Banerjee, J., Benger, J., Treml, J., Martin, F., Grant, R., Lowe, D., Potter, J. and Husk, J. (2011) The national falls and bone health audit: Implications for UK emergency care. *Emergency Medicine Journal*, 29. pp. 830-832. ISSN 1472-0205

We recommend you cite the published version.
The publisher’s URL is [http://dx.doi.org/10.1136/emermed-2011-200501](http://dx.doi.org/10.1136/emermed-2011-200501)

Refereed: Yes

(no note)

Disclaimer

UWE has obtained warranties from all depositors as to their title in the material deposited and as to their right to deposit such material.

UWE makes no representation or warranties of commercial utility, title, or fitness for a particular purpose or any other warranty, express or implied in respect of any material deposited.

UWE makes no representation that the use of the materials will not infringe any patent, copyright, trademark or other property or proprietary rights.

UWE accepts no liability for any infringement of intellectual property rights in any material deposited but will remove such material from public view pending investigation in the event of an allegation of any such infringement.

PLEASE SCROLL DOWN FOR TEXT.
The National Falls and Bone Health Audit: implications for UK emergency care

Jay Banerjee,1 Jonathan Benger,1 Jonathan Treml,2 Finbarr C Martin,2 Rob Grant,2 Derek Lowe,2 Jonathan Potter,2 Janet Husk2

1Clinical Effectiveness Committee, College of Emergency Medicine, London, UK
2Clinical Standards Department, Clinical Effectiveness and Evaluation Unit, Royal College of Physicians, London, UK

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 People1 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,1 and the group derived audit questions to match these and other standards and guidelines.2-3

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 ≥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...
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 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) | Are older people who attend hospital following a fall assessed for osteoporosis risk? | — |
| Is (routine) screening performed on site in A&E? | Acute: 88% (81/92) PCOs: 81% (43/52) HSCTs: 67% (2/3) | Is this a 24 h service? | — |
| 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 hospital following a fall assessed for osteoporosis risk? | — |
| Are older people who attend A&E/MIUs after a fall routinely assessed for osteoporosis risk? | For those with A&E or MIU: Acute: 15% (28/183) PCOs: 29% (28/96) HSCTs: 0% (0/10) | Is there a local coordinated, integrated, multiprofessional and multiagency falls service? | — |
| 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) | Has a fracture liaison nurse or similar designated person(s)? | — |
| — | — | Is there a fracture liaison nurse or similar designated person who performs a falls and osteoporosis assessment on older people that have a fragility fracture? | 34% (51/150) |
| — | — | | |
| Is there a local coordinated, integrated, multiprofessional and multiagency falls service? | Acute: 70% (128/183) PCOs: 75% (120/159) HSCTs: 50% (5/10) | | |
| Do you have a fracture liaison nurse(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? | 54% (81/150) |
| Do you have a falls service coordinator(s)? | Acute: 31% (55/175) PCOs 71% (111/157) HSCTs: 40% (4/10) | | |

**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% (43/75) routinely screened for future risk, compared with 59% (15/33) 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...
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. 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, 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 audit6 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 trial9 and the PROFET study10 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 focus 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.

Competing interests None.
Contributors All authors contributed to developing the manuscript.
Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES
1. Department of Health. National Service Framework for Older People. 2001, Chapter 6 “Falls”. http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/ @dh/@en/documents/digitalasset/dh_4071283.pdf (accessed 24 Mar 2011).
2. National Institute for Health and Clinical Excellence. Clinical Guideline (CG) 21 (2004): Falls: the assessment and prevention of falls in older people. http://www. nice.org.uk/nicemedia/live/105956/29585/29585.pdf (accessed 24 Mar 2011).
3. National Institute for Health and Clinical Excellence. Technology Appraisal (TA) 161 (2008). Alendronate, Ibandronate, Risedronate, Raloxifene, Strontium ranelate and Teriparatide for the Secondary Prevention of Osteoporotic Fracture Fragility Fractures in Post Menopausal Women. http://guidance.nice.org.uk/TA161 (accessed 24 Mar 2011).
4. British Orthopaedic Association and British Geriatric Society. The Care of Patients with Fracture Fragility. 2007. http://www.fractures.com/pdf/BOA-BSG-Blue- Book.pdf (accessed 24 Mar 2011).
5. National Patient Safety Agency. Slips, Trips and Falls in Hospitals. 2007. http:// www.nrls.npsa.nhs.uk/resources/entryid45=50821 (accessed 24 Mar 2011).
6. Department of Health. Falls and Fractures: Effective Interventions in Health and Social Care. 2010. http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/ @dh/@en/documents/digitalasset/dh_108122.pdf (accessed 24 Mar 2011).
7. Klotzbuecher CM, Ross F, Landfmann F, et al. Patients with prior fractures have an increased risk of future fractures: a summary of the literature and statistical synthesis. J Bone Miner Res 2005;15:721–39.
8. Kalula SZ, De Villiers L, Ross K, et al. Management of older patients presenting after a fall - an accident and emergency department audit. S Afr Med J 2006;96:718–21.
9. Caplan GA, Williams AJ, Daly B, et al. A randomized, controlled trial of comprehensive geriatric assessment and multidisciplinary intervention after discharge of elderly from the emergency department—the DEED II study. J Am Geriatr Soc 2004;52:1417–23.
10. Close J, Ellis M, Hooper R, et al. Prevention of falls in the elderly trial (PROFET): a randomised controlled trial. Lancet 1999;353:93–7.
The National Falls and Bone Health Audit: implications for UK emergency care

Jay Banerjee, Jonathan Benger, Jonathan Treml, et al.

*Emerg Med J* published online November 1, 2011
doi: 10.1136/emermed-2011-200501

Updated information and services can be found at:
http://emj.bmj.com/content/early/2011/10/31/emermed-2011-200501.full.html

These include:

**References**
This article cites 4 articles
http://emj.bmj.com/content/early/2011/10/31/emermed-2011-200501.full.html#ref-list-1

**Published online November 1, 2011 in advance of the print journal.**

**Email alerting service**
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

**Notes**

Advance online articles have been peer reviewed, accepted for publication, edited and typeset, but have not not yet appeared in the paper journal. Advance online articles are citable and establish publication priority; they are indexed by PubMed from initial publication. Citations to Advance online articles must include the digital object identifier (DOIs) and date of initial publication.

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/