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Community and Mental Health Services

TRUST-WIDE CLINICAL POLICY DOCUMENT

USE OF BED RAILS

Policy Number:	SA26
Scope of this Document:	All Staff
Recommending Committee:	Patient Safety Group
Approving Committee:	Executive Committee
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Lead Executive Director:	Executive Director of Nursing & Operations
Lead Author(s):	Band 7 Physiotherapist

TRUST-WIDE CLINICAL POLICY DOCUMENT

2019 – Version 4

Striving for Perfect Care and a just culture

Mersey Care NHS Foundation Trust

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USE OF BED RAILS

Further information about this document:

Document name	**TRUST WIDE CLINICAL USE OF BED RAILS POLICY DOCUMENT (SA26)**
Document summary	**This policy provides guidance on the use of bed rails and has been developed based on national guidance.**
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Published by Copies of this document are available from the Author(s) and via the trust's website	**Mersey Care NHS Foundation Trust** **V7 Building** **Kings Business Park** **Prescot** **Merseyside** **L34 1PJ** **Trust's Website www.merseycare.nhs.uk**
To be read in conjunction with	**Risk management policy & strategy SA02** **Reporting, management and review of adverse incidents SA03** **Health, safety and welfare SA07** **Clinical risk assessment tools (to be applied in conjunction with portfolio of risk assessment tools) SA10** **Manual handling SA11** **Slips, trips and falls SA30** **Consent to examination or treatment SD06** **Physical health care of service users SD29** **Mental Capacity Act Overarching Policy MC01**
This document can be made available in a range of alternative formats including various languages, large print and braille etc	
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Version Control:

		Version History:
Version 3	Circulated by Jayne Bridge for approval	April 2015
Version 4	Amended to include South Sefton and Liverpool Community. Risk assessment updated.	April 2019

SUPPORTING STATEMENTS

this document should be read in conjunction with the following statements:

SAFEGUARDING IS EVERYBODY'S BUSINESS

All Mersey Care NHS Foundation Trust employees have a statutory duty to safeguard and promote the welfare of children and adults, including:

- being alert to the possibility of child / adult abuse and neglect through their observation of abuse, or by professional judgement made as a result of information gathered about the child / adult;
- knowing how to deal with a disclosure or allegation of child /adult abuse;
- undertaking training as appropriate for their role and keeping themselves updated;
- being aware of and following the local policies and procedures they need to follow if they have a child / adult concern;
- ensuring appropriate advice and support is accessed either from managers, *Safeguarding Ambassadors* or the trust's safeguarding team;
- participating in multi-agency working to safeguard the child or adult (if appropriate to your role);
- ensuring contemporaneous records are kept at all times and record keeping is in strict adherence to Mersey Care NHS Foundation Trust policy and procedures and professional guidelines. Roles, responsibilities and accountabilities, will differ depending on the post you hold within the organisation;
- ensuring that all staff and their managers discuss and record any safeguarding issues that arise at each supervision session

EQUALITY AND HUMAN RIGHTS

Mersey Care NHS Foundation Trust recognises that some sections of society experience prejudice and discrimination. The Equality Act 2010 specifically recognises the *protected characteristics* of age, disability, gender, race, religion or belief, sexual orientation and transgender. The Equality Act also requires regard to socio-economic factors including pregnancy /maternity and marriage/civil partnership.

The trust is committed to equality of opportunity and anti-discriminatory practice both in the provision of services and in our role as a major employer. The trust believes that all people have the right to be treated with dignity and respect and is committed to the elimination of unfair and unlawful discriminatory practices.

Mersey Care NHS Foundation Trust also is aware of its legal duties under the Human Rights Act 1998. Section 6 of the Human Rights Act requires all public authorities to uphold and promote Human Rights in everything they do. It is unlawful for a public authority to perform any act which contravenes the Human Rights Act.

Mersey Care NHS Foundation Trust is committed to carrying out its functions and service delivery in line the with a Human Rights based approach and the FREDA principles of **F**airness, **R**espect, **E**quality **D**ignity, and **A**utonomy

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1. PURPOSE AND RATIONALE

1.1 Bed rails are used to prevent patients from falling out of bed and sustaining injuries. They are not designed or intended to limit the freedom of people by preventing them from leaving their beds voluntarily, nor are they intended to restrain people whose condition disposes them to erratic or violent movement. Bed rails must not be used as a means of restraint and should be used as the exception versus the rule.

1.2 Serious harm can occur when using bed rails such as entrapment strangulation and broken limbs from entrapment. Chest or neck entrapment in bed rails is a never event.

1.3 This policy is designed to support Mersey Care staff by providing advice and guidance to ensure the safety of patients where a decision to use or not use bed rails is made.

2. OUTCOME FOCUSED AIMS AND OBJECTIVES

2.1 To ensure that bed rails are used safely to reduce falls risk and harm from falls and that no entrapment or death (a never event) occurs as a result of unsafe bed rail use.

2.2 To ensure that bed rails are correctly assessed for and that staff, service users and carers are supported to make individual decisions around the risks of using or not using bed rails.

2.3 Ensure compliance with the statutes including the provision and use of Work Equipment Regulations 1998 (PUWER), and guidance including Medicines and Healthcare products Regulatory Agency (MHRA), National Patient Safety Advice (NPSA) and Health and Safety Executive (HSE).

2.4 That care related to the use of bedrails is monitored on a regular basis and that necessary adjustments to care are implemented.

3. SCOPE

3.1 This Policy applies to all staff within Mersey Care who may come into contact with bed rails or issues relating to bed safety.

4. DEFINITIONS (Glossary of Terms)

4.1

Glossary of Terms	Definition
Bed rail	A piece of equipment attached to the side(s) of a bed to reduce the risk of patients rolling, falling, slipping, sliding or falling out of bed. These are also sometimes referred to as cot sides, bed rail sides, side rails and bed guards. They should not be confused with grab bed handles which are designed to aid getting in and out of bed and movement whilst in bed. Bed grab handles are not

	designed to prevent patients falling from bed, and thus should not be used as bed rails (MDA 2001).
Pressure Relief Equipment	This can be any equipment placed on top of the bed base or on top of the mattress for the use of pressure relief in order to reduce the risk of ulcers or to assist in the healing of ulcers.
Entrapment	This is a situation which may occur when any part of the patients` body becomes caught or trapped between the mattress and the bed rail or between the gap of the head/foot board and the mattress.
Bed Accessories	Any equipment that can be attached or added to a bed e.g. grabs rail, electric profiling bed controls and bed rail protectors (bumper bars).
Bed Levers	A piece of equipment to aid independent movement by the patient when in bed i.e. to roll or sit up. This equipment can also be used to aid getting in and out of bed e.g. to help to get in to a standing position. Please note – not to be used to prevent falls from the bed.

5. DUTIES

5.1 Board of Directors

Has overall accountability for health and safety management and will delegate responsibility (through directors, managers, staff, service users, volunteers and contractors) to ensure that adequate and appropriate resources are made available to allow the Trust to meet its statutory obligations.

5.2 Executive Director of Nursing & Operations

The lead Executive Director for this policy (Executive Director of Nursing) has strategic responsibility for ensuring that arrangements are in place for the safe and effective prevention of harm caused by use of bed rails and will ensure managers are aware of the policy and are supported in implementing the policy with staff. They would work alongside the Director for Patient Safety to ensure monitoring is in place and incidents are reviewed appropriately.

5.3 Employees

5.3.1 Ensure Health and Safety and Clinical Risk Assessments in relation to bed rails are undertaken as required and that associated action plans are formulated and followed through for any hazards identified.

5.3.2 Ensure that staff are completing adequate review of bed rails and their suitability.

5.3.3 Bed rails and bed safety should be reviewed at every visit to ensure they are being used correctly and safely and still meet the needs of the patient. This still applies even if you haven't ordered the bed rails initially.

5.3.4 Ensuring that bed rails are not used routinely on all patients but a clinical decision is made in relation to use or non-use of bed rails and for the review of the decision made is undertaken as patient`s condition or request dictates.

5.3.5 Ensuring accurate documentation for the clinical decision and any variances as per communication with patients and their relatives.

5.3.6 Reporting faults or hazards using appropriate incident reporting system and to the Community Equipment Service if community equipment.
5.3.7 Cleaning and maintaining upkeep of bed rails as per infection control guidance.
5.3.8 Completing relevant information related to bed rails usage when completing an incident form to report an unwitnessed fall.
5.3.9 Ensure that bed rail bumpers are ordered/ issued with all bed rails and that risks and benefits of these are explained to the patient/carer/family
5.3.10 All staff to read the policy to ensure they are aware of the entrapment risks of bed rails
5.3.11 All clinical complex care inpatient staff will have mandatory online training. It is recommended that staff in community who assess for bed rails do the online training.
5.3.12 If further guidance is needed regarding bed rail use contact Equipment Specialist Team (tel: 0151 296 7736 or est@merseycare.nhs.uk) or discuss with inpatient therapy staff.

5.4 Community Equipment Service (CES)

5.4.1 Ensure that systems are in place so that beds and bed rails are kept in good condition, according to the maintenance contract and are cleaned according to infection control guidelines.
5.4.2 Correct fitting of rails at time of delivery, ensuring that gaps at head and feet end meet with European Bed Standards Safe use of bed rails MHRA – Dec 2013.
5.4.3 Bed rails will be reviewed/ observed every 12 months as part of the service and maintenance of the bed.
5.4.4 Recycling of bed rails – include decontamination and inspection to ensure fit for reissue
5.4.5 To check for signs of damage, faults or cracks on the bed rails and if any issues are found for the bed rails not to be used and labeled clearly as faulty and removed from use for repair.
5.4.6 An urgent response to repairs should be undertaken if the patient/family/carers/Mersey Care staff are unable to put any other bed safety measures in place.
5.4.7 Ensure bed rail bumpers are provided as standard with all the deliveries and fitted.

6. PROCESS

6.1 Decision to use bedrails

6.1.1 The decision to use or not use bed rails must be recorded within clinical documentation.
6.1.2 Inappropriate bed rail use or lack of use can put patients at risk of harm. The bed rail risk assessment tool should be used.
6.1.3 Decisions about bed rails need to be made as a multi-disciplinary decision and consent, capacity/best interest need to be taken into consideration.
6.1.4 Bed rails are only a small part of managing falls from bed and the falls policy should be referred to for further information.

6.2 Hazards to be considered when making decision related to bed rail use

6.2.1 For guidance on safe bed rail dimensions please see Appendix 1. Appendix 1 refers to using a cone for measuring gaps but staff can use a tape measure if they do not have an appropriate bed rail measuring cone.
6.2.2 Bumpers on bed rails are used to reduce risk of patient entrapment or injury. The risks and benefits should be explained to patients, carers and relatives. Duvets, pillows or blankets should not be used as an alternative. Bumpers should be checked that they are not a suffocation hazard.
6.2.3 Bed rails should not be used with patients who could deliberately misuse bed rails for self harm.
6.2.4 Bed rail entrapment is a never event.

6.2.5 All beds with bed rail attachments must be used according to the manufacturers' instructions which must be available. Any fault must be reported via an incident reporting form and to the MHRA.

6.3 **Patient assessment**

6.3.1 The bed rails risk assessment should be used when bed rails are being considered for a patient. See appendix 2.
6.3.2 Bed rails may be considered when there is a history or risk of falling or rolling from bed.
6.3.3 Considerations which may exclude the use of bed rails:
6.3.3.1 Climbing over/around bed rails.
6.3.3.2 Patient unable to maintain their own safety
6.3.3.3 Patient has no safety awareness
6.3.3.4 Patient has greater risk of injury with bed rails.
6.3.3.5 Patient is agitated or confused.
6.3.3.6 Fluctuating levels of consciousness
6.3.3.7 Patient independent in movement
6.3.3.8 Using bed rails as a restraint
6.3.3.9 Height and weight meaning patient is at increased risk of entrapment
6.3.3.10 Patient using bed rails to pull themselves up or roll over in bed.
6.3.3.11 Sensory loss
6.3.3.12 Poor posture including limb weakness or hemiplegic conditions
6.3.3.13 Cognitive or perceptual deficit
6.3.4 When assessing a patient for the use of bed rails be considerate of their capacity.
6.3.5 If the patient has mental capacity to consent they should consent the use of bed rails. The assessing clinician should ensure the patient is informed of the risks and benefits of bedrails.
6.3.6 If the patient lacks capacity then the decision to use bed rails or not is taken in their best interest. Relatives and multi-disciplinary team should be involved in this decision.
6.3.7 The decision to use bed rails should take into account the risks and benefits of their use and consider any alternatives. Patients, relatives and multi-disciplinary team should all be involved.
6.3.8 The behavior of individual patients can never be completely predicted, and Mersey Care NHS Foundation Trust will be supportive when decisions are made by frontline staff in accordance with this policy.
6.3.9 Use of bed rails should be regularly reviewed. Bed rails should be regularly reviewed according to Bed Rail Assessment Tool and when a patient's condition or wishes change. As a minimum inpatients should be reviewed every 7 days.
6.3.10 Bed rails on inpatient wards should be checked in line with the mattress checklist.
6.3.11 Staff when reviewing patients who have bed rails should check that the equipment is in good working order and suitable for their needs.
6.3.12 Any fault detected in bed rails must be reported and appropriate action taken to ensure patient safety. Bed rail assemblies must be traceable to assist in regular checking and maintenance.
6.3.13 If a service user is found at any time in a position that suggests they will come to harm, for example, legs through the gaps of the rails, then this must be noted as an indication that they are at risk of serious injury from entrapment and an urgent review of their care must be undertaken to reduce this risk. For inpatients this must include a review of observation levels.
6.3.14 If a service user is found attempting to climb over a bed rail then an urgent review of their care must be undertaken, as the risk of injury could outweigh the benefits already identified in the individual service user assessment.
6.3.15 All beds must be kept at the lowest possible height when staff are not attending to service users, to reduce the risk of injury from a fall. The exception is when independently mobile

service users require the bed to be adjusted to the correct height for their feet to be on the floor whilst they are sitting on the side of the bed.

6.3.16 In the community profiling beds with bed rails will be ordered through the appropriate Equipment Services (Liverpool or Sefton) by staff who have completed a bed rails risk assessment.

6.4 Alternatives to Bed Rails

6.4.1 The use of bed rails needs considerable care to ensure that the patient is not placed at risk. Where appropriate, other methods to prevent harm should also be considered as suitable alternatives or used with bed rails.

- 6.4.1.1 Extra low or floor beds used in the lowest position.
- 6.4.1.2 Crash mats- risk assessment if required as crash mats can create an unstable base causing a trip/ slip hazard if patient is mobile.
- 6.4.1.3 Bed wedges- foam wedges that are used as a substitute for bed rails. They pose no entrapment risk. Note- they cannot be used on a dynamic/ airflow mattress.
- 6.4.1.4 Bed leaving alarm- sensor mat placed under the patients mattress or on the floor or a laser beam, this will alarm to alert family, carers, staff, when patient attempts to get out of bed. All care homes have to provide this system themselves to link with their own nurse call system.
- 6.4.1.5 Inflatable cot sides
- 6.4.1.6 Integrated mesh bed rail bumpers.
- 6.4.1.7 Cocoon system
- 6.4.1.8 Additional height bed rail.

6.4.2 All of the above can be found on CEDAS resource guide. Staff can contact the Equipment Specialist Team for advice on any of the products listed or to discuss specific patients.

6.5 Safe Use of Air Mattress/Pressure Ulcer Prevention Mattress and Bed Rail

6.5.1 Staff should consider the overall height of the mattress as the reduction in the effective height of the bed rail relative to the top of the mattress, may allow the patient to roll over the top of the bedrail – see appendix 1.

6.5.2 The hazard of entrapment between the mattress and bedrail may be increased due to the soft, easily compressed nature of the mattress, therefore a risk assessment of the mattress/bedrail should be undertaken to ensure entrapment cannot occur.

6.6 Purchase of beds

6.6.1 Any purchase of new beds or hire of beds must consider the potential or identified use of bed rails for service users. Integral bed rails must be the preferred option for inpatient service users identified as needing bed rails. For inpatients this decision must be made at ward manager level and above due to the budget implications.

6.6.2 The Patient Safety Group and Modern Matrons have a responsibility to oversee and ensure that all patient safety issues have been addressed as a consequence of identification of need and procurement.

6.6.3 If a community service user requires a bed or bed rails that are not part of core stock this would have to go via special panel with robust clinical justification.

6.6.4 Beds with bed rails must be purchased or hired through the procurement department and only from companies who have complied with the MHRA, HSE and NPSA guidelines.

Risk matrix tool

Risk matrices provide a familiar format that is easy to understand but may over-simplify some decisions. For example, in the matrix below there are more relevant elements that the matrix suggests including vulnerability to injury and visual and spatial awareness.

MENTAL STATE				
	Patient is confused and disorientated	Use bedrails with care	Bedrails NOT recommended	Bedrails NOT recommended
	Patient is drowsy	Bedrails recommended	Use bedrails with care	Bedrails NOT recommended
	Patient is orientated and alert	Bedrails recommended	Bedrails recommended	Bedrails NOT recommended
	Patient is unconscious	Bedrails recommended	N/A	N/A
		Patient is very immobile (bedfast or hoist dependant)	**Patient is neither independent nor immobile**	**Patient can mobilise without help from staff**
		MOBILITY		

7. CONSULTATION

7.1 This policy has been developed through:

7.2 Using previous policies on bed rails from Mersey Care NHS Foundation Trust and its predecessors.

7.3 In consultation with modern matrons, lead nurses, ward managers, manual handling advisor, therapy staff, procurement department and health and safety advisors from complex care and local divisions within Mersey Care NHS Foundation Trust.

8. TRAINING AND SUPPORT

8.1 Online training will be mandatory for complex care inpatient clinical staff and recommended for staff who assess for bed rails in the community.

9. MONITORING

9.1 Inpatient wards with beds with bed rails will have staff audit the bed rails weekly for safety, cleanliness and if they are being used appropriately. Any concerns identified in the audit will be discussed with ward managers who will discuss concerns with modern matrons or at falls meetings if appropriate.

10. EQUALITY AND HUMAN RIGHTS ANALYSIS

10 Equality and Human Rights Analysis

Title: Bed rails policy equality and human rights analysis
Area covered: Bed rails policy

What are the intended outcomes of this work? *Include outline of objectives and function aims* To ensure bed rails are appropriately assessed for and used.
Who will be affected? *e.g. staff, patients, service users etc* Clinical staff and patients using bed rails.

Evidence
What evidence have you considered? **Policy only as this is a policy review.**
Disability (including learning disability) **Bed rails should not be used with people who due to their disability are at risk of entrapment. Alternatives to bed rails such as low rise beds should be considered in these situations.**
Sex No significant issues.
Race *Consider and detail (including the source of any evidence) on difference ethnic groups, nationalities, Roma gypsies, Irish travellers, language barriers.* Interpreters would be used to gain consent for use of bed rails if the patient was not fluent in English.
Age *Consider and detail (including the source of any evidence) across age ranges on old and younger people. This can include safeguarding, consent and child welfare.* If due to their age someone is so small that bed rails put them at risk of entrapment then alternatives to bed rails would be considered.
Gender reassignment (including transgender) *Consider and detail (including the source of any evidence) on transgender and transsexual people. This can include issues such as privacy of data and harassment.* No significant issues.
Sexual orientation *Consider and detail (including the source of any evidence) on heterosexual people as well as lesbian, gay and bi-sexual people.* No significant issues.
Religion or belief *Consider and detail (including the source of any evidence) on people with different religions, beliefs or no belief.* No significant issues.
Pregnancy and maternity *Consider and detail (including the source of any evidence) on working arrangements, part-time working, infant caring responsibilities.*

No significant issues.
Carers *Consider and detail (including the source of any evidence) on part-time working, shift-patterns, general caring responsibilities.* Use of bed rails will be discussed with carers and carers who have to use bed rails would need to be competent in their use.
Other identified groups *Consider and detail and include the source of any evidence on different socio-economic groups, area inequality, income, resident status (migrants) and other groups experiencing disadvantage and barriers to access.* No significant issues.
Cross Cutting *implications to more than 1 protected characteristic* No significant issues.

Human Rights	**Is there an impact?** **How this right could be protected?**
Right to life (Article 2)	*Use not engaged*
Right of freedom from inhuman and degrading treatment (Article 3)	*Use supportive of a HRBA.* *Bed rails will only be used if they have been assessed for and are the most suitable option for the patient.* *They will not be used as restraint.*
Right to liberty (Article 5)	*Use supportive of a HRBA.* *Bed rails will only be used if they have been assessed for and are the most suitable option for the patient.* *They will not be used as restraint.*
Right to a fair trial (Article 6)	*Use supportive of a HRBA.* *Bed rails will only be used if they have been assessed for and are the most suitable option for the patient.* *They will not be used as restraint.*
Right to private and family life (Article 8)	*Use supportive of a HRBA.*
Right of freedom of religion or belief (Article 9)	*Use supportive of a HRBA.*
Right to freedom of expression **Note: this does not include insulting**	*Use supportive of a HRBA.*

language such as racism (Article 10)	
Right freedom from discrimination (Article 14)	*Use supportive of a HRBA.*

Engagement and Involvement *detail any engagement and involvement that was completed inputting this together.*
No engagement required as policy review.

Summary of Analysis *This highlights specific areas which indicate whether the whole of the document supports the trust to meet general duties of the Equality Act 2010*
Eliminate discrimination, harassment and victimisation Policy is supportive. Just because someone has dementia does not necessarily mean bed rails would be inappropriate. Bed rails should be assessed on an individual basis.
Advance equality of opportunity Policy is supportive. Just because someone has dementia does not necessarily mean bed rails would be inappropriate. Bed rails should be assessed on an individual basis.
Promote good relations between groups Policy developed in discussion with Community and Local division.

What is the overall impact? Bed rails policy does not discriminate and meets HRBA.

Addressing the impact on equalities *There needs to be greater consideration re health inequalities and the impact of* each individual development /change in relation to the protected characteristics and vulnerable groups **Multidisciplinary team discussion will support assessment and use of bed rails.**

Action planning for improvement
Detail in the action plan below the challenges and opportunities you have identified. *Include*

here any or all of the following, based on your assessment

- *Plans already under way or in development to address the* ***challenges*** *and* ***priorities*** *identified.*
- *Arrangements for continued engagement of stakeholders.*
- *Arrangements for continued monitoring and evaluating the policy for its impact on different groups as the policy is implemented (or pilot activity progresses)*
- *Arrangements for embedding findings of the assessment within the wider system, OGDs, other agencies, local service providers and regulatory bodies*
- *Arrangements for publishing the assessment and ensuring relevant colleagues are informed of the results*
- *Arrangements for making information accessible to staff, patients, service users and the public*
- *Arrangements to make sure the assessment contributes to reviews of DH strategic equality objectives.*

Training will be used to ensure staff are competent in assessing and using bed rails and do not discriminate.

For the record
Name of persons who carried out this assessment:
Vicky Glaze
Band 7 Physiotherapist

Date assessment completed:

12/4/19

Name of responsible Director:
Director of Nursing

Date assessment was signed:

Mersey Care NHS Foundation Trust

Action plan template

This part of the template is to help you develop your action plan. You might want to change the categories in the first column to reflect the actions needed for your policy.

Category	Actions	Target date	Person responsible and their area of responsibility
Monitoring	Inpatient wards with beds with bed rails will have staff audit the bed rails weekly for safety, cleanliness and if they are being used appropriately.		
Engagement	Local and Community Divisions will discuss bed rails together when needed.		
Increasing accessibility	Online training will be mandatory for complex care inpatient clinical staff and recommended for staff who assess for bed rails in the community.		

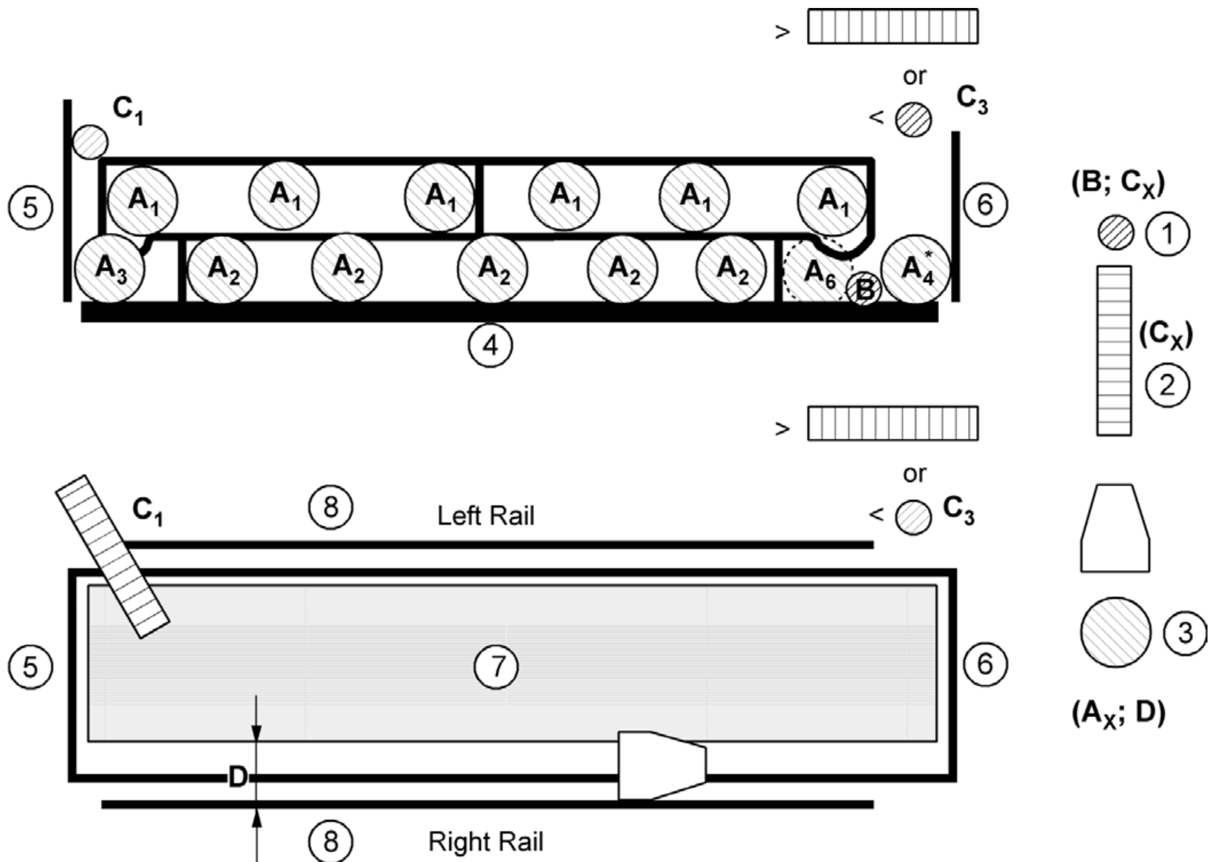
11. ADDITIONAL APPENDICIES
Appendix 1

Table 1 – Comparison of BS EN 1970:2000 and BS EN 60601-2-52:2010

Description	Old BS EN 1970:2000	New BS EN 60601-2-52:2010	Notes
Height of the top edge of the side rail above the mattress without compression	≥ 220mm	≥ 220mm*	*Where a speciality mattress or mattress overlay is used and the side rail does not meet ≥ 220mm a risk assessment shall be performed to assure equivalent safety
Gap between head board and end of side rail	≤ 60 or ≥ 250mm	≤ 60	Most disadvantageous angle between head board and side rail
Gap between footboard and end of side rail	≤ 60 or ≥ 250mm	≤ 60 or ≥ 318mm	
Smallest gap from any accessible opening between side rail and mattress platform	If gap between footboard / headboard is ≥ 250mm then gap is ≤ 60mm If gap between footboard / headboard is ≤ 60mm then gap is ≤ 120mm	≤ 60mm	
Gap between split side rails	≤ 60 or ≥ 250 to ≤ 400mm*	≤ 60 or ≥ 318mm	* when in horizontal position
Gap between side rail	Not specified	Perform	* 120mm aluminium cone is positioned

and mattress in 'plan' elevation		test*	between mattress and side rail to determine if gap is acceptable or not

BS EN Dimensional requirements (BS EN 60601-2-52:2010) – from April 2013
Dimensional requirements of bed rails (from BS EN 60601-2-52:2010) – replacing BS EN 1970:2000 from 01/04/2013



Only applies when the area C is <60 mm.
Key
1 Area of TOOL representing neck diameter (60 mm).
2 Area of TOOL representing chest breadth (318 mm).
3 Area of TOOL representing head breadth (120 mm).
4 MATTRESS SUPPORT PLATFORM
5 HEAD BOARD
6 FOOT BOARD
7 Mattress
8 SIDE RAIL

Area	Description	Requirement / Compliance method
A1	Fully enclosed openings within a	Gap is specified to be less than 120

	SIDE RAIL, HEAD or FOOT BOARD	mm as defined by the following test.
A2	Fully enclosed opening defined by the SIDE RAIL, its supports, and the MATTRESS SUPPORT PLATFORM	*Compliance is checked by the following test: Except for A3 articulate the MEDICAL BED and find the largest opening. Insert 60 mm diameter part of cone tool (see Figure 201.103a, See Figures 201.107 and 201.108) through opening from inside of the MEDICAL BED system. Bring cone tool to bear on opening of interest. Exert 250 N force applied to 60 mm cylindrical end of cone tool in most disadvantageous direction.* Pass/fail criterion: Opening shall not allow 120 mm diameter part of cone tool to enter and pass through.
A3	Partially enclosed opening defined by the HEADBOARD, MATTRESS SUPPORT PLATFORM, and SIDE RAIL	
A4	Partially enclosed opening defined by the FOOT BOARD, MATTRESS SUPPORT PLATFORM, and SIDE RAIL (except where the gap between the SIDE RAIL and the FOOT BOARD > 318 mm)	
A5	Partially enclosed opening between segmented or split SIDE RAILS and the MATTRESS SUPPORT PLATFORM (except where the gap between the SIDE RAILS is > 318 mm)	
A6	Partially enclosed opening defined by the lowest point of a SIDE RAIL, the adjacent SIDE RAIL support, and MATTRESS SUPPORT PLATFORM, to the outside of the SIDE RAIL supports.	
A	Other opening(s) defined by ACCESSORIES (e.g., IV poles, fracture frames) and SIDE RAILS, HEAD/FOOT BOARDS, and/or	

	MATTRESS SUPPORT PLATFORM. This is not in Figure 201.107 and Figure 201.108 as it	
B	Distance between the MATTRESS SUPPORT PLATFORM and the lowest point of the SIDE RAIL outside of the SIDE RAIL support. **AND** The angle between SIDE RAIL and the MATTRESS SUPPORT PLATFORM at the range of the mattress height defined by the MANUFACTURER +/-□2 cm. NOTE +/-2 cm takes into account mattress compression and height of the neck above the mattress.	Gap < 60 mm. **AND** Angle between MATTRESS SUPPORT PLATFORM and the SIDE RAIL interface >60° over the entire range of mattress heights from the minimum recommended mattress height, minus 2 cm. to the maximum recommended mattress height, plus 2 cm. NOTE The RISK MANAGEMENT has to address the possibility of the use of a mattress not specified by the MANUFACTURER. RISK MANAGEMENT to address the entrapment condition of area B (as illustrated in Figure AA.13) should be performed, taking the following into consideration: i) The SIDE RAIL shape and geometry. ii) The distance between the lowest point of the SIDE RAIL and the MATTRESS SUPPORT PLATFORM. iii) The mattress material properties. iv) The mattress dimensions. v) The fit relationship between the SIDE RAIL, mattress and MATTRESS SUPPORT PLATFORM.

		Compliance is checked by inspection of the RISK MANAGEMENT FILE.
C1	Gap between the HEAD BOARD and adjacent SIDE RAIL.	Gap between the HEAD BOARD and adjacent SIDE RAIL is required to be <60 mm. Compliance for a gap <60 mm is checked by the following test: *The cylinder tool (see Figure 201.103b) shall be oriented parallel to floor, in the most disadvantageous angle in the horizontal plane above the gap. The 60 mm cylinder tool shall rest with the full weight on the gap where the cylinder tool intersects. Extra vertical force shall not be used. The cylinder tool shall not be used to pry apart parts of the MEDICAL BED.* *Pass/fail criterion:* *The 60 mm cylinder tool shall not slide into the opening.*
C2	Gap between segmented or split SIDE RAILS with both SIDE RAILS raised.	Gap between segmented or split SIDE RAILS with both SIDE RAILS raised is required to be < 60 mm **or** > 318 mm. *Compliance for a gap < 60 mm is checked by the following test:* *The cylinder tool (see Figure 201.103b) shall be oriented parallel to floor, in the most disadvantageous angle in the horizontal plane above the gap. The*

		60 mm cylinder tool shall rest with the full weight on the gap where the cylinder intersects. Extra vertical force shall not be used. The cylinder tool shall not be used to pry apart parts of the MEDICAL BED. For MEDICAL BED with split SIDE RAILS, articulate the MATTRESS SUPPORT PLATFORM to identify the worst case opening between the SIDE RAILS and perform the test. *Pass/fail criterion:* *The 60 mm cylinder tool shall not slide into the opening.* **OR** For a gap > 318 mm: The gap shall be > 318 mm for the entire vertical distance.
C3	Gap between SIDE RAIL and FOOTBOARD. Other openings(s) defined by ACCESSORIES (e.g. IV poles, fractures frames,…..) and SIDE RAILS, HEAD BOARD, FOOT BOARD, and / or MATTRESS SUPPPORT PLATFORM.	Gap between SIDE RAIL and FOOTBOARD is required to be < 60 mm **OR** > 318 mm. *Compliance for a gap < 60 mm is checked by the following test:* *The cylinder tool (see Figure 201.103b) shall be oriented parallel to floor, in the most disadvantageous angle in the horizontal plane above the gap. The 60 mm cylinder tool shall rest with the full weight on gap where the cylinder intersects. Extra vertical force shall not be used. The cylinder tool shall not be used to pry apart*

		parts of the MEDICAL BED. *Pass/fail criterion:* *The 60 mm cylinder tool shall not slide into the opening.* **OR** For a gap > 318 mm: The gap shall be > 318 mm for the entire vertical distance.
D	Region defined between the SIDE RAIL and the mattress.	*Compliance is checked by the following test:* *Push the mattress away from the SIDE RAIL being measured until the mattress retention system, or the opposing SIDE RAIL stops the mattress. Pull outward on the SIDE RAIL to remove any lateral play and during application of the force the cone tool (see Figure 201.103a) is placed with its longitudinal axis parallel to the SIDE RAIL, resting on the mattress in the horizontal gap between the SIDE RAIL and mattress. Turn the cone tool until the line on the face of the 120 mm diameter end is horizontal. Let the cone tool sink into the space by its own weight.* *If a mattress retention system, SIDE RAIL support or other structure keeps the cone tool from sinking in the gap, the cone tool shall be placed*

		at a different location along the SIDE RAIL where there is no interference. *Pass/fail criterion:* *The large end of the cone tool shall not sink below the mattress surface by 50 % or more of its 120 mm diameter.* NOTE The gap between HEADBOARD and MATTRESS SUPPORT PLATFORM is covered by the measurement of A (See designator A: other opening(s) defined by ACCESSORIES (e.g., IV poles, fracture frames) and SIDE RAILS, HEAD/FOOT BOARDS, and/or MATTRESS SUPPORT PLATFORM. This is not in Figure 201.107 or Figure 201.108 as it depends on the construction of the MEDICAL BED) Gap between HEADBOARD and top of mattress: The mattresses specified by the MANUFACTURER normally have no reasonable gaps between HEADBOARD and top end of mattresses for a possible head entrapment.

12. Appendix 2

Bed Rail Assessment Tool

Name:	**DOB:**
NHS No:	**GP:**
Patient's location: Bed/Community	
Past Medical History and current clinical concern:	
Bed type:	**Are bed rails suitable/compatible?**

Assessment of Service User	**Yes**	**No**	**Comments**
1. Is there a history of falling out of bed?	☐	☐	
2. Does the Service User have poor balance/loss of sensation/altered body awareness?	☐	☐	
3. Does the Service User have uncontrolled movements or seizures?	☐	☐	
4. Is the service user restless or disorientated?	☐	☐	
5. Is the Service User at risk of climbing over the safety rails if they are used?	☐	☐	
6. Is the Service User at risk of becoming entrapped if safety rails are used?	☐	☐	
7. Does the Service User's age/weight/build put them at risk if bed rails are used?	☐	☐	
8. Is the Service User able to get out of bed independently?	☐	☐	
9. Does the patient have a neurological/ cognitive disorder e.g.-diagnosis of Dementia or Alzheimer's?	☐	☐	
10. Would the patient use the bed for ligature purposes?	☐	☐	

IF YOU HAVE ANSWERED YES TO ANY OF THE ABOVE QUESTIONS, BED RAILS MAY BE CONTRAINDICATED PLEASE CONSIDER OPTIONS OVERLEAF.

Have you considered the alternatives to bed safety rails?	Yes	No	N/A	Reason why not suitable
1. Extra Low Profiling bed	☐	☐	☐	
2. Crash Mat	☐	☐	☐	
3. Bed Wedges	☐	☐	☐	
4. Cocoon/Genie Safe Sides	☐	☐	☐	

Assessment of Bed and Environment

Do the benefits of bed rails outweigh the risks of injury and entrapment to the patient Yes/No
If you have answered YES, please provide your clinical rationale for the use of bed rails?

Equipment Prescribed:

Question	Yes	No	Comments
Have the risks and benefits been discussed with the patient?	Yes ☐	No ☐	Comments:
Have you gained consent to order the equipment?	Yes ☐	No ☐	Comments:
Does the service user have capacity or have you used best interest decision making?	Yes ☐	No ☐	Comments:
Taking into account the persons physical or medical condition, how often would you recommend the bed rails are reviewed?			

□ 1 day □ 1 week □ 1 month □ 3 months □ 6 months □ 12 months □ Other:

Assessment completed by:	
Name:	**Designation:**
Signature:	**Date:**

- **Please ensure secure fitting bumpers are supplied with bed rails.**
- **Please ensure the Service User is given manufacturer's instructions for the safe use of bed rails.**

Useful Links www.gov.uk/mhra http://www.hse.gov.uk