

PROCEDURE FOR THE MANAGEMENT OF MATTRESSES AND BED-FRAMES

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1 INTRODUCTION

The Health Act 2010 - Code of Practice for the Prevention and Control of Health Care Associated Infections sets out the criteria by which NHS organisations must ensure that the risk of Health Care Associated Infection is kept as low as possible and patients are cared for in a clean environment. Compliance with the code is a statutory requirement including the duty to adhere to policies and procedure applicable to infection prevention and control.

Poor maintenance of foam mattresses and their covers may lead to staining of the foam or inner surfaces of the mattress covers. Recent research highlights that different types of trauma to the mattress cover can result in damage which is not visible to the naked eye, but can allow fluid to enter the mattress (Russell 2001).

Foam mattresses have a relatively short life expectancy and if used for longer periods will experience core fatigue. This can result in the patient sinking through the foam and being supported by the underlying bed base (Dunford 1994).

The close contact between the patient and the mattress means that transmission of micro-organisms between the patient and the mattress and vice versa is facilitated. Bed components such as bed frames, mattresses and side rails may become contaminated with micro-organisms through direct contact with the skin scales and body fluids, thereby become the source of infections and or cross infection (Creamer 2008).

2 MATTRESS CARE AND PROVISION

A replacement programme should be established to replace condemned mattresses.

On delivery to the hospital the mattress should be marked with the date of purchase and mattress number or a written record is kept on the unit so that on-going monitoring can take place. This will permit the life of the mattress to be audited.

Mattresses must be purchased through NHS supplies and a recognised supplier is used or contact the Infection Prevention and Control Team. When planning to dispose a mattress, the ward/unit manager needs to work closely with the Estates Department to co-ordinate collection of the old mattress and delivery of the new one.

2.1 Care of the mattress

2.1.1 Turning

Mattresses that require turning will have this marked on the cover and the instructions on the mattress should be followed. The turning should occur when the mattress is being cleaned on the patient's discharge or where patients' stay is over a week; the mattress should be turned monthly, checked and dated.

2.1.2 Cleaning

- All mattresses should be cleaned between patients. The way in which the mattress is cleaned depends upon the nature of the contamination and the susceptibility of the patient (Viant 1992). However the user should also consult the manufacturer's recommendations before cleaning the mattress cover (Loomes 1988).
- Alcohol wipes/solutions/sprays and chlorhexidine should NOT be used as it causes breakdown of the waterproof cover.
- In absence of perceptible contamination of the mattress cover, the dirt and or spillage cleaning with water and a neutral detergent plus manual dexterity should be sufficient (Viant 1992).
- In cases of perceptible contamination, the mattress cover should be cleaned first with water and detergent then with a 1000parts per million sodium hypochlorite solution such as Haztabs, Precept and Chlorclean.
- Disposable gloves and aprons should be worn and ensure adequate ventilation.
- Ensure mattress cover is thoroughly dried before making the bed.
- Where possible inspect the surfaces of the covers and their zip fasteners monthly for signs of damage. If the cover is stained, soiled or torn the foam core should be examined. Damaged/soiled covers and mattresses should be reported to the ward manager who should condemn them and withdraw from service.
- If the cover is damaged and the foam core not stained the cover should be replaced as soon as it is found.

- Covers must be checked after each patient discharge, where possible the mattress must be unzipped. If the mattress is without a zip then a hand compression and water test should be performed (see appendix 1).

2.1.3 Disposal and Replacement

- Mattresses for disposal must be reported to estates and facilities via reception at BWH/SMH.
- A new mattress must be ordered by the ward staff via NHS supplies.
- Where there is more than one mattress for disposal, there needs to be a co-ordinated approach between the ward manager and estates so that arrangements can be made for collection of the old mattresses.

2.2 Specialised Pressure Relieving Mattresses

For community services these can be acquired via Millbrook HealthCare or directly from Huntleys.

2.2.1 Before Patient Use

The patient will be assessed by the nurses and if there is a need for a specialised pressure relieving mattress.

2.2.2 After Patient Use

Clean mattress as per manufacturer's instructions, inform the supplier then keep in the store room until collection.

2.2.3 Hired Mattresses

Patient Environment Support Workers will hire directly from Huntleys.

2.3 Auditing and Monitoring.

Covers and zip fasteners (if present) should be checked regularly. If the cover is stained, soiled or damaged the foam core of the mattress should be examined. If the core is wet or badly stained, it should be removed from the ward area and withdrawn from service. Torn or damaged covers must be replaced immediately.

Special mattress e.g. alternating air flow mattresses must be maintained and cared for following manufacturer's instructions.

Covers should be cleaned between patients, using neutral detergent and warm water. To prevent mould growth, avoid over wetting and dry thoroughly before turning, remaking the bed or storing the mattress.

Following cases of infection or soiling with minimal amounts of blood/body fluids, the cover must be cleaned and disinfected using Chlor clean diluted to 1,000 ppm.

Mattress covers must be tested for permeability every 6 months, see [Water Penetration Test](#). This is the responsibility of the Ward, where the test has failed, both cover and mattress should be replaced.

To extend the life and efficacy of the mattress it should be turned as per the manufacturer's instructions. See the [turning procedure](#) below.

The polyurethane-coated nylon cover is still the only recognised method of protecting the mattress. Covers should be replaced according to manufacturers' instructions.

2.4 Water Penetration Test

- Undo the zip and place a sheet of absorbent tissue (paper roll approximately 46cm x 46cm or 18inches x 18inches) between the top surface of the mattress and the cover.
- Do up the zip/fastening.
- Using the fist, indent the mattress over the area where the tissue is located to form a shallow well and pour tap water (about half a cup) into the well.
- Agitate the surface with the fist for one minute and then mop up the water.
- Undo zip and inspect tissue for water spots.
- Repeat the procedure on the reverse side of the mattress.
- The cover should be replaced if it is found to fail the above test or if it is damaged.

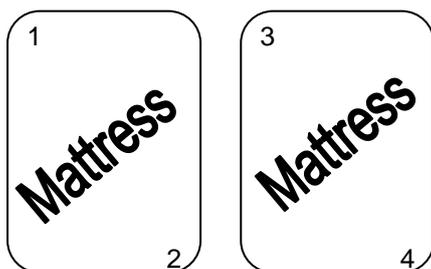
2.5 Suggested Turning Procedure

Many new mattresses do not recommend this procedure so always refer to manufacturer's instructions.

Mark mattress cover on side 1 as shown.

Turnover and mark side 2 as shown.

Turn mattresses regularly using a pre-determined pattern from 1 to 4.



Regular turning of foam mattresses increases their useful life and reduces the likelihood of mould growth.

Mattress Audits are to be completed six monthly and will ensure that every patient has a clean and intact mattress to prevent the spread of infection and minimise the risk of cross infection. This is in line with the CQC Practice Alert 2009 and MRHA Medical Device Alert 2010.

3 EQUALITY CONSIDERATIONS

The author has considered the needs of the protected characteristics in relation to the operation of this policy and protocol to align with the outcomes with IP&C Assurance Framework. We have identified that ensuring that communication reaches all vulnerable groups. The service has been designed to ensure communication relevant to any outbreaks or other healthcare associated infections reaches all sections of the community. This includes taking into consideration communication barriers relating to language or specific needs to reach the whole population. IP&C work closely with multi agency groups and community partners where appropriate we will undertake engagement and outreach activity. We targeted action to relevant groups follow public health England's communication framework. Some groups are particularly vulnerable in relation to their protected characteristics, e.g. age, ethnic minority communities and disability and where we identify that, the expectation is that staff will meet the needs appropriately.

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APPENDIX 1 - PROFORMA AUDIT - DISPOSAL OF HOSPITAL FOAM MATTRESSES.

Factor	Yes	No	Not applicable
1. Is the mattress fitted with a waterproof cover?			
2. Is the mattress free of stains?			
3. Is the mattress free of tears?			
4. Are the zip fasteners in good state of repair?			
5. Is the mattress free of dipping?			
6. Has the mattress passed the water test?			
7. Is the mattress a minimum of 5 inches deep?			
<p>Items 1-7 are essential criteria.</p> <ul style="list-style-type: none"> • Failure of one or more of these items means that the mattress should be condemned. • Mattresses contaminated with body fluids are placed in a sealed bag with a completed yellow label. As per decontamination policy. • Dispose as clinical waste. 			
<p>HAND COMPRESSION ASSESSMENT</p> <ul style="list-style-type: none"> • Adjust the height of the bed so that it is at the same level as the tester’s hip. • Link hands to form a fist and place them on the mattress. • Keep elbows straight and lean forward, applying the full body weight to the mattress. • Repeat the hand compression along the entire length of the mattress. • Note any variation in the density of the foam including whether the base of the bed can be felt through the foam. • The mattress should be condemned if it is found to bottom out or if the foam is found to be stained, damp or odorous. 			
<p>CONDEMNATION</p> <ul style="list-style-type: none"> • Clean the condemned mattress according to decontamination policy. • Complete a yellow decontamination label, sign with your name and ward. • Disposal as clinical waste. 			
<p>Return form to Infection Prevention and Control Team</p>			
<p>Ward:</p>			
<p>Date:</p>			
<p>Bed number:</p>			
<p>Signature:</p>			