

Safe Management of Linen Policy and Procedure

(an element of Standard Infection Control Precautions)



Date of issue: February 2007

Date of review: February 2008

Introduction

It has been shown that used linen, within healthcare settings, in particular, can harbour large numbers of potentially pathogenic microorganisms. Therefore, it is important that the appropriate precautions are taken to ensure contamination to/from linen does not occur as this might then lead to transmission of microorganisms to people or to the environment potentially causing infection. Such important precautions apply to all stages of linen management: storage, handling, bagging, transporting, laundering. Safe management of linen is one of the nine elements of Standard Infection Control Precautions given the potential for contamination of linen used during the delivery of care with blood or body fluids, excretions or secretions.

National guidance relating to the management of linen uses specific terms to categorise linen:

- **Used linen** – this refers to all used linen, irrespective of state, except linen from infectious (or isolated) patients/clients or those suspected of being infectious
- **Soiled/foul linen** – this term refers to linen contaminated with blood or other body fluids, e.g. faeces. This term is often used in practice
- **Infected linen** – this specifically applies to linen that has been used by a patient or client who is known or suspected to be carrying potentially pathogenic microorganisms. Normally, in these situations, a risk assessment will have been carried out and additional precautions will have been put in place to prevent transmission of these microorganisms and subsequent infection in others, e.g. isolation or transmission based precautions, including specific guidance on the management of infected linen. This policy only covers general information relating to used and foul/soiled linen. Local Infection Control Teams should give advice on specific infected linen
- **Heat labile linen** – refers to items which need to be washed at lower temperatures, e.g. 40° C, to avoid shrinkage
- **Radioactive linen** – is linen contaminated with radioactive material and is not covered specifically in this policy as this guidance focuses on standard infection control precautions for blood and other body fluid contamination

This policy does not specifically cover procedures relating to uniforms, however, the principals described should also apply to uniforms

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The terms linen and laundry are used interchangeably in this document.

For further background information, see associated literature review on safe management of linen

Safe Management of Linen Policy - Why does linen need to be safely managed?

- The healthcare setting, in particular, contains a diverse population of microorganisms and this must be considered. It has been shown that used linen within healthcare settings can harbour large numbers of potentially pathogenic microorganisms
- Linen must, therefore be safely managed in order that it does not become a hazard leading to the spread of potentially pathogenic microorganisms to those receiving care, especially those who are most vulnerable
- The transfer of microorganisms from linen to patients/clients, staff and others is primarily through contact and all stages of linen management should be considered including storage, handling, bagging, transportation and laundering
- Therefore, both clean and used supplies of linen should be managed safely

Safe Management of Linen Policy - What are the underpinning elements to ensure linen is managed safely?

- **Responsibilities:**

All Staff

- Have a responsibility to safely manage linen that they will use while delivering care
- Have the responsibility to report any exposure incidents that occur related to contaminated linen and to take appropriate measures to avoid these in the first instance
- Have a responsibility to undertake training on all aspects of the management of linen
- Have a responsibility to display available posters clearly demonstrating the actions to be taken to manage linen safely

Managers

- Have the responsibility to ensure local risk assessments are carried out where necessary, e.g. to identify the use of appropriate personal protective equipment (PPE), adherence to safe practices, including the provision of resources for this, immunisation programmes are offered appropriately and any incidents that occur are reviewed and subsequent actions taken where appropriate
- Have the responsibility to ensure training is available and staff have the responsibility to attend such training sessions

- **Other General Good Practice Points:**

- Staff should avoid shaking linen as this may result in the dispersal of potentially pathogenic microorganisms and/or skin scales into the environment by means of aerosols
- Do not wrap linen together when disposing of it into a receptacle, instead, place each individual item into the bag/receptacle
- Staff should ensure sharps or other extraneous items are not discarded into linen bags/receptacles
- All bags should be tied when filled, before transporting. Laundry bags holding used linen should not be left unsealed/tied for long periods, e.g. longer than a day
- Used linen bags/receptacles should never be overfilled and should be appropriately tagged for identification particularly when generated in healthcare settings
- Used linen should not be re-handled or sorted, especially not by carers in care settings where laundry facilities are available
- Ensure used linen and linen bags/receptacles are stored within a designated area which cannot be accessed by the public and not placed on inappropriate surfaces, e.g. those that are touched frequently/used for other purposes. Do not store in corridors
- In situations where a particular infection is known/suspected, specific advice should be given by staff/ local guidance should be followed as actions may change in relation to laundering. This policy does not specifically deal with infected linen
- Clean linen should be randomly checked to ensure it is clean, fit for use and free of stains. Clean and used linen should never be stored together
- Control of Substances Hazardous to Health (COSHH) sheets and Material Safety Data Sheets (MSDS) should be referred to in order to ensure the safe management of linen e.g. solutions being used for laundering. Manufacturers instructions should also be referred to

- **Incident reporting:**

- Any incidents where linen has not been managed safely and appropriately, and health and safety has been breached as a result should be reported. This might include when sharp items have been found in linen or where supposed clean linen is found to be dirty

Safe Management of Linen Policy - Where should clean linen be stored?

- Clean linen should always be stored in a clean, designated area, preferably a (purpose built) cupboard, away from the floor to prevent contamination with dust and/or aerosols
- Ideally, linen should not be decanted onto different trolleys/shelves or stored in corridors when delivered as this may result in contamination

Safe Management of Linen Policy - How to protect myself when handling used linen?

- A disposable plastic apron should always be worn when handling used linen (and disposable gloves where linen is soiled/foul), e.g. during bed-making. In some areas this may be a colour-coded apron specifically for linen handling
- Hold used linen away from yourself to avoid contamination of clothing from linen
- Hand hygiene should be performed following handling of used linen (see **Hand Hygiene Policy**)
- These points also apply to infected linen, however, further guidance related to the care of infected linen should be provided locally depending on the situation/risks

Safe Management of Linen Policy - When and how to dispose of used linen?

Preparation and Staff Protection:

- Ensure appropriate and clean bags/receptacles, e.g. linen buggy, are available as close to the point of use as possible
- Personal protective equipment (PPE) should be worn appropriately to ensure contamination from used linen does not occur, e.g. disposable plastic apron and gloves if handling linen (see **Personal Protective Equipment Policy and How to protect myself when handling used linen?**)

Procedures:

- Place used linen immediately into a designated bag/receptacle
- Do not separate used linen. Place each item directly into the designated bag/receptacle. (However, if linen is soiled/foul, it should be managed separately, see - **How to dispose of soiled/foul linen?**)
- Never place/drop linen on the floor or on other surfaces which may be touched frequently as this could lead to contamination, especially during care delivery e.g. a locker/table top
- Staff should avoid shaking linen as this may result in the dispersal of potentially pathogenic microorganisms and/or skin scales into the environment
- Used linen should not be rehandled, especially not by carers in care settings where central laundry facilities are available
- Used linen bags/receptacles should never be overfilled and should be appropriately tagged for identification, particularly when generated in healthcare settings
- After handling linen, staff should ensure they dispose of any PPE appropriately (see **Safe Disposal of Waste Policy**)
- Hand hygiene should be performed following handling of linen (see **Hand Hygiene policy**)

Safe Management of Linen Policy - How to dispose of soiled/foul linen?

Preparation and Staff Protection:

- Ensure appropriate and clean bags/receptacles e.g. linen buggy are available as close to the point of use as possible
- Personal protective equipment (PPE) should be worn appropriately to ensure contamination from used linen does not occur, e.g. disposable plastic apron and gloves if handling linen (see **Personal Protective Equipment Policy and How to protect myself when handling used linen?**)

Procedures:

- Linen soiled or contaminated with blood or other body fluids, should be placed directly into a water-soluble/alginate bag (these are often red in colour) to prevent any further handling and potential contamination, particularly for those performing laundering procedures. This bag indicates that linen is soiled/foul. The bag should be secured using a neck tie
- Do not separate the linen
- Staff should avoid shaking linen as this may result in the dispersal of potentially pathogenic microorganisms and/or skin scales into the environment
- A secondary bag (clear plastic or laundry bag) should be used to store/transport the water-soluble bag. The second bag used for this purpose must be appropriately tagged for identification and should be disposed of (where disposable) or laundered immediately after use
- Soiled/foul linen should not be rinsed or sorted prior to it being laundered, particularly within healthcare settings
- At times when linen is so heavily soiled that it is unlikely to be fit for reuse following laundering, it should be placed into a clinical waste sack and discarded e.g. for incineration. This should be repeated where relevant for linen stock maintenance
- Never place/drop linen on the floor or on other surfaces which may be touched frequently as this could then lead to contamination especially during care delivery e.g. a locker/table top
- Bags should never be over filled
- After handling linen, staff should ensure they dispose of any PPE appropriately (see **Safe Disposal of Waste Policy**)
- Hand hygiene should be performed following handling of linen (see **Hand Hygiene Policy**)

NB For those caring for patients/clients in their home care environment see **What advice should be given to relatives/friends if they are taking linen home to launder?** for further information.

Safe Management of Linen Policy - What to do after disposing of linen?

- Dispose of any personal protective equipment (PPE) worn immediately and appropriately (see **Safe Disposal of Waste Policy**)
- Hand hygiene should be performed after handling any used linen and before handling clean linen (see **Hand Hygiene Policy**)
- Ensure the linen bag/receptacle used is not full. If it is, ensure it is closed/tied securely and tagged appropriately with the area of origin. This is required in healthcare settings. Full bags should then be stored in an appropriate designated, safe area (that has a clear cleaning schedule – see **Care of Equipment Policy**)
- If a build-up of used linen bags is noted and no pick-up is made, a call should be made to arrange this with the appropriate department/company
- Used linen that has been bagged should not be rehandled

Safe Management of Linen Policy - How should linen be transported safely to/from the laundry?

Preparation and Staff Protection:

- Personal protective equipment (PPE) should be worn appropriately to protect those transporting linen, e.g. gloves
- Measures should be in place to ensure that linen for use arrives clean e.g. department or company agreements. Inspections should be carried out of those transporting linen e.g. auditing of vans or trolleys to ensure these are clean and that cages are used for storage of linen in these settings with clear separation of clean and dirty linen

Procedures:

- Bags containing used linen that have not been properly secured should not be uplifted
- Those personnel transporting used linen should not open linen bags/receptacles/cages nor should they handle linen
- Any sharps injuries sustained from extraneous items found during transport of linen should be actioned as per **Occupational Exposure Management, Including Sharps, Policy**. This indicates that such items should be disposed of immediately into an approved sharps container
- Clean and used linen should never be transported in the same bag/receptacle/storage cage. Instead, there should be designated bags/receptacles/storage cages for each
- Clean linen should only be handled by clean hands. It should be stored in a designated, clean area with minimal handling until required for use
- Hand hygiene should be performed after handling used linen bags/receptacles/cages and prior to handling clean linen (see **Hand Hygiene Policy**)
- These points also apply to the transportation of linen within patient/client areas.

Safe Management of Linen Policy - Which general points should be considered for the central laundering of linen?

- Laundry staff should wear personal protective equipment (PPE) as appropriate, e.g. gloves, aprons
- To ensure laundry staff are protected and linen is safe for subsequent use, linen should only be sorted by laundry workers as indicated by specific local guidance
- Linen received in water-soluble bags (e.g. soiled/foul linen) should never be opened or sorted by laundry workers, instead the water-soluble bag should be placed directly into the machine
- When sorting other used linen, laundry workers should ensure that any abrasions or cuts are covered and gloves and other PPE (see **Personal Protective Equipment Policy**) is worn
- Inappropriate items found during the sorting of linen, e.g. catheter bags, sharps, should be reported as per local procedures. (Any sharps injuries sustained by laundry workers should be actioned as per **Occupational Exposure Management, Including Sharps, Policy**). Such items should then be disposed of immediately into an approved sharps container or other appropriate waste receptacle (see **Safe Disposal of Waste Policy**)
- Laundry staff should perform hand hygiene appropriately (see **Hand Hygiene Policy**)
- Where a local domestic washing machine is available within a care setting for laundering, items should be cared for/managed in the same way as described throughout this policy. (If items are heavily soiled/contaminated, the patient/client or their relatives/friends must be informed that adequate laundry procedures may damage items, as this may involve washing items at a higher temperature than recommended)

This policy does not replace other/local information on specific laundering techniques

- A schedule for the cleaning of non-disposable linen bags/receptacles must be available to ensure those used to transport linen are clean and fit for purpose. Laundering of these should occur after every use
- It must be ensured that clean linen is not put into dirty linen bags/receptacles
- Laundry policies with detailed procedures as to how to launder used, infected and heat labile linen, including temperatures and holding/mixing times, must be followed (see appendix for further details on laundering temperature cycles)
- Machines should be able to achieve compliance with recommendations and measures should be in place locally to monitor them. Liaison with estates/maintenance staff is essential. Appropriate records should be kept

Safe Management of Linen Policy - What advice should be given to relatives/friends if they are taking linen home to launder?

Preparation:

- Laundering of personal items should first be agreed with patients/clients, relatives/friends or local procedures followed by those carers washing personal items, e.g. in the community
- Staff should explain key elements of standard infection control precautions e.g. personal protective equipment (PPE), hand hygiene, to relatives/friends prior to them taking linen home to launder

Procedures:

- These additional points should also be raised:
 - Dispose of plastic bag(s) used to carry items
 - Launder items using at as high a temperature as possible as per washing instructions
 - Use normal washing powder
 - Tumble dry where possible (following manufacturers guidance)
 - Iron according to manufacturers' instructions. A hot iron is best if possible
 - Hand hygiene should be undertaken following handling of items
 - Where hand rinsing of heavily soiled items is absolutely necessary, this should be carried out by fully submersing the items to avoid potential aerosolisation/splashes while rinsing. Ensure splashing is minimised particularly when throwing away used water
 - Generally, personal items do not need to be separated for washing

NB In situations where a particular infection is known, specific advice should be given by staff/local guidance should be followed, as actions may differ in relation to laundering where high temperatures cannot be achieved the washing process is still competent in removing microorganisms. Further information on this can be sought from Infection Control Teams.

Laundering Temperatures/Cycles

- Washing process for used linen should include a disinfection cycle where the temperature should be maintained at 65° C for not less than 10 minutes (or preferably 71° C for not less than 3 minutes)
- Machines with low and heavy degrees of loading should add up to 4 and 8 minutes respectively for mixing time to ensure heat penetration and disinfection
- A similar disinfection process should be applied for soiled/foul linen. However, additional washing at 93 °C for no less than 10 minutes should eradicate HIV and hepatitis viruses where necessary
- An allowance for mixing time should render linen safe
- Heat labile linen should be washed at a lower temperature only if appropriate. Forty degrees Celsius is recommended to avoid shrinkage of items.
- If tumble dryers are used, the temperature must be limited to 60° C
- Disinfection is possible with chemicals, for example hypochlorites, at low temperatures although performance is often restricted by the presence of soiling or detergents in the wash
- It may be possible to achieve disinfection by adding sodium hypochlorite to the penultimate rinse
- It should be noted, however, that hypochlorites should not be used with materials treated for fire resistance

NB Care should be taken to wash infected linen in washer extractor machines with a vent pipe which is distinct, separated and vented.