British Geriatrics Society
Improving healthcare for older people

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Abstracts of work presented at the British Geriatrics Society Spring Meeting 2019

Abstracts of Work
Presented at the British Geriatrics Society Spring Meeting
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Tel: +44 (0) 20 7608 1369
Email: scientificofficer@bgs.org.uk
Website: www.bgs.org.uk

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SCIENTIFIC RESEARCH: EPIDEMEOLOGY [PLATFORM PRESENTATION]

OUTCOMES OF FRAILTY IN RURAL TANZANIA

E G Lewis[1,5], E Burn[2], F Richardson[3], D Mdegella[4], F Zerd[4], W Gray[5], S Urasa[4], R Walker[5], C Dotchin[5]

1. Newcastle University, Institute of Health and Society, Newcastle upon Tyne; 2. University Hospitals of Derby and Burton NHS Foundation Trust; 3. Gateshead Health NHS Foundation Trust; 4. Kilimanjaro Christian Medical Centre, Moshi, Tanzania; 5. Northumbria Healthcare NHS Foundation Trust, Tyne and Wear

INTRODUCTION: Frailty in high income country settings is associated with a number of adverse outcomes; hospitalisation, institutionalisation, falls, worsening disability and death. In low income countries, outcomes of frailty are likely to differ, particularly given differing contexts of healthcare access. The aim of this study was to investigate the outcomes of frailty through the longitudinal follow-up of a frailty-weighted cohort of older rural-dwelling Tanzanians.

METHODS: A frailty-weighted cohort of 236 older adults were assessed by Comprehensive Geriatric Assessment (CGA) in 2017 (Lewis et al. JAGS 2018). The Clinical Frailty Scale (CFS) was used to categorise the cohort at baseline. At re-assessment after a mean of 503 days (range 405-568 days) participants recalled the number of episodes of acute illness, hospital admission and falls since baseline assessment.

RESULTS: From the original cohort, 26 had died, 4 had moved away and 2 refused to participate. Of the 204 seen, 120 (58%) reported ≥1 episode of acute illness, 52 (25.5%) one or more falls, and 37 (18.1%) hospital admission. No falls were recorded among the severely (n=17) or very severely frail (n=3) (CFS scores 7 and 8). Binary logistic regression demonstrated that frailty according to CGA was significantly associated with an increased risk of hospitalisation (HR 2.69 95% CI 1.3-5.5 $p<0.05$), but not with falls and acute illness episodes. When adjusting for age, sex and education, the association became non-significant (HR 2.37 95% CI 0.9-5.9, $p=0.06$).

CONCLUSION: This is a unique longitudinal follow-up investigating the outcomes of frailty, with low numbers lost to follow-up. Limitations include the recall bias of participants and a medically focussed exploration of the potential outcomes of frailty in this setting. Institutionalisation of older people is rare in Tanzania, therefore the impacts of frailty may be borne by family members. Care-giver burden and household economic impact of frailty may be areas for future investigation.

SCIENTIFIC RESEARCH: FALLS, FRACTURES AND TRAUMA [PLATFORM PRESENTATION]

EFFECT OF ORAL VITAMIN K2 SUPPLEMENTATION ON POSTURAL SWAY AND PHYSICAL FUNCTION IN OLDER PEOPLE WITH A HISTORY OF FALLS: A PILOT RANDOMISED CONTROLLED TRIAL

M D Witham[1], R J G Price[2], M M Band[2], M Hannah[2], R L Fulton[3], C L Clarke[2], P T Donnan[2], P McNamee[4], V Cvoro[5], R L Soiza[4]

1. NIHR Newcastle Biomedical Research Centre; 2. University of Dundee; 3. Abertay University; 4. University of Aberdeen; 5. NHS Fife

INTRODUCTION: Vitamin K plays a role in bone health and maintenance of neuromuscular function, but vitamin K intake is low for many older people. We conducted a pilot trial of vitamin K2 supplementation to test recruitment, retention and effect on postural sway, a marker of falls risk, in older people at risk of falls.

METHODS: Parallel group, double blind, randomised, placebo controlled trial. Participants aged 65 and over with two or more falls in the last year were recruited via primary care and assessed at three centres in Scotland. Participants were randomised to receive once daily placebo, 200mcg or 400mcg oral vitamin K2 for one year. Outcomes were measured at baseline, six and twelve months. The primary outcome was anteroposterior sway measured using a sway plate at 12 months, compared between groups using ANOVA adjusted for baseline. Secondary outcomes included falls, short physical performance battery, Berg balance scale, timed up and go test, quality of life (EQ5D).

RESULTS: 95 participants were randomised, mean age 75 (SD 7) years. 58/95 (61%) were female, with a median of 3 (IQR 2 to 6) falls in the last 12 months. Mean recruitment rate was 3 per centre per month and 77/95 (81%) attended the 12 month follow up visit. Vitamin K2 supplementation did not improve anteroposterior sway (200mcg vs placebo: -0.19cm [95%CI -0.68 to 0.30, p=0.44]; 400mcg vs placebo: 0.17cm [95%CI -0.33 to 0.66, p=0.50]; 400mcg vs 200mcg: 0.36cm [-0.11 to 0.83, p=0.14]). Adjusted falls rates were similar in each group - placebo: 11.5/1000 days, 200mcg 15.0/1000 days, 400mcg 10.6/1000 days. No significant treatment effects were seen for other secondary outcomes.

CONCLUSION: Recruitment and retention were acceptable in this pilot trial, but oral vitamin K2 supplementation did not improve postural sway or physical function in older people at risk of falls.

SCIENTIFIC RESEARCH: BONE, MUSCLE AND RHEUMATOLOGY [PLATFORM PRESENTATION]

REDUCED BASELINE INFLAMMATION MAY BE ASSOCIATED WITH GREATER ACUTE DECLINES IN MUSCLE MASS FOLLOWING ELECTIVE COLORECTAL SURGERY

C Welch, C Greig, Z Hassan-Smith, T Pinkney, J Lord, T Jackson

University of Birmingham

BACKGROUND: Acute sarcopenia is an emerging condition affecting older adults following hospitalisation. It is declined as incident sarcopenia within six months, normally preceded by a stressor event. Chronic sarcopenia has been associated with increased chronic inflammation, but the relationship of acute and chronic inflammatory response with acute sarcopenia is yet to be determined.

METHODS: Enzyme-Linked Immunosorbent Assays were performed to measure preoperative serum concentration levels of high sensitivity C-Reactive protein (hsCRP), cortisol, dehydroepiandrosterone sulfate (DHEA-S), and vitamin D for seven participants recruited to a pilot study measuring acute sarcopenia in older surgical patients.

RESULTS: A positive association was demonstrated between baseline DHEA-S and change in gait speed from preoperative assessment to one week postoperatively ($\tau b=0.87$, $p=0.02$). A positive association was also demonstrated between baseline hsCRP and change in Bilateral Anterior Thigh Thickness (BATT).

CONCLUSION: The results of this pilot study suggest that there may be an association baseline inflammation and development of acute sarcopenia. Further research should focus on evaluating mechanisms including clinical and biochemical correlates to enable targeting of interventions.

SCIENTIFIC RESEARCH: BONE, MUSCLE AND RHEUMATOLOGY [PLATFORM PRESENTATION]

EFFECT OF ALLOPURINOL ON SKELETAL MUSCLE PHOSPHOCREATINE RECOVERY RATE AND PHYSICAL FUNCTION IN OLDER PEOPLE WITH IMPAIRED PHYSICAL FUNCTION: A RANDOMISED CONTROLLED TRIAL

J George[1], C L Clarke[1], A Hutcheon[2], S Gandy[2], C Gingles[2], L Priba[2], S Nicholas[2], I Cavin[3], D Sumukadas[2], M E McMurdo[2], A D Struthers[1], M D Witham[4]

1. University of Dundee; 2. NHS Tayside; 3. NHS Lothian; 4. NIHR Newcastle Biomedical Research Centre

INTRODUCTION: Allopurinol, commonly used for gout, has powerful antioxidant and oxygen-sparing effects, and also participates in purinergic signalling within muscle. These effects may be of importance in reversing functional deficits seen in ageing skeletal muscle. We therefore tested whether allopurinol could improve skeletal muscle energetics and physical function in older people with exercise limitation.

METHODS: Randomised, parallel group, placebo controlled, double blind trial. We recruited participants aged 65 and over with baseline six minute walk distance of <400m and no contraindications to MRI scanning. Participants were randomised to receive 600mg oral allopurinol or matching placebo once daily for 20 weeks. Outcomes were measured at baseline and 20 weeks. The primary outcome was phosphocreatine recovery rate in the calf muscles after exercise to fatigue, measured using 31P magnetic resonance spectroscopy. Secondary outcomes included six minute walk distance, short physical performance battery (SPPB), lean body mass measured by bioimpedance, endothelial function measured by flow-mediated brachial artery dilatation, and quality of life (EQ5D)

RESULTS: 124 participants were randomised, mean age 80 (SD 6) years. 59 (48%) were female, baseline six minute walk distance was 293m (SD 80m) and baseline SPPB was 8.5 (SD 2.0). Adherence to allopurinol and placebo was excellent (93% vs 95%). 116/124 (94%) attended the 20 week visit. Allopurinol did not significantly improve phosphocreatine recovery rate (treatment effect 0.10 units [95%CI -0.07 to 0.27], p=0.25). No significant changes were seen in endothelial function, quality of life, lean body mass or the SPPB (treatment effect 0.0 [95%CI -0.5 to 0.5], p=0.91). Allopurinol produce a modest improvement in six minute walk distance (treatment effect 25m [95% 4 to 46, p=0.02]). Adverse events were more frequent in the allopurinol group (121 vs 85)

CONCLUSION: Allopurinol improved six-minute walk distance but not phosphocreatine recovery rate in older people with impaired physical function.

SCIENTIFIC RESEARCH: BONE, MUSCLE AND RHEUMATOLOGY [PLATFORM PRESENTATION]

PROFILE OF FRAGILITY FRACTURE IN ACUTE DEMENTIA PATIENTS IN THE HOSPITAL SETTING

A Anwar, D Duric; C Edwards, I Singh

Department of Geriatric Medicine, Ysbyty Ystrad Fawr, Aneurin Bevan University Health Board, Wales

INTRODUCTION: Dementia and fragility fractures are two common conditions that often co-exist and are associated with adverse clinical outcomes. Higher prevalence of fragility fracture has been reported in patients with dementia (odds ratio=6.9). However, there is a dearth of evidence exploring cause and effect relationship between dementia and fragility fractures. This study aims to compare the clinical characteristics and outcomes of acute dementia patients with and without previous fragility fracture.

METHODS: The UK National Audit of Dementia (NAD) showed wide variations in the quality and clinical care for acute dementia patients. This was a retrospective observational study based on analysis of the existing data for all acute dementia patients admitted within Aneurin Bevan University Health Board between January and July 2016. The patients were divided into two groups: with and without previous fragility fractures and hip fracture data was reviewed for a maximum of two years following discharge.

RESULTS: 57 patients with non-fragility fractures were excluded from the analysis. The clinical characteristics and outcomes of acute dementia patients with and without fracture are shown below.

Dementia patients		No Fracture (n)	Fragility fracture (n)	p-value
		66.7% (711/1065)	27.8% (297/1065)	
Mean age		83.9±8.2	86.4±6.6	<0.0001*
Females		55.7% (396/711)	74% (221/297)	<0.0001*
Living in	Own Home	71.2% (506/711)	66.6% (198/297)	0.15
	Care Home	25.6% (182/711)	26.6% (79/297)	0.74
Mean Charlson comorbidity index		5.98±1.5	6.23±1.46	0.01*
Anti-psychotics		13.64 (97/711)	14.12 (38/269)	0.85
Clinical outcomes				
Mean hospital stay		18.18±26.7	20.20±27.05	0.28
Discharge destination	Own Home	42.7% (304/711)	38.3% (114/297)	0.20
	Care Home	33.1% (236/711)	39.7% (118/297)	0.04*
Mortality	In-patient	17.0% (121/711)	15.1% (45/297)	0.46
	30-days	23.6% (168/711)	20.5% (61/297)	0.28
	One-year	48.1% (342/711)	50.8% (151/297)	0.43
30-days Readmission rate		15.9% (94/590)	16.2% (41/252)	0.91
Hip fracture	Inpatient	2.1% (15/711)	3.7% (11/297)	0.14
	Post-discharge	3.7% (22/590)	28.6% (72/252)	<0.0001*

CONCLUSION: Dementia patients with previous fragility fracture have a significantly higher rate of discharge to a new care. Dementia patients with previous fragility fracture are at a higher risk of an inpatient hip fracture as compared to those without previous fracture but this is not statistically significant. However, dementia patients with previous fragility fracture are at a significantly higher risk of subsequent hip fracture following discharge. Therefore, an appropriate osteoporosis treatment should be considered for all dementia patients, particularly in those with previous fragility fracture.

SCIENTIFIC RESEARCH: PSYCHIATRY AND MENTAL HEALTH [PLATFORM PRESENTATION]

"SIT DOWN MRS JONES!" STORIES OF (IM)MOBILITY FROM PEOPLE AFFECTED BY DEMENTIA ON AN ACUTE MEDICAL UNIT

P Collins

University of Southampton / University Hospital Southampton

BACKGROUND: This narrative enquiry explores the phenomenon of the immobility of people affected by dementia* within an acute medical unit (AMU). It aims to understand how someone who does not verbalise in a contextual and temporal way, and may utilise body and facial language, communicates their story of (im)mobility.

METHODS: Immobility is explored through the stories of people whilst they are inpatients on an AMU. This research has co-created data with people using a tablet to video conversations that are both verbal and embodied. Questioning was avoided, unless contextual; instead the researcher listened to what was important to that person at that specific time. Participants reviewed and commented upon their video.

People have generally been excluded from research in acute medical settings due to considerations of consent and unidirectional questions that rely on recall on demand. Moving the standard process of consent forward to enable people to consent for themselves has been an important part of this study. Consent was verbal and separated into two parts: 1) participation in the conversation and making the video; 2) consent to utilise the videos for education/research.

RESULTS: There is mobility all around on the AMU. People sit or lie in stillness; watching and listening to the constant motion and noise. The organisational and interactional levels of care delivery has significant consequences for people because of the culture of containment and restraint (Featherstone and Northcott 2018). Patients that do attempt to move are asked to “sit down, I’ll come back to you”. People are distracted by noise and motion; stories are told of who I am and what I think but there is not time or skill to listen.

CONCLUSION: People affected by dementia face three types of discrimination: age, cognition and immobility in a hyper mobile world. Utilising video recordings that could be instantly reviewed with participant’s elicited insightful stories around what immobility is like when you are in an unknown and disorientating environment. Findings are being used for clinical education as well as research.

* Please note that all references to “people” relate to people affected by dementia.

SCIENTIFIC RESEARCH: OTHER MEDICAL CONDITIONS [PLATFORM PRESENTATION]

WHAT ARE THE FACTORS THAT CAUSE DEHYDRATION AMONG THOSE OVER THE AGE OF 65 IN BED-BASED CARE SETTINGS?

M Thomas

*University of Nottingham**

INTRODUCTION: Reports have repeatedly portrayed that in the United Kingdom, dehydration remains a major public health concern among those above 65 years (The Health Service Ombudsman, 2011; The Patient's Association, 2010). The recent Francis Report (2014) affirms the severity of this issue as older patients were observed being denied of adequate fluids. Research highlight dehydration is an easily preventable condition, however, due to the lack of staff education, mortality rates in bed-based care settings (BBCs) such as hospitals, nursing homes and care homes, have risen considerably (Begum and Johnson, 2010). Thus highlighting the importance of further research to understand what factors could inhibit adequate hydration in those above 65 years.

METHODS: Eleven systematically retrieved papers were gathered using three established databases: CINHAL, MEDLINE and Web of Science. The papers consisted of six quantitative studies, one qualitative study, three mixed method and one non-systematic review (Scherer et al., 2016). The truncated search terms used were, 'Dehydration', 'Hydration', 'Fluid Intake', 'Frail Elderly', 'Older People', 'Aged', and 'Over 65 years', which were combined using 'OR' and 'AND'. This provided a total of 14, 422 citations: CINHAL (n=1,746), MEDLINE (n=7,955) and Web of Science (n= 4,721). Papers were excluded due to its irrelevance to the inclusion criteria. After in-depth analysis, 11 papers were selected for critical appraisal.

FINDINGS: A meta-synthesis was undertaken and the papers were critically appraised using the Critical Appraisal Skills Programme (CASP, 2013) for Qualitative studies. Three main themes emerged as key factors for dehydration in patients above 65 years in BBCs. These were: cognitive status, individual preferences, and staff awareness. From these findings, an educational package was initiated as a service improvement tool for nurses to prevent dehydration in patients over 65 years in BBCs.

CONCLUSION: The findings from this systematic review support existing literature that dehydration is a preventable condition, and through adequate clinical management, this issue can be resolved for patients above 65 years in BBCs. Using an audit trail of systematically retrieved papers resulted in the identification of 11 papers. Three dominant themes emerged: cognitive status, individual preferences and staff education. An educational package for nurses was devised as poor staff awareness was found to be the dominant factor.

* The submitted abstract is of the author's BSc Dissertation focusing on the issue of dehydration in patients over 65 in bed-based care settings.

SCIENTIFIC RESEARCH: PSYCHIATRY AND MENTAL HEALTH [PLATFORM PRESENTATION]

DELIRIUM IS PREVALENT IN OLDER ADULTS ADMITTED TO UK HOSPITALS AND IS ASSOCIATED WITH ADVERSE OUTCOMES: RESULTS OF A NATIONAL STUDY ON WORLD DELIRIUM ASSESSMENT DAY

Geriatric Medicine Research Collaborative

BACKGROUND: Delirium is an acute severe neuropsychiatric manifestation of physical illness. Prevalence of delirium on admission has been reported as between 10-31%. This study aimed to identify the point prevalence of delirium in UK hospitals, factors associated with increased prevalence, and the impact of delirium upon patient outcomes.

METHODS: Patients were screened and assessed for delirium on World Delirium Assessment Day 2018 (March 14th). This included all patients aged 65 years and older admitted to any specialty, excluding critical care, within the previous 48 hours. Specialty, dementia status, Clinical Frailty Scale (CFS), age, and gender were recorded. One month follow-up data was obtained for all patients to include length of stay and inpatient mortality.

RESULTS: 1507 patients from 45 hospitals were screened for delirium; 27.3% had been screened routinely. The point prevalence of reference-standard delirium diagnosis was 15.2% (22.1% including those with possible delirium; 24.3% 4AT positive); this was recognised in 34.8% as part of routine care. Reference-standard delirium prevalence was associated with increased age (OR 1.04, CI 1.02-1.06; $p<0.001$), dementia status (OR 1.91, CI 1.33-2.73, $p<0.001$), and incremental groups of CFS compared to 1-3; 4-6 (OR 4.20, CI 2.38-7.38; $p<0.001$), 7-9 (OR 8.40, CI 4.46-15.80; $p<0.001$). However, higher CFS was associated with reduced delirium recognition (7-9 compared to 1-3: OR 0.14, CI 0.03-0.61; $p=0.009$). Delirium prevalence was not affected by gender or specialty. In multivariable analysis, delirium was associated with increased length of stay (bootstrapped mean difference +3.17 days; $p=0.001$), and increased mortality (OR 2.31, CI 1.37-3.89; $p=0.002$) at one month. Screening for delirium was associated with increased recognition (OR 5.35, CI 2.66-10.80; $p<0.001$).

CONCLUSION: Delirium is prevalent in older adults in UK hospitals regardless of specialty, but remains under-recognised. Frailty is a strong risk factor for the development of delirium, but delirium is more likely to be under-recognised in frail patients. The presence of delirium is associated with increased mortality and length of stay at one month. A national programme to increase screening has potential to improve recognition.

SCIENTIFIC RESEARCH: BONE, MUSCLE AND RHEUMATOLOGY [PRESIDENT'S ROUND POSTER]

SEASONAL VARIATION IN PRESSURES ON TRAUMA SERVICES AND IN DEATHS FOLLOWING HIP FRACTURE

C Grose, A Johansen

University Hospital of Wales, Cardiff

INTRODUCTION: Seasonal variation in numbers of patients presenting with hip fracture is well recognised, and the implications of this for trauma and orthogeriatric service have been discussed (*Age and Ageing 2016* doi:10.1093/ageing/afw133). We set out to examine whether increased pressures in the winter months might lead to poorer outcomes for the frail older people who typically suffer this injury.

METHODS: The National Hip Fracture Database (NHFD) has been reporting data for all patients presenting in England, Wales and Northern Ireland since 2007. Monthly data for over 175 individual hospitals are made freely available by the Crown Informatics website (www.nhfd.co.uk). We analysed this published data for the 450,754 people who presented during the seven years from April 2011 to March 2018.

RESULTS: We found the previously described seasonal variation in number of people presenting: 8.0% more people presenting in the winter months (December-February) than in the summer (June-August). However, the total number of people dying within 30 days of hip fracture was 30.5% higher among those presenting in the winter. In total 33,649 people (7.46%) died within 30 days of hip fracture, but this figure varied significantly ($p<0.001$, *Chi*2 test); ranging from 6.66% in July to 8.65% (29.9% higher) in January.

CONCLUSION: The public health impact of these findings is significant. An 8% increase in hip fractures during the winter would equate with 1,250 additional fractures during these months each year. Patients average over 20 days in hospital, so these additional cases will compound the stresses on hospital services of the Christmas and New Year holiday period. Such factors must be taken into consideration when organising trauma and orthogeriatric services if we are to try and avoid the additional 325 deaths that we found to occur each winter.

SCIENTIFIC RESEARCH: CARDIOVASCULAR [PRESIDENT'S ROUND POSTER]

SHOULD WE CONSIDER FRAILTY WHEN TREATING ATRIAL FIBRILLATION?

C Wilkinson, O Todd, A Clegg, C P Gale, M Hall

Department of Clinical and Population Sciences and Academic Unit of Elderly Care and Rehabilitation, University of Leeds

INTRODUCTION: Despite a large and growing population of older people with frailty and atrial fibrillation (AF), there is a lack of guidance on optimal AF management in this high-risk group. We synthesised the existing evidence base on the association between frailty, AF and clinical outcomes.

METHODS: A systematic review of studies examining the association between validated measures of frailty, AF and clinical outcomes, and meta-analysis of the association between frailty and oral anticoagulation (OAC) prescription.

RESULTS: Twenty studies (30,883 patients) were included, all observational. Fifteen were in hospital, four in the community and one in nursing care. Risk of bias was low-to-moderate. AF prevalence was 3%–38%. In people with AF, frailty was associated with increased stroke incidence, all-cause mortality, symptom severity and length of hospital stay.

Meta-analysis of six studies showed frailty was associated with decreased OAC prescription at hospital admission (pooled adjusted OR 0.45 [95%CI 0.22–0.93], three studies), but not at discharge (pooled adjusted OR 0.40 [95%CI 0.13–1.23], three studies). A community-based study showed increased OAC prescription associated with frailty (OR 2.33 [95%CI 1.03–5.23]).

CONCLUSION: Frailty is common, and associated with adverse clinical outcomes in patients with AF. There is evidence of an association between frailty status and OAC prescription, with different direction of effect in community compared with hospital cohorts. Despite the majority of care for older people being provided in the community, there is a lack of evidence on the association between frailty, AF, anticoagulation and clinical outcomes to guide optimal care in this setting.

SCIENTIFIC RESEARCH: EDUCATION AND TRAINING [PRESIDENT'S ROUND POSTER]

DEVELOPING A CROSS-SPECIALITY CURRICULUM FOR TRAINEES INVOLVED IN THE FALLS AND FRAGILITY FRACTURE AUDIT PROGRAMME

E Burn[1], J Youde[1], L Snell[2]

1. Department of Medicine for the Elderly, University Hospitals of Derby and Burton NHS Foundation Trust; 2. Library Services, University Hospitals of Derby and Burton NHS Foundation Trust

INTRODUCTION: The Falls and Fragility Fracture Audit programme (FFFAP) board have commissioned a programme to respond to concerns about trainee participation in audit and quality improvement (QI). This curriculum review aims to create a cross-speciality QI curriculum to structure learning within this programme.

METHODS: The learning outcomes of the key specialities (Orthopaedics, Rheumatology, Anaesthetics and Geriatrics) were reviewed and mapped against curriculum domains, then graded based on frequency of reference. A literature review was used to identify articles that discussed the recent guidance on QI from national bodies, these were screened, and a report created through the clinical librarian service. All articles were reviewed, and competencies extracted and reworded to avoid duplication. The final, systematically-created list was tabulated by curriculum domain, outcomes were then classified as core or supplementary according to grading, in order to create a draft curriculum.

RESULTS: Four speciality curriculums were reviewed, where QI was mentioned 40 times. From a literature search, nine statutory bodies were studied which yielded 24 documents where QI was discussed 913 times. 171 competencies where extracted in total (48 from specialties, 123 from statutory bodies), which reduced to 67 (27 and 40) when duplications were removed and learning outcomes amalgamated.

Total learning outcomes or recommendations related to QI			
Curriculum Domain	**Specialities**	**Statutory bodies**	**Draft curriculum**
Knowledge	12	19	7 (6 core, 1 supplementary)
Skill	9	12	7 (5 core, 2 supplementary)
Behaviour	5	5	3 (2 core, 1 supplementary)
Innovation	1	4	2 (2 supplementary)

CONCLUSION: This curriculum review has demonstrated the variation in the quantity of guidance between FFFAP specialties, and also with national bodies. It has allowed a new draft curriculum to be produced in order to deliver multi-speciality training across a national QI network.

SCIENTIFIC RESEARCH: EPIDEMIOLOGY [PRESIDENT'S ROUND POSTER]

HEALTH OF RESIDENTS IN RETIREMENT VILLAGES IN NEW ZEALAND: WHO LIVES THERE, WHY DID THEY MOVE IN, WHAT ARE THEIR HEALTH NEEDS?

J B Broad[1], Z Wu[1], J Hikaka[2], K Bloomfield[1,2], A Tatton[1,2], M Boyd[3], K Peri[3], C Calvert[1,4], A-M Higgins[1], D Bramley[2], M J Connolly[1,2]

1. Department of Geriatric Medicine, University of Auckland, Takapuna, New Zealand; 2. Waitemata District Health Board, Auckland, New Zealand; 3. School of Nursing, University of Auckland, Grafton, New Zealand; 4. Auckland District Health Board, Auckland, New Zealand

INTRODUCTION: In New Zealand (NZ), a nation where low-density detached housing predominates, a major societal shift has seen moving into a retirement village (RV) becoming a popular accommodation and lifestyle option for older people. The conglomerate nature of RVs provides opportunities to offer health/support services on site. Perhaps one in eight people aged 75+ years live in RVs, yet information is scant. This survey describes the demographics, social supports and health/disability needs of RV residents in Auckland/Waitemata District Health Board regions.

METHODS: In total, 33 of 67 villages were surveyed. Recruitment methods of residents included 1) "sampled" – in which Gerontology Nurse Specialist (GNS) researchers approached randomly selected units (or, in small villages, all units) by letter and door-knock/phone, and 2) "volunteers" – in which residents were invited to participate via newsletters, posters and meetings but were not door-knocked/ phoned. Each participant completed an online questionnaire and an interRAI health needs assessment with the GNS. Ethics approval was granted, but under NZ's Health and Disability Commissioner (Code of Health and Disability Services Consumers' Rights) Regulations 1996, residents lacking capacity to consent were excluded.

RESULTS: 578 residents were included (median age = 81years, 394 volunteers/184 sampled, 420 women/158 men), 38% lived alone. In general, residents were financially well supported with 75% receiving income from investments; 98% had (co-)owned a home. Reasons cited for moving into RV mainly included downsizing/reducing home maintenance, less stressed lifestyle, and assistance with health/care needs. Self-reported quality of life was high (68% very good/excellent). While 92% were satisfied/very satisfied with village living and 73% used the internet, 10% often/always felt lonely. During the 2 weeks prior to survey, 34% received home care and 10% personal care support; 15% reported being on 9+ medications. In interRAI, Clinical Assessment Protocols (CAPs) are derived to assist the systematic interpretation of the information recorded on an instrument, by indicating areas of identified health/need. In this study, algorithms triggered CAPs including most notably for cardiorespiratory conditions (50%), pain (49%), physical activities promotion (43%) and informal support (34%).

CONCLUSIONS: The study is the largest cross-sectional study of health status of residents in RVs in NZ. It will inform health planning by enabling a longitudinal cohort study of health outcomes and has facilitated a randomised controlled trial of a health service intervention.

SCIENTIFIC RESEARCH: EPIDEMIOLOGY [PRESIDENT'S ROUND POSTER]

PREDICTORS OF DELIRIUM IN THE COMMUNITY: A CASE CONTROL ANALYSIS OF PRIMARY CARE RECORDS

J C Delgado, L C Jones, K Bowman, D Melzer

Royal Devon and Exeter Hospital, University of Exeter

INTRODUCTION: Morbidity and mortality associated with delirium is well recognised. Delirium is a well-studied condition in hospitalised patients, where many risk factors for delirium have been identified. There is limited information and research available on risk factors and prediction of delirium in community-dwelling older adults. Delirium is frequently underdiagnosed. The aim of this study was to develop a risk stratification algorithm using primary care data to identify individuals who are at risk for an episode of delirium living in the community.

METHODS: We used the Clinical Practice Research Database, electronic primary care records from England. Predictors of delirium were identified in a case-control analysis of individuals aged ≥60 years, matched on age, gender and study entry year (1 January 2001 and November 2014). Conditional logistic regression with backwards deletion was used to identify risk factors from a list of 110 variables. The predictive model was built on a cohort of individuals aged ≥60 years on 1 January 2015, followed for up to 2 years. Logistic regression models estimated the probability of delirium within 1 and 2 years. Receiver operating characteristics were used to test model accuracy for the outcomes of delirium within 1 and 2 years, mortality within 1 and 2 years, and hospitalisations within 1 year.

RESULTS: The case control analysis included 17,286 cases and 68,321 controls and identified 55 risk factors of delirium. A cohort of 343,548 individuals (1,920 episodes of delirium in 1 year and 4,047 episodes of delirium in 2 years) was used to develop the model. An independent cohort of 85,887 individuals (451 episodes of delirium in 1 year and 996 episodes of delirium in 2 years) was used for validation. The model is a good predictor for 1 year delirium (validation dataset AUC 0.87 95% CI 0.85 to 0.88), 2-year delirium (validation dataset AUC 0.85 95% CI 0.85 to 0.86), and 1 year mortality (validation dataset AUC 0.85 95% CI 0.84 to 0.85) using the 1-year delirium prediction score.

CONCLUSIONS: This is the first predictive model of community acquired delirium using primary care records. Clinically, this algorithm has important implications for early delirium diagnosis in the community. This may aid interventions, treatment and care pathways for elderly patients with delirium in the future.

SCIENTIFIC RESEARCH: FALLS, FRACTURES AND TRAUMA [PRESIDENT'S ROUND POSTER]

INFLUENCE OF FALL PREVENTION EXERCISE PROGRAMMES ON MARKERS OF INFLAMMATION AND CARDIOVASCULAR RISK IN OLDER PEOPLE

K Brooke-Wavell[1], R L Duckham[1,2], S Iliffe[3], D Kendrick[4], D A Skelton[5], R Taylor[6], T Masud[6]

1. School of Sport, Exercise and Health Sciences, Loughborough University; 2. Institute for Physical Activity and Nutrition, Deakin University, Australia; 3. Department of Primary Care & Population Health, University College London; 4. School of Medicine, University of Nottingham; 5. School of Health and Life Sciences, Glasgow Caledonian University; 6. Healthcare for Older People, Nottingham University Hospitals NHS Trust

INTRODUCTION: Strength and balance training programmes such as the Otago Exercise Programme (OEP) and Falls Management Exercise (FaME) were designed primarily for fall prevention but meet the physical activity guidelines recommended for broader health outcomes in older people. We aimed to determine the influence of OEP and FaME on inflammation and cardiovascular risk factors in older people.

METHODS: This study involved participants in the ProAct 65+ trial bone sub-study. Men and women aged over 65 were recruited through primary care and allocated by practice to six months of OEP, FaME or usual care. Venous blood samples were collected at baseline (prior to allocation) and at the end of the trial, and analysed for total cholesterol (TC), high density lipoprotein cholesterol (HDLC) and high sensitivity C-reactive protein (CRP). Cardiovascular risk factors were analysed using linear regression models; comparing final value according to treatment arm, with baseline value and age, gender and statin use as covariates.

RESULTS: Of 319 participants recruited for the bone sub-study, 293 completed the study, 218 of whom provided serum. These participants were 70% female, aged 71.8+5.3 years. CRP changes did not differ between treatment arms. Mean (SE) changes in HDLC in OEP, FaME and usual care groups were +0.04(0.03), +0.02 (0.03) and -0.17 (0.04) mmol/L respectively, being maintained in OEP and FaME relative to usual care groups (both $P<0.001$). Corresponding changes in TC were +0.18 (0.10), +0.00.

CONCLUSIONS: Strength and balance training prevented the decline in HDLC demonstrated in the usual care group. Falls prevention exercise conducted over six months may benefit cardiovascular risk profile as well as preventing falls.

SCIENTIFIC RESEARCH: OTHER MEDICAL CONDITIONS [PRESIDENT'S ROUND POSTER]

ARE PRESSURE ULCERS INEVITABLE IN THE DYING?

A Ferris

Cardiff and Vale University Health Board

BACKGROUND: Pressure ulcers are associated with significant morbidity and mortality as well as high cost to the health service. Although often linked with inadequate care, in some patients, they may be unavoidable.

AIMS: This systematic review aims to quantify the prevalence and incidence of pressure ulcers in patients receiving palliative care and identify the risk factors for pressure ulcer development in these patients as well as the temporal relationship between pressure ulcer development and death.

DESIGN: The systematic review was conducted in accordance with the 'PRISMA' pro-forma. 1022 articles were identified and 12 selected for analysis based on pre-defined inclusion and exclusion criteria.

RESULTS: Overall pressure ulcer prevalence and incidence was found to be 12.4% and 11.7% respectively. The most frequently identified risk factors were decreased mobility, increased age, high Waterlow score and long duration of stay.

DISCUSSION: Pressure ulcers appear more prevalent in patients receiving palliative care than the general population and more prevalent in nursing homes compared with other care settings. While a number of risk factors identified in this review can be modified in palliative patients, for many the desire for comfort may take priority, making pressure damage or poor healing more likely.

CONCLUSIONS: Pressure ulcers do appear more prevalent in patients receiving palliative care and while this should not be an excuse for poor care, it does not necessarily mean that inadequate care has been provided. Skin failure, as with other organ failures, may be an inevitable part of the dying process for some patients.

SCIENTIFIC RESEARCH: PARKINSON'S DISEASE [PRESIDENT'S ROUND POSTER]

TYPE A ADVERSE DRUG REACTIONS AND WEIGHT LOSS ARE CORRELATED IN IDIOPATHIC PARKINSON'S DISEASE IN SINGLE-CENTRE STUDY

B E Schroeder[1], B Mohamed[2], C Thomas[2]

1. School of Medicine, Cardiff University; 2. Movement Disorders Clinic, Rookwood Hospital, Cardiff

INTRODUCTION: Idiopathic Parkinson's Disease (IPD) is a common neurodegenerative disease in older people, wherein weight-loss is a prevalent and often under-recognised feature. There is little understanding of the relationship between weight-loss and side-effects including dose-dependent, predictable side effects (Type A Adverse Drug Reactions – ADRs), however, some work suggests weight loss is a risk factor for L-dopa induced dyskinesias (Sharma J C, Ross I N, Rascol O, *et al.* Eur J Neurol 2008 15(5)). Therefore, we hypothesised that weight loss increases the effective dose (mg/kg) thereby increasing ADR frequency hence we aimed to investigate any statistically-significant relationship between weight-loss and ADRs in IPD.

METHODS: Retrospective, single-centre (Movement Disorders Clinic, Rookwood Hospital, Cardiff), cohort-study parsing patient-notes with selection-criteria and definitions, comparing serial-weights with ADRs in patients with IPD; disease-severity was controlled for by the Hoehn-and-Yahr (H&Y) scale. SPSS® version 23 used the Mann-Whitney U test, the Spearson's rank correlation coefficient, and the Chi-squared test. Significance was defined as $p \leq 0.05$. Ethics approval was not sought in accordance with Medical Research Council website advice.

RESULTS: 138 events were sampled: 80 (58%) were included. 53 (66.3%) experienced weight loss, of whom 45 had ADRs. 27 (33.8%) did not lose weight, of whom 16 had ADRs. 45 of the 68 (66%) exclusions were due to 'notes unavailable'. ADRs in weight loss were significantly more frequent than in no weight loss ($p = 0.01$), but there was no significant correlation in varying weight loss groups, ($p = 0.84$) or with different H&Y ($p = 0.20$).

CONCLUSION: We cannot exclude selection bias of 'notes unavailable' cohort, however, there is a significant difference between ADR prevalence in 'weight loss' compared to 'no weight loss' in IPD. Inadequate statistical power might explain the lack of a dose-dependent effect hence further research is planned with a 'second-sweep' to minimise 'notes unavailable' events.

SCIENTIFIC RESEARCH: PARKINSON'S DISEASE [PRESIDENT'S ROUND POSTER]

MANAGEMENT OF CONSTIPATION IN PARKINSON'S DISEASE: A SYSTEMATIC REVIEW

V H Lim, D J Mcghee

Elderly Care Department, Royal Bolton Hospital Care of the Older Person Department, Blackpool Victoria Hospital

INTRODUCTION: Constipation is one of the earliest and most common non-motor symptoms experienced by patients with Parkinson's Disease (PD). There are currently no clear guidelines to help clinicians manage constipation in patients with PD. This systematic review aimed to examine the literature in this area to determine what treatment options are efficacious and could be recommended for use in clinical practice.

METHODS: Electronic searches were performed in Medline® and Embase (1974-Dec 2017). Relevant abstracts were identified based on pre-determined inclusion and exclusion criteria. The full text of shortlisted abstracts was then reviewed. Studies with participants with idiopathic PD diagnosed clinically or using formal research criteria were included. No restriction was made on the ground of participant's age, gender, ethnicity or disease duration. All studies that looked into the management of constipation in PD were included. Consideration was given to all reported outcome measures for constipation.

RESULTS: 27 studies were included in the final analysis. From the 27 eligible studies, 21 different proposed interventions were analysed. The outcome measures used to determine participants' responses to interventions were just as varied as the interventions proposed. The heterogeneity of the outcome measures made quantitative data extraction impossible. The majority of the included studies were of poor quality - small sample sizes with flawed study methodology.

CONCLUSION: Insufficient evidence was found to recommend any treatment option for the management of constipation in PD. This is most likely due to the poor research methodologies used. The lack of standardised outcome measures made comparisons between different studies results challenging. Recommendations are made to ensure good quality studies can be conducted in the future.

SCIENTIFIC RESEARCH: BIOLOGY AND SOCIAL GERONTOLOGY [PLATFORM PRESENTATION]

COMMUNITY SCREENING FOR FRAILTY IN OLDER ADULTS: A COMPARISON OF THREE FRAILTY INSTRUMENTS

Y J Lim[1], Y S Ng[2], E L Tay[2], S M Mah[2], A B Latib[2], H M Abu-Bakar[2], J C Y Ho[2], L B G Tay[2]

1. Duke-NUS Medical School, Singapore; 2. Department of General Medicine (Geriatric Medicine), Sengkang General Hospital, Singapore

INTRODUCTION: Despite its predisposition to adverse health outcomes, frailty screening for older adults in the community remains to be widely endorsed. We seek to (1) compare the diagnostic performance of FRAIL against established “gold standards” of Fried phenotype and Frailty Index (FI) in community-dwelling older adults, and (2) identify potentially modifiable factors associated with pre-frailty/frailty.

METHODS: Two-hundred (225) participants aged ≥55 years were screened via mobile platforms set up within the community. All participants completed a multi-domain geriatric screen including social profiling, cognitive, psychological, functional and nutritional assessments. The battery of physical fitness tests was designed to evaluate flexibility, strength and power, gait speed, agility and endurance. Each participant was categorized as robust, pre-frail or frail, employing FRAIL, Fried and a 35-item FI. Kappa test with receiver operating characteristic curve (ROC) analyses were performed for FRAIL against Fried and FI.

RESULTS: The prevalence of pre-frail/frail was 50.7%, 38.9% and 18.3% by FI, Fried and FRAIL respectively. Comparing FRAIL against Fried yielded Kappa of 0.349 (95% CI 0.228–0.469, p<0.001), area under curve (AUC) of 0.657 (95% CI 0.577–0.737), specificity of 0.944 (95% CI 88.89%–97.74%), sensitivity of 0.370 (95% CI 26.56%–48.49%). Between FRAIL and FI, Kappa=0.162 (95% CI 0.057–0.267, p=0.003), AUC=0.582 (95% CI 0.503–0.661), specificity of 0.897 (95% CI 81.86%–94.94%), sensitivity of 0.267 (95% CI 18.41%–36.46%). Low mood and sarcopenia were common across all 3 measures of frailty (all p<0.05), low socio-economic status was significantly associated with FRAIL- and FI-defined pre-frailty/frailty (p<0.001, p=0.006), while malnutrition was significant only in FRAIL-defined pre-frailty/frailty (p=0.017), Regardless of the frailty measure employed, pre-frail/frail seniors exhibited significantly weaker grip and lower limb strength/power, slower gait, poorer agility and endurance.

CONCLUSIONS: FRAIL is highly specific against established “gold standards”, and may be feasible for adoption in a step-care approach to community management of frailty. Depression, social support and nutrition should be targets in frailty prevention.

SCIENTIFIC RESEARCH: FALLS, FRACTURES AND TRAUMA [PLATFORM PRESENTATION]

DOES FRAILTY AFFECT THE ASSOCIATION BETWEEN FALLS AND INDEPENDENCE?

J Bobbett[1], M Mohd[1], M Hale[2], G Santorelli[1], A Clegg[2], O Todd[2]

1. Bradford Institute of Health Research, Bradford Royal Infirmary; 2. Academic Unit of Elderly Care and Rehabilitation, University of Leeds, Bradford Royal Infirmary

BACKGROUND: A fall can be associated with loss of independence in later life. Frailty is associated both with falls and loss of independence. This cross-sectional study evaluates whether frailty is a confounder or effect modifier in the association between falls and independence.

METHOD: Participants were recruited as part of the prospective Community Ageing Research 75+ (CARE75+) cohort study. The relationship between a fall in the previous twelve months and baseline independence (measured by Nottingham Extended Activities of Daily Living (NEADL)) according to their frailty status (defined by the electronic Frailty Index (eFI)) was explored using Tobit regression models. Model 1 was adjusted for age and sex; model 2 adjusted for frailty in addition. The addition of an interaction term between frailty and independence was used to test whether frailty was an effect modifier in the association.

RESULTS: Among participants (n=797) the median age was 80 years (IQR 77 to 84), 51% of participants were female, and 331 (42%) had moderate or severe frailty. Among those who had fallen in the past year (n=253, 32%) the median NEADL was 51 (IQR 40 to 59). NEADL scores adjusted for age and sex were 7.5 (95% CI -5 to -10, p-value <0.001) points lower for those who reported falling in the last year compared to those who did not. This was attenuated after additionally adjusting for frailty to a NEADL score of 5.5 points (95%CI 3 to -7) lower. The difference in NEADL scores following a fall varied by frailty status but there was no evidence for interaction between frailty status and independence overall.

CONCLUSIONS: Older people who have experienced falls in the last 12 months have lower levels of independence, compared with older people who have not fallen. Frailty is a potentially relevant confounder of the association between falls and independence.

SCIENTIFIC RESEARCH: FALLS, FRACTURES AND TRAUMA [PLATFORM PRESENTATION]

PERI-OPERATIVE ENHANCED RECOVERY HIP FRACTURE CARE OF PATIENTS WITH DEMENTIA (PERFECTED): CLUSTER RANDOMISED CONTROL TRIAL

C Fox[1], J Cross[1], B Penhale[1], S Hammond[2], T Backhouse[1], F Poland[1], L Shepstone[2], T Smith[3], O Sahota[4], A MacLullich[5]

1. School of Health Sciences, University of East Anglia; 2. Norwich Medical Scool, University of East Anglia; 3. Nuffield Centre, University of Oxford; 4. University of Nottingham; 5. University of Edinburgh

BACKGROUND: Hip fracture in people with dementia and delirium, presents major challenges for older patients, their families/carers and health and social care. The outcomes after surgery for elderly hip fracture patients are often poor and are worse in patients with cognitive impairment (CI). Patient with CI and fracture die sooner, memory problems get worse during their admission and admissions are often longer. They are also less likely to return to their pre fracture residence and only a quarter return to their previous level of mobility. The costs of care are 40% more than in those without CI. There is little research on how best to look after this patient group in hospital. Our previous work shows that patients, families, carers and staff repeatedly report the need for more sensitive ways to look after people with CI. Staff have also highlighted the need for staff training to engage them more meaningfully with the needs of this group.

To address this need we developed a complex intervention called PERFECT-ER (featuring 68 patient level care and 15 organisational items) made up of: a best practice checklist, a staff training manual, staff time to implement the items on the checklist, staff time to train colleagues and a process to help continuous improvement in care.

METHOD: A cluster randomised control trial of the PERFECT-ER programme in 11 hospitals in England and Scotland involving 282 people with hip fracture and CI.

RESULTS / EVALUATION: We recruited to the trial and implemented the intervention over 15 months. PERFECT-ER had signals for improving cognition (MMSE) (1 point improvement) and in-patient hospital survival rate (1.5x higher).

From the process evaluation: despite difficulties in the acute hospital environment with staffing levels, bed pressures and numbers of frail patients, the intervention was welcomed and utilised in the intervention hospitals.

CONCLUSIONS / PERSPECTIVE: People admitted to hospital with hip and CI are vulnerable. National audits have shown some improvement in recognition of this issue, but communication and planning have repeatedly been found to be poor and in hospitals, training for staff is at best limited. PERFECTED is the largest trial to date in acute hospital care in CI and has shown that this intervention can be implemented and has the potential to improve important outcomes.

SCIENTIFIC RESEARCH: HEALTH SERVICES RESEARCH [PLATFORM PRESENTATION]

PROFILE AND CLINICAL OUTCOMES OF PATIENTS ADMITTED TO AN EMERGENCY FRAILTY UNIT

S Aithal, J Collins, A Anwar, D Duric, C Edwards, I Singh

Department of Geriatric Medicine, Ysbyty Ystrad Fawr, Aneurin Bevan University Health Board, Wales

INTRODUCTION: Hospitals are increasingly admitting frail older people and are at risk of adverse outcome. The Society for Acute Medicine Benchmarking Audit (2017) reported that 12% (598) patients had readmissions within 30 days. Rate of rehospitalisation of frail elderly patients has been reported between 19.6 and 24.6%.[1-3] Prompt and timely comprehensive geriatric assessment (CGA) has proven to improve outcomes. This study aims to identify the clinical characteristics of acute frail older patients admitted to emergency frailty unit (EFU) and appraise the clinical outcomes.

METHODS: Clinical outcomes for all patients admitted to EFU from 1 April 2015 to 31 March 2017 were analysed. Patients needed longer stay were transferred to long stay wards.

RESULTS: The clinical characteristics of all acute frail older patients (1505) admitted to EFU including those transferred to long stay ward are shown in the table, Clinical Profile of Patients Admitted to EFU:

	All patients (n=1505)	**EFU (n=856)**	**Wards (n=649)**
Mean age (Years)	82.4±9.6	81.3±10.0	83.8±8.8
Females %	60 (902/1505)	58.3.3 (499/856)	62.2
Mean CCI	5.3±2.7	5.3±2.7	5.3±2.7
Mean No of drugs	9.6±4.4	9.7±4.4	9.5±4.4
Mean Clinical Frailty Scale	6.4±1.1	6.2±1.1	6.7±1.0
Geriatric Giants	2.9±1.0	2.7±1.0	3.2±0.7
Pre-admission Barthel Index	14.1±4.4	15.2±4.3	12.8±4.9
Admission Barthel Index	9.6±4.3	11.4±4.4	7.4±3.7
Outcomes			
Mean hospital LoS (days)	18.3±23.3	5.4±3.2	35.2±27.1
30-day readmission rate %	15.9 (214/1344)	18.3 (146/824)	13.1 (n=68/520)
Inpatient mortality %	10.7 (161/1505)	3.7 (32/856)	19.8 (129/649)

CONCLUSION: A comparatively lower 30-day readmission rate of 18% and shorter hospital stay observed in the study supports prompt comprehensive geriatric assessment for the acutely unwell older patients in the front door.

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SCIENTIFIC RESEARCH: HEALTH SERVICES RESEARCH [PLATFORM PRESENTATION]

THE CANTERBURY COMMUNITY REHABILITATION, ENABLEMENT AND SUPPORT TEAM (CREST) SERVICE: A NOVEL SERVICE TO SUPPORT WELLBEING AND INDEPENDENCE IN THE COMMUNITY

C P Heppenstall[1], H C Hanger[2], T J Wilkinson[1]

1. University of Otago, Christchurch, New Zealand; 2. Canterbury District Health Board, Christchurch, New Zealand

INTRODUCTION: The Christchurch, New Zealand, Community Rehabilitation, Enablement and Support Team (CREST) service was introduced in 2011. It provides support for frail older people living in the community, for whom acute illness or injury has caused functional decline, and have the capacity to regain independence with a period of intensive rehabilitation and support. It uses an individualised goal directed approach. The service aims to: improve or regain independence and achieve goals; to prevent or delay Aged Residential Care (ARC) entry; to reduce hospital bed use.

METHODS: We used a mixed-methods approach to evaluate the service. Retrospective data from before and after the introduction of the service were compared. A prospective cohort of older people being discharged from hospital with the service was recruited, and followed for 6 months. Qualitative interviews were conducted with people who had received the service. Results were brought together using a convergent mixed methods approach.

RESULTS: Scores on the Nottingham Extended Activities of daily living score improved significantly from mean 29.0 points at discharge to 43.3 points after 6 weeks ($p<0.001$). In interviews people spoke of the improvements they had made in function. However many could not identify their specific goals.

There was a significant reduction in ARC use for those who received the CREST service in 2014 from 8% to 5.6% ($p<0.05$). There was a statistically, but probably not clinically significant, increase in the time to ARC admission. Important factors included self-rated quality-of-life, cognition and frailty.

The length of the index length-of-stay was significantly shorter from 9.2 days to 7.8 days ($p<0.001$). We found high readmission rates, 53% at 6 months. However, 52% of readmissions were classified as new acute problems requiring inpatient management, and were able to return home.

CONCLUSIONS: CREST is a novel service, which has impacted on older people’s independence, ARC admissions and hospital bed use.

SCIENTIFIC RESEARCH: BIOLOGY AND SOCIAL GERONTOLOGY

THE ROLE OF IRON AND ANAEMIA IN VENOUS LEG ULCERS: A REVIEW OF THE LITERATURE

A Ferris

Cardiff and Vale University Health Board

INTRODUCTION: Up to 30% of venous leg ulcers (VLUs) remain unhealed at 24 weeks causing significant distress to patients; however, the factors preventing healing are still not fully understood. Iron mediated tissue damage has been hypothesised yet anecdotally anaemia is also thought to have a negative effect on wound healing. This review aims to summarise the current evidence for these theories and to establish the likely effect of local iron overload and systemic anaemia or iron deficiency may have on healing in the context of VLUs.

METHODS: A comprehensive search of MEDLINE®, EMBASE and the Cochrane library was conducted to identify suitable articles. Search domains relating to wound and ulcer healing, iron and anaemia were combined using Boolean operators. Studies were then screened by title and abstract before full text review.

RESULTS: A number of forms of iron including hemosiderin and ferritin are implicated in progression of venous disease, ulcer formation and impaired healing. Higher levels of local iron deposition are associated with more severe ulceration and non-healing which is thought to be mediated by free radicals.

There is inconclusive evidence for the role of anaemia in healing in VLUs but studies in diabetic foot disease have shown higher than expected prevalence of anaemia as well as correlation between anaemia and severity of diabetic foot disease. When you consider this against the detrimental effects identified with local iron overload in VLUs it suggests a highly complex interplay between the damaging effects of iron on local tissues and the negative effects of anaemia mediated tissue hypoxia. Studies looking at options to increase local oxygen delivery such as application of topical haemoglobin suggest this may have an impact on some aspects of healing but is not conclusive.

CONCLUSION: There is growing evidence that locally elevated iron levels may have a detrimental effect on ulcer healing as well as increasing the likelihood of venous ulceration developing however more robust research is needed to fully understand this complex relationship. Our team have designed a novel pilot study to assess the prevalence of anaemia and the relationship between plasma and wound fluid iron levels in patients with VLUs, and any association this may have with rate of healing and this prospective study is now underway.

SCIENTIFIC RESEARCH: BIOLOGY AND SOCIAL GERONTOLOGY

FRAILTY AND NUTRITION IN OLDER TANZANIANS

E G Lewis[1,2], S Coles[3], A Mohammed[4], J Mkodo[4], W Gray[2], R Walker[1,2], I Haule[5] C Dotchin[1,2]

1. The institute of Health and Society, Newcastle University; 2. Northumbria Healthcare NHS Foundation Trust, Tyne and Wear; 3. The Medical School, Newcastle University, Newcastle upon Tyne; 4. Kilimanjaro Christian Medical Centre, Moshi, Tanzania; 5. Hai District Hospital, Bomang'ombe, Tanzania

INTRODUCTION: Average life expectancy at age 60 in Sub-Saharan Africa is already 16 years for females and 14 years for males, thus age-associated frailty is already a reality for many. However, frailty is under-researched in rural populations such as Hai, northern Tanzania. This mixed-methods study has sought to explore the relationship between frailty and nutrition, asking to what extent is undernutrition a factor in old-age frailty in this setting?

METHODS: Exploratory qualitative interviews were conducted with older adults and their families, as well as with community representatives. Interviews were audio-recorded, transcribed and translated from Swahili, then analysed thematically. Survey data were concurrently collected on a frailty-weighted sample of 235 participants. Anthropometric measurements and other nutritional indicators were collected, including body mass index (BMI), calf-circumference (CC), and mid-upper arm circumference (MUAC).

RESULTS: The theme *"Kwa sababu ya kukosa lishe na chakula bora"* (because of missing food and a good diet), discussed the causative association made between lacking food and becoming frail in old age. These qualitative findings were complemented by anthropometric data showing frail participants on average had significantly lower BMI p= 0.04, CC p=.000, and MUAC p=.000, respectively, compared with non-frail participants (using a 2-tailed independent t-test for equality of means). Food shortages were common overall, with a third (n=78, 33.3%) of participants reporting not eating at least once over the previous 12 months due to not being able to afford enough food.

CONCLUSIONS: Frailty appears to be associated with markers of undernutrition in this rural Tanzanian population. Qualitative data illustrates that nutrition is thought to be important in determining fitness or frailty in older people. These findings of reported food shortages may be due to seasonal changes in the availability of food and a recent poor harvest season prior to data collection. Further research should seek to examine the diets of older adults in rural African settings across seasons, and explore interventions for undernutrition as a means of preventing or managing frailty.

SCIENTIFIC RESEARCH: BIOLOGY AND SOCIAL GERONTOLOGY

MANAGING HYPERTENSION IN PEOPLE WITH FRAILTY: AN EXPLORATION OF A PATIENT LED APPROACH

O Todd[1], A Clegg[1], J Young[2], M Godfrey[1]

1. Academic Unit of Elderly Care and Rehabilitation, University of Leeds, Bradford Royal Infirmary; 2. Bradford Institute of Health Research, Bradford Royal Infirmary

BACKGROUND: Nine out of ten 90 year olds have hypertension. Evidence for treatment, particularly in context of frailty and developing dependence, remains uncertain. National guidelines recommend personalising treatment but it is unclear how best to achieve this.

METHODS: Participants with hypertension were recruited from the Community Ageing Research (CARE75+) cohort study using purposive sampling to include a range of ages and degrees of frailty. Qualitative interviews took place during two 45 minute sessions in the participant's home. Interviews were semi-structured, based on a topic guide developed together with a participant representative who later was also involved in analysis. Narrative analysis was inductive and focused both on what and how stories were told. Emerging themes were identified from an individual's stories and social context. Hypotheses were developed iteratively and tested against the data, to consolidate key themes.

RESULTS: Between March and May 2018, we interviewed ten people, with a mean age 84, moderate/severe frailty, half were women, and three had family present. Hypertension treatment was not described as a priority. Frailty as a word was never voluntarily used, was better recognised in others, and described in negative and value laden terms. Decision making was depicted as better done by doctors who understood a patient's values through knowing them over time, or through knowing their families. Few were aware of any uncertainties in blood pressure treatment. Stories championed survivorship, inter-relatedness and community. Priorities focused on day-to-day practicalities, and doing things that maintained identity.

DISCUSSION: Shared decision making in the management of hypertension in people with frailty should acknowledge uncertainty and be framed by issues of greatest relevance and importance for the person. What is important to a person can be elicited from a person's story, their identity ahead of frailty, and in the presence of a trusted family member or carer.

SCIENTIFIC RESEARCH: BIOLOGY AND SOCIAL GERONTOLOGY

HOW DO 'ROBOPETS' IMPACT THE HEALTH AND WELLBEING OF RESIDENTS IN CARE HOMES? A SYSTEMATIC REVIEW OF QUALITATIVE AND QUANTITATIVE EVIDENCE

J Thompson-Coon[1], R Abbott[1], N Orr[1], P McGill[2], R Whear[1], A Bethel[1], R Garside[3], K Stein[1]

1. NIHR Collaboration for Applied Health Research and Care (South West Peninsula); 2.University of Exeter, College of Medicine and Health; 3. European Centre for Environment and Human Health, University of Exeter

INTRODUCTION: In recent years, there has been increasing interest in the use of pet or animal-assisted therapy in care and nursing homes as a type of non-pharmacological therapy that can provide sensory enhancement and facilitate social contact. Robopets are small domestic robots which have the appearance and behavioural characteristics of pets. We conducted a systematic review of the existing quantitative and qualitative evidence to improve understanding of the role of robopets in the elderly residential care setting.

METHODS: We searched 13 electronic databases from inception to April 2017 and undertook supplementary searching. Eligible studies reported the views and experiences of robopets from residents, family members and staff (qualitative studies using recognised methods of qualitative data collection and analysis) and the effects of robopets on the health and wellbeing of care home residents (randomised controlled trials, randomised cross-over trials and cluster randomised trials). Study selection and quality appraisal was undertaken independently by two reviewers. We developed a logic model with stakeholders and used this as a framework to extract and synthesise the data. Where appropriate, we used meta-analysis to combine effect estimates from quantitative studies.

RESULTS: 19 studies (10 qualitative, 2 mixed methods and 7 randomised trials) met the inclusion criteria. Interactions with robopets were described as having a positive impact on aspects of well-being including loneliness, depression and quality of life which were valued by residents and staff, although there was no corresponding statistically significant evidence from meta-analysis for these outcomes. Meta-analysis showed evidence of a reduction in agitation with the robopet ‘Paro’ compared to control (-0.32 (95%CI -0.61 to -0.04, p=0.03)).

CONCLUSIONS: Through increased engagement and collective interactions with the pet, other residents and staff, robopets may have beneficial effects on health and wellbeing for people living in care homes. Robopets were not, however, valued by everyone.

SCIENTIFIC RESEARCH: BONE, MUSCLE AND RHEUMATOLOGY

BURDEN OF OSTEOPOROSIS IN ACUTE OLDER PATIENTS IN THE HOSPITAL: IMPACT OF QUALITY INITIATIVES

D Duric, A Anwar, K Green, C Edwards, I Singh

Department of Geriatric Medicine, Ysbyty Ystrad Fawr, Aneurin Bevan University Health Board, Wales

INTRODUCTION: The most recent NICE publication (Impact falls and fragility fractures, July 2018) suggested that people aged 50 and over who had sustained a fragility fracture, less than a third of those who were recommended treatment had received it within 4 months. There is evidence that only 40% or more of older people with fragility fracture are treated to guidance. The objective of this study was to measure the burden of untreated osteoporosis in acute older in-patients and introduce quality initiatives with aim to treat underlying osteoporosis to guidance.

METHODS: We collected a baseline data over two weeks in May 2018 to measure the prevalence of fragility fractures in acute older patients admitted to five general medical/geriatric wards. Patient characteristics including demographic profile, co-morbidity burden, medications, mobility status, previous falls, fragility fracture and osteoporosis treatment was recorded. Patients with terminal illness were excluded. The key mechanism for improvement was raising osteoporosis awareness through education and training of doctors. Three subsequent plan-do-study-act cycles were undertaken in July, September and November 2018.

RESULTS: 520 patients were studied (mean age =77.9±13.1 years). Mean Charlson Co-morbidity Index and mean number of co-morbidities were 5.3±2.3 and 5.0±2.4 respectively. Mean number of medications were 9.3±4.3. Majority of patients were admitted from their own residence (85%, 445/520) and only 9.6% were admitted from Care Homes. Nearly half (47%, n=242/520) have fallen at least once before admission or were admitted with a fall. Majority of patients were mobile with aids or help (69%, 360/520) and one-quarter were independently mobile (24%; 125/520).

Overall 26% (134/520) had a fracture and 88% (118/134) were classed as fragility fracture. Hip: 12% (62/520); Vertebral: 4.6% (24/255); Wrist: 1% (7/520); Humerus: 2.3% (12/520) and Pelvis: 1% (5/520). Quality initiatives introduced have shown improvement in the initiation of osteoporosis treatment.

Cycle	One	Two	Three	Four
Number of patients	123	131	143	123
Fragility fractures% (n)	25% (31/123)	23% (30/131)	22% (31/143)	21% (26/123)
Treated to guidance% (n)	45% (14/31)	60% (18/30)	71% (22/31)	81% (21/26)

CONCLUSION: More than half of the older patients admitted to hospital are not treated for osteoporosis to guidance. Education and training using quality improvement methodology has shown to improve bone health assessment and treatment for the most vulnerable group.

SCIENTIFIC RESEARCH: CARDIOVASCULAR

DESIGNING A FRAILTY SCREENING TOOLKIT TO TRIAGE PATIENTS SEEN IN TRANSCATHERTER AORTIC VALVE IMPLANTATION (TAVI) CLINIC

G Donnelly[1], M Buch[2], L McDowell[2], A Oliveira[2], P Darlington[2], A Watson[1]

1. Elderly Medicine Department, Wythenshawe Hospital, Manchester Foundation Trust; 2. Department of Cardiology, Wythenshawe Hospital, Manchester Foundation Trust

INTRODUCTION: Frailty is associated with increased mortality and morbidity in patients undergoing a TAVI (Martin, Sperrin, Ludman, BMJ Open, 2018, 1-9). NICE guidance promotes a shared decision-making model when making treatment choices in the frail elderly with symptomatic aortic stenosis, which should involve a Multi-Disciplinary Team including a specialist in elderly medicine (IPG586, 2017). With growing demands on frailty specialists, we need to ensure that we review the appropriate cases so that our time is used effectively.

METHODS: We created a pro-forma to identify patients who could benefit from geriatrician input. The TAVI ANP's recorded data during 5 months of clinics. Acceptance criteria for geriatric referral included patients with either a Katz ADL score <4, age over 90, Mini Cog score of 2 or below and moderately or severely frail on Edmonton Frailty Scale (EFS).

A Katz ADL score of 4 or less was used to highlight dependency as it is a validated marker of mortality in TAVI patients (Rogers, Alraises, Moussa, Am J Cardiol, 2018, 121, 850-855). The EFS was chosen as a frailty screen as it is validated in acute coronary syndrome and for use by non-geriatricians (Judith, Partridge, Harari, *Age and Ageing*, 2012, 41, 142–147).

RESULTS: 60 patients, 57% male with a median age of 82 (range 65-93). All patients lived in their own home with four requiring carers. 16 patients were highlighted as requiring a referral (7 >90, 2 EFS moderately frail, 9 Mini Cog <2, 6 Katz ADL <4). The EFS flagged 8 as mildly frail and 14 as vulnerable, with only 7 of these 22 patients captured by the other referral criteria.

CONCLUSION: Using the EFS alone to triage patients is not adequate. We need to continue to screen across the variety of domains including frailty, dependence and cognition, as some patients only triggered referral in one area. We have adapted the pro-forma to include a Clinical Frailty Score alongside the EFS to compare scores and analyse which score should be used in future practice.

This project has allowed us to establish the potential demand on a geriatrician involved in a TAVI service. It has allowed us to share our knowledge of frailty with the TAVI team and create a screening tool to help to triage those who would benefit from a Comprehensive Geriatric Assessment.

SCIENTIFIC RESEARCH: EDUCATION AND TRAINING

TEACHING FOUNDATION YEAR TWO (FY2) DOCTORS ABOUT THE GERIATRIC GIANTS: CAN WE IMPROVE CONFIDENCE WITH COMPLEXITY?

S Ludlam, J Khan, A Ganiyu, R Parikh

The Royal Oldham Hospital

INTRODUCTION: The "Geriatric Giants" remain relevant as they readily understandable to trainees (Isaacs B.: The Challenge of Geriatric Medicine, Oxford, 1992). The numbers of complex older patients are rising and thus foundation doctors require appropriate training.

A five-session course was designed around the "Giants". Themed sessions were delivered to FY2 learners focused on delirium, dementia, continence and falls. A final session tied these together and tackled complexity.

METHODS: Teaching methods included lectures, simulated patients, case discussions and a feature film (Wrinkles) to illustrate complexity.

Pre- and post-course questionnaires examined confidence managing the "Giants" and complexity. After each session, a questionnaire asked learners to commit to a practice change. Pre- and post-course multiple choice (MCQ) tests were completed.

RESULTS: 25 pre-programme and 31 post-programme questionnaires were returned. 5 learners attended all sessions.

1. Confidence managing the "Giants" rose e.g. continence from 52% to 94%.
2. Preparedness for caring for complex patients improved to 90% from 56%.
3. Awareness of comprehensive geriatric assessment (CGA) improved from 40% to 90%.
4. Learners stated they would alter their practice including challenging pre-conceived ideas and completing thorough holistic assessments.
5. MCQ performance improved by an average of 3.1% in 3 areas (delirium, falls and continence). The MCQ score for prescribing fell by 4.1%.
6. The principles of CGA, holistic assessment, acting as an advocate and recognizing the need for tailored solutions were among the "most-important" things learnt.

CONCLUSIONS: Confidence pre-programme was low. This improved, as did awareness of CGA. Learners committed to creating holistic individualised management plans and understood their potential role as an advocate for appropriate care.

A modest MCQ score uplift occurred. However, on-call rotas affected the number of trainees able to attend. This is a challenge and we need to develop resources to mitigate this. Further development of prescribing teaching is required.

SCIENTIFIC RESEARCH: EDUCATION AND TRAINING

RATIONAL PRESCRIBING: POLYPHARMACY AND OPTIMAL PRESCRIBING TEACHING FOR FOUNDATION YEAR TWO (FY2) DOCTORS

J Khan, A Ganiyu, S Ludlam, R Parikh

The Royal Oldham Hospital

INTRODUCTION: Complex drug treatment regimens in elders with multiple co-morbidities are common. Such regimens may be appropriate and improve life expectancy and quality of life. However, harm may occur with "problematic" polypharmacy i.e. more adverse effects, impaired concordance, and medicine wastage (NICE: http://nice.org.uk/guidance/ktt18).

As part of a five-session course for FY2 learners, we delivered teaching focusing on "Prescribing in the Elderly". This was further explored in the major topic areas tackled (delirium, dementia, falls, continence and complexity) through lecture material and group activities.

METHODS: The initial session comprised a lecture and discussion of two cases facilitated by a registrar and consultant. Pre- and post-programme questionnaires examined attitudes, confidence and knowledge (with multiple-choice questions (MCQ) matched to material embedded within the major topic sessions).

RESULTS: 25 trainees attended the initial session. Key areas trainees identified difficulties with included polypharmacy and how to prioritise treatments. Following the initial session, 92% (23) of trainees felt better prepared to manage polypharmacy. Trainees stated their practice would change by including the use of the STOPP/START tool (O'Mahony D et al. Age and Ageing 2014; 44(2): 213-218), performing medication reviews, and considering anticholinergic burden. 25 trainees completed the pre-programme questionnaire and 31 the post-programme questionnaire. Trainee confidence in performing a medication review rose from 72% to 93%. MCQ scores pre- and post-intervention and were 55.5% and 51.4% respectively. However, only 5 learners attended all the sessions.

CONCLUSIONS: Trainees recognise that older patients are complex, and that polypharmacy is a challenge. After the teaching intervention trainees were more confident in managing this challenge. MCQ performance did not improve. This may be due to the low percentage attending all the sessions due to on-call commitments and leave. Thus, we will develop a study guide (including case studies) to boost the utility of the course and re-evaluate next academic year.

SCIENTIFIC RESEARCH: EDUCATION AND TRAINING

A DAY IN THEIR SHOES: THE USE OF AGEING SUITS IN UNDERGRADUATE MEDICAL EDUCATION

L Webb, C Van't Hoff, C Timms, C Ashton, K Jones, A Ipe

Swindon Academy, Great Western Hospital, Swindon

INTRODUCTION: With an ageing population and increasing pressures on the National Health Service, there is an increasing incidence of ageism and negative attitudes towards older adults. Both the NHS and medical education needs to change to counter this, requiring students to literally 'put themselves in someone else's shoes' to gain insight into the functional effects of ageing.

METHODS: Since 2016, the Swindon Academy of Bristol University has invested in ageing suits. We continued the theme of 'A Trip to the Day Centre' for the fourth-year medical students and timed students completing five typical activities with and without ageing suits. They also completed a pre- and post-workshop survey to explore their attitudes towards ageing.

RESULTS: Students took longer to complete activities while wearing the ageing suits. Tying shoelaces takes a mean average of 63 seconds longer with the ageing suits, which reflected the students' predictions. The least affected task was walking along a corridor and picking up a tablet, although this was still 13 seconds slower with the ageing suit. There was a large standard deviation about the mean for each task, although the reasons for this require further exploration. Thematic analysis emphasised the usefulness of the novel approach and highlighted attitudinal changes of the students. There was also improved insight into limitations of ageing.

CONCLUSIONS: All students agreed that elderly people face difficulties with ADLs and IADLS and they appreciated an interactive workshop to explore this. They enjoyed the ability to carry out tasks and agreed that they would endeavour to have more patience with the older population in the future.

An interactive ageing workshop is beneficial for promoting empathy with older patients and insight into their mobility problems. We hope to expand our results and plan to introduce the workshop into postgraduate teaching.

SCIENTIFIC RESEARCH: EDUCATION AND TRAINING

ARE JUNIOR DOCTORS ABLE AND CONFIDENT IN ASSESSING FRAILTY?

K Davies, A Halewood, S Smith, G Donnelly

Department of Elderly Care, Manchester Royal Infirmary

INTRODUCTION: Thirty percent of patients admitted to Acute Medical Units are elderly patients with frailty (NHS Improvement, IG 23/18, 2018). Frailty is associated with increased mortality (Fried, The Journals of Gerontology, 2001, 56, 145-57). NHS England has mandated that by March 2019 frailty is assessed acutely in all patients over 65 years and that 75% of Type 1 Emergency Departments have an acute Frailty service (NHS Improvement, IG 23/18, 2018). Manchester Royal Infirmary (MRI), a large University Hospital, is currently working with the Acute Frailty Network to set up a frailty service. For this to be successful we need junior doctors to be able to correctly identify frailty.

METHODS: We aimed to assess whether Junior Doctors working within MRI have adequate knowledge subjectively and objectively about frailty and frailty scores, as well as their current clinical practice in these areas. We anonymously surveyed 56 randomly selected doctors across training grades. We then piloted a teaching session to assess if education as an intervention improved confidence and knowledge.

RESULTS: Of 56 Junior Doctors, only 27% stated they felt comfortable assessing frailty, despite the majority (89%) stating it was important. Eighty four percent felt they needed more training to adequately assess frailty. Only 36% of doctors said they routinely screened for frailty on admission. When assessing frailty 45% could select the frailty score used within the trust and 16% could detail how it was correctly used. Of those who felt comfortable assessing frailty, only 20% were using the frailty score correctly. After our pilot education session 100% in attendance understood the trusts frailty screening process and felt more confident in being able to perform the assessment.

CONCLUSIONS: If frailty scores are used to provide triaging for frailty services we need to ensure that those involved have adequate knowledge. At MRI Junior Doctors have gaps in knowledge about frailty and our screening process. Most are consciously aware of this knowledge gap, however others are not and using screening tools incorrectly. We have capitalised on the request for more training highlighted by this project and the success of our initial pilot session, by providing teaching sessions to promote engagement in our service development process and ensure consistency in care.

SCIENTIFIC RESEARCH: EDUCATION AND TRAINING

THE IMPACT OF TEACHING FELLOWS IN THE ELDERLY MEDICINE DEPARTMENT ON UNDERGRADUATE CAREER PERCEPTIONS

R Winter, E Sherman, J Wright

Brighton and Sussex Medical School

BACKGROUND: Medical student lack of career interest in elderly medicine (EM) is thought to be due to lack of exposure, negative perceptions and being deterred by the complexity of the older patient.[1,2] The purpose of the study is to explore the impact of a EM teaching fellow (TF) on student's attitudes towards a potential career in EM.

METHODS: Numerical career ratings (from students' personal logbook) and free text comments to support their rating were retrospectively collected from third year medical students who completed their elderly medicine module between January 2016 and July 2017. Quantitative data was analysed using descriptive statistics and the free text comments were grouped into themes.

RESULTS: 200 log books had careers ratings and were included in the study (84%). The mean career rating increased with the presence of the TF in the department. Three main themes emerged from students´ free-text comments to support their career rating: variety, the team and complexity. Complexity as a theme changed from an adverse factor when deciding about EM as a career to a positive factor with the presence of the TF.

DISCUSSION: The findings of this study suggest that the presence of a TF in the department enhances students´ career rating for a potential future career in EM and particularly changed student views about complexity in EM. It could be an easily reproducible method of enhancing exposure in EM and creating positive perceptions of a career in EM.

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SCIENTIFIC RESEARCH: EDUCATION AND TRAINING

EATING ONE'S FILL: THE USE OF DIETICIAN-LED WORKSHOPS IN TEACHING UNDERGRADUATE MEDICAL STUDENTS ABOUT MALNUTRITION

L Webb[1], A Weir[2], S Rowell[2], E Keenan[2], E Lovegrove[2], M Williams[2], C Timms[1], H Best[2], L Webb[2], K Jones[1]

1 University of Bristol, Great Western Hospital, Marlborough Road, Swindon; 2 Nutrition & Dietetic Services, Great Western Hospital, Marlborough Road, Swindon

INTRODUCTION: Good nutritional status is directly linked to a reduced global burden of disease and better outcomes, but the prevalence of malnutrition in hospitalized geriatric patients is up to 20%. There are few formal teaching sessions on nutrition within the undergraduate curriculum, which results in lack of confidence in assessing nutrition need and delivering advice. This oversight in teaching was identified and a workshop was designed to address the subject.

METHODS: The Dietetics and Nutrition Department at the Great Western Hospital designed a nutrition workshop for undergraduate medical students, run by the team each month. The workshop included MUST calculations, oral nutritional supplement teaching and tasting, and feeding tubes. Knowledge and attitudes were tested before and after the workshop: a quiz-style test and a survey questionnaire (composed of a mixture of Likert scales and free text boxes) were utilised.

RESULTS: The first two workshops demonstrated a mean improvement in quiz scores of 36%. The students believed that teaching from dieticians was preferable to doctors due to their better knowledge of the assessment and management of nutritional status; however, previous teaching delivered by dieticians was rare. The most enjoyable aspect of the teaching was supplement tasting, and the most useful was the interactive, case-based nature of the teaching session. Their knowledge of the roles of doctors and nutritionists in managing malnutrition also improved.

CONCLUSIONS: All students agreed that the nutrition workshop was useful for their learning, supported by the quantitative data, and will improve their practice. They would recommend the session to other students. We aim to continue the workshops throughout this year and perform a full thematic analysis for the conference. We also aim to repeat the questionnaire six weeks after the workshop to ascertain how well the knowledge is retained.

SCIENTIFIC RESEARCH: EDUCATION AND TRAINING

CAN WE IMPROVE THE EXPERIENCE OF JUNIOR DOCTORS ON GERIATRIC MEDICINE ATTACHMENTS?

R Oates, Y Adenwala, M Egbe

Royal Bolton Hospital, Department of Complex Care, Bolton

INTRODUCTION: The Royal College of Physicians (RCP) published a report detailing how inadequate staffing levels can affect patient safety and staff morale. A balance is needed between service provision and training of junior doctors. Trainees should receive time for learning, supervised training opportunities and clinic allocation. Clinic attendance is a compulsory requirement for Core Medical Trainees (CMTs).

Between August 2017 and August 2018, CMTs in geriatric medicine in Royal Bolton Hospital had limited opportunity to clinic time; with many failing ARCP due to this. Junior doctors reported inadequate staffing levels and reduced satisfaction on the Geriatric wards.

METHODS: A Geriatric registrar created and managed a staff rota for 5 complex care wards and allocated clinic time for 14 junior doctors from August to December 2018. Weekly rotas were compiled and reviewed to ascertain average staffing levels. Junior doctors were surveyed in an informal forum.

RESULTS: All wards had a registrar or consultant ward round at least 3 times a week. This is recommended by the RCP. 4 wards had at least 2 juniors present on the ward all day for 39 out of 90 days (43%). One ward had 2 Doctors present for 72 days due to locum cover. This is inadequate. CMT doctors' clinic attendance increased from an average of 4 to 12.

The junior doctor survey highlighted:

- CMTs valued allocated time for clinic and all reported greater understanding of geriatric medicine in the outpatient setting.
- All grades appreciated staffing levels with 2 or more Doctors.
- Supportive and encouraging attitudes of geriatric registrars and consultants were received positively by trainees.

CONCLUSION: A geriatric registrar managing ward rotas can facilitate clinic time which is essential for CMT doctors' training. Staffing levels remain inadequate which needs be addressed to ensure patient safety and staff experience. Behaviours displayed by Geriatricians have a positive impact on experience of junior doctors in terms of morale and learning.

SCIENTIFIC RESEARCH: EDUCATION AND TRAINING

A JUNIOR DOCTOR INTERVENTION TO IMPROVE PATIENT EXPERIENCE ON GERIATRIC WARDS

S Jones, E Zakrzewski, R Oates, Y Adenwala

Royal Bolton Hospital, Department of Complex Care, Bolton

INTRODUCTION: Geriatric Medicine is complex and systems are required to maintain and improve patient safety. At the Royal Bolton Hospital, all wards are subject to review and accreditation to validate and identify key patient safety issues. At the cornerstone of geriatric medicine is multi-disciplinary working, however it is evident some performance indicators are specific to the medical team. The last review for geriatric wards in the hospital scored poorly overall. The aim is to improve the accreditation for the geriatric wards whilst improving patient safety, outcome and communication.

METHODS: One ward team consisting of FY1, FY2, Geriatric StR and Consultant identified key 'medical staff' specific areas. This included: antibiotic policy compliance, DNAR-CPR documentation, evidence of senior review and MDT discussions and discharge summaries. We conducted spot audits on 4 geriatric wards and also conducted a survey for junior doctors on the wards. We then provided education to one specific ward and reassessed.

RESULTS:
Pre intervention:
- Evidence of senior wards rounds present.
- Evidence of MDT working and discussion.
- Failed to provide DNARCPR booklet and correct documentation, with limited evidence of discussion with relatives.
- Poor compliance with antibiotic policy.
- No evidence of prepared discharge summaries.

Survey of junior doctors indicated:
- 75% of wards had senior ward rounds and reviews.
- 75% of wards did not prepare discharge summaries in advance; stating time constraints.
- 63% of doctors aware of DNARCPR forms in place without discussion with relatives.
- 25% of doctors provided the Trust booklet for DNARCPR - mandatory requirement for the Trust.
- 75% of doctors do not sign daily for intravenous antibiotics.

Post intervention:
- 100% of expected discharged had discharge summaries the day before.
- 100% of patients had evidence of daily senior review.
- 100% of patients had evidence of MDT input and discussion.
- 100% of patients with DNARCPR forms had accurate documentation and evidence of discussion with relatives and patients.

Ward accreditation improved by two levels (bronze to gold).

DISCUSSION: Medical staff engagement and peer intervention can improve outcomes on geriatric wards. It is essential for geriatricians to promote effective communication especially with regards to DNARCPR. By educating and including junior doctors on expected processes improvements can be achieved. Given the success this will be implemented across all medical wards with inclusion at induction.

SCIENTIFIC RESEARCH: EDUCATION AND TRAINING

MEMORIES OF ‘66 AT THE NATIONAL FOOTBALL MUSEUM: REMINISCENCE THERAPY TEACHING FOR REGISTRARS

T Warburton[1], L Rutherford[2], R Parikh[1,3]

1. Royal Oldham Hospital; 2. National Football Museum, Manchester; 3. University of Salford

INTRODUCTION: Increasingly, museums view reminiscence as a key-part of their work with local communities. The National Football Museum (NFM) offers memory tours and supports those in community-based settings living with dementia. Reminiscence therapy (RT) has a role in the management of dementia with positive effects on wellbeing, cognition and communication (Woods B et al, Cochrane Collaboration, 2018: DOI: 10.1002/14651858.CD001120.pub3).

METHODS: As part of the Mental Health of Older Adults module (MSc Geriatric Medicine, Salford University) the programme lead for the NFM “Memories of ’66 Project” facilitated a workshop for Speciality Registrars (StRs). This illustrated RT delivery including engagement techniques.
A pre-programme questionnaire explored knowledge of RT and the evidence-base. After the workshop, a qualitative questionnaire explored how participants might apply their learning in the general hospital.

RESULTS: 18 trainees completed the questionnaires. When asked to define RT before the session, most focussed on recall as an endpoint. Answers varied – sophisticated responses highlighted objects and media as stimuli. The evidence base/benefits were poorly understood, and no trainee had used RT. One trainee explained this as “not really on my radar”.

Following the session, responses to RT were positive: “… totally surprised these services available Inspiring (I am not a football fan)”. Trainees stated they would explore/recommend similar projects near their hospitals to patients. Learners reflected on how to apply the techniques within a general hospital. Trainees commented on how RT could be integrated into acute and rehabilitation settings. They felt RT would stimulate patients and promote activity. They described benefits for individuals and groups.

CONCLUSIONS: Reminiscence therapy is a potentially valuable intervention for patients living with dementia. This is a low risk treatment that could be incorporated into the care provided in hospital settings. After providing an interactive session, StRs showed increased understanding and a willingness to utilise reminiscence therapy.

SCIENTIFIC RESEARCH: EDUCATION AND TRAINING

ANNUAL REVIEW OF COMPETENCY AND PERFORMANCE......FOR EDUCATIONAL SUPERVISORS

J V Butler, R E Morse

Geriatric Medicine Specialty Training Committee, Wales Deanery

INTRODUCTION: Geriatric Medicine Trainees are subject to an Annual Review of Competency and Progression (ARCP) throughout their time in training. High quality Educational Supervision (ES) helps ensure trainees progress in a satisfactory manner. ES's need to demonstrate that they are also competent and performing in the role. We postulated that a more formal annual assessment of ES competence and performance would have more measureable benefits for both trainees and trainers.

METHODS: The concept of an ARCP for Educational Supervisors was agreed by the Wales Deanery Geriatric Medicine Specialty Training Committee (STC) in 2014. This was piloted initially at a large teaching hospital in 2015 prior to dissemination throughout all training sites in South Wales in 2016. A 2 step assessment format comprised of

1. An annual formal declaration to STC by ES's relating to all their activity in the role.
2. Optional Formal Trainee feedback on their ES performance collected through a standardised Multi-Source Feedback assessment tool following Trainee ARCP.

A random ES sample were asked to provide their evidence to the Wales Deanery Quality Assurance department. ARCP outcomes for trainees were compared both before and after the introduction of the ES ARCP.

ES's successfully completing their ARCP were awarded a formal Deanery Approved Certificate to inform Employer Annual Appraisal and Job Planning processes. ES's failing to declare their activity in the role or receiving poor feedback were invited to meet with the STC Executive.

RESULTS: All 20 Geriatrics STC ES's participated in the project. 18 ES's successfully completed their ARCP and were awarded Certification in the role. Two ES's felt that they were unable to continue in the role due to competing commitments and resigned from ES responsibilities. All remaining 18 ES's unanimously felt that the ARCP process for them, was both professionally valuable and helped them to maintain their engagement and enthusiasm for the role. The ES ARCP has been continued annually since then and has been adopted by several other STC's throughout the School of Medicine.

Trainee ARCP Unsatisfactory Outcomes reduced from 21.2% to 5.8% during the project period & has been maintained in intervening years.

CONCLUSION: An ES ARCP improves trainee ARCP outcomes and ES satisfaction in the role. It also provides ES's with professional documentation to support annual Job planning and appraisal.

SCIENTIFIC RESEARCH: EDUCATION AND TRAINING

NEED FOR A SPECIFIC GERIATRIC MEDICINE DOCTORAL FELLOWSHIP FUNDING STREAM: RESULTS OF A NATIONAL SURVEY

Geriatric Medicine Research Collaborative

BACKGROUND: Trainee interest in research within geriatric medicine has been demonstrated by involvement of trainees within the Geriatric Medicine Research Collaborative (GeMRC). High quality geriatric medicine research is vital to improve the care and medical treatment of older adults. However, at the time of this survey, there were no specific funding streams for doctoral fellowships for geriatric medicine trainees. We set out to establish the experience of geriatricians applying for doctoral research within the UK.

METHODS: A web-based survey using Google Forms was disseminated and results were collected in November 2018. The survey was disseminated through Twitter, GeMRC regional representatives, and the Academic Geriatric Medicine email distribution list.

RESULTS: 19 responses were obtained from five consultants and 14 registrars in geriatric medicine (ST3-ST6) from nine separate training regions. Five registrars and three consultants expressed that they had previously successfully applied for doctoral research fellowships (42%); three registrars had previously unsuccessfully applied (16%), and a further three expressed an intention to apply (16%). Of those who had obtained funding, four of these (50%) were in 2012 or earlier. Of those funded in 2012 or earlier, one of these (33%) was funded by the historic BGS, Age (UK) joint fellowship. Of those funded subsequently, three (60%) had been funded by the Dunhill Medical Trust. 16 (89%) considered there to be a need for a specific geriatric medicine funding stream.

CONCLUSION: There is increasing interest amongst trainees in geriatric medicine in applying for doctoral research fellowships. Funding of such research is necessary to promote high calibre scientific research to improve the care of older adults. A specific geriatric medicine doctoral fellowship funding stream will widen opportunity for trainees interested in completing doctoral research.

SCIENTIFIC RESEARCH: EDUCATION AND TRAINING

GERIATRIC MEDICINE AND OLD AGE PSYCHIATRY JOINT TRAINING PILOT: AN INNOVATIVE APPROACH TO COLLABORATIVE POSTGRADUATE TRAINING

C Welch, A Bangash, R Wears, D Rice, V Aziz

University of Birmingham; Health Education West Midlands; RCPsych, Old Age Faculty; BGS Education and Training

BACKGROUND: Physical and psychological health problems are prevalent in older adults and rarely exist in isolation. Treating these problems in isolation is resourceful and can be potentially harmful to patients due to delays in diagnosis and treatment and incomplete holistic care plans. Historically, trainees in geriatric medicine and old age psychiatry within the United Kingdom have completed very different training programmes.

METHODS: We undertook a pilot of collaborative postgraduate training between trainees in geriatric medicine and old age psychiatry within the West Midlands training region, United Kingdom. Trainees in each specialty were paired with each other and advised to arrange appropriate training opportunities for their counterpart; these included shadowing each other in their workplace and arranging opportunities to attend training opportunities with their consultants. Pre- and post-pilot surveys were completed by all trainees and reflections from trainees were collated.

RESULTS: Five trainee pairs were formed and arranged shadowing and training opportunities between October 2017 and May 2018. This included a combination of inpatient, outpatient, and community work. For both specialties, trainees' confidence in topics relating to their counterparts' specialty increased between the pre- and post-pilot surveys. Recurrent themes included within reflections included the benefits of collaborative training.

CONCLUSIONS: Our pilot has demonstrated that it is feasible to implement a programme of joint training into postgraduate medical training, and that this can have a positive impact upon the confidence of both specialties. An extended pilot is planned for the training year 2018 – 2019.

SCIENTIFIC RESEARCH: EPIDEMIOLOGY

MULTIMORBIDITY IN ELDERLY FROM A MIDDLE-INCOME COUNTRY: PREVALENCE, CLUSTERS OF DISEASES AND ASSOCIATED FACTORS

S R Batista[1], A L L Sousa[2], B P Nunes[3], P C B V Jardim[1]

1. School of Medicine, Federal University of Goiás, Brazil; 2. School of Nursing, Federal University of Goiás, Brazil; 3. Department of Nursing, Federal University of Pelotas, Brazil

BACKGROUND: Multimorbidity (MM) is an important challenge to health systems around the world, mainly in deprived areas. However, little evidence is available about the topic in low and middle-income countries, mainly in Brazil. This study evaluate the occurrence, patterns and factors associated with multimorbidity among Brazilians aged 60 years and over.

METHODS: A national-based cross-sectional study was carried out in 2013 with 11,177 Brazilian older people. MM was evaluated by a list of 16 physical and mental morbidities (based on self-reported medical diagnosis, Patient Health Questionnaire-9 for depression and obesity by WHO criteria) and analysed taking ≥2 (MM2), ≥3 (MM3) and physical-mental (MMpm) morbidities as cut-off points. Frequencies of MM and of pairs/triads of morbidities were analysed. Factor analysis (FA) was used to identify disease patterns and multilevel models were used to test association with individual and contextual variables.

RESULTS: The occurrence of MM2, MM3 and MMpm was 58.6% (95%CI: 57.1-60.2), 36.4% (95%CI: 34.8-38.1) and 12.2% (95%CI: 11.2-13.4), respectively. Hypertension (50.6%) was the most frequent morbidity followed by a back problems, high cholesterol and obesity. The most frequent combination was HBP and high cholesterol (16.9%). HBP was present in 12 of these combinations. In the adjusted analysis, female sex and live in South region had a statistically significant association with all outcomes.

CONCLUSION: Prevalence of MM in Brazilian elderly was high. The Brazilian National Health System should prioritise improving the care of patients with MM. The effects of MM in Brazilian population, mainly in older people, need to be studied.

SCIENTIFIC RESEARCH: FALLS, FRACTURES AND TRAUMA

THE IMPACT OF ADOPTING LOW MOLECULAR WEIGHT HEPARIN IN PLACE OF ASPIRIN AS ROUTINE THROMBOPROPHYLAXIS FOR PATIENTS WITH HIP FRACTURE

H C Hoskins[1], M B Protty[2], B Hickey[1], G J Lewns[1], R Pettit[1], T Saad[1], A Johansen[1]

1. University Hospital of Wales, Cardiff; 2. Systems Immunity University Research Institute, Cardiff University

INTRODUCTION: Deep vein thrombosis (DVT) is a significant cause of morbidity and mortality following hip fractures. National Institute of Health and Care Excellence guidelines recommended both mechanical and pharmacological measures (NICE CG96, 2010); calling for anticoagulant use rather than aspirin. We examine the impact of changing our unit's pharmacological thromboprophylaxis policy in response to this recommendation.

METHODS: We examined data for patients presenting with hip fracture in a single UK trauma centre between 2007 and 2017; before and after our change in practice from use of aspirin to low molecular weight heparin (LMWH) in June-2010. Concern about the safety of compression stockings meant the rate of mechanical prophylaxis remained low across this period. We excluded 544/5,584 patients who normally reside outside our catchment area. Data for the remaining 5,039 was compared with medical physics records to all Doppler ultrasound scans they had undergone in this period. We examined the impact of the change of practice by calculating rates of lower-limb DVT in affected and unaffected limbs, both before and after hip fracture.

RESULTS: 913 patients (18.1%) received Doppler scans. 307 scans (33.6%) were prior to the fracture, but 400 were 'relevant scans' in the 180 days after a hip fracture. These identified 40 ipsilateral and 14 contralateral DVTs (p=<0.001). Fewer DVTs occurred after June-2010; 29/3,475 patients compared to 25/1,542 in previous years. The rate of DVT reduced significantly following the change in departmental policy; from 1.62% to 0.83% of patients with hip fracture (p=0.012).

CONCLUSIONS: This retrospective study suggests the rate of clinical DVT fell by half following this change in pharmacological prophylaxis. Our figure of <1% for the incidence of clinical DVT in a unit that routinely uses just LMWH following hip fracture will provide a context for discussions of alternative strategies, and for power calculations for future research.

SCIENTIFIC RESEARCH: FALLS, FRACTURES AND TRAUMA

SIMILARITY IN RATES OF FALLS AND FEAR OF FALLING (FOF) BETWEEN GROUPS OF OLDER MEN AND WOMEN WITH AGE-RELATED MACULAR DEGENERATION (AMD)

C S Barnes[1], C D Hall[2]

1. Independent Research Scholar, Palo Alto, California; 2. James H. Quillen VA Medical Center, Mountain Home, Tennessee

INTRODUCTION: Studies have shown lower rates of falls and FOF in older men than in older women. Many studies have shown that vision loss, including that due to AMD, increases the risk for falls and for FOF in older adults. AMD is a prevalent cause of vision loss, but the question remains whether the rates of falls and, particularly, FOF differ between men and women with AMD. We used self-report data from older adults to address this question.

METHODS: Community-dwelling adults (age ≥50) with AMD, but no other eye disease, completed the Independent Mobility Questionnaire (IMQ, Turano et al, Invest Ophthalmol Vis Sci, 1999;40:865) and Balance Self-Efficacy Scale (BSE, Gunter et al., J Aging Phys Activ, 2003;11:28). The IMQ includes questions about falls and FOF in the preceding year. Visual acuities (VAs) were measured or were obtained from medical records.

RESULTS: The 2 groups, 27 men (ages: 74–94; better-eye VAs: 20/17–20/750) and 14 women (63–90; 20/24–20/400), did not differ significantly in age (p=0.5) or VA (p=0.94). Men and women did not differ significantly in the percentages of participants reporting at least one fall (men: 51.9%, women: 57.1%, p=1.0), or in rates of recurrent falls among participants with any fall (men: 57.1%, women: 50.0%, p=1.0). FOF rates (men: 37.0%, women: 57.1%) did not differ significantly between genders (p=0.36); nor did the scores on the questionnaires (IMQ (scores/5): men 1.90±0.69, women 2.44±0.86, p=0.054; BSE (scores/180): men 142.5±39.5, women 118.4±42.3, p=0.092). For both genders, ≥50% of those without a fall reported FOF.

CONCLUSIONS: Participants with AMD reported high rates of falls and FOF, consistent with earlier studies. Fall rates were similar between men and women, and the FOF rate, although higher for women, was not significantly higher. These findings highlight the need for interventions to decrease falls and FOF in older men and women with vision loss.

SCIENTIFIC RESEARCH: FALLS, FRACTURES AND TRAUMA

EDUCATING ON FALLS: THE ROLE OF PODCASTS

P Christie[1], I Wilkinson[1], J Preston[2]

1. Surrey and Sussex Healthcare NHS Trust; 2. St George's Hospital NHS Foundation Trust

INTRODUCTION: Falls are a significant cause of morbidity and mortality, occurring at least annually in 30% of those over 65, and resulting in injuries and loss of confidence (NICE, 2013). Healthcare professionals working with older adults should familiarise themselves with assessment and prevention of falls given their common presentation. The MDTea podcast has created episodes to provide freely accessible, easily digestible information to improve knowledge about falls.

METHODS: Three podcast episodes were created: Falls – Acute Management, Falls Prevention and Fear of Falling. The podcasts are produced by a faculty drawn from throughout Kent Surrey and Sussex (KSS). Topics are mapped to curriculum objectives for a range of professionals. Funding is received by Health Education England (KSS). All podcasts are free, downloadable and have show notes and an infographic.

Feedback was sought through a voluntary CPD log accessed via the website. This was analysed with a mixed methods approach.

RESULTS: Between 1438 and 3239 people listened to the 3 episodes. 69 feedback forms were completed.

Quantitative: Likert scale reflecting knowledge pre and post listening to the podcast showed an improvement (2.94 to 4.13 out of 5, $p<0.001$).

Qualitative: Thematic review of the narrative feedback questions: 'What did you learn?' and 'How will this change your practice?' revealed 4 main themes. 1) New interventions to or with patients (secondary themes of education/psychological and physical); 2) A deeper thinking about the causation of a fall; 3) The importance of CGA completion and 4) The need for MDT working in falls management.

CONCLUSION: Both by qualitative and quantitative means the results show that learners' self-perceived knowledge about falls improved. Podcasts represent a novel means of spreading learning about evidenced based interventions to improve the care of older people. Limitations are the difficulties of proving that this self-perceived new knowledge actually leads to a change in work place performance.

SCIENTIFIC RESEARCH: FALLS, FRACTURES AND TRAUMA

INPATIENT HIP FRACTURES: DEMOGRAPHIC PROFILE, CLINICAL OUTCOMES AND RISK FACTORS

I Singh[1]*, K Hooton[2], C Edwards[3], B Lewis[2], A Anwar[1], A Johansen[4]

1. Department of Geriatric Medicine, Ysbyty Ystrad Fawr, Aneurin Bevan University Heath Board, Wales; 2. Quality and Patient Safety, Aneurin Bevan University Health Board, Wales; 3. Royal Gwent Hospital, Newport, Aneurin Bevan University Health Board, Wales; 4. University Hospital of Wales, Cardiff

INTRODUCTION: The clinical profile and outcome of hip fractures has been widely published. From 2019 inpatient hip fracture (IHF) will be the focus of the National Audit of Inpatient Falls (NAIF) but these injuries have not been extensively studied separately. The objective of this study is to describe patient characteristics, clinical outcomes and the most common falls risk factors for IHF.

METHODS: This observational study used inpatients falls data recorded on DATIX for a single Health Board in Wales. All inpatient falls resulting in IHF between January 2016 and December 2017 were identified and confirmed prospectively through Falls Scrutiny Panel, where every incident is reviewed to underpin the themes leading to IHF.

RESULTS: In total 118 patients sustained an IHF over the two years. Inpatient falls rate across the whole Health Board was 8.7/1,000 occupied-bed-days, with figures for acute, community and mental health beds of 8.1, 10.6 and 7.3 respectively. Mean age was 81.8±9.5 years (range 49-97), 60% (71/118) were women. 112 patients were admitted from home, and 6 from care homes. Mean Charlson's comorbidity index was 5.5±1.9 and were prescribed 8.5±3.7 medications. Dementia was the most common co-morbidity; reported in 75 patients (63%). Nearly half of the patients previously needed to use walking aids. 37 patients (31%) had delirium at the time of the fall leading to IHF.

53 patients (45%) suffered their IHF following the first fall of their hospital stay, and the mean number of inpatient falls before sustaining IHF was 2.7±2.6. 24 patients (20%) suffered IHF within the first 72 hours. Mean hospital stay before sustaining IHF was 26.0±28.2 days.

Total hospital stay averaged 84.9±55.8 days. Just 51 patients (43%) returned to their original residence and 32 (27%) were discharged to care home (26 new care home discharges). 35 (30%) died as inpatient and one-year mortality was 54% (64/118).

CONCLUSION: Inpatient mortality was over four times higher, and one year mortality was twice as high as reported for community acquired hip fracture. Over half of the patients who suffered an IHF had already fallen during their hospital stay, which argues that such events can be predicted and identified for preventive measures. The impact of these inpatient hip fracture was profound, and our work justifies the NAIF planned focus on this condition.

SCIENTIFIC RESEARCH: FALLS, FRACTURES AND TRAUMA

GETTING AHEAD: AN AUDIT TO STANDARDISE MANAGEMENT OF TRAUMATIC BRAIN INJURY IN OLDER ADULTS

C R Mainwaring, P Braude

Guy's and St Thomas's NHS Trust

INTRODUCTION: Traumatic brain injury (TBI) represents 45% of older adults admitted with major trauma[1]. The London Major Trauma System (LMTS) issued guidance in 2017 on the management of older people with TBI recommending admission under a surgical speciality, and assessment by a consultant geriatrician within 72 hours. It outlines geriatric domains for assessment e.g. delirium, dementia and nutrition. At Guy's and St Thomas's (GSTT) trauma unit patients should be admitted under the emergency general surgeons (EGS), supported by a geriatric liaison team (POPS). This audit aimed to establish whether these local and regional guidelines were being followed.

METHODS: Cases were identified using a retrospective search of CTs performed between August 2017 and July 2018. Keywords included "fall", "fell" and "trauma", and diagnoses or descriptions of TBI. Electronic records of patients ≥ 65 years old admitted to hospital with TBI were reviewed against the LMTS standards.

RESULTS: 25 older patients with TBI were admitted to St Thomas's. Median age 81 years (range 65-99 years). Most common mechanism of injury was fall from standing height (88%). A trauma call was instigated in 11%. No patients received a frailty score. Admitted teams were: EGS (39%), general medicine (29%), orthopaedics (12%) and geriatrics (8%). 89% of admissions were reviewed by a geriatrician medicine. 36% by a consultant geriatrician within 72 hours. 60% had dementia screening, 56% delirium screening and 40% nutrition assessment.

CONCLUSIONS: At GSTT older adults are not being admitted under the agreed EGS pathway. This may reflect the well-established difficulty identifying trauma in older people, plus few receiving a trauma call and none a frailty score. Despite this, the majority of patients received geriatric input, but not necessarily from a consultant in a timely manner. Work is now being completed to refine identification of TBI in older patients in order to receive early comprehensive assessment.

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SCIENTIFIC RESEARCH: GASTROENTEROLOGY

USE OF BIG DATA TO GUIDE RESEARCH DIRECTIONS IN DIVERTICULAR DISEASE OF THE INTESTINES (DDI): PRIMARY CARE MANAGEMENT OF DDI IS COMMON, YET EVIDENCE IS LACKING AND GUIDELINES ARE SILENT

J B Broad[1]*, Z Wu[1], J Ng[2], B Arroll[3], M J Connolly[1,4], R Jaung[5], F Oliver[1], I P Bissett[5]

1. Department of Geriatric Medicine, University of Auckland, Takapuna, New Zealand; 2. Institute for Innovation and Improvement, Waitemata District Health Board, Takapuna, New Zealand; 3. Department of General Practice and Primary Healthcare, School of Population Health, University of Auckland, Tamaki, New Zealand; 4. Waitemata District Health Board, Takapuna, New Zealand; 5. Department of Surgery, University of Auckland, Auckland, New Zealand

INTRODUCTION: The literature regarding DDI almost entirely concerns hospital-based care. When DDI is managed in primary care, the information needs of primary-care practitioners may therefore be overlooked. Until very recently, standard care for people with DDI included antibiotics. This study used antibiotics dispensing data to compare how often patients with a DDI hospitalisation are managed in primary care compared to matched non-DDI people.

METHODS: Hospitalisation records of all New Zealand residents born between 1900 and 1986 were individually linked to databases of community-dispensed oral antibiotics. Index hospital admissions during 2007-2016 that included a DDI diagnosis (ICD-10-AM =K57) were classified as acute/non-acute. Use of guideline recommended oral antibiotics was then compared with ten individually matched non-DDI residents, taking the case's index date. Multivariable negative binomial models were used to estimate dispensing rates of relevant antibiotics before, near, and after, the index DDI admission.

RESULTS: From almost 3.5 million eligible residents, data were extracted for 51,059 index cases (20,880 acute, 30,179 non-acute) and 510,581 matched controls; mean follow-up=8.9 years; 19% re-hospitalised. Among controls, dispensing rates rose gradually over time, from 47 per 100 person-years (/100py) prior to the index date, to 60/100py beyond 3 months. In comparison, dispensing for those with DDI was significantly higher: for those with acute DDI, rates were 84/100py prior to the index date, 325/100py near the index date, and 141/100py after 3 months; for those with non-acute DDI, 75/100py, 108/100py and 99/100py respectively.

CONCLUSIONS: In what is virtually a whole population, following an index admission of DDI, patients continued to use antibiotics well above the "norm" of under 60/100py experienced by their non-DDI peers, indicating a high level of primary care management of those with DDI. People with previous DDI may in general experience chronic conditions more frequently, be more likely to access help for symptoms, request antibiotics more readily, or their general practitioners may prescribe them antibiotics more often. If this were not so, then differences in dispensing could be a useful measure of DDI recurrence which typically measures re-hospitalisations alone. Hospital readmission data markedly under-recognises the impact of DDI on symptoms. Studies should cover primary-care and self-care, especially to inform management of recurrent, chronic or persistent DDI, in order that gaps in clinical guidelines are addressed.

SCIENTIFIC RESEARCH: HEALTH SERVICES RESEARCH

DOES DELAY IN ADMISSION ADVERSELY IMPACT OUTCOMES IN INTERMEDIATE CARE?

T Warburton, M Egbe, K Rajnauth, I Patel

Royal Bolton Hospital NHS Foundation Trust

INTRODUCTION: NICE guideline 74 (Intermediate Care including Reablement) suggests that patients are admitted to bed based intermediate care within two days of referral; as longer than this 'is less likely to be successful.' This statement was considered in the context of real world observational data.

METHODS: Retrospective data collected over a calendar year (2016) from a 30-bed intermediate care unit was analysed to see if patient outcomes differed based on a referral to admission time of greater or lesser than 2 days. Patient outcomes of initial discharge destination and twelve month risk of readmission and mortality were compared.

RESULTS: There were a total of 333 patients included in the study. Of these 152 were admitted within two days and 163 took longer than the advised 2 day cut off.

The group admitted within two days had a mean age of 84 years. 87 of the 152 (57%) were discharged home. 107 (70%) were readmitted to a local healthcare facility within 12 months and 62 (40%) had died within 12 months of index admission.

The group admitted in greater than two days had a mean age of 81 years. 99 (61%) were discharged home. 117 (72%) were readmitted to healthcare within the subsequent calendar year and 93 of the 163 (57%) had died within 12 months.

CONCLUSION: There was no significant difference demonstrated in major outcomes for patients admitted. There is limited data available regarding the characteristics of each cohort to correct for confounding factors but there is little to suggest the groups were not comparable in the data available.

All patients admitted had a significant risk of discharge to a supervised care facility, readmission and/or dying within the 12 months following admission.

SCIENTIFIC RESEARCH: HEALTH SERVICES RESEARCH

RESEARCH IN THE RETIREMENT VILLAGE COMMUNITY: DOES THE RECRUITED SAMPLE REFLECT THE RESIDENT POPULATION?

M J Connolly[1,2] , J Hikaka[2], K Bloomfield[1,2], J B Broad[1], Z Wu[1], M Boyd[3], K Peri[3], C Calvert[1,4], A Tatton[1,2], A-M Higgins[1], D. Bramley[2]

1. Department of Geriatric Medicine, University of Auckland, Takapuna, New Zealand; 2. Waitemata District Health Board, Auckland, New Zealand; 3. School of Nursing, University of Auckland, Grafton, New Zealand; 4. Auckland District Health Board, Auckland, New Zealand

INTRODUCTION: Retirement villages (RVs) for older people represent a burgeoning industry internationally, including New Zealand (NZ), where they house perhaps 12% of 'over 75s' (Webster A, www.jll.co.nz 2017). However, we know little about residents' demographics, social engagement, and health/disability issues - information which could inform health planning, facilitate independence and reduce service demand. RVs are semi-closed communities: access for researchers is most conveniently gained via RV managers. We are studying RV residents in Auckland NZ to acquire demographic, health, disability and social data, with a randomised controlled trial of gerontology nurse specialist (GNS)-led multidisciplinary intervention aimed to reduce adverse outcomes (ANZCTR ref: ACTRN12616000685415). We here describe recruitment problems engendered by the semi-closed nature of RVs.

METHODS: We planned to approach all RVs in Auckland/Waitemata District Health Boards, with random sampling of residents in each village using unit lists as the sampling frame. *Exclusions*: Inability to consent; (ACER<65, or person GNS/general practitioner felt lacked capacity). We planned to access residents via RV managers, and contact residents by 'letter-drop' then 'door-knocks'. In 'small' RVs (n<=60 units), we planned to contact all residents to assess eligibility, with random selection in 'larger' RVs (aiming to recruit 30 residents per large RV).

RESULTS: We approached managers of 53 of the 67 RVs. 35 consented to participate, 9 did not reply. Another 9 declined, of which 8 were 'small', largely independently-owned. Many managers, laudably citing resident privacy, prohibited 'letter-drops' or 'door-knocks' at all or without prior residents' meetings to assess acceptance of this methodology. Hence, we had to recruit volunteers via residents' meetings, posters, newsletters and word-of-mouth. We recruited 578 residents from 33 villages (median age=81yrs; 420=female; 184 sampled, plus 394 volunteers).

CONCLUSIONS: Due to organisational or managers' policy in some RVs, our sample may not fully represent the RV population. Future RV research should consider alternative recruitment strategies e.g. random sampling from national census, electoral roll or via residents' organisations, in order to allow 'autonomous' RV residents the ability to choose or decline to participate in research.

SCIENTIFIC RESEARCH: HEALTH SERVICES RESEARCH

PSYCHOTROPIC MEDICINES USE IN RESIDENTS AND CULTURE: INFLUENCING CLINICAL EXCELLENCE (PRACTICE) TOOL: A DEVELOPMENT AND CONTENT VALIDATION STUDY

M Sawan[1], Y-H Jeon[2], T F Chen[1]

1. Faculty of Pharmacy, University of Sydney, Camperdown, NSW, Australia; 2. Faculty of Nursing, University of Sydney

INTRODUCTION: Psychotropic medicines are often prescribed in Residential Aged Care Facilities (RACF) to manage behavioural and sleep disturbances in the elderly despite their association with harmful adverse effects. Organisational culture has been identified to be a key factor that contributes to the high-level prescribing and significant variation in the use of psychotropic medicines RACFs. However, there are gaps in existing tools used to link organisational culture to the use of psychotropic medicines. The aim of this research was to develop and content validate a tool that measures organisational culture concerning the use of psychotropic medicines in aged care homes, named the Psychotropic medicines use in Residents And Culture Influencing Clinical Excellence (PRACTICE) tool.

METHODS: Schein's theory of organisational culture was used to guide the development and content validation of the PRACTICE tool. The tool was developed based on a comprehensive systematic review, qualitative research and generated by the research team. Content validity was assessed using the CVI (Content Validity Index). The content relevance and importance of the tool items were rated by an expert panel with relevant knowledge and experience. Any modified or re-worded items were presented to the panel members in a subsequent round for re-rating.

RESULTS: The PRACTICE tool had 68 items that assessed all aspects of culture according to Schein's theory. Sixty-two items out of 68 (91%) met predefined cut-off values (≥0.78) for the item level CVI. The remaining six items (9%) did not fully meet the cut-off values, but based on the systematic review and qualitative research it deemed important to be included in the tool. The PRACTICE tool is a step forward in validating an instrument that will help inform managers and policy makers to identify target areas for improvement to create a culture of safer psychotropic prescribing in aged care homes.

SCIENTIFIC RESEARCH: HEALTH SERVICES RESEARCH

HOW CARE HOMES IDENTIFY ACUTE DETERIORATION IN RESIDENTS AND COMMUNICATE THIS TO NHS PROFESSIONALS

L Hailes[1], C Crocker[1], K McEwan[1], N Riley[1], A L Gordon[1,2,3]

1. East Midlands Academic Health Sciences Network Patient Safety Collaborative, Nottingham; 2. Division of Medical Sciences and Graduate Entry Medicine, University of Nottingham; 3. East Midlands Collaboration for Leadership in Applied Health Research and Care, Nottingham

BACKGROUND: Supporting care homes to identify and respond to residents who deteriorate, and to communicate concerns to healthcare professionals, is important. We set out to survey current care home practices with regard to deterioration in the East Midlands of the United Kingdom.

METHODS: We surveyed 15 care homes taking part in the annual East Midlands Prevalence of Care Problems benchmarking audit. Paper questionnaires were completed alongside the electronic questionnaires which comprise the routine benchmarking audit during a single week in November 2018. Participants were asked 4 categorical response and 6 open answer questions covering recognition of deterioration, use of external agencies and communication protocols.

RESULTS: Amongst the 15 participating homes, 14/15 and 6/15 had contacted their usual GP or practice nurse respectively for resident deterioration in the last 30 days. 9/15 and 2/15 had contacted an out-of-hours GP and out-of-hours nurse for deterioration respectively. The average (range) number of contacts with an external healthcare professional for deterioration per home was 7 (1-40). 4/15 homes used the National Early Warning Score (NEWS). One home was piloting the second version of NEWS (NEWS-2) in addition to using NEWS. 2/15 homes used an in-house sepsis screening tool and one home used the Modified Early Warning Score (MEWS) to identify deterioration. 8/15 had no specific tool in place for identifying deterioration. 2/15 and 4/15 homes used the Situation-Background-Assessment-Recommendation (SBAR) and Concern-Action-Response-Examination-Shared Information (CARES) tools respectively when communicating with external agencies. The remainder of homes did not structure their communication using a tool. In free text comments, 5/15 care homes requested further training in identifying and communicating acute deterioration.

CONCLUSIONS: There is considerable variation in practice regarding the identification of acute deterioration and communicating with health professionals outside of care homes. Over half of participating homes had no solution in place to identify deterioration or communicate their concerns to healthcare professionals. We plan now to audit deterioration practice using these questions on an annual basis and to co-design solutions with care homes in the intervening periods.

SCIENTIFIC RESEARCH: HEALTH SERVICES RESEARCH

PATIENTS' AND FAMILY CAREGIVERS' GOALS FOR CARE DURING TRANSITIONS OUT OF THE HOSPITAL

E A Coleman

University of Colorado, USA

OBJECTIVE: A critical step towards operationalising patient and family caregiver engagement is to encourage identification and pursuit of personal goals. Our aims were to (1) describe the nature of the goals elicited from patients, family caregivers' goals for their loved ones, and family caregivers' goals for themselves; (2) determine the degree of concordance with respect to the three elicited goals; (3) ascertain goal achievement; and (4) examine factors predictive of goal achievement.

METHODS: Patients and their family caregivers were recruited upon hospital discharge. Patients identified a goal for themselves while family caregivers identified a goal for their loved ones as well as a goal for themselves.

FINDINGS: Goals were grouped into four categories: function, employment, socialization, and symptom management. Concordance between patient's goal type and family caregiver's goal type for her/his loved one was 41%. 51% of patients achieved their goals; 61% of family caregivers achieved their goals for their loved ones; and 64% of family caregivers achieved their own goals. Patient's goal attainment was correlated (0.49) with family caregiver's goal attainment. Patient's goal attainment was predicted (R-square=0.22) by patient's goal type and residing with a spouse.

DISCUSSION: Patients discharged from the hospital more often identified goals related to functional status or returning to social activities or hobbies while family caregivers more often identified goals related to symptom management. The majority of patient goals were achieved.

CONCLUSIONS: Eliciting patient and family caregiver goals and fostering goal achievement may represent an important step toward promoting greater patient and family caregiver engagement.

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SCIENTIFIC RESEARCH: HEALTH SERVICES RESEARCH

DEVELOPING AND SCALING THE EVIDENCE-BASED CARE TRANSITIONS INTERVENTION

E A Coleman

University of Colorado, USA

The Care Transitions Intervention (CTI) was developed to address the challenges experienced by vulnerable older adults during transitions across acute and post-acute care settings. Older persons and their family caregivers are often placed in the position of assuming a major role in managing their health conditions, yet they often lack adequate skills, tools, and confidence.

In contrast to traditional case management approaches, the CTI has an explicit focus on skill transfer to promote self-management. The CTI provides patients and their family caregivers with the skills, confidence, and tools they need to assert a more active role in their care and ensure that their needs are met. In this way, the CTI builds the capacity of patients and family caregivers to become more proficient in managing their self-care needs to ensure successful care transitions in the present as well as into the future.

The CTI was co-designed with patients and families and was rigorously evaluated with randomized controlled trials. The findings have revealed that older patients who received the intervention were significantly less likely to be readmitted to the hospital within 30 days and the benefits were sustained for at least 180 days. Patients who received this program were also more likely to achieve self-identified personal goals addressing quality of life and functional recovery.

The CTI has been successfully adopted by over 1100 health organizations in the United States as well as health organizations in Australia and Singapore.

To learn more about CTI, its evidence, and adoption please visit www.caretransitions.org.

SCIENTIFIC RESEARCH: HEALTH SERVICES RESEARCH

REDUCING LENGTH OF HOSPITAL STAY FOR OLDER ELECTIVE SURGICAL INPATIENTS: FINDINGS OF A SYSTEMATIC REVIEW

M Nunns[1], L Shaw[1], S Briscoe[1], J Thompson-Coon[1], A Hemsley[2], J S McGrath[2,3], C J Lovegrove[2,4], D Thomas[2], R Anderson[1]

1. Exeter HS&DR Evidence Synthesis Centre, University of Exeter; 2. Royal Devon & Exeter NHS Foundation Trust, Exeter; 3. College of Medicine & Health, University of Exeter; 4. Faculty of Health & Human Sciences, Plymouth

INTRODUCTION: Older inpatients may present for elective surgery with issues such including frailty, polypharmacy, cognitive decline or multi-morbidity. Furthermore, previously unidentified problems may be revealed under surgical stress which could complicate recovery. As such, older inpatients are at risk of increased length of stay (LOS) in hospital, and adverse events during or after surgery. Increased LOS is associated with greater risk of in-hospital morbidity and places extra demand on resources. It is essential to evaluate the effectiveness of organisational interventions to reduce LOS and improve recovery.

We present an overview of the findings and implications for research, of a systematic review of the effectiveness of hospital-led interventions to reduce LOS in older elective surgical inpatients.

METHODS: Bibliographic database searches were supplemented by citation searches, web searches and consultation with stakeholders. We sought comparative studies evaluating hospital-led multicomponent interventions to improve recovery and/or reduce LOS in samples of patients aged 60 or over. Two independent reviewers conducted screening, data extraction and quality appraisal. Impact on LOS was the primary outcome, but all other outcomes were evaluated. We regularly consulted with clinical experts and members of the public throughout the review.

RESULTS: We identified 10448 potentially relevant records, yielding 218 included studies. We prioritised 73 studies for synthesis, predominantly regarding colorectal surgery and lower limb arthroplasty. Enhanced Recovery Programmes and Prehabilitation interventions were most common, often leading to improved recovery or reduced LOS, without detriment to other outcomes. Non-clinical outcomes were rarely reported and patient follow-up beyond 30 days was largely absent.

CONCLUSIONS: Interventions to reduce LOS and/or improve recovery following elective surgery can be effective in older adults. Future trials should focus on identifying factors influencing implementation and consistent uptake of interventions across institutions. In-hospital patient voice and longer-term implications of reduced LOS for patient recovery and the wider health and social care system, must be considered.

SCIENTIFIC RESEARCH: HEALTH SERVICES RESEARCH

IMPROVING THE EXPERIENCE OF CARE FOR PEOPLE WITH DEMENTIA IN HOSPITAL: SYNTHESIS OF QUALITATIVE AND QUANTITATIVE EVIDENCE

J Thompson-Coon[1], R Gwernan Jones[1], I Lourida[1], R Abbott[1], M Rogers[1], D Llewellyn, C Green[2], D Richards[2], S Ball[2], A Hemsley[3], D Moore[4], I Lang[1], L Clare[2], C Owens[5]

1. NIHR Collaboration for Applied Health Research and Care (South West Peninsula); 2. College of Medicine and Health; 3. Graduate School of Education, University of Exeter; 4. Royal Devon & Exeter NHS Foundation Trust; 5. Devon Partnership NHS Trust

INTRODUCTION: Many people admitted to hospital have dementia. People with dementia tend to stay in hospital longer than those without dementia. Hospital stays can be particularly confusing and challenging not only for people with dementia, but also for their carers and the staff that care for them. Improving the experience of care for people with dementia in hospital has been recognised as a key priority.

METHODS: We undertook three systematic reviews following best practice guidance to explore i) the experience of care in hospital; ii) the experience of interventions to improve care in hospital; and iii) the effectiveness and cost effectiveness of interventions to improve the experience of care in hospital for people with dementia, their family and staff. Twelve electronic databases were searched for relevant qualitative and quantitative research. A Project Advisory Group of dementia specialists, hospital staff, commissioners and family carers advised us throughout the project.

RESULTS: From 8469 records screened at title and abstract, 101 papers describing the experience of care (83) and/or interventions (18) and 26 papers assessing interventions to improve care were eligible for inclusion. Review findings were used to create conceptual models to help show how interventions can improve the experience of care for people with dementia and the family and staff who care for them.

CONCLUSIONS: There is some evidence supporting a positive impact of dementia care units, activity-based, or tailored interventions on the experience of care for people with dementia. At the heart of the need for care of people with dementia in hospital is the formation of relationships that help staff understand the needs of the patients, and affirm the patients' status as people rather than problems. Facilitating such relationships needs to begin at institutional levels and include changes to ward cultures and environments, as well as training for staff.

SCIENTIFIC RESEARCH: NEUROLOGY AND NEUROSCIENCES

CHARACTERISTICS OF PATIENTS PRESENTING WITH DISSOCIATIVE SYNCOPE: A 2 YEAR ANALYSIS OF DATA FROM A NATIONAL FALLS AND SYNCOPE SERVICE

C J Taylor J Davison A Jaafar

Royal Victoria Infirmary, Newcastle upon Tyne, United Kingdom

INTRODUCTION: The Royal Victoria Infirmary Falls and Syncope Service typically sees approximately 4,000 patients per annum. Of these patients, a small but important population (~0.5%) are diagnosed with dissociative attacks. Dissociative seizures are psychologically mediated episodes of altered awareness and behaviour that may mimic any type of epilepsy. This retrospective study aims to analyse the demographics, characteristics and investigations required to make the diagnosis for patients diagnosed with dissociative attacks at a major regional falls and syncope service in the North East of England over a 2 year period from 2015-2017.

METHODS: Patients diagnosed with dissociative attacks have been kept on a database at the Falls and Syncope unit at the RVI, Newcastle, since 2015. Patient notes were accessed using the e-record system to obtain required data. Where letters were unclear or data missing, it was attempted to access this from the paper records. The data was collected, anonymised and recorded on excel spreadsheet for all patients.

RESULTS: 43 patients were registered with a diagnosis of dissociative attacks. 30 were female, 13 male.

Prodrome	**Yes: 10**	2 can't focus 1 flash backs 1 light headed 1 olfactory 1 cough 3 tingling 1 shaky legs	**Symptoms**	34 collapse 7 vacant 1 sensory 1 visual
	No: 33			
Frequency	**Daily**	7	**Eyes Open**	12
	Weekly	21	**Eyes Closed**	27
	Monthly	11	**Unknown**	4
	<Monthly	4		

Investigations as detailed below:

CT Head	**Yes**	10	*9 NAD, 1 Abnormal (small vessel disease)*
	No	33	
Echocardiography	**Yes**	17	*16 NAD, 1 Abnormal (mild LVSD)*
	No	26	
ECG monitoring	**24hr tape**	12	*12 NAD*
	R test	17	*15 NAD, 2 Abnormal (pAF, 2nd degree AVB)*
	ILR	8	*7 NAD, 1 Abnormal (2nd degree AVB)*
24hr Blood Pressure Monitoring	**Yes**	16	*11 NAD, 2 Abnormal (2 low, 3 low-normal)*
	No	27	
Electroencephalogram	**Yes**	9	*9 NAD*
	No	34	
Magnetic Resonance Imaging	**Yes**	15	*13 NAD, 2 Abnormal (1 old LACI, 1 calcification)*
	No	28	
Tilt Table Testing	**Yes**	14	*14 NAD, 14 Abnormal (12 VVPS, 2 VVS)*
	No	15	

CONCLUSIONS: Very few patients have the sole hallmark characteristics of dissociative attacks from the history which equip the clinician to make an instant diagnosis without instant investigation. They often present with collapse and minimal prodrome and symptoms occur on a very frequent basis. Other diagnoses need to be excluded due to a prevalence of concomitant physiological abnormalities in a significant number of patients. As a result, patients undergo a raft of investigations, which are often negative. As this diagnosis impacts on driving eligibility, clinicians must clearly document this in all formal correspondence from a medico-legal standpoint.

SCIENTIFIC RESEARCH: NEUROLOGY AND NEUROSCIENCES

PROSPECTIVE COHORT STUDY OF DELIRIUM IN ELDERLY UNDERGOING CARDIOTHORACIC SURGERY

A Bourke, V Fitton, V Scotland, J Chongvathanakij

Royal Adelaide Hospital, Adelaide, South Australia

INTRODUCTION: Delirium is common in the post-operative cardiothoracic surgery setting especially in older age. Delirium is associated with poor post-operative outcomes. The aims of this study were to review predictors of delirium, demographics and outcomes in those over 70 years undergoing cardio-thoracic surgery who had delirium compared with those without delirium.

METHODS: Prospective cohort study including those over 70 years undergoing cardiothoracic surgery. Data collected preoperatively included age, gender, supports, mobility, Charlson comorbidity index, living status, MMSE, number of delirium risk factors and Edmonton Frailty score. Outcome data included discharge destination, code blacks, nurse special, falls, early mortality, return to theatre and length of stay. If delirium present type identified. Statistical software used SAS 9.4. Tests included Wilcoxon Rank Sum test and Fisher's Exact test. Ethics approval CALHN R20160219.

RESULTS: N=39 participants included in cohort. The mean age was 76.64 years (SD=4.6). 35.9% female. Preoperatively 64.1% had home supports, 20.5% required walking aids and 28.2% lived alone. Mean MMSE 28/30(SD=2.1), mean number of delirium risk factors 3(SD=0.9), mean Charlson comorbidity index 3(SD=1.4) and mean Edmonton Frailty Scale 5/17(SD=1.7). Postoperatively prevalence of delirium 46 %. Types of delirium comprised 55.6% hypoactive, 16.7% mixed and 27.8% hyperactive. Average length of stay total 11 days and 4.9 in ICU. Outcomes 7.7 % mortality and 58.9% discharged directly home. 2.6% had a code black and nurse special, 7.9% had falls and 12.8% returned to theatre. Those who developed delirium had significant association with preoperative lower MMSE (p=0.03), higher Edmonton Frailty Score (p= 0.01) and living with others (p= 0.04).

CONCLUSION: Delirium is common in the older cardiothoracic patient. Statistically significant preoperative predictors of delirium included lower MMSE, higher Edmonton Frailty score and living with others. Preoperative assessment of the elderly in preparation for cardio thoracic surgery can allow those who are at risk of delirium to be identified, given education regarding delirium and interventions to reduce post-operative delirium and therefore improve surgical outcomes.

SCIENTIFIC RESEARCH: OTHER MEDICAL CONDITIONS

THE CLINICAL FRAILTY SCORE: DO STAFF AGREE?

R Young[1], D G Smithard[2,3]

1. Barts NHS Foundation Trust; 2. Queen Elizabeth Hospital, Lewisham and Greenwich Trust; 3. Greenwich University

INTRODUCTION: As the population becomes increasingly older, the numbers of patients who are deemed frail will increase. Frail older people are characterised by multiple co-morbidities, fatigue, weakness and loss of muscle bulk. Health providers are putting in pathways to identify and stream frail older people to the correct services to ensure good appropriate care. As part of these pathways, frailty scoring tools such as the Clinical Frailty Score (CFS) are being utilised. In studies the CFS was found to have face validity and good agreement between users. Many different members of the multidisciplinary team with a range of experience will complete the CFS, and many will have had no instruction on how to complete it.

METHODS: This study utilised 7 case studies. Members of the MDT were asked to complete the CFS individually, using the provided case studies and a CFS chart.

RESULTS: 125 clinical staff (doctors=107; Nurses = 6, AHPs= 12) completed the study. The majority were foundation doctors. Due to small numbers, the SHO/Registrar responses were grouped and various categories of AHP were combined into one cohort. The results showed that there was a wide range of scores for 6 of 7 case studies (e.g. 1-6 for case history A) across the whole group, as well in different staff groups. No difference (using Mann-Witney U) was found between different staff groups, with the median scores and range of scores all being very similar.

CONCLUSIONS: The results did not show any difference between staff groups. Within staff groups there was general agreement, with a few outliers in each group. The ranges of scores were wide within 6 out of 7 case histories, case history D gave the shortest range (CFS=1 Range 1,2). These results suggest the CFS can be introduced without training in all but a small minority of staff.

SCIENTIFIC RESEARCH: OTHER MEDICAL CONDITIONS

WHY DO SOME CARE HOME RESIDENTS DIE IN HOSPITAL? EXPLORING FACTORS, PROCESSES AND EXPERIENCES

G Alcorn[1,2], J Hockley[1], S Murray[1]

1. Primary Palliative Care Research Group, Usher Institute of Population Health Sciences, University of Edinburgh; 2. Department of Medicine of the Elderly, Royal Infirmary of Edinburgh

INTRODUCTION: Care home (CH) residents are increasingly frail, multi-morbid and at risk of dying. The focus of recent UK policy has been avoiding 'inappropriate' admissions to hospital and on enabling people to die in their preferred place of care. Most residents and their relatives wish to avoid hospitalisation. Nevertheless, a proportion of CH residents do die in hospital. Little is known about what triggers admission in this group and their clinical course in hospital.

We aimed to explore the factors that influence hospital admission of CH residents who then die in hospital. The objectives were to describe the characteristics of this group of CH residents, the extent of documented Anticipatory Care Planning (ACP) and to explore the experiences of CH staff and relatives.

METHODS: We undertook a mixed methods study including:

- In-depth review of hospital case notes of CH residents who died in two hospitals in Scotland (n=109)
- Thematic analysis of qualitative interviews undertaken with a purposive sample of CH staff (n=26) and relatives (n=2).

RESULTS: Most admissions were prompted by a sudden or acute change (72%), often happening out-of-hours (69%). Length of stay in hospital before death was short, with 42% of deaths occurring within three days. There was evidence of documented ACP regarding hospital admission in 44%.

Themes emerging from the interviews included: staff wanting to provide end-of-life care in the CH; uncertain living and dying; the role and expectations of family and their and relationship with the CH; the advantages and challenges of ACP; and a fifth overarching theme of the need for multidomain support for CHs.

CONCLUSIONS: Managing acute changes on the background of uncertain decline trajectories is challenging in CHs. Enhanced support is required to improve and embed ACP in CHs and to provide rapid, 24 hours-a-day support to manage difficult symptoms and acute changes.

SCIENTIFIC RESEARCH: OTHER MEDICAL CONDITIONS

SARCOPENIA, FRAILTY AND NUTRITIONAL STATUS OF COLORECTAL CANCER SURGICAL PATIENTS AND URINARY BIOMARKERS: STUDY PROTOCOL

N Humphry[1], T Wilson[2], M Cox[3] J Hewitt[4]

1. Cardiff and Vale University Health Board; 2. Aberystwyth University; 3. University of Florida; 4. Cardiff University

INTRODUCTION: Pre-operative frailty in older surgical patients is associated with poorer surgical outcomes, and often co-exists with sarcopenia.

Poor nutritional status is also associated with poor peri-operative outcomes, but is difficult to assess due to recall bias and the imprecision of currently available biomarkers. Metabolomics is a technique that quantitatively profiles urinary biomarkers, providing an objective measurement of nutritional status at a certain time point.

This prospective cohort study will assess these three factors in isolation and combination. The primary objective of this research is to provide feasibility data to inform a larger study in the future.

METHODS: Fifty patients aged 65 or over who are undergoing surgery for colorectal cancer (with curative intent) will be recruited via the Older Persons Surgical Outcomes Collaboration (OPSOC).

The three factors will be assessed in the perioperative period using the following methods:

- Frailty: 7-point Clinical Frailty Scale (CFS), the Groningen Frailty Indicator (GFI).
- Sarcopenia: gait speed assessment, hand grip strength and CT morphometric analysis.
- Nutrition status: short-form Mini Nutritional Assessment questionnaire and sequential urine metabolomics assessment.

RESULTS: Patient groups will be determined based on their frailty (frail or non-frail) and sarcopenia (sarcopenic or not) status. Urinary profiling (using metabolomics) will provide an objective measurement of nutritional status for comparison between the frail and non-frail groups. Descriptive independent samples t-tests and two way repeated measures ANOVA will be used to compare the characteristics between sarcopenia and non-sarcopenic groups.

Outcome measures will be length of hospital stay, readmission to hospital within 30 days, post-operative complications (using the Clavien-Dindo classification) and mortality (30-day and 90-day).

CONCLUSIONS: Metabolomic urinary assessment may provide novel biomarkers to determine the impact of surgery on clinical outcomes, and in future may result in prevention of complications with improved patient recovery.

SCIENTIFIC RESEARCH: OTHER MEDICAL CONDITIONS

HOW ROBUST ARE FRAILTY ASSESSMENTS? A SYSTEMATIC REVIEW OF THE APPLICATION OF FRAILTY IN THE SURGICAL POPULATION

H T Wang[1], Q D Nguyen[2], C A Menard[3], A Morinville[4], J P Hirdes[5], P Hebert[2,4]

1.Centre Intégré Universitaire de Santé et Services Sociaux (CIUSSS) de l'est de l'Ile de Montréal, Hospital Maisonneuve-Rosemont, Montréal, Quebec, Canada; 2. Departement de Medecine, Université de Montréal et Centre hospitalier de L'Université de Montréal, Canada; 3. Centre hospitalier de le L'Université de Montréal, Canada; 4. Centre de Recherche du Centre Hospitalier de L'Université de Montréal; 5. School of Public Health and Health Systems, University of Waterloo, Canada

INTRODUCTION: Frailty is increasingly used as a proxy for surgical risks and predictor of postoperative outcomes. Yet, uncertainties still remain in its clinical implementation in the perioperative setting, such as which frailty concept or score to use in the surgical population.

METHOD: We undertook a systematic review to determine the most prevalent frailty instruments used and in which clinical setting it was applied. Search strategy was performed by a trained bibliographic specialist. Since we expected high heterogeneity in frailty and outcome definitions, we did not perform a meta-analysis.

RESULTS: Two reviewers independently performed title screening, abstract review and data collection. Out of 6979 study titles screened, we included 118 studies in our final analysis. Reported data account for a total of 2,500,040 surgical patients. Frailty was most prevalent in lung transplantation (40.6%, n=2 determinations) and least prevalent in gynaecological surgery (1.5 %, n=2 determinations). The most frequently-used instrument was the modified Frailty Index (mFI) from the National surgical Quality Improvement Program (NSQIP) dataset (24%) followed by the Fried frailty phenotype (17%). The Rockwood model had the least variation (30% to 50%, average of 40.5%) in the prevalence of frailty compared to Fried phenotype and Complete Geriatric Assessment. The majority of studies did not specify the timing of frailty assessments (75%). The overall calculated OR of death for frail patients compared to non-frail patients were 3.3.

CONCLUSION: Frailty is very prevalent in patients undergoing elective surgical procedures and is independently associated with adverse outcomes. The Rockwood model however appeared to have the most stable estimates of prevalence between studies and within different surgical procedures. No consensus exists as to the timing of frailty assessment in relation to surgery. Further studies should also focus on patient-centred long term outcomes such as functional decline in order to better inform the decision making process.

SCIENTIFIC RESEARCH: OTHER MEDICAL CONDITIONS

FRAILTY IN OLDER PATIENTS UNDERGOING EMERGENCY LAPAROTOMY: FURTHER RESULTS FROM THE ELF STUDY (EMERGENCY LAPAROTOMY AND FRAILTY)

K L Parmar[1], J Law[2], B Carter[3], J Hewitt[4], J M Boyle[5], P Casey[6], I Maitra[6], I Farrell[6], L Pearce[7], S J Moug[8]

1. University of Manchester; 2. University of Liverpool; 3. King's College London: 4. Cardiff University; 5. Royal College of Surgeons; 6. Health Education North West; 7. Salford Royal Foundation Trust; 8. Royal Alexandra Hospital, Paisley

INTRODUCTION: Frailty has been shown to predict older adult (≥65 years) outcomes in medical and elective surgical settings. Frailty scoring has not yet been assessed in emergency laparotomy, despite older adults now comprising the majority of patients undergoing emergency laparotomy and carrying the highest risk of both post-operative complications and post-operative mortality.

METHODS: This is a multi-centre (n=49) UK-based observational study of 937 older adults (≥65 years) undergoing emergency laparotomy. The Clinical Frailty Score (CFS) ranging from 1 to 7 (CFS 1-4 non-frail; CFS 5-7 frail) was used for pre-operative frailty scoring. Inclusion criteria were in line with the National Emergency Laparotomy Audit (NELA). The primary outcome measure was 90 day post-operative mortality. Secondary outcomes measures included 30-day mortality, length of ICU stay, length of overall hospital stay, change in level of care and discharge destination.

RESULTS: Frailty was present in 20% of participants with an overall 90-day mortality of 19.5%. The risk of 90-day mortality was directly associated with frailty: CFS 5 had aOR of 3.18 and CFS 6/7 aOR 6.10 compared to CFS 1. Frailty was also associated with a significantly increased risk of complications, length of ICU stay and overall length of stay. A change in care level required was observed between admission and discharge in 37.5% of patients. After adjusting for age, sex, and care-level on admission, the risk of requiring an increased level of care at discharge following emergency laparotomy was directly associated with frailty.

CONCLUSIONS: Frailty is associated with a significantly increased risk of post-operative mortality and morbidity, irrespective of age. Additionally, increasing frailty score is more independently associated with increased level of care on discharge, and more predictive than admission care level. Frailty scoring should therefore be integrated into routine practice to aid decision-making with older surgical patients.

SCIENTIFIC RESEARCH: OTHER MEDICAL CONDITIONS

AGEING WELL: DEVELOPING INNOVATION THROUGH CO-DESIGN

V A Goodwin[1], A Hatton[2]

1. University of Exeter Medical School and NIHR CLAHRC South West Peninsula; 2. School of Health and Rehabilitation Sciences, University of Queensland, Australia

INTRODUCTION: There is a need to develop innovative solutions to enhance safe built environments, which optimise health, wellbeing and community participation among older adults. In order to develop solutions that meet the needs of a diverse ageing population, a multi-disciplinary approach is needed. Our aim was to identify the needs of older people in relation to ageing well in the environment.

METHODS: We used a co-design approach involving older people, carers, physiotherapists, geriatricians, engineers, human movement experts, geographers and psychologists from the UK and Australia. This involved a one day workshop that comprised a series of presentations from international speakers on *urban design, social connectedness, injury prevention, and, the natural environment*. Workshops followed on the presentation topics to consider the concerns and challenges as we get older, which were facilitated by the use of Lego© to help the participants share personal stories and reflect on the issues raised.

RESULTS: Five themes emerged across the workshops: (i) access and transport; (ii) involvement of the whole community; (iii) restoration rather than redesign; (iv) assistive and digital technology; and (v) intergenerational approach. These needs related to not just the physical environment but also the social and natural environment.

CONCLUSIONS: Co-design is a valuable tool to help understand need and is the essential basis for developing interventions. Together, the participants highlighted a number of issues affecting people as they age and environmental considerations to promote wellbeing and participation. As a result we have subsequently identified a number of evidence gaps and are planning a number of activities to further develop research ideas in this field in conjunction with our co-design participants.

SCIENTIFIC RESEARCH: PARKINSON'S DISEASE

PREVALENCE OF ATRIAL FIBRILLATION AND ITS IMPACT ON COGNITION IN PEOPLE WITH IDIOPATHIC PARKINSON'S DISEASE

S Wells, L Evans, A Nelson, A Anwar, I Singh, S Aithal

Department of Geriatric Medicine, Ysbyty Ystrad Fawr, Aneurin Bevan University Health Board, Wales

INTRODUCTION: 'Population ageing' has led to an increased burden of neurodegenerative conditions like dementia and Idiopathic Parkinson's Disease (IPD). The point prevalence of dementia is estimated to be 35% in people with IPD (*Arsland, 2005*). Likewise, Atrial Fibrillation (AF) is also a disease of older people (*Kannel, 1998; Zoni-Berisso, 2014*), resulting in poorer outcomes. Whilst people with AF have shown to be at increased risk of cognitive impairment (*Dugger, 2016*), there is also evidence for the association between IPD and Ischemic stroke (*Huang, 2013*). The objective of this study was to measure the prevalence of AF in people with IPD and its' impact on cognition in that cohort.

METHODS: This retrospective observational study has analysed the existing data for all patients attending local movement disorders clinic. Information on demographics, the severity of Parkinsonism and co-morbidity burden were extracted electronically from the clinical workstation, clinic/GP letters and coding. Ethical approval was not required for this clinical research.

RESULTS: 481 patients attend Movement Disorders clinic and we studied 275 patients who have been diagnosed with IPD. Mean age was 81.3±8.0 and 40% were females. Hoehn-Yahr stage and Non-Motor Symptom burden were 3.4±1.1 and 13±7.7 respectively. The Clinical Frailty Scale was 6.7±1.3 and Charlson's co-morbidity index was 5.4±2.3.

The overall prevalence of AF was 26.54% (73/275), and the prevalence has increased with each decade of life as shown below. 74% (54/73) patients were anticoagulated.

Age group	AF (n)	IPD	%
<59	0	3	0.0
61-70	7	43	16.3
71-80	24	109	22.0
81-90	35	104	33.6
91+	7	16	43.8

35.27% (97/275) of IPD patients had dementia (mild cognitive impairment excluded). The figure was significantly higher for IPD patients with AF (50.68%=37/73) as compared to those without AF (29.70%=60/202, $p<0.001$).

CONCLUSION: The prevalence of AF in people with IPD is higher as compared to the general population and the trend increases with every decade from 7th decade onwards in line with the evidence-based literature. Based on our observation that the prevalence of dementia is higher in people with IPD if they also had AF, we recommend for regular monitoring and intervention for the latter as the risk increases with age. Currently the work is ongoing locally to tease-out the association further.

SCIENTIFIC RESEARCH: PSYCHIATRY AND MENTAL HEALTH

IS THE MODIFIED SINGLE QUESTION IN DELIRIUM AS GOOD AS THE CONFUSION ASSESSMENT METHOD AT DIAGNOSING DELIRIUM

E Burn[1], C Hartley[1], J Cabada[1], R Skelly[1], A L Gordon[1,2,3]

1. Department of Medicine for the Elderly, University Hospitals of Derby and Burton NHS Foundation Trust; 2. Division of Medical Sciences and Graduate Entry Medicine, University of Nottingham; 3. East Midlands Collaboration for Leadership in Applied Health Research and Care, Nottingham

BACKGROUND: The modified Single Question in Delirium (mSQiD) asks "*Has the patient been more confused or drowsy in the last 3 days*". It has been proposed as the most straightforward approach to delirium diagnosis with less inter-rater variability than more complex screening tools. We considered how its introduction would affect delirium detection rates in patients, including those with dementia, in a real-world teaching hospital setting.

METHODS: We reviewed patients admitted to our four geriatric medicine wards over 7 data collection days. Patients were included if the hospital's electronic dementia assessment tool, which incorporates the mSQiD, had been completed by nursing staff in conjunction with regular carers. A Confusion Assessment Method (CAM) evaluation was then conducted by junior doctors independently and without knowledge of the mSQiD result.

RESULTS: 54 patients were assessed, and 4 results discounted as the tools were over 24 hours apart. 50 patients were then included, 34% were male with an average age of 86.5 years. The diagnostic frequency of delirium via CAM was 14%, and tools in agreement in 88%. These results were cross-tabulated, using the CAM as gold standard.

	CAM positive	**CAM negative**	
mSQiD positive	6	5	55% Positive Predictive Value
mSQiD negative	1	38	97% Negative Predictive Value
	86% Sensitivity	88% Specificity	

CONCLUSION: In a real-world setting, when used by nurses, mSQiD had excellent negative predictive value for delirium, making it a useful mechanism for screening patients into more detailed clinical assessment. Given its greater ease of use, it has been incorporated in routine nursing assessments and the trust delirium guideline as an effective screening intervention.

SCIENTIFIC RESEARCH: PSYCHIATRY AND MENTAL HEALTH

CARDIAC STATUS AND ITS INFLUENCE ON ACETYLCHOLINESTERASE INHIBITOR PRESCRIBING

Z Goff

Leeds and York Partnership NHS Foundation Trust

Acetylcholinesterase inhibitors (AChEIs) are recommended drugs in Alzheimer's dementia; a possible side effect is bradycardia.

Electrocardiograms (ECGs) are often undertaken by prescribing memory services prior to commencing AChEIs, however limited guidance regarding when to undertake ECG monitoring or when to exhibit caution in prescribing is available.

This article describes a regional quality improvement project to help standardise cardiac monitoring prior to AChEI prescribing. An initial multi-centre audit of cardiac monitoring in 3 memory clinics and a regional survey to 33 memory clinics was conducted. Results showed inconsistency in cardiac monitoring and subsequent prescribing practice. Based on the recommendations a systematic review and public health consultation was completed to assess the evidence base for cardiac side effects and monitoring in AChEI prescribing. This informed a multi-disciplinary regional guideline writing and implementation group.

The resulting guideline recommends conducting ECG's in at risk groups and specifies conditions where AChEIs should be prescribed with caution or withheld. A repeat survey of the same memory services to inform the impact of the guideline demonstrated a guideline uptake of 75%, there was no overall reduction in the number of ECGs undertaken, however a greater standardisation of prescribing practice was observed.

SCIENTIFIC RESEARCH: STROKE

PATIENT RELATED OUTCOME MEASURES IN STROKE

R Gilpin, T Foreman, J Hewitt

Database

Patient Related Outcome Measures (PROMs) are patient facing outcome measures that relate to their health, quality of life and functional status. The International Consortium for Health Outcome Measurement (ICHOM) have developed a standard set of questions that looks at outcome measures that matter most to patients. This study collected data from stroke patients discharged from a District General Hospital six months after their stroke using the ICHOM standardised set.

The evaluation involved five questions regarding current level of function and ten questions centred on health and wellbeing. Most responses were given on a five point scale.

Six month outcome data was reported for thirty five consecutive patients; Twenty-two (63%) female; mean age 72, range 40 to 97. The PROM data evaluated overall health, plus measures related quality of life in different domains. As example, nineteen patients (54%) rated their fatigue as moderate, severe or very severe. No patients reported being pain free; the mean pain score was 4.0, ranging from 2 to 5.

Seventeen patients (49%) were unable to walk, with the majority of the remainder (16, 46%) requiring help to mobilise. Twenty-seven (77%) patients required help dressing/undressing, and twenty-five (71%) required help using the toilet. However, no patients reported requiring a tube to feed and none reported problems with communication or understanding.

The standard set also assesses smoking behaviour prior to and following the stroke. Twenty-one patients responded; although five (24%) smoked prior to their stroke only one (5%) patient admitted to still smoking.

This study enabled the team to evaluate patients six months following their stroke. It has highlighted areas important to patients that may have previously been overlooked, such as pain and fatigue, that can be addressed by treating clinicians.

Patient Related Outcome Measures offer an opportunity to evaluate aspects of care that matter to patients. The data can then be used to guide future service planning across the health board and nationally. Also, as they is derived from standardised metrics, it can be used for comparisons across hospital sites to drive improvements in ongoing care.

CLINICAL QUALITY

EFFECTIVENESS OF A COMBINED SPINAL-ORTHOGERIATRIC SERVICE (SOGS): EXPERIENCE FROM A TERTIARY UK SPINAL UNIT

R Dwivedi, A Rahman

Department for Healthcare of Older People, Queens Medical Centre, Nottingham University Hospital

BACKGROUND: The role of orthogeriatrics has now expanded to include pre-operative care of patients undergoing elective joint and spine surgery (Aw et al 2014). The evidence of its effectiveness comes from Comprehensive Geriatric Assessment (CGA) of frail older persons. Patients with vertebral fractures are at high risk of developing hip fractures, highlighting the need for prompt bone health assessment. Given the effectiveness of a combined hip fracture care model and our interest in osteoporosis, we set out to evaluate the effectiveness of a combined spinal-orthogeriatric service (SOGS).

INNOVATION: Between 2 orthogeriatricians, we started offering 3 ward rounds and 2 Multi-Disciplinary Team meetings per week at our tertiary spinal unit since January 2014 with the aim to deliver CGA on all spinal patients over the age of 65 as well as to carry out bone health assessment of patients admitted with symptomatic osteoporotic vertebral or sacral fractures. To assess the effectiveness of this new service we set out to compare data on 25 patients with symptomatic vertebral or sacral fractures admitted 6 months before SOGS with 25 patients admitted 6 months following this service.

RESULTS: The median length of stay (14 days) was similar across both periods. 24 /25 patients (96%) were seen by geriatricians following SOGS compared to none before. Importantly all 24 patients (96%) seen by geriatrician following SOGS had bone health assessment done compared to 3/25(12%) before ((p< 0.00001). Follow up at 12 months revealed 14/25 patients (56%) seen prior to SOGS had refractures compared to 3/25(12%) following this service (p=0.0023).

DISCUSSION: A combined SOGS leads to significant improvement in bone health assessment as well as a significant reduction in refracture rates of patients admitted with symptomatic vertebral or sacral fractures. Unfortunately, we haven’t been able to demonstrate a significant reduction in their length of stay (LOS). One of the slight limitations of this study is the small sample size as patients with symptomatic osteoporotic vertebral or sacral fractures generally constitute only about a fifth of all spinal patients in the unit. There is a need for a bigger study with adequate baseline sample size to assess the impact of this service on LOS, mortality, etc.

CLINICAL QUALITY

GERIATRICIAN DELIVERED CGA AT FRONT DOOR - BEST QUALITY OF CARE FOR FRAIL OLDER PEOPLE

M Pearl, L Guzman, S Sheriff, S Vasishta, A Verma

Department of Care of the Elderly, Royal Gwent Hospital

BACKGROUND: Before this project a dramatic 0% of frail older patients were assessed through Comprehensive Geriatric assessment (CGA) by a Consultant Geriatrican and Multidisciplinary Team at the Front Door. 1 out of every 3 patients over the age of 85 attending ED at RGH stayed in ED for over 12hrs and 89 % of these patients were admitted to hospital. According to the recent Benchmarking Network in 2015-2016, after patients were admitted in Care of the Elderly wards the average length of stay was between 9-14 days.

AIMS:
- Improve quality of care by providing an early CGA to frail older patients admitted through the front door.
- Coordinate safe yet early discharges from A&E and MAU by a Consultant led service. Reduce hospital admissions from A&E and MAU.
- To reduce the length of stay of frail patients in ED and Hospital.

INTERVENTIONS: 3 months trial project using a completely different approach to assess frail patients in ED and MAU at RGH. A Consultant Geriatrician led MDT provided a Comprehensive Geriatric Assessment from 09:00 – 17:00, Monday to Friday. The Acute Geriatric ward and Community Resource Team were available to facilitate early supported discharges.

RESULTS:
- A total of 388 patients were reviewed in 3 months, with an average age of 83 years old.
- 210 patients were assessed in MAU and 178 in the Emergency Department. 100% of patients were assessed through a comprehensive geriatric assessment at the front door.
- 32% of patients seen were discharged home from ED the same day.
- From the 150 patients admitted to D2E the average LOS was 68 hours compared with the average LOS of 9-14 days in COTE wards.
- Patients managed in the correct EFU pathway were discharged home with a total hospital LOS of 52.5 hours.
- The average time from referral is received to CGA started was 29 minutes.
- The average time from CGA started to discharge home directly from ED was 3 hours and 10 minutes.

CONCLUSIONS: During the period of trial, 100% of patients admitted in ED with frailty criteria had a Consultant led Comprehensive Geriatric Assessment. The average LOS in A&E and in hospital was significantly reduced. Early and safe discharges were coordinated by a more rapid decision without increasing patient adverse related events, maximizing the quality of care in a cost-effective manner.

CLINICAL QUALITY

REGULAR MONITORING WITH STOOL CHART PREVENTS CONSTIPATION, URINARY RETENSION AND DELIRIUM IN ELDERLY PATIENTS: AN AUDIT LEADING TO CLINICAL EFFECTIVENESS, EFFICIENCY AND PATIENT CENTREDNESS

T Maung, K Singh

Dept of Elderly Care, Good Hope Hospital

BACKGROUND: This audit was carried out in the Frailty Unit of Good Hope Hospital. The team involved two members, Dr Tun Zan Maung (SHO) and Dr Kanwaljit Singh (Consultant). The study included 60 elderly patients admitted to the Frailty Unit of Good Hope Hospital.

INTRODUCTION: Monitoring a patient's bowel habit is very important in Geriatric Wards. Constipation in elderly patients may result in urinary retention, delirium and bowel obstruction. However, there was a concern that bowel monitoring might have been missed and documentation in the stool chart was occasionally not completed in busy medical wards. We carried out the study to assess the quality of bowel monitoring with the Bristol stool chart. The standard is that every elderly patient should have bowel monitoring with stool chart every day. The stool chart must be fully documented. The compliance must be 100%.

METHODS: Inclusion criteria: every elderly patient admitted to the Frailty Unit of Good Hope Hospital. The first study was done in November 2017. After the intervention, the audit was repeated in January 2018 to reassess the situation. We looked into three domains: whether it was documented, the quality of documentation and medical review of the stool chart. Data was collected retrospectively from nursing and medical notes.

Intervention: small group training of nursing staff was arranged to improve stool chart monitoring in elderly patients. Audit was presented at the weekly elderly care meeting.

RESULTS: The first audit showed compliance of 85% in documentation, 75% in eligibility and 90% in medical review. We also noted one patient got urinary retention due to constipation and needed to be catheterized. The other had delirium due to constipation. During the study, we found out that many nurses were not aware of the importance of proper stool chart monitoring in elderly patients. After the intervention, we could see improvements in compliance: 91% in documentation, 93% in eligible documentation and 91% in medical review. Most of the patients opened their bowels every one or two days, as doctors proactively put on laxatives unless their bowels opened. No patient had urinary retention and delirium due to constipation.

CONCLUSION
Although we can see an improvement in documentation, we still need to continue educating nursing staff and junior doctors to get 100% compliance for stool chart monitoring. We are also planning to repeat the audit in a regular cycle in the future.

CLINICAL QUALITY

DEVELOPING COLLABORATIVE CARE FOR OLDER IN-PATIENTS ADMITTED TO GENERAL SURGERY IN ROYAL DERBY HOSPITAL

E Burn[1], A Solomonsz[1], F Grant[1], J Pattinson[1], J Harrison[3], A L Gordon[1,2,4]

1. Department of Medicine for the Elderly, University Hospitals of Derby and Burton NHS Foundation Trust; 2. Division of Medical Sciences and Graduate Entry Medicine, University of Nottingham; 3. Business Intelligence, University Hospitals of Derby and Burton NHS Foundation Trust; 4. East Midlands Collaboration for Leadership in Applied Health Research and Care, Nottingham

BACKGROUND: Older people undergoing emergency surgery encounter more post-operative problems. Frailty and multimorbidity are associated with longer inpatient stays following emergency admission. This project extended previous work which developed a structured response to older emergency laparotomy patients, to support all older patients admitted to general surgery, whilst improving staff confidence in managing these patients through an embedded collaborative approach.

INTERVENTION: Improvement cycles have included proactive case finding of patients through twice-weekly board rounds, attended by the general surgery Multidisciplinary Team and an older peoples' liaison team comprising a consultant geriatrician, nurse consultant and specialist registrar. An electronic referral system and formalised documentation stickers were used to standardise referral processes and the recording of geriatric medicine liaison team inputs respectively.

IMPROVEMENT: Over the period of the improvement programme, the average lag time from admission of patient to referral for a geriatrician opinion has reduced from 9 days to 3.1 days. The upper control limit (3rd SD) for the length of stay of patients over 70 admitted to general surgery has reduced from 42 to 28 days, with a reduction in mean length of stay from 12 to 8.9 days, indicating better standardisation of care.

Responses to qualitative questionnaires has revealed that staff feel they have "quick access" to "valuable support", and the board round intervention has "involved the MDT" and "added another dimension to care of our… patients". The introduction of a consultant led service has helped to further embed the service.

DISCUSSION: This intervention has built on a 2-year-old Liaison service. We have demonstrated that collaborative working between General Surgery and Elderly Medicine liaison can improve the care for this patient group with reduced lag-time to specialist geriatric medicine support and reduced variability and mean length of stay.

CLINICAL QUALITY

DELIRIUM ASSESSMENT: ARE HEALTH PROFESSIONALS CONFUSED?

C Hood[1], O J Corrado[2], E Swanston[3]

1. National Audit of Dementia, Royal College of Psychiatrists; 2. Leeds Teaching Hospital NHS Trust; 3. South Tees Hospital NHS Foundation Trust

BACKGROUND: The 3rd National Audit of Dementia (NAD) report was published in 2017. 199 hospitals in England and Wales (98%) of those eligible participated. This and previous reports have emphasised that the assessment of people with dementia for delirium is poor and inconsistent. We undertook a specific delirium 'spotlight' audit to determine whether this was due to interpretation of the questionnaire or poor clinical practice.

METHODS: 117 of 199 hospitals participated and were asked to audit the case notes of 20 people with dementia admitted as emergencies (with a length of stay of 72 hours or more) asking whether a screen and delirium assessment had been undertaken and for details of these assessments. In total 2228 patients' case notes were audited.

RESULTS: 32% of patients with dementia admitted to hospital did not have an initial assessment for delirium (once allowance had been made for those whose notes recorded details of assessments or previously recorded delirium). 27% had no confusion or cognitive test undertaken during their stay. Only 48% of those with possible or actual delirium had this fact communicated to GPs in discharge correspondence. There was variability in interpretation of the questionnaire between hospitals regarding what constituted a delirium screen or assessment.

CONCLUSIONS: People with dementia are particularly susceptible to delirium and this is a frequent cause of admission to hospital. Our audit has shown that a more consistent and thorough approach to the assessment of delirium in these patients could significantly improve their management. Problems with the interpretation of the survey questions compound the situation and the NAD team has revised the questionnaire for the next audit round with the intention of producing clearer and more informative results.

CLINICAL QUALITY

THE INTRODUCTION OF AN ORTHOPAEDIC CLERKING PRO-FORMA FOR PATIENTS OVER 60 YEARS OF AGE TO IDENTIFY PATIENTS WITH A HIGH CLINICAL FRAILTY SCORE REQUIRING AN ORTHOGERIATRIC INTERVENTION

E King, J E Turner, S Ali, I Wilkinson

East Surrey Hospital, Redhill

INTRODUCTION: Older patients with fragility fractures are currently admitted under the care of the orthopaedic service in our hospital. Our prior work has shown the patients to be a similar cohort to those with a neck of femur fracture. Recent changes to the admission policy in our trust mean more fractures are being admitted under the sole care of the orthopaedic teams. Our current model of care does not allow the orthogeriatric team to review all patients. Previous attempts at the introduction of a pro-forma for falls assessment and comprehensive clerking of patients has failed. We aimed to introduce a system for targeted reviews with orthogeriatric intervention for the patients with the greatest need.

METHODS: Co-designed new orthopaedic clerking pro-forma and post-take ward round sheet, introduced for all patients over 60 years, excluding patients with fracture neck of femur, in September 2018. This included a Clinical Frailty Scale (CFS), cognitive and falls assessments.

INTERVENTIONS: A series of PDSA cycles were undertaken to embed the use of the pro-forma over one month. Initial feedback highlighted some discrepancies in frailty scoring and these were addressed by a training session with an orthogeriatrician. Audit is on-going to check correct use of pro-forma.

RESULTS: In total 63 patients (>60 years) were admitted to orthopaedic care.

- 51 (81%) had completed orthopaedic clerking pro-forma (missed patients were reviewed daily for justification of omission).
- 20 (39%) patients had a Rockwood Score of ≥5.
- 75% had a fall.
- Mean Charlston Co-morbidity Score – 6.8.
- Mean length of stay was 10 days.
- Fractures: Spinal 4 (20%), Pelvis 4 (20%), Upper limb 3 (15%), Lower limb 3 (15%).
- Non fractures: Infection 2 (10%), Hip pain 4 (20%).

CONCLUSION: The clerking pro-forma was successfully introduced together with frailty scores and cognitive assessments. Falls assessment embedding is ongoing. This intervention will allow targeted review from the orthogeriatric team for all patients with a CFS Score ≥5.

KEY STEPS:

- Co-design of the pro-forma – with active orthopaedic engagement in its design and implementation.
- The role of the orthopaedic nurse to coordinate the data collection and feedback to team members on a daily basis (significantly increased the uptake in the use of the pro-forma).
- The teaching session to the junior team to highlight the reasoning behind frailty assessments.

CLINICAL QUALITY

OUTCOMES FOR PATIENTS FOLLOWING THE EXPANSION OF AN OLDER PERSON'S ASSESSMENT AND LIAISON (OPAL) SERVICE IN THE EMERGENCY DEPARTMENT

C Mayl, K Bird, J Vale, J Allen

Care of Older Persons Department, Musgrove Park Hospital, Taunton and Somerset NHS Foundation Trust

TOPIC: The Older Persons Assessment and Liaison (OPAL) Practitioners are based in our Emergency Department (ED) and have assessed over 4,000 frail older people in 3 years. Service expansion has delivered demonstrable improvement in outcomes for patients.

INTERVENTION: The number of OPAL practitioners was increased from 2 to 4 to provide a 7 day service, from 8am-6pm. The outcomes for older persons assessed by an OPAL Practitioner from 2 years before and 1 year following the increase have been reviewed.

IMPROVEMENT: The table demonstrates outcomes from ED for older people assessed by an OPAL Practitioner. The OPAL Unit consists of 13 beds on the Acute Medical Unit (AMU), set up as an acute frailty unit delivering comprehensive geriatric assessment.

Outcome for Older Person	2 Practitioners, number (%) per year	4 Practitioners, number (%) per year
Discharged to usual place of residence	331 (35.3)	798 (37.5)
Discharged to other community resource	35 (3.7)	104 (4.9)
Admitted to OPAL Unit Bed	312.5 (33.3)	426 (20.0)
Admitted to AMU Bed	148 (15.8)	511 (24.0)
Admitted to Care of the Older Person Ward	14 (1.5)	21 (1.0)
Admitted to Another Acute Hospital Ward	9.75 (10.4)	269 (12.6)

DISCUSSION: Doubling the number of OPAL practitioners, to allow 7 day working, has resulted in more than twice as many patents being reviewed, and more than a doubling of acute hospital admissions prevented.

The percentage of patients admitted to the OPAL Unit has lessened over this time; although the number of OPAL Practitioners was increased and subsequent numbers of patients seen, the bed numbers of the OPAL Unit were not increased.

This service could be replicated in other ED's with favourable admission avoidance outcomes for a frail older population.

CLINICAL QUALITY

THE IMPLEMENTATION OF AN ADVANCED PRACTITIONER THERAPIST ROLE WITHIN A COMMUNITY INDEPENDENCE SERVICE

D Forster[1,2], J Frosdick[1]

1. Central Community Independence Service, Royal South Hants Hospital, Solent NHS Trust, Southampton; 2. Medicine for Older People, University Hospital Southampton, NHSFT, Southampton

BACKGROUND: Older people admitted to hospital often experience prolonged admissions due to complex multi-morbidity alongside social circumstances. Evidence shows that older adults are more likely to be alive and living in their own homes at follow-up if they receive a Comprehensive Geriatric Assessment (CGA).

INTRODUCTION: In Central Southampton, demand for CGA was higher than capacity so GPs were sent requests such as medications review. Audits showed that 60% of requests were not actioned, impacting on rehabilitation whilst waiting for a GP appointment. This delay on patient care presented an opportunity to train a therapist to complete CGAs and enhance career development opportunities.

INTERVENTIONS: A Quality Improvement (QI) project was set up for a trainee Advanced Practitioner Physiotherapist (APP) to complete CGAs within the Community Independence Service. All falls referrals into the team were discussed with the Consultant Geriatrician who identified those requiring CGA at home. CGAs were completed by the Consultant Geriatrician and trainee APP between October 2017 and August 2018. Data was collected on admission rate and length of hospital stay for 3 months following assessment, plus patient satisfaction and colleague experience on delayed rehabilitation.

RESULTS: 329 patients were screened, with 61 identified as requiring CGA. Capacity to accept patients from triage increased from 16% to 38%. On follow-up, patients receiving CGA had a mean length of hospital stay of 5.5 days if admitted, 7 days less than the comparison group (no CGA). An average of 26 bed days per month were saved. The number of requests sent to GPs reduced by 62.5%, whilst staff confidence in the trainee APP completing CGAs increased from 10% to 90%. 100% of all CGA requests from both the consultant Geriatrician and trainee APP were actioned by GPs. Colleagues reported 45% of their patients had rehab affected whilst waiting for a consultant or GP review prior to the QI, reducing to 7%.

CONCLUSIONS: Multi-morbidity and falls are associated with frequent hospital admissions and a prolonged length of stay. Comprehensive Geriatric Assessment in the community provides a plan for patients and their GPs and significantly reduces length of hospital stay. Investing in Allied Health Professionals to implement CGAs reduces the threshold and increases capacity, leading to considerable system wide cost savings, whilst enhancing recruitment and retention.

CLINICAL QUALITY

ESSENTIAL PHARMACY ROLE IN POLYPHARMACY REVIEW AND DEPRESCRIBING FOR FRAIL OLDER PATIENTS

S Fernandez

Royal Gwent Hospital Pharmacy Department, Newport

The Emergency Frailty Unit (EFU) team of clinicians at the Royal Gwent Hospital (Newport) extended their services to the admission department to optimise referrals and reduce the length of stay of frail older patients. Over a period of 6 weeks a multidisciplinary approach was adopted and a pharmacist independent prescriber joined the team of clinicians at the admissions department to undertake a medication review on those newly admitted patients.

People who are frail are particularly vulnerable to the effects of polypharmacy due to co-morbidity and age related changes and are at higher risk of adverse drug events (ADE) and non-adherence. A core component of the comprehensive geriatric assessment (CGA) is the medication review with goals of identifying inappropriate prescribing and preventing potential ADE. Incorporating pharmacist expertise is essential to complete the CGA and to review each medication for appropriateness.

The pharmacist offered a systematic approach to deprescribing after completing an in-depth medication history and reviewing each medication for indication, compliance, side effects and interactions incorporating patient preferences and choices.

During this study 116 frail patients had a medication review. 69 patients were reviewed separately in the traditional manner achieving a 48% deprescription rate. The remaining 47 received an in-depth joint multidisciplinary review at admission, resulting in 72% having medications stopped; therefore achieving a 50% higher deprescription rate than if done separately at a later time. A cost avoidance of more than £15,000 per year was achieved during this period.

Reducing polypharmacy in frail populations demands an interdisciplinary teamwork. Time constraint was one of the biggest limitations preventing the pharmacist and the medical team from doing a joint multidisciplinary comprehensive review. In view of the results it was recommended for a pharmacist to join permanently the frailty admission team.

CLINICAL QUALITY

COMPREHENSIVE GERIATRIC ASSESSMENT: IMPROVING COMMUNICATION BETWEEN THE ACUTE HOSPITAL AND THE COMMUNITY TEAMS CARING FOR FRAIL OLDER PATIENTS VIA THE USE OF A STRUCTURED DISCHARGE SUMMARY TEMPLATE

L A Frank, L Grainger, H J Lim, R Robson

Care of the Elderly Department, North Middlesex University Hospital, London

INTRODUCTION: The North Middlesex University Hospital is a busy district general hospital with 100 Elderly Care inpatient beds. In the community, care home residents are supported by the community matrons and older patients requiring closer attention are monitored in Day Hospital. The Elderly Care Department received feedback that the available information at discharge was too non-specific and that this was preventing the provision of high quality continuous care outside of the hospital. The aim of the project was to address this by ensuring that core comprehensive geriatric assessment (CGA) domains were consistently handed over following an acute admission.

METHODS: The Elderly Care Department identified 8 core domains to be clearly communicated in the discharge summary: summary of admission; cognition; nutrition; swallow; continence; skin integrity; mobility; social care needs; escalation of care. A discharge summary template was designed and implemented as the standard structure for all elderly care discharges in April 2018.

INTERVENTIONS: The discharge summary template was initially piloted on a single ward in March 2018. It was rolled out across the department from April 2018 and regularly re-audited to monitor compliance and identify issues. Amendments were made in June 2018 following input from speech therapy and palliative care. The consultants have championed the project and positively encouraged its use on their wards. At junior doctor changeover in August 2018, the discharge summary template was presented as a requirement at departmental induction.

RESULTS: Prior to the introduction of the template, baseline auditing of the quality of the department's discharge summaries showed that none of the discharge summaries consistently included information pertaining to the key CGA domains. By September 2018, the template was being used in 90% of discharge summaries indicating good compliance. The CGA domains were being included in 85% of the discharge summaries. Feedback from the community teams has been overwhelmingly positive. The junior doctors found using the template straightforward and not overly onerous.

CONCLUSION: The implementation of the discharge summary template has vastly improved the quality of the information which is produced following an inpatient admission and has strengthened the collaboration between the inpatient and community teams. Future plans include introducing modified versions of the template for other hospital teams such as orthogeriatrics or stroke medicine.

CLINICAL QUALITY

FEASIBILITY OF A WEARABLE TECHNOLOGY BASED VIRTUAL CLINIC FOR PEOPLE WITH PARKINSON'S

L A Evans, B Mohamed, E C Thomas

Rookwood Hospital, Cardiff

INTRODUCTION: The Parkinson's service in Cardiff and Vale cares for over 1500 people with Parkinson's (PwP) and related disorders. NICE recommends offering 6 to 12 monthly follow up clinic appointments (NICE guideline NG71, July 2017). We propose an innovative approach using telemedicine and wearable technology to meet increasing demand on services and provide quality care delivered to patients at home.

METHODS: The service has over 18 months' experience using the Parkinson's Kinetigraph (PKG); a wearable device that measures bradykinesia, dyskinesia and tremor giving a report to facilitate enhanced clinical decision making (Santiago et al, J Parkinsons Dis, Nov 18). Using the PKG report as a surrogate for the point-in-time clinical examination, we set up a virtual clinic.

INTERVENTIONS: Patients are sent virtual clinic appointments and are called on the phone by a doctor. The results of their recent PKG are discussed, along with any symptoms or concerns. Clinic letters are sent to GPs advising on medication changes. We plan to alternate between virtual and face-to-face clinics for each patient 6 monthly. Data has been collected on the consultation outcomes and anonymous feedback questionnaires sent by post.

RESULTS: 28 patients have virtual clinic appointments over 5 clinics, mean age 71 (range 54-81). 82% of appointments are successful, where a clinical decision could be made. This could be a medication change (n=13) or no action required (n=10). The reasons that clinical decisions could not be made included needing a BP reading (n=2) and complex stage of disease (n=2). 93% of those who responded to the questionnaire (n=15) agreed they were satisfied with phone clinic, particularly highlighting convenience and transport issues.

CONCLUSIONS: Virtual clinics are feasible, effective and acceptable to PwP. Success could be improved by referral criteria. The concept appears scalable. Larger clinics and a cost analysis are planned to confirm this.

CLINICAL QUALITY

EVALUATION OF USE OF MRI TIA PROTOCOL IN TIA CLINICS

K Topor, A Saulat

Healthcare for Older People Department, Torbay Hospital, Torquay

INTRODUCTION: Transient Ischaemic Attack (TIA) is a condition when the person presents with sudden onset, focal neurological deficit that has completely resolved within 24 hours of onset and cannot be explained by another condition. TIAs are associated with a high risk of stroke within the next month and even up to 1 year.

Patients presenting with TIA should be referred to a specialist led clinic to make a diagnosis as it could be over-diagnosed by non-specialists in up to 73 % of cases. Up to 35 % of patients referred to TIA clinics have a non-cerebrovascular diagnosis. Also, it might be difficult to distinguish between stroke chameleons and stroke mimics for a non-specialist. Reliable exclusion of TIA diagnosis saves patients from unnecessary polypharmacy in older and frail patients as well as removing restriction from their social life (i.e. driving, travel insurance, etc.).

Patients with a suspected TIA who need a brain imaging should undergo a diffusion-weighted MRI. Unfortunately, MRI is not easily accessible in every NHS hospital and there could be a few days delay due to a high demand and time of procedure.

To address that, in our trust, we adopted use of MRI TIA protocol in our TIA clinic. This protocol uses only 2 sequences and takes only 5 minutes, which means that patients could have a scan done during TIA clinic.

METHODS: We conducted a retrospective notes review of 99 patients who attended TIA clinic in July-August 2017. We clarified reasons for doing MRI TIA and evaluated whether use of MRI TIA scans influenced patient's management.

RESULTS: MRI TIA was performed in 53 cases. Twelve patients had MRI TIA to confirm acute stroke and 41 patients had a scan to exclude it. Acute stroke was confirmed in 9 out 12 cases (75%) and excluded in 39 (95%). Use of MRI TIA has changed management in 52 (98%) cases. Alternative diagnosis was made in 25 cases. Antiplatelet therapy was discontinued in 24 cases. Driving restrictions were removed for 21 patients.

CONCLUSION: Use of MRI TIA has led to changes in management of 52 patents and was an effective tool in distinguishing stroke mimics and chameleons from stroke disease. Use of this imaging modality has reduced a negative impact on patient’s social life and reduced polypharmacy burden.

CLINICAL QUALITY

APPROACH AND CONSIDERATIONS REGARDING LONG TERM TUBE FEEDING IN PATIENTS WITH END-STAGE DEMENTIA IN ISRAEL

A Sawicki, A M Clarfield, T Dwolatzky

Gerontology Department, The Center for Multidisciplinary Research in Aging, Ben-Gurion University of the Negev, Israel

BACKGROUND: A previous study[1] (2005) showed a high overall use of tube feeding for long term (LT) care in Israel (52%) and a proportionally higher use (2:1) of nasogastric tube feeding (NG) over Percutaneous Endoscopic Gastrostomy (PEG) within institutionalized end stage dementia patients. This is much higher compared to other western countries2 (varying between 4.9%-34%), nor is it in line with medical guidelines preferring per-os (PO) over tube feeding, and PEG over NG if necessary for LT care3. In the past decade Israeli end-of-life care underwent a substantial MoH reform aimed to remove the perverse administrative considerations behind these findings, along with other various cultural, legal and administrative changes. This study sought out to provide updated documentation in light of these changes, and to evaluate the considerations behind the choice to tube feed patients with end stage dementia.

METHODS: A convenience sample of 8 geriatric institutions was created representing various forms of geriatric care facilities in Israel today, in which the prevalence, form and considerations behind tube-feeding were documented. This was complimented by an anonymous mixed method survey of Israeli geriatricians.

RESULTS: 139 (32.5%) of 427 patients reviewed met the study criteria of GDS 7. 68 (48.9%) were fed PO and 71 (50.4%) were tube fed. Of those tube fed 34 (47.9%) had a PEG while 37 (52.1%) had a NG tube for an average of 257 days and a median of 79 days. The reasons documented were predominantly medical, followed by clear ethical considerations. Surveyed physicians' views echoed these finding.

CONCLUSION: There seems to have NOT been a significant reduction in the overall prevalence of tube-feeding over PO feeding despite the changes in Israeli end-of-life care, although an improvement was found with a reduction in the proportional use of NG over PEG. Our findings indicate that the reasons for this are not administrative (concerning the MoH reform) rather driven by medical considerations together with a clear cultural-ethical component as well.

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CLINICAL QUALITY

ELECTRONIC RECORDING OF CLINICAL FRAILTY SCALE SCORES FOR ALL ACUTE HOSPITAL ADMISSIONS AGE OVER 75: IS THE ELECTRONIC SCORE CONSISTENT WITH SCORES PERFORMED BY FRAILTY SPECIALISTS, FOUNDATION DOCTORS AND PARAMEDICS?

G Robson, S Lane, L Hines, A Ibude, A Sinclair, T Godden

Royal United Hospital Bath NHS Foundation Trust

INTRODUCTION: The Royal United Hospital Bath (RUH) is one of the first trusts in the country to record the Clinical Frailty Scale score for all inpatients age over 75 on our electronic system. This means scores are being completed by many different people across multiple specialties who will have a very variable understanding of Frailty. We were concerned that scores might not be consistent across different grades making the electronically recorded score unreliable. We also wondered if there would be a difference between scores captured in hospital and those recorded by paramedics in the community given all raters are supposed to score the patient on how they were prior to the presenting illness. As it is increasingly likely frailty will be a factor in clinical decision making we wanted to see if the electronically recorded scores were consistent with scores performed in the community by paramedics and by clinicians with a special interest in frailty.

METHODS: A team consisting of an Occupational Therapist (OT) and 2 Medical Nurse Practitioners from the Frailty Flying Squad, an F1 doctor just starting a 3 month block in geriatric medicine and a consultant geriatrician all independently scored all the patients on our short stay older persons ward. We also recorded what score had already been captured electronically and by the paramedics for comparison.

RESULTS: 20/26 patients on the ward had a score recorded electronically. No patients had scores that differed by more than one between mean and median for all 5 raters and the electronic score. 6 patients had electronic scores that were one different to the mean and median score, 3 higher and 3 lower. Paramedic scores were available for 15 patients. 12/15 paramedic scores differed from the mean and median in-hospital scores with 5 of these lower by 2 or more and only 4 paramedic scores higher.

CONCLUSIONS: We are reassured that our in-hospital scores for older adults are reasonably consistent, varying by 1 or less, which is unlikely to make a significant difference to management. Paramedic scores were more likely to be lower than scores estimated in hospital. This needs further study but suggests seeing patients in their home environments has impact on estimations of level of frailty and should be considered when recording a score electronically.

CLINICAL QUALITY

INTRODUCTION OF OLDER PERSONS ASSESSMENT AND LIAISON (OPAL) SOLIHULL AND ITS IMPACT ON DISCHARGE AND READMISSIONS

H Sharman[1], T Quigley[1], Z Wyrko[2]

1. Department of Elderly Care, Solihull Hospital; 2. Department of Elderly Care, Queen Elizabeth Hospital Birmingham

BACKGROUND: Solihull Hospital is a small DGH within a broadly affluent borough. Its population is ageing at a rate above national average, with 21% of the population aged 65yrs+ and 5% aged 85yrs+. The hospital does not have a traditional Emergency Department; admissions to the Acute Medical Unit (AMU) are via referrals from Minor Injuries Unit (MIU), GPs or direct ambulance admissions.

Older people with frailty are major users of health and social care services and thus more likely to be admitted to hospital and stay longer. Comprehensive geriatric assessment (CGA) is an evidence-based approach to improving patient outcomes which, until October 2017, was not routinely carried out at the front door at Solihull Hospital.

INTERVENTION: The Older Persons Assessment and Liaison (OPAL) team was piloted in October 2017 and fully funded from January 2018. At the time of data collection the team consisted of 9 team members from a variety of disciplines. Cover was from 8am to 8pm Monday to Friday, aiming to provide timely CGA to older adults with/at risk of frailty and facilitate supported discharge.

METHOD: Data was collected from all patients reviewed by OPAL throughout August 2018. Age, referral source, outcome (admission/discharge) and 7- and 28-day readmission rates were recorded. Comparison was made with data collected during a 'scoping exercise' in August 2017 prior to service implementation.

RESULTS: Patients were proactively identified from AMU and MIU, or referred directly from community services. 164 patients were reviewed, ranging from 1 to 10 per day. Median age was 82 years (range 57-98).

63% of patients seen by the OPAL team (104/164) were discharged home, increased from 35% (18/52) prior to implementation. A reduction in both 7- and 28-day readmission rates was seen with a fall of 82% (22.2% to 3.8%) and 68% (38.8% to 12.5%) respectively.

CONCLUSION: Introduction of OPAL at Solihull hospital reduced the proportion of patients at risk of frailty associated harm being admitted from AMU compared to initial scoping data. Despite this increased discharge rate, readmission rates also reduced. Further data collection is required to assess whether this pattern is sustained. Data on the impact OPAL has had on community services and outcomes for patients admitted following OPAL review, including length of stay, would be a useful extension to this project.

CLINICAL QUALITY

PARKINSON'S KINETIGRAPH (PKG) IN CLINICAL MANAGEMENT OF PARKINSON'S DISEASE

S Rao, S Raha, L Ebenezer

Department of Geriatrics, Princess of Wales Hospital, Bridgend

AIMS: To assess the role of PKG in management of Parkinson's disease (IPD) and its effect on drug treatment as well as decisions for advanced treatment.

METHODS: 45 PKG reports between February 2016 and May 2018 from IPD patients in the Movement Disorder Clinic were studied. 37 had a valid reason documented for PKG. 17 male, 20 female. Mean age 71.6 years. Mean duration of IPD 6.37 years, range 1 to 26 years.

RESULTS: There were multiple indications for PKG for most patients. These included dose failure (14 patients), off periods and wearing off (11), possible off dystonia or dyskinesia (5), freezing, falls and relationship with medication (6), bradykinesia and pain (7) and to quantify dyskinesia (3).

On clinical grounds, we felt that 10 of the 36 patients are likely to need complex treatment before PKG. One was already on Apomorphine (Apo-go pen).

After PKG, 4 patients started complex treatment (all had Apo-Go pen). One patient is being assessed for DBS. 5 patients did not need complex treatment but changed their medication with increase in dosage of L-dopa in 4 patients and a reduction in dosage in one patient. We envisage that 2 of these 5 patients are likely to need a form of complex treatment in the near future.

Cost of postponing advanced treatment for 5 patients: Apo-go pump (average cost of £5400/pump/year) led to a saving of £27,000/year. Postponement of Apomorphine (Apo-go) pen treatment (average cost of £3,200/year) led to a saving of approx. £16,000/year.

35 patients changed their PD medication after PKG. Furthermore, 13 were found to have mild to significant dyskinesia with 6 needing a reduction in drug doses. 26 patients were under treated, mostly with off-periods, with 23 needing an increase in drug dosage.

CONCLUSION: PKG is useful for patients with Complex Parkinson's disease to delineate symptoms of dyskinesia, dystonia and wearing off periods. PKG often assists in a change in the patient's medication leading to better symptom control. PKG can be useful in postponing complex treatments in IPD, resulting in significant financial saving.

CLINICAL QUALITY

AN EVALUATION OF THE CURRENT USE OF THE CWM TAF DELIRIUM PATHWAY AND THE DEVELOPMENT OF SUPPLEMENTARY EDUCATIONAL MATERIAL

A Lowe[1], R Martin[2]

1. Cardiff University, Wales; 2. Royal Glamorgan Hospital, Llantrisant, Wales

BACKGROUND: Delirium is an acute confusional state associated with poor patient outcomes. The diverse presentation may lead to diagnostic confusion and delirium is currently poorly managed in a hospital setting. With an ageing population, the poor recognition and management of delirium needs to be addressed.

INTRODUCTION: National guidelines identify a requirement for undertaking regular audits to improve delirium recognition and management. The aim of the project was to evaluate the uptake of the delirium pathway recently introduced into the Royal Glamorgan Hospital and identify if this increased with the provision of staff educational material.

METHODS: 842 medical admission notes were retrospectively assessed, before and after an educational intervention. Patients with new or increased confusion were eligible for the pathway and it was noted if a pathway had been started and/or completed.

INTERVENTION: Education involved presentations to doctors, nursing staff training and production of supplementary materials. 32 staff members on the acute medical unit undertook small group training. Education focused on recognising delirium symptoms and adequate completion of the pathway.

RESULTS: 8.6% (n=72/842) of medical admissions were eligible for the pathway, however uptake was poor. There was an increase in the number of pathways started, 11.8% (n=4/34) to 21.1% (n=8/38), and the number of pathways completed, 0% to 7.9% (n=3/38). However, these were not significant (p=0.291 and p=0.094). After education, delirium was more likely to be mentioned in the notes. The delirium screen completion rate was 34.7% (n=25/72).

CONCLUSIONS: The project highlighted important issues surrounding delirium education and staff training. Despite a small study sample and only a slight increase in pathway uptake, the feedback regarding the educational materials was extensively positive. A longer intervention, education on the delirium screen and further refresher training may be beneficial to improve awareness of delirium in the hospital setting.

CLINICAL QUALITY

HOW INCORPORATING 'LEAN' APPROACH LED TO IMPROVED DELIVERY OF CARE AND REDUCTION IN LENGTH OF HOSPITAL STAY

S Bandyopadhyay, I Wilkinson, T Giokarinin-Royal

Orthogeriatric Team, Department of Medicine for the Elderly, East Surrey Hospital, Surrey and Sussex Healthcare NHS Trust

AIMS: Length of stay (LOS) is a marker of resource consumption. Improved delivery of care may reduce LOS and reduce cost. According to the online 'dashboard report' of the National Hip Fracture Database (NHFD), 2015, the length of acute stay at East Surrey Hospital (ESU) was 21.2 days. This was higher than we aimed for. A multidisciplinary approach was adopted to streamline discharge planning with the ultimate goal of reduction in LOS and improved delivery of care.

METHODS: A lean methodology was incorporated into the existing practice.

- The morning hand-over was improvised to augment the delivery of care. A production board was designed and developed using multiple PDSA (Plan, Do, Study, Assess) cycles.
- Agenda cards were introduced focusing on nursing handover (for new and sick patients), safety (EWS), therapy and planning. PDSA cycles were used to test new ideas and innovations.
- Introduction of a multidisciplinary 'huddle' at the end of the medical ward round (around 11:30 hrs) to improve communication and planning for the rest of the working day.
- Introduction of a 'short' huddle at the end of the day (around 16:00 hrs) to ensure plans made earlier have been implemented and also to identify possible discharges the next day.

RESULTS: The innovative approach helped in identifying patients who are doing well after traumatic hip fracture surgery. It was possible to achieve early stratification of discharge destinations of patients (like home, rehabilitation, respite etc.) and focus on early pain relief.

The length of acute stay is now 17.0 days (The NHFD dashboard, 2018) putting us on the 2nd and 3rd quartile. This is a reduction of 4.2 days in 3 years (20% reduction). As we admit 500 patients each year on average and the cost of each night's in-patient stay is £250, it amounts to a savings of £525,000 per year for our trust.

CONCLUSIONS: The adaptation of a lean approach to ward-based delivery of care has resulted in a 20% reduction in length of stay and saving money for our trust. We believe a further reduction in length of stay is achievable and we aim to work towards it. It is also possible to use this approach in other settings resulting in similar outcomes and savings.

CLINICAL QUALITY

IMPROVING PERIOPERATIVE CARE IN PATIENTS OVER 60 YEARS WITH A FRACTURED NECK OF FEMUR

A Lee, J Ehsanullah, S Chawla, D Shenoy, M Fertleman

Orthogeriatric Department, St Mary's Hospital, London

BACKGROUND: Hip fractures are associated with significant mortality and morbidity. This quality improvement project took place in an urban Orthogeriatric department, on patients over 60 years with a fractured neck of femur.

INTRODUCTION: The Royal College of Physicians and Department of Health published guidelines with a financial incentive (Best Practice Tariff, BPT), aiming to improve hip fracture care. Patients should have prompt surgery, geriatric assessment, physiotherapy, pre-operative AMT score and post-operative 4AT and assessment for bone protection, falls and nutrition.

In our department, the BPT was narrowly not achieved in most of the 350 annual admissions and the failing criterion was variable. Barriers included lack of a structured approach and difficulty recalling the 4AT. Our goal was to introduce a systematic assessment for patients to improve care and BPT compliance.

METHODS: Engagement of the Orthogeriatric team was required. The 'ABCDEF' Orthogeriatric Assessment Tool was devised with their input and integrated into rounds, prompting consideration of Anticoagulation, Bone protection, Cause of falls, Dementia (pre-op AMTS), Delirium (post-op 4AT), ECG, Food/nutritional assessment. A retrospective audit was carried out of 16 electronic patient records (EPR) before and after (average admissions for two weeks), analysing for BPT compliance. Fisher's exact test was applied.

INTERVENTIONS: To enable use of the 'ABCDE' Tool, it was integrated into the EPR system as an auto-text whereby typing ".nof" would bring up the tool, saving time and providing prompts such as the 4AT components.

RESULTS: Use of the tool resulted in a significant increase in compliance, including 4AT (56% vs 100%, $p<0.01$), bone protection (38% vs 100%, $p<0.01$), falls (31% vs 81%, $p<0.01$), and nutritional assessments (13% vs 100%, $p<0.01$. Attainment of the BPT improved from 6 to 81% based on these criteria. Clearly the tool could not help achieve the BPT in cases who did not have prompt surgery, orthogeriatric or physiotherapy assessment, however these patients still benefited through thoroughness of assessments.

CONCLUSIONS: This project demonstrates the incorporation of a simple acronym to stimulate a comprehensive post-operative Orthogeriatric assessment, improving care with financial benefit through increased concordance with the BPT.

Integration of the auto-text into the EPR system was important in encouraging ongoing use despite changeover of doctors. It also saved time and served as an aide memoire for less frequently used aspects such as the 4AT.

CLINICAL QUALITY

INTEGRATED RESPONSE MODEL BETWEEN NEATH PORT TALBOT ACUTE CLINICAL TEAM (ACT) AND THE WELSH AMBULANCE SERVICES NHS TRUST: PUTTING PRUDENT HEALTHCARE INTO PRACTICE

F Adenwalla[1], A Davies[1], B Griffiths[2]

1. Abertawe Bro Morgannwg University Health Board, Swansea; 2. Senior Lecturer in Advanced Practice, Swansea University

TOPIC: Providing better medical care in the community and reducing unnecessary hospital admissions is a challenging task on the backdrop of increasing frailty, chronic disease and working with reduced budgets. The ACT is an advanced nurse practitioner led service, well supported by consultants which provides urgent medical response in the community and works closely with professionals in secondary and primary care including WAST.

INTERVENTION: A collaboration between WAST and ACT led to a pilot to determine whether it was possible to safely and effectively reduce unnecessary hospital admissions in the Neath Port Talbot locality. Calls to the WAST are categorised into red, amber or green according to their urgency and are entered on a “live stack”

The pilot involved ACT having direct access to the ‘live stack’ to identify suitable patients that could be managed by them. After assessment ACT would inform the call handlers if they could take over the case which was then closed to WAST.

IMPROVEMENT: The pilot was over a 5 month period with no additional resource. This meant that the stack was only viewed for a limited number of days in the pilot period. A total of 40 patients were seen by ACT, 35 of these were looked after at home, 3 were admitted to an acute hospital and 2 to a rehabilitation hospital. The average age of patients was 83 years. None of the 35 patients looked after in the community were admitted to hospital within 28 days following discharge from ACT. The pilot demonstrated safety and effectiveness with cost savings of around £2,000 per patient.

DISCUSSION: This pilot has shown that there is a safe and effective alternative to a paramedic review and admission. A far larger number of patients could have been assessed if the stack was looked at daily.

CLINICAL QUALITY

COMPARING THE PREVALENCE OF FRAILTY ON VASCULAR SURGERY AND GERIATRIC MEDICINE WARDS

D Scholes[1], R Armstrong[1], C Nott[2], S Kandola[2], S Dimitri[2]

1. Care of the Elderly Dept, Countess of Chester Hospital NHS Foundation Trust; 2. Vascular Surgery Dept, Countess of Chester Hospital NHS Foundation Trust

BACKGROUND: The Countess of Chester Hospital is a district general hospital with a regional tertiary referral vascular surgery service.

INTRODUCTION: Anecdotally, vascular inpatients experienced high levels of frailty and encountered typical 'geriatric' problems. We felt patient care could be improved with regular geriatric medicine input. We wanted to compare levels of frailty between vascular and geriatric wards in order to demonstrate the demand for a geriatric liaison service.

METHODS: The geriatrics and vascular teams collaborated to assess levels of frailty across the two departments. A random selection of inpatients, age ≥ 65 years, was assessed during November 2018 using evidence-based screening tools for frailty and cognitive impairment. The Rockwood Clinical Frailty Scale and Edmonton Score were used in conjunction with Charlson Comorbidity Index and 4AT. Regular medications were recorded.

INTERVENTIONS: We have developed a geriatric medicine liaison service providing twice weekly consultant-delivered review to frail vascular inpatients. Focus is on management of perioperative complications, polypharmacy, discharge planning and, when appropriate, end-of-life care.

RESULTS: N=30, age range 66-94 years.

Scores (Median)	Vascular	Geriatrics
Age	78	87
Rockwood	6	6
Edmonton	9	9
Charlson Comorbidity Index	5.5	6.5
Medications	10	6
4AT Score	0	1

Results demonstrated comparable prevalence of frailty between the vascular and geriatric wards. Vascular patients were, on average, nine years younger but scored similarly on Rockwood and Edmonton. Polypharmacy was more prevalent in the vascular cohort. We did not demonstrate a significant difference in levels of cognitive impairment between the two groups.

CONCLUSIONS: Older vascular surgery inpatients appear to be as prone to frailty and polypharmacy as the inpatient geriatric medicine population. Vascular patients appear to reach equivalent levels of frailty at a younger age compared to their geriatric medicine counterparts. These results support the routine involvement of specialist geriatricians in the care of older vascular inpatients.

CLINICAL QUALITY

INTEGRATED CARE OF OLDER PEOPLE (ICOP): A NEW SERVICE DELIVERING COMPREHENSIVE GERIATRIC ASSESSMENT (CGA) ON THE ACUTE ASSESSMENT UNIT AT SINGLETON HOSPITAL: RESULTS OF 2 PDSA CYCLES

J Scaife, P Boughey, C Jones, V Williams, L Rowe, A Marchant, E Lacey, O Rees, C Morcam, N Webb, R Davies, E Smith, N Leopold, W Harris, C Hudson, R Edwards

Department of Medicine for Older People, Singleton Hospital

TOPIC: New models of holistic integrated care are required to meet the complex needs of older people presenting at point of crisis to acute medical units. Significant advances in community services including acute clinical teams have allowed medical care and reablement to be provided closer to patient's homes. Prior to 2017 there was no dedicated therapy input in the assessment unit and only a minority of patients ever received comprehensive geriatric assessment (CGA).

INTERVENTION: During the first PDSA cycle in 2017 a dedicated multidisciplinary team undertook CGA for 118 patients aged over 75 presenting with a frailty syndrome. Discharges directly from the assessment unit increased with improved access to community services. A successful business case permanently embedded the service and a second PDSA cycle commenced.

IMPROVEMENT: Between September – November 2017 the iCOP team undertook CGA on 152 patients (23% of total number of acute patients aged >75). Average age 85 years and 75% had a Rockwood clinical frailty scale of > 6.

55.1% were discharged directly home (48% in the pilot) and 62.9% of patients were referred to community teams on discharge. Of the 44.9% that were transferred within the hospital, 61.4% were placed on an older persons ward where CGA and frailty specific care could continue. 80.8% were admitted on 6 or more medications and average medication was reduced from 7.6 to 7.1. 70% received a cognitive assessment and 60% had a do not resuscitate decision documented.

DISCUSSION: iCOP established an integrated approach to acute care overcoming traditional health and social care boundaries. Excellent links with community teams have allowed medical treatment and rehabilitation to be delivered in community settings. Patients requiring inpatient CGA have been fast tracked to a care of older persons ward delivering the right care in the right place at the right time.

CLINICAL QUALITY

IMPACT OF GERIATRIC MEDICINE LIAISON SERVICE ON NATIONAL EMERGENCY LAPAROTOMY AUDIT STANDARDS AND OUTCOMES

R Coary[1], K Jenkins[2], E Mitchell[1], A Pullyblank[3], D Shipway[1]

1. Care of the Elderly, North Bristol Trust; 2. Anaesthetics Department, North Bristol Trust; 3. Colorectal Surgery, North Bristol Trust

BACKGROUND: Older patients undergoing emergency laparotomy have high levels of mortality and morbidity relating to medical complications. The National Emergency Laparotomy Audit (NELA) records processes and outcome measures for patients undergoing emergency laparotomy, with a view to improving the quality of care provided. Geriatrician review of all patients aged >70 years is now a NELA standard. However, the most recent national report shows only 23% compliance which is far short of the target of 80% and consistently the poorest performing standard. Recent data shows that geriatrician review is associated with substantially reduced post-surgical mortality (Oliver C.M. et al., British Journal of Anaesthesia 2018, Volume 121, 1346 - 1356).

INTRODUCTION: In August 2018, we established a dedicated gastrointestinal surgery liaison service to replace ad hoc reviews. We evaluated the impact on NELA standard compliance and patient outcomes.

METHODS: Data was extracted from the local NELA database on all patients aged > 70 years, for the first three months after the service was introduced. These were compared to the same time period in the preceding year, when there was no dedicated service.

RESULTS:

	Pre-Introduction	**Post-Introduction**
	Sept - Nov 2017	**Sept - Nov 2018**
Total No. Laparotomies >70yrs	13	32
Age (Median)	79	78.5
Female	8 (62%)	20 (62.5%)
Length of stay - Mean	22.8	19*
Length of stay - Median	14	14*
Reviewed by Geriatrician	5 (38%)	27 (84%)
Inpatient Death	3 (23%)	2 (6%)
Discharged home	6 (46%)	26 (81%)

*3 remain inpatients

CONCLUSION: These data indicate increased compliance with NELA standards following introduction of the service. Increasing numbers of older people are having emergency surgery. Despite this, mortality improved and a greater proportion of patients were discharged to their own home. No change in length of stay was observed. Dedicated liaison geriatricians may help to improve surgical outcomes, and targeted investment in surgical liaison services may therefore be warranted.

CLINICAL QUALITY

'THE FRAILTY JOURNEY – FROM EARLY RECOGNITION TO END OF LIFE': AN INNOVATIVE MULTIDISCIPLINARY LEARNING EVENT

L Owen, J Pleming, C Lisk, J Brady, A Benafif, A Lewis, D Bertfield, S Mani

Geriatrics Department, Barnet Hospital

AIMS: Frailty is recognised as a long term condition, affecting 14% of people over 60 and 65% of people over 90. The British Geriatrics Society has recognised the need for better identification of frailty and earlier intervention as one of their top priorities following the NHS Long Term Plan. Optimal management of frailty involves a multidisciplinary approach across primary and secondary care.
We created a learning environment to:

- Improve knowledge of frailty among multidisciplinary team members across primary and secondary care.
- Develop confidence in identification and management of frailty.
- Build understanding of the role different professionals can play, and develop relationships to improve frailty management in our local area.

METHODS: A one-day teaching conference was held in March and repeated in October 2018 to groups of 70 participants from primary and secondary care services. Topics were linked by following the journey of a single fictional patient case study from early recognition of frailty through to end of life care including an interactive panel discussion. The most recent conference was filmed by the Acute Frailty Network (AFN) to make a short film for the AFN website. The teaching day has a Twitter presence @frailtyjourney, increasing the visibility of frailty.

RESULTS: Feedback was overwhelmingly positive describing the training as excellent, well-organised and relevant to daily practice and that the case-based learning was very effective. Across eight learning sessions 367/391 (94%) rated sessions at 8-10/10.

CONCLUSIONS: This method of training was highly effective, relevant and well-received by participants. By using a single patient case study throughout we made sure that the message of the day was focused on patient needs, and the requirement for disparate services to come together to provide joined-up care. The course will be repeated on several planned dates in 2019 and aims to expand.

CLINICAL QUALITY

OPPORTUNISTIC SCREENING FOR OSTEOPOROSIS (OSO) OR FRAGILITY FRACTURE (FF) RISKS IN GERIATRIC MEDICINE (GRM) - A QUALITY IMPROVEMENT ACTIVITY (QIA)

S D Varman, S Yu Hnin, D Balsubramanian, L Utami Gani

Changi General Hospital, Singapore

AIM: NICE (UK) Osteoporosis guideline refers to OSO or Fragility fractures risk in Women ≥ 65 and Men ≥75, at any point of contact in health care, using FRAX (UK) for risk stratification, where, high risk may benefit from Bone Density (BMD) scan and consideration of anti-osteoporosis treatment. As there was a perceived lack of consensus on OSO for GRM in-patients, a QIA to assess treatment gaps, changes in practice and the impact post implementation of pathway was performed over the past two years.

METHODS: Snap-shot surveys performed on GRM in-patients in October 2016; repeated in March 2018 to assess changes in clinical practice after the implementation of OSO. Patients with a history of severe dementia, premorbidly bedbound, end organ failures and life-limiting illnesses and on antiresorptive medications were excluded. Patients are deemed eligible for anti-osteoporosis treatment based on a history of previous fragility fracture and FRAX score in accordance with US NOF.

RESULTS: Of 118 identified in first survey, 69 (58%) patients were excluded. 49 included; average age 85; 49 % (n= 24) males. Of the 49 , previous fragility fracture 24/49 (49%), and all 100% (n=49, P< 0 .01) fulfilled the US NOF FRAX threshold of treatment at ≥20% major osteoporotic fracture and/or ≥3 % hip fracture over 10 years (high risk). 30% (15) had BMD done the previous year.

Of 119 patients in the second survey: 46 (39%) excluded. 73 included; average age 84.3; 44 % (n=32) males. History of fragility fractures 40% (29); 97% (n= 71, P < 0. 01) fulfilled the US NOF FRAX high risk treatment threshold. 30% (22) of patients had BMD done the previous year.

CONCLUSIONS: There is a persistent gap in osteoporosis management despite OSO implementation. As most of (97-100%) eligible GRM in-patients fulfil FRAX treatment threshold at any time, enhancing existing OSO pathway to include BMD as the default screening and diagnostic tool, supplemented by FRAX score may improve awareness and increase anti-osteoporosis treatment initiation in local context. This may also reduce fracture related admissions in the elderly. This QIA mandates implementation of enhanced OSO in GRM and further study of its hospital-wide role. A repeat QIA is also important to assess improvement of the osteoporosis treatment gap in our population.

CLINICAL QUALITY

TOLERABILITY AND EFFECTIVENESS OF THE ESTRING (ESTRADIOL) VAGINAL RING PESSARY IN FRAIL OLDER WOMEN ATTENDING A DAY-HOSPITAL BASED CONTINENCE CLINIC

Shoned Jones, R Morse

University Hospital of Wales: Cardiff and Vale University Health Board

BACKGROUND: Post-menopausal oestrogen deficiency may result in vaginal atrophy, worsening urinary incontinence and urinary tract infection (UTI). These effects can be reduced by topical vaginal oestrogen in cream or pessary form. However, regular self-application of topical creams can present challenges in frailer women.

AIMS: To evaluate the feasibility, tolerability and effectiveness of the Estring (estradiol) vaginal ring pessary in frail older women attending a day hospital based continence clinic.

METHODS: Patients with Estring pessary inserted from 2013-2018 were identified. Reasons for insertion were established. Microbiological investigations were analysed for instances of symptomatic bacteriuria pre and post pessary insertion. Total duration of time with pessary in-situ (replaced 3monthly) was calculated and equivalent time pre-pessary analysed for instances of bacteriuria. Documented complications/side effects, symptom improvement and acceptability were noted.

RESULTS: 14 patients were identified, with a mean age of 87 years (range 77-96 years). All had vaginal atrophy on examination. 12 (86%) had urge incontinence, 1 (7%) high residual volume and 1 (7%) poor functional mobility, as their main incontinence diagnosis.

Reasons for Estring insertion (in place of self-administered cream) were: in 8 (57%) a lack of manual dexterity, 3 (21%) an inconsistent application due to poor cognition, 2 (14%) high BMI and 1 (7%) embarrassment.

Overall, 12 (86%) patients reported improvements in overall symptoms. 1 patient’s pessary became displaced post insertion. 6 (42%) experienced reduction in bacteriuria post insertion, 4 (29%) had no change and 3 (21%) an increase. 6 (42%) had evidence of yeast infection with pessary use. 3 (21%) reported increased vaginal discharge with faecal flora cultured in one and Group B streptococcus in another.

Feedback on ease of insertion and tolerability was positive in all patients.

CONCLUSION: Estring pessary is an effective way of delivering vaginal oestrogen with improvements in continence, UTI reduction and overall symtomatology. The main side effect is increased vaginal discharge which can be associated with bacterial or yeast growth.

CLINICAL QUALITY

IMPLEMENTATION OF AN ANALGESIA AND BOWELS PROTOCOL TO IMPROVE PATIENT CARE AFTER HIP FRACTURE

F Naeem, S Rodriguez, A MacRae

Department of elderly care, Royal Alexandria Hospital, Paisley

BACKGROUND: This improvement work was aimed at patients ≥ 65 years admitted with a fracture to the orthopaedic wards in Royal Alexandria Hospital, Paisley. The team included Orthogeriatricians, Elderly Care Orthopaedic Nurses and Pharmacists.

INTRODUCTION: Anecdotally, it was believed hip fracture patients were receiving insufficient analgesia and laxatives. Optimal pain relief allows for earlier mobilisation, resulting in fewer complications. Pain and constipation can contribute to the development of delirium. The Scottish Standard of Care for Hip Fracture states that patients should have adequate provision of pain relief and should be mobilising by the end of the first postoperative day. This project aimed to improve analgesia and laxative prescribing.

METHODS: An audit was carried out in December 2017, which confirmed analgesia and laxative prescriptions were inconsistent (some instances of no analgesia). An Analgesia and Bowel protocol was produced by the local Orthogeriatric and Acute Pain teams and it was introduced in August 2018. An audit of the protocol's effectiveness was undertaken during November 2018. Data on patients' weights, protocol adherence, analgesia and laxatives prescriptions, prevalence of cognitive impairment and pain scores were collected.

INTERVENTIONS: The analgesia and bowels protocol was introduced to facilitate appropriate prescribing and reviews on orthopaedic wards.

RESULTS:

Category of data collected	% patients in 2018 audit	% patients in 2017 audit
Weight recorded on admission	24%	14%
Any analgesia prescribed on admission	100%	93%
Regular opiates prescribed	78%	40%
Regular laxatives prescribed	76%	18%

In the 2018 audit, 47% of patients had prescriptions adhering to the protocol. 47% of patients had an Adult with Incapacity form. 92% of patients who could self-report had pain scores ≥ 5/10. 24% of patients had Abbey pain scores ranging from 3-9. Patients receiving analgesia as per protocol had a lower mean generic pain score (6.2 versus 7.7).

CONCLUSIONS: The protocol resulted in considerable improvement in analgesia and laxative prescriptions. However there remains room for improvement. Adherence to the protocol needs to be increased through education of anaesthetic and orthopaedic ward staff. Analgesia and bowel health could be further optimised by encouraging more frequent assessments by all team members. Increased use of pain assessment tools (especially Abbey pain chart) achieved through nurse education may improve administration and titration of analgesia.

CLINICAL QUALITY

IMPACT OF COMPREHENSIVE GERIATRIC ASSESSMENT AND EARLY COMMUNICATION IN MORE DEBILITATED PATIENTS FOLLOWING STROKE

R Blythe, G Pratt

Acute Stroke Unit, Sheffield Teaching Hospitals, Sheffield

INTRODUCTION: Patients with severe strokes commonly have prolonged admissions for multifactorial reasons. With the aim of improving care and reducing length of stay, patients with more severe strokes were highlighted for prompt comprehensive geriatric assessment (CGA) with communication between patients and relatives to set realistic expectations at an earlier stage.

METHOD: Sheffield Teaching Hospitals has separate Hyper-acute stroke units (HASU) and Acute stroke units (ASU). Neurologists and geriatricians operate a weekly 'consultant of the week' rota on HASU. On ASU, patients are under the care of geriatricians only.

Patients with admission National Institute of Health Stroke Scale (NIHSS) score of 15 or more, Total-Anterior Circulation Strokes (TACS) or pre-morbid-Modified Rankin Scale of 4 or more were highlighted by a stroke pathway coordinator for geriatric consultant review, and early communication with families on HASU and ASU from July 2017 onwards.

Medical notes and computer systems were retrospectively audited.

RESULTS: A total of 23 patients were audited, mean age 78. Stroke severity; 15 TACS, 8 Partial-Anterior Circulation Strokes. Mean admission NIHSS was 19.

Of the 23 patients on HASU, 6 patients had geriatric consultant review when under neurology consultant care. A further 8 were admitted during geriatric consultants 'HASU week'. Of these 14 patients who underwent CGA on HASU, 9 patients had change in management following review including managing complications of stroke, discharge destination and palliation. On HASU, 82% of patients had family discussion.

17 patients were moved from HASU to ASU. Of these patients, 88% of patients had early family discussions with medical staff. Mean time from arrival on ASU to medical meeting was 8.7days. 6 patients were palliated on ASU at first family meeting. 7 patients were planned for Per-oral Image Guided Gastrostomy (PIGG) insertion. Mean time to PIGG insertion from request was 10days. Mean time from stroke to PIGG was 32.5 days, compared with 62 days on previous audit. Mean length of stay for stroke patients discharged into a 24 hour care facility was 106 days in 2017. This has reduced to 64 days in 2018.

CONCLUSION: Early CGA and prompt communication with relatives in patients with more severe acute stroke changed management in several HASU patients, reduced length of time from stroke to PIGG insertion, and reduced length of stay for patients requiring 24 hour care.

CLINICAL QUALITY

IMPROVING PATIENT EXPIRIENCE AND WELL-BEING ON AN ACUTE STROKE UNIT THROUGH BINGO

E Bray, P Slade, S Yeap, J Coady

Abertawe Bro Morgannwyg University Health Board

INTRODUCTION: A stroke occurs when the blood supply to the brain is interrupted. It is associated with significant mortality and morbidity. Many stroke patients remain in hospital for several months. The overall well-being of the patient and their inpatient experience may be overlooked.

The Institute of Medicine lists *compassion*, *communication*, *emotional support*, *relief of fear and anxiety* and *involving relatives* as essential in providing patient-centred care.

A recent BMA article highlighted the importance of addressing the psychological and social needs of patients to positively alter clinical outcomes.

METHODS: Involving all suitable patients in our eight-bedded bays, we held fortnightly bingo. We created bingo cards that were appropriate for visually impaired patients. It required one healthcare assistant to call out the numbers. Due to the varying needs of our cohort, we held it immediately prior to the ward visiting time, allowing relatives to attend early to assist their loved one for maximum engagement.

We provided prizes that were donated to our ward. We collected feedback in the form of questionnaires from 28 patients, 14 participated in bingo and 14 didn't. We excluded two patients from the participation group as they did not recall playing bingo (mild cognitive impairment).

RESULTS: Prior to bingo, 60% of ward patients reported boredom. 80% of these patients felt that activities would improve their overall well-being. All patients agreed that psychological stimulation would benefit their physical recovery. 100% of participants wanted to repeat the experience.

Ward bingo involved the entirety of the multi-disciplinary team. We noted a subjective improvement in the mood of the participants, and a new vigour for their rehabilitation.

Patient feedback included quotes such as 'I have a new hope of a full recovery' and 'for the first time since being here I feel like me'. Other patients reported that it made them feel 'human' and 'cared for'.

CONCLUSIONS: The feedback gathered highlights a need for consideration of our patient's mental stimulation as well as their physical recovery. We plan to create a full timetable of activities to improve overall well-being on our ward as part of our patient-centred care approach. We hope to influence the experience of our patients in a positive way, as well as maximising their mental and physical recovery.

CLINICAL QUALITY

THE VALIDATION OF A MEMORY BOX CONTENTS FOR PATIENTS WITH DEMENTIA

P Heath[1], I Hughes[1], M A Gosney[2]

1. MERL, University of Reading, Reading; 2. Royal Berkshire NHS Foundation Trust, Reading

BACKGROUND: Memory boxes help stimulate the long term memory of a person living with dementia. It enables them to start opening up about their past and sharing fond memories but also allow the carer or loved one to gain a much deeper insight into who they are as a person. The memory box should stimulate all senses as evidence suggest that this can improve mood, self-esteem and overall wellbeing. Individuals in the later stage of dementia are often agitated which results in restless and emotional distress. Recalling happy memories can elicit a positive response and has calming results. Ideally individuals with dementia should have a personalised box. It is important that memory boxes are available in care homes and hospital wards where there are older patients with dementia.

LOCAL PROBLEM: Whilst commercially available boxes are sold widely our aim was to investigate the views of a number of older individuals about the content of memory boxes.

METHODS: A focus group of eight individuals (5 men and 3 women) born between 1928 and 1949 with an average age of 78 years and 24 healthy older individuals who returned questionnaires (Ages 72-91) enabled us to explore items which would trigger those memories if present in a memory box.

RESULTS: Items were grouped under house and home; school; leisure and transport; jobs and work; technology; hobbies; clothes and food. The findings were then compared with local and Internet advertised memory boxes. No items identified by the focus group or the returned questionnaires were present within the designated boxes.

CONCLUSION: By the use of appropriately aged individuals we have defined over 200 suggested items to be included within a variety of memory boxes.

We have developed eight memory boxes that reflect the older people memory triggers.

CLINICAL QUALITY

QUALITY IMPROVEMENT PROJECT: GERIATRIC LIAISON SERVICE IN OLDER PATIENTS ADMITTED UNDER EMERGENCY GENERAL SURGERY

F Malcolm, H S Tay

Nottingham University Hospital Trust

INTRODUCTION: Guidelines produced by The Association of Anaesthetists of Great Britain and Ireland state that peri-operative care of older people should integrate senior geriatrician expertise1. Based on these recommendations a Geriatric Liaison Service was set up with the aim of optimising care of selected general surgery patients aged over 70.

METHODS: Patients over 70 admitted under emergency surgery were selected based on strict criteria for geriatric review. Over 21 weeks demographic and admission related data was collected for all patients reviewed by the Geriatric Liaison team on a biweekly ward round. The data was analysed retrospectively to determine if this initiative resulted in improved patient care.

RESULTS: Over the period 112 patients were reviewed. The mean age was 83.3 years and mean number of co-morbidities was 4.75.

Geriatric interventions were recorded as the number of suggestions made. These ranged from stopping/starting medications, correction of electrolyte imbalances, request for further investigations and involvement of allied health professionals (AHPs). Suggestions were made for every patient; the mean number of suggestions for optimisation of care was 6.1. Poignant examples of important suggestions include stopping of unnecessary medications in 71.4% of patients and the identified need for physiotherapy in 41.9%.

CONCLUSIONS: A clear benefit for every patient reviewed by the Geriatric Liaison Service has been demonstrated as suggestions for optimisation of care were made in every case. We have highlighted how simple interventions such a stopping inappropriate medications and early engagement with AHPs can make a positive contribution to care of older surgical patients.

Going forward there are plans for further analysis into impact on length of stay which is an important factor in future development of geriatric review services for emergency surgical patients.

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CLINICAL QUALITY

USING AFLOAT (AVOIDING FALLS LEVEL OF OBSERVATION ASSESSMENT TOOL) TO ASSIST NURSES IN SETTING THE CORRECT LEVEL OF OBSERVATION FOR IN-PATIENT FALLS PREVENTION

D A Richardson, D Dawson, E Henderson, E Monkhouse

Northumbria-Healthcare NHS Foundation Trust

TOPIC: Approximately 250,000 in-patient falls occur yearly with an estimated overall cost of £630 million/year (NHSI, 2017). In 2017 Shrewsbury and Telford NHS Trust were fined in the Crown Court for failing to prevent falls. Some patients who fell and came to harm, had not had the appropriate level of observation carried out and this had contributed to sub-optimal care (Crown, 2017).

INTERVENTION: AFLOAT was designed to support nurses in setting the correct level of observation based on patient characteristics. Initially derived from a cohort of in-patient fallers, it was developed using PDSA cycles on three (two intervention and one control) care of the elderly wards.

AFLOAT (Avoiding Falls Level of Observation Assessment Tool)	
Clinical presentation	**Score**
Confused (delirium/dementia)	+1
Unsteady when standing/mobilising	+1
Previous falls	+1
Urinary/faecal urgency	+1
Postural hypotension	+1
In-patient fall during this admission	+2
Completely immobile/unconscious	-3
Total Score	

Level of Observation	Description	AFLOAT Score
1	Routine care rounding (2 hourly)	0 or less
2	Increased care rounding (30-60 minutes)	1-2
3	Keep within line of sight at all times	3-5
4	Keep within arms-length at all times	6 or more

IMPROVEMENT: As judged by a Falls Nurse Specialist, ward nurses unsupported set the correct level of observation 74% of the time. Ward nurses supported by AFLOAT set the correct level of observation 81% of the time. AFLOAT sets the correct level of observation 93% of the time. AFLOAT over estimates the required level of observation more often than it under estimates. Patient, relative and nursing feedback was positive.

DISCUSSION: Concerns with in-patient falls prevention observation policies include perceived variation in the setting of observation levels and the additional cost of “specialling” patients. AFLOAT is a safe and effective tool to use and sets the correct observation more accurately than a nurse using unsupported clinical decision making. AFLOAT helps to get the right people onto enhanced observations; it does not affect the volume of patients who require them.

CLINICAL QUALITY

QUALITY IMPROVEMENT PROJECT TO STANDARDISE THE IMMEDIATE ASSESSMENT OF INPATIENTS WHO FALL WITHIN THE ROYAL GWENT HOSPITAL

M Ali, R Marsh, E Beasant

Royal Gwent Hospital, Newport, Wales

INTRODUCTION: Each year over 250,000 inpatient falls are reported to the National Patient Safety Agency (NPSA) from hospitals in England. In 2011 the NPSA released a rapid response report highlighting the importance of essential care following an inpatient fall.

This quality improvement project (QIP) aims to standardise the immediate assessment and care of inpatients who fall within the Royal Gwent Hospital in line with recommendations from the National Institute of Clinical Excellence and NPSA.

METHODS: We utilised PDSA methodology to cyclically review and modify an 'Immediate assessment following inpatient fall' pro-forma. Over three cycles we identified eighty-two inpatients who had fallen using the clinical incident reporting database 'Datix.' We audited the post fall assessment documented in the case notes and database against trust policy and national guidance. We collected seventeen data sets including examination for injury (head, neck, spine, limbs).

RESULTS: The initial audit cycle revealed poor compliance with national guidance and trust policy. 21% of patients did not have a documented clinical assessment and only 28% of patients had an accurately documented twenty-four hour period of neurological observation. Following the introduction of the pro-forma this figure increased to 52%.

CONCLUSION: This ongoing QIP has made a gradual change to the care of patients following an inpatient fall and provides clear guidance on how to appropriately and safely risk assess patients for serious injury.

References

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CLINICAL QUALITY

A PATIENTS CHARTER TO IMPROVE MEDICATION ADMINISTRATION FOR PATIENTS IN CARE HOMES: IMPLEMENTATION AND PILOT

D G Smithard[1], J S Morris[2], F Hollwey[2], D Hansjee[3], R A Power[2], R Griffith[4], T Longmore[5], E Dann-Reed[6], D J Wright[6]

1. Queen Elizabeth Hospital, Lewisham and Greenwich NHS Trust; 2. Patient's Association; 3. Royal College of Speech and Language Therapists; 4. Swansea University; 5. Elvington Medical Practice, Wheldrake; 6. University of East Anglia

BACKGROUND: Care home (CH) residents are frequently very old (164 000/291 000 [56.3%] >85 years), with complex care needs (frailty, dementia and disability). Polypharmacy (mean 7.2 medications) is common. Dysphagia and covert administration are common within many (43-71%) CHs. This may be undertaken to encourage people to take their medications or because of the presence of dysphagia. This practice may be illegal and associated in an increase in medication errors.

Only 10% of CHs have policies or protocols for the administration of medications in the presence of dysphagia and only 20% of these had arranged training. Medications are repeatedly prescribed without review and the formulation may not be appropriate in the presence of dysphagia. Medication reviews are infrequent and neither the resident nor their family may be involved.

METHODS: An expert panel (including NHS, Care Homes, Health Professionals, Health Regulation) was convened and chaired by the Patients Association. A charter (One for Residents and one for Care workers) was drawn up and agreed. A training pack including a web site (www.carehomecharter.org) was developed and demonstrated to CH. The incorporation of the Charter into an Electronic Records, audit of use and identification of dysphagia were included. Twenty two CHs were invited to attend. A certificate was awarded to staff who completed an on line questionnaire regarding the Charter.

RESULTS: 11 CHs attended the launch, 41 care staff (27 Managers or their deputy, 6 senior care staff, 4 health care assistants and 4 pharmacists). After implementation, staff (30), residents and family (12) members from 9 care homes returned questionnaires; 83.3% found Charter useful or very useful in their role, 94.1% of staff that the Charter helped improve the quality of care including the identification of swallowing problems and safe management of medications.

CONCLUSIONS: The overall Charter feedback was very positive. Charter implementation was believed to improve staff confidence in the identification of swallowing problems, use of advanced care plans and medicines administration. Manty staff thought that the Charter had a positive effect on the quality of residents' care. The effective management of dysphagia in the CHs with safe and appropriate medication prescribing and administration has the potential to reduce medication errors, inappropriate prescribing and transfer to hospital. Further work is being planned.

CLINICAL QUALITY

REDUCING MEDICATION-RELATED HARM FROM GABAPENTINOIDS IN PRIMARY CARE: A QUALITY IMPROVEMENT PROJECT WITH A COMPLETED PDSA CYCLE

M J Collinson

Haworth Medical Practice, Modality Partnership

BACKGROUND: Gabapentinoids, namely pregabalin and gabapentin, are increasingly being prescribed in primary care. Associated adverse effects include delirium, increased falls, dependence and death (E Morrison, E Sandilands, D Webb; Journal of the Royal College of Physicians of Edinburgh; 2017; 47: 310–3).

The British National Formulary (BNF) indicates that gabapentinoids are licensed for use in epilepsy and peripheral neuropathic pain, whilst unlicensed uses include migraine prophylaxis and menopause (Joint Formulary Committee; British National Formulary; 2018; 76: 314, 322).

INTRODUCTION: Airedale Clinical Commissioning Group reported that 2% of patients registered at Haworth Medical Practice were taking gabapentinoids. Issues were raised concerning medication-related harm associated with gabapentinoids. The aim was to reduce prescribing at the practice by 10% in one year.

METHODS: In May 2018 there were 144 patients prescribed regular gabapentinoids at Haworth Medical Practice. Prescription charts of a randomised sample (*n*=30) were accessed to ascertain whether indications were listed by the BNF.

RESULTS: Only one third of patients were prescribed gabapentinoids for indications listed by the BNF, and two-thirds were taking them for alternate conditions including fibromyalgia and non-specific pain.

INTERVENTIONS: The data was presented to the practice GPs and nurse prescribers. They received an educational leaflet about medication-related harm associated with gabapentinoids, and were encouraged to reflect on their own practice to reduce inappropriate prescribing. The practice pharmacist and two social prescribers provided support with de-prescribing to implement the quality improvement.
After five months, the number of patients prescribed gabapentinoids was reviewed and this had fallen by 9.7%. In order to sustain this, next steps will involve education for patients and clinicians about managing chronic pain including non-pharmacological therapy options.

CONCLUSION: This quality improvement project demonstrated that gabapentinoids are over-prescribed for a variety of uses not listed in the BNF. Given the harm associated with these drugs, perhaps education regarding de-prescribing and improved utilisation of social prescribing for chronic pain would be beneficial.

CLINICAL QUALITY

AFTER A FALL: THE USE OF A PRO FORMA TO IMPROVE ASSESSMENT

R Manning, A Crawford, L Wightman

Belfast Health and Social Care Trust

OBJECTIVE: To improve inclusion of key elements of a post inpatient fall assessment in the medical notes by 20% within 7 months.

BACKGROUND: Inpatient falls are the second most commonly reported patient safety incident within our Trust with 3000-4500 falls reported annually. Recent Serious Adverse Incidents have highlighted that when falls do occur there can be a delay in recognising and managing injuries sustained from the fall.

CHANGE IDEAS:
- Took what were deemed to be the essential components of a medical assessment post fall, and formulated these into a pro forma to be completed by the junior doctor called to assess the patient. This would guide assessment and be inserted into the medical notes on completion.
- Education of junior medical staff both formally and informally on assessing a patient after a fall and the use of the pro forma.
- Involvement of key stakeholders through the Trust multidisciplinary Falls Forum.

MEASURES:
Outcome:
Inclusion of key elements of assessment in notes (%).
Process:
1. Completion of pro forma (%).
2. Junior doctor confidence and awareness.

Balancing:
Junior doctor feedback regarding ease of use, accessibility and time to complete.

RESULTS:
The project ran over a 28-week period from December 2017 to July 2018 with fortnightly review of medical notes for all inpatient falls. A total of 95 falls were assessed. Baseline median inclusion of key elements was 55%. This increased to 84% when the pro forma was used (an improvement of 53%). Qualitative feedback from junior doctors was very positive.

DISCUSSION:
When used the pro forma significantly improved the documentation of the medical assessment post inpatient fall. Challenges for the project included capturing all junior doctors to introduce them to the pro forma and facilitating easy access to the pro forma on each of the wards.

CONCLUSION AND THE FUTURE:
Recognising the success of the pro forma, it is to be incorporated into the new Trust Falls Policy. Initially introduced into the general medical wards within one site, it is currently being rolled out into other clinical areas, and audits regarding usage continue.

CLINICAL QUALITY

IS YOUR PATIENT MORE CONFUSED THAN NORMAL? A COMPLETE AUDIT CYCLE ON THE DIAGNOSIS AND MANAGEMENT OF DELIRIUM AT WATFORD GENERAL HOSPITAL

G Lewis, T Melo, M Mercer, H Kaur, R Kings

Watford General Hospital

BACKGROUND: An audit of the inpatient population of three Care of the Elderly wards at Watford General Hospital. Conducted by a team of foundation year doctors under the supervision of a Geriatric Consultant.

INTRODUCTION: Delirium is a common problem affecting 20 – 30% of hospital inpatients. It is associated with a variety of poor outcomes including increased risk of falls, pressure ulcers, increased length of stay and increased mortality. It is also associated with higher risk of future dementia. Our audit aimed to improve the diagnosis and management of delirium at Watford General Hospital, and raise awareness and compliance with local and national guidelines.

METHODS: We conducted a spot audit of the medical notes for current inpatients on three Care of the Elderly wards in July 2018. We identified patients on the wards who had signs and symptoms consistent with a diagnosis of delirium, and analysed the notes using a specially designed proforma to record if the actions taken by the medical team during their stay were consistent with the guidelines. The audit was repeated in November 2018 following our interventions.
Interventions:

1. Presentation of the audit at the Care of Elderly clinical governance meeting.
2. Teaching sessions for junior doctors.
3. Posters in key clinical areas.

RESULTS: Almost all of the audited areas showed better compliance with guidelines on re-audit. Key results include: an increase in AMTS done on admission from 36% to 53%, collateral history taking improved from 64% to 83%, use of behaviour charts improved from 14% to 67%, and involvement of friends and family increased from 29% to 80%.

CONCLUSIONS: Our interventions produced modest improvements in compliance with guidelines for diagnosing and managing delirium. However, our re-audit identified many areas with further room for improvement. We intend to continue and expand our teaching programme for the new junior doctors, with a third audit cycle in the future.

CLINICAL QUALITY

IMPLEMENTATION OF AN ELECTRONIC HANDOVER TOOL WITHIN DEPARTMENT OF COMPLEX NEEDS: A QUALITY IMPROVEMENT PROJECT

L Pugh, M Kessler, M Foreman, P Mathew, S Tan, S Vemuri

Department of Complex Needs, Lincoln County Hospital

BACKGROUND: This project took place within the Department of Complex Needs, Lincoln County Hospital. This department specialises in Medicine for the Older Person in this district general hospital. It was led by two Geriatrics Registrars and the Quality and Safety Officer for Medicine, with consultant supervision and the support of junior doctors.

INTRODUCTION: Accurate and comprehensive handover has a vital role to play in maintaining patient safety. There was previously no standard format for 17.00hrs handover within the department. Handover was verbal or in non-standardised written format, for example handwritten notes on scrap paper. This resulted in poor quality handover and information governance issues. Junior Doctor feedback also identified dissatisfaction with the handover process.

METHODS: All data was collected retrospectively using the hospital IT system, WebV. Baseline data was collected comparing handover to the Royal College of Physicians Handover Template for the three wards in the department. Seven domains were assessed for each task handed over: Patient Name, NHS Number, Location, Diagnosis, Task, Reason, Escalation Status. Four PDSA cycles then ensued, to assess improvement in quality of information handed over. For each cycle, we collected data from four consecutive Fridays. We also used junior doctor surveys to get feedback on handover processes, and on the tool itself.

INTERVENTIONS: The primary intervention was the introduction of an electronic clinical handover tool, created within WebV. We supplemented this with additional training for the junior doctors, in a variety of forms. Each PDSA cycle followed further training.

RESULTS: Handovers which contained all the recommended data domains improved from 6% in the baseline data to 81% initially, however that has not been sustained, and further PDSA cycles showed a gradual decline down to 27% at the most recent. The domain most neglected is Escalation Status, with all other domains being complete at least 92% consistently across all PDSA cycles. All handovers are now traceable and recorded, which none where previously. Surveys identified improved junior doctor feedback on the handover process and patient safety.

CONCLUSIONS: There was significant improvement in the quality of handover with the introduction of an electronic handover tool, although recording escalation status has not seen sustained compliance. All handovers are now traceable. The tool has now been rolled out across all medical wards and there is a plan for trust-wide use.

CLINICAL QUALITY

INTERMITTENT PNEUMATIC COMPRESSION STOCKINGS: REDUCING THE RISK OF VENOUS THROMBOEMBOLISM AND PULMONARY EMBOLISM ON THE ACUTE STROKE UNIT

E Bray, S Vincent, T Anjum

Abertawe Bro Morgannwyg University Health Board

INTRODUCTION: Stroke occurs when the blood supply to the brain is interrupted. This is often associated with signficant mortality and morbidity. The risk factors for ischaemic stroke have overlap with the risk factors for venous thromboembolism (VTE). In addition to this, many stroke patients become immobile after their event. This puts them more at risk of suffering a VTE. VTE may cause significant morbidity to the patient, and contribute to longer hospital stays, poorer functional outcome, and increased mortality.

BACKGROUND: The CLOTS 3 trial (the clots in legs or stocking after stroke) was a multi-centre randomised control trial of 2876 patients. It demonstrated an absolute risk reduction of 3.6% in patients that used intermitted pneumatic compression (IPC) devices, and a relative reduction of 30%. IPCs use cuffs around the legs that fill air and squeeze legs. This increases blood flow through the veins and helps prevents blood clots.

METHODS: We completed an audit of 88 patients who were current inpatients on the acute stroke unit over a 4-week period. We included them if they had had a recent stroke and immobile. We excluded them if they were a medical (non-stroke) patient, palliated patient, on oral anticoagulation.

RESULTS: IPCs were indicated in 47% of patients. Out of these patients, 96.8% were appropriately prescribed IPCs IPCs were prescribed when not indicated on 3 occasions. IPCs were prescribed but not in use 16% of the time.

The main reason for non-adherence were the allied healthcare professionals not reapplying the IPCs after they had been removed for therapy. Another major factor in non-adherence was patient refusal. Following the teaching session on IPCs these figures improved.

INTERVENTION: We provided a teaching session to the entier multidisciplinary team highlighting the importance of using the IPCs. This dramatically improved the appropriate use of IPCs on our unit.

CLINICAL QUALITY

HEAD OVER HEELS

A Crawford, S Dunlop, C Malone, G McMillan, L Wightman

Belfast Health and Social Care Trust

AIMS: Reduce the number of in-patient falls by 25% over a 6-month period in ward 6 South BCH (Belfast City Hospital), 28th September 2016 – 28th March 2017.

DESCRIPTION OF THE PROBLEM: We identified 6 South as having the highest number of inpatient falls amongst all elderly care in-patient units within the BHSCT (Belfast Health and Social Care Trust).

CHANGE IDEAS:
- Education and training of all MDT (Multidisciplinary Team) members within ward 6 South BCH.
- Appointment of Fall Safe champions.
- Establishment of an MDT Falls working group.
- A number of initiatives were implemented on the pilot ward for example: Slipper Challenge, Risk Awareness tool displayed at individual bed space, and the introduction of safety briefs to highlight and communicate patients at risk of falls.
- Implementation of Fall Safe Bundle.

MEASURES:
- Audit tool.
- Safety stick.
- Ward Display of falls per month with organised MDT feedback sessions regarding each individual fall, to identify themes and learning.

RESULTS:
Overall there has been a reduction in the incidence of falls by 22% in the 6 month period - 28th September 2016 – 28th March 2017.

LEARNING AND DISCUSSION: This project highlighted many challenges faced within quality improvement. It was vital to engage and support staff in order to maintain motivation, challenge poor practice, inspire innovation, with the overarching common goal of patient safety.

PROGRESS:
One Year On:
- Establishment of an MDT Falls working group in Older Peoples Services.
- Monthly auditing with shared participation from all members of the MDT.
- Falls prevention measures are now included in induction for all MDT staff within Older Peoples Services.
- Implementation of new falls alert sign for individual patients.

There has been a significant reduction (31%) in the total number of falls within Older Peoples Services since implementation and spread of the initiatives developed by the Quality Improvement Project 'Head Over Heels':
- Falls April 2017 – 2018 = total 523
- Falls April 2016 – 2017= total 762

CONCLUSIONS: The importance of collaborative working, local ownership and empowering staff to be proactive and innovative in Falls prevention. We look forward to working with other areas within BHSCT to implement and embed these initiatives.

CLINICAL QUALITY [PLATFORM PRESENTATION]

MDTEA TROLLEY: A MULTIDISCIPLINARY TEACHING TO IMPROVE KNOWLEDGE AND CONFIDENCE IN RECOGNISING AND MANAGING DELIRIUM

J Downing, A O'Brien, F Rickard, H Wood, S J Bailey, B Wildblood, S Balham, M Sritharan, E Bowen

Care of the Elderly Department, Bristol Royal Infirmary

INTRODUCTION: Delirium affects 20-30% of inpatients and is associated with poor outcomes. Awareness of treatment, assessment and management is poor (NICE CG103 2010). As part of 'Delirium Month' at the Bristol Royal Infirmary we designed and delivered a 'Delirium Tea Trolley' with the goal of improving confidence in recognising and managing delirium amongst the Multidisciplinary team. 'Tea Trolley' idea from O'Farrell, Mcdonald, Kelly Anaesthesia (2015) 70,104.

METHODS: A mobile training station was developed to provide brief training sessions on wards across the Bristol Royal Infirmary, Bristol Haematology and Oncology Centre and South Bristol Community Hospital. The Tea Trolley was stocked to the brim with tea, coffee, biscuits and training materials. We attended wards and staff were offered a hot drink and biscuits in exchange for attending a 15 minute training session.
Teaching Delirium Points:

1. Recognising
2. Diagnosis (4AT)
3. Causes
4. Management

Teaching was based around the #FOAMed Delirium infographics (Open Access). Posters and handouts were supplied to wards. Pre and post training questionnaires performed with self-confidence scoring on a 5-point Likert scale.

RESULTS: We successfully engaged a wide multidisciplinary group including; Care Assistants, Nursing, Medical, Student and Allied Healthcare Professionals. 60 Staff members were trained, 100% followed up with questionnaires.

4AT: Only 20% had heard of the 4AT before teaching with a Likert Self-confidence score 0-5 (L-SCS) to perform 4AT of 2.1 which increased to 100% with a L-SCS of 4.9. On Recognising features, causes and managing delirium there was an average increase in L-SCS of 2.1 in increased confidence.

100% Felt the intervention would improve management of Delirium. 100% recommended we ran the Tea Trolley teaching again. We are continuing to roll out Tea Trolley teaching with the intention of teaching further key topics and to reassess after a period of time if knowledge has been maintained.

CONCLUSIONS: Following training all participants significantly increased their confidence scores of recognising, causes and managing delirium.

The Tea Trolley method provided multidisciplinary training in the normal working day for minimal cost or need for study leave and was well received by all. We have offered to support other teams in the hospital to use the same method for teaching.

CLINICAL QUALITY [PLATFORM PRESENTATION]

FALLS RESPONSE SERVICE: A NOVEL MULTIDISCIPLINARY APPROACH IMPROVING PATIENT-CENTRED CARE FOLLOWING AN ACUTE FALL

R McGavock[1], J Gough[2], B Scott[1]

1. Aneurin Bevan University Health Board; 2. Welsh Ambulance Services Trust

BACKGROUND: The Falls Response Service (FRS) is collaboration between Aneurin Bevan University Health Board (ABUHB) and the Welsh Ambulance Services Trust (WAST).

INTRODUCTION: Falls have a devastating effect on frail people, accounting for 10% of 999 calls received by WAST. High rates of conveyance (72%) to Emergency Departments (ED) were identified, with many conveyed with no injury due to lack of appropriate support to remain home safely.
A previous trial pairing a paramedic with a patient transport assistant identified the need for specialist falls assessment, provision of basic equipment and appropriate referral pathways to local services.

METHODS: Using a Plan, Do, Study, Act (PDSA) cycle, FRS paired a paramedic with a physiotherapist on a response vehicle. Physiotherapists were selected from the Community Resource Teams (CRTs) with specialist experience in falls assessments and local referral pathways. FRS responds to acute falls with the following aims:
1. Reduce ED conveyance rates.
2. Reduce re-contacts with ambulance service by accessing local services.
3. Reduce inappropriate referrals to Community Falls Service.
4. Improve patient experience by providing timely response, holistic assessment and treatment.

INTERVENTIONS: The FRS team operates from 8am – 8pm, 7 days per week. Calls are allocated as follows:
- Clinical Control Centre allocates non-injury falls to FRS.
- FRS crew self-allocates with access to call waiting stack.
- Ambulance crews refer appropriate patients to FRS.

On arrival, the paramedic assesses the patient's medical stability. If stable, the patient is lifted using specialist equipment. The physiotherapist assesses mobility, function, environment and social support. A shared decision is made between the physiotherapist, paramedic, the patient and their carer(s). Where appropriate the patient is issued basic equipment, given falls prevention advice, and/or referred to local services.

RESULTS: FRS attended 479 falls (October 2016 – March 2017). 79% of FRS patients remained at home, compared to 35% of falls attended by non-FRS crews. 483 referrals were made to community services, most commonly GP's (128), Therapies (104) and Social Services (69). Only 37% of patients left at home attended hospital within a month. Furthermore, referrals from WAST to CRT Falls Teams reduced by 44%.

CONCLUSIONS: Collaboration between Paramedics and Physiotherapists provides significant benefits to the patient, providing alternatives to ED such as basic equipment, falls prevention advice and referral to community services. This results in more patients treated at home, enabling frontline services to treat those with the greatest health need first.