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Infectious diseases

epidemiology and surveillance

Appendix 5: Procedure for managing spills of blood and body fluids/substances

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Overview

Health services should have management systems in place for dealing with blood and body substance spills and protocols should be included in procedural manual emphasised in ongoing education or training programs. The basic principles of blood and body fluid/substance spills management are:

- standard precautions apply, including use of personal protective equipment (PPE) as applicable
- spills should be cleared up before the area is cleaned (adding cleaning liquids to spills increases the size of the spill and should be avoided)
- generation of aerosols from spilled material should be avoided.

Using these basic principles, the management of spills should be flexible enough to cope with different types of spills, taking into account the following factors:

- the nature (type) of the spill (e.g. sputum, vomit, faeces, urine, blood or laboratory culture)
- the pathogens most likely to be involved in these different types of spills (e.g. stool samples may contain viruses, bacteria or protozoan pathogens whereas may contain *Mycobacterium tuberculosis*)
- the size of the spill (e.g. spot [few drops], small [$<10\text{cm}$] or large [$>10\text{cm}$])
- the type of surface (e.g. carpet or impervious flooring)
- the location involved i.e. whether the spill occurs in a contained area such as a microbiology laboratory or in a public or clinical area of a health service, in a location or within a community premises
- whether there is any likelihood of bare skin contact with the soiled (contaminated) surface.

Equipment

Standard cleaning equipment, including a mop and cleaning bucket and cleaning agents, should be readily available for spills management and should be stored in a known to all. This is particularly important in clinical areas. To facilitate the management of spills in areas where cleaning materials may not be readily available, a 'spills kit' could be used, containing the following items:

- a large (10 L) reusable plastic container or bucket with fitted lid, containing the following items
- appropriate leak proof bags and containers for disposal of waste material
- a designated, sturdy scraper and pan for spills (similar to a 'pooper scooper')
- about five sachets of a granular formulation containing 10,000 ppm available chlorine or equivalent (each sachet should contain sufficient granules to cover a diameter spill)
- disposable rubber gloves suitable for cleaning (vinyl gloves are not recommended for handling blood)
- eye protection (disposable or reusable)
- a plastic apron
- a respiratory protection device (for protection against inhalation of powder from the disinfectant granules, or aerosols, which may be generated from high-risk during the cleaning process).

Single-use items in the spills kit should be replaced after each use of the spills kit.

With all spills management protocols, it is essential that the affected area is left clean and dry.

Sodium hydroxide (caustic soda) spills kits should be available for areas at risk for higher-risk CJD spills, such as neurosurgery units, mortuaries and laboratories.

Procedures

In clinical areas blood and body fluid/substance spills should be dealt with as soon as possible. In operating rooms, or in circumstances where medical procedures way, spills should be attended to as soon as it is safe to do so.

Care should be taken to thoroughly clean and dry areas where there is any possibility of bare skin contact with the surface (e.g. on an examination couch).

Personal protective equipment (PPE) should be used for all cleaning procedures and disposed of or sent for cleaning after use. Hands should be washed and dried cleaning.

Where a spill occurs on a carpet, shampoo as soon as possible. Do not use disinfectant. Steam cleaning may be used instead.

Wash hands thoroughly after cleaning is completed.

Spots or small spills

Spots or drops of blood or other small spills (up to 10cms) can easily be managed by wiping the area immediately with paper towelling and then cleaning with warm and detergent followed by rinsing and drying the area. Dry the area as wet areas attract contaminants.

A hospital grade disinfectant can be used on the spill area after cleaning.

Large spills

Where large spills (over 10cms) have occurred in a 'wet' area, such as a bathroom or toilet area, the spill should be carefully washed off into the sewerage system

copious amounts of water and the area flushed with warm water and detergent.

Large blood spills that have occurred in 'dry' areas (such as clinical areas) should be contained and generation of aerosols should be avoided.

Granular formulations that produce high available chlorine concentrations can contain the spilled material and are useful for preventing aerosols. A scraper and pan used to remove the absorbed material. The area of the spill should then be cleaned with a mop and bucket of warm water and detergent. The bucket and mop should be thoroughly cleaned after use and stored dry.

Use of sodium hypochlorite (bleach)

It is generally unnecessary to use sodium hypochlorite for managing spills but it may be used in specific circumstances. It is recognised, however, that some health workers/members of the public may feel more reassured that the risk of infection is reduced if sodium hypochlorite is used. Health care workers and members of the public should be aware that there is no evidence of benefit from an infection control perspective.

Hypochlorites are corrosive to metals and must be rinsed off after 10 minutes and the area dried.

Creutzfeldt–Jakob disease (CJD)

If a spill of tissue (potentially infected with Creutzfeldt–Jakob disease (CJD) occurs (eg brain tissue), the contaminated item should either be destroyed by incineration, immersed in either sodium hydroxide or sodium hypochlorite for one hour, rinsed and placed in a pan of clean water and sterilised on an eighteen minute cycle. The spill should then be cleaned following routine cleaning and sterilisation procedures.

Surface spills should be cleaned up using paper towels before the surface is wiped over with either sodium hydroxide or sodium hypochlorite, left for one hour (if possible) as long as possible, with the area cordoned off, the solution wiped off and the surface cleaned by following routine cleaning procedures.

