



Western Health
and Social Care Trust

Using Bedrails Safely and Effectively Policy

July 2008

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Responsible Officer: **Assistant Director of Nursing for Governance, Quality & Performance**

To be read in conjunction with:

- *Risk Management Procedures for Use of Medical Devices (pending)*
- *Consent for Examination, Treatment or Care www.dhsspsni.gov.uk;*
- *NMC Guidelines for Records and Record Keeping*
- *Managing Complaints Procedures – Trust-net*
- *Incident Reporting Procedures – Trust-net*
- *Safe and Effective use of Restraint – (pending)*
- *Management of Aggression – Trust-net.*
- *Code of Professional Conduct: standards for conduct, performance and ethics (NMC) www.nmc-uk.org*
- *NMC Guidelines for Records and Record Keeping www.nmc-uk.org*
- *Equipped to Care – the safe use of medical devices in the 21st century www.mhra.gov.uk*

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Introduction

Bedrails are used extensively in care environments for the purpose of preventing injury to an occupant, who might accidentally slip, slide, fall or roll out of a bed or trolley. For the purpose of this document the term bed rail includes devices known as side rails, cot sides, safety rails and bedside rails.

As with any medical device bed rails must only be used for the purpose intended by the manufacturers. They are NOT designed or intended to restrict the freedom of people by preventing them from intentionally leaving their beds; NOR are they intended to restraint people whose condition disposes them to erratic, repetitive or violent movement and they are NOT intended for use as grab handles or hand rails.

Using bed rails appropriately will reduce the greater risk of harm to patients who might fall from beds, however the use of bed rails also involves risk. National data suggests around 1,250 patients injure themselves on bedrails each year, usually scrapes and bruises to their lower legs. Importantly, there are also serious incidents reported to Medicine and Healthcare Products Regulatory Agency (MHRA), the National Patient Safety Agency (NPSA) and (HSE) where asphyxiation after entrapment of the head or neck in a bed rail has led to death. Most of these deaths could have been prevented if adequate risk assessments and appropriate risk management had been carried out (MHRA, 2996).

The possible combinations of bed rails, beds and mattresses, together with the uniqueness of each bed occupant, means that a careful and thorough assessment is necessary if serious incidents are to be avoided.

This policy identify the areas that will improve the safe and effective use of bed rails as informed by the MHRA Device Bulletin 2006(06); Safe use of Bed Rails and Device Alert 2007/009; NPSA safer practice notice: Using bedrails safely and effectively; NPSA bedrails literature review and governs:

- Risk management
- Management responsibilities
- Meeting legal requirements
- Planned training
- Planned maintenance

Scope

This policy is relevant for all staff caring for adults in primary and secondary care services within the Western Health and Social Care Trust. Within this document the word 'occupant' and 'patient' is used also to denote 'client.'

Aims

The aim of this policy is to assist healthcare staff to reduce risk of patient injury through the safe and effective use of bed rails, based upon good practice in care and responsibility, acting in the best interests of patients wellbeing in a manner consistent with the Human Rights Act and the European Convention on Human Rights.

Goals

- To reduce harm to patients caused by falling from beds or becoming trapped in bedrails
- To ensure that the use of bed rails is considered after an assessment of risk
- To ensure risk assessment determines that when a bed rail is necessary, that it is compatible with the occupant, bed and mattress combination.
- To ensure the correct fitting, positioning of bed rails.
- To increase the participation of patients and if appropriate significant others, with members of the healthcare team in consultation, decisions and planning care around the use of bed rails.

Consent

The capacity for patients to give informed consent must be established and while no one can give consent on behalf of another, involving family/carer or advocate in assessing, planning, monitoring and reviewing the use of bed rails is vital to clarify understanding around the choices available and motives for their use.

Capacity is the ability to understand and weigh up the risks and benefits of bedrails once these have been explained to them.

If the patient lacks capacity, staff have a duty of care and must decide if bedrails are in the patient's best interests.

Individual Risk Assessment

It is recognised that there are a variety of bed rails available to healthcare staff, all with a variety of operation and fitting methods. There is also a wide range of beds used in different healthcare settings.

The possible combinations of bed rails, beds and mattresses, together with the uniqueness of each bed occupant, means that a careful and thorough assessment is necessary if serious incidents are to be avoided.

Therefore risk assessment involves a record of firstly, identifying the need for bed rails to prevent injury if a person is likely to slip, slide, fall or roll out of a bed or trolley. Secondly, identifying the risk of injury to a person from using bed rails in combination of with the suitability of the occupant, bed, mattresses and the bed rail.

Decisions about the use of bedrails are a balance between competing risks and must be documented along with the anticipated benefits to the patient.

Staff should use their professional judgement to consider the risks and benefits for individual patients:

Points to Consider in Risk Assessment

If bedrails are not used, how likely is it that the occupant will come to harm?
Ask the following questions:

- How likely is it that the patient will fall out of bed?
- If so are bed rails an appropriate solution?
- Could the use of bed rails increase risk – for example an active but disorientated bed occupant tries to climb over it?
- Will the use of bed rails increase a patient's distress or will they feel more protected and less anxious with their use?
- Could the occupant's physical condition increase the risk of injury or entrapment by limbs or head?
- What are the alternative solutions?

The MHRA adverse incident investigations have shown that the physical or clinical conditions of the bed occupant means that some are at greater risk of entrapment in bed rails. Those at greater risk include older people and adults or children with:

- Communication problems or confusion
- Dementia
- Cerebral palsy
- Very small or very large heads
- Repetitive or involuntary movements
- Impaired or restricted mobility

Bed rails **CANNOT** be used if:

1. The bed occupant is likely to climb over them and therefore increase the risk of falling and injury

2. If the occupant's physical condition increases the risk of entrapment by limbs or head
3. As a form of restraint to stop the occupant from independent action

Bed Rails **CAN** be used if:

1. If the occupant has lower levels of consciousness either from injury, their condition or if recovering from anaesthetic or sedation.
2. If the occupant is being transported on a bed or trolley.

Review of Risk Assessment

After initial risk assessment regular review must be undertaken and recorded as well as after any significant change in the bed occupants condition, or change of any of the combination equipment. This document contains sections on what to avoid and regular checks of combination equipment.

Documentation

Patients who require bedrails must have a written management plan that includes:

- Rationale for the use of bedrails
- The frequency of monitoring the need for bed rails. Review times must be specified in advance. Use of bed rails should be time limited and for the shortest time possible (RCN ,1999).
- Whether bed rail bumpers are required.
- Review of the bed occupants condition that indicates increased risk of injury due to the continual use of bed rails e.g.

The use of bed rails must have regular times for surveillance and observation that includes whether there are changes in the occupants condition, and the combination of the safety of the bed rails, the bed and mattress. This should be undertaken with all other observations on the patient's condition/progress, ensuring that they have all they require, to remain safe and comfortable.

If a patient is found in positions, which could lead to bedrail entrapment, for example, feet or arms through rails, halfway off the side of their mattress or with legs through gaps between split rails, this should be taken as a clear indication that they are at risk of serious injury from entrapment. Urgent changes must be made to the management plan of care. These could include changing to a special type of bedrail or deciding that the risks of using bedrails now outweigh the benefits.

Risk Assessment Checklist for Safe and Effective Use of Bed Rails

This checklist is not intended to cover all the situations that demand clinical judgement and duty to care. It is a guide only and MUST be used in conjunction with the guidance and directives in the Safe and Effective Use of Bed Rails document.

The 'YES' boxes indicate the desired outcome and will inform a documented management plan. If any 'NO' boxes are ticked there may be a serious risk of entrapment with the proposed combination. Report to senior staff for immediate review and follow directives in the Safe Fitting of Bed Rails document.

Is the bed rail to be used with a typically sized adult bed occupant? (for a child or a small adult, see section 5.2)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Does the manufacturer/supplier provide any information on special considerations or contra-indications?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Do you have enough information from the supplier to be able to select and fit the bed rail appropriately?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is the bed rail suitable for the intended bed, according to the supplier's instructions?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Do the fittings or mattress allow the bed rail to be fitted to the bed securely, so that there is no excessive movement?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Does the benefit or any special or extra mattress outweigh any increased entrapment risk created by extra compression at the mattress edge?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Are the bed rails high enough to take into account any increased mattress thickness or additional overlay?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Are gaps avoided that could present an entrapment risk to the bed occupant? Is their head or body large enough not to pass: <ul style="list-style-type: none"> • Between the bars of the bed rails? • Through any gap between the bed rail and side of the mattress? • Through the gap between the lower bed rail bar and the mattress, allowing for compression of the mattress at its edge? 	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No
Are gaps between bars/rails less than 120 mm?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Are the headboard/footboard to bed rail end gaps less than 60 mm or greater than 250 mm?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Has the bed rail been inspected and maintained regularly, if previously used?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

The following sections on what to avoid and regular checks of combination equipment

What to Avoid

To reduce the likelihood of adverse incidents during the selection of bed rails avoid:

- Poor bed rail designs with bar spacing of more than 120 mm, which could allow an occupant to slip between them
- Gaps between 60 mm and 250 mm at the end of the bed rail and the headboard/footboard which could be sufficient to cause neck entrapment
- Using bed rails designed for a divan bed on a wooden or metal bedstead; this can create gaps which may entrap the occupant
- Using insecure fittings or designs which permit the bed rail to move away from the side of the bed or mattress, creating an entrapment hazard
- Using only one side of a pair of third party bed rails when the other side is against a wall – the single rail may be insecure and move
- Mattress combinations whose additional height lessens the effectiveness of the bed rail and may permit the occupant to roll over the top. Extra height bed rails must be applied if mattress overlays are used (see below)
- Mattress and bed rail combinations where the mattress edge easily compresses, introducing a gap between the mattress and the bed rail

It is the responsibility of each Department and Directorate to ensure that any bed rails or combinations of bedrails and mattresses meet the required standards as detailed above and which is included MHRA Device Bulletin 2006(06); Safe use of Bed Rails and Device Alert 2007/009: NPSA safer practice notice: Using bedrails safely and effectively

Mattress Dimensions

The length, width and height of the mattress should be checked to ensure that these dimensions are within the limits specified by the bed manufacturer and do not provide gaps that could increase the risk of entrapment. If the mattress is not the right size, the bed rails may not fit properly and create entrapment gaps.

Mattress Overlay

Before and during the use of mattress overlays with bed rails, consider:

- the reduction in the effective height of the bed rail relative to the top of the mattress may allow the occupant to roll over the top of it; extra height bed rails must be used
- the hazard of entrapment between the side of the mattress and the bed rail may be exacerbated due to the shift, easily compressible nature of the overlay and/or mattress edge
- if the standard mattress is placed with an air mattress or lightweight foam mattress, third party bed rail assemblies (including the mattress and bed occupant) can tip off the bed when the bed occupant rolls against the bed rail. This is because many third party bed rails rely on the weight of a standard mattress to hold the assembly in place

Inflatable Bed Sides

Inflatable bedsides are not generally adjustable and may need to be used with a mattress of particular dimensions. When carrying out an assessment on the risk of entrapment, the elasticity (compression and extension) of the material should be taken into account, as the inflatable rails may change shape when the bed occupant leans against them.

Some inflatable bedsides house the mattress in its own 'pocket' or compartment, a feature which greatly reduces entrapment risks between the mattress and the side walls.

Inflatable bedsides need to be fully inflated to be effective. They may deflate over time so regular checks should be made to ensure this has not happened.

As with all medical devices, care must be taken to use the inflatable bedsides as instructed by the manufacturer.

Bed Bumpers

Bed rail bumpers, padded accessories or enveloping covers are primarily used to prevent impact injuries but they can also reduce the potential for limb entrapment when securely affixed to the bed or rail. However, bumpers that can move or compress may themselves introduce entrapment risks.

Some covers are not air permeable and therefore may present a suffocation risk. Staff must establish that they are air permeable from the manufacturer or supplier before purchasing.

For patients who are assessed as requiring bedrails but who are at risk of striking their limbs on the bedrails, or getting their legs or arms trapped between bedrails, then the use of bed rail bumpers is an option. However:

- Only bed rail bumpers or equivalent designed for this intended purpose must be used
- Under no circumstances should duvets or blankets be placed over bed rails to prevent injury

Safe Fitting and Use of Bed Rails

Assessments by healthcare professionals are increasingly being used as a method of identifying, quantifying and managing risks associated with the use of medical devices **before a device is used**. (ref 21st Century)

- The manufacturer instructions must be available for all staff for ensuring correct operation and maintain procedures (report as an adverse incident if the manufactures information does not contain instructions for use. (See reporting adverse section)

Safe Fitting

It is essential that all bed rails can be fitted correctly to an appropriate bed base allowing safe use. This will include that:

- The bed rail is fitted to the bed correctly.
- Staff understand how to fit the bed rail properly.
- Mounting clamps, if present, are used in the correct orientation.
- There is NO gap between the lower part of the bed rail and the top of the mattress, which could cause entrapment.
- The mattress does NOT compress easily at its edge, creating an entrapment hazard.
- The gap between the end of the bed rail and the headboard or wall does NOT allow entrapment
- The gap between the bed rail and the side of the mattress does NOT allow entrapment of the bed occupant's head or body
- The bed is rail secure and robust – could it move away from the side of bed and mattress in use, creating an entrapment hazard?
- The dimensions and overall height of the mattress do NOT compromise the effectiveness of the bed rail – are extra height bed rails may be required (see also mattresses dimensions and overlay sections).

Maintenance Check

Regular and planned checks must be conducted on bed rails as part of regular maintenance and BEFORE use on the following:

- Presence of rust – this can affect the ease of adjustability of telescopic tubes
- Welded joints are sound, not showing signs of cracking or failure
- Cracking of paint or coating – can point to deeper structural failure
- Flaking chrome plating – can cause lacerations
- Missing locking handles and fixing clamps
- Loose fixings – these affect the rigidity of the assembly. Nuts should be of the self-locking type
- Free play in joints – this can point towards loose, worn or incompatible components
- Stripped threads on bed frame clamps – does not allow them to be tightened securely
- Bent or distorted components

Alternative Solutions

Alternative to bed that may be considered are:

- Bed rails with variable height used in the lowest position
- Specially made low height beds
- 'Netting' or meshed bed sides
- Alarm systems to alert staff/carers that a person moved from their normal position and want to get out of bed

Incident Reporting

All incidents should be reported in compliance with the Trusts management of adverse incidents. Serious incidents must be reported to the MHRA by the fastest means available preferably online followed by faxed or e-mail reports and a confirmatory telephone call.

Monitoring Arrangements

Effective monitoring procedures must be multi-disciplinary and interlink with regular incident reviews and other audits undertaken as part of the Trusts governance arrangements. Procedures must include:

- Audit of the number of incidents of:
 - Physical injury sustained by clients or other service user as a result of injury or entrapment
 - Occasions when bed rails cannot be used in the bed occupant-bed rail, bed and mattress combination
- Assessing the effectiveness of this and existing policies and procedures and up-dating
- Debriefing and discussions with staff after misuse of bed rails with a view to improve practice
- Record and analysis of complaints associated with the use of bed rails

Education and Training

It is the Directorate Managers responsibility to ensure that all staff involved in selecting, fitting, maintaining and checking bed rails have received appropriate training that includes:

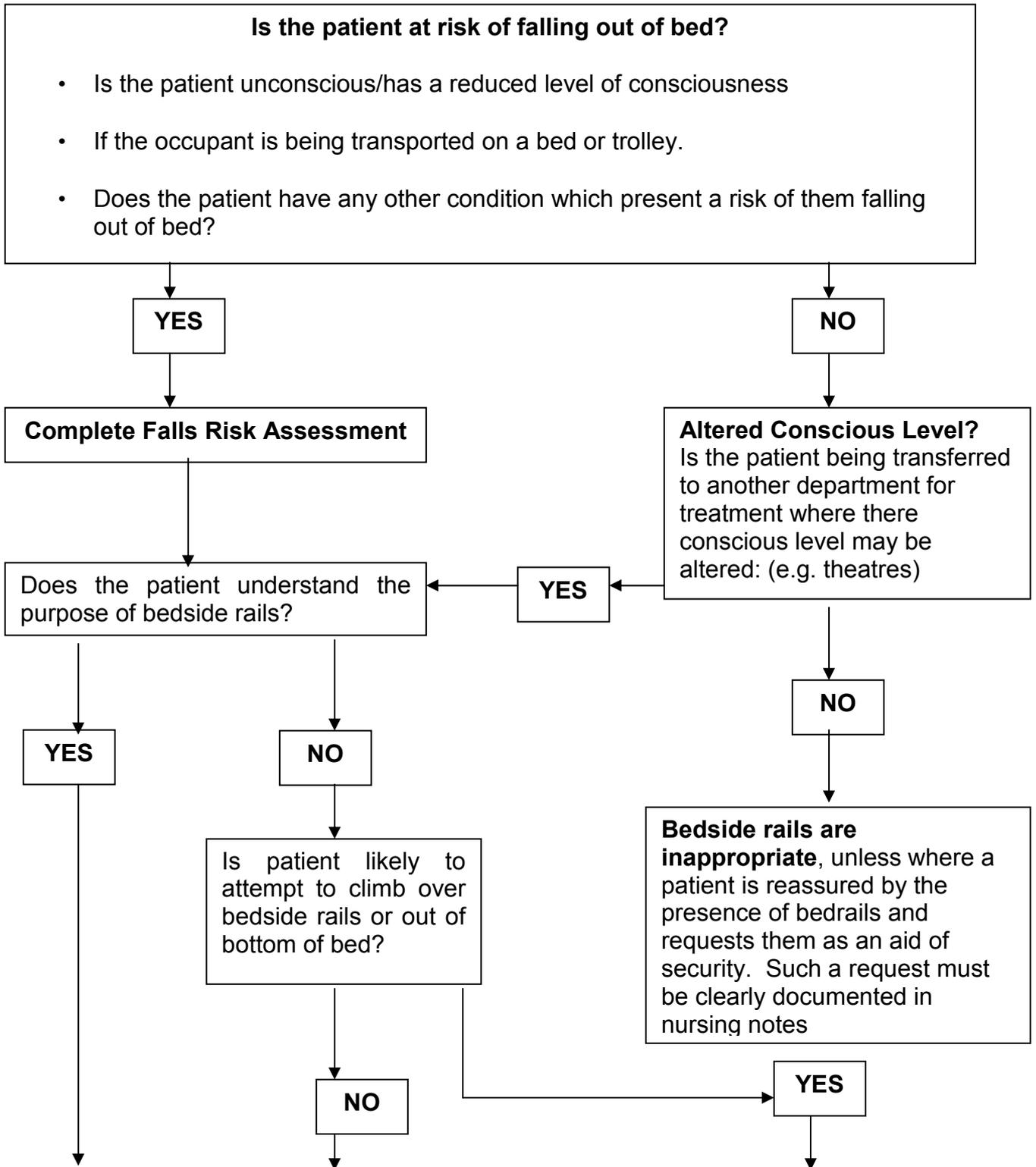
- All registered nurses are familiar with and comply to this document
- All staff who make decisions about bedrail use, or advise patients on bedrail use, must have the appropriate knowledge to do so,
- All staff that supply, maintain or fit bedrails must have the appropriate knowledge to do so as safely as possible, tailored to the equipment used.

- All staff who have contact with patients, including students and temporary staff, understand how to safely lower and raise bedrails and know they should alert the nurse in charge if the patient is distressed by the bedrails, appears in an unsafe position, or is trying to climb over bedrails.
- Education and Training can be accessed through:
 - Ward induction programmes
 - Corporate induction programmes
 - Including the use of bedrails in annual training on moving and handling

Supply, Purchase and Cleaning

- Western Health and Social care Trust aims to ensure bedrails, bedrail covers and special bedrails can be made available for all patients assessed as needing them.
- Extended bed rails can be purchased through Supplies Department. All areas, wards, departments should ensure that a number of these bed rails are held as ward/ department stock.
- Special bedrail covers/mesh rails etc. can be obtained from usual supply sources.
- Each area, ward, department manager should assess their area regarding the need for the equipment mentioned above and ensure sufficient ordering.
- If bedrails cannot be obtained, staff should explore all possible alternatives to reduce the risk to the patient, and report the lack of equipment on *local incident reporting form*.
- Extendable/Detachable bedrails no longer needed should be removed from beds and stored.
- All bedrails and associated equipment should be cleaned and decontaminated as per the Trust Infection Control Policy and manufacturers' instructions
- When special mattresses are hired, the requisition form requires the make and model of bed/bedrail to be stated, and the company renting the mattress will be asked to confirm the mattress is compatible with the bed and bedrail.
- Each area, ward, department manager should ensure that regular hygiene and maintenance check are undertaken (use above checks) and if staff find any defects, these should be reported to the Estates Department
- The WHSCT Estates Department is responsible for regular maintenance

Flowchart for Sale and Effective Use of Bed Rails
To be used in conjunction with policy and guidelines



Bedside rails may be used with caution and only with the patient's informed consent

References
Discuss alternatives

Bedside rails may only be used with caution.
Discuss with the family
Consider Alternatives

Bedside rails must not be used due to increased risk of injury/falls or frustration/agitation

Medical Devices Agency (2000) Equipped to Care – the safe use of medical devices in the 21st century. A guide for health care professionals, support workers and managers.

Medicine and Healthcare Products Regulatory Agency (MHRA), (2006) Device Bulletin Safe Use of Bed Rails DB2006 (06) Medicine and Healthcare Products Regulatory Agency. DOH www.mhra.gov.uk

Medicine and Healthcare Products Regulatory Agency (MHRA), (2006) Device Bulletin Safe Use of Bed Rails DB2006 (06) www.mhra.gov.uk

Gallinagh, R., Slevin, E., McCormack, B. (2001) Side rails as physical restraint: the need for appropriate assessment. Nursing Older People 13 (7) 22-25

Medical Devices Agency Device Bulletin (NI) 2001/2004 (2001) Risk Assessment in Advice on the Safe use of Bed Rails. Belfast. Health Estates. DOHSSPS

