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Infection Prevention Model Policy/Procedure 6

Management of blood and body fluid spillages

(An element of Standard Infection Control Precautions)

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1.0 Executive Summary/Key Points.

- The safe management of blood and body fluid spillages is one of the nine elements of Standard Infection Control Precautions (SICPs), which should be applied in all healthcare settings.
- All staff have the responsibility to ensure safe practices when managing blood and body fluid spillages.
- All staff who may have to manage spillages should receive adequate training to ensure safe practices.
- Any incident where a spillage could have been avoided, has not been managed properly, where adequate equipment was not available or where occupational exposure to blood/body fluids has occurred as the result of a spillage, should be reported and investigated in line with local incident reporting procedures.
- Spillages should be dealt with immediately.
- Personal protective equipment (PPE) must be worn by those dealing with a spillage.
- All items used to manage a spill must either be disposed of correctly as per local waste policy, or decontaminated appropriately.
- Spillage kits may be useful in certain areas/settings.
- All employers and staff must ensure that occupational immunisations and clearance checks are up to date (e.g. hepatitis B immunization). All staff must know whether they have responded to hepatitis B vaccination or not. All non-responders to hepatitis B vaccination **must** be made aware of this and counseled accordingly.
- Should an exposure incident occur when dealing with a spillage, the **local occupational exposure (including needlestick or “sharps” injury) policy** should be followed.
- Control of Substances Hazardous to Health (COSHH) sheets and Material Safety Data Sheets should be available to be referred to as necessary.
- Disinfectants must be used in accordance with manufacturer’s instructions for storage, dilution, contact times and expiry dates.

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- Local policy should clearly state disinfectant products used and appropriate dilutions for those products.
- Clear guidance must be available to all staff on how to make the correct dilutions of disinfectants from tablets and strong liquid solutions.
- Chlorine-releasing agents are the disinfectant of choice in the event of a spillage of blood or body fluids.
- Chlorine-releasing agents should be used in the following dilutions: 1000ppm (0.1%) for low risk body fluids (e.g. faeces), or 10,000ppm (1%) if blood, bloodstained fluids (e.g. faeces, pus) or high risk body fluids.
- If there is broken glass present, it is **essential** that the fragments are **not** gathered up by hand either before or after treatment with disinfectant.

2.0 Introduction

Occupational exposure to spillages of blood, other body fluids, secretions and excretions (excluding sweat), poses a risk of infection. It must always be assumed that every person encountered could be carrying potentially harmful microorganisms that might be transmitted directly or via contamination of surfaces/equipment resulting in subsequent transmission if they are not removed and decontaminated appropriately. Therefore the safe and effective management of such spillages is essential to prevent transmission of infection. As such, the safe management of blood and body fluid spillages is one of the nine elements of Standard Infection Control Precautions (SICPs), which should be applied in all healthcare settings.

3.0 Responsibilities

3.1 Managers/Clinical Directors must:

- Ensure that all staff have had instruction/education on the principles of SICPs and the management of blood and body fluid spills.
- Ensure that all staff have had instruction/education on the principles of SICPs and in the management of occupational exposures including needlestick (or “sharps”) injury.
- Ensure that all areas, including domestic services and estates, have adequate numbers of staff who have received training and are competent to safely manage spillages.
- Ensure that an up-to-date evidence-based blood and body fluid spillage policy is easily available for all staff.
- Ensure that an up-to-date evidence-based occupational exposure (including needlestick or “sharps” injury) policy is easily available to all staff.
- Ensure that adequate resources and appropriate equipment are in place to allow recommended infection prevention and control measures such as management of blood and body fluid spillages to be implemented.
- Undertake a risk assessment to optimise patient/client and staff safety, consulting expert infection prevention and control guidance if/as required.
- Support staff in any corrective action or interventions if an incident occurs that may have resulted in an exposure or injury.
- As part of the local Incident Reporting process, investigate untoward incidents and all occupational exposures, and ensure any learning points are shared with staff to help prevent recurrences.

- Ensure any staff with health concerns, or who have become ill due to occupational exposure, are referred to the relevant agency e.g., General Practitioner or Occupational Health.

3.2 All staff (providing direct care in a health or social care setting including a patient/client's own home) **must:**

- Apply the principles of SICPs, and ensure all other staff/agencies apply the principles of SICPs.
- Attend induction, mandatory and update infection prevention and control education sessions, including those on management of blood and body fluid spillages.
- Provide a safe environment for others when dealing with a spillage.
- Report to line managers any deficits in relation to knowledge of management of blood and body spillages/SICPs, facilities/equipment or incidents that may have resulted in cross contamination, exposure or injury.
- Understand what to do in the event of themselves or others working with them sustaining a needlestick (or "sharps") injury/occupational exposure to blood/body fluids.
- Ensure that all requested occupational health checks/clearance requirements are fulfilled prior/during employment e.g. hepatitis B immunisation.
- Know whether or not they are a responder to hepatitis B immunization.
- Report any illness as a result of occupational exposure to their line manager.
- Consider the elements of SICPs such as management of blood and body fluid spillages as an objective within staff continuing professional development, ensuring continuous updating of knowledge and skills.

3.3 Infection Control Staff must:

- Provide education for staff and management on this policy.
- Act as a resource for guidance and support when advice on management of blood and body fluid spillages is required.
- Provide advice on individual risk assessments for managing blood and body fluid spillages.
- Investigate and advise on suspected transmission of infection as a result of blood or body fluid spillage.

The source of Infection Prevention and Control advice and support should be identified by all healthcare providers.

3.4 Incident reporting

Where appropriate, consider local incident reporting of spillages to ensure future incidents or exposures to blood and other body fluids can be avoided, and that appropriate measures and equipment are, in place to manage such spillages.

4.0 Why is it important to manage blood and body fluid spillages safely?

Blood and body fluids can potentially contain a range of microorganisms, and exposure to these fluids, including faeces, vomit, pus and urine, poses a potential risk of contamination and transmission of infection to patients as well as those providing care, if not dealt with safely and correctly. In addition, viruses such as hepatitis B, hepatitis C and HIV can be transmitted through exposure to blood and other high risk body fluids (e.g. amniotic fluid, breast milk, pericardial fluid, peritoneal fluid, pleural fluid, cerebrospinal fluid, semen, synovial fluid) and blood-stained fluids like urine, vomit, sputum and faeces. Therefore, the quick and effective management of spillages, regardless of the setting, is essential.

5.0 Who should manage spillages?

All those working in health or social care who may be exposed to spillages of blood or other body fluids should receive appropriate training to ensure that they are competent to safely manage such incidents. Training records should be held to reflect this. It should be clear within each area/care setting, who is responsible for managing spillages.

6.0 Managing spillages

6.1 General good practice points

- Spillages should be dealt with **immediately**.
- Make the area safe i.e. do not allow people to walk through the spillage and never leave the spillage unattended. A display sign may be helpful.
- Effective communication between all members of the health and social care teams is important for patient/client and staff safety.
- Personal protective equipment (PPE) e.g. aprons and gloves, must be worn by those dealing with a spill. Wear facial protection if there is a risk of splashing.

- Lesions on exposed skin should be covered with waterproof dressings.
- Gather together all the equipment, disinfectants and waste receptacles/waste bags that are required to correctly and safely manage the spill.
- All items used to manage a spill must either be disposed of correctly as per local waste policy, or decontaminated appropriately.
- Control of Substances Hazardous to Health (COSHH) sheets and Material Safety Data Sheets should be available to be referred to as necessary.
- Disinfectants must be used in accordance with manufacturer's instructions for storage, dilution, contact times and expiry dates. All disinfectants and solutions should be correctly and appropriately labelled.
- Clear guidance must be available to all staff on how to make the correct dilutions of disinfectants from tablets and strong liquid solutions.
- Disinfectants should be approved for use by the individual health and social care organisation.
- Detergents must be used according to manufacturer's instructions.
- Laboratories may require their own more specific spillage policies, with more detail pertaining to the infectious agents they encounter.
- All employers and staff must ensure that occupational immunisations and clearance checks are up to date (e.g. hepatitis B immunization). All staff must know whether they have responded to hepatitis B vaccination or not. All non-responders to hepatitis B vaccination **must** be made aware of this and counseled accordingly.
- Safe working practices and procedures must be used to prevent exposure incidents from occurring during the management of spillages.
- Should an exposure incident occur when dealing with a spillage, the **local occupational exposure (including needlestick or "sharps" injury) policy** should be followed.

- If there is broken glass present, it is **essential** that the fragments are **not** gathered up by hand either before or after treatment with disinfectant. Disposable scoops, forceps, plastic dustpan or pieces of card should be used to remove the fragments to a sharps container without risk of sharps injury. Any re-usable items e.g. plastic dustpan, must be properly decontaminated after use.

6.2 Items required to manage a spill

- Personal protective equipment e.g. gloves, aprons, +/- facial protection.
- Disposable paper towels.
- Clinical waste bag as per local waste policy.
- Warm water and general purpose neutral detergent (used according to manufacturers instructions).
- Disinfectant (approved hypochlorite solutions or Sodium Dichlorisocyanurate (NaDCC) granules). Local policy should clearly state products used and appropriate dilutions for those products. The disinfectant must be diluted with water from the cold tap. It is good practice to have dilution charts in designated areas e.g. sluices.
- Disposable scoop, or dustpan for cleaning up broken glass
- Many items required, including disposable scoops, are contained within spillage kits, and these kits may be useful in certain areas/settings.

6.3 Chlorine-releasing agents as disinfectants

Chlorine-releasing agents are chemical disinfectants which at the correct concentration are effective against blood-borne viruses. They are the disinfectant of choice in the event of a spillage of blood or body fluids. However, the effectiveness of all chemical disinfectants is dependent on their conditions of use. In order to be effective, they must be used in accordance to manufacturer's instructions, at the appropriate strength and for the correct contact time. Solutions made from tablets should be freshly prepared, and dilutions made with water from the cold tap.

Chlorine-releasing agents fall into two groups:

- Sodium dichloroisocyanurate (NaDCC) – granules can be applied to spillage directly, or tablets that are added to water to make the appropriate strength of solution.
- Sodium hypochlorite's e.g. Milton, Domestos

COSHH (Control of Substances Hazardous to Health Regulations, 2002) assessments must be carried out for all chemical disinfectants in use. Staff must know how to use these agents safely and appropriately, and comply with storage guidance (e.g. the use of locked storage cupboards). They must wear appropriate PPE when handling disinfectants and know what to do in the event of a chemical exposure e.g. splash to eye etc. When using chlorine-releasing agents ensure that areas are well ventilated to prevent the build up of fumes.

Chlorine-releasing agents are corrosive to metal and will bleach soft furnishings. They must never be mixed with acids, or used directly on urine or vomit spills, as chlorine gas will be released. They should not be mixed with hot water or any other cleaning agents. Dilutions should be made with water from the cold tap.

6.4 Spillage procedures in healthcare settings

6.4.1 Small spots of blood or body fluids on inanimate surfaces

- Gather up necessary equipment for dealing with the spill.
- Wear appropriate PPE.
- Discard all waste produced **immediately** into a clinical waste bag.
- Small spots of blood can be wiped up using disposable paper towels soaked in a fresh hypochlorite solution 10,000 ppm available chlorine (1%). Let it dry.
- Clean the area with general purpose detergent and warm water using a disposable cloth/paper towels. Dry.
- Remove PPE and place immediately into a clinical waste bag.
- Perform hand hygiene.

6.4.2 Larger blood or body fluid spillages (excluding urine and vomit).

- Secure the area to keep away all people other than those attending to the spill.
- Gather up necessary equipment for dealing with the spill.
- Wear appropriate PPE.
- Discard all waste produced **immediately** into a clinical waste bag.
- For spillages of body fluids containing **organic matter** e.g. faeces and pus, see **section 6.4.3** for the spillage management procedure.
- Spills can be dealt with using one of two methods:
 - hypochlorite solution 10,000 ppm available chlorine (1%)
 - chlorine releasing granules (applied directly)

Hypochlorite solution method

- Contain, absorb and cover the spill (e.g with disposable paper towels).
- Carefully pour the hypochlorite solution onto the paper towels soaking the area.
- Leave the area for 2 minutes (or as per manufacture's instructions), then clear away the towels/disinfectant directly into a clinical waste bag.
- Wash the area with a general purpose detergent and warm water using a disposable cloth/paper towels. Dry.
- Remove PPE and place immediately into a clinical waste bag.
- Perform hand hygiene.

Chlorine releasing granules method

- Contain, absorb and cover the spill by directly applying the granules to the spill until all visible liquid is soaked up.

- Leave the area for 2 minutes (or as per manufacture's instructions), then clear away the granule mixture using disposable paper towels or disposable scoop, directly into a clinical waste bag.
- Wash the area with a general purpose detergent and warm water using a disposable cloth/paper towels. Dry.
- Remove PPE and place immediately into clinical waste bag.
- Perform hand hygiene.

6.4.3 Spillages containing organic matter

Spillages of body fluids containing solid/semi-solid matter e.g. faeces and pus, need to be cleaned up first as the presence of organic matter can markedly reduce the activity of any disinfectant applied.

- Gather up necessary equipment for dealing with the spill.
- Wear appropriate PPE.
- Discard all waste produced **immediately** into a clinical waste bag.
- Contain, absorb and cover the spill (e.g. with disposable paper towels).
- Carefully clean up the area using disposable paper towels removing all organic matter.
- Wash the area with warm water and a general purpose detergent using a disposable cloth/paper towels. Dry.
- Wipe the area thoroughly using disposable paper towels soaked in a fresh hypochlorite solution - 1000 ppm available chlorine (0.1%) for low risk body fluids like faeces or 10,000 ppm available chlorine (1%) if blood, bloodstained fluids (e.g. faeces, pus) or high risk body fluids. Let it dry.
- Wash the area with a general purpose detergent and warm water using disposable cloth. Dry.
- Remove PPE and place immediately into a clinical waste bag.

- Perform hand hygiene.

6.4.4 Spillages of urine or vomit

Chlorine-releasing agents or hypochlorite solutions **must not** be used directly on spills of urine or vomit, as it can cause the release of chlorine gas.

- Gather up necessary equipment for dealing with the spill.
- Wear appropriate PPE.
- Discard all waste produced **immediately** into a clinical waste bag.
- Contain and absorb the spill (e.g. using disposable paper towels).
- Carefully clean the area removing all solid matter (if vomit) and absorbing **all** liquid (if urine), e.g. with disposable paper towels.
- Wash the area with warm water and a general purpose detergent using disposable paper towels/cloths. Dry.
- Wipe over the area with a solution of 1000 ppm available chlorine (0.1%), and let it dry. If the urine or vomit was blood-stained, a solution of 10,000 ppm available chlorine (1%) should be used.
- Remove PPE and place immediately into clinical waste bag.
- Perform hand hygiene.

6.5 Spillages on soft furnishings.

- Where blood or body fluid spills are likely, carpets and soft furnishings should be avoided. Washable chair covers and furnishings which can be disinfected and cleaned should be considered.
- If contamination does occur, for fixed fittings detergent cleaning followed by steam cleaning should be considered, if the textiles will tolerate this. For curtains or other loose fittings, laundering or dry cleaning followed by hot pressing is effective.

- If contamination is heavy, it may be necessary to incinerate soft furnishings if there are grounds for believing that the contaminated material is infectious.

6.6 Management of spillages in a patient's own home.

6.6.1 Blood spillages on hard surfaces

- Wear aprons and gloves.
- Use a bleach if available e.g. Domestos (diluted one part bleach with 10 parts water). Cover the area with disposable paper towels, newspaper or kitchen roll, and gently soak the area with the bleach solution. Leave it for 2 minutes, then wipe up and discard all waste into a plastic bag or bin liner.
- Clean the area with warm water and detergent using disposable cloths. Dry the area, and discard all waste as above.
- Clean any buckets/basins used with clean warm water and detergent, rinse and dry.
- Dispose of all protective clothing as above. Tie and double bag the waste before placing in the domestic waste*.

(*If it is risk assessed that the patient and the waste generated as a result of the spillage poses a significant risk due to a known infection, then the waste should be treated as Infectious Hazardous Waste. The appropriate waste bags should be used and a community waste collection organised accordingly).

- Perform hand hygiene.

6.6.2. Spillage other than blood on hard surfaces, and all spillages on soft furnishings

- Wear aprons and gloves.
- Soak up as much of the spillage as possible using absorbent disposable material e.g. paper towels, kitchen roll, and place directly into a plastic bag or bin liner.
- Clean the area thoroughly using disposable cloths, warm water and detergent, rinse and dry. Dispose of all waste as above.

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- Clean any buckets/basins used with clean warm water and detergent, rinse and dry.
- Dispose of all protective clothing as above. Tie and double bag the waste before placing in the domestic waste*.

(*If it is risk assessed that the patient and the waste generated as a result of the spillage poses a significant risk due to a known infection, then the waste should be treated as Infectious Hazardous Waste. The appropriate waste bags should be used and a community waste collection organised accordingly).

- Perform hand hygiene.

7.0 References/literature review

This policy/procedure is supported by a full review of literature with references.

This work is based on the Model Infection Control Policies developed by Health Protection Scotland, with thanks.



