Leicestershire Partnership NHS
NHS Trust

Code of Practice for Using Electric Profiling Beds

This code of practice outlines the health and safety arrangements in place to comply with the Manual Handling Operations Regulations 1992 and to support the Trust Manual Handling Policy

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Key individuals involved in developing the document

Name	**Designation**
Jo Jackson	Clinical Lead
Alana Barby	Matron
Erica Johnson	Diana Team Leader
Yvonne Julien	Occupational Therapist
Neil Wincott	Training Coordinator
Theresa O'Malley	Intermediate Care Sister

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Version Control and Summary of Changes

Version number	Date	Comments (description change and amendments)
V1	14.07.2015	New

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For further information contact:

Moving and Handling Advisor
Tel: 0116 295 1662

Definitions and Acronyms that apply to this Code of Practice

Manual Handling	Refers to the transportation or support of a load, including lifting, lowering, pushing, pulling, carrying or moving thereof by hand or bodily force (Manual Handling Operations Regulations 1992 (as amended))
Load	A load will be a separate, moveable object (either inanimate or a person) but not an implement, tool or machine while in use for its intended purpose. (Manual Handling Operations Regulations 1992 (as amended))
Reasonably Practicable	The level of risk is balanced against any potential resource input that is required to remove or reduce the risk.
Risk Assessment	This may be generic completed for an area or department or individual completed as an assessment of any moving and handling risks for employees or when providing care or rehabilitation for a patient/client.
Electric Profiling Bed	The bases of electric profiling beds are sectioned so the mattress can be profiled to achieve various positions, the height can also be adjusted. Movement is powered and controlled via a bedside handset by staff, and if appropriate, the patient.
Ultra Low Profiling Bed	Ultra low beds are able to be lowered to a height of below 30 cm (top of mattress to floor)
Musculoskeletal	Relating to or involving the muscles and the skeleton
Patients	Refers to a community patient, inpatient/outpatient, deceased patient. For the purpose of the document the term ‘patient’ has been used throughout to describe patient, service user, client, child or young person.
CQC	Care Quality Commission
SWL	Safe Working Load
NRS	NRS Healthcare
PUWER	Provision and use of Work Equipment Regulations
PPM	Planned Preventative Maintenance
LPT	Leicestershire Partnership NHS Trust
EPB	Electric Profiling Bed

Foreword

It is recognised that in some inpatient areas patients will be on EPBs but will not be requiring to use all the functions of the bed.

The Code of Practice details the following points:

- Criteria for allocating an electric profiling bed to a patient
- Criteria to determine the suitability of an electric profiling bed
- General principles of using electric profiling beds
- Moving of electric profiling beds
- Ultra low electric profiling beds
- Maintenance
- Training
- Infection Prevention and Control
- Purchase and disposal

1 Introduction

Where patients need moving and handling assistance for repositioning in bed, or a significant amount of care is delivered to them in bed, electric profiling beds (EPBs) should be considered together with appropriate handling equipment, as part of the risk assessment including moving and handling and tissue viability care plans.

Ergonomic comparison between moving a patient on standard beds and EPBs confirm the significant reduction in risk of injury to staff. EPBs are an appropriate measure where the patients are dependant and handling takes place frequently for example care of the elderly, stroke rehabilitation as well as individual patients being cared for in their own homes.

Following the introduction of the Manual Handling Operations Regulations (as amended), the use of electric profiling beds to care for patients with limited independence has increased.

This code of practice is designed to ensure the safe use of electric profiling beds and minimise the risk of injury to staff and their patients.

2 Criteria for Allocating an Electric Profiling Bed to a Patient

2.1The patient is assessed to be so dependent that approved manual handling techniques cannot safely be used to facilitate their repositioning in bed, and hoisting them is not always appropriate.

2.2The patient is assessed to need repositioning in bed so frequently that the use of a hoist is impractical and/or causes them distress.

2.3For therapeutic reasons the patient benefits from a degree of independence and positioning afforded by this type of bed.

2.4To facilitate the positioning of patients receiving nutrition in bed, including enteral feeding.

2.5The patient has a medical need which cannot otherwise be met e.g. postural drainage, respiratory failure.

2.6Short term solution to enable hospital discharge or reduce hospital admission.

2.7The patient requires nursing intervention on the bed.

2.8The patient is in bed more than 18 hours in a 24 hour period due to health needs or nursing interventions.

Note: Refer to the Integrated Community Equipment Service Code of Practice for Electric Profiling Beds for patients who require an electric profiling bed in the community

3 Criteria to Determine the Suitability of an Electric Profile Bed

All new beds purchased from the 1 April 2013 onwards must conform to British Standard EN60601-2-52 Bed Standard. Beds purchased prior to 1 April 2013 must be compliant with British Standard EN60601-2-38 and EN1970.

Where the patient is being cared for at home or in a domiciliary environment, so far as is reasonably practicable, the bed should be able to be disassembled and reassembled to enable it to be installed in the patients home, taking into consideration the patient's preferred bed location.

The bed must be able to take the weight of the patient and the mattress i.e. its Safe Working Limit must not be exceeded.

The bed should be long enough and wide enough to support the patient completely. The head section should be high enough to support the patients head when they are sitting up.

The bed should be height adjustable. It should go high enough to enable carers to maintain a safe posture throughout their delivery of care. It should go low enough (35-40 cm) to facilitate the patients independence and ensure their safety.

The bed should be able to profile the patient i.e. it should have a power assisted adjustable backrest, upper and lower leg sections. A four section bed is the recommended option: three section beds tend to wedge the patients bottom between the two top sections. The bed should have a tilt mechanism, enabling the patient to be positioned either head down or feet down (Trendelenburg or Reverse Trendelenburg). A feet down tilt facility enables the patient to be placed in an 'arm chair' position.

The bed should be able to accommodate any type of pressure relieving mattress that clinical assessment deems to be necessary, and still maintain its profiling ability.

The bed's control unit should have clear and easy to use controls. Switches should be distinguishable in the dark, or by those with poor vision, and be operable by those with weak hands. The control unit should be a robust pendant handset, which is easy to attach securely to the bed when not in use.

The under-bed space should be easily accessible and have enough clearance for the legs of a portable hoist. There should be no trailing wires on which hoists could catch. As with the rest of the bed, there should be easy access for cleaning and maintenance.

The bed should have brakes on all four castors or central braking system. They should be easy to reach to operate, even when the bed height has been altered, and it should be easy to see if they are on or off.

Where risk assessment indicates the potential for the patient to self-harm it must be possible for the bed's leads and cables to be made safe.

If the patient is to be discharged home have alternatives to a EPB been explored for example alternative techniques, mattress elevator, rope ladder, pillow lifter, bed lever, back rest, bed raiser or foam wedges.

Note: Refer to the Integrated Community Equipment Service Code of Practice for Electric Profiling Beds for patients who require an electric profiling bed in the community

4 General Principles of Using Electric Profiling Beds

4.1Any use of an EPB must be as specified by the patient's Moving and Handling Risk assessment / Care Plan.

4.2Never exceed the Safe Working Limit of the bed. The weight of the patient should be recorded on their Moving and Handling Risk Assessment / Care Plan. The Safe Working Limit of the bed should be clearly marked on the frame. If in doubt, check with the manufacturer. Carers need to bear in mind that if they are attending to and/or moving the patient and are doing so with part or all of their body weight on the bed, the combined weight of the patient and carers may exceed the Safe Working Limit.

4.3All beds must have a unique serial number to enable the equipment to be easily identified and it's service history accessed from the equipment database.

4.4Ensure there is sufficient power for use. Most EPBs have a battery operated back-up system, but this is not designed for long term use and beds should be plugged into the mains when in use.

4.5Electric profiling beds have manual override levers to enable the repositioning of its sections in case of complete loss of power. Carers should familiarise themselves with the override systems of the beds that they have in their areas.

4.6 If bed rails have been risk assessed as appropriate to be used with the patient then please refer to Bed Rail Policy for further information.

5 Ultra Low Electric Profiling Beds (High-Low Beds)

High-low beds are able to be lowered to a height of below 30 cm (top of mattress to floor) and can be a viable alternative if the patient is at very high risk of attempting to leave their bed and fall.

They will be used in conjunction with impact ("crash") mats.

If planning to use a high low EPB, staff must consider the following:

- A risk assessment for potential injuries from floor level furniture or fittings
- The bed placed too close to a radiator creasing potential for risk of burns
- The bed placed too close to a wall but not flush with it, creating potential for entrapment and asphyxia if the patient slides between the bed and the wall
- The bed left at working height by error
- Impact mats causing a trip hazard to patients, staff and others.

5.1 General Principles on the Safe Use of Ultra Low Beds

Some patients are at risk of falling from bed. Risk factors including dementia, delirium, agitation, disorientation, limited mobility and acute illness. These patients may, in the past, have been nursed on mattresses on the floor.

Where the use of bedrails is inappropriate, consideration must be given to the use of an Ultra Low Bed. However, they must not be seen as a universal falls prevention solution and provided inappropriately for mobile patients, as this could be deemed as restraint.

Ultra low beds can reduce the risk of a fall from height, whilst allowing staff to attend to the patient, with consideration to back care.

It is important to note that even when ultra low beds are used correctly in the lowest position, some patients may still sustain serious injuries such as a fractured hip or intracranial injury. As a result, it is important that even falls from ultra low beds are taken seriously.

5.2 Before an Ultra Low Bed is used:

Patients must be assessed individually by a Registered Nurse or therapist to establish the most appropriate method of preventing falls from bed.

This must include:

a) Completion of a falls risk assessment and creation of a falls care plan
b) Completion of the Bedrails Risk Assessment

Consider:

a) Physical illness – some medical or nursing interventions may be difficult or impractical when using an ultra low bed.
b) Psychological illness or distress – the unusual position of the bed may trigger distress, agitation or increased confusion for the patient.
c) Previous accidents and injuries resulting from falls – the time, place and cause of a previous fall may or may not indicate that an ultra low bed would reduce the patient's risk.
d) Tissue viability, if the patient has a Waterlow score that indicates that their skin integrity is at risk, the assessing nurse must consider if the ultra low bed available has a full profile capability. Some ultra low beds do not have a 'knee break' i.e.

they raise the patient's legs so that their lower legs are horizontal. This results in the patient's sacral area sitting in a 'V' with undue pressure on the sacrum. If the patient's skin integrity is at risk, a fully profiling bed must be used, allowing the patient to sit in a naturally contoured position. NB: Invacare Etude, Bartra Protean, Spirit, Parkhouse Richmond and Pegasus Ultra Low beds profile fully. The Montcalm Carroll beds to not.

e) If the ultra low bed may cause a problem when used with certain mattresses e.g. when a patient sits on the side of an ultra low bed and compresses the standard mattress, this can result in pressure on the back of their legs. If this is the case, staff must ensure that the patient does not sit on the bed for protracted periods or they must identify a more suitable mattress.

f) If the bed will be compatible with a bed table as they may not fit under some ultra low beds.

g) Mental capacity. When patients are assessed individually by a Registered Nurse or therapist for an ultra low bed, it would be deemed good practice to document in the clinical notes/falls care plan that the patient and/or their carer has been consulted with regarding the use of the ultra low bed. Documentation must include that the patient is aware of the restrictions the ultra low bed may impose on them, but have given their consent to its use to reduce the risk of further falls.

   If however, there are concerns that the patient may not have capacity to consent to its use, then an assessment of capacity must be made in line with the five principles of The Mental Capacity Act 2005 (refer to mental capacity policy).

   If the assessment of capacity demonstrates that the patient lacks capacity to make this decision themselves, then the multi-disciplinary team must make a best interest decision also involving the patient's next of kin.

   The outcome of the capacity assessment must also be clearly documented in the patient's notes/falls care plan.

h) Variation in cognitive status over a 24 hour period e.g. nocturnal confusion.

i) Disability/capability – the use of an ultra low bed may improve/impede the patient's ability to transfer.

j) Patient's weight – check the weight limit for the ultra low bed available, as it may not be suitable for patients over a certain weight.

5.3 When Using an Ultra Low Bed:

a) Document the decision to use or not use an ultra low bed in the clinical notes and falls care plan. This must include the rationale and whether or not bedrails are required.

b) Ensure the decision is communicated to all members of the multi-disciplinary team.

c) The use of ultra low beds must be reviewed weekly in conjunction with the falls risk assessment unless the patients condition changes in between assessment (on wards where alternative bed options available) and recorded.

d) Ensure the ultra low bed is kept away from floor level furniture, doors, lockers, pipes, wheelchairs, commodes, radiators and other low level hazards to reduce the risk of patient injury or burns.

e) Ensure the ultra low bed is either placed flush to a wall or with a large enough gap either side, to prevent asphyxial entrapment if the patient slipped between the side of the mattress and the wall.

f) When the patient is on the ultra low bed, the bed must be returned to the lowest level to prevent a fall from height after being attended to by staff. All staff must ensure that the bed is at a low level if the patient is left unattended.

g) In the majority of cases, if a patient is at risk of falls from bed and an ultra low bed is deemed appropriate. Some ultra low beds have integral bedrails which cannot be removed. Staff who are unfamiliar with the patient's current fall status must check the Falls Care Plan and Bedrail Risk Assessment before contemplating use of the bedrails if they are attached to the bed.

h) Falls mats at the side of an ultra low bed must be used with caution. These can cause a trip hazard from both patient staff. When the patient is not using the ultra low bed e.g. sitting in an armchair, any falls mat in use must be removed from the bed area and stored safely.

i) Choice of mattress to be used on the bed must be determined by assessing the patient's weight, skin integrity and any risks of injury or entrapment. The assessing nurse must ensure that any air flow mattress being considered is suitable for use with the ultra low bed available.

j) Take care when positioning the legs of a hoist under the ultra low bed, as limitations imposed by the low height of the bed could cause a manual handling concern.

k) Prior to completing any manual handing manoeuvre, ensuring that the bed is at the correct height for the patient and staff.

5.4 Obtaining an Ultra Low Bed

If there are any difficulties with obtaining an ultra low bed for a patient assessed as needing one, Ward Managers must contact the Matron to discuss availability of beds from other areas/wards or rental options. Consideration must also be given to using the correct procurement route for renting or purchasing new equipment to ensure that appropriate insurance indemnities are in place prior to committing to a rental, loan or purchasing agreement. The procurement department can be contacted for further advise if required. Advice should also be sought from the relevant specialist, i.e. Tissue Viability Team, Moving and Handling Advisor, Infection Prevention and Control Team, etc. should there be a need to acquire a non-standardised product.

6 Moving Electric Profiling Beds

- EPBs are heavy to move and must always be moved with two or more persons even when empty.
- Always ensure that manufacturer's instructions are followed when moving the bed.

- Make sure the bed is unplugged and wheels are not braked before you start pushing or pulling
- Make sure the wheels are in the direction of intended movement
- Always adjust the height of the bed to a safe working level before beginning. Pull or push from your hips until half way up your chest. If the bed is too low or too high there will be too much stress on your shoulders or on your back
- Adopt a stable position with your feet
- Take a comfortable grip on the bed head or foot board with both hands.
- Use your full hands when you pull the bed. This gives you a better grip
- Use your body weight when you pull the bed
- Take care to protect your feet when moving backwards.
- Always push rather than pull the bed if possible
- Push with the lower palm of your hands. Keep your wrists in a neutral position as much as possible. Push as much as possible with the lower palm of your hand
- Build up the force. Start the movement slowly and build up power gradually
- Stop gently. Stopping the bed with a jerky movement will increase the stress on your body and is uncomfortable for the patient
- Do not twist your back. Use the steering wheel when turning the bed
- Stay in line
- Make sure the steering wheel is located on the opposite end from which you generally push the bed
- When you have to push the bed sideways in a confined place it is better to release the steering wheel so that the bed will easily move sideways
- Ensure the brakes are adjusted to the correct setting before moving the bed.
- Look as far forward as you can when you move the bed through the corridor

7 Maintenance

EPBs are subject to the Provision and Use of Work Equipment Regulations 1998 (PUWER) and the Medical Devices Regulations 2002 as a minimum and for the Trust to comply with these regulations maintenance inspections are required as per the manufacturers recommendations.

Information on maintenance and breakdown please refer to the Medical Devices Policy and/or contact the Medical Devices Asset Manager.

If the bed is deemed unsafe for use it should be removed from service and a record of the reported issue logged for future reference. A sign should also be visible on the bed stating “Do not Use” to ensure that the bed is not inadvertently used elsewhere in the hospital.

In circumstances where the equipment is required to be used in order to prevent risk of injury to patient/staff, then a visual inspection of the bed and a risk assessment should be carried out for that task before the equipment is used.

8 Training

To comply with Manual Handling Policy and Medical Devices Policy all staff that use EPBs should receive training in their use from a competent person.

All LPT staff that move and handle patients on electric profiling beds undertake Moving and Handling Level 2 training which includes the principles of using a four section profiling bed.

Training is recorded on the LPT Learning and Development database.

Staff undertake medical devices competencies on equipment in their area including EPBs used specifically in their areas.

It is the individual employees' responsibilities to attend moving and handling level 2 update training as required by the Mandatory Training Policy. Any difficulties in meeting this requirement should be made known to their line manager.

9 Infection Prevention and Control

The bed frame of EPBs must be cleaned and decontaminated using Chlor clean solution between each patient use.

If used on a patient with a known or suspected infection where source isolation precautions are being implemented it must be cleaned and decontaminated with chlor clean solution whilst the patient is receiving source isolation precautions and prior to the precautions being discontinued.

For other routine cleans, where there is not soiling of the frame or the patient is not thought or known to have an infection a detergent wipe can be used.

If there is any soiling of the frame with blood or bodily fluids chlor clean wipes must be used to clean and decontaminate.

The following table gives the procedure and rationale for cleaning EPBs.

Procedure	**Rationale**
Wash hands and put on protective clothing (apron and non-sterile gloves)	To reduce cross contamination and risks to staff.
Use a detergent wipe to clean the bed frame for a routine clean where there is no evidence of blood or bodily fluids. NB Phenols e.g. Stericol or other similar disinfectants (surfanios) must never used on any part of the equipment.	Detergent and water are very effective at removal of micro-organisms. Phenolic disinfectants are damaging to mattress components. Surfianos are damaging to the pump components.
Inspect and wipe the equipment using a detergent wipe. Do not immerse electrical equipment in water: WIPE OVER ONLY. Start at the top and work down.	Using this method you should always be working from cleaner to more heavily contaminated areas.
Once cleaned, dry all surfaces thoroughly before next client use.	Micro-organisms may survive and multiply in the presence of moisture.
If there is evidence of blood or bodily fluid spillage on the bed frame a chlor clean wipe should be used to clean and	To remove and destroy any viral particles which may be present.

decontaminate. If the patient has a known or suspected infection, or the bed frame is to be discontinued from use by a particular patient or the source isolation precautions are to be discontinued for a particular patient then chlor clean solution must be used to clean and decontaminate the bed frame. Aprons, gloves and towels should then be disposed of as clinical waste.	To prevent damage from chemical residue to equipment and components.

10. Purchase and Disposal

For the purpose of consistency, where possible all sites must use the same equipment. This assures the organisation that its employees using the equipment are more likely to be familiar with its use. It also reduces the requirement for additional/different training when employees work across sites.

Equipment to be purchased should be risk assessed to ensure it is appropriate for the tasks it is intended to perform. Specialist advice should be sought from the Tissue Viability Team and the Infection Prevention and Control Team prior to purchase to ensure the bed meets both the clinical needs of the patient and also the standardisation consideration of the Trust.

EPB should only be purchased via NHS Supply Chain or through the Leicestershire and Rutland Procurement Partnership iProc and E-catalogue System. There are wide ranges of manufacturer products available through NHS Supply Chain. The Procurement Department, Moving and Handling Advisor, Tissue Viability Team and Medical Device Asset Manager can provide advice and support on purchases where required.

The purchasing and Standardisation Considerations of the Medical Devices Policy should be consulted and met prior to purchase, the Procurement Department are able to provide advice and support where required.

The supplier of the equipment will install, test, and commission the equipment prior to it being used, staff must ensure this process has taken place.

When new equipment has been purchased the Medical Devices Registration Form should be completed and forwarded to the Medical Devices Asset Manager for inclusion in the central asset register of medical devices. Arrangements will be made for the item to be asset tagged and the equipment will form part of the future maintenance and servicing procured via existing call off orders.

Equipment should be disposed of in accordance with the Trusts Disposal Policy and current legislation. The Medical Device Asset Manager can provide advice and support where necessary.

Petty cash, purchase cards and credit cards must not be used for purchasing medical devices.

11 References

This code of practice was drafted with reference to the following:

Relevant Legislation

Management of health and Safety at Work Regulations 1999
Manual Handling Operations Regulations 1992 (as amended)
Provision and Use of Work Equipment Regulations (PUWER) 1998
Mental Capacity Act 2005

HSE

Electric Profiling Beds in Healthcare
Electric Profiling Beds in Hospitals: Case Studies
www.hse.gov.uk

MHRA

Safe Use of Bed Rails – DB2006 (06) v2 MHRA Dec 2013
British Standard EN 60601-2-52-2010
www.mhra.gov.uk

Bibliography

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Workplace Health and Safety Standards. Health Safety and Wellbeing Partnership Group – revised July 2013, page 50-52.

Leicestershire Partnership NHS Trust Policies

Medical Devices Policy
Mandatory Training Policy
Trust Induction Policy
Policy on the Safe Use of Bed Rails
Prevention and Management of Slips, Trips and Falls Policy
Manual Handling Policy
Infection Prevention and Control Policy
Mental Capacity Act Policy
Portable Appliance Testing Guidance

All policy documents are available via the Policy Document Store available on E-source.