

SAFETY ALERTS

Essential care after an inpatient fall: summary of a safety report from the National Patient Safety Agency

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As many as one million patient falls are estimated to occur in hospitals each year in the United States, with similar rates reported from most other developed countries.¹ In England and Wales about 280 000 patient falls are recorded annually from acute hospitals, community hospitals, and mental health units.² This is likely to be an underestimate, as all reporting systems are known to under-report.³ Although over 96% of these falls result in only minor or no physical harm, 1390 caused fractures (including 840 hip fractures) and 30 led to intracranial injuries (mostly subdural haematomas).²

Inpatients are particularly vulnerable to falling owing to acute medical problems such as delirium, stroke, systemic infections, and cardiovascular and musculoskeletal conditions and to adverse effects from medications. In addition, the unfamiliar hospital environment may exacerbate the impact of conditions such as dementia and problems with continence, balance, strength, mobility, or eyesight.¹

Prevention of falls is a crucial element of patient safety, and resources to help identify and reduce risk factors for falls are widely available.⁴ However, what happens after a fall is equally important. In particular, early detection and treatment of any injuries sustained, such as subdural haematoma⁵ and hip fracture,⁶ may affect outcome critically.

Twelve months of reports to the National Patient Safety Agency before 25 March 2010 indicate that about 200 patients who sustained fractures or intracranial injuries after a fall in hospital experienced some shortfalls of care after their fall. This is likely to be an underestimate owing to under-reporting and minimal detail in many reports on care after the fall. The reviewed incidents suggest that failure to recognise the risks and the potential for harm after falls are common. A typical report reads: "Patient suffered head injury on ward previous day. Found 11.30 unconscious (GCS [Glasgow coma score] 3/15) bleeding from nose and aspirating blood. Fixed and dilated pupils. Significantly abnormal cardiovascular and respiratory observations. Coagulopathy on background of alcoholic liver disease. ISSUES . . . No neuro obs [neurology observation] being carried out after injury."

Problems identified by the National Patient Safety Agency

- Delayed diagnosis of fractures, ranging from several hours to several days after the fall. This seemed to relate predominantly to patients being assessed only superficially or not at all by medical staff, rather than to injuries that were difficult to detect or x ray images that were difficult to interpret. Patients with delirium or dementia who could not give a coherent account of the fall or their symptoms appeared particularly vulnerable to delayed diagnosis
- Neurological observations not recorded often enough, or not at all, with failure to recognise the greater vulnerability of patients receiving

anticoagulant treatment or patients with coagulopathy. These problems resulted in delayed diagnosis of intracranial haemorrhage

- Sling hoists used to move patients despite symptoms of limb fracture or spinal injury, causing intense pain and even fracture displacement
- Delay in access to urgent investigations or surgery (particularly orthopaedic advice and beds for patients who fell in non-orthopaedic, acute hospital wards).

This summary is based on a safety report (known as a rapid response report or RRR) issued by the National Patient Safety Agency in January 2011.⁷

What can we do?

As serious injury occurs in only about 1% of inpatient falls, staff need to be vigilant. Key clinical considerations are:

- Before moving a patient off the floor, stop and think if there could be serious injuries, including checking for signs or symptoms of limb fracture and potential for spinal injury
- If the patient shows signs or symptoms of serious injury, know how to access "flat lifting" equipment and get help from colleagues who are trained in its use (or in isolated units, keep the patient immobile while awaiting emergency services)
- Ensure that all patients with features of serious injury, and those who are more vulnerable to serious injury, are rapidly assessed by a doctor
- Ensure that all patients receive a detailed and documented medical review within an appropriate timescale. Medical staff should return regularly to review the patient if there are any concerns, with further review at the next consultant or general practitioner ward round
- After suspected head injuries, base the frequency, duration, and components of neurological observations on national guidance (box).⁵ Abnormal findings such as lateralising signs, seizures, or a drop in the Glasgow coma score should trigger prompt action. Hospitals should use only charts that allow recording of the standard 15 point version of the Glasgow coma scale⁸
- Carefully document a history of the fall, collected from any witnesses as well as the patient, as this may point towards underlying causal factors. Report all falls and investigate these via local systems, and where applicable inform relatives and carers of the fall
- Assume that a patient who falls is at high risk of further falls, triggering action on secondary prevention¹ and consideration of bone health⁶
- Note that falls are often an ominous "red flag" for underlying deterioration, which may itself merit urgent medical review regardless of any actual injury.¹

Following a Department of Health review in July 2010, the National Patient Safety Agency will be abolished and some of its functions transferred to a patient safety subcommittee of the new NHS Commissioning Board. Reports of incidents are, however, still encouraged at www.npsa.nhs.uk.

Content and frequency of neurological observations

The NICE guideline on the triage, assessment, investigation, and early management of head injury² includes the following advice on frequency of neurological observations:

- (From point 1.7.2.1 in the guidance) For patients admitted for head injury observation, the minimum acceptable documented neurological observations are Glasgow coma score, pupil size and reactivity, limb movements, respiratory rate, heart rate, blood pressure, temperature, and blood oxygen saturation
- (From point 1.7.3.1 in the guidance) Observations should be recorded every 30 minutes until the Glasgow coma score of 15 has been achieved. The minimum frequency of observations for patients with a score of 15 should be (starting after the initial assessment in the emergency department):
 - Every 30 minutes for two hours
 - Then every hour for four hours
 - Then every two hours thereafter
- (From point 1.7.3.2 in the guidance) If a patient with a Glasgow coma score of 15 deteriorates at any time after the initial two hour period, revert to observations every 30 minutes and follow the original frequency schedule.

The rapid response report requires NHS organisations to support frontline staff through system changes, including producing and disseminating local protocols for actions after a fall and reviewing training, equipment, and bedside documentation. Units without resident doctors are required to agree on criteria and timescales for access to emergency ambulance services and medical review. Acute hospitals should review their referral and transfer systems to ensure that patients with serious injuries from falls receive the same quality and speed of access to specialist investigations and treatment as that provided to people in the community.

What else do we need to know?

The challenge both for falls in hospital and for falls in the community is consistent, reliable implementation of the existing evidence on the care that will optimise patients'

chances of making a full recovery and reduce the risk of further falls.⁹

How will we know when practice has become safer?

NHS organisations are asked to make the system changes outlined in the rapid response report by July 2011. In 2011, the Clinical Effectiveness and Evaluation Unit of the Royal College of Physicians will pilot a national audit of inpatient falls, including elements to assess progress in implementing the recommendations of the rapid response report. Organisations can also check progress locally—for example, by taking a sample of patient notes to check the quality of medical assessments done after a fall and recording of neurological observations, or by asking a sample of staff members if they know how to access local “flat lifting” equipment.

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The talisman effect

Early most mornings I shuffle into the kitchen to make coffee for the family. You may visualise the cupboard in our kitchen above the counter to my right. This is where the family’s store of vitamins is kept. There are numerous bottles of vitamins and minerals labelled from A all the way to Z. There is vitamin C and lots of vitamin Bs and then a whole lot of minerals such as zinc and magnesium and even selenium. Our kitchen cupboard may hold the whole of the periodic table for all I know.

A cursory inspection of members of the family arriving at breakfast reveals no obvious evidence of

scurvy, pellagra, or beriberi in the consumers of their vitamin enriched cereals, so I have conducted a family focus group to find out the reason for this profligate consumption of food supplements. The answers have ranged from “Because they are good for you” and “They prevent me from getting colds” to “They will stop me getting Alzheimer’s like you, father.”

I have rejected their conclusions with the contempt that medicine reserves for non-believers of the scientific method. There is no hard evidence, I have cried, futilely, to the ranks of the opposition. This is why I have come to the conclusion that the multibillion dollar vitamin

business is based on what I call the talisman effect. A talisman is a protection against evil or disease. It usually takes the form of a piece of jewellery or a pendant hung round the neck to provide magical protection (from the Greek *telesma*, to consecrate). Almost all cultures and religions have signs, figures, or artefacts that are thought to protect the wearer against misfortune and disease. The crucifix, St Christopher medals, the sign on the door, the black ribbons on the trucks, the amulets and the ankle and wrist bands on babies in the traditional worlds.

The talisman effect of vitamins and

many other modern interventions in providing protection against illness seems to be cryptically embedded in the human psyche. How does the ritual of the medication, the belief in efficacy, and the feeling of protection affect the outcome of illnesses? The interventions may indeed have some benefits, but, like the placebo effect in treatment, the talisman effect in prevention may be more difficult to identify and measure in our deeply atavistic belief systems.

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