On behalf of the Scientific Committee of the Irish Gerontological Society (IGS) we welcome you to the 54th Annual Scientific Meeting. The Society was founded in 1950 and it is one of the oldest societies in the world devoted to the study of ageing.

The IGS, by providing a forum for evidence-based discussion of ageing, age-related disease and services for older people, can provide vital information to aid, inform and facilitate change for the better in services for older people. This Society should continue to strive to act as a resource for those charged with implementing policy change, so that this change is both progressive and informed.

We are grateful to our colleagues from University College Hospital, Galway, Merlin Park Hospital, and the Irish Centre for Social Gerontology, National University of Ireland Galway, for their hard work in organising the meeting. We also acknowledge the efforts of our team of adjudicators for the oral (platform) and poster presentations. We look forward to an excellent meeting.

One of the highlights of our Annual Scientific Meeting is always the Willie Bermingham Memorial Lecture, endowed by ALONE, in memory of their charismatic and far-sighted founder. This year we are again exceptionally fortunate in the prestigious nature of the lecturer, Prof. Ken Rockwood, from the Geriatric Medicine Research Unit in Nova Scotia. He has many and varied research interests and his research on health and ageing is widely published in prestigious journals.

We hope that you will find the meeting stimulating and convivial. We would like to encourage you all to join the IGS as members and to participate in the Society’s Annual General Meeting on Saturday the 16th of September at 12.00 am directly following the Saturday morning scientific session.

**IGS SCIENTIFIC COMMITTEE 2005-2006**

Dr Cillian Twomey, President, ex-officio  
Prof Desmond O’Neill, Secretary, ex-officio  
Dr Michael Watts, Treasure, ex-officio

Ms Marian Hughes  
Dr Eamon Mulkerrin  
Dr Shaun O’Keeffe  
Prof Eamon O’Shea

**IGS EXECUTIVE COMMITTEE 2005-2006**

Dr Cillian Twomey, President,  
Prof Desmond O’Neill, Secretary  
Dr Michael Watts, Treasurer

Ms Maja Barker  
Ms Imelda Noone  
Dr Eleanor Mullan  
Ms Emma Stokes  
Prof Eamon O’Shea
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<th>Time</th>
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<tr>
<td>9.00 - 10.50</td>
<td><strong>Registration followed by Tea/Coffee</strong></td>
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<td>10.50 - 11.00</td>
<td><strong>Welcoming address</strong></td>
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<td>Dr. Cillian Twomey, President, Irish Gerontological Society</td>
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<tr>
<td>11.00 - 12.00</td>
<td><strong>Session 1 Assessment</strong></td>
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<td><strong>Chairpersons</strong></td>
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<td>Dr. Paula Hickey</td>
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<td>Consultant Geriatrician, Sligo General Hospital</td>
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<td>Dr. Joe Duggan</td>
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<td></td>
<td>Consultant Geriatrician, Mater Misericordiae University Hospital, Dublin</td>
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<tr>
<td>12.00 - 12.30</td>
<td><strong>Platform Presentations (S1 – S5)</strong></td>
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<td>Dr. Eamon Mulkerrin</td>
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<td>Consultant Geriatrician, UCHG</td>
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<td><em>Vitamin D status – Implications for the management of osteoporosis</em></td>
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<td>12.30 - 14.15</td>
<td><strong>Lunch, Poster viewing, Marking and Pharmaceutical Stands</strong></td>
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<td>14.15 - 15.15</td>
<td><strong>Session 2 Stroke + Vascular Disease</strong></td>
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<td><strong>Chairpersons</strong></td>
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<td>Dr. Richard Liston</td>
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<td>Consultant Geriatrician, Kerry General Hospital</td>
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<td>Dr. Conal Cunningham</td>
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<td>Consultant Geriatrician, St. James Hospital</td>
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<td>15.15 - 15.45</td>
<td><strong>Platform Presentations (S6- S10)</strong></td>
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<td><strong>Speaker</strong></td>
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<td>Prof John Bond</td>
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<td>Centre for Health Sciences Research School of Population and Health Sciences</td>
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<td><strong>Title</strong></td>
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<td><em>Healthy ageing and its social context</em></td>
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<td>15.45 - 16.15</td>
<td><strong>Tea/Coffee and Poster Viewing</strong></td>
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### Session 3  Continuing Care

**Chairpersons**  
Dr. Tom O’Malley  
Consultant Geriatrician, Mayo General Hospital  
Dr. Gerry O’Mara, Consultant Geriatrician  
Roscommon General Hospital

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<tr>
<td>16.15 - 17.15</td>
<td>Platforms Presentations (S11 – S15)</td>
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| 17.15 - 18.15 | Willie Bermingham Lecture  
Prof Ken Rockwood  
Geriatric Medicine Research Unit, Nova Scotia  
Title  
*Frailty: Its measurement, management and mandate* |
| 19.30   | Gala Dinner – Corrib Hotel, Galway         |

**SATURDAY 16th SEPTEMBER, 2006**

### Session 4  Falls and Bone Health

**Chairpersons**  
Ms Pauline Burke  
Senior OT UCHG  
Dr. Brian Carey  
Consultant Geriatrician, Bantry General Hospital, Cork

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<tr>
<td>9.30 - 10.30</td>
<td>Platform Presentations (S16-S20)</td>
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<td>10.30 - 11.00</td>
<td>Tea/coffee and Poster Viewing.</td>
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### Session 5  Hospital Practice

**Chairpersons**  
Dr. Diarmuid O’Shea  
Consultant Geriatrician, St. Vincent’s University Hospital  
Dr. Mike O’Connor  
Consultant Geriatrician, Cork University Hospital

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<tr>
<td>11.00 - 12.00</td>
<td>Platform Presentations (S21- S25)</td>
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<td>12.00</td>
<td>Awards and AGM of IGS</td>
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Friday, 15th September 2006
Corrib Hotel, Galway

Session 1: Assessment

Chairpersons
Dr. Paula Hickey, Consultant Geriatrician, Sligo General Hospital, The Mall, Sligo
Dr. Joe Duggan, Consultant Geriatrician, Mater Misericordiae Hospital, Dublin

S1 Value of occupational therapy pre-driving skills assessment
O. Wall, P. Gallagher
Dept of Geriatric Medicine, Cork University Hospital

S2 Berg Balance Scale and outcomes of patients on a mixed rehabilitation ward
L. Walsh, N. O’Regan, D. Power, J. Duggan, L. Kyne
Dept of Physiotherapy and Medicine for the Older person, Mater Misericordiae University Hospital, Dublin

S3 Facilitating Appropriate Discharge Early (FADE) utilising a screening questionnaire in the Emergency Department
R. McNamara, S. O’Hanlon, J. Ryan, D. O’Shea
Depts of Emergency Medicine, Geriatrics, St. Vincent’s University Hospital and St. Columcille’s Hospital Loughlinstown, Dublin

S4 Reliability of the Evers Amusia Test for assessing musical abilities
J. O’Reilly, S. Evers, D. O’Neill
Trinity College Institute of Neurosciences, Dublin, University of Münster, Germany and AMNCH, Tallaght, Dublin

S5 Reducing the use of cotsides in an acute hospital: Introducing a risk assessment tool and education programme
N. Boyle, I. Noone, M. Fungay, D. O’Shea, M. Crowe
Dept of Medicine for the Elderly, St. Vincent’s University Hospital, Dublin

Session 2: Stroke + Vascular Disease

Chairpersons
Dr. Richard Liston, Consultant Geriatrician, Kerry General Hospital, Kerry
Dr. Conal Cunningham, Consultant Geriatrician, St. James’s Hospital, Dublin

S6 A co-ordinated network of rapid access stroke/TIA clinics in three acute hospitals serving North Dublin City: An Initiative of the North Dublin population stroke study
Depts of Medicine for the Older Person and Neurology, Neurovascular Clinical Science Unit, Mater Misericordiae University Hospital, Dublin; Connolly Hospital Blanchardstown, Dublin; Beaumont Hospital, Dublin
S7 Atrial fibrillation is strongly associated with early functional stroke severity. 
A preliminary analysis of the North Dublin population stroke study
N. Hannon, P. Rathi, LA Kelly, J. Duggan, PME McCormack, A. Moore, E. Williams, 
G. Horgan, D. Harris, E. Ryan, PJ Kelly, L. Kyne 
Dpts of Medicine for the Older Person and Neurology, Mater Misericordiae University 
Hospital, Dublin; Neurovascular Clinical Science Unit, Dept of Medicine for the Elderly 
Beaumont Hospital, Dublin1; Dept of Medicine for the Elderly, Connolly Hospital 
Blanchardstown, Dublin2

S8 Volume of haemorrhage in haemorrhagic stroke – a useful predictor of outcome?
K. McCarroll, I. Noone, M. Crowe, D. O’Shea 
St. Vincent’s University Hospital, Dublin

S9 Vascular endothelial nitric oxide effects of atorvastatin in elderly arteriopaths: 
optimisation of dosage 
P.J. Barry, M. O’Connor, C. Twomey, D. O’Mahony 
Dept of Geriatric Medicine, Cork University Hospital, Cork

S10 Prognostic significance of the nocturnal decline in systolic blood pressure in 
the older adult: Dublin mortality outcome study
E. Dolan1, A. Staunton1, L’Thijs1, N. Atkins1, J.A. Staessen2, E. O’Brien1, P. McCormack1 
Adapt Centre, Beaumont Hospital, and Dept of Clinical Pharmacology, Royal College of 
Surgeons in Ireland, Dublin1; Dept of Molecular and Cardiovascular Research, University 
of Leuven, Leuven, Belgium2

Session 3: Continuing Care

Chairpersons
Dr. Tom O’Malley, Consultant Geriatrician, Mayo General Hospital, Mayo
Dr. Gerry O’Mara, Consultant Geriatrician, Roscommon General Hospital, Roscommon

S11 Appropriateness of continuing care placement; A prospective study
O. Collins, G. Buckley, K.A. O’Connor, M. O’Connor, C. Henry 
Dept of Gerontology, Mercy Hospital, Cork

S12 Costs of Residential Care in state-funded, community residential and private 
nursing homes – can valid comparisons be drawn? 
T. McCarthy1, J. Heslin2, O. O’Reilly2 
Public Health Dept, Greater Glasgow & Clyde Health Board, Glasgow1; Public Health 
Dept, HSE-South Eastern Area, Kilkenny2

S13 Social inclusion and early-stage dementia: preliminary findings
E. Begley, D.R. Collins, V. Timonen, S. Cahill 
Trinity College Dublin, Social Policy and Ageing Research Centre, School of Social Work 
and Social Policy, Adelaide & Meath Hospital, Dublin

S14 Care of nursing home residents in Dublin – General Practitioners’ views 
E. Sweeney, C. Murphy, D.R. Collins 
Adelaide & Meath Hospital, Dublin
S15  Preferences of acutely ill patients for participation in medical decision making
M. Khanji, C. Wilkinson¹, O. Dunne², P.E. Cotter, S.T. O’Keeffe³
Dept of Geriatric Medicine, Galway Regional Hospitals, Galway

Session 4: Falls and Bone Health

Chairpersons
Ms Pauline Burke, Senior OT, UCHG, Galway
Dr. Brian Carey, Consultant Geriatrician, Bantry General Hospital, Cork

S16  A targeted falls prevention programme in a rehabilitation unit for older adults
M.J. Foley, M. Buckley, P. Barry, S. Gallagher, R. Kennedy
Elderly Services Division, St. Finbarr’s Hospital, Cork City

S17  Analysis of Medications taken by patients presenting with a fall
C. McGlade, P. Barry
Elderly Services Division, Cork University Hospital, Cork

S18  The Effect of chronic kidney disease on bone turnover and vertebral fracture
L. Brewer, H. Cronin, M. Healy, C. Kirby, J.B. Walsh, M.C. Casey
Mercer’s Institute for Research on Ageing, St. James’s Hospital, Dublin

S19  Why are patients readmitted after hip fracture?
Z. Rauf, K. Mahwish, E. Ahern, L. Fook
Royal Liverpool & Broadgreen University Hospitals Trust, Liverpool, England

S20  Have we learnt the lessons of previous studies on the use of physical restraints?
Dept of Medicine for the Elderly, St. Vincent’s University Hospital, Dublin

Session 5: Hospital Practice

Chairpersons
Dr. Diarmuid O’Shea, Consultant Geriatrician, St. Vincents University Hospital
Dr. Mike O’Connor, Consultant Geriatrician, Cork University Hospital, Cork

S21  Emergence of clostridium difficile PCR-027 in three Dublin Hospitals
D. Drudy, R. O’Mahony, N. Harnedy, S. Fanning, L. Kyne¹
Centre for Food Safety, University College Dublin, Dublin, Dept of Medicine for the Older Person, Mater Misericordiae University Hospital, Dublin¹

S22  High level resistance to moxifloxacin and gatifloxacin associated with a novel mutation in GYBR in toxin A-negative, toxin B – positive clostridium difficile
D. Drudy, T. Quinn, R. O’Mahony, N. Harnedy¹, S. Fanning, L. Kyne¹
Centre for Food Safety, University College Dublin, Dublin, Dept of Medicine for the Older Person, Mater Misericordiae University Hospital, Dublin¹
S23  Colorectal cancer in the very elderly  
Centre for Colorectal Disease, St. Vincent’s University Hospital, Dublin  

S24  Prescription errors are common in elderly patients with renal impairment: A study of prescribing practices in a large Irish Regional Hospital  
C.A. Mason, H.R. Khan, S. Leavey, F.J. Walker, J. Clare, R. Mulcahy  
Dept of Medicine for the Elderly and Dept of Nephrology Waterford Regional Hospital, Waterford  

S25  Prevalence of chronic disease in the elderly based on a national pharmacy claims database  
C. Naughton, K. Bennett, J. Feely  
Dept of Pharmacology & Therapeutics, Trinity College Dublin, Trinity Centre for Health Sciences St. James’s Hospital, Dublin  

Poster Presentations  

ASSESSMENT  
P1  Driving assessments in the elderly – Experience within a day hospital  
T. Bolger, K. McCarroll, C. Cooney, D. O’Shea  
Dept of Medicine for the Elderly, Carew House Day Hospital, St. Vincent’s University Hospital, Dublin  

P2  The Barthel Index: Exploring the inter-rater reliability between nurses and doctors  
I. Hartigan, D. O’Mahony  
Dept of Geriatric Medicine, Cork University Hospital & University College Cork, Wilton, Cork  

P3  A review of screening tests for cognitive impairment  
B. Cullen, B. O’Neill, J. J. Evans, R. F. Coen, B.A. Lawlor  
Southern General Hospital, Glasgow, University of Glasgow, Mercer’s Institute for Research on Ageing, Dublin  

P4  Needs assessment of people with dementia attending an old age psychiatry service  
M. Dolan, C. Cooney, A. Freyne  
Dept of Old Age Psychiatry, Carew House, St. Vincent’s University Hospital, Dublin  

HEALTH SERVICES  
P5  Support Communication: A client-lead initiative  
S. Lawson, B. O’Brien  
Age Related Healthcare, Adelaide & Meath Hospital, Dublin
P6 An interim evaluation of the pilot occupational therapy ‘action van’ service: sharing of resources to enhance discharge from hospital for older people and to enhance community services
C. Leonard
The Royal Hospital, Donnybrook, Dublin

P7 Successful collaboration between therapy and volunteer services in an acute hospital
M. McGrath, R. Sowman, C. Roe
Age Related Healthcare Dept, Speech and Language Therapy Dept, Volunteer Services, Adelaide & Meath Hospital, Dublin

P8 An Alternative therapy in a day hospital?
K. McCarroll, V. Pedlow, D. O’Shea, M. Crowe
Royal Hospital Donnybrook, Dublin

P9 Older people’s participation in the discharge process: eliciting the meaning ascribed to ‘participation’ by the literature
M. O’Brien
Social Policy and Ageing Research Centre, Trinity College Dublin, Dublin

P10 Innovation in adversity the safe implementation of a rapid access clinic to obviate the need for hospital admission in elderly patients attending an overcrowded emergency department
T.M. Breslin\textsuperscript{1}, O. McLaughlin\textsuperscript{2}, O. Donohoe\textsuperscript{2}, H. Norma\textsuperscript{2}, J. McInerney\textsuperscript{2}, D. Power\textsuperscript{2}
Emergency Dept\textsuperscript{1}, Medicine for the Elderly Mater Misericordiae University Hospital, Dublin\textsuperscript{2}

P11 Severe hyperkalaemia (>8mmol/l) in the elderly non-dialysed patient
K. Mahawish, P.S. Williams, A. Davison, T. Hine
Depts of Nephrology and Clinical Chemistry, Royal Liverpool University Hospital, Prescot Street, Liverpool, England

P12 Stigma and embarrassment as barriers to seeking home care services by older people
R. Garavan, H. McGee
Royal College of Surgeons in Ireland, Dublin

P13 Pain Management in Older Adults: A survey of nurses’ knowledge and attitudes
M.J. Foley
Elderly Services Division, St. Finbarr’s Hospital, Cork City

P14 The prevalence of constipation in community dwelling older people
D. Donohoe, G. Robles, S. Dowling, S. McNally
Community Reablement Unit, Our Lady’s Hospice Harold’s Cross, Dublin

P15 Is pressure ulcer prevention information giving effective at improving knowledge of older adults?
I. Hartigan, M. Hickey, L. Casey, M. Calanan, M. O’Connor
Dept of Geriatric Medicine, St. Finbarr’s Hospital, Cork
P16 Pilot study to ascertain any relationship between thyroid stimulating hormone and the metabolic syndrome in an elderly Irish population
G. Suton, E. O’Donoghue, D. O’Shea
Dept of Medicine for the Elderly/Dept of Endocrinology, St. Vincent’s University Hospital, Dublin

P17 Exercise training for patients with chronic heart failure: A systematic review and meta-analysis
O. Collins, K.A. O’Connor
Dept of Gerontology, Mercy Hospital, Cork

P18 End of Life issues are poorly addressed in elderly patients undergoing chronic haemodialysis
C.A. Mason, S. Leavy, F.J. Walker, J. Clare, R. Mulcahy
Dept of Medicine for the Elderly and Dept of Nephrology, Waterford Regional Hospital

P19 Gait and disability as predictors of length of hospital stay in older patients
E. Delappe, C. Nugent, J. Mulrooney, L. Kyne, T. Herman, J. M. Hausdorff, E. Mulkerrin
Dept of Medicine for the Elderly, University College Hospital Galway, Dept of Medicine for the Elderly, Mater Misericordiae Hospital, Dublin, Harvard Vanguard Medical Association, Boston, MA, USA, Beth Israel Deaconess Medical Centre, Boston, MA, USA

P20 Chronic disease management: self-care behaviour in heart failure patients
K. Morgan, H. McGee, E. Shelley
Dept of Psychology, Dept of Epidemiology & Public Health Medicine, Royal College of Surgeons in Ireland, Dublin

P21 How does our management of the care of the dying patient compare, to that outlined by the Liverpool care of the dying pathway?
N. Boyle, H. Doola, L. McGrath, P. Ui Dhulbhir, M. Crowe, E. Tiernan, D. O’Shea
Dept of Medicine for the Elderly, St. Vincent’s University Hospital, Dublin

P22 New medical diagnoses in elderly admissions to an acute orthopaedic unit
R. McNamara, S. O’Hanlon, K. O’Rourke, E. Kelly, M. Crowe
Depts of Geriatrics and Orthopaedics, St Colmcille’s Hospital, Loughlinstown, Co. Dublin

P23 Characteristics of elderly admissions to an acute orthopaedic unit
Depts of Geriatrics and Orthopaedics, St. Vincent’s University Hospital, Dublin

P24 Creatively using Day Hospital resources to meet service users needs
M. McDonnell, C. Keogh, A. Hutton
St. Vincent’s University Hospital, Dublin
Falls and Bone Health

P25  Shoe characteristics and postural stability in older women attending a geriatric day hospital  
F. Crehan¹, M. Curran¹, E. Barrett², A. Moore³, C. Donegan¹, F. Horgan¹  
School of Physiotherapy, Royal College of Surgeons in Ireland¹, Depts of Physiotherapy² & Medicine for the Elderly³, Beaumont Hospital, Dublin

P26  Prevalence of vitamin D insufficiency in a female community dwelling population in the West of Ireland  
C. McCreevy, E. Delappe, H. Grimes³, E.C. Mulkerrin  
Dept of Medicine for the Elderly, University College Hospital, Galway, 'Dept of Clinical Biochemistry, University College Hospital, Galway

P27  Syncope presenting to the emergency Dept of a teaching hospital  
F. McCarthy, D. Coakley, R.A. Kenny, C. Cunningham  
Falls and Blackout Unit, Med El Directorate, St. James’s Hospital, Dublin

P28  Prevalence of chronic kidney disease in female patients with hip fracture  
M. Zahir, D. Balmforth, M.I. Shahbuddin, E. Ahern  
Royal Liverpool & Broadgreen University Hospitals Trust, Liverpool, England

P29  Comparison of calcaneal ultrasound with standard DXA parameters to identify patients at risk of second hip fracture  
N. Maher, G. Steen, N. Fallon, C. Kirby, J.B. Walsh, M. Casey  
Falls and Osteoporosis Service, St. James’s Hospital, Dublin

P30  Changes in 25 (OH) D and 24 hour urinary calcium during the initial phase of treatment with recombinant parathyroid hormone (1- 34)  
B. Kennedy, N. Caffrey, M. Healy, N Fallon, J.B. Walsh, M.C. Casey  
MedEl Directorate, St. James’s Hospital, Dublin

P31  Factors associated with falls efficacy scale (FES) in acutely ill older patients  
E. Delappe¹, C. Nugent¹, J. Mulrooney¹, L. Kyne³, T. Herman³, J. M. Hausdorff⁴, E. Mulkerrin¹  
Dept of Medicine for the Elderly, University College Hospital, Galway, 'Dept of Medicine for the Elderly Mater Misericordiae Hospital, Dublin', Harvard Vanguard Medical Association, Boston, MA, USA;³ Gerontology Division, Beth Israel Centre, Boston, MA, USA⁴

P32  Outcomes of hip fracture care in an orthogeriatrics rehabilitation ward  
S.R. Grint, E. Ahern, L. Fook  
Royal Liverpool & Broadgreen University Hospitals Trust, Liverpool, England

P33  Bone marker response to parathyroid hormone therapy in older osteoporotic patients  
N. Caffrey, T. Coughlan, B. Kennedy, M. Healy, J.B. Walsh, M. Casey  
Medicine for the Elderly, St. James’s Hospital, Dublin

P34  Falls in the continuing care setting  
M. Doyle, B. Byrne, A. Shedghi-Khoi  
Peamount Hospital, Newcastle, Co Dublin
P35  Low Body Mass Index results in increased falls and fracture risk
G. Pope, S. Carew, J. Saunders, A. Costelloe, T. Sheehy, D. Lyons
Dept of Medicine for the Elderly, Mid-Western Regional Hospital, Limerick

P36  Preventing Non-Collision injuries on urban buses: Acceleration thresholds that cause falls in older people
A. Palacio, G. Tamburro, D. O'Neill, C. Simms
Trinity Centre for Bioengineering and Dept of Medical Gerontology, Trinity College, Dublin, Dublin

P37  Mortality after hip fracture
A. Latif, E. Ahern, N. Giotakis
Royal Liverpool & Broadgreen University Hospitals Trust, Liverpool, England

P38  Orthostatic hypotension in osteoporotic patients on recombinant PTH treatment
H. Cronin, M. Fan, J.B. Walsh, M.C. Casey,
Dept of Geriatric Medicine, St. James’s Hospital, Dublin

P39  Orthostatic dizziness and orthostatic hypotension in day hospital attendees
C.W. Fan, M. O’Sullivan, A. Mitchell, C.J. Cunningham
Dept of Medicine for the Elderly, Robert Mayne Day Hospital, St. James’s Hospital, Dublin

P40  Risk factors for falls in patients with Colles fracture
N. Fallon, C. Kirby, M. Casey, C. Fan, B. Kennedy, N. Maher, G. Steen, E. Thornton, J.B. Walsh
Mercers Institute for Research in Ageing, St. James’s Hospital, Dublin

P41  Comparison of Head up Tilt to Active Posture Change in older patients with suspected orthostatic hypotension
F. Kearney, M. Mulroy, A. Martin, T. Hassan, C. Davenport, C. Donegan, A. Moore
Dept of Geriatric Medicine, Beaumont Hospital, Dublin

LONG TERM CARE

P42  The efficacy of Pre-thickened fluids on total fluid and nutrient consumption among extended care residents requiring thickened fluids due to risk of aspiration
K.M. Stafford¹, S.E. McCormick¹, E. Carmody¹, M. Glynn¹, E. Healy¹, Z. Hameed¹, D.A. Power²
Dept of Nutrition¹, Dept of Nursing², Dept of Medicine², St. Mary’s Hospital, Phoenix Park, Dublin

P43  Degree of satisfaction among patients recently transferred to a nursing home
S.E. McCormick¹, A. O’Loughlin², K. Lynch³, D.A. Power⁴
Dept of Nutrition¹, Social Work Dept², Nursing Services³, Dept of Medicine, St. Mary’s Hospital, Phoenix Park, Dublin⁴

P44  Social network in a longstay setting – Does the social history or bedside accurately reflect social network?
SM Kennelly, E McDwyer, G. Murphy, M. Cahill, PME McCormack
Medicine for the Elderly, Connolly Hospital, Blanchardstown, Dublin
P45 Factors involved in discharge to long term care
C. Broderick, S. Cox, N. Kelly, D. O'Neill
Discharge Planning Team and Age-Related Health Care, Adelaide and Meath Hospital, Dublin

P46 An exploration into the perceived factors influencing the implementation of person-centred care in long term care settings: A qualitative study
C. Keogh
St Vincent's University Hospital, Dublin

P47 Retrospective audit of appropriate use of proton-pump inhibitors at an elderly long term care facility
K. Wu, M. Deane, E. Stuart
Dept of Geriatrics, The Royal Hospital Donnybrook, Dublin

P48 Should dependency be used as a criterion for admission to public long stay beds
J. Clare, L. Campbell, R. Mulcahy
Waterford Regional Hospital

P49 Hair growth as an indication of time spent awaiting admission to long term care
S.E. McCormack¹, C. McGreavy², H. Twomey², J. Sadiq³, D.A. Power²
Dept of Nutrition¹, Dept. of Medicine², St. Mary's Hospital, Phoenix Park, Dublin

P50 Oral health status of older adults in the continuing care setting
M. Doyle, D.R. Collins
Peamount Hospital, Newcastle, Co Dublin

P51 Evaluating specialist geriatric clinical input in continuing care patients
Dept of Medicine for the Elderly, Mid-Western Regional Hospital, Limerick. University of Limerick, Dept of Health Care of the Elderly, Kings College Hospital, London; Dept of Medicine, Bolton General Hospital, Lancashire

P52 Resident characteristics associated with type of long-stay facility
T. McCarthy¹, J. Heslin², O. O'Reilly²
Public Health Dept, Greater Glasgow & Clyde Health Board, Glasgow¹, Public Health Dept, HSE-South Eastern Area, Kilkenny²

P53 Dedifferentiation and nursing home institutionalisation
K. Walsh¹, T. Waldmann²
Irish Centre for Social Gerontology, NUI Galway¹, M & OE Dept, University of Limerick²

P54 Role of occupational therapy in extended care for older persons
P. Rajkumar, K. Mc Dermott, C. Conlon, R. Collins
Dept of Occupational Therapy & Age Related Health Care, Peamount Hospital, Newcastle, Co Dublin
PSYCHOLOGY OF AGEING AND MENTAL HEALTH

P55  Language changes with healthy ageing? Ask Jeeves
PE Cotter, C. Wilkinson, ST O’Keeffe
Dept of Geriatric Medicine, Galway Regional Hospitals, Galway

P56  Prospective Memory in mild cognitive impairment: Subgroup analysis of subtypes
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M Lyons1, A Jennings2, E Griffin1, M O’Sullivan1, S O’Neill4, L Walsh1, EK Stokes6
1. Physiotherapy Research & Older People, Connolly Hospital Dublin; 2. Scared Heart Hospital Castlebar; 3. Royal Hospital Donnybrook Dublin; 4. St. James’s Hospital Dublin; 5. St. Vincent’s University Hospital Dublin; 6. Trinity College Dublin, Dublin

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E Clarke, A Cahill, C Casey, A Lane, EK Stokes
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1 Value of occupational therapy pre-driving skills assessment

Occupational therapists aim to maximise independence and safety in activities of daily living. For many patients driving is essential for their independence. However safety in driving is paramount. A pre-driving skills assessment provides vital information about patient’s attention, behaviour and reaction times, which are then further evaluated during an on-road driving skills assessment.

The pre-driving skills assessments of patients referred to the occupational therapy Dept from the geriatric outpatient clinics at Cork University Hospital were prospectively studied over a 2-year period. Patient demographics, cognitive and perceptual test scores were recorded, in addition to the results of on road driving assessments.

Thirty patients were referred for a pre-driving skills assessment, of which 19 (63%) attended. Reasons for non-attendance included refusal and illness. 74% were male. 58% lived in a rural environment. Mean age was 72.4 years. Reasons for referral included the diagnoses of stroke disease (42.2%), dementia (36.8%), post orthopaedic surgery (10.5%) and Parkinsons disease (10.5%). Mean Mini Mental State Examination (MMSE) score was 27/30 (range: 22-30). 68% passed the on-road assessment. High MMSE scores (>25/30) did not consistently reflect success in on-road assessments.

Driving is an integral part of a person’s independence. Referral to an occupational therapist for a pre-driving skills assessment can enhance the on-road driving assessment by highlighting cognitive, perceptual, physical and behavioural difficulties prior to an on-road assessment. This resource is valuable and the referral pattern would suggest that it is currently under-utilised.

2 Berg balance scale and outcomes of patients on a mixed rehabilitation ward

The Berg balance scale (BBS) has been validated as a predictor of falls in community-dwelling elders and rehabilitation outcome in stroke patients. The aim of this study was to evaluate the clinical use of the BBS on a mixed rehabilitation ward in patients with stroke, falls, decreased mobility (due to musculoskeletal or non-stroke neurological conditions) and deconditioning post-acute medical illness.

In a prospective cohort study, consecutive patients admitted to 2 rehabilitation wards were included. Baseline and follow-up measures included the BBS, the Elderly mobility scale (EMS), modified Barthel index, MMSE and Charlson co-morbidity score. Spearman correlation and multiple regression analyses were used to determine relationships between balance and functional scores at admission and rehabilitation outcomes at discharge.

115 patients were enrolled; 37 with stroke, 27 fallers, 26 with decreased mobility and 25 with medical deconditioning. Median age was 84 years (65-96). 92 (80%) were discharged home and 23 (20%) to LTC. 22 (19%) were completely independent at the time of discharge; 93 (81%) required an assistive device or wheelchair. Admission BBS and EMS scores were highly correlated (r=0.61; p<0.0001). Among all patients, the median discharge BBS was significantly higher in patients who were discharged home (p=0.0006) and those who achieved full independence (p=0.002). For stroke patients, in multivariable analyses, a BBS >40 significantly predicted full independence and discharge home (OR=10.9; 95% CI=2.04 to 55.5). Among fallers admission BBS significantly predicted independence but not discharge location. BBS did not predict outcomes in patients with decreased mobility or deconditioning.

The BBS is a useful independent predictor of rehabilitation outcome. Its strengths lie in the ability to predict independence and discharge location in fallers and stroke patients but not in patients with decreased mobility or medical deconditioning.
Facilitating appropriate discharge early (FADE) utilising a screening questionnaire in the emergency department

Increased resource utilisation contributes to a longer length of stay. We sought to identify on admission which patients would be more likely to need extra resources during their inpatient stay.

A screening tool was developed based on an earlier retrospective study of patients that had increased resource utilisation. The tool was prospectively employed over a 3 week period in the Emergency Depts of 2 hospitals, within the first 24 hours of acute patient admissions. Data were collected on patient demographics, admission diagnosis, secondary diagnoses, social supports, mobility and cognitive scoring. Patients were followed up for a minimum of six weeks, to identify resource utilisation and discharge destination.

A total of 189 patients >65 years old were included. 15 patients were discharged to a nursing home. 157 patients went home, of whom 11 went via convalescence. Resource utilisation information was available on 84% of patients (n=157) of which 95 (60.5%) required use of physiotherapy, OT, MSW or dietician. Patients discharged to a nursing home had a higher mean score on the predictive tool (p=0.0058) and a longer LOS (p=0.0028).

Our preliminary work suggests early identification of potential barriers to appropriate discharge can be identified using a structured scoring system. While further work is required this system may provide a way of triggering early involvement of appropriate services to facilitate a person’s discharge.

Reference:

Reliability of the Evers Amusia Test for assessing musical abilities

Loss of musical ability (amusia) can occur in stroke and may be important in better understanding the phenomenology of stroke and in the development of focussed therapy. A potentially useful test is the Evers Amusia Test (EAT), but its test-retest reliability has yet to be determined. A study was undertaken to determine the intra-rater reliability and internal consistency of the test in relation to six aspects of musical perception: rhythm, metre, melody comparison, emotional association, pitch discrimination and melody recognition.

Twelve older, cognitively intact participants (mean age 79.7 yr), 8 men and 4 women, were administered the EAT twice each by a single rater with an inter-test interval of one week. Participants scoring 23 or higher on the Mini Mental State Examination (MMSE) were deemed cognitively intact. Spearmans-Brown (rho) and Pearson’s correlation coefficients were used to investigate test-retest reliability. Internal consistency was investigated using Cronbach’s alpha and intraclass correlation coefficients.

The EAT questionnaire displayed good reliability as estimated using models of internal consistency (alpha = 0.78, ICC = 0.756). For metre (rho = 0.693), melody discrimination (rho = 0.971), pitch discrimination (rho = 0.704) and melody recognition (0.659) significantly correlated reliability coefficients were generated. Metre also displayed the greatest internal consistency with alpha = 0.759 and ICC = 0.737.

Studying amusia following stroke may help to localise the areas of the brain that are involved in music processing in a non-invasive manner. A better understanding of amusia may be important in the development of music therapy for stroke patients.
Reducing the use of cotsides in an acute hospital: Introducing a risk assessment tool and education programme

The use of physical restraints raises ethical dilemmas and can cause distress to patients both emotionally and physically. Our aim was to reduce the use of cotsides, the most common form of restraint, and to promote their more appropriate use.

An observational study was performed over a 24-hour period in December 2005 on the Care of the Elderly unit, prior to an education programme, incorporating a risk assessment tool and information leaflet for patients and their relatives on the use of cotsides. A further observational study was performed in June 2006.

The percentage usage of restraints was 50% before the introduction of the education programme with higher usage at night (p<0.001). The most common form of restraint was double-sided cotsides. This was reduced to 24.1% in the follow-up period. Again the most common reason for the use of restraints was prevention of falls (53.8%). No patient had restraints in place in the follow-up period without a documented reason (Fisher exact test not significant). 57.4% had completed risk assessment tools once introduced. The risk assessment tool identified equally those with multiple risk factors, personal preference for the use of cotsides, and those patients with no indication for their use.

The introduction of an education programme for the use of physical restraints reduced the incidence of their use by over 50% and resulted in their more appropriate use. However, a more prolonged period of evaluation is required to validate the tool and adjust for some seasonal variation in patient profile.

References:
A co-ordinated network of rapid access stroke/TIA clinics in three acute hospitals serving North Dublin city: an initiative of the North Dublin population stroke study

Departments of Medicine for the Older Person and Neurology, Neurovascular Clinical Science Unit, Mater Misericordiae University Hospital, Connolly Hospital Blanchardstown, Beaumont Hospital

The North Dublin Population Stroke Study began recruitment in December 2005, Daily Rapid Access Clinics for minor Stroke/TIA were established to facilitate patient evaluation for the study, while simultaneously providing early access to specialist care. These have a novel design, operating as a collaborative network between the three acute North Dublin hospitals.

Referrals are received from North Dublin general practitioners and A&E Departments through a central office. Cases are triaged by a Stroke Physician according to the description of symptoms provided on a standard pro-forma, with the aid of the ABCD score. Urgent cases are seen on a same-day or next-day basis. Ninety-one referrals were received between December 1st 2005 and 13th June 2006. The median time to review was 4 days with 90% seen < 8 days. No patient had a stroke between initial referral and review. 44/91 (48.3%) referrals were diagnosed as probable/definite stroke/TIA. 6.6% patients at high risk of early recurrence were admitted. Of stroke/TIA patients 39 (89%) had carotid symptomatology. Two patients had urgent carotid endarterectomies. Of patients diagnosed with stroke or TIA 37/44 (88%) had neuroimaging (either CT or MRI Brain) performed and 29/44 (66%) had carotid imaging performed. A further 20/44 (45%) had ambulatory ECG monitoring performed.

This network of coordinated daily Rapid Access Clinics, set up as an initiative of the NDPSS, has provided a safe, integrated service for the specialist evaluation of possible stroke and TIA in North Dublin city, thus avoiding unnecessary referrals to A+E departments.

Atrial fibrillation is strongly associated with early functional stroke severity. A preliminary analysis of the North Dublin population stroke study

Few population-based data exist concerning the factors influencing stroke severity. Conflicting data exist regarding the relationship between severity and pre-stroke antiplatelet and statin use, which may be neuroprotective via local cerebral antithrombotic effects and penumbral vasodilatation. We performed a preliminary analysis of severity in the first consecutive 100 participants in the North Dublin Population Stroke Study (NDPSS).

Methods have been described in detail elsewhere. Twenty-five cases were excluded due to qualifying events other than first-ever ischaemic stroke. Early severity was assessed with the National Institutes of Health Stroke Scale (NIHSS) and the Modified Rankin score at 72 hours.

The mean age was 73 years (SD 12, range 35-96) with 25% of cases under 66 years. 6.7% of cases were ascertained via community referrals. The mean 72 hour Rankin score was 2.9 (SD1.7). Mean acute NIHSS was 4 (median 3, 25-75% IQR 2-5); 32% (24) had atrial fibrillation (AF). 29% (19) were taking a statin, 45% (34) at least one antiplatelet agent, and 24% (18) both statin and antiplatelet agents prior to stroke onset. AF was significantly associated with early stroke Rankin score (3.6 vs 2.6, p=0.005) but not NIHSS. No association was found between severity and pre-stroke antiplatelet, statin, or combination therapy, or with age and vascular risk factors.

The association of AF with more severe early functional impairment following stroke in a population-based cohort supports findings from previous hospital-based studies. Further large studies are required to investigate the potential neuroprotective role of antithrombotic and statin medications in acute stroke.
Volume of haemorrhage in haemorrhagic stroke – a useful predictor of outcome?

Predictors of 30-day outcome after a primary intracerebral haemorrhage include volume of haemorrhage, presence of intraventricular haemorrhage, location, initial GCS, and patient age.'

Patients were identified from a stroke database who were admitted to St.Vincents University Hospital with a spontaneous intracerebral haemorrhage between June 2002 –June 2006. Haemorrhage due to trauma, known aneurysm, or haemorrhagic transformation of an infarct were excluded. The volume of parenchymal haemorrhage was measured were possible using CT films and the simplified formula for an ellipsoid ABC/2. Haemorrhage was classified as deep (basal ganglia, thalamus, internal capsule, deep white matter), lobar ( cortex and subcortical white matter), cerebellar or pontine and note was made of the presence of intraventricular haemorrhage (IVH). Oxford Handicap Scale (OHS) at thirty days and initial Glasgow Coma Scale (GCS) were recorded from the medical notes.

47 patients met the criteria, 23 male and 24 female. Volume of parenchymal haemorrhage, initial GCS and IVH were associated with an adverse outcome (p <0.0001, p = 0.001 and p = 0.004).

Volume of haemorrhage, IVH and initial GCS, (data which can be easily obtained on admission) are all important predictors of 30 day outcome.

References:
1. Hemphill et al., Stroke: 2001; 32 (4) 891-7

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Vascular endothelial nitric oxide effects of Atorvastatin in elderly arteriopathies: Optimisation of dosage

There is increasing evidence that ‘pleiotropic’ effects of statins may be of equal importance to cholesterol-lowering effects. These effects include up-regulation of endothelial nitric oxide synthase, inhibition of Endothelin-I release and increased nitric oxide (NO) release. NO release can be indirectly measured using forearm mediated dilatation (FMD) and repeated to monitor treatment effects.

The aim of this study was to determine if there was a dose-response relationship between ultrasonic and biochemical markers of endothelial function and atorvastatin. Subjects were recruited from a vascular clinic. All subjects (n=8, male subjects) had a history of disease affecting at least one vascular bed and elevated total cholesterol (TC) or low density lipoprotein (LDL) levels.

Brachial artery ultrasonography was used to measure FMD following transient upper limb ischaemia. Percentage change in the brachial artery of > 4% indicated endothelial dysfunction. Data were collected at baseline and on treatment doses of 10mg and 20mg of atorvastatin. FMD and lipid fractions were measured and compared. Mean age was 72.5 ± 8.2 years.

This study shows atorvastatin improved endothelial NO release at 10 mg while reducing TC and LDL levels. Doubling the statin dose had no additional effect on NO release.

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Prognostic significance of the nocturnal decline in systolic blood pressure in the older adult: Dublin mortality outcome study

Not for publication

E Dolan¹, A Stanton¹, L Thijs², N Atkins¹, JA Staessen², E O’Brien¹, P McCormack¹

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11 Appropriateness of continuing care placement a prospective study

“28% of residents or about 5000 people in long stay beds are in low to medium categories, and could be cared for in their homes with the appropriate level of support”, the Irish Minister for Health said in October 2005. Since then, the focus in caring for elderly people in the community has increased with promises of immediate substantial increases in community services and funding for older people.

We carried out a 4 month prospective study examining all referrals for continuing care in Cork city. In each case the consultant or specialist registrar was asked if long term placement could be avoided if varying levels and intensities of community support were available. This decision was then reviewed by the local Age Care Evaluation Team.

139 people were referred for long term care between February and May 2006 inclusive (mean age = 78.6 +/- 7.8 years). The mean MMSE and Barthel was 15.4 +/- 8.9 and 9.6 +/- 5.33 respectively. Thirty seven referrals (26%) could have been avoided if the appropriate community services were available. Day care, night care and regular respite were deemed the most valuable services. In addition, four people would have required alternative housing in order to stay at home. Placement was not avoided in any case as these services were not available in the community.

Over one quarter of long term care referrals could be avoided if the appropriate level of community support was available. However there has been no obvious improvement since this was recognized 9 months ago.

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12 Costs of residential care in state-funded, community residential and private nursing homes - can valid comparisons be drawn?

In the south east of Ireland, long-term residential care for older people is provided by state run hospitals and welfare homes; community residential homes and private nursing homes. This study explores the difficulties in comparing the cost of care between these settings.

All state and voluntary homes (n=22) in the region were visited. Information was collated by interview on service provision and sources of funding. Cost of care provision was calculated from expenditure accounts. Similar information, including nursing home fees, was requested from all fifty nursing homes using a postal questionnaire, with 66% responding.

The hierarchy of costs estimated was broadly in keeping with the dependency levels of residents catered for, in each type of facility (see Table).

Cost of nursing home beds was shown to be highly sensitive to under occupancy, if funded on a contract basis. Additional challenges identified when drawing comparisons included:
- Ineligibility for GMS (General Medical Services) services within a geriatric hospital
- Separating cost of long-term care provision from other high-cost, high-turnover care
- Subsidised workers or unpaid voluntary work, particularly in community homes

Future plans for long-term care provision must optimise use of available resources. This study highlights that caution is required when drawing conclusions about relative costs of care in different settings.

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Public Health Dept, Greater Glasgow & Clyde Health Board, Glasgow, Public Health Dept, HSE-South Eastern Area, Kilkenny

<table>
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<th>COSTS/OCCUPIED BED/YEAR</th>
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13 Social inclusion and early-stage dementia: preliminary findings

This on-going study examines the health, social, and support care needs of a sample of community-dwelling people with early-stage dementia. In particular focusing on how their quality of life and their social inclusion can be maintained and promoted. Through an investigation of the subjective experience of the illness the needs of this group will emerge.

A total of 15 respondents have been recruited through the Age Related Health Care Outpatient’s Clinic in the Adelaide & Meath Hospital. Data collection consisted of two in-depth interviews with each respondent and one in-depth interview with their carer. A grounded theory and interpretative phenomenological approach was used in data analysis.

Preliminary findings show that there is a gender difference in how people manage the early symptoms of dementia. Female respondents involved in the research to date had more extensive social and kinship networks. Although social withdrawal was common amongst both men and women, men’s social networks tended to be tied to previous employment and organised sporting activity e.g. golf clubs, bowls clubs etc. However their involvement in these activities decreased or ended with the onset of the illness.

As dementia progresses social networks can develop into informal care networks and are important in addressing the social exclusion and isolation associated with dementia. In particular this identifies older men with dementia as being particularly vulnerable to exclusion.

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14 Care of nursing home residents in Dublin – General Practitioner’s views

Older people in nursing homes constitute a vulnerable sector with complex physical and mental health issues and with numbers of older Irish adults set to double over next 20 years this population is set to grow. There have been recent public concerns re standards of care in private sector Irish & UK nursing homes. Medical care for nursing home residents in Ireland is provided mainly by general (family) practitioners (GPs).

A postal survey of 500 GPs in Dublin was carried out in order to assess views, identify difficulties and highlight support needs.

186 (38%) of those contacted replied. Although 85% of respondents rated themselves as confident in treating nursing home residents, only 63% felt they had received adequate training in geriatric medicine to care for this patient group. 54% felt the elderly in nursing home care required more contact time than patients of equivalent age living in the community. 37% of GPs had witnessed substandard care in nursing homes but reported this to nursing home matrons only. In qualitative analysis of comments two recurrent themes were evident; a need for increased liaison with geriatricians to manage nursing home patients; recent investigations into private nursing home standards had increased GP workload and responsibility for simple decisions.

There is need for greater input from geriatricians to establish standards of care and support GPs and the decision-making process in nursing homes.

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Age-Related Health Care, Adelaide & Meath Hospital, Dublin
Preferences of acutely ill patients for participation in medical decision making

Previous studies suggest that older people are no less likely to want to be involved in decisions regarding care than younger patients. However, most such studies have been conducted in stable outpatient populations, and the results may not be the same in acutely ill patients.

We examined 165 consecutive acute medical inpatients. A standardized assessment included cognitive tests, demographic data and an assessment of the severity and nature of medical illness. We assessed patients’ desire for information using a 5-point Likert scale, and their desire for a role in medical decision making using the Degner Control of Preferences Scale. The physician’s prediction of the patients’ preference (PPPP) was also recorded. Those with significant communication difficulties, who didn’t wish to participate or were too ill to participate were excluded. All analyses were pre-specified.

149 patients were eligible for participation. The median score on the Likert scale for information desired was 4 (‘a lot’); mean score was 3.8 (SD 1.0). The median score on the Degner scale was 2, mean score 2.3 (SD 1.3). There was no univariate or multivariate association between age, sex, socio-economic group, severity of acute illness or cognitive score and either the desire for information or the Degner scale result. Similarly, PPPP were not significantly correlated with patient preferences.

In an acute setting, older patients are no less likely than younger patients to desire information nor to seek an active role in decision making regarding their care. The only way to determine patient preferences is to ask them.

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Dept. of Geriatric Medicine, Galway Regional Hospitals, Galway
16 A targeted falls prevention programme in a rehabilitation unit for older adults

The high incidence of falls and related injuries in older adults stems from a high prevalence of co-morbid diseases (i.e. osteoporosis, stroke), age-related physiological decline (i.e. slower reflexes, visual impairment) and multiple diverse extrinsic and intrinsic factors. The aim of this study was to evaluate the effectiveness of a targeted multiple intervention fall prevention programme in reducing falls and related injuries on a 40-bed female mixed rehabilitation unit for older adults attached to a University Hospital.

An observational study comparing falls incidence for the first 6 months of 2005 and, following introduction of the intervention programme, the first 6 months of 2006. The number of patients screened from the first 6 months of 2005 was 210 and 2006 was 190.

A falls prevention programme commenced with the introduction of a STRATIFY falls risk assessment tool, risk identification and targeted multiple interventions. Outcome measurement included incidence of patient falls, associated injury and categorical analysis of associated risk factors.

Results revealed a significant decrease in falls from 2005 (n = 69) to 2006 (n = 38). Chi squared test was performed (p < 0.005). Risk factors identified included peak periods of ward activity, cognitive impairment, unsteady gait, toileting and inappropriate footwear. Injury was associated with use of restraint.

Preliminary findings reveal that interdisciplinary assessment is effective in reducing the incidence of falls. This intervention is consistent with the prospective identification of risk factors. The need for ongoing education and a quality control feedback loop system is currently being addressed.

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Elderly Services Division, St Finbarr’s Hospital, Cork City

17 Analysis of medications taken by patients presenting with a fall

Falls represent not only a significant mortality and morbidity risk to the patient, but also a burden to the Health Service in terms of cost and bed occupancy. Multiple factors have been identified that contribute to the risk of falling, including the use of various medications.

A retrospective observational study identified all consecutive patients over 65 years admitted through Cork University Hospital emergency Dept over a 6 month period. The aim was to assess whether patients admitted consequent to a fall, were more likely to be taking medications associated with an increased falls risk, than those with no history of prior falls.

Data was collected on 596 patients, 144 presented secondary to a fall – cases, (101 female, 43 male), 401 had no history of previous falls - controls (194 female, 207 male). Being female, having a history of previous falls, or being over 80 years, increased the likelihood of admission due to a fall, rather than another complaint (p<0.005). The case group were on proportionately more medications than the controls. For cases, the odds ratio (95% confidence interval) for taking the following medications was: angiotensin antagonist / ACE inhibitor 0.46 (0.25 – 0.85), beta blocker 0.54 (0.29-0.99), thiazide 0.87 (0.44-1.74), alpha blocker 0.33 (0.07-1.51), calcium channel antagonist 0.65 (0.32-1.34), opiates 0.56 (0.32-2.66), NSAID 2.07 (1.02-4.22), loop diuretic 1.31 (0.73-2.37), hypnotics 1.39 (0.78-2.47), antidepressants 1.90 (0.96-3.75), antipsychotics 2.76 (0.90-8.42).

These findings are comparable with previous studies1, and may have implications, in particular, for the choice of antihypertensive agent in patients who fall.

Reference:
The effect of chronic kidney disease on bone turnover and vertebral fracture risk

Osteoporosis and chronic kidney disease (CKD) are prevalent in older people. Even patients with mild renal impairment have evidence of renal bone disease histologically. Renal status is rarely considered in patients undergoing investigation for Osteoporosis. The significance of even moderate CKD (CrCl 30–60 ml/min) is unappreciated.

One hundred and seventy-five consecutive patients (139, 36M) with a mean age of 78.5 years were recruited from a Specialist bone clinic. All patients were bisphosphonate naive. We examined PTH and Vitamin D levels in addition to estimated Creatinine Clearance using the Cockcroft and Gault equation. We also measured Osteocalcin (OC), Procollagen type 1 aminoterminal peptide (PINP), markers of bone formation, along with C-telopeptide (Ctx), a marker of bone resorption. All patients underwent a DEXA with a Lunar Prodigy Scanner.

Patients with CrCl <60 (Group A) had significantly lower BMD at the hip (p<0.00065) and spine (p<0.03). This was associated with a two-fold increased risk of vertebral fractures (p<0.05). These patients had higher PTH values (48.48 vs 46.6, p=0.13) and lower Vitamin D levels (20.87 vs 24.54, p=0.15).

76% of our patients had moderate-severe CKD. This is associated with significantly higher bone turnover and a doubling of the risk of Vfx. It is essential to identify CKD in Osteoporotic patients as it has important implications for future fractures and treatment modifications.

References:
2. Cockcroft DW, Gault MH 1976 Nephron16:31-41

L. Brewer, H. Cronin, M. Healy, C. Walsh, C. Kirby, J.B. Walsh, M.C. Casey
Mercer’s Institute for Research on Ageing, St James’s Hospital, Dublin

Patients with CKD were divided into 2 groups according to CrCl.
A moderate (30-60ml/min) and severe (<30ml/min).
B mild (60-90ml/min)

<table>
<thead>
<tr>
<th>CrCl</th>
<th>BMD Hip</th>
<th>BMD Spine</th>
<th>OC (10-50ng/ml)</th>
<th>PINP (10-80ng/l)</th>
<th>Ctx (0.1-1.0ng/l)</th>
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<tr>
<td>A CrCl&lt;60 (n=133)</td>
<td>0.7257</td>
<td>0.902</td>
<td>37.156</td>
<td>82.87</td>
<td>0.504</td>
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<tr>
<td>B CrCl&gt;60 (n=42)</td>
<td>0.8633</td>
<td>1.017</td>
<td>28.2</td>
<td>50.82</td>
<td>0.464</td>
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<td>P&lt;0.0006543</td>
<td>P&lt;0.0339</td>
<td>P&lt;0.02996</td>
<td>P&lt;0.00659</td>
<td>P&lt;0.05531</td>
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Mercer’s Institute for Research on Ageing, St James’s Hospital, Dublin
19 Why are patients readmitted after hip fracture?

Hospital readmission after hip fracture is associated with increased morbidity and mortality. The objective of our study was to examine the causes of readmission.

We carried out a retrospective audit of patients’ medical records who were readmitted within 28 days after hip fracture from 1/1/2005 to 31/12/2005. 278 patients were discharged alive with a hip fracture in the study period. 33 patients were readmitted. Medical records were obtained for 32 patients. 20 = female (62.5%); 12 = male (37.5%). Median age = 82 years. For the hip fracture spell 17 (53%) patients were admitted from home, 6 (19%) from Residential and 9 (28%) from Nursing Homes (NH). 11 (34%) had a history of dementia. 30 (94%) of patients had surgical fixation. 22 patients (69%) were reviewed by a Geriatrician peri-operatively. Median length of stay = 15 days in the acute orthopaedic setting. 19 patients were rehabilitated on acute Orthopaedic wards and 9 (28%) on our Orthogeriatrics Rehabilitation Unit. Post rehabilitation 28 (88%) patients were discharged to their usual residence. The majority of patients were readmitted through the Emergency Dept. Median time to readmission = 75 days. The majority of patients (28, 91%) were readmitted because of medical causes; 11 (34%) had a history of confusion with or without agitation. 30 (94%) of patients had surgical fixation. 22 patients (69%) were reviewed by a Geriatrician peri-operatively. Median length of stay = 15 days in the acute orthopaedic setting. 19 patients were rehabilitated on acute Orthopaedic wards and 9 (28%) on our Orthogeriatrics Rehabilitation Unit. Post rehabilitation 28 (88%) patients were discharged to their usual residence. The majority of patients were readmitted through the Emergency Dept. Median time to readmission = 75 days. The majority of patients (28, 91%) were readmitted due to medical causes; 11 (34%) had a history of confusion with or without agitation. 30 (94%) of patients had surgical fixation. 22 patients (69%) were reviewed by a Geriatrician peri-operatively. 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20 Have we learnt the lessons of previous studies on the use of physical restraints?

Restraints or “any device that limits an individual’s freedom for voluntary movement” have caused injuries and provoked ethical considerations around impeding free movement and decision-making. In 1998, Noone et al had documented the use of cot-sides at night at 16% in one Irish hospital. We wanted to again look at the prevalence of physical restraint use in hospitals in Ireland and the conditions of their use.

An observational study of the use of physical restraints in general medical and surgical wards was performed in three hospitals. The data collection was performed within the same twenty-four hour period at 10pm - 1am and 1am - 11am. The presence or absence of restraints, the type used and the reason for their use was recorded. Specialist units were excluded.

The data collection was performed in the period between December 2005 and January 2006. In the three hospitals, restraint usage total was 23.5%, 20.8% and 19.4% with significantly higher usage at night in two of the hospitals. Prevention of falls was the most common reason for restraint use (62.9% vs. 60.4% vs. 65.8% p>0.05 when comparing hospitals). Patients with a history of confusion with or without agitation figured highly (41.9% vs 47.9% vs 40.4% p>0.05).

There appears to be an increase in the use of restraints over the last decade. We plan to introduce coordinated guidelines for the use of physical restraints, including a risk assessment tool, reduce their unnecessary use and promote the use of alternative strategies.

References:
21 Emergence of clostridium difficile PCR-027 in three Dublin hospitals

Not for publication.

D. Drudy, R. O’Mahony, N. Harnedy, S. Fanning, L. Kyne
Centre for Food Safety, University College Dublin, Dublin. Dept of Medicine for the Older Person, Mater Misericordiae University Hospital Dublin

22 High level resistance to Moxifloxacin and Gatifloxacin associated with a novel mutation in GYRB in toxin A-negative, Toxin B-positive clostridium difficile

Not for publication.

D. Drudy, T. Quinn, R. O’Mahony, N. Harnedy, S. Fanning, L. Kyne
Centre for Food Safety, University College Dublin, Dublin, Dept of Medicine for the Older Person, Mater Misericordiae University Hospital Dublin

23 Colorectal cancer in the very elderly

Risk of colorectal cancer (CRC) increases with age but few studies have looked at very elderly patients (>85 years). We examined CRC in this population.

Clinical characteristics and survival data were obtained from a prospectively maintained database of patients with CRC (n=2237).

90 patients aged over 85 years were identified and compared to the younger population (n=2147). There were more female patients (p=0.001) and right sided tumours (p=0.03) in the elderly group. Tumour stage, surgical and resection rates were similar in both groups. Most elderly patients underwent surgery (91%). 30 day mortality was increased in the elderly (11% versus 4%, p=0.004). No patient over 85 years received chemotherapy. Univariate analysis showed that cancer related survival in patients over 85 was decreased relative to the younger cohort (log rank, p<0.0001). Multivariate logistic regression demonstrated that tumour stage, chemotherapy and resection had highly significant effects on survival (p<0.005) while age>85 years had only a small independent influence on outcome (p=0.049).

Elderly patients are more likely to die from CRC but many have good relative life expectancy following surgery.

Centre for Colorectal Disease, St Vincent’s University Hospital, Dublin
24 Prescription errors are common in elderly patients with renal impairment: A study of prescribing practices in a large Irish regional hospital

The presence of renal impairment is often underestimated in hospital inpatients. This is usually due to an over-reliance on serum creatinine alone as the primary indicator of renal function, particularly in elderly patients. Another issue in such patients is the need for dose reduction of many commonly-used drugs that are renally excreted. Failure to recognise this clearly has the potential to increase drug toxicity.

We looked at the incidence of renal dysfunction in the inpatient population of a large regional hospital over a single day. The drug regimen and most recent serum creatinine level, if stable, were recorded in 270 patients. Each patient’s renal function was then estimated using the Modification of Diet in Renal Disease (MDRD) formula. 104 patients (41.4%) were found to have at least moderate renal dysfunction (GFR < 60 ml/min) with 25 (11%) having severe renal impairment (GFR < 30 ml/minute). Excluding inhaled bronchodilators, dietary supplements and laxatives, this group of patients were prescribed a mean of 8.8 drugs each. We identified over 40 prescription errors due to a failure to take into account reduced renal function, all in the group of patients with severe renal impairment (1.6 errors per patient). The vast majority of these errors related to the prescription of analgesic and anti-microbial agents.

Prescription errors are common in patients with renal impairment due both to underestimation of the extent of renal impairment and also to lack of awareness of the need to take into account reduced renal excretion when prescribing common drugs.

25 Prevalence of chronic disease in the elderly based on a national pharmacy claims database

The increase in life expectancy and the size of the elderly population in Ireland has focused attention on the health care needs of this population, yet there is a lack of accurate chronic disease prevalence data. The aim of this study was to estimate chronic disease prevalence in the elderly population in Ireland using a national pharmacy claims database (i.e. HSE-PCRS).

This is a population based study of prescribing for chronic disease (≥ 3 prescriptions in 12 months) All individuals aged 70 years and over (n=271,518) were included. Incidence ratios (IR) and 95%CI were calculated using STATA.

Eighty six percent of those aged 70 years and over received regular medication for one of nine chronic conditions. Prescribing for cardiovascular disease (CVD) had the highest prevalence at 72%, followed by central nervous system (CNS) at 37% and musculoskeletal conditions at 29%. Over one quarter (27%) of the population received medication for two co-morbidities and 14% experienced four or more chronic conditions. In terms of drug acquisition expense, CVD was the highest costing condition (€88million per year).

There was a significant difference in distribution of chronic disease between genders with CNS conditions more prevalent in women (IR = 1.31 95% CI 1.30-1.33), and CVD slightly more prevalent in men (IR = 1.04 95% CI 1.03-1.05).

The estimated prevalence of chronic conditions in the elderly population was high, with a significant level of co-morbid diseases. Pharmacy claims databases may offer an alternative approach to estimating prevalence in countries with limited national data on chronic conditions.
Driving assessments in the elderly – Experience within a day hospital

Automobiles are the main source of transport for all age groups. Some studies suggest 80% males and 50% females aged over 85 years will continue driving. While many do not need self restriction some may benefit from such advice. The road traffic accident rate among patients increases every year after the diagnosis of dementia is made.

Our aim was to examine the reasons for and the performance of the patients during the driving assessments. We undertook a retrospective study to examine the results of the driving assessments carried out on our patient population in the day hospital. Patients were referred to an external assessment agency which carried out standard assessments. Patients were referred when a concern was raised by our staff, themselves or their families.

17 patients were referred for assessment. Eight women were included. The average age was 75.3 years with 48.2 years of driving experience. The average MMSE was 27.2/30. 12 patients had cerebrovascular disease while 4 were diagnosed with short term memory problems. They had an average of 13.8 months left on their licences. All 17 patients passed their driving assessments while 8 patients required modifications made to their cars. Six patients were advised to reattend for retest within 12 months. Two patients were advised to limit their driving to local areas.

Normal assessments were very helpful in this group’s management. Those patients who required restrictions had the lowest MMSEs. Retesting should be considered in those with dementia and transient ischaemic attacks.

The Barthel index: Exploring the inter rater reliability between nurses and doctors

The Barthel index is an ordinal scale comprising of the ten activities of daily living (ADL). Since its inception, several modifications have increased its accuracy in measuring functional ability. Information required for scoring the index can be collated by a variety of methods, each of these approaches has strengths and limitations. Currently in the researcher’s area of clinical practice the Barthel index is frequently recorded by nurses and doctors. There are discrepancies in recording the index and without the presence of the guidelines and training the information learned from each method of assessment may vary considerably.

To ensure accuracy in recording the Barthel index the inter-rater reliability between nurses and doctors was explored. A prospective study of 65 elderly patients with a mental test score of >7 consented to participate. Two doctors and two nurses administered the index on different occasions within five days of admission. The guidelines and training were provided to enhance the accuracy in recording the index.

Measurements of inter-rater reliability were calculated. The scoring by doctors was higher than that by the nurses (mean difference 0.554 vs. -0.015). Intra class correlation showed good agreement in all ADL, only grooming and bathing demonstrated bias error. Although the introduction of the guidelines minimised misclassifications and standardised the method of administration of the index between doctors and nurses, the results demonstrated that the index is highly reliable when recorded by nurses with low inter-rater variation. There was greater variation between doctors questioning the reliability of the doctors in scoring fundamental ADL.
A review of screening tests for cognitive impairment

This review aimed to identify currently available cognitive screening tests, and to consider their suitability for three purposes: brief assessment in the doctor’s office; large-scale community screening programmes; and domain-specific screening to guide further assessment.

Tests were identified via searches of electronic databases and individual article reference lists. Inclusion criteria were that the tests were designed to screen for cognitive impairment or had been used for that purpose, they had an administration time of less than 20 minutes, and they were available in English. Reliability and validity data were extracted from individual papers which had employed suitable “gold standard” criteria. A list of cognitive domains covered by each test was made by consensus agreement.

Thirty-nine tests were reviewed. The screens which showed the best potential for use in the doctor’s office were those which expand on the content of the MMSE and from which an MMSE score can be derived (3MS, CASI, SASSI, ACE-R). These instruments also provided the broadest coverage of various neuropsychological domains. An administration time of more than 10 minutes appears to be an unavoidable cost of achieving sufficiently robust statistical performance while covering key domains. Informant-rated instruments (e.g. IQCODE, SMQ) may be useful in large-scale screening programmes.

One size does not fit all in cognitive screening. Clinicians should move away from the tendency to become over-reliant on one screen (usually the MMSE). and take advantage of the continually-evolving range of more specialised tools for different situations.

Needs assessment of people with dementia attending an old age psychiatry service

Older people have a number of needs because of the frequent co-existence of disability, physical morbidity and social difficulties. Needs assessments can identify specific deficits which may lead to the introduction of targeted services or enable preventative action to be taken. A previous study of needs in dementia identified high levels of unmet needs.

People attending this service with dementia and their carers were asked to participate in the study, which had ethics committee approval. Forty patients were recruited. The Camberwell Assessment of Need in the Elderly (CANE) was completed for the patients and carers. This assesses needs across 20 areas of functioning, from physical, social and psychological needs to carer burden. Cognitive status was recorded using the Mini-mental state examination, and sociodemographic information obtained. Quantitative and qualitative data were obtained.

Patient and carer needs were identified. Areas of ‘serious need’ for patients included memory, psychological distress and self care and of ‘moderate need’ included food, safety and money. Carers needs were for information and almost 50% had some level of psychological distress.

The level of needs identified highlights the complexity of services required to support people with dementia living in the community. The findings demonstrate the extent of caregiver stress. From a service development view, it is important that carers needs are identified and addressed. Services can advocate on behalf of vulnerable patients and identification of unmet need in the areas of personal and social care can ensure that community care is responsive to those needs.

Reference:
Supported communication: A client lead initiative

There are an estimated 30,000 people with residual disability as a result of stroke living in Ireland. 12-18% of these people have aphasia. Aphasia potentially deprives a person of one of the primary ways of maintaining social relationships i.e. language. This group faces particular challenges in maintaining social networks. We report on a supported conversation group for people living with aphasia run by 2 speech and language therapists (SLT) in a day hospital setting.

Two female clients with similar communication needs were identified. Both presented with chronic severe expressive aphasia resulting in limited verbal output. The group was run on a weekly basis for 8 weeks exploring the nature and effect of stroke and aphasia. The clients designed a personalised poster to raise awareness of the impact of aphasia on communication. Places were identified where the poster should be displayed and specific people who would benefit from the information.

A specifically designed qualitative evaluation form was completed midway and on week 8 to evaluate the group.

Both clients attended all 8 sessions. Qualitative data reflected:
- Improved understanding of their own aphasia
- Established ownership of the poster in which they could convey information personal to them
- Developed a meaningful and practical tool to educate others on aphasia

This group reinforced the need for ongoing support and education not only for those clients and their families living with aphasia but also the need to raise interprofessional, local and public awareness of this chronic disability.

Reference
1. Irish Heart Foundation, Stroke Care: Towards Excellence in Stroke Care in Ireland, 2000

An interim evaluation of the pilot occupational therapy ‘action van’ service: Sharing of resources to enhance discharge from hospital for older people and to enhance community services

Action Van involved the creation of a pool of assistive equipment to facilitate hospital discharges and the provision of a “handy-person” to undertake minor works with priority given to an agreed number of hospital discharges. It is unique in that Occupational Therapists in 3 voluntary and 1 state hospitals and 3 community care areas share a resource on the basis of agreed protocols which eliminate the need for dual hospital/community OT assessment at the point of hospital discharge.

Starting in February 05 the service was evaluated at 10 months. On the basis of 153 days of activity the service had facilitated a total of 43 hospital discharges by fitting rails and/or providing equipment providing these within 2.5 working days for priority requests or within the period of planned discharge. It carried out approximately 309 jobs within Community Areas 1, 2 and 10 and distributed approximately 20k worth of equipment for direct provision to appropriate patients. The average cost per intervention was approximately €136. For the purpose of comparison, a commercial company was used for a hospital discharge. Despite paying a premium for 5 day installation, rails were not provided for 24 days and cost €450. If all hospital discharges had this experience, the cost may have been €19,350, compared to €5,848 for Action Van. For the 18 acute discharges, delays eliminated may have enabled 30 or more admissions of average length of stay.

Recommendations include continuation of the service with a greater emphasis on ring-fenced equipment budgets for hospitals.
7 Successful collaboration between therapy and volunteer services in an acute hospital

A good model of care is that patients with mild to moderate cognitive impairment on an acute ward who are discharged from formal therapy and awaiting long term care placement continue to receive regular structured cognitive/communicative stimulation. A structured cognitive/communication stimulation group was set up in 2002, by occupational therapy and speech and language therapy and was shown to be beneficial for patients. Due to therapy resource limitations this group was postponed in 2005. In 2006 we began the process of collaborating with the volunteer services in our hospital in order to re-establish this valuable programme. We trained volunteers to successfully run a structured cognitive/communication stimulation group for patients with supervision from therapists.

Volunteers were recruited via the volunteer services manager. Initial training was carried out over a period of 3 weeks and volunteers gradually assumed greater responsibility for facilitating the group. Pre and post training focus groups were carried out with volunteers to evaluate the training programme and to explore their perception of being involved in a structured cognitive/communication stimulation group.

Qualitative data indicates that the experience was positive for all parties involved. Volunteers report increased knowledge and skill with regard to communicating and working with patients with dementia. Patients reported that the groups were baneful by enhancing their overall hospital experience.

Collaboration with the volunteers enabled us to manage therapy resources effectively, provide an opportunity for training and education of volunteers and maintain the programme for our patients.

References:

M. McGrath, R. Sowman, C. Roe
Occupational Therapy Dept. Speech and Language Therapy Dept, Volunteer Services. Age Related Healthcare. The Adelaide and Meath Hospital Dublin, incorporating the National Children’s Hospital, Tallaght, Dublin

8 An alternative therapy in a day hospital?

Yoga has been used as an alternative therapy in chronic back pain, hypertension, insomnia, and in relieving stress. We aimed to investigate the possible benefits of yoga in a day hospital setting.

Patients attending the Royal Hospital Donnybrook once a week were chosen to participate in an eight week course of Serak Dharma Yoga. This involved gentle exercises of hands, feet, arms, shoulders, legs, hip and neck, yoga breathing exercises and relaxation techniques led by an experienced yoga instructor. A questionnaire was administered to patients before and after therapy.

Eleven patients completed a full eight weeks of yoga (7 female, 4 male) with a mean age of 81.5 years. Prior to doing yoga, seven were enthusiastic about it, six thought it would be beneficial and that they would do yoga at home and eight felt they would be able to do the exercises. Post yoga eleven were able to do the exercises, ten found it relaxing, nine thought it was beneficial and would recommend it to other people, eight enjoyed yoga and would like to continue doing it, seven said they did yoga at home and two found it improved their sleep.

All patients who participated in yoga were able to do the exercises without any difficulty, most found it enjoyable and relaxing, thought it was beneficial and would like to continue to do yoga in the day hospital. These findings suggest that yoga is beneficial and should be made more widely available in a day hospital setting.

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Royal Hospital Donnybrook, Dublin
Older people’s participation in the discharge process: Eliciting the meaning ascribed to ‘participation’ by the literature

This literature review is phase one of a three-part study, which aims to explore older people’s participation in defining their care needs and deciding their care location when being discharged from acute hospital in Ireland. Acute hospitals are under pressure to secure the timely and effective discharge of older people with long-term care needs. So hospital discharge can represent a critical juncture in the lives of older people with chronic and long-term illness, in terms of provision and location of future care.

Patient participation is central to the delivery of person-centred health services. This model emphasises the participation of patients in decision-making about their care. However, participation is a complex concept that is difficult to define and without clarification of what the concept of participation entails, aspirations to include older people in decision-making about their care, may remain rhetoric rather than practice.

This review of the literature presents the philosophical, professional and patient perspectives of patient participation in health care with a particular focus on older people’s participation in the discharge process.

Many studies attempt to define the concept of participation, but all conclude that the concept remains ambiguous and elusive. This illustrates that the concept of participation can be a contested philosophy. It assumes motivation on the part of all the participants, the equalising of power, full knowledge, choice and the availability of real options. Nevertheless, there is agreement that the broad aim of participatory policy is to increase the involvement of patients in decision-making in their own lives.

Innovation in adversity—the safe implementation of a rapid access clinic to obviate the need for hospital admission in elderly patients attending an overcrowded emergency department

Not for publication
Severe hyperkalaemia (>8mmol/l) in the elderly non-dialysed patient

Acute renal failure is more common in the elderly and carries a worse prognosis. This study aims to look at causative factors leading to severe hyperkalaemia and its prognosis.

We conducted a retrospective case note review of patients between May 99 - May 04. Patients were identified using the clinical chemistry database. 33 patients (11M, 22F) median age 81 (range 70-99) were identified. Past medical history included diabetes, cardiac failure, dementia and malignant disease. Mean potassium was 8.6 mmol/l (range 8.1-9.7), creatinine 563μmol/l (range 123-2309). 27 patients had renal function measured within 6 months of the acute episode and in all cases worsened. Drugs known to cause hyperkalaemia were taken by 21 (64%): 11 single agent, 10 combinations of two or more drugs. Drugs included Amiloride, Spironolactone, Digoxin, ACE-inhibitors and non-steroidal anti-inflammatory drugs. In seven patients nephrotoxic drugs (ND) were started in the 2 weeks previously. The most frequent precipitant was sepsis. Overall outcome was poor: 14 patients died within 24 hours of the hyperkalaemia, eight subsequently.

In unwell patients, dosage adjustment or cessation of such drugs should be considered. Insidious renal impairment may exist in the elderly prior even with “normal” creatinine values. Creatinine clearance could be calculated in 10 of those on ND: mean 34 ml/min (range 11-73). Further, we advise caution in prescribing evidence based drugs to elderly patients, study population frequently being younger: PROGRESS (mean age 64 years [Lancet.2001;358:1033–1041]), and RALES (62 years [Am J Cardiol.1996;78:902-7]).

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Stigma and embarrassment as barriers to seeking home care services by older people

Recent research has shown that stigma and embarrassment can be significant barriers to health service utilisation. However, a greater theoretical understanding of these barriers and of willingness to accept services among older people is needed.

Interviews were conducted with 1,756 randomly selected, community-dwelling older people in Ireland. Factors associated with the stage of readiness or willingness to accept home care services were examined (drawn from the Transtheoretical model).

Half of older people who had major/severe difficulties in activities of daily living had never thought about using home care services, and 15% said they would be fairly or very embarrassed to accept home care services. Perceptions of being stigmatised for using services were added to the Anderson and Newman model of health service utilisation to evaluate its impact on willingness, controlling for predisposing, enabling and needs characteristics. Findings of an ordered logistic regression suggested that those who were older, living alone, and showing more difficulties in carrying out activities of daily living were more likely to be ready to accept home care services. Older people who had pre-existing negative attitudes towards both services and users, and perceptions of being stereotyped as an older person, were less likely to accept home care services.

Perceptions of being stigmatised were shown to be significant predictors of willingness to accept home care services even after controlling for predisposing, enabling and needs factors.

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13 Pain management in older adults: A survey of nurses knowledge and attitudes

Pain in older adults often remains unreported, undetected and untreated due to factors related to advancing age and mis-informed attitudes of professional carers. The aim of this descriptive study was to identify what are nurses’ knowledge & attitudes regarding the subjective nature of pain, belief in the patients’ self report, objective measurement, and medication management.

Nurses were surveyed using a 30-item self-report questionnaire (validated in a variety of settings). From two linked hospitals, a convenience sample of registered nurses (n=72) working in Care of Older Adult Settings (acute medical, rehabilitation & continuing care) was used.

The mean score 74.6% indicated moderate to high levels of knowledge and positive attitudes regarding pain management. However 61% incorrectly believed that more than 10% of patients exaggerate pain experienced and that a health professionals’ intuition is useful in determining whether a person is lying about his or her pain (50%). Only 50% agreed that a pain scale is appropriate for this group. Only 29% indicated that nurses’ assessment of pain influences doctors prescribing decisions. Forty-three percent percent indicated that doctors should prescribe the exact dose of analgesia and specify times rather than leave it to the nurse to decide.

There is a need for greater recognition that pain is whatever the patient says it is and exists when he or she says it does. Nurses need to be more proactive in their response to the comfort needs of older adults & recognise the importance of individual assessment in medication management. Practice changes require ongoing education, multidisciplinary commitment and organisational support.

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14 The prevalence of constipation in community dwelling older people

Elderly patients with constipation generally have an impaired quality of life. In this group, constipation is often related to diet, physical immobility, concurrent illness and/or multiple medication use. Available estimates of the prevalence of constipation in North America range from 1.9% to 27.2% (1). Similar rates are reported from other countries. Little data is available on the elderly population in Ireland. The aim of this study was to evaluate the prevalence of constipation among an elderly community dwelling population who attended our Community Reablement Unit (CRU) for rehabilitation.

Approval was obtained from the ethics committee at St Vincent’s University Hospital and consent was given by 74 patients admitted to CRU between June 2005 and March 2006. Each had a plain abdominal x-ray (PFA) which was then evaluated by an independent radiologist for the presence or absence of constipation. The radiologist was blinded to each patient’s history.

Of seventy four consecutive patients examined four did not have PFA films available for reporting. Of the remaining 70, 41(55.4%) were classed as having constipation based on PFA findings.

Recognizing constipation can be a challenge mainly because there is a wide variation in subjective symptoms among patients. Objective measures to facilitate the diagnosis of constipation have been slow to develop and there are few studies which look specifically at the elderly population who appear to be disproportionately affected by constipation. Plain film radiography may shed new light on current prevalence estimates which are generally arrived at via symptom based criteria and patient self reporting.

Reference:

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Is pressure ulcer prevention information giving effective at improving knowledge of older adults?

For prevention of pressure ulcers, patient education is a vital. Prevention of pressure ulcers has long been a goal of nursing. As 95% of pressure ulcers may be prevented, treatment should be preventative instead of reactive.

A prospective study, of 56 patients attending a day hospital was conducted. Patient’s knowledge on pressure ulcer prevention improved after information giving. Patient information leaflets were developed that consolidated information on pressure ulcer prevention. An 11 item questionnaire to assess patient’s level of knowledge was administered to patients and then the information leaflet was distributed. One week later patient’s level of knowledge was reassessed and their risk assessment conducted using the Waterlow and Medley scales.

Mean age of patients was 78 years, with 64% female. Prior to information giving 37% of patients did not know what the signs of a pressure ulcer were and only 28% of patients could identify one area of the body most at risk. After information giving 90% identified factors that might cause a pressure ulcer compared with 70% prior to information giving. 36% of patients did not know what foods help prevent a pressure ulcer compared with 86% prior to information giving.

Although the leaflet did increase patient’s knowledge a more structured educational intervention with follow up may greatly improve patient’s knowledge and aid knowledge retention. Education of patients and caregivers must be the objective, for those who are at risk of developing pressure ulcers. The European Pressure Ulcers Advisory Panel supports this objective and supports studies to investigate the impact of individualised structured educational programmes.

References:

Pilot study to ascertain any relationship between thyroid stimulating hormone and the metabolic syndrome in an elderly Irish population

The metabolic syndrome describes a constellation of risk factors that have been associated with an increased risk in cardiovascular disease. It has been demonstrated that subjects in the lowest quartile of the reference range of free thyroxine levels had an increased odds ratio for the metabolic syndrome compared to the highest quartile. This pilot study aimed to look at a possible relationship between thyroid stimulating hormone (TSH) within the reference range and the metabolic syndrome in Irish older patients in a day hospital setting.

Patients who were recruited, had a waist measurement, thyroid function, fasting glucose and lipids performed. Similar inclusion/exclusion criteria used in the Chinese study were applied. Patients were divided into two groups depending on their TSH level (lower group 0.4-2.2; higher group 2.21-4.0) and the number within each group that could be defined as having the metabolic syndrome were recorded (IDF definition).

29 patients with an average age of 82.97 years (range 72-95) were included. 9/18 patients in the lower TSH group and 2/11 in the higher group could be defined as having the metabolic syndrome. Using Fisher’s exact test to assess the difference between the two groups, the exact p-value = 0.125.

On the basis of this small pilot study, there was no statistically significant association between the value of TSH within the reference range and being defined as having the metabolic syndrome. The aim is to build on these results, in order to have a sufficiently powered study to answer this enquiry conclusively.

References:
Exercise training for patients with chronic heart failure: a systematic review and meta-analysis

Chronic heart failure is a significant cause of morbidity and reduced quality of life especially in the elderly. We searched the literature to establish the effectiveness of exercise training in chronic heart failure in terms of mortality, exercise capacity and health related quality of life.

Multiple databases from 1974 to 2006 were searched. Studies of exercise-based interventions randomized against usual care in patients with chronic heart failure were selected. Changes in peak oxygen consumption and distance walked on six minute walk test were outcomes of capacity. Data on mortality and exercise capacity were pooled in separate meta-analyses.

Twenty three studies representing 1413 patients were included. Most trials were small, of short duration and poor methodological quality. 82% were male and 97% had NYHA Class II-III. Exercise training showed no significant change in mortality (RR 0.77, 95% CI 0.53 – 1.13). Peak oxygen consumption improved by 1.97 ml/kg/min (Weighted Mean Difference (WMD) random effects 95% CI 1.36 -2.82) and the 6-minute walk test by 37.3 metres (WMD random effects 95% CI 12.1-60.6). Quality of life improved in nine of the fifteen studies that examined this outcome.

Exercise training shows improvement in exercise capacity in patients with stable mild-moderate heart failure. Limited information exists in elderly patients and in severe disease. More research is required before these findings can be generalized to all patients with heart failure.

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End of life issues are poorly addressed in elderly patients undergoing chronic haemodialysis

As patients live longer despite extensive co-morbidity, increasing numbers of elderly people are presenting for dialysis. The multiple medical problems that inevitably accompany this population mean the life-span for many will be limited. Despite this we are poor at confronting end-of-life issues in these patients.

Our elderly dialysis population was evaluated using the unit’s database to evaluate their morbidity and mortality and to ascertain whether patient’s wishes with regard to end-of-life issues were discussed.

268 patients started on regular maintenance haemodialysis between May 2001 and January 2006. 76 of these patients (28.3%) were 75 years or over at initiation of treatment. Almost 1 in 3 patients had died less than a year later. Many underwent multiple often prolonged hospital admissions during this time.

Currently, there is a similar elderly population with over 35% of patients aged 75 years or older. There is an abundance of coronary artery disease, diabetes, cognitive impairment, cerebral and peripheral vascular disease. These patients travel a mean of 294 kilometres a week for treatment. Despite such chronic ill-health and limited life-expectancy, patient and family wishes regarding resuscitation and related issues are rarely mentioned in their records outside of the setting of dire acute emergencies.

Despite an often poor prognosis and extensive medical co-morbidity, end-of-life issues are rarely addressed in elderly dialysis patients outside of the setting of a dire emergency. Measures which would encourage these patients to determine their own treatment could result in less demand for inappropriately aggressive interventions when these patients become suddenly severely ill.

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19 Gait and disability as predictors of length of hospital stay in older patients

Recent studies suggest that gait speed is a good predictor of disability and hospitalisation. This study examined the predictive power of gait and other health-related variables on duration of hospital stay.

The gait of 141 older patients with acute illness admitted to an acute care facility was examined at admission (mean age 75.8 years, 55% female). Gait function and stability was assessed with a portable monitoring system that collects information on gait cycle timing and its sub-phases. Gait function was assessed at discharge where possible (n=58). Baseline characteristics of patient health and other measures of gait and balance were recorded (e.g. age, gender, medications, pain, Barthel Index, MMSE, depression, comorbidity, functional reach and assistive device use).

In univariate analysis, gait speed (r = -0.32, p < 0.001), stride time variability (r = 0.20, p = 0.032) and swing time variability (r = 0.27, p = 0.003) were associated with duration of hospital stay. In multivariate analysis that controlled for the other baseline health, gait and balance-related variables, the only independent predictor of hospital stay was Barthel index (Beta = -0.783, p = 0.045).

A reduced Barthel index was the only independent predictor of prolonged length of hospital stay in this study. This measure of disability at admission may be useful in predicting duration of hospital stay. Gait measures, though useful as a predictor of disability and hospitalisation, appear not to be useful in determining length of stay in older patients admitted to an acute care facility.

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20 Chronic disease management: Self-care behaviour in heart failure patients

Patients with heart failure are encouraged to be actively involved in the management of their condition. The purpose of this study was to identify clinical and psychological factors associated with self-care behaviour.

Heart failure patients (ejection fraction <35%) were recruited from out-patient Depts of three Irish hospitals (N=100). Self-care behaviour was measured using the 12-item European Heart Failure Self-Care Behaviour Scale (1). Perceptions of illness were measured using the Illness Perception Questionnaire – revised (IPQ-R) (2). Disease severity was assessed by clinicians using the New York Heart Association (NYHA) classification.

Many participants reported partial non-adherence to professional recommendations of self-management. Adherence rates varied greatly according to recommendation (daily weighing 16%, reporting weight gain 39%, taking regular exercise 41%, taking medication 93%). Clinical variables (disease severity and time since diagnosis) were not associated with self-care behaviour. However, two IPQ-R components - illness coherence (understanding of pathophysiology and symptoms) and timeline (perception on spectrum of acute - chronic) were associated with self-care. Illness coherence was positively associated with self-care, while timeline (perception of a chronic condition) was negatively associated with self-care (p<0.01).

In conclusion, psychological factors were related to self-care behaviour in patients with heart failure. Neither illness severity nor duration of illness related to adherence while having a more coherent and less chronic view was related to greater self-care.

References:
2. Moss-Morris R et al. Psychology and Health 17 (1), 1-16

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21 How does our management of the care of the dying patient compare to that outlined by the Liverpool care of the dying pathway?

The Liverpool Care Pathway (LCP) “was developed to improve the quality and organisation of palliative care given to the patient in the NHS.” (1) It has provided a recognised system of care for the dying patient, which can be translated to the acute hospital. Prior to its introduction we reviewed our practise in the management of patients at the end of their life.

A chart review was performed on patients who had died on a general medical ward over an eighteen-month period. In particular details on advanced prescribing for common symptoms and documentation of resuscitation orders and communication were included.

Of the 70 patients identified, 58 charts were available for review. 31 were female and their average age was 83.9 years. The average time from terminal diagnosis to death was 9 days (from hours to 70 days). Do not resuscitate orders were documented in 93% of cases. Subcutaneous morphine was prescribed in 66.7% of cases, with lower rates of prescription of anticholinergics, anxiolytics and sedatives at 34.8%, 30.4% and 13% respectively. Families were contacted in 91.4% of cases. Communication deficits were identified with Pastoral care (44.8%) and the patient’s G.P. (86.2% cases all by letter).

This study highlights deficiencies in documentation especially in respect to communication with family and professionals alike and in prescribing for common symptoms experienced by dying patients. The implementation of the LCP is designed to address these and improve our quality of care.(2)

References:
1. www.lcp-mariecurie.org.uk

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22 New medical diagnoses in elderly admissions to an acute orthopaedic unit

Acute orthopaedic units have a large proportion of elderly patients. Many of these have multiple medical comorbidities. The inpatient stay offers an opportunity to provide screening for new medical diagnoses.

A retrospective chart review was performed of all patients over 65 admitted over a 6 month period to an Orthopaedic unit in St Colmcille’s Hospital, Dublin. Charts were reviewed for demographic details, admission diagnosis, secondary diagnoses, baseline data and new medical diagnoses which were made during the course of their admission. 1 year follow-up was available.

34 patients over 65 were identified during the 6 month inclusion period (age range 67-99). 23 (70%) of these were female. 27 (79%) were living at home, 13 of whom were living alone. 25 (74%) of these were admitted with a hip fracture. A new diagnosis was made in 21 (62%) patients, with a total of 34 new diagnoses. The diagnoses included arrhythmia, thyroid dysfunction, ischaemic heart disease, thrombosis and diabetes mellitus. Mortality at one year follow-up was 14%.

Many elderly patients admitted to an orthopaedic unit may have multiple undiagnosed comorbidities, which require specific assessment and treatment.

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23 Characteristics of elderly admissions to an acute orthopaedic unit

Fractures are a common cause of morbidity and mortality in the elderly. Many patients admitted to Orthopaedic units require intensive resource utilisation. We sought to review characteristics of elderly admissions to an acute orthopaedic unit to aid in the development of an Orthogeriatric liaison service.

A prospective observational study was performed on all patients over 65 years of age, admitted to an acute orthopaedic ward. Data retrieved included information on preoperative functionality, mechanism of injury, social supports, pre-existing risk factors for fracture and primary fracture prevention.

63 patients were identified during the study period. The mean age was 81.6 years (range 65-94), with 84.1% female cohort. Prior to admission 50.6% of patients were living at home, of whom 75% (n=12) were living alone. 55.5% of patients were independent. 25.39% of patients had a previous fracture. One patient was on a bisphosphonate prior to admission. 58.49% of female patients and 60% of male patients sustained their fracture as a result of a fall indoors. Services involved in post-operative care included Physiotherapy (100%), Medical social worker (27%), Occupational therapy (6.3%), Geriatric Service (11.1%) and Orthopaedic Rehabilitation Hospital (39.7%). Patients were discharged home to their families (17%), home alone (19%), to convalescence (7.9%) or to a local general hospital (12.7%). 19% of patients were independent at discharge.

Elderly patients admitted to an acute orthopaedic unit should be screened for factors contributing to their fracture. There is a need for organised and accessible medical care for elderly orthopaedic patients with multiple comorbidities.

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24 Creatively using day hospital resources to meet service users needs

The day hospital service in psychiatry of old age is the cornerstone of the old age psychiatry community services. However within the setting of the day hospital there are very often conflicting needs of patients who may have moved from their acute stage of treatment, but still require ongoing support before they can move onto local day centres.

Two groups were developed in specific response to these patients. The ‘Active Rehab Group’ (ARG) was developed for patients who had enduring mental health difficulties who could not be discharged from the day hospital due to likelihood of relapse and lack of appropriate services in the community. 5 patients who had either had regular long admissions to inpatient units or had been heavy users of service personnel (i.e. Community mental health nurse visits, doctor visits etc) were selected to join the ARG. Inpatient admissions in this population decreased.

The second programme developed was the Healthy Ageing Programme, which is an eight-week educational programme that is goal-focussed in its approach. Service users who had completed their acute phase of day hospital were accommodated in this two-hour outpatient group, thereby serving their needs better and increasing acute places in the day hospital.

Both programmes have been developed in response to service need and evidence that specific, skilled intervention based on users needs, can prevent admission. And used in conjunction with acute day hospital services, can allow for a better throughput of clients within existing resources.

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25 Shoe characteristics and postural stability in older women attending a geriatric day hospital

The causes of falls in older people are multi-factorial and include intrinsic factors and environmental hazards such as unsafe footwear. This study examined the effects of footwear on balance in a sample of older women attending a day hospital. Assessments took place in the geriatric day hospital in Beaumont hospital. Demographic data and a brief falls history were recorded. Participant’s footwear was assessed using a Footwear Assessment Form. A Berg Balance Score (BBS) was completed under two conditions-shoes on and shoes off with order counter-balanced. Statistical analysis included repeated measures ANOVA for shoe effect and linear regression for baseline predictors of shoe effect.

100 elderly females were assessed, mean age was 82 years (s.d. 6.5) and mean Abbreviated Mental Test Score 8.2 (s.d. 1.9), 51% were living alone and 80% had a history of falls. The mean BBS was 39.07 (s.d. 9.14) with shoes on and 36.54 (s.d. 10.39) with shoes off (p<0.0001). Wearing their own footwear significantly improved a participant’s balance compared to being barefoot. The greatest benefit of footwear was seen in those with the poorest balance.

This is the first study to look at the effects of usual footwear on balance of frail older patients and identifies that there was a significant benefit. Further studies should investigate whether particular types of footwear are associated with greater benefit.

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26 Prevalence of vitamin D insufficiency in a female community dwelling population in the West of Ireland

Vitamin D deficiency is an established risk factor for osteoporosis, falls and fractures. Previous studies have highlighted the benefits of vitamin D supplements in institutionalised older people but few have looked at the prevalence of vitamin D insufficiency in a community dwelling population. We investigated a population of middle aged and older women attending for routine Dexa scans in February.

A total of 104 consecutive community dwelling females aged 48 years and over [Range 48 to 79 years, median age-56] attending for routine Dexa scans were given a questionnaire on diet, sunlight exposure and lifestyle habits. Bone Mineral Density (BMD) was assessed and Parathyroid Hormone (iPTH) and Vitamin D (25OHD) levels were measured in each patient.

51 patients out of 68(75%) who consented to have blood sampled had vitamin D insufficiency as defined by a 25OHD concentration of <50nmol/L. There was no correlation between low 25OHD levels and BMD [r = 0.080]. Daily dietary calcium and vitamin D intakes were below the recommended levels. Fourteen (13.5%) patients were being prescribed calcium/vitamin D supplements. Winter sun exposure was shown to be an independent predictor of 25OHD levels.

There was a surprisingly high prevalence of hypovitaminosis D in this healthy population of community dwelling females. This is a significantly higher figure than has been found in previous international studies and confirms that a majority of the older population in our region may have subclinical 25OHD insufficiency. A greater awareness of the high prevalence of vitamin D insufficiency in this population should help in devising better fracture prevention strategies.

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27

Syncope presenting to the emergency department of a teaching hospital

Syncope accounts for much morbidity and hospitalisation among older patients. We prospectively studied emergency department (ED) attendances to a major teaching hospital between 10/11/05 - 13/4/2006.

All ED attendance cards of patients seen in the ED were reviewed within 48 hours by a senior geriatrician with syncope experience. Those with possible syncope based on a list of predetermined keywords were then contacted by telephone to determine if syncope actually took place. Those with recurrent syncope were offered assessment in the ‘Falls & Blackout Unit’.

18,898 attendances were reviewed of which 4,059 (21.5%) were > 65 years. 206 (5.1%, CI: 4.4 – 5.8) had transient loss of consciousness of whom 98 (2.4%, CI: 1.9 – 2.9) had syncope. 34 had first syncope without worrying features, 34 were neurally mediated, 17 had a cardiac cause, 5 were unexplained and 8 refused follow up. 69 (70%) patients with syncope were admitted with a median length of stay of 4.5 (1 - 158) days. Using European Society of Cardiology guidelines 35 (51%) of these admissions were not necessary.

This is the first Irish data on the prevalence of syncope among older people presenting to the emergency department (ED). It suggests that diagnosis can be attained in the large majority of such cases and admission can be avoided in a significant proportion of cases if access to a syncope and falls clinic is available.

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28

Prevalence of chronic kidney disease in female patients with hip fracture

Chronic kidney disease (CKD) increases in prevalence exponentially with age. Serum creatinine(SC) is frequently normal in older patients with reduced GFR (Gomerular Filtration Rate). Bisphosphonates are commonly prescribed as a treatment for the secondary prevention of osteoporotic fragility fractures post hip fracture but are not recommended for patients with renal impairment where GFR is less than 35ml/min.

It is important to recognise patients with reduced GFR post hip fracture because caution is advised when prescribing bisphosphonates and indeed other nephrotoxic drugs.

We retrospectively studied 83 female patients > 75 years who were admitted with a hip fracture over a 6 month period. We calculated GFR using the 4 variable Modification of Diet in Renal Disease(MDRD) formula. Serum creatinine(SC) on discharge was used in the calculation.

- n = 83
- median age = 85 years
- 26.5% = stage 3 CKD(GFR 30-59ml/min)
- All patients with stage 3 disease had normal SC.
- 1% = stage 4 CKD(GFR 15-29ml/min)
- 3.5% = stage 5 CKD(GFR <15ml/min)
- All patients with stage 4 and 5 disease had abnormal SC.

31% of female patients >75 years had moderate, severe or established renal failure. However 85% of these had normal SC and potentially unrecognised chronic kidney disease. Caution and vigilance is advised in female patients >75 years post hip fracture for recognition of CKD and drugs prescribing.

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29 Comparison of calcaneal ultrasound with standard DXA parameters to identify patients at risk of second hip fracture

Dual X-Ray absorptiometry (DXA) is the most commonly used technique for assessment of bone status. Calcaneal quantitative ultrasound has also been identified in various studies as being predictive of hip fracture risk. The aim was to compare calcaneal ultrasound and DXA parameters in patients with a single hip fracture (group 1) to those with two hip fractures (group 2).

We assessed 101 patients treated in a tertiary centre to compare the mean differences in calcaneal ultrasound parameters of speed of sound (SOS), broadband ultrasound attenuation (BUA), estimated T-score and bone mineral density (BMD) between these two groups. Similar comparisons were made on mean BMD values by DXA. DXA measurements were made of lumbar-sacral spine, femoral neck and total hip on a Lunar Prodigy scanner and calcaneal ultrasound measurements (Table below for results).

Despite a lack of significant differences between ultrasound parameters or DXA parameters for those from either group, there was a trend towards lower estimated T scores on ultrasound and a lower BMD on DXA. Neither technique was superior in identifying those who had suffered a second hip fracture (this may have been affected by the small number in the second hip fracture group).

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<td>BMD</td>
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30 Changes in 25 (OH) D and 24 hour urinary calcium during the initial phase of treatment with recombinant parathyroid hormone (1-34)

Recombinant parathyroid hormone (rPTH) exerts anabolic effects on bone. While endogenous PTH is an important regulator of calcium homeostasis, it is unclear whether rPTH significantly alters markers of calcium metabolism. The aim of our study was to observe changes in 25 (OH) D and 24 hour urinary calcium (24 U Ca) that occur during the first four months of treatment with rPTH.

We report on 43 (41 female) osteoporotic patients (mean age 70 years) who received Teriparatide(1-34) (20mcg) with supplemental calcium(1000mg) and cholecalciferol(800iu). 25 (OH) D (30-60ng/ml) and 24 U Ca (2.5-7.5mmol/24hr) were measured at baseline and three months.

Values are described as mean (+ SD). Mean values for baseline T-score AP spine, T-score hip and vertebral fractures were -3.5 (+1.2), -2.8 (+1.1) and 1.6 (+1.7) respectively. Mean follow-up time was 116 days (+7.8). Baseline and follow-up 25 (OH) D were 32.24 (+15.36) and 24.48 (+8.45) respectively (p<0.001). Baseline and follow-up 24 U Ca were 4.1 (+2.4) and 4.45 (+2.87) respectively (p-value non-significant).

24 hour urinary calcium was not significantly altered. There was however a highly significant decrease in 25 (OH) D. This may reflect increased conversion of 25 (OH) D to 1,25 (OH) D due to upregulation of 1-alpha hydroxylase by rPTH.

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31 Factors associated with falls efficacy scale (FES) in acutely ill older patients

Fear of falling has been associated with functional decline, poorer health status and reduced mobility. The FES efficacy scale (FES) is a validated tool for evaluating a person's perception of their abilities to perform ADLs as well as their fear of falling. We sought to determine independent FES predictors and therefore identify potential modifiable factors to improve the confidence and mobility of the older population.

FES scores were determined in 141 older patients with acute illness admitted to an acute care facility (mean age 75.8 years, 55% female). Baseline characteristics of patient health, functional ability and measures of gait and balance were recorded at admission and at discharge where possible (n=58).

Using multivariate analysis that adjusted for age, gender, BMI, medication use, comorbidity, assistive device use, MMSE, depression, and stride and swing variability, FES was found to be independently predicted by Barthel index (\(\beta = 0.52, p = 0.015\)), leg pain (\(\beta = 0.39, p = 0.033\)), functional reach (\(\beta = -0.37, p = 0.026\)), pre-discharge velocity (\(\beta = 0.62, p = 0.033\)), average stride time interval at baseline (\(\beta = -1.02, p = 0.025\)) and at discharge (\(\beta = 1.05, p = 0.026\)).

A number of factors influence fear of falling in the older population including gait related variables and the Barthel Index. Interventions designed to reduce fear of falling should focus on identifying and targeting these potentially modifiable factors following admission. A reduction in fear of falling and associated activity restriction in older persons may result in an improvement in their overall health status.

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32 Outcomes of hip fracture care in an orthogeriatrics rehabilitation ward

Fractured neck of femur is an important cause of mortality and morbidity. Post-operative rehabilitation is being increasingly undertaken in specialist Orthogeriatrics Rehabilitation Units (ORU). The purpose of our study was to explore outcomes of hip fracture care in our ORU.

A retrospective audit was performed of 50 consecutive patients admitted to our ORU following hip fracture between April and September 2005. We recorded the following: surgical procedure, ASA score, pre-admission and discharge residence and mobility status.

37 medical records were obtained. Mean age was 81 years and 28 (76%) patients were female. Dynamic hip screw was performed in 21 (57%), the remainder (43%) requiring hemiarthroplasty. 33 (89%) of patients were admitted from their own homes. Prior to injury, 21 (57%) required no mobility aids, 13 (35%) used a stick, with the rest utilising a frame. Before admission, 23 (62%) walked outdoors unaided, 10 (27%) required assistance with the remainder being housebound.

All patients admitted from their own homes were discharged home. 3 (8%) patients admitted from intermediate care were discharged to residential or nursing homes. After discharge, 22 (59%) of patients required a frame, with 15 (41%) using only a stick. The median ward stay was 27 days (interquartile range 19-50).

Most patients were admitted from their own homes. All these patients returned home, albeit requiring an increased care package and mobility aids, indicating crude favourable outcomes for patients who are rehabilitated in a specialist Orthogeriatrics Rehabilitation Unit following hip fracture.

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33 Bone marker response to parathyroid hormone therapy in older osteoporotic patients

Recombinant human parathyroid hormone (PTH 1-34) is an anabolic agent used in the treatment of osteoporosis. Our unit has over 100 older persons, undergoing PTH 1-34 therapy on a database.

Patients who had completed 18 months of PTH treatment were sourced from our Bone Protection Clinic. Patients were reviewed at 3, 12 and 18 months with routine biochemistry and bone markers. DEXA

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Falling is a serious and common problem among older people. Falls affect quality of life and may lead to fear, pain, injury, dependency and even death. Incidence of falls in institutional care is almost three times the rate of community dwellers; injury rates are also higher by 10% -30%.

A retrospective falls audit was undertaken for a period of 12 months (June 2005-June 2006) on a continuing care unit, to determine the extent of the problem. Total residents = 23.

A total of 42 falls were reported, 56.5 % (13) residents were reported to have fallen at least once. 34.7% (8) residents had more than one fall. The maximum amount of falls reported for a single resident = 9 (8.6% (2) of the residents having 9 reported falls) 57.1% (24) of reported falls occurred at the bedside. 21.4 % (9) of falls occurred in the bathroom / toilet area and 21.4% (9) occurred in the sitting room / dining room areas of the unit. 47.6% (20) of the reported falls occurred between 12md and 10pm, 21.4%(9) occurred between 10pm and 6am, 30.9% (13) occurred between 6am and 12md.

Despite in-service fall prevention education for all staff and the identification of residents who are of high risk of falling using a falls risk assessment tool, residents continue to fall and have recurrent falls. In an effort to reduce falls in a continuing care setting, falls prevention requires a multi-focused approach, involving multifactorial risk assessment and preventative strategies.

There was a dramatic response in bone formation markers (PINP, osteocalcin) in these patients representing the potential of older bone to respond to the potent anabolic action of PTH. The areal bone mineral density (BMD) at 18 months does not fully reflect the extent of new bone formation as full mineralization has not occurred. In the absence of three dimensional imaging, bone markers are a good index of response.

<table>
<thead>
<tr>
<th></th>
<th>% CHANGE AT 3 MONTHS FROM BASELINE</th>
<th>% CHANGE AT 12 MONTHS FROM BASELINE</th>
<th>% CHANGE AT 18 MONTHS FROM BASELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PINP</td>
<td>468.2 (31 – 2411.1)</td>
<td>1086.6 (725 – 4820)</td>
<td>688.6 (46.4 - 2315.5)</td>
</tr>
<tr>
<td>Osteocalcin</td>
<td>237.6 (55.7 – 704)</td>
<td>295.5 (-20.3 – 2130.7)</td>
<td>203.9 (-15.2 – 744)</td>
</tr>
<tr>
<td>CTX</td>
<td>274 (-273 – 1501.9)</td>
<td>388.7 (-20.3 – 2130.7)</td>
<td>4577 (40.5 – 4323)</td>
</tr>
<tr>
<td>Vitamin D</td>
<td>-29.6 (-70.2 – 8.1)</td>
<td>-42 (-81.3 – 1.2)</td>
<td></td>
</tr>
<tr>
<td>BMD spine</td>
<td></td>
<td></td>
<td>8.32</td>
</tr>
<tr>
<td>BMD hip</td>
<td></td>
<td></td>
<td>3.75</td>
</tr>
</tbody>
</table>

References:
Low body mass index results in increased falls and fracture risk

Low Body Mass Index (BMI) is associated with higher all-cause mortality than normal and indeed overweight groups. We investigated the relationship between BMI and haemodynamic changes on orthostatic stress. We re-evaluated the relationship between Orthostatic Hypotension (OH) with systolic hypertension and finally BMIs’ relationship with Osteoporosis.

This was a 7 year longitudinal study of all patients that underwent Head-Up-Tilt (HUT), for unexplained syncope or falls. Inpatient and outpatient studies were reviewed.

Automated non invasive beat-to-beat digital artery photoplethysmography (Finomed TNO Amsterdam) was used. Changes in blood pressure on HUT, under standardised conditions, were recorded with BMI. Analyses of subgroups that underwent 24 hour Ambulatory-Blood-Pressure-Monitors (ABPM) or Dual-Energy-X-Ray Absorptiometry (DEXA) scan were performed.

2,222 patients underwent HUT. Systolic and diastolic blood pressure reductions on HUT were significantly different (p<0.0005, p=0.001 respectively), between BMI groups.

592 patients (26.6%) had both HUT and DEXA. Logistic regression revealed that each unit increase in BMI reduced the likelihood of OH by 4% and osteoporosis by 20%.

603 patients had both HUT and ABPM. For patients with OH, the median systolic BP (181.5 +/- 28.99 SD), this was significantly greater than the OH negative group (124.0 +/- 14.14 SD) (p=0.001).

Low BMI is associated with an increased risk of orthostatic hypotension and osteoporosis (major falls / fracture risks). Orthostatic hypotension is also associated with systolic hypertension. These may account in part for the associated increased mortality with low BMI.

Preventing non-collision injuries on buses: Acceleration thresholds that cause falls in older people

In the last 15 years, several medical reports and transport journals have made brief studies about injuries suffered in non-collision accidents by elderly people when using urban buses (1). Data from previous studies and from this on-going project reveals the importance on focusing attention on the interior design of urban buses and the peaks of acceleration/deceleration in the course of regular driving. Our goal is to establish different thresholds of acceleration likely to cause falls in older people standing in a bus.

A computer musculoskeletal model of a human in a standing position travelling on an urban bus has been created using the MADYMO software. An approximate model of the grip force between the hand and handholders of common buses is being developed. The different characteristics of bus floors (wet, iced, dirty, etc.) are being analyzed to establish the stability limits in real situations. Information about the bus ground surface properties has been provided by the bus builder to better approximate the model to the reality.

Real on-going tests of acceleration/deceleration are being carried out in different bus routes using an accelerometer, a battery amplifier and a laptop computer with a PCMCIA data acquisition card. These values are being used, after mathematical treatment with MATLAB, as inputs to the computer model.

The aim of the project is to provide improved interior design of urban buses, make recommendations on driving strategies, focusing on the values of accelerations likely to cause a fall in a standing older person while the bus is moving. Thresholds levels of acceleration/deceleration for stability will be established, for older people, depending on the different conditions analyzed.

Reference:
Mortality after hip fracture

Each year about 60000 hip fractures occur in the United Kingdom with mortality 10-20% above that expected on the basis of age and sex.

We carried out a retrospective audit of 25 medical records for patients who died in our trust following hip fracture from 1/9/2004 to 7/07/2005. 360 patients were discharged with a diagnosis of hip fracture in the study period. 50(14%) of these patients died. Medical records were obtained for 25 deceased patients.

Female = 17(68%) Male = 8(32%).

The majority of patients were aged 81-90 years (56%).

All patients were admitted through the Emergency Dept. All patients underwent surgery with a median time to surgery of 1 day.

Most patients had an intracapsular fracture (68%).

11(44%) had a dynamic hip screw and a further 7(28%) had a hemiarthroplasty.

6(64%) had a general anaesthetic with the remainder receiving spinal anaesthesia.

Just over half of the patients 13(52%) had three or more documented co-morbidities pre-operatively. 5(20%) had a history of cognitive impairment.

Median interval to death = 10 days

The majority of patients (10, 40%) had respiratory tract infection documented as the primary cause of death and a further 4(16%) had myocardial infarction.

Our percentage deaths are comparable to national figures (14.3%) and the majority of patients (52%) were operated on within twenty four hours which is compliant with Royal College of Physicians’ guidelines. All but one patient died as a result of medical complications supporting the input of Geriatricians into the post-operative care of patients admitted with hip fracture.

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Orthostatic hypotension in osteoporotic patients on recombinant PTH treatment

Recombinant PTH (rPTH) is licensed for severe osteoporosis, increasing bone mineral density by 9% at the lumbar spine and significantly reducing vertebral fractures. In this landmark trial, 9% of patients complained of dizziness and orthostatic hypotension (OH). We investigated patients on PTH, to establish the prevalence of OH pre and post treatment with rPTH.

Twenty-four patients (22f and 2m), mean age (SD) 63.3 ± 9.4, were investigated before and within 12 days ± 8 of commencing rPTH therapy, using a Finometer. This measures systolic blood pressure (SBP), mean arterial pressure (MAP) and total peripheral resistance (TPR), supine and within 2 minutes of standing. OH was defined as a drop in SBP of >20mmHg within 2 minutes of standing.

Pre rPTH therapy, 21/24 patients (88%) had a drop of >20mmHg in SBP consistent with OH, of whom 6 were dizzy. Of the 15 asymptomatic OH patients at baseline, 5 became symptomatic post rPTH. 2 of the 3 patients without OH at baseline developed symptomatic OH on treatment. No significant differences were noted in any cardiovascular parameter pre and post rPTH treatment (Table 1).

In our study, treatment with rPTH was not associated with an increased risk of Orthostatic Hypotension. As OH was extremely prevalent, we would advocate paying strict attention to fluid balance and falls education in patients embarking on rPTH treatment.

References:
Orthostatic dizziness and orthostatic hypotension in day hospital attendees

Chronic dizziness affects 29% of community-living elderly (Sloane, 1989) and can be due to orthostatic hypotension (OH) or vestibular dysfunction. We determined the prevalence of orthostatic dizziness (OD) and its relationship with OH and balance in a group of older people attending a day hospital.

We measured postural blood pressure (using an oscillometric device) in consecutive patients attending between 3/1/2006-28/2/2006. We determined Berg-Balance score in 18 of the patients. We defined OD as any history of dizziness from supine to standing.

<table>
<thead>
<tr>
<th></th>
<th>OD+ (N=58)</th>
<th>OD- (N=41)</th>
<th>P VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years) mean (s.d.)</td>
<td>80.2(7.0)</td>
<td>79.8(6.77)</td>
<td>0.76</td>
</tr>
<tr>
<td>MMSE</td>
<td>25.8(3.6)</td>
<td>25.0(4.0)</td>
<td>0.33</td>
</tr>
<tr>
<td>POSTURAL CHANGE (STANDING – SUPINE) IN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systolic BP</td>
<td>-7.7(18.7)</td>
<td>-6.8(14.7)</td>
<td>0.81</td>
</tr>
<tr>
<td>Diastolic BP</td>
<td>+1.0(10.9)</td>
<td>+1.0(10.3)</td>
<td>0.98</td>
</tr>
<tr>
<td>Heart rate</td>
<td>+8.3(6.6)</td>
<td>+6.7(6.1)</td>
<td>0.22</td>
</tr>
<tr>
<td>N(%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male gender</td>
<td>13(22.4%)</td>
<td>9(22.0%)</td>
<td>0.96</td>
</tr>
<tr>
<td>Previous fall</td>
<td>32(55.2%)</td>
<td>2(4.9%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>OH</td>
<td>13(22.4%)</td>
<td>6(14.6%)</td>
<td>0.33</td>
</tr>
<tr>
<td>Berg-Score available</td>
<td>N=8</td>
<td>N=10</td>
<td></td>
</tr>
<tr>
<td>Mean Berg-Score</td>
<td>38.3(4.33)</td>
<td>46.5(6.28)</td>
<td>0.004</td>
</tr>
</tbody>
</table>

OD was very common and was associated with falls and impaired balance. It was, however, not associated with OH (using oscillometric measurement). It may be more useful to refer fallers with OD for more sensitive tests of peripheral and central blood flow than just performing erect and supine BP measurements routinely. Vestibular function testing may also be useful to determine the cause of dizziness.

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Risk factors for falls in patients with Colles fracture

Most Colles fractures (CF) result from falls. Patients with CF have been shown to have one or more fall risk factors (Mulherin et al 2003). This study reports on the incidence of fall risk factors in a population of elderly outpatients (>60 years).

We recruited consecutive patients with CF from orthopaedic clinics. All patients had bone mineral density (BMD) and lateral morphometry on a DXA scanner in a Clinical Nurse Specialist-led clinic. Falls risk assessments included sit-to-stand 5 times without using arms, tandem stand with eyes open and closed, tandem walk, visual acuity (Snellen at 9 feet) and supine and standing blood pressure.

Of the 96 patients recruited (13 male, 83 female) the mean (s.d.) age was 74.7(7.6) years. BMD showed that 46(48%) of patients had osteoporosis, 46(48%) osteopaenic and 4(4%) were normal. Of the patients, 20(21%) failed to complete sit-to-stand test, 39(41%) tandem walk and 32(33%) tandem stand (eyes open). Impaired vision (score of 6/18 or below in both eyes) was also present in 26(27%) patients. Half of our patients reported a history of fractures and

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23 (24%) spent less than 4 hours per day on their feet. Orthostatic hypotension was detected in (20)21% subjects.

This study highlighted the presence of multiple fall risk factors amongst elderly outpatients with previous CF. It is pertinent to assess and reduce falls risk amongst this group. We also found high prevalence of osteoporosis and osteopaenia, demonstrating the importance of osteoporosis assessment in this population.

Reference: Mulherin et al, Osteo Int 2003, 14(9), 757-60

41 Comparison of head-up tilt to active posture change in older patients with suspected orthostatic hypotension

Orthostatic Hypotension (OH) commonly contributes to falls in older patients. The American Autonomic Society accepts several precipitants of orthostatic stress including head-up tilt (HUT) and lying to standing active posture change (APC). We retrospectively reviewed the results of older patients attending a syncope clinic to compare results obtained from each orthostatic precipitant.

Results from consecutive older patients attending a syncope clinic were reviewed. OH was defined as a 20mmHg systolic or a 10mmHg diastolic blood pressure (BP) decrease within 3 minutes of orthostatic stress. All patients initially underwent HUT to 70 degrees followed by APC. BP changes were monitored using digital artery photoplethysmography. The lowest BP recordings within 3 minutes of orthostatic stress were recorded. Mean BP, symptom and heart rate (HR) changes were recorded for each precipitant and compared between stressors.

Results from 66 patients (29 male, 37 female, mean age 76) were obtained. The mean BP change for patients after HUT was 120/52mmHg (s.d. 28/21mmHg) → 103/43mmHg (s.d. 32/25mmHg) (mean Δ 17/9mmHg). The mean changes after APC were 117/58mmHg (s.d. 26/22mmHg) → 85/53mmHg (s.d. 33/25mmHg) (mean Δ 32/5mmHg ± SD). The differences in systolic and diastolic BP precipitated by each stressor were significant (p<0.01 and p=0.045 respectively). Symptoms were present in 10 patients after HUT and 24 patients after APC (p<0.01).

APC precipitated OH symptoms more frequently than HUT and also precipitated a significantly larger decrease in systolic BP in patients attending our clinic.

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42 The efficacy of pre-thickened fluids on total fluid and nutrient consumption among extended care residents requiring thickened fluids due to risk of aspiration

Not for publication

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Degree of satisfaction among patients recently transferred to a nursing home

Despite increases in life expectancy, the demand for placement in nursing homes (NH) remains unchanged at around 5% of the over 65 population. Nevertheless, as the population grows, the absolute numbers in residential nursing homes is increasing. Research examining patient (and relative) satisfaction levels with NH care and the information provided prior to entry to the NH is sparse. The present study aimed to determine satisfaction levels among patients recently admitted to a NH.

Questionnaires were sent out to 70 consecutive patients and relatives of patients who had been transferred from a public hospital to a publicly funded bed in a private residential NH. A letter explaining how to complete the 6 questions was sent with the questionnaire.

Of the 70 questionnaires distributed, 52 (74.2%) were returned. The majority of respondents (85%) were satisfied that they were provided with sufficient information concerning their care options and felt the information provided was helpful. Eighty-eight percent had needed to be seen by a GP following NH admission, however only 60% were satisfied with the medical care provided. Eighty-eight percent of respondents were satisfied with all aspects of the NH care experience. The standard of care was termed ‘completely satisfactory’, ‘satisfactory’, ‘fairly satisfactory’ and ‘poor’ by 73%, 23%, 4% and 0% of respondents respectively.

The majority of residents are pleased with the information provided prior to choosing their NH and are satisfied with the care provided there. Most transfers to NH require medical review soon after admission, however not all are satisfied with the service received.

Social network in a longstay setting - does the social history of bedside accurately reflect social network?

Social network contributes to quality of life in longterm care. This study assessed the relationship of admission social history, social network in the consultant review and patient’s bedside to current social network. Documented in the consultant review are medical details, visitor details, outings, dayroom participation and preferred activities. Bedside surrounds were photographed. A scoring system reflected bedside surrounds: 0 = no personal items, 1 = locker items/personal bedclothes, 2 = photos + above, 3 = radio/ TV + above, 4 = wall mounted family pictures, laundry instructions + above.

In an extended care unit 26 female residents had mean age 82 (67-96) years; mean length of residence 3.5 (0.5-12) years. Admission social history documented marital status 57.7% (n=15); occupation 7.7% (n=2); household before admission 65.3% (n=17); social network before admission 11% (n=3). On consultant review 53.8 % patients (n=14) were visited daily, 65.3% (n= 17) weekly, 15.3% (n= 4) monthly; 19 patients (73%) participated in social activities; 9 (34.6%) had regular outings. Bedside scores for one patient was =0; 2 [7%] scored 1; 10 [38%] scored 2; 9 [34%] scored 3; 8 [30%] scored 4 – no correlation between bedside score and visitor frequency.

Our study highlights poor admission documentation of social history and especially social network. Consultant reviews provided more social network information. We suggest that a structured assessment of social network is required for patients in extended care. We intend to study the relationship of social network to quality of life in our extended care population.
45 Factors involved in discharge to long term care

Although the number of older people requiring long term care (LTC) after hospital admission is a tiny fraction of all admissions (1) the complexity of factors involved mean that they may stay for considerable lengths of time in hospital awaiting discharge (2). This audit of the long term care list reviewed the impact of a number of these factors.

We reviewed a long-term care database arising out of a weekly discharge planning meeting over the period 31/03 – 04/07/06.

There were 26 people on LTC list at start of audit: 47 were added to list and 54 discharged, with an average of 205 patients present on list per week of the surveyed period. 20-25% of the inpatients on the Long Term Care list at any one time were assessed as medically unfit for discharge, and therefore could not accept long term care at the time of bed availability. Consistently between one third and two thirds of patients/relatives had made one or more refusals of LTC beds offered to them, with one patient refusing six nursing home beds. Taking the last week of each month of the survey period to ascertain refusals, the following results were observed – April, May and June showed a 50%, 41% and 61% patient/family refusal rate respectively. Reasons for non-placement included: i) dependency and medical factors – 6 patients refused by public facilities, 8 refused by private nursing homes (MRSA and high dependency being the main reasons for refusal) ii) geography – many beds offered were up to 25 miles distance from the family home, iii) concerns by patient/relative over care arrangements. Arranging further assessment and family meetings contributed further to delay, sometimes up to 8 weeks.

A number of factors have been highlighted, in particular non-availability of LTC places near patient/family homes, a lack of capacity of LTC to deal with high or complex dependency which can direct strategies to improve access to LTC and reduce unnecessary waiting in hospital for older people and their families.

References:

46 An exploration into the perceived factors influencing the implementation of person-centred care in long term care settings: A qualitative study

Demographic changes in society, namely the ageing population and alterations in social fabric have impacted on the prevalence of dementia and an increased need for long-term care settings to accommodate individuals as their disease progresses. Person-centred care (PCC) is both a philosophy of care and a way of practising with people with dementia that is well supported in the literature. This study aimed to explore qualitatively the factors that influence PCC in nursing homes as perceived by the care staff.

Focus groups were chosen as the main method of inquiry and directors of nursing, nurses and care attendants were invited to attend. 33 people participated in all across six focus groups.

Colaizzi’s method of data analysis was used to analyse the data generated by the focus groups.

Eight major themes were identified and discussed in the findings. The themes identified as having an influence on PCC were Communication, Isolation, Importance of support, Respect for personhood, Expectations of care, Time, Staffing configuration and Culture change. The themes reflected the many complexities that are inherent in implementing a person-centred approach when an individual is living in a group environment. The person-centred approach appears to be consistently contingent on a fluid system of care and is interdependent with many other factors.
47 Retrospective audit of appropriate use of proton-pump inhibitors at an elderly long term care facility

Proton Pump Inhibitors (PPI) are widely used for the treatment of dyspepsia. They have minimal side effects, few adverse drug interactions and are well tolerated in long-term therapy. Hence they may be prescribed inappropriately or for too long a period. These medications may be hazardous in the elderly population due to variable drug absorption and polypharmacy.

The audit aims to (1) compare current PPI prescribing habits at the Royal Hospital Donnybrook with the guidelines published by the National Institute of Clinical Excellence (NICE); (2) look at ways of improving PPI use; (3) review cost effectiveness of PPI prescription in this sample elderly population.

Medication charts and notes from 117 elderly long-term residents of The Royal Hospital Donnybrook were reviewed for the type of PPI used and the duration of each prescription. The indications for PPI use were compared with specific NICE guidelines. The cost of PPI use was calculated.

Forty-four patients (37.61%) were prescribed PPIs, with the most frequent indication being gastric irritation induced by chronic Non-Steroidal Anti-Inflammatory Drug (NSAID) use. The most popular PPIs prescribed were Lanzoprazole 30mg (36.4%) and Omeprazole 20mg (34.1%). The annual total expenditure on PPIs in this population was €23,497.24. Ten patients in this sample group were inappropriately prescribed PPIs at a cost of six thousand euros per annum. This was mostly due to poor case documentation and inadequate patient follow-up. Tighter adherence to prescribing guidelines and regular review of maintenance treatment can minimize inappropriate use of PPIs and improve the cost-effectiveness of these prescriptions.

References:

48 Should dependency be used as a criterion for admission to public long stay beds

There has been a significant increase in the number of patients requesting admission to a public long term care (LTC) bed in Waterford. All are placed on the same chronologically based list. There is a great discrepancy in the dependency level of those on the list.

We studied levels of dependency in patients on the public LTC list currently resident in private nursing homes and compared them with those of public long stay patients. The Barthel Index was used as a surrogate of dependency.

107 of the 159 patients on the waiting list for 98 LTC beds (St. Patrick’s Hospital) are residing in a private nursing home. There is significant variability in dependency within the public hospital with 17/96 patients having a Barthel score of 14 or more. 23/107 on the public LTC list residing in private nursing home have a Barthel of 2 or less. 43/96 of the public hospital group have a Barthel score of 7 or more, 42/107 of the private nursing home group have Barthel score 6 or less.

The increase in requests for public LTC beds has not been met with an increase in public beds. Public LTC beds are much better resourced than private nursing home beds. We need to move away from a chronological based list to a system of admitting the most dependent directly to a public bed. This study helps to guide what dependency level we should look at in the prioritisation criteria.

References:
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Waterford Regional Hospital, Waterford
Hair growth as an indication of time spent awaiting admission to long term care

Advances in medical treatment have resulted in the population surviving longer. Increases in the population aged 65 years and over is likely to have a bearing on the number of patients requiring long term care (LTC) and until clear entitlement guidelines are produced the length of time spent awaiting nursing home admission will continue to grow. It was observed that many patients transferred from acute care settings had obvious grey hair roots on admission to LTC. The present study aimed to determine whether the length of grey roots in patients admitted from acute care was associated with the length of time spent awaiting transfer to LTC.

Female patients (N = 8) with dyed hair consecutively admitted to LTC were studied. Grey hair roots were measured at the vertex of the skull and correlated with their length of stay in acute care while awaiting LTC.

A strong positive correlation exists between the length of new hair growth in patients and length of stay (r = 0.82; p<0.05).

The length of grey roots in patients is proportional to the length of time spent waiting transfer from acute to the LTC setting. We propose this novel sign of time spent awaiting LTC be called ‘St. Mary’s Sign’.

Oral health status of older adults in the continuing care setting

Poor oral health can lead to life-threatening conditions including malnutrition and dehydration, brain abscesses, valvular heart disease, joint infections, cardiovascular disease, and pneumonia. As the mouth plays an important role in appearance, speech and intimacy, poor oral health can impact on self-esteem, social isolation and depression. (1) Older adults residing in continuing care settings are at high risk of developing complex oral disease and dental problems. (2)

An audit of the dental condition of the residents on two continuing care units was undertaken to establish the current dental condition and oral care needs of the residents. (T= 44)

69% (30) were dependent on nursing staff for their daily oral care needs, 65.5% (29) of residents were edentulous, 41% (12) of the edentulous residents had no dentures, 41% (12) of the edentulous residents had full dentures, but only 75% (8) of these residents wore their dentures. 13.6% (4) residents used partial dentures and had some natural teeth, 18 % (6) used either top or bottom denture only, 34.5 % (15) - of residents had some natural teeth in poor condition.

Nurses in the continuing setting face huge challenges in an effort to promote effective oral care by providing:-
- Assistance to residents who are dependent for their oral care needs.
- Oral health education for all residents including those capable of independent oral care.
- Regular oral assessment and appropriate referral to a dental practitioner for oral mucosal screening as the prevalence of oral mucosal lesions increase with age.

References:
51 Evaluating specialist geriatric clinical input in continuing care patients

Clinical and financial effectiveness of visiting Geriatricians in Hospital Continuing Care Wards (CCW) needs evaluation.

This study was carried out in 10 CCWs (mean age 82.5) where all patients are screened, pre-admission, by a placement panel after full investigation.

Initially the study tabulated demographic, medical, nursing details and dependency scores. Medications and costs were tabulated in all patients. Randomisation then took place into control and intervention groups. An expert group of Geriatricians, pharmacists and nurse specialists, recommended medication changes following patient review in the intervention group. Six international tools of accepted best practice determined appropriateness of medications for the intervention group.

66.1% of advice was implemented by the attending medical officers. The control (n=114) and intervention groups (n=111) were comparable in age, gender, level of nursing care, Barthels and Mental Test Scores. Post intervention there was no improvement in patient Barthel (6.4 pre, 6.3 post) or Mental test scores (4.2 pre, 4.2 post). Total medications had only reduced by 0.3 per patient (from 1,352 to 1,282). However, the intervention group had increased medical reviews, acute hospital admissions, longer hospital stay and mortality rates (3.87 intervention v 3.06, p<0.0005, 11 v 6, 13.8 days v 11.5, 15.3% v 9.7% respectively). The cost of implementation was 102,453 euro with savings of 20,972 on medication.

This study demonstrated no financial or clinical benefits by intervention of specialist Geriatricians. This suggests that, for elderly patients, maximum benefits from specialist Geriatrician input is probably best concentrated in early intervention in acute illness and rehabilitation.

Reference:

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52 Resident characteristics associated with type of long-stay facility

The choice of residential care facility is primarily decided by geriatric assessment, the financial means of the individual and availability of beds. This study explores the differences between those currently in long-term care facilities in the south east of Ireland.

Carers of 207 randomly selected long-stay residents were interviewed. Resident’s reported functional dependence was quantified using Barthel scoring and the SMAF (Functional Autonomy Measurement System). Age and elements of functioning were compared using non-parametric tests. Logistic regression was used to deduce those factors most associated with type of residence.

Across all dependency scores, residents in hospitals were most dependent and those in community homes least dependent.

Logistic regression yielded the following as strongest predictors of place of care:
- high total SMAF score predicts requirement for a hospital or nursing home (p<0.001)
- female sex predicts nursing home rather than hospital care (OR 0.435; p<0.05)
- older age predicts residence in a community home rather than welfare home (p<0.05)

This study demonstrates the usefulness of epidemiological tools in describing the residents catered for by different types of long-stay facilities for older people.

Reference:

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<thead>
<tr>
<th>AGE</th>
<th>BARTHEL (0-20)</th>
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<tr>
<td>Nursing Home</td>
<td>85</td>
<td>8</td>
</tr>
<tr>
<td>Welfare Home</td>
<td>77.5</td>
<td>16</td>
</tr>
<tr>
<td>Community Home</td>
<td>82</td>
<td>17</td>
</tr>
</tbody>
</table>
Dedifferentiation and nursing home institutionalisation

An initial study of 25 older adults found different numbers of ability factors in nursing home residents (NHRs) and community dwellers (CDs). Similar findings have been used to hypothesise a dedifferentiation process in the ageing brain. Given that the samples were matched, the difference appeared to be due to nursing home institutionalisation. This assumption was tentative, however, as the number of participants was small.

Data from ability assessments conducted as a part of the Berlin Ageing Study were then analysed. While the results indicated similar patterns they were also subject to several limitations. Consequently, this study is an explorative investigation of the influence of NH institutionalisation on the underlying ability structures of low dependency older adults.

A cross-sectional comparative analysis of the capabilities of 50 CDs and 50 low-dependency NHRs was conducted. An informal structured interview was also used to gather additional demographic, psychiatric and health information. Factor analysis (principle axis factoring) was then used to the underlying ability structures.

While a reduced factor structure was evident for the NHRs, the individual abilities only correlated moderately with each other and the variance that the factors accounted for was actually less than the factors of the CDs. Thus the findings of this study do not support dedifferentiation. However, several issues may have affected the research, including sample size, NH resident mix and sampling adequacy. In light of these limitations and the findings of the initial studies, it is recommended that this topic is further investigated with larger samples and where there are more distinct categorisations of long-stay care.

Role of occupational therapy in extended care for older persons

With recent concerns over standards in the continuing care of older persons it is valuable to explore the role of occupational therapy in extended care units for older persons. The role of occupational therapy is to enhance the daily functioning and psycho-social well being of older persons living in the community or in extended care. Occupational therapists use several techniques to achieve this such as life review, sensory stimulation, activity groups, rehabilitative procedures, home safety instructions and assistance with adaptive equipment.

Clinical audit of 44 clients in two continuing care units was carried out to explore the need for occupational therapy services using: 1. Chart reviews; 2. Informal interviews with other health care professionals; 3. A seating audit; 4. Mini Mental State Exam (MMSE); 5. Barthel Index (to assess ADLs and dependency levels).

From the audit we identified the following needs: 48% require falls prevention input; 18% have specific seating needs; 47% currently attend recreational therapy and may benefit from occupational therapy in conjunction with this; 53% may benefit from individual/group cognitive activities; 16% may benefit from behaviour intervention, for example sensory stimulation; 38% would benefit from occupational therapy input in their ADL’s.

Our Audit strongly suggests that occupational therapy has an important therapeutic role and can contribute to the quality of life of older persons in continuing care.

Reference:
Prospective memory in mild cognitive impairment: subgroup analysis of subtypes

Prospective Memory (PM) is the ability to remember to perform an intended action in the future, and has been argued to be a more sensitive indicator of early dementia, compared to retrospective episodic memory. Relatively little is known about PM functioning in Mild Cognitive Impairment (MCI).

The study aimed to: 1. Investigate the frequency of PM deficits in MCI; 2. Establish the discriminatory capacity of a PM test for detecting MCI; 3. Investigate the pattern of neuropsychological deficits in two MCI-subgroups [MCI-suspected Alzheimer’s disease (MCI-AD; n=20), and Vascular Cognitive Impairment-No Dementia (VCIND; n=19), compared to normal controls (NC; n=21). A newly developed PM test (Silly Sentences; SS), calculated on 80 sentences per book, was the main measure of syntactic complexity of language. Metaphor density was assessed by counting the number of metaphor ideas per thousand words over 4 chapters in each book. The relationships between outcome variables and age were examined using linear regression.

Both MCI subgroups reported a higher frequency of retrospective and PM failures compared to NC’s. However, MCI subgroups did not report a higher frequency of PM failures compared to retrospective memory failures. Receiver Operating Characteristics Curve analysis showed excellent discriminatory capacity of the PM test for detecting MCI. With cut-off score < 8, the SS-Non-Specific condition achieved: Sensitivity=81%, Specificity=95%, and Overall Accuracy (OA)=86%, with Positive Predictive Value (PPV)=97%, and Negative Predictive Value (NPV)=74%. When the particular SS-conditions were dropped from a Multiple-Discriminant-Analysis, leaving Stroop and MMSE-7s combined, the discrimination dropped dramatically, confirming the important contribution of the PM test. What’s more, only the SS-Specific-Non-Salient test discriminated between MCI subgroups (Sensitivity=68%, Specificity=84%, OA=76%, PPV=81%, NPV=71%). Although correct classification rates for MCI-AD’s was low (56.3%), up to 80% of VCIND patients and 100% of controls were correctly classified.

Based on its high discriminatory capacity, the present study indicates that PM tests are a potential useful adjunctive tool to detect MCI.

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Language changes with healthy ageing? Ask Jeeves

Ageing has little effect on language comprehension or vocabulary. However, an age-related decline in the complexity of adults’ language, even with healthy ageing, has been reported in some studies. We examined changes in language production with age in the published works of P.G. Wodehouse (1882-1974), a writer whose long writing career and stylistic consistency facilitated such an assessment.

We studied 20 books: 10 from the Jeeves and Wooster series (1934-1974) and 10 from the Blandings Castle series (1915-1969). All texts were converted to digital format using scanning software. The number of distinct words in the first 45,000 words of text in each book, calculated using concordance software, was used as a marker of vocabulary size. Mean clause per sentence (MCS), calculated on 80 sentences per book, was the main measure of syntactic complexity.

Vocabulary size showed a non-significant increase with age in a linear fashion ($R^2 = 0.19$, $p=0.06$). Syntactic complexity increased with age ($R^2 = 0.22$, $p=0.04$). Metaphor density showed a non-significant linear increase with age ($R^2 = 0.13$, $p=0.1$); a quadratic model, with a peak at 70 years, gave a better fit for this variable ($R^2 = 0.36$, $p=0.02$).

This longitudinal study of a single writer suggests that decline in syntactic complexity is not an inevitable feature of ageing.

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57 Investigating episodic retrieval of autobiographical memories using the episodic autobiographical memory interview in young and elderly healthy individuals and patients with mild Alzheimer’s disease

Researchers have recently posited that autonoetic consciousness, which facilitates subjective mental time travel, is the hallmark of episodic retrieval (Wheeler, Stuss & Tulving, 1997). The Episodic Autobiographical Memory Interview (EAMI) is a new assessment that attempts to elucidate potential behavioural markers accompanying recall of truly episodic memories.

The EAMI was validated using 30 healthy elderly control individuals (Aged: > 60; MMSE > 27), a sample of 30 gender- and education-matched younger control individuals (Aged: 30-60, MMSE > 28) and 15 mild Alzheimer individuals (Age > 60; MMSE > 20). Comparison tasks for validation included Kopelman et al’s (1990) Autobiographical Memory Interview (AMI), the Autobiographical Memory Fluency Test (Dritschel et al, 1992), the CERAD acquisition/retention word-learning task (Morris et al, 1988) and letter/category fluency tasks.

The EAMI discriminated well between the three participant groups, with younger controls tending to mentally “re-live” the reported memories to a larger degree than older controls and AD individuals. There is evidence to suggest that the level of contextual detail elicited on the EAMI correlates well with subjective “re-living” judgments and “Remember/Know” judgments. The emergence of a large number of “episodic-like” memories, which were rich in contextual details yet without an accompanying endorsement of “re-living” was noted in the older control group.

Age and emotionality of memories are discussed as factors that potentially modulate episodic retrieval of memories via autonoetic re-experiencing, and may discriminate between those memories that are truly episodic versus those that are “episodic-like” in nature.

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58 Decisional capacity in the older adult

The rapid aging of the Irish population and longer lifespan demand a better understanding of the decision-making needs of older people. Good decision-making skills in older adulthood are very important for both physical and psychological well-being. The current conceptualisation of capacity utilises legal standards of choice, understanding, appreciation and rational reasoning.

This study examined decision-making capacity in a group of older adults attending a psychiatric day hospital and a medical oncology day ward. It was a cross-sectional study. We also studied cognitive factors that might influence decision-making capacity.

The subjects were aged 65 years and older. In total 40 older adults were interviewed, including 20 males and 20 females. Subjects completed the Capacity to Consent to Treatment Interview (CCTI) and neuropsychological tests assessing logical memory, language and executive function.

Demographic details of participants were collected and will be presented in tabular form. Component scores for each ability (choice, understanding, appreciation and rational reasoning) across the CCTI instrument will also be presented. We found the CCTI easy to use and incorporate into assessment interviews for both patient groups. However the CCTI and similar capacity instruments should be used to contribute, not substitute for, an individualised assessment and interpretation. Clinical evaluations of capacity should also be interpreted in light of the individual’s case particulars, including values and life span perspectives. Predicting sources of good and poor decision-making in older adults is crucial for enhancing the quality of life of older adults and their families.

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Demographic characteristics of first consecutive 70 participants in the North Dublin population stroke study

Although stroke is the commonest cause of acquired adult disability and a major source of hospital admission and resource utilization, accurate data on stroke frequency and outcome are lacking in the Irish population. The North Dublin Population Stroke Study (NDPPS) is a large population-based prospective cohort study of stroke in North Dublin city, which aims to accurately establish the incidence and outcome of stroke in an Irish urban sample.

First-ever and recurrent stroke and TIA cases were ascertained from multiple overlapping hospital and community sources according to established criteria for ‘ideal’ stroke incidence studies. Stroke was defined according to WHO criteria, and TIA by the Oxfordshire/OXVASC definition. Unclear eligibility, TIs and potential recurrences were assessed in-person by a study physician. Demographic, educational, and clinical data were recorded.

Of the first 70 participants, 71.4% were men, Age:< 65 years 21.4%, >65 years 51.4%, >80 years 28.5%. The qualifying event was First ever stroke in 82%, recurrent stroke in 4.7%, First ever TIA in 7%, and prevalent TIA in 4.7%. 78% had finished Primary level education, 20% completing Secondary, and 3% Third level education. Pre-stroke risk factors prior to stroke were: hypertension 44%, diabetes mellitus 12%, hyperlipidaemia 42%, current smoking 20%. CT Brain was performed in 100%, with MRI Brain in 42%. Stroke classification was 71.4% Ischaemic infarct, 71% ICH, 1.4%SAH, 12.8%TIAs & 71% unknown.

These preliminary data on NDPSS participants indicate an accurate statistical analysis of stroke in the given population in Ireland. This will enhance accurate targeted service planning and provision for stroke in Ireland.

Effect of drug licensing and guideline implementation on thrombolysis for stroke

Intravenous recombinant tissue plasminogen activator (rt-Pa) is a proven treatment for acute ischaemic stroke when administered within three hours of stroke onset. In the United Kingdom rt-Pa was provisionally licensed in April 2003. Thrombolysis guidelines advising referral of patients presenting within two hours of stroke onset were disseminated to the Greater Glasgow area in October 2004. Changes in rt-Pa usage relating to numbers treated and source of referral were evaluated.

Retrospective review of all stroke patients receiving intravenous rt-Pa. Prospectively collected data included stroke severity (NIHSS: National Institute of Health Stroke Scale), onset to treatment time and source of referral. Patients were described according to three time periods (1) Pre-licensing (1996-March 2003), (2) Post-licensing (April 2003-October 2004) and (3) Post guidelines (October 2004-March 2006). The South Glasgow Stroke service accepts referrals directly from primary care, local accident & emergency and other hospitals.

141 patients (48% female) received intravenous rt-Pa (1996-March 2006). Median age 68 (IQR 58,76), median NIHSS 16 (IQR 11,19) and median onset to treatment time 175 minutes (IQR 152,185). Pre-licensing 31 patients were treated (0.4/month), 35 patients post-licensing (1.8/month) and 75 patients (5.0/month) post-guidelines. Licensing saw an increase in the proportion treated from other hospitals. (Pre-licensing 10/31 (32%), post-licensing 17/35 (49%). Guideline implementation resulted in a further increase with 54/75 (72%) patients treated being referred from the local area.

Drug licensing and guideline implementation has increased treatment rates and influenced the source of thrombolysis referral. Transfer of patients from other hospitals to a single treating centre is feasible.
A preliminary analysis of early recurrent stroke after incident stroke and TIA. The North Dublin population stroke study

We present a preliminary analysis of factors associated with early (7 and 28 day) recurrence in the first 6 months of the North Dublin Population Stroke Study (NDPSS), a population-based prospective cohort study in 290,521 North Dublin City residents.

Case ascertainment is performed using multiple overlapping community and hospital sources according to recommended criteria (1). Recurrence is defined according to Rothwell’s definition (2). Suspected recurrences were detected by assessment at 7 and 28 days post-onset, and confirmed by physician evaluation. A nested case-control analysis for recurrence risk factors was performed, with non-recurrence NDPSS controls matched 2:1 with cases by age and gender.

There were 23 recurrent strokes, 47.8% of which had occurred by 7 days. Crude recurrence rates were 4.1% at 7 days and 8.1% at 28 days. The initial qualifying event for recurrent cases was ischaemic stroke in 43.5% (10 cases) and TIA in 56.5% (13 cases).

Recurrences had a median Rankin score change from baseline of 3 (25-75% IQR 0-5), compared to 1 (0-4) in controls (p=0.4). There was no association between recurrence and stroke risk factors (hypertension, diabetes, current smoking, hyperlipidaemia, coronary artery disease, atrial fibrillation), treatment in a Stroke Unit, and care by a Stroke Team (p>0.1 for all).

Overall 28 day recurrence rates were similar to those reported in other population studies. TIAs were associated with a recurrence rate similar to ischaemic stroke, confirming their importance as a stroke warning syndrome. Recurrent stroke was associated with greater functional disability compared to controls.


Older and younger people at a rapid access TIA clinic

There is increasing interest in rapid access transient ischaemic attacks (TIA) clinics following recent studies which defined a very high risk of early stroke after TIA. Although most strokes occur in older people, the profile of older people attending such clinics has not been well characterized. We investigated whether older people present with a differing profile of stroke and non-stroke disease than younger people.

We studied all referrals in the first 3 months of a rapid-access TIA clinic established by a geriatric medical service. All referrals were by means of a proforma available online for family doctors and emergency room physicians (www.amnch.ie). Using the ABCD score, admission is recommended for high-risk patients; all others are seen within one week at a rapid access clinic.

Of 59 patients seen, 27 were < 65 and 32 were > 65. Of these, 34 (58%) were adjudged to have a TIA or minor stroke (Table 1). No significant difference was seen between the proportion with a diagnosis of TIA/ minor stroke and other primary diagnoses between age groups. However, older people referred as a TIA were more likely to have a minor stroke (30%) compared to younger people (14%).

This preliminary data suggests that diagnostic rates for TIA and minor stroke are similar among older and younger people referred to a rapid-access TIA clinic when the referring doctor is guided by a pro-forma. However, completed stroke (which carries a more serious prognosis) is more commonly missed among older people by referring physicians and this topic requires further study.

The role of transthoracic and transoesophageal echocardiogram in identifying cardiac causes of stroke

It is felt that approximately 20% of ischaemic strokes are cardioembolic in nature[1]. There are definite and possible cardiac sources of emboli[2] that can be detected through the history, examination or further investigation. The aim of this audit was to ascertain the role of transthoracic (TTE) and transoesophageal (TOE) echocardiogram in identifying cardiac causes of stroke.

The records of patients who had suffered a cerebral infarct between 01/01/04 and 30/06/05 were appraised. Results of echocardiograms were obtained via the TOMCAT database system in the hospital ECG Dept. Significant findings, as listed in the study by Ay et al[2], were those that may not have been identified by initial evaluation of the patient.

145/227 (63.9%) consecutive patients underwent TTE. At least one abnormality was discovered in 29/145 (20.0%) patients who underwent TTE. The only positive abnormalities found on TTE were thrombi, reduced ejection fraction (EF) and valvular lesions (Table 1).

TOE found abnormalities (aortic atheroma, PFO or vegetations) in 2/8 patients under 65 years and 8/10 patients aged 65 or older that had not been found on TTE.

TTE and TOE identified a significant number of abnormalities that have been considered sources for cardioembolic stroke. However the issues of whether the significant valvular lesions could have been identified by clinical examination and whether the results of the echocardiogram changed management were not addressed by this audit. We would suggest that risk stratification needs to be formulated to increase the effectiveness of echocardiogram’s role in the stroke work-up.

References:
An investigation into fatigue and depression in people who have had a stroke

Fatigue and depression are common co-morbidities post stroke. Fatigue has been reported to present in 39-72% of people after a stroke (Colle et al. 2006), to date no Irish data is available on the prevalence of fatigue and its nature. Cassidy et al. (2004), in an Irish study, report that one in five people present with a major depressive disorder after their first stroke.

The aim of this study was to examine the profile of fatigue and depression in an Irish population.

The study sample comprised two groups of age and gender matched people. Matching of the groups took place to minimise the possible confounding effects of age and gender. A face-to-face questionnaire methodology was employed, and included both the Geriatric Depression Scale (n=94) and the Multi-Dimensional Fatigue Inventory (n=120).

No relationship was determined between either fatigue or depression and age or gender.

The average fatigue score for people with stroke is 13.5, compared to 7.4 for those who have not had a stroke. Similarly, the average depression score for those with a stroke was 13.0, compared to 5.5 for those without this diagnosis. Statistical analysis determined a statistically significant difference between the two groups.

The data concurs with previous opinion that fatigue and depression are common and persistent in people who have had a stroke. Both are independent of age, gender and physical function. This provides a baseline for future research, which will evaluate fatigue and depression in this population, and design a client-centred, evidence-based intervention to reduce fatigue.

References:
2. Cassidy et al, Disabil Rehab, 2004; 26(2), 71-77

<table>
<thead>
<tr>
<th>ABNORMALITY</th>
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<th>TOTAL (N=145)</th>
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<td>4 (3.42%)</td>
<td>4 (2.76%)</td>
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<td>Significant aortic or mitral valve lesion</td>
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Table 1

SPREAD OF ABNORMALITIES FOUND ON TTE ACCORDING TO AGE
66 Prospective audit of vascular outcomes of patients with transient neurological symptoms not attributed to TIA. The North Dublin population stroke study

The diagnosis of Transient Ischaemic Attack (TIA) in patients presenting with transient neurological symptoms (TNS) is principally based on clinical history. Current diagnostic criteria for TIA were originally established by consensus with little data regarding their validity. We sought to prospectively audit the vascular outcomes of patients considered not to have developed a TIA at initial assessment in Rapid Access Clinics (RACs) established in the setting of the North Dublin Population Stroke Study (NDPSS).

A detailed description of NDPSS methods is submitted separately. Following initial assessment at the RAC, a telephone interview was performed with the patient or carer. Standard questions assessed the presence of stroke, further TNS, myocardial infarction, or sudden cardiac death, and the prevalence of vascular risk factors.

Of 85 cases assessed in the RAC between 24/11/05 and 31/05/06, 35 (41%) non-TIA cases were identified. Of these, 27 (77%) were successfully contacted. The mean interval between RAC visit and follow up was 16 weeks. The mean age of the patients interviewed was 66 yrs (Range 29 - 85yrs); 9 were male, 18 were female. Risk factors identified in this group were Hypertension 16/27 (55%), Hypercholesterolaemia 9/27 (33%), Smoking 11/27 (40%) and 3/27 had diabetes. The assigned diagnosis of these patients were: 16% Migraine, 12% Postural Hypotension, 12% Benign Positional Vertigo, 60% Others. No cases of stroke, myocardial infarction or sudden cardiac death were identified. Two (4%) developed further neurological symptoms (one Bell’s palsy, one awaiting reassessment).

These data support the safety of the RAC model when conducted by experienced physicians and the sensitivity of current criteria for TIA diagnosis.

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67 Developing a rapid Access TIA clinic: Current practice and priorities in primary care

Assess current practice and service expectation of general practitioners (GPs) in early management and referral of patients with suspected TIAs so as to inform service development of a Rapid Access TIA Clinic.

Questionnaire survey of 80 local GPs in AMNCH catchment area.

Of the 51 who replied (64%), 71% refer patients with suspected TIA directly to A&E; 39.4% refer to OPD (geriatric medicine 86%, G(I)M 40%, Neurology 20%). Letter/fax was the preferred method of communication for referral (82% first rank), over telephone and email least favoured. In prioritising symptoms, 89% ranked hemiparesis and 86.8% dysphasia (87%) as priority symptoms. Recurrent events and atrial fibrillation (both 79%) were the next most important clinical factors for urgent referral. However 60% viewed both amaurosis fugax and ‘blackouts’ as equal priority symptoms. Only 55% routinely give driving advice to patients with suspected TIAs. Almost all (87%) GPs felt that a referral protocol to a rapid access TIA clinic would be helpful.

While current GP practice is largely to refer to A&E, a substantial majority of the surveyed GPs felt a referral protocol to a Rapid Access TIA clinic would be helpful. GPs appropriately prioritise clinical factors in relation to TIAs but ‘blackouts’ are also a TIA referral priority for many. Almost half of the general practitioners give no driving advice post suspected TIA. ‘Communication’ and ‘ease of access’ were flagged as priorities for general practitioners in development of a TIA service.

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An ethnographic study of a stroke (support) group

Stroke survivors and their families are at risk of loneliness and isolation in addition to other psychosocial problems. A Stroke Support Group was set up to provide mutual support and social integration. The study aim was to explore the experiences of people attending the group. Objectives included understanding gender differences in stroke, determining health beliefs and values of the group and exploring post-stroke psychosocial difficulties.

Data collection included participant observation of the group’s meetings and outings over 1 year and recording of field notes. Unstructured interviews based on the analysis of observation data were held with a purposive sample of 13 participants, including stroke survivors and carers.

The findings of this research included: benefits of group participation; psychological effects including suicidal intent; life changes for women; life changes for men; health beliefs and values of the group; and gendered dominance – effects on the group. The ‘benefits of group participation’ was sub-divided into comparing, similarity and identity; social interaction, helping others and group moods.

Men and women were affected equally by the loss of valued roles and identities, such as ‘house-wife’ or ‘man of the house’. All participants benefited from being part of the group. Participants were very reluctant to take anti-depressants even when prescribed or dispensed, including those who had considered suicide. Although aware of risk factors for stroke, many (particularly men) held a fatalistic view and did not heed advice regarding smoking and diet. Further research is needed in the area of stroke in the Republic of Ireland.

Development of a comprehensive stroke service 2002-2006. Results of the Mater University Hospital (MMUH) stroke audit

It is recommended that all acute hospitals treating stroke should have dedicated stroke units as they significantly reduce morbidity and mortality. An acute stroke service was established in the MMUH in 2002, including an Acute Stroke Unit (ASU). Other components include integrated multidisciplinary care, Rapid Access Clinics 3 times weekly, bimonthly Stroke Prevention Clinics and a mobile Stroke Team. We describe the service’s structure and expansion.

The ASU opened in 2002, initially with six protected beds, but was later expanded to 12 beds. The unit is run jointly between Medicine for the Older Person and Neurology Depts. The care is multidisciplinary with dedicated nurses and rehabilitation staff, integrated ward rounds and clinical conferences.

The number admitted directly from A&E has increased from 15.6% in 2003 to 35.5% in 2005. 489 patients have been treated in the Unit to date. A stroke audit was performed for a 19-week period in 2003. There were 107 hospital admissions with acute stroke/TIA (mean, 5.7 per week). Stroke accounted for 7.5% of all general medical admissions. The mean age was 73 years (range 41-91). The Stroke Team evaluated all patients, 75% were seen <48 hours of arrival. The Neurology team cared for 58.9% acutely. Forty-one % of all strokes were admitted to the ASU. The median length of stay was <21 days; 10% remained in hospital for >112 days.

Planned developments include a complementary 6-bedded rehabilitation stroke unit in St. Mary’s Hospital and the provision of a 24-hour thrombolysis service.
70 Thrombolysis of stroke patients: A possibility in Sligo General Hospital?

There is evidence that patients treated within 3 hours of stroke, with thrombolytic therapy have reduced death or dependency at six months post stroke. We wanted to determine what changes are necessary to make thrombolysis feasible in Sligo Hospital.

A retrospective study of 50 patients with stroke in 2005 was gathered from the Hospital Information System. From the records we included age, gender, location of initial assessment, admission under the care of a general physician or physician with special interest in stroke, time interval from onset of symptoms and admission to performance of CT brain scan.

The age range was between 37-92 years and mean age was 74.5 years. There were 28 females and 22 males. 25(50%) were initially assessed in Medical Assessment Unit, 24(48%) in Casualty and 1 was not recorded. 42(84%) were admitted under the care of consultant physicians and of the 42(84%), 40(80%) were then seen by the physician with special interest in stroke. Only 3 (6%) had CT within 3 hours from time of admission and majority had CT between 14 to more than 48 hours. 36 % had CT after 24 hours and 18% had CT after 48 hours.

We demonstrated that for thrombolysis to be feasible in Sligo Hospital educating the public is crucial for early presentation. Stroke should be identified as a medical emergency by medical staff. CT services should be made readily available and a protocol is required for efficiency and speed.

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71 Psychological and clinical predictors of depression in acute stroke

Depression in acute stroke has been shown to be associated with greater functional impairment. Psychological variables such as adaptive strategies and perceived control may have as equal importance as clinical variables in determining depression in acute stroke. This study aimed to investigate Baltes profile of adaptive strategies, Selection, Optimisation and Compensation (SOC), belief in personal control and their association with stroke severity and disability to predict depression in acute stroke.

One hundred and fifty stroke patients (52% female) mean age 71 years ±13.4, were interviewed within 6 weeks of admission. Depression was assessed with the HADS Depression scale. Strategies of adaptation were measured using the 15 item Selection (Elective and Loss-based), Optimisation and Compensation questionnaire (SOC-15), perceived control with the Recovery Locus of Control questionnaire (RLOC), Stroke severity with the Orpington Prognostic Scale (OPS) and disability with the Barthel Index (BI).

The psychological variables RLOC, adaptive strategy Optimisation, total SOC score and clinical variables OPS and BI correlated strongly with depression scores (p<.001). Regression analysis showed that the adaptive strategy Optimisation (β = -.22, p = .005) and BI (β = -.29, p = .001) were the best predictors of depression. RLOC, Optimisation and BI accounted for the most variance (AdjR² =.15; F 3,146 = 9.6, p<.0001) in the regression model. OPS was not a significant predictor of depression (β = .09, ns).

These results highlight the importance of psychological variables in predicting depression in acute stroke. Psychological variables can facilitate in the early detection of depression in acute stroke and in turn support the rehabilitation process of functional recovery.

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72 Difference in recognition of right and left hemispherical strokes in an Irish stroke population

Left and right hemispherical strokes can present differently, often depending on the side of dominance. Dominant hemispherical signs and symptoms include aphasia, however non-dominant hemispherical strokes can present with neglect and other higher cortical features. Signs and symptoms associated with non-dominant hemispherical strokes are inconsistently documented and frequently unrecognised.
Blood glucose control in acute ischaemic stroke patients using a glucose-potassium-insulin infusion

Post-stroke hyperglycaemia is associated with a worse stroke outcome. Intervention with insulin for aggressive blood glucose control is currently unproven. We recruited patients to a randomised placebo-controlled trial examining the effect of insulin on MRI lesion volume progression.

Patients with hyperglycaemia (blood glucose >7.0mmol/l) with MRI proven acute ischaemic stroke within 24 hours of ictus were randomised to either placebo (Normal saline) or insulin. Insulin was administered in the form of a Glucose-Potassium-Insulin infusion (GKI) as per a set protocol for either 24, 48 or 72 hours. The feasibility and safety of the infusion is described. For analysis data from all three insulin groups were combined.

40 patients were recruited, 15 to placebo and 25 insulin. (Age 75±9.5 years; 40% male; 20% lacunar stroke; mean time to MRI 18±6.3 hours; mean time to infusion 20±1.1 hours; Blood Glucose 8.0±2.3mmol/l; 30% known diabetics). There was no statistically significant difference in blood glucose at baseline. Mean blood glucose initially increased in 68% of patients receiving the GKI infusion; however it was significantly lower in the GKI group versus placebo at 6 hours (5.4mmol/l versus 6.9mmol/l; p<0.001) and 10 hours (5.3mmol/l versus 6.7mmol/l; p<0.001). There was no difference in mean blood glucose between groups for the remainder of the infusion. One episode of symptomatic hypoglycaemia occurred in the active treatment group.

Early blood glucose control using a GKI infusion in patients with acute ischaemic stroke and hyperglycaemia is feasible. When compared to placebo prolonged insulin infusions had no effect on blood glucose control.

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Fatigue post stroke in an Irish population

Many patients suffer from fatigue after a stroke, which often manifests as both mental and physical lack of energy resulting in interference with the rehabilitation process. Fatigue may also be a pivotal component of post stroke depression and may be relieved with treatment of depression. The objective of this study was to estimate the prevalence of post stroke fatigue (PSF) with or without depression.

Data was collected prospectively over a 5 month period (Jan – May 2006) on all patients returning to the stroke follow-up clinic. Patients were asked two questions: (1) is fatigue a problem?, (2) is depression or low mood a problem following your stroke? Prescribed medications were recorded.

Out of 60 patients interviewed, 50% were female and the mean age was 76 yrs (range of 45-93). The mean time from date of stroke to interview was 3 months. 37(62%) patients had PSF and 18(30%) patients had depression. When combined 14 (37%) had both PSF and depression. 23(62%) of the 37 patients with PSF were classified as either lacunar (LACI) or posterior (POCI) and left sided versus right. PSF was more prevalent and highly significant in the 65-79yrs (p<0.0001) compared to those <65yrs or >80yrs. Out of the 44 patients on anti-hypertensive medications, 31 (70%) had PSF.

Fatigue is a common sequela of stroke patients and may impact on their daily activities. Further studies are required to delineate the magnitude and aetiology of PSF. Strategies to improve PSF should be individualized according to the causative factors.

Stroke subtype and risk factors; changing trends with Ireland’s economic boom? – Tallaght stroke service database

Analysis of stroke subtypes and risk factors for stroke are important in resourcing stroke services and planning secondary prevention strategies. Ireland has been experiencing an economic boom in the last 7 years which has greatly affected the demographics and overall population within our hospital catchment area. We sought to compare patterns of stroke subtype and risk factors in our current stroke population with our database for 1997-1999.


Between 1997 and 1999, 193 acute strokes were admitted to the stroke service (51% male), mean age 67.8 yrs. 79% were cerebral infarctions, 16% intracerebral haemorrhages and 5% due to subarachnoid haemorrhage/other causes. 63% were discharged home, 21% to institutional care and 14% died.

In the first 6 months of 2006, 69 acute strokes with completed clinical episode were admitted (56% male); mean age 66.2 years. 86 % were infarctions, 10% intracerebral haemorrhages and 2% due to subarachnoid haemorrhage/other causes. 65% returned home, 9% required nursing home care and 13% died.

Comparing major risk factors for cerebral infarction in the original cohort versus our current population; 64 % versus 52% had hypertension; 41% versus 30% had ischaemic heart disease; 34% versus 48% current or ex-smokers; 34% versus 23% for atrial fibrillation; 15 % versus 18% had significant carotid stenosis; 18.5 versus 18% had diabetes.

Although these are preliminary figures for the current year the population demographics and outcome appear very similar despite the change in catchment population. There may be a trend towards lower incidence of cardiac disease.
76 Pilot study to ascertain the relationship between NIHSS score within 24 hours and Barthel index at six weeks in patients with cerebral infarcts

The Modified Barthel Index (BI) is a method of assessing the degree of disability in an individual, giving a score out of 20. The NIH stroke scale (NIHSS) is a 15-item neurological examination stroke scale used in acute stroke therapy trials. It has been shown to predict BI at 90 days [1]. The aim of this pilot study was to ascertain if NIHSS score within 24 hours could predict BI at six weeks in patients who had suffered a cerebral infarct.

Patients who had suffered a cerebral infarct and were able to have a NIHSS score recorded within 24 hours of the stroke were included. Patients who suffered strokes as inpatients were excluded. Patients were assessed six weeks following their stroke and a BI was recorded at that point. Patients who had died within the six weeks were given a BI of zero.

Simple linear regression was used to determine any relationship between the two variables.

12 patients were included in the study with a mean age of 75.83 years (range 66-89). Statistical analysis gave an F-ratio of 75.859 (p<0.001) and $R^2=0.884$ and a regression model such that $BI = (-0.8 \times \text{NIHSS score within 24 hours}) + 20.87$.

The coefficient of determination implies that 88.35% of the total variation in BI is attributable to the variation in NIHSS score. Therefore NIHSS score appears to be predictive of BI at six weeks. However, further larger powered studies are required to establish whether this is correct and if the regression model is accurate.

Reference:

Dept of Medicine for the Elderly, St. Vincent’s University Hospital, Dublin

77 A survey of the rate of generic prescription in an acute hospital

Generic prescription is a fundamental rule of safe prescription practice. It reduces prescription error, increases likelihood of identifying drug interactions and adverse effects and reduces the cost of prescribed medications. The purpose of this study is to determine the rate of generic prescription in our 165 bed acute hospital.

The prescription sheets of all inpatients were examined during a 10 hour daytime period. A proforma was designed to collect relevant data. Statistical analysis where relevant is by SPSS version 12.

A total of 145 inpatients (88% bed occupancy) were surveyed of which 86 (59%) were aged 65 and above. The overall average age of patients was 62.3 years. The average number of prescriptions per patient was 10.7 in patients aged 65 and above including regular, pro re nata and single dose prescriptions in comparison to 75 in the under 65 group. The rate of generic prescription was 32.7% in the older group compared to 34.9% in the younger group with an overall rate of 33.4%.

The rate of generic prescription in this hospital is relatively low. The potential for drug interactions and side effects increases with age, number of medications and number of underlying medical comorbidities, taking into consideration the high average age and number of medications described above. Ways to increase generic prescription include ready availability of formularies, educational sessions and local prescription guidelines for reference. The practice of generic prescription should be emphasised from undergraduate level and reinforced in postgraduate training following through to fully qualified independent practitioners.

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78 Polypharmacy and psychotropic drug usage in those awaiting long term care

As part of a general review of the public long-term care waiting list, we examined prescribing habits, particularly of psychotropic medications, in the patients who are currently resident in a private nursing home.

The drug chart was reviewed and regular and prn (as required) medications recorded. We did not include dietary supplements in the medication recording.

At the time of the study, there were 160 people on the waiting list for 98 long term care beds. 107 were resident in a private nursing home and we had access to 95 medication charts. Of the 95 medication charts reviewed there was a median of 9 total medications per person (range 3-19), with median 7 regular medications (range 0-15) and median 1 prn medication (range 0-5).

It was beyond the scope of this study to look at whether the on-going prescription of these medications was appropriate. However, judging by the number and combination of medications it seems reasonable to assume that some of the prescribing was inappropriate. The study highlights the need for regular medication reviews in this frail vulnerable population.

<table>
<thead>
<tr>
<th>MEDICATION TYPE</th>
<th>NUMBER TAKING MEDICATION TYPE N = 95</th>
<th>PERCENTAGE</th>
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<tr>
<td>Antidepressants*</td>
<td>40</td>
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<tr>
<td>Benzodiazepine*</td>
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<td>39%</td>
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<tr>
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<td>26%</td>
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<tr>
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<tr>
<td>Antidepressant, benzodiazepine and antipsychotic medication</td>
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</tbody>
</table>

One or more of medication type

79 Potentially inappropriate medication use among the elderly in the community and nursing homes

Use of potentially inappropriate medications (PIMs) in the elderly is associated with a higher risk of adverse health outcomes and increased healthcare costs. Little is known about the prevalence of PIMs use in the elderly in Ireland. This study aimed to determine the prevalence of PIM use among the elderly and the association with age, gender and residence in nursing homes.

We examined the HSE’s Primary Care Reimbursement Services prescribing database for the Eastern region of Ireland for all patients aged 65 years and over (n=109,925) during January-December 2004. PIMs to be avoided in the elderly were derived from previously published expert panel criteria. These were applied to the database to determine the 1-year risk of receiving a prescription for one or more PIMs. Logistic regression analysis was used to predict the use of PIM by age, sex and residence in nursing homes.

The 1-year risk of receiving at least one PIM was 21.2%. The most frequently prescribed PIMs were long-acting benzodiazepines (11.7%), followed by antidepressants with strong anticholinergic and sedating properties (2.3%). The likelihood of PIM use was less in males vs females (OR=0.72, 0.69-0.74), and in the older age group (75+) relative to younger age group (65-69 years) (OR=0.87, 0.83-0.91). Nursing home residents were more likely to receive PIM than community-dwelling elderly (OR=1.53, 1.39-1.68).

Despite awareness on the potential risks associated with these drugs, their use has remained high. Our findings confirm the need for regular reviews of prescribing to improve medication use in the elderly, particularly in nursing facilities.

References:
Review of the use of a “Medication Monitoring Chart” in a long-term care setting

Polypharmacy is common amongst elderly patients. We have previously presented the use of a “Medication Monitoring Chart” (M. M. Chart), to advise on monitoring of certain medications. We reviewed the use of the chart and the attitude of staff towards it.

A chart review of residents in long-term care wards in the Royal Hospital Donnybrook occurred in January 2006. Details included the use of the “M. M. Chart”, the number, frequency and appropriateness of blood tests ordered. A survey was distributed to the nursing staff on the corresponding wards to ascertain their attitudes to the “M. M. Chart”.

113 residents of 146 were included, 57% female with mean age 79.9years and mean length of stay 10years (range 2 weeks-34years). The average number of medications prescribed was 6.2 (range 0-18), most frequently prescribed Aspirin, Diuretics, Anti-epileptics, ACE-inhibitors and Statins (26.1% vs. 15.4% vs. 15.4% vs. 11.2% vs. 10.6% respectively). 47.8% of residents had appropriately completed “M. M. Charts” and blood tests. The table identifies the investigations indicated and performed for monitoring purposes.

Of the 45.2% of staff who completed the survey, 36.8% were aware of the chart. When educated on the use of the chart, 84% thought it useful and 94% stated willingness to assist in monitoring.

After 4 years of use of the “Medication Monitoring Chart”, the results illustrate some areas requiring improvement, which could be addressed by involving nursing staff in the monitoring process and increase the success of the chart. The survey has indicated their willingness to participate.

References:

<table>
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<th>BLOOD TESTS</th>
<th>2002 REQUIRED</th>
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Regional age and gender differences in prescribing for chronic conditions in the elderly in Ireland

Some studies report inequalities in prescribing especially in the elderly. This study aims to compare the distribution of chronic disease among the elderly across Health Boards (HB) in Ireland and to examine quality prescribing indicators by age, gender and HB region.

This is a population-based study using a national pharmacy claims database. All individuals aged 70 years and over (n=271,518) who received ≥3 prescription items for one of nine chronic conditions (e.g., cardiovascular disease (CVD)) were included. Standardised prescribing ratios (SPR) were used to compare the prescribing for chronic conditions across HB, an SPR ≥100 representing average or above average prescribing. Logistic regression was used to identify variation in quality prescribing indicators for CVD. Odds ratios (OR) 95% CI were calculated using SAS.

The South Eastern, North Western and Western HBs had below-average prescribing (SPR <100) for many chronic conditions. Prescribing indicators for CVD and diabetes identified significant age and regional variations in prescribing of preventative therapies. Those aged 70-74 with CVD were 2.2 times (95% CI 2.12-2.22) more likely to receive statins compared to those aged ≥75 years, while diabetic patients (70-74 years) were 1.62 times (95% CI 1.53-1.70) more likely to receive preventative therapy. Elderly patients in the North Eastern, Mid, North Western and Southern HB were 10-30% less likely to receive preventive therapies.

There was wide regional and age variation in prescribing which may be evidence of age and regional inequalities in prescribing for chronic conditions.

Retrospective case control study of association between B12 deficiency and use of proton pump inhibitors

Vitamin B12 deficiency occurs frequently in older people. Some studies have suggested that chronic use of proton pump inhibitors (PPIs) may predispose to the development of B12 deficiency. Our aim was to investigate chronic PPI use as a cause of B12 deficiency in older Irish inpatients.

Vitamin B12 deficient (serum B12<150pmol/l) cases and four age and sex matched non-B12 deficient (serum B12>300 pmol) controls per case were randomly selected from the preceding year. The study was designed with an 80% power to detect an odds ratio (OR) of 2.5 for B12 deficiency with PPI use. Case notes for cases and controls were reviewed for the presence or absence of chronic PPI use (>1 year).

The case notes of 56 cases and 201 controls were obtained. The average age of subjects was 80.2 years; 51% were female. A total of 15 cases and 54 controls had long-term PPI use at the time of testing. The estimated OR for chronic PPI use in B12 deficiency was 1.02 (95% CI 0.52-1.88).

Contrary to the findings in other settings, chronic use of PPIs does not increase the likelihood of B12 deficiency in Irish inpatients.
Measurement error in the berg balance scale – what change is real change?

The Berg Balance Scale (BBS) is a tool designed to measure balance that is both reliable and valid (Berg et al. 1992). Reliability can be reported in two ways – relative and absolute. The standard error of measurement (SEM) returns a value for measurement error in the same units as the measurement itself i.e. it is an indication of absolute reliability. The SEM also allows us to calculate the minimal detectable change (MDC) i.e. the amount a patient’s score needs to change, to be sure the change is greater than measurement error. The calculation of the MDC is important for clinical decision-making. It has only been reported in the BBS for older people with stroke.

This study aimed to calculate the MDC for the BBS in a group of older people, with balance problems using the following calculation - \( MDC_{95} = SEM \times \sqrt{2} \times 1.96 \).

Performance on the BBS was measured at two points in time (within 24-48 hours) in a sample of older people. No change was expected in performance between Time 1 (T1) and time 2 (T2). At T2, metrologists were blinded to the scores at T1.

The BBS was measured on 42 older people, 45% male, mean age 79.6 years (sd 6.3). Table 1 illustrates the MDC95 results.

This is a preliminary report of the error measurement in the BBS for older people. The results suggest that in older people who are independent a change of at least 2 points is required; this increases to 5 in people who require the assistance of an aid or physical help.

The psychosocial impact of assistive devices on older people

Assistive devices (AD) can be described as any device that ‘increases the capacity of people with disability to function in all aspects of daily living, including work and leisure’. AD ownership appears to be greater as one gets older with 45% of people over the age of 76 years reporting one or more AD’s.

The purpose of the study was to investigate the psychosocial impact of AD’s in people over 60 years. The ‘Psychosocial Impact of Assistive Devices Survey’ (PIADS) was used to measure the impact of AD on the users, three domains are considered – self-esteem, competence and adaptability. Scores range from –3, which represents maximum negative impact to +3, maximum positive impact. 0 indicates no impact at all.

A cross-sectional sample of convenience (n=97) was utilised - 39% (n=38) were male and 61% (n=59) were female. The mean age was 80 years (range 60-93, sd 8). Table 1 illustrates the results for the most commonly used devices.

In the future, AD devices will account for increasing expenditure; the use of instruments such as the PIADS will enable the impact of the device, to be evaluated in a more holistic manner that may optimise the use and prescription of AD’s.

1 Sonn U, Grimsby G (1994) Assistive devices in an elderly population studied at 70 and 76 years. Disabil Rehabil 16(2):85-92