

## Introduction

In 2013 the Department of Health and Social care issued the Health Technical Memorandum (HTM 01-04) : guidance about decontaminating linen used in health and social care. This supersedes the Choice Framework for local Policy and Procedures and provides up-to-date evidence-based guidance on the decontamination of linen for health and social care.

These new comprehensive guidelines are divided into four individual memoranda which cover all aspects of linen processing. As follows.

Decontamination of linen for health and social care:

- ❖ **Management and provision**
- ❖ **Engineering, equipment and validation**
- ❖ **Social care**
- ❖ **Guidance for linen processors implementing BS EN 14065.**

What this means for you is that in order to comply with government regulations, you'll now need to adhere to the essential quality requirements relevant to you in each of these documents. To help you understand these updates, we've outlined key areas that specifically affect this essential process in care homes and how they can be implemented into your everyday Onsite Premises Laundry (OPL) processes.

## Essential Quality Requirements and Best Practice

The Health Act Code of Practice recommends that healthcare organisations comply with guidance establishing Essential Quality Requirements (EQR) and demonstrate that a plan is in place for progression to Best Practice (BP)

**Essential Quality Requirements (EQR)**, for the purposes of this best practice guidance, is a term that encompasses all existing statutory and regulatory requirements. They will help to demonstrate that an acute provider operates safely with respect to its decontamination services.

**Best Practice (BP)** is additional **to the EQR**. Best Practice as defined in this guidance covers nonmandatory policies and procedures that aim to further minimise risks to patients; deliver better patient outcomes; promote and encourage innovation and choice; and achieve cost efficiencies.

## HTM 01-04 structure and content

HTM 01-04 is divided into four volumes

- ❖ **The ‘Management and provision’ volume** includes: a description of the overall structure of the guidance and the rationale behind the structure and the Department of Health policy on safe linen decontamination and processing.
- ❖ **The ‘Social care’ volume** gives guidance on how to implement linen decontamination in social care settings.
- ❖ **The ‘Guidance for linen processors implementing BS EN 14065’ volume** gives guidance on ways of complying with HTM 01-04 specifically for those organisations that have implemented or will be implementing the European standard BS EN 14065.
- ❖ **The ‘Engineering, equipment and validation’ volume** covers: the standards and regulatory framework; roles of key personnel; the built environment; design and pre-purchase considerations; and validation and verification of disinfection performance of washers, washer-extractors and continuous tunnel washers (CTWs).

Each volume sets out a summary of the Essential Quality requirements and the Best Practice, the guidance on how to achieve this for the care provider and how an inspector would judge compliance. In this respect these volumes are very useful and worthy of close examination.

In each sections below we have summarised the main points for a care home with an on-site premises laundry (OPL).

## Requirements for linen processing

For the purposes of the HTM 01-04 document, “linen” means all reusable textile items requiring cleaning/disinfection via laundry processing including: Bed linen: blankets, counterpanes, cot sheets and blankets, duvets, duvet covers, pillowcases and sheets (woven, knitted, half sheets, draw and slide sheets); bibs; blankets; canvases; curtains; hoist slings; patient clothing (gowns, nightdresses and shirts, pyjama tops and bottoms); staff clothing (coats, scrub suits, tabards, uniforms\*); towels.

- ❖ **Washing machines** – When washing machines are due to be replaced, commercial-type, purpose-designed washers are preferable to domestic types.
- ❖ **Documentary evidence** (for example, a logbook) of any service and repair visits should be kept and be available for inspection along with written local policies and safe working procedures for the operation of all washing machines and dryers. The written local policies should be based on the following principles: (i) ongoing observation of the condition of the machine in order to detect any major problems that may occur; (ii) correct operation of the machine and use of detergents including educating staff to operate the machines correctly (for example, instructions on correct dosing of detergent and precautions against overloading the machine); (iii) observation of the condition of processed items that come out of the machine.
- ❖ **Processes should be safe** and protect staff and service-users against exposure to infection
- ❖ **Appropriate PPE** – personal protective equipment (including appropriate clothing and eye protection) should be available for all staff.
- ❖ **Processed linen** should be stored in a clean area above floor level and should not be kept in the laundry area.
- ❖ **The laundry area** should be designed to minimise the risk of recontamination of linen and to ensure the protection of service-users and staff involved in the handling of used linen. This should include: (i) procedural segregation of clean and dirty items/areas within the laundry room; (ii) hand decontamination facilities including a wash-hand basin, liquid soap, disposable paper towels, pedal-operated clinical and domestic waste receptacles and a first-aid kit; (iii) a safe and segregated dirty area for the removal of solids and sluicing of linen.

## Handling dirty linen

- ❖ **All dirty linen** should be handled with care and attention paid to the potential spread of infection.
- ❖ **Personal protective equipment** (PPE) such as plastic aprons and suitable gloves should be worn for handling dirty or contaminated clothing and linen.
- ❖ **Removal of linen** from a service user's bed should be undertaken with care and placed in an appropriate container according to the segregation category

- ❖ **Personal clothing** should also be removed with care and placed in the bag, not placed upon the floor.
- ❖ **Soiled or fouled linen** should not be held close to the chest to prevent contamination of the uniform (an apron should be worn)
- ❖ **Segregation** required prior to washing should be carried out before transport to the laundry area. Staff should never empty bags of linen onto the floor to sort the linen into categories – this presents an unnecessary risk of infection. The use of water-soluble or ‘red’ or ‘alginate’ bags within cotton sacks in a wheeled trolley facilitates this separation, keeping linen off the floor before taking the bags to the laundry.
- ❖ **After handling linen**, hands should be washed properly.

## Categorisation and segregation of dirty linen

- ❖ **It is the responsibility of the person handling** linen to ensure that it is segregated appropriately. In the simple on-site care-home setting, two categories should be used relating to the process, and these can be colour-coded as follows:
- ❖ **Standard process – off white or white.** Soiled and fouled items should be placed into a water-soluble bag(s) (and additionally within a white cotton sack if required) or alternatively placed directly in a white impermeable bag. Heavily soiled items should have any solids removed prior to being placed into the bag. In larger premises, patients’ clothing may sometimes be bagged separately to bed linen.
- ❖ **Enhanced process – red.** These items should be sealed in a red water-soluble bag immediately on removal from the bed. This primary container should then be placed in an impermeable or nylon/ polyester bag. Additionally, the outer bag must carry a bold legend stating “Infectious linen”.

## Linen processing

- ❖ **The standard process** is the normal process applied for most of the service-users most of the time. The items should be washed in the highest suitable temperature in accordance with the garment care label.
- ❖ **The enhanced process** should be used when triggers are identified relating to the possibility of infectious linen or clothing being generated.

- Example triggers include: unexplained diarrhoea and vomiting; confirmed infection; unexplained rashes; confirmed cases of scabies/lice; unexplained fever.
- The enhanced process should be performed in a machine as for the standard process, but using a cycle with a minimum temperature of 60°C, or the highest temperature suitable for heat-sensitive items.
- To achieve the BP requirements all enhanced processes should use a washing cycle that has either: a thermal disinfection cycle that reaches 71°C for at least three minutes or 65°C for at least ten minutes; or a chemical disinfection process that satisfies the requirements in the section 'Disinfection of linen' (in the 'Management and provision' volume).
- All linen/clothing should enter the laundry through the appropriate dirty entrance and should not be stored but processed as soon as possible.
- The laundry staff should never open any inner water-soluble bags. Instead, the bags should be transferred to the washing machine for decontamination.
- Washing machines should not be overloaded.
- Heavily soiled items should also have a pre-wash/sluice cycle selected.
- Heat-labile items should be washed at the highest temperature possible for the item.
- All items should then enter a drying process (when the item is compatible). Once removed, they should be stored in a clean area above floor level and not be kept in the laundry area.

## Equipment design and pre-purchase considerations

- ❖ **When choosing equipment** for the disinfection of healthcare linen, all washers should be checked prior to purchase to ensure that they have the specified programming ability to meet the disinfection standards and on commissioning to ensure compliance with the required disinfection standards.
- ❖ **Consideration** should be given to the range of items to be disinfected with specific regard to their heat, chemical compatibility and volumes.
- ❖ **Commercial-type** purpose-designed washers are preferable to domestic types.

- ❖ **All washers should be fitted with accurate heat sensors** capable of controlling the disinfection stage to a level that ensures disinfection parameters are met.
- ❖ **For standard washer extractors** for a typical OPL process-monitoring equipment and instruments should be fitted to the machine to allow monitoring of the key variables listed below: (i) Programme identification (ii) Disinfection stage time. (iii) Disinfection temperature. (iv) Disinfection concentration via dosing (v) Load weight. (vi) Dip level. (vii) Liquor ratio. (viii) Alkalinity/pH. (ix) Water hardness.
- ❖ **Thermal disinfection** of the load should be deemed to have been achieved if the specified minimum temperature for the specified minimum (holding) time is achieved on all items that need to be disinfected. The temperature should be continuously maintained at or above 65°C for not less than ten minutes or 71°C for not less than three minutes.
- ❖ **Chemical disinfection** of the load should be deemed to have been achieved if, all items have been exposed to the specified (HTM) conditions of chemical disinfectant concentration and temperature for the required contact time; and any other parameters deemed necessary for achievement of disinfection as specified by the disinfection system supplier have been met.
- ❖ **The User should obtain information** from the washer manufacturer, the disinfection system supplier or the chemical supplier, as appropriate, for each specified chemical disinfectant, any requirements for safe handling, data on the maximum permitted residual level on items and the method of detection to be used for determining process residuals. The washer manufacturer (or where appropriate, the disinfection system supplier) should specify the test method to be used to demonstrate compliance.
- ❖ **The washer or disinfection system** should either: (i) be fitted with a means that will indicate when there is (are) insufficient chemical disinfectant(s) available for the next cycle or next stage of the cycle; or (ii) incorporate a monitoring system that will abort the cycle and indicate a failure should there be insufficient chemical disinfectant delivered to satisfy the parameters for chemical disinfection required in this section.
- ❖ **Testing of washers used in the laundry.** Disinfection processes should be validated before use; the performance of the process should be monitored during routine use; the calibration of controls and instrumentation should be verified; and the equipment should be subjected to a suitable maintenance programme.
- ❖ **Washers should be suitably accredited** to either BSI or CEN standards.

- ❖ **Installation** qualification. All equipment must be (i) should be installed correctly; (ii) should be adequate to meet the demands of the equipment; and (iii) should not leak. All necessary isolating valves/switches and test points should be installed. Drains should remove effluent effectively when all plant (including equipment) is connected and operating. The water treatment plant (if fitted) should operate correctly, and the quality of water supplied for the disinfection stage of the process should be in accordance with the specification. The ventilation discharge system should be checked to ensure the duct is not blocked and the exhaust air is being discharged safely.
- ❖ **Periodic performance qualification tests** are required by the user under the HTC and these are covered in detail in schedule 6 in the HTC0104 Part 4- Engineering, equipment and validation
- ❖ **WRAS** – additionally there are obligations under the Water Regulations 1999 to ensure that all washers are meet the fluid protection 5 standards. This is achieved with WRAS approval.
- ❖ **GAS SAFE** – many commercial driers use gas, it is therefore imperative that Gas equipment has been installed correctly by a GAS SAFE qualified engineer. Thereafter the dryer must be used correctly and in accordance with any manufacturers operating instructions. These measures will ensure that your staff, patients, residents and property remain safe.

## Conclusion

This document, provided by Aventus Laundry, summarises the information within HTM 01-04 to provide a quick reference guide. To ensure your care home laundry fully adheres to the requirements of HTM 01-04, it is strongly recommended that you read all four documents and implement the necessary changes/updates.

Links to the four volumes of the HTM 01-04 can be found here:

Decontamination of linen for health and social care:

- ❖ **Management and provision**  
(<https://www.ventus-group.co.uk/wp-content/uploads/2019/07/Health-Technical-Memorandum-0104-Decontamination-of-linen-for-Health-and-Social-Care-management-and-provision.pdf>)
- ❖ **Engineering, equipment and validation**  
(<https://www.ventus-group.co.uk/wp-content/uploads/2019/07/Health-Technical-Memorandum-0104-Decontamination-of-linen-for-Health-and-Social-Care-engineering-equipment-and-validation.pdf>)
- ❖ **Social care**

<https://www.ventus-group.co.uk/wp-content/uploads/2019/07/Health-Technical-Memorandum-0104-Decontamination-of-linen-for-Health-and-Social-Care-social-care.pdf>

❖ Guidance for linen processors implementing BS EN 14065

<https://www.ventus-group.co.uk/wp-content/uploads/2019/07/Health-Technical-Memorandum-0104-Decontamination-of-linen-for-Health-and-Social-Care-guidance-for-linen-processors-implementing-BS-EN-14065.pdf>

Having a properly accredited commercial laundry solution comprising correctly installed washing machines and tumble dryers and other dedicated equipment ensures that your care home can effectively meet most of these requirements. This means that you can concentrate the time and efforts of your staff to spend more time on providing first class care to those who need it.