

# The National Falls and Bone Health Audit: implications for UK emergency care

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## ABSTRACT

**Introduction** The National Clinical Audit of Falls and Bone Health, coordinated by the Royal College of Physicians, assesses progress in implementing integrated falls services across the UK against national standards and enables benchmarking between service providers. Nationally, falls are a leading contributor towards mortality and morbidity in older people and account for 700 000 visits to emergency departments and 4 million annual bed days in England alone.

**Methods** Two rounds of national organisational audit in 2005 and 2008 and one national clinical audit in 2006 were carried out based on indicators developed by a multidisciplinary group.

**Results** These showed that management of falls and bone health in older people remains suboptimal in emergency departments and minor injury units and opportunities are being missed in carrying out evidence-based risk assessment and management.

**Conclusions** Older people attending emergency departments in the UK following a fall are receiving a poor deal. There is an urgent need to ensure more effective assessment and management to prevent further falls and fractures.

## INTRODUCTION

Each year, over 700 000 older people in the UK attend emergency departments (EDs) after a fall and many more attend minor injury units (MIUs), or call for ambulance assistance. Injurious falls, including over 60 000 hip fractures annually, are the leading cause of accident-related mortality in older people. The National Service Framework for Older People<sup>1</sup> emphasises that “preventing falls in older people depends on identifying those most at risk of falling and coordinating appropriate preventative action. Older people who attend accident and emergency departments having fallen should, with their consent, be referred to a specialist falls service.”

The National Audit of Falls and Bone Health in the UK, is commissioned by the Healthcare Quality Improvement Partnership (HQIP, formerly Healthcare Commission), and is conducted by the Clinical Effectiveness and Evaluation Unit (CEEU) of the Royal College of Physicians, London. It is facilitated by a multidisciplinary steering committee representing the many different stakeholders involved in the care of older people after falls. The CEEU conducted an organisational audit in 2005 and then a patient-level clinical audit in 2006 before re-auditing changes in the organisation of care in 2008. The objectives of the national audit are to assess progress across the UK in the implementation of

integrated falls services against national standards and to enable benchmarked comparisons of the organisations and provision of falls and bone health services. This paper describes findings from this national audit that are relevant to EDs and MIUs.

## METHODS

Indicators of the structure and process of high-quality care were developed by a multidisciplinary steering group representing professional and patient organisations relevant to falls and bone health. The original brief was to audit the extent to which Trusts had met the requirements set out in the National Service Framework for Older People,<sup>1</sup> and the group derived audit questions to match these and other standards and guidelines.<sup>2–5</sup>

The organisational audit of November/December 2005 covered England only and all eligible acute Trusts participated. The organisational audit of November/December 2008 recruited 95% of eligible healthcare Trusts in England, Wales and Northern Ireland, and involved the acute hospital sector, primary care, combined health and social care organisations, and mental care trusts. Direct comparison between 2005 and 2008 is difficult because in 2005 acute Trusts provided overview information across the local falls service as a whole, whereas 2008 data were obtained separately from commissioning trusts, community, acute and mental healthcare providers about what specific services they themselves provided (structure indicators).

The clinical audit of October/November 2006 recruited acute hospitals in England, Wales, Northern Ireland and the Channel Islands, with 91% submitting data on process indicators for individual patients. The audit covered two groups of patients aged  $\geq 65$  years and presenting to the ED or MIU, those with a hip fracture and those with other fragility fractures (wrist, humeral, pelvic or vertebral). The audit asked for data on 20 consecutive hip fracture and 40 consecutive other fragility fracture cases, using a retrospective review of case notes. Data were submitted to a secure internet site with no transmission of personally identifiable information.

Organisational data were also entered into web-based data collection tools. Audit data were exported to the CEEU for cleaning, analysis and reporting. All audits were piloted for data proforma and the web tool.

## RESULTS

Results from the two organisational audits of services for older people who fall and attend EDs are shown in table 1. In 2005, only 29% of acute Trusts

## Original article

**Table 1** Results from the 2005 and 2008 organisational audits of emergency departments

2008 Audit question	2008 Audit result	2005 Audit question	2005 Audit result
Are older people who fall and attend A&E departments or MIUs routinely screened for risk of future falls?	For those with A&E or MIU: Acute: 50% (92/183) PCOs: 55% (53/96) HSCTs: 30% (3/10)	—	—
Is (routine) screening performed on site in A&E?	Acute: 88% (81/92) PCOs: 81% (43/53) HSCTs: 67% (2/3)	—	—
Is this available 7 days a week?	Acute: 80% (65/81) PCOs: 84% (36/43) HSCTs: 100% (2/2)	—	—
Within A&E/MIUs are there systems for providing onward direct referral for falls and bone health assessments/treatment?	For those with A&E or MIU: Acute: 75% (138/183) PCOs: 80% (77/96) HSCTs: 70% (7/10)	—	—
Are older people who attend A&E/MIUs after a fall routinely assessed for osteoporosis risk?	For sites with A&E or MIU: Acute: 15% (28/183) PCOs: 29% (28/96) HSCTs: 0% (0/10)	Are older people who attend hospital following a fall assessed for osteoporosis risk?	41% (61/149)
Between September 2007 and August 2008 have there been any local audits performed to assess any aspects of the falls and bone health service?	Acute: 91% (167/183) PCOs: 67% (106/159) HSCTs: 90% (9/10)	Is there a regular audit programme to assess some aspects of the falls service?	62% (92/149)
Has an audit been performed on the screening of all older people attending A&E for falls and osteoporosis risk?	Acute: 28% (46/167) PCOs: NA HSCTs: 11% (1/9)	—	—
—	—	Are older people who fall and attend A&E assessed by a member of the specialist falls service?	29% (44/150)
—	—	Is this a 24 h service?	14% (6/44)
Is there a local coordinated, integrated, multiprofessional and multiagency falls service?	Acute: 70% (128/183) PCOs: 75% (120/159) HSCTs: 50% (5/10)	Is there a coordinated multiprofessional specialist falls service?	74% (111/151)
—	—	Has the <u>specialist falls service agreed protocols</u> for the care of older people with osteoporotic hip fracture with the A&E department[s]?	44% (67/151)
Do you have a falls service coordinator(s)?	Acute: 31% (55/175) PCOs 71% (111/157) HSCTs: 40% (4/10)	Which of the following professionals have within their job description/job plan a commitment to the specialist falls service: Falls coordinator?	54% (81/150)
Do you have a fracture liaison nurse (s) or similar designated person(s)?	Acute: 29% (51/175) PCOs 15% (24/157) HSCTs: 60% (6/10)	Is there a fracture liaison nurse or similar designated person who <u>performs</u> a falls and osteoporosis assessment on older people that have a fragility fracture?	34% (51/150)

Acute, acute hospital sector; MIU, minor injury unit; PCO, primary care organisation; HSCT, health and social care trusts.

used a member of a specialist falls service to assess such patients, and only 14% of these had a 24 h service. This, despite 74% of Trusts claiming they had a coordinated multiprofessional specialist falls service in their ED for the care of older people with osteoporotic fractures. Services were available to assess osteoporosis risk after falling in 41% of Trusts. In 2005, 54% of services had a falls coordinator and 34% had a fracture liaison nurse.

The 2008 audit asked about services provided by acute hospitals, primary care, combined health and social care organisations, and mental care providers. Half (51%, 148/289) of those with EDs or MIUs routinely screened older people after falls for risk of future falls. For commissioning providers (primary care, health and social care) with written commissioning strategies for falls prevention, 59% (43/73) routinely screened for future risk, compared with 39% (13/33) without written strategies. Routine screening was mostly done on site and available 7 days a week. Systems allowing staff to arrange direct referral for further assessment and treatment were available in 77% of providers with an ED or MIU (222/289). Only 19% (56/289) of providers with an ED/MIU routinely assessed older people for risk of osteoporosis after a fall. Among acute trusts and combined health and social care trusts, 91% (176/193) had

audited the quality of the falls and bone health service in the previous 12 months but only 27% of these (47/176) had audited on the screening of older patients in A&E for falls and osteoporosis risk. In acute Trusts, 29% (51/175) had a fracture liaison nurse and 31% (55/175) had a falls coordinator.

The 2006 clinical audit of patients presenting to emergency care with fractures after a fall gave results for separate aspects of multifactorial falls risk assessment (table 2). Often, considerably fewer than half the relevant number of patients with non-hip fragility fracture were being assessed: medication review 31%, cardiovascular examination 40%, vision 10%, continence 21%, mobility and balance 28%. Only 22% were referred for exercise training to reduce falls and only 20% were receiving appropriate treatment by 12 weeks for osteoporosis. Whereas almost all (99.8%) of patients with hip fracture were admitted to hospital, 66% (3700/5642) of patients with a non-hip fragility fracture were not admitted.

## DISCUSSION

This is the most comprehensive audit cycle of UK falls and bone healthcare ever conducted and provides as true to life a picture of

**Table 2** Results from the 2006 clinical audit in relation to secondary prevention intervention within 12 weeks of falling

Question	Non-hips (5642)	Hips (3184)
Was there evidence of a medication review?	31% (1773/5642)	52% (1654/3184)
Performance of a cardiovascular examination?	40% (2240/5642)	89% (2827/3184)
Did the patient have an assessment for visual impairment?	10% (573/5642)	19% (595/3184)
Did the patient have an assessment of urinary function including continence status?	21% (1187/5642)	63% (2009/3184)
Do the clinical records indicate that a gait, balance and mobility assessment was performed?	28% (1421/5086)	68% (2018/2952)
Has patient attended any form of exercise?	22% (1108/4933)	44% (1224/2764)
Was patient prescribed a bisphosphonate or other appropriate treatment for osteoporosis?	20% (1038/5311)	43% (1301/3030)

actual clinical practice as is possible with large-scale audit. It demonstrates quite clearly that the management of falls and bone health in older people is suboptimal. This is especially important given the nature and size of the problem and future projections within an ageing population. Given that emergency care departments are often the first port of call for many older fallers, the relevance of the roles played by clinicians at this interface between secondary and primary care and the need for surveillance, assessment and management cannot be overstated.

Opportunities to prevent recurrent falls and fractures are being missed. Services with falls coordinators and fracture liaison nurses probably have better case-finding systems in place to identify high-risk fallers than services that do not.<sup>6</sup> Assessment rates for secondary prevention are so low that many clinical services clearly do not adhere to NICE guidelines on preventing falls and fractures. Half of the patients with hip fractures have previously had a fragility fracture of another bone,<sup>7</sup> and hence there are missed opportunities to reduce the incidence of subsequent hip fractures in this group by using osteoporosis treatment and falls risk reduction. The clinical audit indicated that two-thirds of patients presenting with a non-hip fragility fracture were not admitted to hospital. This means that the majority of high-risk patients miss the best or only opportunity for their falls and fracture risk to be identified in the majority of hospitals. Local strategies are needed to enable the case-finding opportunity at the point of presentation to be coordinated with subsequent primary and community health-care responses. In addition, every primary care organisation needs a strategy to for case finding other patients at high risk.

An audit<sup>8</sup> showed that in managing older patients after a fall, the ED focused on injuries sustained but little effort was made to establish and manage risk factors to prevent recurrent falls. Furthermore, falls are a geriatrics syndrome, which indicates that the individual is also at higher risk of adverse outcomes. The DEED II trial<sup>9</sup> and the PROFET study<sup>10</sup> demonstrated that comprehensive geriatric assessment and multidisciplinary intervention can improve health outcomes of older people at risk of deteriorating health and admission to hospital.

More research is needed, however, into the management of older people presenting with falls in EDs and into the reasons for non-concordance with evidence-based practice which are multifactorial. The acute care setting, targets and consequent influence on patient investigation and shared decision-making may alter the focus on different aspects of patient management, resulting in less time being spent on risk assessment for future

falls or fragility fractures than managing the immediate consequent injuries. Attitudes towards, and knowledge and uptake of, evidence-based management may also affect management of these patients. Lack of knowledge on older peoples' issues, ageism, sociocultural and communication barriers and health beliefs of patients may all influence elements of care delivery.

In summary, older people attending EDs in the UK after a fall are 'receiving a poor deal'. There is an urgent need to ensure more effective assessment and management to prevent further falls and fractures. Ideally, all elderly patients attending EDs should be asked about their history of falls in the previous 12 months and assessed for mobility and balance problems. Patients identified as being at risk of falling should receive assessment for fracture risk and should be referred for appropriate falls and/or osteoporosis assessment and treatment.

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