**ROYAL ACADEMY OF
MEDICINE IN IRELAND**

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61st Annual and Scientific Meeting of the Irish
Gerontological Society

Meeting Programme & Abstracts

Croke Park Conference Centre
Dublin

20th and 21st September 2013

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**Irish Gerontological Society
in partnership with the Royal College of Surgeons
in Ireland/Beaumont Hospital**

**61st Annual and Scientific Meeting
*Towards an Age-friendly Future***

Croke Park Conference Centre, Dublin
20th and 21st September 2013

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Disclosure Statement

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Céad Míle Fáilte

It is with great pleasure that I welcome you on behalf of the Scientific Committee to the 61st Annual Scientific Meeting of the Irish Gerontological Society. This year's event is being jointly hosted with the Royal College of Surgeons in Ireland and Beaumont Hospital.

The theme this year is “Towards an Age Friendly Future” and we are delighted to present an expanded programme that highlights many of the innovations and new thinking and research across all the pillars of gerontology. As with last year we are running parallel sessions throughout the 2 days. The range and depth of the submissions received was impressive with increasing numbers from the biological and behavioural/social sciences. There are sixty-five oral presentations over the 2 days alongside the 203 posters to be viewed. It is going to be a busy but stimulating time!

This year's programme provides a platform for a range of new and exciting studies to be shared which will be presented during the sessions which cover: Therapeutics and Prescribing, Environment and Ageing, Biology of Ageing, Psychology and Mental Health, Bones and Falls, Continuing Care, Emergency Medicine, Stroke and Cardiovascular, Health and Wellbeing and a new session on Critical Perspectives.

We are delighted that the Willie Bermingham Memorial Lecture will be delivered by Prof Chris Phillipson, Professor of Sociology and Social Gerontology, University of Manchester titled “Re-thinking Care in Later Life: The Social and the Clinical”.

Our four keynote speakers this year will be Professor Michael Farrell speaking about “Brain Banking and Dementia-Where to next?”, Prof. Yves Joanette on “The Health and Wellness of the Aging Population in Canada: Seizing the Opportunities and Facing the Challenges”, Dr Simon Conroy on “Interface Geriatrics: Acute/Emergency Care of Older People” and Dr Paul Brennan on “Acute Intervention for Stroke”. These all promise to be diverse and thought-provoking talks.

My thanks to the organising committee in RCSI/Beaumont, to Miriam Ahern and Lucette Murray and to the IGS Executive committee for their considerable work in bringing this meeting together.

We all hope you have a wonderful time with lots of networking, knowledge sharing and craic!

Mo Flynn,
Honorary Secretary, on behalf of the Scientific Committee

**61st Annual and Scientific Meeting—Towards an Age-Friendly Future
Programme**

THURSDAY, 19th SEPTEMBER 2013

19.00–21.00

Sponsored Symposium

Venue: RCSI, St. Stephen's Green

Parkinson's Disease in the Older Person,

Dr. Graham Hughes, Consultant in Geriatric Medicine, St. Vincent's University Hospital, Dublin

Anatomical Correlations in Parkinsonian Syndromes,

Professor Dan Healy, Consultant Neurologist, RCSI and Beaumont Hospital, Dublin

FRIDAY, 20th SEPTEMBER 2013

08.00–09.00

Sponsored Symposium

Venue: Croke Park Conference Centre

Obstructive Pulmonary Disease in the Elderly,

Dr. Mike Henry, Consultant Respiratory Physician, Cork University Hospital

09.00–09.45

Registration

09.45–09.55

Welcome Address

Professor J. Bernard Walsh, President, Irish Gerontological Society

(Hogan Mezzanine II with live AV feed to Mezzanine I)

Session 1

Hogan Mezzanine II

Co-chairs

Dr. Clare Fallon, Head of Stroke Unit, Midlands Regional Hospital, Mullingar, and Undergraduate Dean, RCSI

Professor David Williams, Geriatric & Stroke Medicine, RCSI, Consultant Stroke Physician, Beaumont Hospital

Hogan Mezzanine I

Co-chairs

Dr. Frances Horgan, Senior Lecturer in Physiotherapy, RCSI

Clare O'Sullivan, Director of Postgraduate Education for the School of Clinical Therapies, Department of Occupational Therapy, UCC

10.00–11.00

Therapeutics and Prescribing (Hogan Mezzanine II)

O1 Potentially Inappropriate Medication Use in Nursing Home Residents Attending the Emergency Department.

O2 Effect of Blood Pressure Lowering Using Antihypertensive Drugs on Ability to Carry out Activities of Daily Living in Participants with Hypertension or Pre-Hypertension: A Systematic Review and Meta-Analysis of Randomized Controlled Trials.

O3 The Effect of the Introduction of a Line Extension and Generic Competition on Prescribing within the Osteoporosis Market Segment

O4 Analgesic and concurrent medication utilisation amongst adults aged 65 years and older: a cross-sectional study of the Irish population

O5 Prevalence, Patterns and Factors Associated with Polypharmacy and Excessive Polypharmacy in an Ageing Population with Intellectual Disability in Ireland

Environment & Ageing (Hogan Mezzanine I)

O6 Location, Location, Location: Acute Geriatric Units in the Irish Setting

O7 Assessing the Age-Friendliness of Purpose-Built Retirement Communities

O8 Rural informal practices, social exclusion and age-friendliness

O9 Great Northern Haven: From Raw Smart Home Data to Health Metrics

11.00–11.30 Tea/Coffee, poster viewing and exhibition

Session 2

Hogan Mezzanine II

Co-chairs

Professor Ciaran Donegan, Geriatric & Stroke Medicine, Consultant in Geriatric Medicine, Beaumont Hospital/RCSI
Dr. Rory McGovern, Consultant Physician/Geriatrician, St. Luke's Hospital, Kilkenny

Hogan Mezzanine I

Co-chairs

Dr. Mary Cosgrave, Executive Clinical Director, North Dublin Mental Health Services
Professor Thomas Scharf, Director, Irish Centre for Social Gerontology, NUI Galway

11.30–12.00

Keynote Update: Brain Banking and Dementia—Where to Next?

Professor Michael Farrell FRCP, FRCPPath, FRCP, Neuropathologist, Beaumont Hospital
(Hogan Mezzanine II with live AV feed to Mezzanine I)

12.00–13.30

Biology of Ageing, Atrial Fibrillation (Hogan Mezzanine II)

O10 Sustained Attention Mediates the Relationships between Executive Function, Cognitive Processing Speed and Frailty in the Older Adult Population.

O11 An Investigation of the Relationship between Neuro-cardiovascular Instability and Vision

O12 Effects of Centrally Acting Angiotensin Converting Enzyme Inhibitors on the Rate of Cognitive Decline and Activities of Daily Living in Dementia

O13 Instability of Renal Function in Older Subjects Requiring Anticoagulation for Secondary Prevention of Atrial Fibrillation following Stroke

O14 Awareness of Atrial Fibrillation in Ireland and Public Priorities for Treatment

O15 Towards a Smart App for Increasing Awareness and Detection of Atrial Fibrillation in the Community. Translating Findings from the Irish Longitudinal Study on Ageing into Practice

Psychology & Mental Health (Hogan Mezzanine I)

O16 The role of the screening section of a standardised diagnostic interview in determining the burden of mental illness in later life

O17 The Passive Death Wish and the Frailty Syndrome: An Opportunity for Active Intervention

O18 The Impact of Visual and Hearing Deficits on Cognition: Task-specific or General?

O19 Use of the Quick Memory Check, a Caregiver Administered Test, for Cognitive Impairment

O20 Which Short Cognitive Test Might Be Suitable for Serial Testing to Detect Delirium in Hospitalised Older People?

O21 Do the NICE delirium screening criteria detect delirium?

O22 Patient Absconsion from a Geriatric Ward

13.30–14.30

Lunch, poster viewing, marking, and exhibition

14.00–14.30

IGS Annual General Meeting—Ard Chomhairle Room

Session 3**Hogan Mezzanine II**

Co-chairs

Professor J. Bernard Walsh, Clinical Professor of Medical Gerontology, Director, Mercer's Institute, St. James's Hospital
 Dr. Mike O'Connor, Consultant Geriatrician, Cork University Hospital/St. Finbarr's Hospital

Hogan Mezzanine I

Co-chairs

Mo Flynn, Chief Executive Officer, Our Lady's Hospice and Care Services
 Dr. Kieran Walsh, Deputy Director, Irish Centre for Social Gerontology, NUI Galway

14.30–15.15**Bones & Falls (I) (Hogan Mezzanine II)**

O23 Characterising falls risk factors and health care utilisation in patients with a low trauma wrist fracture attending a physiotherapy clinic

O24 Data from the Irish Hip Fracture Database, IHFD 'Better, safer care'

O25 Prevalence of Fractures and Fracture Prevention in Community Dwelling Older Adults

O26 Characteristics of the Bone Cohort of TUDA

Critical Perspectives (Hogan Mezzanine I)

O27 A Platform for Research on Aging: The Canadian Longitudinal Study on Aging

O28 Ageing research and philanthropy in Ireland: An overview

O29 'Knowing more' and 'knowing better'—valuing older people's knowledge and expertise as peer researchers in a study exploring understandings of elder abuse

O30 Generational Observing: Re-Imagining Intergenerational Relations

15.15–15.45

Keynote Update: The Health and Wellness of the Aging Population in Canada: Seizing the Opportunities and Facing the Challenges

Professor Yves Joannette, PhD, FCAHS, Scientific Director, Institute of Aging, Canadian Institute of Health Research, Faculty of Medicine, Université de Montréal
 (Hogan Mezzanine II with live AV feed to Mezzanine I)

15.45–16.15

Tea/Coffee, poster viewing and exhibition

Session 4**Hogan Mezzanine II**

Co-chairs

Dr. Rose Galvin, Post-Doctoral Research Fellow & Lecturer in Physiotherapy, School of Physiotherapy, RCSI
 Professor Eamon Mulkerrin, Consultant Physician & Geriatrician, NUI Galway

Hogan Mezzanine I

Co-chairs:

Mary Foley, Advanced Nurse Practitioner, St. Finbarr's Hospital, Vice-President, All-Ireland Gerontological Nurses Association

Dr. Siobhan Kennelly, Consultant Geriatrician, Connolly Hospital

- 16.15–17.45** *Bones & Falls (2) (Hogan Mezzanine II)*
- O31** Low Spatial Frequency Contrast Sensitivity but not Visual Acuity is Associated with Spatial Gait Parameters in Older Adults
- O32** Is Vitamin D Deficiency Being Adequately Treated in Patients with Osteoporosis?
- O33** Implementation of Care Standards for Hip Fracture Care in an Irish Hospital: Results from the National Hip Fracture Database
- O34** Does the CHA2DS2VASc score Predict Falls?
- O35** Correlates Of Vitamin D in Older Irish Adults
- Continuing Care (Hogan Mezzanine I)*
- O36** Fair Deal Applications in A Small Acute Irish Hospital—Who? What? How? When? Where? Why?
- O37** Appropriateness of continuing care placement—A prospective Study
- O38** “Why can’t older people die in nursing homes anymore?”: Hospital Staff perceptions of older people and nursing home residents as acute hospital service users
- O39** Surveillance demonstrates how risk factors, healthcare-associated infections and antimicrobial use are prevalent in residents of Irish long-term care facilities
- O40** Prevalence and Types of Elder Abuse in Residential Care Facilities in Ireland
- O41** Inter-personal and institutional financial mistreatment of older people a question of a ‘position of trust’
- 17.45–18.45** **Willie Bermingham Lecture:**
‘Re-thinking Care in Later Life: The Social and the Clinical’
 Professor Chris Phillipson, Professor of Sociology and Social Gerontology, University of Manchester
 (Hogan Mezzanine II with live AV feed to Mezzanine I)
- 19.30** **Dinner at Croke Park Conference Centre**

SATURDAY, 21st SEPTEMBER 2013

- 09.30–10.00** **Keynote Update: ‘Interface Geriatrics’ : acute/emergency care of older people**
 Dr Simon Conroy, Head of Service Geriatric Medicine, Department of Cardiovascular Sciences, University of Leicester, UK
 (Hogan Mezzanine II with live AV feed to Mezzanine I)

Session 5

Hogan Mezzanine II

Co-chairs

Dr. Alan Martin, Geriatric & Stroke Medicine, Consultant Geriatrician, Beaumont Hospital/RCSI

Dr. Diarmuid O’Shea, Consultant Physician in Geriatric Medicine, St. Vincent’s University Hospital

Hogan Mezzanine I

Co-chairs

Dr. Rose Galvin, Post-Doctoral Research Fellow & Lecturer in Physiotherapy, School of Physiotherapy, RCSI

Professor Tom Scharf, Director, Irish Centre for Social Gerontology, NUI Galway

- 10.00–11.00** *Emergency Medicine (Hogan Mezzanine II)*
O42 Dysphagia in Nursing Home Residents Attending the Emergency Department
O43 Outcomes of Nursing Home Residents' Acute Presentations to an urban teaching hospital in 2012
O44 Characteristics and outcomes of community dwellers aged >80 re-attending the Emergency Department (ED) of an Irish urban teaching hospital
O45 A Profile of Elderly Fallers Referred for Physiotherapy in the Emergency Department of a Dublin Teaching Hospital
O46 Clinical Characteristics of older Human Immunodeficiency Virus (HIV +) patients
Health & Wellbeing (I) (Hogan Mezzanine I)
O47 Perceptions, supports and expectations influence exercise activity in frail older adults
O48 Influences on exercise behaviours of frail older adults in the acute setting
O49 The Impact Of High Intensity Exercise On Outcome in People With Parkinson's Disease: A Systematic Review
O50 Aiming for Home: The Effectiveness Of Occupational Therapy Intervention in Facilitating Goal Achievement in A Frail Elderly Active Rehabilitation Unit
O51 EMERALD, Elderly Medicine Early Review And Liaison for Discharge
- 11.00–11.30** **Update on National Clinical Programme**
Dr. Diarmuid O'Shea, Consultant Physician, St. Vincent's University Hospital,
Noel Mulvihill, HSE National Director for Older Persons
(Hogan Mezzanine II with live AV feed to Mezzanine I)
- 11.30–12.00** Continental Breakfast, poster viewing and exhibition
- 12.00–12.30** **Keynote Update: Acute Intervention for Stroke**
Dr. Paul Brennan, Consultant Radiologist and Clinical Director, Beaumont Hospital
(Hogan Mezzanine II with live AV feed to Mezzanine I)
- Session 6** **Hogan Mezzanine II**
Co-chairs
Professor Joseph Harbison, Consultant Stroke Physician and Geriatrician, St James's Hospital, and Department of Medical Gerontology, TCD
Professor David Williams, Geriatric & Stroke Medicine, RCSI, Consultant Stroke Physician, Beaumont Hospital
- Hogan Mezzanine I**
Co-chairs
Mo Flynn, Chief Executive Officer, Our Lady's Hospice and Care Services
Clare O'Sullivan, Director of Postgraduate Education for the School of Clinical Therapies, Department of Occupational Therapy, UCC

12.30–13.45***Stroke & Cardiovascular (Hogan Mezzanine II)*****O52 The pre-stroke modified Rankin Scale is an important independent predictor of thrombolysis outcome****O53 Patterns of Activity and Reliability of an Acute Stroke TeleMedicine Service – DML Stroke Network****O54 Inpatient Strokes: clinical characteristics and outcomes****O55 Acute Stroke Unit Improves Stroke Management-4 Years on from INASC (Irish National Audit of Stroke Care)****O56 Low rate of ipsilateral stroke distal to asymptomatic carotid stenosis:****O57 Prevalence of Intra-cranial Bleeds at a General Hospital from 2008 to 2010****O58 Prevalence Of White Coat Hypertension in Older Irish Adults: A Primary Care ABPM Database****O59 The Prevalence of Orthostatic Hypotension and Spectrum of Orthostatic Blood Pressure Control in Older Community Dwelling Adults*****Health & Wellbeing (2) (Hogan Mezzanine I)*****O60 An alternative model of Interim Care (IC)****O61 Prevalence, Patterns and Healthcare Burden of Multimorbidity in the older Irish population****O62 The Frailty Index in Europeans: Association with Determinants of Health****O63 Patterns of multimorbidity in an ageing population of people with an intellectual disability: Results from the intellectual disability supplement to the Irish longitudinal study on ageing (IDS-TILDA)****O64 The role frailty syndrome can play in supporting and targeting resources in our ageing population—high prevalence of frailty syndrome in a population attending the day hospital****O65 Screening for Markers of Frailty and Perceived Risk of Adverse Outcomes Using the Community Assessment of Risk Tool (CART)****13.45–14.00****Awards and Close of Conference**

PLATFORM

O1 Potentially Inappropriate Medication Use in Nursing Home Residents Attending the Emergency Department

A Grace², R Briggs¹, RM Corcoran³, R Kieran³, T Coughlan¹, R Collins¹, D O'Neill¹, S Kennelly¹

¹Department of Age Related Health Care, Tallaght Hospital, Dublin, Ireland, ²TCD/HSE Specialist Training Programme in General Practice, Dublin, Ireland, ³School of Medicine, Trinity College Dublin, Dublin, Ireland

O2 Effect of Blood Pressure Lowering Using Antihypertensive Drugs on Ability to Carry out Activities of Daily Living in Participants with Hypertension or Pre-Hypertension: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

M Canavan¹, A Smyth², M Jensen², S Robinson¹, EC Mulkerrin¹, MJ O'Donnell²

¹Department of Geriatric Medicine, Galway University Hospital, Galway, Ireland, ²HRB Clinical Research Facility, National University of Ireland, Galway, Galway, Ireland

O3 The Effect of the Introduction of a Line Extension and Generic Competition on Prescribing within the Osteoporosis Market Segment

D Byrne¹, A Akintola¹, MaryJo Macavlin², K Bennett²

¹Kerry General Hospital, Tralee, Ireland, ²University of Dublin, Trinity College, Dublin, Ireland

O4 Analgesic and concurrent medication utilisation amongst adults aged 65 years and older: a cross-sectional study of the Irish population

M-C Kennedy¹, G Cousins², RA Kenny³, M Henman¹

¹School of Pharmacy and Pharmaceutical Sciences, Trinity College Dublin, Dublin, Ireland, ²HRB Centre for Primary Care Research, Royal College of Surgeons in Ireland, Dublin, Ireland, ³The Irish Longitudinal Study on Ageing (TILDA) Trinity College Dublin, Dublin, Ireland

O5 Prevalence, Patterns and Factors Associated with Polypharmacy and Excessive Polypharmacy in an Ageing Population with Intellectual Disability in Ireland

M O'Dwyer¹, J Peklar², M McCarron¹, P McCallion³, M Henman¹

¹Trinity College Dublin, Dublin, Ireland, ²University of Ljubljana, Ljubljana, Slovenia, ³University of Albany, New York, USA

O6 Location, Location, Location; Acute Geriatric Units in the Irish Setting

SA Coveney¹, N O'Regan¹, KA O'Connor²

¹Cork University Hospital, Cork, Ireland, ²Mercy University Hospital, Cork, Ireland

O7 Assessing the Age-Friendliness of Purpose-Built Retirement Communities

T Scharf¹, J Liddle², B Bartlam², M Bernard², J Sim²

¹NUI Galway, Galway, Ireland, ²Keele University, Staffordshire, UK

O8 Rural informal practices, social exclusion and age-friendliness

K Walsh¹, E O'Shea¹, T Scharf¹, M Shucksmith²

¹National University of Ireland Galway, Galway, Ireland, ²Newcastle University, Newcastle, Ireland

O9 Great Northern Haven: From Raw Smart Home Data to Health Metrics

L Walsh, J Loane, J Doyle, A Kealy, A MacFarlane

CASALA, Dundalk Institute of Technology, Dundalk, Ireland

O10 Sustained Attention Mediates the Relationships between Executive Function, Cognitive Processing Speed and Frailty in the Older Adult Population

A O'Halloran¹, M O'Connell¹, C Finucane¹, G Savva³, I Robertson², RA Kenny¹

¹TILDA, Trinity College Dublin, Dublin, Ireland, ²Trinity Institute of Neuroscience, Trinity College Dublin, Dublin, Ireland, ³School of Nursing Sciences University of East Anglia, Norwich, UK

O11 An Investigation of the Relationship between Neurocardiovascular Instability and Vision

B Ní Bhuachalla¹, C McGarrigle², RA Kenny¹

¹Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland; ²The Irish Longitudinal Study on Ageing, Trinity College Dublin, Dublin, Ireland

O12 Effects of Centrally Acting Angiotensin Converting Enzyme Inhibitors on the Rate of Cognitive Decline and Activities of Daily Living in Dementia

Y Gao¹, R O'Caoimh¹, D Kerins², L Healy¹, J Eustace⁴, G Guyatt⁵, D Sammon³, DW Molloy¹

¹Centre for Gerontology and Rehabilitation, University College Cork, St. Finbarr's Hospital, Cork City, Ireland, ²Department of Pharmacology and Therapeutics, University College, Mercy University Hospital, Cork City, Ireland, ³Department of Business Information Systems, University College Cork, Cork City, Ireland, ⁴Clinical Research Facility, Mercy University Hospital, Cork City, Ireland, ⁵Department of Clinical Epidemiology & Biostatistics, McMaster University, Hamilton, ON, Canada

O13 Instability of Renal Function in Older Subjects Requiring Anticoagulation for Secondary Prevention of Atrial Fibrillation following Stroke

N Murphy, C Harbison, O Mahon, M Muldowney, G Sheridan, J Harbison
St James's Hospital, Dublin, Ireland

O14 Awareness of Atrial Fibrillation in Ireland and Public Priorities for Treatment

R Dwyer, B Drumm, D O'Neill, T Coughlan, S Kennelly, R Collins
AMNCH, Dublin, Ireland

O15 Towards a Smart App for Increasing Awareness and Detection of Atrial Fibrillation in the Community. Translating Findings from the Irish Longitudinal Study on Ageing into Practice

C Finucane, J Frewen, H Nolan, B Murphy, RA Kenny
TILDA, TCD, Dublin, Ireland

O16 The role of the screening section of a standardised diagnostic interview in determining the burden of mental illness in later life

R McDowell¹, A Ryan¹, B Bunting², S O'Neill²

¹Institute of Nursing & Health Research, University of Ulster, Coleraine, UK, ²Psychology Research Institute, University of Ulster, Derry, UK

O17 The Passive Death Wish and the Frailty Syndrome: An Opportunity for Active Intervention

C O'Hare, RA Kenny
The Irish Longitudinal Study of Ageing (TILDA), Trinity College Dublin, Dublin, Ireland

O18 The Impact of Visual and Hearing Deficits on Cognition: Task-specific or General?

A Setti¹, J Loughman³, W Shanahan⁴, M O'Tool⁴, RA Kenny²

¹University College Cork, Cork, Ireland, ²The Irish Longitudinal Study on Ageing, TCD, Dublin, Ireland, ³Dublin Institute of Technology, Dublin, Ireland, ⁴School of Medicine, TCD, Dublin, Ireland

O19 Use of the Quick Memory Check, a Caregiver Administered Test, for Cognitive Impairment

P Coghlan¹, R O'Caomh², DW Molloy²

¹University College Cork, Cork City, Ireland, ²Centre for Gerontology and Rehabilitation, University College Cork, St. Finbarr's Hospital, Cork City, Ireland

O20 Which Short Cognitive Test Might Be Suitable for Serial Testing to Detect Delirium in Hospitalised Older People?

N Liddy¹, N O'Regan¹, M Buckley², M Uppal³, J Fitzgerald⁴, D Meagher⁴, S Timmons¹

¹Centre for Gerontology and Rehabilitation, School of Medicine, University College Cork, Cork, Ireland, ²Department of Geriatric Medicine, Cork University Hospital, Cork, Ireland, ³Department of Geriatric Medicine, Mercy University Hospital, Cork, Ireland, ⁴Department of Psychiatry, Graduate Entry Medical School, University of Limerick, Limerick, Ireland

O21 Do the NICE delirium screening criteria detect delirium?

M Davis¹, M Buckley², A Hannon², T Jayaraman², J Fitzgerald³, N O'Regan⁴, W Molloy⁴, D Meagher⁵, S Timmons⁴

¹Department of Psychiatry, Mercy University Hospital, Cork, Ireland, ²Department of Geriatric Medicine, Cork University Hospital, Cork, Ireland, ³Graduate Entry Medical School, University of Limerick, Limerick, Ireland, ⁴Centre for Gerontology and Rehabilitation, University College Cork, Cork, Ireland, ⁵Professor of Psychiatry, University of Limerick, Limerick, Ireland

O22 Patient Absconson from a Geriatric Ward

H Gogarty, S Lingwood, S Kennelly, T Coughlan, D O'Neill, DR Collins
Tallaght Hospital, Tallaght, Dublin 24, Ireland

O23 Characterising Falls Risk Factors and Health Care Utilisation in Patients With a Low Trauma Wrist Fracture Attending a Physiotherapy Clinic

C O'Reilly², F Horgan¹, A Moore²

¹Royal College of Surgeons, Dublin, Ireland, ²Beaumont Hospital, Dublin, Ireland

O24 Data from the Irish Hip Fracture Database, IHFD 'Better, safer care'

E Ahern¹, T Coughlan²

¹St Luke's Hospital, Kilkenny, Ireland, ²AMNCH, Dublin, Ireland

O25 Prevalence of Fractures and Fracture Prevention in Community Dwelling Older Adults

R Lannon¹, K McCarroll², A Molloy³, M Healy⁴, C Cunningham², JB Walsh¹, M Casey¹

¹Bone Health Unit, Mercer's Institute for Research on Ageing, St James's Hospital, Dublin 8, Ireland, ²Mercer's Institute for Research on Ageing, St James's Hospital, Dublin 8, Ireland, ³Department of Biochemistry, Trinity College Dublin, Dublin 2, Ireland, ⁴Department of Biochemistry, St James's Hospital, Dublin 8, Ireland

O26 Characteristics of the Bone Cohort of TUDAR Lannon¹, K McCarroll², M Healy³, A Molloy⁴, C Cunningham², JB Walsh¹, M Casey¹¹Bone Health Unit, Mercer's Institute for Research on Ageing, St James's Hospital, Dublin 8, Ireland, ²Mercer's Institute for Research on Ageing, St James's Hospital, Dublin 8, Ireland, ³Department of Biochemistry, St James's Hospital, Dublin 8, Ireland, ⁴Department of Biochemistry, Trinity College Dublin, Dublin 2, Ireland**O27 A Platform for Research on Aging: The Canadian Longitudinal Study on Aging**S Kirkland¹, P Raina², C Wolfson³¹Dalhousie University, Halifax, NS, Canada, ²McMaster University, Hamilton, ON, Canada, ³McGill University, Montreal, QC, Canada**O28 Ageing Research and Philanthropy in Ireland: An Overview**A Cochrane¹, S McGilloway¹, M Furlong¹, M Donnelly²¹National University of Ireland Maynooth, Co Kildare, Ireland, ²Centre for Public Health, Queen's University, Belfast, UK**O29 'Knowing More' and 'Knowing Better'—Valuing Older People's Knowledge and Expertise as Peer Researchers in a Study Exploring Understandings of Elder Abuse**M O'Brien¹, E Begley¹, J Carter Anand², B Taylor³, C Killick⁴¹Age Action Dublin, Ireland, ²Queen's University Belfast, ³University of Ulster, ⁴South East Health and Social Care Trust, N. Ireland**O30 Generational Observing: Re-Imagining Intergenerational Relations**V Timonen¹, C Conlon¹, G Carney², T Scharf²¹Trinity College Dublin, Dublin, Ireland, ²National University of Ireland Galway, Galway, Ireland**O31 Low Spatial Frequency Contrast Sensitivity but not Visual Acuity is Associated with Spatial Gait Parameters in Older Adults**E Duggan¹, H Cronin¹, O Donoghue¹, G Savva¹, J Loughman², RA Kenny¹, C Finucane⁴¹The Irish Longitudinal Study of Ageing (TILDA), Trinity College, Dublin 2, Ireland, ²National Optometry Centre, Dublin Institute of Technology, Dublin 8, Ireland, ³Mercer's Institute for Successful Ageing, St. James's Hospital, Dublin 8, Ireland, ⁴Department of Medical Physics and Bioengineering, St. James's Hospital, Dublin 8, Ireland**O32 Is Vitamin D Deficiency Being Adequately Treated in Patients with Osteoporosis?**

E Shanahan, J Ryan, A Butler, S Carew, T Sheehy, A Costelloe, B Lenehan, C Peters, M O'Connor, D Lyons

University Hospital Limerick, Limerick, Ireland

O33 Implementation of Care Standards for Hip Fracture Care in an Irish Hospital: Results from the National Hip Fracture DatabaseM O'Connor¹, C Byrne¹, P Spencer², J Duggan¹¹Medicine for the Older Person Department, Mater Misericordiae Hospital, Eccles St, Dublin 7, Ireland, ²Department of Physiotherapy, Mater Misericordiae Hospital, Eccles St, Dublin 7, Ireland**O34 Does the CHA2DS2VASc score Predict Falls?**S Robinson¹, M Canavan¹, L Glynn¹, A Murphy², E Mulkerrin¹, M O'Donnell²¹Departments of Geriatric Medicine and General Practice, Galway University Hospitals & National University of Ireland, Ireland, ²HRB-Clinical Research Facility, National University of Ireland, Galway, Ireland**O35 Correlates of Vitamin D in Older Irish Adults**K McCarroll¹, A Beirne¹, A Molloy², M Healy³, H Mc Nulty⁴, C Cunningham⁵¹Mercer's Institute for Research On Ageing, Dublin, Ireland, ²Department of Biochemistry, Trinity College, Dublin, Ireland, ³Department of Biochemistry, St James's Hospital, Dublin, Ireland, ⁴University of Ulster, Coleraine, Ireland, ⁵Department of Gerontology, St James's Hospital, Dublin, Ireland**O36 Fair Deal Applications in A Small Acute Irish Hospital—Who? What? How? When? Where? Why?**

S Matiullah, R Bradfield, F Holland, B Carey

Bantry General Hospital, Bantry, Co. Cork, Ireland

O37 Appropriateness of continuing care placement—A prospective Study

S Coveney, J McGlynn, N Harnedy, M O'Connor

Cork University Hospital, Cork, Ireland

O38 "Why Can't Older People Die in Nursing Homes Anymore?" Hospital Staff Perceptions of Older People and Nursing Home Residents as Acute Hospital Service UsersJ McGlynn², R Martin², N O'Regan¹, M Bartley², J Clare³, S Timmons¹, C McGlade¹¹Centre for Gerontology and Rehabilitation, University College Cork, Cork, Ireland, ²South Munster SpR Geriatric Medicine Training Scheme, Cork, Ireland, ³Cork University Hospital, Cork, Ireland

O39 Surveillance Demonstrates How Risk Factors, Healthcare-Associated Infections and Antimicrobial Use are Prevalent in Residents of Irish Long-Term Care Facilities

K Burns, F Roche, S Donlon, F Fitzpatrick
Health Protection Surveillance Centre, Dublin, Ireland

O40 Prevalence and Types of Elder Abuse in Residential Care Facilities in Ireland

A Lafferty, J Drennan, P Treacy, G Fealy, A Phelan, I Lyons, P Hall
University College Dublin, Dublin, Ireland

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O43 Outcomes of Nursing Home Residents’ Acute Presentations to an Urban Teaching Hospital in 2012

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O48 Influences on Exercise Behaviours of Frail Older Adults in the Acute Setting

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R Romero-Ortuno, I Noone, G Hughes, D O’Shea, M Crowe
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O53 Patterns of Activity and Reliability of an Acute Stroke Telemedicine Service—DML Stroke Network PartnershipJ Soh¹, C Offiah¹, T Coughlan¹, P O'Brien¹, DJH McCabe¹, S Murphy¹, J McManus², D O'Neill¹, R Collins¹¹Adelaide and Meath Hospital, Tallaght, Dublin, Ireland, ²Midland Regional Hospital Tullamore, Tullamore, Ireland**O54 Inpatient Strokes: Clinical Characteristics and Outcomes**

R Briggs, O Mahon, S Walsh, J Harbison

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E Shanahan, N Cunningham, R Keenan, G O'Malley, P O'Connor, M O'Connor, C Peters, D Lyons

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O57 Prevalence of Intra-cranial Bleeds at a General Hospital from 2008 to 2010

D Cahill, A Bimbo, D Byrne, R Liston, J McManus

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O58 Prevalence of White Coat Hypertension in Older Irish Adults: A Primary Care ABPM DatabaseK James¹, E Dolan¹, E O'Brien²¹Connolly Hospital, Dublin, Ireland, ²University College Dublin, Dublin, Ireland**O59 The Prevalence of Orthostatic Hypotension and Spectrum of Orthostatic Blood Pressure Control in Older Community Dwelling Adults**C Finucane¹, M O Connell¹, CW Fan⁴, C Soraghan², H Cronin¹, G Savva⁵, RA Kenny¹¹TILDA, TCD, Dublin, Ireland²Department of Medical Physics and Bioengineering, St. James's Hospital, Dublin, Ireland, ³Mercer's Institute for Successful Ageing, St. James's Hospital, Dublin, Ireland, ⁴Department of Gerontology, Mater Hospital, Dublin, Ireland, ⁵University of East Anglia, Norwich, Ireland**O60 An Alternative Model of Interim Care (IC)**

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O63 Patterns of Multimorbidity in an Ageing Population of People with an Intellectual Disability: Results from the Intellectual Disability Supplement to the Irish Longitudinal Study on Ageing (IDS-TILDA)M McCarron¹, J Swinburne¹, E Burke¹, E McGlinchey¹, P McCallion²¹Trinity College Dublin, Dublin, Ireland, ²University of Albany, New York, Ireland**O64 The Role Frailty Syndrome Can Play in Supporting And Targeting Resources in Our Ageing Population—High Prevalence of Frailty Syndrome in a Population Attending the Day Hospital**

O Nthololang, RE Kelly, R Romero-Ortuno, S Cosgrave, C Tiernan, D Kelly, G Hughes, O Collins, JJ Barry, M Crowe, D O'Shea

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O65 Screening for Markers of Frailty and Perceived Risk of Adverse Outcomes Using the Community Assessment of Risk Tool (CART)R O'Caoimh¹, Y Gao¹, E Healy², E O'Connell², DW Molloy¹¹Centre for Gerontology and Rehabilitation, University College Cork, St. Finbarr's Hospital, Cork City, Ireland, ²Department of Public Health Nursing, South Lee PCCC, St. Finbarr's Hospital, Cork City, Ireland

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A Harper, S Sarup, L McDaid, E McKenna
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C Bennett, K Daly, B Carey
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P79 Metabolically Healthy Obesity, Obesity Measurements and Markers of Cognitive Impairment in Older AdultsC Kennedy¹, D Robinson², R Romero-Ortuno³, D O'Shea¹, RA Kenny³, D O'Shea¹, J O'Connell¹¹St Vincent's University Hospital, Dublin, Ireland, ²St James Hospital, Dublin, Ireland, ³Trinity College, Dublin, Ireland**P80 Culture Negative Infective Endocarditis and Intracerebral Haemorrhage**

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P82 Testing an Alternative Model of Frailty in the Irish Longitudinal Study of AgeingB King-Kallimanis¹, RA Kenny¹, G Savva²¹TILDA (The Irish Longitudinal Study on Ageing), Department of Medical Gerontology, Trinity College Dublin, Dublin, Ireland²School of Nursing Sciences, University of East Anglia, Norwich Research Park, Norwich, UK**P83 Would a Patch Help? An Unusual Cause of Delirium**

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P85 Denosumab—Trends in Use and Tolerance in the First 30 MonthsR Lannon¹, L O'Keeffe¹, N Fallon¹, M Healy², M Casey¹, JB Walsh¹¹Bone Health Unit, Mercer's Institute for Research on Ageing, St James's Hospital, Dublin 8, Ireland²Department of Biochemistry, St James's Hospital, Dublin 8, Ireland**P86 The Role of IV Bisphosphonates in relation to Denosumab**

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P192 An Assessment of the Impact of Age and Socio-Economic Group on Subjective HealthD Deepika¹, G O’Malley¹, E Humphreys², S de Burca², J Saunders², J Cooke¹, T Walsh¹, J Curtain¹, C O’Connor¹, C Peters¹, M O’Connor¹, D Lyons¹¹Department of Medicine, Division of Aging and Therapeutics, University Hospital Limerick, Limerick, Ireland, ²University of Limerick, Limerick, Ireland**P193 National Dementia Education Project: An Evaluation of Progress to Date**M Manning², A Quinn³, D Lynch⁴, C Hayden³, C Craig¹, M Connolly⁵¹DSIDC St James’s Hospital, Dublin, Ireland, ²Office of Nursing & Midwifery Service Directorate, HSE Dublin, Ireland, ³HSE Services, Kildare & Tipperary, Ireland, ⁴Mercy University Hospital, Cork, Ireland, ⁵Alzheimer’s Society, Dublin, Ireland**P194 Caregiver Perspectives of Palliative and End of Life Care for Individuals at End-Stage Alzheimer’s Disease in Newfoundland and Labrador: A Qualitative Phenomenological Approach**

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P195 Use of Transport for Older People with Intellectual Disability: Results from Wave 1 of the Intellectual Disability Supplement to the Irish Longitudinal Study on Ageing (IDS-TILDA)D McCausland¹, E Burke¹, E McGlinchy¹, J Swinburne¹, E Cleary¹, M McCarron¹, P McCallion²¹Trinity College, Dublin, Ireland, ²University of Albany, New York, USA**P196 RelAte: Combining Social and Nutritional Interventions to Improve Psychosocial Wellbeing in At-Risk Older Adults**

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P197 Portable Application for Calculation and Graphing of Normative Values of Physical and Cognitive Tests in Community-Dwelling Older, Irish AdultsH Nolan¹, RA Kenny¹, R Coen², J Frewen¹, H Cronin¹, O Donoghue¹, G Savva³¹The Irish Longitudinal Study on Ageing, Trinity College Dublin, Dublin, Ireland, ²Mercer’s Institute for Research on Ageing, St James’s Hospital, Dublin, Ireland, ³School of Nursing Sciences, University of East Anglia, Norwich, UK**P198 An Evaluation of Met and Unmet Needs, Carer Burden and Barriers to Accessing Services Amongst Family Carers of People With Dementia: A Qualitative Study**

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P199 Elder Abuse and Neglect: The Role of Irish DoctorsJ O’Brien¹, C Cooney², M Bartley³, D O’Neill⁴¹University of Louisville, Louisville, KY, USA, ²University College, Dublin, Ireland, ³University College, Cork, Ireland, ⁴Trinity College, Dublin, Ireland**P201 Step Safely: An Audit of Footwear Worn in Acute Geriatric Wards**

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P203 A Survey of Secondary School Students' Knowledge and Attitudes towards Elderly People

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PLATFORM PRESENTATIONS

O1 Potentially Inappropriate Medication Use in Nursing Home Residents Attending the Emergency Department

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Background: Potentially inappropriate medication (PIM) use is common in nursing home patients. This study aims to determine the prevalence of PIMs in nursing home (NH) residents attending the emergency department (ED) and to identify the potential role of PIM-related adverse events in ED attendances.

Methods: A search of all nursing home residents aged ≥ 65 years who attended ED in 2011 was undertaken. Data on demographics, pre-attendance medications, background medical diagnoses, and clinical details regarding the presenting complaint (PC) were extracted from the nursing home/GP referral documents, the NH prescription sheet, and the ED electronic Symphony® record system. The Beers [1] and STOPP (Screening Tool of Older Persons' potentially inappropriate Prescriptions) criteria were applied and compared for sensitivity and usefulness in this population. A clinician panel reviewed the association between PIMs and patients' ED PC.

Results: 206 long-term care residents aged ≥ 65 years attended the ED in 2011. 195/206 patients (95 %) were included. Patients from intellectual disability and respite care services were excluded. 129/195 (66 %) were female. The mean age was 82.3 years (± 7.6). The mean number of medications prescribed pre-arrival to ED was 8.5 (± 5.2) (range 0–25). 157/195 (81 %) were prescribed at least one PIM by either criterion. When reviewed individually 140/195 (72 %) received a PIM according to STOPP criteria and 147/195 (75 %) according to the Beers criteria. There was a “definite” association between the PC and PIMs in 37/195 (19 %) cases, and a “potential” association in a further 35/195 (18 %) cases.

Conclusions: There is a high prevalence of PIMs in NH residents attending the ED and a PIM-related adverse event was potentially associated with the ED PC in over a third of cases. Careful medication review and application of criteria identifying PIMs may result in fewer ED attendances by NH residents.

Reference:

1. The American Geriatrics Society (2012) Beers Criteria Update Expert Panel. American Geriatrics Society Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. Journal of the American Geriatrics Society (60)4:616–631. Available from <http://onlinelibrary.wiley.com/doi/10.1111/jgs.2012.60.issue-4/issuetoc>. Accessed Feb 2013.

O2 Effect of Blood Pressure Lowering Using Antihypertensive Drugs on Ability to Carry out Activities of Daily Living in Participants with Hypertension or Pre-Hypertension: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

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Background: The effect of blood pressure (BP) lowering on cognitive impairment has been previously reported but its effect on functional impairment (ability to carry out activities of daily living [ADLs]) is uncertain.

Objectives: To estimate the effectiveness of antihypertensive drugs on ability to carry out ADLs in people with hypertension or pre-hypertension. Secondary outcomes included Quality of Life (QOL) and mean change in systolic and diastolic BP.

Data Sources: A systematic review (SR) of articles retrieved using Medline (1946–2013), Embase (1974–2013), Psych Info (1806–2013) and Cochrane Controlled Trials Register (1960–2013) was conducted. Search terms included: randomized controlled trial (RCT), antihypertensive drugs, hypertension, ADLs, disability, self care, mobility, quality of life, cardiovascular disease (Stroke and Myocardial infarction) and humans.

Study Selection: Randomized controlled trials (RCTs) evaluating antihypertensive drug(s) versus control and reporting functional outcomes with at least 1 year follow up were eligible. Screening (2690 Title & Abstracts and 82 Full Texts) was done by two independent reviewers. Disagreements were resolved by consensus after discussion with a 3rd independent reviewer. Data was independently extracted from full texts using predefined data fields and study quality indicators.

Results: 8 RCTs were eligible. All pooled analyses were based on random effects models. There was no difference in ability to carry out ADLs with antihypertensive treatment for 4 years (OR 0.91, [0.76, 1.09]). There was a reduction in between group systolic (mean difference (MD) -6.86 [-9.66 , -4.05]) and diastolic (MD -3.14 [-4.00 , -2.29]) BP. Significant heterogeneity was observed among studies which didn't significantly change with subgroup analysis for the primary outcome. Non-standardised reporting of QOL outcomes limited meta-analysis of QOL.

Conclusions: There is no evidence that blood pressure lowering prevents functional impairment but a non-significant trend towards benefit was observed. Standardised reporting of functional outcomes will benefit future SRs in this area.

O3 The Effect of the Introduction of a Line Extension and Generic Competition on Prescribing within the Osteoporosis Market Segment

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Background: The Irish health service needs to achieve cost savings. Introduction of new drugs change the value/shape of a market segment. Purpose of this study is to examine the effect the launch of Alendronate with Vitamin D (ALND) (line extension), and the first generic alendronate on the prescribing pattern/market value of the Osteoporosis market segment.

Methods: The Health Service Executive Primary Care Reimbursement Scheme (HSE-PCRS) database was used in this study. Results are standardized for the eligible PCRS population and expressed as defined daily dose per 1000 PCRS population over 16 years. Data is presented on quarterly basis for adjusted number of prescription items for the treatment population and costs.

Results: Osteoporosis market expanded between 2004 and 2010. Prescribing rate increased from 73 to 149/1000 PCRS eligible patients >16 years; market value increased from €11 to €24 million. Alendronate market share fell from 59 to 41 %. ALND achieved a 15 % market share by the end of 2010. Segmented regression analysis for ALND launch disclosed an increased slope rate of prescription of 2.2 (0.74)/1000 PCRS eligible patients ($p = 0.013$); cost of market segment increasing by €91,525 (30,689) per quarter ($p = 0.013$). Segmented regression analysis for the time of generic launch showed slowing of the rate of increase in prescription rate by 4.8/1000 PCRS eligible patients ($p = 0.0003$); rate of fall in market cost of €181,842 (52,670) per quarter ($p = 0.0004$).

Conclusions: ALND offers therapeutic advantage but its launch increased the value of the market segment. Launch of generic alendronate is followed by stabilization of market value, a reduction in the proportion of alendronate prescriptions despite its well established use and evidence base. Actively marketed drugs continued to grow market share. A more aggressive approach to market and increase awareness of generic drugs will be required to achieve putative cost savings.

O4 Analgesic and Concurrent Medication Utilisation Amongst Adults Aged 65 Years and Older: A Cross-Sectional Study of the Irish Population

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Background: Thirty per cent of community-dwelling older adults suffer with pain. Pharmacological regimens for the management of pain may use combinations of analgesics and adjuvant medications depending upon the nature and severity of the condition. This study describes some demographic and clinical features of a population of elderly pain sufferers within a national cohort.

Methods: The Irish Longitudinal Study on Ageing (TILDA) is a nationally representative cohort study of people aged 50 years and older in Ireland, documenting their health, social and economic circumstances. Descriptive analyses were conducted to identify the prevalence of adults, aged 65 and older, reporting pain and to determine the prevalence of analgesic and concurrent medication utilisation. Quality of life (QoL) was assessed using the CASP-19 measure; control and autonomy were combined yielding a score indicative of QoL.

Results: Thirty-six per cent ($n = 1142$) of adults aged 65 and older reported non-malignant but only 30 % of these reported use of an analgesic. After adjusting for significant covariates, severe pain, all-over pain and poly-pharmacy were associated with an increased likelihood of taking an opioid. Half the participants taking an opioid reported concurrently taking an acid suppressant compared to 4 % taking a laxative. Seventeen percent reported concurrently taking a benzodiazepine with an opioid, while 6.7 % reported a concurrent non-benzodiazepine hypnotic. Those with severe non-malignant pain had lower mean QoL scores than the general ageing population.

Conclusions: Approximately one-third of older adults reported non-malignant pain, one-third of these indicated use of an analgesic. This may be associated with under-reporting of analgesic utilisation but may also identify a proportion of the population in which pain is inadequately controlled. Opioids are the most commonly used form of analgesic. The concurrent use of potentially inappropriate sedating

agents and the underutilisation of laxatives in conjunction with opioids may warrant further investigation.

O5 Prevalence, Patterns and Factors Associated with Polypharmacy and Excessive Polypharmacy in an Ageing Population with Intellectual Disability in Ireland

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Background: The provision of appropriate pharmacotherapy in an ageing population with intellectual disability (ID) poses challenges due to the complexities of conditions being treated and the use of medicines for off-label indications. People with intellectual disabilities are likely to be exposed to polypharmacy to treat a variety of chronic conditions. Life expectancy of people with intellectual disabilities is increasing in Ireland. We sought to evaluate the prevalence of polypharmacy (≥ 5 medicines) and excessive polypharmacy (≥ 10 medicines), to describe the therapeutic classes implicated and to determine patient characteristics associated with polypharmacy (PP) and excessive polypharmacy (EPP) in an ageing population with ID.

Methods: Medication data was drawn from the first wave of the Intellectual Disability Supplement to the Irish Longitudinal Study on Ageing (IDS-TILDA), a nationally representative study of 753 people with an ID aged 40 and over randomly selected from the National Intellectual Disability Database. Polypharmacy was defined as concurrent reported use of 5–9 medicines and excessive polypharmacy ≥ 10 medicines. A multinomial logistic regression model was used to identify factors associated with PP and EP.

Results: Overall, 90 % ($n = 680$) of participants reported medicines use, with a mean (S.D.) of 5.7 (4.4) medicines. PP was observed in 31.5 % of participants and EPP in 20.9 %. The three most frequently reported drug classes in the EPP and PP groups were the antipsychotics (67.5 % in EPP, 56.5 % in PP), the antiepileptics (63.1 % in EPP, 54.1 % in PP) and the laxatives (75.3 % in EPP, 49.4 % in PP). Factors associated with both PP and EP included; living in residential settings, mental health disease, neurological disease and gastrointestinal disease.

Conclusions: Prevalence of polypharmacy (52.4 %) was high. Mental health, neurological and gastrointestinal diseases were associated with multiple medicine use. Raising awareness of polypharmacy patterns may help to ensure effective and appropriate use of medicines in elderly people with ID.

O6 Location, Location, Location; Acute Geriatric Units in the Irish Setting

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Background: Thirty-three per cent of patients admitted to acute hospitals in Ireland are aged 65 years and older, and hence, are at risk of functional decline during admission. Current national guidelines propose that all older patients should be admitted to an 'Acute Geriatric Unit'. This allows comprehensive input from multidisciplinary teams (MDT), early discharge planning and follow up and has been recently

shown to improve outcomes. We aimed to assess the effectiveness of the acute geriatric unit in improving outcomes in an Irish setting, compared to conventional care.

Methods: Data pertaining to geriatric medicine admissions in two acute hospitals in Cork was collected prospectively between 1st January 2007 and 31st January 2011. In one hospital patients were admitted to a geographically separate unit with a dedicated MDT (group 1), while in the second hospital, patients were admitted across the general medical wards and received conventional care (group 2). Patients in both groups were admitted under the same geriatric consultant.

Results: There were 1700 patients included: 1350 in group 1 and 350 patients in group 2. The mean age of group 1 was 80.43 versus 81.82 in Group 2. In both groups the most common diagnoses were falls/syncope, acute infections and stroke. Admission Barthel Index (10.4 vs 9.53) and abbreviated mental tests scores (7.53 vs 7.0) were similar in both groups. On discharge 63.8 % of patients in group 1 were discharged home, compared to 43.8 % in group 2. Mean LOS was shorter in those admitted to the acute geriatric unit (13 vs 16.4 days).

Conclusions: Patients admitted to the acute geriatric unit had shorter LOS and were more likely to be discharged home. Early input from a dedicated MDT is likely to be a major contributing factor, highlighting the importance of specialised geriatric units for those admitted acutely.

O7 Assessing the Age-Friendliness of Purpose-Built Retirement Communities

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Background: Recently, there has been exponential growth of the global ‘age-friendly movement’, with numerous public authorities developing policies and plans orientated towards adapting environments to facilitate active ageing. This paper contributes to emerging scientific debates concerning the age-friendliness of contrasting environmental contexts [1, 2] by focussing on purpose-built retirement communities as environments that might be considered age-friendly by default.

Methods: Adopting a new definition of age-friendly communities, we assess the relative age-friendliness of one retirement community in England. Evidence is drawn from the mixed-method Longitudinal study of Ageing in a Retirement Community, encompassing two waves of a resident survey (70 % of eligible residents [n = 122] participated in Wave 1, 63 % [n = 156] in Wave 2), interviews and focus groups with stakeholders involved in staffing, managing and designing the community, and qualitative data collected from residents.

Results: Findings concerning 5 domains of age-friendliness are reported: existence of a strategic and on-going improvement process; physical environment; social environment; supportive infrastructure; respect and social inclusion. Where appropriate, findings are related to items drawn from the WHO (2007) age-friendly cities checklist.

Conclusions: Purpose-built retirement communities have the potential to be age-friendly settings, but might better involve residents in regular cycles of planning, implementation, evaluation and continual improvement if they are to facilitate active ageing. More clarity is needed on how such developments can align with the age-friendly agenda, particularly in terms of their capacity to support ageing in place, the accessibility of the wider neighbourhood, opportunities for intergenerational interactions, and the training of staff to work with older people.

References:

1. Buffel T et al (2012) Ageing in urban environments: developing ‘age-friendly’ cities. *Crit Soc Policy* 32(4):597–617
2. Lui C-W et al (2009) What makes a community age-friendly: a review of international literature. *Aust J Ageing* 28(3):116–122.

O8 Rural Informal Practices, Social Exclusion and Age-Friendliness

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Background: In conceptualising/designing environments for inclusive ageing, rural communities have often been a challenging if not a neglected context. Set amidst information gaps in rural environmental gerontology, this paper explores the role of informal practices, across the state, private, voluntary and family/friend systems, in supporting and engaging older people and addressing social exclusion in rural communities. In doing so, we examine the relevance of the concept of ‘age-friendly’ to rural settings.

Methods: Using focus group data, involving 62 community-stakeholders from ten communities across Ireland and Northern Ireland, we analyse: the four systems and their limitations; and the informal practices that underlie system interactions and older adult supports.

Results: Informal practices underpinned many community responses to supporting older people and arose from collective interdependencies, multiple actor-roles, and positions of need. Such relationships were key to addressing issues of social exclusion and contributed directly to elements of age-friendly community living.

Conclusions: The findings highlight how the meaning of age-friendliness is likely to differ for different kinds of community context. Assessing the age-friendly potential of rural communities may be complicated by the relational dynamics across local systems, and by transformative rural changes. What is necessary in future work for rural areas is a more involved reconstruction of age-friendliness, and its meanings, in such settings.

O9 Great Northern Haven: from Raw Smart Home Data to Health Metrics

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Background: Great Northern Haven (GNH) is a demonstration housing project consisting of 16 purpose built homes, each equipped with a combination of sensor and interactive technology to support Ambient Assisted Living for older adults, promote independent living and support active and healthy ageing. Data have been collected from 15 of the apartments, occupied by older adults, since June 2010. There are a total of 2,240 sensors and actuators throughout the development; the sensors include Passive InfraRed (PIR) sensors to detect motion, window and door sensors to detect openings and closings, electricity and water usage sensors, temperature and brightness sensors. Importantly, Great Northern Haven is not a pilot or trial project; real-world data is being captured from people living in their homes over extended periods.

Methods: Algorithms have been developed to extract daily metrics from the raw smart home data including total daily activity, time spent outside the house, number of room transitions, time in bed, nocturnal restlessness and number and duration of bed exits. Multiple health questionnaire (cognition, depression, loneliness, quality of life, sleep quality) data, repeated at multiple time points, have been collected from the residents.

Results: Comparisons of the extracted metrics were made across all residents and within each resident's data as well as against the longitudinal health questionnaire's data and observations by health care experts. Changes in health status (e.g. depression) may be detected using the ambient data (e.g. total activity and time spent outside the house) through comparisons made against the person's own baseline data.

Conclusions: Ambient sensing is a practical solution which can provide an insight into a person's daily patterns. Longitudinal deviations in these metrics may be used to inform health and wellness interventions.

O10 Sustained Attention Mediates the Relationships between Executive Function, Cognitive Processing Speed and Frailty in the Older Adult Population

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Background: Sustained attention is a fundamental aspect of executive function and frail older adults perform poorly on tasks placing high demands on resources of attention. We investigated the relationships between two models of frailty, and sustained attention in a cognitively intact adult population aged 50+.

Methods: 4,310 participants of The Irish Longitudinal Study on Ageing (TILDA) completed a comprehensive health assessment, <1 % had MMSE scores under 23. A frailty index (FI) was calculated from 40 items, ranging from 0 (no deficits) to 1.0 (40 deficits). Phenotypic frailty or pre-frailty were defined by having ≥ 3 or 1–2 items from low gait speed, low grip strength, low physical activity, unintentional weight loss and exhaustion. Multivariate regression analyses computed associations between pre-frailty, frailty or FI scores and measures from the Sustained Attention to Response Task (SART). Cognitive processing speed and executive function were also measured using the Choice Reaction Time (CRT) test and Colour Trails Test (CTT).

Results: The prevalence of frailty and pre-frailty were 3.3 % (FI score: 0.28, ± 0.12), and 34.1 % (FI score: 0.14, ± 0.10). Declining sustained attention was associated with pre-frailty, frailty and higher FI scores in the 50–64 and 65+ age-groups. This was indexed by slower mean reaction time (RT) ($p < 0.01$), greater RT variability ($p < 0.01$), and more SART errors ($p < 0.01$). Results remained significant ($p < 0.05$) following adjustments for cognitive processing speed, executive function, age and gender. Cognitive processing speed was only correlated with FI in the 50–64 age-group ($p < 0.01$). Female gender was strongly correlated with frailty in both age-groups ($p < 0.001$), but age and executive function were not.

Conclusions: The relationship between frailty, executive function and cognitive processing speed appears to mediate by sustained attention. This suggests a novel, objective and modifiable cognitive marker of progression into frailty.

O11 An Investigation of the Relationship Between Neurocardiovascular Instability and Vision

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Background: Neurocardiovascular instability (NCVI) has been shown to be a risk factor for accelerated neurodegeneration and may be an influencing factor in terms of other end organ damage. Hence we hypothesize there may be a relationship between NCVI and deterioration of visual function.

Methods: Data from the first wave (2009/2011) of The Irish Longitudinal Study on Ageing (TILDA) was used. Of 8,175 participants (nationally representative sample) 5255 underwent a comprehensive health assessment in which objective visual and cardiovascular measures, including finometry data from active stand (AS) were collated. Best available corrected visual acuity was assessed separately in both eyes by means of a LogMar chart. In this study, in establishing baseline characteristics, visual acuity was categorized by means of ICD 10 criteria into “normal” “mild visual loss” and “moderate/severe/profound visual loss/near-blind/blind”, taking global vision to be that of the better eye. To determine whether visual loss was associated with NCVI, linear regression models were created with the outcome measure being LogMar vision in the worst eye. NCVI variables chosen as the primary predictor were: (1) a greater than 10 % deficit/overshoot compared to within 10 % range of baseline systolic blood pressure (bSBP)/at bSBP and (2) a greater than 20 mmHg drop/overshoot, compared to bSBP, at each 10 s (s) timepoint of AS. Confounders controlled for included demographics, self-reported eye diseases, self-report diabetes, objective hypertension and antihypertensives.

Results: Of 5255 participants 76.75 % (4033) had normal vision, 21.24 % (1116) mild visual loss and 2.01 % (106) moderate to profound visual loss. Greater than 10 % overshoot of bSBP at 70, 100 and 110 s post AS was associated with worse vision ($p < 0.05$). A greater than 20 mmHg overshoot at 100 and 110 s was also associated ($p < 0.05$).

Conclusions: Orthostatic hypertension is cross-sectionally associated with worse vision independent of objective hypertension. Time to recovery also seems to be an important factor.

O12 Effects of Centrally Acting Angiotensin Converting Enzyme Inhibitors on the Rate of Cognitive Decline and Activities of Daily Living in Dementia

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Background: There is evidence that anti-hypertensive agents, particularly centrally acting angiotensin converting enzyme inhibitors

(CACE-Is), are associated with reduced rates of cognitive decline. CACE-Is also improve exercise tolerance in functionally impaired older adults with normal cognition, suggesting that they may affect activities of daily living (ADLs). Given this, we compared rates of cognitive and functional decline, in subjects with dementia, receiving CACE-Is, to those not currently treated with CACE-Is (NoCACE-I).

Methods: We accessed data from 1,100 subjects, diagnosed with Alzheimer's Disease, vascular or mixed dementia, from two research databases (the Geriatric Assessment Tool and Doxycycline and Rifampin for Alzheimer's Disease trial databases). Patients were included if baseline and end-point (standardized at 6 months apart) Standardized Mini-Mental State Examination (SMMSE), Quick Mild Cognitive Impairment screen (Qmci), and ADLs (Lawton Scale) scores were available. Patients with depression or other dementia subtypes were excluded. The average 6-month rates of change in scores were compared between subjects receiving CACE-I (perindopril and/or ramipril) and the NoCACE-I group.

Results: There was a significant reduction in the rate of decline in ADL scores, in patients taking CACE-Is ($n = 125$), compared to those who were not (NoCACE-I, $n = 343$), $p = 0.002$. There was also a reduction, of borderline significance, in the rate of decline in Qmci scores, in those taking CACE-Is ($n = 141$) compared to the NoCACE-I group ($n = 375$), $p = 0.056$. When those treated with perindopril ($n = 32$) and ramipril ($n = 93$) were compared to the NoCACE-I group, reductions in the rate of decline in ADL remained significant ($p = 0.004$ and $p = 0.03$ respectively). No significant reductions were seen between subgroups receiving either perindopril or ramipril.

Conclusions: CACE-Is are associated with a reduced rate of functional decline in patients with dementia. A reduced rate of cognitive decline was also demonstrated, although this did not reach significance. There was no difference between choices of CACE-I, suggesting that these are class effects.

O13 Instability of Renal Function in Older Subjects Requiring Anticoagulation for Secondary Prevention of Atrial Fibrillation Following Stroke

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Background: Approximately 30 % of strokes are caused by atrial fibrillation (AF) and its incidence increases significantly after the age of 60. The novel anticoagulants Dabigatran and Rivaroxaban have made the secondary prevention of AF easier as INR surveillance is not necessary but both drugs are partially renally excreted and require dose modification in subjects with reduced kidney function. As Creatinine Clearance is complex to measure routinely, Glomerular Filtration Rate is used instead. Estimates of this vary between methods, especially in older subjects. We performed a study to determine what degree of variation in GFR was experienced by our subjects requiring Secondary Prevention for AF related stroke and whether this was clinically relevant to anticoagulation.

Methods: Kidney function Results in consecutive stroke patients who required anticoagulation for AF were collected and Glomerular Filtration rate calculations were made using estimated MDRD (eGFR) and Cockcroft Gault (cGFR) methods for each subject during

their hospital attendance (2 weeks to 3 months). Prescription guidelines for subjects with renal failure derived from Summaries of Product Characteristics were applied for each drug to determine whether modification of dose would be necessary.

Results: Data on 20 subjects were reviewed [60 % female, median age 79 years (range 65–95 years)]. Individual's eGFR values varied by between 13.8 and 117 % of their lowest recorded values during their attendance and 11.4 and 102.6 % of cGFR values. GFR calculations differed by up to 50 % in either direction (–50 to 48.9 %) depending on method used. 6 subjects (30 %) recommended dose of Dabigatran would have changed during the course of monitoring (using cGFR) compared to 1 subject (5 %) on Rivaroxaban. 3 subjects (15 %) would have been started on different doses of Dabigatran depending on GFR calculation used.

Conclusions: More clarity is necessary in the means used to determine recommended doses of novel anticoagulants in subjects with cardioembolic stroke.

O14 Awareness of Atrial Fibrillation in Ireland and Public Priorities for Treatment

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Background: Atrial fibrillation (AF) is the second most common risk factor for stroke, but often goes undiagnosed. AF affects 3 % of our population, predicted to rise to 4.5 % by 2040. Despite the fact that oral anticoagulation reduces stroke risk by 65 %, many with known AF and a high calculated stroke risk remain untreated. We assessed awareness of AF and its treatment options among the general Irish population.

Methods: Interviews were carried out by IPSOS/MRBI among 1000 adults from a quota controlled sample representative of the Dublin Mid-Leinster Stroke Network population.

Results: The incidence of self-reported AF was 5 % ($n = 47$), of whom 49 % ($n = 23$) were on treatment. Among those who had a previous stroke, 40 % ($n = 4$) reported a diagnosis of AF and 50 % ($n = 5$) had heard of AF. Within the general population 30 % ($n = 300$) had heard of AF but 42 % ($n = 126$) of these could not define AF. Over 65s and social class ABC1 were most likely to have awareness ($p < 0.005$). AF was mentioned as a risk factor for stroke by 28 % ($n = 83$) [33 % women vs 22 % men ($p < 0.005$)].

Regarding stroke prevention, 36 % ($n = 358$) mentioned aspirin, 17 % ($n = 169$) warfarin/heparin and 0.8 % ($n = 8$) novel anticoagulants. If they were hypothetically at increased risk of stroke from AF, 81 % ($n = 813$) would be willing to take medication every day to reduce their risk. The factors considered most important when choosing a drug were efficacy (74 %, $n = 739$) and safety record (68 %, $n = 683$), with side effects (37 %, $n = 360$) and dose frequency (21 %, $n = 210$) considered least important.

Conclusions: Public awareness of AF, particularly as a risk factor for stroke, is poor despite its high prevalence. The risk of cardioembolic stroke in AF can be drastically reduced by oral anticoagulation. Although patient knowledge of anticoagulant therapy is poor, their willingness to accept treatment is high. As such, increased awareness of AF as a risk factor for stroke, both among doctors and patients is a vital step in stroke prevention.

O15 Towards a Smart App for Increasing Awareness and Detection of Atrial Fibrillation in the Community. Translating Findings from the Irish Longitudinal Study on Ageing into Practice

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Background: Atrial Fibrillation (AF) is an age related disorder and a significant risk factor for stroke and dementia. Awareness and treatment of AF is low in Ireland. Early detection is thus paramount. Here we describe work towards translating recent epidemiological findings into easy to use community tools for increasing awareness and detection of AF.

Methods: Data from the Irish Longitudinal Study on Ageing (TILDA) was initially used to develop and validate an automated algorithm for detecting atrial fibrillation. 10 min (3 lead) ECG recording (4 kHz; 16 bit) and beat-to-beat blood pressure records (200 Hz, 12 bit) were obtained from each participant. Each ECG record was screened for AF. A subset of 800 random ECG signals from this database were used (AF = 99/NSR = 701). R-R interval sequences were estimated from the 30 s–5 min epochs. Generalizable time and frequency domain features ($n = 8$) were extracted from both signals and classified using a linear discriminant approach. This was further trained and tested using cross-fold validation. An Android App was subsequently developed to detect pulse rate variations and screen for AF utilising the previously developed algorithm.

Results: The algorithm developed demonstrates a sensitivity of 99 %, specificity of 99.2 %, positive predictive value of 99 % and negative predictive value of 99.2 % when applied to plethysmograph signals. The effect of record duration and sampling frequency demonstrated that algorithm accuracy varies by 0.41 to 4.2 %. In a small sample of participant's mobile phone based atrial fibrillation proved technically feasible and acceptable.

Conclusions: Smart devices for detecting atrial fibrillation are becoming prevalent in the community. It is now possible to utilise smart low cost tools to detect atrial fibrillation in the community with high accuracy. We envisage after future larger scale validation such tools will be used for future screening of atrial fibrillation in the Irish community and raising awareness.

O16 The Role of the Screening Section of a Standardised Diagnostic Interview in Determining the Burden of Mental Illness in Later Life

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Background: Standardised diagnostic instruments often report low levels of mental illness among older adults. Whilst some authors believe that mental disorders are relatively uncommon in later life, others claim that this belief does not correspond with clinical experience. The purpose of this study is to examine the impact of the screening section of a standardised diagnostic interview, the CIDI, in determining the prevalence of 12-month mood and anxiety disorders.

Methods: Participants in N. Ireland, Portugal and Romania were studied ($n = 10,495$). For each participant a longitudinal Guttman complex was used to describe progression through the CIDI in relation to screener and diagnosis for each of the eight disorders studied. This was analysed using multigroup latent class analysis and modelled as a function of age, gender, marital status and urbanicity. Potential for the effect of age to be mediated by self-report of chronic illness and cognitive disability was examined.

Results: An ordinal scale of six latent classes was identified, ranking from those who never passed any of the screening questions to those who received multiple diagnoses. Older adults in N. Ireland and Portugal were more likely not to progress past the screener than adults of other ages, or if they did not to be diagnosed. The indirect effect of age mediated via chronic illness was nullified by the indirect effect of age mediated via cognitive disability in later life.

Conclusions: Why older adults would be less likely than other adults not to have experienced the lifetime scenarios in the screener is unclear. This may be partly due to the demands of lifetime recall compounded by the complexity of some of the questions. Other factors such as social convention and stigma may be important. Further research is required to determine whether this instrument is suitable for measuring mental illness in later life.

O17 The Passive Death Wish and the Frailty Syndrome: An Opportunity for Active Intervention

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Background: A passive death wish (PDW) increases risk for completed suicide. Depression in the presence of co-morbid physical illness is classically difficult to diagnose given overlapping somatic symptoms. Clinicians may benefit from knowledge of a simple screening question to assist targeting of further inquiry, investigation and treatment in older adults at high risk of both depression and physical frailty. We thus sought to investigate a potential relationship between the frailty phenotype and the report of a passive death wish in older adults.

Methods: Cross-sectional analysis of data from The Irish Longitudinal Study on Ageing (TILDA), from participants aged 60 and over, who completed a comprehensive health assessment ($n = 2,440$). Frailty was defined using the Fried Frailty criteria whereby participants are classified as 'robust', 'pre-frail' or 'frail'. PDW was assessed via a single question whereby respondents were asked by a trained interviewer if they had had thoughts that they would rather be dead in the last month.

Results: A PDW was reported by 2.4 % of the population over 60 years. Of those who attended the health assessment 2.3 % were classified as frail. 17.9 % of those classified as frail reported a PDW. Regression analysis found that a PDW was significantly and independently associated with being categorised as frail (RR 2.4; $p = 0.005$) along with increasing age, higher levels of depressive symptoms, smoking and polypharmacy.

Conclusions: In those over 60 years the report of a PDW is associated with increasing risk of classification as frail, independent of depressive symptomatology. If further research were to confirm this association, a single question used to identify a PDW may provide a simple screening strategy in older adults at once highlighting increased risk of depression, physical frailty and suicide.

O18 The Impact of Visual and Hearing Deficits on Cognition: Task-Specific or General?

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Background: Visual and hearing deficit are common in older people. In this study we investigated whether these deficits are associated with negative effects on cognition and whether these effects are substantially limited to tasks relying on the impaired sensory modality or generalised and therefore not dependent on the sensory modality used for testing.

Methods: The sample studied is constituted by The Irish Longitudinal Study on Ageing (TILDA) participants who took part in the Computer Assisted Interview and in the Health Assessment Centre testing (N = 5021). A cross-sectional design was adopted. For statistical analyses multivariate regression models controlling for health and demographic covariates were used to test whether hearing efficiency (subjectively reported) and vision (objectively and subjectively measured) predicted performance in different cognitive tasks (memory, attention, executive function, and reasoning) and in global cognitive measures (Mini Mental State Exam and Montreal Cognitive Assessment).

Results: Participants with poor hearing presented significantly poorer immediate recall of orally presented words than participants with excellent hearing (Coeff. = -0.46) and poorer delayed recall (Coeff. = -0.60); they also showed poorer category fluency (Coeff. = -1.96), that does not require on-line processing of auditory material. Accordingly they reported worse memory (Odds Ratio = 0.23) and more absent-mindedness (Odds Ratio = 2.18). Vision was a significant predictor of visually presented tasks but also of category fluency.

Conclusions: The present findings provide evidence for both modality specific and general associations between cognitive abilities and visual and hearing deficits and have implications for understanding how sensory impairment may lead to cognitive decline and dementia. A perceptual load model constitutes a plausible account for these Results whereby cognitive resources are 'stolen' to achieve effective perceptual processing to detriment of higher level cognitive function with both 'on line' and long terms negative effects on cognition.

O19 Use of the Quick Memory Check, a Caregiver Administered Test, for Cognitive Impairment

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Background: The prevalence of Alzheimer's disease and other dementias is expected to increase as society ages. Modest advances in therapeutic and preventive strategies can result in delayed onset and progression of dementia, significantly reducing the burden of this condition. Effective and efficient screening is key to identifying people with mild cognitive impairment (MCI) and early dementia but is limited by a lack of sensitive screening tools.

Methods: This study aims to examine the accuracy of a caregiver administered cognitive screening test, the Quick Memory Check (QMC), in the diagnosis of dementia and MCI.

Subjects, referred to a memory clinic were prospectively recruited over a 13 month period. The QMC, including basic instructions, was posted prior to clinic appointments and carers and family members were asked to score patients. Subjects were classified, based upon a comprehensive assessment, as having normal cognition, MCI or dementia. The accuracy of the QMC was determined by receiver operating characteristic curves, compared to the Standardised Mini-Mental State Examination (SMMSE), the Quick Mild Cognitive impairment screen (Qmci) and the Montreal Cognitive Assessment (MoCA).

Results: A total of 85 participants, 50 females and 34 males, were included. The QMC had good to excellent accuracy for identifying cognitive impairment (either MCI or dementia), area under the curve (AUC) of 0.83, and compared well to the Qmci (0.92), MoCA (0.92) and SMMSE (0.85). The CMC also demonstrated reasonable accuracy in differentiating normal cognition from MCI, AUC of 0.66, compared to 0.72 for the SMMSE.

Conclusions: The QMC, administered by untrained raters, in an informal setting, compared favourably to established cognitive screening tests administered by trained raters. This study demonstrates the potential that caregiver administered screening tests have for identifying cognitive impairment. It raises the possibility of using such tests to improve the efficiency of busy memory clinics and screen community dwelling older adults for cognitive impairment.

O20 Which Short Cognitive Test Might Be Suitable for Serial Testing to Detect Delirium in Hospitalised Older People?

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Background: Delirium is an acute, highly prevalent neuropsychiatric disorder, whose symptoms typically fluctuate over time. Diagnosis is made by formal neurocognitive assessment, which can be lengthy. Serial use of a simple short screening tool in high risk populations may facilitate early diagnosis, however it remains unclear which test is most sensitive. Furthermore, the extent to which non-delirious patients experience cognitive fluctuations during admission has not been described. This study aimed to identify a simple cognitive test which remains consistent with serial testing in non-delirious patients.

Methods: This study was nested within a prospective cohort study of incident delirium in older medical inpatients. Patients who hadn't delirium on admission were assessed twice daily for up to 7 days using four standardised tests: 6 Item Cognitive Impairment Test (6-CIT), Spatial Span Forwards (SSF), Clockdrawing Test (CDT), Overlapping Pentagon Drawing Test (OPDT). Test Results were analysed to determine the percentage fluctuation over time in each patient.

Results: Twenty-five patients (male, n = 15; female, n = 10) of mean age (SD) 80.48 years (5.87) were recruited. Four of these became delirious during the study. The 6-CIT test had least intra-patient variation over time in non-delirious patients. The other three tests show wide test-retest variation. There was a correlation (Spearman's rho) between baseline 6-CIT score and delirium occurrence, $r = -0.406$, $p = 0.043$, $n = 25$. The baseline 6-CIT combined with pentagon-drawing, using the Wilcoxon test, strongly predicted

delirium, $p = 0.0001$, $n = 25$. In contrast, SSF and CDT baseline scores showed no correlation with delirium.

Conclusions: Of the four tests studied, 6 CIT showed most promise as a potential delirium screening tool as it was very stable on test–retest over time in non-delirious patients. The baseline 6-CIT score also had the strongest (negative) correlation with delirium occurrence. Further work is now needed to determine whether sudden fluctuations in 6-CIT score can predict delirium onset.

O21 Do the NICE Delirium Screening Criteria Detect Delirium?

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Background: Delirium is highly prevalent, occurring in 20 % of hospital inpatients and is independently associated with adverse outcomes. Diagnosis is challenging and requires training and experience. In 2010, NICE Guidelines for the diagnosis, prevention and management of delirium recommended that all at risk inpatients should be screened daily for delirium by monitoring for changes in cognitive and physical function; perception; and social behaviour. Although this process was advocated by a consensus panel of experts, it has not yet been validated in the clinical setting. The aim of our study was to assess the efficacy of these recommendations in delirium detection in older medical inpatients.

Methods: This study was part of a prospective study of delirium in older medical inpatients. Recruited patients were assessed daily using the Delirium Rating Scale - Revised '98 (DRS-R98) by an experienced rater. An independent, blinded team of researchers surveyed the relevant nursing staff daily using a questionnaire based on the NICE recommendations for delirium screening. Sensitivities and specificities were calculated from 2×2 tables with confidence intervals testing significance at 95 %.

Results: There were 430 dual assessments performed in 110 patients. The median age was 80 years (IQR 76–85) and 53.6 % were male. Delirium occurred in 24 patients (21.8 %), 13 (54.2 %) of whom were simultaneously detected using the NICE-based questionnaire. Of the non-delirious patients, 48.8 % ($n = 42$) screened positive on at least one assessment. Looking at all 430 assessments, the NICE-based questionnaire had a sensitivity of 42.3 % (95 % CI 30.6–54.6) and a specificity of 78.8 % (95 % CI 74.2–82.9) in the detection of delirium.

Conclusions: Our study illustrates that the NICE recommendations for delirium screening misses approximately one-half of delirium cases, highlighting the challenges of accurate delirium detection in our hospitals. Further work is needed to identify a short, simple, accurate delirium screening test to facilitate early diagnosis.

O22 Patient Absconson from a Geriatric Ward

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Background: Patient absconson is a high risk event and common in many healthcare settings. Few studies explore this issue, particularly

in elderly populations. We studied cases of absconson in older patients on a geriatric ward.

Methods: Case-notes and risk management data relating to absconsions from a geriatric ward between 2005 and 2012 were reviewed retrospectively. For the purposes of this study we included only patients over the age of 65. We reviewed circumstances relating to absconson, possible risk factors for absconson, actions taken and outcomes.

Results: There were 35 incidences of absconson, representing 28 patients. Sixteen (57 %) were over the age of 65 (four women, twelve men, mean age 72.8 years), with twenty incidences of absconson in this group. Five patients (31 %) had a previous history of absconson or were considered at risk. Thirteen (81 %) had a diagnosis of a cognitive disorder, two (13 %) a history of psychiatric illness, and two (13 %) a documented diagnosis of delirium. Two (13 %) were documented as requiring a 1:1 special; both were in place. Three (19 %) absconded more than once. Thirteen (81 %) left the ward, three (19 %) attempted to leave the ward. Of those who left the ward, eight (62 %) left hospital grounds, two of whom (25 %) did not return to hospital. Of patients with documented cognitive disorders, five (38 %) left hospital grounds. Incident reports were filed in all cases. Security was called in nine (56 %) cases. Absconsions were documented in medical notes in three cases (15 %).

Conclusions: Most incidences of absconson of older patients occurred in association with cognitive disorders. In over a third of these cases patients left the hospital, presenting a serious risk to already vulnerable patients. This highlights the need to implement a more structured framework to manage absconsions, focusing on identifying high risk patients, improving prediction and prevention.

O23 Characterising Falls Risk Factors and Health Care Utilisation in Patients With a Low Trauma Wrist Fracture Attending a Physiotherapy Clinic

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Background: Ireland's population is ageing and falls continue to be the most common cause of injury for those aged over 65. International guidelines recommend screening of low-risk falls patients in order to prevent significant impairments. The aim of this study was to characterise multifactorial falls risk factors in subjects who had sustained a low trauma wrist fracture and identify their health care utilisation.

Methods: This was a case–control, observational study, incorporating a comprehensive multi-factorial falls assessment on 41 consecutive adults between 55 and 80 years who sustained a low trauma wrist fracture and were referred for outpatient physiotherapy. They were compared to 41 healthy controls.

Results: The mean age of the female subjects was 68.19 ± 6.71 and the male subjects were 61.0 ± 6.75 . There were statistically significant differences between the subjects and the controls in the TUG ($p < 0.002$), M-CTSIB ($p < 0.001$), knee flexor strength (right: $p < 0.006$, left: $p < 0.019$) and cognition ($p < 0.009$). There were higher levels of healthcare demands and medical interventions (referral to general practitioner $p < 0.001$; geriatrician $p < 0.04$) and for further physiotherapy ($p < 0.001$) for the subjects following a low trauma wrist fracture.

Conclusions: This study identified the presence of both intrinsic and extrinsic falls risk factors in subjects who sustained a low-trauma wrist fracture. Furthermore, 92 % of the subjects required an intervention which they would not routinely have received. The findings of

this study highlight the need for a targeted falls prevention screening tool and intervention programmes for patients over 55 years of age who sustain a fragility fracture.

O24 Data from the Irish Hip Fracture Database, IHFD ‘Better, safer care’

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Background: Every year, in Ireland, approx. 3000 people are hospitalised with a hip fracture.

Inpatient cost is estimated at €35 million. The IHFD is a collaborative venture backed by the Irish Gerontological Society and the Irish Institute for Trauma and Orthopaedic Surgery.

In 2012, the IHFD received national HSE support through the Quality and Patient Safety Directorate and IHFD data is now collected on a web based capture system overseen by ESRI/HIPE.

The aim is to establish a prospective database of all hip fractures to monitor standards of care against International recommendations and use continuous comparative data to create a drive for sustained improvements in clinical standards and cost effectiveness.

Methods: Currently, 14 trauma and orthopaedic units are collecting and entering data.

Data is entered through a web based capture system accessed locally through the HIPE portal.

The IHFD contains 610 entries for 2012 and 294 for 2013.

Results: 2013. Median los *Update on National Clinical Programme* 16.5 days. 29.6 % were male. 40.7 % of patients were 80–89. 64 % were walking unaided prior to fracture. 26 % of all patients are meeting the standard of transfer from ED to ward in <4 h. 1 patient had formal pre-op geriatric assessment. Median time to surgery was 24.74 h. Hospital transfers median time was 45.43 h. 66 % of patients had surgery within 48 h.

38 % of patients had intertrochanteric fractures. Most had DHS. 55 % had spinal anaesthesia.

Conclusions: The IHFD is fundamental to delivering better, safer care. Delivering better care at lower cost is challenging but achievable by the combination of: Care standards and audit (IHFD) to monitor implementation of these standards and the impact on hip fracture care, outcomes and cost.

By end of 2013: Achieve 100 % coverage, site visits, establish national quality indicators of care.

O25 Prevalence of Fractures and Fracture Prevention in Community Dwelling Older Adults

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Background: It is acknowledged that fracture prevention is one of the key aims in bone health and osteoporosis management. Once a

fracture has occurred it is imperative comprehensive assessment and initiation of appropriate lifestyle and pharmacological measures to reduce risk of further fracture takes place.

Methods: Data analysis for this study was obtained from participants in the TUDA (Trinity, University of Ulster, Department of Agriculture) cross sectional study. Participants were prospectively recruited community dwelling adults over 60 years attending our Bone Health Unit for DXA (bone densitometry measurement). Those included had a T score of –1 or less i.e. osteopenia or osteoporosis. A detailed assessment including medical history, fracture history, medication use as well as biochemical tests of serum 25(OH) Vit D and serum PTH was carried out.

Results: 1344 subjects attended the bone cohort. Of these 810 (60 %) had a fracture. Mean age 71.6 ± 7.7 years. Mean T score spine -2.27 ± 1.34 , mean T score hip -1.97 ± 0.929 . Significant fragility fractures of hip and vertebral types made up 12.7 and 35 % of all fractures respectively. Both these groups were also older at 75.8 and 74.2 years. Of concern 396 (49 %) fracture subjects were not on any pharmacological treatment for osteoporosis though a majority of the hip and vertebral fracture subjects were. A further 240 (30 %) were not on Calcium/Vitamin D supplement.

Conclusions: Fracture prevalence is high in this group of community dwelling subjects with T scores in the osteopenic range. This does not necessarily lead to treatment. This significant risk of fracture before progression to the WHO definition of osteoporosis and T scores < –2.5 needs to be highlighted to help prevent further fracture

O26 Characteristics of the Bone Cohort of TUDA

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Background: The Trinity University of Ulster Department of Agriculture study (TUDA) is a cross sectional study aiming to create a phenotype and genotype database for 3 community dwelling cohorts over 60 years of age. The study was carried out between January 2009 and May 2012.

Methods: Participants attending the bone cohort in TUDA were prospectively recruited from patients attending our Bone Health Service for DXA. Patients included were those over 60 years who had a T score of –1 or less i.e. osteopenia or osteoporosis. All participants underwent a single assessment lasting about 70 min—this included an interview recording medical history, medications, falls and fracture history as well as assessments such as “Timed Up and Go” and blood tests including serum 25 hydroxyvitamin D, parathyroid hormone levels and biochemical markers of bone turnover.

Results: 1344 subjects participated in this part of TUDA. Average age 70.7 ± 8.6 years, 1128 females and 216 males. T score of spine was -2.19 ± 1.31 and -1.85 ± 0.94 at the hip consistent with moderate to severe osteopenia. 66 % were on a calcium and vitamin D supplement or Vitamin D supplement alone while 49 % were on pharmacological treatment for osteoporosis. This was reflected in an excellent mean serum 25(OH) vitamin D $73.3 \text{ nmol/L} \pm 22.84$. Serum PTH was within normal limits 41.31 ± 22.94 . Analysis of bone markers in those on various treatments versus those who weren’t has also been carried out.

Bisphosphonates and combined calcium + vitamin D supplement users show significant suppression of the bone turnover markers CTX, PINP and osteocalcin in keeping with other studies. ($P < 0.001$)

Conclusions: We now aim to prospectively review fracture incidence and analyse factors influencing why patients may not have responded to osteoporosis treatment in this study group focusing on compliance and their medical profile.

O27 A Platform for Research on Aging: The Canadian Longitudinal Study on Aging

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Background: The Canadian Longitudinal Study on Aging (CLSA) is a large, long-term study that will follow 50,000 Canadian men and women for 20 years. The study collects information on the changing biological, medical, psychological, social, and economic aspects of people's lives. These factors are studied in order to understand how, individually and in combination, they have an impact in maintaining health and in the development of disease and disability as people age. Here we report on: (1) CLSA progress and milestones achieved; (2) key methodological aspects of recruitment and sampling, outcomes ascertainment, and biobanking; and (3) the scope and potential of the CLSA as an international platform for research on aging.

Methods: Participants aged 45–85 years at enrolment are followed every 3 years. All 50,000 participants provide information through interviews administered by telephone and/or in person; 30,000 also undergo in-depth assessments at a Data Collection Site in one of eleven academic centres across Canada. For all 50,000 CLSA participants, data will be linked to existing health care administrative databases, mortality files, disease registries, and environmental databases.

Results: The CLSA has engaged in a number of “firsts” in Canada, including establishing a coordinated approach to the Research Ethics Board approval process for a national multi-site observational study. Baseline data collection has been completed for the Tracking (20,000) cohort. Recruitment and baseline data collection for the Comprehensive (30,000) cohort takes place over 3 years, and will be complete in 2015. The first wave of Tracking data will be available to researchers in early 2014.

Conclusions: Over the next 20 years, the CLSA will generate a wealth of information that will contribute to the advancement of the science of aging and to policy development. Its large sample, multi-disciplinary focus, and longitudinal design will provide research opportunities to investigate aging, from cells to society.

O28 Ageing Research and Philanthropy in Ireland: An Overview

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Background: Scientific research is an important driver of innovation in public policy and in the development and improvement of services and products within the ageing sector, whilst investment in research is

crucial to building research capacity [1]. Until relatively recently, there has been little robust evidence, or information on the experience of ageing in Ireland, to inform appropriate planning and policy development.

Methods: This study was undertaken to assess the overall impact of philanthropic research funding in the ageing sector in Ireland. Data collection is ongoing and has involved a number of key activities including: a comprehensive documentary analysis; a series of site visits and one-to-one interviews with key informants (including decision-makers); stakeholder workshops; case-studies; and a postal survey of senior researchers.

Results: Large scale investment in research has been pivotal to the development of specialist academic and clinical research centres that optimal environments for undertaking world class research and for training the next cadre of ageing researchers. The infrastructure for education and training at under- and post-graduate levels has improved considerably across a number of Irish institutions. Inter-disciplinary and inter-institutional research has also been enhanced through a number of novel collaborative projects.

Conclusions: Philanthropic investment has been critical in supporting the expansion of ageing-related research capability and attendant infrastructure. The multi-disciplinary dimension of ageing is also reflected in the wide range of projects supported. All of these developments have helped to generate robust, high quality evidence to help inform practice and procedures as well as high level decision making and policy development and implementation.

Reference:

1. Futurage (2011) A road map for European ageing research. <http://www.futurage.group.shef.ac.uk>

O29 ‘Knowing More’ and ‘Knowing Better’—Valuing Older People’s Knowledge and Expertise As Peer Researchers in a Study Exploring Understandings of Elder Abuse

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Background: Traditional approaches to generating knowledge result in us ‘knowing more’ about an issue, but do we necessarily ‘know better’? To date definitions and responses to elder abuse have been mainly professionally driven. This paper reflects on how the inclusion of older people as peer researchers in a study that explored older people's understanding of elder abuse, constructed meanings outside of ‘professional’ typification of elder abuse.

Methods: The design of the study was participatory, qualitative, multi-disciplinary with a cross-border all Ireland dimension. Fifty-eight older adults participated in eight focus groups. Four older people volunteered as peer researchers working in collaboration with the research team. The older researchers took on aspects of research design, data collection through focus groups, data analysis and dissemination.

Results: Engaging peer researchers in this study reframed the research. This came about through peer researcher input at different stages of the research process. Firstly, in the way data was collected. Instead of using vignettes in focus group discussions as in the original proposal, and using a concept based on professionally driven categories of elder abuse, data was collected using open ended questions, devised by the peer researchers, which asked older people what they saw as elder abuse. Secondly, peer researchers, in co-facilitating focus groups, were able to draw out participants on the sensitive topic of elder abuse. Thirdly,

having lived through the same times, peer researchers' interpretation of the data added context and depth to the analysis.

Conclusions: The evidence from this study suggests that older people's knowledge built up over a lifetime of experiences and professional knowledge gleaned from research and practice are two equally valid sources of knowledge, complementing each other and in this study gave a deeper understanding of elder abuse.

O30 Generational Observing: Re-Imagining Intergenerational Relations

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Background: Although intergenerational solidarity/conflict is at the centre of discourses on fairness in ageing societies, we have few conceptual tools for understanding how people think of other generations. Biggs et al. [1] define 'generational intelligence' as 'an ability to reflect and act, which draws on an understanding of one's own and others' life-course, family and social history'. This paper contributes to the literature on processes underlying perceptions and experiences of intergenerational relations.

Methods: We conducted a Grounded Theory study involving in-depth interviews with 100 women and men (aged 18–102) living in Ireland in 2011–2012. Generational observing is a concept that emerged from the Changing Generations data through the iterative process of inductive and abductive analysis.

Results: Generational observing denotes a process of witnessing the practices of younger/older generations, and adjusting one's expectations of intergenerational solidarity in the light of personal interpretations of these practices. Generational observations are strongly conditioned by material circumstances. Higher socioeconomic groups evince behaviours and attitudes that are primarily trained towards generational independence. In contrast, generational interdependence is widely expected and manifest in the attitudes and behaviours of people from lower socioeconomic groups. Differentiation in family-level solidarities by social class is particularly evident in (actual and anticipated) sources of support in old age: older adults in higher socioeconomic groups prepare to meet costs of care through their savings and assets, whereas older adults in lower socioeconomic groups tend to have higher expectations of family care.

Conclusions: Generational observing shapes understandings and practices of intergenerational solidarity at family level. Generational observing is evident in how individuals perceive other age groups in society, and shapes their understandings of (in)justice in generational distribution of resources.

References:

1. Biggs S, Haapala I, Lowenstein A (2011) Exploring generational intelligence as a model for examining the process of intergenerational relationships. *Ageing Soc* 31:1107–1124

O31 Low Spatial Frequency Contrast Sensitivity but not Visual Acuity is Associated with Spatial Gait Parameters in Older Adults

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Background: Thirty percent of older adults have a gait disorder associated with falls and reduced mobility. The relationship between vision and gait has not been conclusively confirmed with conflicting Results reported by previous studies. The aim of this paper was to investigate the relationship between measures of visual acuity, contrast sensitivity and spatial frequency sub-bands and gait in older adults.

Methods: Participants were recruited as part of the Irish Longitudinal Study on Ageing. Visual acuity was measured using LogMAR charts and contrast sensitivity using the Functional Acuity Contrast Test across distinct spatial frequencies (1.5–18 cpd). Gait was assessed using the GAITRite system to capture gait speed (m/s), cadence (spm), stride length (m) and double support phase (%). Multivariate associations were examined using linear regression and all analysis was performed after reweighting for non-response and controlling for potential covariates: age, gender, education, body mass index, number of medications, chronic conditions, cognition, diseases which effect vision and mental health.

Results: Data from 4641 participants was available. In the multivariate models, better contrast sensitivity at 1.5 cpd (low spatial frequency) was found to be independently associated with faster gait speed (0.03, 95 % CI: 0.001:0.05, $p < 0.05$), increased stride length (0.03, 95 % CI: 0.01:0.05, $p < 0.01$) and reduced double support phase (−0.006, 95 % CI: −0.01:0, $p < 0.05$). Visual acuity was not independently associated with any of the gait variables considered ($p > 0.05$).

Conclusions: Better low spatial frequency contrast sensitivity but not visual acuity, is independently associated with improved gait performance. This is intuitively satisfying as low frequency contrast sensitivity has a role in object detection and spatial awareness. Visual acuity assessment is currently included in the AGS/BGS guidelines for screening and assessment of falls in community dwelling adults. Future studies should examine the role of contrast sensitivity in routine geriatric assessment of gait disturbances especially in the context of falls.

O32 Is Vitamin D Deficiency Being Adequately Treated in Patients with Osteoporosis?

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Background: It is well established that Vitamin D is essential for the regulation of serum calcium, the normal mineralisation of bones and the prevention of fractures. Vitamin D replacement is part of the routine treatment of osteoporosis. We investigated if a population of known osteoporotic patients who have sustained a fragility fracture have been adequately treated for Vitamin D deficiency.

Methods: All patients admitted to a University Hospital with a fractured neck of femur between July 2011 and June 2012 were offered bone health screening by a newly established geriatric liaison service which included testing of 25-(OH)D levels. A database of patient's past medical history and investigations was maintained. Data

was analysed to establish if there was a difference in 25-(OH)D levels between those with and without a prior diagnosis of osteoporosis.

Results: 206 patients were admitted post fractured neck of femur. Of these, 31 had a previous diagnosis of osteoporosis. The median 25-(OH)D level in those with a previous diagnosis was 41 nmol/l. 77.4 % were Vitamin D insufficient or deficient. The median 25-(OH)D level in those with no prior diagnosis of osteoporosis was 21.5 nmol/l. There was a significant difference in median 25-(OH)D level between the 2 groups ($p = 0.007$).

Conclusions: While 25-(OH)D levels are significantly higher in those with known previous osteoporosis, the majority of patients still had insufficient levels. This suggests that current Vitamin D replacement strategies are inadequate and more stringent regimes are required to prevent this high risk population from re-presenting with significant fractures.

O33 Implementation of Care Standards for Hip Fracture Care in an Irish Hospital: Results from the National Hip Fracture Database

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Background: Each year in Ireland 3000 older patients sustain a hip fracture resulting in significant morbidity and mortality. Additionally the economic cost of hip fracture care estimated at €35 million is set to increase with the ageing population. There is clear evidence that organised hip fracture care provides better quality care. Consequently the Irish Hip Fracture Database was set up in 2008 to audit standards of care. We aimed to examine how our hospital performed in achieving these quality indicators.

Methods: We retrospectively examined the implementation of the six standards of care for hip fracture patients according to the BOA-BGS Blue Book Guidelines. Data pertaining to all hip fracture admission aged ≥ 65 years admitted over a 9 month period was extracted from the National Hip Fracture Database online portal.

Results: 159 patients (66 % female) were included in the analysis; median (IQR) age 79 (75–86) years. The median time to surgery was 46 (21–54) h. Surgical delay was mostly due to lack of theatre space (60 %) and awaiting pre-operative investigations (25 %). 98 patients (62 %) were assessed preoperatively by a geriatrician with all 159 patients receiving geriatric review and assessed for falls risk factors during their admission. Bone protection was addressed in 100 % of patients. No patients met the target of admission to orthopaedic ward within 4 h; 9 (6.8 %) patients developed pressure ulcers in hospital. 74 (47 %) patients had their surgery performed by a registrar only. The median length of stay was 10(7–17) days.

Conclusions: Considerable improvements in quality of hip fracture care in our hospital are required to meet international standards. Providing a high quality of hip fracture care in Ireland will deliver significant improvement in older patients' morbidity and mortality in addition to reducing health expenditure through reduced length of hospital stay and improved functional outcomes for patients.

O34 Does the CHA2DS2VASc Score Predict Falls?

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Background: Among patients receiving antithrombotic therapy for stroke prevention, an important, modifiable, contributor to the risk of major bleeding are falls. A history of falls is also frequently cited as a reason for not prescribing antithrombotic therapy. Therefore, understanding the competing risks of stroke and falls may inform decision-making on antithrombotic therapy. In this study, we explored whether the CHA2DS2VASc score, a scale used widely to guide decisions on antithrombotic therapy in patients with atrial fibrillation, also provides information of risk of falls.

Methods: Cross-sectional cohort of 3,499 older adults in General Practice, and included in the CLARITY study. CHA2DS2VASc score was calculated as a composite score of: congestive heart failure, hypertension (1), age (65–74 years-1, ≥ 75 years, 2), diabetes (1), stroke/TIA (2), vascular disease (1) and female sex (1). We used logistic regression to determine the association between CHA2DS2VASc score and history of falls in the preceding 12 months.

Results: Mean age in the entire cohort was 66.2 (± 10.3) years and 45.6 % were male. A fall in the preceding year was reported in 465 (16.6 %) overall. The CHA2DS2VASc score was associated with risk of falls (OR 1.29; 95 % CI 1.18–1.41 per category increase in score). The prevalence of falls was 12.9 % (57/440) in those with a CHA2DS2VASc score 1, 14.0 % (150/1069) in those with score 2, 16.5 % (138/832) with score 3, 26.1 % (89/341) with score 4, and 26.0 % (31/119) of those with a score 5 or greater. Among individual components of the score, age ($p < 0.001$), hypertension ($p = 0.018$), diabetes ($p = 0.018$), prior history of vascular disease ($p = 0.001$) and female gender ($p = 0.01$) were the strongest predictors of falls.

Conclusions: The CHA2DS2VASc score, used widely in clinical practice to quantify risk of stroke, also provides information on falls risk. The observation that both the risk of stroke and falls increase with higher CHA2DS2VASc scores may help refine risk-benefit decisions on antithrombotic therapy in high-risk patients with atrial fibrillation.

O35 Correlates of Vitamin D in Older Irish Adults

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Background: We aimed to investigate correlates of serum 25 hydroxyvitamin D [25(OH)D] in community dwelling older Irish adults.

Methods: Study subjects were participants of the cognitive cohort in the TUDA (Trinity, University of Ulster, Department of Agriculture) study and were recruited from the outpatient services in the Gerontology Department at a large Dublin hospital. All subjects were aged over 60 and underwent a detailed assessment which included recording of demographic and psychosocial factors, medication and supplement use, and physical measurements (Timed up and Go, TUG). Those with an MMSE of less than 24 were excluded in our analysis as we aimed to look at the relationship in non-dementia

subjects. Serum 25(OH)D was measured by LCMS (Liquid Chromatography Mass Spectroscopy).

Results: 1330 participants met the inclusion criteria, Mean age was 80.4 ± 6.8 years and 66.6 % were female. 700 subjects were taking vitamin D supplements of which 81 % was prescribed vitamin D and calcium. 73.6 % of those who were not supplemented were vitamin D deficient (<50 nmol/l). The mean difference in serum 25(OH)D between supplemented and non-supplemented subjects was 33.2 nmol/l ($p < 0.001$) and was similar across all seasons. There was a significant seasonal variation in 25(OH)D in both groups ($P < 0.001$) with peak and trough levels in the month of August and March respectively. Predictors of higher serum 25(OH)D status in a linear regression model were supplement use ($P < 0.0001$) female gender ($P < 0.0001$), autumn season ($p = 0.001$) and preference for sun exposure when outside ($p = 0.002$), while negative correlates were body mass index ($p = 0.03$) and TUG ($P < 0.001$), [$r^2 = 0.33$].

Conclusions: Vitamin D deficiency is very prevalent affecting nearly three quarters of non-supplemented older Irish adults attending a geriatric outpatient clinic. Supplement use was associated with a significantly higher serum 25(OH)D but did not appear to attenuate the seasonal variation.

O36 Fair Deal Applications in A Small Acute Irish Hospital—Who? What? How? When? Where? Why?

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Background: The Nursing Home Support Scheme (Fair Deal) has been operational in Ireland since 2009, yet few data are available about how applications are processed and progressed in Irish hospitals. We examined Fair Deal applicants in a small, acute hospital.

Methods: A database containing data from all patients deemed to require continuing care following comprehensive geriatric assessment was created for the calendar year 2012. The following parameters were assessed: age; gender; principal diagnosis; duration of delayed discharge; who completed the application; preferred and actual discharge destinations.

Results: 87 patients (47 female) were deemed to require continuing care. Mean age was 87 years (62–101 years). The principal diagnoses were dementia 48 %, stroke 13 %, falls 6 %, cancer 6 % and other multiple comorbidities 26 %. In 56 % of cases, a son or daughter completed the application. Others to complete the task were niece/nephew 15 %, sibling 10 %, spouse 5 %, cousin 3 %, friend 3 %, solicitor 2 %, self 1 % and discharge coordinator 1 %. The patient's preferred discharge destination was a public care institution in 77 % of cases. Only 43 % were ultimately discharged to their destination of choice. There were no appeals of the cost of care. On discharge, 29 % entered public care, 38 % private care, 2 % palliative care, 9 % died and 22 % went home (of whom over half subsequently died or entered a care facility). 10 % remain alive at home. The mean duration of delayed discharge was 31 days (2–116) resulting in the loss of 15 % of total available bed days.

Conclusions: Most Fair Deal applicants suffer from dementia. Half of applications are made by offspring, but a heterogeneous group make the remainder. The process is time-consuming and resulted in the loss of 15 % of bed days available to the hospital. A significant number of applicants actually return home, but their subsequent outcomes remain poor.

O37 Appropriateness of Continuing Care Placement—A Prospective Study

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Background: In 2011, 25 % of nursing home residents were classified as either low or medium dependency, compared to 28 % in 2004. The Minister for Health has proposed that with adequate resources, a proportion of these 5,200 older persons could be maintained at home. In 2011, the Programme for Government pledged to increase the availability of homecare packages (HCP) and increase home help (HH) hours to help maintain older people in the community. Since then the number of home help hours have been reduced by over 1 million hours.

Methods: We carried out a 3-month prospective study examining all referrals for continuing care in Cork city to assess the impact that this reduction in HH hours and cuts to home care packages has had on maintaining older people at home. We compared this study to a similar study carried out in 2004.

Results: 102 people were referred for long term care (LTC) between October and December 2012 inclusive. The mean age was 83.12 ± 7.59 . The majority of patients (over 70 %) had a diagnosis of stroke or dementia. 31 (30 %) referrals could have been avoided if the appropriate community services were available. This is an increase of 4 % since 2004. An additional 8 (8 %) patients could have waited at home for LTC placement. HCP, increased HH input, night time sitters and regular respite were identified as the most valuable services. 3 (3 %) people would have required alternate housing to stay at home. Placement was not avoided in any case as these services were not available.

Conclusions: Nearly one-third of long-term care placements to low and medium dependency beds could be avoided if adequate services were available. This has not changed since 2004. This has major socioeconomic implications for an ageing population where an ever-increasing number will require assessment for LTC.

O38 “Why Can’t Older People Die in Nursing Homes Anymore?” Hospital Staff Perceptions of Older People and Nursing Home Residents as Acute Hospital Service Users

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Background: “Why can’t older people die in nursing homes (NH) anymore?” This consultant physician’s comment overheard in a large teaching hospital’s corridor triggered the question: how do hospital staff view older people and NH residents as acute hospital service users? In 2011, there were 464,311 admissions to Irish public acute hospitals; 35 % were older (65 years plus). Only 1.8 % of all admissions came from “long stay accommodation” and only 11.2 % of these died during hospitalisation. Local figures show approximately 5 % of those aged >65 years die during a hospital admission. There are approximately 30,000 long term care (LTC) residents in

Ireland. International figures suggest 15–20 % of LTC residents ultimately die in hospital rather than their familiar LTC residence.

Methods: A convenience sample of 177 hospital staff in three Cork hospitals were surveyed over a 24-h period, as follows: (a) “What percentage of people >65 years admitted acutely die during the admission episode?”, (b) “What percentage of patients over 65 years who die in hospital had come from a NH?” and (c) “What percentage of NH residents die in hospital rather than in the nursing home?”

Results: Responses varied widely, even within disciplines. Overall, staff felt 20 % (median, Interquartile range (IQR) 8–30 %) of older people die during an acute admission, four times the actual figure, and 30 % (median, IQR 10–50 %) of these deaths were of people admitted from LTC (three times too high). Staff estimated a median of 30 % (IQR 10–50 %) of NH residents die in hospital, almost twice the likely figure.

Conclusions: There is a common, unfounded perception amongst hospital staff that significant proportions of NH residents die in hospital. Hospital staff also vastly overestimated the in-hospital mortality rates of older patients. These erroneous beliefs may affect the care given to older people in hospital.

O39 Surveillance Demonstrates How Risk Factors, Healthcare-Associated Infections and Antimicrobial Use are Prevalent in Residents of Irish Long-Term Care Facilities

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Background: The 2011 Census of Ireland recorded 21,769 nursing home residents aged >65 years. The elderly are vulnerable to infection for multiple reasons including; chronic illness, impaired immunity, integument and indwelling medical device use. Interval prevalence surveys are a useful method to capture the burden of risk factors, healthcare-associated infections (HCAI) and antimicrobial use in long-term care facilities (LTCF).

Methods: In 2010, Irish LTCF participated in a voluntary anonymous prevalence survey and the survey was repeated in 2011. The survey was carried out according to a protocol and HCAI were defined according to the McGeer Criteria, with the addition of physician diagnosis of infection as a criterion for all infection categories.

Results: Between 2010 and 2011, the number of participating LTCF increased from 69 to 108, with an increase in residents surveyed from 4,170 to 5,922 and an increase in the proportion aged over 85 years from 34.3 to 39.3 %. Resident dependency indicators were broadly similar for both surveys. In 2011, impaired mobility was reported for 49.7 %, incontinence for 59 %, disorientation for 48.6 %, indwelling urinary catheters for 6 % and pressure sores for 3.7 % of all residents surveyed. The HCAI prevalence increased from 3.6 % in 2010 to 4.1 % in 2011 and residents with HCAI tended to be older, to have an indwelling medical device or recent surgery. The antimicrobial use prevalence remained unchanged over 2 years at 10 %, with the proportion of all antimicrobials prescribed for prophylaxis at 42 % in 2010 and 39 % in 2011.

Conclusions: These surveys demonstrate potentially modifiable risk factors for HCAI, particularly those due to antimicrobial resistant organisms. Further work is required to address these important resident safety issues and the survey is to be repeated in 2013.

O40 Prevalence and Types of Elder Abuse in Residential Care Facilities in Ireland

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Background: Infirmary and dependence on others are risk factors for elder abuse. Evidence from several countries, including Ireland, indicates that older people in residential care experience abuse and neglect from care staff. This paper reports on some key findings from a national prevalence study of abuse and neglect of older people in residential care in Ireland.

Methods: A national survey of nursing and care staff in residential care settings for older people in Ireland was completed in 2012. A clustered random sample of 64 public and private residential care homes was generated and 1,316 registered nurses and healthcare assistants from these care facilities were surveyed. Self-report data were collected using the Conflicts Tactics Scale (CTS) to measure self-reported conflicts and interactions between staff and residents.

Results: Overall, 57.6 % of respondents reported that they had observed one or more neglectful acts by other staff members and over a quarter (27 %) reported that they themselves had engaged in at least one neglectful act. A quarter observed psychological abuse of residents by other staff and eight per cent reported that they themselves had perpetrated psychological abuse, such as shouting at a resident in anger. Physical abuse, such as restraining a resident, was observed by 11.7 % of respondents and 3.2 % of respondents reported that they themselves had committed one or more acts of physical abuse on a resident.

Conclusions: This study provides the first comprehensive national study of the prevalence and types of abuse and neglect in residential care in Ireland. The findings confirm that older people in residential care are vulnerable to abuse due to cognitive and physical impairments, reduced social networks and dependency on others for their physical and psychological needs. However, the prevalence of physical and psychological abuse is substantially lower in Ireland than in other referent countries.

O41 Inter-Personal and Institutional Financial Mistreatment of Older People a Question of a ‘Position of Trust’?

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Background: Financial mistreatment of older people is generally considered at the inter-personal level whereby perpetrators occupy a position of trust. Financial institutions are not traditionally seen in this way. The study aim was to identify the prevalence of inter-personal and institutional financial mistreatment of older people and to describe the characteristics of both groups.

Methods: The data is extracted from a national prevalence survey of elder abuse in a community dwelling population aged 65 years and older. A cluster random sample of 2021 people was recruited using face-to-face interviews. The study received ethical approval and achieved a response rate of 83 %. Analysis was carried out using descriptive statistics. Differences between the groups were tested using Chi square and *t* test statistics, Bonferroni correction was used to control for multiple-tests.

Results: The prevalence of inter-personal financial mistreatment in the previous 12 months was 1.8 % (36/2021) and since 65 years was 2 % (43/2021). In the case of institutional financial mistreatment (been pressured or sold financial products) the prevalence was 1.04 % (21/2021) and 1.9 % (39/2021) respectively. Eight per cent of inter-personal mistreatment involved some kind of legal process. People who experienced interpersonal financial mistreatment had lower levels of physical ($p < 0.001$) and mental health ($p < 0.001$) and social support ($p = 0.009$) compared to a general older population. For institutional financial mistreatment they tended to have higher levels of education ($p = 0.04$) and live in less deprived communities ($p = 0.02$, Bonferroni correction $p = 0.08$) compared to the general population.

Conclusions: The majority of financial mistreatment occurs at an inter-personal level but there can be direct and indirect legal and financial institutional practices that do not adequately take account of the comparative costs and benefits to the parties involved. A narrow definition of a 'position of trust' is likely to inhibit the development of policy and multi-agency strategies to prevent elder financial mistreatment.

O42 Dysphagia in Nursing Home Residents Attending the Emergency Department

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Background: The most frequent cause for emergency department (ED) referrals of nursing home (NH) residents is pneumonia. This study describes the contribution of dysphagia to this, and the role of speech and language therapy (SALT) interventions in this vulnerable cohort.

Methods: A prospective cohort study of all NH residents attending ED over an 18-week period was performed. Data was retrieved from direct clinical review, the ED symphony® record, and NH/GP transfer documents. Only admitted patients from ED were referred for SALT review. Specific characteristics of NH residents referred to and reviewed by SALT services, the factors contributing to dysphagia, and the diagnosis and outcomes from SALT assessment were recorded.

Results: There were 155 ED visits by 116 NH residents, with 111/155 (72 %) admissions during the study period. 32/116 (28 %) of all NH residents presenting to ED were referred for SALT assessment. Mean age was 79.7 (± 10) years, and 18/32 (56 %) female. Similar to the rest of the cohort they were frail with a mean Barthel activity score of 33 (± 19), and 25/32 (78 %) having ≥ 5 medical comorbid conditions. The most frequent admission diagnoses were pneumonia 21/32 (66 %) and urinary tract infection 4/32 (12.5 %).

Most patients were reviewed same day of referral. 22/32 (69 %) had more than two risk factors for dysphagia. The mean dysphagia severity score was 4.7 (± 2.1) and 17/32 (53 %) admissions were directly related to dysphagia. 25/32 (78 %) of assessments required an intervention, with diet-modification being recommended in 15/32 (46 %) cases. No patient was referred for PEG insertion.

Conclusions: This study highlights the importance of SALT assessment as part of a comprehensive geriatric review of NH residents attending ED. Only half of all NH residents attending ED with pneumonia were referred for SALT assessment, potentially missing an opportunity to reduce their risk of subsequent infections.

O43 Outcomes of Nursing Home Residents' Acute Presentations to an Urban Teaching Hospital in 2012

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Background: Ireland's ageing population is leading to an increasing proportion of older and frailer presentations to Irish hospitals and the Care of the Elderly (COTE) Program has set out to prioritise the access to appropriate care for frail older people in Irish society.

Methods: We conducted a retrospective, observational, single-centre audit of the electronic records of ED presentations and admissions to the hospital whose primary residence was recorded as a nursing home from January 2012–January 2013. The objective was to measure the outcomes of the Nursing Home residents presenting acutely to an urban teaching hospital.

Results: Over 12 months, 492 Nursing Home residents presented at an Emergency Department. Median age: 81 years, 57 % were female. Of these, 292 were admitted and the remaining 200 patients were discharged home from the ED.

Median Patient Experience Time (i.e. time from registration to either admission to a ward or discharge) was 13 h. PET for admitted vs. discharged patients was significantly longer 26 vs 4 h ($p < 0.001$). The most common causes for presentation were respiratory infections, urinary infections and sepsis unspecified (38, 11 and 5 % respectively). Median length of stay was 5 days. Inpatient mortality was 12 %. Failed discharges (patients representing within 48 h) was only 2 % for both admitted and non-admitted patients. Of the total group 10 % was readmitted within 30 days.

Conclusions: We have identified a large group of frail older adults acutely admitted to hospital who experience long delays in accessing appropriate treatment. They have a high inpatient mortality and a high 30 day readmission rate although their length of stay is relatively low. This illustrates the need for specialised care for this patient cohort to reduce negative outcomes in this group.

O44 Characteristics and Outcomes of Community Dwellers Aged > 80 Re-Attending the Emergency Department (ED) of an Irish Urban Teaching Hospital

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Background: Older old patients have reported high use of Emergency Departments and higher rates of prolonged admission to hospital in setting of same. This study sought to further characterize repeat ED attenders aged 80 and over, rates of admission and baseline links with community health and social structures.

Methods: Retrospective chart analysis of consecutive ED attendees aged > 80 presenting from a North Dublin catchment area on > 1 occasion between January and March 2013 (index attendees identified through Symphony® system). Residents transferred from nursing homes excluded. Medical charts reviewed for data related to emergency department attendances, admission and length of stay. A community database of service users was cross-referenced to identify rates of access to community services including home care, public health nurse and social care at baseline.

Results: Repeat ED attendance in the over 80s constituted 240/8310 (2.8 %) of total ED attendances in the period. 115 attendances occurred in 51/76(67 %) patients from within local catchment area with an average of 2.3 attendances in a 3 month period (mean age 84.8 years; female 58 %). The total admission rate for first attendance was 48 % rising to 58 % at second ED attendance. 35 patients accounted for a total of 51 admissions using 788 bed days. A diagnosis of Dementia was documented in 32 % of cases with previous stroke documented in 24 %. 34 % of patients were actively reviewed by a PHN; 28 % had a Home Care Package average of 10.5 h/week; 13 patients (28 %) were known to MFTE. 74 % of the cohort were discharged home; 10 % required residential or supported accommodation; 6 % died in hospital.

Conclusions: Although they constitute a low use of ED relative to overall attendance, this group of older patients demonstrated high levels of increasing admissions over repeat attendances with low levels of referral to community and medicine for the elderly services at baseline.

O45 A Profile of Elderly Fallers Referred for Physiotherapy in the Emergency Department of a Dublin Teaching Hospital

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Abstract Details not for publication

O46 Clinical Characteristics of Older Human Immunodeficiency Virus (HIV+) Patients

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Background: HIV positive patients attending infectious disease services are increasingly reaching older decades of life. This reflects better patient survival in an era of modern antiretroviral therapy but is also due to increasingly new diagnoses being made in patients over the age of fifty.

Methods: All prevalent patients over 50 years of age who attend the HIV clinic at our institution in 2012 were studied. A manual review of patient charts was performed and the following data were extracted: demographic data, clinical data at presentation, sexual history and comorbidities.

Results: 384 patients attended our clinic in 2012. 61 patients were over the age of fifty—48 males, (79 %), 13 females (21 %). Twenty-one patients were 60 years or older (34 %), eight (13 %) were over 65 years. Median age at diagnosis was 48 years (IQR 42–55) and 25 patients (41 %) were diagnosed after the age of fifty. 60 (98.5 %) patients acquired HIV through sexual exposure. 30 males (62.5 %) reported 'men sex with men' (MSM) exposure. The oldest patient attending the service is 76 years old. 37 (60 %) patients were late presenters (nadir CD4 count of <350 cells/uL) (31 male, 6 female). Predominant AIDS (Acquired Immunodeficiency Syndrome) defining

illness at presentation include 13 pneumocystis pneumonias (21 %), 8 Candida infections (13 %), 6 Tuberculosis infections (9 %).

Twenty-five patients (41 %) carried three or more comorbidities, including 23 dyslipidemia (38 %), 15 psychiatric diagnoses (25 %), 13 hypertension (21 %), 5 diabetes mellitus (type II) (8 %). 18 patients (30 %) were prescribed greater than three non-HIV treatment related medications.

Conclusions: An increasingly ageing cohort is expected in HIV clinics over the coming decade. Sexual contact continues to be the predominant vector for HIV acquisition and a high proportion of incident patients should be expected to be late presenters. A higher burden of comorbidities is expected in this cohort, necessitating more frequent subspecialty consultation.

O47 Perceptions, Supports and Expectations Influence Exercise Activity in Frail Older Adults

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Background: Ireland's population is rapidly aging. Frail older adults are at particular risk of adverse outcomes. Exercise interventions reduce adverse outcomes, however regular exercise or physical activity decreases with age for non-frail older adults. (1) Research into exercise behaviours of frail older adults is scarce. Thus, this qualitative study was conducted to establish what factors influence frail older adults to exercise.

Methods: Ethical approval was obtained. Semi-structured, open-ended interviews were conducted with 29 frail older adults to explore what influenced them to exercise. Thematic content analysis established the findings.

Results: Firstly, lifelong perception of exercise influences current exercise behaviours in frail older adults. Important historical influences on exercise behaviour include emigration, technology, occupation, and child-rearing. In general, frail older adults perceive exercise as a by-product of more purposeful activities such as manual work, or social activities. They define exercise in terms of function, thus their descriptions of exercise changes in line with their ability. Previous participation in rehabilitation programmes changes perceptions and expectations of exercise. Motivators to exercise include desire for independence, positive outcome expectations and enjoyment. Barriers include health, age, environment and family. Family, the largest source of social support, support exercise behaviour, but they also limit it. Progression into frailty appears to be associated with a decline in non-family support.

Conclusions: Frail older adults perceive exercise as incidental to more purposeful activities rather than an endpoint in itself. Therefore, exercise programmes concentrating on functional outcomes may be more relevant for this population. Family members in a caring role may benefit from education regarding exercise benefits. Strategies which promote social support networks may also benefit frail older adults.

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O48 Influences on Exercise Behaviours of Frail Older Adults in the Acute Setting

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Background: Frail older adults are at increased risk of adverse outcomes following an acute hospital admission. Research on non-frail older adults shows reduced mobility in this setting leads to adverse outcomes, including functional decline. (1) However, no research exploring exercise behaviours of frail older adults in the acute hospital setting has been published. The aim of this qualitative study was to explore what influences frail older adults to exercise, or not, during an acute hospital admission.

Methods: A qualitative descriptive approach was utilised for this study. Ethical approval was obtained. Fifteen older adults, who were frail or pre-frail, took part in in-depth, semi-structured interviews relating to their exercise behaviours during an admission to an acute hospital. Data was analysed using thematic content analysis.

Results: The majority of participants perceived the hospital as an inappropriate space for exercise and this acted as a barrier. However, those with lower baselines, greater levels of disability or increased social isolation found the environment more supportive. A period in an isolation room appeared to have a decidedly negative emotional and physical impact. Lack of information or mixed messages from staff constituted a strong barrier to exercise. Health status was reported as a longstanding barrier but few participants felt it impacted on their exercise behaviour in hospital. Participants suggested the need for more advice from staff regarding exercise, and environmental changes, to improve their in-hospital exercise behaviour. All stated they would participate in a structured exercise intervention if asked.

Conclusions: This study suggests that staff awareness, patient education and environmental modifications may be important in promoting exercise among frail older adults during acute admission hospital stays.

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O49 The Impact of High Intensity Exercise on Outcome in People with Parkinson's Disease: A Systematic Review

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Background: The objective of this systematic review with meta-analysis is to examine the effectiveness of high intensity exercise therapy when compared to conventional therapy on functional outcome in people with PD.

Methods: A systematic literature search was performed to identify all studies that met the inclusion criteria: (a) study design; randomised controlled trials (RCTs), (b) population; individuals with PD, (c) intervention; high intensity exercises (as defined by the individual

study), (d) comparison; conventional exercises or sham/no intervention, (e) outcome; measures of impairment, activity or participation. Two reviewers independently assessed the risk of bias of each study against Cochrane criteria. Cochrane Review Manager Software was used to conduct statistical analyses to determine the treatment effect.

Results: A total of 3,155 records were identified and 9 RCTs were included, ranging in size from ten to 44 participants. The RCTs delivered the intervention using a variety of modalities including resistance, eccentric, treadmill and cycling training. Duration of interventions ranged from 8 weeks to 4 months. The frequency and duration of sessions also varied. Overall, the methodological quality of the studies was unclear. Results from the meta-analysis indicate that high intensity exercises have a significant favourable impact on gait speed [SMD −0.66, 95 % CI −1.07 to −0.26, I² = 0 %] and no significant difference on motor impairment [Unified Parkinson's disease rating scale (UPDRS)—motor subsection; −7.75, 95 % CI −18.21–2.71, I² = 84 %] when compared to conventional therapy.

Conclusions: This systematic review shows high intensity exercise significantly improves levels of activity limitation in people with PD when compared to conventional therapy. However, there is no significant change in motor impairment despite promising Results in some studies. More research is needed to clarify the frequency, intensity and timing of high intensity exercise, in order to optimise the chance of motor impairment improvements using standard outcome measures.

O50 Aiming for Home: the Effectiveness of Occupational Therapy Intervention in Facilitating Goal Achievement in a Frail Elderly Active Rehabilitation Unit

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Background: Occupational therapy (OT) is a client-centred health-care profession which aims to promote health and well-being through engagement in meaningful occupation, and to enable individuals to participate in the activities they want to, need to, or are expected to do (World Federation of Occupational Therapy 2010). The National Clinical Programme for Older People indicates that the ultimate goal is to facilitate the person in optimising their independence and returning to safe, independent, dignified living in the community (Health Service Executive 2012). This study was carried out to determine the effectiveness of OT intervention within a newly established older person rehabilitation unit in achieving this goal.

Methods: A combined qualitative and quantitative approach was adopted. Quantitative data was gathered for all clients discharged from the rehabilitation unit between November 2012 and May 2013 inclusive. The Functional Independence Measure, an 18-item ordinal assessment scale, was carried out with all clients as an outcome measure. Qualitative data was obtained through conduction of a focus group, which aimed to gain a subjective account on the impact of OT intervention, and implementation of a falls efficacy scale, which assessed fear of falling as linked to activity performance.

Results: An average reduction in dependency levels of 18 % and reduced fear of falling was achieved through OT intervention, indicating higher levels of independence and confidence at the point of discharge as compared with admission. 78 % of clients returned home, while 8 % required long-term care. Clients provided detailed

accounts of the holistic nature of OT intervention and its' impact on their individual lives.

Conclusions: The objective and subjective effectiveness of OT intervention in goal-attainment was demonstrated for clients within this newly established, frail elderly rehabilitation unit.

O51 EMERALD, Elderly Medicine Early Review and Liaison for Discharge

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Background: Hospitalised, older patients are at high risk of functional decline. Functional level at admission can predict survival and early comprehensive geriatric assessment has been shown to provide better outcomes. We aimed to assess the impact of prospectively identifying high risk elderly in-patients using a validated scoring system (VIP), and providing early comprehensive geriatric assessment (CGA) in this group

Methods: Patients >85 years were screened by the EMERALD team using the VIP. A non-interventional pilot cohort was observed. A subsequent intervention cohort with early CGA for those screening positive was undertaken. Length of stay (LOS), mortality and 30 day readmission rates are reported, and comparison undertaken between the 2 cohorts.

Results: Data were collected prospectively over 6 months. 371 patients were assessed; 50 in the observation cohort, 328 in the intervention cohort. Mean age was 89.4 (3.32) years for the intervention cohort; and 82.3 (4.87) years for the observation group. VIP screen was positive in 211 (64.3 %) of the intervention cohort and 27 (54 %) of the observation cohort. 30-day readmission rate was significantly higher in the observational cohort than in the intervention cohort (18.4 vs 7.0 %; $p < 0.0001$). LOS was not significantly different in intervention compared to observation cohort (10.3 vs 9.58 days; $p = 0.64$). Mortality did not differ significantly between the groups although it tended to be higher in the older intervention group (9.74 vs 2 %; $\chi^2 = 2.35$, $p = 0.13$). In a multivariate model, screening positive with VIP was the only predictor of LOS.

Conclusions: VIP screening in older people identifies those at risk of prolonged length of stay and readmission. Early targeted intervention is associated with a reduced readmission rate (but not LOS). Provision of comprehensive geriatric assessment outside the setting of a geriatric ward, through organised care and patient screening may improve outcome for those patients.

O52 The Pre-Stroke Modified Rankin Scale is an Important Independent Predictor of Thrombolysis Outcome

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Background: The pre-stroke modified Rankin Scale (p-mRS) measures pre-morbid disability and has moderate interobserver reliability and validity in an acute stroke setting [1]. The p-mRS is measured (often via proxy respondent/s) prior to administration of intravenous thrombolysis for acute ischaemic stroke. An exclusion criterion for

thrombolysis is a p-mRS >3 . In those with p-mRS between 0 and 3, the extent to which the p-mRS determines thrombolysis outcomes (in the light of other potentially influential factors) is not well known.

Methods: We reviewed the charts of all patients undergoing stroke thrombolysis in our service between June 2009 and December 2012. All patients were assessed as having a p-mRS between 0 and 3. A generalised linear model was computed to assess the independent contribution of p-mRS towards thrombolysis outcome in the presence of age, sex and time from event to thrombolysis. The outcome studied was change in NIHSS at 7 days.

Results: 61 patients (34 males, 27 females; mean age 68.8 years, range 31–92 years) underwent stroke thrombolysis over the period. Their mean NIHSS score pre-rtPA was 13.5 (SD 5.7), and post-rtPA was 8.2 (SD 7.0) (paired samples t-test $P < 0.001$). Their mean pre-stroke mRS was 0.4 (SD 0.9), and post-stroke was 2.4 (SD 1.7) ($P < 0.001$). In the multivariable model, the significant predictors of NIHSS change at 7 days were: p-mRS (OR = 2.89, 95 % CI: 2.16–3.86, $P < 0.001$) and time from event to thrombolysis (OR = 1.02, 95 % CI: 1.02 = 1.03, $P < 0.001$). Age and gender were not significant predictors.

Conclusions: In this analysis, the p-mRS was the strongest predictor of thrombolysis outcome, followed by time from event to thrombolysis. The accurate clinical measurement of p-mRS before thrombolysis is of high importance.

Reference:

1. Fearon P et al (2012) Prestroke modified rankin stroke scale has moderate interobserver reliability and validity in an acute stroke setting. *Stroke* 43(12):3184–3188

O53 Patterns of Activity and Reliability of an Acute Stroke Telemedicine Service—DML Stroke Network Partnership

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Background: Telemedicine can facilitate acute ischemic stroke treatment by immediate stroke-expert consultation particularly 'out of hours'. The Dublin MidLeinster (DML) Stroke Network Partnership initiated a new telemedicine service (RP-7 InTouch Health) in 2010 with the aim of improving the delivery of acute stroke thrombolysis across a network of 3 regional stroke centers serving 760,000 people.

Methods: Clinical data was prospectively collected by on-line consultation entry for 157 consecutive patients who were assessed for acute thrombolysis using the telemedicine system across 3 acute hospital sites. Data regarding FAST notification, reliability of system and acceptability to patient/carer was also recorded by a post-consultation on-line proforma.

Results: 157 fully completed telemedicine consultations using the RP-7 system were analysed. Average age 65.94 (range 19–91) with a female:male ratio of 1:1. Average time between symptoms onset and presentation to ED was 107 min (0–515 min). 90.4 % of patients presented to ED out of normal working hours including weekends ($n = 141$). Of the 85 presenting on weekdays, 15 presented during working hours (9 a.m. to 5 p.m.), 57 presented from 5 pm to midnight and 13 after midnight. 49.7 % of all patients assessed were thrombolysed ($n = 78$). Main reasons for not thrombolysing were: minor deficits (34.3 %), non-stroke diagnosis (15.7 %); outside thrombolysis window (11.4 %). A Post-consultation reliability proforma was completed in 107 cases. Successful log-in was achieved in 99.1 % of cases. Some difficulty logging in was reported in 5.6 and 22.4 %

reported loss of signal during the consultation. 100 % patients or carers agreed that the telemedicine was an acceptable form of consultation and all but one reported that the consulting physician was easily understood and seen on the RP-7 system.

Conclusions: Telemedicine assessments within the DML stroke network partnership were associated with high rates of positive thrombolysis treatment decisions. The RP-7 system was very reliable regarding log-in. Some signal loss was reported in 1 in 5 consultations but did not interfere with completion of consultation. All patients and carers found the system acceptable and clear.

O54 Inpatient Strokes: Clinical Characteristics and Outcomes

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Background: Stroke occurring after a patient is admitted to hospital for another reason makes a significant contribution to total stroke morbidity and mortality. Due to concomitant medical problems and atypical mode of presentation, they are somewhat under-represented in clinical research. We profiled all patients recorded as having a stroke following admission over a 22 month period, from September 2011 to June 2013, in a large urban university teaching hospital.

Methods: We gathered data retrospectively from an electronic stroke register, including baseline characteristics and data on aspects of their care, as well as outcome data. This was then compared to data from patients admitted after developing stroke out of hospital. The study site is a primary stroke centre with unselected general medical and surgical take and is a tertiary referral centre for multiple specialties including cardiothoracic surgery, oncology and oncology surgery.

Results: There were 50 Inpatient strokes (IS) and 408 outpatient strokes (OS) during the study period. Inpatient mortality amongst IS was higher than OS (36 vs. 10 %, $p = 0.005$ Chi square), they had longer mean length of stay (79.2 vs. 21.9 days, $p < 0.0001$ t-test) and IS were less likely to be discharged home (50 vs. 65 %, $p = 0.04$ Chi square). 18 of the 50 IS patients had a known malignancy and 23 were post-operative, 7 were post cardiac intervention. Of the 27 IS patients admitted medically, the most frequent presenting complaint was shortness of breath (30 %). Two patients with IS were thrombolysed, compared with 50 patients with OS ($p = 0.1$ fisher's exact two-tailed).

Conclusions: IS represented a significant proportion (10.9 %) of total strokes during the study period, this can be poorly represented on service activity data. IS had significantly poorer outcomes despite absent delay to admission. A large proportion of patients had concomitant malignancy reflecting the impact of oncology on other hospital services.

O55 Acute Stroke Unit Improves Stroke Management 4 Years on from INASC (Irish National Audit of Stroke Care)

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Background: The Irish Heart Foundation carried out INASC in 2008. 1 out of 36 hospitals audited had a fully functional stroke unit.

Management practices were significantly poorer than those in the UK Sentinel audits. Since then an acute stroke unit has been established in a University Hospital with care coordinated by a stroke CNS. We carried out an audit to establish if management practices have improved since 2008.

Methods: A database of parameters indicative of appropriate stroke care was established in April 2012 and is maintained by the stroke CNS. From the database we identified the 12 key indicators of stroke management audited by INASC. We compared our Results for patients admitted April 2012 to September 2012 with those found by INASC.

Results: 89 patients were admitted with stroke, 8 of which were haemorrhagic. 8 of the 12 key indicators scored significantly better than in INASC. 92.5 % had a brain scan within 24 h (INASC-40 %, $p \leq 0.001$). 100 % of ischaemic strokes received anti-thrombotics by discharge (INASC-85 %, $p \leq 0.001$). 94 % had rehab goals agreed by MDT (22 % in INASC $p = 0.0000$). 55 % were treated in stroke unit (2 % in INASC, $p = 0.0000$). 31 % spent >50 % of hospital stay in the stroke unit (1 % in INASC, $p = 0.0000$). 80 % started aspirin within 24 h (45 % in INASC, $p = 0.0000$). MDT input improved with regard to physiotherapy (87 vs 43 % in INASC, $p \leq 0.02$) and SALT (74 vs 26 %, $p \leq 0.02$), however was worse for OT input (3 vs 22 %, $p = .02$). Weight and mood assessment were not recorded in the database. Home assessments are carried out from the rehab units so were not analysed.

Conclusions: Stroke management has significantly improved from 2008, however some areas can be further improved. Our database now incorporates weight and mood assessment. A full time OT is now also employed. Re-audit is needed to take these into consideration.

O56 Low Rate of Ipsilateral Stroke Distal to Asymptomatic Carotid Stenosis

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Background: Carotid endarterectomy reduces risk of stroke compared to best medical therapy (BMT) alone in patients with ≥ 60 % asymptomatic carotid stenosis. However, BMT has improved in recent years and the risk of cerebrovascular events distal to asymptomatic carotid stenosis in patients on BMT only may have fallen.

Methods: In a population-based study of all patients with TIA or stroke (Oxford Vascular Study), we studied the risk of cerebrovascular events distal to clinically significant (≥ 50 % stenosis by NASCET method; ≥ 70 % stenosis by ECST method) asymptomatic carotid stenosis in patients recruited consecutively from 2002 to 2012 and given contemporary medical treatment.

Results: Of 1,715 consecutively imaged patients presenting with stroke or TIA, 285 had significant stenosis of at least one carotid bifurcation, which was asymptomatic in 129 patients (mean age 76.5 years; 39 % women; 45 % aged ≥ 80 years). During 476 patient-years of follow-up (mean = 3.7 years), there were 9 ipsilateral cerebrovascular events—3 strokes and 6 TIAs. The average annual risks of ischaemic events in the territory of an asymptomatic stenosis were 0.63 (95 % CI: 0.20–1.95) for any ipsilateral carotid territory ischaemic stroke (3 events) and 1.29 (95 % CI: 0.58–2.86) for ipsilateral TIA (6 events). Of the three patients with ipsilateral stroke, two had disabling events associated with atrial fibrillation at the time of stroke, and one had a non-disabling definite non-cardioembolic stroke.

Conclusions: The risk of definite non-cardioembolic ischaemic stroke distal to an asymptomatic carotid stenosis on contemporary medical

treatment was low (one event in 476 patient-years), raising uncertainty about the benefit of carotid revascularisation in this patient group.

O57 Prevalence of Intra-cranial Bleeds at a General Hospital from 2008 to 2010

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Background: Intra-cranial bleeds are a significant cause of mortality and morbidity in the elderly. We wished to study the prevalence of intra-cranial bleeds at a General Hospital and in particular to assess the role of warfarin in such bleeds.

Methods: We did a retrospective review of all intra-cranial bleeds admitted to the General Hospital over a three period from 2008 to 2010 using HIPE data to identify bleeds.

Results: From HIPE records, 145 intra-cranial bleeds were admitted to the hospital over the 3 years. Medical notes were available for 134 of these. Intra-cerebral bleeds (52 %) and sub-arachnoid haemorrhages (26 %) were the most common bleed type followed by subdural haematomas (10 %), haemorrhagic transformation of infarct (3 %), cerebellar bleed (3 %) and others 6 %. 71 % of intra-cerebral bleeds occurred in the patients over 70 years, whereas 70 % sub-arachnoid haemorrhages occurred in patients <70 years. There were 51 deaths in the group—most occurred in the intra-cerebral bleed cohort (40 %). Four patients who had an intra-cranial bleed were taking warfarin on admission—all four patients had an indication for warfarin. One of these patients died—in this case the INR was therapeutic on admission

Conclusions: One intra-cranial bleed is admitted approximately every week to the General Hospital. Intra-cerebral bleeds, which occur primarily in elderly patients, have the highest mortality of any bleed type. Warfarin plays a small role in intra-cranial bleeds in our catchment area.

O58 Prevalence of White Coat Hypertension in Older Irish Adults: A Primary Care ABPM Database

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Background: Ambulatory white coat hypertension (WCH) is defined as an elevated blood pressure (BP) measurement during the first hour of the recording (>140/90 mmHg) with a normal mean daytime BP (<135/85 mmHg) based on ambulatory blood pressure monitoring (ABPM). Recent guidelines recommend that all patients who have suspected hypertension should undergo ABPM to exclude WCH. It is important, particularly in an older population, to know how prevalent WCH is to avoid the inappropriate prescribing of anti-hypertensive agents.

Methods: The study examined ABPM recordings performed in primary care clinics in adult patients between January 1999 and June 2012. All ABPM recordings were performed because of a previously elevated clinic blood pressure measurement (CBPM). The study

population was then divided into subgroups aged under and over 65. Ethical approval was obtained from the local hospital ethics board.

Results: 77,260 patients were included in the study with a mean age of 58.8 ± 16.9 years. Of these 28,486 patients were aged over 65 years (mean age 75.4 ± 9.8 years). In this cohort 27.7 % were found to have ambulatory WCH compared to 25.9 % in those aged less than 65 years. The older WCH group have significantly higher mean BP readings compared to their normotensive counterparts (daytime = $126.9/70.7$ versus $121.0/69.2$ mmHg, $p < 0.0001$; night time = $116.9/61.5$ versus $111.5/60.1$ mmHg, $p < 0.0001$).

Conclusions: This study demonstrates a high prevalence of WCH in older adults attending primary care in Ireland. The Results emphasize the necessity of providing ABPM to all patients suspected of having hypertension in keeping with the most recent NICE guidelines. It also highlights an opportunity to reduce drug usage, which has implications from a cost and adverse drug event viewpoint in this population. Finally those identified with WCH warrant follow-up due to their higher mean BP measurements.

O59 The Prevalence of Orthostatic Hypotension and Spectrum of Orthostatic Blood Pressure Control in Older Community Dwelling Adults

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Background: Homeostatic blood pressure responses to standing play a pivotal role in identifying individuals at risk of syncope and unexplained falls. To date no study has examined the spectrum of beat-to-beat blood pressure responses and prevalence of orthostatic hypotension (OH) at a population level.

Methods: Participants ($n = 4463$) were recruited from The Irish Longitudinal Study on Ageing, a nationally representative cohort study of Irish adults aged 50 and over. Analysis was applied to beat-to-beat blood pressure records from those who underwent an active stand test using continuous non-invasive photoplethysmography (FinometerTM). Individuals were identified as having orthostatic hypotension according to ESC guidelines. The spectrum of blood pressure profiles and prevalence of orthostatic hypotension was reported across age, gender and at each time point following standing after reweighting for non-response.

Results: Drops in systolic blood pressure increase with age and are higher in females—Males: (50–59) 36.5 mmHg vs. (80–89) 48.1 mmHg; females: (50–59) 42.8 mmHg vs. (80–89) 49.1 mmHg. ($p < 0.05$). Diastolic blood pressure drops remained consistent across age: males: (50–59) 26.1 mmHg vs. (80–89) 31.6 mmHg; females: (50–59) 27.1 mmHg vs. (80–89) 26.9 mmHg. The proportion of those with drops of >20 mmHg systolic and/or >10 mmHg diastolic within 3 min of standing was 97.8 % of males and 98.3 % of females. The proportion of those with a sustained drop after 40 s of standing increased with age from 6.3 % in males and 10.8 % in females aged 50–59 to 32 % of males and 29 % of females in the over 80s.

Conclusions: The proportion of those with OH using beat-to-beat technology is high according to the 20/10 definition. Timing of the response is important with over a quarter of oldest adults aged > 80 demonstrating a sustained blood pressure drop after 40 s. The

definition of OH requires refinement to include timing and response morphology to explicitly define a sustained drop.

O60 An Alternative Model of Interim Care (IC)

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Background: Interim (or transitional) care (IC) has been proposed as playing a significant role in the patient care pathway under the Geriatric Model of Care (RCPI/HSE Publications 2012). The programme suggests IC should be under the clinical governance of General Practice in a community setting. We describe our experience of an alternative model of IC, under the governance of an acute hospital, but geriatrician-led and nurse delivered.

Methods: We characterised 50 consecutive admissions to Synge Unit, a 25 bed IC facility located offsite to the MMUH and followed up on their discharge outcomes. We then compared their outcomes to an age and gender matched control group cared for on general medical wards and chosen off a rolling waiting list for the Synge IC unit.

Results: Both the study group of 50 successive IC admissions and the 20 control patients were matched for age, MMSE, Barthel Index and Charlson Co-morbidity index (all NS). There was however a significant reduction in average length of stay for the IC group and a significant increase in the numbers discharged home (both $p < 0.05$). Of note there was also a trend (NS) toward a reduction in the number of medications prescribed for IC patients on discharge.

Conclusions: IC is a poorly studied but increasingly utilised form of care for older persons on their journey through the health system. Our model of hospital-governed IC appears to be effective in achieving improved discharge ($p < 0.05$) and medication-burden (trend but NS) outcomes when compared to traditional general ward based care. It is unclear how it would compare to the proposed General Practice-governed IC model. It is in our view imperative to undertake appropriate research on this topic to determine best practice and compare models of delivery, as its perceived cost efficiency gains traction with health service fund holders.

O61 Prevalence, Patterns and Healthcare Burden of Multimorbidity in the Older Irish Population

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Background: Multimorbidity, defined as two or more chronic conditions occurring simultaneously in an individual is the norm rather than the exception for older people in Ireland. This study examines the prevalence and non-random patterns of multimorbidity and its impact on health and social care in an Irish context.

Methods: Analyses were conducted on the first wave of the Irish Longitudinal Study on Ageing (TILDA), representative of community-dwelling people aged 50 years and over.

Results: Based on a broad definition of multimorbidity, including sensory impairments, mental health and physical conditions, 53.8 % had threshold multimorbidity (≥ 2 conditions), 7.5 % had physical-

mental health multimorbidity and 3.3 % had mental health multimorbidity. Prevalence was significantly higher in women, those living in rural areas and those living alone. Significantly higher prevalence of multimorbidity with at least one mental health condition was found for those reporting to be permanently sick or disabled and separated or divorced. Employment, particularly self-employment was found to be protective. A social gradient was found for all multimorbidity and was more pronounced for multimorbidity with at least one mental health condition. Nine associative patterns of multimorbidity were identified from cluster analysis. The likelihood of a healthcare episode and intensity of healthcare use increased substantially with increasing multimorbidity. GP visits, outpatient visits and the number of nights spent in hospital in the previous year, all increased with increasing levels of multimorbidity.

Conclusions: The accumulation of chronic conditions was a better predictor of healthcare use than age, however it is likely that the absolute numbers of people with multimorbidity will increase with population ageing and thus place a substantial burden on healthcare services in Ireland. As health care systems evolve to address demographic changes, existing vertical approaches to chronic disease management will need to reorient towards the management of complex patients with several co-existing conditions.

O62 The Frailty Index in Europeans: Association with Determinants of Health

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Background: The Frailty Index (FI) summarises differences in health status within individuals, and the determinants of health drive that variability. Factors such as genetics, education, socio-economic status and lifestyle all have considerable impacts on health, especially in countries where, at a population level, the impact of factors such as sanitation and access to health and social care has been minimised due to advances in Public Health and Social Policies. The aim of the present study was to investigate the influence of education, income, smoking, alcohol intake, and parental longevity on the FI variability in Europeans.

Methods: Analyses were based on a 40-item FI previously validated on the first wave of the Survey of Health, Ageing and Retirement in Europe (SHARE, <http://www.share-project.org/>), including 29,905 participants aged ≥ 50 from 12 European countries. For each sex, the sample was divided into age categories (50s, 60s, 70s, 80s and ≥ 90) and FI quartiles within age categories were calculated. Multivariate ordinal regressions were computed to assess the relative contribution of the health determinants on the FI quartiles in each age group.

Results: In women, the most significant multivariate predictors of FI quartile membership were years of education (Odds Ratios [ORs] around 0.9), and difficulties making ends meet (ORs between 1.8 and 2.1). In men, the most significant multivariate predictors were years of education (ORs around 0.9), difficulties making ends meet (ORs between 1.6 and 2.1), mother's age of death (OR under 1), and father's age of death (ORs under 1).

Conclusions: Consistent with the literature, education and income explained, in both sexes, cross-sectional variability in FI in subjects of the same chronological age group. The influence of parental longevity seemed to be greater in men, which mirrors previous studies showing that genetic factors may have a higher impact on longevity in men.

O63 Patterns of Multimorbidity in an Ageing Population of People with an Intellectual Disability: Results from the Intellectual Disability Supplement to the Irish Longitudinal Study on Ageing (IDS-TILDA)

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Background: Multimorbidity (2 or more chronic conditions) is a topic widely studied in ageing populations. This study explores emerging concepts of multimorbidity and the extent to which multimorbidity is a feature of ageing in persons with an intellectual disability.

Methods: Data was generated from wave one of the intellectual disability supplement to the Irish longitudinal study on aging (IDS-TILDA). The sample included 753 persons with ID aged 40 years and older randomly selected from the National Intellectual Disability database (NIDD). Using a standardized protocol, information on the presence of 12 chronic conditions was collected in face-to-face interviews with persons with ID and/or their caregivers. Prevalence of multimorbidity was established and patterns were examined using logistic regression models. The patterns of multimorbidity for people with ID that emerged were then compared with those reported for other older, Irish adults.

Results: Multimorbidity was established for 71 % of the IDS-TILDA sample. Rates of multimorbidity were high (63 %), even among those aged 40–49 years, and women were at highest risk. Eye disease and mental health problems were most often associated with a second condition and the most prevalent multimorbidity pattern was mental health/neurological disease.

Conclusions: Further investigation, attention to mental health issues and the development of treatment guidelines that recognise chronic condition disease load are critical to mitigating the negative impact of multiple chronic conditions and preventing additional disability in adults with ID as they age.

O64 The Role Frailty Syndrome Can Play in Supporting and Targeting Resources in Our Ageing Population—High Prevalence of Frailty Syndrome in a Population Attending the Day Hospital

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Background: The frailty syndrome will become (has become) an important focus for supporting and targeting resources to our ageing population. Frail individuals are at higher risk of adverse outcomes and need priority access to Comprehensive Geriatric Assessment (CGA). In the community, the prevalence of frailty is 4–7 %. Our aim was to establish the prevalence and correlates of frailty in new referrals to our geriatric Day Hospital (DH).

Methods: Data was prospectively collected between August 2012–April 2013. Levels of frailty were measured with the SHARE Frailty Instrument for Primary Care (SHARE-FI, <http://www.biomedcentral.com/1471-2318/10/57>). Frailty correlates included demographics, physical performance scores, falls history, and need for higher level CGA services.

Results: Of the 257 patients assessed (90 men, 167 women), 81 (31.5 %) were frail, 66 (25.7 %) pre-frail and 110 (42.8 %) non-frail. Mean age was 84.3 years for the frail, 83.2 for the pre-frail and 82.2 for the non-frail ($P = 0.021$ frail vs. non-frail). Mean Berg Balance Score (BBS) was 43.1 for the frail, 47.1 for the pre-frail and 50.7 for the non-frail ($P < 0.01$ frail vs. others). Mean Timed Up and Go (TUG) test was 33.9 s for the frail, 19.5 for the pre-frail and 14.5 for the non-frail ($P < 0.01$ frail vs. others). Forty-one percent of the frail reported two or more falls in the preceding year, compared to 38 % of the pre-frail and 21 % of the non-frail. Of the 27 patients who were referred to a higher level CGA service, 16(59.3 %) were frail, 4(14.8 %) pre-frail and 7(25.9 %) non-frail.

Conclusions: The prevalence of frailty in our DH (31.5 %) was higher than in the community (4–7 %). Frail patients had worse physical performance scores, more history of falls and were in greater need for higher level CGA services. The use of SHARE-FI in primary care may aid the efficient targeting of CGA resources to our ageing population.

O65 Screening for Markers of Frailty and Perceived Risk of Adverse Outcomes Using the Community Assessment of Risk Tool (CART)

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Background: Functional decline and frailty are common in community dwelling older adults, increasing risk of adverse outcomes (AO). We investigated the prevalence of frailty-related risk factors in a cohort of community dwelling, older adults, using the Community Assessment of Risk Tool (CART), which ranks risk of AOs (institutionalization, hospitalization and death), within the next year, from one (minimal) to five (extreme).

Methods: A cohort of 803 community dwelling older adults, were scored, by their public health nurse (PHN), for frailty, using the Clinical Frailty Scale (CFS), and perceived risk of AOs using the CART. Prior to scoring, PHNs stated whether they regarded subjects as frail.

Results: Subjects' median age was 80 (interquartile range, ± 10), of whom 64 % were female and 47.4 % were living alone. Median Mental Test Score was 10, (± 0), Barthel Index (BI) 18 (± 6). The cohort prevalence of cognitive impairment (CI) was 16.7 %. Patients with CI were older ($p = 0.001$), female ($p < 0.001$) and more functionally impaired ($p < 0.001$). A priori, 41.8 % of subjects were regarded as being frail, which increased to 54.3 % using the CFS (score $\geq$ five). Scoring the CART, 4.3, 11.1 and 2.7 % were perceived to be high-risk (four or five on the CART) for institutionalization, hospitalization and death, respectively, in the next year. Dividing subjects into low-risk (one, two and three on the CART) and high-risk (four and five) demonstrated that high-risk subjects were more likely to be frail (43 versus 92 %, $p < 0.001$), functionally (BI 17.5 versus 11, $p < 0.001$) and cognitively impaired (48 versus 7.5 %, $p < 0.001$). Age, gender and living alone were not associated with perceived risk. Frailty most closely correlated with the BI, $r = -0.80$, $p < 0.001$.

Conclusions: A small percentage of this community sample was perceived to be at risk of AO. Frailty (subjective or objective), CI and functional status were markers of perceived risk of AO. Age, gender and living alone were unhelpful in triaging community dwellers according to risk.

POSTERS

Biology of Ageing

P1 Detecting Undiagnosed Diabetes Mellitus in Patients with Acute Ischaemic Stroke

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Introduction: Current guidelines from the American Diabetic Association (ADA) [1] recommend the use of HbA1C >48 and fasting plasma glucose (FPG) >7.0 mmol/L for the diagnosis of diabetes (T2DM) as an alternative to standard oral glucose tolerance test (OGTT) >11.1 mmol/L. This approach has been called into question in patients with acute coronary syndromes [2]. We studied the use of all three tests in diagnosing T2DM in acute ischaemic stroke (AIS).

Methods: Consecutive patients with AIS were included. All patients were tested for HbA1c, FPG, and OGTT. Cut-off levels for T2DM and IGT were as per ADA criteria 1. Standard prevalence characteristics were quantified, receiver operator characteristic (ROC) curves were plotted and areas under the curve (AUC) were calculated. **Results:** Data from n = 102 patients were analysed. The prevalence of newly diagnosed T2DM as per OGTT, HbA1c and FPG was 20.6, 2.9, and 3.9 % respectively (p < 0.001). Impaired glucose metabolism (IGM) as per OGTT, HbA1c and FPG was 41.2, 24.5, and 3.9 % respectively (p < 0.001). 76 % of patients with a normal FPG and 38 % with a normal HbA1c had new T2DM on OGTT. AUC for HbA1c, and FPG were 0.697 (p < 0.01), and 0.770 (p < 0.001), respectively.

Conclusions: These data highlight the common finding of previously undiagnosed T2DM in AIS and the diagnostic insensitivity of HbA1c and FPG in screening for same. Consideration should be given to the use of OGTT for T2DM screening in AIS.

References:

1. Sacks DB, Arnold M, Bakris GL et al (2011) Position statement executive summary: guidelines and recommendations for laboratory analysis in the diagnosis and management of diabetes mellitus. *Diabetes Care* 34:1419–23
2. De Mulder M, Oemrawsingh RM, Stam F, Boersma E, Umans VA (2011) Comparison of diagnostic criteria to detect undiagnosed diabetes in hyperglycaemic patients with acute coronary syndrome. *Heart* 98:37–41

P2 Psychotropic Medication Prescribing in an Outpatient Dementia Population

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Background: The prescribing of psychotropic medications is controversial in the setting of dementia. It is recommended that antipsychotics be prescribed only in 'severe stress' due to risks of increased morbidity and mortality [1]. There is a lack of evidence of efficacy for antidepressants for the treatment of depression in

dementia while anxiolytics and hypnotics may impair cognition [2]. We reviewed the notes of the dementia patients attending a Medicine for the Older Person (MRTOP) clinic over a 6 month period to determine the proportion of patients being prescribed psychotropic medications.

Methods: The notes (clinic pro forma) of all patients attending the MPTOP clinic from Jan 1, 2012 to June 30, 2012, were reviewed. Patients were included if they had a documented diagnosis of dementia, cognitive impairment, cognitive loss, mild cognitive impairment or if they had a Mini Mental State Exam score of less than 24.

Results: The study included 477 patients. Of these, 84 (17.6 %) were being prescribed antipsychotic medications. The indication for antipsychotic prescribing was not documented in 35 % of cases. Antidepressant medications were prescribed in 153 (32 %) of dementia patients while anxiolytics and hypnotics were prescribed in 86 (18 %) patients. The cholinesterase inhibitors and/or memantine were prescribed in 343 (72 %) of patients and, of these, 84 % were on full therapeutic dose.

Conclusions: A high proportion of our ambulatory dementia patients are on one or more psychotropic medications. The prescribing of these medications, based on current evidence and recommendations, needs to be regularly reviewed and reconsidered.

References:

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P3 Cognitive Performance in Orthostatic Hypotension: Findings from a Nationally Representative Sample

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Background: To describe the cognitive profile in an unselected population representative sample with orthostatic hypotension compared to those without.

Methods: 5936 participants of the Irish longitudinal study on ageing (TILDA) were studied. OH was defined as a drop of ≥ 20 mmHg in systolic blood pressure or a drop of ≥ 10 mmHg diastolic pressure on standing from a seated position. Cognitive performance was assessed using comprehensive cognitive tests, measuring domains of global function, executive function, processing speed, attention and memory from which z-scores were computed. Multivariate analysis controlling for potential confounders was carried out to compare cognitive performance by OH status.

Results: In this Irish population, mean age 63 ± 9 (54 % women), the prevalence of OH was 6.1 % (95 % confidence interval 5.4–6.7 %). Following adjustment for age, gender and education, OH subjects had lower memory composite z-scores ($\beta = -0.14$, $p = 0.004$). Further adjustment for demographics, behavioural health and cardiovascular disease, yielded a significant negative association between OH status and both global cognition and memory ($\beta = -0.13$, $p = 0.03$; $\beta = -0.13$, $p = 0.004$ respectively). Anti-hypertensive and anti-psychotic medications had a negligible effect on this association.

Conclusions: OH was associated with lower cognitive performance independent of confounders, in a large population based sample of

older adults. Domains of global function and memory were specifically affected. Longitudinal studies with concomitant assessment of cerebral perfusion are needed to determine causality.

P4 A Rare Case of Intracranial Calcific Embolism in the Posterior Circulation Secondary to Vertebral Artery Dissection

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Background: Embolic strokes secondary to intracranial calcified emboli are rare. Most strokes secondary to calcific emboli have been reported in anterior circulation with only a handful of reports involving the posterior circulation. To our knowledge there are no reports in the literature of vertebral artery dissection (VAD) causing calcific emboli. We report a case of posterior circulation stroke secondary to VAD causing calcific emboli.

Case Report: A 73 year old man presented after a fall at home secondary to alcohol excess.

CT brain showed an old right lacunar infarct. He required assistance of one to mobilise with a Zimmer rolator. A few days into his admission he developed disequilibrium, gait and truncal ataxia and bilateral past pointing and now required assistance of three to stand. A further CT brain and CT angiogram showed acute infarction within the right occipital lobe, right thalamus and both cerebellar hemispheres, suspicious of calcific emboli with calcification at the basilar tip and at the margins of the right occipital infarct. It also showed a right VAD which extended into the basilar artery. He proceeded to MRI head and carotids which confirmed these findings. Thrombolysis and clot retrieval were not suitable due to insidious onset presentation and duration exceeding 12 h. He was treated with therapeutic low molecular weight heparin and subsequently warfarinised. After rehabilitation he was discharged to a stepdown bed with community based rehabilitation and by discharge was mobilizing with aid of Zimmer frame and assistance of one person.

Conclusions: This case report shows the need to appreciate intracranial calcification as representative of possible calcific embolism. In this case the calcific emboli were found to be secondary to VAD, from a heavily calcified vertebral artery. This condition of calcific emboli secondary to VAD has not been reported in literature previously.

P5 Long-range Resting-State Functional Connectivity Declines in the Healthy Aging Brain

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Background: One of the most paramount social and economic issues facing the developed world is maintenance of intellectual and cognitive integrity in advanced age, factors that are critical to autonomous and optimal standard of living in later years. Our success in identifying, effectively coping with, and preventing age-related cognitive and structural changes in the central nervous system greatly depends on our understanding of healthy and optimal aging. In the current project, we looked at differences in functional connectivity that occur as part of healthy aging using functional magnetic resonance imaging (fMRI).

Methods: Human brain is a large network of highly specialized, anatomically distinct regions that are continuously communicating with each other, even when an individual is not performing any specific task. We compared functional connectivity in young adults with functional connectivity in individuals who are in their 7th and 8th decades of life. T2*-weighted EPI volumes were acquired on a 1.5T Siemens system with 1-channel head coil (35 axial slices, TE = 40 ms, TR = 2000 ms, 240 volumes, resolution $4.0 \times 4.0 \times 4.0 \text{ mm}^3$, 2 sessions).

All functional volumes were corrected for geometric distortions, slice acquisition delay, and in-scanner head motion using SPM8 software (UCL, London). Images were transformed into MNI space and smoothed with 8 mm Gaussian Kernel. Network analyses were performed using GIFT (v1.3) software, and only voxels with z-scores ≥ 3 and z-scores ≤ -3 , were considered significant. MDL algorithm was used to detect the most likely number of mathematically independent sources of BOLD signal. Network components were calculated using independent component analysis (ICA) and were visually identified for each participant.

Results: Group Results showed that older individuals had weaker functional connectivity in the default mode and the parietal-frontal networks, while visual and motor networks showed little change with age.

Conclusions: Long-range functional connectivity between cortical association areas is dramatically reduced in older individuals.

P6 Atypical Femoral Fractures in Perspective

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Background: Atypical femoral fractures are defined as femoral shaft fractures with specific radiological features typically occurring in users of bisphosphonates. Theoretically those on bisphosphonates for longer periods are at higher risk.

Methods: We reviewed cases of atypical femoral fracture in patients attending our specialist bone health unit. Cases were identified through our electronic bone health database.

Results: We identified 3 patients with criteria of atypical femoral fracture (AFF). All were female; aged from 54 to 82. All were on bisphosphonates at time of fracture. Length of time on drug ranged from 18 months to 9 years. Mean T scores were -2.2 at spine and -1.8 at contralateral hip. Serum 25(OH) vitamin D levels were sub-optimal but not deficient in 2 patients. We noted suppressed sCTX, a marker of bone resorption. This has been linked to increased risk of AFF.

Conclusions: It is important to compare the risks of an atypical fracture to those of a hip fracture in patients with osteoporosis. Dell et al. reported on the incidence of these fractures within a defined population and examined the incidence rates according to duration of bisphosphonate use. The age-adjusted incidence rates for an atypical fracture were 1.78/100,000/year with exposure from 0.1 to 1.9 years with an increased to 113.1/100,000/year with exposure from 8 to 9.9 years. They concluded that incidence of AFF increased with longer duration of bisphosphonate use but the rate is much lower than the expected rate of devastating hip fractures in elderly osteoporotic patients. Put in perspective 1 atypical fracture for every 100 Osteoporotic Hip Fractures prevented with 5 years of use of Bisphosphonates and 2 atypical fractures for every 100 osteoporotic hip fractures prevented with 10 years of use of bisphosphonates.

Patients at risk for osteoporotic fractures should not be discouraged from initiating bisphosphonates.

P7 A Study of PTH Response to Hypovitaminosis D

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Background: Functional hypoparathyroidism was a term used to describe the then novel finding in 2001 during the Nottingham Neck of Femur study, of blunted serum PTH response to hypovitaminosis D. This study recruited 150 patients with recent hip fracture looking at prevalence of hypovitaminosis D and its effects on the calcium-vitamin D-parathyroid hormone endocrine axis, bone mineral density and type of fracture. It was postulated that this effect could be protective against PTH mediated bone loss. Recently a Japanese study suggested functional hypoparathyroidism might be a risk factor for bone fragility in vitamin D insufficiency rather than protective.

Methods: Data analysis was carried out on participants attending the TUDA (Trinity, University of Ulster, Department of Agriculture) Study who had a serum Vitamin D level of <30 nmol/L. Patients were categorised as functional hypoparathyroid where their serum PTH level remained within normal limits.

Results: 57 patients were identified with 40 having serum PTH levels within the normal range (15.0–65.0 pg/ml). Mean PTH was 38.4 pg/ml $\pm$ 10. There remained many similarities between the 2 groups such as similar fracture rates, serum calcium levels, and serum PINP; a marker of bone formation. However there were more classical fragility fractures in the functional hypoparathyroid group. We also noted a trend towards lower CTX; a marker of bone resorption. This is not explained by differences in bone medication use as 75 % were not on such medication. We noted increased use of statins in the functional hypoparathyroid group though equal rates of proton pump inhibitors. Impact of this is unclear. Finally 31 % of subjects on Calcium/Vitamin D supplements remaining vitamin D deficient at <30 nmol/L strongly suggests non-compliance.

Conclusions: Subjects with blunted PTH response to hypovitaminosis D appear to have similar bone density though less bone resorption and ultimately an unaffected fracture rate.

P8 The Use of the Novel PAS (Platelet ADP Secretion) Assay in the Setting of Acute Stroke

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Background: Large artery atherosclerotic ischaemic stroke Results from thrombus formation secondary to platelets adhering to damaged endothelium overlying atherosclerotic plaques. Current platelet function assays measure aspects of platelet aggregation via optical transmission. Platelet aggregation is intrinsically non-linear and requires a threshold level of activation before any response is recorded. The novel Platelet ADP Secretion (PAS) assay measures platelet activation response via dense granule release of ADP (Adenosine

Diphosphate) to a variety of platelet agonists: Thrombin Receptor Activating Peptide (TRAP), U46619 (thromboxane mimetic) and Arachidonic acid (AA). Nonetheless, Light Transmission Aggregometry (LTA) is the clinical gold standard assay for assessing platelet function.

Methods: A blinded, case-control prospective observational study was completed between October 2011 and August 2012. 42 patients were recruited: 22 acute ischaemic stroke patients (Acute Stroke Unit) and 20 age-matched controls (Geriatric Day Hospital). Following informed consent, blood was taken and used directly for the VerifyNow and serum thromboxane (TXB2) analysis. Alternatively, blood was centrifuged to obtain Platelet Rich Plasma (PRP) for use in the PAS or LTA assays. PRP was added to a 96-Well plate containing increasing concentrations of platelet agonists. Concentration of ADP released was quantified by luminescence recorded following Chrono-Lume® addition to each well.

Results: Median age for the control and TIA/Stroke group was 79 $\pm$ 7.1 years and 73.3 $\pm$ 12.1 years respectively. 45.5 % (n = 10) of the control group had prior antiplatelet use. Analysis of aggregation response to AA and the VerifyNow® assay have shown a similar trend indicating the sensitivity to aspirin usage. Concerning PAS control samples exposed to TRAP, the average nmol ADP released per platelet was lower for those not on aspirin compared with controls on aspirin.

Conclusions: The PAS assay has demonstrated preliminary evidence of a no differential effect in patients with stroke and is affected by antiplatelet therapy.

P9 Descriptive Analysis of Younger Stroke Patients Presenting to a Regional Institution Between 2007 and 2011 and Analysis of Stroke Aetiology According to TOAST and ASCO Criteria

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Background: Identifying aetiology of stroke is fundamental to targeting treatment for secondary prevention. The Trial of Org 10172 in Acute Stroke (TOAST) criteria classify stroke aetiology into one of five possible areas, including 'stroke of undetermined cause'. The ASCO system, identifies disease presence in each of four main aetiological areas (Atherosclerosis, Small vessel disease, Cardiac source, Other cause) and highlights any area which has been under investigated. A stroke of 'undermined cause' would therefore have no disease in any area which could have caused the stroke.

Methods: We identified 45 patients aged 55 or lower via the HIPE portal. We analysed the demographics and risk factors of these patients and the investigations completed during work-up for cause of stroke. We applied the TOAST and ASCO classification systems to determine stroke aetiology and compared the proportion of each aetiological area between the two systems.

Results: The median age at time of stroke was 50.5 years (IQR 44.7–55.7). When using the TOAST criteria, 35 % of strokes were classified as 'undetermined cause', compared with the ASCO criteria which identified 24 % who had a truly cryptogenic stroke. TOAST criteria did not highlight if all potential causes of stroke had been sufficiently investigated. In contrast, the ASCO criteria found that 24 % of patients were insufficiently investigated in at least one of the four aetiological areas. Both systems identified small vessel disease as the next most common cause, 28 and 27 % respectively.

Conclusions: We propose the use of the ASCO system for all strokes in younger people presenting to our institution in the future to ensure

comprehensive evaluation of each stroke patient and allow targeted treatment of disease processes for future stroke prevention.

P10 Hba1c Level and Cognition—A Modifiable Risk Factor?

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Background: Some studies have shown that cognitive performance may be related to HbA1c status, suggesting that it may be a risk factor for cognitive decline. We aimed to investigate the relationship between HbA1c and cognition in community dwelling older Irish adults.

Methods: Study subjects were participants of the bone, cognitive and hypertensive cohorts in the TUDA (Trinity, University of Ulster, Department of Agriculture) study and represented those aged over 60 with a respective diagnosis of osteoporosis/osteopaenia, hypertension and cognitive impairment. All subjects underwent a structured interview which included recording of medical history, basic demographic, psychosocial and physical factors. Cognition was assessed with the Frontal Assessment Battery (FAB), Mini Mental State Examination (MMSE) and the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS). The RBANS comprises five cognitive domains: Immediate memory, Visuospatial, Language, Attention and Delayed memory represented by Indices I, II, III, IV and V respectively. Mood was assessed with the Center for Epidemiological Studies Depression Scale (CES-D). Blood was taken for measurement of HbA1C. Subjects with MMSE scores below 24 were excluded in our analysis as we wanted to look at the relationship in non-dementia subjects.

Results: The relationship was explored with each of the above cognitive tests in approximately 4000 subjects. Mean age was 73 years and 67 % were female. A significant inverse relationship was found between HbA1c and performance in index I and IV on the RBANS before and after adjustment for age, gender, education, body mass index, smoking and alcohol drinking status ($p = 0.02$). The relationship remained significant after further adjustment for stroke and depression (CES-D ≥ 16) ($p = 0.03$).

Conclusions: Hba1c was associated with two cognitive tests that assess attentional processing, executive function and encoding. Findings suggest that Hba1c may be a risk factor for cognitive decline.

P11 Vitamin D and Blood Pressure in Older Irish Adults

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Background: Serum 25(OH)D has been implicated as a cause of high blood pressure in numerous studies. We aimed to investigate for this potential relationship in community dwelling older Irish adults.

Methods: Study subjects were participants of the bone, cognitive and hypertensive cohorts in the TUDA (Trinity, University of Ulster, Dept of Agriculture) study and represented those aged over 60 who had a

respective diagnosis of osteoporosis/osteopaenia, cognitive impairment and hypertension. All subjects underwent a structured interview where they self reported on medication/supplement use, medical history, psychosocial, dietary and lifestyle factors. Blood pressure was measured with a validated automated blood pressure recording device (Omron 705CP-II). Hypertension was defined as a mean systolic or diastolic blood pressure of ≥ 140 and 90 mmHg respectively and/or having a self reported diagnosis. Serum 25(OH)D was measured by liquid chromatography mass spectrometry (LCMS). Participants with MMSE scores below 24 were excluded in our analysis. Global solar radiation (GSR) was used as a surrogate marker of UVB irradiation.

Results: 4077 were included in the analysis. Mean age was 72.7 ± 8.3 years and 68.1 % were female. 83.6 % of participants were hypertensive. A significant inverse relationship was found between 25(OH)D and hypertension before and after adjustment for age, gender, body mass index, season, GSR, sun holiday travel, supplement use, smoking, alcohol consumption and timed up and go ($P = 0.008$). In a post hoc model, the relationship remained significant after further adjustment for serum PTH and calcium. No association was found with systolic or diastolic blood pressure in a fully adjusted model.

Conclusions: Findings support a role for vitamin D in blood pressure regulation. The majority of subjects were taking medications with an anti-hypertensive affect and a significant proportion with self reported hypertension had normal blood pressure readings. This may account for the lack of association with systolic or diastolic blood pressure.

P12 The Effect of Vitamin D Replacement on Arterial Stiffness in an Elderly Community Based Population

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Background: Previous studies have demonstrated that vitamin D deficiency may lead to impairment of vascular effects leading to abnormalities in central arterial stiffness. Pulse wave velocity (PWV) is a non-invasive method of determining arterial compliance. This study aimed to determine whether vitamin D deficiency leads to increased arterial stiffness and whether supplementation with vitamin D will lead to improved vascular compliance in an elderly cohort of patients.

Methods: We carried out a double-blind RCT comparing the effects of two different doses of IM cholecalciferol on arterial compliance. We randomised 119 known vitamin D deficient (<50 nmol/L) older subjects to receive either 50,000 or 100,000 IU single IM dose of cholecalciferol. All participants had baseline BMI, baseline biochemical indices and OPG, MMP-9, PTH and 25OHD levels at week 0. PWV and PWA was assessed using a Vicorder apparatus. At week 8, all parameters were rechecked to assess for changes.

Results: The responses in serum 25OHD levels seen in both lower and high dose vitamin D groups were statistically significant ($p < 0.001$). In the higher dosage group, median PWV decreased from 12.2 to 11.5 m/s after 8 weeks but this trend did not meet statistical significance ($p = 0.22$). Augmentation Index (Aix) significantly decreased from week 0–week 8, with a mean decrease of 3.803 ± 1.7 ($p = 0.032$). There was an inverse correlation between vitamin D levels and PWV readings at baseline. Only 3/51 (5.8 %) who received 100,000 IU vitamin D reached levels of sufficiency (>75 nmols/L), with none of the 50,000 IU group achieving sufficient vitamin D levels 8 weeks post therapy.

Conclusions: Low vitamin D is associated with raised PWV at baseline. Decreases in PWV readings were seen over the study period

in both groups but these changes were non-significant. A significant decrease in Augmentation index was seen in the group that received 100,000 IU vitamin D. IM vitamin D may not be adequate to achieve optimal vitamin D levels.

P13 An Assessment of the Effect of Donusemab on Orthostatic Hypotension

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Background: Donusemab is a human monoclonal antibody to RANKLA and in the FREEDOM study, Donusemab was demonstrated to be as effective as bisphosphonate as the first line treatment for osteoporosis [1]. The Freedom study subgroup analysis showed a reduction in falls in the Donusemab treated population. The cause for this was not fully elucidated. We hypothesised that donusemab through its effect on endothelial function, leads to reduced postural hypotension and risk of falls, as RANKL is associated with endothelial dysfunction. The effect of Donusemab on orthostatic hypotension (OH) has not previously been investigated.

Methods: Ethical approval was obtained for an observational study assessing OH using the active stand protocol and measurement of beat to beat variability with a finometer. Patients attending the bone health clinic for Donusemab were invited to participate and an active stand was measured at baseline and six monthly intervals.

Results: Of the 32 patients who had baseline active stand performed pre-treatment with Donusemab (59 %) 19/32 had a significant drop with active stand with an average systolic drop of 36.2 (range 22–86). Serial active stand measurements was carried out in 23 patients. Of the 23 patients with two consecutive active stand measurements, 15/23 (65 %) had OH at baseline with an average systolic drop of 35.2 (range 20–86). The number of patients with evidence of orthostatic hypotension increased at 6 months post treatment with Donusemab, 21/23 (91 %) demonstrating OH on active stand with an average drop in systolic blood pressure of 35.76 (range 21–62).

Conclusions: The Results showed a surprising increase in the number of patients with postural hypotension on active stand 6 months after commencing Donusemab which could be due to type 11 error. A randomised control trial is required to more accurately elucidate the effect of Donusemab on orthostatic hypotension.

Reference:

1. Cummings SR et al (2009) Denosumab for prevention of fractures in postmenopausal women with osteoporosis. *N Engl J Med* 361(8):756–765

P14 Systolic Blood Pressure Behaviour Around Intravenous Thrombolysis For Acute Ischaemic Stroke: Association With Outcomes

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Background: High systolic blood pressure (SBP) during intravenous thrombolysis with rtPA may be associated with poor outcomes in patients with acute ischaemic stroke. We studied this association in our clinical practice.

Methods: We reviewed the charts of all patients undergoing rtPA in our service between June 2009 and December 2012. We collected all nurse-recorded SBP values within 3 h before and after rtPA. Mean SBP values pre- and post-rtPA were calculated. Generalised linear models were computed to assess the independent contribution of mean pre- and post-SBP values towards outcomes in the presence of age, pre-stroke modified Rankin Scale (mRS), initial NIHSS score, and time from event to rtPA. The outcomes studied were: haemorrhagic transformation (HT, symptomatic or asymptomatic), change in NIHSS at 7 days, change in mRS at 90 days.

Results: 61 patients (34 males, 27 females; mean age 68.8 years, range 31–92 years) underwent rtPA over the period. Their mean NIHSS score pre-rtPA was 13.5 (SD 5.7), and post-rtPA was 8.2 (SD 7.0) (paired samples t-test $P < 0.001$). Their mean pre-stroke mRS was 0.4 (SD 0.9), and post-stroke was 2.4 (SD 1.7) ($P < 0.001$). In two cases there was symptomatic HT (further 7 had asymptomatic HT). Overall, the mean SBP pre-rtPA was 151.9 mmHg (SD 22.8), and post was 146.4 mmHg (SD 20.5) ($P = 0.014$). In the multivariable models, there were no significant predictors of HT. Mean SBP post-rtPA was a weak predictor of changes in NIHSS (OR 1.09, $P < 0.05$) and mRS (OR 1.02, $P = 0.05$).

Conclusions: Higher SBP post-rtPA seemed to be associated with lesser NIHSS improvement at 7 days and higher dependency at 90 days. The small effect sizes could be due to underpower. Further research is necessary to understand the determinants of blood pressure behaviour peri-thrombolysis.

P15 Insights into the Clinical Management of the Syndrome of Supine Hypertension—Orthostatic Hypotension (SH-OH): The Irish Longitudinal Study on Ageing (TILDA)

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Background: The morphological classification of orthostatic hypotension (MOH) is an approach to the definition of three typical orthostatic hemodynamic patterns using non-invasive beat-to-beat monitoring. In particular, the MOH pattern of large drop/non-recovery (MOH-3) resembles the syndrome of supine hypertension—orthostatic hypotension (SH-OH), which is a treatment challenge for clinicians. We characterised MOH-3 in the first wave of TILDA, with particular attention to concurrent symptoms of orthostatic intolerance (OI), prescribed medications and association with history of faints and blackouts.

Methods: The study included all TILDA wave 1 participants who had a Finometer® active stand. Automatic data signal checks were carried out to ensure that active stand data were of sufficient quality. Characterisation variables included demographics, cardiovascular and neurological medications (WHO-ATC), and self-reported information on comorbidities and disability. Multivariable statistics consisted of logistic regression models.

Results: Of the 4,467 cases, 1,456 (33 %) were assigned to MOH-1 (small drop, overshoot), 2,230 (50 %) to MOH-2 (medium drop, slower but full recovery), and 781 (18 %) to MOH-3 (large drop, non-recovery). In the logistic regression model to predict MOH-3, statistically significant factors included being on antidepressants (OR = 1.98, 95 % CI: 1.46–2.69, $P < 0.001$) and beta blockers (OR = 1.67, 95 % CI: 1.27–2.19, $P < 0.001$). MOH-3 was an independent predictor of OI after full adjustment (OR = 1.45, 95 % CI: 1.23–1.70, $P < 0.001$), together with being on hypnotics or sedatives

(OR = 1.69, 95 % CI: 1.19–2.39, $P = 0.003$). OI was an independent predictor of history of falls/blackouts after full adjustment (OR = 1.24, 95 % CI: 1.06–1.45, $P = 0.006$).

Conclusions: Antidepressants and beta blockers were independently associated with MOH-3, and should be used judiciously in older patients with SH-OH. Hypnotics and sedatives may add to the OI effect of MOH-3.

P16 The Influence of Age on Clinical and Haematological Manifestations of Infection

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Background: Older adults are commonly perceived as having atypical manifestations of infection with a blunted white cell count, neutrophil and temperature response to infection. This study aims to formally document this response in older adults with blood culture confirmed bacteraemia to their younger counterparts.

Methods: The Results of all blood cultures taken in 2011 in an acute hospital were retrospectively obtained. All positive cultures taken in the Emergency Department (ED) on admission were selected. Case notes were reviewed and the first temperature checked on admission was recorded. Initial blood Results taken in the ED were obtained.

Results: There were 106 patients with positive cultures, data was available for 104. The median age was 74 years (range 20–95). There was no significant correlation between age and first recorded temperature ($p = 0.377$). Only 46 % of patients were febrile while 33 % had hypothermia. 59 % of patients had a raised white cell count. There was no correlation between age and white cell count ($p = 0.377$). 76 % of patient had a neutrophilia. There was no correlation between age and neutrophil count ($p = 0.196$). 5.9 % of patients had a lymphocytosis while 63 % had a lymphopenia. There was no correlation between age and lymphocyte count ($p = 0.083$). Lymphopenia was the most commonly found abnormal parameter. 6 % of patients had no other abnormal parameter.

Conclusions: This study has identified no difference between age and temperature or haematological markers of infection in a population of patients with a confirmed bacteraemia, which is contrary to common belief. This study does however highlight that temperature and haematological parameters are commonly normal in patients with bacteraemia highlighting the requirement for good clinical judgement and blood cultures in managing patients with suspected infections.

P17 Clinico-Radiological Features of Lung Cancer Detected at CT Cerebral Angiogram (CTA): A Case Series

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Background: Catalano (1) observed a 2.7 % incidence of lung cancer in a patient cohort who underwent CTA for the detection of ICA stenosis. The prevalence of lung cancer at cardiac CT has been described by 0.31 % with 68 % of these malignancies at a resectable stage (2). We describe 4 cases of lung cancer identified following CTA.

Methods: Patients with lung cancer initially detected at CTA were identified by means of a retrospective search of a lung cancer database. Patients known to have lung cancer at the time of CTA were not included.

Results: 4 patients, all smokers, age range 52–71 years had upper lobe lung nodules demonstrated on CTA. Case 1 showed non-small cell lung cancer; Right PICA infarct. Case 2 had adenocarcinoma of lung stage IV; right hemispheric TIA. Case 3 demonstrated squamous cell carcinoma (probable recurrence of cervical carcinoma); Case 4 demonstrated a left upper lobe nodule inaccessible to biopsy, PET negative and currently awaiting lung resection with background recurrent left hemispheric TIA symptoms.

Conclusions: Incidental findings are a clinically important part of the assessment of CTA and should be appropriately evaluated. Given the common risk factor of smoking for both lung cancer and acute ischaemic stroke careful attention to lung findings on CTA and aggressive investigation should be recommended.

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P18 Retrospective Review of Initial Sepsis Management in a Large Hospital Setting

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Background: Sepsis is a complex inflammatory syndrome which continues to contribute to significant morbidity and mortality worldwide. The Surviving Sepsis Campaign (SSC) guidelines 2012 for sepsis and septic shock management have shown to improve diagnosis, management and survival. Our aim was to see compliance to SSC guidelines and its effects on the patient outcome.

Methods: A retrospective analysis was performed on patients with possible sepsis using local HIPE database (ICD10). 51 cases were identified and case notes were reviewed for December 2012. Sepsis was defined as per the SSC guidelines. To assess quality of care, 3 and 6 h sepsis bundles were established and sepsis score was allocated. Associations between sepsis scores, age groups and mortality were evaluated using a fisher's exact test. The lengths of stay (LOS) were compared using Mann–Whitney U test.

Results: 24 patients met the criteria. The Median age was 68 years (IQR 79–58) 41.2 % male. Predominant diagnosis was Pneumonia 60.8. Sepsis and organ dysfunction markers predominantly identified were Tachycardia >90 b/m (87.5 %), Tachypnoea >20 br/m (70.8 %), WBC >12 (62.5 %), SBP <90 mmHg (37.5 %) and Bilateral Pulmonary infiltrates (58.3 %). For 3 h bundle 1 (4.2 %) lactate and 10 (41.7 %). Blood Cultures were taken. Everyone received antibiotics (Co-Amoxiclav 64.2 %) within a median time of 182.5 min (IQR239–132). 5 cases (20.8 %) received crystalloids. No 6 h targets were achieved. 2 patients (8.3 %) died while the median LOS was 5 days (IQR 9–3). Mortality and LOS were not so different between good sepsis score >2 versus a poor score (70 % v 30 %, $p = 0.51$) and (13 vs. 11.3 days, $p = 0.62$) respectively. Analysis for age showed older people >75 were more likely to die ($p = 0.1$).

However, the LOS between the age groups was not different ($p = 0.74$)

Conclusions: Over all sub-optimal management of sepsis was seen. Early recognition of sepsis and timely, protocol-driven interventions should be used. This audit should be cycled in a 12 month period to see the effectiveness.

P19 Tropical Illness in Older Patients

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Background: Due to increased medical co-morbidities and physiological changes older patients are at higher risk of adverse outcomes from certain tropical illnesses. The most common tropical infections in returning travellers are malaria, dengue, typhoid and rickettsial infections. Increasing age is strongly and independently associated with increasing mortality risk from malaria.

Methods: A hospital inpatient enquiry for tropical medical presentations (malaria, dengue, typhoid, typhus) to two urban university teaching hospitals over a 10-year period (2002–2012) was performed. A case-note review was performed for all patients aged ≥ 65 years.

Results: Of the total 220 tropical medical presentations, 14 (6.4 %) were aged ≥ 65 years; 12 cases of malaria (*5.9 %- total malaria presentations) and 2 cases of typhoid (25 %- total typhoid presentations). Medical notes were available for 13/14 cases. Demographically there were 12 Caucasian patients, 2 Black, and 9 males. The mean age was 69 years (SD ± 5). Interestingly, 4/13 (31 %) were returning missionaries. Fever was a key presenting feature in all cases. Only 6/13 (46 %) of patients were diagnosed on admission, the remaining having a delay to diagnosis. 7/13 (54 %) had no documented travel history. 2/13 (15 %) were opportunistically diagnosed when the laboratory noticed malaria trophozoites on FBC. 6/13 (46 %) had a hospital stay >1 month, and 1/13 re-presented within a month, the diagnosis having initially proved challenging. All were eventually discharged home well. **Conclusions:** Older individuals represent a substantial proportion of patients presenting with tropical illnesses and timely diagnosis is dependent on retrieval of a detailed history. This case-series highlights challenges to the identification of tropical illnesses in older patients and the prolonged hospitalisations often required during treatment, some of which is related to the elusiveness of the diagnosis. With increasing numbers of older travellers, physicians must remain vigilant to the presence of tropical illnesses in older patients with unexplained fever.

P20 Developing Contextual Understanding of Rehabilitation Therapy Services for Older Adults in the Ontario Home Care System: Semi-structured Interviews within a Knowledge Discovery in Databases (KDD) Project

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Background: Despite the fact that rehabilitation therapy services are an essential component of the Ontario Home Care System, there is

limited understanding of how these services are being provided to the aging home care client population. The aim of the study is to develop understanding of rehabilitation therapy service provision for older adults through a series of semi-structured interviews with variety of stakeholders. The Results of this qualitative study will be utilized to inform and guide quantitative analyses of a provincial data repository within a Knowledge Discovery in Databases (KDD) framework.

Design: Semi-structured interviews were conducted with 10 key informants purposefully sampled to provide insights from three different perspectives on rehabilitation services in the Ontario home care system: case managers, service providers, and system level stakeholders. Transcripts of interviews were analyzed in NVIVO 8 using a thematic analysis method.

Results: Three themes were identified: Drivers, Challenges, and Decision-Making. The study yielded information on what factors drive the provision of occupational therapy and physiotherapy for older adults, the reactive nature of therapy services in home care, and the need for novel decision support services for home care case managers.

Conclusions: The Results of this study provided important insights into rehabilitation services for older adults in the Ontario Home Care System. As the first step in a KDD project, these qualitative interviews provided an in-depth contextual understanding prior to the development and construction of data mining models.

P21 Frailty in Relation to Late-Life Cognition: Poisson Regression Models in Data from the Honolulu-Asian Aging Study

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Background: Frailty has been related to cognitive decline, incident mild cognitive impairment and dementia. In most health-related databases, frailty can be operationalized using a frailty index, based on the accumulation of deficits approach. To examine the relationship between frailty and cognition in older Japanese American men, frailty index scores were generated from data collected in the Honolulu-Asian Aging Study (HAAS).

Methods: 1,818 male subjects aged 71–93 at baseline were included in this study. Cognitive function was measured at each wave of the HAAS using the Cognitive Abilities Screening Instrument (CASI). A frailty index (FI) score was calculated for each participant at baseline, using 44 dichotomized health deficits.

Results: At baseline, the average FI was for this study population was 0.13 (SD = 0.09; maximum = 0.56). A multivariate Poisson regression model was developed to examine the association between baseline frailty and future cognition, measured at a subsequent wave of the study (5 years later), while controlling for age, education, and baseline CASI score. Frailty was significantly associated with CASI scores at follow-up ($\beta = -0.568$, 95 % confidence interval = 0.325–0.811, $P < 0.001$), indicating that each increment of the frailty index was associated with a 1.7 % mean decrease in the CASI score 5 years later.

Conclusions: Quantifying frailty with a frailty index may be useful in understanding the relationship between frailty and cognitive decline in aging. Future work will examine the dynamics of frailty and cognition, as well as the relationship between frailty and Alzheimer disease and other dementia diagnoses.

P22 A Prospective Study of Falls post Discharge from an Acute Medical Admissions Unit

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Background: Data examining the falls rate and risk factors for falls in the immediate post-hospitalization period from an acute hospital setting has not been well described in Ireland. The objectives of the study were to determine the incidence of falls within 3–6 months of discharge of patients admitted with falls to the Acute Medical Admission Unit of a teaching hospital, and evaluation of patients profile for associated falls risk. Participants: 50 consecutive patients aged 65 years and over, admitted to the AMAU with falls who met the required criteria.

Methods: Patient Information obtained on admission. Initial assessment included demographic data, pre-admission functional baseline and Elderly Mobility Scale score. Discharge assessment included length of hospital stay, use of assistive device and functional status level on discharge.

Patients followed up prospectively with telephone calls 3 and 6 months post discharge to enquire about falls. Inclusion criteria include: history of falls in the previous 6 months prior to admission, good cognitive status, consent to receive telephone calls and capable of mobilising with or without walking aid on discharge.

Results: Mean age of participant was 82 years with SD ± 5.43 , 53 % female and 47 % male. 12 patients (24 %) fell more than once during the first 3 months after discharge and were readmitted to the hospital, 3 of these patients were subsequently listed for LTC.

Major risk factors for falls included decline in mobility with EMS score less than 14 and use of assistive device. Patients who lived alone, functionally dependent and needed follow up physiotherapy input after discharge had the highest rate of falls. There was a reduction in rate of falls 6 months after discharge.

Conclusions: High incidence of falls within 3 months post hospital discharge. Follow up Intervention needs to focus on first 4–6 weeks post discharge from acute hospital settings.

P23 Correlation of Postural Blood Pressure Readings and Tilt Table Test

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Background: It has been felt that recurrent vasovagal syncope is related to orthostatic changes in blood pressure and heart rate. Theoretically therefore, you would expect that patients who suffer from this would have a significant postural drop in their blood pressure (systolic >20 mmHg or diastolic >10 mmHg or both) as a baseline. This study was primarily to identify the correlation of this with the findings on tilt table testing.

Methods: Data was collected both prospectively and retrospectively. We studied all patients who attended the syncope clinic from March 2012 to January 2013 through chart reviews. Thereafter, data was then collected prospectively as they attended the syncope clinic up to May 2013.

Results: 69 patients were included in this study, 44 female patients and 25 male patients. 30 patients were below the age of 60, whilst 39 were above 60 years of age (mean age 57.5 ± 32.5). 42 out of 69 patients (61 %) had positive tilt tests, 15 (35 %) of which had a baseline postural drop in blood pressure, the other 27 having no baseline postural drop.

Conclusions: There was no correlation with regards to positivity of a tilt test based on postural blood pressure readings. Clinical suspicion and history is ultimately the main indication for a tilt test and diagnosis of recurrent vasovagal syncope.

P24 Rehabilitation Through Baking—The Great Rehab Bake-Off

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Background: Baking groups have previously been used as a form of rehabilitation therapy in mental health. Their usefulness has not yet been explored in patients undergoing rehabilitation following acute stroke. We established a baking group to explore the potential of this form of therapy in stroke rehabilitation.

Methods: The senior occupational therapist (OT) used charitable funding to purchase the necessary utensils and raw materials. She identified patients with rehabilitation needs most likely to be addressed by baking therapy. A baking group was formed, comprising of 6–8 patients meeting one afternoon weekly for a 12-month period in the occupational therapy kitchen. Therapy and activities were supervised by the OT and family members were actively encouraged to participate. In addition, physiotherapists and speech and language therapists had an active input into the group. A questionnaire was formulated by the OT exploring the usefulness of the group from the viewpoint of both patients and therapists.

Results: Results over a 12-month period were analysed. 70 % of patients invited to participate did so, ranging in age from 25 to 100 years. Both sexes were almost equally represented with 46 % being men. 66 % described themselves as “very satisfied” with the experience while the remainder described themselves as “satisfied”. 87 % would attend again while 13 % would consider doing so. When asked how they felt they had benefited, in order patients listed the following: learned new skills; mixed and socialised with others; adapted old skills; elevated mood; felt more confident. Skills deemed by the OT to have been particularly enhanced by therapy included cognitive skills, perceptual skills, physical functioning and psychosocial needs.

Conclusions: Baking therapy appears to be a valuable addition to the rehabilitation process post stroke. Further work is needed to further elucidate the potential benefits for patients in helping to achieve rehabilitation goals.

P25 A Review of the Thrombolysis Service at Beaumont Hospital

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Background: Tissue Plasminogen Activator (tPA; thrombolysis) reduces post-stroke disability if delivered appropriately within 4.5 h of ischaemic stroke onset. The UK-RCP National Clinical Guideline for Stroke 2012 proposes a door-to-needle time of ≤ 1 h, which requires efficient service integration. We reviewed the efficiency of the stroke thrombolysis pathway at Beaumont Hospital, over a 16-month period.

Methods: Details of patients admitted with ischaemic stroke (IS) between January 2011 and April 2012 were sourced from the hospital stroke registry. Relevant information was recorded into standardized proformas that recorded overall numbers of stroke patients that presented each month and specific details on patients who received thrombolysis.

Results: Of the 323 stroke patients that presented to Beaumont Hospital during the study period, 282 (87 %) had an IS. 66 patients (23 % of IS) presented within 4.5 h and 30 (10.6 % of IS) received thrombolysis (mean age 66). Half of all thrombolysed patients were treated between 9 and 5 pm. The mean time (from door) for a review by the stroke service was 23 min (5–50). The mean door-to-CT time was 60 min (25–95) and the mean door-to-needle time was 92 min (46–130). The mean time spent in the acute stroke unit was 19 days (1–63).

Conclusions: The rate of thrombolysis in BH compares favourably with international standards. However, there is room for improvement in the efficiency at each step in the thrombolysis care pathway. Effective, multi-dimensional implementation strategies (including stroke education programmes, identification of treatment barriers, service goal-setting and appropriate organizational change) have demonstrated improvements in the administration rates and the efficiency of delivery of tPA in many studies and should be more widely incorporated into local thrombolysis service development programmes. This would result in more favourable outcomes for all patients with IS presenting to acute services.

P26 Development of a Rapid Assessment TIA Service

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Background: Transient ischaemic attack (TIA) is associated with high risk of early recurrent stroke. Urgent clinical assessment of all TIA patients is essential but the addition of brain imaging, cardiac investigations and neurovascular imaging can optimise risk stratification of patients. This allows physicians to individualise the management of patients. There is no international consensus on where and how this rapid evaluation should take place.

Beaumont Hospital is a large tertiary referral centre with a well-established stroke service. In January 2012 a TIA service was established in conjunction with the appointment of a TIA nurse specialist. We established a local protocol (outlining the pathway of care for all patients presenting acutely with TIA) and an education programme for physicians within the emergency department (ED) outlining the urgency of assessment of these patients to the stroke team. There is a strong admission policy at BH for patients who cannot be urgently investigated as outpatients, regardless of the ABCD2 score.

Methods: 105 patients with TIA were assessed in the year commencing January 2012 with just over half subsequently diagnosed with a TIA. Mean age was 70 years (range 48–93). 92.5 % were referred through the ED, the remainder received their initial assessment in the stroke outpatient clinic. The most prevalent risk factors were hypercholesterolaemia (79 %) and hypertension (68 %). Eleven patients (20 %) had an acute cerebral infarct on diffusion-weighted MRI.

Results: The mean length of hospital stay has reduced by 4 days over the course of the year.

Conclusions: A significant number of TIA patients had an ischaemic infarct on neuroimaging, emphasising the need for rapid assessment and management of these high risk patients. Lack of availability of urgent outpatient investigations necessitates the admission of many TIA patients. With careful service, coordination and planning, waiting

times for such investigations (and length of stay) can be effectively reduced.

P27 Cardiovascular Profile of Patients Prescribed Strontium Ranelate at a Specialist Bone Health Clinic

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Background: Recent advice from the European Medicines Agency has advised restriction of the use of strontium ranelate due to concerns regarding an increased risk of adverse cardiovascular events. It recommended avoiding the use of strontium in patients with a history of cardiovascular, cerebrovascular or peripheral vascular disease, as well as restricting its use only to those with severe osteoporosis. We profiled all patients prescribed strontium at a specialist bone health clinic in a large urban university teaching hospital from 2006 to 2013, focusing especially on their history of vascular disease and vascular risk factors.

Methods: Patients were identified from the bone health clinic database. Data collected included basic baseline demographical information, medical comorbidities, including vascular disease, and previous treatment for osteoporosis, as well as fracture history. Medical comorbidities were recorded from general practitioner referral letters.

Results: 340 patients were prescribed strontium at the bone health clinic, 309 female and 31 male. Their mean age was 67.5 ± 11.7 years. 48 of the 340 patients (14 %) had a history of vascular disease (either stroke or ischemic heart disease). Of the remaining 292 patients, 35 had a history of hypercholesterolemia (35/292, 12 %) while 22 % (63/292) had hypertension. 32 patients (32/340, 9.4 %) had a history of hip fracture. 64 % of those studied had also been prescribed a bisphosphonate, while 26 % had also been prescribed teriparatide.

Conclusions: This study shows that patients commenced on strontium had relatively high rates of vascular disease and risk factors. Additionally, strontium was often commenced in patients who had previously been treated with bisphosphonates (limited to 5 years treatment) and/or PTH (limited to 18–24 months treatment). Strontium is an effective, generally well-tolerated and commonly prescribed treatment for osteoporosis. Therefore it is essential that further prospective research clarifies precisely in what circumstances strontium can and should be used going forward.

P28 Physiotherapy Referral Practices for Care of Older Person Respite Services

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Background: Physiotherapy referral processes have not been extensively studied, and never in the long-term care (LTC) setting. In the author's place of work, a blanket referral system for respite admissions has traditionally been used. However, the average time taken for an initial assessment is 29 min. Hence the aim of this study was to assess the efficiency of the current referral system and to compare it to two possible referral pathways: a modified St. Thomas Risk Assessment

Tool in Falling Elderly Inpatients (STRATIFY), and clinical opinion. The modified STRATIFY deems a score of 2 or more a falls risk.

Methods: Ethical approval was obtained. All respite patients ($n = 229$) admitted during 2012 were considered eligible for inclusion. A retrospective chart review was conducted on a random computer generated sample ($n = 70$), to establish which patients required physiotherapy intervention. Clinical opinion was obtained from a physiotherapy referral book in which nursing staff identify priority patients.

Results: 98.6 % of those admitted had a physiotherapy assessment. 68.1 % of these required physiotherapy intervention. The median STRATIFY score of those admitted was 4. Using a Chi squared test, neither STRATIFY ($p = 0.21$) or clinical opinion ($p = 0.78$) identified patients who required physiotherapy. STRATIFY was slightly better at identifying patients compared to the blanket referral system, but the difference was not significant ($p = 0.29$).

Conclusions: This is the first study to assess physiotherapy referral practices and efficiency in LTC. The current system is not efficient, resulting in a loss of 35.3 h, equivalent to one working week, per year from the service. However, the two alternatives examined were not significantly better in identifying those in need of physiotherapy. Future research will focus on developing new referral systems.

P29 Frail Older Adults' Perceptions of an In-Hospital Structured Exercise Intervention

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Background: A pilot control trial examining the effects of an augmented prescribed exercise programme (APEP) in hospitalised frail older adults was conducted in 2011 (1). Exercise interventions should be assessed qualitatively to establish how people participate, perceive and are influenced by them, and in turn to explore how interventions should be delivered for maximal effect. This study aims to qualitatively explore how the participants in the APEP were affected by the intervention.

Methods: Qualitative description was the method used for this study. Ethical approval was obtained. Fourteen of the total fifteen participants who completed the active arm of the APEP participated in an in-depth semi-structured interview. Data were analysed using thematic content analysis.

Results: Participation rates, perceived value of the APEP, and outcome expectations were all influenced by the relationship with the interventionist in this study. Pre-existing positive outcome expectations increased the likelihood of engaging in the programme and reporting positive outcomes. Perceived positive outcomes included increased intention to exercise post-discharge, improved self-efficacy and perceived improvements in physical status. Challenges to the intervention included negative or no outcome expectations and health. Recent exercise history also impacted on how participants viewed the APEP.

Conclusions: Exercise interventions targeting frail older adults in the acute setting may benefit from taking a multifaceted approach to implementation. Education and setting restorative goals with the participants, may improve outcome expectations and future intention to exercise. Participants may benefit from tailored interventions which challenge their level of ability. The relationship between the participants and the interventionist appears critical to participation and perceived positive outcomes.

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for frail hospitalised older in-patients: a feasibility study" (By Correspondence)

P30 Implementation of a Falls Prevention Focused Medication Review by a Pharmacist in an Acute Hospital

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Background: Falling is a multi-factorial, largely preventable cause of significant morbidity and mortality, particularly in the elderly. Medication is considered the most predictive extrinsic risk factor. Evidence of the benefit of falls prevention programmes incorporating medication review is limited, and predominantly involves community or long term care settings.

Aim: To implement a falls prevention focused medication review and to evaluate implementation issues in an acute hospital.

Methods: Literature review and up-skilling culminated in development of a tool to facilitate falls prevention focused medication review. Data collection took place over an 8 week period in St. Vincent's University Hospital. 65 patients at risk of falling were enrolled, 50 in the intervention group and 15 in the control group. Following enrolment, intervention group patients underwent medication review focused on falls prevention. Any interventions identified were implemented at the discretion of the medical team. In contrast, control patients received usual pharmaceutical care throughout admission.

Results: The total number of falls risk medicines prescribed for intervention patients was 238, and intervention was considered appropriate in the case of 47 of these. Of the 50 patients reviewed, at least one intervention was made in the case of 31 patients (62 %). 72 % of interventions relating to falls risk medicines were implemented by medical teams and almost all were sustained. No statistically significant reduction in the risk of falls or the number of falls risk medicines prescribed at discharge was observed. Reviews took an average of 23.5 min to complete.

Conclusions: Falls prevention focused medication review by pharmacists should have a role as part of a multi-factorial falls prevention programme. Patients at risk of falling are regularly prescribed medicines which increase their falls risk. Identifying at-risk patients and hazardous medicines is straight-forward. However, identifying and switching to safer alternatives is more challenging, mainly due to competing clinical priorities.

P31 A Multicentre Survey of Acute Hospital Nursing Staff Training in Dementia Care

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Background: The National Dementia Education Project was developed to implement person-centred education for staff caring for people with dementia in Ireland across all care settings, including acute hospitals. However, this may not have translated yet into actual training and confidence in acute nursing staff to care for the person with dementia.

Methods: Nursing staff of all grades in six hospitals in Cork city and county were asked to complete a questionnaire, modified from the UK “National Audit of Dementia” for the Irish setting, focused on dementia training and confidence.

Results: 151 registered nursing staff completed the questionnaire—44 surgical, 42 medical, 26 mixed medical/surgical, 9 care of the elderly, 11 emergency department and 19 intensive or coronary care nurses. In general, only 16 % felt they had sufficient training in dementia care (compared to 32 % in the UK survey, 2011). This varied from 7 to 24 % between the hospitals. Only one respondent had been refused a request for training in dementia care (insufficient staff cover). The biggest areas of deficient training were perceived to be assessing cognitive ability and capacity (70 and 62 % had insufficient or no training in these areas, respectively), followed by communication skills specific for people with dementia and recognising pain in patients with dementia (64 %). In particular, just over half had insufficient or no training in dealing with challenging behaviour/aggressive behaviour, or using restraints/sedation. Many respondents were not aware of any training available in dementia care. A minority felt it wasn't relevant to their area of practice, while almost all others would welcome further training.

Conclusions: This study shows that nursing staff in hospitals in Cork still feel they had insufficient training in the care of the person with dementia. This may not reflect the situation in other parts of Ireland, and further study is warranted.

P32 Older Re-attenders to ED and Medicine for the Older Person

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Background: Frail older adults who attend the Emergency Department (ED) are at risk of re-attending and readmission. Our aim was to study the frequency of re-attendance of older persons to the ED and their exposure to Medicine for the Older Persons (MFTOP) services over a 3-month period before the full implementation of the Model of Care for Specialist Geriatric Services.

Methods: Community-dwelling older persons 70 years and older who attended -ED two or more times between 1/1/2013 and 31/3/2013 were identified retrospectively through patient electronic record. Their age, sex, frequency of ED attendance, admissions and MFTOP service use were collected. Chi Square test was used to compare between the age groups 70–79, 80–89 and 90 and over. Significance was set at $p < 0.05$.

Results: There were 234 older persons who had multiple attendances, 94 (40 %) men, with 530 attendances and 249 admissions. The majority of the patients (189) attended twice. 74(33 %) were MFTOP outpatients. Of the 158 (67 %) patients who were admitted, 129 (82 %) were under non-MFTOP teams. 41 (32 %) received MFTOP consultations as inpatients. Patients in the older age groups were more likely to be known to MFTOP (age groups 70–79, 80–89, 90 and over: 21, 40, 52 %, Chi squared = 15.3, $p = 0.0005$), to be admitted (53, 83, 85 %, Chi squared = 24.5, $p < 0.0001$) and receive MFTOP consultations as inpatients (18, 40, 50 %, Chi squared = 9.9, $p = 0.007$).

Conclusions: Our study showed that two-thirds of older recurrent ED attendees were admitted. Older patients were more likely to be known to MFTOP services or receive MFTOP consultations. The implementation of the Model of Care may streamline the frail and at-risk older patients who are frequent users of ED to specialist geriatric

wards, rehabilitation units and ambulatory care pathways. The effect of the implementation will require further evaluation.

P33 Catching a Break: Identifying Patients at risk of Further Fracture

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Background: Capture the Fracture is a global campaign by the International Osteoporosis Foundation to promote coordinated, multi-disciplinary models of care for secondary fracture prevention. By taking the opportunity to respond to the first fracture we can prevent subsequent fractures. Our aim was to determine if patients presenting with hip fractures had previous fractures that would have been opportunities for intervention.

Methods: We analysed data from the HIPE hip fracture database of patients admitted with a hip fracture to the University Hospital. Electronic Patient Records were analysed and data regarding the demographics, number of previous fractures and the type were gathered. **Results:** Of 132 patients included, the median age was 79 years (range 75–86), 66 % were female, 93 % were admitted from home and 40 % of those admitted from home were discharged to long term care after their hip fracture. 51 (39 %) had a previous fracture requiring presentation to the hospital and 15 (11 %) had presented with multiple fractures before presenting with their hip fracture. There were 17 (13 %) patients with a Colles fracture, 8 (6 %) with a humerus fracture, 9 (7 %) with a previous vertebral fracture, 16 (12 %) with a previous hip fracture and 22 (17 %) with an alternative fracture.

Conclusions: A significant number of patients have presented with a fracture prior to their admission with a hip fracture. These represent opportunities for secondary prevention that can be acted upon.

P34 Sarcopenia and Sarcopenic Obesity in Older adults: Prevalence and Comparison of Diagnostic Criteria

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Background: Sarcopenia is the progressive loss of skeletal muscle mass and strength with age. This study was performed to determine the prevalence of sarcopenia and of sarcopenic obesity in a cohort of community dwelling older adults attending a day hospital, in accordance with 'European Working Group on Sarcopenia in Older People' (EWG SOP) guidelines.

Methods: Bioelectrical impedance analysis and Mid Arm Muscle Circumference (MAMC) were used to estimate muscle mass in 60 individuals aged ≥ 65 years. Sarcopenia was defined as; skeletal muscle mass index (SMI) <31 % in males and <22 % in females (Method 1), with poor gait speed (<0.8 m/s) and/or poor grip strength (<30 kg in males, <20 kg in females). Prevalence based on Method 1 was compared with other estimates, in which muscle mass was adjusted for height in males and females respectively as follows:

Method 2: $<8.87 \text{ kg/m}^2$, $<6.42 \text{ kg/m}^2$; Method 3: $<8.5 \text{ kg/m}^2$ and $<5.75 \text{ kg/m}^2$; Method 4: $<7.26 \text{ kg/m}^2$, $<5.45 \text{ kg/m}^2$. Sarcopenic obesity (SO) was defined as sarcopenia (Method 1), with increased adiposity using either fat mass percentage (FM % >28 % in males, >35 % in females) or Body Mass Index (BMI) of >30 .

Results: Almost a third (30.9 %) of patients were severely sarcopenic and 9.1 % were sarcopenic (according to Method 1). Sarcopenia was negatively associated with weight, BMI, FM %, fat mass and fat mass index. The estimate of prevalence varied with the method used to quantify muscle mass. Using methods 2, 3, and 4, prevalence was 43.6, 25.5, 14.5 %, respectively. Patients in the lowest MAMC tertile did not have a higher prevalence of sarcopenia. The prevalence of SO based on FM % (36.4 %) was twice the prevalence of SO using BMI (18.2 %).

Conclusions: Sarcopenia and SO were highly prevalent. Consensus is required on appropriate diagnostic cut-offs to diagnose both conditions and to facilitate valid comparisons between studies.

P35 A Study of the Impact of Occupational Therapy Home Assessment Visits on Reducing Fear of Falling in an Elderly Population

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Background: Guidelines for falls prevention published by the National Institute for Clinical Excellence (2004) recommend a multi-factorial falls' risk assessment and interventions aimed at modifying risk factors which include fear of falling and home hazard assessment and intervention.

Methods/Intervention: The Falls Efficacy Scale International (FES-I) is a seven item scale used to measure the client's concern/perception regarding falling during social and physical activities inside and outside the home [1]. The Occupational Therapy service on this Short-term Post Acute Rehabilitation Care Unit adopted an Adapted version of the FES-I. The adapted version consists of seven items used to determine the patient's own perception/concern regarding falling whilst completing specific functional transfers within their home. The adapted FES-I was completed 24 h before and after an OT Home Assessment visit. All patients who availed of an OT Home Assessment Visit during November 2012 and January 2013 were included in this study. The sample size is 20 (55 % male, 45 % female). All participants are aged over 65 years.

Results: Following the Home Assessment Visit, the provision of enabling equipment was recommended for 50 % of participants. Internal and external rails were recommended for 55 % of participants. The provision of both enabling equipment and rail installation was recommended for 40 % of participants. Where feasible, equipment and rails were supplied and fitted during the Home Assessment visit. 95 % of participants returned to living at home.

The Results of the Adapted FES-I demonstrate that following an OT Home Assessment visit, participants experienced a 40 % reduction in concern regarding falling. Each specific functional transfer resulted in a decrease in concern level.

Conclusions: OT Home Assessment Visits and subsequent interventions are effective at reducing fear of falling relative to specific functional transfers and mobility within the home environment in an elderly population.

References:

1. Kempen GIJM, Yardley L, Van Haastregt JCM, Zijlstra GAR, Beyer N, Hauer K, Todd C (2007) The shortFES-I: a shortened version of the falls efficacy scale-international to assess fear of falling. *Age Ageing* 37:45–50

P36 Chronic Inflammatory Demyelinating Polyradiculoneuropathy: An Unusual Presentation and Reversible Cause of High Level Dependence

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Background: Chronic Inflammatory Demyelinating Polyradiculoneuropathy (CIDP) is an umbrella term for a heterogeneous group of neuropathies that cause demyelination of the peripheral nerves. It can occur in isolation, however is frequently associated with several systemic diseases. We examine the case of a 78 year old woman who had an unusual first presentation of this illness.

Case: In February 2012 a previously independent right handed woman presented to the pain service with 3 weeks of left arm and shoulder pain. We got involved in her care, as there was a significant functional decline and rehabilitation needs. She needed major assistance to mobilise, developed urinary retention and severe pain in her lower limbs limiting her function. Examination revealed decreased muscle strength in both arms and legs, and bilateral lower limb areflexia. She had nerve conduction studies (NCS) and biopsies, brain and spinal imaging, and cerebrospinal fluid (CSF) analysis.

Results: CSF showed a markedly elevated protein. Repeated NCS showed slowing of conduction velocities, with some conduction block consistent with CIDP. Intravenous immunoglobulin (IVIg) therapy was commenced. She was both anaemic and thrombocytopenic, indicating possible associated haematological disorder and is being followed up by haematology services. She spent a 4 month period of in-patient rehabilitation, which has continued following discharge, at our day hospital. She has also attended for monthly IVIg infusions in our day hospital. Her pain has improved, and her function has recovered significantly. She is now independently mobile and living back at home.

Conclusions: This case study outlines a case of CIDP with severe pain as the prominent presenting symptom. The case reinforces the need to be vigilant for potential reversible causes of high level dependence in rehabilitation. It also highlights the complexity of this diagnosis and the importance of the day hospital to facilitate outpatient treatment and ongoing rehabilitation.

P37 Acute Hospital Admissions from a Nursing Home Facility—A 3 Year Study

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Background: Nursing home residents are often frail, dependent and have complex care needs. Our centre provides an enhanced model of medical and multidisciplinary care to its nursing home residents. A recent (2010) international systematic review found at least 30 transfers to the acute hospital for every 100 beds. Irish residential care facilities were not included. This study looks at acute hospital admissions and mortality rates over a 3 year period in our facility.

Methods: 89 patients who were resident in two 28 bed long stay wards for a 3 year period (January 2010–January 2013) were studied. There are weekly proactive geriatrician led multidisciplinary ward rounds, regular pharmacy meetings and nursing staff skilled in phlebotomy, cannulation, transfusion capability, percutaneous gastrostomy and catheter management. The mean age was 82 years. 37 % were male. Mortality status as of January 1st 2013 was recorded. The number of acute hospital admissions, date of death and place of death during that period was recorded.

Results: Over the 3 year period there were 31 acute hospital admissions corresponding to 19 individual patients (14 patients admitted once, 2 patients twice, 1 three times and 2 five times). The yearly transfer rate was 18 transfers for every 100 beds. The annual mortality rate was 20.8 %. 11 % ($n = 4$) residents died in the acute hospital. 89 % ($n = 31$) died in our facility. Of the 19 patients transferred over the 3 year period 14(73 %) were alive at the end of the study period.

Conclusions: The integrated enhanced care model of multidisciplinary care provided to our frail nursing home residents ensures that a high proportion of acute medical episodes are successfully managed on site and that acute hospital admission are appropriate. Our residents are not heavy users of our local acute hospital and the majority of our residents die in our facility.

P38 The Activity and Outcomes of an Off-Site Geriatric Rehabilitation Unit: A 1-Year Study

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The Royal Hospital Donnybrook, Dublin, Ireland

Background: The National Clinical Programme for Older People recommends that each hospital has access to structured rehabilitation beds for older people. Our hospital provides an off-site specialist geriatrician led multidisciplinary in-patient rehabilitation programme. The objective of the service is to optimise patients' functional independence and facilitate a safe home discharge. This study provides a review of activity and outcomes over a 1 year period.

Methods: In the study period (March 2012–March 2013) 200 patients were admitted to the 18 bed unit. Mean age 83 years. 64 % were females. The average length of stay was 30 days. 8 % stayed longer than 50 days. The majority of patients (47 %) were admitted due to falls or non-surgical fractures. 77 % had a MMSE greater than 25. All patients received Occupational Therapy (OT) and Physiotherapy input. Medical Social Work, Speech Language Therapy, Dietician and Wound Nurse specialist were provided on referral. Twice weekly multidisciplinary rounds identified rehabilitation goals.

Results: Patients mean Barthel Index (BI) on admission was 15 and on discharge was 17. The change in BI was significant as tested by the paired Wilcoxon Signed Ranks test ($p < 0.001$). 88 % of patients were discharged home. 66 % received an OT led home visit with subsequent home adaptations. 11 % became medically unstable during their rehabilitation programme and were transferred back to the acute hospital. 5 % were admitted back to acute hospital within 30 days of discharge from our unit.

Conclusions: Our unit has a high percentage discharge home rate as a result of a coordinated multidisciplinary team input and proactive discharge planning. Functionally these patients made both clinical and significant gains as measured by the improvement in BI. These are a complex group medically with a number needing acute hospital admission. The 30 day readmission rate following discharge from our facility was low.

P39 A 360 Degree Evaluation of the Physiotherapy Service in a Postacute Elderly Inpatient Rehabilitation Unit

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Background: There is a growing need for healthcare quality evaluation as outlined in the HIQA National Standards for Safer Better

Healthcare (2012). The first step in improving service quality is by gaining an awareness of performance and quality. A 360-degree evaluation is used to provide timely, consolidated feedback from relevant stakeholders. Using this tool, the physiotherapy service in an elderly inpatient rehabilitation unit was evaluated.

Methods: Participants were referring medical teams, clinical nurse managers, service users (patients) and service providers (physiotherapists) working in the rehabilitation unit.

Over 1 year, three cohorts were surveyed: referrers to the physiotherapy service, the service user and the service provider. The referrer satisfaction survey contained 11 questions and was distributed to the 5 treating medical teams and clinical nurse managers in the unit. The service user satisfaction survey contained 16 questions and was completed by patients prior to discharge from the unit. The service provider survey contained 10 questions and was distributed to physiotherapists working in the unit. All questionnaires included a combination of likert scales, polar and open-ended questions. Surveys were analysed using simple and descriptive statistics.

Results: Fifteen referrer surveys, 90 service user surveys and 9 service provider surveys were analysed. Ninety percent of service users and 100 % of referrers were satisfied with the physiotherapy service. Common positive themes that emerged regarding the service included: interpersonal and clinical skills, timely response to referrals and communication. Suggested areas for improvement were larger gym facilities, the provision of inservices and the prescription of discharge exercise programmes.

Conclusions: A 360° evaluation of the physiotherapy service in this elderly inpatient rehabilitation unit has demonstrated a high satisfaction rate from all stakeholders. This has lead to an improved awareness of performance, as well as highlighting initiatives to implement to further improve the quality of the service.

P40 A Change Project to Introduce a Multidisciplinary Quality Improvement Forum within a Rehabilitation Unit

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Background: Improving quality of care in a post-acute elderly rehabilitation unit is an important service goal. Previous quality improvement projects (QIPs) were developed among individual disciplines however implementation of these initiatives was invariably difficult and unsustainable. Quality improvement projects which combine multidisciplinary expertise increases communication, improves motivation, encourages responsibility, facilitates commitment among staff and ultimately delivers high quality services. The aim of this change project was to introduce a forum for healthcare professionals to engage in quality improvement initiatives within a rehabilitation unit.

Methods: The HSE Change Model was selected to facilitate the introduction of the forum. The Model comprises initiation, planning, implementation and mainstreaming phases. Results were based on tasks achieved under each phase of the Model.

Results: Initiation—all stakeholders within the rehabilitation unit were approached to partake in the forum. It was agreed that a MDT approach to quality improvement would have a positive impact in the rehabilitation unit. Planning—Terms of references were agreed. An idea-generating session determined QIPs for the year. A detailed plan of each QIP developed including the description and scope of the change project, objectives, sequence of actions and who was responsible, timeframe,

performance measures and resource requirements. Examples include; Patient Satisfaction Questionnaire, Stroke Information Sessions and a Rehabilitation Folder which contains goal plans, exercise programmes and condition-specific information. Implementation—a clear implementation plan for all staff, including commencement dates and staff training was developed. Mainstreaming—QIPs have been integrated into established work practices within the unit.

Conclusions: The Quality Improvement Forum was successfully initiated and implemented a number of QIPs. An audit of each QIP will be performed to determine if initiative was sustainable.

P41 An Audit of the Effectiveness of Occupational Therapy (OT) in a Well-Elderly Population Using the Canadian Outcome Performance Measure (COPM) and the Falls Efficacy Scale International (FES-I)

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Background: A retrospective audit was completed to measure the effectiveness of OT in a well elderly population attending a Community Reablement Unit using the COPM and FES-I.

The unit provides inpatient reablement for people 65 years and older. Through a multi-disciplinary approach, the programme enables clients to maximise safety, functional independence and mobility in order to maintain living at home.

Methods: The OT and client collaborated to complete a COPM ($n = 98$) and FES-I ($n = 230$) pre and post OT intervention. The COPM is an individualised, client centered reliable and valid outcome measure [1]. It detects changes overtime in a client's self-perception of occupational performance and satisfaction in the areas of self-care, productivity and leisure. The FES-I is a seven item scale used to measure clients concern regarding falling during social and physical activities inside and outside the home [2] The COPM and FES-I scores were analyzed by SPSS, using the non-parametric related sample Wilcoxon Signed Rank Test to detect change pre and post intervention.

Results: Occupational Therapy intervention did elicit a statistically significant change on COPM performance scores ($z = -7.317$, $p = 0.001$) and satisfaction scores ($z = -7.218$, $p = 0.001$). FES-I scores also demonstrated a statistically significant change ($z = -8.012$, $p = 0.001$).

Conclusions: The audit demonstrates that OT intervention was effective in this well elderly population with increasing performance and satisfaction in goals and reducing concern regarding falling.

References:

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2. Yardley L, Beyer N, Hauer K, Kempen G, Piot-Ziegler C, Todd C (2005) Development and initial validation of the falls efficacy scale—International (FES-I). *Age Ageing* 34:614–619

P42 Patient Satisfaction with the Physiotherapy Service in a Day Hospital

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Background: A quality physiotherapy service should meet patients expected needs effectively [1]. The aim of this study was to determine

satisfaction levels of patients attending physiotherapy in a day hospital and to highlight any deficiencies requiring intervention.

Methods: Older patients attending physiotherapy in the day hospital on a designated week in April 2013 were asked to complete a patient satisfaction questionnaire by a physiotherapy research assistant. Informed consent was obtained. The questionnaire consisted of eleven questions relating to the patient's experience of the physiotherapy service. The majority of these were polar questions. Patients were also asked to rank their experience on a 10 point visual analogue scale (VAS), to comment generally about the service and to make recommendations for improvements.

Results: The quantitative and qualitative data obtained from the survey was analysed using simple and descriptive statistics. Forty-three patients, over 65 years, participated. The majority of patients felt the therapist listened to their concerns (91 %), discussed their treatment goals (77 %) and felt involved in developing their goals (86 %). However, 51 % felt that they weren't informed of their progress towards their goals, 47 % report not receiving a written exercise program and 9 % of respondents ($n = 4$) indicated that communication could be improved between the MDT members and patients in relation to the nature of the services provided. Despite this, 67 % rated their experience at 8/10 or above on VAS. Feedback in the comments section indicated a positive experience with physiotherapy, for example, "staff are excellent at service provision".

Conclusions: Whilst the majority of service users are very satisfied with the physiotherapy service, a number have highlighted verbal and written communication as an area for development. A strategy is being developed to address this deficiency and a clear communication model will be implemented and reviewed.

References:

1. HIQA National Standards for Safer Better Healthcare 2012

P43 A Survey of One Geriatric Medical Clinic to Assess the Number of Patients Who Take Some Form of Regular Physical Activity

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Background: Regarding healthy ageing a simple intervention like walking regularly has health benefits which include reducing the incidence of strokes, heart attacks and some cancers; regulating weight and improving mood [1]. Yet the experience of one clinic revealed very few of the population take any form of regular exercise. This study looks at the number of people in an elderly general medical clinic who take some form of regular exercise and how many had the habit of exercising when they were young. It also looks at the percentage who complied with the advice to "exercise regularly".

Methods: In an elderly general medical clinic a survey of 36 consecutive patients over a period of 2 months (September to October 2012) with ages ranging from 75 to 92 years were asked the questions "Do you take any form of regular exercise" and "Did you take any form of regular exercise when you were younger". Of those who answered "No" to the first question the advice was given to "start taking some form of regular exercise like walking for 20 min on 5 days per week". Alternatives like cycling and swimming were also suggested. At 3 month review they were asked "Have you started taking any form of regular exercise?"

Results: Of the cohort 94 % admitted to taking no regular exercise and of these 44 % admitted to taking regular exercise in the past. At 3 month review none had acted on the advice.

Conclusions: Astonishingly and in spite of proven health benefits of regular exercise 96 % in this cohort do not exercise regularly and

when advised to do so none complied. The challenge here will be to teach people about the health benefits of regular exercise.

Reference:

1. Young A, Dinan S (2005) Activity in later life. *BMJ* 330(7484): 189–191

P44 Mass Syncope: Comparing Rates of Orthostatic Hypotension Between Symptomatic and Asymptomatic Groups in a Mass Going Population

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Background: A sizeable number of patients presented to our Geriatric Medicine department with a history of syncopal episodes at mass. We hypothesized that those who suffered from syncopal episodes at mass were more likely to suffer from orthostatic hypotension (OH) when compared with a cohort of age matched individuals with no history of syncope.

Methods: This was a retrospective case controlled study whereby we identified 45 patients from our database whose presenting complaint was syncope at mass and who subsequently had a head up tilt test (HUTT), which was considered positive for OH with a drop in systolic blood pressure of 20 mmHg and diastolic blood pressure of 10 mmHg. The patients were matched for age and sex with 110 controls derived from the HIACE group (Health Inequalities and Aging in the Community).

Results: Among the 45 patients who had a syncopal episode at mass, only 23 (51.1 %) had a positive HUTT and 6 people (13.3 %) had a paradoxical rise in BP during the tilt, while the remainder had a normal test. Among the HIACE group (the controls), a total of 66 out of 110 people (60.0 %) had a positive tilt and 2 people (1.8 %) had a paradoxical rise in blood pressure. There was no statistically significant difference between the two groups (p value = 0.31).

Conclusions: We did not identify a significant difference in incidence of OH in those who suffer from syncope at mass compared with their age matched peers in the community. Alternate Results may have been obtained if the method of diagnosis was changed, e.g. active stand test instead of HUTT. Other factors may predispose to syncope in the setting of church such as fasting for holy communion. Of note, attendance at religious celebrations has been shown in the literature to be of benefit to health.

P45 Dementia Care in an Acute Hospital—A Forgotten Issue?

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Background: 42,000 individuals are living with dementia in Ireland, by 2,036 that number will have increased 100,000. Patients with dementia are commonly encountered in the acute hospital setting, occupying up to 25 % of acute medical beds. There is no national standard to guide the appropriate management of patients with dementia in the hospital setting. No formal audit mechanism has

existed until the recent establishment of the Irish National Audit of Dementia (INAD) Care in Acute Hospitals. Here, we present the Results of the pilot audit of dementia care in one large acute hospital, performed prior to the national roll-out of INAD.

Methods: A retrospective chart audit ($n = 40$) was undertaken in Cork University Hospital in November 2012. Cases were randomly selected but had to have a diagnosis of dementia (as per HIPE coding) and a length of stay longer than 5 days between October and December 2010. Charts were audited using the 2010 RCP UK Dementia Audit Tool.

Results: 10 patients (25 %) had a formal cognitive assessment on admission with one patient having this repeated on discharge. Mobility was assessed in 30 patients (75 %). 33 patients were asked about continence issues, 14 had a formal functional assessment (e.g. Barthel). Medications were listed in 35:13 patients were on regular antipsychotic medications, 5 patients were prescribed PRN antipsychotics. The indication for antipsychotic use was documented in 1 chart. 10 patients died, 5 were discharged to continuing care facilities.

Conclusions: This audit identified considerable deficiencies in the care of patients with dementia. However, not all domains of the UK audit are applicable to the Irish Health Care setting. This pilot was useful in identifying those standards needing modification prior to the Irish National Audit of Dementia Care, which in turn will aim to inform strategy and policy development for these patients.

P46 An Unusual Case of Reversible Cognitive Decline

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Background: Cognitive decline, both acute and chronic, is one of the most common indications for review by the Geriatric Medicine Service. One of the most common aetiologies being prescribed medication. Here we report an unusual adverse drug event leading to rapid cognitive decline.

Case: A 75-year old male was referred to the emergency department (ED) with rapidly progressive cognitive decline. This was associated with reduced functional capacity and generalised stiffness. His family also reported some instances of auditory hallucinations. 6 months prior to presentation he had been fully independent with reportedly normal cognition. He had been diagnosed with prostate cancer and commenced on GnRH analogue therapy. Interestingly, his wife had noted that the onset of cognitive decline coincided with his first GnRH analogue injection. On review in ED, his physical examination was unremarkable, and in particular, he had no focal neurological findings. MMSE was consistent with severe global cognitive impairment. Preliminary laboratory and radiological investigations were normal. A lumbar puncture was performed and showed no evidence of infection/inflammation. Although his thyroid function tests were normal, he had raised antithyroid peroxidase antibodies. As autoimmune thyroiditis is a known side effect of GnRH analogues he was commenced on high dose steroids for presumed Hashimotos encephalitis (HE). His GnRH analogue was discontinued. At 3-month follow-up, he was independent in ADLs and mobility. His most recent MMSE was 18/30. At 6 months he had returned to farming.

Conclusions: Hashimotos encephalitis is a rare syndrome, which can occur in association with hashimotos thyroiditis. HE is most often characterized by a sub-acute onset of confusion with altered level of consciousness, seizures, and myoclonus. Thyroid function is not clinically predictive, however anti-thyroid antibodies are usually positive. This case highlights the need to consider reversible causes, however rare, when dealing with patients with rapid onset of cognitive decline.

P47 Imaging of Low Back Pain in Older People: An Audit of Current Practice

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Background: Low back pain (LBP) is a common and often debilitating symptom in older people. The Royal College of Radiologists (RCR) has developed guidelines to enhance appropriate use of imaging for this indication. The purpose of this audit was to assess current practice of referrals and for a busy regional hospital.

Methods: Electronic data was obtained retrospectively from the hospital Radiology Information System for a 5 month period for each lumbar spine plain film request in people aged 65 or above. This included referral source, indication and radiological diagnosis. Referral source comprised G.P., E.D., inpatient or outpatient. The radiological diagnoses were normal, osteoporosis/compression fracture, degenerative changes, significant findings/further imaging recommended. Adherence to RCR guidelines was assessed for each referral. The cost implications for each inappropriate referral were also assessed.

Results: 974 radiographs for LBP were performed during 2012. 414 referrals were included in the study period. Overall 82 % of requests were deemed inappropriate according to RCR guidelines. G.P. referrals accounted for 65 % of plain film requests. The main indication was non-specific LBP with or without sciatica symptoms accounting for 59 % of referrals. 8 % of the total went on to have MRI or CT imaging of their lumbar spine. Only 2 % of radiographs reported significant findings or need for further imaging. The costing of each plain film was estimated at 44 euro. The total cost of inappropriate imaging performed during this study was 15,000 euro.

Conclusions: There is a need to increase awareness of RCR guidelines to enhance appropriate use of imaging in older patients with LBP leading to more efficient resource utilisation.

P48 The Prevalence of Sarcopenia and its Influencing Factors in a Community Based Older Adult Population

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Background: Sarcopenia, the age related loss of skeletal mass, is a syndrome of major public health concern in the elderly. The aims of this study were firstly, to establish the prevalence and stage of sarcopenia in a sample of elderly Irish day-hospital attendees, according to European guidelines and secondly, to assess the associations between the stage of sarcopenia and various clinical, functional, anthropometric and dietary variables.

Methods: Individuals attending an age related day hospital and aged 65 years and older were recruited during a five-week period (n = 60). Assessments of muscle mass (mid-arm muscle circumference) and muscle function (handgrip strength, gait speed) were undertaken on each participant. Current dietary intakes were estimated to determine if any dietary or nutritional patterns were associated with sarcopenia.

Results: A larger proportion of females (13.8 %) than males (4 %) were classified as sarcopenic and more females (34.5 %) than males (28 %) were severely sarcopenic. Sarcopenic obesity (SO) was found to be present in 36 % of the total study population. No statistically significant correlation was found between sarcopenia and dietary

intakes of energy, protein or serum 25-OHD. Similarly, there was no correlation between skeletal muscle mass (SMM) and dietary intakes of energy, protein or serum 25-OHD. Hand-grip strength was highly correlated with SMM (P = 0.001), while gait speed was seen to be strongly inversely correlated with sarcopenia (P = 0.000).

Conclusions: A high prevalence of sarcopenia and of sarcopenic obesity was observed in this study population. Further research is needed to determine if these Results are representative of the community-dwelling older population generally. Appropriate prevention and treatment plans for the clinical setting also need to be explored.

P49 A Profile of Fallers on an Acute Medical Admissions Unit (AMAU) in a Large Dublin Teaching Hospital

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Background: An economic assessment of falls and fractures shows that today these injuries in older people cost over €400 million to the Irish economy. Approximately 7,250 older people are admitted to hospital for treatment of fall related injuries every year, utilising 5.2 % of the 1.8 million hospital bed days used by older people. The aim of this study was to determine if there is a link between falls risk factors, multidisciplinary team (MDT) (social work, occupational therapy) input and hospital length of stay.

Methods: A convenience sample of thirty elderly patients was included in the study. Falls risk factors investigated included; environmental, social, intrinsic, and previous falls history. MDT input was tracked in terms of time of assessment and treatment. Length of patient stay was tracked. Information was inputted into a Microsoft Excel spreadsheet, and descriptive analysis was used to highlight trends.

Results: No trend emerged in terms of falls risk factors and hospital length of stay. Eight of the patients were discharged home from AMAU within 5 days of admission and had received MDT input within the first 2 days of admission. Nine patients were discharged home between five and 10 days of admission, seven of whom received MDT input within 5 days of admission. Five patients were discharged home after ten or more days, and had received MDT input at least 10 days after admission. Eight patients transferred onto other wards after 10 days on AMAU for further input.

Conclusions: Patients who received prompt MDT assessment and treatment were discharged within shorter time periods than those whose MDT input was delayed. One could suggest that further investigation into the causes for delayed MDT input and subsequent discharge and financial implications, involving a larger sample size, is warranted in this specific area.

P50 Accuracy of GP Referral Letters with Possible Stroke or TIA

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Background: Good communication between community and hospital services aids delivery of an efficient and effective stroke service. In our institution all letters from General Practitioners (GPs) which

make reference to possible new stroke or Transient Ischaemic Attack (TIA) are automatically referred to the stroke service for review. This study aimed to examine information provided on referral letters from GPs and the accuracy of differential diagnoses.

Methods: Fifty consecutive GP letters which made reference to possible new stroke or TIA were reviewed.

Results: Fifteen letters mentioned possible stroke as the only differential. Eleven had stroke. One had seizure. One had an infection exacerbating old neurological deficit. One had Bell's palsy. One had radial nerve injury. 14 letters mention TIA as the only differential. Five had neurological deficits on arrival and proved to be strokes. Five had convincing stories suggestive of TIA, three had likely syncope and one had migraine. 11 letters mention both stroke and TIA as possible differentials. Four had stroke confirmed. Four had likely TIAs. Two had urinary tract infections (UTI). One had a bowel obstruction. Ten letters mentioned multiple different possible diagnoses including stroke or TIA. One patient had a subacute stroke. One had a subdural haematoma. Three had pneumonia. Two had UTIs. Two had sepsis of uncertain origin and one had severe constipation. Ten letters mentioned time of onset. Twenty-eight letters included some details about the neurological examination.

Conclusions: We observed that a large proportion of patients referred with a letter mentioning stroke or TIA did in fact have a stroke or TIA. Of concern, six patients referred with a possible TIA had neurological findings on arrival and five continued to have persistent symptoms. There needs to be a high level of vigilance when triaging patients with possible intracranial events particularly when TIA is suspected.

P51 Rehabilitation Intervention Outcomes for Parkinson's Diseases using LSVT Big

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Background: LSVT BIG is a treatment for Parkinson's Disease that can be delivered by a Physiotherapist and/or Occupational Therapist. Treatment is administered in 16 sessions over a single month (four individual 60-min sessions per week). This protocol was developed specifically to address the unique movement impairments for people with Parkinson's Disease. The protocol is both intensive and complex, with many repetitions of core movements that are used in daily living. This type of practice is necessary to optimize learning, and carryover, of better movement into functional activities in everyday life.

Methods: This study reviews the outcomes of LSVT Big administered to patients with Parkinson's Disease who were attending a Day Hospital for adults aged over 65 years who have primarily physical needs.

Results: All patients treated with LSVT Big improved significantly on standardised outcome measure scores. There were also improvements in confidence, enhanced ADL engagement, reduced falls frequency, and greater quality of life experienced by the participants that were not fully reflected in the outcome measure scores.

Conclusions: LSVT Big should be more widely adopted as a treatment strategy available for people with Parkinson's diagnosis. The reduction in falls frequency, falls risks, together with enhanced ADL engagement, greater independence, and quality of life clearly justify the intensive input required.

The short term outlay of LSVT Big may well reduce costly interventions further down the line, perhaps being cost neutral, or even reducing the financial burden of patients with Parkinsonian diagnosis on healthcare providers in the longer term.

P52 Using Timed Up-and-Go to Identify Future Difficulty in Activities of Daily Living

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Background: This study examined the use of Timed Up-and-Go (TUG) to predict future difficulty completing basic and instrumental activities of daily living (ADLs) in a nationally representative sample of community dwelling older adults.

Methods: At baseline, 2130 participants aged ≥ 65 years and with a Mini-Mental State Examination (MMSE) score ≥ 24 completed TUG as part of The Irish Longitudinal Study on Ageing (TILDA). Of these participants, 1946 were followed up after 2 years and asked to indicate difficulty in a number of basic and instrumental ADLs. Receiver Operating Characteristic (ROC) analysis was used to compare the predictive power of TUG for future ADL difficulty while predicted probability of difficulty was obtained at a range of TUG cut-offs.

Results: TUG is a reasonable predictor of future difficulty in basic and instrumental ADLs in community dwelling older adults (AUC = 0.69, 0.71 respectively). It is a better predictor of difficulty walking across a room and higher level functions such as preparing hot meals and managing money (AUC = 0.80–0.88). At a TUG cut-off of 13 s, the predicted probability of reporting any basic/instrumental ADL difficulty after 2 years is 0.20 and 0.10 respectively and this increases to 0.50 and 0.40 using a TUG cut-off of 20 s.

Conclusions: Based on ROC analysis, TUG is a reasonable predictor of future difficulty in basic and instrumental ADLs. However, the probability of developing difficulty is quite low across the range of TUG cut-offs used (5 s to 20 s) suggesting that TUG is not a very sensitive test for this purpose. As exercise can improve mobility and ADL performance, these predictive probabilities may be useful to provide performance goals and feedback for individuals participating in exercise interventions.

P53 Clinical Guideline Adherence by Physiotherapists Working in Acute Stroke Care in Ireland

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Background: The publication of the Irish Heart Foundation National Clinical Guidelines and Recommendations for the Care of People with Stroke in 2009 provided healthcare professionals with an essential tool for improving health services in Ireland. There is negligible information available regarding guideline adherence by Irish physiotherapists in acute stroke care. The aim of this study was to identify the degree to which Senior Physiotherapists in acute stroke care adhered to the Irish Clinical Guidelines for Stroke.

Methods: In this observational, cross-sectional study a postal or online survey was distributed to the Senior Physiotherapist responsible for acute stroke care in 31 acute hospitals in the Republic of Ireland, achieving a 74 % response rate

Results: There was excellent compliance for guidelines for the completion and documentation of full assessment within 5 working days of admission (83 %), early mobilisation (96 %), the use of

standardised assessment tools (83 %), regular patient communication (100 %) and the involvement of the patient in goal setting (83 %). Poor compliance was reported in relation to guidelines for the provision of early assessment within 48 h of admission (44 %) and adequate rehabilitation intensity of a minimum of 45 min per day (39 %) with respondents reporting that the main barriers to compliance in these areas were organisational in nature.

Conclusions: Although excellent compliance was demonstrated in most areas, poor compliance levels reported may have been related in part to poorly organised stroke services in Ireland, which have been previously described in the literature. These findings benchmark Irish acute stroke physiotherapy services against best practice and provide information, which may be used to design effective strategies to promote guideline adherence thereby improving patient care in the future.

P54 The Development of a 10 Bed Stroke Rehabilitation Unit in Cork—An Overview of the First Year

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Introduction: The benefits of specialist services for the provision of care following stroke are well documented [1]. The HSE National Stroke Programme has prioritised the development of stroke units and networks within Ireland [2]. We aim to describe the development, clinical use and rehabilitation outcomes of a dedicated stroke service for older people which was configured within an existing older person rehabilitation unit in St. Finbarr's Hospital, Cork.

Methods: Patients over the age of 65 who suffered a stroke were transferred for further rehabilitation to the 10 bed unit from two acute hospitals. Admission criteria to the unit included: patient being medically stable and the potential to improve function and independence. Data was collected on patients who were admitted to the unit from Feb 2012–Feb 2013. A database was set up to record relevant information e.g. age, referral source, dependency scores on admission and discharge, length of stay and discharge destination.

Results: Data was collected and means and medians were calculated. Of the 82 patients admitted to the unit during the 12 month period, 58 % were female and the average age was 77. Patients were transferred from two acute hospitals; Cork University Hospital (77 %), Mercy University Hospital (18 %). Of a sample of 45 patients the average Barthel Index score was 9 on admission and 15 on discharge. 45 % (n = 37) were incontinent on admission and 24 % (n = 9) were incontinent on discharge. The average length of stay was 42 days. 70 % (n = 57) were discharged home with only 4 % (n = 3) requiring long term care.

Conclusions: The data outlined is as a result of re-configuring rehabilitation beds within existing staffing and budgetary resources. It is anticipated that additional staffing and resources would result in improved outcome measures.

References:

1. National Clinical Guidelines for Stroke, 4th edn. Royal College of Physicians 2012
2. National Clinical Guidelines and Recommendations for Stroke Irish Heart Foundation 2010

P55 Technology-Based Health and Wellness Self-Management for Older Adults

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Background: Innovative technology can support older adults in self-managing wellness at home, potentially resulting in early detection of illness and in the prevention of illness. These non-pharmalogical, proactive approaches have the added benefit of promoting increased ownership of health status by the individual and increase health promoting behaviours.

An iPad application was developed to support older people in self-reporting on their wellbeing, including sleep, mood, social interactions, falls history and fear of falling. This application also provides feedback on such to increase the person's awareness of their wellbeing, to inform and educate on how to maintain or return to a healthy state. Central to the development of this support tool is a person-centered design process, focusing on needs, usability and satisfaction. We discuss this person-centered design process and findings from an extended deployment.

Methods: Multiple focus groups with older adults were conducted. Feedback on methods for inputting data, preferred feedback visualisations and content of importance to individuals was collected. Workshops were conducted with clinicians to ensure the application's validity as a health and wellness tool. The application has been developed on an iPad and has been deployed to 8 older adults living in the community over a period of 3 months. Pre- and post- study health questionnaires (cognition, loneliness, sleep quality, quality of life and depression) were administered.

Results: Themes emerging from the focus groups included: important parameters of wellbeing; sharing of health information; motivation to use such an application; preferred feedback. Average daily compliance of completion was 68 %. Participants found the feedback useful and all reported it increased their awareness of wellbeing.

Conclusions: An iterative design process combining focus group feedback and extended deployment have informed how such applications can assess appropriate aspects of wellbeing and deliver useful and beneficial feedback that is easy for older adults to interpret.

P56 Older Persons attending Emergency Department (OPED) Study

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Background: Older patients account for an increasing proportion of the workload in emergency departments (ED). Despite this the ED remains a challenging environment for caring for older patients. The aim of this study is to characterize in detail, the demographic profile and outcomes for older patients attending ED.

Methods: All patients aged ≥ 65 years attending an urban hospital ED during January (1st–31st, 2012) were included and outcomes were followed for 12 months. Data on demographics, ED attendances, admissions, mortality, and risk-screening scores were extracted from the electronic ED symphony® record, clinical notes, and the HIPE data. Patients were age-categorised as Group A: 65–74, Group B: 75–84, and Group C: ≥ 85 years for analysis (SPSS-20®)

Results: 550 older patients (A: $n = 260$; B: $n = 182$; C: $n = 108$) attended ED in January 2012 (15.5 % of all ED-visits) of whom 345 were admitted (33.5 % of all admissions). Across all groups over half of attendances occurred outside normal working hours, and proportionally more by ambulance in older groups. The mean Charlson comorbidity score was 5.1, 6.3, and 7.0 for each group respectively, indicating high levels of comorbid illness. Proportionally more patients in groups B + C had a positive triage risk screening tool (for identification of vulnerable older patients). Admission rates increased proportionally with age (A: 57 %; B: 64 %; C: 76 % $p = 0.03$). Similarly, inpatient length of stay, and 1-year mortality was higher in older groups. 30-day re-attendance rates were similar for all groups (~ 13 %), and ED-recidivism was only marginally higher in older groups (A: 43 %, B: 50 %, C: 52 %).

Conclusions: Despite only accounting for 10 % of local catchment population, older patients account for 15 % of ED attendances and a third of all admissions from ED. With increasing proportions of older patients necessitating review in ED it is imperative to make this environment more gerontologically attuned.

P57 A Clinical Nurse Specialist-Led Osteoporosis Pre-assessment Clinic

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Background: In St James's Hospital, the Clinical Nurse Specialists (CNS) run pre-assessment clinics twice-weekly which are the first point of contact for patients who are referred for assessment of their bone health and fracture risk. A comprehensive assessment is performed by a CNS on all patients. This includes risk factors for osteoporosis, falls and advice on diet, lifestyle modifications and education on treatment. An extensive bone screen is performed at the initial visit including a DXA scan, a calcaneal bone ultrasound, a full biochemical and haematological workup including serum bone turnover markers. Patients are commenced on treatment as indicated by their assessments. This enables appropriate follow-up in the bone health clinics.

Methods: Data was collected from the electronic clinic database and electronic attendance records.

Results: Patients are referred externally from General Practitioners or other hospitals, and from general medicine clinics within St James Hospital (SJH). The fracture liaison service identifies all patients who attend SJH with a hip fracture and those over the age of 50 years with a low-trauma fracture, offering assessment in the CNS-led clinics. In 2012, a total of 1454 patients were seen in these clinics, representing an increase of 19 % from 2011. 626 new attendances were recorded, including 50 hip fractures and 65 colles fractures. Of 828 return visits (408 in 2011), 266 patients attended 1 week after receiving IV zoledronic acid for monitoring of serum calcium and side-effects. All patients on Parathyroid Hormone therapy and Denosumab 6-monthly attend for bone biochemistry and management of side-effects.

Conclusions: The number of return visits doubled in 2012 from the previous year, reiterating the essential role of the CNS in monitoring treatment efficacy as well as promoting compliance and managing side effects. The increased clinic activity reflects the growing awareness of the importance of assessing and treating osteoporosis.

P58 “Can’t Come, Won’t Come, Shouldn’t Come”—The Experience of Domiciliary Consultations by Mater Community Medicine for the Older Persons team

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Background: Some community-dwelling older adults who require specialist geriatric assessments may not attend outpatient clinics because of cognitive, functional and/or social challenges. While domiciliary consultation (DC) by geriatricians is well-established in UK, little is known about its practice in Ireland. Our aim is to describe our experience of DC in North Dublin City.

Methods: The Mater Community Medicine for the Older Persons commenced DC in January 2012. The demographics, referral source, social support, known co-morbidities, medications, dependency and intervention following DC were collected. Continuous variables are expressed as mean $\pm$ SD or median (range). Forty-eight patients (26 women) were visited at home and mean age was 82 sd7.9 years (range 64–97). The referral sources were geriatricians who deemed patients too frail/immobile to attend OPD (14), failure to attend OPD (7), community nurses and agencies (11), GP (7), social workers (5), old-age psychiatry (3), and emergency department (1). Twenty lived alone, 36 received social support and 11 refused services. Majority (36) allowed access and examination, 8 allowed access but refused examination, and 4 refused access. 25 were high/maximum dependency, 30 had cognitive impairment, 20 mental health diagnosis. The median known co-morbidities was 6 (range 2–15), median medications 6 (range 0–15); five did not take any of their prescribed medications. Following assessment, no intervention was required in 23 cases, phlebotomy (8), admission to hospital (4), respite care (4), increase formal support (7), institutional care (4) were recommended and 2 were deceased. Twenty-nine had single visits, 19 had two or more visits.

Results: Our experience showed that half of the patients ‘couldn’t come’ due to increased dependency, a quarter ‘wouldn’t come’ or accept services and one who ‘shouldn’t come’ had frequent emergency department attendance. A high proportion of patients have cognitive impairment and mental health diagnosis.

Conclusions: A co-ordinated approach by various agencies including community geriatric medicine, psychiatry, primary care and case managers may be required to optimise care delivery for these community-dwelling older persons.

P59 A Multi-Disciplinary Quality Improvement Initiative Addressing Food and Nutrition Standards for Dysphagic Patients in an Acute Care Setting

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Background: To improve the quality and safety of the modified consistency diets for patients with swallowing disorders in an acute

care setting where there is a high elderly population at risk of medical complications and/or under-nutrition due to dysphagia.

Methods: A multi-disciplinary group or 'Food Forum' representing key stakeholders in the hospital was established to address all steps in the process from food sourcing to diet presentation to the patient, in order to meet the national standards of the Irish Association of Speech and Language Therapists/Irish Nutrition & Dietetics Institute and the Food & Nutritional Care in Hospitals Guidelines.

Staff were educated and trained with regards to swallowing disorders; diet consistencies and their preparation and presentation; nutritional value and fortification. Meetings are held on a monthly basis to continue to drive quality improvement. Audits are carried out on a quarterly basis to measure change.

Results: Overall feedback from the staff engaged in the process has been very positive which is reflected in the high attendance rate ($X = 90\%$) at meetings. Audit Results over that time have shown significant gains in compliance with standards. The most recent audit achieving 98.5 % compliance with standards.

Conclusions: A multi-disciplinary working group involving key stakeholders is effective in driving quality improvement in modified consistency diets for patients with swallowing disorders who are at high risk of medical complications and/or under-nutrition due to dysphagia.

This initiative is unique and first of its kind in Ireland. It represents a positive multi-disciplinary team approach improving patient quality, safety and nutritional intake for modified consistency diets.

P60 Quality Medication Use in People Ageing with Intellectual Disability and Behaviour Disorders

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Background: Behaviour disorders in adults with intellectual disabilities burden the person, increase strain on families and caregivers, impair social interactions, increase the risk of restrictive practices being used, increase the risk of out of home placements and they are costly for the service provider. Psychotropic medication is commonly used but this is one of the most controversial areas in current mental health. The experience of quality medication use by any adult with intellectual disabilities is shaped, directly and indirectly, by organisational and human factors interacting in dynamic and complex ways. Assessing medication use provides an opportunity for monitoring quality of care.

Methods: A 2 round modified Delphi Technique with a 32 member multidisciplinary panel, which included a geriatrician, identified quality indicators [QIs] for medication use in adults with intellectual disabilities and behaviour disorders. Panel members were asked to rate the candidate 38 QIs on a 9 point likert scale. The preset consensus criteria for this project was defined as 75 % or more of replies rating 7–8–9 for importance and scientific soundness and 50 % or more rating 7–8–9 for feasibility.

Results: The completion rates were 78 and 86 % respectively. No QI was rejected by the panel. Thirty QIs reached consensus following 2 rounds. Panel ratings showed little dispersion. A hierarchy of QIs was identified. Six superior QIs were rated by more than 90 % of panel as important while 8 QIs did not reach consensus.

Conclusions: QIs of the medication use process, identified here reflected different dimensions of quality including patient experience and access to care. The objectives of any professional and service response to adults with intellectual disabilities and behaviour

disorders, which may include medication use, should ensure development of the individual with intellectual disability and the enhancement of that individual person's opportunity to experience an age friendly future.

P61 A Comparison of Vitamin B12 Deficiency in Stroke Patients Vs Healthy Older Adults

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Background: There is evidence in the literature showing an association between vitamin B12 deficiency and lacunar stroke. In this study we looked at vitamin B12 levels admitted to the stroke rehabilitation unit and compared them to a cohort of healthy community dwelling older adults.

Methods: All stroke patients from October 2000 to March 2013 were identified from the existing stroke database compiled at a University Hospital and corresponding values for vitamin B12 were obtained from the hospital haematology records. These Results were compared with those from the HIACE population (Health Inequality in the Aging Community Evaluation)—a cohort of older well patients residing in the community who have undergone a number of medical investigations including full blood count and B12 levels.

Results: The normal level for Vitamin B12 is >200 pg/ml but values from 200–300 pg/ml are considered borderline. Of a total of 706 patients with stroke, 517 (73.2 %) had B12 levels measured of which 52.7 % were male. The total number in the HIACE group was 386 (male 220 (57 %)). Mean age was 73 in both groups. 6.6 % of the stroke group had a vitamin B12 level of <200 compared to 1.8 % of the non-stroke group giving an absolute difference of 4.8 % between groups (95 % CI 2.1–7.4). There was no statistical difference between groups for vitamin B12 levels of 200–300 (21.7 vs 19.4 %, 95 % CI –3.2–7.5). 72 % of the stroke group had vitamin B12 levels >300 compared to 79 % in the non-stroke group giving an absolute difference of 7 % (CI 1.3–12.5).

Conclusions: A significantly larger proportion of patients with stroke had vitamin B12 deficiency when compared to a healthy cohort of older adults, indicating the need for a low threshold of clinical suspicion for the assessment of vitamin B12 status in stroke patients.

P62 Is Constraint Induced Movement Therapy Acceptable? A Study of Irish Therapists' Perspectives

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Background: Hemiparesis is common after stroke and may lead to permanent disability. Despite evidence of the effectiveness of Constraint Induced Movement Therapy (CIMT) for the hemiparetic arm, the treatment is not widely used in Irish practice. This study explored Irish therapist (occupational therapists and physiotherapists) attitudes towards the use of CIMT among stroke patients.

Methods: A cross-sectional survey was conducted among OT's and PT's with experience in stroke treatment. A 10 min video was shown to the therapists outlining a CIMT-treatment approach. The therapists then completed a 14-item questionnaire exploring their opinions on suitability and applicability of CIMT. Completed questionnaires were analysed descriptively.

Results: Of 103 therapists from six hospitals in the greater Dublin area (PT = 42, OT = 61), the majority had more than 3 years clinical experience but only 12 (12 %) were working exclusively with stroke patients. Ninety-one therapists (88 %) reported prior knowledge of CIMT: for 22 (24 %) this arose from undergraduate or formal postgraduate training. Only 2 therapists currently use CIMT.

After viewing the video, 75 (73 %) reported an overall positive reaction, 86 (83 %) felt CIMT would be acceptable, and 78 (76 %) would be willing to carry out this version of CIMT. Most [81 (78 %)] felt it was likely to result in permanent improvement in upper limb function.

However, concerns noted including perceived cruelty [47 (45 %)], possible fall risk [84 (82 %)] and possible discomfort [61 (59 %)]. Many [65 (62 %)] therapists felt that it would not be possible to administer the CIMT approach in their clinical setting.

Conclusions: Current use of CIMT was low. Although most therapists felt that CIMT would be suitable for use with stroke patients and an acceptable form of treatment, many felt it was not possible to administer CIMT in their current clinical settings. Further research is needed to clarify the reasons underlying the barriers to CIMT.

P63 Ageism in Stroke Rehabilitation Studies

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Background: Approximately 10,000 strokes occur in Ireland per year with a mean age of 75, comparable to international figures—mean age range 73–76 years. An age bias has been demonstrated in studies of pharmacological therapeutic intervention in stroke. Stroke rehabilitation has been demonstrated to significantly reduce mortality and morbidity, but the extent of ageism in the literature is unknown. The aim of this study systematically reviewed the literature to assess the extent of ageism in stroke rehabilitation studies.

Methods: All Randomized Control Trials (RCT) on stroke rehabilitation entered in the Cochrane-database on which reported mean age were included. Patient gender and exclusion criteria were also recorded.

Results: Of 241 RCTs identified, 182 were included in this review. Excluded studies had insufficient data or had patients with an acquired brain injury other than stroke. The mean age of all patients was 64.3, with 57 % men and 43 % women, consistent with the reported gender ratio in stroke incidence worldwide. 46 % of trials excluded patients with cognitive impairment, 23 % with uncontrolled hypertension or cardiac disease, 23 % with dysphasia and finally 13 % of trials excluded patients with multiple strokes.

Conclusions: We have identified a clear difference in the mean age of those included in stroke rehabilitation studies compared to the international mean age of stroke. In addition, a quarter of trials excluded dysphasic patients which may indicate omission of more severe strokes. Similarly, a quarter of trials excluded individuals with significant cardiovascular disease, a further limitation of these trials. This means that the evidence base for stroke rehabilitation is deficient in terms of matching the characteristics of patients encountered in clinical practice, and older people and those with significant disability must be included in future trials.

P64 Characteristics and Outcomes for Older Patients Attending an Acute Medical Assessment Unit

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Background: Older patients represent an increasing workload for acute unscheduled care services in hospitals. In line with recommendations from the Acute Medicine Programme report (2010), a 12 h (09.00–21.00) 11-bay acute medical assessment unit (AMAU) was opened in July 2012. Acutely unwell medical, triage category 1–3 patients are referred either directly from Emergency Department (ED) triage or by the ED physicians following review. There is a daily outpatient AMAU review clinic. The aim of this study was to report on the characteristics and outcomes for older patients assessed in the AMAU.

Methods: Data on all older patients (aged ≥ 65 years) attending the AMAU (16.07.2012–01.04.2013) was prospectively collected and information on demographic details, patient experience times in the AMAU, and discharge outcomes were retrieved.

Results: 642/1970 (32.6 %) of all patients assessed in the AMAU were ≥ 65 years. 389/642 (61 %) came to the AMAU directly from ED triage, with the remainder referred by ED physicians. 238/642 (37 %) of older patients were triage category 1 or 2 on presentation, 380/642 (59 %) were category 3, and the remainder category 4. Mean length of time from attendance at ED to AMAU discharge was 5 h 53 min, with 80 % discharged within 6-h target.

Almost half (49.1 %) of older patients presenting to the AMAU were self-referred, 37.6 % were referred by GP, 3.1 % attended directly from nursing home, and 13.3 % were referred via other hospital departments. 366/642 (57 %) of older patients were medically admitted with 275/642 (43 %) discharged following AMAU assessment. Discharge outcomes included GP follow-up in 124/275 (45.1 %) of patients, AMAU review clinic in 80/275 (29.1 %) and other outpatient services and age-related day hospital in 71/275 (25.8 %) cases.

Conclusions: Older patients account for almost a third of all patients seen in the AMAU. A sizeable proportion of potential admissions can be avoided using AMAU review clinic and OPD services.

P65 Oropharyngeal Dysphagia in End of Life Care

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Background: Oropharyngeal dysphagia (OPD) occurs in association with a number of illnesses and is common among older patients. Its prevalence in end-of-life care for non-malignant disease is unknown. We studied OPD in end-of-life care of older patients without known malignant disease.

Methods: Case-notes relating to deaths occurring between 2010 and 2011 in a geriatric and stroke medicine service were reviewed retrospectively. Patients with known diagnosis of malignancy were excluded. We reviewed diagnosis of OPD, underlying conditions associated with OPD and the management of OPD in the terminal phase of care.

Results: Of twenty patients who met study criteria, there were ten men and ten women, mean age 82.5 years, average length of stay 23 days. Four had a preadmission diagnosis of OPD, two a documented history of aspiration. Six (30 %) were diagnosed with aspiration pneumonia secondary to OPD either at presentation or during admission, an overall incidence of OPD of 45 %. Of those with OPD, seven (78 %) had a diagnosis of a neurodegenerative condition, three (33 %) respiratory disease, six (66 %) documented cognitive impairment. Seven patients were placed NPO for a mean 2.4 days prior to death. Three (33 %) had a palliative care consultation: advice regarding feeding was given in only one case. Four deaths were related to aspiration pneumonia secondary to OPD

Conclusions: The incidence of OPD is high among older people whose end-of-life care occurs in hospital. It has a higher incidence in those patients with multiple co-morbidities, in particular neurodegenerative and cognitive disorders, and is under-diagnosed. This indicates a need to highlight the issue of OPD in geriatric end-of-life care, to investigate effective management strategies, and develop a more structured framework for its management.

P66 Will I? Won't I? Motivating Factors in Attending an Exercise-Based Falls Prevention Programme

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Background: While it is proven that exercise benefits health and prevents falls, the uptake of referrals to falls prevention exercise is poor. Our aims were to determine the reasons older adults chose to partake in falls prevention-exercise classes (FPC) and why they continued attending.

Methods: 41 patients, age range 62–94 years, completed a 10-week FPC over 15-month period. Of those, 8 were excluded (death and medically unwell). 33 letters inviting interviews were sent; of which 23 (70 %) were contactable by telephone and agreed to participate in rater-administered structured questionnaire. Referral source, knowledge regarding FPC, exercise beliefs, feedback of FPC and exercise behaviour since FPC were recorded.

Results: Twenty-three respondents (16 women), mean age 80.2 years, 48 % recurrent fallers and a median Berg 40 were interviewed. Majority (21) heard about FPC from health care professionals. 9 respondents remembered being told that the aim of the FPC was to improve balance. Reasons for FPC attendance included wanting to improve movement and balance (10), prevent future falls (4) and feeling obligated (2). Other motivating factors for initiating and continuing the classes included social factors (8) e.g. meeting peers and getting out of the house, transport provision (6), and friendly peers and health professional staff (5). While 20 respondents believed that exercise benefitted their health, 16 enjoyed exercising. All clients found the group and gym setting helpful in motivating them to exercise. Majority (17) continued to do exercise since completing the programme.

Conclusions: Our study showed that older adults (59 % ≥80 years) who completed FPC were motivated by personal and social factors including peer support during their 10-week programme. Transport and gym setting were perceived as important factors for adherence to a group-based programme. It is encouraging that many respondents saw exercise as beneficial for their health and continued to exercise on completion of the programme.

P67 Use of a Brief Cognitive Screening Instrument in Older Patients Attending Emergency Department—A Pilot Study

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Background: Older patients represent an increasing workload in the emergency department (ED) and are at higher risk of adverse events and poorer outcomes than their younger counterparts. Their attendance is often complicated by cognitive impairment that is frequently undiagnosed previously.

The aim of this study was to investigate implementation of a brief nurse-administered 6-item cognitive impairment test (6-CIT) in ED.

Methods: A convenience sample of all older patients aged ≥65 years attending ED between 15.10.2012–30.10.2012 was performed. Following two training sessions, the 6-CIT was administered by ED/AMAU nurses when initially reviewing the patient. A score of ≥8/28 was positive for cognitive impairment. Admitted patients with cognitive impairment had repeat 6-CIT the following day and CAM-ICU screen for delirium performed by geriatrics team. Demographic and clinical data was retrieved from ED Symphony® records, clinician review and admission notes.

Results: 117 patients were screened (mean age 76.4 (±8); female: 51.3 %); Nursing home residents accounted for 9/117 (8 %) cases. The majority 85/117 (72.6 %) of patients were screened between Monday and Friday (0900–1700). Over two-thirds 79/117 (67.5 %) required hospital admission. A triage risk screening tool (TRST) was performed on 48/117 (41 %) of patients and 37/48 (77 %) were identified as high-risk vulnerable older adults. Initial 6-CIT was positive in 43/117 (36.8 %). Repeat 6-CIT was performed on 28/43 (65 %) of these, the remainder having been discharged from ED. All except 4/28 (14 %) remained positive. CAM-ICU was positive for delirium in 7/28 (25 %) of patients screened.

Conclusions: A high proportion of older patients attending ED met criteria for cognitive impairment. Of those admitted and re-screened, many met criteria for delirium. There was considerable variation in the applicability and successful implementation of the screening instruments between nurses, despite training. Attendance at ED represents an opportunity to identify older patients with cognitive impairment, who may have undiagnosed dementia.

P68 An Individually Tailored Exercise Program for Frail Older Hospitalised Inpatients

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Background: Older adults can experience functional decline following an acute hospital stay. Low levels of physical activity may influence this decline. A pilot study completed in 2011 showed additional exercise improved function and quality of life with a median reduction of 2 days in length of stay [1]. The purpose of this study was to develop a tailored, evidence-based balance and strengthening program for use in a large randomised controlled trial (RCT), which is now underway.

Methods: From a review of current literature, evidence-based exercise programs were identified and based on these an exercise program was designed and adapted to suit frail inpatients. Sixteen core exercises were selected which can be tailored to each patient by altering the body position, repetitions and resistance. Diagrams have been devised to assist guidance. The exercise program was trialled on 18 older inpatients and feedback was sought from the patients and staff.

Results: A tailored exercise program was designed. Immediately after the exercise session, eight (44 %) of the patients felt and demonstrated an improvement in their physical ability, as measured by the Short Physical Performance Battery. Fourteen (78 %) participants found it somewhat hard or challenging. Although two (11 %) of the eighteen participants stated that they did not enjoy the program, they reported they would do it again. All staff (n = 5) gave positive feedback and found the program easy to administer and adapt. From the staff feedback, four amendments were made to the program, thus establishing a program of twenty exercises.

Conclusions: Based on these preliminary Results, this individually tailored exercise program is easy to administer with good patient compliance. It will be used in the on-going RCT with further evaluation planned as part of the trial.

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P69 Development and Implementation of an Oral Care Assessment Tool

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Background: Stroke can have a profound effect on the oral cavity resulting in difficulties in daily activities such as eating, drinking and swallowing. While implementing nurse-led ward rounds it became evident there was no standardisation in oral care practices and equipment being used. In particular the current oral care tool used on the ward provided a score that was poorly understood and without a care plan. We sought to evaluate the current oral care practices and assessment tools being used on our care of the elderly ward.

Methods: A staff questionnaire was developed and distributed on the care of the elderly ward. The questionnaire included open and closed ended questions. Staff were asked about policies, practices and assessment tools used.

Results: 16(67 %) of patient's needed assistance with oral care (mean age 86 years). Mean Barthel was 9/20. 68 % of nurses were aware of the existing oral care policy. There was no standardisation in the oral care practices and a variety of equipment and products were being used. Pink swabs were the main equipment used and toothbrushes were only used in 47 % of patients. 53 % of staff found the main barrier to providing oral care was related to no equipment available in the hospital. 84 % of staff had not received an update on oral care since qualifying.

This led to a survey of the development and implementation of an oral cavity assessment tool (1) and a case to purchase toothbrushes at ward level. A follow-up questionnaire shows a 6 point improvement on a Likert scale in favour of the new oral care tool.

Conclusions: Poor oral care can result in pain, poor quality of life, infections and reduced nutritional intake. Implementation of an oral care tool and appropriate equipment can provide nurses with a standardised approach to assessment ensuring evidence-based practice and individualised care.

P70 Acute Basilar Artery Occlusion: A Neuro-Interventional Emergency

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Background: Acute occlusion of the basilar artery may cause brainstem or thalamic ischaemia or infarction. It is a neuro-interventional emergency and if not recognised and treated early will result in rapid deterioration and death. Patients with acute basilar artery occlusion may present with sudden and dramatic stepwise neurological impairment, the exact characteristics of which will depend on the site of occlusion. A high index of suspicion is needed in the correct clinical setting as the diagnosis can easily be missed. Case Report: 46 year old male, past medical history of hypertension, ex-smoker, heavy alcohol intake on day prior to sudden onset of occipital headache with associated disorientation, nausea and vomiting. Unremarkable physical examination on arrival to emergency department. CT Brain normal. Subsequent development of severe hypertension 215/110, associated left hemiparesis, fixed gaze to left and seizure activity. CT cerebral angiogram demonstrated basilar artery thrombosis with pre-existing atherosclerosis. Persistent severe hypertension required treatment with intravenous labetalol and seizure activity required intubation and ventilation. Emergency transfer to neurosurgical unit for thrombectomy was arranged (good angiographic result) but subsequent compression of 4th ventricle from left cerebellar infarction with oedema led to the development of acute hydrocephalus. Unfortunately he subsequently experienced further clinical deterioration and died.

Conclusions: Acute occlusion of the basilar artery is a life-threatening event with up to 90 % mortality depending on the location, and high morbidity in the survivors (1). Treatment may involve catheter-directed intra-arterial thrombolysis and intravenous heparin. Mechanical embolectomy with a clot retrieval device has been used in selected cases. Rapid recognition of symptoms and prompt referral to specialist interventional centres are key in minimising morbidity and achieving good patient outcomes.

Reference:

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P71 A Study of Older People Admitted to General Surgical Wards With Head or Bone Trauma

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Background: This study examined a population of older adults (>65) admitted to a surgical ward after a fall with fracture or head injury, and the involvement of elderly care services. Comprehensive geriatric assessment has shown to be effective for frail older people in the acute hospital setting and there are recommendations on the routine involvement of elderly care physicians in orthogeriatric and general surgical wards.

Methods: Retrospective case note review in 2013. We identified 55 patients admitted with head injury or fracture following a fall. All contact with elderly care services (inpatient referrals, occupational

therapy (OT), physiotherapy (PT) and community falls team) was recorded. Also the incidence of atrial fibrillation and any change to medication noted.

Results: 55 patients identified, 34 (62 %) were female, 21 (38 %) male. Average age was 80 years, range 66–93 years. 27 (49 %) were transferred to a trauma unit for surgical fracture management where orthogeriatric services provide routine fall prevention and osteoporosis assessments. The remaining 28 (51 %) patients were discharged home from a surgical ward. This group had no routine elderly care assessment, although a clear referral pathway exists within the hospital. 5 (18 %) patients had comprehensive assessment by a geriatrician as an inpatient, 2 seen at outpatients. 14 (50 %) were assessed by OT/PT who have specific role in falls prevention. Only 1 patient was referred to a community falls prevention team.

Of the 10 patients discharged with a fragility fracture, 2 (20 %) were on osteoporosis treatment.

Conclusions: This study identified patients who would clearly benefit from comprehensive geriatric assessment, with missed opportunities for falls prevention interventions and AF screening. This hospital is now reviewing how older patients with complex needs can access the right care.

P72 An Assessment of Footwear Characteristics and Factors that Influence Shoe Selection in Older Persons Within an Inpatient Rehabilitation Setting

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Background: Inappropriate or ill-fitting footwear can increase an older person's risk of falling. The attributes of good footwear are well known [1]. The Footwear Assessment Form (FAF) is a reliable clinical tool for assessment of footwear characteristics relevant to balance [2]. It has been suggested that older persons base their footwear selection on comfort rather than safety [1]. The aim of this study is to assess footwear characteristics using the FAF, identify ill-fitting footwear and investigate factors that influence shoe selection in older inpatients in a rehabilitation setting.

Methods: A convenience sample of 32 older inpatients within a rehabilitation setting was included. Participant's footwear was assessed using the six item FAF which included; shoe type, heel height, sole pattern, sole stiffness, heel counter stiffness and shoe closure. Participants wearing ill-fitting footwear were identified. A questionnaire was administered regarding factors that influence footwear selection.

Results: The FAF identified that 37 % of participants were wearing slippers. This style of footwear was strongly associated with adverse footwear characteristics. 28 % of participants were wearing ill-fitting footwear. Results of the questionnaire found that the majority of participants reported a preference for features associated with comfort rather than safety when selecting a shoe. Only 31 % of participants were able to name attributes of safe shoes.

Conclusions: Slippers are commonly worn by older inpatients in a rehabilitation setting and are associated with adverse footwear characteristics. Footwear selection is commonly based on comfort rather than safety. Physiotherapists have a duty to inform patients of the attributes of safe footwear with the aim of falls avoidance in the older person.

References:

1. Menant JC (2008) Optimising footwear for older people at risk of falls. *JRRD* 45:1167
2. Menz HB (2000) The Footwear Assessment Form: a reliable clinical tool to assess footwear characteristics. *Clin Rehabil* 14:657

P73 Nighttime Blood Pressure Variability in Older Irish Adults: A Primary Care ABPM Database

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Background: Hypertension is a leading risk factor for cognitive impairment and stroke. Normal circadian patterns predict that blood pressure (BP) will be lower at night, a phenomenon known as dipping. Patients who do not experience this nocturnal decrease (greater than 10 % fall in BP) are known as non-dippers and patients whose BP increases at night are reverse dippers. These patients have a higher risk of cardiovascular events. This study aimed to examine patterns of nocturnal blood pressure in older Irish adults.

Methods: The study examined ambulatory blood pressure monitoring (ABPM) recordings performed in primary care clinics in adult patients between January 1999 and June 2012. All ABPM recordings were performed because of a previously elevated clinic BP measurement (CBPM). The study population was then divided into subgroups aged under and over 65. Ethical approval was obtained from the local hospital ethics board.

Results: 77,260 patients were included in the study with a mean age of 58.8 ± 16.9 years. 28,486 patients in the group were aged over 65 (mean age 75.4 ± 9.8 years). In the under 65 age group, 45 % showed a normal dipping BP profile. 23.6 % were non-dippers and 9.1 % were reverse dippers. In comparison, in the over 65 age group, there were higher rates of non-dipping and reverse dipping (31.5 and 18.1 % respectively). The initial CBPM was similar across normal dippers, non-dippers and reverse dippers (160.1/89.8, 159.1/88.1 and 158.9/86.9 mmHg respectively). This contrasts with mean nighttime BP for the same groupings (119.7/62.6, 130.3/67.1 and 143.7/72.2 mmHg respectively).

Conclusions: This study emphasizes that older adults are more likely to display abnormal nighttime BP patterns. This confers a higher risk of cardiovascular events. The findings of the study also highlight the advantage of ABPM in defining 24 h blood pressure control.

P74 What's Up with DaT? Does Striatal Dopamine Transporter Imaging Add Anything to the Clinical Picture?

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Background: Distinguishing Parkinson's Disease (PD)/Parkinsonian Syndromes (PS) from movement disorders is clinically challenging. Striatal dopamine transporter imaging using 123I-FP-CIT single photon emission tomography (DaTscan) can help distinguish PD/PS from essential tremor, but it cannot differentiate PD from PS. Given that some studies suggest DaTscans have equal accuracy to that of careful clinical diagnoses of PD we were keen to determine the clinical relevance of these studies in our own clinical practice, questioning the frequency of use and do they add anything to the clinical picture?

Methods: DaTscans carried out between the period 2010 to 2013 were identified using The National Integrated Medical Imaging

System, chart reviews were then carried out on patients from the Department of Geriatric Medicine.

Results: In total 38 scans were analysed, 82 % (31) of these were male, 18 % (7) were female, the median age was 67. Breakdown by speciality showed 45 % (17) Geriatric Medicine, 34 % (13) Neurology, 16 % (6) Psychiatry, 2 % (1) Internal Medicine and 2 % (1) Rheumatology. Regarding Geriatric Medicine scans 71 % (12) were male, 29 % (5) were female, the median age was 77.5. In 65 % (11) the conclusion supported a diagnosis of PD/PS, 30 % (5) suggests a diagnosis of essential tremor, which resulted in different patient management and in 5 % (1) a report was not available.

Conclusions: A relatively small number of DaTscans were carried out in the Department of Geriatric Medicine, but in 30 % of patients a result not supportive of PD altered patient management, suggesting that DaTscans can be clinically useful.

P75 Knowledge, Skills and Attitudes of NCHDs towards Cognitive Assessment of Older Oncology Patients

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Background: The number of individuals with cognitive impairment alongside a cancer diagnosis is expected to become more prevalent in the coming years. This preliminary study on the cognitive assessment of older oncology patients reviews Non-Consultant Hospital Doctor's (NCHD's) knowledge, skills and attitudes towards this area.

Methods: An online survey was distributed nationally to NCHDs working in Medical and Radiation Oncology. The survey was compiled using Survey Monkey software. Statistical analysis was performed using SPSS version 20.

Results: The overall response rate was low (11/48) and consisted of Specialist Registrars (n = 8) and Registrars (n = 3) only. Cognitive assessment of older oncology patients was employed mainly for determining delirium or dementia, 91 % (n = 10) or 82 % (n = 9) respectively. Established links and referral pathways between Oncology and Geriatric Medicine did not exist in seven of the eleven institutions surveyed. There were no protocols for the use of a specific standardized cognitive assessment tool for older oncology patients (73 %, n = 8), when to carry out such assessments (82 %, n = 9), who should carry out such assessments (73 %, n = 8), and no training received for conducting cognitive assessments (64 %, n = 7) identified in certain institutions. No statistically significant differences were identified for doctors' confidence in conducting cognitive assessments on older oncology patients in comparison to their discipline, length of time qualified as a doctor or participation on a training scheme.

Conclusions: Many respondents did not assess patients for chemotherapy-induced cognitive impairment and decline in cognition in relation to hormone therapy; this finding was consistent with the literature despite the need for improved detection of such cognitive deficits. The implementation of adequate training for doctors on the appropriate use of cognitive assessments and better integration between Oncology and Geriatric Medicine in the form of referral pathways or protocols could better assist NCHDs in their detection of cognitive impairment of older oncology patients.

P76 Efficiency of Computerised Discharge Letters

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Background: Continuity of care between acute hospitals and general practitioners is of the utmost importance in ensuring patients receive appropriate and timely care after discharge from hospital. There have been many studies looking at the effectiveness of computerised discharge summaries, but literature on simple efficiency is lacking. For example, the majority of GPs are of the opinion that computerised discharges are an improvement over manual letters 1, and that their content is satisfactory 2. It is therefore important that hospitals undertake audit to ensure appropriate levels of receipt of important transfer of care documents.

Methods: An audit was performed of 100 consecutive discharges from the department of age-related health care in Tallaght Hospital, consisting of determining how many discharge letters were received by the correct GP, and clarifying the factors associated with failure to receive a discharge summary.

Results: 85 hospital discharge letters (85 %) had been received by the appropriate practice and 15 (15 %) had not. Of the fifteen letters not received, three had no discharge summary completed. Two discharge summaries went to the wrong GP due to the incorrect GP details being entered into the Patient information Management System (PiMS). One was an inter-hospital transfer where the discharge summary was sent to the accepting hospital. The remaining nine occurred to GP practices who were not participants in Healthlink.

Conclusions: This data suggests that there is a sizeable minority of discharge summaries which are not received by their GPs. The audit suggests that a review of the processes for sending out discharge summaries should be undertaken by liaison committees of GPs and their local hospitals. Our Results confirm that secure electronic communication plays a major role in maximizing the efficiency of communication of transitions of care of patients between hospitals and their general practitioners, and its universal use should be encouraged.

P77 Predictors of Falls in a Profile of Unselected Community-Dwelling Population Assessed by a Physiotherapist in a Day Hospital

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Background: Our Day Hospital provides patient tailored comprehensive geriatric assessment. Majority of referrals are from GPs. Comprehensive geriatric assessment incorporates multidisciplinary approach, physiotherapists among others. Physiotherapists are involved in falls risk assessment using Berg Balance Scale, Dynamic Gait Index and Elderly Mobility Scale. Patients identified at risk are given individually tailored Home Exercise Programs, falls prevention advice, walking aids, and referral to rehabilitation facilities.

Methods: Patients' physiotherapy records reviewed retrospectively. Patients' demographics, outcome measures, and numbers of falls over

the previous year were collated and used in this study. All patients assessed by physiotherapist in the Day Hospital over 1 yr period (January 1st 2011 to December 31st 2011) included in this study. We aimed to profile unselected community-dwelling population assessed by a physiotherapist in the Day Hospital and determine predictors of falls.

Results: 588 patients were reviewed, mean age 82.2 (SD 6.6) years. Of these 470 patients had Berg Balance Scores (BBS) completed, mean 46.61 (SD 7.60). Data on falls over the past year were available on 415 patients who had BBS completed, M:F ratio 134 (32.3 %): 281 (67.7 %). Mean BBS for those with no falls (267 (64.3 % patients) was 48, with 1 fall (85 (20.5 % patients) was 46, with 2 falls (35 (8.4 % patients) was 46 and with more than 2 falls (28 (6.7 % patients) was 43 (95 % confidence interval).

Threshold (number) of falls, sex, age and BBS were used as predictors of falls over the previous year. Wald Chi square for threshold falls = 1 was 0.945 ($p = 0.331$), falls = 2 was 0.122 ($p = 0.727$), falls more than 2 was 0.22 ($p = 0.883$), sex was 0.046 ($p = 0.830$), age was 0.016 ($p = 0.899$) and BBS was 10.407 ($p = 0.001$).

Conclusions: Berg Balance score was the only statistically significant predictor of falls over the previous year in the cohort of patients.

P78 Prophylaxis Rates for Venous Thromboembolism in the Elderly Inpatient: Too Low or Too High?: A Snapshot of Current Practice

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Background: Risks and benefits of venous thromboembolism (VTE) prophylaxis in hospitalised medical patients remains controversial with recent systematic reviews concluding that heparin prophylaxis resulted in little benefit if applied universally. Best practice suggests risk profiling of patients in order to appropriately prescribe prophylaxis.

Methods: With this in mind we undertook a prospective audit assessing current LMWH prescription in inpatients. Standards of practice were based on current prescribing guidelines. Patient demographics were recorded. Statistical analyses were performed using non-parametric testing. Relative risks (RR) and odds ratios (OR) were calculated. p values <0.05 were deemed significant.

Results: 88 patients were assessed, 44 female. Median age was 76. 45 % were on prophylactic LMWH. Of these, 70 % had an appropriate indication and dosage prescribed. The most common reason for inappropriate dosing was failure to dose adjust with renal impairment (25 %). In those not on treatment, 54 % actually met criteria for treatment according to guidelines, having 1 or more risk factor for VTE. 21 patients were appropriately not treated. 12 patients in this group were on an oral anticoagulant. Renal impairment (Creatinine Clearance <30 ml/min) increased risk of inappropriate prescription did in both untreated and treated groups ($p < 0.0001$) while age and gender did not.

Conclusions: Clear guidelines on LMWH prescribing and the need for dose adjustment in vulnerable populations such as the elderly and renally impaired are required to ensure minimisation of the risks of bleeding, death and future venous thromboembolic disease in these cohorts.

P79 Metabolically Healthy Obesity, Obesity Measurements and Markers of Cognitive Impairment in Older Adults

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Background: The term metabolically healthy obesity (MHO) has been used to describe obese individuals who do not display the expected features of metabolic dysfunction usually associated with excess adiposity. The criteria defining metabolically healthy obesity varies considerably. We compare markers of cognition for MHO individuals with that of their Metabolically Unhealthy Obese (MUO) counterparts. We do so for cohorts created using the World Health Organisation (WHO) obesity criteria based on either body mass index (BMI), waist hip ratio (WHR) or waist circumference (WC).

Methods: TILDA consists of a stratified clustered sample of 8,175 individuals ≥ 50 years representative of the community dwelling population. TILDA cross sectional data is presented here. Individuals were divided into the MHO and MUO groups according to criteria adapted from the International Diabetes Federation consensus definition of the metabolic syndrome and WHO obesity measurements. Regression analysis compared results of assessments of recall, attention and executive function as well as those for cognitive screening tools (MMSE, MoCA). Age, gender, educational level and smoking status were identified as confounder characteristics.

Results: The percentages of MHO among the obese cohorts were 8.0, 10.7 and 10 % for BMI, WHR and WC based criteria respectively. MHO groups created using the three obesity measurements resulted in comparable Results for all cognitive outcomes. MHO groups performed significantly better on recall assessment than their MUO counterparts when defined by WHR [$B = 0.27$; CI 0.04–0.51] and WR [0.36; CI 0.07–0.65]. The cognitive screening assessment trend towards improved Results in all MHO groups.

Conclusions: The composition of MHO groups created using BMI, WHR or WC is consistent, as are the cognitive outcomes for these groups when compared to their MUO counterparts. Results suggest MHO groups may have better cognitive outcomes, particularly with respect to recall. It emphasises the importance of aligning resources to maintain metabolic health in older adults.

P80 Culture Negative Infective Endocarditis and Intracerebral Haemorrhage

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Background: We present a case report of Intracerebral Haemorrhage as a possible complication of Culture Negative Infective Endocarditis. A 63 year old gentleman with previous history of prosthetic MV and AV replacements and Hypercholesterolaemia presented with sudden onset of left visual field disturbance, left sided neglect, confusion, headache and dizziness. The INR was 2.16. CT BRAIN demonstrated a right frontoparietal Intracerebral

haemorrhage with Some mid line shift and intraventricular extension. Anticoagulation was reversed with Prothrombin complex and Vitamin K. Repeated CT Brain showed no change and to facilitate early anticoagulation craniotomy and evacuation of haematoma was performed. Initial TTE revealed Echo densities on mitral valve and a decision was made to replace prosthetic valves with bio prosthetic valves. Subsequently the patient developed fever although the multiple sets of blood cultures were all sterile. A transoesophageal echo TOE demonstrated numerous and extensive echodensities on MV and MV annulus suggesting possible infective endocarditis. Atypical serology sent were all sterile and the patient has since been treated with a prolonged course of antibiotics. Repeated TOE demonstrated persistent Echo densities MV and probable aortic root abscess at junction of anterior MV annulus. The patient was referred for urgent mitral and aortic valve replacement.

Conclusions: This case presents important learning points in terms of management of Intracranial haemorrhage in the setting of prosthetic valves and emphasizes the need to rule out endocarditis in patients with risk factors who present with stroke.

P81 Spinal Epidural Abscess Presenting with Evolving Symptoms of Stroke

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Background: We present a case report of spinal epidural abscess with a presentation of stroke.

A 70 year old lady with background of rheumatoid arthritis and peptic ulcer disease presented to A&E with back pain leading to poor mobility and urinary retention. Prior to admission complete independence with ADLs. Urine analysis revealed leukocytes and RBC along with pus cells. Difficult to assess neurologically but power, tone and reflexes normal, no apparent signs of neurological deterioration noted. Treatment of UTI commenced. Next Day developed right pronator drift and right leg power 3/5. Clinical diagnosis of TACI with few days' onset complicated by dehydration and UTI. CT Brain revealed old lacunar infarct only. MRI Scan showed appearances consistent with the presence of an anterior spinal epidural abscess extending from upper border of L2 superiorly down into the sacral spinal canal. Dural sac compression, bone marrow oedema and contrast enhancement in the bodies of L5 to S1. Also L5 S1 disc oedematous. Repeated MRI 2 months later showed Florid L5 S1 discitis where there is disc space fluid end plate bone oedema, paravertebral soft tissue change, and a small epidural collection which is producing advanced spinal stenosis at L5/S1 particularly to the right.

Conclusions: A spinal epidural abscess threatens the spinal cord or cauda equina by compression and also by vascular compromise. If untreated, an expanding suppurative infection in the spinal epidural space impinges on the spinal cord, producing sensory symptoms and signs, motor dysfunction, and, ultimately, paralysis and death. Intervention early in the course of the disease undoubtedly improves the outcome. Frequently, diagnosis is delayed because the initial presentation may be complex, mimicking stroke and its complications.

P82 Testing an Alternative Model of Frailty in the Irish Longitudinal Study of Ageing

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Background: In the past decade numerous tools to measure the frailty phenotype have been developed. However, there is no consensus on which constitutes a gold standard for measuring frailty. The aim of this work was to explore combining the unique elements of 3 different tools to create a combination measure. This model was used to predict 2-year mortality.

Methods: Data comes from the Irish Longitudinal Study on Ageing (TILDA), a nationally representative sample of older adults aged 50 and older. We focused on participants 65 and older ($n = 2,187$). Components of Fried's phenotype measure, the Morely FRAIL scale and the Survey of Health, Ageing and Retirement in Europe frail scale were operationalised. Confirmatory factor analysis was used to assess construct validity, and full structural equation modelling was used to investigate the links between the resulting structure and mortality, while controlling for age and sex.

Results: Frailty is often conceptualized as a single dimension, and this was the first model tested. However, we found that a two-dimension model was more appropriate ($SB \chi^2(53) = 133.96$, $p \leq 0.001$); one factor represented physical components of frailty and the second represented emotional components. Elements from each traditional frailty scale contributed to the model. When age, sex and mortality were included, the risk for 2-year mortality increased for those with both greater physical ($OR = 1.03$, $p < 0.001$) and emotional ($OR = 1.02$, $p = 0.001$) frailty.

Conclusions: In combining the unique components of different frailty tools, we found that a two-dimension structure for the construct of frailty was suitable. This alternative combination frailty model has sufficient construct and predictive validity. To our knowledge, this is the first attempt to unify indicators from different frailty scales into a single frailty model, and will potentially lead to new methods to identify frailty in a research setting.

P83 Would a Patch Help? An Unusual Cause of Delirium

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Background: Delirium occurs in up to 50 % of older hospital inpatients [1] and can be precipitated by a vast array of potential aetiologies. Alcohol withdrawal is a well-recognised precipitant [2]. We describe a case of delirium related to nicotine withdrawal.

Case: An 81-year-old man with a history of seizures was admitted after an unwitnessed collapse resulting in facial bruising. CT brain scan was unremarkable. He denied alcohol consumption. His fingers

were deeply tar stained in keeping with his history of heavy smoking. On arrival to the Emergency Department, he was alert with an Abbreviated Mental Test Score of 10/10. The presumed diagnosis was an unwitnessed seizure with good recovery and discharge was planned for the following day.

Twenty-four hours following admission he became acutely agitated with evidence of hyperactive delirium. He was disorientated, urinating on the ward, hitting out at staff members and required a nursing special. He was given lorazepam intramuscularly with little benefit. A collateral history regarding his alcohol intake confirmed that he had not drunk alcohol for several years. His relative volunteered that he had previously become very agitated when abstinent from smoking in another hospital and asked “Would a patch help?” Following the application of a 25 mcg nicotine patch, there was a dramatic resolution in his delirium over a few hours. He returned to full independence and was discharged home 4 days post admission.

Conclusions: Cigarette smoking is the most prevalent addiction worldwide. Despite this, nicotine withdrawal delirium is not well-described in the literature, with most cases to date arising in intensive care and palliative care settings [3]. Given the high prevalence of delirium in older inpatients, we advise consideration be given to alcohol, benzodiazepine or cigarette addiction when admitting older adults, in order to help attenuate delirium risk.

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P84 Consensus Validation of a Method for Delirium Identification Using Hospital Records

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Background: Delirium is highly prevalent among older inpatients. Though delirium appears to be associated with adverse trajectories of cognitive decline, it has rarely been considered in prospective studies of dementia. The possibility that a delirium diagnosis could be retrospectively derived from medical records would add important information when considering cognitive outcomes in cohort studies. This study aimed to develop and validate a tool for retrospective delirium detection using medical records in the UK/Ireland.

Methods: A delirium point prevalence study was undertaken in an acute hospital on 15th May 2010, and this served as the reference-standard for delirium diagnosis. Medical records of a random selection of this study's participants were retrieved. Short clinical vignettes on each patient were compiled in a standardised manner, describing

any relevant delirium symptoms recorded in the whole case record for the period leading up to case-ascertainment. Case records were abstracted several times to assess the influence of abstractor on the consensus process. An expert panel independently rated each vignette as unlikely, possible, or probable delirium and disagreements resolved by consensus. Abstractors and experts were blinded to the original DSM-IV delirium diagnosis. Data were analysed using Stata, version 12.1.

Results: To date, five abstractors have produced 247 independent vignettes on 49 participants. Median age of subjects was 77.9 years (IQR 60.7–86.7). When measured against the original study DSM-IV diagnosis, the chart abstraction process had a sensitivity of 87.7 % and a specificity of 86.6 % in delirium detection, with AUC 0.877 (95 % CI 0.83–0.92). There was no significant difference detected in assigned diagnostic categories according to abstractor.

Conclusions: Our study shows the chart abstraction method is an accurate tool to retrospectively deduce the presence of delirium in hospitalised patients. This should prove particularly useful in retrospectively identifying incident delirium in dementia study cohorts under longitudinal follow-up.

P85 Denosumab—Trends in Use and Tolerance in the First 30 months

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Background: Denosumab is available to treat severe osteoporosis in Ireland for 30 months. We reviewed selection criteria applied to prescribe denosumab, reported side effects and initial biochemical response.

Methods: We reviewed the first 228 patients who received denosumab in our Bone Health Clinic looking at data from an existing database where patients demographics, bone density and biochemistry Results are recorded.

Results: We identified 208 females and 20 males. Mean age 74.4 ± 10.6 years. Rate of prescription has increased from 10 in 2010 to 71 in 2011 to 144 in 2012. Reasons for prescription as well as profile of patients remained similar to our previous reporting. The majority had established severe osteoporosis—with 75 % having suffered a fragility fracture at some stage. The majority of patients had normal renal function or mild dysfunction though 35 % had stage 3 CKD or worse. Vitamin D levels were optimised prior to administration with a mean level of 74.3 nmol/L ± 29.

Indications for commencement of denosumab were lack of response to previous treatments, gastrointestinal pathology e.g. gastrectomy, intolerance of other treatments and non-compliance. Of note 44 patients received denosumab first line due to CKD or contraindication to oral therapy.

Biochemical response shows significant reduction in CTX ($p < 0.01$) with trend to a rise in PTH and fall in serum calcium though no clinically significant episodes of hypocalcaemia have been noted. Clinically reported side-effects were minimal: arthralgia ($n = 2$), mild flu-like illness ($n = 4$) and rash ($n = 2$).

Conclusions: Denosumab is a very useful addition to the armamentarium of treatments for severe osteoporosis. It is well tolerated with few side effects making it a safe as well as convenient treatment for our elderly population. Further data will become available in next 6–12 months on bone mineral density response in these patients

P86 The Role of IV Bisphosphonates in Relation to Denosumab

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Background: Denosumab is available to treat severe osteoporosis in Ireland for 30 months. Prior to its release our options with regard to patients who were intolerant, non-compliant or unresponsive to oral therapies were recombinant parathyroid hormone therapy or intravenous bisphosphonates. The former has certain specific indications and is costly leaving the latter to “fill the gap” so to speak; that is until the introduction of denosumab.

Methods: We reviewed rates of first prescription of iv zoledronic acid and denosumab since the introduction of denosumab in late 2010 in our specialist bone clinic. We compared this to the rate of first prescription of iv zoledronic acid in the 1 year prior.

Results: Rate of prescription of iv zoledronic acid has declined significantly as denosumab use has increased. However iv zoledronic acid still plays a major role in our treatment of osteoporosis. In 2010 iv zoledronic acid was prescribed for the first time in 267 patients. Denosumab was prescribed 7 times towards the end of the year. In 2011 iv zoledronic acid was prescribed 211 times with denosumab issued 80 times. In 2012 iv zoledronic acid was prescribed 146 times with denosumab prescribed 153 times. Interestingly total use of both drugs remains similar.

Conclusions: Denosumab is a well tolerated addition which is convenient and cost effective as it can be administered in the community. It has led to a 46 % reduction in use of iv zoledronic acid in our service. It is suitable for patients with chronic kidney disease. Nevertheless iv zoledronic acid remains a potent antiresorptive and the treatment of choice in complex medical patients such as those with transplants or autoimmune conditions and in augmenting the gains of 2 years of anabolic treatment with rPTH. We conclude that iv zoledronic acid remains pivotal in our treatment options for osteoporosis.

P87 Cortical Vein Thrombosis Presenting as Transient Neurological Symptoms

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Background: Cerebral venous thrombosis (CVT) causes approximately 0.5 to 1 % of strokes worldwide with varying incidences in specific patient cohorts. 8 % occur in those >65 years. In this group the incidence is equal in men and women. 62 % occur in the superior sagittal sinus. 17 % are isolated cortical vein thrombosis (ICVT).

Methods: We present the case of a 70 year old right-handed female smoker, with a history of ischaemic heart disease and dyslipidaemia who presented to the emergency department following a 2 week history of episodic right arm and leg weakness.

Results: At presentation her GCS was 15, BP 153/92, NIHSS 0. ECG was normal sinus rhythm. No carotid bruit was heard. Her ABCD2 score was 4. A CT brain showed no stroke disease. Her subsequent stroke work up was negative for a causative factor. A presumptive diagnosis of a transient ischaemic attack was made. Subsequently she

complained of a headache and had a multiple sequence MRI brain which confirmed the presence of an ICVT. Investigation for malignancy was done. None was found. She commenced anticoagulation. Follow up imaging at 3 months showed recanalisation of the cortical vein.

Conclusions: We present an unusual cause of transient neurological symptoms. Headache is the most common presentation of CVT, however 28.5 % of people present with stroke like symptoms. At presentation 30 % of CT brain scans are normal. MRV and gradient ECHO are the most sensitive imaging techniques. Malignancy is a frequent cause in those >65 years however in 37 % no cause is found. When diagnosed and treated promptly prognosis is good with complete recovery in 79 %. There is a paucity of information on the management of ICVT with the majority of information being derived from case reports and series. With improvements in imaging techniques it is likely that their incidence will increase.

P88 Adherence to Do Not Attempt Resuscitation (DNAR) Policy in an Irish Long Stay Unit

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Background: There is no legislation or guidelines in Ireland regarding do not attempt resuscitation (DNAR) orders. The British Geriatric Society (BGS) has guidelines that can direct physicians [1]. In Ireland 13 % of long stay units have DNAR policies [2]. Our aim was to look at our institution's policy, how it correlates to the BGS guidelines and our adherence to it.

Methods: Our institution's policy was reviewed. Documentation of DNAR orders in a 100 bed nursing unit was analysed over a 24 h period.

Results: Our policy adheres to the BGS guidelines. 64 % (n = 64) of residents were female. Median age was 84 (SD 6.64). Dementia was documented present in 70 % (n = 70). Admissions were from an acute hospital (77 %), another long stay institution (19 %) and home (4 %). Median length of stay (LOS) was 437 days. 82 % (n = 82) had DNAR orders. Of these, 92.68 % (n = 74) had it documented in their medical note. 7.32 % (n = 6) were reported to have DNAR decisions but documentation could not be found due to inaccessible notes. Of the 76 documented, 2 were in their closed notes. Of those remaining documentation of capacity, reason for DNAR and documented discussion with family were present in 21.62 % (n = 16), 44.59 % (n = 33), 50.7 % (n = 39) respectively. It was most commonly discussed with the patient's offspring (43.59 %, n = 17). It was documented discussed with patients in 9.61 % (n = 5).

No significant difference in resuscitation status with regard to LOS (p = 0.68), gender (p = 0.778), or residence before admission (p = 0.906) was seen. DNAR orders were significantly associated with older age (84 vs 79, p = 0.048) and documented dementia (74.39 vs. 50 %, p = 0.04).

Conclusions: Currently our DNAR policy adheres to the BGS guidelines. Our adherence to documentation of DNAR orders is suboptimal. Poor documentation does not indicate a lack of appropriate decisions. We aim to achieve 100 % compliance with our policy through improved education and introduction of a DNAR proforma.

References:

1. British Geriatric Guidelines
2. O'Brien M, O'Keeffe ST (2009) Resuscitation decision in Irish Long-Stay Units. *Ir Med J* 178(4):423–425

P89 A Change in Prescribing Practices Among the Elderly in an Irish Teaching Hospital

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Background: Medication use increases with advancing age and contributes to the susceptibility of the elderly to adverse drug reactions (ADRs). Generic prescribing is an important measure of prescribing quality. The aim of this study was to evaluate current generic prescribing rates in our institution and determine whether a specific prescribing intervention would improve this aspect of patient care.

Methods: We analysed prescribing practices on four wards (two medical, two surgical) 6 months apart. As an intervention a prescribing booklet was distributed among non-consultant hospital doctors (NCHDs). The number of prescribed items and rate of generic prescribing were analysed.

Results: 133 and 123 patients' prescriptions were analysed in stage 1 and 2 respectively. No significant difference in gender (48.48 % female vs. 52.85 % female, $p = 0.48$) or length of stay (LOS) (42.15 SD57.02 vs. 42.64 SD74.27, $p = 0.952$) was noted between the two sampling periods. Patients were younger in stage 2 [73 years (95 % CI 70.167–75.787) vs. 68 years (95 % CI 64.781–71.608), $p = 0.03$]. There were equal proportions of medical and surgical patients ($p = 0.23$).

The number of medications prescribed per patient (PPP) did not change significantly over the 6 month period (13.7PPP SD 5.4 vs. 13.7PPP SD 6.3, $p = 0.93$). Generic prescribing improved from 62.86 to 68.27 %. More medications were prescribed generically in stage 2 of the cycle in patients >65 years (9.1PPP vs 10.6PPP, $p = 0.02$) and those >75 years (9.4PPP vs. 11.2PPP $p = 0.009$). Generic prescribing in both age groups improved in relation to the prescribing of their regular medications, 6.8PPP vs. 8.1PPP $p = 0.015$ and 7.0PPP vs. 8.6PPP $p = 0.0075$ respectively.

Conclusions: With education generic prescribing can be improved and thus reduce the potential for ADRs. Elderly patients are more at risk due to polypharmacy. With our intervention, generic prescribing improved particularly in those >65 years. With continued education we aim to continue the increased awareness among our staff regarding polypharmacy, generic prescribing and ADRs.

P90 Voice Disorders in Older People Referred to Speech and Language Therapy

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Background: A voice disorder can be defined as a voice which is characterised by an abnormality of pitch, volume, resonance, quality or which is inappropriate for the age or gender of the speaker. Voice disorders can have a significant impact on income, inter-personal relationships and quality of life. Voice disorders are typically reported in the literature as more prevalent in the working-age population. This study reports on an audit of ENT referrals to a Speech and Language

Therapy (SLT) department over an 18 month period revealing a significant number of people over 65 presenting with voice disorders. **Methods:** An audit of outpatient ENT referrals to an SLT department in an acute hospital over an 18 month period. The Voice Handicap Index (VHI) was used as a therapy outcome measure.

Results: Of 45 referrals received 20 (44 %) were for people over 65 years old. The most prevalent aetiology was presbyphonia (55 %), followed by laryngo-pharyngeal reflux (LPR) (15 %) and vocal fold palsy (10 %) with the remainder of referrals comprising of other diagnoses. Of those 20 referrals, 18 (90 %) accepted invitation for an initial assessment. Eleven (69 %) of those who attended for initial assessment went on to attend for voice therapy. All completed VHIs revealed a reduction in scores post treatment, indicating an improved self-perception of voice after therapy.

Conclusions: A significant proportion of ENT referrals to SLT are for older people presenting with voice disorders. As a group, the majority of clients require and benefit from voice therapy. Older people may be exhibiting degenerative changes associated with normal ageing, but which give rise to vocal dysfunction, thereby affecting their quality of life. Therefore it is imperative that older people with voice disorders have access to SLT services.

P91 Towards Dementia Friendly Hospitals: A Multicentre Survey of Acute Hospital Ward Environments

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Background: As the population with dementia expands, acute hospitals must examine whether their physical environment is appropriate for the person with dementia, not just in elderly care wards, but in all hospital wards.

Methods: Thirty-one wards were randomly chosen from six hospitals in Cork county (three urban public hospitals; one urban private hospital, and two rural public hospitals). A team of three researchers external to the hospitals examined these wards using the UK National Audit of Dementia environmental audit tool (RCPUK 2010).

Results: Few wards had sufficient orientation aids, such as clocks, visible from all patients' beds ($n = 5$), and only one ward had calendars visible from all beds. Personal items and messages from relatives were visible to patients in only nine wards. Only two wards could supply hearing aids such as amplifiers/communicators/batteries, and some wards ($n = 9$) could not even readily supply mobility aids. Seven wards did not have an area for restless patients to mobilise while still visible to staff.

Just ten wards utilised a colour scheme to aid the patient to find their own bay, and key areas such as the nurses' station or the dayroom were clearly marked in only 8 wards. Similarly, toilets were poorly sign-posted—only three wards had the sign for the bay toilet visible from all beds, and the toilet door did not have a sign in 10 wards. The call bell/ alarm was not visible in the toilet in 7 wards. Signs, when present, were judged to be unclear in the majority of cases (19 wards). There was some variation between hospitals, but no ward was ideal.

Conclusions: Our acute hospital wards could be improved to better meet the needs of a person with dementia who is hospitalised. Many of the changes (e.g. signs, orientation aids) are low cost and feasible to implement.

P92 Is Acute Hospital Ward Organisation and Staffing Optimised to Treat Patients With Dementia?

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Background: As the population with dementia expands, it is important that acute hospitals have sufficient resources and structures in place to identify and meet the care needs of patients with dementia.

Methods: Thirty-one wards were randomly chosen from the six hospitals in Cork county (21 from urban public hospitals; 3 from an urban private hospital, 7 from rural public hospitals) and examined using the UK National Audit of Dementia environmental audit tool (RCPUK 2010) to determine the ward structure and resourcing as it relates to the older person with dementia.

Results: Some care aspects were excellent- almost all wards identified the name by which the person with dementia prefers to be addressed, and had a system for reporting uneaten meals. However, most wards had staffing issues—68 % had staff vacancies and a similar proportion of these vacancies were unfilled. On 55 % of wards, there were no minimum staffing levels. Only 25 % of wards had arrangements to cover staff attending training relating to people with dementia. Only four wards had support from a dementia nurse. The majority of wards had access to services such as liaison psychiatry, occupational therapy, pharmacy and physiotherapy during weekdays, but access to these services out of hours was universally scarce. Approximately half the wards provided written communication with patients and their families regarding ward routines, complaints procedures and homecare packages. Half the wards operated a protected mealtime system, but few had a system to proactively identify people that needed assistance with meals (n = 3). Most wards (n = 26) didn't offer patients any opportunity to interact socially during mealtimes.

Conclusions: Our acute hospital wards do not have adequate staffing or resources to treat people with dementia optimally. Flexible redistribution of current staff to match care needs, improved communication and improved ward systems (e.g. at mealtimes) may help.

P93 An Audit of In-Patient Consultations Referred to the Department of Geriatric & Stroke Medicine in a Dublin Teaching Hospital

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Background: The provision of inpatient hospital healthcare involves liaison with different specialist services. Effective communication with the Department of Geriatric & Stroke Medicine (DGSM) service is essential for elderly patients with established multiple comorbidities and care needs. Consultation is the first step in establishing communication with medical and surgical specialties. Consultations are requested electronically via the hospital's Patient Information Profile Explorer system, seeking an opinion/advice on a wide range of issues: management of delirium/falls/bone health, rehabilitation and medico-legal advice on placement. We aimed to determine the profile and quality of these referrals.

Methods: A retrospective audit (01/05/2011 to 31/12/2012 inclusive) of all consultations referred to the DGSM was conducted. Data concerning demographics, quantity and source of consultations, reasons for each consultation, medical comorbidities and time interval (from when the consultation was sent, to when the patient was subsequently reviewed) were collated.

Results: 1317 referral consultations were reviewed. Female patients predominated (n = 713, 54 %). Patients aged >65 years accounted for 63 % (n = 823) of referrals, whilst 3 % (n = 41) were <65 years. Patient age was not recorded on 34 % of consultations. Medicine accounted for 65 % (n = 850) of referrals, 18 % (n = 238) from Surgery and the source was not specified for 17 % (n = 229). The Gastroenterological and Vascular Surgery services accounted for 22 % (n = 186) and 24 % (n = 58) of medical and surgical consultations respectively. Long Term Care (33 %, n = 440) accounted for the majority of consultations. 49 % (n = 646) of the referrals were seen within 3 days, 11 % (n = 147) took >3 days and 40 % (n = 524) did not have a date recorded for when the referral was seen. The average time interval to assessment was 1.90 days.

Conclusions: A high quality referral letter can facilitate effective communication with other specialists and improve patient care. The development of a standardised consultation form with required fields could improve the quality of referral consultations.

P94 The Assessment of Nutritional Intake for Hospitalised Older Adults in a Dublin Teaching Hospital

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Background: Disease related malnutrition in hospitalised patients has been identified as a significant problem in Ireland, especially in older adults (>65 years) [1]. Multiple comorbidities, frailty, cognitive impairment, and increased care needs/dependency place older adults at greater risk of malnutrition. Malnutrition is associated with prolonged hospitalisation, increased medication requirement and decreased quality of life. Our previous audit (2010) revealed that 72 % of patients in the geriatric ward received less than the minimum recommended daily energy requirement (25 kcal/kg/day).

Methods: A prospective audit (28/01/2013 to 8/03/2013 inclusive) of the nutritional intake for in-patients aged >65 years, in three medical wards, was conducted. Data on age, cognition, dependency level, Malnutrition Universal Screening Tool score (MUST), Barthel Index and length of stay (LOS) were collated. Nutritional intake data were calculated for each patient, for all meals over 3 consecutive days, by recording and calculating the calories (kcal) and protein consumed. Nutritional requirements for each patient were determined using the Oxford/Henry (calories) and Elia (protein) equations respectively.

Results: 67 patients were included in the study. 70 % (n = 47) had cognitive impairment, 45 % (n = 30) required assistance at mealtimes and 58 % (n = 39) were medium-high risk for malnutrition (MUST score >2). 64 % (n = 43) and 58 % (n = 39) of patients failed to achieve the minimal caloric intake and minimum protein requirements respectively. Older adults with a longer LOS, a higher dependency level and of an older age were more likely to meet the minimum nutritional requirements. We postulate that this group may have been prioritised for nutritional intervention because of their age and pre-existing risk factors.

Conclusions: Nutritional intake for hospitalised older adults in medical wards was inadequate. To ensure adequate nutritional intake, older adults need regular screening during their hospital admission.

Reference:

1. Nutrition and Health in an Ageing Population. UCD Institute of Food & Health Report 2010. (http://www.ucd.ie/t4cms/ucd_ageing_policy_doc_june_10.pdf)

P95 “Hear me Think!”—An Accessible Cognitive Screen for Patients With Communication Impairment Post Stroke

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Background: Patients with communication impairment often have difficulty understanding others, expressing themselves and reading/writing. Therefore, it is often assumed that patients with communication impairment have a co-occurring cognitive impairment. This impacts on the entire treatment plan for a patient and on how people interact with that individual. We have found that existing cognitive assessments are not accessible for patients with communication impairments post stroke or primarily assess problem solving. We have developed a cognitive screen that aims to be accessible for this patient group. We believe a cognitive screen with a reduced ‘language load’ would enable us to isolate the nature of patient’s deficits (i.e. cognition, communication or both) and so help to guide rehabilitation and patient care. Our cognitive screen is accessible for patients with varying degrees of communication impairment. It assesses orientation, visual & auditory attention and memory, visuospatial abilities and executive function. Each subtest encompasses a new, accessible method of assessment with correlating written/pictorial material. This ensures true assessment of that cognitive domain thus reducing the impact of communication impairment on performance.

Methods: We piloted our ‘accessible cognitive screen’ with 20 patients with communication impairment post stroke through joint SLT/OT sessions. Feedback was sought from patients and OT/SLTs who have used the assessment in an acute hospital setting. DVD recordings were made to compare patients’ responses to the accessible cognitive screen with the original version.

Results: While this initiative is still a work in progress, early indications are that this is a novel tool that helps to diagnose the nature of the patient’s impairment more precisely. It provides invaluable information that aids decision-making resulting in more effective patient-centred treatment.

Conclusions: Such collaborative team working has helped to ensure that patients with communication impairment are able to access a cognitive assessment that does not rely on language use to demonstrate cognitive ability.

P96 Are Rehab Patients Undergoing DXA Scans According to Current Guidelines?

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Background: The purpose of this audit is to determine if patients in a rehabilitation centre are undergoing DXA scans as recommended in

current guidelines. It is estimated that patients post-stroke have 1.5 to 4 times the risk of sustaining a hip fracture compared to an age-matched healthy population. A residual walking deficit post-stroke is a significant risk factor for osteoporosis, and so the presence of this risk factor warrants a baseline DXA scan.

Methods: All adult admissions over a 12 month period from January to December 2012 were included. A patient list was obtained through the hospital IT system, including data on gender, date of birth (DOB), type of injury and medical record number (MRN). Data was gathered on all DXA scans performed, with patients’ names and MRNs from a handwritten record kept by the radiography department. This information was correlated with the admission list, using the patients’ name, MRN and DOB as identifiers.

Results: 149 patients were included in the study; 90 men and 59 women. Patients’ ages ranged from 18 to 70 years old, with only 9 patients over 65 years. 6 categories of injury were identified. Over 97 % of patients were admitted under three of these categories and one patient was admitted under each of the remaining three. Only 17 patients underwent a DXA scan, while the average age of those admitted was 47 years, and 52 years for those scanned.

Conclusions: Only 13 % of patients underwent a DXA scan. Patients with a traumatic brain injury underwent DXA scans most frequently, but this was also the largest patient group. Recommendations for the rehabilitation centre include routinely assessing osteoporosis risk factors, noting these in a structured format, and maintaining a computerised list of DXA scans to improve accessibility and future auditing.

P97 The Impact of Hip Fracture on Mobility and Ability to Self Care Fifteen Months Post Fracture

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Background: Hip fractures are an increasingly serious problem for older adults. They are associated with increased morbidity, mortality functional decline and loss of independent living. They are a major clinical and financial burden on health services accounting for 10 % of all non vertebral fractures. They are frequently a consequence of falls and may indicate underlying osteoporosis. The lifetime risk of sustaining a hip fracture is 17.5 and 6 % in white women and men respectively.

Aim: The aim of this study was to assess the effect of hip fracture on the ability of the sufferer to self care and to measure their level of mobility 15 months following fracture.

Methods: A prospective longitudinal study was carried out at the study site on patients admitted for repair of hip fracture. Prior mobility and self care levels were assessed using the Nottingham Extended Activities of Daily Living score (NEADL) and Modified Barthel Index on admission and every 4 months for 15 months.

Results: 214 (95 %) participants were admitted from home with 12 (5 %) admitted from Long Term care facilities. At 15 months 148 (71 %) were at home with 49 (24 %) in long term facilities.

Of 226 participants, 126 (56 %) were independently mobile prior to hospital while 100 (44 %) required some form of assistance. At 15 months only 41 (20 %) were independently mobile, 152 (70 %) required assistance while 14 (7 %) were immobile.

Conclusions: Hip fractures have serious consequences for older people, resulting in reduced mobility and ability to carry out personal and instrumental activities of daily living independently. This can have a detrimental effect on a person’s ability to live independently.

P98 The Use of Femoral Approach for Trans-Thoracic Echocardiogram Bubble Studies in the Investigation of Cryptogenic Stroke

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Background: In approximately 30 % of young survivors of stroke, no clear cause is identified. Patent foramen ovale (PFO) is found in half of these patients on transoesophageal echocardiogram (TOE). Prevalence of PFO is 25 % in the general population. PFO may be the cause of the stroke, though often its presence is incidental [1].

We aimed to determine the utility of femoral-approach trans-thoracic echocardiogram (TTE) bubble-study for the detection of PFO in patients with cryptogenic stroke.

Methods: In our regional hospital, TTE bubble studies have been performed on all patients with cryptogenic stroke since 2007. We retrospectively examined Results from November 2007 to April 2013. Patients were admitted as day cases to our Medical Assessment Unit. They had central venous cannulae placed in the right femoral vein by Seldinger technique. TTEs were performed contemporaneous to injection of agitated saline, and assessment was made for PFO via bubble flow from right to left atria. Assessment was made at rest and after valsalva manoeuvre.

Results: 32 stroke patients had TTE bubble studies. 17 female and 15 male. Mean age 47.2 years, SD 1.2. 15 patients (46.9 %) were positive for PFO, and 17 patients were negative. complication rate was low. One patient developed a right groin haematoma.

Conclusions: Our centre favours the femoral approach to bubble studies, as it is thought to be higher sensitivity than upper limb approach, for anatomical reasons. Furthermore, valsalva is not possible during TOE, thus limiting its sensitivity. The prevalence of PFO in our cohort was similar to that in other studies, indicating that femoral approach TTE is a useful alternative to TOE. Of the patients with a positive study, four were sent for closure of the PFO. This remains a controversial topic.

Reference:

1. Steven R et al (2013) Still No Closure on the Question of PFO Closure. *NEJM* 368:12:1152–1153

P99 Epilepsy in Older Adults with an Intellectual Disability in Ireland: Associations and Service Implications

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Background: Epilepsy is a common occurrence in persons with an intellectual disability (ID) and seizures are often complex and refractory to treatment. There are limited studies on the prevalence of epilepsy in older adults with an ID, its relationship to comorbid conditions and the picture of ageing for those with an ID and epilepsy.

Methods: This is a population based prevalence study with data drawn from Wave One of the Intellectual Disability Supplement to the Irish Longitudinal Study on Ageing (IDS-TILDA) which included 753 persons with an ID aged 40 years and over. The prevalence of epilepsy was estimated using the number of individuals who reported

a doctor's diagnosis of epilepsy. Prevalence of epilepsy was established and the association of epilepsy and age was examined. Logistic regression was used to examine the association between epilepsy, and co morbid conditions.

Results: Prevalence rates of epilepsy among people with ID were high (30.7 %). Differences in prevalence of epilepsy among genders were not statistically significant, and prevalence was highest in the younger age groups (40–49 years) and declined as people got older. Epilepsy was significantly more prevalent in those with a severe/profound ID than those with a mild/moderate ID, and without Down's syndrome. Rates of refractory epilepsy were high and, despite taking anti-epileptic medication over half of those with epilepsy reported experiencing seizures within the last 2 years.

Conclusions: Older adults with epilepsy and ID appear to face challenges from living with seizures and associated comorbidities. Those individuals, their carers and families have considerable needs for information about epilepsy and its management, access to specialised epilepsy centres and support from specialist ID and epilepsy services.

P100 Title: Drugs, Drips and Diamonds—Improving the Rate of Switch to Oral Antibiotics in Elderly Patients

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Background: Switching intravenous (IV) antibiotics to oral antibiotics when clinically indicated is associated with patient, staff and cost benefits including reductions in infection, antibiotic costs and improved patient comfort and mobility. Hospital policy recommends switch occurs on day three which coincides with IV catheter bundle decision of reviewing the need for catheter and removing if no longer indicated.

Methods and Aims: This multidisciplinary project commenced January 2013 on our Care of the Elderly ward. We completed an analysis of ward compliance and knowledge with the hospital IV to oral antibiotic switch policy and found only 55.55 % patients were considered for oral switch at Day 3, 25 % staff could locate policy and 75 % staff knew the indications for safe switch.

We used quality improvement methodology aiming that by July 1st 100 % patients eligible for IV-oral antibiotic switch are switched by 6 pm and IV removed if no longer indicated.

The ward whiteboard (plan for every patient) contains a variety of symbols, which includes a diamond 'decision' symbol. The process of antibiotic prescription was mapped and we trialled the insertion of a diamond on the whiteboard for every patient on day three IV antibiotics. This signalled that clinical review was required regarding oral antibiotics.

Results: Utilising the diamond symbol improved the proportion of patients considered for and changed to oral antibiotics to 100 %. Additional tests of change introduced included revising the hospital policy, education, publicising and utilising a patient information leaflet to explore the role of patient in helping to improve the switching process.

Conclusions: By linking into two established ward processes (the whiteboard symbols and IV care bundle) we have improved prompt switching of patients to oral antibiotics. The benefit of the multidisciplinary approach, and involving all key team members was essential in instituting improvement within the geriatric patient population.

P101 Predisposing, Enabling and Need Determinants of Flu Vaccination in the Older Irish Population

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Background: Flu vaccination is an effective strategy to reduce flu-related morbidity and mortality. In Ireland, as in other countries, it is recommended annually for particular groups including people aged ≥ 65 , or those with chronic conditions. The aim was to examine predisposing, enabling and need factors associated with flu vaccination among older Irish adults.

Methods: Data were analysed from the 1st wave of The Irish Longitudinal Study on Ageing (TILDA), a population-based cohort study using stratified clustered sampling. A 62 % response rate was achieved among eligible households. The outcome was responses to 'have you ever had a flu shot'. Uptake was examined in recommended groups including those aged ≥ 65 , with lung disease, heart disease and/or diabetes, body mass index (BMI) of $\geq 40 \text{ kg/m}^2$, or in receipt of carer's allowance. Covariates were categorised into predisposing (age, sex, residence, marital status), enabling (education, employment, carer's allowance, medical card status, private health insurance) and need factors (self-rated health, disability, chronic disease status). Multivariate logistic regression was conducted using Stata 12.

Results: 74 % of those aged ≥ 65 (95 % CI = 73–76 %) and 58 % of those with heart disease and/or diabetes had been vaccinated in the past. Taking all recommended groups into account, uptake was 56 % (95 % CI = 54–57). Factors significantly associated with having ever had a vaccination were age (OR = 1.1), being separated/divorced (OR = 0.6), having 3rd level or higher education (OR = 1.24), having a medical card (OR = 2.2), good self-rated health (OR = 0.7), number of chronic diseases (≥ 3 OR = 2.8) and a diagnosis of chronic lung disease (OR = 2.4) (all $p < 0.05$). A diagnosis of heart disease and/or diabetes and having a BMI $\geq 40 \text{ kg/m}^2$ were not significant predictors.

Conclusions: In this study predisposing, enabling and need factors were determinants of vaccination uptake. Not having a medical card was associated with receipt of vaccination, suggesting a potential financial barrier to preventive services in Ireland.

P102 An Audit of Antibiotic Prescription for Older Patients Admitted to Hospital with Urinary Tract Infection

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Background: Urinary Tract Infection (UTI) in the over-65 population is a frequent reason for admission. Diagnosis is typically based on the presence of new urinary symptoms in addition to systemic features. In reality treatment is often initiated because of positive urinalysis despite evidence that asymptomatic bacteriuria should not be treated [1]. The rise of antibiotic resistance is an important reason to obtain accurate diagnosis and treat with narrow-spectrum agents adjusting for culture sensitivities.

Methods: A prospective chart review of patients aged 70 and over admitted for UTI was undertaken over 8 weeks. A proforma was used to document admission National Early Warning Scores (NEWS) and urine culture Results. Uncomplicated UTI was defined: female

patients in the absence of indwelling catheters, no signs of systemic infection (indicated by new confusion, NEWS). Complicated UTI included males, presence of catheters or systemic features.

Results: Forty patients were identified for review. Urine culture Results were available for all 40 (100 %). The most common reason for initiating antibiotics was positive urinalysis in addition to acute confusion (11 patients, 27.5 %). Fourteen patients (35 %) met criteria for uncomplicated UTI; of these, 6 patients (43 %) were treated with broad-spectrum intravenous antibiotics. Twelve (30 %) commenced on oral antibiotics; of these, 6 (50 %) required escalation to intravenous agents. Eleven (27.5 %) cultures grew nil significant however 9 (82 %) of those patients received intravenous antibiotics.

Conclusions: Patients admitted for UTI commonly receive broad-spectrum antibiotics. This perhaps reflects diagnostic difficulty in a population who often present atypically and may not have the same physiological response as their younger counterparts. Positive cultures may be elusive due to prior community treatment or practical reasons (e.g. unobtainable samples in confused patients). In summary the diagnosis of UTI in our elderly population is complex and may lead to over-treatment, inappropriate antibiotic prescribing and subsequent resistance.

References:

1. Beveridge et al (2011) Optimal management of urinary tract infections in older people [Online]. Available <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3131987/pdf/cia-6-173.pdf>

P103 Transfusion & Infusion Services for the Frail Older Patient in a Day Hospital Setting: Retrospective Analysis Supported by an Individual Case Study

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Background: A Day Hospital enhances independent living and avoids unnecessary hospital admissions by providing specialist assessment and treatment of older people by core multidisciplinary teams. Our day hospital (DH) has developed a transfusion and infusion service. The aim of this study is to describe and assess the provision of these services.

Methods: We carried out a retrospective analytical study of infusions at the DH during 2012. Information was obtained from patient attendance records, individual patient chart review, Irish blood transfusion board and hospital pharmacy. We included intravenous infusions for iron and magnesium replacement, zoledronic acid, immunoglobulins and red blood cells (RBC). We analysed the cost of the service based on pricing in 2012. We also do a cost comparison using a case study of an individual who had multiple hospital admissions for recurrent symptomatic hypomagnesaemia prior to enrolment in the DH.

Results: In 2012, there were 7,311 attendances (male 48 %, average age 78) at our assessment and treatment centre for various services. We gave 156 RBC, 11 zoledronic acid, 7 immunoglobulin and 18 iron infusions. The individual case we analysed had spent 63 nights in hospital for symptomatic hypomagnesaemia in the 4 months prior to his enrolment to the day hospital at a basic bed cost of €21,231 (€5,307.75/month). This patient subsequently attended the day hospital for RBCs and magnesium infusions. He had a total of 60 day hospital attendances during 2012. He had 13 RBC units and 49 magnesium infusions (184 g). This amounted to a basic care cost of €9,678 (€806.50/month). He had no acute hospital admission during this time.

Conclusions: This study highlights new cost effective services our DH provides to the local community. With a multidisciplinary team available if required it is the ideal setting for potential service expansion to manage frail older patients.

P104 Assessment of Hospital Inpatient Discharge Summaries, Written for General Practitioners, from the Geriatric Service of a Large Teaching Hospital

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Background: This study aimed to assess if information important to General Practitioners is being included in inpatient hospital discharge summaries for patients treated by the Geriatric service in a large teaching hospital. The discharge document summarising an acute inpatient stay in hospital is often the only means of communication between Secondary and Primary care, and ensures continuity of care. This is especially important in the elderly population who have multiple morbidities and are often on many medications.

Methods: After a thorough literature review, a “gold standard” letter was defined as having inclusion of a discharge diagnosis, medications on discharge and follow-up plans. Forty computerised discharge summaries were retrospectively assessed for inclusion of these parameters. The study group consisted of the first eight sequentially discharged patients under the care of each of the five Consultants during a 1 month period (1 September 2011 to 30 September 2011). Each summary was compared to the “gold standard”.

Results: A discharge diagnosis was included in 37 of the 40 summaries (92.5 %), medications on discharge were included in 39 summaries (97.5 %) and follow-up was recorded in 35 summaries (87.5 %). Of the 40 originally selected summaries, six (15 %) were not completed, so alternative summaries were selected. Of the 37 summaries that had a discharge diagnosis included, four (10.8 %) had a single diagnosis recorded in ‘Reason for admission’/‘Diagnosis’/‘Progress during stay’ sections of the computerised template, despite having more than one symptom mentioned in these sections.

Conclusions: This study showed that the information assessed was available in the vast majority of discharge summaries for patients admitted acutely under the care of this Geriatric service. Perhaps some new diagnoses pertaining to admissions were not included. Improvements can be made, especially in ensuring each patient has a discharge summary, and in documentation of follow-up plans.

P105 An Opportunity to Press the Pause Button: Audit and Review of End of Life Care

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Background: The Hospice Friendly Hospitals (HFH) Programme, in collaboration with the HSE Palliative Care Clinical Programme, has developed a pilot end-of-life care audit and review system, a concept supported by HIQA. The system builds on the first National Audit of

End-of-Life Care in Hospital Ireland (2008/9), combining elements of audit, research and reflective practice, to support a process of reflection and continuous improvement. Eight key domains of care for persons at the end of life have been identified mainly based on national standards. The audit is applicable to all adult deaths regardless of diagnosis or whether the death was expected or sudden and examines care from the provider and bereaved relative perspective.

Methods: The system was piloted in acute hospitals, hospices, community units/hospitals, nursing homes and residential care services across Ireland in 2012/3 and 120 deaths reviewed against the eight domains. The pilot was evaluated using mixed methods including documentation of audit findings, qualitative interviews with audit facilitators and managers, cognitive testing of the tools and independent assessments of care to determine validity and reliability.

Results: Findings suggest that the system is feasible and highly regarded amongst care providers. Subject to the implementation of the recommended modifications to the system (to further improve the validity and internal reliability of the tools), it is anticipated that the system may be useful to support providers of end of life care to reflect and improve upon the care they provide.

P106 The Introduction of a Mealtime Companionship Program to a Geriatric Care Ward in a Dublin Teaching Hospital

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Background: Nutritional intake and social engagement are two critical factors in acute care of the older person. The role of volunteers at mealtimes may have important implications for ensuring that hospital settings are ‘age-friendly’ in this regard. The primary aim of providing mealtime companionship is to enhance nutritional intake but it can also have the effect of enhancing relationships between caregivers and the older person, both integral to facilitating independence. One in 3 patients admitted to hospital are at risk of disease related malnutrition. 75 % are considered to be at high risk (BAPEN, Nutrition Screening Week 2010, 2011). A study in the UK found that 40 % of inpatients felt they did not get enough help at mealtimes (Healthcare Commissioner, 2008). Providing a social environment for mealtimes may be considered a difficult challenge in a busy acute hospital environment, however it has been shown to be one of “the most powerful interventions nursing has to offer persons with dementia” [1]. A program of mealtime volunteers has been initiated on the main geriatric care ward of an acute Dublin hospital to optimise nutritional intake and increase patients’ opportunities for social interaction at mealtimes.

Method: The paper will review current practice and outline the process and challenges to establishing a mealtime companionship program on an acute geriatric ward in a large Dublin hospital.

Results: The review will draw on the clinical experiences of stakeholders in the mealtime companionship scheme. Preliminary audit data will be reviewed.

Conclusions: The review will conclude by discussing the feasibility of a mealtime companionship scheme to address both nutritional intake and social engagement of older patients in an acute setting.

Reference:

1. Amella EJ (2004) Feeding and hydration issues for older adults with Dementia. *Nurs Clin N Am* 39:607–623

P107 Utilization and Yield of Nerve Conduction Studies and Electromyography in Older Adults

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Background: Little is known about the use of nerve conduction studies (NCS) and electromyography (EMG) in older adults. These patients are at increased risk of both central and peripheral neurological disorders which may be exacerbated by conditions that are more common in the elderly. Impaired nerve and muscle deficits contribute to morbidity and reduced quality of life. Our aim was to define the utilization and yield of NCS and EMG in older adults.

Methods: We reviewed NCS and EMG records for patients older than age 65 in the year 2012. Patient demographics were described. Diagnoses were recorded as neuropathy, myopathy, radiculopathy, plexopathy, anterior horn cell syndrome, unclear and multiple diagnoses. These categories were further stratified to detail the type and number of nerves involved. We examined the referral forms recording the source and reason for referral, and whether the working diagnosis was congruous with the post-test diagnosis.

Results: 1,530 NCS and EMGs were performed in 2012, of these 23 % were in patients older than 65 (mean age 73.7, 52 % male). Referrals came from medical consultants (47.4 %), surgeons (21.6 %), neurologists (19.9 %) and general practitioners (11.1 %). Of the referral forms that included a potential diagnosis, 37.8 % were not congruous with the post-test diagnosis. 83.7 % of NCS were abnormal as were 71.8 % of EMGs. The likelihood of having an abnormal test result increased with increasing age. The most common diagnosis was peripheral neuropathy (65.4 %) followed by a normal study (11.1 %), multiple diagnoses (8.8 %), radiculopathy (4.5 %), anterior horn cell syndrome (2.8 %), plexopathy (2.6 %), unclear diagnosis (2.8 %) and myopathy (2 %).

Conclusions: NCS and EMG are useful tests in this cohort for evaluation of a wide variety of peripheral nervous system abnormalities. The incidence of peripheral neuropathy is particularly high in this age group and detection is vital to institute treatment where applicable, prevent morbidity and improve quality of life.

P108 Stress Correlates of Relocation in Frail Elderly Long Term Care Residents: A Retrospective Analytical Study

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Background: Nearly 5 % of persons aged 65 and above reside in long term care facilities (LTCFs). In the past 18 months 1,200 LTCF beds have been closed for various reasons resulting in residents being transferred between facilities. Relocation stress syndrome in this population has been well documented. Our aim was to examine stress markers and mortality in residents relocated between LTCFs.

Methods: We studied the outcomes for residents from two LTCFs that care for the most highly dependent residents in our region. One LTCF closed completely and the second unit partially closed. We used the residents of the second unit who did not transfer as controls. A retrospective analysis was carried out recording: demographic data; cumulative illness (CIRS-G), dementia (CDR), mobility and

functional level. We examined new antidepressant prescriptions and antibiotic usage as markers of stress. Mortality at 30 and 90 days was recorded.

In total, we studied 76 transferred residents (mean age 82.1, male 38.2 %) and 62 controls (mean age 82.4, male 33.9 %). Both groups were highly dependent (modified Barthel index: control group 1.7 versus transfer group 2.6). Both groups had a high 90-day mortality (18.4 vs 17.7 %). However, there was an increased early mortality in the transfer group, with two-thirds of deaths in the first 30 days. There was higher prescription rate of antibiotics among the relocated residents prior to transfer (59.2 vs 27.4 %, $p = 0.017$). After transfer residents had a greater number of new antidepressant prescriptions than non-movers (19.7 vs 8.1 %, $p = 0.05$).

Results: Our Results show an increased early mortality and increased mood disturbance in highly dependent residents that transfer LTCFs. The increased antibiotic use prior to transfer could relate to increased stress before transfer as demonstrated in other studies. Proper planning and vigilance by staff is essential to minimise any distress caused to patients during times of relocation.

P109 The Eldermet Project: Dentition, Nutrition & Cognition–Community Versus Long Term Care (LTC) Population

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Background: Researchers in UCC, Cork University Hospital and Teagasc have created the ELDERMET project. Researchers are studying the relationship between diet, gut bacteria and health in a large number of elderly (>65 years) Irish subjects. Gut bacteria alteration is increasingly linked to variations in health including obesity and inflammatory conditions.

Methods: Data collections were undertaken amongst community, day hospital, long term care & rehabilitation populations in the Eldermet database. Dental status, MMSE and MNA scores, inflammatory markers and haematinics were recorded. Antibiotic usage amongst all groups was catalogued.

Results: 264 (58.8 %) females and 185 (41.2 %) males patients at T0. Patients were stratified according to residence category, of which Community (202) Day Hospital (67) Long-stay (117) Rehab (63). The Eldermet dental information was collapsed into three groupings; Completely Dentate (≥ 25 teeth); Partial Edentulism (1–24 natural teeth) Edentulism (no natural teeth). Using Kruskal–Wallis non-parametric ANOVA, looking at the effect of dental condition, we get a significant effect on MMSE ($\chi^2 = 35.64$, $p = 1.819 \times 10^{-8}$) and MNA ($\chi^2 = 14.53$, $p = 6.9887 \times 10^{-4}$). Running Kruskal–Wallis on bloods showed significant Results; Haemoglobin = ($\chi^2 = 5.76$, $p = 0.056$) and WBC = ($\chi^2 = 8.11$, $p = 0.0173$). Neither folate nor ferritin appeared to be affected by dental condition.

The lowest MMSE scores were among edentulous groups (MMSE 0–15:18 patients, MMSE 16–23:41 patients). Antibiotic usage per residence category was highest among community populations, followed by long stay, rehab and day hospital patients. Clostridium Difficile rates were highest among long-stay patients.

Conclusions: Dental status appears to impact on the nutritional and cognitive health of patients. Edentulous patients recorded higher white cell counts and lower haemoglobin levels than fully dentate patients. The lowest MMSE scores were recorded amongst the edentulous group. Antibiotic use was highest amongst community participants. Further research is required to qualify these preliminary Results.

P110 Inadequate Staffing Levels Delay Speech and Language Therapy Assessment of Acutely Ill Older Patients

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Background: Speech and language therapy [SALT] assessment provided as early as possible to acutely ill older patients in hospital is an integral part of comprehensive geriatric assessment (CGA) [1]. CGA improves survival and increases the likelihood of successful discharge [2]. We aimed to audit the paper-based referral system for SALT services in the geriatric medicine department.

Methods: We evaluated SALT assessment referral patterns for patients admitted to the department which employs 1.7 whole-time equivalent Speech and Language Therapists (SLTs). We prospectively evaluated consecutive patients admitted during June 2012. Demographics, referral indications and reasons for delay (≥ 24 h) from admission to referral and/or assessment were recorded. Reasons for any delay were sourced from patient notes and/or interview with doctors and relevant SLT.

Results: 51 patients were included. Mean age 75, 43 % female and 53 % had a stroke diagnosis. Main referral indications were speech (54 %), language (20 %) and swallow (71 %) assessment with some requiring more than 1 assessment. 23 (46 %) were seen on the day of referral while 14 (27 %) waited >24 h for assessment. 14 (27 %) waited >48 h. Date of referral/assessment was not documented in 4 (8 %) cases. The reasons identified for delays included: lack of staffing ($n = 20$), lack of awareness of the referral ($n = 5$) and delay by team in making referral ($n = 3$).

Conclusions: Significant delay in SALT assessment of patients was largely due to understaffing. Junior doctor education on the importance of prompt referral is necessary. A computerised referral system would improve response times. Ultimately, significant enhancement of SALT staffing levels is essential for timely provision of speech and language assessment.

References:

- (2012) Acute Care Toolkit 3: Acute medical care for frail older people. London: RCP
- Ellis G, Whitehead MA, O'Neill D et al (2011) Comprehensive geriatric assessment for older adults admitted to hospital. Cochrane Database Syst Rev (7):CD006211

P111 The Implementation and Audit of a Modified Malnutrition Risk Screening Tool in a Community Nursing Unit

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Background: Raheny community nursing unit (RCNU) is a 100 bedded long term care residence for persons over 65 years of age. Research indicates that people over the age of 65 years in Ireland are at increased risk of malnutrition due to multiple factors such as dementia, depression, isolation, reduced mobility, poly-pharmacy and

multiple co-morbidities. In March 2012 a modified malnutrition risk screening tool was introduced into RCNU and appropriate training carried out by the Dietitian. An audit was carried out before and after the implementation of the modified malnutrition screening tool in September 2012 yielding positive Results.

Methods: The nutritional status of all subjects $n = 100$ (females, $n = 64$; males, $n = 36$) was determined using the original MUST tool and the modified malnutrition screening tool. An audit of anthropometric data, including weight, height, BMI, Mid-upper arm circumference (MUAC) and percentage weight loss was assessed. The Results from each tool were compared.

Results: Audit 1: The original MUST was completed in 30 % of subjects ($n = 100$), of this 30 % only 13 % accurately calculated percentage weight loss and 19 % accurately calculated Ulna length to obtain a surrogate measure of height.

Audit 2: Post implementation and training of the modified Malnutrition screening tool there was a significant improvement in screening rates and accuracy. The screening tool and anthropometry was accurately completed in 89 % of residents and referrals to the Dietitian increased by 22 %.

Conclusions: This audit has highlighted a clear need for a consistent and accurate nutritional screening tool to be in place at the RCNU. With appropriate education and training of nursing staff and carers the modified malnutrition screening tool can be an effective and useful tool to identify those residents at risk of malnutrition.

P112 Audit of Thrombolysis Service for Stroke in a Peripheral Hospital Setting

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Background: Thrombolysis significantly improves the chance of independent recovery from ischaemic stroke and is appropriate treatment for older people based on the recent IST-3 trial. Mayo General Hospital (MGH), a peripheral hospital serving a catchment population of 130,600 people introduced on-site thrombolysis in 2008, and increased to 24/7 in 2011. Mayo has one of the highest elderly populations in Ireland circa 14 %. Delivery of thrombolysis to this elderly population is a considerable challenge and requires education and coordination of thrombolysis care pathway, emergency department care, medical staff and campaign to increase awareness in the community.

Methods: Prospective data was collected on 197 stroke patients who were screened for thrombolysis admitted to a 6 bedded acute stroke unit. 16 stroke patients were thrombolysed between May 2012 and May 2013. The final decision on thrombolysis was taken by the consultant physician on call. Data was recorded utilising the national stroke portal. Additional data was recorded door to rtPA time, and National Institute of Health Stroke Scale (NIHSS) pre and post thrombolysis. Adverse events including haemorrhagic transformation and symptomatic intracranial haemorrhage were also collected. In collaboration with Croi West of Ireland, the month of March 2013 was designated as Mayo Stroke Awareness Month. A county wide media campaign was conducted to highlight the stroke F.A.S.T. campaign.

Results: 16 (8.1 %) patients were thrombolysed over a 1 year period. 9 (56 %) were female and the mean age was 70 years. Maximum age was 88, with 4 (25 %) patients aged ≥ 80 . There was 1 (6.3 %) fatal intracranial haemorrhage.

Conclusions: Despite the logistics of delivery of thrombolysis to a rural population this was achieved in 8.1 % which is above the national target. The impact of the F.A.S.T media campaign for stroke awareness may become apparent in future planned audits.

P113 Exploration of the Association between Vitamin B12 and Cognitive Impairment in Older Patients

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Background: Vitamin B12 deficiency has traditionally been associated with neurocognitive pathology, but may not be associated with cognitive decline in older patients [1, 2]. Our aim was to assess the relationship between B12 levels and cognition in a cohort of older patients.

Methods: New patients attending our Geriatric Day Hospital, summer 2011, were eligible for inclusion; patients for whom B12 and MMSE were unavailable were excluded.

Results: Twenty-four patients were included; 13 (54.2 %) male, mean age 81.8 years (SD 6.5). One patient (4.2 %) had a pre-existing diagnosis of B12 deficiency, and 4 (16.7 %) of dementia when referred to clinic. At baseline, no patients were on specific B12 supplementation, or anti-epileptic therapy; 1 (4.2 %) was receiving a multivitamin. Median B12 was 233 pcg/ml (IQR 194–313); B12 was <200 pcg/ml in 9 (37.5 %) <160pcg/ml in 3 (12.5 %). Only 1 patient (4.2 %) had B12 >400 pcg/ml. At baseline, mean MMSE was 21.9 (SD 5.7); 14 (58.3 %) had an MMSE <24/30. No association was observed between B12 level and baseline MMSE (coefficient 0.008, 0.41), or between B12 <200 pcg/ml and MMSE <24 ($p = 0.62$). However, all 3 patients with a B12 <160 pcg/ml had MMSE <24. These 3 patients were commenced on intramuscular hydroxycobalamine; no other patients were supplemented. Follow-up MMSE was only available for 8 patients (mean 17 months from baseline); MMSE increased slightly (median 2 points) in 4 (50 %), with no change in the remaining 4 patients. Change in MMSE was not associated with B12 level.

Conclusions: In this exploratory analysis, there was a signal that very low B12 levels might be associated with cognitive impairment. However, numbers were small, and no association was otherwise observed between B12 levels and cognitive status as measured by MMSE. The role of B12 in the development of and management of cognitive impairment remains unclear, and large randomised trials are needed.

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2. O'Leary F et al (2012) Vitamin B12 status, cognitive decline and dementia: a systematic review of prospective cohort studies. *Br J Nutr* 108(11):1948–1961

P114 Investigating Concordance: Identifying the Factors That Influence the Implementation of Feeding, Eating, Drinking and Swallowing Recommendations for Residents of a Nursing Home Who Have Experienced Stroke

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Background: Concordance is a concept where patients and healthcare workers are equal partners and a state of agreement is reached through negotiation and partnership. It was this principle that guided the current research. This is a report of a study that aimed to address the questions: (i) what is the observed level of the implementation of speech and language therapy (SLT) feeding, eating, drinking and swallowing (FEDS) recommendations for patients in a nursing home

following stroke and (ii) what factors impact on the implementation of these recommendations from the patients' and nurses' perspectives? **Methods:** Data were collected over 3 months in 2011 and consisted of video-recorded observations of patients eating a main meal. Semi-structured interviews were conducted with the patients and nurses about their perspectives on the implementation of SLT FEDS recommendations and were qualitatively analysed using thematic analysis [1].

Results: Results showed an overall high level of implementation of SLT guidelines (76.9 %). The interviews revealed two global themes for the patients: (i) the patients' accommodation of personal factors and external influences and (ii) patients' attitudes to the role that food plays in their lives; and two global themes for the nurses, (i) the nurse as keystone of the core multidisciplinary team and (ii) the nurses' interactions with external services.

Conclusions: It is necessary for clinicians to bear in mind the diversity of factors that influence the behaviour of patients and nurses and to consider these when making SLT FEDS recommendations.

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P115 Results of the Implementation of a Falls Prevention Strategy in St. Columcille's Hospital (SCH)

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Background: An Interdisciplinary Falls Strategy Committee (FSC) was established to address the high incidence of falls in SCH. It was proposed that such a strategy would reduce falls by 20 % in line with the literature. The aim of the committee was to implement a Hospital Falls Initiative (HFI) using the HSE Falls prevention strategy and monitor change.

Methods: A retrospective audit of falls of the year 2010 was completed. A hospital wide falls prevention programme was introduced which incorporated a Risk assessment tool known as 'Stratify', a nursing care plan and staff education. This HFI was piloted during 2011 and introduced hospital wide in 2012. A prospective audit of falls from all wards in 2012 and analysis of the data was completed by the FSC. Data was analysed using means and t test.

Results: In 2010 the Average Number of falls was 22.75 per month (range 9–35). Falls per 1000 bed days averaged at 6.93 (range 3–13.7). In 2012, the average number of falls was 17 (range 14–22) per month. This implies a 26.35 % reduction in falls rate. The two tail t-test score thus being $p = 0.053$ and one tail t test of $p = 0.026$. In 2012, the Falls per 1000 bed days averaged at 5.39 (range 4–7.25) indicating a 1 tail t test score of $p = 0.06$. Further analysis shows that the greatest reduction was in falls from standing, 113 %, and also recurrent fallers reduced by 12.80 %. The average age of Fallers was similar for the 2 years, 76 and 78 respectively.

Conclusions: The Results show that the introduction of a HFI involving an interdisciplinary team showed a significant improvement in reducing the number of falls in a hospital setting. This has major cost implications for the hospital.

P116 Introducing a Falls Prevention Strategy in St. Columcille's Hospital (SCH)

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Background: In 2010 an Interdisciplinary Falls Strategy Committee (FSC) was established in response to the high rate of falls in SCH. At that time there was no falls risk assessment tool in place. The aim of the committee was to implement and monitor a Hospital Falls Initiative (HFI), in line with the HSE Falls Prevention Strategy.

Methods: In 2010 a risk assessment tool known as 'STRATIFY' was introduced. The FSC educated nursing staff on use of the STRATIFY, falls care plan and referral to other disciplines. A colour coding wristband was used to identify those at risk of falls. Pink stickers were used to highlight falls risk in the medical chart. The medical team's role included identifying intrinsic causes of falls. The Physiotherapist completed a mobility report within 24 h. Occupational Therapy carried out seating, cognitive and environmental assessments. A positive outcome of a 3 month pilot in 2011, resulted in the roll-out of STRATIFY to all wards on 1st January 2012. An analysis of all falls was repeated in 2012 by the FSC.

Results: In 2012 56–76.5 % of patients who fell had a "STRATIFY" of ≥ 2 . This would suggest that the high risk group were successfully identified by "STRATIFY". This indicates good reliability of the tool. Compliance with completing the initial STRATIFY risk assessment tool varied from ward to ward ranging from 85 to 100 %. However compliance with completion of repeat Stratify was much less 36 to 50.6 %.

Conclusions: The STRATIFY proved to be a quick reliable tool. Its use resulted in increased awareness and improved practice to reduce falls. Education of Staff was an important factor in the success of the tool. Compliance was found to be a barrier to implementation of the HFI. This is an area that we plan for future intervention and research.

P117 Nurse Led Ward Rounds in Stroke Care

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Background: Stroke survivors are at increased risk of developing complications which have been shown to impede rehabilitation and are associated with poor clinical outcomes. These complications are potentially preventable or treatable with early detection. Nursing staff play a key role in helping prevent their occurrence. Ward rounds are an essential activity and represent complex care requiring not only knowledge but also skills in communication, clinical care, patient management and teamwork. Using this concept, the stroke nursing team, including the Advanced Nurse Practitioner (ANP), or Clinical Nurse Specialist (CNS), Clinical Nurse Manager (CNM) and/or a Senior Staff Nurse, organised a weekly nurse led ward round.

Methods: A nursing proforma was developed and each patient was assessed looking at essential nursing care (oral care, skin integrity, continence, falls prevention) and stroke outcome measures.

Results: 126 patients were assessed over a 6 month period (mean age 84 years) mean Barthel was 5/20. 33 % of patients had symptoms of depression and SSRIs were prescribed. 67 % patients were incontinent (93 % had bladder scans performed) and a continence care plan commenced. 60 % were constipated, of which 53 % had laxatives prescribed and 20 % had laxatives discontinued. Oral thrush was diagnosed in 27 % and an oral care tool was implemented. Pressure areas were intact in all patients and mattresses were removed where appropriate to aid transfer. 40 % of patients had a reduction of greater than 5 kg in weight and dietetic input was requested on all.

Antiplatelets were reduced in 13 and 20 % of patients educated for anticoagulation.

Conclusions: Nursing ward rounds facilitate the early detection and prevention of stroke complications. It empowers nurses in decision making within their own professional role and provides a proactive learning environment. Such an initiative may also be suitable in other care of the elderly settings.

P118 Comparison of two Multifactorial Fall Risk assessment Tools in an Irish Day Care Centre setting: A Modified Version of the "QuickScreen" and the HSE "Multi-factorial Falls Risk Assessment in Primary Care"

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Background: Older adults, at risk of falling, benefit from a multifactorial, falls risk assessment that incorporates targeted intervention strategies. A systematic, standardised approach to falls assessment is often lacking because of time, knowledge and resources. Day Care Centres (DCCs) serve a cohort of high-risk, frail, community dwelling older adults, and are an ideal environment for falls risk assessment. This study compared the use of two Falls Risk Assessment Tools (FRATs) in the DCC setting.

Methods: Older adults, attending two DCCs were assessed with the Health Service Executive Multi-factorial Falls Risk Assessment (MFA) and the QuickScreen. As the QuickScreen lacks a cognitive assessment, the Quick Mild Cognitive Impairment (Qmci) screen was added to create a modified QuickScreen.

Results: In total, 40 subjects, median age 81 (interquartile range, ± 7.5), were included, of which 78 % were female. There were no significant differences in age, gender, Mental Test Score (MTS), or Qmci scores, between subjects attending the two DCCs. Barthel Index scores were however, significantly different (16 versus 18, $p = 0.008$). The Qmci was more accurate than the MTS, in identifying subjects with cognitive impairment (area under the curve of 0.85 versus 0.78). Median administration times for the QuickScreen, 15 (± 5) mins, and the Modified QuickScreen, 23 (± 11) mins, were shorter than the MFA, at 44 (± 4) mins, $z = -5.4$, $p < 0.001$ and $z = -5.3$, $p < 0.001$, respectively. Median administration times reduced, with use, for both FRATs: 8 min for the QuickScreen ($p = 0.01$), and three for the MFA ($p = 0.04$). The MFA missed referrals, deemed appropriate by a clinical specialist physiotherapist and assistant director PHN, in 47 % of cases, compared to 27 % for the modified QuickScreen.

Conclusions: The QuickScreen and modified QuickScreen were shorter than the MFA and administration time reduced with practice. The Modified QuickScreen provided a more comprehensive assessment and instigated a greater number of appropriate referrals, suggesting that it is useful FRAT in clinical practice.

P119 European Innovation Partnership on Active and Healthy Ageing is a Key Driver of the National Falls and Bone Health Implementation Project AFFINITY

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Background: The purpose of this study was to explore the European Innovation Partnership on Active and Healthy Ageing (EIP-AHA) as a key driver in implementing the 'National Strategy for the Prevention of Falls and Fractures in Ireland's Ageing Population (1). Falls prevention (A2) as the pilot initiative aims to increase the average healthy life years (HLY) in the EU by 2 years by 2020 (2). EIP-AHA will ensure Europe's health and social care systems move from reactive, curative disease models to proactive care based on health promotion and disease prevention. This involves (older) persons participating as co-producers of their own health and wellbeing, through shared decision-making and community initiatives. Over 30 commitments, representing 150 partners and some 15 countries are involved.

Methods: Key policy documents, action plans and change management methodologies were reviewed to explore the relationship between the EIP-AHA and the Irish National Strategy. Study findings were informed by national data, HSE activity levels and internationally relevant comparative data.

Results: Critical change management success factors intrinsic to the EIP-AHA project are common to both projects. Significant alignment exists between A2 objectives, action areas and deliverables and AFFINITY. Political, funding, legislative and organisational reforms and challenges within the Irish health and social care system resonate with the EIP-AHA strategy in its desire for standardisation, collaborative working, scaling up of good practices and clarifying privacy restrictions for data sharing.

Conclusions: EIP-AHA will enable nations/regions to leverage the necessary resources, innovations and collaborations needed to effect real change. Ireland will share in international best-practices, strengthen monitoring and service improvement measures, contribute to the alignment of data-registries and toolkits and learn how innovative technologies can be implemented as an integral part of integrated care pathway models. Technological innovations, industrial collaborations and continuous improvement models will drive sustainability and cost-effectiveness.

P120 A Quality Improvement Initiative Using a Triage Risk Screening Tool (TRST) to Guide Effective Occupational Therapy Intervention in a Multidisciplinary Day Hospital Setting

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Background: To discuss a quality initiative in the area of an Occupational Therapy (OT) service within a MDT (multidisciplinary team) in a Day Hospital Setting. Older adults can present with a wide range of functional changes including a history of falls, change in cognitive function, safety risks in a person's home environment, decline in mobility and previous and current medical histories.

Methods: A retrospective review of utilising the TRST (Triage Risk screening tool) in a Day hospital setting. Exploration of international screening tools were considered although, in a benchmarking survey with other acute teaching hospital OT colleagues, it was felt that the TRST could be a potential screening tool to adapt and apply to the Day Hospital's requirements.

The OT uses the TRST with all the patients who have been referred to the day hospital for their interdisciplinary assessment.

Results: Using the TRST, the OT uses effective clinical reasoning to identify those Patients at risk or who would benefit from a more accurate assessment in their home environment and closer linking with primary care colleagues pre attendance to the day hospital. There were 1363 patient attendances in the last 12 months, for all of whom the OT completed the TRST screening tool prior to their attendance.

Conclusions: The TRST screening tool has been in operation for 12 months and is now continued current practice in the Day Hospital. Ultimately the quality initiative's aim was to improve the OT service provided to the Medicine for the Elderly service users and to work within the quality standards as an OT professional body, the organisation and within the need for improved integration of services between hospital and primary care services.

A Plan-Do-Check-Act model of quality is continuing to guide this quality initiative as a quality improvement cycle.

P121 Increased Body Mass Index and Central Adiposity are Associated With Frailty in Community Dwelling Older Adults

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Background: Two demographic trends have emerged worldwide which are of growing public health and economic concern, namely increased life expectancy and obesity. A state of frailty identifies those older adults who are susceptible to adverse health outcomes. This study aimed to determine if Body Mass Index (BMI) ≥ 30 kg m² or central adiposity is associated with frailty in older adults.

Methods: 1,814 adults (>65 years) participated in a health centre assessment at TILDA. 1,490 (82.1 %) had sufficient data for a 4-item frailty score (grip strength, gait velocity, self-reported low physical activity, self-reported exhaustion) to be calculated. 1,486 (99.7 %) of these had measures of waist circumference and 1,485 (99.7 %) had measures of BMI.

Results: 528 (35.6 %) participants presented with a BMI ≥ 30 kg m², 656 (44.2 %) a BMI between 25.0 and 29.9 kg m², and 301 (20.3 %) a BMI between 18.5 and 24.9 kg m². 795 (53.5 %) presented with a high waist circumference (>88 cm for women, >102 cm for men). A similar proportion of frailty was seen for BMI 18.5–24.9 kg m² (11.7 %), BMI 25.0–29.9 kg m² (11.0 %) and those with a low waist circumference (9.3 %). For those with a BMI ≥ 30 kg m² or with a high waist circumference the proportions of frailty were 16.4 and 16.1 % respectively. BMI ≥ 30 kg m² (Odds ratio 2.0 CI: 1.5, 2.6) and increased waist circumference (Odds ratio 1.9 CI: 1.6, 2.3) were associated with frailty ($p \leq 0.001$). Adjusted models indicated the associations between BMI ≥ 30 kg m² (Odds ratio 1.6 CI: 1.2, 2.2), increased waist circumference (Odds ratio 1.6 CI: 1.3, 2.0) and frailty were independent of cognitive function, morbidities associated with obesity, HDL level and polypharmacy ($p \leq 0.01$). Adjusted models indicated that BMI ≥ 30 kg m² and an increased waist circumference were independently associated with reduced gait speed and reduced physical activity ($p \leq 0.01$).

Conclusions: Interventions to combat frailty need to be explored within this population.

P122 Orthostatic Hemodynamics and Frailty in Older Irish Adults

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Background: Impairments in homeostatic response to stressors may underlie frailty in older adults. An impaired homeostatic response to orthostatic stress may lead to falls in blood pressure known as orthostatic hypotension, a leading cause of falls and other adverse outcomes. This study aimed to explore the relationships between orthostatic hemodynamics and frailty in the older Irish population.

Methods: Participants (n = 4463) were recruited from The Irish Longitudinal Study on Ageing, a nationally representative cohort study of Irish adults aged 50 and older. Beat by beat blood pressure responses during active standing were captured using continuous non-invasive photoplethysmography (Finometer®). Frailty was assessed using the Cardiovascular Health Study criteria, with participants classified as robust, prefrail or frail, according to the presence of 0, 1–2, or ≥3 or more of the 5 criteria. Statistical analyses were based on multivariate linear regression models.

Results: 92 (2.1 %) participants were frail and 1410 (31.6 %) were prefrail. After adjustment for age and sex, frailty was associated with a reduced blood pressure recovery between 20 and 50 s post stand ($P < 0.01$). At 30 s, frail participants had recovered 96.2 % of their baseline Systolic Blood Pressure (SBP) compared to 100.7 % in robust participants. Similar Results were seen for Diastolic Blood Pressure (DBP). Further adjustment for health behaviours, co-morbidity, and medications reduced, but did not fully attenuate these associations. After adjustment for all covariates and the other frailty criteria, slow gait speed remained related to impaired SBP and DBP responses ($P < 0.05$).

Conclusions: Frailty was associated with impaired blood pressure recovery following orthostatic challenge. This was partially explained by health behaviours, co-morbidity and medication use. Slow gait speed was consistently related to poorer blood pressure recovery. These findings are consistent with impaired homeostatic response to stressors in frailty and suggest potential involvement of blood pressure regulation in mobility decline.

P123 Elderly Admissions to a Model-4 Acute Hospital: Who, What, Where, When, Why?

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Background: Health information has a major role in the planning of future healthcare provision. With current reconfiguration and cost saving measures, further demands are being placed on acute hospitals. As the population continues to age, it is important to analyse hospital admissions of older patients so that strategies can be developed to

meet future challenges in healthcare provision for this population. The aim of this study was to examine the demographics of older patients admitted to a Model-4 acute hospital.

Methods: All patients over 75 years of age who were admitted to University Hospital Limerick from the Emergency Department over a 6 week period were included in the study. Patient admissions were analysed on the basis of patient demographics, presenting complaint and referral source.

Results: Over the 6 week period there were a total of 190 admissions through the Emergency Department. 48.9 % of admissions were male with 51.1 % female. 26 % of patients admitted were from Limerick city with the remaining 74 % from Limerick county and the surrounding counties. 13 % of admissions were from a nursing-home setting. The most common presenting complaint was dyspnoea (21.1 %) followed by collapse (11.6 %) and chest pain (10.5 %). 31.5 % of those admitted were referred from a primary-care setting with 11.4 % from “Out of hours” services and 57.1 % with no referral. For patients without a referral 65.4 % presented through emergency services, 16.3 % presented directly to the Emergency Department, while 16.3 % presented following transfer from another hospital.

Conclusions: The Results from the current study show that within our region the Emergency Department is the most common initial destination for older patients. As a result we aim to develop a more comprehensive referral policy to avoid initial presentation to the Emergency department and therefore help alleviate overcrowding issues.

P124 BIPAP—“Too Little Too Late”

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Background: Life-saving treatment for acute respiratory failure (ARF) traditionally mandated endotracheal intubation which has its complications; hence the use of non-invasive ventilation (NIV) has emerged to become the preferred treatment modality.

We conducted a local investigation on the administration of NIV in the form of Bi-level Positive Airway Pressure (BIPAP) in older patients in an acute general hospital to determine if BIPAP was initiated according to standard guidelines and their outcomes.

Methods: Patients commenced on BIPAP were identified from the Coronary Care Unit (CCU) logbook. Their medical charts were sourced from the Hospital In-patient Enquiry and a predesigned questionnaire based on the British Thoracic Society guidelines³ was completed.

Results: A total of 21 patients received BIPAP from 1st October to 30th November 2011. The mean age was 71.6 years. The predominant indication was a combination of COPD and CCF exacerbation (47.6 %) followed by COPD exacerbations (28.6 %). The mean arterial blood gas (ABG) results of these patients pre-BIPAP were pH 7.30, PO₂ 9.2 kPa, PCO₂ 7.54 kPa, and O₂ saturations- 89.5 %.

Nine (42.9 %) out of the 21 patients were unsuccessful on BIPAP with 6 deaths. 5 patients were intubated and 1 patient was switched to CPAP. There was a delay in BIPAP commencement in less than 40 % of patients and no documented clinical evaluation with repeat ABGs in 76 % of patients. 6 patients had the first repeat ABG after 4 h on BIPAP.

Conclusions: Clinical assessment and ABGs guide optimization of the ventilator settings. The possibility of nursing staff titrating NIV settings based on an agreed algorithm may improve the effectiveness

of this intervention in small hospitals where out of hours medical cover is focused on acute medical admissions. A robust protocol should be put in place as well as formal training of medical and nursing staff in order to improve the current practice.

P125 “Collapse”—Do We Get The Full Story?

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Background: “Collapse” is a common presentation to the emergency department, encompassing a wide range of differential diagnoses including sepsis, stroke, dysrhythmias, seizures and vasovagal syncope. A detailed collateral history can be paramount to the working diagnosis and guides the appropriate investigations and management. The aim of this audit is to look at the documentation of relevant collateral history of patients presenting with collapse.

Methods: We retrospectively analyzed 44 medical notes of patients who presented with collapse, focusing on the documentation of any witnessed collateral history taken within 48 h of initial presentation.

Results: Mean age of patients was 73, ranging 23–92 years. 23 (52 %) were male. The majority of the patients had collapsed at home (89 %). 33 were admitted by SHOs and 11 by Registrars. 25 (57 %) were unable to give a reliable history. Underlying dementia/delirium was documented in 12 (48 %) of patients. 11 (44 %) had no recollection of event, 6 (24 %) had low GCS at presentation and 2 (8 %) were unwitnessed collapse. Only 20 (45 %) of charts reviewed had clearly documented collateral history. 20 (83 %) didn’t document the reason why collateral history wasn’t obtained. 17 (85 %) of the documented collateral histories were taken in emergency department within 24 h of presentation to hospital. The collateral histories were obtained by the admitting medical officers (47 %), followed by A&E doctors (41 %), and GPs (12 %). 90 % of the histories were taken from family members/carers, 7 % from paramedics, and 3 % from medical staff from other hospitals. Collateral histories varied in their detail.

Conclusions: Reports have shown skilled history taking minimizes relying too much on costly diagnostic tests which may ultimately delay the diagnosis and leads to prolonged hospital stay. More emphasis should be made at educating medical trainees to highlight the importance of documenting this free, yet priceless part of patients’ investigation.

P126 An Unusual Pain in the Neck!—A Rare Case of Mycotic Extracranial Internal Carotid Aneurysm

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Background: Mycotic aneurysm is a rare cause of stroke, associated with prolonged bacteraemia, endocarditis, trauma or immunosuppression. Common sites includes aorta, peripheral, cerebral and visceral arteries. Involvement of extracranial internal carotid artery (ICA) is exceedingly rare, with only 50 cases reported between 1966 and 2007. Case report: A 61 year old gentleman presented to ED with 4 day history of acute left sided weakness, blurred vision, unsteadiness and a painful right neck swelling. There was no trauma. Background history included atrial fibrillation (subtherapeutic warfarin), pulmonary embolism, chronic leg ulcer, alcohol excess and heavy smoker. On assessment he had left homonymous hemianopia, reduced power in left upper limb (4/5), unsteady gait, and a tender swelling of his right neck extending posteriorly to right ear. CT brain showed

right frontal, temporal and occipital infarction, and 300 mg aspirin was commenced. Carotid dopplers and MRI angiogram showed a totally occluded 2.4x1.4 cm right ICA aneurysm, with significant inflammation of right ICA bulb. He had 3 negative blood cultures (before antibiotics), normal WCC, raised CRP (52 mg/L) and was afebrile. Transoesophageal echocardiogram was negative for vegetation. Bone scan of old left leg injury revealed chronic osteomyelitis of tibia which was for conservative management. Repeat MRA after a week of intravenous antibiotics showed improvement in soft tissue inflammation but no change in mycotic aneurysm. Right carotid aneurysmectomy was performed which showed posterior rupture and a large amount of blood and pus evacuated. Histology showed organising thrombus formation but no growth on culture. He was discharged to rehabilitation after prolonged course of antibiotics in liaison with the microbiologists, and made full motor recovery.

Conclusions: Mycotic aneurysm affecting extracranial ICA is rare and may lead to significant morbidity or mortality. Surgical intervention is often necessary, along with prolonged course of antibiotics. Systemic source of infection should be sought, and treated accordingly.

P127 Suboptimal Prescribing of Venous Thromboembolism Prophylaxis in Acute Medical Admissions

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Background: Deep venous thrombosis (DVT) and pulmonary embolism (PE) are manifestations of venous thromboembolism (VTE). Diagnosis is often difficult or missed, but the complications are serious. It is estimated that the use of low molecular weight and unfractionated heparins in ‘at risk’ patients can reduce symptomatic VTE disease by up to 50 % and fatal PE by nearly two thirds 1. Optimised prophylaxis would result in better patient outcomes, shorter length of hospital admission and reduced overall cost 1, 2.

Methods: A point prevalence audit of all medical admissions was carried out in 2013. A proforma based on the NICE Clinical Guideline 92, ‘Venous thromboembolism: reducing the risk’, January 2010, was used as the audit tool. Information was obtained from the admission note and drug prescription list. Risk factors for VTE and bleeding, assessed within 24 h of admission, were included.

Results: The median age of the 52 patients included was 82 years old. 71 % were assessed for risk of VTE/bleeding. 31 % had at least one risk factor for bleeding and 100 % had at least one risk factor for VTE. Pharmacological VTE prophylaxis was given appropriately to 36 % and not given appropriately to 29 %. 35 % of patients should have received pharmacological VTE prophylaxis but did not. No patient received pharmacological VTE prophylaxis inappropriately. Overall, 51 % of the ‘at risk’ group received pharmacological VTE prophylaxis. However, no mechanical VTE prophylaxis was offered to any patients.

Conclusions: This audit reports the suboptimal prescribing of VTE prophylaxis in medical admissions. It emphasises the under-usage of simple mechanical VTE prophylaxis. Moreover, it highlights the challenge of changing staff, as a similar audit cycle including an education session had been conducted the previous year. Our recommendations following this audit include ongoing education, amendment of the admission proforma to include a section related to VTE/bleeding risk assessment, and re-audit thereafter.

P128 Multi-Disciplinary Outcomes for Patients Admitted To a Geriatric Rehabilitation Unit

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Background: St Josephs' Rehabilitation unit (SJRU) is an 18 bedded unit which provides comprehensive rehabilitation to geriatric patients suffering from multiple co-morbidities. SJRU aims to assist patients to reach their full potential and facilitate discharge through an interdisciplinary team approach. This profile aimed to quantify the improvements made by patients following their admission to SJRU.

Methods: A retrospective review of patients outcome measures across the multi-disciplinary team was performed on all patients admitted to SJRU from the 1st of June 2012 to 30th April 2013 (N = 176). Descriptive statistics were utilised for data analysis.

Results: There were 104 female patients and 72 male patients admitted to SJRU over the 10 month period. The mean age of the female patients was 80.19 ± 7.76 years and the mean age of the male patients was 79.92 ± 7.68 years. There was a 33.3 % (N = 143) decrease in patients Waterlow score (nursing assessment tool), 71.4 % (N = 84) of patients had a significant increase in their Elderly Mobility Scale (physiotherapy assessment tool) and 50 % (N = 86) had a significant improvement in the Modified Barthel Index (occupational therapy assessment tool). Half (50 %) of the patients with speech/swallow (N = 24) requirements had a significant improvement in both their impairment and limitation on the AusToms assessment scale. Malnutrition screening identified 20 subjects at risk of malnutrition and referral to the Dietitian. Following a high calorie protein diet possibly with a nutritional supplements 60 % (N = 12) of patients had evidence of weight gain.

Conclusions: Through a comprehensive multi-disciplinary approach to rehabilitation in a geriatric population patients made significant gains in all domains which resulted in a safe discharge home.

P129 Outcomes in Complex Stroke Rehabilitation: Intensive Post-acute Stroke Rehabilitation for the Moderate to Severe Stroke Survivor

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Background: Off-site Stroke Rehabilitation Units offer a unique resource in support of costly acute stroke unit care for the provision of intensive specialist rehabilitation of the moderate to severely impaired individual with first time stroke. Dependency figures following severe stroke are high and in 2007 the cost of Nursing home care was reported to account for a staggering 40 % of the overall cost of stroke in Ireland [1].

Methods: In a sample of consecutively admitted Stroke patients (n = 28), mean admission, discharge and change scores were calculated for the total Functional Independence Measure (FIM). Motor FIM scores (0: max. dependency – 91: independent) were examined in this study.

Results: Results showed a mean motor FIM increase of 21 points. The Minimal Clinical Important Difference (MCID) for the motor FIM has been reported as 17 points (2) (this equates to a mean motor improvement of 40.1 %).

Patients with admission motor FIM scores <43 points were classed as having 'severe' motor impairment (n = 10). Subgroup analysis

showed a mean improvement of 23.7 points: a 6.7 point mean improvement above the MCID in this group (this equates to a mean 60.4 % motor improvement). Patients most severely affected by stroke made greatest gains following intensive rehabilitation.

Conclusions: Optimising functional outcomes for the severely affected stroke patient is imperative if we are to offer them the best opportunity for returning home and avoid admission to costly care home facilities.

References:

1. IHF (2006) National Clinical Guidelines for Stroke 2010
2. Beninato M, Gill-Body KM, Salles S, Stark PC, Black-Schaffer RM, Stein J (2006) Determination of the minimal clinically important difference in the FIM instrument in patients with stroke. *Arch Phys Med Rehabil* 87(1):32–39

P130 Test Re-test Reliability of the Modified Leeds Arm Spasticity Impact Scale (MLASIS) and the Minimum Detectable Change (MDC) Scores

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Background: Upper limb spasticity post stroke can negatively affect patient quality of life and increase caregiver burden. Optimising ease of care of the affected limb (passive function), is a principle goal of treatment. The Leeds Arm Spasticity Impact Scale (1) was designed to evaluate upper limb passive function tasks from the patient and caregiver perspective. Based on the author's early scale evaluation (2), a reduced number of items: eight patient and six caregiver items were evaluated in the study for test re-test reliability and MDC scores. **Methods:** This was a multi-centre test re-test reliability study utilising a convenience sample of 22 non-acute stroke patients with upper limb spasticity, and 18 caregivers. A single clinician administered both subscales twice, 7 days apart. Patient items were administered in person and caregiver items were administered separately by telephone. Ethics committee approval was granted covering five sites.

Results: Mokken Scaling analysis produced two strong unidimensional patient subscales containing 3 and 4-items (1 miss-fitting item) and a strong unidimensional caregiver scale comprising 4-items (2 miss-fitting items). Items are ranked on a likert scale (0 = no difficulty to 4 = cannot do). Summary scores (2) were treated as interval ratio data. Internal consistency for subscales were adequate to excellent ($\alpha = 0.69\text{--}0.91$). Test-retest reliability using the Intraclass Correlation Coefficient (ICC: One-way random effects model) was high: patient items; $r = 0.95$ and caregiver items; $r = 0.95$. The MDC score across patient items was 0.5 and for the caregiver items was 0.4.

Conclusions: Although slightly underpowered, the high ICC scores in this study demonstrate that a more valid, simple and highly reliable measure was formed in this analysis—the MLASIS, supporting the use of this measure in follow-up situations. MDC values will provide clinically meaningful score interpretation for patient and caregiver subscales.

P131 Hyperglycaemia and Mortality in Acute Stroke

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Background: Hyperglycaemia is known to be associated poorer outcomes in acute stroke.

Methods: We analysed the admission venous glucose (mmol/L) in 150 patients sequentially admitted to the Acute Stroke Unit to assess whether there was a correlation between admission glucose and discharge outcomes.

Results: Glucose was measured on day 1 in 119 patients. Glucose was ≤ 6.0 mmol/L in 40 patients, 6.1–10 mmol/L in 62 patients and ≥ 10.1 mmol/L in 17 patients. In the normoglycaemic group 7.5 % patients died; in the group with mild hyperglycaemia 17.7 % died and in the group with overt hyperglycaemia 23.5 % patients died. The relative risk of death in patients with overt hyperglycaemia compared with normoglycaemia was 3.1.

Of the 119 patients in whom admission glucose was measured, 71 (59.6 %) patients were discharged home; 13 (10.9 %) were admitted to residential rehabilitation facility; 13 (10.9 %) were discharged to long-term care facility; 5 (4.2 %) were transferred to other hospitals and 18 (15.1 %) patients died.

In patients discharged home median glucose on admission was 6.5 mmol/L; 6.5 mmol/L in patients discharged to rehabilitation facility; 6.8 mmol/L in patients transferred to long-term care; 6.1 mmol/L in patients transferred to other hospital facilities and 8.2 mmol/L in patients who died. Overall median glucose in patients who survived to discharge was 6.6 mmol/L. There was no statistically significant difference in admission glucose in various groups of patients who survived to discharge.

Patients who died during their admission had statistically significantly higher glucose on admission than patients who survived to discharge ($p = 0.03$).

Conclusions: Amongst patients with acute stroke admission hyperglycaemia was associated with an increased risk of death. This was statistically significant.

P132 Thrombolytic Therapy: Factors affecting Delivery

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Background: We carried out a retrospective study to report on the efficiency and outcomes of a stroke thrombolysis service in our centre.

Methods: Data was collected over a 2 year period. All patients receiving thrombolysis for acute ischaemic stroke between January 2011 and December 2012 were included.

Results: 25 patients received thrombolytic therapy. This constitutes 12.5 % of all ischaemic strokes presenting to St. Luke's Hospital during 2012 and 6.5 % in 2011. 64 % were male. Median time to presentation was 80 min (range 0–225). In 2011 the median time was 75 min (25–225) while in 2012 it was 113 min (0–220). Mean door to CT time was 41 min (10–73). Mean door to CT time between 0900 and 1700 h was 34.18 min compared with 46.4 min between 1700 and 0900 h. Mean door to needle time was 71 min (35–135). Mean time from development of symptoms to presentation increased from 91 min in 2011 to 108 min in 2012. Median NIHSS score pre-thrombolysis was 12 (5–22). Modified Rankin Score was ≤ 2 in 64 % of patients at 3 months. One patient died.

Conclusions: An area identified as target for improvement in future is door to CT time during on-call periods. Increasing time to presentation from 2011 to 2012 is a concern and we recommend further study to elucidate the reasons for delay in time to presentation. We postulate that this may be in part due to the curtailment of the "Act Fast" campaign in late 2011.

P133 Access to In-Patient Stroke Services and Multidisciplinary Team (MDT) Rehabilitation: Current Demands and Capacity

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Background: The aim of this study was to analyse the current access to in-patient stroke services and multidisciplinary team (MDT) rehabilitation (speech and language, physiotherapy, occupational therapy and dietetics) in an acute stroke centre and to compare levels of access to the current best practice guidelines, as set out by the Irish Heart Foundation National Stroke Guidelines.

Methods: A retrospective chart review was carried out on all patients admitted to Beaumont hospital with acute stroke over a three-month period (March–May 2012). Activity statistics including time to referral and assessment, time spent in rehabilitation and the interventions implemented were evaluated. Demographic information was also recorded.

Results: There were 73 patients (male = 40, 54.8 %), mean age was 68 (s.d. = 15.1). Patients were discharged from the stroke service after a mean length of stay of 20.2 days (s.d. = 19.3). Over three quarters (76.7 %, N = 56) of patients were admitted to the acute stroke unit (ASU). Length of stay in the ASU was 14.6 days (s.d. = 15.1). The mean length of time from admission to general MDT referral was 2 days (s.d. = 2.16), mean length of time from referral to first assessment was 1.49 days (s.d. = 1.64), with length of treatment 17.9 days (s.d. = 24.1). Patients received approximately 23–47 min per discipline per day, by up to four disciplines (physiotherapy, occupational therapy, speech and language therapy and dietetics and nutrition).

Conclusions: Nearly a quarter of stroke patients were not treated in the ASU. There was on average a two-day delay in referral to the various MDT services; the national guidelines recommend that all stroke patients should receive a full MDT assessment within 24 h. However, once referred, patients were generally reviewed within a 24 h window. These findings highlight current demands on a stroke service in one clinical site and give an insight into inpatient service capacity issues which can impact on meeting standards of stroke care.

P134 Can Bone Biochemistry Profiles Help Identify Vitamin D Deficiency in Older Adults?

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Background: Vitamin D insufficiency and deficiency are known to be highly prevalent in older adults, both nationally and internationally. We have previously identified 25(OH)D deficiency (i.e. <25 nmol/L) in 12 % of healthy adults over the age of 65 years during the Health Inequalities and Aging in the Community Evaluation (HIAACE) Study. Vitamin D testing is frequently outsourced in Ireland to external laboratories and is relatively expensive. 'Routine' biochemistry profiles are often used both in primary care and in hospital settings as surrogate markers of vitamin D deficiency. The aim of this study was to assess the frequency of abnormal Results

from tests of serum calcium, phosphate, and alkaline phosphatase in patients who were identified as being vitamin D deficient with or without secondary hyperparathyroidism.

Methods: Biochemistry profiles including corrected serum Ca(Ca), phosphate (PO), alkaline phosphatase (ALP) and parathyroid hormone levels (PTH), where available, of all patients with vitamin D samples sent to the biochemistry laboratory of our institute over a 12 week period were examined (n = 182). Samples from those under the age of 65 years were excluded (n = 77). Estimated glomerular filtration rate (eGFR) using the Modified Diet in Renal Disease (MDRD) calculation was also looked at.

Results: Of those aged 65 years plus (n = 105) tested, 56 (53 %) had significant vitamin D deficiency. Median age of the deficient group was 77 years. cCa was below the normal limit in 3 patients and low-normal in 8 (14 %). PO was normal in 51 (91 %) and ALP in 48 (86 %). No patient in this sample had all three indices outside the normal range in a manner consistent with vitamin D deficiency. The Pearson Correlation for Ca and vitamin D was -0.2

Conclusions: If bone biochemistry is relied on as a surrogate identifier of vitamin D deficiency, a substantial majority of cases will be missed.

P135 Development of a 36 Bed Gerontological Rehabilitation Unit: A Profile of Client and Hospital Outcomes

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Background: This gerontological rehabilitation unit was established in October 2012 as an off-site rehabilitation unit for frail older people under the National Clinical Care Programme for Older People [1]. The ultimate goal of the initiative is to facilitate the older person in leading an independent, confident and social life with dignity in the community. We aim to describe the development, clinical intervention and rehabilitation outcomes of this frail older person rehabilitation unit.

Methods: This is a retrospective observational study of clients over the age of 65 requiring rehabilitation to return home. The unit accepts referrals from two acute hospitals. Descriptive statistics were used to analyse the data.

Results: Data has been collated from January 2013 to mid-May 2013. The unit has admitted 107 clients (65 female, 42 male) during this period with an average age of 82 years. The average length of stay was 45 days. 70 % (n = 55) were discharged home successfully, with only 8.3 % requiring long-term care. Clients received comprehensive geriatric assessment and intervention from the full interdisciplinary team. The average improvement in physical function was 18 %, using the Elderly Mobility Scale. An average reduction in dependency levels of 18 % was achieved, as demonstrated through the Functional Independence Measure.

Conclusions: This is a profile of client and hospital outcomes. The Results presented here reflect the challenges facing timely discharges, including delayed home care package and long-term care processes. We have demonstrated both positive client and hospital outcomes in this newly established rehabilitation unit. Effective intervention of the interdisciplinary team, with a client-focused approach, has resulted in the majority of clients successfully returning home.

References:

1. Health Service Executive and Royal College of Physicians of Ireland (HSE RCPI) (2012) Specialist geriatric services model of care National Clinical Programme for the Older Person

P136 A Re-audit of Acute Stroke Thrombolysis at a Model Three Hospital

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Background: Intravenous thrombolysis is the gold standard treatment for acute ischaemic stroke, in suitable patients. This treatment Results in one less patient death, or patient left dependent at 3 months for every 10 patients treated. An acute stroke thrombolysis service was introduced into a 253 bed hospital in April 2009. We measured the current acute inpatient stroke thrombolysis rate, compared with previous rates and identified barriers to thrombolysis.

Methods: Data was collected utilising the HIPE Stroke portal over a 6 month period from the 1/11/2012 to 1/4/2013. Data is prospectively entered by a dedicated Clinical Nurse Specialist. Only patients with a diagnosis of ischaemic stroke were included. Patients who presented within 3.5 h of symptom onset (allowing 1 h for door to needle time), were selected as being suitable for thrombolysis. A review of those patients not thrombolysed was then carried out to identify any barriers to thrombolysis.

Results: There were 65 patients with a diagnosis of ischaemic stroke. Nine ischaemic strokes arrived within 3.5 h of symptom onset (13.85 %). 3 patients received thrombolysis, giving a thrombolysis rate of 4.6 %. The mean age was 71.9 years. The mean door to needle time was 75 min. All 6 patients who were not thrombolysed had contraindications to thrombolysis.

Conclusions: The national target acute stroke thrombolysis rate is 10 %. From the data above, we found that our rate was lower than this target, at 4.6 %. In 2009, our thrombolysis rate was 8.7 %. We did not identify any in-hospital barriers to thrombolysis, and all suitable patients who fulfilled the criteria for thrombolysis received treatment. Informal enquiry from the local ambulance control report no change in their response time. Patient delay in seeking medical assistance may account for this recent drop in thrombolysis rate. We recommend repeating the national awareness campaign to address this.

P137 Does the Erythrocyte Sedimentation Rate (ESR) Correlate with Age in a Community Dwelling Population?

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Background: The relationship between age and ESR is controversial. Several studies have shown an increase in ESR with age, however this may be due to increased prevalence of disease in an older population. Guidelines suggest that the normal standard range should be used and to look for an underlying pathological condition when high ESR levels are detected in older persons. The aim of this study was to determine the relationship between age and ESR in a cohort of older community dwelling adults.

Methods: This was an observational study analysing ESR measurements in 385 adults involved in the Health Inequalities and Aging in the Community evaluation (HIACe study). We wanted to establish how many patients had an abnormal ESR based on the laboratory normative values were (5–12 mm/h) compared to an age based

equation to determine the normal upper limit – [(age in years (+10 if female))/2 = upper limit of normal for age].

Results: ESR had a positively skewed distribution with median 11, IQR (7, 18) and a range of 1–84 ($n = 385$). Spearman's correlations between age and ESR was very weak and not significant ($p = 0.056$). Based on the laboratory cut offs, 190 (49.4 %) were within limits while 195 (50.6 %) had an abnormally raised ESR. Using the age based equation to calculate the upper limit for ESR, only 15 (3 %) people were above the limit based on their age.

Conclusions: We did not establish a real relationship between ESR and age in our cohort. ESR is a useful test for the assessment of older adults, but use of an age based equation to determine normative threshold rather than the specified laboratory normative values may be more useful.

P138 Bone Health in a Cohort of Patients with Anorexia Nervosa

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Background: Osteoporosis is an important complication of Anorexia Nervosa (AN) and hence is a frequent presentation to bone health clinics. At least 30 % of female patients with AN have osteoporosis. Studies have shown that patients with AN are three to seven times more likely to suffer a fracture when compared with the general population. Aim: To review the bone health and management of patients with AN within a specialist bone clinic.

Methods: A retrospective cohort analysis was performed on all patients referred to our clinic with AN. Data was collected on demographics, dual-energy X-ray absorptiometry (DXA) Results and management.

Results: 21 patients with AN were referred to our unit between 2006 to 2012. 95 % were female and the median age was 43 (range 17–65 years). Sources of referrals included General Practitioners (75 %), Psychiatry (10 %), Medicine (10 %) and Orthopaedics (5 %). 61.9 % (13) were on bone protection prior to referral. 47.6 % (10) had a previous fracture. In specific 14.3 % (3) had a previous Colles fracture and 9.5 % (2) had a previous hip fracture. Average T-score of spine was -2.71 (range -0.5 to -4.6) and of total hip -1.81 (range -0.6 to -3.5). The prevalence of osteopenia and osteoporosis were 19 and 75 % for the spine and 33 and 52 % for the total hip respectively. With regards to treatment 19 % (4) were managed with bone protection alone, 28.6 % (6) commenced bisphosphonates, 9.5 % (2) commenced strontium and 19 % (4) required teriparatide.

Conclusions: There is a high prevalence of osteoporosis and subsequently fractures in patients with Anorexia Nervosa. Thus we need to identify them as a high-risk group and target them appropriately.

P139 The Role of Dysphagia Management by Speech and Language Therapy in Supporting a Comprehensive Geriatric Assessment in Patients Admitted to an Acute Medical Unit

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Background: Early access and assessment by Health and Social Care Professional (HSCP) services, is an integral part of a comprehensive

geriatric assessment. Older patients (aged ≥ 65 years) account for a substantial proportion of all patients admitted through Acute Medical Units (AMUs), making this a key area in which care for older people can be influenced. There is a high prevalence of dysphagia in the community-based geriatric population, and even higher prevalence within residential care settings. The aim of this study was to review the characteristics and outcomes from older patients referred to Speech and Language Therapy (SLT) in a 24-bed inpatient AMU.

Methods: Data for a set of variables exploring demographics, diagnoses, impressions and outcomes, was prospectively collated from November, 2012 to April, 2013 for all SLT referrals from AMU. Patients aged <65 years or those referred solely for communication assessment, were excluded. Outcomes were calculated to include specific outcomes for the subgroup of patients admitted from residential long-term care.

Results: 80 (81 %) of a total of 102 referrals met inclusion criteria, and 25/80 (31 %) were nursing home (NH) residents. 52/80 (65 %) patients were referred for swallow assessment as part of work-up for possible aspiration pneumonia. 40/80 (50 %) showed evidence of new dysphagia or deterioration from previously established baseline. Instructions regarding dietary modification and swallow precautions were relayed to NH and/or patient with a view to preventing further episodes. Early SLT intervention was potentially a factor in facilitating successful discharge in 27/40 (65 %) of the cases with confirmed new/worsened dysphagia. A similar impact was evident in the residential care cohort.

Conclusions: The utilisation of SLT services for early identification of dysphagia and an overall heightened awareness of an individual's risk for aspiration is an important complimentary role within the AMU to improve outcomes for older persons.

P140 Elderly Admissions Following Primary Care Referral: The Truth is in the Referring

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Background: Information that is accurate, relevant, and legible is a necessary requirement for the provision of healthcare. The Health Information and Quality Authority (HIQA) have recently produced documentation to help ensure the delivery of high quality healthcare information, by standardising the information shared between general practitioners and hospital staff. The aim of this study was to examine the referral documentation of older patients admitted to a Model-4 acute hospital.

Methods: All patients over 75 years of age who were admitted to University Hospital Limerick over a 6 week period were included in the study. Primary-care referral documentation was then analysed on the basis of presenting complaint, patient demographics, referrer details, and the clinical information provided.

Results: A total of 190 patients were admitted through the Emergency Department with 42.9 % from a primary care setting. 28.9 % of referrals were typed and 46.1 % handwritten. Handwritten referrals were fully legible in only 21 % cases. 90 % of referrals contained the patient's name, date of birth and address. 88 % of referrals included the GP signature, while only 57 % included medical council number. 98.7 % of referrals included a presenting complaint with 52.6 % having a past medical history. 57.9 % provided a full prescription list and 42.1 % a partial list. Only 23.4 % of referrals listed any known drug allergies. Only 10.5 % documented social history or baseline

functional status. 26.3 % of referrals did not include a physical examination while only 50 % included a clinical impression.

Conclusions: The majority of primary-care referrals included the required details as per the recent HIQA report, but very few included information relating to patient social, functional and cognitive status. These parameters are of particular relevance to the older population and so future referral recommendations should highlight these aspects in order to improve quality of healthcare for this population.

P141 Can Patient's Social Factors Help Predict Vitamin D Deficiency?

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Background: It is established that Vitamin D is essential for the regulation of serum calcium, mineralisation of bones and prevention of fractures. Insufficient levels are common in the Irish population. We aimed to establish if there are any demographics that increase risk of insufficiency.

Methods: All patients admitted to a University Hospital with a fractured neck of femur (NOF) between July 2011 and June 2012 were offered bone health screening by a new geriatric liaison service which included testing of 25-(OH)D level. A database of patient demographics and investigations was maintained and analysed.

Results: 206 patients were admitted post fractured NOF. 152 patients had 25-(OH)D level tested. 26.3 % (40) were male and 73.7 % (112) were female. There was no significant difference in median 25-(OH)D between males (22.5 nmol/l) and females (24.5 nmol/l) ($p = 0.528$). The mean age was 78.9 years. There was no correlation between age and 25-(OH)D ($p = 0.301$). 84 % (129) were admitted to hospital from home, 12.5 % (19) from a nursing home and 2.5 % from another hospital. The median 25-(OH)D in those from home was 25 (10–173) nmol/l and 18 (10–69) in those from nursing home ($p = 0.181$). 115 (76 %) mobilised outside and 37 (24 %) either mobilised only indoors or not at all. There was no significant difference in median 25-(OH)D between groups ($p = 0.199$). There was no significant difference in 25-(OH)D level according to smoking status ($p = 0.677$) with a median 25-(OH)D of 22 nmol/l in ex-smokers, 24 nmol/l in non-smokers and 29 nmol/l in smokers. There was no significant difference in 25-(OH)D according to alcohol intake ($p = 0.261$) with a median 25-(OH)D of 23 nmol/l in those who do not drink alcohol and 27 nmol/l in those that do.

Conclusions: Vitamin D deficiency is extremely prevalent regardless of social demographics. Factors such as immobility, nursing home residency and inability to mobilise outside the house cannot be used to predict Vitamin D levels in those suspected of deficiency.

P142 Can Calcium, Phosphate and Alkaline Phosphatase Levels be Used to Influence Prescribing of Vitamin D in the Community

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Background: It is well established that Vitamin D deficiency is extremely common. A recent audit in our area showed that a large

proportion of GPs were not checking Vitamin D levels as part of secondary investigation of osteoporosis. This may in part be due to the technical difficulties of keeping the sample light free and rapidly delivering it to the laboratory. With this in mind we reviewed other blood parameters taken as part of a bone profile with the view to identifying an abnormal parameter than could be used to signify possible Vitamin D deficiency or insufficiency.

Methods: All Vitamin D samples sent to the biochemistry laboratory in a University Hospital between July and September 2012 were retrospectively reviewed. Results consistent with Vitamin D insufficiency and deficiency were selected. Calcium (corrected for albumin), phosphate and alkaline phosphatase Results taken at a similar date were obtained.

Results: 181 Vitamin D Results were obtained. The median Vitamin D level was 33 nmol/l. There was a significant negative correlation between Vitamin D and alkaline phosphatase ($r_s = -0.354$, $p = <0.001$). However 84.8 % of patients had an alkaline phosphatase within normal range.

There was no correlation between calcium and Vitamin D levels ($p = 0.22$).

There was no correlation between phosphate and Vitamin D levels ($p = 0.36$).

Conclusions: Although increased alkaline phosphatase levels correlate with reduced Vitamin D levels, the majority of patients with abnormally low Vitamin D still had an alkaline phosphatase within the normal range. We did not identify any other parameter that could be used as a substrate for testing Vitamin D assays. It is therefore crucial that Vitamin D be tested regardless of other normal bone markers.

P143 An Intervention to Improve Exercise Compliance of Physiotherapy Patients in a Geriatric Setting

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Background: Studies have shown that compliance with exercise increases when clear exercise instructions are given to patients (1). The objective of this study was to determine if an information pack given to patients regarding physiotherapy and the benefits of exercise would improve compliance with ward based exercise programmes.

Methods: 20 patients from a geriatric rehabilitation unit were monitored for 10 days (13 male 7 female, mean age 75). It was documented twice daily after two observation periods if patients had completed exercises prescribed verbally or through handouts by their physiotherapist. Following this, 20 new rehabilitation patients were given a physiotherapy information pack. It was then documented if these patients had completed their physiotherapy exercises twice daily for 10 days. The information pack included a detailed patient specific exercise programme, as well as an exercise diary, information on the benefits of general exercise and pathology specific exercise and a page documenting goals for physiotherapy.

Results: Patients monitored before the introduction of the information pack showed a ward based exercise compliance rate of 42.9 %. After the patient information pack was introduced, ward based compliance levels rose to 52.9 %. This is higher than reported compliance levels in previous studies (1). The number of patients completing both exercise programmes and walking programmes increased.

Conclusions: This study shows that patients are more compliant with following physiotherapy prescribed ward based programmes and exercising independently when they are given written exercise programmes in a structured format.

P144 Acute Hospital Inpatient Activity in Ireland: Comparing 2006 and 2011 for Those Aged ≥ 65

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Background: The increase in the population aged ≥ 65 has important implications for planning health services. Our aim is to compare acute hospital inpatient activity for those ≥ 65 in 2006 and 2011.

Methods: Acute hospital inpatient discharge data were obtained from the Hospital Inpatient Enquiry, accessed via Health Atlas. The Census of Population 2006 and 2011 provided denominators to calculate activity rates, to adjust for demographic changes.

Results: The population aged ≥ 65 increased by 14.4 % and inpatient discharges increased by 5.4 % to 153 219 in 2011; changes ranged from –3.6 % in those 70–74 to +23.4 % in those ≥ 85 . Emergency admissions increased from 77.5 % of all those discharged in 2006 to 81.5 % in 2011. Mean length of stay (MLOS) decreased from 11.0 days to 10.4 days in 2011 (range 8.0 days, 65–69 years, to 13.2, age ≥ 85). Total bed days decreased by 0.6 % to 1.59 million, varying from –9.8 % in those 70–74 to +19.0 % for the ≥ 85 age group. Medical bed days increased by 3.6 % and were 71.8 % of the total in 2011 (range –6.8 % aged 70–74, +25 % in age ≥ 85). Surgical bed days decreased by 7.4 % (range –13.6 % aged 70–74, +3.8 % age ≥ 85) and accounted for 27.1 % of total bed days in 2011. Total discharge rates in 2011 were 28,618 per 100,000 aged ≥ 65 (range 18 049, 65–69 years to 48 904, age ≥ 85), 7.9 % lower than 2006. Medical discharge rates decreased by 2.1 % overall but increased by 2.2 % in those 80–84 and by 9.5 % in the over 85s. Surgical discharge rates decreased by 13.3 %, by approximately similar amounts in all age groups.

Conclusions: With the exception of medical patients aged ≥ 85 , lower discharge rates and shorter MLOS in 2011 compared to 2006 compensated for the increase in the population aged ≥ 65 , with minimal increase in total bed days.

P145 An Analysis into the Effect of Access to Post-Acute Rehabilitation on Hospital Length of Stay Following Hip Fracture, a Retrospective Audit

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Background: Key objectives of the National Clinical Programme for Older People include access to appropriate rehabilitation facilities and reducing delayed hospital discharges [1]. The aims of this study were to assess the average length of stay (avLOS) and the effect of an increased number of post-acute rehabilitation beds on avLOS, for older adults (>65) post-orthopaedic surgery for hip fracture.

Methods: An audit was carried out over 3 months (period 1) on patients >65 years post hip fracture requiring orthopaedic surgery and physiotherapy in a major acute hospital. After completion of period 1 a new post-acute rehabilitation facility opened in the hospital's catchment area. A repeat audit of avLOS, and time waiting for rehabilitation was conducted over a further 3 month period (period 2).

Results: Thirty-five people were included in period 1 analysis ($n = 35$). The mean age was 80.52 years (range 68–96). Average

LOS was 24.0 days (range 4–101). Sixty-nine percent of patients required post-acute rehabilitation. To access post-acute rehabilitation, patients were required to be able to mobilise with assistance of 1 person. The mean time waiting to access post-acute rehabilitation after achieving mobility with assistance of 1 person was 8 days (range 1–60). Forty-one people were included in period 2 analysis ($n = 41$). The mean age was 82.64 years (range 66–101). Average LOS was 15.48 days (range 3–54). Fifty-one percent of patients required post-acute rehabilitation. The mean time to access post-acute rehabilitation after achieving mobility with assistance of 1 person was 4.27 days (range 1–30).

Conclusions: Results indicate that increasing the number of post-acute rehabilitation beds significantly reduces acute hospital LOS for older adults post orthopaedic surgery for hip fracture. Further studies incorporating cost of bed days in the acute and sub-acute setting are required to investigate possible associated improvements in cost-effectiveness.

References:

1. HSE (2012) <http://www.hse.ie/eng/about/Who/clinical/natclinprog/olderpeopleprogramme/geriatric.pdf>

P146 European Innovation Partnership on Active and Healthy Ageing: Ireland and the COLLAGE Experience

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Background: The European Commission has identified “active and healthy ageing as a major societal challenge common to all European countries.” The European Innovation Partnership on Active and Healthy Ageing (EIP AHA) was established with the vision of addressing this challenge through identifying, supporting and promoting the dissemination of good practice innovations with societal benefits. There are possible 3 levels of engagement with the EIP AHA: registration on the Marketplace (an online system to facilitate networking), membership of an Action Group (in 6 specific targeted areas) and application for Reference Site Status. COLLAGE (Collaboration on Ageing) is the Irish application for reference site status under the EIP AHA.

Methods: Relevant initiatives, groups, centres and institutions were identified with a view to generating genuine and effective collaboration, which was cross sectoral and focused on implementing transferrable and scalable good practices that could be transferred elsewhere and scaled to regional or national needs. Registrations were completed on Marketplace and applications were made for Action Group membership. Two initial reference site applications (CHARGE-UCC and Louth Age Friendly County) came together to form COLLAGE, a single bid for reference site status. Trinity EngAGE and the Health Services Executive, already contributors to EIP AHA at Action Group level, also joined COLLAGE.

Results: The resulting initiative comprises of stakeholders from a range of backgrounds including academia, healthcare, technology, social care and local government. Fourteen COLLAGE initiatives are registered on Marketplace. Six COLLAGE initiatives are members in 4 of the 6 Action Groups and a further 4 have applied for membership. Significant collaborations have been formed with other groups within Europe. Successful candidates for reference site status will be announced in June 2013.

Conclusions: The establishment of COLLAGE has realised benefits already, including identification of synergistic initiatives within Ireland and development of relationships with other European Centres.

P147 Generalist Palliative Care Beds in a Residential Care Setting for Older People: Fact, Figures and Staff Experiences

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Background: The need for generalist palliative care provision has been highlighted [1]. Based on the findings of a regional Health Services Executive palliative care working group, 6 generalist palliative care beds were provided in a Service for Older People (SOP) inpatient unit on a site that is co-located with a regional specialist palliative care inpatient unit (IPU). Suitability for admission to the beds is determined by the local palliative medicine consultants and patients are admitted from the IPU, acute hospitals and the community. This study was undertaken to review use of these beds and to look at staff experiences of the initiative.

Methods: Mixed methods were used. Quantitative data were obtained from admission records and patient chart review over a 1 year period. Qualitative information was obtained from a focus group consisting of multidisciplinary staff from the SOP.

Results: There were 27 admissions. Demographic findings included: median age 79, female 52 %, cancer diagnosis 88 %. Documented comorbidities were prevalent: cognitive impairment 41 %, alcohol excess 29 %, cardiovascular disease 24 %. Median length of stay was 39 days. All had complex social needs resulting in the need for ongoing residential care. Three themes emerged from the qualitative data. Organisational issues included co-location with the IPU and initial lack of clarity about how the beds would work. Effects on other residents included more death on the wards and for those admitted to the beds a change of focus to "living". Effects on staff included the opportunity for professional development and increased workload.

Conclusions: The initiative has met a need and has brought challenges and opportunities for both staff and residents. Good forward planning is essential.

References:

1. Quill T, Abernethy A (2013) Generalist plus specialist palliative care—creating a more sustainable model. *N Engl J Med* 368: 1173–1175

P148 Prevalence of Vitamin D Deficiency and Supplementation Regimes in Older Irish Patients

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Background: Vitamin D deficiency is common in the older adult. Poor vitamin D status is associated with many illnesses including poor bone health, osteoporosis and fracture. The optimal serum levels of vitamin D are controversial, although deficiency is generally regarded as being

<25 nmol/L while levels below 80 nmol/L are considered to be 'insufficient'.

The aim of this study was to measure vitamin D in a group of older adults to establish the prevalence of vitamin D deficiency (<25 nmol/L) and insufficiency (25–80 nmol/L). We also sought to examine the supplementation regimes as those with significant deficiency require replacement at higher dosage levels.

Methods: Serum 25-hydroxyvitamin D (25-OH-D) levels were measured by HPLC mass spectrometry. Type and dosage of Vitamin D and calcium supplements were recorded.

Results: One hundred and 24 patients with a mean (standard deviation, SD) age of 80.7 (7.1) were evaluated. Over a quarter (27.4 %, n = 34) and 59.6 % (n = 74) of patients had 25-OH-D levels of ≤25 and ≤50 nmol/L respectively. 58 % (n = 72) had 25-OH-D levels between 25 and 80 nmol/L.

Only 32 % of patients who were deficient were on high dose supplementation.

Sixty-three per cent of patients who had insufficient levels were prescribed 800–1,000 IU vitamin D per day, while 22 % of patients did not have any vitamin D supplementation prescribed.

A seasonal variation was found for vitamin D, with levels taken during the month of October being the highest (p value 0.002).

Conclusions: Vitamin D deficiency was common in this population. There was variation in the prescribing of vitamin D supplements. Further guidance is needed regarding the correction of vitamin D in older adults.

P149 Will the Faller Fracture? Has Anyone Asked?—An Audit of Bone Health Management in Patients Referred to our Syncope Clinic

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Background: Patients referred to a Syncope Clinic are at high risk of falls, but assessment and management of bone health may be sub-optimal in these patients.

NICE guidelines (2012) suggest that all women over 65, men over 75, and younger patients with a history of falls (or other fracture risk-factors) should have bone health assessed.

Methods: included all out-patients >60 years old referred to our Syncope Clinic for tilt table testing/carotid sinus massage, over an 8-week period. Referral letters and clinic response letters were retrospectively assessed for information or recommendations regarding bone health, and GPs contacted for additional information regarding DEXA and medication status.

Results: 22 patients were included, mean age 76.2 years (SD 7.9), 10 female. Bone health was addressed in 4/22 referral letters, and an additional 1 response letter. Data regarding DEXA/medications were available for 21/22; 52.4 % (11) were not on osteoporotic medication—3 of these had previously undergone DEXA scanning, 36.4 % (8) had not undergone DEXA scan and were not on treatment, and so were potentially 'at risk'. Of 10 patients on treatment, in 5 cases the GP was unaware of prior DEXA or diagnosis of osteoporosis.

This first part of the audit cycle indicated need for improved assessment and management in this patient group.

On re-audit of clinic response letters following intervention (team education/amendment format of clinic response letters) (N = 17): bone health had been addressed in 11/17 (65 %) letters (recommendation to consider assessment/treatment of osteoporosis); 2 additional patients (11.8 %) were referred for Comprehensive Geriatric Assessment (including bone health assessment).

Conclusions: Our audit identified an area of deficit in our practice as regards management of bone health in at-risk syncope clinic patients. A simple intervention led to improvement, but not complete resolution of the deficit. Further efforts at improving bone health management are needed (and planned).

P150 Atrial Fibrillation in an Elderly Stroke Population

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Background: Atrial fibrillation (AF) is an important risk factor for stroke with its prevalence increasing with advancing age. We sought to examine the incidence and means of diagnosis of newly detected AF and the proportion of strokes attributable to untreated AF in an elderly stroke population.

Methods: Data was collected on patients assessed by the medicine for the elderly stroke team diagnosed with an ischaemic stroke from July to December 2012.

Results: 104 patients presented with an acute ischaemic stroke during this period. 50 % were female. The mean age was 78 years (range 58–95). Almost half (49 %, $n = 51$) had AF and for 35 % ($n = 18$), this was a new diagnosis. 51 % ($n = 26$) of patients with AF were female. Of those newly diagnosed, 66 % ($n = 12$) were in sinus rhythm on their admission electrocardiogram (ECG). The diagnosis was made on subsequent ECG in 3 patients, 24 h holter monitor in 3, 48 h holter monitor in 2, 7 day monitor in 2 and one each on telemetry and during echocardiogram. Of those with known AF ($n = 33$), 70 % ($n = 23$) were not anticoagulated at the time of their stroke. In 30 % ($n = 7$) it had been discontinued previously due to bleeding, in 26 % ($n = 6$), the patient had declined therapy and in 13 % ($n = 3$) anticoagulation was on hold for a procedure. One patient had discontinued therapy due to labile INRs and one due to low platelets. In 22 % ($n = 5$) the reason for not being on treatment was unclear. 22 % ($n = 23$) of all ischaemic strokes during this period occurred in patients not on anticoagulation at the time.

Conclusions: These findings show a high incidence of paroxysmal AF in newly diagnosed AF in acute stroke, supporting the role of prolonged rhythm monitoring. While some patients have contraindications to anticoagulation, untreated AF accounts for a significant proportion of ischaemic stroke.

P151 Dementia is Prevalent in Older People Admitted to Acute Hospitals, But Often Un-Diagnosed: A Prospective Multicentre Study

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Background: Acute hospital admission is a critical time for the person with dementia, potentially offering a point of contact for diagnosis, medication review, and forward planning, or sadly, leading to further cognitive and functional decline. Sampson et al. (2009) reported that

40 % of acute medical admissions in a single teaching hospital in London had dementia, but similar data for Ireland is not available.

Methods: All patients over 70 years old, admitted to the five public acute hospitals in Cork county and the one private hospital, over a total 2 week period in each hospital, were screened for dementia, using a several step process. Any patient with an initial mini mental state examination (MMSE) score less than 27/30 had in-depth assessment using the informant questionnaire of cognitive status (IQCODE) interview with a carer (cut-off 3.5), Delirium Rating Scale (DRS-R98), and a depression screen. Equivocal cases were reviewed by an expert multidisciplinary team. Co-morbidity was assessed using the Cumulative Illness Rating Scale (CIRS-G).

Results: In total, 597 older patients were screened; 492 of these in the public hospitals. 28 % of these had dementia. Dementia rates were higher in the rural hospitals (34 %), lower in elective admissions (16 %) and significantly lower in the private hospital (6 %). Dementia was more prevalent in medical patients as expected. Crucially, only 40 % of the patients with dementia were known to have dementia on admission. Patients with dementia had lower functional ability, more co-morbidities and higher in-hospital mortality.

Conclusions: Approximately 28 % of older people admitted to acute public hospitals have dementia, often not yet formally diagnosed, supporting the need for a greater focus on dementia-friendly care in acute hospitals. This study also indicates the key role of cognitive screening on admission, prompting formal assessment for delirium or undiagnosed dementia in those with low cognitive scores.

Reference:

1. Sampson EL, Blanchard MR, Jones L, Tookman A, King M (2009) Dementia in the acute hospital: prospective cohort study of prevalence and mortality. *J Psychiatry* 195(1):61–66. doi:10.1192/bjp.bp.108.055335

P152 The Development and Audit of a Balance Class in a Gerontological Rehabilitation Unit

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Background: Evidence has shown that balance re-education, as part of multi component intervention, is effective in reducing falls risk amongst the frail elderly population. The main aim of this audit was to assess the effectiveness of a balance class in a gerontological rehabilitation unit using both quantitative and qualitative data.

Methods: The participants were frail elderly inpatients in a subacute geriatric rehabilitation unit identified to be at risk of falling. To attend the balance class, participants were required to achieve a minimum score of 30 on the Berg Balance Scale (BBS) and have the ability to participate in a class setting. The class consisted of static, dynamic, functional and gait-specific balance re-education. Data was collected over a 10 week period. Information including client demographics, number of classes attended, 'Timed Up-and-Go' (TUG) and BBS scores on referral and discharge from the class, was collated.

Results: 19 clients with a mean age of 84 years attended the balance class over a 10 week period. Participants attended an average of 9 classes during their inpatient stay. There was a mean improvement of 7.6 s in TUG scores ($n = 10$) and 8.6 points in BBS scores ($n = 14$). These changes signified a meaningful improvement in class participants' balance and function and a statistically significant improvement in the Berg was noted with reference to [1]. Positive qualitative information was obtained through the use of a patient comment card and a Likert scale.

Conclusions: The data obtained suggests that the balance class described above is an effective component of multi-disciplinary

intervention that contributes to reducing risk of falls and improving function in an inpatient geriatric rehabilitation population.

References:

1. Donoghue D, Stokes EK (2009) How much change is true change? The minimum detectable change of the Berg Balance Scale in elderly people. *J Rehabil Med* 41(5):343–346

P153 Efficacy of a Lower Limb Progressive Resistance Training Class on Physical Outcomes in a Subacute Elderly Population

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Background: Evidence suggests that benefits of rehabilitation are dependent on multiple components including multidisciplinary team (MDT) involvement and physiotherapy interventions. This study presents outcomes of a progressive lower limb strengthening class for an over-65 subacute inpatient population.

Methods: Gait-speed, function and risk of falling were identified using the 6-m walk test, Elderly Mobility Scale (EMS) and Timed-Up-and-Go (TUG) on admission and discharge. Exercises were individually tailored, comprising warm-up exercises, progressive resistance training and functional strengthening. Data regarding participant demographics, outcome measures, length of stay and number of classes attended was collated. Qualitative data was obtained from comment cards and using a Likert-scale.

Results: Over 10 weeks, 21 individuals were referred to the class. 57 % were geriatric, 39 % orthopaedic, 4 % neurological clients, with women representing 62 % of attendees and men 38 %. The mean age was 82 years. On average, participants attended 8 classes. Gait-speed improved by a mean of 1.03 m/s ($n = 17$) with a mean gait-speed on discharge of 4.01 m/s. This was a substantial meaningful change [2]. EMS scores improved by 4 points, representing 95 % of participants achieving the higher functioning category. TUG scores improved by a mean of 14.3 s with a 31.6 s average on discharge, a meaningful change in this population [1]. Positive qualitative feedback was obtained.

Conclusions: A lower-limb strengthening class is an effective intervention, demonstrating improving functional outcomes in the elderly population. As participants received multi-component interventions during their admission, the class described is one aspect of effective MDT rehabilitation of an older person.

References:

1. Brooks D, Davis AM (2006) Validity of 3 physical performance measures in inpatient geriatric rehabilitation. *Arch Phys Med Rehabil* 87(1):105–110
- Perera S, Mody S (2006) Meaningful change and responsiveness in common physical performance measures in older adults. *J Am Geriatr Soc* 54(5):743–749

P154 Prioritisation of Referrals to a District General Neurovascular Clinic: Role of ABCD2

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Background: Royal College of Physicians and NICE guidelines emphasise the importance of prompt TIA diagnosis, ABCD2 at triage, urgent referral and hospital assessment. We examined local practise,

use of standard referral and diagnostic outcomes assessed against ABCD2 score.

Methods: Retrospective review of referrals to a district general neurovascular clinic from June to September 2011. Baseline demographics, source and method of referral and final diagnosis were recorded.

Results: 197 patients were assessed. 58 % female, mean age 65 (range 27–96). 69 % referred by primary care and 29 % from emergency department; 60 % of referrals faxed, with the standard TIA form used and ABCD2 completed in 62 % (123/197) of cases. 32 % (63/197) were diagnosed with stroke/TIA. Six patients (9.5 %) had significant carotid stenosis. Seventeen (27 %) patients had atrial fibrillation (new diagnosis in eleven). 85 % of patients with ABCD2 score <4 were assessed within 7 days of referral, dropping to 39 % in those with $ABCD \geq 4$ being assessed within 24 h. Only 28.2 % (13/46) of patients with $ABCD2 \geq 4$ had final diagnosis of stroke/TIA. 71 % (87/123) scored using ABCD2 had non-stroke diagnosis on discharge.

Conclusions: Only 1/3 of patients triaged as high risk were seen within 24 h of referral. Stroke/TIA was not reliably identified by ABCD2. Final stroke numbers do not reflect workload. Ready availability of MRI may increase diagnostician confidence. Education is needed in the use of ABCD2 as a prognostic rather than diagnostic aid. Rescoring at neurovascular clinic is important for adherence to targets.

P155 Parkinson's Disease in Acute Admissions—Are We “On” or “Off”?

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Background: Studies have shown that mismanagement of Parkinson's disease (PD) can increase morbidity and hospital stay in acute admissions [1]. For this audit we used NICE guidelines [2], comparing the admissions over 1 month against these proposed standards in relation to prescribing habits and specialty services availability.

Methods: In conjunction with the Pharmacy Department, patients on PD medications were highlighted and their details recorded. Information collected during the evaluation included a review of prescribing accuracy, an assessment of appropriate and inappropriate medications and also whether specialist input for PD had occurred.

Results: Of the 15 patients admitted during the study period, only 6 were prescribed their PD medication at the times they were being taken at home. While the majority were on levodopa/carbidopa combination treatment alone, other medications included Rivastigmine, Rasagiline and Donepezil. No patient was allowed to keep their own medication at the bedside and self-dispense. The majority of patients (12 out of 15) were prescribed laxatives. We did not find any use of medications contraindicated in Parkinson's disease such as anti-psychotics.

Conclusions: Adherence to recommended practices can be achieved through prescriber education and documentation of both best practice and patient's preferences. We plan to develop a medication 'Passport', similar to those available for patients receiving Warfarin, that would provide the admitting medical team easy access to these recommended practice guidelines, as well as patient specific information regarding medication usage and preferences of the patient.

References:

1. Sathyababu R, Chan E, Dhakam Z (2012) Management of Parkinson's Disease medication in acutely admitted patients

2. Parkinson's Disease—NICE (National Institute for Health and Clinical Excellence) Guidelines. Issued June 2006

P156 A New Initiative—Transition from Individual Nutrition Consultations to Group Education Sessions for Elderly Patients

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Background: The Dietetic Department provided individual consultations to patients attending the Care of the Elderly Day Hospital. The Dietetic staffing levels were reduced in December 2011 in addition to increased patient referrals secondary to the use of the Malnutrition Universal Screening Tool (MUST) being used on patients attending their Day Hospital medical review. A restructuring of Dietetic Services was required to manage increased patient referrals coupled with reduced staffing levels; initiating the move from individual consultations to group education sessions.

Methods: Referral criteria for group education sessions included MUST ≥ 2 , weight loss and poor appetite. Patients were sent postal invitations or were invited to attend the group session whilst at their Day Hospital medical review. The session included anthropometric measurements, practical dietary education on food fortification and modified consistency diets. Nutritional supplements were trialled; prescriptions were provided as required. Weights were monitored at subsequent Day Hospital reviews.

Results: Comparison of patient reviews from May 2011–Nov 2011 and May 2012–Nov 2012 was carried out. The 7 month period in 2011 comprised of 8 individual patient consultations requiring 8 h of Dietetic time. In the 7 month period in 2012, 3 individual patient consultations and 2 group education sessions including 18 patients were delivered; requiring 8.75 h of Dietetic time. Feedback from patient questionnaires revealed that patients had received new practical information. Patients with suspected dysphagia and/or feeding difficulties were identified; referrals to the Speech and Language Therapist and/or Occupational Therapist were made.

Conclusions: Group education sessions resulted in more efficient use of limited Dietetic services with increased numbers of patients seen. Dietetic input will continue to rise with increased referrals therefore group education sessions are a time efficient way to educate patients.

P157 Adverse Drug Reactions as a Cause of Admission to a University Teaching Hospital

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Background: Adverse drug reactions (ADRs) are a common problem which leads to significant excess cost and morbidity. A meta-analysis of 25 international studies found 4.2–6.0 % of admissions to medical departments were ADR-related. One Irish study found that 8.8 % of admissions to the emergency department of a university teaching hospital were attributable to ADRs. Our aim was to develop and evaluate a screening process to detect ADR-related admissions.

Methods: A 2-day pilot study was undertaken to calculate the sensitivity and specificity of our screening process which involved a pharmacist or physician screening all medical admissions. If an

ADR-related admission was suspected, details were documented on a screening form provided. All suspected ADRs were reviewed using data from clinicians who managed the patient and chart records. All non-cases were also reviewed. An algorithm (the Naranjo scale) was used to assess ADR probability (1). This process was then applied to 9 consecutive days of medical admissions to a large Dublin hospital.

Results: The sensitivity and specificity of the process was 100 and 97 %, respectively. Of the 137 admissions which occurred during the 9-day period, 7 confirmed ADRs were detected. The incidence of ADR-related admissions was 5.1 % (95 % CI, 1.4–8.8 %). Of the ADRs, 6 were type A (predictable and preventable) reactions and 1 was a type B (uncommon ADRs) reaction. The median age of patient who experienced an ADR was 80 years old [IQR 66.06–93.94].

Conclusions: There is a lack of data regarding the burden of ADRs on the HSE. The process used in this study should inform a larger national study of ADR-related hospitalisation in Ireland.

References:

Naranjo CA, Busto U, Sellers EM, Sandor P, Ruiz I, Roberts EA, et al (1981) A method for estimating the probability of adverse drug reactions. *Clin Pharmacol Therap* 30(2):239–245.
Epub 1981/08/01

P158 “The Burden Of Cost”—Admission versus Discharge Medications

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Background: Avoiding unnecessary polypharmacy prevents potential drug-drug interactions culminating in adverse drug events¹. In light of the budgetary constraints that is overwhelming the economy; it would also imply less cost to the patient and the government. This study compares the cost of medications for patients on admission and on discharge.

Methods: The charts of the first 94 medical patients admitted into an acute general hospital starting from January 1st 2012 were sourced from Hospital In-Patient Enquiry (HIPE) and a pre-designed questionnaire was completed. The cost of medications per patient was calculated using the MIMMS manual appropriate for the period of admission and discharge. We examined the patient demographics, source of referral, LOS (length of stay), name of medications and their costs.

Results: The total cost of medications for the 94 patients on admission was 10,517.20 Euro (Average cost being 111.89 Euro per patient) and on discharge was 11,320.05 Euro (Average cost being Euro 120.43 per patient). 64 patients (68.1 %) were 65 years and older. The average length of stay was 3.1 days. There was an increase of 25.4 % in monthly cost of medications for 51 patients; of whom 70 % were aged 65 years or over. There was a decrease of 26.7 % in monthly cost of medications for 21 patients. The most commonly prescribed medications were anti-coagulants and anti-platelets, costing 409.63 Euro per month, followed by inhalers, nebulizers and antitussives, costing 1661.45 Euro per month. 40 % had previous admissions and the main admission diagnosis was omitted from the discharge summary in 12.8 % of cases.

Conclusions: Identifying a preferred drug list could impact positively on the cost of medications for the state. Acute medical admissions are an opportunity for substantial quality improvements. Each medication needs to be evaluated in terms of appropriateness and its impact on the patient when prescribed with other medications.

P159 Nursing Home Admission Rates During a Time of Acute Medical Service Reconfiguration

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Background: The Framework for smaller hospitals recently announced, sees a change in practice with acutely unwell medical patients being transferred directly to a Model 4 hospital from a wider catchment area. Although beneficial this may initially prove challenging for services within that hospital in terms of capacity and workload. The aim of this study was to evaluate nursing home admission rates in a current model 3 Hospital with a 24 h ED service soon to become a model 2 Hospital with a daily 12 h AMAU service.

Methods: Information concerning all nursing home residents admitted on acute medical take over a consecutive 8 week period was collected prospectively. Forty-four patients were admitted from 18 nursing homes representing 9 % of total medical admissions during this period. Mean age was 82 ± 9 years (64 % female) with mean length of stay 7.25 days (median 4.5 days). Eighteen (41 %) had more than one admission in the past year. Nine (20 %) were referred from one nursing home. Seventeen (39 %) were seen by a General Practitioner prior to transfer to the ED with all but one requiring ambulance for transfer and twenty-four (55 %) were registered in the ED after 19.00 h i.e. after future AMAU hours. Twenty-five (55 %) were diagnosed with Pneumonia, 23 (51 %) received physiotherapy and 18 (41 %) required assessment by Speech and language therapy. Three (7 %) died.

Results: The Results of this study demonstrate how in one area alone the proposed reconfiguring of acute medical services will impact on nursing home liaison services and multidisciplinary teams in an already busy Model 4 Hospital setting.

Conclusions: As with other services close liaison between General Practitioners, ambulance services, hospital outreach services and nursing homes will be required in order to ensure the best appropriate transfer and care for this group of patients.

Psychology of Ageing

P160 The factor structure of the Montreal Cognitive Assessment (MoCA): What Cognitive Domains are Evaluated?

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Background: The Montreal Cognitive Assessment (MoCA) is a widely used measure of general cognitive function in clinical and research settings. Previous work [1] identified a six-factor structure in line with that originally proposed by the MoCA authors, though additional validation was recommended at the population level. Therefore, we aim to test the six-factor structure and additionally assess the effects of age, gender and education on MoCA performance.

Methods: Complete data on the MoCA was available for 2,340 participants from the Irish Longitudinal Study on Ageing (TILDA).

Age, gender and education were recorded. Confirmatory factor analysis was used to test the validity of the six-factor structure (orientation, memory, attention/working memory, visuospatial abilities, executive function and language). Next, a second order structure with a general latent variable of 'cognition' was tested. Finally, we assessed the effects of age, gender and education on the six-factors in a full structural equation model.

Results: A six-factor model fit the data well (χ^2 (234) = 576.893, RMSEA = 0.025). The second order general cognition factor also fit the data well (χ^2 (231) = 591.894, RMSEA = 0.026). Participants with higher levels of education had higher scores across all six factors. There was no effect of gender on executive function, language or orientation domains. Women performed worse than men on visuospatial ($B = -0.139$, $p < 0.001$), language ($B = -0.195$, $p < 0.001$) and attention/working memory domains ($B = -0.181$, $p < 0.001$), but better on memory ($B = 0.209$, $p < 0.001$). Older participants had poorer scores across all factors. There were only small effects of gender or education on individual items.

Conclusions: The six-factor structure of the MoCA has construct validity and is largely consistent with previous findings. While there was a small amount of differential item functioning with respect to sex and education, the effects do not impact substantive or clinical conclusions.

Reference:

1. Freitas S et al (2012) Construct validity of the montreal cognitive assessment (MoCA). J Int Neuropsychol Soc 18:1–9

P161 Who is Having a Good Friday? A Point Prevalence Study of Depression in Geriatric Patients

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Background: Depression is common in late life with rates reaching 13 % in older adults aged 80 and older. Major depression is reported in 8–16 % of community dwelling older adults, 5–10 % of older medical outpatients seeing a primary care provider, and 10–12 % of medical-surgical hospitalized older adults with 23 % more experiencing significant depressive symptoms. Recognition in inpatient groups and long term facilities is poor and not consistent amongst studies [1].

Methods: A point prevalence study of depression was performed on Good Friday (March 2013) in Cork University Hospital. We used the Geriatric Depression Scale (short form) questionnaire and information from the patient's charts and drug kardex to gather the needed data.

Results: There were a total of 37 adult in-patients over 65 years old (range 65–90 years 3 months) and under the care of the Geriatric teams on 29/3/2013. Five patients were excluded from analysis due to medical reasons (critical care, aphasia etc.). Twelve cases of likely depression were detected in 32 adult in-patients in this group according to the Geriatric Depression (scoring greater than 4). 6 of these patients scored >4 and ≤ 8 and indicating mild depression and six scored >8 indicating moderate depression. Of the twelve patients four (33 %) were receiving treatment for depression or had a previously documented diagnosis of depression. Of this same group one patient had a review of their antidepressant in the past year.

Conclusions: This study clearly demonstrates that the prevalence of depression in elderly patients is high. Depression is greatly underdiagnosed in elderly patients and untreated.

Reference:

1. <http://www.aware.ie/>

P162 Anti-Depressant Use is Independently Associated With Single And Dual Task Gait Deficits

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Background: Cognitive impairment, especially executive dysfunction, is associated with impaired mobility and an increased risk of falls in older adults. These impairments are often seen in those with depressive symptoms, however limited research has quantitatively examined gait in this group. Therefore, this study examined the relationships between depressive symptoms, antidepressant use and gait in both single and dual task walking conditions.

Methods: A nationally representative sample of community dwelling adults (aged ≥ 50 years) took part in wave 1 of The Irish Longitudinal Study of Ageing (TILDA). Inclusion criteria for this analysis was age ≥ 65 years, Mini-Mental State Examination score ≥ 24 , and completion of gait assessment ($n = 1247$). The Centre for Epidemiological Studies Depression scale was used where scores ≥ 16 represent clinically relevant depressive symptoms; antidepressant use was also recorded. Gait measures were obtained during single and dual task (reciting alternate letters of alphabet, A-C-E) walking using a 4.88 m GAITRite® walkway. Participants were divided into three distinct groups: controls ($n = 1096$), clinically relevant but untreated depressive symptoms ($n = 88$) and those on anti-depressants ($n = 53$). Using regression analysis, the associations between each group and gait adjusting for socio-demographics, physical health, psychological health and cognition were examined.

Results: The anti-depressant group displayed reduced gait speed and stride length and increased double support phase during single task walking and reduced stride length in dual task walking after adjusting for confounders ($p < 0.05$). While the untreated symptomatic group displayed significant univariate gait deficits, these were explained by confounders in multivariate analysis.

Conclusions: Antidepressant use was independently associated with gait deficits although this may also reflect greater severity of depressive symptoms in this group. As gait impairments are associated with an increased risk of adverse outcomes including falls, clinicians should be aware of the impact of depressive symptoms and especially antidepressants on gait in older adults.

P163 Cognitive Reserve: Developing a Model of the Social Processes that Influence Age-Related Cognitive Decline

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Background: Cognitive reserve (CR) is a hypothetical construct proposed by [1] to explain individual differences in risk for, and patterns of cognitive impairment associated with ageing and dementia. There is considerable evidence that reserve is influenced by lifestyle variables including education, IQ, occupation, social engagement and mental stimulation; and the hypothetical construct of CR is typically measured using proxy indicators that reflect these experiences. However, the inconsistent use of several indicators has attracted criticism as it limits comparability across studies. While there is evidence that these life experience variables contribute to the

protective effects of CR, there is currently little understanding as to how these protective effects occur. Robertson (2013) proposes that the protective effect of CR functions via the neurotransmitter noradrenaline. We aim to elucidate CR by (a) developing a model of the lifestyle variables that influence it and (b) using this model to test the hypothesis that CR is mediated by noradrenergic function.

Methods: Participants were normally ageing adults aged 50+ ($N = 221$) with a mean age of 64.3 years (SD 8.4). Participants completed a comprehensive assessment battery including neuropsychological, cognitive and psychological measurement tools, along with self-report questionnaires and scales to measure proxy indicators of CR. Protocol for a study to test the hypothesis that CR is mediated by noradrenergic function will also be presented.

Results: A multiple-indicator model of CR indicators will be used to explore the relationship between CR and age-related cognitive performance, both cross-sectionally and longitudinally.

Conclusions: Potential implications of the findings in terms of further research, interventions aimed at preventing cognitive decline and clinical practice will be discussed.

References:

1. Stern Y (2009) Cognitive reserve. *Neuropsychologia* 47:2015–2028
2. Robertson IH (2013) A noradrenergic theory of cognitive reserve: implications for Alzheimer's disease. *Neurobiol Aging* 34:298–308

P164 Comparison of Two Cognitive Assessment Tools on a Care of the Elderly Ward

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Background: Cognitive impairment is common in hospitalised elderly patients. Studies have shown that this increases the risk of adverse health outcomes [1]. Nice guidelines state that patients over sixty-five are at high risk of developing delirium especially if they have underlying cognitive impairment or dementia and concurrent severe illness [2]. Therefore all Care of the Elderly patients should have formal cognitive assessment.

Methods: We reviewed all (19) patients on a CoE ward. We carried out a chart review of past medical and drug history and looked for any diagnosis of delirium, or evidence of cognitive assessment, since admission. All patients then had a Montreal Cognitive Assessment (MoCA) and this was compared with their Mini Mental State Examination (MMSE).

Results: Six patients (32 %) had a history of dementia, of whom three (16 %) were on dementia medications. Six (32 %) were admitted with increased confusion or undiagnosed cognitive impairment. Five patients (26 %) were unable to complete a cognitive assessment. 64 % (9) of those able already had a cognitive assessment performed. Two declined MoCA assessment. Of the remaining twelve, eleven (92 %) were diagnosed with cognitive impairment. Fourteen patients had an MMSE, four (29 %) showed no cognitive impairment, six (43 %) mild, three (21 %) moderate and one (7 %) severe cognitive impairment. The mean score of those who had both a MoCA and MMSE was 18 and 22, respectively. Two patients were diagnosed with cognitive impairment with MoCA but not with MMSE.

Conclusions: We have confirmed that the prevalence of cognitive impairment is high in our hospitalised elderly patients. Interestingly the newer MoCA identifies more patients as having cognitive impairment than the MMSE. As only 8 % were assessed as normal the clinical utility of the MoCA in this age-group requires further assessment. Usage of a specific delirium screening tool e.g. CAM may be more beneficial.

P165 Does Pain Mediate The Relationship Between Physical Activity And Depression in Older Adults? Findings From Two Nationally Representative Studies

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Background: Increasing physical activity is negatively associated with depressive symptoms in older adults. Pain is also associated with depression and is a potential reason for non-engagement in physical activity. However, few population studies have investigated the potential mediating effects of pain on physical activity and depression. We aimed to determine any such effects in two large datasets of older Irish adults.

Methods: Data were from two population datasets: the Health Ageing Research Project (HARP, 2005) (N = 2053) and The Irish Longitudinal Study on Ageing (TILDA, 2011) (N = 8504) and were analysed using logistic regression. HARP participants were community-dwelling adults aged 64 years from the Republic of Ireland (RoI) and Northern Ireland, while TILDA participants were aged 50 years plus and living in the RoI only.

Results: Both PA and pain independently predicted depression when adjusting for various other factors in both HARP and TILDA. When both PA and pain were entered into the same model, the effects of physical activity on depression were not significantly attenuated.

Conclusions: Both pain and physical activity independently predicted the likelihood of depression in older adults in both nationally representative samples, but no mediation effect was found. Providing support for National Goal Two of the recent National Positive Ageing Strategy; continuing to support older adults in engaging in regular moderate to vigorous PA can improve both their physical and mental health, irrespective of their pain levels.

P166 Cognitive Rehabilitation for Early Stage Alzheimer's Disease

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Background: Cognitive rehabilitation (CR) is an individualised, goal-based intervention for people with progressive conditions such as Alzheimer's disease (AD). The aim of CR is to enable people with cognitive impairments to achieve improved performance on personally relevant goals and everyday functional activities. Our research will investigate the clinical efficacy of individualised, goal-based CR interventions in early-stage Alzheimer's disease (AD).

Methods: Up to ten participants with early-stage AD will be recruited to take part in the study. Participants are required to be community dwelling, have a formal diagnosis of AD, and score >18 on the MMSE. Family carers will also be invited to participate. The study will incorporate a single case, multiple-baseline design, with up to five personal rehabilitative goals identified for each participant. Intervention sessions will be conducted for 60–90 min, once per week

over 8 weeks. Baseline, post-intervention, and follow-up data will be included. Primary outcomes of interest include progress with rehabilitation goals, goal satisfaction, and self-reported quality of life. Secondary outcomes include cognitive and everyday functioning, and memory self-efficacy. Outcomes of interest for caregivers include caregiver strain, quality of life, and general health.

Results: Goal attainment scaling procedures will be used to evaluate progress with individual goals. Standardized outcome measures for the person with AD will include; the Bangor Goal Setting Interview, Quality of Life-AD, Repeatable Battery for the Assessment of Neuropsychological Status and Instrumental Activities of Daily Living scale. Outcome measures for the carer will include the Zarit Burden Interview, World Health Organisation Quality of Life scale—short version, and the General Health Questionnaire.

Conclusions: Potential implications of CR interventions will be discussed with regard to cognitive and everyday functioning for people with early stage Alzheimer's disease; and quality of life and well-being of family caregivers.

P167 Validation of a Model of Cognitive Reserve Based on Risk and Protective Factors in Dementia

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Background: The main objective of this research is to model the role of cognitive activity in developing, as well as protecting against dementia by validating a model of cognitive reserve (CR). High levels of cognitive activity are thought to boost CR or the brain's capacity to cope with pathology in order to minimise symptomatology [2]. Even though models of CR have proved wanting because of the lack of evidence to address the issue of construct validity, [1] conceptual model of CR is empirically testable. This study therefore aims to investigate the role of cognitive activity in dementia risk and protection using [1] conceptual model of CR.

Methods: Satz et al. [1] CR model will be tested against two longitudinal ageing study datasets – MAAS (N = 1800) and DESCRIPA (N = 880). The Maastricht Ageing Study (MAAS) is a 15-year follow-up study on cognitive ageing. The CR model will be developed using this large dataset of risk factors and cognitive decline/dementia outcomes. The model will be validated using an independent dataset from the DESCRIPA study—a multicentre European cohort study on ageing and dementia.

Results: Results from confirmatory factor analysis will elucidate the structure of, and the relationships among, CR constructs.

Conclusions: The role of cognitive activity in developing and protecting against dementia, as well as the construct validity of a CR model, will be clarified.

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P168 Comparison of the Quick Mild Cognitive Impairment Screen (Qmci) to the Montreal Cognitive Assessment

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Background: Sensitive and specific instruments are required to screen for cognitive impairment (CI). Both the Quick Mild Cognitive Impairment screen (Qmci) and the Montreal Cognitive Assessment (MoCA) accurately differentiate mild cognitive impairment (MCI) from normal cognition (NC) and dementia. While the MoCA has been validated in multiple clinical settings, few studies compare it to tests designed specifically to detect MCI. Given this, we sought to investigate how the shorter Qmci compares to the MoCA.

Methods: Consecutive referrals, presenting with memory loss, to a university hospital memory clinic, underwent a comprehensive assessment, classifying them as NC, MCI or dementia. The Qmci and MoCA were scored by trained raters, in random order, blind to the diagnosis.

Results: In all, 322 subjects, median age 76, were screened, of whom 290, representing 421 assessments (78 NC, 93 MCI, and 250 dementia), were included. The median ($\pm$ interquartile range) Qmci scores for NC, MCI and dementia were 67.5 ($\pm$ 9.75), 58 ($\pm$ 12), and 36 ($\pm$ 23), respectively, compared to 25 ($\pm$ 4), 22 ($\pm$ 4.25), and 13 ($\pm$ 9.5), for the MoCA. The Qmci was more accurate than the MoCA in differentiating MCI from NC, area under the curve (AUC) of 0.82 versus 0.74. It also had superior accuracy for differentiating MCI from dementia, AUC of 0.96 versus 0.91. At the recommended cut-offs, the Qmci had a sensitivity of 92 % and specificity of 77 % for CI, compared to 96 % sensitivity and 42 % specificity for the MoCA. Median time for the Qmci was 4 min, 50 s ($\pm$ 1 min) compared to 10 min, 13 s ($\pm$ 4 min, 30 s), for the MoCA. The MoCA had a high false positive rate for CI, 58 % compared to 17 % for the Qmci.

Conclusions: Although both tests distinguished MCI from NC and dementia, the Qmci was more accurate, with a shorter administration time. The MoCA had a low specificity for CI and a high rate of false positives, suggesting that it is less clinically useful among older adults.

P169 Screening for Cognitive Impairment in a Hospital Rehabilitation Unit

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Background: Cognitive impairment (CI) is frequently under-diagnosed among patients in rehabilitation units. Few studies have investigated the utility of different, short cognitive screening instruments in this population of older adults. Given this, we compared the Standardised Mini-Mental State Examination (SMMSE), the Montreal Cognitive Assessment (MoCA) and Quick Mild Cognitive Impairment (Qmci) screen, in their ability to differentiate CI from normal cognition (NC).

Methods: Consecutive stable inpatients, in a university hospital rehabilitation unit, were screened for CI over 1 week. CI was

determined independently by multi-disciplinary team assessment. Patients who were medically unstable, screened positive for depression using the Geriatric Depression scale (short-form), or who were unable to communicate verbally due to dysphasia were excluded.

Results: In total, 32 patients were assessed, of which 30 were included, 13 with NC and 17 with CI. Two patients were excluded because of dysphasia. Patients median age was 81.5 (interquartile range, $\pm$ 9.75) years, and 18 (60 %) were female. The median SMMSE score for NC was 27 ($\pm$ 4), compared to 22 ($\pm$ 7.75) ($\pm$ 7.5) for the MoCA and 61 for the Qmci. Median scores for CI for the SMMSE, MoCA and Qmci were 19 ($\pm$ 7), 12 ($\pm$ 4.75) and 35 ($\pm$ 18) respectively. The Qmci and MoCA had similar accuracy, in differentiating CI from NC, area under the curve (AUC) of 0.93, and both were superior to the SMMSE, AUC of 0.88. Median administration times for the SMMSE, MoCA and Qmci were 5 min, 11 s ($\pm$ 1 min, 35 s), 8 min, 37 s ($\pm$ 1 min, 27 s) and 4 min, 25 s ($\pm$ 50 s) respectively.

Conclusions: All three of the cognitive screens were accurate, at differentiating CI from NC, in a university hospital rehabilitation unit. The median administration time for the Qmci was shorter than for the SMMSE and MoCA. The median score for NC, for the MoCA was below its established cut-off for CI, suggesting that it is less useful in this setting.

P170 Orthostatic Intolerance is Associated with Subjective Memory Complaints in Older Irish Adults

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Background: Growing evidence suggests a link between orthostatic blood pressure changes and cognitive function—this association has been reported even with subsyndromal orthostatic hypotension (OH). Orthostatic intolerance (OI) may reflect transient cerebral hypoperfusion resulting from orthostatic challenge. Subjective Memory Complaints (SMC) in the absence of objective deficits in older adults have been suggested as a possible early indicator of future cognitive decline yet present a diagnostic dilemma given significant overlaps with mood disorders and personality traits. Both SMC and OH have been associated with cerebral white matter hyperintensities on MRI. Building on earlier work from our group, we hypothesised that OI may be more common in those with SMC.

Methods: Cross-sectional in design, participants were those aged 50 and older who completed the TILDA health centre assessment which included comprehensive cognitive testing, screening for SMC and measurement of orthostatic phasic blood pressure changes using beat-to-beat digital photoplethysmography (Finometer®). OI was defined as reporting feelings of dizziness, light-headedness or unsteadiness during active stand.

Results: 4,672 participants were free from dementia (MMSE $>$ 23; DWR $>$ 2). 4018 (84 %) rated their memory as 'excellent', 'very good' or 'good' and 654 (14 %) rated their memory as 'fair' or 'poor'. 1,730 (37 %) expressed symptoms of OI upon standing. A logistic regression model found that in addition to male gender, treatment with antidepressant medications, high levels of neuroticism and higher educational background, orthostatic intolerance was independently associated with SMC (OR 1.37; CI 1.05–1.8; $p < 0.05$).

Conclusions: These preliminary findings suggest a link between OI and SMC in community-dwelling older adults at population level while controlling for a broad range of bio-psycho-social variables

(notably depression, anxiety and personality variables). If the relationship between OI and SMC were to be confirmed in longitudinal analysis, OI may represent a potential modifiable risk factor for subjective cognitive dysfunction in the elderly.

P171 Antidepressants Strongly Influence the Relationship between Depression and Heart Rate Variability: Findings from the Irish Longitudinal Study on Ageing

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Background: Heart rate variability (HRV) is known to be reduced in depression; however, is unclear whether this is a consequence of the disorder or due to antidepressant medication. Reduced HRV is believed to contribute to the increased risk of cardiac morbidity and mortality observed in patients with depression.

Methods: We analysed data from the first wave of The Irish Longitudinal Study on Ageing (TILDA). Depression was assessed using the Center for Epidemiologic Studies – Depression scale. Time domain (standard deviation of normal-to-normal beats ms2 [SDNN]) and frequency domain (High Frequency ms2 [HF] & Low Frequency ms2 [LF] power) measures of HRV were derived from 3-lead surface electrocardiogram records obtained during 10 min of supine rest.

Results: Participants on antidepressants (with or without depression) differed significantly from controls on measures of SDNN, LF and HF power. Depressed participants not taking antidepressants did not differ from controls on all measures HRV. Linear regression models showed that selective serotonin reuptake inhibitors (SSRIs) and serotonin–nor-epinephrine reuptake inhibitors (SNRIs) were associated with reduced SDNN ($B = -0.053$ 95 % CI $-0.088, -0.017$) and LF ($B = -0.085$ 95 % CI $-0.139, -0.031$). Only SNRIs were associated with reductions in the HF measure of HRV ($B = -0.278$ 95 % CI $-0.417, -0.140$).

Conclusions: Our Results imply that reductions in HRV observed among depressed older adults are driven by the effects of antidepressant medications. SSRIs have less impact on HRV than other antidepressants with anticholinergic effects, but they do still reduce indices of HRV.

P173 Case Studies of the Effects of SenseCam Therapy on Identity in People with Early Stage Dementia

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Background: Dementia is an umbrella term for many diseases with different aetiologies but similar symptoms including a serious deterioration of cognitive abilities including memory impairment and a loss of communication skills, affecting social interactions and occupation. These deteriorations are simultaneous to diminishing identity in dementia. In the absence of a medical cure for memory loss new technologies specialised in pervasive imaging are emerging with the potential to act as an external memory resource. SenseCam is a lightweight wearable digital camera which passively takes images of the wearers' activities throughout the day. It takes about 3,000 images a day (Microsoft Corporation 2011).

Methods: This research is being conducted over a 36 month period in an exploratory and descriptive approach using the Multiple Case Study method. Three individual case studies are used to collect in-depth data within their context about a complex issue. Three individuals with early stage dementia are asked to wear SenseCam while they go about their everyday life, for the duration of 7 weeks, during which the researcher visits at pre-arranged appointments and views the images engaging the participant in discussions about them. The researcher uses software which automatically structures the thousands of SenseCam images captured each day, into "events". The event-based browsing software developed in the CLARITY centre allows huge amounts of SenseCam data to be navigated easily [1].

Results: To date two out of three case studies have been completed with the preliminary Results indicating that with refined suitability criteria of participants SenseCam therapy can act as a tool to help the person with dementia maintain their identity by providing external resources in memory, encouraging communication and maintaining social interactions.

Conclusions: These findings show the potential of structured SenseCam use to develop into a successful therapy for early stage dementia, concurrently, adding to the knowledge of psychosocial interventions for dementia.

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P174 Negative Self-Perceptions and Objective Health Outcomes: An Investigation into the Longitudinal Association Between Ageing Perceptions and Timed Up-And-Go

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Background: Walking speed is a strong predictor of functional health in later life. Older adults with slow walking speeds are at greater risk of falls, functional decline and poor cognition. Although walking speed is a physical task there is some evidence to suggest that it may also be determined by psychological factors. We sought to test the hypothesis that poor perceptions of ageing would be longitudinally associated with slower walking speed.

Methods: 4,935 participants from the Irish Longitudinal Study on Ageing (TILDA) completed the Ageing Perceptions Questionnaire which is composed of four dimensions of ageing: timeline, consequences, control and emotional representations. Participants were asked to indicate level of agreement with statements such as 'as I get older I can take part in fewer activities'. Participants also completed a timed up-and-go (TUG) where time taken to rise from a chair, walk 3 m, turn and sit down was recorded. Participants completed this task twice over 2 years. Depressive mood (Centre for Epidemiology Depression scale (CES-D)) was also recorded. Participants with Parkinson's Disease, history of stroke or MMSE <18 were excluded.

Results: Mean age was 63.83 and 54.2 % were female. At wave 1 having poorer perceptions of ageing across all domains was associated with slower TUG times after adjustment for age, gender, education, chronic disease, disability and depression (p 's < 0.001). Participants who had stronger beliefs in the negative consequences of ageing dimension at wave 1 had a decline in TUG speed at wave 2, 2 years later, after adjustment for all above covariates ($B = 0.01$ (S.E. = 0.004), $p \leq 0.025$).

Conclusions: Perceptions of the negative consequences of ageing are associated with slowed TUG speed both cross-sectionally and longitudinally. This suggests that walking speed is not determined purely by physical characteristics of ageing but is also affected by psychological state.

P176 Examining the ICF Framework as a Model of the Cross-Sectional Relationship between Chronic Disease and Quality of Life at Middle and Older Ages

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Background: The International Classification of Functioning, Health and Disability (ICF) conceptualises bodily impairment, activity limitation and participation restriction as the key consequences of poor health. This paper examines the potential of this framework as a model explaining the relationship between chronic disease and quality of life (QoL), assessing direct and indirect effects via these three domains.

Methods: A cross-sectional sample (n = 5,249) representative of the Irish community-dwelling population aged 50+ was obtained from the Irish Longitudinal Study of Ageing (TILDA). Path analysis was used to test the direct and indirect effects of chronic disease on QoL, via variables for bodily impairments, activity limitations and participation restrictions. The model was subsequently re-specified with bodily impairment and activity limitation variables as indicators of two separate latent constructs. The analysis was stratified by sex and age (under 65/65+), with age and education as covariates. Two dimensions of QoL were examined—control/autonomy and self-realisation/pleasure.

Results: Path analysis indicated that, across all groups, the effect of chronic disease on QoL was mediated by aspects of bodily impairment, pain and unsteadiness. Factor analysis showed that variables for bodily impairment and activity limitations did not load on to separate latent factors, but on to a single overall physical impairment factor. This physical impairment factor fully mediated the effect of chronic disease on QoL. In addition, control/autonomy fully mediated the effect of physical impairment on self-realisation/pleasure. Model fit was good (chi-sq = 557.86, p < 0.05; RMSEA = 0.03; TLI = 0.961).

Conclusions: Chronic disease appears to affect QoL through increased overall physical impairment, in both body functions and activities. This impairment is associated with a reduced sense of control, which in turn affects a person's sense of purpose (self-realisation) and enjoyment (pleasure). Chronic disease did not appear to affect QoL through restrictions in participation.

Social Gerontology

P177 Anxiety Management Groups in Old Age Psychiatry Services—What is Their Role?

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Background: Anxiety disorders are common and are often chronic with considerable level of distress and disability. National Institute for

Clinical Excellence recommends psychological therapies as the first line of treatment for anxiety disorders. These can be provided in primary or secondary care. Our service had 219 community referrals for the year 2012. Average case load for the service is approximately 200 per year. We do not have access to psychology service.

Methods: Multi-disciplinary anxiety management course was designed and delivered. It was based on anxiety management programme actively delivered in General Adult Psychiatry services. There were 7 weekly sessions lasting 90 min and a follow up session. This incorporated theory, relaxation practice, peer support, feedback and question and answers round. 16 people were identified, 10 were assessed and 8 agreed to participate. Outcomes were measured using Burns Anxiety Inventory, Beck's Depression Inventory and General Health Questionnaire. Acceptability was measured using feedback forms. Group was also given handouts and stress tools.

Results: Of 8 people, 6 showed improvement in all categories. However, between baseline and final outcome no statistical difference was found. 7 enjoyed the group, and 7 found it very useful. 5 were discharged from the service after completion of the anxiety management group.

Conclusions: The need was limited. This might be explained by provision of similar services in the primary care. It was highly acceptable by the group. To measure effectiveness, a larger sample is needed. Similar groups running across services can be compared and standardized. This could be an effective option for conclusion of treatment and transition of clients to community or primary care.

P178 The Ageing Tourist—Are There Implications for Service Planning in a General Hospital in a Popular Tourist Destination?

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Background: Tourism is an important source of revenue for Ireland. Tourism Ireland have highlighted that wellness holidays will provide an important source of growth in this market segment. They also highlight that services should align with this demographic including the accessibility of health services. This study explores the temporal trend in admissions to an acute general hospital in a tourist destination which attracts 846,000 visitors per annum (40 % >45 years).

Methods: Data was sourced from the Hospital In-Patient Enquiry (HIPE). We reviewed the number of monthly medical admissions along with length of stay (LOS) from 1st January to 31st December 2012. Looking at their areas of residence, we classified them into 'catchment' and 'out-of-catchment' areas. Excel and STATA were used for analysis.

Results: There was an average of 350 admissions per month with LOS between 6–8 days. Two peak periods were observed during the months of January–February and July–August. There was an 8 % surge in admissions over baseline during the summer months. In August 11 % of our total activity was based on patients from outside our catchment area. More than half (53 %) of these patients were over the age of 65. Comparing the percentage admissions by age category for 'in-catchment' versus 'out-of-catchment' we found 21 versus 26 % in the 65–74 year category; 32 versus 21 % in the 75–84 year category and 14 versus 7 % in the over 85 year category respectively.

Conclusions: Our institution experiences a surge in activity in the summer months that should be factored into service planning. The health and service needs of an ageing tourist population should be considered with emphasis on crossing linguistic and cultural barriers; facilitating medical repatriation; and being cognisant of the psychosocial stressors that may impede clinical assessment and recovery.

P179 Person-Centred Primary Care?: An Exploratory Study of Older Adults' Experiences

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Background: Person Centred Care (PCC) is an approach that treats older people as individuals and enables them to make choices about their care (England, Department of Health, 2001). While PCC has been thoroughly investigated with respect to older people in long-term care, we are not aware of any work to date that has examined PCC within the context of primary care. The publication of the HIQA National Standards for Safer, Better Healthcare (HIQA 2012) has highlighted the importance of person-centredness in primary care and there is a clear need for a greater understanding of the service-users' perspectives.

Methods: This study took a descriptive, qualitative approach. Twenty community-dwelling adults (5 men and 15 women aged between 67 and 86 years) were recruited through an Active Retirement Group within the North-East region of Ireland and participated in one of 3 focus-groups. The questions were based on the person-centred theme of the HIQA standards (2012). The interviews were transcribed verbatim and analysed using thematic analysis.

Results: The key theme to emerge from preliminary findings was 'diversity of experiences'. While some felt vulnerable and disempowered when accessing primary care others felt involved and respected. This was generally explained in terms of individual personalities rather than structural or organisational factors. However 'barriers to access' was a major theme and participants identified inequities. Key problems were service availability, geographical distance and travel, knowledge of entitlements and expense.

Conclusions: These findings suggest considerable variability in the level of PCC in primary care, as noted by HIQA (2012). For these participants, PCC, while experienced, is largely on an ad-hoc basis and there is a need for more structured support. However it is clear that access is a major barrier to PCC within primary care and is of particular concern to older rural dwellers.

P180 Community Based Comprehensive Geriatric Assessment: A Review of Published Literature

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Background: The effectiveness of comprehensive geriatric assessment (CGA) has been demonstrated in in-patient and outpatient settings. The goal of this study is to review the literature with respect to the use of CGA in primary care.

Methods: We searched PubMed, CINAHL and EMBASE for randomized controlled trials of comprehensive geriatric assessment in a primary care setting. Inclusion criteria were trials that were conducted in a primary care or domiciliary setting, targeting frail community-dwelling frail people older than 65 years. Exclusion criteria were trials delivered in ambulatory settings other than primary care, trials targeting a single condition such as dementia or depression, or trials without a control group.

Results: We identified eleven appropriate randomized controlled trials. The mean number of participants was 554. CGA was delivered by nurses in seven of the studies (7/11, 64 %), and delivered by geriatricians in 2 of the studies (2/11, 18 %). The average length of follow-up was 25 months. Five of the studies looked at healthcare utilization as an outcome measure, with four of the five reporting

positive Results in relation to CGA. Six of the studies included mortality as an outcome measure, with two reporting positive outcomes. Of the four studies with nursing home placement as an outcome measure, two found that CGA was beneficial. Five of the seven trials looking at functional ability found that community based CGA delayed functional decline or improved functional status.

Conclusions: There is a published body of evidence suggesting that community based CGA may have beneficial effects, especially in relation to improving functional status and reducing healthcare utilization. However a more integrated meta-analysis may help to clarify this further.

P181 Award Winning Care; the Eden Alternative Model of Care Adapted to a Long Stay Care Home

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Background: A project started in 2010 by the Staff of the Sacred Heart Hospital Roscommon to transform the care culture and environment by adapting the Eden Alternative, which has, as its core belief, that aging is a continued stage of growth and development, rather than a period of decline. The Sacred Heart Hospital in Roscommon is a 95-bed long stay care home and was the first in Ireland to register with the Eden Alternative in 2012.

The Eden Alternative's principle-based philosophy is a powerful tool used to guide organizations through the journey of culture change. Its core focus is to improve the wellbeing of Residents and those who care for them by transforming the communities in which they live and work. The vision is to eliminate loneliness, helplessness and boredom. The organisational culture change facilitates empowerment of both residents and staff, giving them a strong voice in the direction of life within the care home.

Methods: Staff in all departments received training on the Eden Alternative Principles in the context of institutionalised care for older people with dementia and other age related illnesses. Staff who received a 3-day training became Eden Associates and were the leaders of change throughout the organisation.

Results: The outcome following 3 years of change management has resulted in significant reduction in Falls incident, the use of Restraints, Pressure Ulcers, the use of Benzodiazepines and Staff Absenteeism. Significant improvements are seen in the environment where there is easy companionship, the opportunity to give as well as receive care and where there is variety and spontaneity. This was helped by introducing plants, animals and children into the care environment through schools and community based organisations.

Conclusions: The Eden Alternative is an ongoing journey taken by staff within an organisation and is a continual process of change and improvement.

P182 Whose "Successful Ageing"? Lay vs. Researcher Conceptualisations of What it Means to Age Well

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Background: Despite having been used in a gerontological context for more than half a century, "successful ageing (SA)" has not been

operationalised in a universally accepted definition. Definitions and conceptualisations of SA vary dramatically from study to study. However, there are generally two groups from which conceptualisations of SA stem: researchers and laypersons.

Methods: The current study compares Results from a systematic review of quantitative operational definitions of SA with themes captured in a systematic review of qualitative studies of layperson perspectives of SA.

Results: Results from the reviews reveal marked differences in the conceptualisations of SA between researchers and the “real world.” Qualitative studies generally have greater multidimensionality and more emphasis on psychosocial aspects of SA, such as resilience and coping. Conversely, quantitative studies contain fewer components that are generally biomedically focused, such as physical functioning/disability and the presence of illness. The vast majority of included studies were conducted in North America and the UK using non-clinical populations, resulting in limitations on the generalisability of SA conceptualisations beyond these Anglophone contexts.

Conclusions: Future SA research needs to be explicit about the geographic and cultural scope, focusing on the pragmatic application and societal value of definitions of SA.

P183 Nurse Led Quality Improvement Initiative in the Day Hospital

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Background: As a multidisciplinary team (MDT) we felt more information available on those referred would be beneficial to the planning of their assessment and care. Our aim was to establish stronger links with our community colleagues to improve the quality of information shared between healthcare professionals.

Methods: Liaison was established with the Public Health Nurses (PHN's) in a community care area within our catchment area. Liaison meetings took place with the assistant director of public health nursing and the day hospital MDT, led by the nurse manager of the day hospital. A performa was established with the community liaison team. This performa was developed with a focus on patient's care in the community. Prior to assessment a list of patients was forwarded to the liaison PHNs. PHNs were requested to return the form by fax or email.

Results: 60 % of patients (780) referred to our day hospital are from this community care area, consisting of 8 health centres. Response rate of liaison forms was 78 %. The information obtained was invaluable to the planning of individual assessments. 150 liaison forms yielded the following data. 27 % of patients were unknown to PHN services prior to assessment in day hospital. Of the 73 % (110 patients) known to PHN service, they had a variety of services available to them. These include home help/home care package (39 %), meals on wheels (14 %), day centre (24 %), respite (9 %), community physiotherapy (25 %), community occupational therapy (25 %) and community social worker (6 %). Information was also provided on patients considering applying for nursing home care under the NHSS.

Conclusions: This initiative, led by nursing staff in the day hospital, has strengthened communication with our colleagues in one community care area. This liaison has reduced duplication of work and has led to seamless care for those attending the day hospital.

P184 Either that Wallpaper Goes, or I do: Places for Living for Elderly People

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Background: The global population, and, as part of it, the population of Ireland, is ageing rapidly [1]. Arising from this is a need for residential and care accommodation which is user-friendly for elderly residents. While current policy places huge emphasis on “care in the community”, the question arises as to how realistic this aspiration is, and whether it alone can be assumed to meet the needs of older people, as it relies unduly on informal supports, which may not be available. There is a particular divergence between existing provision, and the future needs of an older population with a significant projected increase in numbers of people with dementia. Its predicted prevalence in the “oldest old” [2] suggest that “design for dementia” should be the norm in any purpose-built setting.

Methods: The paper explores the evolution of care typologies in Ireland, and addresses the apparent chasm between the reality of a majority of current care settings, and aspirations towards psychosocial models of care, flagging the possibility that many existing residential settings may actually exacerbate symptoms of dementia.

Conclusions: are that the culture of care and the physical context of care are inextricably interwoven, and that psychosocial congruence cannot be fully realised in an institutional setting. The way forward is in drawing on best practice internationally, to develop user-friendly community-based architectural models for living. The role of emerging technologies in supporting functional and psychosocial congruence is addressed, in the context of an architectural model which aims to maximise both. In the built environment, these two aspects of congruence, or environmental “fit”, are often inseparable in terms of design intervention.

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P185 Emergency Department and Community Geriatric Medicine Referrals of Nursing Home Patients: Experience of Mater Community Medicine for Older Persons 2008–2012

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Background: Nursing homes (NH) patients medical care needs are complex and secondary referrals to emergency department (ED) or community geriatric teams are often warranted. We studied referral patterns of NH patients to Mater-ED and the Mater Community Medicine (MCMOP) team over 5 years, adjusted for bed-capacity in each NH.

Methods: Prospective data collected on NH patients referred to ED and MCMOP in the Mater-ED catchment, was compared with data pre-commencement of MCMOP (2008) service. We examined NH-specific ED attendance, GP referral to MCMOP and MCMOP post-hospital discharge follow-up. NH-specific referral rates were calculated as per 100-bed. Regression analysis was performed on ED and

GP referrals and referral rates adjusted for NH-specific bed capacity. Significance was set at <0.05 .

Results: NH beds in the Mater-ED catchment increased by 28 % (837 → 1073) in the 5 years. This was associated with a fall of ED referrals by 19 % (648 → 525) but an increase in admissions (54 % → 63 %) of ED referred patients. Referrals to MCMOP rose by 96 %; predominantly from GP. The median ED referrals rate per 100 beds from Yr2008 were 91, 54, 50, 51 and 57 and the median GP referrals rates from Yr2009 were 25, 50, 34 and 36 respectively. Regression analyses of year 2012 showed significant correlations between ED referrals and bed capacity ($p = 0.033$, $r^2(\text{adj}) = 25.2\%$) and GP referrals to MCMOP ($p < 0.0001$, $r^2(\text{adj}) = 72.2\%$). After adjusting for NH-specific bed capacity, the correlations between GP and ED referrals remained significant ($p < 0.001$).

Conclusions: ED referrals trended lower despite an increase in NH beds in the past 5 years. In contrast, referrals from GPs to MCMOP have more than doubled. Correlation between ED attendance and GP referrals reflect possible changes in local NH referral practices and perhaps increased complexity of healthcare needs. A co-morbidity profile database of NH residents with available local expertise may yield further healthcare delivery benefits to the NH population.

P186 Re-Conceptualising Poverty—a Gendered and Life-Course Approach

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Background: Poverty represents a global concern for policy makers and researchers. It is regarded as a gendered phenomenon [1] and one which evolves as individuals experience various life-course transitions [2]. Conceptualising poverty has a long history, with feminist researchers instrumental in broadening the lens through which it is conceived. Feminist thinkers are especially critical of commonly applied unitary approaches to poverty measurement for only presenting part of the picture. Building on a review of poverty conceptualisations as they pertain to individuals across the life course, this paper develops a critique of current approaches to poverty measurement in Ireland and resulting public policy responses to perceived disadvantage among different cohorts.

Methods: The paper reviews conceptual papers and empirical studies undertaken over a number of years in diverse environmental contexts and with individuals at different stages of the life course.

Results: Reflecting on the multidimensional nature of poverty, the paper identifies different ways in which poverty measurement may be approached in order to improve insight into the gendered nature of poverty across the life course. These approaches are rooted in the body of feminist literature which conceives poverty as having strong perceptual and subjective dimensions. Importance is placed on assets and entitlements within which the power, inter alia, to manage expenditure, to mobilise labour, and to access social and community support, are vital elements [1]. The feasibility and limitation of alternative measures are discussed.

Conclusions: The paper challenges researchers to consider approaches to poverty measurement that reach beyond static income-based and household-level measures. It argues for a major focus on measures that not only examine individual and environmental sources of poverty, but also the structural factors which serve to reinforce gendered disadvantage across the life course.

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P187 Life Stage and Perceptions of Ageing in Motor Neurone Disease

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Background: The disease trajectory in motor neurone disease (MND) is characterised by paralysis of limb, respiratory and bulbar muscles and life expectancy is on average 2–4 years from symptom onset. Healthcare professionals support people with MND as they advance in the disease and encourage life-sustaining interventions to improve survival. We knew little about how people with MND construct their trajectories as they engage with healthcare services.

Methods: We conducted a grounded theory study to identify key variables that shape how people with MND make decisions about their care. We theoretically sampled 34 people from the Irish MND population-based register in the period 2011–2012 and conducted in-depth qualitative interviews with them in their homes. We analysed our data using open, axial and selective coding procedures [1].

Results: We found that participants' perceptions of ageing and of their family roles at different life stages shaped how they confronted MND and end-of-life care. Participants perceived loss of independence in MND as analogous to dependency in later life and indicated that later life was a more acceptable life stage to develop MND. Middle-aged and younger participants believed that older people were likely to resign themselves to MND. Young and middle-aged participants with dependent children wished to live on and engage with supportive care but participants in later life regardless of their parenthood status wanted to die soon.

Conclusions: People with MND construct later life as a period of resignation and acceptance and approach end-of-life care in the context of their life-stage transitions and trajectories. Ageing is a key variable that shapes how people with MND respond to impending death and engage with healthcare services.

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P188 Older People and Loneliness: The Impact of Day Centres in Northern Ireland

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Background: Recent research indicates that loneliness can have as much impact on morbidity in older people as smoking (Holt-Lunstad et al. 2010). One method of intervention used to address this risk is day centre attendance. Whilst day centres have traditionally welcomed older people to attend on an open-ended basis, the Northern

Health & Social Care Trust has recently introduced time limited programmes, based around the theme of ‘reablement’. Reablement is a common theme now used in work with older people in the community, although the use of the ideology in a day centre setting is unique to this particular Trust.

Methods: Seven day centres will participate in this study over a 15 month period. This study will use a mixed methodology. The quantitative element investigates the impact of the programmes on three occasions, at commencement of the service, at the end of the programme and 4 months after completion. Questionnaires will be conducted with up to 135 new day centre attendees who are participating in one of three 16 week ‘reablement’ programmes within the Northern Trust area of Northern Ireland. The questionnaires include background information (including marital status, living arrangement, self-rated health etc.), two internationally validated loneliness scales (De Jong Gierveld & UCLA), a quality of life scale (CASP-19) and IADL (independent activities of daily living). These questionnaires will be conducted with any new attendee on the aforementioned programmes at baseline (first day at the day centre), at 4 months (final day at day centre) and at 8 months (4 months following cessation of programme). The final occasion is of particular interest as it will hopefully give indication of whether any skills acquired during the programme are maintained.

Analysis of covariance will be carried out to examine the impact of the programme on a number of variables, specifically loneliness, quality of life and IADL but also examining their relationship with living arrangements, marital status and self-perceived health. A second thread to the research is that a small purposive sample will be asked to complete diaries for the duration of the programme. This will help examine the process that individuals go through and hopefully articulate some of the changes that participants experience. Interviews will be conducted with those completing diaries at the conclusion of the programme to develop themes identified through the diaries. The study will also analyse qualitative data gathered from diary entries and interviews with a maximum of 11 programme participants.

P189 The Reform Agenda in Health and Older People: No Reductions in Acute Hospital-Based Services Without a More Developed Infrastructure of Primary and Community-Based Care

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Background: The research focuses on a “healthy” ageing population in an urban setting. It included assessment of health status, health services utilisation and quality assessment by users. The findings are relevant to the reform agenda in health including the proposed shift from secondary to primary care. At the time of the research, entitlement to the GMS medical card was extended to all persons 70 years and over.

Methods: Cross-sectional design, quantitative research strategy centred on a survey of people aged 65 years (N = 542). Research sites are four urban neighbourhoods with different socio-economic profiles: affluent, middle class suburb, deprived local authority estate and a socially mixed neighbourhood. The survey, based on a random sample, involved face-to-face interviews and incorporated SF-36 for subjective health assessment. Data analysis, using SPSS, involved bivariate and multivariate analysis using appropriate statistical tests.

Results: Use of services in the last 12 months including average number of GP visits (5.3), hospital in-patient services (used by 26 %), out-patient clinics (used by 52 %) and other services by type of neighbourhood, socio-economic status and health profile are reported. Variation in utilisation rates is associated with health status (e.g. average of 10 GP visits by those in poor v. 2.5 by those in excellent health). Rates of utilisation of community-based services (e.g. home help, public health nursing) are low and uptake concentrated amongst people in poorest health, older old and living in poor neighbourhoods. Quality of professional care is highly rated but varies by social class, influenced by differences in expectations.

Conclusions: Free GP care has not resulted in older people in good health “flooding” the services. Shifts out of hospital-based care cannot be undertaken without a more developed infrastructure of accessible community-based care services.

P190 ‘You’re Just Used to it.’ The Drivers of Age Relationships: A Single Neighbourhood Case Study in Northern Ireland

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Background: The changing age demographic has prompted speculation about economic sustainability, intergenerational equity and relations when viewed through a macro level lens. This research presents a view of age relationships from the personal and social levels. The drivers of age relations are identified as ageism, social exclusion and the legacy of the conflict. Understanding these drivers is an important precursor to the development and implementation of age-friendly policy.

Methods: This research uses a single case study of a Protestant public housing estate in Northern Ireland to reveal the social drivers of intergenerational relations in the neighbourhood. Using a qualitative and ethnographic frame, the author asserts her subjective and critical position and strives to reflect the current reality of estate living.

Results: Ambivalence is recognised as a key feature of the drivers identified. For example, older people were described as ‘grumpy’ and ‘kind’; younger people were presented as ‘nasty’ and ‘nice’. Participants expressed simultaneous pride and shame in their neighbourhood and both support and disapproval for the on-going paramilitary activity and control in the neighbourhood. These ambivalences are interpreted as products of the contestation of externally imposed negative categorisations, such as the ageist stereotypes associated with being older or younger and the stigma of living in this neighbourhood. This research shows that the continued physical discipline by paramilitaries of children and young people borrows legitimacy from ageism (to ‘protect’ older people from young people) and is enabled by the social separation both of age groups and of the estate and its residents.

Conclusions: Previous research on intergenerational relationships has highlighted ambivalence within family relationships [1]. This research identifies ambivalence within neighbourhood age group relationships and links these ambivalences to broader sociological processes of identification which are socially contextualised in the case study neighbourhood.

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P191 The Meaning of Caring for a Person with Dementia: An Occupational Justice Perspective

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Background: Sustaining family caregivers caring for a relative with dementia at home requires the support of policy and services which reflect the needs of both caregiver and care recipient. The aim of this study was to illuminate the meaning of caregiving by exploring the narratives of family caregivers and to position that meaning within the current Irish care landscape using an occupational justice perspective. Occupational justice espouses the human need for participation in meaningful occupation as a prerequisite for health and well-being.

Methods: The researcher interviewed family caregivers caring for a relative with dementia. Interpretative phenomenological analysis was used to examine the lived experience of care-giving from within the narratives of family caregivers.

Results: The theme of interconnectedness which is described as an ethological attachment between caregiver and care recipient permeated the narratives of all family caregivers. Factors which influenced interconnectedness include: motivation to care, an umbilical connection, the necessity of transient breaks, threats to attachment and the relational aspects of caregiving.

Conclusions: From an occupational justice perspective, community based services which sustain interconnectedness between caregiver and care recipient should be supported by services and policy. Opportunities for caregivers to participate in respite experiences in their home should be encouraged and supported by health professionals.

P192 An Assessment of the Impact of Age and Socio-Economic Group on Subjective Health

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Background: As part of the Health Inequalities and Ageing in the Community evaluation (HIACE) study, the impact of aging and socio-economic status on subjective physical and mental health status was assessed. We anticipated lower economic status and increasing age would have a negative impact on subjective measurements of health.

Methods: This was a cross-sectional study involving independent community dwelling adults aged over 65 years. Participants were socially stratified on the basis of social class and highest level of education obtained. The Short Form 36 (SF-36) is a validated multi-purpose health survey and was used to ascertain subjective mental and physical health.

Results: A total of 552 participants were recruited in the study. Focusing on differences by age: (64–74 years v. 75+), there was a significant association between age and worsening physical health. Physical Component Score of the SF-36 differed significantly for

those aged 75 and older compared to the under 75 age group ($p < 0.001$). Increasing age was not associated with a significant difference in the Mental Component Score of the SF-36. Place of residence was used as a proxy for the social class of an area. We found a significant relationship between place of residence and both physical health ($p < 0.05$) and mental health ($p < 0.01$) in the age group 64–74 years for. However in the group aged 75 and older, there was no statistically significant association between place of residence and physical health status ($p = 0.185$) and was a barely significant association between place of residence and mental health status ($p = 0.05$).

Conclusions: The Results indicate, as expected, that physical health declines with age but overall subjective mental health is not affected by age. Lower socio-economic status had less impact on health in those over 75 compared to their younger peers which may be due to the 'survivor effect'.

P193 National Dementia Education Project: An Evaluation of Progress to Date

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Background: The National Council for the Professional Development of Nursing & Midwifery funded a project for the development and implementation of an educational programme for staff on caring for older people with dementia in acute, residential, community care settings. Initially an audit of current programmes available nationally in dementia was carried out, followed by a comprehensive literature review to inform the development of the project.

The first ever national needs analysis to identify the learning and education needs of a random sample of nurses and care attendants was carried out. As a result a suite of education programmes was developed. These included: a core generic education programme, Dementia Champion module, specialist module in responsive behaviour, e-learning course on the early identification of memory problems, Identifying Delirium Posters, Carers Handbook & CD.

Methods: The generic education programme has been rolled out nationally since 2010 and evaluated in 2012. The aim of the evaluation was to identify the strengths, weaknesses and impact of the current programme, and explore suggestions for changes/revisions to the programme from all the stakeholders' perspective. The programme is currently being delivered in approximately 25 sites across Ireland. Over 2,500 health care staff across services have attended the programme to date. Twelve sites were selected for participation in the evaluation, based on geographical spread, and representation from HSE, voluntary, public and the Alzheimer's Society of Ireland. The evaluation was carried out in two stages. Postal questionnaires were sent out to selected programme co-ordinators & participants. Second stage involved telephone interviews with respondents to explore more in depth their suggestions for change.

Results: The programme evaluated very positively, with facilitators and co-ordinators reporting that the content addressed all relevant areas of dementia and the information in each module providing participants with an excellent overview and a clear understanding of the subject.

P194 Caregiver Perspectives of Palliative and End of Life Care for Individuals at End-Stage Alzheimer's Disease in Newfoundland and Labrador: A Qualitative Phenomenological Approach

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Background: The purpose of this research was to examine the experiences of individuals at end-stage Alzheimer's disease in relation to palliative and end-of-life care. Much research into Alzheimer's disease focuses on caregiver burden, financial costs, pathology and cures for the disease. Gaps in the literature examining the quality of death for individuals at end-stage Alzheimer's specifically as it relates to palliative and end of life care (PEOLC) exist. This research examines how individuals with Alzheimer's disease experience PEOLC in light of the World Health Organization (WHO) definition of palliative care as: "...an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual." Individuals with Alzheimer's present with a unique set of circumstances that make it difficult to assess if the individual is nearing the end of his/her life.

Methods: A qualitative, phenomenological study was used to examine familial caregivers' experiences of PEOLC among their deceased loved ones. Participants were familial caregivers of individuals at end-stage Alzheimer's in Newfoundland who had been deceased for 6 months to 5 years. Using in-depth interviews and a focus group, participants discussed diagnosis of palliation, pain management, level of professional caregiver engagement during the palliative stage and satisfaction with PEOLC. Thematic analysis was used to analyze the data to identify unique and common themes.

Results: Not all interviews have been transcribed. Final Results are expected by the end of July.

Conclusions: The main implications of the study seek to identify Alzheimer's specific issues at end of life. So doing will provide insight into ensuring that people at end-stage Alzheimer's are afforded a dignified death through the minimizing of pain and suffering.

P195 Use of Transport for Older People with Intellectual Disability: Results from Wave 1 of the Intellectual Disability Supplement to the Irish Longitudinal Study on Ageing (IDS-TILDA)

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Background: People with intellectual disability (ID) are poorly integrated in the communities in which they live, despite reported better outcomes for those living in the general community as opposed to in institutional settings. Having access to adequate and appropriate transportation is considered a significant determinant of ability to access services and engage in the community; particularly when independent mobility decreases with age. This paper examines the use and experiences of transport for older people with ID in Ireland.

Methods: Bivariate analysis of data from the 753 adults with ID aged 40 years involved in the first wave of IDS-TILDA, an ongoing longitudinal study of ageing and ID in Ireland considered experiences in using private and public transport.

Results: The most frequently cited means of transport was being driven as a passenger by service staff (90.0 %; n = 678) followed by taxi/hackney (46.3 %; n = 349) and being driven as a passenger by a family member (38.5 %, n = 270). Just 12.9 % (n = 95) of all respondents used public transport at least once a week but one-third wanted to use such transportation more often. Transportation independence was mediated by age, living in less independent settings, and have more severe levels of ID.

Conclusions: The most frequently used transport options (taxi/hackney; driven by family) reflect a high degree of reliance on others and low levels of independence, especially when compared with older people in the general population. That almost one-third of older people with ID wanted to use public transportation more suggests that attention is needed to ensure a greater level of necessary supports to meet this desire and increase participation in the community.

P196 RelAtE: Combining Social and Nutritional Interventions to Improve Psychosocial Wellbeing in At-Risk Older Adults

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Background: Undesirable outcomes in late life are often a result of declines in social engagement and inadequate nutritional intake. To target these two issues simultaneously, we present the RelAtE project, a relationship-based mealtime intervention study. Previous research has shown that similar interventions can benefit the physical [1] and social [2] wellbeing of older nursing home residents. We aim to deliver our intervention to community-dwelling, independent older adults.

Methods: 100 individuals who are identified as being at risk of social isolation will be recruited to the study. 50 participants will be randomised to the treatment group, and 50 to the control group. Peer volunteers will also be recruited and trained to deliver the mealtime intervention in the homes of the intervention group participants, once weekly for 8 weeks. Psychological, cognitive, and health-related metrics will be assessed at baseline, post-intervention and at two follow-up points to investigate whether an intervention of this type can be seen to have a statistically significant impact on quality of life and psychosocial wellbeing in socially isolated older adults. Another area of interest to the researchers is the impact of the intervention on the peer volunteers; this will be investigated also using relevant psychometric assessments post-intervention.

Results: We report relevant guiding principles from the literature. These principles include person-centred care, relevant nutritional guidelines for the clinical population, and prior research on relationship-based interventions. Our goals include the successful enhancement of the quality of life of socially isolated older adults, by providing them with two combined services within their own home. We outline our plans to deploy the RelAtE intervention in the homes of 50 individuals in the community.

Conclusions: We present RelAtE, a relationship-based, person-centred mealtime intervention for at-risk older adults.

Reference:

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P197 Portable Application for Calculation and Graphing of Normative Values of Physical and Cognitive Tests in Community-Dwelling Older, Irish Adults

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Background: The Irish Longitudinal Study on Ageing incorporates numerous test of physical and cognitive function. These measures are clinically relevant and are often included in a comprehensive geriatric assessment. Normative values allow individuals to be compared to population performance. A recent study produced normative values of key measures from TILDA. Utilisation of such outcomes often remains low; however, the rise in popularity of smart phone and tablet technology presents an opportunity for display and dissemination of such information in graphical format.

Methods: A nationally representative sample of 8504 community dwelling adults (aged 50+ years). Normative tables were produced for measures of BMI, gait speed, timed up and go, grip strength, MMSE, MOCA and colour trails time test. Further details are available in [1]. Tables were plotted, graphically showing measure output against age, with percentile bands indicated. An app was developed which took relevant inputs for each measure and computed percentile values from statistical models, then displayed these on the relevant graph.

Results: An easy-to-use app for Android phones and tablets was developed to enable plotting and graphing of normative values. This app will be made available.

Conclusions: This application provides access to nationally representative normative data for commonly used evaluations of older Irish adults in an accessible graphical format. The framework enables later addition of further normative values. This development allows clinicians and non-medical test administrators to compare patient performance to that of the general, community dwelling population, allowing better diagnosis and management of older adults. An iPad version will be evaluated.

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P198 An Evaluation of Met and Unmet Needs, Carer Burden and Barriers to Accessing Services Amongst Family Carers of People With Dementia: A Qualitative Study

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Background: The increasing prevalence of dementia means that many people are taking on a caring role for someone with dementia,

often on a full time basis. Few studies have explored the needs of carers in Ireland, and in particular there is little literature on the barriers to accessing services.

Methods: In-depth semi-structured interviews were conducted with six family caregivers of people with moderate and advanced dementia who were identified through snowball sampling. A framework analysis, with stages of familiarization, identification of thematic framework, indexing, mapping and interpretation was undertaken.

Results: Five major themes emerged from the textual data: information, money, limited service availability, support and transport. The primary reported barrier to service use among carers was the lack of information received at time of initial diagnosis. Once diagnosed, adequate support is not seen as available. Carers reported isolation and uncertainty about what was available to support them. Financial burden resulted from the family member's dementia this contributed to increased levels of carer stress and in most cases limited access to services.

P199 Elder Abuse and Neglect: The Role of Irish Doctors

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Background: Elder Abuse and Neglect appears to be a growing problem that robs older adults of quality of life and may result in death. It would appear that doctors should be in an ideal position to detect and report instances of abuse and neglect, despite this fact doctors ranked eighth in reporting in Ireland.

Methods: Three separate surveys of General Practitioners regarding Abuse and Neglect, and Geriatricians and Old Age Psychiatrists regarding Self-Neglect, were conducted via Survey Monkey in 2010 yielding respectively response rates of 24; 45, and 68 %.

Results: General Practitioners identified Self-Neglect as the most frequent type encountered in the past year. Most, 57.6 %, were involved in detection of cases. The majority, 75.9 % cases were detected in the home with 72.5 % believing the situation for the patient (victim) was improved. Geriatricians: Identified Self-Neglect as a common problem but also that abuse was present in 40 % of cases. Personal neglect, refusal of services, and environmental neglect were the most common types identified. Older men were more commonly affected than women. Dementia, lifelong personality traits, and alcoholism were cited most frequently as underlying causes. Educational programs were identified as a need.

Old Age Psychiatrists: 92 % had seen a case in the past year. Most common presentations were personal neglect, non-compliance and hoarding. Most, 59 %, felt the outcome for the victim was unsatisfactory while 72 % felt outcome was unsatisfactory for themselves.

Conclusions: Elder Abuse and Neglect represent a significant problem that doctors encounter in Ireland. Self-Neglect seems to be a particularly frustrating problem to address and requires a broad based interdisciplinary approach.

P201 Step Safely: An Audit of Footwear Worn in Acute Geriatric Wards

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Background: 30–40 % >65 year olds and 50 % of >80 year olds fall each year. The wearing of footwear without fixation, with worn soles

may be associated with increased risk of falls. The purpose of this audit was to evaluate the footwear worn in Acute Geriatric Wards.

Methods: Footwear was assessed using a standardised footwear assessment tool. Inclusion criteria: age >65 years old and mobile. Information on mobility and falls in the last year was also collected. The audit included 107 patients in Acute Geriatric Wards over three audit cycles. The first cycle included 36 patients. An information leaflet was handed out with recommended footwear, using words and pictures. 2 weeks following this, the footwear of 33 patients was assessed to complete the second cycle. Following an interval time of 4 months, the shoes of a further 38 patients were evaluated.

Results: Cycle 1: The most common type of footwear worn on the wards were slippers (27/36), followed by walking shoes (5/36). 26/36 wore footwear without fixation. Fully or partly worn footwear tread pattern was found in 16/36 of patients.

Cycle 2: 2 weeks following the information leaflet: slippers remained the most common type of footwear worn on the wards (27/33). 22/33 wore footwear without any fixation. 18/33 of patient's footwear had partly or fully worn tread pattern.

Cycle 3: 4 months following the information leaflet: slippers, again, were most common type of shoes worn (31/38). 31/38 wore footwear without fixation and 21/38 with a partly or fully worn tread pattern.

Conclusions: The majority of patients on Acute Geriatric Wards were wearing footwear with at least one sub-optimal feature. Some improvement was seen following implementation of the 'Recommended Footwear' information leaflet, however this did not persist. In order to improve footwear compliance in older patients, provision of proper footwear may be required.

P202 Clinical Characteristics and rates of Psychosocial Problems and Alcohol Abuse in Frequent Attenders aged over 65 to an Inner City Emergency Department

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Background: A Frequent Attender (FA) is a patient who presents four or more times a year to an Emergency Department (ED). Existing literature suggests that FAs are generally middle-aged men, and have high rates of chronic illness, psychosocial problems and a predilection for substance and alcohol abuse. No existing research focuses on the over 65 age group, and examines if these characteristics hold true, compared to their non-FA counterparts.

Methods: a random sample of 120 ED patients over 65, FA (n = 60) and non-FA (n = 60), was taken throughout 2011. The ED charts of each group were examined and data was extracted on type of presenting complaint, presence of co-morbidities, psychosocial and alcohol problems and disposition code.

Results: Relatively, FAs suffered from more co-morbidities and were admitted more often, 93.3 % compared to 67.2 % for NFAs. The most common presenting complaint was Cardiovascular Disease, compared to Injury for Non-FA. Of note, 38.3 % of FAs presented at least once

for neurological complaints, compared to 14.8 % of Non-FAs. Alcohol and Psychosocial issues were more prevalent in the FA group.

Conclusions: we can report chronic disease and multiple co-morbidities play a large role in the FA cohort, where patients presented with different PCs. However, Non-FA tended to present with an isolated injury, like a fall. FAs were more likely to leave the department than non-FAs. They tend to be sicker and admitted more often than Non-FAs, and should not be considered "time-wasters", but rather a population to whom special attention should be given. This research is pertinent given the aging population, and can be used to aid hospitals in adapting care strategies to best serve the FA population with this in mind.

P203 A Survey of Secondary School Students' Knowledge and Attitudes Towards Elderly People

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Background: As the elderly population is continuing to grow, ageism and society's views of elders is becoming more important. Little is known about younger people's opinions of their older counterparts, and developing a positive mindset about ageing while young is imperative. The objective was to investigate secondary school students' knowledge and attitudes towards old people.

Methods: A paper survey comprised of the Palmore's Facts on Ageing Quizzes FAQ1 and FAQ2, and the Kogan's Attitudes Toward Old People scale was distributed at two secondary schools in Dublin, Ireland. Surveys were anonymous and self-administered. Demographic information was collected. Results were analyzed appropriately by scale, and parametric and non-parametric statistical analysis was performed using SPSS.

Results: The response rate was 64.42 % (335/520). The percentage of correctly, incorrectly and 'don't know' answers, and positive and total Kogan scores were all significantly different by gender ($p < 0.05$). Males had a higher percentage of correct and incorrect answers, and a greater positive and total score. Only the positive Kogan score was significantly different for age and perceived age of elders ($p = 0.049$ and 0.016). The younger and older age cohorts differed significantly by the percentage of incorrect answers, and positive and total Kogan scores ($p = 0.039$, 0.024 , and 0.024), with the older participants answering less questions incorrect, and having a higher positive and total score. The negative Kogan score was not significantly different in terms of gender and age ($p = 0.105$ and 0.426), but males and the older cohort had a lower negative score.

Conclusions: Male and older secondary school students are more knowledgeable on the topic of ageing, and hold a more positive attitude towards elderly people. The attitudes held by teenagers in regards to older people are reassuring, but their overall knowledge of issues affecting the elderly could benefit from improvement, especially in females and younger students.