



Standard Infection Control Precautions Literature Review: Safe management of linen

Version: 2.1
Date October 2017
Owner/Author: Infection Control Team
Review Date: Financial year 2019/20

DOCUMENT CONTROL SHEET

Key Information:		
Title:	Standard Infection Control Precautions (SICPs) Literature Review: Safe management of linen.	
Date Published/Issued:	October 2017	
Date Effective From:	October 2017	
Version/Issue Number:	2.1	
Document Type:	Literature Review	
Document status:	Final	
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Version History:			
This literature review will be updated in real time if any significant changes are found in the professional literature or from national guidance/policy.			
Version	Date	Summary of changes	Changes marked
2.1	October 2017	Additional recommendation to include detergent in laundering process and update of Department of Health reference to latest version.	
2.0	October 2016	No change to recommendations, minor changes to text for clarity.	
1.0	January 2012	Final for publication	

Approvals – this document requires the following approvals (in cases where signatures are required add an additional ‘Signatures’ column to this table)::				
Version	Date Approved	Name	Job Title	Division
2.1	October 2017	NPGO Steering Group		
2.0	October 2016	NPGO Steering Group		
1.0	January 2012	Steering (Expert Advisory) Group for SICPs and TBPs		

HPS ICT Document Information Grid	
Purpose:	To inform the Standard Infection Control Precautions (SICP) section on safe management of linen in the National Infection Prevention and Control Manual in order to facilitate the prevention and control of healthcare associated infections in NHS Scotland healthcare settings.
Description:	This literature review examines the available professional literature on linen and its management in the healthcare setting.
Target audience:	All NHS staff involved in the prevention and control of infection in NHSScotland.
Circulation list:	Infection Control Managers, Infection Prevention and Control Teams, Public Health Teams
Update/review schedule:	Updated as new evidence emerges with changes made to recommendations as required'.
Cross reference:	National Infection Prevention and Control Manual http://www.nipcm.scot.nhs.uk/
Update level:	Change to practice – No significant change to practice Research – No significant change

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1. Objectives

The aim of this review is to examine the extant professional literature regarding the safe management of linen. The specific objectives of this review are to determine:

- What are the legislative/mandatory requirements for the safe handling of linen?
- How should linen be categorised?
- What is the available evidence/guidance on temperature requirements for laundering linen?
- What is the available evidence/guidance on products for effective laundering of linen?
- How should beds be stripped/made?
- How should used/infectious linen be sorted?
- How should used/infectious linen be labelled?
- How should clean linen be safely handled?
- How should used/infectious linen be safely handled?
- How should clean linen be stored?
- How should used/infectious linen be stored?
- How should clean linen be transported?
- How should used/infectious linen be transported?
- Is there any specific evidence/guidance on the effective laundering of uniforms/scrubs?

N.B. Management of linen that is contaminated with suspected or known specific infectious agents was considered to be within the scope of this review; recommendations for the management of 'infectious' linen contained within this review should be followed as part of Transmission Based Precautions (TBPs).

This review did not seek to examine and evaluate all of the available guidance relating to laundry services in NHSScotland. NHSScotland laundry facilities are subject to legislation and guidance which determine their operating practices/procedures and, for example, outline what

cleaning agents and products should be used in particular circumstances as well as determining the appropriate use of laundry equipment. Such guidance was considered not to be within the scope of this review.

Similarly, the laundering of uniforms was examined but uniform policies or dress code was excluded from the review. National guidance on uniform policy for NHSScotland is presented in CEL(2010)42, which can be accessed via this link:

http://www.sehd.scot.nhs.uk/mels/CEL2010_42.pdf

2. Methodology

This targeted literature review was produced using a defined methodology as described in the [National Infection Prevention and Control Manual: Development Process](#).

3. Recommendations

This review makes the following recommendations based on an assessment of the extant professional literature on safe management of linen:

What are the legislative/mandatory requirements for the safe handling of linen?

NHSScotland MEL(1993)7 and (1993)86 outlined the mandatory requirements for the safe management of used and infected linen in Scottish hospitals, this has now been superseded by the 'National Guidance for Safe Management of Linen in NHSScotland. Health and Care Environments. For laundry services/distribution.'(see [Appendix 1](#)).

How should linen be categorised?

The categories of linen are:

- Clean linen: linen washed and ready to be used.
- Used linen: all used linen that is not contaminated with either blood or body fluids.
- Infectious linen: all linen used by a person known, or suspected to be infectious and linen that is contaminated with either blood or body fluids.
- Heat-labile linen: linen that may be damaged (shrinkage/stretching) by thermal disinfection.

(Mandatory)

What is the available evidence/guidance on temperature requirements for laundering linen?

The washing process should have a disinfection cycle in which the load temperature is maintained at 65°C (150°F) for not less than 10 minutes or preferably at 71°C (160°F) for not less than 3 minutes.

(Mandatory)

Items of patient clothing that are laundered at home should be washed at the hottest temperature appropriate to the fabric. For further information refer to the “Washing clothes at home” leaflet: <http://www.hps.scot.nhs.uk/haic/ic/resourcedetail.aspx?id=945>

(Good Practice Point (GPP))

What is the available evidence/guidance on products for effective laundering of linen?

No recommendation can be made on the chemical composition of products for laundering used or infectious linen from healthcare. Linen must be processed using a laundry detergent.

(AGREE rating: Recommend)

Specialised guidance on the appropriate selection and use of cleaning agents is available in specific guidance/manufacturer’s instructions for NHSScotland centralised laundry facilities.

(Good Practice Point (GPP))

How should beds be stripped/made?

Handle used/infected textiles and fabrics with minimum agitation to reduce dispersion of aerosols

(AGREE rating: Recommend)

Beds should be stripped in order to minimise agitation of the removed linen.

- **Used** items of linen should be removed one by one and placed in the used linen hamper/stream.
- **Infectious** linen should not be sorted but rolled together, ensuring that there are no extraneous items such as patient equipment, and placed into the infectious linen hamper/stream.

(Good Practice Point (GPP))

A disposable plastic apron should always be worn when handling used or infectious linen. Disposable non-sterile gloves should also be worn if handling infectious linen.

(Good Practice Point (GPP))

How should used/infectious linen be sorted in hospitals?

All linen should be sorted into appropriate colour-coded hampers at the point of use e.g. at the bedside.

Used linen should be placed in white hampers. Infected linen should first be placed into a water soluble (alginate) bag and then into a clear polythene bag before placing in a red hamper.

(Mandatory)

How should used/infectious linen be labelled?

All linen hampers must be labelled with the hospital, care area/ward/department, and dated.

(Mandatory)

How should clean linen be safely handled?

Hand hygiene must always be performed before touching clean linen.

(Mandatory)

How should used/infectious linen be safely handled?

Staff handling linen in the soiled sorting area of the laundry facility must wear protective clothing e.g. a disposable plastic apron and disposable non-sterile gloves. Any lesion on the hand must always be covered with a waterproof dressing. Hand washing must be performed after handling used/infectious linen.

(Mandatory)

Handle used/infectious textiles and fabrics with minimum agitation to minimise dispersion of aerosols.

(AGREE rating: Recommend)

How should clean linen be stored?

Clean linen should be stored in such a way as to protect it from contamination.

(AGREE rating: Recommend)

(Mandatory)

Clean linen should be stored off the floor in a clean designated area which protects it from contamination. If a trolley is used to store clean linen it should be designated for this purpose and completely covered with an impervious covering that is able to withstand cleaning and/or disinfection.

(Mandatory)

How should used/infectious linen be stored?

The provision of designated storage areas is not necessary, but infectious linen should be stored under secure conditions prior to treatment.

(Mandatory)

How should clean linen be transported?

Clean linen must be protected from contamination during transport.

Clean linen must be physically separated from used/infectious linen during transport.

(Mandatory)

How should used/infectious linen be transported?

For transportation, used/infectious linen must be placed into securely fastened colour coded laundry hampers.

(Mandatory)

Is there any specific evidence/guidance on the effective laundering of uniforms/scrubs?

Contaminated uniforms and all surgical scrubs should be laundered in hospital facilities. Contaminated uniforms/scrubs should be placed into water-soluble/alginate bags followed by a secondary clear polythene bag and finally into a red laundry hamper. Laundry hampers should be tagged for identification.

(Mandatory)

Used (not contaminated) uniforms should be laundered in hospital facilities where they are available. If no hospital laundry facilities are available then used uniforms can be laundered at home following the guidelines on home laundering outlined in CEL42(2010):

- Used uniforms should be kept separate from clean uniforms.
- Pockets should be empty.
- Hand hygiene should be performed before handling clean uniforms and after handling soiled uniforms.
- All uniforms should be laundered at the highest temperature suitable for the fabric as detailed on the care label.
- The detergent used should be suitable for the skin type of the healthcare worker using the uniform.
- Bleach should not be added.
- Uniforms can be ironed or tumble dried according to the care label.
- Laundered uniforms should be stored separately from used uniforms.

(Mandatory)

4. Discussion

4.1 Implications for practice

What are the legislative/mandatory requirements for the safe handling of linen?

Relevant mandatory guidance for NHSScotland, NHS England and guidance produced by the Centers for Disease Control and Prevention (CDC) is summarised in [Appendix 1](#).

Previously, NHSScotland MEL(1993)7/(1993)86 detailed the requirements for the safe management of used and infected linen in hospitals, this has been superseded by the 'National Guidance for Safe Management of Linen in NHSScotland'.^{1,2} There is similar legislation that applies to the safe management of linen in hospitals in England.³

How should linen be categorised?

Linen should be categorised as either 'used' (previously called 'soiled and fouled') or 'infectious' (see [Appendix 1](#)).^{1,2} 'Heat-labile' linen should be categorised as either 'used' or 'infectious'.^{1,2} In English legislation, there is a separate category for 'heat-labile' linen.^{3,4} Neither the Scottish or English document provides a definition of soiled or fouled linen.

(Mandatory)

What is the available evidence/guidance on temperature requirements for laundering linen?

National and international guidance documents have made different recommendations regarding laundering temperatures and the time laundry should be held at these temperatures.⁴
⁸ In both Scotland and England it is a mandatory requirement that the washing process should have a disinfection cycle in which the load temperature is maintained at 65°C (150°F) for not less than 10 minutes, or preferably at 71°C (160°F) for not less than 3 minutes.¹⁻⁴

(Mandatory)

What is the available evidence/guidance on products for effective laundering of linen?

The CDC state that linen should be processed using a detergent;⁵ however, this review did not identify any evidence relating to the selection and use of specific products for the effective laundering of linen.

(AGREE rating: Recommend)

How should beds be stripped/made?

No evidence was found on how beds should be stripped/made to minimise the possible cross transmission of infection.

How should used/infectious linen be sorted?

Used and infectious linen should be bagged separately into colour coded laundry hampers.¹ Used linen should be placed in white hampers.¹ Infectious linen should first be placed into a water soluble (alginate) bag and then into a clear polythene bag before placing in a red hamper.^{1;2;9} All linen should be sorted into appropriate colour-coded hampers at the point of use, for example, immediately on removal from the bed.^{5;6}

(Mandatory)

How should used/infectious linen be labelled?

All linen hampers must be labelled with the hospital, care area/ward/department, and dated.¹

(Mandatory)

How should clean linen be safely handled?

Hand hygiene should be performed before handling clean linen.¹

(Mandatory)

How should used/infectious linen be safely handled?

It is a legislative and mandatory requirement that staff handling used/infected linen wear protective clothing e.g. a disposable plastic apron and disposable non-sterile gloves. Any

lesions on the hand must be covered with a water proof dressing. Hand hygiene must be performed after handling used/infectious linen.^{1;2}

(Mandatory)

It is recommended that handling of used/infected fabrics is done with minimum agitation to minimise dispersion of aerosols.^{5;6;10;11}

(AGREE rating: Recommend)

How should clean linen be stored?

It is important that clean linen is stored in such a way as to protect it from contamination. Clean linen must be stored separately from used/infectious linen. Clean linen must be stored above floor level.^{1;6;8;12;13}

(AGREE rating: Recommend)

(Mandatory)

How should used/infectious linen be stored?

Although the provision of designated storage areas is not deemed necessary, it is a legislative requirement that infectious linen should be stored under secure conditions prior to treatment.²

(Mandatory)

How should clean linen be transported?

When transporting clean linen, it is considered important that it should be protected from contamination. Clean linen must be physically separated from used/infectious linen during transport.^{1;5;6;8;13}

(AGREE rating: Recommend)

(Mandatory)

How should used/infectious linen be transported?

Used linen should be placed into securely fastened colour coded laundry hampers for transport.^{1;2}

(Mandatory)

Is there any specific evidence/guidance on the effective laundering of uniforms/scrubs?

CEL42(2010) states that contaminated uniforms and surgical scrubs should be laundered in hospital (dedicated laundry) facilities ¹⁴. The uniform/scrub should be placed into a water-soluble/alginate bag which should be placed into a secondary clear polythene bag and finally into the infectious linen hamper. The bag should be tagged for identification.

Used uniforms should be laundered in hospital facilities if they are available ¹⁴. Where hospital facilities are not available used uniforms should be laundered at home. CEL42(2010) states that there is no evidence that home laundering is a less effective method of laundering a used uniform. Used uniforms laundered at home should be laundered in accordance with the guidelines outlined in CEL42(2010):

- Used uniforms should be kept separate from clean uniforms.
- Pockets should be empty.
- Hand hygiene should be performed before handling clean uniforms and after handling soiled uniforms.
- All uniforms should be laundered at the highest temperature suitable for the fabric as detailed on the care label.
- The detergent used should be suitable for the skin type of the healthcare worker using the uniform.
- Bleach should not be added.
- Uniforms can be ironed or tumble dried according to the care label.
- Laundered uniform should be stored separately from used uniforms.

(Mandatory)

4.2 Implications for research

There is a limited evidence base in the extant professional literature relating to the safe management of linen in the hospital setting; although there are mandatory requirements regulating much of the process(es). Much of the available evidence is in the form of laboratory-based experimental studies, or is professional opinion.

Two systematic reviews were identified which concluded that there is no evidence that home laundering of used uniforms is inferior to commercial laundering.^{15;16} An empirical study also suggested that domestic laundering of uniform is an acceptable alternative to central laundering, providing it is combined with tumble drying and/or ironing.¹⁷ Despite this, there is insufficient evidence from which to draw and formulate a graded recommendation.

Further research on the safe management of linen should also endeavour to address the gaps in the evidence base and should examine, as a priority, the efficacy of home versus commercial laundering of used uniforms, including: domestic washing powders and detergents, laundering uniforms separately, and the effect of tumble drying and steam ironing.

References

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Appendix 1

National and International Organisations: Safe management of linen - Specific Guidance

Organisation/ Guidance	Categories of linen	Effective laundering		Specific guidance on laundering of uniforms/scrubs	Linen handling/sorting/label ling	Storage/transport of linen
		Products	Temperatures and wash cycle			
<p>NHS Scotland MEL (1993) 7 and (1993) 86, Hospital laundry arrangements for used and infected linen – <i>this has now been superseded by the 'National Guidance for Safe Management of Linen in NHSScotland Health and Care Environments For laundry services/distribution' (2015)</i></p>	<p>“2 Linen should be divided by staff in wards and departments into 2 categories as follows:-</p> <p>2.1 Used (soiled and fouled) – all used linen, including heat labile fabrics, irrespective of state, apart from that from infectious patients, those suspected as being infectious and linen covered by 2.2.”</p> <p>2.2 Infected – linen, including heat labile fabrics,</p>	<p>“10 Disinfection with chemicals at low temperatures is possible with hypochlorites but the performance of hypochlorites is often restricted by the presence of soiling, detergents and alkalis in the wash. However, in clean conditions hypochlorites are active at a temperature below 60°C in low concentrations and will not damage fabrics outside acceptable limits.”</p>	<p>“4 The washing process should have a disinfection cycle in which the load temperature is maintained at 150°F (65°C) for not less than 10 minutes or preferably at 160°F (71°C) for not less than 3 minutes. For machines of conventional design and a low loading (for example, below 0.056kg/litre) 4 minutes should be added to these times to allow for 'mixing time'. For</p>	-	<p>“2.2 It is important that linen likely to infect staff should be put immediately into an impervious bag, sealed with an appropriate tie and labelled, if considered necessary locally.”</p> <p>“13 Staff handling linen in the soiled sorting area must wear protective clothing and gloves. Any lesion on the hand must always be covered with a waterproof dressing. The use of surgical face masks is not necessary although care needs to be given to proper</p>	<p>“3 For transportation, [used] linen should be placed into nylon/polyester laundry bags, colour coded...Bags must be securely fastened before being sent to the laundry. Care should be taken to prevent linen or foul seepage escaping from laundry bags and contaminating other items or staff. Use of liner bag would be suitable.”</p> <p>“6 The provision of a designated storage area should not be necessary but infected linen should be stored under secure conditions prior to treatment.”</p>

National and International Organisations: Safe management of linen - Specific Guidance

Organisation/ Guidance	Categories of linen	Effective laundering		Specific guidance on laundering of uniforms/scrubs	Linen handling/sorting/label ling	Storage/transport of linen
		Products	Temperatures and wash cycle			
	from patients with specific infections (listed in the document)	<p>“Disinfection of <u>heat-labile materials</u>, only if suitable may be achieved by the addition of sodium hypochlorite to the penultimate rinse. The rinse should be of at least 5 minutes duration and sufficient sodium hypochlorite must be added to achieve a solution of 150ppm available chlorine. Overriding of washing programmes must be avoided. Hypochlorites should not be used on fabrics treated for fire resistance, e.g. cotton. Other chemical processes may be used I approved by the</p>	<p>machines with a heavy degree of loading (for example 0.056kg/lite) it is necessary to add up to 8 minutes.”</p> <p>“7 The recommendations on the washing process for <u>used</u> linen regarding the thermal disinfection stage also apply to the process for infected linen.”</p> <p>“9 Heat-labile materials need to be washed at low temperature (40°C) to avoid shrinkage. The temperature in tumble driers, if used must be</p>		<p>protection at all times.”</p> <p>“6 [Infected] linen should not be sorted but should be sealed in a red water-soluble bag, or red bag with a water soluble membrane, immediately on removal from the bed or before leaving a clinical department. The primary container should then be placed in a clear polythene bag and labelled if considered necessary locally.”</p> <p>Appendix “1. Under the revised laundry procedures there will be no need to separate soiled from</p>	

National and International Organisations: Safe management of linen - Specific Guidance

Organisation/ Guidance	Categories of linen	Effective laundering		Specific guidance on laundering of uniforms/scrubs	Linen handling/sorting/label ling	Storage/transport of linen
		Products	Temperatures and wash cycle			
		Control of Infection Committee.”	limited to 60°C.”		<p>fouled linen and the use of national colour coding as set out below will have to be adapted accordingly.</p> <p>2.1 Used (soiled and fouled) linen – containers should be coloured white or off-white.</p> <p>2.2 Infected linen containers should be coloured red or at least include red as a prominent feature on a white or off-white background. Additionally the container should carry a bold legend on a prominent yellow label such as INFECTED LINEN and show the sender, date and type</p>	

National and International Organisations: Safe management of linen - Specific Guidance

Organisation/ Guidance	Categories of linen	Effective laundering		Specific guidance on laundering of uniforms/scrubs	Linen handling/sorting/label ling	Storage/transport of linen
		Products	Temperatures and wash cycle			
					of infection. 3 Laundries are free to introduce their own choice of colour but the use of red for infected material should be regarded as mandatory.”	
NHS HSG (95) 18, Hospital laundry arrangements for used and infected linen	<p>“2.1.1 Used (soiled and foul) – all <u>used</u> linen, irrespective of state but on occasion contaminated by body fluids or blood, apart from linen from infectious patients, those suspected as being infectious and linen covered by 2.1.2 and 2.1.3.”</p> <p>2.1.2 Infected –</p>	<p>“5.4 Disinfection with chemicals at low temperature is possible with hypochlorite but the performance of hypochlorite is often restricted by the presence of soiling, detergents and alkalis in the wash. However, in clean conditions hypochlorite is active at a temperature below 60°C (140°F)</p>	<p>“3.2 The washing process should have a disinfection cycle in which the temperature in the load is maintained at 65°C (150°F) for not less than 10 minutes or preferably at 71°C (160 °F) for not less than 3 minutes. With both options, “mixing time” must be added to ensure heat penetration</p>	-	<p>“2.1.2 It is most important that linen likely to infect staff should be put immediately into a water soluble bag or bag with a water soluble stitched seam or membrane which will release its load in the wash process and which is sealed with an appropriate soluble tie and labelled as to its origin.”</p>	<p>“3.1 For transportation, [used] linen should be placed into polythene or nylon/polyester laundry bags, colour coded... Care should be taken to prevent linen or foul seepage (body fluids or blood) escaping from laundry bags and contaminating other items or staff. Bags must be securely fastened before being sent to the laundry. Use of a water soluble bag as a liner is recommended.”</p> <p>“3.5 Water soluble bags or</p>

National and International Organisations: Safe management of linen - Specific Guidance

Organisation/ Guidance	Categories of linen	Effective laundering		Specific guidance on laundering of uniforms/scrubs	Linen handling/sorting/label ling	Storage/transport of linen
		Products	Temperatures and wash cycle			
	<p>linen from patients with or suspected of suffering from specific infections (listed in the document)</p> <p>“2.1.3 Heat labile – fabrics damaged by the normal heat disinfection process and likely to be damaged at thermal disinfection temperatures.”</p> <p>“3.5 Categorisation of linen should be done at local level with the appropriate coloured coded containers.”</p>	<p>in low concentrations and will not damage fabrics outside acceptable limits.”</p> <p>“5.4 Disinfection of heat-labile materials, only if suitable, may be achieved by the addition of sodium hypochlorite to the penultimate rinse. This should be a medium or high drip rinse of at least five minutes duration and sufficient sodium hypochlorite must be added to achieve a concentration of 150ppm available chlorine. Overriding of washing programmes must be avoided. Hypochlorite must not be used on</p>	<p>and assured disinfection. For machines of conventional design and a low degree of loading (for example, below 0.056kg/litre) 4 minutes should be added to these times to allow for mixing time. For machines with a heavy degree of loading (for example above 0.056kg/litre) it is necessary to add up to 8 minutes). A sluice cycle should be included as necessary when dealing with <u>foul</u> linen.”</p> <p>“4.3 The</p>		<p>“3.5 categorisation of linen should be done at local level with the appropriate coloured coded containers. However, water soluble bags or bags with a water-soluble stitched seam or membrane are recommended for heavily <u>fouled</u> linen.”</p> <p>“4.1 [Infected] linen should not be sorted, but should be sealed in a water-soluble bag or bag with a water-soluble stitched seam or membrane immediately on removal from the bed or before leaving a clinical department. This primary container should then be placed in a nylon or polyester</p>	<p>bags with a water-soluble stitched seam or membrane are recommended for heavily <u>fouled</u> linen.”</p> <p>“4.2 The provision of a designated storage area should not be necessary but <u>infected</u> linen should be stored under secure conditions prior to treatment.”</p> <p>“6.4 There must be a physical barrier between clean and <u>used</u> or <u>infected</u> linen when carried on a vehicle at the same time. No bag of linen that is not securely fastened should be placed in a vehicle.”</p> <p>“6.5 Trolleys for clean linen in transit should be covered with a washable or disposable cover. Fully enclosed and sealed containers with a</p>

National and International Organisations: Safe management of linen - Specific Guidance

Organisation/ Guidance	Categories of linen	Effective laundering		Specific guidance on laundering of uniforms/scrubs	Linen handling/sorting/label ling	Storage/transport of linen
		Products	Temperatures and wash cycle			
		fabrics treated for fire retardance. Other chemical processes may be used if approved by the Control of Infection Committee.”	<p>recommendations on the washing process for <u>used</u> linen regarding the thermal disinfection stage also apply to the process for <u>infected</u> linen.”</p> <p>“5.2 <u>Heat-labile</u> materials, for example patients’ clothing articles manufactured from knitted polyester, need to be washed at low temperatures (40°C - 104°) to avoid damage. The temperature in tumble driers, if used, must be limited to 60°C and calenders should be avoided wherever possible.”</p>		<p>bag with the appropriate colour code...and labelled in considered necessary locally.”</p> <p>“7.1 Staff in the sorting areas handling <u>used</u> unwashed linen should wear protective clothing e.g. waterproof aprons and gloves. Any exposed lesion should always be covered with a waterproof dressing. Although care needs to be given to proper protection at all times, the use of surgical face masks is not considered necessary.”</p> <p>Appendix A “2.a. <u>Used (soiled and foul)</u> linen containers should be coloured</p>	lockable door may be used in preference, in which case covers are not required.”

National and International Organisations: Safe management of linen - Specific Guidance

Organisation/ Guidance	Categories of linen	Effective laundering		Specific guidance on laundering of uniforms/scrubs	Linen handling/sorting/label ling	Storage/transport of linen
		Products	Temperatures and wash cycle			
					<p>white or off white.</p> <p>b. <u>Infected</u> linen - containers should be coloured red or, at least, include red as a prominent feature on a white or off white background. Additionally the container should carry a bold legend on a prominent yellow label such as INFECTED LINEN. It should be noted that some red bags used for this purpose may not be colour-fast.</p> <p>c. <u>Heat-labile</u> – containers should be coloured white with a prominent orange stripe.</p>	

National and International Organisations: Safe management of linen - Specific Guidance

Organisation/ Guidance	Categories of linen	Effective laundering		Specific guidance on laundering of uniforms/scrubs	Linen handling/sorting/label ling	Storage/transport of linen
		Products	Temperatures and wash cycle			
					3. The use of red for <u>infected</u> material should be regarded as mandatory and the use of blue or yellow for this type of laundry should be avoided.”	
Department of Health (2007), Uniforms and Workwear: An evidence base for developing local policy	-	-	<p>“A ten-minute wash at 60°C is sufficient to remove most micro-organisms.”</p> <p>“There is no conclusive evidence of a difference in effectiveness between commercial and domestic laundering in removing micro-organisms.”</p>	<p>“It is good practice to...Wash uniforms at the hottest temperature suitable for the fabric.”</p> <p>“It is good practice to...provide sufficient uniforms for the recommended laundry practice (more uniforms may be needed where the trust carries out the laundry).”</p>	-	-

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Northern Ireland Regional Infection Control Manual (2008)				“Where laundry facilities are available these should be used for laundering clinical uniforms. Where local laundry arrangements are not available and staff launder their own uniforms they must be provided with written instructions.”	“Never discard sheets onto the floor. Always use the correct colour coded bag.” “Always deal with linen at the bedside” “Used sheets must be rolled or folded carefully before disposal to prevent airborne dispersal of skin cells.”	
CDC (2007) Guideline for Isolation precautions: Preventing Transmission of Infectious Agents in Healthcare Settings 2007	-	-	-	-	“IV.G.1. Handle used textiles and fabrics with minimum agitation to avoid contamination of air, surfaces and persons.” “IV.G.2. If laundry chutes are used,	-

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					<p>ensure that they are properly deigned, maintained, and used in a manner to minimize dispersion of aerosols from contaminated laundry.”</p> <p>“Key principles for handling soiled laundry are 1) not shaking the items or handling them in any way that may aerosolize infectious agents; 2) avoiding contact of one’s body and personal clothing with the sealed items being handled; and 3) containing soiled items in a laundry bag or designated bin.”</p>	

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CDC and HICPAC, Guidelines for Environmental Infection Control in Health-Care Facilities	-	<p>“Do not use dry cleaning for routine laundering in health-care facilities.”</p>	<p>“If hot-water laundry cycles are used, wash with detergent in water $\geq 160^{\circ}\text{F}$ ($\geq 71^{\circ}\text{C}$) for ≥ 25 minutes.”</p> <p>“Choose chemicals suitable for low-temperature washing at proper use concentration if low-temperature ($< 160^{\circ}\text{F}$ [$< 71^{\circ}\text{C}$]) laundry cycles are used.”</p>	<p>“Employers must launder workers’ personal protective garments or uniforms that are contaminated with blood or other potentially infectious materials.”</p>	<p>“Bag or otherwise contain contaminated textiles and fabrics at the point of use.”</p> <p>“Do not sort or prerinse contaminated textiles or fabrics in patient-care areas.”</p> <p>“Establish a facility policy to determine when textiles or fabrics should be sorted in the laundry facility (i.e. before or after washing).”</p> <p>“Handle contaminated textiles and fabrics with minimum agitation to avoid contamination of air, surfaces, and persons.”</p>	<p>“Use leak-resistant containment for textiles and fabrics contaminated with blood or body substances.”</p> <p>“Identify bags or containers for contaminated textiles with labels, colour coding or other alternative means of communication as appropriate.”</p> <p>“Covers are not needed on contaminated textile hampers in patient-care areas.”</p> <p>“Package, transport, and store clean textiles and fabrics by methods that will ensure their cleanliness and protect them from dust and soil during inter-facility loading, transport, and unloading.”</p>

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					<p>“If laundry chutes are used, ensure that they are properly designed, maintained, and used in a manner to minimize dispersion of aerosols from contaminated laundry. Category IC”</p> <p>“Ensure that laundry bags are closed before tossing the filled bag into the chute.”</p> <p>“Do not place loose items in the chute.”</p>	