

THE SCOURGE OF BED FALLS IN THE COMMUNITY

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Falls are a common problem for older people due to reduced mobility, increased frailty, confusion and dementia. This article examines the consequences of bed falls and what can be done to avoid them.

According to 2006 statistics, there were 44,000 falls from beds reported in hospitals in England and Wales, which resulted in 90 fractured necks of femurs and 11 deaths

(National Patient Safety Agency [NPSA], 2007a). The fear is that this is just the tip of the iceberg and that deaths and serious injury from bed falls are being under-reported.

Falls are a common problem for older people and are exacerbated by reduced mobility, increased frailty and confusion, dementia and the impact of various medications. Bed falls can easily occur at night when the patient is disorientated and may forget their limitations and attempt to get up from bed by themselves. The effect of falls can be great — not just because of the physical effect of injury — but the psychological impact of reduced confidence and increased feelings of vulnerability.

The numbers of older people in the UK has been steadily growing. Between 1985 and 2010 the number of people aged 65 and over in the UK increased by 20% to 10.3 million. The number of people aged 85 and over more than doubled in the same period to 1.4 million (Office of National Statistics, 2011). The growth in this vulnerable patient group has meant an increased demand for care. As people age, their health needs inevitably increase and there is a subsequent increase in demand for care home places and social care.

In England alone, there are 390,000 people in care homes and yet underfunding is forcing some care home operators to shut, creating yet more pressure on oversubscribed facilities (BBC News, 2011). Local authorities have been forced to reduce monthly payments for residents and this cannot be done while still maintaining high care standards (Coonan, 2011). Staffing levels are inevitably cut along with training and pay. This leaves an overworked, diminished workforce to care for increasing numbers of older people in conditions that are not designed to prevent falls.

There are often reports of falls from beds in care homes in the popular press, pointing the finger at staff (Hills, 2012; Narain, 2012). In the culture of litigation a fall can lead to expensive and damaging legal disputes. In fact, an analysis of the NHS Litigation



Authority data on falls leading to litigation has shown that 23% were falls from beds (NPSA, 2007a).

The economic climate has left low-paid care workers desperate to keep their jobs and the fact that they will often be the ones who are blamed when adverse events occur, even when it is completely out of their control, means it is unsurprising that injuries from falls go unreported — or they are classified as something different such as shock-induced heart attacks — especially when the carers on the frontline can face litigation for any perceived neglect of duty.

It is ironic that many of the factors that increase the risk of bed falls for older people are based on reforms and innovations designed to improve care. In isolation, these innovations appear innocuous but implemented together in stripped-back services they are becoming part of the problem.

Ward to community

Changes to the whole set up of elderly care facilities from ward-based communal sleeping areas to private individual rooms in community care homes was designed to respect the dignity of the individual but in fact has made it much more difficult for staff to monitor patients when they are in their beds at night. The patient/carer ratio is such that it would be impossible to continually check on each patient in each room. The fact that a fall can happen in seconds makes it almost impossible to prevent.

The increased use of deep cell dynamic air mattresses may also contribute to the occurrence of bed falls despite being an amazing innovation for the prevention of pressure ulcers — particularly in this patient group who are at high risk of pressure damage. These mattresses were designed to be used under supervision in open hospital wards but this is not happening in busy care homes with a complex of private bedrooms. They

operate by sequentially deflating and inflating a series of air chambers during a given cycle.

Some patients dislike the sensation of a dynamic mattress's movement and it can cause a nauseous sensation similar to seasickness. This can cause patients to attempt to get out of bed unassisted. Air cells sometimes deflate when a patient is preparing to stand or to transfer or while simply sitting on the edge of their bed. If the patient is attempting to support themselves on a deflating cell they can lose their balance and fall. While most dynamic mattresses provide a static mode to facilitate transfer, the patient will sometimes attempt to sit, transfer or stand without assistance. Dynamic hybrids provide greater stability as they have a double layer of chambers, rather than a single layer of deep cells, and are the same depth as traditional foam mattresses.

Bedrails

Bedrails are often used as a falls prevention strategy. There is between an 8%–39% prevalence in UK hospitals and in nursing homes

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internationally a prevalence of 9%–71% (Healey et al, 2008). However, they have been demonised over the years and blamed for worsening the effects of a fall as they force the patient to fall from a greater height.

There has also been the worry of injury caused by entrapment, where patients can become stuck in the bars, leading to injury or even death.

Only three deaths by entrapment in bedrails were recorded in England and Wales from 2000–2007 and yet the debate about bedrails has often focused on this while neglecting the risk of falls (NPSA, 2007a). There has also been some debate of the ethics of the use of bedrails as they are sometimes seen as an unnecessary restraint.

Bedrail design has improved considerably, but problems occur when they are not maintained properly or when they are used in conjunction with inappropriate mattresses or bedrail extensions. One major cause in the frequency of bed falls is that some care providers are unaware of their legal responsibilities and are providing the incorrect equipment. Safety standards BS EN1970 specifies minimum heights of bedrails (22cm above an uncompressed mattress) but this was based on widespread use of traditional foam mattresses which had 12.5cm depth as opposed to the dynamic mattresses which are often much deeper. BS EN1970 focuses on the safe design and build of adjustable beds and compliance to this standard is a major part of the bed manufacturers certificate of European conformity (the CE mark).

One problem that has arisen since the introduction of this critical safety standard is that some factors, such as bed rail heights of 22cm, have been used out of context to encourage care providers to achieve a safe bedrail height. While the motive has been to reduce bed falls the consequence may have been to increase the severity and frequency of bed falls. As a result of the move from hospital to community care, huge numbers of the traditional nursing beds are now being used in conjunction with dynamic air mattresses, some of which reduce the height of the bed rails to below 22cm. The problem for care providers is that if the bed rail height is less than 22cm, the CE status of the bed is compromised and this can invalidate insurance cover and leave care

providers open to litigation should an adverse event occur.

Some care providers have tried to alleviate the problem by using bedrail extensions, underlays, or crash mats — but underlays may compromise the pressure-relieving capacity of the mattress and crash mats only serve to minimise damage after a fall, and can themselves be trip hazards. The expense of adapting rails and mattresses is often prohibitive and safety can once again be compromised for the sake of cutting costs. Insurance cover can also be affected if a bed is adapted by a third party.

In 1998 a study found that 50–90% of falls occurred despite bed rails being applied (Fregley and Mion, 1998). This highlights the care that must be taken when deciding to use bedrails with a patient. They should never be used routinely and every patient should be assessed for need and for the risk of bed falls when using them.

If the patient has confusion and dementia but is still mobile and capable of climbing over the bed rail then they should not be used. Studies have also shown that injury — particularly head injury — could be significantly less likely in falls from bed using bedrails (NPSA, 2007b). This shows that the use of bedrails should not be abandoned wholesale but rather used with consideration and with compliance with recommended standards.

Prevention

So, what can be done to prevent bed falls? There needs to be a rethink about the way we supply our care services. Although perhaps an idealistic goal, there needs to be greater investment in staff, staffing levels need to be increased, more training offered and pay and job security improved. Frontline staff need to feel able to report honestly

on adverse events as we need to know the extent of the problem to be able to deal with it effectively. The reporting of falls needs to be considered at government level.

The risk of bed falls needs to be considered by every care facility and innovations put in place that help to reduce the risk. Perhaps a return to shared sleeping spaces could be trialled (although ensuring that patients retain dignity and autonomy by having access to private space in the day). Maybe the benefits would outweigh the negatives and it could be a lifesaver.

Patients should be given detailed, holistic assessments and comprehensive fall prevention plans should be put in place. Staff need to be aware of the risks of falls and be trained to maintain equipment, such as bed rails, and to check that safety standards are adhered to. Outdated equipment needs to be removed and equipment maintained and staff trained to use the rails safely (Healey and Oliver, 2009).

Bed stocks must comply to the BS EN1970, meaning that mattresses of no greater depth than 12.5cm should be used as while deeper mattresses will fit some types of bed frames, there is the risk of them being transferred for future use on other types of bed where they might not fit. This would be preferable to using bed rail extensions, which can increase risk of injury. This standardising also need to be enforced correctly by regulatory agencies.

Equipment that may help to prevent bed falls includes pressure ulcer management systems (such as movinsense; www.movinsense.co.uk). These intelligent systems detect and record the respective positions of all patients centrally so that staff can be alerted to the possibility of a bed fall prior to it becoming reality. The use of dynamic hybrid mattresses (such

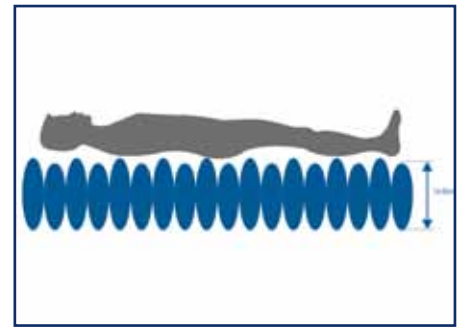


Figure 1: Traditional deep cell dynamics can involve substantial movement of air cells and thus cause a feeling of seasickness. Such movement or instability can also lead to bed falls. Depths significantly greater than 12.5cm can render the CE mark invalid on some nursing beds.

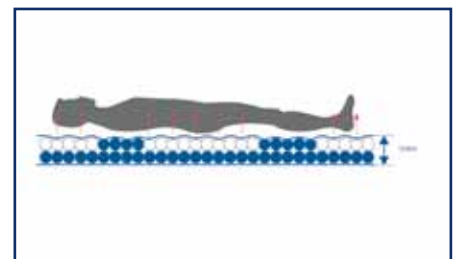


Figure 2: The lower profile of dynamic hybrid mattresses ensures minimal movement and promotes stability, reducing the likelihood of sea sickness and bed falls. A 12.5cm depth guarantees legal compliance on all nursing bed stocks.

as the Squirrel Diamond; www.squirreldiamond.com) means that pressure relief is maintained coupled with a stable support surface of just 12.5cm. This facilitates self positioning and independent wheelchair transfer while complying with the legally required BS EN1970.

The effect of bed falls can be devastating so it is important that we focus on ways to prevent them and not just accept them as inevitable occurrences. It is ironic that the innovations put in place to improve patient care may have ended up increasing the risk of bed falls but we need to stay committed to improving the care of older people in all areas. This will be dependent on us finding sure-fire ways to keep them safe while they are in our care. **WE**