

Safer practice notice



Notice

26 February 2007

Immediate action	<input type="checkbox"/>
Action	<input checked="" type="checkbox"/>
Update	<input type="checkbox"/>
Information request	<input type="checkbox"/>

Ref: NPSA/2007/17

Using bedrails safely and effectively

This safer practice notice aims to improve the safety of patients in hospitals through informing patients and staff about the relative risks of falls and injury¹ with and without bedrails, and what steps they can take to reduce the risks to their patients. It aims to ensure that bedrails are used, when appropriate, to reduce the risk of patients accidentally slipping, sliding, falling or rolling out of bed, and that bedrails are not used inappropriately as a form of restraint.

This safer practice notice is intended for use alongside the Medicines and Healthcare products Regulatory Agency (MHRA) Device Bulletin 2006(06) *Safe Use of Bed Rails*² and Device Alert 2007/009 *Beds Rails and Grab Handles*.³ These provide advice on how to reduce the risk of bedrail entrapment and bedrail failure, and require actions on risk assessment and the review of existing combinations of beds, bedrails and mattresses.

Action for the NHS

To improve the appropriate use of bedrails, the National Patient Safety Agency (NPSA) is advising NHS organisations providing adult inpatient care to take the following actions by 28 August 2007:

- 1 produce a policy on bedrails based on the draft policy provided, or ensure their policy on bedrails covers the key areas required within this safer practice notice;
- 2 ensure ongoing training programmes are in place for staff who make decisions about bedrails, purchase, store, attach or maintain bedrails, or care for patients using bedrails;
- 3 develop an effective implementation plan to bring their new or revised policy on bedrails to the attention of all relevant staff;
- 4 develop plans to audit and evaluate the impact of their new or revised policy on bedrails, including taking baseline measures before the implementation of their new or revised policy on bedrails, where appropriate.

For response by:

- NHS organisations with inpatient beds in England and Wales

For action by:

- Directors of nursing

The NPSA recommends NHS organisations inform:

- Risk managers
- Clinical governance leads
- Service managers
- Patient advice/liason service staff in England and Wales
- Equipment managers

The NPSA has informed:

- Chief executives
- Directors of nursing
- Directors of estates and facilities
- Medicines and Healthcare products Regulatory Agency
- Chief executives/regional directors and clinical governance leads of strategic health authorities (England) and regional offices (Wales)
- NHS Litigation Authority
- Health and Safety Executive
- Healthcare Commission

- Health Inspectorate Wales
- NHS Purchasing and Supply Agency
- Welsh Health Supplies
- Royal College of Nursing/Royal colleges and professional bodies
- Quality Improvement Scotland and DHSSPS, Northern Ireland



Action deadlines for the Safety Alert Broadcast System (SABS)

Deadline (action underway): 29 May 2007

Action plan to be agreed and action started

Deadline (action complete): 28 August 2007

All actions to be completed

Further information about SABS can be found at:

www.info.doh.gov.uk/sar2/cmopatie.nsf

Scope of this safer practice notice

This safer practice notice does *not* apply to:

- Paediatric wards, because the needs of babies and children, the type of equipment used, and responsibilities for decision making can be very different from adult patients in hospitals. However, children's services may find some of the resources useful, and they should be reviewing the safety of their equipment and working practices as required by the MHRA.^{2,3}
- People receiving advice on bedrails from healthcare staff in their own homes or in care homes, because the issues can be very different from the issues in hospitals. In particular, there are different issues relating to the roles of formal and informal carers, obtaining equipment, the use of bedrails with divan or other domestic beds, and the amount of time the bedrail user spends out of sight of carers. However, community services may find some of the resources useful, and should be reviewing the safety of their equipment and working practices as required by the MHRA.^{2,3}
- NHS organisations with limited inpatient beds, where bedrails are very rarely or never required – for example, an NHS organisation whose only inpatient provision is a small unit providing mental health services for working age adults. However, these organisations should ensure they can access advice from local community healthcare services in the rare instances when bedrails may be required.

This safer practice notice is directed at all other NHS organisations providing adult inpatient care in all settings, including general/acute hospitals, mental health or learning disability units, and community hospitals.



Reporting incidents

Frontline staff should be encouraged to report patient falls, or incidents of bedrail entrapment via their local risk management system to the National Reporting and Learning System (NRLS), even when patients have not been harmed. Reports of falls from bed should routinely include information in the free text on whether or not bedrails were in use. Risk managers should also follow the reporting requirements set out in MHRA Device Alert 2007/001 *Reporting Medical Device Adverse Incidents and Disseminating Medical Device Alerts*⁵ and the reporting requirements of the Health and Safety Executive (HSE).⁶

Further information on the action points

1 Produce a policy on bedrails based on the draft policy provided, or ensure their policy on bedrails covers the key areas required within this safer practice notice.

It is appropriate for organisations to include a bedrail section within an overarching falls prevention policy, rather than developing a separate, stand-alone policy for the safe and effective use of bedrails.

The key areas that should be included are:

- a A link to the NHS organisation's falls prevention policy, so that all interventions aimed at reducing a patient's risk of falling are considered together.
- b Clear and appropriate guidance about who is responsible for deciding whether or not bedrails are used, including patients with and without capacity, linked to the NHS organisation's consent policy and the *Mental Capacity Act (2005)*.⁷
- c A definition of restraint that helps NHS staff understand the ethical difference between helping a patient avoid doing something they do not want to do (fall out of bed) and stopping a patient from doing something they want to do (get out of bed). The following definition is recommended: 'Restraint is the intentional restriction of a person's voluntary movement or behaviour ...'.⁸
- d Clear guidance that the only appropriate use of bedrails is to reduce the risk of patients accidentally slipping, sliding, falling or rolling out of bed, and that bedrails, when used in this way, are not classed as restraint.
- e Formats and requirements for documenting the outcome of any risk assessment and requirements for re-assessments in the patients' record.
- f Systems that the NHS organisation has put in place to support frontline staff in complying with the MHRA Device Bulletin 2006(06) *Safe Use of Bed Rails*² and Device Alert 2007/009 *Beds Rails and Grab Handles*.³

The policy should not contraindicate bedrails for wide and diverse groups of patients, for example all patients with dementia. Patients with dementia will each have different levels of cognitive impairment, some will also have other illnesses, and all will need the same individual assessment of the risks and benefits of bedrails as patients without dementia.



Where appropriate, the policy should include circumstances when bedrails are standard practice, for example, when wheeling patients on their beds between wards, or in the initial period of recovery from anaesthetic.

Written information explaining the benefits and risks of using bedrails should be available to support discussions between staff, patients and relatives. An example is included in the resources provided to support this safer practice notice.

NHS organisations should make sure they have adequate stocks of bedrails that can be obtained without delay. They should provide suitable equipment for patients who are at risk of trapping or injuring their legs on bedrails, for example, padded bedrail covers, mesh bedrails, or bedrails designed in one piece without bars. Any shortages should be reported through local systems, and immediate action taken to restore appropriate levels of supplies.

2 Ensure ongoing training programmes are in place for staff who make decisions about bedrails, purchase, store, attach or maintain bedrails, or care for patients using bedrails.

Ongoing training programmes should be in place to ensure that staff who make decisions about bedrails, purchase, store, attach or maintain bedrails, or care for patients using bedrails, have the competencies appropriate for local equipment and the patients they care for. This should be integrated within training in falls prevention.

3 Develop an effective implementation plan to bring their new or revised policy on bedrails to the attention of all relevant staff.

All relevant staff should be made aware of the new or revised policy through meetings, newsletters, posters and other methods. The implementation plan should include ongoing induction of newly-recruited or temporary staff.

4 Develop plans to audit and evaluate the impact of their new or revised policy on bedrails, including taking baseline measures before the implementation of their new or revised policy on bedrails, where appropriate.

NHS organisations should plan to undertake regular audits on how bedrails are being used, including taking baseline measures before the implementation of their new or revised policy on bedrails, where appropriate. This should include the analysis of falls from beds reported to their local risk management system. Audit and evaluation should focus on the appropriateness of the use of bedrails, rather than the numbers of bedrails in use.



Background information

The recommendations in this safer practice notice have been informed by:

- analysing patient safety incidents reported to the NPSA's NRLS, the MHRA, the HSE, and the NHS Litigation Authority (NHSLA);
- two focus groups with former patients;
- a systematic literature review;
- a survey of overnight use of bedrails in seven randomly selected hospitals;
- a snapshot survey of bedrail policies from 42 NHS organisations;
- a reference group of patient organisations, frontline clinical staff, falls experts and organisations working to reduce harm from falls and from bedrails.

Bedrails, falls and injury

Patients receiving hospital care often have impaired mobility. They may be less aware of their surroundings if they have dementia, visual impairment or delirium, or are affected by anaesthetics, sedatives, painkillers or other medication. Their ability to remain safely in the centre of the bed can be affected by strokes, paralysis, epilepsy, muscle spasms, or other conditions. This puts them at a greater risk of falling from bed. Bedrails are designed to reduce the risk of patients accidentally slipping, sliding, falling or rolling out of bed. Bedrails when used in this way are not classed as restraint. Bedrails will not prevent a patient leaving their bed and falling elsewhere, and should not be used for this purpose.

Between 1 September 2005 and 31 August 2006, there were around 44,000 reports to the NRLS of patients who appeared to have fallen from bed in acute and community hospitals, mental health and learning disability units.¹ Injuries included around 90 patients who fractured their neck of femur, and 11 fatalities.

Of the reports of falls from beds made to the NRLS, 61 per cent did not include information on whether bedrails were in use or not; eight per cent stated that the falls occurred when bedrails were being used; and 31 per cent stated that bedrails were not in use when the falls occurred.¹ Falls from bed without bedrails, as well as being more frequent, were significantly more likely to involve injuries.¹ Head injuries, usually minor, were much more likely to occur in falls from bed without bedrails.¹ No significant difference in moderate or severe injuries, or fatalities was found between falls from bed with or without bedrails.¹

Reports to the NHSLA and the HSE also suggest only a minority of falls from bed occur with bedrails raised. NHSLA data on litigation following falls from beds show only three per cent of falls from beds occurred with bedrails.¹ HSE data show 22 per cent of reported falls from bed occurred with bedrails in place.¹



The use of bedrails is not appropriate for all patients. For patients who can mobilise without help from staff, bedrails would create a barrier to independence. They may create a greater risk of falls and injury for patients who are both confused enough and mobile enough to climb over them.

Using bedrails also involves hazards. NRLS data suggest around 1,250 patients injure themselves on bedrails each year, usually scrapes and bruises to their lower legs.¹ The HSE received two reports of fractures from bedrail entrapment between 2001 and 2004.¹ Deaths from bedrail entrapment in hospital settings in England and Wales have been reported but appear extremely rare, and could probably have been avoided if advice from the MHRA^{2,3} had been followed. Three fatalities from bedrail entrapment in hospitals were located by the NPSA, the HSE and the MHRA in records dating from 2000 to 2006.⁴

Balancing the risks and benefits of bedrails for individual patients is a particular challenge as many of the factors which increase the likelihood of injury from bedrails² – for example, being older, cognitively impaired, and with poor mobility – also increase the likelihood of falls from bed and subsequent injury.¹

Staff should continue to take great care to avoid bedrail entrapment, but need to be made aware that in hospital settings there is a greater risk of harm to patients from falling from beds.

MHRA advice^{2,3} is also intended to reduce the risk of bedrail failure – when bedrails are inappropriately fitted or maintained, and then break or detach, allowing the patient to fall to the floor. The NRLS has recorded one death from bedrail failure, and the HSE received six reports of major injury from bedrail failure between 2001 and 2004.¹

Published evidence on bedrails, falls and injury

The prevailing opinion in most nursing literature is that bedrails do not prevent falls and may increase the likelihood of injury from falls from bed. However, opinion is not the same as evidence, and a systematic review of scientific studies⁹ within the literature carried out by the NPSA suggests falls from bed with bedrails are usually associated with lower rates of injury, and initiatives aimed at significantly reducing bedrail use can increase falls.

Published literature on bedrails has described deaths in the USA from suffocation through bedrail entrapment over the last 20 years.⁹ The circumstances described confirm MHRA^{2,3} advice that the risk of fatal bedrail entrapment usually arises when bedrails are used without an individual risk assessment, and often involve inappropriately designed, badly fitted, or poorly maintained bedrails, particularly 'third party' bedrails where entrapment gaps can be created by unsuitable combinations of bedrails, beds and mattresses.



Current practice

An NPSA survey of NHS organisations⁹ found that 79 per cent had produced a policy or guidance document covering bedrail use. Most policies were of good quality, and gave useful guidance to frontline staff in reducing the risks from falls from bed, and from using bedrails. However, some policies covered the potential risk of fatal entrapment at length, with little or no reference to the risks of falling from bed. Some policies presented bedrail entrapment as a random and unpredictable risk that could only be avoided by using bedrails as rarely as possible, rather than supporting staff to take the steps recommended by the MHRA.^{2,3}

Some bedrail policies were not integrated with, or linked to, local falls prevention policies, and so did not prompt staff to consider whether patients could benefit from wider interventions to reduce the risk of falling, such as detection and treatment of delirium, or reducing night sedation.¹ Some policies had inappropriately broad contraindications, for example stating that bedrails should never be used for any patient with confusion or dementia, or even that bedrails should never be used for any patient at risk of falls. Very rarely, policies stated that any use of bedrails constituted restraint, equated restraint with abuse, and warned staff they may be liable to civil or criminal prosecution, or strongly discouraged bedrail use in the belief that bedrails increased the likelihood of falls and injury.

Most policies recognised that patients' needs and wishes will vary, but some left no scope for individual decisions. When patients were too ill to decide about bedrails, some policies incorrectly stated that relatives should take decisions for them.

Some policies did not take appropriate action at an organisational level to comply with MHRA requirements^{2,3} and put too much onus on frontline staff. For example, frontline staff were expected to repeatedly measure the gaps between the bars of bedrails, rather than the organisation removing bedrails with inappropriate gaps.

An overnight survey⁹ carried out by the NPSA with the help of NHS acute hospitals showed that 26 per cent of patients had bedrails raised at night. Ninety-three per cent of patients with bedrails had limited mobility and 86 per cent were aged over 65 years. Staff appeared very aware of the need to avoid bedrails for patients who are both confused enough and mobile enough to climb over them. Some staff appeared anxious about bedrail use, and were worried they would be criticised for using them.

Patients' views

Focus groups held by the NPSA with former patients⁹ highlighted that patients are less anxious about bedrails than staff, and this is supported by published patient studies.¹⁰ Patients in the NPSA focus groups said, if they are well enough, they want to be consulted about bedrails, and see bedrails as an acceptable safety measure.



Evaluation

To analyse the effect of the recommendations laid out in this safer practice notice, the NPSA will:

- monitor reports of patient safety incidents involving bedrails reported to the NRLS;
- seek feedback from those implementing the advice in this safer practice notice;
- survey NHS organisations' bedrail policies again;
- survey overnight use of bedrails again;
- audit compliance through the SABS system;
- audit compliance through the Healthcare Commission annual declaration process in England (standards C1a, C1b, and C4b)¹¹ and the regional offices of the Welsh Assembly Government in Wales.



Resources from the NPSA

To help NHS organisations implement the recommendations in this safer practice notice, the NPSA has developed the following resources. The resource set will be sent to the director of nursing in each NHS organisation providing inpatient care in England and Wales, and can be downloaded from www.npsa.nhs.uk

Resource	Content
Systematic literature review	A review of published evidence on falls and injury due to bedrails, direct injury from bedrails, and patients' opinions of bedrails. Includes a recommended definition of restraint.
Local policy template	This includes suggested text, issues to consider, formats for individual risk assessment, and scenarios to test decision aids.
Slips, trips and falls in hospital: the third report from the Patient Safety Observatory	A national picture of the circumstances surrounding patient falls, including falls from beds with and without bedrails, and related injuries, and analysis of NPSA, MHRA, NHSLA, and HSE data. Includes links to multiple resources for preventing falls in hospitals, based on a systematic literature review.
Local publicity materials	Posters, PowerPoint presentation, and a staff newsletter template.
Patient information	A version of this safer practice notice for patients, and an example of a patient and carer leaflet.
Audit tool	A format used for the NPSA's overnight bedrail survey, which could be used for local audit.
Background materials	A summary of the findings from the NPSA's overnight bedrail survey, its survey of NHS organisations' policies, and focus groups with patients.



Additional resources

The MHRA have provided extensive advice and resources on the safer use of bedrails in MHRA Device Bulletin 2006(06) *Safe Use of Bed Rails*² and Device Alert 2007/009 *Beds Rails and Grab Handles*³ which supersedes earlier guidance and device alerts, and can be downloaded from: www.mhra.gov.uk

Acknowledgements

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- Action on Elder Abuse
- Alzheimer's Society
- British Geriatrics Society
- Counsel and Care
- Health and Safety Executive
- Healthcare Commission
- Medicines and Healthcare products Regulatory Agency
- National Institute for Mental Health in England
- NHS Purchasing and Supply Agency
- Nurse Directors' Association
- Royal College of Nursing

We would also like to thank the members of the external reference group, the patients who participated in focus groups, and the NHS organisations who took part in an overnight survey of bedrail use or shared bedrail policies with us.



Further details

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or your local NPSA Patient Safety Manager, whose contact details can be found on **www.npsa.nhs.uk/health/reporting/contacts**

References

1. National Patient Safety Agency. *Slips, trips and falls in hospital*. (2007). Available at: **www.npsa.nhs.uk**
2. Medicines and Healthcare products Regulatory Agency. Device Bulletin 2006(06) *Safe Use of Bed Rails*. Available at: **www.mhra.gov.uk**
3. Medicines and Healthcare products Regulatory Agency. Device Alert 2007/009 *Beds Rails and Grab Handles*. Available at: **www.mhra.gov.uk**
4. Medicines and Healthcare products Regulatory Agency records searched dated from 2000; Health and Safety Executive records from 2000; and National Reporting and Learning System records from inception in 2003.
5. Medicines and Healthcare products Regulatory Agency. Device Alert 2007(01) *Reporting Medical Device Adverse Incidents and Disseminating Medical Device Alerts*. Available at: **www.mhra.gov.uk**
6. The Health and Safety Executive's specific requirements on the severity and circumstances in which a fall requires reporting to them can be found at **www.hse.gov.uk/pubns/hsis1.pdf**
7. *Mental Capacity Act*. (2005). The Stationery Office. London
8. Queensland Health Falls prevention best practice guidelines for public hospitals. Queensland Government. (2003). p37
9. National Patient Safety Agency. Resources to support implementation of safer practice notice 17: *Using bedrails safely and effectively in hospitals*. (2007). Available at: **www.npsa.nhs.uk**
10. Vassallo M et al. Acceptability of falls prevention measures for hospital inpatients. *Age and Ageing*. 2004; 33(4): 400
11. Department of Health. *Standards for Better Health*. (2004). Available at: **www.dh.gov.uk/assetRoot/04/08/66/66/04086666.pdf**



 A safer practice notice strongly advises implementing particular recommendations or solutions.

This safer practice notice was written in the following context:

It represents the view of the National Patient Safety Agency, which was arrived at after consideration of the evidence available. It is anticipated that healthcare staff will take it into account when designing services and delivering patient care. This does not, however, override the individual responsibility of healthcare staff to make decisions appropriate to local circumstances and the needs of patients and to take appropriate professional advice where necessary.

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