

Spring Meeting 2023

17-19 May

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Book of Abstracts

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PLATFORM PRESENTATION
WEDNESDAY, 17 MAY: 14.50
FRAILITY AND SARCOPENIA

1459. SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma)

Handgrip strength as a predictor of post-operative outcomes following hip fracture

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Introduction: Sarcopenia is common in patients with hip fracture, but few studies have examined whether assessment of sarcopenia improves prediction of adverse post-operative outcomes. We examined whether sarcopenia, diagnosed using hand grip strength (HGS), could predict outcomes after hip fracture.

Methods: Routinely collected data from the National Hip Fracture Database were combined with locally collected HGS data from a high-volume orthopaedic trauma unit. Patients aged ≥ 65 years with surgically managed, non-pathological hip fracture with grip strength measured on admission were included. The European Working Group on Sarcopenia in Older People (EWGSOP2) thresholds were used to identify patients with or without sarcopenia; those unable to complete grip strength testing were also included in analyses. Outcomes examined were 30-day and 120-day mortality, residential status and mobility, prolonged length of stay (>15 days) and post-operative delirium. Binary logistic regression models were used to examine prognostic value of HGS, and discriminant ability for the Nottingham Hip Fracture Score (NHFS) alone and on adding sarcopenia status were compared using c-statistics.

Results: We analysed data from 282 individuals; mean age 83.2 (SD 9.2) years; 200 (70.9%) were female. 99 (35.1%) patients had sarcopenia and 109 (38.7%) were unable to complete testing. Sarcopenia predicted higher 120-day mortality (OR 13.0, 95%CI 1.7-101.1, $p=0.014$), but not 30-day mortality (OR 1.5, 95%CI 0.1-16.9, $p=0.74$). Patients unable to complete HGS testing had higher 30-day mortality (OR 13.5, 95%CI 1.8-103.8, $p=0.012$) and 120-day mortality (OR 34.5, 95%CI 4.6-258.7, $p<0.001$). Sarcopenia status did not significantly improve discrimination for mobility but improved prediction of 120-day residential status (c-statistic 0.89 [95%CI 0.85-0.94] for NHFS+sarcopenia vs 0.82 [95%CI 0.76-0.87] for NHFS alone) and post-operative delirium (c-statistic 0.91 [95%CI 0.87-0.94] vs 0.78 [95%CI 0.73-0.84]).

Conclusions: Sarcopenia assessment via HGS testing may provide additional prognostic information to existing risk scores in older patients with hip fracture.

PLATFORM PRESENTATION
WEDNESDAY, 17 MAY: 15.45
FRAILITY AND SARCOPENIA

1454. SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma)

The clinical utility of muscle mass assessment in patients with hip fracture: A systematic review

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Introduction: In the current European guidelines, sarcopenia is diagnosed on the basis of low muscle strength, with low muscle mass used to confirm diagnosis. The added value of measuring muscle mass is unclear. We performed a systematic review to assess whether muscle mass was independently associated with adverse outcomes in patients with hip fracture.

Method: The systematic review protocol was registered on the PROSPERO database (CRD42021274981). Electronic databases (MEDLINE, EMBASE, CENTRAL, CINAHL, Clinicaltrials.gov) were searched for observational studies of patients with hip fracture aged ≥ 60 who had muscle mass or strength assessment perioperatively. Two reviewers independently screened titles/abstracts for inclusion. The association of muscle mass or strength with postoperative outcomes (mortality, Barthel Index, mobility, physical performance measures, length of stay, complications) was recorded. Risk-of-bias was assessed using the AXIS or ROBINS-I tool as appropriate. Due to the degree of study heterogeneity, data were analysed by narrative synthesis.

Results: The search strategy identified 3,007 records. Ten studies were included (n=2281 participants), containing 27 associations between muscle mass assessment and hip fracture postoperative outcomes. Four studies had intermediate risk of bias; 6 studies had high risk of bias. Lower muscle mass was associated with higher mortality and worse physical performance measures in univariate analyses but there was no significant association between muscle mass and mobility, length of stay and postoperative complication scores in any included study. Six studies assessed both muscle mass and strength. Muscle mass was not a significant independent predictor of any adverse outcome in any included study after adjustment for muscle strength and other predictor variables.

Conclusion: Data on the clinical utility of muscle mass measurement in patients with hip fracture are limited in volume and quality, but available studies suggest muscle mass does not offer additional prognostic benefit to muscle strength measures.

PLATFORM PRESENTATION
WEDNESDAY, 17 MAY: 15.30
QI WORKSHOP

1563. Clinical Quality – CQ – Clinical Effectiveness

Improving documentation of Treatment Escalation Plans within 72 hours of admission to East Lothian Community Hospital

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Introduction: East Lothian Community Hospital (ELCH) comprises of 95 medical beds for older patients undergoing rehabilitation following acute admission or discharge planning. Ideally, transfers from acute hospitals should have Treatment Escalation Plans (TEPs) in place, however only 67% of patients had a TEP documented electronically within three days of ELCH admission. Overnight and weekend cover is provided through nurse practitioners or Hospital at Night (off-site), therefore documented individualised plans by senior decision makers in the event of clinical deterioration is vital.

Objective: 95% of patients admitted to ELCH would have a provisional TEP documented electronically within 72 hours of admission by February 2023.

Methods: Using quality improvement methodology, two Plan-Do-Study-Act cycles were completed. Firstly, a questionnaire was sent to junior doctors and nurse practitioners responsible for admitting patients to understand barriers to completing TEPs. Data was collected from electronic records on admission date, first documentation of provisional TEP (by a junior doctor or nurse practitioner) and admitting ward. The first cycle of change focused on increased awareness through posters reminding clinicians to consider TEP on admission. The second cycle of change involved two education sessions, highlighting the importance of TEP and how to approach difficult conversations.

Results: 28.5% of junior clinicians did not feel comfortable discussing TEPs on admission, with barriers being time constraints, level of responsibility and concern about making incorrect decisions. The first cycle (increased awareness) showed an improvement in documented provisional TEPs within 72 hours of admission from 67% to 79%. The second cycle (two education sessions) saw a further improvement to 94%.

Conclusions: Basic interventions to increase awareness and education to address concerns surrounding TEP discussions were very effective. Future cycles are planned with new junior doctors to sustain the improvement. Next steps are to clarify the role of other medical practitioners in completing provisional TEPs.

PLATFORM PRESENTATION
WEDNESDAY, 17 MAY: 15.45
QI WORKSHOP

1588. CQ - Clinical Quality - CQ - Patient Centredness

Introducing ‘the CARE tool’: a simple tool to improve general surgery documentation and understanding of key aspects of frailty

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Introduction: Increased frailty is associated with increased post-operative morbidity and mortality in older patients undergoing emergency laparotomy. NELA recommend documentation of frailty in surgical patients over 65. Using QI methodology, we introduced a ‘CARE tool’ for surgical doctors aiming to improve their documentation of an older person’s medical history (including CFS and delirium).

Method: A collaborative team representing geriatric medicine, anaesthetics and surgery devised the acronym CARE (Cognition, Assistance at home, Record the CFS, Exercise tolerance). The tool was tested using QI methodology over 2 PDSA cycles. Cycle one introduced the tool into electronic patient records (EPR) and presented it at the surgical faculty meeting. Cycle two introduced the tool specifically to surgical FY1 doctors during induction. The EPR surgical clerkings of patients over 65 years old admitted to general surgery were sampled weekly over seven weeks to assess CARE tool completion. Post-intervention, we surveyed the surgical doctors assessing their understanding of frailty and perceived value of the CARE tool.

Results: At baseline: 12% of confusion, 92% dementia status, 0% CFS, 30% assistance at home, 8% exercise tolerance were documented. Following PDSA cycle one, use of the CARE tool was 40%. There was an increase in the documentation of confusion (40%) and CFS (40%). Dementia status and assistance at home were documented in similar frequency pre- and post-cycle. During cycle two, CFS documentation increased to 55% but identification of confusion dropped to 25%. The survey demonstrated that frailty, CFS scoring and delirium screening were better understood by junior doctors than Consultants and registrars.

Conclusions: Our project showed mixed success in improving documentation using the CARE tool. The survey demonstrated a good understanding and knowledge of frailty in surgical FY1s. Ongoing frailty teaching is planned for the surgical department.

PLATFORM PRESENTATION
THURSDAY, 18 MAY: 16:30
REHABILITATION AND THE OLDER PATIENT

1527. SP - Scientific Presentation - SP - Epid (epidemiology)

Delirium on hospital admission is associated with adverse outcomes in patients with a hip fracture: The IMPACT Delirium Study

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Aim: Delirium is associated with adverse outcomes following hip fracture, but large-scale routine data studies investigating pre-operative delirium are lacking. Our aims were to assess delirium prevalence on hospital admission and, in patients admitted from home, determine associations with: (i) mortality; (ii) length of stay; (iii) post-discharge level of care, and (iv) hospital readmission within 180 days.

Methods: This retrospective cohort study was conducted in a major trauma centre using routine clinical records and validated audit data. Consecutive patients aged ≥ 50 years admitted with a hip fracture between 01/03/20-30/11/21 were included. Admission delirium status was determined by 4'A's Test score ≥ 4 . Patients with missing scores were excluded. Associations of delirium with mortality, discharge to higher care and readmission with 180-day follow-up were assessed using multivariable logistic regression adjusted for age, sex, deprivation, and ASA grade.

Results: A total of 1821 patients (mean age 80.7 years; 71.7% female) were admitted, 1383 (mean age 79.5; 72.1% female) from home. 87 patients (4.8%) were excluded due to missing 4AT scores. Delirium prevalence in the whole cohort was 26.5% (460/1734): 14.1% (189/1340) in patients from home, 68.8% (271/394) in the remaining patients. In home-dwelling patients, delirium was associated with a 3 day longer median acute stay ($p < 0.001$). In multivariable analyses, delirium was independently associated with higher mortality at 180 days (Odds Ratio (OR) 1.69, 95% Confidence Interval (CI) 1.13-2.54; $p = 0.013$), discharge to higher care (OR 2.82, CI 1.99-4.00; $p < 0.001$), and readmission within 180 days (OR 1.77, CI 1.01-3.11; $p = 0.046$).

Conclusions: More than one in four patients had delirium on admission. More than one in seven admitted from home had delirium; this was associated with adverse outcomes. Routine admission delirium assessment could guide prognostication, targeted peri-operative management, and proactive care planning. Research should focus on identifying potentially modifiable risk factors and mediators of adverse outcomes following delirium.

PLATFORM PRESENTATION
THURSDAY, 18 MAY: 16:45
REHABILITATION AND THE OLDER PATIENT

1617. SP - Scientific Presentation - SP - PD (Parkinson's Disease)

Qualitative study of participants of a feasibility trial of remote physiotherapy for early stage Parkinson's disease

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Introduction: Exercise is beneficial for Parkinson's disease (PD), but many people struggle to achieve the 150 minutes per a week recommendation. Symptoms of PD or co-morbidity may be barriers for exercise; and physiotherapists can provide expert assessment and tailoring of exercise to accommodate these needs.

Method: We developed a remote physiotherapy intervention using videoconference (Attend Anywhere). An ongoing feasibility trial is assessing this intervention, and a process evaluation seeks to understand the broader context and acceptability of the intervention. Here we present a qualitative study of participants of the feasibility study. We invited participants from the feasibility trial to individual semi-structured telephone or videoconference interview. 14 participants were interviewed. Transcripts were analysed by thematic analysis within two main themes: physical activity and use of digital technology. Participants spoke about their attitudes towards their diagnosis.

Results: Individuals who had come to terms with their PD were more engaged with the exercise regime than participants who expressed a sense of denial. Participants who mentioned the benefits of exercise for reducing or delaying PD symptoms were more likely to report a positive attitude to exercise. In contrast, individuals with co-morbidity, or caring roles, found it more difficult to commit to regular exercise; flexibility of the exercise routine was valued. For the theme of digital technology some participants reported struggling with, technical problems such as interruptions in internet connection, having constrained space to exercise and staying in view of the camera for the physiotherapist. Whilst some participants lacked digital confidence, or expressed a preference for in-person treatment, other participants reported no difficulties or found it more convenient than travelling to clinic.

PLATFORM PRESENTATION
FRIDAY, 19 MAY: 11:30

1513. SP - Scientific Presentation - SP - Big Data

Pre-fracture mobility enhances prediction of post-operative outcomes in hip fracture surgery

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Introduction: Predicting outcomes after hip fracture is important for identifying high-risk patients who may benefit from additional care and rehabilitation. Pre-operative scores based on patient characteristics are commonly used to predict hip fracture outcomes. Mobility, an indicator of pre-operative function, has been neglected as a potential predictor. We assessed the ability of pre-fracture mobility to predict post-operative outcomes following hip fracture surgery.

Methods: We analysed prospectively collected data from hip fracture surgery patients at a large-volume trauma unit. Mobility was classified into four groups. Post-operative outcomes studied were mortality and residence at 30-days, medical complications within 30- or 60-days post-operatively, and prolonged length of stay (LOS, ≥ 28 days). We performed multivariate regression analyses adjusting for age and sex to assess the discriminative ability of the Nottingham Hip Fracture Score (NHFS), with and without mobility, for predicting outcomes using the area under the receiver operating characteristic curve (AUROC).

Results: 1919 patients were included, mean age 82.6 (SD 8.2); 1357 (70.7%) were women. Multivariate analysis demonstrated patients with worse mobility had a 1.7-5.5-fold higher 30-day mortality ($p \leq 0.001$), and 1.9-3.2-fold higher likelihood of prolonged LOS ($p \leq 0.001$). Worse mobility was associated with a 2.3-3.8-fold higher likelihood of living in a care home at 30-days post-operatively ($p < 0.001$) and a 1.3-2.0-fold higher likelihood of complications within 30-days ($p \leq 0.001$). Addition of mobility improved NHFS discrimination for discharge location, AUROC NHFS 0.755 [0.733-0.777] to NHFS+mobility 0.808 [0.789-0.828], and LOS, AUROC NHFS 0.584 [0.557-0.611] to NHFS+mobility 0.616 [0.590-0.643].

Conclusions: Incorporating mobility assessment into risk scores may improve case mix adjustment, prognostication following hip fracture, and identify high-risk groups requiring enhanced pre, peri and post-operative care at admission. This implies that Information available at admission could facilitate prognostication, discharge planning, bed management and risk aversion, as well as informing discussions between clinical teams and patients about post-operative recovery.

PLATFORM PRESENTATION
FRIDAY, 19 MAY: 11:45

1587. SP - Scientific Presentation - SP - BMR (Bone, Muscle, Rheumatology)

Association between handgrip strength-based motoric cognitive risk syndrome and the risk of cognitive impairment

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Background: Motoric cognitive risk syndrome (MCR), characterised by slow gait speed (GS) and subjective cognitive complaints, is a simple way to screen older adults at high risk of dementia. In primary care service, however, assessing GS may still be a challenge due to the short consultation time and space constraints common in general practice. Therefore, there is a need to explore alternative MCR subtypes with motor domains that can be measured conveniently. This study aimed to explore a new subtype of MCR, using low handgrip strength (HGS) as the motoric phenotype, and examined its association with the incidence of cognitive impairments among the Chinese community-dwelling older adults.

Methods: We used four-wave data (2011-2018) of participants (≥ 60 years) in the China Health and Retirement Longitudinal Study. We investigated two MCR subtypes. First, MCRg was defined in the literature as the coexistence of slow GS and cognitive complaints without dementia or morbidity disability. Then, we defined a new subtype, MCRh, by replacing slow GS with low HGS. Cox proportional hazards models were used to examine the association between baseline MCR subtypes (MCRg and MCRh) and incident cognitive impairment, controlling for sociodemographic characteristics, lifestyle behaviors and health conditions.

Results: Of 3325 participants (Mean age: 66.7 ± 5.7 , males: 54.9%), 5.2% had MCRg and 5.4% MCRh. Based on Cox models, both MCR subtypes were associated with the increased risk of cognitive impairment, with adjusted hazard ratios (95% CI) of 1.821 (1.402 to 2.368) for MCRg and 2.008 (1.567 to 2.574) for MCRh.

Conclusion: Low HGS, which can be quickly measured and requires no additional space, may be considered as a promising motoric phenotype of MCR subtypes. This study preliminarily supports the potential utilization of the HGS-based MCR subtype for early risk identification of cognitive impairment in primary care settings.

PLATFORM PRESENTATION
FRIDAY, 19 MAY: 12:00

1600. SP - Scientific Presentation - SP - HSR (Health Service Research)

Community-based complex interventions to sustain independence in older people: systematic review and network meta-analysis

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Introduction: Sustaining independence is important for older people, but there is insufficient guidance about which community services to implement.

Methods: Systematic review and network meta-analysis (NMA; PROSPERO CRD42019162195) to synthesise effectiveness evidence from randomised or cluster-randomised controlled trials of community-based complex interventions to sustain independence for older people (mean age 65+) living at home, grouped according to their intervention components. Main outcomes: Living at home, activities of daily living (ADL), care-home placement, and service/economic outcomes at one year. We searched five databases and two registries, and scanned reference lists. A random-effects NMA was used. We assessed risk of bias, inconsistency, and certainty of evidence.

Results: We included 129 studies (74,946 participants). Nineteen intervention components, including 'multifactorial-action' (individualised care planning), were identified in 63 combinations. Few studies contributed to each comparison. High risk of bias and imprecision meant results were very low certainty (not reported) or low certainty (unless otherwise stated). Findings may not apply to all contexts. For living at home, evidence favoured 'multifactorial-action and review with medication-review' (odds ratio (OR) 1.22, 95% CI 0.93 to 1.59; moderate certainty), and three other interventions: 'multifactorial-action with medication-review'; 'cognitive training, medication-review, nutrition and exercise'; and 'ADL, nutrition and exercise'. Four interventions may reduce odds of remaining at home. For instrumental ADL (IADL), evidence favoured 'multifactorial-action and review with medication-review' (standardised mean difference (SMD) 0.11, 95% CI 0.00 to 0.21; moderate certainty). Two interventions may reduce IADL. For personal ADL, evidence favoured 'exercise, multifactorial-action and review with medication-review and self-management' (SMD 0.16, 95% CI -0.51 to 0.82). Among homecare recipients, evidence favoured addition of multifactorial-action and review with medication-review (SMD 0.60, 95% CI 0.32 to 0.88). Other findings were inconclusive.

Conclusions: The intervention combinations most likely to sustain independence include multifactorial-action, medication-review and ongoing review of patients. Unexpectedly, some combinations may reduce independence.

PLATFORM PRESENTATION
FRIDAY, 19 MAY: 12:15

1644. SP - Scientific Presentation - SP - Stroke (Stroke)

Frailty and outcomes after stroke: a systematic review and meta-analysis

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Introduction: Frailty is an important clinical syndrome of increased vulnerability to stressors. The impact of frailty on stroke is a growing research area. We carried out a systematic review for an up-to-date picture of the prevalence of frailty and its impact on a wide range of outcomes.

Methods: We searched Medline, Embase and CINAHL for studies referencing frailty and stroke. We assessed quality of studies using National Heart, Lung, and Blood Institute (NHLBI) quality assessment tools. We collated prevalence of frailty and impact on outcomes after stroke or transient ischaemic attack (TIA). Meta-analysis was conducted to determine pooled odds ratios (OR) and 95% confidence intervals (CI). Where possible, we carried out metanalysis on outcome data.

Results: We included 28 studies (n=111,787). Studies used the Clinical frailty scale (CFS), (n=6, 10,967), a frailty index (n=10, 19134), Hospital Frailty Risk Score (HFRS) (n=4, 18,373), frailty phenotype (n=4, 10,838), or other assessment methods (n=8, 50,568). Pooled prevalence of frailty was 36% (95% CI 29-43%). Including pre-frailty, prevalence was 48% (40-56%). Increased CFS (n=738) was associated with increased in-hospital mortality, OR=2.43 (95% (CI 1.54-3.84). Higher frailty was associated with higher 28-day, 90 day and one year mortality, higher stroke severity, and NIHSS, mRS and dependency on discharge.

Conclusion: Increased frailty is associated with multiple adverse outcomes following a stroke, including mortality, worsened functional outcome, and increased dependency at discharge. There was heterogeneity in frailty measures used, precluding meta-analysis.

PRESIDENT'S ROUND
THURSDAY, 18 MAY: 12:30

1485. SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma)

The taste and acceptability of a high protein, fortified ice cream compared with hospital milkshake nutritional supplement

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Introduction: Oral nutritional supplement (ONS) prescription is commonly recommended for malnourished patients in hospital. However, compliance with ONS is often low. Ice cream may be a promising nutritional intervention. We undertook a study designed to compare the acceptability of high protein, fortified, ice cream called Nottingham-Ice Cream (N-ICE CREAM) with routinely prescribed milkshake ONS.

Methods: Fifty older (≥ 65 years) inpatients with hip or spine fractures were recruited from Queens Medical Centre, Nottingham. Patients were randomised into two groups, receiving two days of N-ICE CREAM and milkshake ONS. Group A received N-ICE CREAM first and Group B, milkshake ONS first. We measured compliance, acceptability (hedonic characteristics; rating 0 dislike a lot to 7 like a lot), attitudes towards length of prescription (rating 0 very unconfident to 4 very confident) and preference.

Results: Mean (standard deviation, SD) age of patients was 80.6 (7.7) years. The majority ($n = 21$, 67.7%) preferred N-ICE CREAM. Mean compliance to N-ICE CREAM was greater in both Groups (Group A ($n = 22$) 69.9 (30.0) % and Group B ($n = 26$) 56.3 (39.3) %) compared to the milkshake ONS (Group A ($n = 22$) 43.4 (4.7) % and Group B ($n = 26$) 53.6 \pm (40.2) %). This was statistically significant in Group A ($p < 0.05$). Mean hedonic ratings were higher for N-ICE CREAM with an overall impression score of 5.8 compared with 4.6 for milkshake ONS. Confidence score for both products decreased with increasing time length. Both had an overall confidence score of 2.9.

Conclusions: High protein N-ICE CREAM is more accepted and preferred by older patients with a hip or spine fracture compared to standard milkshake ONS. Further, research should explore optimal timing for N-ICE CREAM administration and long-term compliance, as well as clinical outcomes.

PRESIDENT'S ROUND
THURSDAY, 18 MAY: 12:35

1519. SP - Scientific Presentation - SP - Other (Other medical condition)

Wellbeing of unpaid carers over fifty: an analysis of data from English Longitudinal Study of Ageing

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Introduction: There is relatively little known about physical health of older people who are unpaid carers. The English Longitudinal Study of Ageing (ELSA) Wave 9 (2019) was used to examine the relationship between unpaid caring and health. This study contains information on frailty, caring, comorbidities and Instrumental Activities of Daily Living (IADL) from 8,736 participants 50 years and over.

Methods: We included participants who received a nurse visit in Wave 9 (n=3,047), 21 were excluded due to missing data. Frailty was calculated using the ELSA-Frailty Index (FI). Carers were those in receipt of Carers Allowance or self-reported unpaid caring.

Results: 351 carers and 2675 non-carers were included. Carers were younger (64.5 (10.2) vs 66.7 (10.5), p<0.001) and more likely to be married (78.1% vs 62.8%, p<0.001). Carers had a lower median FI score (0.07 (0.04-0.14) vs 0.15 (0.12-0.21), p=0.000) however, 45/536(8%) of moderately and severely frail participants were carers. Of 966 non-frail (FI <0.12) participants: 9/246(2.6%) carers experienced difficulties with IADLs, compared to 5/720(0.69%) non-carers; 79/246(31%) of carers had impaired mobility, compared to 39/720(5%) of non-carer; and 51/246(20%) had 2+ comorbidities, compared to 17/720(2.4%) non-carers. Of 1524 mildly frail (FI>0.12-0.24) participants: 16/60(26.7%) carers experienced difficulties with IADLs, compared to 116/1464(0.69%) non-carers; 58/60(97%) of carers had impaired mobility, compared to 807/1464(55%) non-carers; and 42/60(70%) had 2+ comorbidities, compared to 607/1464(41.4%) non-carers. On frailty-adjusted multivariable analysis there was a strong association between carer status and comorbidities with Odds Ratio (OR)3.01 (95%CI 2.21-4.10); impaired mobility, OR 11.08 (95%CI7.52-16.32); and impaired IADLs, OR 5.44(95%CI3.48-8.48)

Conclusions: Carers are less likely to be frail but more likely to struggle with at least one IADL, experience comorbidity or mobility impairment than equivalently frail peers. This suggests that, in the over 50s, either caring contributes to impairment or the burden of care falls on the more impaired.

PRESIDENT'S ROUND
THURSDAY, 18 MAY: 12:40

1531. SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma)

Multiple modifiable components of hospital service delivery predict hip fracture: a national record-linkage study

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Y Ben-Shlomo⁹; E Marques¹; A Judge^{1,6,9}; C L Gregson^{1*}

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Introduction: Substantial variations remain in hip fracture care delivery across the UK despite established standards and guidelines. We aimed to predict adverse patient outcomes following hip fracture from modifiable hospital-level organisational factors and develop implementation tools to improve national service delivery.

Method: We used a national record-linkage cohort of 178,757 patients (≥ 60 years) with a hip fracture in England and Wales (2016–19). We linked patient-level hospital admissions, National Hip Fracture Database and mortality data with 231 metrics from 18 hospital-level organisational-level audits and reports. Multilevel models identified organisational factors, independent of patient case-mix, associated with patient outcomes: length of hospital stay, emergency 30-day readmission, 120-day mobility recovery, days in hospital and health costs over 365-days, and mortality (30- and 365-day) in 172 hospitals across England and Wales.

Results: Over one-year patients with mean (SD) age 83 (8.6) years, spent 31.7 (32.1) days in hospital, costing £14,642 (£9,017), and 50,354 (28.2%) died. We identified 46 key organisational factors independently associated with one or more patient outcome, of which 14 were (a) associated with cost and/or bed-day savings over one year, (b) consistently associated with other positive patient outcomes, and (c) potentially modifiable. Factors included weekend physiotherapy provision (mean saving per patient/year: £676 [95%CI:£67-1285]), orthogeriatrician assessment (£529 [£148-910]), direct admission to a hip fracture ward (3.4 [-0.36-7.07]days), regular dissemination of audit data to staff (0.85 [0.30-1.39]days). These data have informed the development of a hospital-specific cost-benefit calculator, with a model business case for service improvement, specialty checklists, audit and 'how to' guides for complex care delivery.

Conclusion: All hospitals should try to provide the best available hip fracture care equally across England and Wales. We identified multiple, potentially modifiable, organisational factors associated with important patient outcomes following hip fracture. Our practical and freely-available toolkit should help reduce variation in service delivery.

PRESIDENT'S ROUND
THURSDAY, 18 MAY: 12:45

1540. SP - Scientific Presentation - SP - HSR (Health Service Research)

Yoga for older adults with multimorbidity: Randomised controlled trial with embedded economic and process evaluations

G A Tew^{1,2,3}; L Wiley²; L Ward^{2,3}; J Hugill-Jones²; C Maturana²; C Fairhurst²; K Bell²; L Bissell⁴; A Booth²; J Howsam⁴; V Mount⁵; T Rapley⁶; S Ronaldson²; F Rose²; D J Torgerson²; D Yates⁷; C Hewitt²

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Introduction: Older adults with multimorbidity can experience poor health-related quality of life (HRQOL). Yoga has the potential to improve HRQOL. The British Wheel of Yoga's Gentle Years Yoga® (GYG) programme was developed for older adults with chronic conditions. We investigated the effectiveness and cost-effectiveness of the GYG programme in older adults with multimorbidity.

Method: This was a multi-site, individually randomised, open, superiority trial with embedded economic and process evaluations. Community-dwelling adults aged ≥65 years with ≥2 chronic conditions were recruited from general practices. All participants continued with usual care. Intervention participants were offered a 12-week GYG programme, which changed from face-to-face to online delivery during COVID-19. Most outcomes were participant reported. The primary outcome and endpoint was health-related utility measured using the EQ-5D-5L over 12 months. Secondary outcomes were HRQOL, depression, anxiety, loneliness, falls, adverse events and healthcare resource use.

Results: The mean age of the 454 participants was 73.5 years, 60.6% were female, and the median number of conditions was three. The primary analysis (n=422) showed no statistically or clinically significant difference in the EQ-5D-5L utility score over 12 months (adjusted mean difference of 0.020 favouring intervention; 95% CI -0.006 to 0.045, p=0.14). No statistically significant differences were observed in key secondary outcomes. No serious, related adverse events were reported. The intervention cost £80.85 more per participant (95% CI £76.73 to £84.97) than usual care, generated an additional 0.0178 quality-adjusted life years (QALYs) per participant (95% CI 0.0175 to 0.0180), and had a 79% probability of being cost-effective at a willingness-to-pay threshold of £20,000 per QALY gained.

Conclusion: The GYG programme showed no statistically significant benefits in terms of HRQOL, mental health, loneliness or falls. However, the intervention was safe, acceptable to most participants, and highly valued by some. The economic evaluation suggests that the intervention could be cost-effective.

PRESIDENT'S ROUND
THURSDAY, 18 MAY: 12:50

1543. SP - Scientific Presentation - SP - HSR (Health Service Research)

Promoting Activity, Independence and Stability in Early Dementia and MCI: the PrAISED Randomised Controlled Trial

R H Harwood¹; A Brand²; S E Goldberg¹; T Masud¹; V Van Der Wardt³; J Gladman¹; P Logan¹; Z Hoare²; V Booth¹; L Howe¹; A Cowley¹; R Bajwa¹; C Burgon¹; C Di Lorito¹; M Godfrey¹; M Dunlop¹; T Welsh⁴ on behalf of the PrAISED Study Group

1. Universities of Nottingham; 2. Bangor; 3. Marburg; 4. Bristol

Introduction: People living with dementia and MCI progressively lose abilities, through increasing cognitive impairment, co-morbidities, inactivity, acute illnesses and injuries. Rehabilitation therapy may reduce disability and falls and increase resilience.

Methods: We co-produced a therapy intervention, comprising strength, balance and dual-task exercises, functional activity training and promoting community access, providing up to 50 therapy sessions, delivered over 12 months and underpinned by a behaviour change strategy. We evaluated the intervention in a 5-site multi-centred Randomised Controlled Trial, against a brief assessment control. Participants had a diagnosis of dementia or MCI, Montreal Cognitive Assessment (MoCA) between 13 and 25. Primary outcome was the Disability Assessment in Dementia (DAD), an ADL score, after 12 months, alongside a battery of other health status measures. The COVID-19 pandemic necessitated modifications.

Results: We recruited 365 participants, 42% female. Median age was 81 years (range 65-95), MoCA 20 (13-26), DAD 82 (5-100). Baseline balance between groups was good. Participants were predominantly white and socioeconomically advantaged. Intervention group participants received a median of 31 (IQR 22-40) session and undertook an additional mean 121 minutes of exercise per week. Assessed fidelity was good. 290 (79%) were followed up. There were no significant differences in DAD score (adjusted mean difference -1.3/100, 95% CI -5.2 to +2.6; effect size (d) -0.06; -0.26 to 0.15; p=0.5), physical activity, balance, quality of life, cognition or a range of other measures. Upper 95% confidence intervals excluded even small benefits. Rate of falling reduced by 22% (Rate Ratio=0.78; 0.46 to 1.3; p=0.3), but this was not statistically significant.

Conclusions: The intensive PrAISED intervention did not improve measured outcomes. It may be impossible to reduce the rate of functional decline in dementia. Alternatively, the pandemic may have distorted outcomes or participants may have been too advantaged to benefit. There may have been unmeasured psycho-social benefits.

PRESIDENT'S ROUND
THURSDAY, 18 MAY: 12:55

1545. SP - Scientific Presentation - SP - BMR (Bone, Muscle, Rheumatology)

The effects of dietary nitrate supplementation on physical performance in older people – a systematic review

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Background: Dietary nitrate (inorganic nitrate) supplementation has been proposed as an intervention to improve muscle function via increased nitric oxide (NO) availability. Although some studies show benefit in younger adults, the effects in older people are unclear. This systematic review evaluated the effects of dietary nitrate supplementation on physical performance and muscle strength measures in older people.

Method: The review was conducted according to a prespecified protocol by two reviewers. We included interventional studies using dietary nitrate supplementation, mean participant age 60 and over, with or without sarcopenia or impaired physical performance. Outcomes of interest were physical performance and measures of muscle strength and mass. Risk of bias was assessed using a structured tool. Results were grouped by intervention and outcome measures and were described by narrative synthesis.

Results: Our search strategy found 1174 titles; 25 studies were included in the review. Study size ranged from 8 to 72 participants. Data on baseline functional status were not available, but 7 studies were in healthy older adults. The intervention duration ranged from a single dose to twelve weeks. Most studies had high or unclear risk of bias; three had low risk of bias. One hundred and nineteen outcomes were reported; 62 were physical performance measures and 57 were muscle strength measures. Twenty-nine outcomes showed significant improvement, two showed significant worsening and 88 showed no statistically significant difference. Results that showed significant improvement did not group together under any particular outcome measure, supplementation product or duration. Meta-analysis was not possible due to heterogeneity of populations, intervention duration and outcome measures.

Conclusion: Current evidence suggests that increasing intake of dietary nitrates may be beneficial for physical performance and muscle strength in older people, however data are limited. Future studies should be longer, larger and target older people with sarcopenia or impaired physical performance.

PRESIDENT'S ROUND
THURSDAY, 18 MAY: 13:00

1555. SP - Scientific Presentation - SP - Cardio (Cardiovascular)

Automated electronic health record frailty assessment for older cardiac patients

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Background: Hospital Electronic Health Records (EHRs) increasingly capture health and functional deficits. We report outcomes for acute cardiac patients in relation to an automated frailty measure derived from these EHR data.

Methods: We conducted a retrospective observational cohort study of consecutive cardiology admissions aged ≥ 70 years between April 2016 and August 2020, to three hospitals across Edinburgh, Scotland. The Continuous Dynamic Evaluation of Frailty (CODE-f) is an automated score between 0 (no markers present) and 1 (all present) representing 12 deficits generated from 31 admission EHR data points. This includes measures of cognition, functional dependence, mobility and falls risk. The primary outcome was mortality at 1 year. The secondary outcome was days alive and out of hospital ('home time') in the year after discharge for hospital survivors. In a nested cohort of 318 consecutive patients, the Clinical Frailty Scale (CFS) was determined from manual EHR review blinded to CODE-f scores.

Results: 2,406 patients were included (mean 79 ± 6 years old, 60% male). A CODE-f score could be generated in 2,158 (90%) patients, with a median score of 0.13 (IQR 0–0.33). There were 352 (15%) deaths by 1 year. Patients in the highest CODE-f quartile (>0.35) had three times greater risk of death at one year than in the lowest quartile after adjustment for age and sex (27% versus 9%, adjusted odds ratio 3.44, 95% CI 2.47–4.82, $p < 0.001$). 16% of patients from the highest CODE-f quartile lost >90 days home time in the year after discharge, compared to 6% in the lowest two quartiles ($p < 0.001$). CODE-f scores correlated moderately well with CFS (Spearman's $r = 0.50$, 95% CI 0.41–0.58, $p < 0.001$).

Conclusion: An automated EHR measure can identify older adults at risk of death and poorer recovery after acute cardiac illness. This could inform treatment decisions and future care planning. Funding: Chief Scientist Office (PCL/18/05)

PRESIDENT'S ROUND
THURSDAY, 18 MAY: 13:05

1564. SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma)

Incidence and healthcare cost of fall-related readmissions after discharge among older patients

Xing Xing Qian¹; Pui Hing Chau¹; Daniel Y T Fong¹; Mandy Ho¹; Jean Woo²

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Introduction: Older patients are vulnerable to falls after discharge as hospitalization could induce declines in physical function, mobility, and muscle strength. Falls may cause readmissions and subsequent healthcare burden. However, such incidence rates and costs have not been understudied. This study aimed to investigate the incidence and costs of fall-related readmissions in older patients.

Method: A population-based retrospective cohort study was conducted among patients aged 65 or over and discharged from public hospitals in Hong Kong from 2007 to 2017. The administrative data for inpatient admission were obtained from the Hospital Authority Data Collaboration Lab. The fall-related readmissions within 12 months following discharge were identified by the International Classification of Diseases code of diagnosis. The incidence rates were calculated in terms of person-years. The costs were computed based on the public ward maintenance fees adopted since 2007.

Results: In total, 611,349 older patients with a mean (SD) age of 75.3(7.6) were analyzed. Within 12 months after discharge, 18,608 patients (3.0%) had 20,666 fall-related readmissions, giving an incidence rate of 35.2 per 1000 person-years. Meanwhile, such rates (per 1000 person-years) were 44.7 for women, 25.5 for men, 20.5 for patients aged 65-74, 41.0 for patients aged 75-84, and 76.2 for patients aged ≥85. The annual cost exceeded HKD 145.6 million (23.9 million USD PPP in 2018) for older patients, and the mean cost per fall-related readmission was HKD 7,827 (1,286 USD PPP).

Conclusion: The fall-related hospital readmissions were important adverse events during the transitional period and caused a considerable healthcare burden to the patients, family caregivers, and the health system. Health professionals are suggested to implement interventions during hospitalizations or at the early stage after discharge to reduce falls, particularly for women and patients aged ≥85. For instance, increase physical activity during the hospital stay can be considered for fall prevention.

PRESIDENT'S ROUND
THURSDAY, 18 MAY: 13:10

1653. SP - Scientific Presentation - SP - Other (Other medical condition)

Thinking outside the box: exploring user and carer perceptions of pharmacy-filled multi-compartment medication compliance aids

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Introduction: Medication non-adherence is estimated to cost the NHS >£500 million a year in preventable morbidity, mortality and health service use. Multi-compartment medication compliance aids (MCAs) are provided in an effort to promote adherence, despite opposing recommendations from NICE and the Royal Pharmaceutical Society. This study aimed to understand the views of patients and carers of MCAs, including those who have declined or discontinued the use of a pharmacy-filled medication compliance aid (pMCA).

Method: A researcher-administered questionnaire survey of older adults ("users") and carers, who used, declined or discontinued a pMCA. Participants were recruited from inpatient, outpatient and community services at a central London NHS trust. Thematic analysis was conducted by two independent researchers to identify overarching themes.

Results: 88 users and 88 carers were interviewed. The majority of pMCAs were started by healthcare professionals or requested by the carer due to polypharmacy. 12 of 61 users (20%) did not know why a pMCA had been provided, with only 6 requesting the aid themselves. 5 (8%) current pMCA users considered returning to taking medicines from their original packaging. Themes common to both groups included polypharmacy and poor product design. A theme identified solely in the patient group was autonomy and independence, while carers commented on time, waste and sustainability, and responsibility and associated mistakes. For the most part, carers and users perceived MCAs as useful tools to assist medication adherence.

Conclusion: pMCAs are often issued to manage complex medication regimens which are cognitively overwhelming, sometimes at the expense of patient autonomy. Healthcare professionals should aim to reduce the need for pMCAs through individualised medication reviews and rationalisation and improvement of pathways to obtain medicines. If their use is unavoidable, the design of the product and healthcare systems surrounding their use should be optimised to improve the user experience.

PRESIDENT'S ROUND
THURSDAY, 18 MAY: 13:15

1645. SP - Scientific Presentation - SP - N & N (Neurology & Neuroscience)

A Small Vessel Disease syndrome? Symptoms associated with cerebral SVD progression and incident infarcts after minor stroke

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Introduction: Small vessel disease (SVD) lesions may cause symptoms apart from stroke. We aimed to determine whether white matter hyperintensity (WMH) progression and incident infarcts associate with gait, mood, and cognitive symptoms.

Method: We recruited patients with non-disabling stroke (modified Rankin Scale <3), performed diagnostic MRI, and questioned participants/informants about gait, mood, cognitive, Center Epidemiologic Studies-Depression Scale (CES-D), Neuropsychiatric Inventory-Questionnaire (NPI-Q) symptoms and Informant Questionnaire for Cognitive Decline in the Elderly (IQCODE). The baseline visit occurred < 3months post-stroke. We repeated MRI and symptoms assessments every 3-6 months for 12 months, assessing WMH change and incident infarcts (i.e. new since previous scan) on DWI or FLAIR. We analysed WMH using cubed root normalised for intracranial volume. We used linear mixed-effects models, adjusting for age, gait speed, modified Rankin Scale, and time for gait symptoms; age, anxiety, MoCA, stroke subtype, and time for cognitive/neuropsychiatric symptoms.

Results: We recruited 230 participants (mean age=65.8 [SD=11.2] years; 34% female; 56.5% lacunar); median baseline WMH volumes = 8.26mL (IQR 3.65-19.0); one-year = 8.24mL (IQR = 4.15-20.1). Incident infarcts (n=110, 82/110 (74.5%) small subcortical subtype) occurred in 53/230 (23%) of patients. WMH progression over one year was associated with falls (OR=4.13 [95% CI=1.6-10.1]); self-reported brain fog (OR=3.13 [95% CI=1.11-8.82]); and increasing NPI-Q scores (est=2.12 [95% CI=0.46-3.77] p=0.012). Baseline and one-year WMH volumes were cross-sectionally associated with apathy (baseline OR=8.78 [95% CI=2.56-31.88]; one-year OR=4.83 [95% CI=1.43-17.26]). Higher CES-D depression scores were associated with incident infarcts (mean 15.2 [12.9] with vs 11.9 [SD10.6] without; est=2.26 (95% CI=0.12-4.4), p=0.038). WMH progression and infarcts were not associated with fatigue, anxiety, subjective memory complaints, confusion, dizziness, or IQCODE scores.

Conclusions: SVD progression following minor stroke co-associates with specific gait/cognitive/mood symptoms. WMH progression and incident infarcts may cause non-focal, non-stroke symptoms which characterise a potential 'SVD syndrome'.

POSTER

1500. Clinical Quality – CQ – Clinical Effectiveness

Assessment of osteoporosis and future fragility fracture risk in patients admitted to hospital with falls

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Introduction: NICE guidelines state that assessment of osteoporosis risk is a part of multifactorial fall assessment in older people who present with a fall (NICE clinical guidelines: fall in older people, June 2013). This audit was conducted to examine and improve our practice in assessing osteoporosis risk in patients admitted with fall to Care of Elderly department.

Method: FRAX or QFracture are the recommended tools to evaluate the risk of osteoporosis and future fragility fracture. We have checked if any of these assessment tools has been used in patients who were admitted with a diagnosis of fall.

Results: Baseline data was collected for 30 random patients admitted between 1st January 2022 – 31st March 2022, it showed only in 3.3% the assessment tool (FRAX/QFracture) was used. Following attempts to improve the practice by increasing the awareness of the importance of using FRAX/QFracture tools (lecture presentation and email reminders), a significant improvement has been achieved in cycle 2 which checked 21 random patients between 1st June 2022 and 15th August 2022. This showed 48% of patients have documented risk of osteoporosis and future fragility fracture checked with an assessment tool (FRAX was the tool used in all patients). As a result, osteoporosis treatment was started in 9.8%, DXA scan was requested in 4.8% and only life style advice was given to 33.6% of all fall patients included in cycle 2.

Conclusion: A significant improvement in using the assessment tools (FRAX/Qfracture) in fall patients has been achieved. With continuing to implement the same measures (educating doctors and sending reminders), we are expecting a better result in the future.

POSTER

1511. Clinical Quality – CQ – Clinical Effectiveness

Improving the identification and management of delirium at the front door

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Background: Delirium is common especially in the older adult (≥ 65 years) and is characterised by disturbed consciousness, cognitive function or perception. It develops acutely, often has a fluctuant course and is associated with several adverse outcomes including increased length of hospital stay, increased mortality and increased incidence of developing dementia. Delirium is under-recognised, however assessment tools such as 4AT and abbreviated mental test score (AMTS) have been developed to help clinicians assess for the presence of delirium.

Method: The “TIME” bundle developed by Healthcare Improvement Scotland helps clinicians to think about underlying triggers for delirium. Baseline data collected from a care of the elderly ward showed that 26% (5/19) of patients aged ≥ 65 years had a delirium assessment tool used on admission. 42% (8/19) of patients were given a diagnosis of delirium on admission. Out of the 8 patients diagnosed with delirium, only 13% (1/8) of patients was assessed for urinary retention, 50% (4/8) for pain and constipation and 25% (2/8) had blood glucose measured. Several PDSA cycles were implemented including an educational session to promote early detection and management of delirium, poster detailing 4AT assessment and “TIME” bundle and use of a 4AT sticker in the medical admission booklet.

Conclusion: The sticker was the most successful intervention as results showed 50% (13/26) of patients aged ≥ 65 years had a delirium assessment tool filled in on admission. For those diagnosed with delirium, assessment for urinary retention and blood glucose measurement improved to 78% (7/9), pain assessment improved to 67% (6/9) and 100% (9/9) of patients were assessed for constipation. In conclusion, this project has improved use of delirium assessment tools at the front door and when delirium is recognised, there is greater awareness of common underlying causes. Planned future cycles include a ward “delirium champion” to help with recognition and management of delirium.

POSTER

1539. Clinical Quality – CQ – Clinical Effectiveness

Improving recording of the Clinical Frailty Scale by physiotherapists in Older People's Medicine: a quality improvement project

C Buckland

Newcastle-upon-Tyne Hospitals NHS Foundation Trust

Introduction: Frailty is under-recognised in hospital leading to unwarranted variation in care. National guidance recommends that all healthcare professionals can identify frailty and offer interventions to reduce risk factors for frailty. Previously, physiotherapists working in Older People's Medicine (OPM) did not record frailty status in their clinical assessment. This quality improvement project seeks to translate and implement best practice, supporting physiotherapists to record the Clinical Frailty Scale (CFS) score within routine patient assessment, so interventions can be initiated to optimise outcomes.

Project aim: Within 3 months, to achieve a 50% increase in the number of patients with a Clinical Frailty Scale (CFS) score recorded within their physiotherapy assessment.

Methods: Plan-Do-Study-Act cycles with interventions of bespoke teaching and assessment proforma re-design were employed targeting the OPM physiotherapy team on ward 31, RVI.

Measures: The weekly number of patients with a CFS score recorded within physiotherapy assessment was collected over 13 weeks and evaluated on a run chart. Staff knowledge and skills self-assessment scores and cohort data were also recorded and described using descriptive statistics.

Results: At baseline – 0/114 (0%) physiotherapy patients had a CFS score recorded, this improved to 95/192 (49%), suggestive of effective change post interventions. Staff confidence scores also improved.

Conclusions: This project has led to improved frailty awareness and identification amongst OPM physiotherapy staff. Furthermore, these efforts are being sustained, and implemented in other areas of acute care. This work supports a collaborative approach to improving frailty care; better identification of frailty can reduce harm by informing healthcare needs, supporting patient flow, and resulting in better, safer, and more equitable care.

POSTER

1566. Clinical Quality – CQ – Clinical Effectiveness

Evaluating a new delirium follow up clinic service

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New Cross Hospital, Dept of Elderly Care, The Royal Wolverhampton NHS Trust

Background: Delirium is common and experienced by 20% of all admissions to hospital¹. Studies have shown a link between delirium and development of dementia² but there are not many services to follow such patients up, post-discharge. A new service has been developed at New Cross Hospital run by Care of the Elderly Consultants with an interest in Cognition.

Methods: A delirium follow up clinic was designed to assess these patients after 6 to 8 weeks from discharge following hospital admission or reviews in Frailty. We set up referral criteria for prolonged or recurrent delirium follow up. The clinic is run by a consultant and a registrar. A thorough history is taken and memory is assessed using the Addenbrooke's Cognitive Examination III or RUDAS. Data was collected and analysed from the clinic and the outcome was fed into Excel.

Results: 31 patients reviewed post admission with delirium, with 8 of those having a suspected cognitive impairment. 12 patients were diagnosed with dementia and 6 with Mild Cognitive impairment (MCI). The subtypes were as follows: Alzheimer's (2), Mixed Dementia (2), Vascular Dementia (6), Lewy Body Dementia (1), Fronto-temporal dementia (1). Only one patient had fully resolved delirium with no cognitive impairment. The rest of the patients had a diagnosis of BPSD (Korsakoff's) (1), ongoing reviews (4), cognitive impairment not quantified (6) and pseudodementia/depression (1).

Conclusion: This service has ensured follow up for patients with delirium and has shown a significant relationship between complex delirium and MCI or dementia. It has provided a medium to diagnose, treat and signpost patients and carers for support with community services. Very few regions have such pathways in place and the services to follow up patients with delirium discharged from health care settings. This service offers quick and comprehensive follow-up for patients with concerns regarding cognition.

POSTER

1569. Clinical Quality – CQ – Clinical Effectiveness

Building a holistic service for patients with Parkinson's Disease and psychiatric symptoms

E Tullo; S Henry

Northumbria Healthcare NHS Foundation Trust

Introduction: Parkinson's Disease (PD) is recognised by the motor symptoms of tremor, rigidity and bradykinesia. However, the prevalence of psychiatric symptoms such as low mood, anxiety and memory problems in PD is also common (20-80%). We integrated one clinical session per week from a Parkinson's specialist psychiatrist (PDSP) into our existing MDT service, and aimed to evaluate the impact of this model on care for patients with PD.

Method: We initiated a series of Plan Do Study Act (PDSA) cycles to establish a referral pathway to our PDSP. Using electronic clinical records we collected data from a cohort of PD patients seen by our PDSP over 6 months to map symptoms, time to review, diagnosis, treatment and follow-up. We estimated the number of referrals to other services that did not need to be made over the same period due to access to our PDSP

Results: Fifty-one patients with PD were referred to our PDSP with the following symptom(s): memory impairment (53%), low mood (42%), hallucinations (10%), anxiety (8%) - all were seen within eight weeks. Of the 27 patients referred with memory impairment, review by our PDSP meant that 15 did not need onward referral to a separate mental health service. Of 14 patients with low mood (without memory impairment), review by our PDSP meant that 12 did not need onward referral.

Conclusion: Prior to the integration of a PDSP into our PD MDT patients with psychiatric symptoms needed to be referred to another clinical service, often with a long wait for assessment and treatment. With access to a PDSP, 51 patients were reviewed within eight weeks, and 27 did not need onward referral to another service. We do not yet have evidence as to how patient outcomes differ before and after integration of a PDSP into our team.

POSTER

1575. Clinical Quality – CQ – Clinical Effectiveness

Improving the quality of comprehensive geriatric assessment through incorporation of skin assessment

L Ali; M Kaneshamoorthy; M Haddadeen; F Salotun; L Krasniqi

Department of Elderly Care; Southend University Hospital

Introduction: Comprehensive geriatric assessment (CGA) is a multidisciplinary diagnostic method of recognising physical, psychosocial, and functional abilities & limitations of an elderly person. Assessment of the skin is an essential element of the physical domain of CGA as aging skin is more susceptible to loss of skin integrity. Common conditions including pressure sores, purpura from long term anticoagulation and steroid use, and venous stasis eczema put patients at high risk for developing infections. Therefore, it is essential to be cognizant of the condition of the elderly patients' skin. We aimed to improve frequency of skin assessments performed by doctors working on the two geriatric wards of Southend University Hospital, over 6 weeks. Our baseline data illustrated that 15.8% skin assessments were documented by doctors on both wards and 80.7% by the nurses.

Method: Three bi-weekly interventions were carried out. PDSA 1 introduced a concept of regular skin assessments, highlighting its importance in elderly population, through informal teaching at morning meeting. PDSA 2 delivered formal teaching led by tissue viability nurse and finally, PDSA 3 presented a poster to act as reminder for regular skin assessments as well as provision of contact details to escalate positive findings.

Results: PDSA 1 showed improvement from 15.8% to 31.6% in frequency of performing skin assessments. PDSA 2 showed a decrease in number of skin assessments at 11.9%, which was less than baseline. PDSA 3 also showed a decrease at less than baseline and only resulted in 8.8% assessments completed.

Conclusion: The findings showed the first intervention as most impactful indicating benefit of teaching session focused on skin assessments in elderly patients. It is suggested that a regular teaching session is carried out in every rotation with regular audits for a more sustainable outcome.

POSTER

1577. Clinical Quality – CQ – Clinical Effectiveness

Improving the Multidisciplinary Team Meeting in a Community Hospital

A Paterson; L Henderson; W Mathieson

Whitehills Health and Community Care Centre

Introduction: Whitehills Health and Community Care Centre (WHCCC) is a 31-bed community hospital. Weekly multidisciplinary team (MDT) meetings occur to co-ordinate care and discharge planning. The format prior to this quality improvement project was meetings twice per week using Microsoft Teams. Errors were noted such as incorrect discharge dates and missed referrals.

Aims: improving information transfer during MDT meetings, reducing errors in communication, reducing meeting duration and improving staff satisfaction.

Methods: Data was collected in the format of surveys distributed to members of the MDT and meeting duration. There were three PDSA cycles: Introduction of chairperson and proforma Chairperson, Proforma and screensharing on Microsoft Teams. Reduction of MDT meetings to once weekly

Results: The initial survey found that 43% (n = 3/7) of staff found meetings to be effective. One hundred percent noted that information had been missed or not acted upon (n = 7). This improved with each cycle; cycle 3 data showed that 100% felt the meetings were effective and only 14% felt information was missed (n=1/7). Given the improvements, cycle 3 trialled a once weekly meeting. Average weekly time spent in meetings fell from 213 minutes to 130 minutes (39% reduction). 100% (n=7) said they were very satisfied or somewhat satisfied with the once weekly MDT.

Conclusions: Creating a standardised structure in the form of chaired meetings and MDT proforma was found to improve effectiveness of the meeting and reduce errors. These changes resulted in a more efficient and safe weekly meeting. This led to reduction in time away from clinical areas for MDT members. These changes have been adopted and maintained by the WHCCC team.

Areas of future development may include: The impact of blended or face to face meetings and further reduction in meeting times.

POSTER

1579. Clinical Quality – CQ – Clinical Effectiveness

Improving detection and diagnosis of delirium in elderly patients on admission wards with the use of 4AT in a tertiary centre

A Sharp; J Gray; S Abraham; E Danbaki; J Hauxwell; M Atkinson; J Headlam; S Ninan

Leeds Teaching Hospitals Trust

Introduction: Delirium remains under-recognised. We wished to improve recognition of delirium on our assessment wards.

Methods: Data was collected prospectively on two admissions wards between 18/10/21 and 30/01/23 initially weekly, and then periodically to assess for the presence of a 4AT assessment by post take ward round. PDSA 1 -Departmental meeting to raise awareness and creating of an improvement team including doctors and ward managers. PDSA 2 -Teaching ward nurses “How to” do a 4AT and education sessions for nurses on delirium. Online guide on 4AT PDSA 3 -Adding 4AT to the admissions checklist performed by nurses.

Results: On ward A, 4AT completion rates improved from 15.4% to 35% with a step change in completion rates with 6 points above the baseline. On ward B, 4AT completion rates improved from 14.8% to 24.5% with a step change improvement but with wider variability.

Conclusions: Ward teams felt that education and inclusion of the 4AT to the admissions checklist would result in significant improvement. Whilst a statistically significant improvement did occur, 4AT completion rates are still lower than desired and there was still some resistance to completion from both medical and nursing teams. Ward A had a few nurses who took up admission 4AT completion enthusiastically, with strong local leadership from the ward manager. The nursing leadership of the wards changed during the time of the project, and consultant cover was at lower levels than has been the case historically. We have now added 4AT to the “ward metrics” so wards will be measured on compliance. We have launched a trust-wide delirium improvement plan, supported by senior management. We plan for routine electronic collection of 4AT completion rates. In addition, we have designed a delirium care plan to link 4AT assessment to prevention and management

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POSTER

1595. Clinical Quality – CQ – Clinical Effectiveness

What is the impact of a pre-hospital geriatrician led telephone ‘silver triage’ for older people living with frailty?

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1. Central and North West London NHS Foundation Trust; 2. North Central London Integrated Care Board; 3. London Ambulance Service; 4. University College London

Background: The Ageing Well programme within the NHS Long Term Plan promotes person-centred care aligning with the goals of Integrated Care Systems (ICSs) in unifying health and social care aiming to increase the proportion of care to older people delivered in the community (NHS England, 2019). As most older people admitted to hospital are conveyed by ambulance services this presents a focus to reduce hospitalisation (Maynou L, Street A, Burton C, et al. *Emergency Medicine Journal* 2023). North Central London ICS has invested in ‘Silver Triage’ a pre-hospital telephone support scheme which sees geriatricians and emergency physicians supporting the London Ambulance Service in their clinical decision making relating to older people at the point of assessment.

Methods: Data from the first fourteen months of the scheme was analysed.

Results: Between November 2021 and January 2023 there have been 452 Silver Triage cases with 80% resulting in a decision to not convey an older person to hospital. The mode clinical frailty scale (CFS) score was 6 with no difference in conveyance rates based on CFS. Prior to triage paramedics thought hospitalisation was not needed in 44% of cases (n=72/165). Most paramedics (93%, n=154/165) found it easy to contact the team with all 176 who responded to a post triage survey answering they would use it again. Many (66%, n=108/164) felt they learnt something from the discussion, with 16% (n=27/164) reporting it changed their decision-making process.

Conclusion: Silver Triage has the potential to improve the care of older people by preventing unnecessary hospitalisation and has been well received by paramedics.

POSTER

1596. Clinical Quality – CQ – Clinical Effectiveness

How could pre-hospital ‘Silver Triage’ for older people living with frailty be improved? – The views of paramedics

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Background: Most older people access acute hospital care via ambulance conveyance. The ambulance service provides a key link in the urgent care chain, yet the role of frailty-attuned assessment and care in this context is poorly understood. North Central London Integrated Care System has invested in a pre-hospital programme where geriatricians and emergency physicians support London Ambulance Service: ‘Silver Triage’. We report here on feedback on the scheme from paramedics.

Methods: 452 cases were discussed with Silver Triage between November 2021 and January 2023. Paramedics using the service were sent a survey including a free text question on how the scheme could be improved which was analysed thematically.

Results: 103 comments were organised into three key themes: 1. Improving access to the service – this included expanding to a 24-hour service, accessible in other areas of London, available to emergency medicine technicians and for people not living in care homes. 2. Improving information about the service – this included education for paramedics on who to refer but also increasing awareness of the scheme in local emergency departments. 3. Improving delivery of the service – this included requests for video conferencing, reported technology issues and frustrations with pathway breakdown following triage. For example, if the agreed plan was not to convey and to support through rapid response or district nurse services, lack of availability led to conveyance to hospital contrary to outcome of triage.

Conclusion: Whilst the Silver Triage scheme has been well received by paramedics, there are clear areas for improvement to ensure sustainable and equitable pre-hospital care for older people living with frailty.

POSTER

1607. Clinical Quality – CQ – Clinical Effectiveness

Multidisciplinary structured medication review reduces inappropriate polypharmacy and associated costs in care homes

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Background: Person-centred structured medication review (SMR) is associated with reduced polypharmacy, adverse drug reactions (ADRs), admission to hospital and mortality. Our service development aimed to explore the cost-efficacy of a multi-disciplinary team (MDT) providing SMR as part of a comprehensive geriatric assessment for care home (CH) residents.

Method: We established an MDT consisting of a consultant geriatrician, specialist clinical pharmacist, two general practitioners, clinical fellow, physician associate and frailty paramedic practitioner. Training on SMR was given by the pharmacist to other team members, with further support offered through the pilot.

Results: A total of 785 residents were reviewed across 20 CH sites during the initial 6-month pilot. Overall, polypharmacy was reduced by an average of 1.33 medicines per resident (8.32 to 6.99). The drug classes most commonly deprescribed were laxatives, antidepressants, lipid lowering drugs, opioids, and nutritional supplements. Medicines altered included three classes known to cause 40% of avoidable hospital admissions due to ADRs(1): diuretics (stopped/changed for 42 residents), antiplatelets (stopped for 34 residents) and anticoagulants (stopped/changed for 26 residents). Annual projected medication savings totalled £131,462(net), with an average saving of £169 per resident (range £63- £367). Drug classes with the largest cost impact were nutritional supplements (40% total savings), laxatives (12%), opioids (12%) and anticoagulants (11%). Carbon footprint savings from the 12 inhalers stopped during this phase totalled 1,323,098 gCO₂e per annum: equivalent to 4562 car miles.

Conclusion(s): A multi-disciplinary approach to medication review was shown to reduce inappropriate polypharmacy in care home residents. This intervention was associated with significant projected cost savings. Future work should aim to target SMR to patients with the highest rates of inappropriate polypharmacy.

References: 1. Howard, R. L. et al. Which drugs cause preventable admissions to hospital? A systematic review. *British Journal of Clinical Pharmacology* vol. 63 Preprint at <https://doi.org/10.1111/j.1365-2125.2006.02698.x> (2007).

POSTER

1624. Clinical Quality – CQ – Clinical Effectiveness

Improving the quality of teaching within the Ageing and Complex Medicine Department; introducing a novel teaching programme.

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Introduction: Feedback from the National Training Survey (NTS) in 2018 showed suboptimal satisfaction levels within our department, particularly for local teaching and clinical supervision. A novel dedicated teaching and training programme was designed and implemented. National and local feedback from trainees highlights significant improvement in satisfaction levels across all domains.

Method: The new programme includes scheduled weekly teaching using a defined geriatrics curriculum; simulation sessions, improved opportunities for bedside teaching and workplace-based assessment, opportunities to present patients/interesting topics at weekly teaching, overhaul of our induction programme, support and supervision with QIPs/research including formal end of placement QIP presentation sessions. We reviewed national feedback alongside our own locally sourced feedback to quantify improvements in satisfaction levels and address further areas for improvement.

Results: Feedback from the NTS shows satisfaction within all domains has improved between 2018 and 2022. In particular, satisfaction with clinical supervision improved from 80.1 (below national average) to 88.33, satisfaction with our induction process improved from 75.19 to 88.89 (above national average) and satisfaction with local teaching improved from 70.83 to 81 (above national average). Local feedback showed that trainees are satisfied with the quantity and quality of teaching and training during their placement; 92.5% rated the quality of clinical supervision as very high or high quality, 95% felt the formal teaching was useful to their learning, and 90% would recommend an ACM placement at RAEI to their colleagues.

Conclusion(s): Our teaching and training programme has improved the quality and quantity of learning experiences for junior doctors within our department. There are domains in which satisfaction remains suboptimal including “rota design” and “workload” however there are factors affecting these areas which are out of the control of our department and therefore may present challenges when trying to implement change.

POSTER

1635. Clinical Quality – CQ – Clinical Effectiveness

The introduction of an Older Person's Assessment Unit and impact on length of stay at Royal Bolton Hospital

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Introduction: Nationally, there have been increased attendances to hospital for older frailer adults. Recommendations from GIRFT and NHS England acknowledge the importance of identifying frailty, and the role that dedicated specialist services play. Best practice indicates when frailer adults receive a Comprehensive Geriatric Assessment (CGA), this reduces patient harm and improves outcomes. Locally in October 2022, Bolton NHS Trust converted an Acute Medical Assessment Unit (AMU) to a 22 bedded frailty unit, the Older Person's Assessment Unit (OPAU) to provide older frailer adults with early specialist input and review from a dedicated multi-disciplinary team (MDT). The unit is run by three Consultant Geriatricians and a dedicated wider MDT, with links to community partners and when needed preferential admission to Geriatric base wards.

Methods: Data was collated and analysed with set metrics by the Trust's Business Intelligence Department. Data was compared for the 3 months pre and post inception of the frailty unit. Regular service reviews occur and utilise PDSA cycles to assess interventional change.

Results: The average age of patients pre-intervention was 69, and post intervention was 79.6. Pre-intervention, the average length of stay for patients admitted from AMU to Geriatric base wards was 25.93 days. This reduced to 18.79 days post-intervention. The average length of stay for patients admitted to non-Geriatric base wards was 10.77 days, this reduced to 8.62 days post intervention.

Conclusion: Specialist Consultant Geriatrician and MDT input on a dedicated frailty unit has reduced the average length of stay of patients to all base medical wards assessed, especially base Geriatric wards. This has clear implications on patient flow, and benefits patients and the Trust. We expect this will have a compound and positive effect on patients by reducing the risk of deconditioning and potential development of inpatient harms.

POSTER

1637. Clinical Quality – CQ – Clinical Effectiveness

Improving Planned Care in the Frail at Morrision (IPCF Morrision) Phase 1

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Introduction: The pathway for referral to elective perioperative clinic involves frailty screening patients at the point of referral¹. This is adequate if waiting times are short. At Swansea Bay 6,458 patients >65 years are awaiting surgery with up to 5 year waits for cholecystectomies. Opportunity to medically optimise patients prior to surgery are lost using a traditional approach. We aimed to develop a screening tool to identify frailty in patients awaiting surgery.

Method: The cholecystectomy list (750 patients) of which 258 were > 65years. Older people were sent a postal questionnaire gaining 96 responses. 58.3% felt their health deteriorated since being referred for surgery. 50% stating they had unmet healthcare needs and 17.5% stating unmet social care needs. Frailty was identified using this questionnaire, telephone interview or electronically by the Hospital Frailty Risk Score (HFRS).

Results: 193 patients were successfully contacted utilising an expanded CRANE questionnaire. All patients triggering on HFRS, CFS>4 or any concern on the CRANE questionnaire were offered a clinic appointment. Each interaction was then classified into change or no change in medical management of patients. 92 patients had no interventions, 35 had an intervention following the initial CRANE telephone questionnaire that did not require further input, 31 had an intervention following clinic. CFS>4 identifies 56% of the patients that under go any form of intervention. HFRS identifies 34% and the CRANE questionnaire identifies 42%. In patients who need a clinic review HFRS identifies 19%, CFS>4 identifies 59% and CRANE identifies 87%.

Conclusion: The CRANE questionnaire is a useful screen for patients on a waiting list who will benefit from an elective perioperative clinic.

References: 1 Guidelines of perioperative care CPOC

POSTER

1660. Clinical Quality – CQ – Clinical Effectiveness

Quality Improvement focussed on identification and management of delirium in older surgical patients

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Background: This Quality Improvement project was undertaken at University Hospitals of Derby and Burton. The team comprised a speciality doctor and improvement fellow previously employed as an operating department practitioner (ODP). Senior sponsors comprised a consultant geriatrician and Divisional Nurse Director.

Introduction: Delirium impacts up to 40% of older hospital inpatients and is associated with mortality, institutionalisation and deconditioning. We aimed to increase diagnosis and management of delirium to reduce complications, length of stay and readmissions.

Method: An initial audit measured delirium prevalence using 4AT in patients aged >65 on arrival to the Surgical Assessment Unit (SAU) and 48 hours later. A series of plan-do-study-act (PDSA) cycles then tested small-scale changes to improve delirium practice on SAU. We developed, implemented and iteratively improved 4AT and delirium sections in care plans. We developed and delivered teaching and supporting materials around the PINCHME acronym to SAU staff. 4AT and delirium care plan completion rates were monitored. Staff knowledge before and after teaching was tested.

Results: 36% of 111 consecutive emergency surgical admissions audited were likely to have delirium based on 4AT. 5% were coded as having delirium and 19% had delirium documented in their notes. Average length of stay was 7, 10 and 5.3 days for the whole cohort, those with and without delirium respectively. These data convinced SAU managers of need for change. Improvements around 4AT screening were associated with a rise in average 4AT completion rate from 40% to 64%. Completion rates were highly dependent on the improvement team, rising as high as 100% after interventions but falling back between these. Knowledge scores improved from 43% to 92% following teaching.

Conclusion: Improvements correlated with higher delirium screening and detection rates, and staff knowledge improved. Interventions were not sustained. We are now exploring delirium champions as a way of sustaining change.

POSTER

1665. Clinical Quality – CQ – Clinical Effectiveness

Recognising frailty in non-elective general surgical patients to optimise their care

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Introduction: In 2021, there were 38,839 adults >65 years living in Brighton and Hove (1) (13% of the local population, compared to 18% in England (2)). However, 56% of emergency laparotomy procedures in the UK (3) are in the > 65s. At the Royal Sussex County Hospital, a consultant geriatrician was appointed to lead a Frailty Liaison Service to respond to the needs of frail older patients undergoing general surgery (GS). No process was in place for the early identification of these patients, so intervention decisions were being made without GS Frailty Liaison input, potentially leading to unnecessary procedures and adverse outcomes such as deconditioning (4), which could potentially be reduced by timely clinical frailty scoring (CFS) and comprehensive geriatric assessment (5).

Objective: This quality improvement project sought to identify all appropriate frail older patients over 70 within 1 week of admission to be seen by the Frailty Liaison Team on the general surgical ward.

Method: We used the Model for Improvement and diagnostic tools (fishbone; stakeholder mapping; driver diagrams) and PDSA cycles to test the impact of junior doctor education on CFS scoring and awareness raising primarily through a newsletter; measured by the number of frailty scores given to patients pre-intervention, remeasured at 3 months after the initial data set. We captured feedback following the education sessions to assess usefulness.

Results: 100% of participants felt more confident in identifying frailty in GS patients. The average number of days from admission to identification and first review decreased from 8.29 to 6.36, possibly reducing adverse outcomes. The proportion of appropriate referrals increased, releasing time to care for those who needed it most.

Conclusion: Moving forward, we plan to promote the use of a CFS column on the handover list and continue our education sessions, incorporating real patient cases as requested in feedback.

References:

1. Office for National Statistics. Local authority ageing statistics, based on annual mid-year population estimates. 2020. URL: <https://www.ons.gov.uk/datasets/ageing-population-estimates/editions/time-series/versions/1>
2. Voices of our ageing population: Living longer lives. Office for National Statistics . 2022. URL: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/ageing/articles/voicesofourageingpopulation/livinglongerlives>
3. NELA Project Team. Sixth Patient Report of the National Emergency Laparotomy Audit. London; 2020.
4. Eamer G, Taheri A, Chen SS, Daviduck Q, Chambers T, Shi X, et al. Comprehensive geriatric assessment for older people admitted to a surgical service. Cochrane Database of Systematic Reviews. 2018 Jan 31;2018(3).

POSTER

1516. CQ - Clinical Quality - CQ - Efficiency and Value for Money

Can an Advanced Clinical Practitioner (ACP) lead in the development of a POPS service?

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Introduction: Perioperative medicine for the Older Patient undergoing Surgery (POPS) is an established, evidence based medically led service across many Trusts. However, with consultant workforce constraints, the aim was to determine if an alternative ACP led model of care, with consultant geriatrician oversight, delivered the same benefits.

Method:

- A senior nurse, with POPS expertise, was seconded for one year to oversee the project. NHS Elect network supported, from February to October 2022, with monthly meetings, data analysis and facilitated shared learning from other sites
- An ACP from the medical frailty service worked alongside to develop perioperative expertise and allow future sustainability.
- Geriatrician with interest in perioperative care was appointed in May 2022 and contributed to service development and delivery.
- Patients with frailty were identified proactively through the daily board round and surgical handover. Those identified were reviewed using a comprehensive geriatric assessment. Medical advice was sought as required.
- Prospective data collected on all patients seen

Results: Patient data analysed (n=404) from January to August 2022. Length of Stay (LOS) reduced for patients over 65 years of age living and with frailty by 4 days (17 to 13 days). Variation in LOS reduced from 46 to 26 days. Readmission rate was 6% (26/404). Average Trust rate of 11%. Introduction of POPS improved the National Emergency Laparotomy Audit geriatric specialist input from 10% in Q1 2020/2021 to 91% of patients in Q4 2021/22. Unmeasured benefits include upskilling of nursing staff on the wards identifying frailty and discharge planning. Shared decision making influencing non-surgical treatment for patients for better outcomes. Reduction in calls to medical registrar post POPS introduction.

Conclusion: This pilot successfully demonstrated the role of ACP in service design, care coordination and timely medical review to deliver a reduction in length of stay and readmission rate.

POSTER

1572. CQ - Clinical Quality - CQ - Efficiency and Value for Money

A Green Quality Improvement Project: Sustainable waste disposal in a Geriatric Admissions Unit

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Introduction: Following COP26, the NHS pledged a 'Net Zero' health service by 2040. Incineration of clinical waste has a negative impact on the environment whilst also being extremely costly. NHS Grampian spends over £1m annually on disposal of clinical waste, whilst 20% of the waste incinerated is unsuitable for that waste stream. An excess of clean plastic packaging from visors, used when managing respiratory viruses, was a particular contributor in our unit. To improve sustainability, the aim of this quality improvement project was to reduce unnecessary disposal of plastic packaging in clinical waste streams by 80% in our Geriatric Assessment Unit.

Method: Using PDSA methodology, data was collected regarding the number and location of clinical waste bins and how many contained plastic visor packaging or any form of 'non-clinical' waste. Qualitative data highlighted that staff were aware of disposing waste in the wrong stream, however, struggled to find alternative waste bins located nearby. Selected orange bins were removed and black bins introduced at convenient points. Further PDSA cycles focused on staff engagement and education.

Results: Following PDSA Cycle 1, a baseline median of 57% of orange bins contained clean plastic packaging and 64% contained any form of non-clinical waste. Following staff education, clinical waste bins containing single use plastic dropped to 0%, whilst the percentage containing any form of non-clinical waste remained averaging 35%.

Conclusion: Making clinical waste bins less readily available reduces the amount of unnecessary clean plastic packaging entering clinical waste. We must counteract this through increasing access to general and recyclable waste bins to ensure waste is disposed of correctly. This may be achieved through the creation of "waste stations" in preparation areas, to facilitate readily available access to all waste streams at a single point if required.

POSTER

1580. CQ - Clinical Quality - CQ - Efficiency and Value for Money

Structured multidisciplinary reviews for care home residents reduce polypharmacy cost-effectively

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Background: West Lothian has 17 care homes with 881 residents. General Practitioners (GP) undertake annual review of all residents, including medication review, with variability between practitioners.

Introduction: Multidisciplinary team (MDT) working is the cornerstone of comprehensive geriatric assessment. MDT meetings are an excellent environment for shared learning and discussion. We applied this principle to a 2-year project delivering structured MDT medication reviews of care home residents.

Methods: Funding was secured for a consultant geriatrician (0.5PA for 2 years, £6500 per year) to join the Lead GP, Integrated Care Pharmacist and care home nursing staff in setting up an MDT for each care home. Complex patients were discussed in monthly MDT meetings, focusing on medication reviews. Shared decisions were documented on primary care clinical notes and amendments made to prescriptions. Where necessary, further GP review assessed subsequent impact of medication changes. Annual cost savings were calculated based on the current Scottish Drug Tariff. Qualitative feedback was sought from all members of the MDT.

Results: 43 residents from 9 Care Homes were discussed in 11 MDT meetings between Jan-Dec 2022. Average age was 83.3 years (64.9-101.3), 63.4% were females. In total 6 new medications were started, while 87 medications were stopped. The dose was increased in 5 medications but decreased in 37 medications. Total annual savings were estimated at £6657, an average of £155 per resident discussed. Feedback from all members of the MDT was positive, particularly for improving patient care and increasing knowledge and confidence in managing this frail population.

Conclusion: Structured MDT reviews ensured patients were on appropriate medications focusing on improving symptoms and quality of life, in keeping with principles of realistic medicine. The estimated annual savings exceeded the funding invested, making this intervention cost-effective. We plan to scale this up further in Year 2 of this project.

POSTER

1614. Clinical Quality – CQ – Efficiency and Value for Money

Developing our Older Peoples Liaison Service: Is a Frailty Nurse Led Model the Way Forward?

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Introduction: ‘Older People in Hospital Standards’ (2015) identifies that Older People should have care/treatment in the most suitable settings. In University Hospital Monklands (UHM) a liaison service was provided to frail patients who needed care outside our older people’s wards (e.g. Surgical wards), led by clinicians (Consultant Geriatrician/ specialty doctor) twice weekly with support from Frailty nurses (FN). Patients were referred via multiple routes (email, letter, phone). Our aim was to develop a single point of referral, to increase capacity, be more responsive and FN led.

Methods: We developed the FN workforce by recruiting advanced/ trainee advanced nurse practitioners. We developed an electronic referral and Electronic Frailty alerting in October 2022. We provided education/visual prompts about the service and embedded the referral pathway/criteria in the hospital ‘huddle’ and safety briefs. From December 2022, all patients referred were reviewed by a FN.

Results: From December 2022, the number of electronic referrals has increased by 70%. The number of patients who have a recorded clinical frailty score (CFS) has increased from 50 % to 98%. We now have a 5day service, where referrals are seen the same day by FN. We reduced the need for clinician input from 2 sessions/week to 0.5 sessions/week, allowing redistribution of workload. There has been no change in outcomes of discharge planning/rehabilitation/repatriation for patients before and after the change.

Conclusion: The number of referrals made electronically has increased – allows a more responsive service, standardises the pathway and reduces FN time in responding to phone calls/emails. This has increased the number of patients who have a CFS completed. It has released clinician time to deliver care in other parts of the system. Ongoing plans include developing this to be fully FN led and using it in planned care e.g. in preoperative admissions.

POSTER

1627. CQ - Clinical Quality - CQ - Efficiency and Value for Money

Does having a clinical coordinator in the Same Day Emergency Care Older Person's Unit improve its efficiency?

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Introduction: The Same Day Emergency Care Older Person's Unit (SDEC OPU) provides urgent holistic care, complementing acute and community services to deliver comprehensive geriatric assessment. In October 2022, we introduced a new clinical coordinator role with the aim of improving patient flow. Prior to this role existing, one clinician per day was assigned to take referrals alongside reviewing their own patients, without having an overview of the processes and outcomes of the day. The new clinical coordinator role included taking referrals, vetting patients in A&E, assigning tasks to clinicians, leading regular 'huddles,' reviewing results, preparing notes and discharge letters, and requesting specialty referrals. The role was introduced to reduce the waiting time of patients within the unit and to reduce waste through the Leeds Improvement Method.

Method: Data was analysed from a 13-week period both before and after the role was implemented, with the main focus being patient length of stay. 454 patients from before the clinical coordinator role was introduced, and 360 patients following its introduction were included.

Results: Mean length of stay was calculated at 5hr 11minutes before the role introduction and 4hr 45minutes afterwards. This reduction in length of stay (LOS) was statistically significant ($p=0.015$), with a 95% confidence interval where LOS was reduced between 8 and 43 minutes ($p=0.0029$). The percentage of patients discharged within 4 hours of arrival was 30.4% before the implementation and 36.7% after it. This was not statistically significant ($p=0.0593$). The percentage of patients discharged over 7 hours after arrival was 19.8% before the implementation and 13.3% after it. This was statistically significant ($p=0.0143$).

Conclusion: The introduction of a bespoke clinical coordinator role within SDEC OPU significantly reduced patients' LOS; it has also provided leadership to the team, improved efficiency, and patient experience through the unit.

POSTER

1641. Clinical Quality – CQ – Efficiency and Value for Money

Naloxegol use in a post-operative geriatric ward: a feasible, cost-effective treatment for opioid-induced constipation

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Introduction: Elderly post-operative patients are susceptible to opiate-induced constipation (OIC) and many fail to open their bowels despite regular laxative prescription. Naloxegol is a gastrointestinal opiate antagonist licensed to treat OIC in patients failing laxative therapy. Naloxegol's higher unit price than standard laxatives may present a barrier to its use by hospital pharmacies. We present a quality improvement project on the feasibility and cost-effectiveness of using of naloxegol to treat OIC in the real-world setting of a geriatric post-operative ward.

Methods: Initial Audit- Review of inpatient notes from October-November 2022 identified patients on opiates who failed laxative therapy during admission (bowels not opening for ≥ 3 days, despite 4 consecutive days of laxatives). Average number of bowel motions per week following failure of laxative therapy and number of laxative doses received were recorded. Total cost of laxatives was recorded for each patient. Intervention – Naloxegol was supplied to the ward for patients meeting criteria of OIC failing laxative therapy. From December 2022-January 2023, naloxegol was prescribed to these patients. Laxatives were stopped on receipt of naloxegol. Naloxegol was stopped on cessation of opiates.

Results: Baseline audit identified 63.9% patients on opiates had failed laxative therapy. Following laxative therapy failure, average number of bowel motions/week was 2.65. Average cost of laxatives per patient was £3.77. Accounting for length of admission, average cost of laxatives per day was £0.13. During the intervention period 67.2% patients on opiates failed laxative therapy. 13 patients were prescribed naloxegol. Average number of bowel motions on naloxegol was 5.1/week. Average combined cost of laxatives and naloxegol per patient was £1.93. Average combined cost of laxatives and naloxegol per day was £0.08.

Conclusions: In this small-scale quality improvement project we demonstrate that naloxegol is both clinically effective and cost-effective in treating OIC in geriatric post-operative patients failing laxative therapy.

POSTER

1544. CQ - Clinical Quality - CQ - Improved Access to Service

Using QI Methodology to Ascertain the Most Effective Place for an UCR ACP to Reduce Hospital Attendance

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Introduction: It is recognised that there are pressures on the NHS particularly the emergency services. Therefore, a focus of the 21/22 Priorities and Operational Guidance was to develop community services to prevent emergency department (ED) attendance and unavoidable hospital admissions. This informed the funding of urgent community response services (UCR). An urgent response is defined as a presentation that would likely result in hospital admission if a response were not made within 2 hours. Quality Improvement methodology was applied to evaluate the potential impact an advance clinical practitioner (ACP) could have in providing alternatives to hospital conveyance by redirecting appropriate calls to the UCR.

Method: Small scale tests of change with iterations of Plan Do Study Act cycles were conducted to enable comparison and recommendation for the use of the funding. PDSA A. ACP based in an ambulance station. PDSA B ACP based in 2 different hospital EDs at the point of triage. PDSA C. ACP based in the clinical hub where 111 calls are triaged. PDSA D. ACP based in the ambulance call centre.

Results: These PDSA cycles enabled process mapping of the patient journey to be made and a gap analysis showed the possible interventions an ACP to make to prevent an inappropriate admission. It was apparent that a call stack pull model where the ACP can directly respond to calls from the ambulance list, and often redirect to the UCR service, was the most effective method. Cross organisational information governance issues were found to be a barrier to implementation.

Conclusion: Small-scale tests of change were implemented to seek the most effective use of an ACP to support alternatives to hospital admission. To introduce this pathway, a whole systems approach is needed to collaboratively provide a seamless service and an overall better experience for all.

POSTER

1551. CQ - Clinical Quality - CQ - Improved Access to Service

An ANP in Dementia services and collaborative working with H@H significantly improves patient access to a diagnosis of dementia

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Introduction: Scotland's National Dementia strategy (2017) highlights the need to improve identification and management of dementia. Hospital at Home (H@H) teams often identify undiagnosed cognitive decline as part of comprehensive geriatric assessment. A trainee ANP in dementia services was appointed in 2019 in West Lothian; before this, the average waiting time to memory clinic assessment was 6 months for a home visit, and 12 months for outpatient clinic review. Affiliated with REACT H@H, the ANP identified a significant unmet need for assessment of cognitive decline in a patient cohort referred to H@H.

Method: Baseline data from patients reviewed by the dementia ANP was collected between Sept 2021 – Feb 2022, including referrals from H@H. A new pathway was then introduced to streamline referrals with education and upskilling of the H@H team. Further data was collected between Sept 2022 – February 2023.

Results: In the first cohort, 161 patients were assessed by the Dementia ANP, of which 39 (24%) had been referred from H@H. 60 patients (37%) were seen as a home visit, and 101 (63%) in clinic. 2 (1%) of referrals were managed with advice only. 125 patients (78%) were given a diagnosis of dementia; other diagnoses included delirium, low mood and anxiety. In the second cohort, 168 patients were assessed by the Dementia ANP, 39 (23%) being referred from H@H. 94 (56%) were seen in clinic and 74 (44%) as home visits. 10 (6%) of referrals were managed with advice only. 138 (82%) were given a diagnosis of dementia. Time to diagnosis of dementia was reduced to 1 month for home assessment, and to 4 months for outpatient clinic assessment.

Conclusion: Appointment of a Dementia ANP to work alongside H@H significantly improved access to specialist services and time to diagnosis of dementia as part of comprehensive geriatric assessment.

POSTER

1609. CQ - Clinical Quality - CQ - Improved Access to Service

Improving streaming of Frail Older adults from the Emergency Department to a Frailty Unit.

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Introduction: It is well recognised that frailty is increasing amongst the population and can impact outcomes for patients when admitted to hospital. Frail older adults are more vulnerable to developing complications from continued hospital admissions. National recommendations by GIRFT indicate CFS scores ought to be documented in the Emergency Department (ED) to facilitate early recognition of frailty and stream patient to the appropriate pathway and clinician. The aim of this is to ensure the correct Clinician reviews the frailer adult in the most appropriate setting and thereby reduce risk of deterioration and patient harm. In October 2022 an electronic patient record system (EPR). Bolton NHS Trust has created a dedicated frailty unit staffed by Geriatricians for older frail adults. Therefore, a method of identifying and streaming frailer older adults is crucial to effectiveness of the unit.

Methods: PDSA cycles were implemented. A retrospective audit was performed prior to the implementation of the CFS documentation. A robust education programme was introduced to all clinical staff in the Emergency Department. Online modules were also available. A second audit as part of PDSA cycle was then performed to assess the intervention.

Results: Pre-intervention and EPR documentation tool only 11% of patients had CFS score. Following the intervention, 88% of medical staff included the CFS score in their assessment prior to a Frailty team referral and review. The frailty team have observed an increase in referrals.

Conclusions: Early recognition and documentation has enabled improved streaming and review of the correct patients to the frailty unit. This has enabled Gold Standard of Comprehensive Geriatric Assessment for frailer adults to be completed. Further PDSA cycles to the effectiveness of the unit are ongoing. Initial data indicates with correct identification and recognition of frailty; the average length of stay has reduced.

POSTER

1613. CQ - Clinical Quality - CQ - Improved Access to Service

Improving electronic frailty alerting in University Hospital Monklands: A whole system approach.

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Introduction: Older people with frailty are at risk of adverse outcomes from hospital admission. Early identification of frailty at can help reduce these. The Clinical Frailty Scale (CFS) identifies frailty, is quick to perform and can be done in acute settings. We have a well-established a Frailty Assessment Unit (FAU) which supports comprehensive geriatric assessment (CGA) for older adults with frailty in hospital. We developed direct admission pathway for frail patients direct from our emergency department (ED) to FAU and we needed to ensure that CFS was performed in the ED.

Methods: A training and education programme in CFS was delivered to ED via Frailty nurse practitioners. CFS was embedded in the ED safety briefs and daily handovers. A Frailty link nurse was identified in ED. We implemented an electronic CFS Frailty Alert (eFA) to our electronic Patient Management System.

Results: A direct admission pathway was established in March 2021 and eFA began in September 2021 (delayed due to Covid-19). The number of patients presenting to ED who have eFA added at admission has increased from 4/month to 100/month. This has allowed us to maintain 80% of patients being admitted to FAU (and therefore to GCA) < 24 hours of attendance at hospital. The number of patients who have an eFA recorded in the overall service has also increased.

Conclusion: We improved the number of patients with an eFA in ED and can better identify who needs CGA. We can use eFA as a visual tool for site awareness of frailty which helps to support flow. Capability of ED /hospital teams to add eFA was increased and extended to Hospital@Home/ community teams. Finally, this has been shared across our NHSL sites.

POSTER

1642. CQ - Clinical Quality - CQ - Improved Access to Service

Hospital Frailty Risk Score (HFRS) – Identifying Frailty in the Emergency Department (ED).

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Aim: We proposed that the Hospital Frailty Risk Score (HFRS) could identify patients attending the Emergency Department (ED) who would benefit from our Older Persons Assessment Service (OPAS). Identifying older people at risk of adverse outcomes in hospital can allow a system to provide frailty-specific interventions throughout their stay

Methods: OPAS (ED-based) accepts patients with frailty syndromes aged >70 years. All patients receive a contemporaneous Clinical Frailty Score (CFS) following multidisciplinary assessment. A retrospective analysis of the OPAS databank was conducted using HFRS to divide patients in High/Intermediate and Low Frailty Risk. We considered Age, CFS, Postcode with Welsh index of multiple deprivation, length of stay (LOS) and 12-month mortality.

Results: 700 consecutive admissions: 400 High/Intermediate and 300 Low HFRS. High/Intermediate HFRS vs Low HFRS had similar deaths ($p=0.2$) but significant difference in CFS ($p<0.05$). HFRS was able to detect frailty in those <75 years old ($p<0.01$) but not at ≥ 76 ($p=0.08$). There was no association between postcode with frailty or Death. HFRS Sensitivity: 0.44, Specificity: 0.83, Positive Predictive Value: 0.66, Negative Predictive value: 0.34, Area Under Curve: 0.39.

Conclusion: The HFRS identified 57% of the retrospective OPAS cohort, with the addition of >80yrs of age, the modified score identifies >85% of service users. Of those admitted, High/Intermediate Frail had median LOS of 28.11 days vs 21.26 days for not frail, with 30-day mortality 10.12% vs 8.90%; potentially suggesting the HFRS can identify a subpopulation of high-risk frail patients. We found socio-economic status, quality of discharge summaries and coding had no relationship to the screening efficacy of HFRS. We have developed an electronic, automated Frailty Flag that operates in real-time to signpost appropriate patients who would benefit from comprehensive geriatric assessment which we have tested in clinical practice. HFRS can be used to measure frailty-specific intervention system efficiency.

POSTER

1649. CQ - Clinical Quality - CQ - Improved Access to Service

Evaluation of a Frail-Trauma ("Frail-T") Service in a Scottish Major Trauma Centre

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Background: Geriatrician assessment is associated with improved clinical outcomes for seriously injured older adults. In 2021, the Queen Elizabeth University Hospital opened a dedicated Major Trauma (MT) ward for adults with significant polytrauma. Four Geriatrician sessions were introduced per week, establishing the 'Frail-T' service. Our aim was to provide specialist review to frail trauma patients within 72 hours of admission.

Methods: All patients reviewed were prospectively added to a secure database. Patients >65 years on the MT ward were screened for frailty and reviewed if Clinical Frailty Score (CFS) >4. If medical issues arose in patients CFS ≤4, input was provided upon request. Reviews on Critical Care and surgical wards were provided on referral. Qualitative data collected after service implementation assessed staff satisfaction and service improvements. Our database was compared to analysis from 2019 and cross-referenced with the Scottish Trauma Audit Group (STAG) figures to estimate unmet needs.

Results: 220 patients were reviewed between September 2021 and August 2022. Median age was 81. 33.2% of patients were frail. 45% received delirium management intervention. Compared to 2019, median time to Geriatrician input improved in polytrauma patients (5 to 3 days), but head and isolated chest injuries (usually on surgical/medical wards) experienced delays (6 and 5 days respectively). 332 additional patients aged >65 on the STAG database were identified; Geriatrician review was recorded in 38% (n=126). Qualitative feedback deemed the service highly accessible (88%, n=15) with themes of improvement: greater service promotion and educational input.

Conclusions: Only a third of patients reviewed by the team were frail, reflecting requirement for medical expertise in trauma care. Cohorting polytrauma in a dedicated ward with proactive screening has improved time to Geriatrician review. Delays remain for isolated head and chest wall injuries. Improvement work will focus on greater identification of patients beyond the MT ward.

POSTER

1652. CQ - Clinical Quality - CQ - Improved Access to Service

Use of an Automated Digital Flag for Identification of Older People Undergoing Emergency Laparotomy

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Introduction: In the presence of multiple co-morbidities and frailty, older people undergoing emergency laparotomy warrant higher supportive care. It is evident that geriatrician input to perioperative care plays a crucial role to improve patient experience and outcomes. Whilst we recognised the need for a surgical liaison service and increased compliance with NELA we had limited resources to give. We created an automatic email alert to enable us to see NELA patients and make the maximum use of our clinical time.

Method: An automated email alert was created in July 2022 to identify patients undergoing laparotomy based on theatre coding, we then set up filtering by age and frailty. A surgical liaison service was already established but we were able to target NELA patients from September 2022. Retrospective analysis of local data for Morriston Hospital extracted from 2022 National Emergency Laparotomy Audit allowed comparison of compliance to expected standards by the SOPAS (surgical liaison) service before and after intervention.

Results: There were 225 patients who required emergency laparotomy at Morriston hospital in 2022. 50 patients met NELA criteria of which 30% were > 64 with high CFS and 70% over 80. A 3-month period (March-May) prior to the intervention and 3 months following (Sept-Nov). We showed an increased in compliance with NELA standards from under 10% to over 50% with this intervention.

Conclusion: Significant improvement of 5% to 50% compliance with NELA standards was observed after the intervention of email alert; further to this we noted an issue with the alert working through December 2022 where many patients were not seen. This corresponded with a period of increased mortality. Our aim going forward is to upscale this to align with the BGS Position Statement.

POSTER

1440. CQ - Clinical Quality - CQ - Patient Centredness

Improving communication with patients' relatives on an Aging and Complex Medicine (ACM) ward during the COVID-19 pandemic

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Introduction: During the COVID-19 pandemic, restricted hospital visitation policies were implemented to reduce the spread of the viral infection. As a result, telephone has become the main communication method despite the complexity of the elderly patients' medical and psychosocial issues. This has heightened anxiety and reduced satisfaction among patients and their families. This quality improvement project aimed at improving communication with patients' families. We introduced several strategies with the aim to update patients' families within 48 hours of admission and then at least once a week during patient's journey from admission to discharge.

Method: Retrospectively, all patients who were admitted to the ACM ward during the study period were included. Multiple Plan-Do-Study-Act (PDSA) cycles were implemented. As the first intervention, we added a new section on "Update patients' families" in our weekly harm free care document to identify patients' families who were not updated. Also, reminder emails were sent to all medical doctors to ensure that we record all discussions with families using "Discussions with patients and families' document". As the second intervention, a poster on "Harm Free Thursday and Update Friday" was displayed in the doctor's office. Face-to-face education was provided to new trainees to emphasise the importance of good communication with patients' families. Data was collected from electronic patient record (EPR) and Microsoft Excel was used for data collection and analysis.

Results: 189 patients were included in the baseline audit which showed that only 49% of patients' families were updated weekly throughout the admission. Compliance in communication with families after the first and second cycle was 62% and 69% respectively. Following the second PDSA cycle, the percentage of patients' families who were updated within 48 hours of admission increased from 50% to 56%.

Conclusion: The project showed significant improvement in communication with patients' families with each cycle.

POSTER

1498. CQ - Clinical Quality - CQ - Patient Centredness

The CGA Board Round – Improving documentation and communication for older adult inpatients, University Hospital Hairmyres

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Background: Acutely unwell hospitalised older people have better outcomes including mortality and functional status when CGA (Comprehensive Geriatric Assessment) is performed. A previous complaint, escalated to the Scottish Public Services Ombudsman, highlighted issues with CGA documentation and recording MDT discussion. This pilot project's aim was to create a method for documenting CGA MDT plans and to embed this as routine practice for all inpatients on a Geriatrics ward.

Method: Following consultation with staff on this ward, a sticker was developed detailing status of medical and therapy input, planned discharge date and likely required support on discharge to evidence MDT discussion. This was completed weekly at the board round for each patient. The stickers were implemented over a 2-week roll-out phase, and use (and completion) of stickers were compared to a 2-week period approximately 1 month later. Feedback from ward staff was also collected via questionnaires.

Results: Initially, 98% of patients had a sticker completed (n=49/50) and 86% of all required information was documented (n=43/50). For the second round of data collection this fell to an 18% completion rate (n=7/38). Ward staff interviewed were aware of the stickers and felt they improved CGA communication (n=100%, n=8/8). Suggestions for improvement included an option to record whether families were updated, clearer options for discharge status and reasons why a patient may not have received occupational or physiotherapy.

Conclusion: The CGA board round sticker was a positively received, simple and effective intervention to improve documentation. It addressed an area which had been highlighted as requiring improvement. As expected, initial completion rates were high but rotation of staff impacted on subsequent completion rates. Establishing this as routine practice will be challenging but permanent staff present at the board round will facilitate allocation of this task and a poster highlighting this process has been displayed on the ward.

POSTER

1528. CQ - Clinical Quality - CQ - Patient Centredness

Improving discussion surrounding resuscitation in older patients admitted to hospital

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Introduction: One in three hospitalised patients die within 12 months of admission, rising to 45.6% in individuals aged 85 and older. Resuscitation is rarely successful in this patient group. Most older persons are happy to engage in discussions regarding resuscitation and patients' and relatives' involvement is recommended by British Geriatrics Society, General Medical Council and Royal College of Physicians. We aimed to increase the number of resuscitation and escalation of care discussions across our Ageing and Complex Medicine department to 90% by November 2022.

Method: Retrospective review of randomly selected electronic case notes for patients discharged in August 2021, November 2021, March 2022 and August 2022, and November 2022, to determine when resuscitation was discussed and, if not discussed, the reasons why. Interventions included:

1. face-to-face presentation of findings with discussion at departmental teaching,
2. distribution of posters on each ward,
3. discussion between each ward team, to review individual wards results.

Results: 388 patient cases were reviewed over 5 data collection cycles. At baseline, in August 2021, 49% patients had discussion surrounding resuscitation, increasing to 69% following intervention 1 (November 2021) and 79% following intervention 2 (March 2022). Follow up in August 2022 showed this increase was not sustained, falling to 64%. After intervention 3 (November 2022) this rose again to 72%. August 2022 data was evaluated to identify reasons behind no discussion. The main reason was 'good baseline' (31.1%) with no documented reason in 48.3% cases.

Conclusion: Percentage of resuscitation discussions has fluctuated over time, improving following targeted intervention but has not yet reached 90%. The main barriers to success identified included junior doctor change-over, fast patient flow, competing ward priorities and patients/relatives lack of understanding. We hope to integrate teaching regarding resuscitation into our departmental induction, to sustain knowledge and understanding within the workforce.

POSTER

1558. CQ - Clinical Quality - CQ - Patient Centredness

The Role of Comprehensive Geriatric Assessment and Shared Decision Making in patients being considered for Orthopaedic Surgery

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Perioperative care of Older People undergoing Surgery (POPS) team, East Kent Hospitals University NHS Foundation Trust

Introduction: Our perioperative service for older people undergoing surgery (POPS) commenced preoperative assessment of co-morbid and frail patients undergoing elective orthopaedic surgery in 2021. As part of the comprehensive geriatric assessment (CGA) and shared-decision-making process (SDM), we wanted to analyse the decisions our patients made around surgery and how many regretted having surgery.

Methods: Review of all orthopaedic patients seen by POPS between September 2021-December 2022. **Intervention:** CGA and SDM on all patients. **Data collected:** comorbidities, Clinical Frailty Scale (CFS), SDM outcome. Decision regret scale was sent out 6 months post op from August 2022.

Results: 111 patients assessed. Median age 89 (range 60-97). Median CFS 4 (range 1-7). Median comorbidities 12 (range 2-22). Surgery considered: knee 43%, hip 33%, shoulder 10%, spine 6%, revision hip 5%, and revision knee 3%. 77% wanted to proceed with surgery and 13% did not after SDM. 5% were deemed not fit enough and 5% are still awaiting final decision outcomes. Decision regret data has been returned by 10/14 (71%) of patients who proceeded. None regretted their decision.

Conclusion: The majority of patients seen by POPS wish to proceed with orthopaedic surgery. However, 13% did not wish to proceed following SDM which is similar to the 14% of patients who regretted undergoing surgery in other settings¹. Of those that have returned the 6-month post op questionnaires, none have regretted their decision. Understanding how optimisation and appropriate SDM impacts on the patient experience is important as frailty impacts adversely on patient reported outcomes in elective hip and knee surgery. Frail patients are also less likely to report their postoperative outcomes in national data sets compared to less frail patients².

1. CPOC website

2. Cook et al (2022). The impact of frailty on patient reported outcomes following hip and knee arthroplasty. *Age and Ageing*.

POSTER

1571. CQ - Clinical Quality - CQ - Patient Centredness

A quality improvement initiative on 'Indwelling Urinary Catheterisations' in hospitalised older adults.

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Introduction: Indwelling urinary catheters (IUC) are well-known to cause serious adverse outcomes in older adults such as catheter associated urinary tract infections (CAUTI), direct trauma, delirium, deconditioning, falls, restrain, prolonged length of stay etc. (Lee E., Malatt C, 2011). Removal of IUCs as soon as the indication is resolved, results in better outcomes (Dawson et al, 2017). We identified high rates of inappropriate catheterisations as a regular practice or part of sepsis protocol in our hospital. This QIP was designed to compare our practice against the standards set by NICE and Royal College of Nursing.

Methods: Two PDSA cycles of 30 patients each, were completed between 2021-2022 (4 months apart), in Acute Frailty Unit and two Elderly Care wards. New IUCs in patients above 65 years were included. Data were collected on, documentation of IUCs, indications, plans for Trial without catheters (TWOC), appropriate management plans and CAUTI. Interventions post first PDSA cycle were; organised teaching to the nurses and doctors, discussing catheters at by-daily board rounds (BR), displaying flowcharts and reviewing IUCs during ward rounds.

Results: Documentation of IUCs improved significantly from 17/30 to 24/30. There was a small reduction in inappropriate indications from 16/30 to 12/30. Documentation of TWOC plans improved from 4/30 to 11/30. Collection of urine samples for CAUTI's improved from 11 to 18. Our interventions were shown to produce positive outcomes.

Conclusion: Despite continuous education and BR discussions, there's still room for improvement. Better understanding of catheter associated harm by frailty teams resulted in positive outcomes. Next steps prior to the 3rd PDSA cycle include educating Emergency and medical teams through wider teaching platforms and integrating changes to hospital electronic systems on appropriate documentation and TWOC plans. Our study would be applicable in similar settings nationally and globally to achieve better catheter care in older adults.

References: 1. Lee E., Malatt C (2011) Making the Hospital Safer for Older Adult Patients: A Focus on the Indwelling Urinary Catheter 15(1): 49–52

POSTER

1594. CQ - Clinical Quality - CQ - Patient Centredness

Multidisciplinary advance care planning in care homes is associated with fewer ambulance call-outs and hospital conveyances

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Introduction: The Enhanced Health in Care Homes Framework recognises personalised advance care planning (ACP) as a key component of optimal healthcare for care home residents (1). Documented ACP discussions guide decision-making in acute situations and may facilitate avoidance of inappropriate hospital admissions.

Methods: We established a multidisciplinary care home service which aimed to provide comprehensive geriatric assessment (CGA) based ACP to all residents within three pilot care homes. We evaluated the effect of proactive, systematic CGA and ACP. Ambulance call-out and conveyance data for the pilot care homes were compared for three months before and after our intervention.

Results: 122 residents were reviewed during the pilot period and 61 new ACPs were completed. Amongst the 61 new ACPs, 41 new decisions were made during the pilot to avoid future hospital admission and to prioritise comfort in the community. Total ambulance callouts to the 3 pilot care homes were observed to fall from 55 to 33 in the 3 months following our intervention: a reduction of 40%. Additionally, when an ambulance attended the scene, conveyance to an acute hospital was observed to fall by 50% (pre-n =40 vs post-n=19), in favour of discharging into the community.

Conclusion: The provision of systematic CGA-based advance care planning in care homes may be associated with a lower frequency of ambulance call-outs and lower rates of conveyance of care home residents to hospital. Proactive advance care planning may influence GP, care home, and paramedic decision-making.

1. NHS England and NHS Improvement. *The Framework for Enhanced Health in Care Homes*. 2020 Mar.

POSTER

1606. CQ - Clinical Quality - CQ - Patient Centredness

Treatment Escalation Planning : understanding the system to enable change

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Introduction: The 2020-21 Chief Medical Officer report described Treatment Escalation Plans (TEPs) as 'Realistic Medicine in action.' Our aim is to increase TEP completion on the Medicine of the Elderly (MOE) wards at the Royal Infirmary of Edinburgh to >90% by July 2023.

Method: Since August 2022, we collected weekly data from a single MOE ward. In October, we upscaled to include four MOE and one stroke ward. The notes of five randomly selected patients were reviewed weekly to see whether they have a TEP, and if so, which parts were completed. To further understand behaviours around TEP completion, we collected qualitative data asking doctors what the triggers and barriers were to TEP completion. 40% found the conversations challenging whereas 30% cited time and environment as barriers. We used this data to generate change ideas. For PDSA cycle 1, we developed a teaching session around TEP conversations. This is delivered regularly to all junior doctors and ANPs in the department. For PDSA 2, we allocated a weekly ward 'TEP champion' to highlight patients without a TEP and encourage completion.

Results: Median for TEP completion was 75% on the initial ward, 42% over the four MOE wards and 20% for the stroke ward. All patients with a TEP had their resuscitation status documented. One third of patients did not have a TEP at all. Of the two thirds of patients with a TEP, a quarter were incomplete. Sections on goals of care, communication and interventions were completed in around half.

Conclusion: This project is ongoing with future PDSAs planned to address the barriers of time and environment. PDSA 3 will test the introduction of a mobile TEP phone to enable discussions in a quieter environment. The variation in practice in MOE versus stroke is important and requires further understanding of the barriers specific to stroke.

POSTER

1611. CQ - Clinical Quality - CQ - Patient Centredness

Memory Link Worker within General Surgery: A Pilot

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Introduction: The General Surgery directorate at Cardiff and Vale University Health Board secured funding for the appointment of a Memory Link Worker (MLW) for a 12-month pilot in the emergency stream. The aim of the MLW is to improve patient experience for those living with dementia/ cognitive impairment, or those who experience delirium whilst in hospital. In addition, the MLW role should increase awareness and completion rates of “Read About Me” (RAM).

Method: The pilot scheme started in February 2022. Eligible patients were identified by ward staff or the Perioperative care of Older People undergoing Surgery (POPS) team and referred in person or via bleep. The MLW reviewed patients, offered activities, contact families / carers and completed the RAM. MLW input continued for the duration of the admission. Objective assessment of the impact of the MLW interventions on patient wellbeing was completed through Dementia Care Mapping (DCM) – an observational tool to improve person-centred care for people living with dementia.

Results: 104 patients have been reviewed to date. Average caseload of 6 patients per week. Average time spent with each patient during their admission is 5 hours 51 minutes. Two thirds of patients engage in activities offered by the MLW. DCM demonstrated a positive impact on patient well-being, mood and engagement. Very few patients were able to self-entertain in the absence of the MLW and those that did were using tools supplied by the MLW.

Conclusion: The MLW role has had a positive impact on patient experience as demonstrated by the DCM process. Further analysis of the impact of the role is underway, including feedback questionnaires from staff members and service-users, as well as re-audit of RAM completion rates. We hope this will support a business case to ensure the MLW is a substantive role in general surgery.

POSTER

1621. CQ - Clinical Quality - CQ - Patient Centredness

Foundation year 1 doctors' (FY1s) knowledge of frailty and comprehensive geriatric assessment: a cohort survey of 31 FY1s

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Introduction: The British Geriatrics Society and NHS England recommend that patients aged 65 and over should be screened for frailty when presenting to healthcare services to facilitate early comprehensive geriatric assessment (CGA). Recognition of frailty frequently relies on assessment by FY1s. We sought to assess a) how confident FY1s are in recognising and managing frailty, b) their understanding of CGA, and c) how these change during the year.

Methods: Questionnaires (quantitative and qualitative data) were given to FY1s at induction, 6 months, and 12 months. Teaching sessions on frailty and CGA were delivered. We collated feedback on how frailty recognition and CGA knowledge had altered their assessment of older people.

Results: All FY1 Doctors completed the survey at induction. The 6 months and 12 months surveys were emailed to FY1s. The survey response rate was 100% (31/31), 68% (21/31) and 58% (18/31), respectively. At induction, 23% (7/31) reported they were "quite" or "very" confident in assessing for frailty. This increased to 71% at 6 months and 100% at 12 months. Fifty-two per cent (16/31) of FY1 Doctors were aware of a tool to assess for frailty at baseline, increasing to 100% (18/18) at 12 months. Knowledge of CGA improved less, from 48% (15/31) at baseline to 83% (15/18) at 12 months. There was no association between speciality experience and confidence levels. Feedback from FY1 doctors indicated that frailty recognition allowed identification of patients who may benefit from advanced care planning discussions and triggered early therapy input.

Conclusions: Despite BGS and NHS England recommendations, at induction, FY1s lack confidence in frailty recognition and assessment. Through experiential learning and targeted teaching this improved, not limited to those in geriatric medicine. We recommend final year medical students need increased frailty and CGA specific education to improve their confidence when assessing frail older patients.

POSTER

1646. CQ - Clinical Quality - CQ - Patient Centredness

Can use of sensor technology prevent hospitalisations in frail older people at high risk of hospital admissions?

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Introduction: There has been significant developments, investment and ambition to use modern technology in admission avoidance in hospitals. Sensor technology has been one area of development.

Method: We used My Sense to improve outcomes for a cohort of High Intensity Users (HIU) frail older patients and compared hospitalisation rates before and after employing Sensor technology. HIU patient consent criteria is 3 Admissions with 40 days Length of Stay.

Introduction of MySENSE :

- 8 Sensors placed around the home ;
- Chargeable wrist device;
- Monitors - activity, heart rate, environment temperature

Aim

- To detect change in health and routine;
- Reduce deterioration in physical and mental health well-being;
- Promote independence;
- Unnecessary Admissions Methods;

Fifty randomly selected HIU patients consented to use My Sense from November 2021 to June 2022. HIU monitors usage via a dashboard with the aim to intervene and reduce the likelihood of deterioration caused by inactivity or illness. HIU contacts the key responders, include liaising with family members, GP, other health/care professionals if unusual patterns or no activity is recorded. For example - bed/chair/toilet/kettle/tap sensor not being activated for some time. Indicators for potential UTI's, constipation, dehydration, reduced mobility and other conditions if not addressed may result in admission.

Results: • Admissions prior to installation 84 post 54; • Length of Stay prior to installation 909 post 724; • Cost saving = £64,750.00; • Cost of equipment £399 with a monthly subscription fees £39.99 per month.

Conclusion: • Useful to detect any changes to normal pattern improving patient safety

- Early identification of deterioration and early deployment of help for earlier intervention
- Raised patient, family and staff satisfaction/reassurance
- Reduced reliance on acute care
- Reduced level of physical social care support / greater independence
- Useful tool but more detailed studies are needed.

POSTER

1655. CQ - Clinical Quality - CQ - Patient Centredness

Front Door Frailty: a quality improvement project to reduce Preventable Emergency Admissions for older adults

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Background: Up to 17.5% of admissions for older adults with frailty may be Preventable Emergency Admissions (PEAs). PEAs are costly and expose patients to complications including deconditioning, delirium, malnutrition and nosocomial infections. Royal Derby Hospital (RDH) has 1159 beds and cares for a population of around one million. The Frailty Emergency Assessment Team (FEAT) operates within the Emergency Department (ED) and Medical Assessment Unit. FEAT is multi-disciplinary, comprising nurses, physiotherapists and occupational therapists.

Aim: To reduce the number of PEAs for older adults presenting to RDH.

Design: We integrated a Geriatrician into FEAT with the aim of reducing PEAs through early medical reviews. Suitable patients were identified through referral from ED and routine screening of the patient information system. To support consistent medical reviews and automate data collection we created an e-form embedded within the Electronic Patient Record. This captured details and outcome of medical reviews including Clinical Frailty Score (CFS), problem list, medication review and 'Medically Stable for Discharge' (MSFD) status.

Results: Between 7th February 2022 and 20th February 2022 68 medical reviews were collected on the e-form. 72% were assessed first by an ED clinician. 81% had a CFS of 5-7 and 7% had a CFS of 8. The most common presenting complaint was 'fall(s)' (25%) followed by 'clouded consciousness' (13%). 66% of FEAT physician reviews resulted in planned discharge from ED, 13% of which avoided an admission planned by ED. Of 68 patients reviewed 42 (62%) were MSFD. Of these 29 (69%) were discharged home, 11 (26%) were admitted to a ward to await interim beds or new care package, one (2%) patient was discharged to a care home and one (2%) to another health care facility.

Conclusion: Our intervention reduced PEAs for older adults presenting to RDH. The e-form automated data collection successfully.

POSTER

1668. CQ - Clinical Quality - CQ - Patient Centredness

Can proactive, collaborative and Co-productive Anticipatory Care Plans Improve Frail High Intensity Patient outcomes?

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Midlands Partnership Trust; University Hospital of North Midlands; High Intensity Team; Newcastle Road, Newcastle under Lyme; Staffordshire

Background: The High Intensity Users (HIU) Team supports individuals with single or multi-morbidities or complex care needs who are high users of Health and Social Care Services.

Introduction: Stoke-on-Trent has an aged population rising: 65 years plus by 17% increase to 280853; 85 years plus by 38% increase to 39425. Frail older people are the most frequent cohort of patients converted to admissions from ED. From April 2021 to October 2022 there has been an increase of 18% in inpatient length of stay which may be detrimental to the older person. HIU was developed to support this cohort of patients by creating an MDT to create personalised anticipatory care plans.

Methods: Individuals who have had three or more acute admissions and forty days non-elective inpatient days during the previous twelve months were included. An MDT facilitated by a Case Manager formulated an action plan to streamline the care; this includes the Frailty Passport which will identify the advanced/anticipatory care wishes of the individual. This is shared across all relevant teams. Once the actions are complete the patient is then monitored, if stable the patient then has an identified case worker to manage their on-going care.

Results: In the twelve months post consent: ED attendances reduced by 108; Admissions reduced by 477; Length of Stay reduced by 7086 (bed days); Cost saving £2,480,100; Service Cost £400,000; Qualitative feedback 93% patients would recommend; Staff 88% feel there are benefits for patients / services.

Conclusion: The results quite clearly demonstrate the benefits of patient centred care and approach when introducing an anticipatory care plan, including: Raised patient, family and staff satisfaction/ reassurance; Improved access to services; Right care, right time, right professional; Value for money.

Next steps: Useful tool. More studies needed. Expand and share learning with others.

POSTER

1499. CQ - Clinical Quality - CQ - Patient Safety

Reducing hypoglycaemia on the Care of the Elderly wards: A multidisciplinary team focused quality improvement project

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Introduction: Older adults with diabetes are at increased risk of hypoglycaemia during inpatient hospital stays. It was noted that a large proportion of diabetic patients on the care of the elderly wards at North Middlesex University Hospital were experiencing hypoglycaemia so a quality improvement project was devised to address this issue and improve patient safety.

Method: Baseline data was collected in October 2021 by monitoring the glucose levels of 21 diabetic inpatients across three care of the elderly wards over a 72-hour period. The project consisted of 3 interventions introduced on one of these wards. The initial intervention was a poster reminding doctors to check the HbA1c results of diabetic patients. The second was the introduction of a bedtime snack for diabetic patients. The final intervention was the inclusion of a hypoglycaemia report in the nursing handover.

Results: In the baseline data collection 3/21 (14.2%) patients had a recorded episode of hypoglycaemia. Following the introduction of the poster, 0/9 (0%) and 1/9 (11%) patients experienced episodes of hypoglycaemia at 2- and 4-weeks post-intervention respectively. Following the introduction of a bedtime snack, 1/5 (20%) patients experienced an episode of hypoglycaemia at 2-weeks post intervention. Following the introduction of the nursing handover report, 1/8 (12.5%) and 0/5 (0%) patients experienced an episode of hypoglycaemia at 4- and 5-weeks post-intervention respectively.

Conclusions: The high rate of hypoglycaemia in elderly diabetic inpatients is likely to be multifactorial and therefore a multidisciplinary approach is essential. The sample size was too small to draw clear conclusions, but the results suggest that a simple nursing intervention could be effective at reducing the frequency of hypoglycaemia. The next steps will be to formally introduce the nursing handover intervention to the other care of the elderly wards and monitor its impact.

POSTER

1522. CQ - Clinical Quality - CQ - Patient Safety

The Impact and Interventions of a Frailty Pharmacist within Emergency Department Frailty Team of an Acute NHS Hospital Trust

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Introduction: Older patients admitted to the emergency department (ED) do not have a pharmacist-led medication review within the comprehensive geriatric assessment (CGA), yet the presenting complaint can be attributed to overprescribing and problematic polypharmacy. Taking ten or more medications increases the risk of hospital admission by 300% due to adverse drug reactions (ADRs)¹, therefore a medication review can reduce this outcome by optimising current therapy². Responsibility of safely transferring this medication information between care settings is a healthcare professional's duty, as the rate of error is 30 - 70%³.

Method: Patients were identified by the ED Frailty Team according to local frailty criteria, including patients > 65 years presenting with delirium, a fall and/or multi-morbidities. Medicines reconciliation was carried out by the frailty pharmacist, and medications optimised to reduce future harm with investigations prompted where needed. Interventions were categorised. A summary plan was written to the General Practitioner (GP) and each patient was followed up after 4 weeks to assess if received and actioned appropriately.

Results: 73 medication reviews were conducted for patients (mean age 84.4 years) from June to September 2022, majority presenting with fall (69%). High-risk medication review was most common intervention (90%), followed by counselling (50%). 92% patients required a pharmaceutical intervention (n=208). GP plans were actioned for 65% patients in Primary Care.

Conclusion: ED frailty pharmacist's input reduced inappropriate polypharmacy and optimised medication for this patient cohort, with majority of care plans carried out appropriately following discharge. A future study could examine re-admission rates of patients in comparison to those without a frailty pharmacist's input.

References: 1. Payne RA et al. British Journal of Clinical Pharmacology 2014; 77: 1073 – 1082. 2. Department of Health and Social Care, 2021. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1019475/good-for-you-good-for-us-good-for-everybody.pdf. Accessed 19/1/23. 3. Department of Health, 2011/2012. Available at: www.wp.dh.gov.uk/healthandcare/files/2011/01/outcomesglance.pdf. Accessed 19/1/23.

POSTER

1562. CQ - Clinical Quality - CQ - Patient Safety

Let's Talk About Death: Implementing Guidance on Learning from Deaths at Homerton Hospital

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Introduction: The National Quality Board published the first Guidance on Learning from Deaths in March 2017, which stated the aim of mortality review processes across NHS Trusts and provided a framework in identifying, reporting, investigating and learning from deaths in care. Homerton Healthcare NHS Foundation Trust considered how best to implement the Guidance: record mortality reviews, increase engagement within the Trust and disseminate learning.

Method: Whilst paper-based mortality reviews had already been conducted by some specialties, there was no Trust-wide process to record data and learnings. In 2018, an in-house electronic Mortality Review Tool was built by clinicians and IT team incorporating the use of CESDI (Confidential Enquiry into Stillbirths and Deaths in Infancy), a scoring methodology used to document quality of care and impact on outcome. Ongoing training for the tool is provided to medical staff and is now used by all specialties. A quarterly multidisciplinary mortality newsletter entitled "Let's Talk About Death" was launched and is now published on the intranet, available for all members of the Trust. Anonymised clinical case examples are used to illustrate learning points and teaching on death and dying.

Results: Percentage of completion of mortality reviews across the Trust increased from 82% to 99% with the implementation of the electronic Tool in comparable quarters (Q1 2018/2019 to Q1 2022/2023). Consultant-led CESDI scores rose from 76% to 98% over the years (2018/2019 to 2021/2022). The newsletter has led to regular collaboration with all teams involved in supporting a patient with life-limiting illness; has encouraged multidisciplinary focus on dying and has provided a leadership opportunity to geriatric medicine trainees who edit the newsletter.

Conclusion: The Trust's response to the Guidance has resulted in measurable improvement in data recording and engagement with mortality reviews across all specialties and has reinforced the culture of learning from deaths.

POSTER

1581. CQ - Clinical Quality - CQ - Patient Safety

Postural Hypotension – A Quality Improvement Project

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Introduction: Postural hypotension (PH) is an identifiable and potentially reversible cause of falls in elderly patients. The National Audit of Inpatient Falls recommends lying and standing blood pressure (LSBP) measurement for patients aged over 65. Our project aims to review current clinical practice and to develop a standardised approach to correctly investigate and manage PH in patients admitted following a fall to the geriatric department.

Method: We performed two cycles of retrospective data collection across three geriatric wards, looking at percentage of patients investigated for PH and the use of correct technique for LSBP measurements as recommended by the Royal College of Physicians (RCP) guidelines. Between cycles, formal and informal educational strategies were implemented and the RCP LSBP measurement guidelines were displayed on doctors' noticeboards and blood pressure monitoring devices. A PH sticker was designed to ensure correct technique was used and documented.

Results: Following the interventions, the percentage of patients who had LSBP measurements performed improved from 28% to 96% [$p < 0.00001$ (X2 test)]. Introduction of the PH stickers improved use of correct technique from 12% to 37.5%. Performance and documentation of medication reviews for patients diagnosed with postural hypotension improved from 0% to 87.5% and lifestyle advice given and documented improved from 0% to 37.5%.

Conclusions: Our study highlighted the need for further training on investigation and management of PH. Our results demonstrate that educational interventions and a standardised sticker to ensure clear documentation can significantly improve diagnosis of PH. The local Falls Prevention Team are keen to promote use of the sticker across the Trust and we have produced patient information leaflets to ensure that all patients receive lifestyle advice.

POSTER

1599. CQ - Clinical Quality - CQ - Patient Safety

Documented neurological examination in patients presenting with falls

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Introduction: In Scotland, more than 18,000 older people are admitted to hospital after a fall each year. One in three people over the age of 65 experience a fall at least once each year (1). Neurological examination is an essential part of the initial assessment of these patients in hospital and can determine the cause of falls such as stroke, peripheral neuropathies and Parkinson's disease. Local anecdotal evidence suggested that this was often not carried out, with the potential for delayed diagnosis and treatment.

Method: Baseline data was collected from clinical notes of admissions to the care of the elderly (COTE) wards at University Hospital Hairmyres (UHH) over a 1-month period. Multiple departmental education sessions were arranged to highlight to medical staff the importance of neurological examination in patients presenting to hospital following a fall. Following these sessions the data collection cycle was repeated. A poster has now been designed highlighting common causes of falls and in particular emphasising the importance of performing a neurological examination, with a further cycle of data collection planned.

Results: 36.8% of patients admitted to COTE wards in August 2022 were admitted with falls, with only 23% of patients having a neurological exam documented on admission. Following the initial intervention, 30 patients' notes were reviewed in January 2023. 56.7% of patients were admitted with falls and frequency of documented neurological examination had increased to 58.8%.

Conclusion: Educational sessions resulted in a 156% increase in documented neurological examinations for patients admitted with falls. We hope this improvement will lead to earlier identification of causes of patients' falls, allowing prompt management. Our project is ongoing, with planned implementation of posters as a secondary intervention, with further data collection in due course.

References: 1. NHS Inform. Why Falls Matter. Available from: <https://www.nhsinform.scot/healthy-living/preventing-falls/why-falls-matter> (accessed 27 November 2022).

POSTER

1629. CQ - Clinical Quality - CQ - Patient Safety

Improving the documentation of best interest decision making and skin checks in the use of mittens

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The Whittington Hospital NHS Trust

Introduction: Mittens are used to facilitate necessary interventions safely in patients who lack the mental capacity adhere to them. A serious incident (SI) occurred at our Trust when a patient, with delirium, developed pressure ulcers to their wrists as a result of prolonged use of mittens. A subsequent investigation revealed that there had been inadequate skin checks and insufficient documentation, from the medical team, directing the use of mittens.

Method: A multidisciplinary QIP was initiated:

- For the Medical team: An electronic "Mittens Request Form" was created. This included fields to document a mental capacity assessment, the best interest decision and a link to apply for Deprivation of Liberty Safeguards. There was also a prompt to prescribe mittens on the electronic drug chart.
- For the Nursing team: A pre-existing electronic mittens checklist form was updated to confirm that a daily skin check had been completed. The outcomes of the SI report and changes above were communicated to the department.

After the QIP, a notes review was completed for all patients over the age of 65 years who had a mittens checklist completed before and after the interventions. Notes were assessed for documentation of a mental capacity assessment, communication of a best interest decision, prescription of mittens and completion of a daily skin assessment.

Results: Documentation of a capacity assessment improved from 9% to 47%. Communication with relatives improved from 0% to 35%. Prescription of mittens, on the drug chart, improved from 0% to 24%. Documentation of a daily skin assessment Increased from 0% to 94%

Conclusions: This QIP brought about improved documentation of best interest decisions related to mittens and ensured regular skin checks. The next stages will involve expanding the QIP to other departments within the hospital and reinforcing messaging about communication with relatives and prescription of mittens.

POSTER

1636. CQ - Clinical Quality - CQ - Patient Safety

Bone health assessment audit cycle at Queen Alexandra Hospital, Portsmouth (Audit ID 5474)

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Background: Conducted in the department of General Internal Medicine. Our focus group was elderly patients, especially women aged 65 and above and men 75 years and above as per NICE guidelines since these patients should have their bone health assessment done ideally. Local problems: Osteoporosis is very common affecting approximately 3 million people. Over 5,00,000 fragility fracture occurs in UK each year. The purpose of our audit was to find the percentage of patients who underwent bone health assessment and got bone protection treatment appropriately thus checking our compliance to NICE guidelines. Hence keeping in lines with patient safety.

Methods: A total of 45 patient's data was collected from the medical wards in both the audit and re-audit. Data was collected from patient's case notes, previous clinical documents and medication charts. A questionnaire was used which entailed patient details, risk factors for osteoporosis and whether or not bone health assessment had been done.

Interventions: We identified patients at risk of osteoporosis. Performed BHA with FRAX score calculation. Started them on appropriate treatment based on NOGG 2021 guidelines. Additionally, a teaching session was held after each audit to implement changes in the department and raise awareness about the importance of bone health assessment. **Results:** The first audit showed that only 29 out of 45 patients had their assessment done. A total of 41 patients had their assessment done in the re-audit showing a significant improvement by 26%.

Conclusions: Bone health is often overlooked and affects millions of people across the UK with high risk of mortality and morbidity in turn affecting patients' quality of life. Based on the comparative analysis, 26% more patients benefitted from the completed audit cycle.

POSTER

1524. SP - Scientific Presentation - SP - Big Data

Drug-induced Postural Hypotension: cluster analysis of co-prescription patterns in older people in UK primary care

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Introduction: Over 250 medications are reported to cause postural hypotension, associated with serious adverse outcomes in older adults. Studies in the literature and guidelines suggest a harmful cumulative risk of postural hypotension with multiple medication use. However, there is limited evidence on the potential for harm in practice, particularly which drugs are co-prescribed and may increase risk of postural hypotension.

Methods: Retrospective cohort study and cluster analysis using general practice data from IQVIA Medical Research Data (IMRD) in patients aged ≥ 50 contributing data between 1 Jan 2018 and 31 Dec 2018. Thirteen drug groups known to be associated with postural hypotension by mechanism were analysed and clusters generated by sex and age-band.

Results: 602,713 individuals aged ≥ 50 with 283,912 (47%) men and 318,801 (53%) women were included. The most prevalent prescriptions that might contribute to postural hypotension were angiotensin converting enzyme (ACE) inhibitors, calcium-channel blockers, beta-blockers, selective serotonin reuptake inhibitors and uroselective alpha-blockers. We identified distinct clusters of cardiovascular system (CVS) drugs in men and women at all ages. CVS plus psychoactive drug clusters were common in women at all ages, and in men aged ≤ 70 . CVS plus uroselective alpha-blockers were identified in men aged ≥ 70 .

Conclusion: Distinct clusters of drugs associated with postural hypotension are commonly prescribed in practice, which change over the life course in men and women. Our findings highlight potentially harmful drug combinations that may cause a cumulative risk of postural hypotension in older people. This may guide clinicians about the potential of synergistic harm and to monitor for postural hypotension if using such combinations – particularly in patients aged ≥ 70 or at high-risk due to comorbidity.

POSTER

1634. SP - Scientific Presentation - SP - BMR (Bone, Muscle, Rheumatology)

Physical activity and exercise use in hospitalised older adults: a survey of registered healthcare professionals

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Background: Older adults are subject to an almost entirely sedentary experience during hospitalisation. This can lead to deconditioning and loss of function requiring additional personal care and temporary institutionalisation. Physical activity and exercise can improve function and reduce care dependency. Current use of these interventions in clinical practice is variable and not well understood. The aim of this study is to gain insight into current use, perceived barriers, and future opportunities to improve physical activity and exercise use in hospital.

Method: A cross-sectional online survey was designed to collect data. Participants were recruited voluntarily using social media and were eligible to take part if they were registered healthcare professionals working with older adults in the acute hospital setting. Data was collected between December 2021 and February 2022 and was subject to descriptive statistical and content analysis. Informed consent and eligibility were gained. The project was classified as a service evaluation and was registered with the organisation's governance platform no: 7318

Results: Forty-two responses were received from allied health professionals (30, 71%), doctors (8, 19%), and nurses (4, 10%). Aerobic and functional task activities, such as walking, and bed transfers were typically used more frequently than muscle strengthening and balance exercises. Perceived barriers to physical activity and exercise included a lack of staff time and availability, hospital culture, and the environment. Opportunities to improve intervention use included staff education, dedicated roles, cultural change, and re-design of care processes.

Conclusions: Significant workforce and organisational barriers prevent the optimal use of physical activity and exercise in hospitalised older adults. These barriers contribute to the disproportionate use of simple functional task activities over tailored muscle strengthening and balance exercise programmes. Future research should focus on addressing workforce and organisational barriers to improve the clinical integration and adoption of evidence-based physical activity and exercise interventions.

POSTER

1197. SP - Scientific Presentation - SP - Cardio (Cardiovascular)

Exploring barriers to recruiting older people to a white-coat hypertension study

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Introduction: There is a recognised association between white coat hypertension (WCH) and adverse cardiovascular outcomes in older adults. However, there is no consensus on the management of WCH in this group. The objective of the Hypertension in the Very Elderly Trial (HYVET-2) study was to assess the feasibility of randomising 100 patients >75years with WCH from General Practice in the UK to treatment or usual care. The study did not randomise any patients. In this follow up study, we sought to explore the reasons for not recruiting.

Methods: Using a mixed-methods study design, staff from 29 General Practice (GP) sites and the Clinical Research Network (CRN) in Kent, Surrey, and Sussex (KSS) were sent an online questionnaire about local research facilities and infrastructure, and HYVET-2 study methodology and target population demographics.

Results: Nineteen (19) individuals responded the questionnaires (15 primary care staff, 4 CRN staff). Using a framework approach, we identified six themes summarising challenges to HYVET-2 recruitment. These themes were: established approaches of primary care towards managing WCH in older people, target patient demographics, study design complexity, patient-facing study documents, limited research resources in primary care and identification of eligible patients using existing coding.

Conclusion: Our experience showed that recruiting older people to a WCH study from primary care was not feasible. A national scoping survey amongst primary care physicians in the UK, and a robust patient and public involvement (PPI) targeting older people with WCH might improve recruitment in future studies of WCH in older people.

POSTER

1474. SP - Scientific Presentation - SP - Diab (Diabetes)

Diabetes management in older adults who fall: A retrospective cohort study

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Introduction: Type 2 diabetes mellitus (T2D) is associated with poor health outcomes and tight glycaemic targets are questionable in those aged over 70 years. We examined whether people with T2D admitted to emergency department (ED) with a fall, were more likely to have greater frailty, co-morbidity burden, or risk factors for falls and whether use of insulin or gliclazide was associated with poor clinical outcomes.

Methods: The Older Persons Assessment Service (OPAS) is a local emergency department service which accepts patients on frailty criteria. The OPAS databank was retrospectively analysed for people with T2D admitted with a fall between June 2020-September 2022. We examined clinical outcomes relating to medication, age, Charlson co-morbidity index (CCI) and clinical frailty score (CFS).

Results: 1081 patients were included: 294 (27.2%) with T2D and a mean HbA1c of 53.9 (± 15.8) mmol/mol [7.1%]. People with T2D had a similar mean CFS and age compared to those without T2D, but higher mean CCI (7.0 ± 2.2 vs 5.9 ± 2.1 , $p < 0.001$). Of those people with T2D, 175 (59.5%) and 240 (81.6%) had a HbA1c ≤ 53 mmol/mol [7.0%] and ≤ 64 mmol/mol [8.0%], respectively. In total, 48 (16.3%) people with T2D were identified to have a capillary blood glucose below 4.0 mmol/L on admission to the emergency department. People with T2D treated with insulin and/or gliclazide had a greater mortality (36.6% vs 23.6%, $p < 0.05$), greater frequency of hypoglycaemia (35.4% vs 11.8%, $p < 0.001$), and greater HbA1c (65.5 ± 17.2 mmol/mol [8.2] vs 48.9 ± 12.1 mmol/mol [6.6%]) compared to those who used other agents. People with T2D were not more likely to live in deprived areas.

Conclusion: Falls are a significant burden, and hypoglycaemia-inducing medication may contribute to the greater mortality observed in people with T2D. Clinician awareness can support de-prescribing for patients with frailty and HbA1c < 64 mmol/mol. There should be increased awareness of the impact of hypoglycaemia, especially in those using insulin or gliclazide.

POSTER

1483. SP - Scientific Presentation - SP - Education / Training

Reducing Door to Needle Time through Simulation-Based Education

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Background and Aims: Many medical specialty trainees report a lack of confidence in hyperacute stroke management, contributing to inefficient patient care. We identified a lack of knowledge of our pathways, as well as difficulty managing human factors, particularly communication and teamwork. We hypothesised that the implementation of a simulation-based education programme could address these issues amongst medical specialty trainees and lead to improvements in our door-to-needle (DNT) times.

Methods: We organised a scenario-based simulation education session for our trainees led by a multi-disciplinary faculty. We addressed the management of acute ischaemic stroke, intracerebral haemorrhage, and basilar artery occlusion, as well as thrombolysis complications. Learners were surveyed before and after each session to gauge improvements in knowledge and confidence using a Likert scale. Free text feedback was sought from both learners and faculty to identify areas for improvement. We measured the mean DNT 3 months before and after our session.

Results: We improved both the knowledge and confidence of trainees in managing hyperacute stroke presentations and the human factors involved in a stroke pathway. We received feedback regarding the staffing of our on-call team and improving communication, including the use of lanyard cards and single point of contact devices. We also noted an improvement in our mean DNT amongst trainees who attended our training from 51mins to 34mins. Our resources were trialled in two other healthcare trusts to refine them further, before expanding the programme locally and regionally to improve training across all healthcare trusts.

Conclusions: Simulation education is beneficial in improving knowledge and confidence in the management of hyperacute stroke and can contribute to reduced DNT.

POSTER

1452. SP - Scientific Presentation - SP - Education / Training

What is the social network of the MDTea Podcast (Multidisciplinary Team Educating about Ageing)?

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Background: The MDTea is a free open access medical education podcast designed for all healthcare professionals caring for older adults. To date there are 120 episodes.

Introduction/Method: The MDTea Podcast has CPD survey logs on its website where listeners who access the website can record their learning and receive a CPD certificate, Listeners provide their professional roles. Listener numbers for episodes were much higher than those recorded in the CPD log, so alternative measures were sought to understand who listens to the podcast. Series 11 was released in January to July 2022 and was themed around 'A Day in the Life' of health professionals working with older adults in the hospital environment. The MDTea Podcast Twitter account had 6333 followers before series 11 release and has good discussion and engagement with followers, and is regularly tagged in other geriatrics care from discussion by professionals. Measuring the followership and social network of the account may be useful to understand the MDTea's place in the social network of UK care of older adults healthcare. Therefore with each episode release the new follower numbers and if available self identified professional roles of each were recorded and counted.

Results: Over the course of the 11th series, the MDTea Podcast twitter account gained 432 new followers, from 22 different self defined professional groups who engaged with our social media. 121 followers did not identify their title. In contrast 12 self identified professions were recorded in our series 11 CPD log results from 30 responses.

Conclusion: This work has demonstrated the wide range of professionals that engage with FOAMed resources produced by the MDTea. Given the breadth of professionals working in elderly care roles in both primary and secondary settings, having an understanding content users can enable authors to design content that is appropriate for their audience.

POSTER

1559. SP - Scientific Presentation - SP - Education / Training

Using quality improvement methods to design a weekly ward-based teaching programme.

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Introduction: A weekly ward-based teaching programme was designed and implemented using quality improvement methodology. 10 topics were identified to be covered during each 4-month rotation. 1) Topic of the week introduced via a presentation in the weekly teaching session; 2) Daily topic discussions at ward level.

Method: 7 wards. PDSA 1 (weeks 1 and 2): Weekly poster with the topic and a daily fact / question PDSA 2 (week 3 onwards): a) Software introduced to enable interaction in the teaching session b) Departmental WhatsApp used to send out daily questions. PDSA 3: a) New topics selected b) More staff groups added to WhatsApp group c) Questions weekly for each ward to 'answer' in the WhatsApp group

Results: Cycle 1 – little daily ward level discussion. Generating discussion in weekly teaching difficult. Cycle 2 - more engagement with both discussions. Variation in (MDT)staff group awareness. Daily teaching not habitual everywhere. Nursing staff more engaged with prompt cards than via Whatsapp. It was clear that each ward should be supported to have a different approach to delivering the teaching. Not all staff could access to weekly teaching sessions. Cycle 3 – more ward level ownership and interaction in the virtual space. The wards that have gained the most benefit from the teaching have made the questions a fixed part within their morning routine and include the entire MDT in five-minute discussion around the questions.

Conclusion: Staff working in these wards were generally positive about the weekly topic style. Having clinical leaders who are invested in teaching can support daily - cooperation and "buy-in" from those in senior roles is crucial for the development of this learning culture. This work has demonstrated some of the challenges of teaching a diverse multidisciplinary team to make information and learning accessible and useful for all.

POSTER

1589. SP - Scientific Presentation - SP - EET (Eyes, Ear, Teeth)

Characteristics, Treatment and Healthcare Utilisation of Patients with Xerostomia in Primary Care Settings in the United Kingdom

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Introduction: Xerostomia, also known as dry mouth, is prevalent in older populations and associated with key determinants such as continual use of medication, radiation, and chronic diseases. Xerostomia significantly increases the risk of experiencing demineralisation, dental caries, tooth sensitivity, candidiasis, and other oral conditions that may negatively affect quality of life. An effective strategy to manage the risk of dental caries for patients with xerostomia is the prescription of high-fluoride products with proven efficacy. The aim of this study was to provide evidence on the burden of xerostomia, patient characteristics, treatments, and healthcare resource use in this patient population in the United Kingdom.

Method: A retrospective observational study was conducted including all patients aged ≥ 16 years with a first diagnosis of xerostomia between 01/04/2015-31/03/2020 in the Optimum Patient Care Research Database, a primary care database. Patients with < 12 months' baseline and follow-up data were excluded.

Results: 11,731 patients with a mean age of 67.93 years (SD 15.64) newly diagnosed with xerostomia were included. 72.27% of patients were > 60 years and 65.3% were females. Patients aged ≥ 65 years received a median of 5 (Q1-Q3: 4-6) drug classes in the baseline period. Analgesic agents (80.6%), cardiovascular drugs (70.3%), antidepressants and antipsychotic agents (57.3%), and antihypertensive agents (47.6%) were common prescriptions reported before the diagnosis of xerostomia. Patients had 24.2 primary care visits with the associated costs of £727.66 per patient-year during follow-up. Only 2.2% of patients received high-fluoride toothpaste, whereas 99.6% of patients were prescribed artificial saliva and 16.3% received saliva stimulants.

Conclusions: The majority of patients aged ≥ 65 years had chronic diseases for which they received ≥ 4 medications in the baseline period. Although xerostomia is predominantly managed in primary care, few patients are prescribed high-fluoride toothpaste, which is a cost-effective and simple way to reduce the inevitable risk of dental caries.

POSTER

1615. SP - Scientific Presentation - SP - EET (Eyes, Ear, Teeth)

Recommendations for the assessment and management of co-existing dementia and hearing loss within UK audiology services

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Introduction: Dementia and hearing loss (HL) are becoming increasingly prevalent in society and commonly co-exist. People living with concurrent conditions have complex needs and face additional barriers to diagnosis and management. There is a paucity of research regarding the current and optimal management of HL in people living with dementia. This research aimed to: (1) examine the current clinical provision for people living with HL and dementia within UK audiology services, and (2) explore recommendations for the management of co-existing HL and dementia from professionals and people living with these conditions.

Methods: This was an online, qualitative study with three stages: (1) open-ended survey of 37 audiologists, (2) semi-structured interviews with 13 audiologists, and (3) semi-structured workshops with seven people with lived experience of HL and/or dementia.

Results: Audiologists used various adapted and additional hearing assessments for people with dementia. Audiological interventions for people with dementia included adapted hearing aids, alternative interventions/devices, and involvement of other services/professions. Approaches to ongoing audiological care for people with dementia included providing frequent follow-ups and face-to-face, rather than remote, follow-ups. Overarching approaches to audiological care for this population involved patient-centredness, specialist training, increased carer involvement, and adjusted appointment duration. However, there are no standard procedures/guidelines relating to dementia in UK audiology services. Recommendations included enhanced training in dementia and HL across health and social care, improved multidisciplinary collaboration, appropriate carer involvement, and greater personalised care.

Conclusions: Currently, there is no standard practice for assessing and managing HL in people with dementia in UK audiology services. Although this study identified several beneficial strategies and approaches, there remain significant areas for improvement. The study results could be used in the future to produce national guidelines and training programmes for the assessment and management of HL in people with dementia, which would reduce disparities in care.

POSTER

1435. SP - Scientific Presentation - SP - Epid (epidemiology)

The burden of multimorbidity amongst older hospitalised adults in northern Tanzania: A multi-centre study

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Background: Populations in sub-Saharan Africa are ageing rapidly and Tanzania is one country experiencing this acute demographic shift. Multimorbidity (the presence of two or more chronic conditions [1]) is common in the community and associated with greater risk of hospitalisation. To-date, the prevalence amongst older hospital inpatients is unknown.

Objective: To establish the prevalence of multimorbidity amongst older hospitalised adults in northern Tanzania.

Methods: For 6-months, adults aged ≥ 60 admitted to medical wards in four hospitals were invited to participate. A standardised questionnaire, structured around the Comprehensive Geriatric Assessment, was completed. This included items regarding health insurance and exemption from health user fees (granted based on age and low socioeconomic means). Multimorbidity was self-reported using a list of 16 conditions from the Study of Global Ageing and Adult Health Questionnaire, with additional screening for hypertension.

Results: Between March and August 2021, 540 adults aged ≥ 60 years were admitted and 308 (57%) underwent assessment. Reasons for non-participation included discharge ($n=159$) and death ($n=34$) prior to researcher attendance. Of 277 participants, 145 (52%) had self-reported multimorbidity. Data were unavailable for 31 participants who were unsure of their past medical history. Hypertension was reported by 146 (52%) and an additional 35 (11%) had mean readings $\geq 140/90$ when screened. Mann-Whitney U revealed a significantly greater burden of multimorbidity in those with health insurance ($p<0.001$) or exemption from user fees ($p=.34$), compared with participants without.

Conclusion: Multimorbidity is common amongst hospitalised older adults in Tanzania. Higher rates amongst those with insurance or exemption are likely because of greater access to healthcare services and therefore diagnosis. Simple screening for hypertension identified further individuals with multimorbidity, demonstrating that it may remain underestimated. Widening access to healthcare is a government priority, but the impact of multimorbidity also poses a challenge to hospitals and policymakers.

References: 1. Johnston, MC et al. 2018. European Journal of Public Health, 29, 182-189.

POSTER

1436. SP - Scientific Presentation - SP - Epid (epidemiology)

Clinical outcomes of older hospitalised adults living with frailty in northern Tanzania: A prospective multicentre study

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Introduction: As global populations age, healthcare systems are facing challenges posed by multimorbidity, disability and geriatric syndromes. In high-income countries, frailty is a strong predictor of poor hospital outcomes. Comprehensive Geriatric Assessment is effective but resource-intensive and unavailable in sub-Saharan Africa where specialist geriatric training and allied health infrastructure are limited.

Aim: To establish clinical outcomes of older adults with frailty admitted to hospital in northern Tanzania.

Methods: All adults aged ≥ 60 years admitted to medical wards at four hospitals were invited to participate. Participants were screened for frailty using the Clinical Frailty Scale (CFS). The primary outcome was inpatient death, with secondary outcomes including length of stay, 30-day readmission and delirium (confirmed using the Confusion Assessment Method [CAM]). Outcomes for frail (≥ 5 on CFS) and non-frail participants (1-4 on CFS) were compared.

Results: Over 6 months, 308/540 patients admitted participated. Reasons for non-participation included death (n=34) and discharge (n=159) before researcher attendance. Mean age of participants was 74.9 years and 154 (50.1%) were female. Of these, 205 (67%) participants had a CFS ≥ 5 . 21 (14.9%) frail participants died, compared with 5 (6.4%) in the non-frail group (Chi-squared, $p=.095$). Length of stay and re-admission rates were higher in frail participants, but differences were not statistically significant. Delirium was diagnosed in 35 (17%) frail participants, compared with 4 (4%) in the non-frail group (Fisher's Exact test, $p<.001$).

Conclusion: Frailty in older adults admitted to hospitals in northern Tanzania is common and associated with significantly higher rates of delirium. Mortality, readmissions, and length of stay were higher in the frail group, but differences did not reach statistical significance. Type II Error (exacerbated by selection bias from non-inclusion of individuals who were discharged, or died, early in their admission) may explain this. Participants will now be followed-up for 12-months to assess outcomes longitudinally.

POSTER

1456. SP - Scientific Presentation - SP - Epid (epidemiology)

Factors influencing adherence to chronic disease medication among older adults in India: analysis of WHO - SAGE2

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Background: There is a growing number of older adults in India and accordingly a rising burden of non-communicable diseases (NCDs). Poor medication adherence among patients with NCDs is prevalent in India and is associated with adverse outcomes, increased mortality and consequently increased patient and healthcare system costs. Understanding the factors which influence adherence across India is vital to guide interventions towards improved adherence. This study examined the factors influencing medication adherence in older adults (50 years or older) with NCDs in India.

Method: Data analysis was conducted from the second wave of the World Health Organisation's 'Study on global AGEing and adult health (SAGE)' to identify socioeconomic, health-related, geographical and social support variables that influence medication adherence in adults with NCDs. Bivariate analysis and multivariate logistic regression modelling were conducted.

Results: The average medication adherence rate was 51% across 2840 patients with one or more NCDs. The strongest factors predicting non-adherence were multimorbidity (odds ratio 0.49, 95% CI 0.41-0.58) and feelings of depression (0.48, 95% CI 0.32-0.70). Rural living (0.71, 95% CI 0.48-1.05), tobacco use (0.75, CI 0.58-0.97), never having attended school (0.75, 95% CI 0.62-0.92) and feelings of anxiety (0.83, 95% CI 0.67-1.02) were also independent associated with poor adherence. Older age (1.89, 95% CI 1.40-2.55) was associated with improved adherence while there was a weak association between increased wealth and medication use.

Conclusion: Our analysis provides evidence that poor medication adherence in India is multifactorial, with distinct socioeconomic and health-system factors interacting to influence patient decision making. Public health interventions to improve medication adherence should focus on barriers that may exist due to multimorbidity, comorbid depression and low educational status.

POSTER

1667. SP - Scientific Presentation - SP - Epid (epidemiology)

Variation in acute geriatric medicine activity and outcomes in Scotland before, during and after the covid pandemic lockdowns.

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Introduction: The Scottish Care of Older People (SCoOP) collaborative reports outcomes of acute geriatric medicine admissions across Scottish hospitals. The covid pandemic caused major and variable restructuring of acute services across the country. Their impact on activity and outcomes is unknown.

Methods: We collated all SMR01/SMR01E hospital episodes from Public Health Scotland from 1st April 2017 to 31st March 2022 where over 50% of the total episode was spent under acute geriatric medicine (code AB) and the diagnosis was not stroke. Activity and outcomes in 19 major hospitals were compared across financial years 2017-19 (before-), 2020/21 (during-) and 2021/22 (after lockdowns).

Results: Admissions fell by 15% to 36954 in 2020/21 from an average 42566 before recovering to 41971 in 2021/22. Some hospitals were busier than ever in 2020/21 while others saw large reductions in activity. Age, sex and social deprivation profiles differed between hospitals ($p < 0.001$) but remained similar within each hospital at all timepoints. Mortality at 30 days post-admission was 8.5% higher in 2020/21 (17.9% v 16.5% in other years, $p < 0.001$), with 2-fold differences across hospitals. Mean median length of stay (LOS) across hospitals was 11.7 days, compared to 13.6 days in 2017-20, $p < 0.001$. There were up to 17-fold differences in median LOS between hospitals (2-34 days), $p < 0.001$. The impact of the pandemic on LOS within each hospital was variable. Readmission rates at 7 days post-discharge were broadly similar across all years but two-fold differences between hospitals were seen each year (2020/21 4.8%-9.8%, mean 6.8%, $p < 0.001$).

Conclusion: The impact of the pandemic on the activity and outcomes of individual hospitals was widely disparate, probably reflecting variation in how each hospital service responded to the pandemic. Overall activity and LOS were lower and mortality was higher in 2020/21.

POSTER

1547. SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma)

Prefabricated Orthotics with and without a Metatarsal Pad to Decrease Pain and Fear of Falling in Older Adults

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Background: Foot pain in older adults may reduce physical activity, resulting in impaired mobility and an increased risk of falls. Orthotics, both with and without a metatarsal pad, may provide foot pain relief and improved stability.

Objective: Compare the use of Aetrex orthotics with and without a metatarsal pad in decreasing pain and fear of falling in older adults. Methods: 206 participants over 60 years old were randomised into the intervention group, who received Aetrex L2305 Orthotics with a metatarsal pad, or the control group, who received Aetrex L2300 Orthotics with no metatarsal pad. At baseline and 6-week follow-up, musculoskeletal pain was reported via Numerical Rating Scales (NRS), foot pain and functionality via the Foot Health Status Questionnaire (FHSQ), and fear of falling via the Short Falls Efficacy Scale International.

Results: Both groups reported significant improvements in pain in the back, hips, knees, ankles, and feet using the NRS ($P < 0.001$). Using the FHSQ, foot pain significantly improved in both the intervention ($\bar{x} = 18.47 \pm 20.58$, $P < 0.001$) and control group ($\bar{x} = 17.21 \pm 18.74$, $P < 0.001$). Function also improved significantly in both groups ($\bar{x} = 18.35 \pm 20.67$, $P < 0.001$ and $\bar{x} = 15.07 \pm 20.15$, $P < 0.001$, respectively), as did fear of falling ($\bar{x} = 1.55 \pm 3.79$, $P < 0.001$ and $\bar{x} = 1.23 \pm 3.53$, $P < 0.001$, respectively). No statistically significant difference was observed between groups for any outcome ($P > 0.05$).

Conclusion: Aetrex orthotics, with and without metatarsal pads, decrease pain and fear of falling in older adults.

POSTER

1593. SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma)

Frailty and outcomes for older patients treated in a major trauma centre

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Introduction: Older people are the fastest growing group of hospitalised trauma patients, most commonly due to falls from standing height. The Scottish Trauma Audit Group (STAG) collect extensive national data, but this does not currently include frailty and longer-term dependency.

Method: We retrospectively reviewed consecutive cases in the STAG database for the Royal Infirmary of Edinburgh between September 2018 and February 2019. Casenote review was used to calculate baseline Charleston Comorbidity Index (CCI) and frailty status using the Clinical Frailty Scale (CFS). Outcomes of residence and mortality were collected to 1 year.

Results: We included 442 patients (mean age 62±20 years old, 43% female), of whom 218 (49%) were ≥65 years old (mean 78±8 years, 57% female). CFS could be ascertained in 209 (96%) patients ≥65 years, of whom 73 (35%) were frail (CFS ≥5). Frail patients were older (82±8 years vs. 77±8 years, p<0.001) and had more comorbidities (mean CCI 5.4±1.8 vs. 4.4±1.8, p<0.001) prior to trauma compared to non-frail patients >65 years old. Median Injury Severity Scores (ISS) did not vary by age (9 [5-12] ≥65 years vs. 9 [8-16] <65 years, p=0.07) or frailty status (9 [9-10] frail vs 9 [4-14] non-frail, p=0.59). Frail older patients were twice as likely to die within one year of trauma (32% vs 14% in non-frail, p<0.001), and this was independent of age (adjusted odds ratio 2.4, 95% confidence intervals 1.2–4.9, p=0.02). In survivors to 1 year, 16% of frail older patients required increased care at home (vs. 8% of non-frail older patients, p<0.001) and 14% were newly admitted to a care home (vs. 4% of non-frail, p<0.001).

Conclusion: A third of older patients with trauma are frail and this is an important predictor of patient outcomes beyond death. Frailty provides more prognostic information than age in this setting.

POSTER

1631. SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma)

Association between admission inflammatory markers and 30-day mortality in patients with hip fracture

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Introduction: Risk prediction tools help guide prognostic conversations and benchmarking in hip fracture care. The Nottingham Hip Fracture Score (NHFS) shows only moderate predictive ability for 30-day mortality. We assessed whether routine markers of inflammation could improve the discriminant ability of the NHFS to predict 30-day mortality following hip fracture surgery.

Methods: We studied consecutive patients admitted with hip fractures at a large-volume trauma unit between 2015 and 2020. Baseline NHFS and postoperative outcome data were extracted from a local registry and linked to routine laboratory data from patients' electronic clinical records. We selected measurements taken closest to admission pre-operatively. The biomarkers studied were albumin (negative acute-phase reactant), C-reactive protein (CRP), neutrophil count, and neutrophil-lymphocyte ratio (NLR). Univariate and multivariate logistic regression analyses were performed separately for each combination of NHFS and inflammatory marker. C-statistics were calculated to assess the discriminant ability of the NHFS with and without each inflammatory marker for 30-day mortality.

Results: We included 1710 patients, mean age 82.5 years (SD 8.2). 1199 (70.1%) were women. 104 (6.1%) patients died within 30 days of admission. In univariate analysis, admission NHFS, albumin, CRP and NLR were significantly different between those alive and dead at 30 days. Higher admission albumin was an independent predictor of 30-day mortality in multivariate analysis (OR=0.86 [95%CI 0.81-0.91], $p \leq 0.001$) as was higher CRP (OR=1.93 [95%CI 1.04-1.44], $p=0.013$). The addition of albumin significantly improved the discriminant ability of the NHFS for 30-day mortality ($p \leq 0.001$) (c-statistic 0.742 [95%CI 0.683-0.800] vs 0.681 [95%CI 0.617-0.745] for the NHFS alone). Other inflammatory biomarkers did not significantly improve discrimination of 30-day mortality when added to the NHFS.

Conclusions: Admission albumin improves the discrimination of 30-day mortality in patients undergoing hip fracture surgery when combined with the NHFS, whereas other markers of inflammation including CRP, neutrophil count and NLR did not.

POSTER

1505. SP - Scientific Presentation - SP - HSR (Health Service Research)

Using Patient and Public Involvement (PPI), Data and Design to Communicate about Frailty to the General Public

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Introduction: Despite the high prevalence of frailty among older people, the clinical definitions and implications of frailty are not well understood by the public. Existing communication material is predominantly technical in nature and aimed at healthcare professionals. This project integrated expertise in geriatric medicine, data science, user design and patient and public involvement (PPI) to develop an accessible visual communication resource on frailty that linked data stories, clinical perspectives and public views of frailty in later life.

Methods: We recruited three public contributors from the University of Edinburgh Advanced Care Research Centre's PPI network to contribute to formulating the aims and objectives of the communication resource. We developed user personas and case scenarios to consider the intended audience for the communication resource and how they might interact with it. To ensure that all key messages were data-driven, we analysed quantitative survey data from the English Longitudinal Study of Ageing (ELSA) (n=7289), which included information on sex, age and health deficits used to calculate standardised Frailty Index scores. We developed a storyboard to present each piece of information.

Results: Using an iterative co-design process with our PPI contributors, we tested different ways of communicating frailty information and ELSA data insights. Visual elements were incorporated to enhance engagement and informativeness. Core themes of the final 6-page resource included placing frailty in the context of resilience, healthy ageing and interactions with common health issues such as living with multiple long-term conditions. The prevalence of frailty and differences between mild, moderate and severe levels were communicated using person-examples inspired by ELSA data.

Conclusions: We produced a communication resource, informed by a co-design process, that addresses a key gap in existing frailty resources. Our work shows the value of integrating user experience research methods, public patient involvement and data insights to enhance health communications.

POSTER

1508. SP - Scientific Presentation - SP - HSR (Health Service Research)

Older patients' adherence to appropriate polypharmacy: challenges, strategies and outcomes of importance to stakeholders

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Introduction: Older patients often struggle to manage and take polypharmacy. Intervention studies have measured a variety of outcomes to improve adherence to polypharmacy. However, the scarcity of well-designed trials and inconsistencies in outcomes reported and measured have resulted in low-quality evidence. It is now recommended that researchers consider using a Core Outcome Set (COS); the minimum number of outcomes that should be measured and reported in all studies in a specific area. This study explored stakeholders' perspectives regarding the challenges older patients face when taking polypharmacy, potential strategies to address such challenges, and outcomes of importance with a view to developing a COS for studies focusing on adherence to appropriate polypharmacy.

Method: Semi-structured virtual and telephone interviews were convened with relevant stakeholders, recruited through several approaches. Interview topic guides sought information on challenges and strategies associated with adherence to polypharmacy. A list of potential outcomes (n=7) associated with adherence research (derived from a previous Cochrane review and two other relevant studies) was presented to participants for comment. Content analysis of audio-recorded and transcribed interviews identified key themes on challenges, strategies and outcomes.

Results: Participants (15 academics, eight healthcare professionals, and six public participants) identified 11 challenges (encompassing medication, healthcare system, patient and socioeconomic issues) and 16 educational and behavioural strategies relevant to polypharmacy. They agreed that the seven outcomes presented to them were important and suggested six additional outcomes, generating a final list of 13 outcomes for potential use in trials focusing on adherence to appropriate polypharmacy.

Conclusion(s): A range of challenges associated with polypharmacy was reported by participants, and a suite of strategies was suggested to address these challenges. The list of 13 outcomes will be used to inform the development of a COS for trials targeting interventions aiming to improve adherence to appropriate polypharmacy in older patients.

POSTER

1542. SP - Scientific Presentation - SP - HSR (Health Service Research)

Implementation opportunities for a garment-integrated sensor system for early detection of stress in people living with dementia

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Introduction: Stress and communication difficulties, both prone in people with dementia, are risk factors for challenging behaviour. Challenging behaviour negatively impacts the quality of life of people with dementia and their caregivers. Technology can help caregivers detect stress in people with dementia. However, implementation of these technologies is not always successful. The aim of this study is to explore the implementation opportunities for a garment-integrated sensor system that enables caregivers to identify early signs of stress in people with dementia.

Methods: A qualitative design with online focus groups (n=9) and interviews (n=21) with persons living with dementia (n=4), family (n=10) and professional caregivers (n=9) was used to collect stakeholders' perceptions towards the sensor system and requirements for its implementation into long-term care. Participants took part in three focus groups or interviews, of which the last round focused on implementation. Qualitative data were analysed using inductive conventional content analysis.

Results: Participants were positive about the idea of a garment-integrated sensor system and could see several groups in both intramural and extramural healthcare settings benefit from the system. Besides early stress detection, participants also saw an added value of the system for the identification of triggers for challenging behaviour or for diagnostic purposes. According to participants, implementing the system in long-term care requires clear guidelines and agreements for its use, a trial period and educating caregivers. The sensor system needs to meet several requirements (e.g. customizability, ease of use) to increase user acceptance and thereby implementation success.

Conclusions: Participants perceive the idea of a garment-integrated sensor system for people with dementia in long-term care as positive. To increase implementation success, it is important to create an easy-to-use, tailor-made system, educate stakeholders, and establish clear guidelines for its use. The next step is to validate and implement the system in long-term care.

POSTER

1573. SP - Scientific Presentation - SP - HSR (Health Service Research)

Summarising Rehabilitation for COVID-19 Patients: A Literature Review and Synthesis of COCHRANE REH-COVER

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Introduction: The role of rehabilitation medicine in treating post-acute COVID-19 survivors is currently ill-defined. Recently developed evidence-based initiatives, such as Cochrane REH-COVER, aim to describe the management of COVID-19 patients, but the variance and overlap in intervention types result in clinical uncertainty.

Methods: We collected evidence regarding performed COVID-19 rehabilitation interventions from studies collected by the Cochrane REH-COVER Rapid living Systematic Reviews between March 2020 and February 2022. We extracted a set of studies highlighting details of COVID-19 rehabilitation programmes in adult hospitalised patients. Our exclusion criteria consisted of removing case reports, opinion pieces, guidelines and review articles. We collected information on the delivered service, intervention type and length of rehabilitation where available.

Results: Out of 580 REH-COVER studies, 69 met the inclusion criteria. In-hospital interventions were present in 45 (65%) of cases, 14 (20%) were performed in community or home settings, and 10 (14%) were not explicitly defined. 44% of studies were conducted within the initial wave of COVID-19, in the first half of 2020. Among the intervention categories, 38 (55%) studies consisted of physical therapy, 41 (59%) respiratory training, 7 (10%) neurological treatment, 4 (6%) nutritional therapy and 4 (6%) speech and language therapies. Based on review, we inferred that only 34 (49%) of these studies described a multidisciplinary intervention. Among these treatments, the mean length of rehabilitation was 21 days (95% CI: 13-30), compared to 17 days (95% CI: 8-26) for those with a single intervention. However, these data were not reported in 32 (46%) studies.

Conclusions: There is currently a wide variation in descriptions of rehabilitation interventions for COVID-19 patients. The limited number of papers clearly describing the content and length of rehabilitation programmes reduce the ability to share best practices. Harmonising descriptions of rehabilitation could improve the quality and standardisation of research in this area.

POSTER

1576. SP - Scientific Presentation - SP - HSR (Health Service Research)

Patients' and carers' experiences and perspectives of the management of anxiety and depression in people with dementia

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Introduction: Many people with dementia (PwD) are affected by anxiety and depression, leading to significant changes in patient behaviour, carer burden and negative patient outcomes. Anxiolytics and antidepressants are commonly prescribed for PwD and may contribute to potentially inappropriate prescribing. This study aims to explore patients' and carers' experiences and perspectives of the management of depression and anxiety in PwD.

Methods: An online discussion forum, Talking Point, hosted by the Alzheimer's Society, was searched for relevant archived threads and posts. These were identified using 64 search terms such as "depression" and "SSRI". Data were extracted into Microsoft Word and inductive thematic analysis is ongoing to code the data and identify pertinent key themes.

Results: In total, 3539 posts were identified from 931 registered forum users. Initial findings have highlighted that anxiety and depression were commonly experienced by PwD and many described the difficulties in differentiating depression from dementia during the early stages of dementia. "Initially my wife was treated for depression and anxiety but that soon changed to MCI [mild cognitive impairment], then dementia..." [TP019]. Forum users described the use of anxiolytic and antidepressant medications as a process of trial and error: "The GP gave her sertraline but that didn't work so now on mirtazapine. Only been 10 days and really makes her sleep just with half a tablet but now crying again" [TP022]. Frank accounts of the symptoms that PwD experienced were shared, highlighting the impact depression and anxiety has on both patients and their carers.

Conclusion: This online discussion forum is a source of rich and valuable data, which may not be accessible through traditional qualitative methods. This study will provide authentic insights on patients' and carers' lived experiences of managing anxiety and depression in PwD and will inform further qualitative work with key stakeholders.

POSTER

1598. SP - Scientific Presentation - SP - HSR (Health Service Research)

A typology of community-based complex interventions to sustain independence in older people

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Introduction: Provision of community-based health services to support independence of older people, and further research in this area, would be improved by a typology of these complex interventions - thereby enabling evidence synthesis and the identification of effective intervention components. We aimed to produce such a typology in preparation for a systematic review and network meta-analysis.

Methods: The typology was developed based upon the descriptions of these interventions in published reports. This involved four stages: (1) systematic identification of relevant RCTs and related publications; (2) the extraction of descriptions of the interventions (including control/comparison) using the Template for Intervention Description and Replication (TIDieR); (3) a qualitative synthesis generating categories of key intervention features and (4) grouping the interventions based on the categories.

Results: Our search identified 496 reports of 129 studies, involving 266 intervention arms. 19 intervention components were identified: Formal homecare; Physical exercise; Health education; ADL training; Providing aids and adaptations; Nutritional support; Psychological therapy; Technology for communication and engagement; Cognitive training; Engagement in meaningful activities; Care voucher provision; Alternative medicine; Social skills training; Welfare rights advice; Medication review; Monitoring; Routine risk screening; Multifactorial-action from care planning; and Routine review following multifactorial-action from care planning. Multifactorial-action from care planning refers to a process of individualised, multidomain assessment and management resulting in a tailored selection of action components, as in comprehensive geriatric assessment. 63 different intervention types (combinations of these components) were identified.

Conclusions: The typology provides an empirical basis for service planning and evidence synthesis. Target populations are not explicitly integrated and should be considered separately. The components, being broad actions, are likely to endure; further components may be identified. However, the huge potential number of intervention types constitutes a challenge to typical approaches to effectiveness research. We recommend better reporting about organisational aspects of interventions and usual care.

POSTER

1616. SP - Scientific Presentation - SP - HSR (Health Service Research)

How can we enhance Comprehensive Geriatric Assessment for older people living with frailty in primary care and community setting

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Background: With advancing age comes the increasing prevalence of frailty and increased risk of adverse outcomes (e.g. hospitalisation). Internationally, models of Comprehensive Geriatric Assessment (CGA) delivery in primary care/community settings vary, and effectiveness is uncertain. CGA is a complex intervention and improving the effectiveness and efficiency of it first requires exploration of how individual components may work and how the intervention can be strengthened.

Aims: To explore how to enhance current CGA, the conditions needed to implement enhanced CGA and the outcomes that older people, families, health and care professionals identify as important.

Methods: A qualitative study using semi-structured interviews with older people and healthcare practitioners working in non-hospital settings with older people in the UK. Data were analysed using an abductive analysis approach. Findings were shared with our stakeholder group involving older people, family members, health and social work professionals.

Results: Twenty-seven people participated including 14 older people and 13 healthcare professionals. We identified limitations in current CGA: the lack of information sharing between different healthcare professionals who are delivering the CGA; communication between older people and their healthcare professionals; and follow-up after conducting the CGA. There was variation in participant perceptions on the provision of digital and remote assessment. However, we found that introducing remote assessment and a designated comprehensive care coordinator might be a viable solution to address the gaps in the current delivery of CGA.

Conclusions: The study identified potential challenges in the implementation of enhanced CGA. However, the participants suggested possible solutions that can be used to overcome these challenges, which aligned with feedback from relevant stakeholders. The next stage of this research will involve using these findings, alongside existing evidence and key stakeholder engagement, to develop and refine a model of enhanced CGA that can then be assessed for feasibility and acceptability.

POSTER

1643. SP - Scientific Presentation - SP - HSR (Health Service Research)

Living labs approach to integrate digital care plans into relationship-based care in care homes

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Introduction: Teaching and Research in Care Homes (ToRCH) is a living labs partnership between University of Nottingham and three care homes in Derbyshire and Nottinghamshire. We aim to engage care home teams in research, including knowledge exchange and co-designing research proposals.

Methods: We conducted 7 workshops / focus groups with 10 staff members. These were supplemented by site visits, where the researcher observed staff meetings and met with residents and relatives (for patient and public involvement). We elicited discussion by appreciative inquiry method and recorded findings through field notes. Ideas built over time, iteratively, through ongoing discussion.

Results: Digital care records, in place in all member care homes, were a focus of discussion and we identified three topics for improvement projects and accompanying research: A) Emerging from lockdown, care homes identified newly appointed staff may have missed aspects of training about digital documentation, e.g. using language consistent with the model of care. Additional support may optimise use of digital records consistent with relationship-based practice. B) Using digital care record for benchmarking to support improvement projects. C) Realtime analysis of digital care records to identify deterioration and deliver proactive care. Our partnership is working with the software providers to develop these projects to improve continuity of proactive care and to develop indicators to assess outcomes of improvement projects.

Conclusion: Our living labs partnership has enabled care home teams to reflect on their use of digital care records and how these mediate communication within the care team as well as with family carers and primary care colleagues. Fresh perspectives have emerged which may accelerate the impact of digitalisation of care homes.

POSTER

1650. SP - Scientific Presentation - SP - HSR (Health Service Research)

How do patients aged 65+, pharmacists and physicians envisage the implementation of pharmacogenomic-guided care in hospital?

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Introduction: Pharmacogenomics is using a patient's genetic information to predict their likely response to a medicine. There is evidence that patients who receive pharmacogenomic-guided care benefit from a reduction in clinically significant adverse drug reactions. Therefore, pharmacogenomic testing can be used as a medicines optimisation tool to prevent adverse drug reactions in older people and reduce associated hospital admissions. This qualitative study aimed to identify the facilitators and barriers to implementing pharmacogenomic-guided prescribing in acute care for older patients by examining the views of patients, pharmacists and physicians.

Method: Following consent, patients (aged 65+), pharmacists and physicians across two hospital sites, participated in a semi-structured interview. The interviews were transcribed and analysed using the Framework approach to identify themes describing barriers or facilitators to implementing pharmacogenomic-guided care. Patient interviews were analysed separately from the healthcare professional interviews and supporting quotes were selected to illustrate each theme.

Results: Nine patients, six pharmacists and five physicians participated in the study. Framework analysis of the patient interview transcripts identified three themes: (1) Information delivery (2) Standard of care (3) Participation in pharmacogenomic-guided care. Framework analysis of the professional interviews produced the themes: (1) Level of interest (2) Workforce pressures (3) Support required for the workforce. Professionals do not have enough knowledge of pharmacogenomic-guided care to confidently apply it to their clinical practice. Patients want to be involved in pharmacogenomic-guided prescribing decisions so pharmacogenomics does not feel imposed on them.

Conclusion(s): Older patients view pharmacogenomic-guided care as therapeutically beneficial and would like to be involved in pharmacogenomic-guided prescribing decisions, with information about pharmacogenomic-guided care tailored to their information-seeking preferences. Professionals envisage pharmacogenomic-guided care as potentially useful in improving their prescribing and medicines reviews but are concerned that operational pressures could make its implementation impractical.

POSTER

1591. SP - Scientific Presentation - SP - Incont (Incontinence)

Barriers and facilitators for the provision of continence care for care home residents: a qualitative evidence synthesis

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Introduction: Incontinence affects a significant proportion of older adults who reside in care homes. Incontinence symptoms have been linked to comorbidities, an increased risk of infection and reduced quality of life and mental wellbeing of residents. However, continence care provision can often be poor for residents, further compromising the health and wellbeing of this vulnerable population.

Method: A systematic qualitative evidence synthesis and thematic analysis established the current evidence-base of barriers and facilitators for the provision of continence care in care homes.

Results: The evidence synthesis revealed complex barriers and facilitators at three influencing levels: macro (structural, societal and external influences), meso (organisational and institutional influences) and micro (day-to-day actions of individuals impacting care provision). Macro-level barriers included negative stigmas relating to incontinence, aging and working in the older adult social care sector, restriction of continence care resources such as containment products (i.e. pads), short staffing in care facilities, shortfalls in the professional education and training of care home staff and the complex health and social care needs of older adult residents. Meso-level barriers included task-centred organisational cultures, ageist institutional perspectives regarding old age and incontinence, inadequate care home management and poor communication and teamwork among care staff. Micro-level barriers included both staff and residents' poor knowledge of continence care and negative attitudes towards incontinence symptoms, management and treatment.

Conclusions: These findings help to outline the complexities of continence care provision in older adult care homes. Macro, meso and micro level influences demonstrate problematic and interrelated barriers across international contexts, indicating that improving continence care in this setting is extremely challenging due to the multiple levels at which care provision, services and individuals are impacted. Older adult social care policy-makers, researchers and service-providers must recognise this complexity in any intervention that aims to improve continence care in care homes.

POSTER

1625. SP - Scientific Presentation - SP - N & N (Neurology & Neuroscience)

Melatonin modestly improves sleep efficiency in patients with neurocognitive disorders: a systematic review and meta-analysis

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Introduction: The administration of melatonin and melatonin receptor agonists (MRA) may result in a small improvement in sleep quality among middle-aged and older adults living with neurocognitive disorders, but debate remains as to whether effects are clinically meaningful. The purpose of this PROSPERO-registered systematic review and meta-analysis (CRD42022373972) was to synthesise evidence from randomized controlled trials (RCTs) of melatonin or MRA against placebo and other interventions for the treatment of sleep disturbances in adults with neurocognitive disorders.

Method: CENTRAL, MEDLINE, EMBASE, AMED, CINAHL and PsycINFO were systematically searched on November 4th 2022, examining the effect of melatonin and MRA on sleep efficiency: the percentage of time spent asleep while in bed. Results were analysed using Review Manager 5.4. Risk of bias was assessed using RoB 2 and the certainty of evidence was assessed with the GRADE framework.

Results: Among the 1,579 references evaluated, 13 RCTs were selected, corresponding to 16 studies, none including MRA, with a total of 592 patients. Compared with placebo, bright light treatment, or clonazepam, sleep efficiency significantly improved with melatonin administration (MD = 2.85, 95% CI: 0.88 to 4.81, p = 0.004). In subgroup analyses, only low doses of melatonin (< 5 mg) yielded a statistically significant improvement to sleep efficiency (MD = 3.81, 95% CI: 1.13 to 6.49, p = 0.005, I² = 34%), and melatonin administration statistically significantly improved sleep efficiency in patients with Mild Cognitive Impairment, Parkinson's Disease, or Multiple Sclerosis (MD = 3.27, 95% CI: 0.11 to 6.43, p = 0.04, I² = 41%), but not patients with Alzheimer's Disease. We found the overall quality of evidence to be moderate according to GRADE.

Conclusion: Melatonin may modestly ameliorate sleep quality in patients with neurocognitive disorders by improving sleep efficiency, which may be clinically significant to patients and those who care for them.

POSTER

1447. SP - Other (Other medical condition)

Delivery of resistance exercise for older people living with probable sarcopenia or frailty – findings from the BEPOP project

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Introduction: Resistance exercise is an effective intervention for older people at risk of, or living with, sarcopenia and frailty. Surveys of current UK practice in exercise prescription for these conditions found that resistance exercise was offered in only 9% of departments and was often not optimised for sarcopenia and frailty. The Benchmarking Exercise Programmes for Older People (BEPOP) project is a joint British Geriatrics Society and AGILE initiative to promote best practice in the prescription of resistance exercise for older people.

Methods: Using an online data collection tool, 10 services delivering exercise interventions to older people from across the UK submitted anonymized details of baseline assessment (including demographics), exercise prescription and progression, and outcomes, for up to 20 consecutive patients referred to their services with probable sarcopenia, frailty, falls, and reduced mobility. Descriptive data were reviewed and analysed by an expert panel comprising physiotherapists, geriatricians, and exercise specialists.

Results: Data were analysed for 188 patients with a mean age of 80 years (range 60-101). At the time of referral, 154 (83%) patients did not have a diagnosis of sarcopenia. At baseline, 115 (61%) patients received an objective assessment of muscle strength. The most common modality of resistance exercise prescribed was bodyweight exercises (n=173, 92%) followed by resistance bands (n=49, 26%). Progression of exercise programmes was predominantly through increased repetitions (n=163, 87%) rather than increased load. Forty-one (24%) patients did not undergo any review to inform progression of exercise dose. Fifty patients (30%) patients did not have re-assessment of the outcome measures recorded at baseline on completion of the prescribed exercise programme.

Conclusion: Multiple opportunities exist to improve both the diagnosis and assessment of sarcopenia, and the prescription, delivery, and monitoring of resistance exercise. BEPOP will provide individualized benchmarking reports to each site to facilitate quality improvement and local service development.

POSTER

1486. SP - Scientific Presentation - SP - Other (Other medical condition)

Resuscitation discussions and Clinical Frailty Scale scoring in older adults admitted to hospital under general surgery

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Introduction: Living with frailty is a risk factor for increased short and long term mortality. We aim to describe the uptake of escalation of care and resuscitation status discussions in frail older patients admitted to general, colorectal, and upper gastrointestinal wards.

Methods: Prospective observational study of all patients aged 65 years and over admitted under general surgery 11th February to 11th March 2022 and a second cohort of patients hospitalised between 1st and 31st of October 2022. We scored frailty using the clinical frailty scale (CFS) and identified escalation of care discussions through review of electronic patient records.

Results: We included 196 patients, average age 75.9 (65-97), 90 (46%) females and 106 (54%) males, 107 (54.6%) emergency (EM) and 89 (45.4%) electives (EL). 64 (32.7%) patients were frail (F = CFS \geq 5) and 132 (67.3%) non frail (NF = CFS \leq 4). Length of stay was 14 days, 14.9 in F and 11.4 in NF, 14 EM and EL 18.3. Surgery was carried out in 14 (25.9%) F and 33 (40.7%) NF. In total 6 patients died in hospital: 4 F (7.3%) and 3 (3.7%) NF individuals, one without resuscitation decision. Resuscitation discussions had in 20 (36.4%) F vs 4 (4.9%) NF, 19 (16.8%) EM and 6 (6.7%) EL. Percentage of discussions increased in frail patients from 24% to 42.4% overall, and 92% non-frail patients were not offered discussion.

Conclusion: 1 in 3 patients in our cohort of older adults hospitalised under surgery were frail. Higher frailty scores were associated with increased in-hospital mortality. 30% frail and 8% non-frail older patients underwent resuscitation discussions. We advocate early proactive discussions of resuscitation status and advance care planning in high-risk surgical patients.

POSTER

1492. SP - Scientific Presentation - SP - Other (Other medical condition)

Effectiveness of exercise interventions on body composition and functional outcomes in sarcopenia: A systematic review

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Background: Sarcopenia is defined as the age-related progressive loss of skeletal muscle mass, strength, and function. Although many different interventions have been suggested for the management of sarcopenia, the effectiveness of such treatments is still uncertain.

Objective: To systematically assess the different interventions strategies currently reported and to evaluate their effects on muscle mass, muscle strength, and physical function outcomes in sarcopenic participants.

Methods: Web of Science, ClinicalTrials.gov, and Scopus were systematically searched for exercise, nutritional, pharmacological, and other randomised controlled trial interventions in participants diagnosed with sarcopenia and ≥ 50 years of age. Eligibility was assessed through reviewing titles and abstracts, and if a study was found to be eligible the full texts were read for confirmation. Risk of bias was performed on included studies and subsequently data including study, participant, and intervention characteristics, were extracted. Using this data, the studies were subgrouped according to intervention type and outcomes reported, and meta-analysis was performed on exercise interventions.

Results: Database searching retrieved 2558 records. 21 full-texts were assessed for eligibility, of which 7 were included in the meta-analysis. Meta-analysis revealed that exercise interventions significantly improved appendicular skeletal muscle mass (0.5kg, 0.09-0.91CI, $P=0.02$), timed up and go (-1.67s, -2.43--0.91CI, $P<0.0001$), grip strength (2.04kg, 0.39-3.70CI, $P=0.02$), and knee extension strength (12.35Nm, 8.47-16.23CI, $P<00001$).

Conclusion: Exercise interventions significantly improved many body composition and functional outcomes in sarcopenic participants, and these results are in line with other reviews, however further research is required to consolidate these findings due to the small number of studies with heterogeneous methods.

POSTER

1523. SP - Scientific Presentation - SP - Other (Other medical condition)

**What patient-reported outcome measures are used in research involving older adults with frailty?
A rapid review**

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Introduction: The need to develop and evaluate frailty-related interventions is becoming more pertinent as life expectancy increases. Patient-reported outcome measures (PROMs) are arguably essential in this field of research and can be defined as “any report of the status of a patient's health condition that comes directly from the patient, without interpretation of the patient's response by a clinician or anyone else” (FDA 2009). Numerous validated questionnaires can be classed as PROMs, but seem inconsistently used, and of uncertain relevance to/for those living with frailty. This rapid review aimed to identify existing PROMs used in research with older people living with frailty.

Method: PubMed and Cochrane were searched (up to 24/11/22). Inclusion criteria were quantitative studies, use of a PROM, and either measurement of frailty or inclusion of older adults as participants. Distinguishing PROMs from questionnaire-based clinical assessments was necessary, and criteria were created to do this. 197 records were screened. PROMs were categorised according to the domain they assess, based on a standard set of health outcome measures for older people (Akpan et al, 2018).

Results: 90 studies were included. 119 unique PROMs were used 289 times, most frequently the SF-36 (n=23), EQ-5D (n=21) and Barthel Index (n=14). The most frequently assessed outcome domains included “Mood and Emotional Health”, and “Activities of Daily Living”. Outcome domains with fewer usages included “Participation in Decision Making” and “Carer Burden”.

Conclusions: PROM usage in frailty research is highly heterogeneous. The most frequently used PROMs omit outcomes that are important to people with frailty (e.g. Akpan et al 2018, Herrler et al 2021, Mayo et al 2022). Further research should investigate the importance of specific outcomes (and thus identify particularly relevant PROMs) to people living at different stages of frailty severity. More consistency of PROM use could facilitate evaluation of different frailty interventions.

POSTER

1541. SP - Scientific Presentation - SP - Other (Other medical condition)

The impact of an AHP prehabilitation service on frailty for cancer patients undergoing major abdominal surgery

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Background: Prehabilitation in clinical trials improves fitness, improves quality of life, reduces complications, and reduces hospital length of stay. It is not standard of care in routine clinical practice. This prospective observational study reports the outcomes of a clinical AHP prehabilitation service for older people undergoing major cancer surgery.

Methods: The LUHFT Prehab service commenced in August 2017, patients prior to major abdominal surgery for cancer were eligible for referral, this was inclusive of 8 different surgical specialties. Referred patients were invited to attend a multi-disciplinary prehabilitation clinic inclusive of physiotherapy, occupational therapy and dietetic support. In a review of the past 12 months clinical frailty score was recorded at baseline and pre surgery. Patients were given individualised exercise, wellbeing, and nutrition plans, and provided with support via 121 or group based follow up. Where distance was a barrier, telephone clinics were undertaken.

Results: Over a 12-month period, 477 patients were referred over the age of 65, of these 436 underwent baseline frailty assessment. Of these 380 went on to have surgery with an average period of 40 days between initial prehab assessment and their elective admission. In these patients 50 scored 5 or above on the clinical frailty scale, 105 fell within the vulnerable category and 163 in managing well at baseline. Of those patients reassessed pre surgery 100% of patients with a frailty score of 5 or above either improved or maintained their score. Of those that scored a frailty score of 4, 94% either improved or maintained their score.

Conclusion: A prehabilitation service is feasible and improves frailty in the lead up to major abdominal elective surgery in a cohort that would otherwise be expected to decondition due to the nature of their disease. Prehabilitation should be part of standard care for older patients undergoing cancer surgery.

POSTER

1586. SP - Scientific Presentation - SP - Other (Other medical condition)

Older age is an important predictor of non-referral to community alcohol services following an inpatient episode: findings from

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Introduction: Alcohol use disorder (AUD) in older adults is increasingly common, under-recognised and under-treated within acute hospitals.

Methods: Consecutive patients seen by the Alcohol Care Team (ACT) at an acute NHS trust between January-April 2021 were invited to take part in a service evaluation. Baseline demographic and clinical data was collected in addition to community alcohol service referrals for all patients. For older adults (>64years), Older People's Mental Health (OPMH) referral and hospital use data (ED attendances and admissions) in the 12 months prior/post index admission were also collected.

Results: Of 280 patients seen by the ACT during the 3-month period, 87 (31%) were older adults and 75% were male. Older adults resided in more affluent neighbourhoods compared to patients under 65 ($p = 0.002$). Referral to community alcohol services was predicted by younger age ($p < 0.001$), medically assisted withdrawal during admission (MAW) ($p < 0.001$) and scoring as possibly alcohol dependent ($p = 0.006$) on the Alcohol Use Disorder Identification Test (AUDIT) screening tool. In binary multivariate logistic regression considering age, sex, MAW and AUDIT category, referral onto alcohol services remained highly significant for age, with older adults less likely to be referred (odds ratio 0.029, CI: 0.007 to 0.125, $p < 0.001$). In older adults drinking at higher risk/possibly dependent levels, only 4.3% ($n=2/47$) were referred to alcohol services compared to 66.2% ($n = 96/145$) in under 65s. Older adults were more often signposted or not referred due to confirmed/perceived cognitive impairment. No significant difference in use of hospital services was found for the 12 months after the index admission.

Conclusions: Older adults are less likely to be referred to community alcohol services, despite evidence they are drinking at higher risk/dependent levels. Further exploration into the reasons behind this is required to help inform development of appropriate pathways and services for this patient group.

POSTER

1601. SP - Scientific Presentation - SP - Other (Other medical condition)

Public and patient involvement and engagement (PPIE) of older patients in codesign of research into perioperative services.

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Introduction: Patient and public involvement and engagement (PPIE) is essential to delivering patient centred, quality research. Older adults constitute an increasing proportion of the surgical population but are unintentionally excluded from traditional models of engagement. We describe the process and outputs of conducting PPIE to support future research examining the scale up of CGA-based perioperative services such as POPS (Perioperative medicine for Older People undergoing Surgery).

Method: Patients undergoing elective surgery at four NHS hospitals in England and Wales were asked to consider participation in PPIE. Twenty-two expressed interest; nine offered to participate, six declined due to their own or relative's ill health, two withdrew, five did not respond. Six were able to participate on proposed dates. Three had access to email and video calling to join a group Microsoft Teams call. Three took part in 30-minute individual telephone calls. A patient representative from Centre for Perioperative Care (CPOC) acted as peer facilitator for the interview structured around five pre-agreed questions.

Results: Six older patients contributed through PPIE to codesign research examining perioperative services for older people, with three volunteers for long-term involvement as part of a research steering group. The group offered insight into their experience of traditional and POPS-led perioperative pathways. This group emphasised the need for coordinated care, delivered by clinicians with a holistic understanding of the whole perioperative pathway, the need to reduce duplication of information provision and diagnostic testing and a proactive approach to hospital discharge planning. Participants agreed that POPS services should be established nation-wide and that research should focus on implementation and scale-up. The need for PPIE in the dissemination of future research findings was highlighted.

Conclusion: Involving older adults in PPIE is possible and necessary to deliver healthcare services, including novel perioperative care pathways, tailored to service users.

POSTER

1603. SP - Scientific Presentation - SP - Other (Other medical condition)

Proactive advance care planning alongside comprehensive geriatric assessment in care homes: a qualitative feedback analysis

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Introduction: The Enhanced Health in Care Homes Framework recognises personalised advance care planning (ACP) as a key component of optimal healthcare for care home residents. We established a multi-disciplinary care home team providing comprehensive geriatric assessment (CGA), structured medication review (SMR) and advance care planning (ACP) to a pilot cohort of frail residents in 17 care homes. We aimed to explore the acceptability and perceptions of proactive ACP alongside CGA from the perspective of resident's next-of-kin (NOK), primary care staff and care home managers (CHMs).

Methods: Data was collected using standardised questionnaires between February-September 2022. Data were analysed using qualitative content analysis. This was undertaken independently by two lead authors, after which codes and categories were identified through a collaborative approach and triangulation.

Results: Four categories emerged from NOK data: 1) Perceived benefit of frailty specialist review, 2) Perceived improved knowledge of the individual through holistic assessment, 3) Sensitive conversations were perceived to have been handled well, but this was sometimes challenging over the phone, 4) Families felt empowered in shared decision making. Six categories emerged from primary care feedback: 1) Perceived benefit of holistic reviews, 2) Improved information sharing using same clinical system, 3) Specialist frailty involvement supporting GP learning, 4) Challenges with set-up, 5) Perceived avoidance of admissions following reviews, 6) Time and financial savings for NHS. Four categories emerged from CHM feedback: 1) Perception that medical reviews were overdue, 2) Reduced care home staff workload through saving of time, 3) Specialist review and 4) Empowering staff to avoid admissions.

Conclusions: This evaluation identified key feedback themes in relation to the perceived value and acceptability of a dedicated care home team performing CGA based ACP. Stakeholders expressed positive views about the service, suggesting benefits for individual residents, primary and community healthcare staff, and the wider healthcare system.

POSTER

1610. SP - Scientific Presentation - SP - Other (Other medical condition)

Impact of the introduction of a Geriatrician in pre-operative assessment for older adults undergoing elective colorectal surgery

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Introduction: About 300,000 people living with Frailty undergo operations annually. Current evidence suggests that comprehensive geriatric assessment (CGA) pre-operatively enhances shared decision making (SDM), equity of access to surgery, length of stay (LOS) and mortality. Multiple NCEPOD reports, the National Emergency Laparotomy Audit (NELA) and National Hip Fracture Database (NHFD) programs have highlighted the unmet need in caring for these patients. Our aim was to introduce a novel combined Geriatrician/Anaesthetist pre-assessment clinic to provide better SDM and perioperative optimisation to improve outcomes for elective colorectal surgery.

Method: We performed combined CGA and Anaesthetic pre-operative assessment in patients undergoing elective colorectal surgery aged ≥ 65 years between July 2021 to August 2022. Data including Clinical Frailty Score (CFS), LOS, Type of surgery, P-POSSUM Score, 30-day mortality and 90-Day mortality were analysed.

Results: We reviewed 48 patients in 14 months. 69% patients underwent surgery and 27% declined after a comprehensive SDM process. The median age of operated patients was 80 (65-94) compared with 74 in 2020-21. 58% of patients operated were over 80, compared to 24% in 2020-21, prior to clinic inception. The median CFS was 4. 55% of patients had a LOS ≤ 7 days (73% in 2020-21), 32% was 8-14 days (18%) and 13% was >14 days in hospital (9%) respectively. 32% had a P-POSSUM score of $\geq 5\%$ whereas 10% had a score of $>15\%$. The overall 30-day and 90-day mortality rates for our cohort was 0%, compared with 0% and 3% respectively in 2020-21.

Conclusion: Our data suggests that our clinic has enhanced equity of access to curative colorectal cancer surgery for older adults. 90 days mortality remained 0% owing to excellent patient selection and enhanced perioperative care. Importantly, 27% of patients declined surgery after an extensive process of SDM. Further work needs to be completed assessing decision regret and satisfaction with SDM (SDMQ9).

POSTER

1651. SP - Scientific Presentation - SP - Other (Other medical condition)

Video-recording patients for direct care purposes: a systematic review with specific focus on the older patient

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Introduction: Video-recordings of patients may offer advantages over text-based documentation to supplement assessment and decision-making – particularly for older patients with complex needs. Our systematic review aimed to evaluate the application, acceptability, and impact of video-based records; here we highlight current evidence on using video-recordings to support direct care delivery for older patients.

Methods: Five electronic databases (Medline/Embase/PsycInfo/Cochrane/HMIC) were searched from 2012-2022. Studies involving videorecording patients aged ≥ 18 years for diagnosis, care, or treatment were identified. Study quality was assessed using published appraisal tools. Acceptability was evaluated through i) recruitment/retention rates, and ii) synthesis of patients' and professionals' perspectives and experiences. Sekhon's Theoretical Framework of Acceptability (TFA), consisting of seven constructs (affective attitude/burden/ethicality/ intervention coherence/opportunity costs/self-efficacy), underpinned the synthesis.

Results: Of 14,221 citations, 27 studies (mainly low-quality) met inclusion criteria. 10/27 studies recruited older patients including those with Parkinson's Disease (PD), dementia, stroke, end-of-life care, average age was 69. Video-recording was used in diagnosis, management/monitoring, and rehabilitation of older patients. Mean recruitment rate was 58.8% (34.2%-73.7%): mean retention rate was 81.3% (73.4%-100%). Reasons for non-participation/withdrawal related to the video-recording intervention itself (privacy concerns/poor video quality) and other factors (patients lost to follow-up). Framework synthesis generated 17 sub-themes linked to the seven TFA constructs. Attitudes to video-based records were largely positive. Video-recordings were perceived to be helpful in facilitating diagnosis/treatment/care for patients with movement disorders (PD; high-risk fallers), including in dementia populations. Digital literacy, illness severity and cognitive impairment influenced patients' capacity to consent to video-recording. Healthcare professionals were concerned about technical challenges but burden was minimised through using portable devices (e.g. iPad) for video capture.

Conclusion: Video-based records may be acceptable to older patients and professionals, providing valid consent is obtained and the potential benefits are recognised. Further research is needed to evaluate the acceptability, feasibility, and effectiveness.

POSTER

1657. SP - Scientific Presentation - SP - Other (Other medical condition)

Relationship Between Delirium and Co-morbidity in Acutely Hospitalised Older Medical Patients

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Introduction: Delirium is common in hospitalised older patients. It is associated with increased mortality, poorer functional outcomes and increased length of stay. It has also been shown to be positively associated with level of co-morbidity in older postoperative patients. The aim of the study is to assess the correlation between delirium and co-morbidity in older medical inpatients. It also aims to determine the effect of gender on this association.

Method: This was a prospective, cross-sectional analysis carried out as part of a Quality Improvement Project on screening for delirium in older patients admitted acutely on medical wards from 6th to 12th October 2022. Patients were included if they were 65 years and over. Exclusion criteria were patients younger than 65 years. Patients with incomplete data were also excluded from analysis. Patients were screened for delirium using the 4-AT screening tool which is well validated. In addition, the patients' co-morbidities were assessed using the age-adjusted Charlson's Comorbidity Index (CCI). The SPSS 29 IBM software was used for statistical analysis. Baseline characteristics were calculated using descriptive statistics. Pearson's correlation co-efficient and linear regression analysis were used to calculate correlation. **RESULTS** 233 patients in total were assessed - 119 males and 114 females. Median age was 79.4 years in males (Interquartile range – IQR – 11) and 83.5 years in females (interquartile range – IQR – 12). Overall mean age was 81.6 years (SD 8.1). The prevalence of likely delirium was 32.2 %. There was a statistically significant positive correlation between 4-AT and CCI in these patients ($r=.236$; $p<.001$). This effect was stronger in male than female patients ($r=.275$; $p=.002$) and ($r=.197$; $p=.035$) respectively.

Conclusion: There was positive correlation between comorbidity and delirium in this cohort of patients. The association appeared to be stronger in male than female patients. More studies are needed to explore and validate these findings.

POSTER

1662. SP - Scientific Presentation - SP - Other (Other medical condition)

Pilot testing of a brief pre-consultation medicines adherence screener in a geriatric outpatient setting

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Introduction: In older adults, medicines non-adherence is prevalent and harmful. Current methods of identification have limitations with direct questioning often being met with a reluctance to “admit” non-adherence to healthcare professionals. The *Making Medicines Work for You* screener has been developed to support patients and clinicians identify and discuss adherence issues in a clinical setting. This study aimed to pilot the screener and identify barriers to medication adherence in an unspecified geriatric outpatient population.

Method: Patients attending the Older Person’s Assessment Unit at a large London teaching hospital between June – October 2022 completed the 7-item paper-based screener, with the support of a carer or researcher where necessary. Descriptive analysis was used to determine the incidence and type of barriers to adherence. Associations and correlations between the screener and existing measure of adherence and medicines beliefs were assessed using Chi square and Spearman’s Rank, respectively.

Results: Of 245 patients approached, 226 consented to participate: 120 (53.1%) male; mean age 78.3 years (SD 6.7 years). 64 (28.3%) reported having someone help with their medicines and 67 (29.6%) used a multicompartiment compliance aid. 193 barriers were reported: 115 (50.9%) identified at least one barrier to adherence (median 1, range 0-5). “I’ve found my own way to use my medicines” (n=53, 27.5%) and “I sometimes forget to take my medicines” (n=45, 23.3%) were the most frequently reported barriers. The screener demonstrated strong association with MARS5 ($p<0.001$), and moderate correlations with the MARS5 ($r -0.34$, $p<0.001$) and BMQ Concerns ($r 0.29$, $p<0.001$).

Conclusion: Despite support with medication being common, half of the participants reported barriers to medication adherence. The high rate of completion, strong association and moderate correlation with existing adherence measures suggest that the screener may have value in this setting. Further work is required to explore the barriers identified and develop appropriate interventions.

POSTER

1515. SP - Scientific Presentation - SP - PD (Parkinson's Disease)

Evaluation of outcomes across delirium subtypes in hospital admissions in patients with Parkinson's disease.

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Introduction: Delirium is prevalent in patients with idiopathic Parkinson's disease (iPD) who are admitted to hospital. The hypoactive subtype of delirium is associated with poorer outcomes in hospitalised patients. The aim of this study was to evaluate different outcomes across delirium subtypes in unplanned hospital admissions in patients living with iPD

Methods: Data was collated prospectively on all patients with idiopathic Parkinson's disease admitted to our hospital's medical wards between 1st January 2019 and 30th March 2020. Electronic case-note review and in-person assessments were used to determine a diagnosis of delirium, the delirium subtype, and key outcomes including length of stay (LOS) and mortality. Data was analysed with respect to both index admissions and those readmitted during the study period.

Results: 123 patients with iPD (male 52.8 %, mean age 77.9 years) accounted for 189 admissions. Delirium was present in 91/189 admissions (48%). There was no difference in Hoen & Yahr or Clinical Frailty Scale levels between groups with and without delirium. The prevalence of dementia was higher in the delirium group (48.3% vs 25.5%). Hypoactive delirium was the most common subtype (49.5%); hyperactive (13.2%), mixed (11%) and neutral (neither hypo- nor hyperactive) 26.4%. 12-month mortality in the index admissions was highest in the hypoactive subtype (57.1%). Median LOS (all admissions) was 11.5 days in patients with delirium vs 5.5 days in those without. A mixed delirium phenotype had longest LOS (mean 30.7 days) compared with other subtypes.

Conclusions: The hypoactive subtype of delirium predominates in hospitalised patients with iPD. Length of stay was longest in those experiencing a mixture of hyperactive and hypoactive subtypes, and mortality was highest in the hypoactive group. Healthcare settings need robust systems screening for delirium in Parkinson's patients, with prevention and management processes to reduce morbidity and mortality in this complex group.

POSTER

1618. SP - Scientific Presentation - SP - PD (Parkinson's Disease)

A survey of attitudes towards physical activity and acceptability of remote physiotherapy for people with Parkinson's disease

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Introduction: People who have recently been diagnosed with Parkinson's disease (PD) may do less physical activity than the general population because of PD symptoms or loss of confidence. We have developed a remote physiotherapy intervention for which we are running an ongoing feasibility trial. To gain a broader understanding of attitudes to physical activity and physiotherapy, we surveyed people with early PD in UK. We also sought views on use of digital technology and receiving teleconsultations with health practitioners.

Method: We developed a questionnaire which was distributed on paper to local Parkinson's UK groups, and online which was distributed via Parkinson's UK media and more broadly via social media. The online questionnaire was hosted by JISC Online Surveys. The initial filter question asked whether the respondent was diagnosed within the previous 4 years and was resident in UK. We received n valid responses online and n valid paper responses. In terms of demographics, the most frequent age category was 60-69 years, with just over half being male (53%). Respondents of diverse ethnicities were 1.7% of the total sample.

Results: For physical activity, the majority of participants reported a high or average level of physical activity, with only 11% reporting a low level. The majority of participants reported that regular exercise was extremely or very important for keeping well with PD. When asked about barriers to being active, the most common response was apathy (36%), followed by difficulties due to PD symptoms and feeling exhausted. These barriers may be amenable to physiotherapy intervention, and we asked participants about their experience of physiotherapy. 44% reported that they had never had physiotherapy for PD; the remainder ranged from single assessment to more than one course of physiotherapy.

POSTER

1530. SP - Scientific Presentation - SP - Psych (Psychiatry & Mental Health)

Mediation effect of childhood health status, life adversities, financial condition, and network satisfaction on suicidal ideation

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Introduction: The study is to explore how childhood health status (X), early life adversities (M1), financial condition (M2), and satisfaction with social networks (M3) are associated with the development of suicidal ideation (Y) over time among older adults in 13 European countries. Respondents were drawn from the Survey of Health, Ageing, Retirement, in Europe (SHARE) conducted in 2013 (Wave 5), 2015 (Wave 6), 2016 (Wave 7), and 2020 (Wave 8). 56.8% (n=10043) of respondents were female, and 43.2% (n=7642) were male. The mean age at Wave 8 was 72.35 (range 60-103).

Method: The conditional process analysis using the PROCESS macro (model 6), which can perform the same functions as structural equation modelling, was applied (Hayes, Montoya & Rockwood, 2017).

Results: A poor childhood health status (X) (coeff=.1222, p<.001) was found to have a direct impact on suicidal ideation (Wave 8), but its effect was decreased after considering the mediation effect of the three mediators (coeff of M1=.1511, p<.001, coeff of M2=.1931, p<.001, and coeff of M3=-.1640, p<.001) (Coeff of X to Y via M1, M2 and M3=.0428, p=.1913, Full competitive mediation).

Conclusion: Findings show that poor childhood health status contributed significantly to developing suicidal ideation over time. The cumulative risk of early life adversities and a worse financial situation than expected earlier in life positively mediated the impact of adverse childhood health status on developing suicidal ideation. However, a satisfied social network can eliminate the cumulated risk of adverse childhood health status, early life adversities, and a worse financial situation in the development of suicidal ideation. A higher level of satisfaction with social networks, especially since the outbreak of the COVID-19 pandemic, is a protective risk for suicidal ideation among older adults.

POSTER

1565. SP - Scientific Presentation - SP - Stroke (Stroke)

Prevalence of frailty in a TIA clinic and associations with mortality

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Background and aims: Frailty is a clinical syndrome of increased vulnerability to stressors, associated with adverse outcomes after stroke, but its impact on outcomes after transient ischaemic attack (TIA) remain unclear.

Methods: Retrospective analysis of 1185 patients referred by the emergency department (ED) who attended TIA clinic with a Clinical Frailty Scale (CFS) within two weeks. Records were combined from two routinely collected databases, and prevalence of frailty was determined. Frailty was classified as CFS score ≥ 4 . Data were collected on date of death, and hazard ratios (HR) were determined through cox proportional hazard regression, adjusted for prognostic factors.

Results: 7945 patients were referred through the ED between 01/01/2016 and 12/03/2022. 1185 patients were included. 53.5% (n=634) had frailty. Patients with frailty tended to be older (median age 81 vs 74, $p < 0.001$) and female (53.9% vs 39.9% $p < 0.001$). TIA was diagnosed in 28.3% (n=335), 61.2% (n=205) of whom were frail. Stroke was diagnosed in 23.1% (n=274). 46.7% of these had frailty (n=128). In TIA patients and the whole cohort (WC), frailty (TIA: HR 2.69 [95%CI 1.23-5.87, $p = 0.013$], WC: 2.58 [95%CI 1.64-4.08, $p < 0.001$]; and increasing age [HR 1.07 95% CI 1.04-1.12], were predictive of mortality. In stroke patients, only increasing age was predictive of death, (HR 1.11 [95%CI 1.04-1.19, $p = 0.003$]).

Conclusions: Frailty is common in TIA and is predictive of mortality. Studies are required to investigate the effects of frailty on other outcomes after TIA, including: quality of life; progression to stroke; and how frailty impacts rehabilitation.

POSTER

1664. SP - Scientific Presentation - SP - Stroke (Stroke)

Assessing frailty and anticholinergic burden in stroke patients: a prospective, observational study

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Introduction: Frailty assessment in stroke is not commonly integrated into clinical practice, despite current clinical recommendations. Pre-stroke frailty is associated with longer-term mortality, length of admission, and disability. Similarly, anticholinergic burden (ACB) is not routinely reviewed, even though it is associated with cognitive and physical impairment, increased hospital admissions, and higher mortality in older people. Healthcare Improvement Scotland-Frailty (HIS-Frailty) is a novel tool for the evaluation of frailty in older people. Our aim was to compare and correlate the identification and severity of frailty with HIS-Frailty to the Rockwood Clinical Frailty Scale (CFS) in stroke. We also used the ACB Score to determine if there was a difference in ACB between hospital admission and discharge in these patients.

Methods: We conducted a prospective, observational, single-centre study in a stroke unit. Patients with a cerebrovascular diagnosis were included. We compared frailty assessment through linear correlation and ACB through mean difference in scores.

Results: were considered statistically significant if p-value < 0.05 and highly statistically significant if p-value < 0.005. SPSS® 26.0 was used to perform data analysis. We included 145 patients. 110 (76%) were older than 60 years and 75 (52%) were male. Most admissions were due to ischemic stroke (67%), closely followed by TIA (14%). Forty-eight (32%) were classified as frail. There was a strong positive correlation between HIS-Frailty and the CFS ($r = 0.95$; $p < 0.00001$; $R^2 = 0.91$). Seventy-nine (55%) patients had significant ACB. There was no significant difference between ACB at admission and discharge (MD = 0.010, CI 95% -0.52 to 0.54; $p = 0.97$).

Conclusion: HIS-Frailty may prove to be a consistent and easy tool for the systematic identification of frailty in stroke patients, in accordance with best clinical practice guidelines. We should identify and standardise measures to reduce ACB after admission for stroke.

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