

# Safe Management of the Care Environment (Environmental Decontamination and Management of Blood and Body Fluid Spillages)

## Executive Summary

**Version 1.0**

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# Contents

<b>Executive Summary</b> .....	<b>4</b>
<b>Scope</b> .....	<b>5</b>
Research questions .....	5
Change to Practice .....	5
Change to Recommendations and Good Practice Points .....	6
<b>Summary of Recommendations (R) and Good Practice Points (GPP)</b> .....	<b>7</b>
Research Question 1: What is the risk of healthcare associated infection (HAI) from the care environment? .....	7
Research Question 2: What is environmental decontamination? .....	7
Research Question 3: For the purpose of environmental decontamination what is the care environment, including patient zones? .....	7
Research Question 4: What different types of environmental decontamination are undertaken in health and care settings and why are they required? .....	8
Research Question 5: Are there any legislative requirements or standards that should be adhered to when undertaking environmental decontamination? .....	8
Research Question 6: What methods and techniques are recommended for decontamination of the health and care environment? .....	9
Research Question 7: When and how should different products be used for decontamination of the health and care environment? .....	10
Research Question 8: How should blood and body fluid spillages be managed? .....	11
Research Question 9: What is the recommended frequency for environmental decontamination? .....	12

**Research Question 10: Are there specific requirements for the decontamination of soft furnishings? .....12**

**Research Question 11: Who has responsibility for ensuring the care environment is decontaminated appropriately? .....13**

**Research Question 12: How should environmental decontamination equipment be managed and stored? .....14**

## Executive Summary

This literature review informs the content on environmental decontamination in the National Infection Prevention and Control Manual (NIPCM) and the Care Home Infection Prevention and Control Manual (CHIPCM).

See:

- Chapter 1 [sections 1.6 'Safe Management of Care Environment'](#) and [1.8 'Safe Management of Blood and Body Fluid Spillages'](#) and
- Chapter 2, [sections 2.3 'Safe Management of the Care Environment'](#) and [2.4 'Personal Protective Equipment \(PPE\) and Respiratory Protective Equipment \(RPE\)'](#).
- Addendum for HCID [section 5.0 'Management and disposal of used PPE after doffing'](#)
- Appendices [5 'Gloves Use and Selection'](#) and [9 'Management of Blood and Body Fluid Spillages'](#) in the NIPCM
- CH IPCM Chapter 1 [Sections 6 ' Safe management of the care environment'](#) and [8 'Blood and body fluid spillages'](#) and Chapter 2 section [2 'Safe management of the care environment'](#) , and the [care home resource for respiratory illness](#).

Updates have been made to the glossary and supplementary resources relevant to this literature review.

There are three documents to note:

- **Literature review** which provides a comprehensive systematic review of the evidence
- **Considered judgement forms** which outline the evidence base and expert opinion used to develop the recommendations and good practice points for each literature review research question. Also detailed are the benefits, potential harms, feasibility of implementation, value judgements, intentional

vagueness, and exceptions associated with the recommendations and good practice points

- **Evidence tables** which detail all the included studies and provide an assessment of the evidence for each research question of the literature review

## Scope

### Research questions

There are 12 research questions (RQ) in this literature review. As this update no longer divides sections by standard infection control precautions and transmission-based precautions, RQs from the previous update were combined and altered accordingly. Furthermore, the 'Blood and Body Fluid Spillages' literature review was amalgamated into this review update, so RQs regarding blood and body fluid spillages were added:

- RQ1 covers risk of healthcare associated infection from the environment.
- RQs 2, 3, 4, 7 and 9 cover definitions relevant to environmental decontamination and indications for detergent and disinfectant product use.
- RQ5 covers legislation and industry standards relevant to environmental decontamination and disinfection products.
- RQs 6, 8 and 10 cover methods (techniques), and requirements for decontaminating blood and body fluid spills and soft furnishings.
- RQ11 covers roles and responsibilities in relation to environmental decontamination.
- RQ12 covers decontamination equipment management and storage.

### Change to Practice

Whilst there are no significant changes to practice expected as a result of this literature review update, the findings emphasise the importance of complying with recognised industry efficacy standards, rather than prescribing specific actions or

highlighting particular active ingredients, such as chlorine within cleaning and decontamination products.

This approach ensures that practice is guided by robust, evidence-based performance criteria rather than individual product components.

The NIPCM and CHIPCM and supporting resources have been updated to reflect this.

## Change to Recommendations and Good Practice Points

- New GPPs now place emphasis on compliance with industry standards, rather than focusing on specific actions or active ingredients within cleaning and decontamination products (GPP5.1).
- Recommendations within the previous version (V1.0) of this literature review regarding the use of specific types of detergents and disinfectants (chlorine-releasing agents) for decontaminating the environment have been removed. This is due to a lack of evidence to support selection of specific types of disinfectants for certain tasks or anticipated exposure. This has been replaced with GPPs advising:
  - when detergents, disinfectants and combined products should be used (GPP7.1, GPP7.2, GPP7.3, GPP7.4)
  - decontamination products should be prepared and used according to manufacturer's instructions (GPP7.5 and GPP7.6), taking into account manufacturer's instructions for soft furnishings (GPP10.3) and managing decontamination equipment (GPP12.4)
  - adherence to local policy regarding decontaminating blood and body fluid spillages (GPP8.3) and storing decontamination equipment (GPP12.4)
- This review update has ensured consistent and accurate terminology regarding environmental decontamination, as per definitions described in RQ4. As such, GPPs defining routine environmental cleaning (GPP4.1),

enhanced decontamination (GPP4.2) and terminal decontamination (GPP4.3) align with this terminology. These GPPs remain reflective of current practice.

- Existing and emerging technologies for decontamination such as wipes, ATP bioluminescence and fluorescent markers are no longer mentioned within this review, as these are covered by [specific literature reviews within the NIPCM](#).

## Summary of Recommendations (R) and Good Practice Points (GPP)

### Research Question 1: What is the risk of healthcare associated infection (HAI) from the care environment?

**GPP1.1** The care environment should be considered a potential source for transmission of healthcare-associated infections.

### Research Question 2: What is environmental decontamination?

**GPP2.1** Environmental decontamination should be defined as a process which removes, inactivates or destroys micro-organisms (including infectious agents) on a surface or item so that it is no longer capable of cross-transmission. Environmental decontamination is an umbrella term, encompassing cleaning, disinfection and sterilisation as required and according to the infection risk.

### Research Question 3: For the purpose of environmental decontamination what is the care environment, including patient zones?

**GPP3.1** For the purpose of environmental decontamination, the care environment should be defined as the physical space where care is provided and includes clinical and non-clinical areas.

## Research Question 4: What different types of environmental decontamination are undertaken in health and care settings and why are they required?

- GPP4.1** Routine environmental cleaning should be carried out on a scheduled basis and is part of usual practice to remove dust, soiling, stains and residue.
- GPP4.2** Enhanced decontamination describes increased decontamination frequency for selected surfaces and areas, in addition to routine cleaning, and should be carried out during outbreaks and when a patient or service user has known or suspected infectious status.
- GPP4.3** Terminal decontamination is the decontamination (including cleaning and disinfection) of an entire room or area during or after use and should be carried out for patients or service users with known or suspected infectious status and upon the cessation of an outbreak.

## Research Question 5: Are there any legislative requirements or standards that should be adhered to when undertaking environmental decontamination?

**R5.1** The following legislation must be adhered to when undertaking environmental decontamination in Scottish health and care settings:

- The Public Health etc. (Scotland) Act 2008
- The Health and Safety at Work etc. Act 1974
- The Control of Substances Hazardous to Health (COSHH) Regulations 2002
- Detergents (Amendment) (EU Exit) Regulations 2020
- The Personal Protective Equipment at Work (Amendment) Regulations 2022

**GPP5.1** Surface disinfectants intended for environmental decontamination in health and care settings should have broad-spectrum antimicrobial activity (for example bactericidal, virucidal, yeasticidal, fungicidal and sporicidal) and meet the relevant standards for antimicrobial activity as detailed in Appendix 5 of the [literature review](#).

## Research Question 6: What methods and techniques are recommended for decontamination of the health and care environment?

**GPP6.1** The NHSScotland National Cleaning Services Specifications (SHFN 01-02 for healthcare settings and SHFN 01-05 for care homes) outlines decontamination methods for each location in the health and care environment which should be followed by health and care staff.

**GPP6.2** Before carrying out a terminal decontamination of a room or care area, any bed screens, curtains, bedding, and the patient or service user's belongings should be removed.

If patient or service user belongings are present, they should be securely stored before the environmental decontamination process begins.

**GPP6.3** Environmental decontamination in all circumstances should be undertaken from high to low, and cleanest or least soiled to the dirtiest or most soiled areas.

**GPP6.4** Damp dusting methods should be undertaken in health and care settings to reduce dispersal of micro-organisms.

## Research Question 7: When and how should different products be used for decontamination of the health and care environment?

**GPP7.1** Detergents should be used for routine environmental cleaning.

**GPP7.2** A detergent should be used prior to a disinfectant, unless a combined detergent and disinfectant product is used.

**GPP7.3** Disinfectants (including a combined detergent and disinfectant) should be used for decontamination of the environment where a patient or service user has a known or suspected transmissible infection and/ or where there is environmental contamination with blood and body fluids.

**GPP7.4** Disinfectants should be used for decontamination of all sanitary fittings. Sanitary fittings include toilets, sinks, basins, baths, taps and fixtures.

**GPP7.5** Manufacturer's instructions should be followed regarding how a detergent, disinfectant or combined detergent and disinfectant product should be used.

In addition, local policies and guidelines should be adhered to where applicable.

**GPP7.6** Detergent and disinfectant solutions should be changed as per manufacturer's instructions and decontamination equipment (for example, disposable cloths) should not be double dipped (re-submersed) into solutions.

## Research Question 8: How should blood and body fluid spillages be managed?

- GPP8.1** Spills of blood and body fluids should be decontaminated as soon as reasonably practicable. If the area cannot be decontaminated immediately, it should be made safe.
- GPP8.2** Products (including detergent and disinfectant solutions and granules) for decontamination of blood and body fluid spillages should always be prepared and used in accordance with manufacturer's instructions, including correct dilution, type of spillage and contact time.
- GPP8.3** Health Boards and organisations should have local policies that clearly state the procedures to be followed for decontamination of blood and body fluid spillages, including the type of product to use dependent on type of spillage, volume and surface material.
- GPP8.4** The use of superabsorbent polymer gel granules (including sachets, mats and loose powder) to reduce or solidify spillage is restricted (refer to NHS National Service Scotland Safety Action Notice SAN(SC)19/03 for further information). Health Boards and organisations should ensure that any polymer gel used for environmental decontamination is stored securely and kept away from patients and service users. If granules are not available, disposable paper towels should be placed over the spillage to absorb and contain it before cleaning and disinfecting the area.
- GPP8.5** Suitable PPE should be worn based on the level of perceived risk or anticipated exposure. For example, eye and face protection may be required if the spill is extensive or splashing is likely to occur.
- GPP8.6** Materials used to decontaminate blood and body fluid spillages should be disposed of as infectious clinical waste.

## Research Question 9: What is the recommended frequency for environmental decontamination?

- GPP9.1** Frequency of environmental decontamination should be determined by local risk assessment and application of the coding system to calculate a risk rating. This risk rating should be based on the type of care environment and level of contamination, as per the NCSS (SHFN 01-02).
- GPP9.2** Deviation from frequency of environmental decontamination determined based on risk assessment should be documented.
- GPP9.3** Decontamination frequency should be increased at times of potentially high environmental contamination (for example, as a result of highly symptomatic individuals with known or suspected infection or colonisation or HAI incidents and outbreaks of infection or colonisation).
- GPP9.4** Sites of increased contamination such as frequently touched surfaces should be more frequently decontaminated than other sites in the healthcare setting.
- GPP9.5** Patient isolation and cohort rooms and areas should be decontaminated at least daily.

## Research Question 10: Are there specific requirements for the decontamination of soft furnishings?

- GPP10.1** Soft furnishings (for example, upholstered chairs, carpets, fabric sofas) should not be used within care areas where there is a high risk of contamination with blood or other potentially infectious body fluids.
- GPP10.2** When blood and body fluid spills occur on soft furnishings, if decontamination is not immediately possible, the item should be

removed from use. If an item is incapable of being adequately decontaminated, then it should be disposed of.

**GPP10.3** Manufacturer's instructions should be followed when decontamination of carpets and soft furnishings in health and care settings is required. Where these instructions are not specific, the NCSS (SHFN 01-02) and care homes NCSS (SHFN 01-05) should be followed.

## **Research Question 11: Who has responsibility for ensuring the care environment is decontaminated appropriately?**

**GPP11.1** As per HDL (2005)07, a named person or persons, for example Senior Charge Nurses or nurse in charge, should be responsible for ensuring safe working conditions within their clinical area. This includes all aspects of environmental cleanliness. The named person or persons have the authority to require local cleaning services to act on any problems identified.

**GPP11.2** All health and care staff should be aware of their roles and responsibilities related to environmental decontamination and follow correct policies and guidance, including HDL(2005)07, NCSS (SHFN 01-02) and care homes NCSS (SHFN 01-05) for NHSScotland health and care settings. The division of decontamination tasks should be clearly defined and communicated, in line with local or organisational policy.

## Research Question 12: How should environmental decontamination equipment be managed and stored?

- GPP12.1** Re-usable cleaning materials and equipment should be colour coded in accordance with the coding scheme outlined in the NCSS (SHFN 01-02) and care homes NCSS (SHFN 01-05). Environmental decontamination equipment should only be used in the area indicated by the colour scheme.
- GPP12.2** Disposable decontamination equipment should be discarded in accordance with local waste management policy. Non-disposable decontamination equipment which is no longer fit for purpose should be discarded in accordance with local waste management policy.
- GPP12.3** Separate purpose-built Domestic Services Rooms (DSRs) should be used for storage of decontamination equipment. These areas should have sufficient space and facilities to enable equipment to be thoroughly cleaned and decontaminated following use and for the disposal of cleaning solutions and be kept to an appropriate standard of cleanliness.
- GPP12.4** Equipment for environmental decontamination should be managed according to manufacturer's instructions and stored according to local policy.