

**22nd International Conference
on Falls and
Postural Stability
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Book of Abstracts

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Platform presentations

SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma) [Platform Presentation]

843. Visual function risk factors for falls in older adults: a case-control study

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Introduction Visual impairment has been identified as one of the many risk factors associated with falls, yet despite the National Institute of Clinical Excellence (NICE) guidelines, vision is rarely systematically tested in falls assessments. The aim of our study was to investigate the association of impaired visual function and falls in older adults.

Methods Visual function risk factors; ETDRS visual acuity (VA), contrast sensitivity (CS), stereoacuity (SA), binocular vision (BV) and visual fields (VF) were measured in a prospective observational individually age matched case (N=83) control study (N=83). Socio-demographic factors, general health, number of medications, health quality, fear of falling and physical activity data was also collected for each participant.

Results Cases (falls typically <2months) and age matched controls had a similar mean age (72 ± 6.5 yrs) and gender distribution. Older adults have an increased risk of experiencing a fall if they have reduced visual function (odds ratio (OR): 3.49, 1.64-7.45, $p=0.001$), specifically impaired stereoacuity worse than 85" of arc (OR: 3.4, 1.20-9.69, $p=0.02$) and reduced (by 0.15 log unit) high spatial frequency CS (18 cpd) (OR:1.40, 1.12-1.80, $p=0.003$). Older adults with a hearing impairment are also at higher risk of falls (OR: 3.18, 95% CI: 1.36-7.40, $p=0.007$). The falls risk decreases with living in a less deprived area (OR: 0.74, 0.64-0.86, <0.001), or socialising more out of the home (OR: 0.75, 0.60-0.93, $p=0.01$).

Conclusion Impaired stereoacuity worse than 85" of arc and contrast sensitivity at higher spatial frequencies are visual risk factors for falls in older adults. Also, impaired hearing, social and behavioural determinants must be considered in the prevention of further falls in older adults. Interventions for modifiable biological risk factors (hearing and vision) are paramount for older adults in addition to public health messaging and social prescribing to reduce health inequalities for social and behavioural risk factors.

SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma) [Platform Presentation]

849. Decision Tree Modelling with the Syncope-Falls Index: Using machine learning in prediction of falls within the older population

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Introduction Various pre-existing conditions and increased frailty in the older population contribute to the multi-factorial aetiology of falls. Decision Trees are a white-box machine learning model of good predictive power while providing visualisation of the classification data. The aim of this project was to generate a Decision Tree as a prediction model for future falls and to extract important contributing factors in The Irish Longitudinal Study on Ageing (TILDA).

Method The Syncope-Falls Index (SYFI) is a 40-deficit index previously designed on the TILDA dataset using the frailty index methodology. The SYFI was utilised in a decision tree model to predict all falls in TILDA participants between Waves 1 (2010) and Wave 4 (2016). Tuning of the tree's hyperparameters was performed to enhance the accuracy of the model. Feature importances were derived from the tree to obtain the most important SYFI deficits predicting falls.

Results The use of SYFI deficits in a decision tree algorithm produced a 61% predictive power in predicting all falls within a 6-year period. 13 deficits were identified to have significant importance for falls prediction. Gender was shown to be the most important feature in predicting all falls (feature importance 0.17), followed by Z-drugs (0.13) and poor eyesight or blind (0.13). Other modifiable deficits found to be relevant were the use of antihypertensives (0.048) and alcohol/substance abuse (0.034).

Conclusion Important SYFI deficits identified by the model may help direct clinicians in modifying crucial risk factors for the prevention of falls. Comparison of important features amongst the different types of falls may also shed light onto the clinical overlap of complex falls and syncope. The demonstration of machine learning applications in medicine suggests its potential in solving the conundrums posed in large clinical datasets, whilst allowing broader perspectives to be unearthed.

SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma) [Platform Presentation]

823. Protected by worry: A qualitative exploration of worries about falling in older adults

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1. Introduction. Worries about falling are common in older adults deemed to be at a high risk of falling. For example, in our previous work, we found that nearly 80% of older adults who have fallen will report engaging in worries/ruminations about falling when their balance is threatened. It has been suggested that these worries can reduce balance safety by acting as a distracting dual-task. However, it is also possible that they may serve a protective purpose, e.g., preventing individuals from engaging in risky activities. The present work adopted a qualitative approach to conduct an in-depth exploration of older adults' perceptions of worries about falling.

2. Method. Semi-structured interviews were conducted with 15 community-dwelling older adults (mean age = 77.8 years; males = 4/15) who reported experiencing worries about falling. Reflexive thematic analysis was used to analyse the data.

3. Results. Participants were mostly worried about the consequences of an injurious fall – particularly with respect to loss of independence and subsequent institutionalisation. This stemmed from having observed these outcomes occurring in friends/family members who had fallen. Experiencing a fall – or becoming aware of balance limitations – led participants to believe that a similar outcome could happen to them, thus triggering worries about falling. Despite causing psychological distress, worries were largely identified as being protective if they occur prior to engaging in the 'worrisome' activity. In these instances, worries lead to behavioural adaptations necessary for ensuring safety. However, negative consequences to balance occur when worries persist beyond the initiation of such adaptive behaviour - and particularly in instances of low perceived control.

4. Conclusions. These findings provide novel insight into the development and consequences of worries about falling in older adults. They highlight the importance of considering when worries occur before deciding to clinically intervene.

SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma) [Platform Presentation]

854. Alternative Measures of Adiposity in Relation to Falls in Older Adults- MELoR Five-year Follow-up Study.

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Introduction: Few studies have demonstrated the association between obesity and falls risk in older adults. Obesity, often determined by body mass index (BMI), does not define an individual's adiposity and has manifested conflicting arguments on its adverse outcomes. Hence, we aimed to evaluate the aforementioned associations by using alternative measures of adiposity; the body fat percentage (BF%), waist circumference (WC), and waist-to-hip ratio (WHR).

Method: Five-year telephone follow-up data was available for 799 individuals aged ≥ 55 years from the Malaysian Elders Longitudinal Research (MELoR) study. Enquiries were made on falls in the past 12-month. BF%, WC, and WHR were obtained during baseline clinical visit. Each measurement was ranked into four quartiles (Q1, Q2, Q3, and Q4). Comparisons were made according to each measurement quartiles using logistic regression with the lowest quartile (Q1) as the reference group.

Results: Of 799 participants with mean (SD) age 68.2 (7.2) years, 459 (57.4%) were female, and 171 (21.4%) had reported falls at five-year follow-up. Increased in BF% (Q2, Q3, and Q4) were associated with prospective falls at five-year follow-up (Rate ratio, RR (95% Confidence interval, CI): 2.25 (1.22-4.12); 2.14 (1.16-3.96); 3.60 (2.00-6.48) respectively). The association remained significant after adjustment for age, but no longer significant under further adjustment for gender where female (mean (SD) BF%, 39.7 (6.2) %) reported with higher BF% than the male (mean (SD) BF%, 26.5 (5.6) %), p -value= 0.028. WC and WHR were not associated with falls in older persons in five years.

Conclusions: High adiposity was found to increase the risk of falls after five years. This study highlighted that volume of adiposity implicates the risk of falls in older adults regardless of their fat distribution. The role of body fat loss intervention to reduce falls risk should therefore be advised over losing weight without losing muscle mass.

CQ - Clinical Quality - CQ - Patient Centredness [Platform Presentation]

835. Routine Assessment Of Continence In Patients Admitted With Falls As Per Nice Guidelines:

S Gupta¹; C Negansan ²;K Thu ³

Frimley Park Hospital

Introduction: Incontinence is one of the important markers of frailty. NICE guideline on falls mentions routine assessment of continence on all patients admitted with falls. However in practice, this is not always done. The aim of this study was to see whether continence assessment had taken place in all patients admitted with falls and to see what treatment we could offer for fallers with incontinence.

Method- We did the study in a community hospital, over six month's period and included 75 patients with mean age of 82 years. None of them had been routinely asked for a continence history in the acute hospital, when they have been admitted with a fall. We took a detailed continence history on all these patients and discussed them in our weekly MDT.

Results 24% were continent on admission. 40% patients had dementia/cognitive impairment. Among those incontinent, 49% had urge, 15% stress and 36% mixed respectively. 28% had double incontinence. 10% were decided to be kept on long-term catheter to protect skin integrity as they were doubly incontinent, frail and with cognitive issues. Patient with urge and mixed incontinence had regular toilet training. We targeted some treatment measures. This included pelvic floor exercise (4), urology and gynaecology referral (15), incontinence clinic follow-up (26) and pharmacological treatment (12).

Conclusion Cognitive issues and frailty were the limiting factors for intervention such as toilet training, pelvic floor exercise and uro/gynae referral. This study showed the importance of routine comprehensive evaluation of continence for patients presenting with falls. Early identification and targeted management of continence play a major role in improving quality of life and implementing appropriate discharge planning and follow up plans for our frail elderly patients admitted with falls. Reference: Falls in older people: assessing risk and prevention -NICE guidelines 2013

SP - Scientific Presentation - SP - Psych (Psychiatry & Mental Health) [Platform Presentation]

834. Falls-Efficacy – a Unidimensional or Multidimensional Construct?

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Introduction Falls efficacy (FE) is a widely studied outcome of falling, yet it is commonly confused with fear of falls (FoF). This study aimed to differentiate the two constructs by proposing a hypothesis that FE is a multidimensionality concept. The model builds upon two main components of posttraumatic stress disorder (PTSD) - fear and anxiety. There were three pathways predicted: 'at the moment FE' where fear is directly associated with FE, 'constant FE' where anxiety is directly associated with FE, and 'elaborated FE' where FE was indirectly associated with FoF.

Methods In this cross-sectional study, a convenience sample of 119 participants in Poland aged >60 years who were hospitalised due to their fall injuries (fracture or head trauma) completed questionnaires regarding FE, FoF and PTSD symptoms.

Results Path analyses revealed that all hypothesised paths were supported and accounted for 61% of the variance in FE. Strong relationships were found between FE and fear (.261, 95% CI [.109, .416], $p = .009$), FE and anxiety (.447, 95% CI [.303, .632], $p = .006$), and FE and FoF (-.286, 95% CI [-.396, -.183], $p = .006$).

Conclusion This study proposed a new theoretical understanding of the psychological response to falls in which FE is a multidimensional concept. It appears that FE acts differently depending whether anxiety, nonspecific fear or FoF influences it. Thus, not only can FE play a positive role in reducing fall risk, but also FoF can be protective, which becomes maladaptive when anxiety is present.

Poster presentations

CQ - Clinical Quality - CQ - Improved Access to Service [Poster]

655. The Role of Advanced Physiotherapy Practitioners in Falls Clinic

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Introduction Multidisciplinary clinics are established in the management of frail patients presenting with falls. Demand for falls clinics is increasing with population ageing. The Covid-19 pandemic has accelerated the need to reduce hospital attendances, provoking the need to explore new ways to deliver an effective service. This is an audit of a pilot project whereby the initial assessment of patients referred to falls clinic was conducted by an Advanced physiotherapy practitioner (APP) in the patient's home referring for geriatrician input when required.

Method This was a retrospective audit of the medical records of patients referred to the multidisciplinary falls clinic in the 5 months (June-October 2016 - pilot group) compared with the same 5 months the previous year (control group).

Results The time to be seen was reduced from 69 days to 20 days. Only 39% of those seen in the study group were referred on to the Geriatrician. There was a reduction use of medical resources: 24 hour tapes(37% to 14%), ECHO (11% to 0%), CT/MR brain (16% to 7%). DEXA scans were requested at the same rate. The readmission rate was 16% in the control group (100% fracture rate), compared to a readmission rate of 25% in the study group (43% fracture rate).

Conclusion Assessment of patients in their homes enabled quicker understanding of the mechanism of falls, reducing the need for further testing. A greater proportion of the pilot cohort were readmitted with falls, but with reduced fracture rate. Investigation found that none of these falls would have been prevented if the patient had seen the Consultant geriatrician. We have no data on subsequent falls not requiring hospital admission. APPs are a new cohort of advanced clinical practitioners who can enhance clinic capacity and reduce waiting times whilst maintaining standards of care.

The Role of Advanced Physiotherapy Practitioners in Falls Clinic

Dr A.Morrow, S. Markevics, Dr S.Harris - Royal Devon & Exeter Hospital

Introduction

- Demand for falls clinics is increasing with population ageing.
- Covid has accelerated the need to reduce hospital attendances.
- Initial assessment in the home by an advanced Physiotherapy Practitioner (APP) offers a potential solution to waiting times and geriatric clinic burden.

Method

Retrospective audit of the medical records of patients referred to the multidisciplinary falls clinic in the months June-October across 2 years.

- 2015 – all patients seen by geriatrician
- 2016 (pilot) – all patients first assessed by an APP, and referred on to geriatrician when necessary

	2015	2016
Number of patients seen	19	28
Time to be seen	69 days	20 days
Seen by Geriatrician	19 (100%)	11 (39%)
Investigations requested:		
24h Tape (abnormal)	37% (29%)	14% (0%)
Echocardiogram (abnormal)	11% (0%)	0%
DEXA scan	21%	21%
CT/MRI Brain	16%	7%
Other medical tests	26%	7%
Falls admissions <3 years (with fracture)	16% (100%)	25% (43%)

Results

- More patients seen
- Reduced waiting times
- A greater proportion of the pilot cohort were readmitted with falls, but with a reduced fracture rate.
- Investigation found that these falls were unlikely to have been prevented had the patient seen the Consultant geriatrician.

Conclusion

- Assessment of patients in their own homes enabled quicker understanding of the mechanism of falls.
- APPs are a new cohort of advanced clinical practitioners who can enhance clinic capacity and reduce waiting times, unnecessary hospital visits and medical tests whilst maintaining standards of care.

CQ - Clinical Quality - CQ - Patient Safety [Poster]

669. Improving Access to Call Bells: Lessons from the Pandemic

Abbie Morrow; Alexander Knighton

York District Hospital

Introduction Call bells are a simple safety measure linked to prevention of falls. The National Audit of Inpatient falls 2017 highlighted that access to call bells was highly variable across trusts and recommended regular auditing. The national average of access to call bells was 81%. The winter covid pandemic posed a significant burden on staffing levels due to absence and redeployment. Experienced nursing staff are essential to maintaining good quality care to elderly patients.

Method We conducted an audit of access to call bells on a geriatric ward in December 2020 (mid-pandemic) compared to April 2021 (post-pandemic). Patients receiving 1:1 or cohort nursing care were not included.

Result A total of 40 patients were audited. Mean age mid-pandemic was 88.7 compared to 86.4 post-pandemic. The average frailty score was 5.4 and 5.5 respectively. 47.4% of patients mid-pandemic had a documented dementia or delirium, versus 28.6% post-pandemic. The percentage of patients with access to a call bell mid-pandemic was 42.1% compared to 85.7% post-pandemic, a statistically significant difference ($\chi^2 = 8.3$, $P=0.004$). Relative risk of call bell unavailability was 4.1 times greater in the December cohort than in April (RR 4.1, 95% CI 1.3 - 12.4). Staffing was reported to be below expected levels in December 2020 with not all nurses/HCAs having experience in geriatric care compared to expected staffing levels of experienced ward staff in April 2021.

Conclusion Access of call bells to elderly patients remains a simple intervention in preventing inpatient falls. In light of the threat of new covid variants and future winter pressures we remain hopeful that the importance of adequate levels of experienced nursing staff for our elderly population is not underestimated. We are currently implementing a "5 moments for call bell access" quality improvement project and recommend further auditing across departments within the Trust.

Access to Call Bells: Lessons from the Pandemic

Dr A Morrow, Dr A Knighton – York Hospital

Introduction

- Call bells are a simple safety measure linked to prevention of falls.
- The winter covid pandemic posed a significant burden on staffing levels due to absence and redeployment.
- We measured the impact this had on our elderly hospital population before implementing our own quality improvement plan (QIP).

Method

- Audit of patients on a single COTE ward who had access to a call bell during the pandemic (Dec 2020) and afterwards (April 2021).
- Patients receiving 1:1 or cohort nursing care were not included.

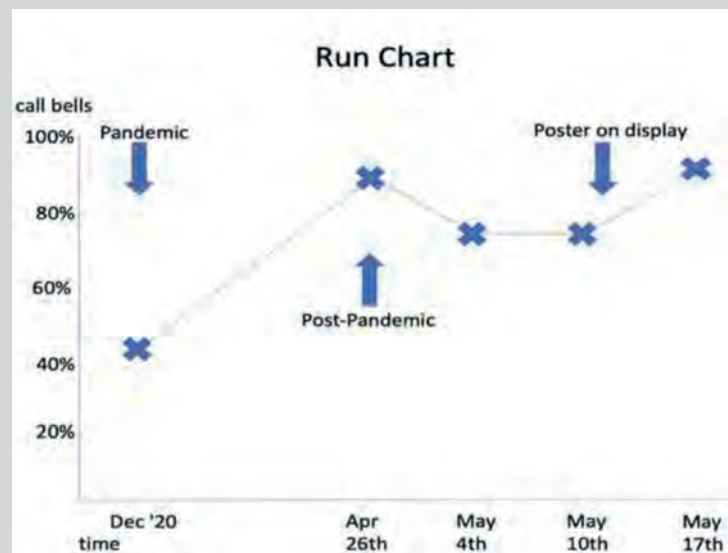
Results

	Dec20	April21
Mean Age	88.7 years	86.4 years
Frailty (Rockwood)	5.4	5.5
Cognitive Impairment	47.4%	28.6%
Access to Call Bell	42.1%	85.7%

- Relative risk of call bell unavailability was 4.1 times greater in the December cohort than in April. Our results reached a statistical significance ($x2 = 8.3$, $P=0.004$).
- Staffing was reported by the ward sister to have been below expected levels during the first audit period compared to the second.

Implementation of QIP

- Ongoing audit revealed call bell access was falling below national standard of 81% in May 2021.
- To address this we created a "5 moments for call bell access" poster which was displayed within each bay.
- This saw a further increase in access of call bells to 90%.



Conclusion and Discussion

- Access of call bells to elderly patients remains a simple intervention in preventing inpatient falls.
- Our audit suggests additional pressures on the health system such as COVID-19 negatively impact on call bell access in elderly patients.
- We recommend ongoing audit across departments within the trust.

**Abstract
withdrawn**

**Poster
withdrawn**

CQ - Clinical Quality - SP - Falls (Falls, fracture & trauma) [Poster]

723. An Audit looking at the Clinical Effectiveness of Neck of Femur Fracture Management and compliance with National Guidelines.

A Kurani 1, S Setty 2

1. Barnet Hospital, 2. Department of Anaesthetics, Barnet Hospital

Introduction: The annual incidence of neck of femur fractures is 77,000 and the estimated treatment cost per patient is £25,000. It is imperative to optimise patients peri-operatively and operating early is key to successful outcomes (1). **Objective:** To profile local compliance with the National Institute for Health and Care Excellence peri-operative care guidelines for neck of femur fractures (2).

Method: 20 patients were retrospectively, randomly selected from the database and their records reviewed. **Results:** The mean presentation age was 82 and 85% of cases were ASA grade 3 and above. The Nottingham Hip Fracture Score was documented in 0% of cases and a clinical frailty score was documented in 50% of cases. Orthogeriatrician review should occur within 72 hours of admission (compliance in 82% of cases). Surgery should be performed within 36 hours of admission (compliance in 65% of cases). 20% of cases had an acceptable delay for further pre-operative optimisation and 15% had an unacceptable delay. Pre-operative delirium assessment was performed in 80% of cases and reassessed post-operatively in 30% of cases. 90% of patients had pre-operative albumin checked. A low albumin is associated with increased post-operative morbidity (2).

All patients received optimum analgesia within 24 hours of admission. The average length of stay was 18.4 days compared with the national average of 15.5 days. The post operative mortality within 30 days of admission was 20% compared with the national average 6.5% (3).

Conclusion: This audit highlights areas of good performance including analgesia on admission and prompt orthogeriatrician assessment. The implementation of a national neck of femur fracture framework pathway and education of trainees would be a step towards excellent and safe care. **References** 1. Griffiths R et al. Anaesthesia. 2012;67(1):85-98. 2. National Institute for Health and Care Excellence. London: NICE 2011. 3. Royal College of Physicians. London: RCP; 2020.

Introduction

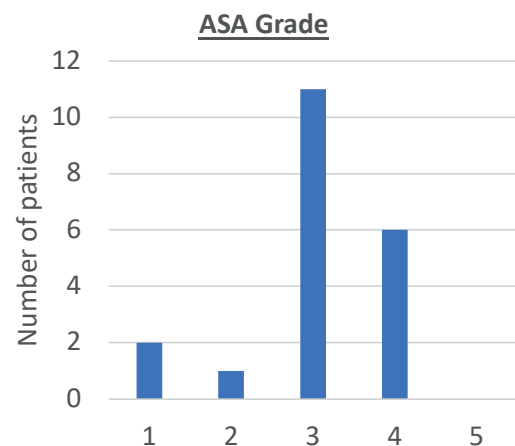
The annual incidence of neck of femur fractures is 77,000 (1) and the estimated cost of treatment per patient is £25,000. It is imperative to optimise patients peri-operatively and provide excellent care. The average age at presentation is 83 years old, and early surgery is the key to successful outcomes (2).

Objective

We set out to retrospectively profile local compliance with the National Institute for Health and Care Excellence standards for peri-operative care of neck of femur fractures (3).

Methods

20 patients were retrospectively, randomly selected from the database and their records reviewed.

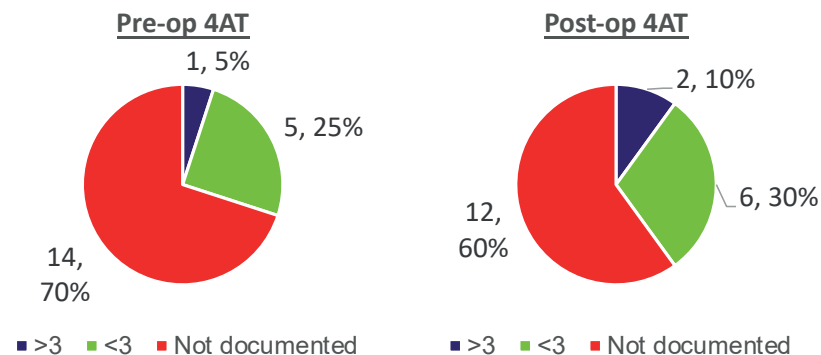


Results

The mean presentation age was 82 years old and 85% of cases were ASA grade 3 and above. The Nottingham Hip Fracture Score was documented in 10% of cases and a clinical frailty score was documented in 50% of cases.

Orthogeriatrician review should take place within 72 hours of admission (compliance in 82% of cases). Surgery should be performed within 36 hours of admission (compliance in 65% of cases). In the remaining 35% of cases, 20% had an acceptable delay due to further pre-operative optimisation and 15% of cases had unacceptable delay. Pre-operative delirium assessment was performed in 80% of cases and reassessed in 30% of cases post-operatively. 90% of patients had pre-operative albumin checked. A low albumin is associated with increased post-operative morbidity (3).

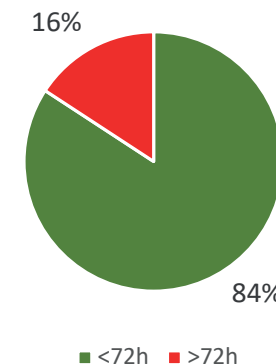
All patients received optimum analgesia in first 24 hours of admission. The average length of stay was 18.4 days compared with the national average of 15.5 days. The post operative mortality within 30 days of admission was 20% compared with the national average 6.5% (4).



Conclusion

This audit highlights the areas of good performance such as analgesia on admission and prompt orthogeriatrician assessment. A national neck of femur fracture framework pathway and ongoing education of trainees would be a step towards excellent and safe care.

Orthogeriatrician assessment



Recommendations

1. Incorporate Nottingham Hip Fracture School into clerking to aid in post-op mortality risk.
2. Monitor delirium regularly post-operatively.
3. Perform Rockwood score as part of pre-op risk assessment.
4. Assess Patients for malnutrition and refer to dietetics input when triggered.

References

1. White SM et al. Anaesthesia for proximal femoral fracture in the UK: first report from the NHS Hip Fracture Anaesthesia Network. *Anaesthesia*. 2010;65(3):243-8.
2. Griffiths R et al. Association of Anaesthetists of Great Britain and Ireland. Management of proximal femoral fractures 2011: Association of Anaesthetists of Great Britain and Ireland. *Anaesthesia*. 2012;67(1):85-98.
3. National Institute for Health and Care Excellence. Hip Fracture: Management. Clinical Guideline CG124. London: NICE 2011.
4. Royal College of Physicians. National Hip Fracture Database (NHFD) Annual Report 2020. London: RCP: 2020.

CQ - Clinical Quality - CQ - Clinical Effectiveness [Poster]

750. Laxative prescription in patients admitted following a fall under an acute frailty team: a quality improvement project

Rhys Morris; Cameron Abbott

Rhys Morris, Wrexham Maelor hospital, Wrexham, LL13 7TD; Cameron Abbott, Wrexham Maelor hospital, Wrexham, LL13 7TD

Introduction Falls in the elderly are very common with many requiring hospital admissions. Decreased mobility in the elderly is known to increase the risk of constipation, and can contribute to the risk of delirium which further increases morbidity and mortality in these patients. This project aims to assess the use of laxatives in falls patients admitted under an acute frailty team.

Methods This study collected prospective data on patients admitted under an acute frailty team in a district general hospital from 23rd April 2021 until 2nd June 2021 inclusive. Medical notes and prescription charts were reviewed for each patient to identify any injuries sustained, and assess laxative prescribing patterns. Both 'regular' or 'as required' prescription of laxatives was included.

Results In total 51 patients (30 female, 21 male) with a mean age of 84 years (range 50-107) were admitted during the study period. The mean delay from admission to transfer to the frailty unit was 2.2 days. The most common injury patterns were non-specific injuries (24 patients), fractures (13 patients), and head injuries (13 patients). A total of 32 patients (62.7%) did not have any laxatives prescribed ('regular' or 'as required') when initially reviewed by the acute frailty team on the frailty unit.

Conclusion Over half of patients admitted under the acute frailty team with a history of falls were not prescribed any 'regular' or 'as required' laxatives by the admitting team. This is despite elderly patients with poor mobility being at very high risk of constipation, and is an area we are looking to re-evaluate following an educational intervention to raise awareness of this issue.

Laxative prescription in patients admitted following a fall under an acute frailty team: A quality improvement project

Rhys Morris, Cameron Abbott

Department of Care of the Elderly Medicine,
Wrexham Maelor hospital, LL13 7TD



GIG
CYMRU
NHS
WALES

Bwrdd Iechyd Prifysgol
Betsi Cadwaladr
University Health Board



Introduction

- Falls in the elderly are very common with many requiring hospital admissions.¹
- Decreased mobility in the elderly increases the risk of constipation.²
- Constipation increases risk of delirium and can delay discharge.³

- Figure 1: Abdominal X-ray showing severe constipation**



Aims:

- Assess the use of laxatives in falls patients admitted under an acute frailty team.
- Assess injury patterns in patients admitted to acute frailty unit.

Methods

- Data collected prospectively on patients admitted to an acute frailty unit from 23rd April 2021 to the 2nd June 2021 inclusive.
- Medical notes and prescription charts were reviewed to assess laxative prescribing patterns.
- Both 'regular' or 'as required' prescription of laxatives were included.

References

- Society AG, Society G, Prevention OF et al. Guideline for the prevention of falls in older persons. *J Am Geriatr Soc* 2001; 49(5): 664–72.
- Yurtdas G, Acar-Tek N, Akbulut G et al. Risk factors for constipation in adults: A cross sectional study. *J Am Coll Nutr* 2020; 39(8): 713-9.
- Maung TZ, Singh K. Regular monitoring with stool chart prevents constipation, urinary retention and delirium in elderly patients: an audit leading to clinical effectiveness, efficiency and patient centredness. *Future Healthc J* 2019; 6 (Suppl 2): 3.

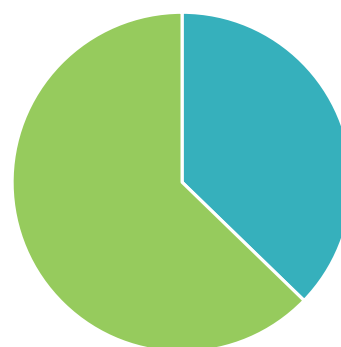
Results

- 51 patients met inclusion criteria (30 females)
- Mean age 84 years (50-102)

Table 1: Summary of injury patterns in patients

Injury pattern	Number of cases
Non-specific injuries	24
Fractures	13
Head injury	13
Other	1

Figure 2: Laxative prescription in patients



■ Prescribed ■ Not prescribed

- 32 patients (62.7%) of patients did not have any laxatives prescribed

Conclusion

- Over half of acute frailty patients with a history of falls were not prescribed any 'regular' or 'as required' laxatives by the admitting team.
- We are developing educational interventions to improve this practice which we hope to re-evaluate.

818. Improving the Risk Assessment and Prevention of Inpatient Falls on Elderly Care Wards

B Whitby¹; I Safiulova¹; M Lethby¹; P Jenkinson¹; N Bose¹; E Coates¹; R Ramadan¹; J Anthony-Wilkinson¹; J Radford¹; M Dulay¹; C Stubbs²; T Tong¹; R Mizoguchi¹

1. Care of the Elderly Department, Chelsea and Westminster Hospital; 2. Imperial College London School of Medicine

Background: Falls represent a significant morbidity risk to elderly patients. For inpatients, delirium and unfamiliar environments further increase falls risk. Comprehensive falls risk assessments reduce the rate and sequelae of inpatient falls.
Aim: To investigate falls risk assessment completeness for inpatients on Care of the Elderly (CoE) wards and the impact of simple measures on improving compliance.

Methods: This audit was performed on two wards at Chelsea and Westminster Hospital. Inpatients aged ≥ 65 admitted over 14 days were retrospectively audited against 14 risk assessment criteria from the Royal College Physician (RCP) FallSafe guidelines. A repeat cycle was performed following interventions. Criteria were: Lying and Standing Blood Pressure (LSBP); recent falls; fear of falling; falls causing fracture; medication review; cardiac auscultation; electrocardiogram; measuring bone profile and vitamin D; dementia screening; assessments of vision, gait, neurology, continence. Interventions included staff teaching, reminder posters & labels, and electronic 'prescription' of LSBP measurement.

Results: In cycle one, 38 patients were audited: 12 male (32%), 26 female (68%). The least frequently assessed criteria were LSBP (7/38), falls causing fractures (7/38), vitamin D (15/38), fear of falling (18/38), number of recent falls (21/38). Cycle 2 was performed post-intervention for 38 patients: 23 male (61%), 15 female (39%). Mean falls risk parameters assessed increased from 8.79 (SD 2.63) to 10.05 (SD 2.04). Five parameters substantially improved: Fear of falling (18/38 to 34/38; +88.9%), vitamin D (15/38 to 26/38; +73.3%), visual assessment (23/38 to 30/38; +30.4%), medications review (30/38 to 38/38; +26.7%), dementia screening (27/38 to 32/38; +18.5%).

Conclusions: Comprehensive inpatient falls risk assessments are incomplete in most patients on CoE wards. Simple measures increasing staff awareness of falls risk assessments yielded substantial improvements in important assessment components. Ongoing staff education regarding national guidelines will be key for ensuring minimisation of the frequency and consequences of inpatient falls.

Improving the Risk Assessment and Prevention of Inpatient Falls on Elderly Care Wards

B Whitby, I Safiulova, M Lethby, P Jenkinson, N Bose, E Coates, R Ramadan, J Anthony-Wilkinson, J Radford, M Dulay, C Stubbs, T Tong, R Mizoguchi



Introduction

Falls represent a significant morbidity risk to elderly patients.

For inpatients, delirium and unfamiliar environments further increase falls risk.

Comprehensive falls risk assessments reduce the rate and sequelae of inpatient falls.

Aim

To investigate falls risk assessment completeness for inpatients on Care of the Elderly wards and the impact of simple measures on improving compliance.

Methods

- Retrospectively assessed notes for patients aged >65 admitted to 2 wards over a 14 day period.
- Identified compliance in documenting 14 key elements of RCP FallSafe risk assessment.
- Implemented staff training, reminder posters/labels, electronic LSBP 'prescriptions' and reassessed with a second cycle.

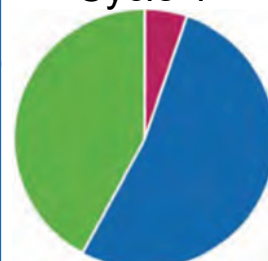
Total parameters assessed per patient

Total number of the 14 parameters which had been completed within 72hrs of admission per patient.

Cycle 1: Mean 8.8 (SD 2.6)

Cycle 2: Mean 10.1 (SD 2.0)

Cycle 1

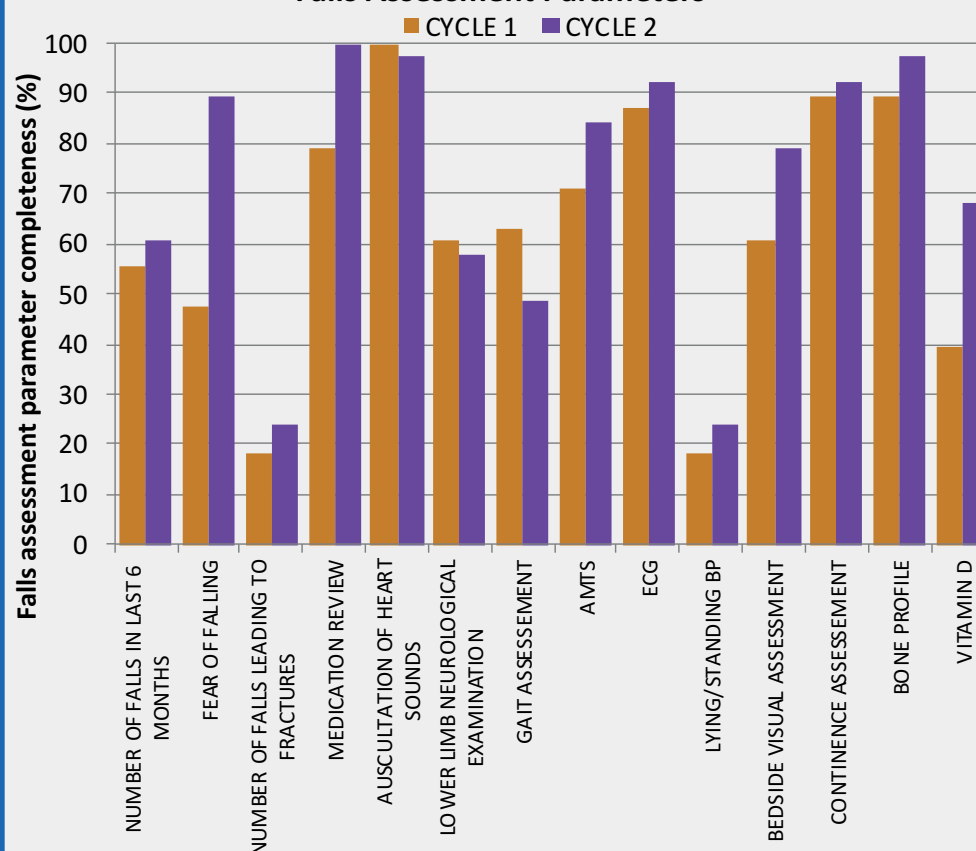


Cycle 2



■ 0-4 ■ 5-9 ■ 10-14

Falls Assessment Parameters



Results

- 38 individual patients per cycle
- Mean number of parameters assessed increased from 8.8 (SD 2.6) to 10.1 (SD 2.0)
- Parameters most improved:
 - Fear of falling (47% → 89%)
 - Vitamin D (39% → 68%)
 - Visual assessment (61% → 79%)
 - Medications review (39% → 100%)
 - AMTS (71% → 84%)
- Parameters requiring improvement:
 - Falls causing fractures (18% → 24%)
 - LSBP (18% → 24%)

Conclusions

- 97% of elderly patients have incomplete falls risk assessments
- Staff awareness of and attention paid to falls risk assessments can be improved by simple measures including staff teaching & reminders
- Further improvements could be made in some areas including LSBP, falls causing fractures, neurological and gait assessment

SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma) [Poster]

819 Improving inpatient fall assessment using a new electronic request (equest) and post-fall medical assessment proforma.

L Jones; H wood; C Jefferson-Loveday

University Hospital Southampton

Introduction Inpatient falls are frequently reported adverse events in hospitals. NICE guidelines recommend that all inpatient falls require multifactorial assessment to include; a post-fall protocol with assessment for injury before being moved, a documented medication review and timely medical assessment. Timescales for medical assessment are within 12 hours or 30 minutes if signs of serious injury.

Method Total number of inpatient falls over a two week period were collected in September 2019. 69 inpatient falls were identified and 10 were excluded due to incomplete records. Electronic records were retrospectively analysed for; use of post-falls protocol with suspected injury, time to medical assessment, documented medication review and completion of medical assessment form. Change was implemented with an electronic request (eQuest) for urgent medical review for out-of-hours falls. A new medical assessment proforma was developed and a falls teaching session was held for junior doctors.

Results 93% (55) had a medical review by a doctor after an inpatient fall. 64% (38) had a post-falls checklist completed by ward staff to assess for injury. 45% (26) received a medical review within the timescale outlined on the post-falls checklist. The pre-existing medical proforma was used in 46% (27) of medical reviews. 17% (10) had a documented medication review.

Conclusion The initial audit identified the need for improvement in timescale of medical review, use of a medical proforma and a documented medication review after inpatient fall. Change was implemented to address these issues. Re-audit was delayed due to COVID-19 escalation but is planned for September 2021. It will assess whether the interventions have improved outcomes to be aligned with NICE guidance. Further change is required to increase use of the post-falls checklist by ward staff in suspected injury.

Improving inpatient fall assessment using a new electronic request (eQuest) and post-fall medical assessment proforma

Charles Jefferson-Loveday, Hannah Wood, Liam Jones

Introduction

- Inpatient falls are commonly reported adverse events in hospitals and can lead to increased length of stay and serious harm.^{1,2}
- NICE guidelines recommend that all inpatient falls require a multifactorial assessment to include; a post-fall protocol with assessment for injury before being moved, a documented medication review and a timely medical assessment.³
- Recommended timescales for a medical assessment are 12 hours or 30 minutes if signs of serious injury.³

Method

- All inpatient falls that occurred at University Hospital Southampton (UHS) over a 2 week period in September 2019 were identified using the Trust's electronic incident reporting system.
- 69 inpatient falls were identified and 10 of these were excluded from analysis due to incomplete records.
- Scanned medical notes from the Electronic Document Management System (EDMS) were retrospectively analysed for; use of the post-fall protocol with suspected injury, time to medical assessment, documented medication review and completion of the pre-existing medical assessment proforma (see figure 1).
- Change was implemented with a new medical assessment proforma and a falls teaching session held for junior doctors to promote the new assessment proforma and the NICE guidelines (see figure 2).
- A new electronic request (eQuest) for an urgent medical review for out-of-hours falls was developed (see figures 3 and 4).

Method

Figure 2. Post-fall medical review proforma

Figure 3. eQuest form for post-fall reviews
• An 'immediate' review option was added for suspected serious injuries.

Figure 4. eQuest form for post-fall reviews
• The post-fall review can be assigned to an appropriate professional.

Results

- Before change was implemented, our initial audit revealed the below results (see figures 5-9). Reaudit was delayed due to Covid-19 escalation but is planned for September 2021.



Figure 5. A graph showing the percentage of patients who received a documented post-fall medical review
• 93% (55/59) had a medical review by a doctor after an inpatient fall.



Figure 6. A graph showing the percentage of patients who had a post-falls checklist completed by ward staff
• 64% (38/59) had a post-falls checklist completed by ward staff to assess for injury.



Figure 7. The percentage of patients who received a medical review within the timescale outlined in the checklist
• 45% (26/59) received a medical review within the timescale outlined on the post-falls checklist.



Figure 8. The percentage of medical reviews that used the pre-existing post-falls medical proforma
• The pre-existing medical proforma was used in 46% (27/59) of medical reviews.

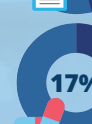


Figure 9. A graph showing the percentage of medical reviews that included a documented medication review
• 17% (10/59) of medical reviews had a documented medication review.

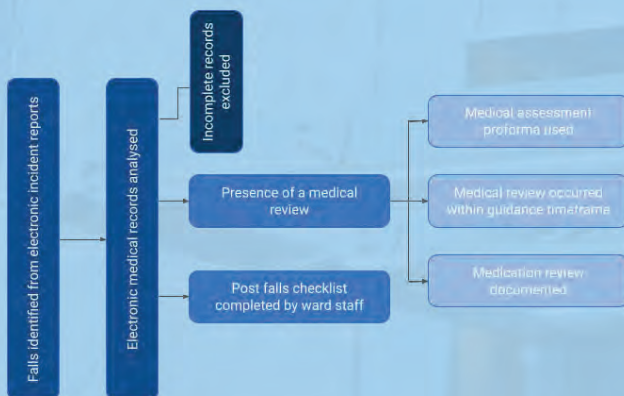


Figure 1. Process of identifying falls using electronic incident reports

Conclusion

- The initial audit identified the need for improvement in timescale of medical review, use of a medical proforma and a documented medication review after an inpatient fall.
- Change was implemented to address these issues with a new out-of-hours eQuest for an urgent post-fall medical review, a redesigned post-fall medical proforma and a teaching session for junior doctors to inform about relevant guidelines and the new proforma.
- Reaudit was delayed due to COVID-19 escalation but is planned for September 2021. It will assess whether our interventions have improved outcomes to be aligned with NICE guidelines. Further change is required to increase use of the post-fall checklist by ward staff in suspected injury.

References

1. Royal College of Physicians. National Audit of Inpatient Falls: audit report 2017. London: RCP, 2017.
2. Dunne TJ, Gaboury I, Ashe MC. Falls in hospital increase length of stay regardless of degree of harm. J Eval Clin Pract. 2014 Aug;20(4):396-400
3. NICE Quality Standard 85 [QS86]. Falls in older people. Published: 25 March 2015. Last updated: 31 January 2017

SP - Scientific Presentation - SP - BMR (Bone, Muscle, Rheumatology) [Poster]

824. Preventing glucocorticoid-induced osteoporosis: a single-practice audit evaluating the implementation of NOGG 2017 guidelines

A Carter

University of Oxford

Introduction Glucocorticoid-induced osteoporosis (GIO) is the most common cause of secondary osteoporosis. Bone loss and increased fracture risk occur rapidly after initiation of glucocorticoid therapy. The aim of the audit was to assess the management of GIO and to identify areas of quality improvement.

Methods Standards were compared to National Osteoporosis Guideline Group (NOGG) 2017 guidelines on osteoporosis. 56 patients aged ≥ 50 prescribed any strength of prednisolone or hydrocortisone tablets were identified in a search. Patients had their FRAX score calculated and were subsequently stratified into high, intermediate and low risk groups. Those in the intermediate group were further stratified into being above or below an intervention threshold.

Results 12 patients were already prescribed bone protection. Of these, 7 were indicated for this based on FRAX alone. 4 patients were excluded. 40 patients were not prescribed bone protection. 5 patients were identified as high risk and were offered bone protection with a bisphosphonate. 20 patients were identified as intermediate risk: 5 were above the intervention threshold and were treated as high risk; 15 were below the intervention threshold and were offered a DEXA scan. 15 patients were identified as low risk. Patients were sent a letter with lifestyle and dietary advice tailored to osteoporosis prevention and were invited for further intervention where applicable. GPs were educated in the FRAX tool and the NOGG guidelines. A quarterly repeat search was set up to identify patients to be considered for bone protection.

Conclusions These results suggest that improvements in bone protection prescribing can be made, and that compliance with the NOGG guidelines can be increased. These results are likely to be mirrored across primary care. Identifying patients at risk of GIO is important to reduce fracture risk. Those at risk can be easily identified and interventions can be made where appropriate.

Preventing glucocorticoid-induced osteoporosis: a single-practice audit evaluating the implementation of National Osteoporosis Guideline Group 2017 guidelines

Adam Carter
Medical Student, University of Oxford

Glucocorticoid-induced osteoporosis (GIO) is the most common cause of secondary osteoporosis. Bone loss and increased fracture risk occur rapidly after initiation of glucocorticoid therapy. The aim of the audit was to assess the management of GIO and to identify areas for quality improvement.

Methods

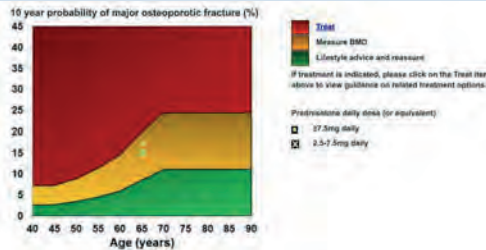
Standards were compared to National Osteoporosis Guideline Group (NOGG) guidelines.

56 patients aged ≥ 50 years prescribed any strength of prednisolone or hydrocortisone tablets were identified in a search. Patients had their FRAX[®] score calculated and were subsequently stratified into high, intermediate and low risk groups. Those in the intermediate group were further stratified into being above or below an intervention threshold as defined by the NOGG guidelines.

Using FRAX[®] to stratify risk

FRAX[®] aims to provide assessment and intervention thresholds for the management of patients at high risk of fracture.

The tool is straightforward to use in a primary care setting.



Interventions

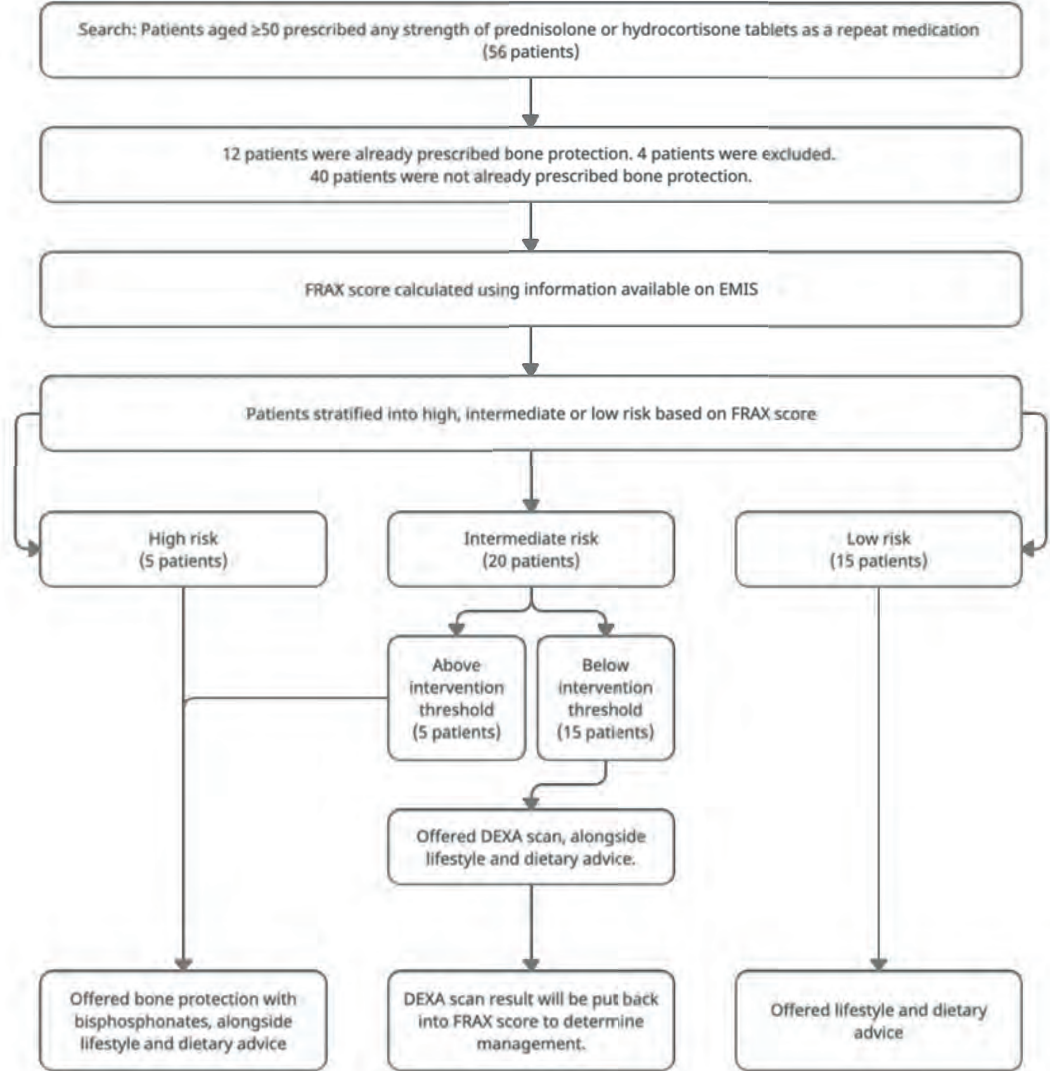
Patients were sent a letter with lifestyle and dietary advice tailored to osteoporosis prevention and were invited for further intervention where applicable.

GPs were educated on the FRAX[®] tool and the NOGG guidelines. A quarterly repeat search was set up to identify patients to be considered for bone protection.

A re-audit will take place in September 2021.

Conclusions

Improvements in bone protection prescribing can be made; compliance with the NOGG guidelines can be increased. These results are likely to be mirrored across primary care. Identifying patients at risk of GIO is important to reduce fracture risk. Those at risk can be easily identified and interventions can be made where appropriate.



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With thanks to Merton College, Oxford for their generous financial support.



CQ - Clinical Quality - SP - Psych (Psychiatry & Mental Health) [Poster]

829. Bone protection in dementia patients in an old age psychiatry ward

A Angus

Psychiatry of Old Age, Royal Edinburgh Hospital

INTRODUCTION Inpatient older adults in psychiatric care are known to be at increased risk of falls and fractures. They often remain in hospital for months; requiring doctors to ensure their physical health needs are identified. The female dementia ward described recorded twenty falls in one year. The study aimed to identify patients who may benefit from bone protection through screening using the QFracture score and medical records.

METHOD A review of patient records identified any history of falls or fractures. Blood results confirmed whether a bone profile and vitamin D level had been checked. Review of imaging records identified those with a previous DEXA scan. Drug charts were reviewed for the prescription of bone protection. Records were used to generate a QFracture score for each patient, using the online QFracture tool. SIGN guidance recommends that all patients with a score above 10% should be considered for investigation.

RESULTS Fifteen records of female dementia inpatients were reviewed. 64% of patients had a history of recurrent falls. Of these patients, six had a historical fracture. One third of patients had a documented diagnosis of osteoporosis, however, one patient was prescribed bone protection. The mean QFracture score for hip/wrist/shoulder/spine was 47.5%. 93% of patients had a QFracture score greater than 10%.

CONCLUSION In a psychiatric hospital, patients' physical health needs can be overlooked. Management of bone health in this patient population is complex; their dementia can cause significant distress and consideration should be given to whether imaging and treatment is in their best interest. Despite this, these patients are at high risk of falls and fractures; some may benefit from further investigations and initiation of treatment. Based on these findings, a checklist is under development for admitting doctors to assess individual patient bone health. The potential impact of this will be re-evaluated.

BONE PROTECTION IN DEMENTIA PATIENTS IN AN OLD AGE PSYCHIATRY WARD



Dr A. Angus, Royal Edinburgh Hospital, NHS Lothian, Scotland.

INTRODUCTION

Inpatient older adults in psychiatric care are known to be at increased risk of falls and fractures. They often remain in hospital for months, requiring doctors to ensure their physical health needs are identified. Older adults in the care of mental health services are twice as likely to fall and four times as likely to have a hip fracture than the general population.¹ The female dementia ward described recorded twenty falls in one year. The study aimed to identify patients who may benefit from bone protection through screening using the QFracture score and medical records. SIGN guidance recommends that all patients with a score above 10% should be considered for investigation.

METHOD

A review of patient records identified any history of falls or fractures. Blood results confirmed whether a bone profile and vitamin D level had been checked. Review of imaging records identified those with a previous DEXA scan. Drug charts were reviewed for the prescription of bone protection. Records were used to generate a QFracture score for each patient, using the online QFracture tool.

CONCLUSIONS

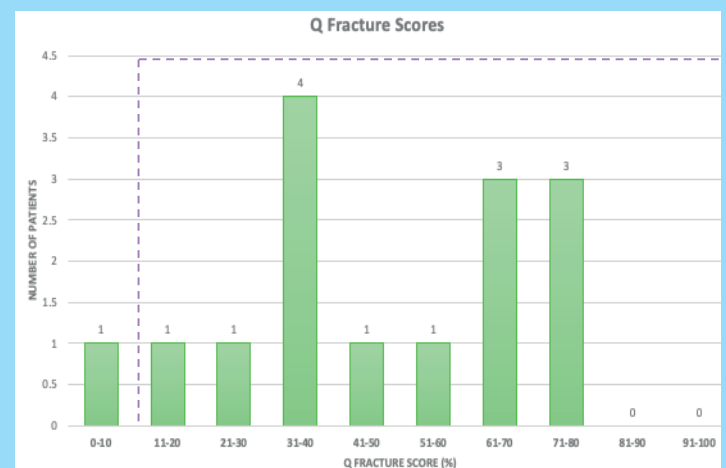
In a psychiatric hospital, patients' physical health needs can be overlooked. Management of bone health in this population is complex. Blood tests and DEXA scans may cause distress and patients may not be able to manage the instructions for oral bisphosphonate administration.

Despite this, these patients are at high risk of falls and fractures; some may benefit from further investigations and treatment. Each case should be addressed on an individual basis, with careful thought given to the difficult balance between the benefit from treatment and polypharmacy.

Based on these findings, a checklist is under development for admitting doctors to assess individual patient bone health. The potential impact of this will be re-evaluated.

RESULTS

Fifteen records of female dementia inpatients were reviewed. The mean age was 80 years old. 64% of patients had a history of recurrent falls. Of these patients, six had a historical fracture. One third of patients had a documented diagnosis of osteoporosis, however, one patient was prescribed bone protection. The same patient was the only one to have had a DEXA scan. The mean QFracture score for hip/wrist/shoulder/spine was 47.5%. 93% of patients had a QFracture score greater than 10%.



Patients requiring further investigation

REFERENCES

¹Stubbs, B., Perara, G., Koyanagi, A., Veronese, N., Vancampfort, D., Firth, J., Sheehan, K., De Hert, M., Stewart, R. and Mueller, C., 2020. Risk of Hospitalized Falls and Hip Fractures in 22,103 Older Adults Receiving Mental Health Care vs 161,603 Controls: A Large Cohort Study. *Journal of the American Medical Directors Association*, 21(12), pp.1893-1899.

SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma) [Poster]

831. Screening Tools for Falls Risk among Community-Dwelling Older Persons in Kuching, Sarawak

JBM Ing^{1,2} ;DKA Singh; J Whitney⁵ ; IK Tiong³; TM Pin⁴

1. Physiotherapy Program, Centre for Healthy Ageing and Wellness, Faculty of Health Sciences, University Kebangsaan Malaysia 2. Ministry of Health Malaysia 3. Geriatric Unit, Sarawak Heart Centre, Sarawak Health Department , Ministry of Health Malaysia 4. Division of Geriatric Medicine, Department of Medicine, Faculty of Medicine, University of Malaya 5. King's College, London, United Kingdom

Background Falls among older adults can lead to severe injuries and prolonged hospitalization. Identifying convenient screening tools which accurately predict falls is useful for effective primary and secondary fall prevention. We evaluated screening tools for falls risk among community-dwelling older persons residing in Kuching, Sarawak.

Methods Sarawak is the state with the largest land mass occupying most of the Northern coast of Borneo Island, East Malaysia. Its population is largely rural and culturally diverse. Individuals aged ≥ 60 years with and without a history of falls in the preceding 12 months were recruited from outpatient clinics from the Sarawak General Hospital and through word of mouth. Physical performance was determined with the five times sit to stand (5STS) and dominant handgrip strength (HGS), timed up and go (TUG) tests. Fear of falling (FOF) was determined using the shortfalls efficacy scale international (FES-I).

Results Seventy-four participants (mean age 66.7 \pm 5.50years) were recruited, 26 (35%) with a history of falls. Fallers has significantly poorer 5STS ($p < 0.001$), HGS ($p < 0.05$), TUG ($p < 0.001$) scores and were significantly more likely to experience FoF ($p < 0.001$) compared to non-fallers. The 5STS (odds ratio, OR 0.6, 95% confidence interval, CI 0.52,0.87) and FOF (OR 0.75, 95%CI 0.65,0.85) were significantly associated with falls in a logistic regression model. If individuals with FOF were removed, TUG (OR 0.41, 95%CI 0.19) and 5STS (OR 0.68, 95%CI 0.53, 0.89) tests were then significantly associated with falls.

Conclusions The 5STS test and FOF scale or 5STS and TUG tests may be useful tools to evaluate fall risk in older adults in Kuching, Sarawak, though these findings need to be confirmed in a longitudinal study. Lower limb muscle strength and balance are also potentially modifiable risk factors for falls in our study population.

Screening Tools for Falls Risk among Community-Dwelling Older Persons in Kuching, Sarawak, Malaysia

Janet Bong May Ing^{1,2} Devinder Kaur Ajit Singh¹, Julie Whitney⁵, Ing Khieng Tiong³, Tan Maw Pin⁴

INTRODUCTION

-Falls among older adults can lead to severe injuries and prolonged hospitalization.

-Identifying convenient screening tools which accurately predict falls is useful for effective primary and secondary fall prevention.

- We evaluated screening tools for falls risk among community-dwelling older persons residing in Kuching, Sarawak, Malaysia



Method

- Participants : Community dwelling older persons aged ≥ 60 years with and without a history of falls in the past 12 months
- Recruited from outpatient clinics from the Sarawak General Hospital and through word of mouth.
- Falls risk measures used:
 - (i) 5STS: five times sit to stand
 - (ii) HGS: dominant handgrip strength
 - (iii) timed up and go (TUG)
 - (iv) FOF: Fear of falling using short falls efficacy scale international (FES-I)

Main finding

Combination of :
**5STS test & FOF scale or
 5STS & TUG tests**
 may be
useful screening falls risk



among community dwelling older adults In Kuching, Sarawak, Malaysia

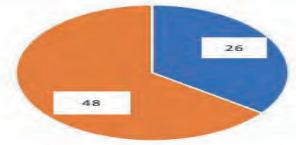


are potentially modifiable risk factors for falls in our study population.

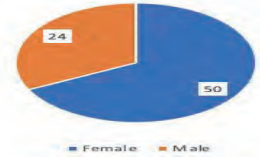
1. Physiotherapy Program, Centre for Healthy Ageing and Wellness, Faculty of Health Sciences, University Kebangsaan Malaysia
2. Ministry of Health Malaysia
3. Geriatric Unit, Sarawak Heart Centre, Sarawak Health Department, Ministry of Health Malaysia
4. Division of Geriatric Medicine, Department of Medicine, Faculty of Medicine, University of Malaya
5. King's College, London, United Kingdom

RESULTS

Numbers of Older Adults with and without Falls



Numbers of Female and Males



Mean age=66.7 \pm 5.50years

The Results	Older Adults with Falls (Mean, Standard Deviation)	Older Adults without Falls (Mean, Standard Deviation)
Times to complete TUG (p<0.001)	12.25 \pm 0.83	10.67 \pm 1.33
Handgrip strength (p<0.05)	19.96 \pm 4.49	22.52 \pm 4.63
Times to complete 5TSTS (p<0.001)	17.57 \pm 4.79	12.40 \pm 2.47
FOF scores (p<0.001)	20.50 \pm 6.29	11.65 \pm 4.13

Binary Logistic Regression:



CQ - Clinical Quality - CQ - Clinical Effectiveness [Poster]

833. An audit of bone-targeted agent (BTA) prescription rates for fragility fracture secondary prevention in patients aged ≥ 50 years

J C Dean (1)

(1) West Hertfordshire Hospitals NHS Trust

Introduction This audit assessed BTA prescription rates for fragility fracture secondary prevention in patients aged ≥ 50 years. Local Clinical Commissioning Group guidelines recommend that patients aged ≥ 75 years who have experienced a previous fragility fracture should receive treatment with a BTA. For patients aged < 75 years, a decision to prescribe a BTA should be based on fracture risk.

Methods Patients in the Orthopaedic ward in an NHS general hospital on select days in October–December 2019 and 2020 were included if they were aged ≥ 50 years, and if they were admitted with a fragility fracture at any site. After the 2019 audit, a field was added to the Trust discharge summary that prompts doctors to consider a fragility fracture diagnosis.

Results Of patients admitted with a fragility fracture, 67.0% were prescribed a BTA on discharge in 2020 (N=75/112), versus 63.2% in 2019 (N=72/114). Of patients aged ≥ 75 years, 71.9% were prescribed a BTA on discharge in 2020 (n=69/96), versus 70.8% in 2019 (n=63/89). Of patients admitted with a neck of femur (NOF) fracture, 80.9% were prescribed a BTA on discharge in 2020 (n=72/89), versus 68.7% in 2019 (n=68/99). Of patients aged ≥ 75 years with a NOF fracture, 88.0% were prescribed a BTA on discharge in 2020 (n=66/75), versus 73.2% in 2019 (n=60/82). Of patients aged 50–74 years, 25.0% had DEXA recommended on discharge in 2020 (n = 4/16), versus 24.0% in 2019 (n = 6/25).

Conclusions BTAs may be underprescribed in patients aged ≥ 50 years who are discharged from an NHS general hospital following a fragility fracture, despite guideline recommendations. Of note, BTA prescription rates on discharge were highest in patients admitted with a NOF fracture; these patients receive joint care from both the Orthopaedic and Orthogeriatric teams.

An audit of bone-targeted agent (BTA) prescription rates for fragility fracture secondary prevention in patients aged ≥ 50 years

Jack C. Dean, Foundation Year 2 Doctor, Watford General Hospital, Watford, Hertfordshire, UK

Introduction

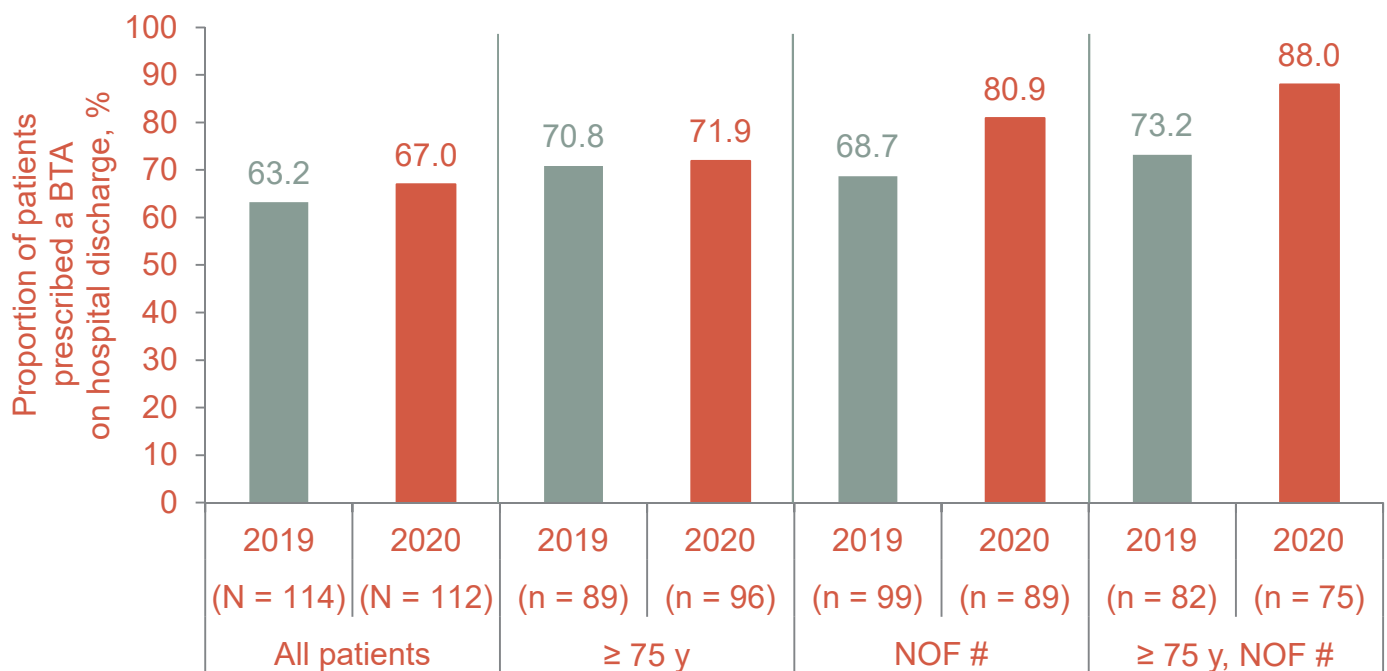
Fragility fractures are associated with pain, disability, reduced health-related quality of life, and increased mortality.^{1,2}

Intervention

After the 2019 clinical audit, a field was added to the Trust discharge summary template that prompts doctors to consider a fragility fracture diagnosis.

Method

Inpatients in the Orthopaedic Ward at Watford General Hospital on pre-specified days in October–December 2019 and 2020 were included in this clinical audit if they were aged ≥ 50 years, and if they were admitted to hospital with a fragility fracture at any anatomical site. Data including rates of BTA prescription on hospital discharge were collected.



Conclusion

Although improvements are observed between 2019 and 2020 in some patient groups, BTAs may be underprescribed in patients aged ≥ 50 years who are discharged from Watford General Hospital following a fragility fracture, despite local and national guideline recommendations with a strong evidence base.^{3–5} BTA prescription rates on hospital discharge are highest in patients who are admitted with a neck of femur (NOF) fracture. This patient group follows a well-defined management pathway that includes joint care between Orthopaedics and Orthogeriatrics.

1. Dyer SM *et al.* A critical review of the long-term disability outcomes following hip fracture. *BMC Geriatr* 2016;16:158.
 2. Haentjens P *et al.* Meta-analysis: excess mortality after hip fracture among older women and men. *Ann Intern Med* 2010;152:380–90.
 3. ROS, 2019. Effective secondary prevention of fragility fractures: clinical standards for fracture liaison services.
 4. HVCCG, 2015. Hertfordshire guidelines on the management of osteoporosis.
 5. RCP, 2021. Fracture liaison service database (FLS-DB) annual report benchmarking FLS improvement and performance in 2019.

SP - Scientific Presentation - SP - Cardio (Cardiovascular) [Poster]

836. Carotid sinus syndrome unmasked by eating: a case report and review of literature

Aza Abdulla¹, Julianaa Raghu¹, Ahmad Kwanda²

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Introduction: Symptomatic hypotension following a meal in older people is common but poorly recognised/underdiagnosed. This, in our view, is mainly because it is unusual for clinicians to assess patients following a meal and the symptoms are resolved by the time they present to a clinician. We describe a patient with dizziness diagnosed as carotid sinus syndrome after a meal on tilt-test and carotid massage.

Case: An 88-year-old lady presented with dizziness for 7 months, unrelated to change in posture or activity. From her description, postural hypotension was a possibility and a 24-hour ambulatory BP monitor was arranged. A review of the recording by author AA, showed systolic BP drop to 110mmHg around 12-13:00 o'clock and 20:00 – 21:00. These timings coincided with her meals and post-prandial hypotension was suspected. To confirm the diagnosis, pre- and post-prandial tilt-test and carotid sinus massage(CSM) studies were arranged.

Results: Following the pre-prandial test, the patient was given a sandwich meal and returned in 30 minutes for the post-prandial test. Initially, both HR and BP were lower than before eating. On head-up tilt, there was an asymptomatic BP drop from 178/79 mmHg supine to 140/64 mmHg at 1 minute standing and 118/69 mmHg at 3 minutes with an increase in HR from 75 bpm to 91bpm (see graph). An upright CSM resulted in BP dropping to 85/48 mmHg and HR to 57 bpm. This was associated with significant dizziness, loss of muscle power in legs with near collapse. The patient recovered within 6 minutes on return to horizontal position.

Conclusion: We are unaware of carotid sinus syndrome potentiated by meals, and to our knowledge, this is the first reported case of post-prandial carotid sinus syndrome. The case illustrates the need to consider post-prandial tilt-test /carotid studies in patients with unexplained symptoms following a meal.

Carotid sinus syndrome unmasked by eating: a case report and review of literature

Dr Aza Abdulla ¹ Dr Julianaa Raghu ¹, Dr Ahmad Khwanda ²

1 Department of Clinical Gerontology, Princess Royal University Hospital, Kings College NHS Foundation Trust

2. Department of Cardiology, Princess Royal University Hospital, Kings College NHS Foundation Trust

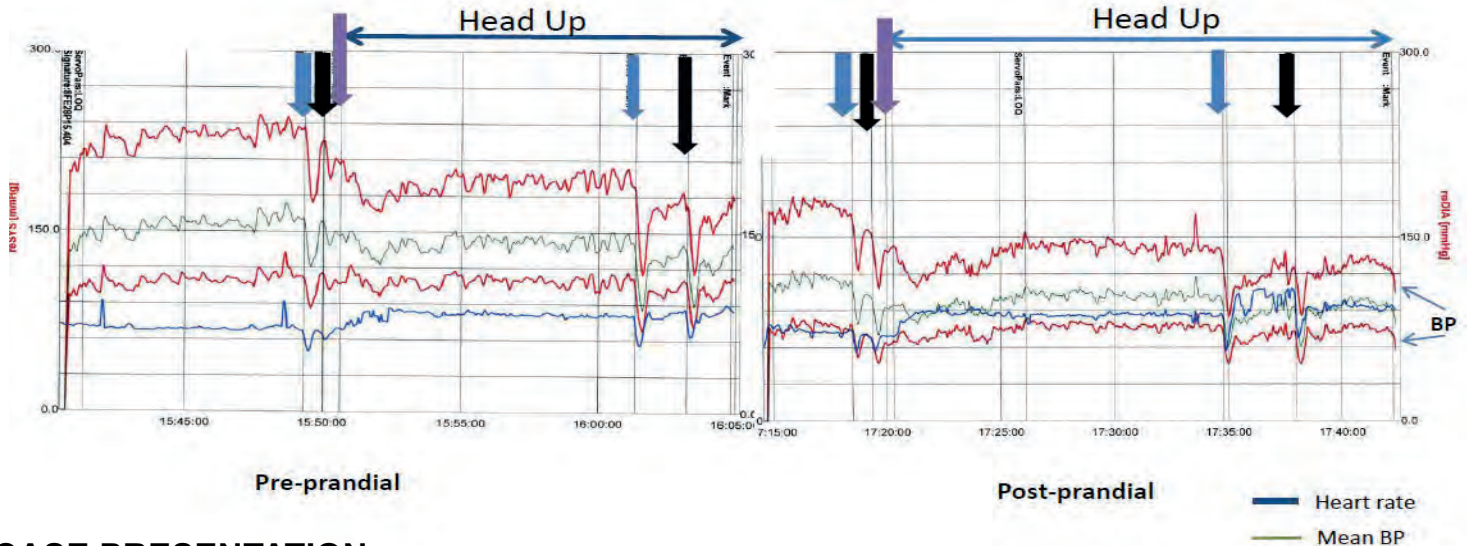
INTRODUCTION

- Symptomatic hypotension following a meal in older people is common but poorly recognised and underdiagnosed.
- This, in our view, is mainly because it is unusual for clinicians to have the opportunity to assess patients following a meal and the symptoms are resolved by the time they present to a clinician.

We describe a patient with dizziness diagnosed as carotid sinus syndrome after a meal on tilt-test and carotid massage.

RESULTS

- Following the pre-prandial test, the patient was given a sandwich meal and returned in 30 minutes for the post-prandial test.
- Initially, both heart rate and BP were lower than before eating. On head-up tilt, there was an asymptomatic BP drop from 178/79 mmHg supine to 140/64 mmHg at 1 minute standing and 118/69 mmHg at 3 minutes with an increase in heart rate from 75 bpm to 91bpm.
- An upright CSM resulted in the BP dropping to 85/48 mmHg and heart rate to 57 bpm.
- This was associated with significant dizziness, loss of muscle power in legs with near collapse.
- The patient recovered within 6 minutes on return to horizontal position.



CASE PRESENTATION

An 88-year-old lady presented with dizziness for 7 months, unrelated to change in posture or activity. From her description, postural hypotension was a possibility and a 24-hour ambulatory BP monitor was arranged. A personal review of the recording by one of the authors (AA), showed a drop in systolic BP to 110mmHg around 12-13:00 o'clock and 20:00 – 21:00 o'clock. These timings coincided with her meals and post-prandial hypotension was suspected. To confirm the diagnosis, a tilt-test and carotid sinus massage (CSM), pre- and post-prandial studies were arranged.

CONCLUSION

To our knowledge, this is the first reported case of post-prandial carotid sinus syndrome. We recommend that when postprandial hypotension does not reproduce the symptoms in patients with history of falls and syncope, then it may be worth considering tilt-test and carotid studies after a meal. The frequency of this association is unknown and warrants further studies.

CQ - Clinical Quality - CQ - Clinical Effectiveness [Poster]

837. Adopting the Principles of the 'BONE-PARK' Algorithm to Improve Bone Health Management in Parkinson's disease at LTHT

A Nixon¹; C Briggs¹; C Eaves¹

1. Department of Elderly Medicine, Leeds Teaching Hospitals NHS Trust

Introduction Compared with age-matched counterparts, patients with Parkinson's disease (PD) have a 3-fold increased fragility fracture risk, and there is considerable associated mortality (Pouwels, Osteoporosis, Vol 24(8), 2283-90, 2013). A recent study (Henderson, Parkinsonism & Related Disorders, Vol 64, 181-187, 2019) proposed a 'BONE-PARK' algorithm to recognise this increased fracture risk and guide bone health management for PD patients. We aimed to adopt principles of this algorithm (optimising Vitamin D and modifying FRAX scores) to improve bone health management at Leeds Teaching Hospitals NHS Trust (LTHT). This algorithm aligns with NICE guidance which advises FRAX scoring for all at risk of fragility fractures (CG146, 2017) and Vitamin D supplementation for all PD patients (NG71, 2017). **Method** We performed retrospective case-note audits of bone health management in PD clinic and inpatients admitted with fragility fracture at LTHT. We used the 'BONE-PARK' algorithm to create and disseminate a guideline including modified-FRAX scores (MFS) for use in PD clinics. Re-audit of bone health management in PD clinic has been undertaken.

Results • Between August 2019-August 2020, 2/26 (7.7%) PD patients admitted with fragility fractures had previously documented FRAX scores. 9/26 (35%) were taking Vitamin D. • Implementing MFS in this cohort would have increased empirical bone protection by 7/24 (29%) and reduced DEXA scans indicated by 4/24 (16%). • 3-month clinic audit in 2019/20 showed 2/120 patients (1.7%) had documented FRAX scores and 27/120 (23%) were taking Vitamin D. • Following guideline dissemination, 7/40 (18%) had MFS documentation and 23/40 (58%) had Vitamin D supplementation.

Conclusion MFS documentation and Vitamin D supplementation have increased following dissemination of a 'BONE-PARK' derived guideline at LTHT. We are continuing data collection to assess the sustainability of this improvement in bone health management.

Adopting the Principles of the 'BONE-PARK' Algorithm to Improve Clinical Effectiveness of Bone Health Management in Parkinson's Disease at Leeds Teaching Hospitals Trust

Dr A Nixon, Dr C Briggs (Clinical Fellows), Dr C Eaves (Consultant Geriatrician), Leeds Teaching Hospitals NHS Trust

Introduction

Compared with age-matched counterparts, patients with Parkinson's Disease (PD) have a 3-fold increased fragility fracture risk, and there is considerable associated mortality⁽¹⁾.

A recent study proposed a 'BONE-PARK' algorithm to recognise this increased fracture risk and guide bone health management for PD patients⁽²⁾.

Aims

We aimed to adopt principles of the BONE-PARK algorithm (optimising Vitamin D and modifying FRAX scores- see Step 3) to improve bone health management in PD patients at LTHT.

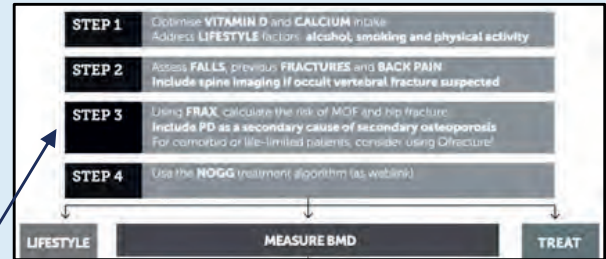
Methods

1) We undertook retrospective case-note audits of bone health management in PD clinic and inpatients admitted with fragility fracture at LTHT.

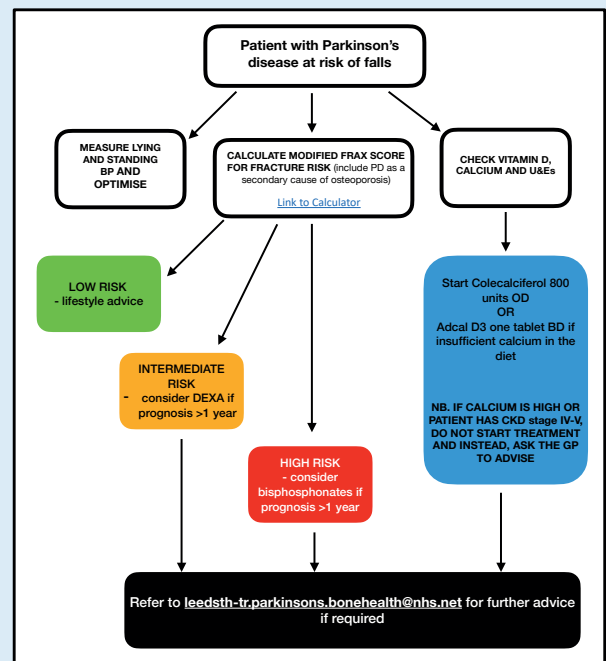
2) We used the 'BONE-PARK' algorithm to create and disseminate a guideline including modified-FRAX scores (MFS) for use in PD clinics.

3) We re-audited bone health management in PD clinic.

BONE-PARK Algorithm⁽²⁾



New LTHT local guideline

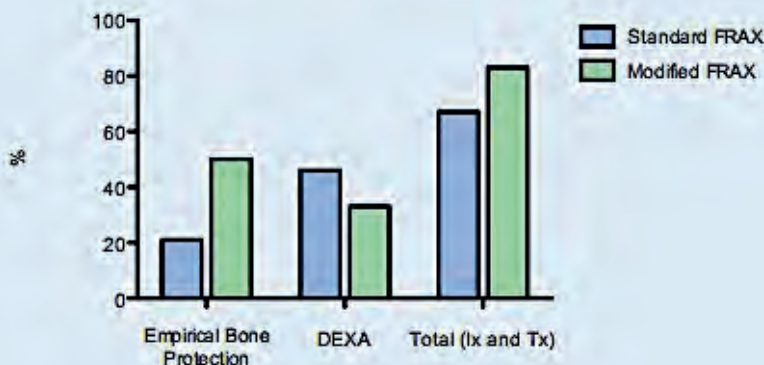


Results

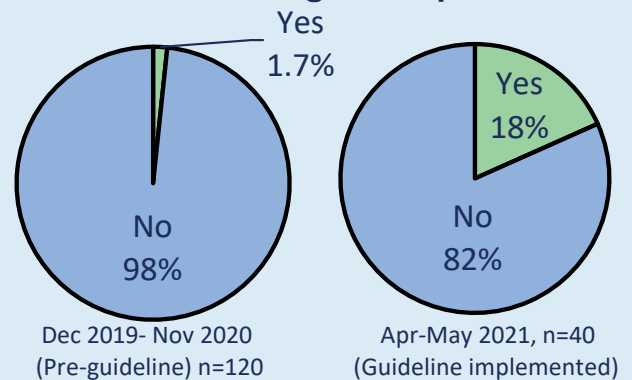
- Implementing MFS in this cohort would have increased empirical bone protection by 7/24 (29%) and reduced DEXA scans indicated by 4/24 (16%).

- Following guideline dissemination, MFS documentation increased from 2/120 patients (1.7%) to 7/40 (18%) and Vitamin D supplementation increased from 27/120 (23%) to 23/40 (58%).

Impact of modifying FRAX (2019) n=24



Proportion of clinic patients with bone health management plan



Conclusions

MFS documentation and Vitamin D supplementation have increased following dissemination of a 'BONE-PARK' derived guideline at LTHT. We are continuing data collection to assess the sustainability of this improvement in bone health management.

SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma) [Poster]

838. Ethnic Differences in Knee Pain and Prospective Falls: Results from Malaysian Elders Longitudinal Research Study

S Mat1; AV Chin 2,3; SB Kamaruzzaman2,3; MP Tan 2,3,4.

1 Centre for Healthy Aging and Wellness, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia, 2Ageing and Age-Associated Disorders Research Group, Faculty of Medicine, University of Malaya 3 Division of Geriatric Medicine, Department of Medicine, Faculty of Medicine, University of Malaya 4 Department of Medical Sciences, School of Healthcare and Medical Sciences, Sunway University, Bandar Sunway, Malaysia

Introduction: Both knee pain and falls are common in older persons. The relationship between knee pain and actual falls outcomes longitudinally have not previously been evaluated, as previous studies have primarily utilized balance outcomes to estimate falls risk. This study therefore aimed to determine the influence of knee pain on falls risk longitudinally among three main ethnic older adults in Malaysia.

Method: The MELoR study selected individuals aged 55 years and over and conducted first interviewed between 2013-2015 (Wave 1). After 5 years, individuals who were still alive were then evaluated with a 40-minute telephone survey (Wave 3). The incident rate ratio (IRR) with 95% confidence intervals (CI) is calculated for falls occurring in the preceding 12 months at five-year follow-up. Knee pain severity at baseline and ethnic comparisons were conducted.

Results: Of 1212 baseline participants, 673 were successfully followed up. Overall, 31.6% participants reported knee pain at baseline. 148 (21.9%) reported at least one fall in the past 12 months at follow-up. The unadjusted IRR for falls in people with knee pain was 1.39 (95% CI 1.00 to 1.94). Among individuals with Indian ethnicity, falls was more likely in those with knee pain compared to those without knee pain 1.72 (95% CI 1.01 to 2.92). Moderate-to-severe pain were associated with increased risk of falls compared to those with mild knee pain (IRR 2.00, 95% CI 1.13 to 3.56). Such relationships were however absent in ethnic Malay and Chinese.

Conclusion(s). This study highlights the influence of ethnicity in the association between knee pain and falls suggesting that potential cultural and genetic influences on falls risk prospectively. Future studies should determine the mechanisms underlying the differential ethnic relationships.

Ethnic Differences in The Associations between Knee Pain Symptoms and Prospective Falls: Results from Malaysian Elders Longitudinal Research Study

Sumaiyah Mat*, Chin Ai-Vyrrn, Shahrul Bahyah, Tan Maw Pin.*



INTRODUCTION



Both knee pain and falls are common clinical presentations affecting older persons.

The relationship between knee pain and actual falls outcomes longitudinally have not previous been evaluated, as previous studies have primarily utilized balance outcomes to estimate falls risk.

OBJECTIVES

to determine the influence of knee pain on falls risk longitudinally among three main ethnics older adults in Malaysia

METHODS

Data: The first and 3rd waves of the Malaysian Elders Longitudinal Research study

Design: Prospective study, 5-year follow up

Setting: Klang Valley, Kuala Lumpur

Participants: Age 55 years and above

Measurements:

1-Self-reported knee pain

2-Self reported Falls Outcome (preceding 12-months)

RESULTS

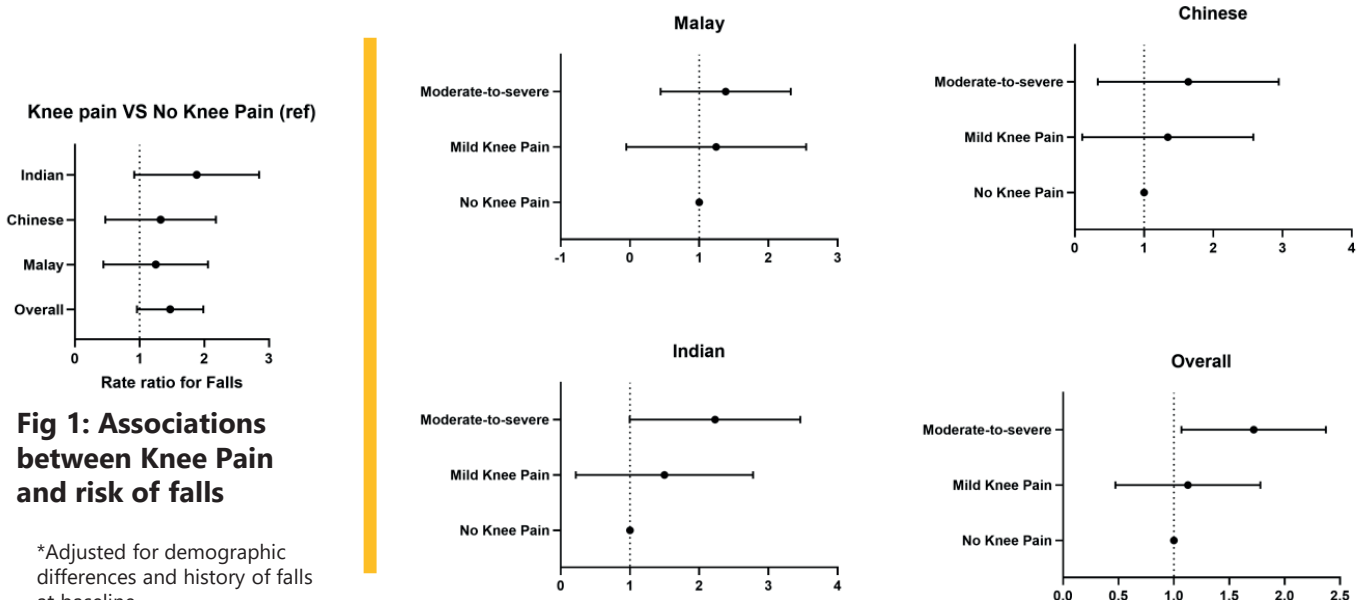


Fig 1: Associations between Knee Pain and risk of falls

*Adjusted for demographic differences and history of falls at baseline

Fig 2: Associations between Severity of Knee Pain and risk of falls by Ethnicity

CONCLUSION

This study highlights the influence of ethnic differences in the associations between knee pain and falls suggesting that potential cultural and genetic influences observed with ethnicity could affect the risk of falls at five-years' follow-up.

SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma) [Poster]

840. Acceptability of Perturbation-based Balance Training for Falls Prevention in Older Adults

MHG Gerards 123; JM Sieben 34; RGJ Marcellis 1; RA de Bie 23; K Meijer 5; AF Lenssen 1

1. Department of Physical Therapy, Maastricht University Medical Center; 2. Department of Epidemiology; 3. Care and Public Health Institute; 4. Department of Anatomy and Embryology; 5. Department of Nutrition and Movement Sciences, School of Nutrition and Translational Research in Metabolism, Maastricht University.

Introduction Perturbation-based balance training (PBT) can effectively reduce daily-life falls in older adults, and may even be superior compared to various exercise programmes (Mansfield et al., *Physical Therapy*, 2015 (95)700-9). Due to the nature of the intervention, requiring unpredictable balance perturbations, the question arises whether acceptability is an issue in PBT. The aim of this study is to evaluate the acceptability of PBT in older adults with a recent history of falls.

Methods Semi-structured interviews were conducted in a sample of older adults who participated in a three-session PBT protocol as part of another study (Gerards et al., *BMC Geriatrics* 2021 (21)9). Interviews were based on the theoretical framework of acceptability (Sekhon et al., *BMC Health Services Research*, 2017 (17)88) alongside context-specific barriers and facilitators. Interviews were analyzed using a template analysis approach.

Results Sixteen participants were interviewed. We identified six themes describing factors that participants related to the acceptability of PBT. Overall, participants described their participation in PBT as a positive experience. Some described initially feeling apprehensive and unsure of their ability to participate. The safety harness and supervision were important alleviating factors to help participants feel safe during training. Individual training enabled participants to focus on their own experience, and throughout training psychological effects of increased confidence were valued. While some participants clearly experienced physical training effects, most struggled to identify how these would present in daily life. Most participants had little prior knowledge about fall prevention or PBT, which was not perceived as a barrier or facilitator to participating.

Conclusions The results suggest that PBT is perceived as acceptable by older adults with a history of falls, and indicate important factors that should be considered in future implementation of PBT. Further research may focus on elucidating if these results also apply to PBT in different settings.

The acceptability of a perturbation-based balance training protocol for falls prevention in older adults

Marissa Gerards MSc., Dr. Judith Sieben, Dr. Rik Marcellis, Prof. Rob de Ble, Dr. Kenneth Meijer, Prof. Antoine Lenssen



Perturbation-based balance training (PBT) is a form of training that aims to improve reactive balance control after unexpected external perturbations. In a safe and controlled environment, participants are repeatedly exposed to destabilizing perturbations during various activities of daily living¹.

Background

PBT is reported to effectively reduce daily-life falls in older adults, and may even be superior compared to various exercise programs². With PBT, balance adaptation may occur faster, potentially achieving equal or better results with fewer training sessions compared to conventional balance training³.

Due to the nature of the intervention, requiring unpredictable balance perturbations, the question arises whether acceptability is an issue in PBT. The aim of this study is to evaluate the acceptability of PBT in older adults with a recent history of falls.

Methods

Semi-structured interviews were conducted in older adults who completed a three-session PBT protocol as part of another study. Typical case and purposive sampling strategies were applied. Interviews were based on the theoretical framework of acceptability⁴ (TFA) alongside context-specific factors and analysed using a template analysis approach. In the TFA, acceptability is viewed as a multifaceted construct, consisting of seven components, which we operationalized as follows:

Affective attitude: How an individual feels about the PBT.

Self-efficacy: The participant's confidence in their ability to perform the PBT.

Perceived effectiveness: The extent to which the participant perceives the PBT to be potentially and actually (observed) to be effective.

Ethicality: The extent to which the PBT had good fit with the participant's value system and expectations of a falls prevention intervention.

Intervention coherence: The extent to which the participant understands the aim of PBT and how it works.

Burden: The perceived amount of effort that was required to participate in the PBT.

Opportunity costs: The extent to which benefits, profits or values were given up to participate in the PBT.

Key points

- Technology-assisted perturbation-based balance training is perceived acceptable by older adults with a recent history of falls
- Perceived increases in balance confidence and self-efficacy contributed to acceptability
- Enjoyment and feeling safe during training outweighed initial anxiety about unpredictable perturbations
- Strategies to alleviate anxiety during training should be considered, while maintaining the task-specific aspect of unpredictable perturbations

Results

Sixteen participants (14 females and 2 males, mean age 73.6 ± 6.0 years) were interviewed. Most participants (11) had experienced one fall in the previous year, others had fallen twice (3), three (1) or four (1) times.

The results indicate that this PBT protocol is perceived as acceptable by older adults with a recent history of falls, and highlight key areas for potential future modifications.

Facilitating factors

- Participants enjoyed the novel training and technology.

P031. *"The setting was very surprising. The fact that you're walking on a treadmill in an environment that moves with you. I thought it was a very extraordinary experience."*

- Participants described that their sense of self-efficacy increased during the training sessions.
- Perceived psychological impact in the form of increased balance confidence during daily activities was often reported.

P068. *"Especially the first time I noticed that I was quite insecure. (...) And that was more related to my confidence, which had been damaged. And I noticed after a few times that I, because of the training actually, gained some confidence. That I got more confident in my body."*

- Being able to feel safe during training was highly valued, this was accomplished by using the safety harness, guidance from the trainer and receiving information during the training.
- Most participants preferred training individually and described this as an opportunity to really focus on the training itself.

Potential points for improvement:

Specific:

- Some participants reported feeling anxious about sudden perturbations, mostly at the start of training.
- Some participants described being curious how others performed during training, or wanting to discuss fall-related experiences.

General:

- Raising awareness of the importance and possibilities of fall prevention training is a challenge in this population
- Travel to the training location is a potential barrier, as participants are often dependant on family or public transportation

Conclusions

The results suggest that PBT is perceived acceptable by older adults with a history of falls, and indicate important factors that should be considered in future implementation of PBT.

CQ - Clinical Quality - CQ - Patient Safety [Poster]

844. Audit on visual assessments in elderly fall patients in Royal Gwent Hospital

Sit Aung Lwin¹; Omotola Balogun²; Sian Harkin³; Marita Snow⁴;Elba Peter⁵

1,2,3,4,5. Department of elderly care, Royal Gwent Hospital

Introduction Falls are common, but often overlooked, cause of injury especially in elderly population. Patients with poor vision have 1.7 percentage of getting fall leading to serious injury as compared to general elderly population. Guidelines recommend that people who fall should undergo multifactorial assessment, including of visual assessments. The Royal College of Physicians (UK) have recommended to use the 'Look out!' bedside vision check tool for falls prevention. We carried out an Audit on complete Geriatric assessment in care of the elderly ward to compare local practise against the recommendation by royal college of physician.

Methods We evaluated 53 patients presenting to hospital with falls in June 2021. We looked through clerking proforma/ CGA of fall patients whether bedside vision assessment has been performed on admission or deferred in acute unwell and confused patients.

Results Gender ratio 43.4 % of male and 56.6 % female. Average 85.07. Cognitive assessment done only in 45% of the studied population. Bed side visual assessment was not done at all.

Conclusion Poor performance in doing visual check in assessing fall patients detected and we studied to identify the causes behind as follow- 1. Lack of awareness of importance of impaired vision as a falls risk among junior doctors. 2. Lack of familiarity with bed side visual assessment tool. 3. Junior doctors rotating on regular basis. Our implementation is 1. To raise awareness by presenting in grand round and to include in the departmental COTE induction programme. 2. To incorporate bed side visual chart 'Look out Tool' into our CGAs so as not miss visual examination and refer to opticians/eye clinic accordingly. 3. To re-audit post implementation. Our aim is to achieve 100% compliance with bedside visual assessment suggested by royal college of physician and optician referral if needed by the end of 2021.

Quality Improvement Project

Vision Assessment In Elderly People

S.A.Lwin, O.balogan, S.Hokins, E.Peter
Care of Elderly Department, Royal Gwent Hospital

Introduction

Falls are common, but often overlooked, cause of injury especially in elderly population. Patients with poor vision have 1.7 percentage of getting fall leading to serious injury as compared to general elderly population. Guidelines recommend that people who fall should undergo multifactorial assessment, including of visual impairment. The Royal College of Physicians (UK) have recommended to use the 'Look out!' bedside vision check tool for falls prevention. We carried out an Audit on complete Geriatric assessment in care of the elderly ward to compare local practise against the recommendation by royal college of physician.



Look out!
Bedside vision check
for falls prevention

Method

We evaluated 53 patients presenting to hospital with falls in June 2021. We looked through clerking proforma/ CGA of fall patients whether bedside vision assessment has been performed on admission or deferred in acute unwell and confused patients.

Result

Gender ratio 43.4 % of male and 56.6 % female.
Average age 85.07
Cognitive assessment done only in 45% of the studied population.
Bed side visual assessment was not done in all patients.

Conclusion

Poor performance in doing visual check in assessing fall patients detected and we studied to identify the causes behind as follow.

1. Lack of awareness of importance of impaired vision in fall risk in junior doctor
2. Lack of familiarity with bed side visual assessment tool
3. Junior doctors changing rotation on regular basis.

Implementation

1. To raise awareness by presenting in grand round and included in COTE induction programme.
2. To incorporate bed side visual assessment chart into CGA and refer to optician accordingly.
3. To re-audit post implementation.

Aim

Our aim is to achieve 100% compliance with bedside visual assessment suggested by royal college of physician and optician referral if needed by the end of 2021.

CQ - Clinical Quality - CQ - Clinical Effectiveness [Poster]

845. Assessment of Bone Health Care on the Elderly Care ward

A Nanapragasam 1; J Brend 1 ; E Pollheimer 1; M Dhillon 1; R Mizoguchi 1

1. Dept of Elderly Care; Chelsea and Westminster NHS Trust

Introduction: Osteoporosis is rarely diagnosed until a fragility fracture occurs. According to the National Institute of Health and Care Excellence (NICE) guideline for Fragility Fractures, females > 65 and males > 75 admitted should receive bone health assessment which includes a Dual Energy X-Ray Absorptiometry (DEXA) scan and bone protection.

Method: A retrospective audit of a 3 week period was carried out on an Elderly Care ward to assess whether patients had received bone health assessment. Our intervention was a flow chart with standard bone health care, and a reminder for the GP to book a DEXA scan. Second cycle was performed after 6 weeks intervention.

Results: In the pre-intervention phase, no patients (n=9, 4/9 male, 5/9 female, mean age 83) had bone health assessment. 40% (n=2 /5) patients who required bone protection received treatment. Unfortunately, GPs for those 78% (n=7/9) who required a DEXA scan were not contacted. 30 patients were reviewed post-intervention (male 14/30, female 16/30, mean age 79). 83% (n=25/30) patients met inclusion criteria (female > 65, male > 75). All patients who had a fragility fracture were started on bone protection prior to discharge. GPs of all patients who had a history of fragility fractures or a 'QFracture' score of over 10% were informed to book a DEXA scan.

Conclusion: Pre-intervention, no patients had bone health assessment, nor had a DEXA scan requested and not all the patients were adequately treated. Post-intervention, there was a 100% rate for informing GP to request a DEXA scan and for receiving bone protection. This reflects a simple flow chart is an effective way to increase compliance with assessing whether a patient meets the NICE standard for bone health care.

A Nanapragasam¹; J Brend¹; E Pollheimer¹; M Dhillon¹; R Mizoguchi¹
1. Elderly Medicine Department, Chelsea and Westminster Hospital



Introduction

Osteoporosis is rarely diagnosed until a fragility fracture occurs.

Around 180,000 fractures occur a year in the UK from osteoporosis (National Institute of Health and Care Excellence, 2020).

The annual medical and social cost for all UK hip fractures is around £2 billion (NICE, 2016).

Screening for bone health could have a positive impact if we screen high risk patients before fracture.

Aims

Inpatient females > 65 and males > 75 should receive bone health assessment which includes Dual Energy X-Ray Absorptiometry (DEXA) scan and bone protection.

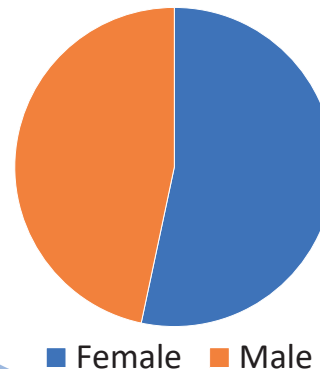
Method

- A retrospective audit of a 3 week period was carried out on the Elderly Care ward to assess whether patients meeting the criteria above had received bone health assessment
- The intervention was a flow chart with standard bone health care and a reminder for GP to book DEXA scan
- A second cycle was performed after 6 weeks post-intervention.

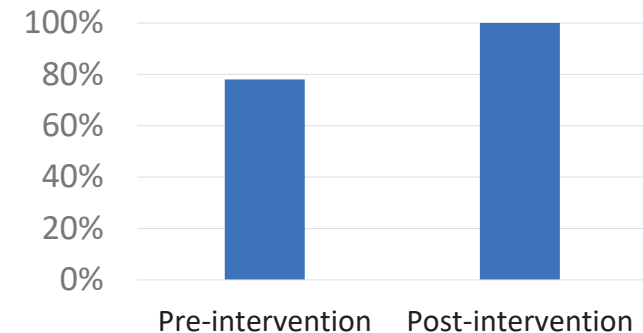
Results

- In the pre- intervention phase, no patients had bone health assessment.
- 30 patients were reviewed post-intervention (14 male, 16 female, mean age 79).
- 83% (n=25/30) patients met the inclusion criteria (female > 65, male > 75).
- All patients who had a fragility fracture were started on bone protection prior to discharge. The GPs of all patients who had a history of fragility fractures or a 'QFracture' score of over 10% were informed to book a DEXA scan.

Gender of patients reviewed post intervention %



Percentage of GPs asked to request DEXA scans where needed



Conclusion

- Pre-intervention, no patients had a bone health assessment nor had a DEXA scan requested.
- Post -intervention, there was a 100% rate for informing the GP to request a DEXA scan and 100% rate for receiving bone protection.
- This reflects how a simple flow chart is an effective way to increase compliance with assessing whether a patient meets the NICE standard for bone health care.

CQ - Clinical Quality - CQ - Clinical Effectiveness [Poster]

846. Promoting the measurement of lying and standing blood pressure to improve multifactorial falls assessment and falls prevention.

Sami Fouda, Elizabeth Dominguez, Thayapary Sivagnanam and Shaha Pennadam Sheriff

Care of the Elderly Department, Royal Gwent Hospital in Newport, Aneurin Bevan University Health Board, Wales, United Kingdom

Introduction: Orthostatic Hypotension (OH) is a common and disabling condition among older patients which can result in falls with significant morbidity and mortality. Increasing the incidence of falls in hospitals and in the community requires early identification and management of OH. **Aim:** To assess how well orthostatic BP monitoring is recorded and whether this could be improved.

Method: We conducted a prospective study in 5 geriatric wards including three cycles. We audited the notes of inpatients presented with falls, had inpatient falls, history of recurrent falls or deemed to be at high risk of falls. Logged whether lying and standing blood pressure (L/S BP) was done, this was done correctly and clearly documented. Both of the medical and nursing teams were contacted following the first cycle and a pro forma sheet was introduced including guidance on performing L/S BP. In addition, the second cycle was followed by a teaching session, reminder emails to the ward managers and out-reach visits to wards to educate and encourage the recording of L/S BP.

Result: The first cycle included 65 patients and showed a percentage of 13.84 who had their L/S BP done compared to 34.54% among 55 patients in the second cycle. While the third cycle included 56 patients, 57.14% of them had their measurements done. Among those who had orthostatic BP, it was done correctly in 44% in the first cycle and it was improved to 57% and 75% in respective cycles. It's worth mentioning that all those identified with OH had successful or ongoing medical management.

Conclusion: Interventions done to educate about and promote the monitoring of L/S BP via teaching, reminder emails and pro forma introduction resulted in a significant improvement of the recording, accurate measurement and management of OH as a part of multifactorial falls assessment and prevention.

LYING AND STANDING BLOOD PRESSURE



GIG
CYMRU
NHS
WALES

Bwrdd Iechyd Prifysgol
Aneurin Bevan
University Health Board

PROMOTING THE MEASUREMENT OF LYING AND STANDING BLOOD PRESSURE TO IMPROVE MULTIFACTORIAL FALLS ASSESSMENT AND PREVENTION OF FALLS

Sami Fouda, Elizabeth Dominguez, Thayapary Sivagnanam and Shaha Pennadam Sheriff

Care of the Elderly Department, The Royal Gwent Hospital, Aneurin Bevan University Health Board, Wales, The United Kingdom

INTRODUCTION

Orthostatic Hypotension (OH) is a common and disabling condition among older patients which can result in falls with significant morbidity and mortality.

Increasing the incidence of falls in hospitals and in the community requires early identification and management of OH.

OBJECTIVES

To assess how well Orthostatic BP monitoring is recorded and whether this could be improved.

METHODOLOGY

A prospective study of 3 cycles in 5 geriatric wards included auditing the notes of inpatients with recent falls or at high risk of falls. We logged whether lying and standing blood pressure (L/S BP) was done, whether this was done correctly and clearly documented.

Interventions after the first cycle included:
- Introduction of a pro forma sheet with guidance on performing L/S BP correctly.

Interventions after the second cycle included:
- Teaching session
- Reminder emails to the ward managers, nurses and doctors.
- Out-reach visits to the wards to educate and encourage the recording of L/S BP.

Figure 1: Royal College of Physicians guidance on performing L/S BP¹

RESULTS

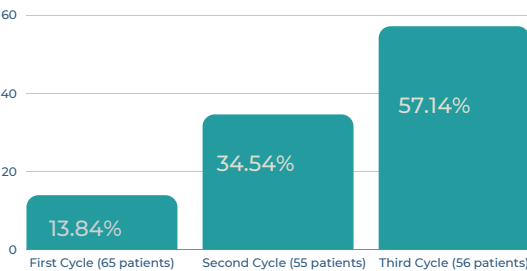


Figure 2: Percentage of patients who had their L/S BP done over the three cycles.

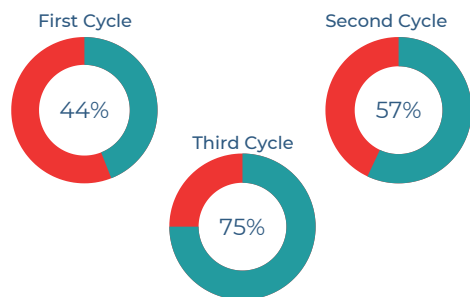


Figure 3: Improvement in the percentage of patients who received accurate measurements of L/S BP after serial interventions.

CONCLUSION

Interventions implemented to educate about and promote the monitoring of L/S BP through teaching, reminder emails and pro forma introduction resulted in a significant improvement in the recording, accurate measurement and management of OH as apart of multifactorial falls assessment and prevention.

All those identified with OH had successful or ongoing medical management.

Following this project, The concise format of lying and standing blood pressure monitoring was included in the updated Multifactorial Falls Assessment booklet for the health board (Aneurin Bevan University Health Board)

Figure 4: The updated Multifactorial Falls Risk Assessment, ABUHB featuring the mandatory review of lying and standing blood pressure²

References

1. Falls and Fragility Fracture Audit Programme of the Royal College of Physicians.
2. Policy for the Prevention and Management of Adult Inpatient Falls, ABUHB - Owner: Director of Therapies & Health Science

CQ - Clinical Quality - CQ - Patient Safety [Poster]

848. Promoting measurement of lying and standing blood pressure in over-65s to prevent inpatient falls: A Quality Improvement Project

P Hossain¹; J Kotecha²; M Elok³.

1.Department of Acute Medicine,St Helier Hospital;2.Department of Rheumatology, St Helier Hospital;3.Department of Frailty Medicine, St Helier Hospital

Introduction: Around 250,000 inpatient falls are recorded in England every year (1). Significant consequent complications include physical injuries (30-50% of falls), fractures (1-3%) (2), intracranial haemorrhage (1%) (3), and decline in mobility (4). Identifying and addressing underlying risk factors may reduce inpatient falls by up to 30% (2). National Institute for Health and Care Excellence (NICE) recommend all patients over the age of 65 years (over-65s) should have a multi-factorial falls risk assessment, including measuring lying and standing blood pressure (LSBP) at 1 and 3 minutes. (4). National audit data has shown that the compliance rate of measuring LSBP is less than 20% (5). We performed a quality improvement project to improve compliance with measuring LSBP in over-65s in our hospital.

Methods: We audited LSBP measurements of over-65s compared to NICE guidelines, assessing digital observations charts of all patients on the Acute Medical Unit and Acute Frailty Unit. We performed a survey of nurses and healthcare assistants (HCAs) to assess their understanding of the guidelines and their usual practice. A second audit cycle was performed after providing education to nurses and HCAs, and displaying posters to promote awareness.

Results: 32 participants responded to the survey: 87.5% were aware of NICE guidelines but only 22% said they measured LSBP for all over-65s. We assessed 40 charts of over-65s in the first cycle and 44 in the second cycle. In the second cycle 43.2% of over-65s had LSBP documented, compared to 17.5% in the first cycle. 63.2% of measurements were recorded at both 1 and 3 minutes in the second cycle, compared to 28.6% in the first cycle.

Conclusion: Providing education and promoting awareness via posters led to a marked improvement in the measurement of LSBP. Future work aims to further improve compliance by creating prompts on digital observations charts.

Promoting measurement of lying and standing blood pressure in over-65s to prevent inpatient falls

Hossain P, Kotecha J, Elok1 M

Introduction

250,000 inpatient falls are recorded in England every year¹. Significant complications:

Physical injuries
(30-50% of falls)

Fractures
(1-3%)²

Intracranial hemorrhage
(1%)³

Decline in mobility⁴

Identifying /addressing risk factors may reduce inpatient falls by up to 30%²

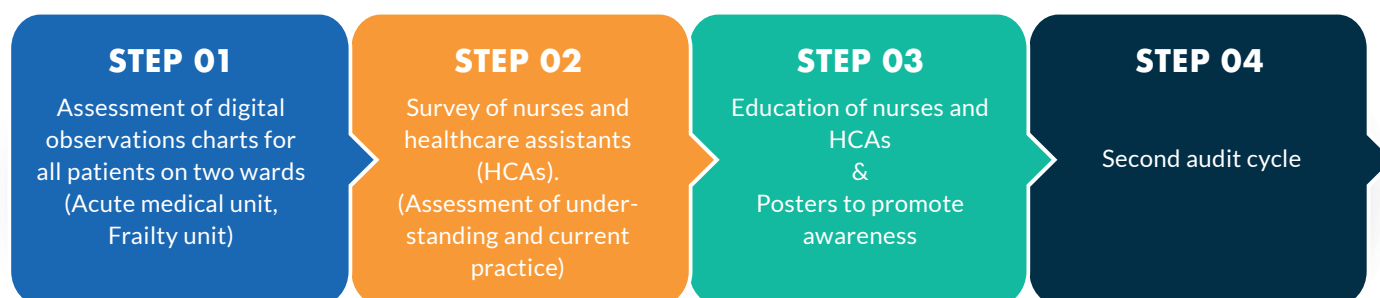
National Institute for Health and Care Excellence(NICE) recommendations: all patients > 65 years old (over-65s) should have a multi-factorial falls risk assessment

Includes measuring lying and standing blood pressure (LSBP) at 1 and 3 minutes⁴.

National audit data: compliance with measuring LSBP is less than 20%⁵.

Our quality improvement project: improving compliance with measuring LSBP in over-65s in our hospital.

Methods



Results

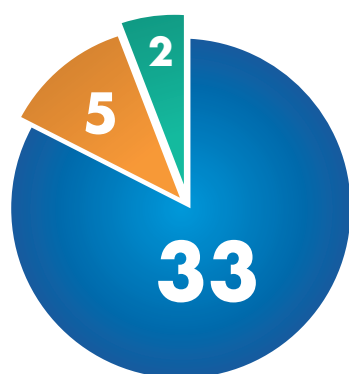


Fig-1: 1st audit cycle (n=40)

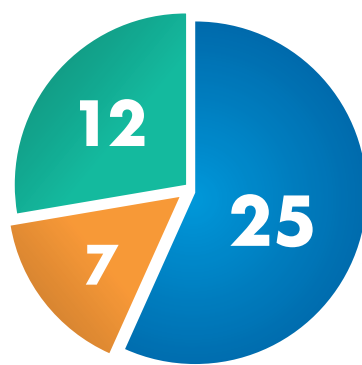


Fig-2: 2nd audit cycle (n=44)

- patients with no LSBP measured
- patients with one LSBP measured
- patients with LSBP measured at 1 and 3 mins

Conclusions

- Providing education and promoting awareness via posters resulted in marked improvement in measurement of LSBP.
- Future work: further improving compliance by creating prompts on digital observations charts.

References:

- NHS Improvement. The incidence and costs of inpatient falls in hospitals. London: 2017. Available at: <https://improvement.nhs.uk/resources/incidence-and-costs-inpatient-falls-hospitals/>
- Morris R, O'Riordan S. Prevention of falls in hospital. Clin Med (Lond). 2017 Jul;17(4):360-362.
- Toyabe S. Use of risk assessment tool for inpatient traumatic intracranial hemorrhage after falls in acute care hospital setting. Glob J Health Sci. 2012 Apr 28;4(3):64-71.
- National Institute for Health and Care Excellence. Falls: NICE clinical guideline 161 (June 2013). Available at: <https://www.nice.org.uk/guidance/cg161/evidence/falls-full-guidance-190033741>
- Royal College of Physicians. National Audit of Inpatient Falls: audit report 2017. London: RCP, 2017. Available at: <https://www.rcplondon.ac.uk/projects/national-audit-inpatient-falls-naif>

CQ - Clinical Quality - CQ - Patient Safety [Poster]

851. Five pillars of preventing falls and the consequences of these events in older people

Bartłomiej Gasienica-Walczak

Podhale State College of Applied Sciences in Nowy Targ, Poland

Introduction: Assuming that every single person moving independently will fall at least once in his life, it would be unwise to ignore programs that reduce the likelihood of falling, especially in older people, but on the contrary, these programs should be indispensable element of systemic fall prevention and postural stability. The aim of the work is a recommendation (based on facts) of a complementary system to prevent death and injuries due to falls (CSPDIDF).

Methods: Review of the literature related to: fall-likelihood reduction programs; the results of randomized trials of reducing the susceptibility to injury during a fall, including teaching safe falls; as well as being guided by own research, teaching and therapeutic experience resulting from the continuation of the achievements (since 2008) of the so-called Polish school of safe falling dating back to the tradition of the 60s of the previous century.

Results: Pillar I of the CSPDIDF, promotion of knowledge about the causes and effects of falls and the effectiveness of preventive programs in ontogenesis. Pillar II, diagnosing the susceptibility to injuries to the body of the elderly (including those belonging to other groups of increased risk of falling). Pillar III, diagnosing physical fitness in the context of effective body control during a fall and the ability to getting up independently (muscle strength in the lower and upper extremities, abdomen, flexibility and the body balance disturbance tolerance skills). Pillar IV, teaching safe falls. Pillar V, teaching elderly caregivers the methods and techniques of assecuration a fallen person in a variety of circumstances.

Conclusion: The importance of pillar V of the CSPDIDF (including the role of caregivers for the elderly) will increase due to the aging of societies, decreased activity of elderly people after the Covid-19 pandemic, and the growing population of people with neurological diseases.

Five pillars of preventing falls and the consequences of these events in older people

Gasienica-Walczak Bartłomiej ¹

1. Podhale State College of Applied Sciences in Nowy Targ



INTRODUCTION

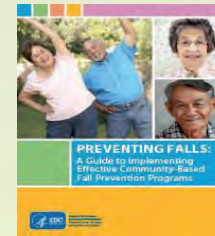
Assuming that every single person moving independently will fall at least once in his life, it would be unwise to ignore programs that reduce the likelihood of falling, especially in older people, but on the contrary, these programs should be indispensable element of systemic fall prevention and postural stability. The aim of the work is a recommendation (based on facts) of a **complementary system to prevent death and injuries due to falls** (CSPDIDF).

METHODS

A review of the literature related to: fall-likelihood reduction programs; the results of randomized trials of reducing the susceptibility to injury during a fall, including teaching safe falls; as well as being guided by own research, teaching and therapeutic experience resulting from the continuation of the achievements (since 2008) of the so-called Polish school of safe falling dating back to the tradition of the 60s of the previous century.

RESULTS

Pillar I of the CSPDIDF, promotion of knowledge about the causes and effects of falls and the effectiveness of preventive programs in ontogenesis.



Source:
https://www.cdc.gov/homeandcommunitybased/safety/falls/community_preventfalls.html

Pillar II, diagnosing the susceptibility to injuries to the body of the elderly (including those belonging to other groups of increased risk of falling: blind people or people with eye disorders, people with limb amputations, etc.).



Source: : Kalina RM. Non-apparatus safe falls preparations test (N-ASFPT) – validation procedure. Arch Budo, 2013 4: 255-265

Pillar III, diagnosing physical fitness in the context of effective body control during a fall and the ability to getting up independently (muscle strength in the lower and upper extremities, abdomen, flexibility and the body balance disturbance tolerance skills).



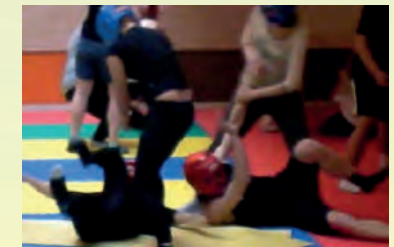
Source: <https://www.world-today-news.com/the-importance-of-physical-exercise-in-the-elderly/>

Pillar IV, teaching safe falls while enhancing the motor skills listed in pillar III.



Source: Kalina RM, Kruszewski A, Jagiełło W, Włoch G.: Combat sports propaedeutics – basics of judo. Warsaw. APE Warsaw 2003

Pillar V, teaching elderly caregivers the methods and techniques of assecuration a fallen person in a variety of circumstances.



Source: : Kalina RM. Non-apparatus safe falls preparations test (N-ASFPT) – validation procedure. Arch Budo, 2013 4: 255-265

CONCLUSIONS

The importance of pillar V of the CSPDIDF (including the role of caregivers for the elderly) will increase due to the aging of societies, decreased activity of elderly people after the Covid-19 pandemic, and the growing population of people with neuro-cognitive diseases.

CONTACT

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CQ - Clinical Quality - CQ - Clinical Effectiveness [Poster]

852. An Audit of the Management of Frail Older Trauma Patients at an Irish University Hospital in 2019

A Roy; L Binions; M Lynders; R Laguna; R Coary; V Ramiah

Mater Misericordiae University Hospital

Introduction Frail older adults make up a significant proportion of trauma patients attending our emergency services. Acute as well as post-acute management of the older persons with trauma comes with challenges given their complex medical and rehabilitation needs. In recent years, the implementation of hip fracture management pathways has shown significant improvement in outcomes. We aimed to assess the current management of clinically frail older persons with non-hip fracture trauma/other injuries in our Emergency Department (ED) and compare our practice to the standards of care listed in the British Orthopaedic Association (BOA) guidelines for older or frail orthopaedic trauma patients. Our focus was on acute management/identification, comprehensive geriatric assessment, multifactorial falls assessment and advance care planning.

Methods We conducted a retrospective review of hospital electronic medical records. Our inclusion criteria were: (1) adults over 65 years old presenting with mild/moderate/severe trauma to our ED between October and December 2019; (2) triaged as clinically frail using the variable indicator of placement(VIP) frailty tool. We excluded patients with hip fractures.

Results 28 patients were selected using inclusion criteria (64% female). Median age was 83.3 years. 26 of 28 patients had suffered falls from standing height. Compared with BOA standards, 93% of our patients had cross sectional imaging performed (cervical spine imaging was performed in only 25%); advance care planning/ceiling of care decisions were documented in 25% of patients. 54% of patients underwent comprehensive geriatric assessment and multifactorial falls risk assessment was done in 46%, bone health review was documented in 36% of patients.

Conclusions Our findings revealed an urgent need for improvement in several aspects of care of the older trauma patient. Since this audit, a multidisciplinary frailty intervention team and a “Silver Trauma” pathway have been established in our ED. We aim to re-audit our practice following these improvements.

**Poster not
supplied**

CQ - Clinical Quality - CQ - Patient Safety [{Poster }]

853. In-Hospital Fall Incidences Among Older Adults in Medical Ward: Structured Interdisciplinary Unit-Based Safety Program

K.Karthikayini¹; Maw Pin, Tan²; Mohd Idzwan Zakaria³; Karuthan Chinna⁴

1. Department of Nursing; University of Malaya Medical Centre, Kuala Lumpur, Malaysia; 2. Ageing and Age-Associated Disorders Research Group, Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia; 3. Academic Unit Trauma and Emergency, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia; 4. School of Medicine, Faculty of Health and Medical Sciences, Taylor's University, Selangor, Malaysia

Background: Falls are very common among elderly patients in hospitals, and this often increase the length of hospital stay. Studies suggest that patient safety education and unit-based safety programs can increase awareness and adherence to fall prevention measures and reduce number of falls and fall-related injuries in the ward. **Objective:** To determine the effectiveness of a Comprehensive Unit-Based Program (CUSP) in reducing fall incidence among older adults.

Method: In this study, a multi-component initiative to emphasize staff and patient education and awareness was implemented in a ward. The components of this program include John Hopkins Fall Assessment Tool, education materials to patients and caregivers, risk assessment tool, ward audit on the compliance of the CUSP and fall incidence data monitoring. Structured training using the Agency for Healthcare Research and Quality and science of safety module were also incorporated in the program. The effectiveness of the program was assessed using the Safety Attitude Questionnaire

Results: Ninety-three percent of staff in the ward completed the training module guided by the research team in the CUSP implementation. Fall incidence was recognized as a safety concern among the staff. In a 2-year post-intervention period, no falls were reported. More than 85% of staff who went through the training participated in the safety assessment. There were significant improvements in six safety domains but not in job satisfaction and stress recognition. This project has reached sustainability and as there were no falls thereafter the unit managed to control the low fall rate with no injuries, below the national and hospital level indicator for fall incidences.

Conclusion: CUSP is a promising tool to improve patient safety practices. It leads to quality of care and changes the practices of HCPs with the recommended principles of safety rounds. This project is sustainable as there were no falls thereafter.

IN-HOSPITAL FALL INCIDENCES AMONG OLDER ADULTS: A STRUCTURED INTERDISCIPLINARY UNIT-BASED SAFETY PROGRAM



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Introduction

- Falls is a common factor that often increases length of stay among hospitalized older patients^[1]
- A staggering 700,000 to 1 million inpatients were estimated to experience falls annually- ranging from 1.3 to 8.9 per thousand patient days, with about 30% resulting in injury.^[2]
- The Comprehensive Unit-based Safety Program (CUSP) (Figure 1) was developed by patient safety researchers at the Johns Hopkins Hospital in 2001 to improve local safety culture and to learn from defects by utilizing a validated structured framework. ^[3] This CUSP was used to reduce fall incidences in an adult ward.



Figure 1: CUSP model

Objectives

- To implement and evaluate the effectiveness of CUSP model to reduce fall incidences and fall related injuries that enhance patient centered culture.

Methods

Study design: Interventional, pre and post study.

Study site: 1020-bedded teaching hospital in Kuala Lumpur,

Study population: Healthcare providers working within an acute ward with high fall-risk at a teaching hospital.

Intervention: CUSP-led patient safety rounds and web-based education to address prevention of inpatient falls (Figure 2).

Outcomes measures

Primary outcome: Safety Attitude Questionnaire (SAQ)^[5] was used pre and post intervention to assess staffs' attitude towards patient safety in six domains: teamwork climate, safety climate, job satisfaction, perceptions of management, stress recognition and working conditions.

Secondary outcome: falls incidents reported

Data Collection: SAQ was administered as an online survey disseminated of the hospital staff portal using a Google™ form platform. Questionnaires were completed anonymously. Web-based education was given via online method and discussions were made quarterly to monitor the effectiveness. An audit system captured fall incidences and fall injuries 6 months before and 24 months after the intervention of CUSP.

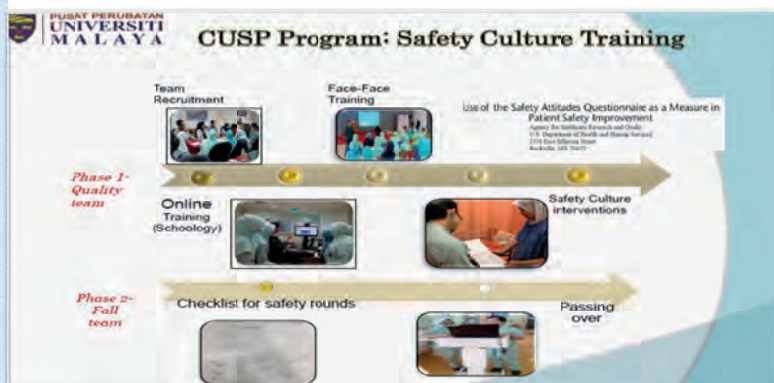


Figure 2: CUSP Web-based Education Timeline

Results

Post intervention results showed a dramatic improvement in fall assessment and documentation of the interventions (Table 1 & Figure 3). The fall rate was 11.18 per 1,000 patient bed days in 2018. In the second quarter of 2019, it was 6.5 per 1,000 bed days. After the implementation, the fall rate dropped to zero. The unit observed the longest of fall-free days in 2020, at a total of 365 days (Figure 4).

Domains	Pre - intervention Mean ± S	Post-intervention Mean ± S	t	p-value
Teamwork (TW)	3.79 ± 0.29	3.97 ± 0.49	1.732	0.042*
Safety Culture (SC)	3.76 ± 0.30	3.90 ± 0.34	1.691	0.045*
Job Satisfaction (JS)	4.07 ± 0.50	4.11 ± 0.53	0.301	0.382
Stress Recognition (SR)	2.93 ± 0.89	2.90 ± 1.10	0.077	0.469
Unit Perception (UP)	3.59 ± 0.39	3.81 ± 0.48	1.948	0.026*
Hospital Perception (HP)	3.55 ± 0.38	3.76 ± 0.49	1.855	0.032*
Working Condition (WC)	3.61 ± 0.54	3.85 ± 0.50	1.628	0.042*

Table 1: Pre and Post intervention Results

SAQ survey pre- and post-CUSP for fall prevention

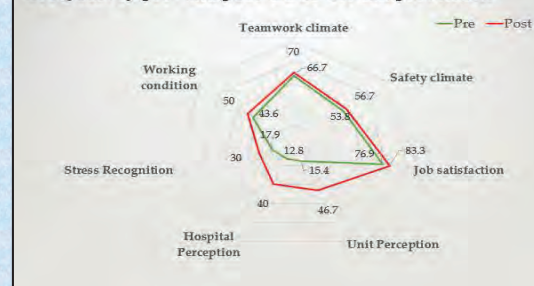


Figure 3: Pre and Post SAQ results

Achievements

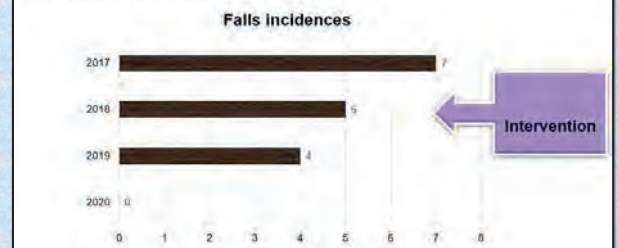


Figure 4: Fall incidence rate pre and post intervention

Discussion

- With the implementation of evidence-based practices and continued research related to fall prevention, we can anticipate new approaches to decrease injuries sustained by an ageing hospitalized population.
- Consistent diligent use of fall prevention measures through the development of a patient centered culture that promotes safety and harm free environment, influenced practice and resulted in the reduction of falls and falls with injury.

Conclusion

- CUSP leads to sustainable changes in quality of care and practices of HCPs.
- Future research should also explore CUSP in other contexts, but CUSP should be considered as a tool for reduction of inpatient falls in acute hospitals.

References: [1]. Bonner, A., MacCulloh, P., Gardner, T., Chase, C.W., (Sept. 2007) "A student led demonstration project on fall prevention in a long-term facility" Geriatric Nursing 28(5) 312-318.

[2]. Goldsack, J., Bergey, M., Mascioli, S., Cunningham, J., (February 2015) "Hourly rounding and patient falls: What factors boost success?" Nursing 45 (2) 25-30.

[3]. Agency for Healthcare Research and Quality, Rockville, <https://www.ahrq.gov/patient-safety/settings/hospital/fall-prevention/toolkit/index.html>.

[4]. Dyck, D., Thiele, T., Kebicz, R., Klassen, M., Erenberg, C. (2013) "Hourly rounding for falls prevention: A change initiative." Creative Nursing 19(3) 153-158.

[5]. Sexton JB, Helmreich RL, Neilands TB, Rowan K, Vella K, Boyden J, et al. The safety attitudes questionnaire: psychometric properties, benchmarking data, and emerging research. BMC Health Serv Res. 2006;6:44. doi:10.1186/1472-6963-6-44.

SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma) [Poster]

855. Secondary prevention of fragility fractures within the medical department.

D Mwandumba¹; B Low²; G McKinnon³

1. Dept of Psychiatry; Gartnavel Royal Hospital; 2. Dept of Acute Medicine; Forth Valley Royal Hospital; 3. Dept of Acute Medicine; Queen Elizabeth University Hospital Glasgow

INTRODUCTION Fragility fractures increase the risk of subsequent fractures in the future, especially in frail patients. We sought to evaluate the initiation of secondary prevention in patients admitted with a fragility fracture through the medical admissions unit at Forth Valley Royal Hospital.

METHODS Retrospective data about patients admitted through the medical admissions unit with a fragility fracture was collected in two phases. The first phase ran from January to February 2020. Posters were then made and disseminated with the medical admissions unit to increase awareness amongst medical staff about secondary prevention of fragility fractures. A second phase was then conducted from November 2020 to January 2021.

RESULTS 28 patients were analysed in phase one (96% of patients aged 75 or above), and 21 patients were analysed in phase two (81% of patients aged 75 years or above). The most common fractures in both phases were pubic rami and vertebral compression fractures – they comprised of 45% of all fractures in phase one, and 54% of all fractures in phase two. Despite the implementation of posters within the medical admissions unit, there was actually a 45% reduction in the initiation of some form of bone protection in patients who were otherwise not on any prior to admission. Secondary prevention was most commonly initiated after a pubic rami fracture (occurred in 67% of patients in both phases). 20% of patients were initiated on a bisphosphonate as well as calcium/vitamin D supplement in phase one, whilst no patients were given bisphosphonates in phase two.

CONCLUSION More work is needed in order to improve secondary prevention and therefore reduce the risk of subsequent fragility fractures in frail patients. It's possible that COVID-19 may have impacted the prescription of bone protection in patients with fragility fractures within the second phase.

Secondary Prevention of Fragility Fractures within the Medical Department

Dalitso Mwandumba¹, Bianca-Rose Low¹, Gordon MacKinnon¹.
¹Department of Acute Medicine, Forth Valley Royal Hospital.

Introduction

Fragility fractures are fractures that occur from a low-impact mechanism, such as a fall from standing height or less. They increase the risk of subsequent fractures in the future, especially in elderly patients.¹ Not only may they lead to long hospital stays, increased care needs and mortality, it's been estimated that the social and medical costs of fragility fractures to the UK healthcare economy may eventually amount to £2.2 billion.² Therefore, initiation of secondary prevention bone protection after a fragility fracture may help to reduce the subsequent healthcare and economic burden.

The aim of our study was to evaluate the initiation of secondary prevention in medical patients with a fragility fracture that were admitted through the admissions unit at Forth Valley Royal Hospital.

Method

Retrospective data about patients admitted through the medical admissions unit (MAU) with a fragility fracture was collected in two phases. The first phase ran from January 2020 to February 2020. Data collected included: patient demographics, type of fracture, and bone protection status pre- and post-fracture. Posters were then made and disseminated with the admissions unit to increase awareness about the prescription of bone protection (calcium/vitamin D supplements +/- bisphosphonates) following a fragility fracture in suitable patients. A second phase was then conducted from November 2020 to January 2021 to evaluate any changes in practice.

Results

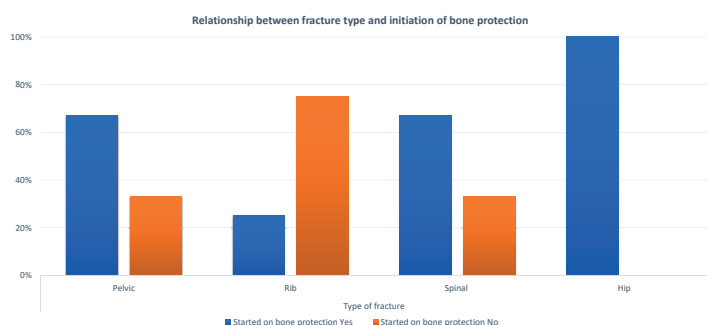
28 patients were analysed in phase one (96% of patients aged ≥75 years), and 21 patients were analysed in phase two (81% of patients aged ≥75 years). A range of fracture types were seen. This data is summarised in *table 1*.

Type of fracture	Phase 1	Phase 2
Facial	1	1
Spinal (endplate/wedge/insufficiency)	7	9
Upper limb (clavicular, scapular, humeral, wrist, elbow)	4	3
Rib	7	1
Pubic ramus/symphysis	7	4
Lower limb (neck of femur, distal femoral, acetabular, tibial plateau, Lisfranc)	5	4

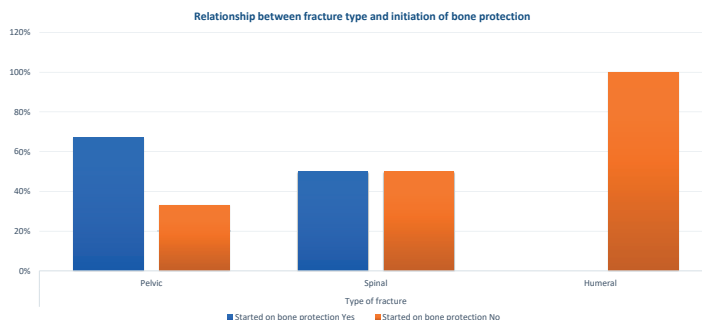
Table 1. Comparison of fracture types between phase one and phase two.

The most common fractures in both phases were pubic rami and vertebral compression fractures; they comprised of 45% of all fractures in phase one, and 54% of all fractures in phase two.

Graphs 1 and *2* show the varying rates in initiating bone protection depending on the fracture type in both phases. The percentage initiation of bone protection varied based on fracture type.

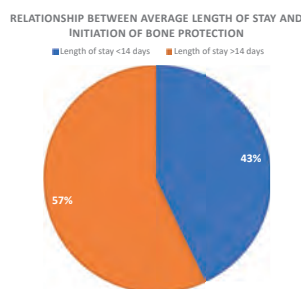


Graph 1. Relationship between fracture type and initiation of bone protection in phase one.

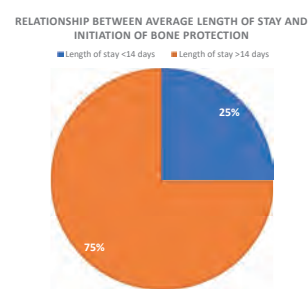


Graph 2. Relationship between fracture type and initiation of bone protection in phase two.

The average length of hospital stay in phase one was 14 days, compared to 32 days in phase two. It is unclear why phase two was associated with a more prolonged admission. Some of the patients were residential/care home residents, so it's postulated that the requirement of x2 negative COVID PCR results prior to returning may explain the prolonged admission in phase two. Despite this, longer hospital stays were associated with higher likelihood of prescribing secondary prevention as shown in *graphs 3* and *4*.



Graph 3. Relationship between average length of stay and initiation of bone protection in phase one.



Graph 4. Relationship between average length of stay and initiation of bone protection in phase two.

Despite the implementation of posters within the MAU, there was actually a 45% reduction in the initiation of some form of bone protection in patients who were otherwise not on any prior to admission. Given that phase two was conducted during the height of the 2nd COVID wave, it is possible that the consideration of bone protection may not have been an immediate priority for prescribers.

Table 2 highlights the types of bone protection initiated post fragility fracture in phases one and two.

Bone Protection	Phase 1	Phase 2
Calcium/vitamin D supplements	80%	20%
Bisphosphonates	100%	0%

Table 2. Comparison of bone protection types initiated in phase one and phase two.

Conclusions

More work is needed in order to improve the secondary prevention of fragility fractures within the MAU. It is possible that COVID-19 may have impacted the prescription of bone protection in patients with fragility fractures within the second phase, so it would be useful to conduct a further phase in future outwith of this period and following further education.

References

1. Wozniak LA, Johnson JA, McAlister FA, Beupre LA, Bellerose D, Rowe BH, Majumdar SR. Understanding fragility fracture patients' decision-making process regarding bisphosphonate treatment. *Osteoporosis International*. 2017 Jan 1;28(1):219-29.
2. Pennestri F, Corbetta S, Favero V, Banfi G. Fragility Fracture Prevention—Implementing a Fracture Liaison Service in a High Volume Orthopedic Hospital. *International journal of environmental research and public health*. 2019 Jan;16(24):4902.

CQ - Clinical Quality - CQ - Clinical Effectiveness [Poster]

856. Upper limb fracture pathways in frailty enable earlier return to function with associated reduced length of hospital stay.

L Shaw 1; T Maggs 2; P Braude 3; D Shipway 3; S Srivastava 3; M Kelly 4

1. Frailty Team Physiotherapist North Bristol NHS Trust; 2. Senior Physiotherapist North Bristol NHS Trust; 3. Consultant Medicine for Older People North Bristol NHS Trust; 4. Trauma and Orthopaedic Consultant North Bristol NHS Trust Note: 1 and 2 co lead authors

Introduction: Upper limb fractures are the second most common fracture requiring admission to hospital after hip fracture [Jennison, 2019]. At 1-year 20.5% have died, compared to 29.5% in hip fracture [Wiedl, 2021]. Local Problems: At North Bristol Trust most patients with upper limb fractures and a Clinical Frailty Score ≥ 5 are managed non-operatively on medical wards. Local service evaluation identified a long length of stay of 23 days. Case note review revealed:

- Delayed transfers of care (DTCs) had been managed non-weight bearing in slings for 4-6 weeks.
- Non-weight bearing status resulted in DTC due to declined access to social care and rehabilitation due to perceived health needs.
- A high rate of hospital-acquired complications and failure to rehabilitate.
- Breakdown in interdisciplinary communication and ownership across the pathway.

Methods: A multidisciplinary QI project was commenced. Using local data through business analytics, clinician and patient feedback, a new Trust guideline was developed for older people with frailty and upper limb fractures. Data collected determined average length of stay before and after implementation of the service change. A standard process control chart was created monitoring the effect of the changes in the pathway. The multidisciplinary team met regularly to make alterations during implementation. The resulting intervention included:

- Removal of functional restrictions; allow free use of limb as comfort permits.
- Simplified slings and minimised light weight casts.
- Proactive integration of orthopaedic plan into CGA documentation.
- Proactive interdisciplinary communication across pathways.
- Patient information leaflets.

Results: Pre-intervention average length of stay was 23 days. Post-intervention was 14 days.

Conclusion: Proactive, structured management of upper limb fractures in people with frailty is associated with significant reduction in acute hospital length of stay. Next steps include a business case for a frailty trauma specialist therapist embedded into medicine.

Upper limb fracture pathways in frailty enable earlier return to function with associated reduced length of hospital stay

L Shaw; T Maggs; P Braude; D Shipway; S Srivastava ; M Kelly

Introduction

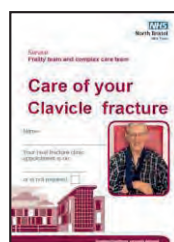
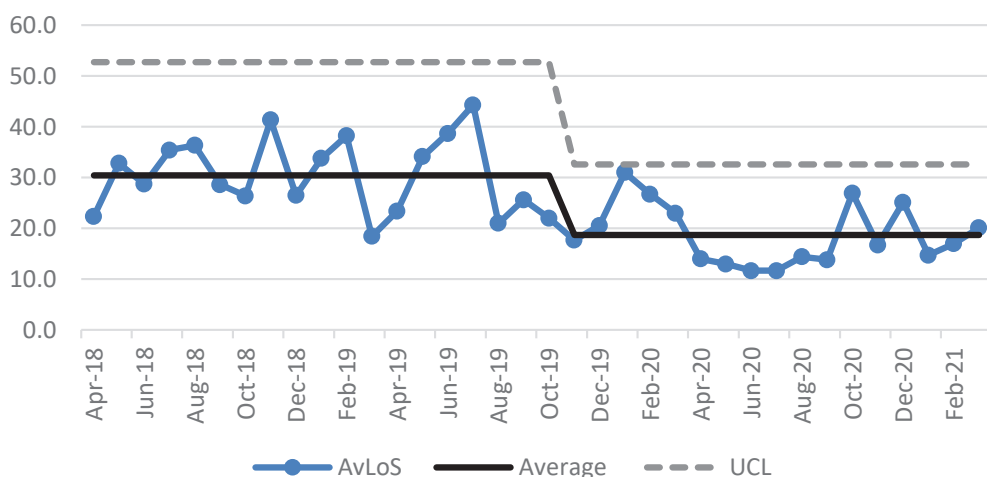
- Upper limb fractures are the second most common fracture requiring admission to hospital after hip fracture [Jennison, 2019]
- Functional restrictions following upper limb fracture may significantly contribute to deconditioning, long term loss of function and delayed transfers of care
- In our Trust most patients with upper limb fractures and a Clinical Frailty Score ≥ 5 are managed non-operatively on medical wards
- Local service evaluation identified length of stay of 30 days

Intervention

- Frailty trauma specialist therapist in medicine implementing new guideline.
- Removal of functional restrictions if clinical frailty score ≥ 5 :allow free use of limb as comfort permits.
- Proactive integration of orthopaedic plan into CGA
- Simplified slings and minimised light weight casts.
- Design of patient information leaflets

Run Chart

Length of stay - 7 days or more



Results

Reduction in mean length of stay of 12 days (range 30 -18).

This may indicate an potential cost saving of >£500,000 a year

Conclusion

- Proactive, structured management of upper limb fractures in people with frailty is associated with significant sustained reduction in acute hospital length of stay.

CQ - Clinical Quality - CQ - Patient Centredness [Poster]

857. Bone health: an exercise in improving junior doctors' confidence in assessing and managing fragility fractures

Y Ge; LM Dennis

Care of the Elderly Department; Chelsea and Westminster Hospital NHS Foundation Trust

INTRODUCTION Fragility fractures are a major disease burden in the UK. With an ageing population and number of fragility fractures predicted to double in 50 years, prevention in this high-risk population needs to be addressed. This audit aimed to examine the assessment of fracture risk in patients presenting with fragility fractures and improve awareness amongst trainee doctors through education.

METHODS A retrospective study was conducted on patients over 65 years admitted with fragility fractures, excluding neck of femur, from January to March 2021 (n= 51). Data was collected on Fracture Risk Assessment Tool (FRAX) scores, dual energy X-ray absorptiometry (DEXA) scans, and risk factors including body mass index (BMI), previous fragility fracture, smoking, alcohol intake, serum calcium and vitamin D. Teaching seminars for junior doctors were delivered to increase confidence in assessing and managing fragility fractures.

RESULTS The mean age of patients was 79, with most common presentations being proximal humerus, distal femur and ankle fractures. 46% of patients had a previous fragility fracture. Smoking and alcohol history were documented in 72% and 60% of patients respectively, and 29% had BMIs calculated. 68% had calcium and 45% had vitamin D checked. DEXA scans occurred in 12%, all of whom had osteopenia or osteoporosis. Over half of patients were already on bone protection and 28% were subsequently started on bisphosphonates. Teaching sessions were delivered to junior doctors (n=17), leading to improved confidence in assessing fracture risk by 35%, and improved confidence in managing fragility fractures by 40%. Knowledge of FRAX score increased from 58% to 100%.

CONCLUSION A significant proportion of the over-65 population are likely to present with fragility fractures. Improving awareness and confidence amongst junior doctors can lead to identification of risk factors and help better prevent and manage fragility fractures in this high-risk population.



BOOSTING BONE HEALTH:

Improving junior doctors' confidence in assessing and managing fragility fractures

Yueqi Ge, Lydia M Dennis

BACKGROUND

Fragility fractures are a major disease burden in the UK. With an ageing population and number of fragility fractures predicted to double in 50 years, prevention in this high-risk population needs to be addressed.

This audit aimed to examine the assessment of fracture risk in patients presenting with fragility fractures and improve awareness amongst trainee doctors through education.

METHODS

A retrospective study was conducted on patients over 65 years admitted with fragility fractures from January to March 2021 (n= 51).

Data was collected on Fracture Risk Assessment Tool (FRAX) scores, dual energy X-ray absorptiometry (DEXA) scans, and risk factors including body mass index (BMI), previous fragility fracture, smoking, alcohol intake, serum calcium and vitamin D. Teaching seminars for junior doctors were delivered to increase confidence in assessing and managing fragility fractures.



Teaching sessions were delivered to junior doctors (n=17) (*see above*), leading to improved confidence in assessing fracture risk by 35%, and improved confidence in managing fragility fractures by 40%. Knowledge of FRAX score increased from 58% to 100%.

RESULTS

The mean age of patients was 79, with most common presentations being proximal humerus, distal femur and ankle fractures. 46% of patients had a previous fragility fracture. Smoking and alcohol history were documented in 72% and 60% of patients respectively, and 29% had BMIs calculated. 68% had calcium and 45% had vitamin D checked. DEXA scans occurred in 12%, all of whom had osteopenia or osteoporosis. Over half of patients were already on bone protection and 28% were subsequently started on bisphosphonates.

CONCLUSION

A significant proportion of the over-65 population are likely to present with fragility fractures. Improving awareness and confidence amongst junior doctors can lead to identification of risk factors and help better prevent and manage fragility fractures in this high-risk population.

CQ - Clinical Quality - CQ - Patient Safety [Poster]

858. Postural Hypotension: A QIP

T Glover; K Wilkinson; S Malani

1,2,3 Imperial College Healthcare NHS trust

Falls in elderly people cause significant morbidity and mortality; and can negatively affect patients' functional baseline. Studies, such as one by Shaw et al. Al show that patients who have postural hypotension are more likely to fall (Shaw et al. BMC Geriatrics, 19(80): 2019). Postural hypotension is a treatable and therefore reversible cause of falling. NICE stipulates patients presenting with fall should have a multifactorial falls assessment (NICE, 2013, CG161. Section 1.1.2.1.) Lying-standing blood pressure (LSBP) should therefore form part of this assessment.

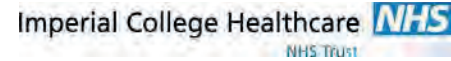
Our study developed an educational approach to postural hypotension assessment on an elderly care ward. We undertook two rounds of retrospective data collection. Following round one, we undertook small group education sessions focused on recording and documenting for our nursing and therapy colleagues and developed reminder cards to place on observation machines.

Our results were encouraging and also highlighted further areas for development. Of all patients with a LSBP request in their notes, in cycle 1 42% were completed whereas in cycle 2 90% were completed. We also significantly improved the technique and documentation on our electronic system from 0% correct in the first cycle to 95% in the second. This improvement is where the teaching and intervention was aimed therefore shows an effective intervention. LSBP was recorded more quickly; mean time to complete decreasing from 1.7 to 0 days showing increased awareness of importance. An ongoing issue identified was requesting a LSBP as part of the falls assessment, as only 63% of patients having documented requests in both cycles. In cycle 1, 26% of patients presenting with a fall had a LSBP whilst in cycle 2, this increased to 56%. This is an area for future work. We have presented results at the local departmental meeting to increase doctor awareness of the falls assessment.

An MDT approach to Postural Hypotension

Dr K Wilkinson, Dr T Glover, Dr S Malani

Medicine for the Elderly, Charing Cross Hospital



Background

Falls in elderly people cause significant morbidity and mortality; and can negatively affect patients' functional baseline. Studies, such as one by Shaw et al. show that patients who have postural hypotension are more likely to fall (Shaw et al. BMC Geriatrics, 19(80): 2019). Postural hypotension is a treatable and therefore reversible cause of falling. NICE stipulates patients presenting with fall should have a multifactorial falls assessment (NICE, 2013, CG161. Section 1.1.2.1.) Lying-standing blood pressure (LSBP) should therefore form part of this assessment.

Aims and Objectives

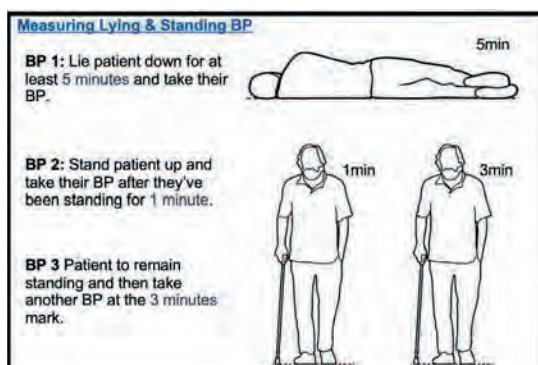
Our aim was to standardize the approach to falls assessment on a care of the elderly ward amongst all members of the multi-disciplinary team. We planned to address this by focusing on postural hypotension. Our aim was to provide education to members of the MDT to improve recording and documentation of LSBP.

Method

Our study developed an educational approach to postural hypotension assessment on an elderly care ward. We undertook two rounds of retrospective data collection with cohort sizes of 75 and 89 for each cycle. Inclusion criteria was all patients admitted to an elderly care ward during a certain time frame and excluding patients who were bed-bound at baseline or who did not mobilise on the ward. We collected data relating to whether LSBP were recorded, and if so efficiency and accuracy of LSBP recordings. After round one, we undertook small group education sessions focused on recording and documenting for our nursing and therapy colleagues and developed reminder cards to place on observation machines.

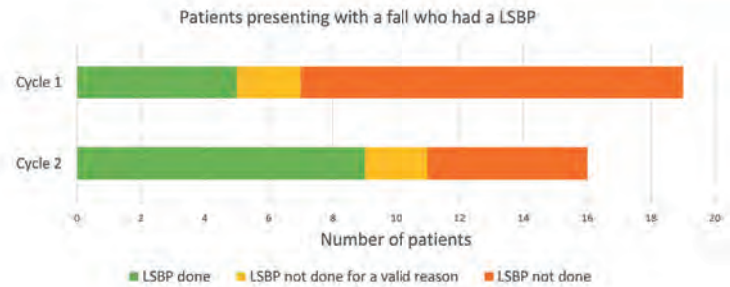
Intervention

Small group teaching sessions with nursing team members lead by senior nurses and junior doctors. Additionally, information cards were placed on observations machines with instructions and pictures to guide accurate recordings. Communication between teams was improved by handing these over at MDT meetings.



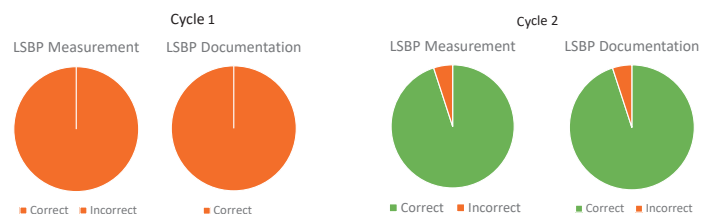
Results

Our results were encouraging and also highlighted further areas for development. Of all patients with a LSBP request in their notes, in cycle 1 42% were completed whereas in cycle 2 90% were completed. This was a great improvement.



We also significantly improved the technique and documentation on our electronic system from 0% correct in the first cycle to 95% in the second. This improvement is where the teaching and intervention was aimed therefore shows an effective intervention.

Data Points	CYCLE 1	CYCLE 2
Average time to complete LSBP (when done)	1.8 days	0.79 days
Average number of repeat requests	Every 1.7 days	0
Correct LSBP measurement	0/6	18/19
Documented in the right place	0/12	20/21



LSBP was recorded more quickly following request from the doctors; mean time to complete decreasing from 1.7 to 0 days showing increased awareness of importance and improved communication. An ongoing issue identified was requesting a LSBP as part of the falls assessment, as only 63% of patients having documented requests in both cycles. In cycle 1, 26% of patients presenting with a fall had a LSBP whilst in cycle 2, this increased to 56%. This is an area for future work.

Conclusion

To conclude; small group teaching was an effective way to refresh knowledge, create positive change and raise awareness of necessity of accurate LSBP recording. Our data shows an increase in accuracy of recording and decrease in time taken to record LSBP; thereby helping to standardize our approach to falls assessment on our ward.

Our data also highlighted areas of future work, and since the second cycle we have focused our education on doctors at departmental teaching sessions. We also hope to allocate a LSBP champion amongst all members of the MDT to improve accessibility to the information and sustainable improvement.

References:

- Shaw et al. Relationships between orthostatic hypotension, frailty, falling and mortality in elderly care home residents. BMC Geriatrics. 19(80): 13/03/2019. Available from: <https://bmgeriatr.biomedcentral.com/articles/10.1186/s12877-019-1082-6>
- Falls in older people: assessing risks and prevention. NICE Guidance. 12 June 2013. Clinical Guideline CG161. Section 1.1.2.1. Available from: <https://www.nice.org.uk/guidance/cg161>

SP - Scientific Presentation - SP - Falls (Falls, fracture & trauma) [Poster]

859. New barriers to the dissemination of innovative knowledge about the prevention of falls not only among the elderly

B Barczynski

Archives of Budo

Introduction: The slogan 'science without borders' is an example of sophisticated propaganda. While until the symbolic break of Iron Curtain (1989), valuable scientific knowledge published in the natural languages of researchers from Eastern Block countries was unavailable in the global science space mainly due to language barriers, ignoring such knowledge available in the Web of Science (regardless of the geographical origin) can be explained by the lack of scientific reliability. The aim of the work is an evidence-based criticism of the scientific reliability of publications dedicated to the issue of unintentional falls of people, by the fact that the citations of articles published in the journal Archives of Budo are not cited, offering the visualization of tests and exercises in a special section of 'Safe Falls Academy'.

Method: Comparison the works citations reviews published in the Archives of Budo dedicated to falls in relation to the references of the latest works dealing with this issue.

Results: Since the authors of works concerning the effectiveness of methods of limiting damage to the body as a result of falls ignore the knowledge about the effects of unique experiments (including clinical ones) of various groups of increased risk published in Archives of Budo and in the branch title Archives of Budo Science of Martial Arts and Extreme Sports , and since they indicate one of the methods of reviewing works in the Web of Science, the explanatory hypothesis put forward at the beginning is true.

Conclusion: A necessary condition for rapid progress in the prevention of unintentional falls, not only of elderly people, is the publication of a credible review of works dedicated to this issue in a reputable scientific journal (effectiveness of reducing injuries and death, when it is no longer possible to avoid a fall).

**Poster not
supplied**

CQ - Clinical Quality - CQ - Patient Safety (Poster)

860_Improving the medical assessment and documentation of falls in the Geriatric Department, Ninewells Hospital, Dundee

J Livie¹; V Livie¹; L Henderson¹; K Lewis¹; S Laidlaw¹

Ninewells Hospital, Dundee

Falls in the older population are common and can lead to serious disability. Falls are the most commonly reported safety incident in NHS hospitals. Up to half of all falls result in injury, with a small proportion of these resulting in a fracture. Falls cause patients to lose confidence, delay recovery and prolong hospital admissions. Falls are usually multifactorial, therefore medical assessment should involve a systemic approach to identify appropriate investigations and management. Our project involved creating a proforma for medics to use when assessing inpatient falls on geriatric wards to standardise assessment and documentation.

Baseline data (n = 9) was collected in September 2020 on 3 geriatrics wards and a questionnaire was sent to foundation doctors regarding falls assessment. Following this the proforma was created and placed in each of the wards. PDSA cycle 1 involved a teaching session to all foundation doctors regarding falls and also highlighted the proforma. PDSA cycle 2 involved collating feedback from those who had used the proforma and creating a poster to highlight awareness. PDSA cycle 3 involved changing the proforma based on feedback and the project discussed at our local clinical governance meeting.

Cumulating data from all PDSA cycles we have compared documentation using the proforma vs without (n = 21 vs 11). History taking was 62% vs 36%. Systemic examination with the proforma vs without: respiratory 100% vs 45%, cardiology 86% vs 9%, head injury consideration 81% vs 64% and assessment for fractures 91% vs 55%. Documentation of medication review was 62% with the proforma vs 27% without.

Overall, the proforma helped to improve assessment and documentation of inpatient falls. Although there are still advances to be made, our aim is for the proforma to be made available for trust-wide use.

IMPROVING THE ASSESSMENT AND DOCUMENTATION OF FALLS IN THE GERIATRIC DEPARTMENT, NEWWELLS HOSPITAL, DUNDEE



JENNIFER LIVIE, VICTORIA LIVIE, LAURA HENDERSON, KATIE LEWIS, SIMON LAIDLAW
NEWWELLS HOSPITAL, DUNDEE

PRESENTING AUTHORS: JENNIFER LIVIE AND VICTORIA LIVIE

INPATIENT FALLS

- Falls are the most commonly reported safety incident in NHS Hospitals¹
- Up to 50% of falls result in injury¹
- Falls delay a patient's recovery and prolong hospital admission¹
- Falls are often multifactorial, therefore require a systemic approach to investigation and management²
- Proforma created to standardise medical assessment and documentation

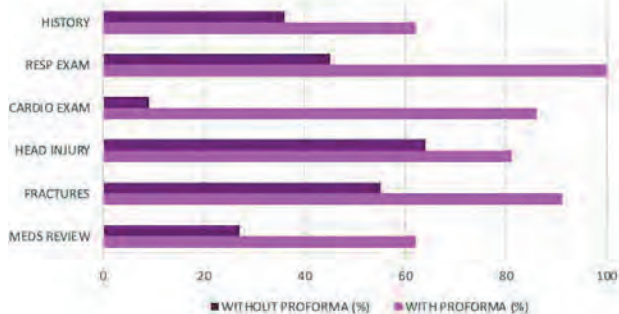
PDSA CYCLES

- 1) Teaching session to all FY Doctors in NHS Tayside
- 2) Poster to highlight awareness
- 3) Project discussed at local clinical governance meeting
- *Feedback collated regarding proforma at each PDSA cycle*

RESULTS

Documentation using proforma vs without. N= 21 vs 11

COMPARISON OF DOCUMENTED COMPONENTS OF A FALLS ASSESSMENT USING PROFORMA AND WITHOUT



CONCLUSION

- Proforma has improved assessment and documentation of key components of a falls assessment
- Feedback gained shows the vast majority of doctors found the proforma useful and helped them save time when completing their review
- Currently being trialed at another geriatric hospital in NHS Tayside

PROFORMA

Post-Fall Medical Review

A medical review should be completed immediately if there is a head injury, suspected fracture or other serious injury, or if the patient is distressed. In all other cases a review should be undertaken as soon as is practicable. Document that this form has been completed then file chronologically within medical notes.

Location/ward:

CHI:

Surname:

Forename:

Date/time of fall: Date/time of assessment:

History – was the fall witnessed by staff? Yes No

Examination	RR	SpO2	FIO2	HR	BP	Temp	Glucose
Airway + C-spine (see appendix 1)							
Breathing							
Circulation							
Disability							
Head injury?(see appendix 2) Yes <input type="checkbox"/> No <input type="checkbox"/> Suspected <input type="checkbox"/>							
Pupils							
GCS: E /4 M /6 V /6							

Injuries (document on diagram)

Clinical evidence of hip fracture? Yes No

Assessment – why did the patient fall? Consider: impaired balance, syncope, delirium/cognitive impairment, medication, environment, other.

Actions

- Consider: lying and standing BP, ECG, further examination and investigations, update 4AT - think causes of delirium
- Review TPAP (e.g. anticoagulation, analgesia if required)
- Neuro observations if known or suspected head injury - e.g. half hourly until GCS=15, then half hourly for 2 hours, then one hourly for 4 hours, then two hourly thereafter

Completed by: Print..... Sign..... Role..... Bleep.....

REFERENCES

- 1) Morris R. Prevention of falls in hospital. Clin Med (Lond) [serial on the Internet]. 2017 [read 2021 Aug 21];17(4): 360-362
- 2) NICE. Falls in older people: assessing risk and prevention [homepage on the Internet]. c2013 [2013 Jun 12; read 2021 Aug 21]. Available from: https://www.nice.org.uk/guidance/cg161/chapter/introduction?fbclid=IwAR3IK4NxTb2THWTbzqa4hhv_xte27hncb_6F9x10vAUw6YB69RsTm1SuSEQ