

# Chapter 22

# Housekeeping and Laundry

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## Key points

- Neutral detergents are adequate for most cleaning purposes.
- Cleaning staff must be properly trained and supervised.
- An ongoing cleaning schedule must be established.
- All linen, whether visibly soiled or superficially clean, must be processed to the same high standard.

## **Housekeeping<sup>1-3</sup>**

The inanimate environment is rarely the source of infection outbreaks; however contaminated water and bedding may result in opportunistic infections. If the environment immediately around a patient becomes contaminated, either by direct patient shedding by healthcare workers touching instruments, door knobs, or other surfaces and equipment with contaminated hands, secondary transmission may occur.

Thus, it is necessary to clean the environment, especially around the area of recently discharged patients, to remove material that may harbour potential pathogens. A clean, well-maintained health care facility inspires confidence in patients, staff, and the public.

### **Disinfection**

Surface disinfectants are hazardous and must be handled only by trained staff. Using disinfectants for general housekeeping is unsafe, as it poses risks to the environment as well as staff and there is no evidence that it prevents infection. Detergent/disinfectant products are available that clean well and are not readily affected by organic matter.

### **Housekeeping cleaning**

Vigorous cleaning with water and neutral detergents reduces or eliminates reservoirs of potential pathogens and is adequate for most purposes. Cleaning personnel must be properly trained and supervised.

An ongoing cleaning schedule must be established, which should specify:

- Who is responsible for specific jobs
- Work procedures, including special equipment and supplies, e.g., cleaning and storage of equipment, mop head changing
- Use of protective clothing
- Accountability
- Frequency of floor cleaning
- Frequency of solution and mop change
- Frequency of furniture cleaning
- Frequency of toilet, commode, and fixture cleaning
- Frequency of cleaning fixtures such as ice machines
- Frequency of cleaning grilles and air-ducts

If a spill of moist body substances occurs, it should be spot disinfected with a detergent/disinfectant solution. This is particularly important above floor level where hands may come into direct contact with potential pathogens.

Walls rarely become contaminated and so do not need frequent cleaning. Horizontal surfaces, such as floors, and simple devices, such as intravenous therapy poles and bed frames, collect dust and can be maintained by cleaning with water and a detergent. However, areas that are repeatedly touched, for example, handrails/bedrails, door handles, and light switches, may need more frequent and intensive cleaning. Special cleaning procedures may be considered in certain circumstances, e.g., during an outbreak of *Clostridium difficile*-associated diarrhoea.

The manufacturers' instructions must be followed when preparing disinfectant and cleaning solutions. Some disinfectants, e.g., phenolics, must not be used in newborn nurseries or food preparation areas because of toxicity.

## **Laundry Services<sup>4-5</sup>**

Careful handling and reprocessing of soiled linen prevents the spread of potential pathogens between patients and staff. Provision of fresh, clean linen enhances patient comfort. All linen, whether visibly soiled or superficially clean, must be processed to the same high standard. Gross soil (e.g., faeces) should be removed as close to the source as possible, preferably by dumping it into a sluice, clinical sink, or down a toilet.

All staff must be made aware of the risk to laundry workers from sharp objects left in soiled linen; laundry workers should be offered vaccination against hepatitis B virus. In addition, vaccination against hepatitis A virus is warranted in this group of workers. Special procedures need to be developed for linen contaminated with viral haemorrhagic fever viruses.

### **Sorting procedures**

- Avoid contaminating hands with soil.
- Place soiled linen in a water-impermeable laundry bag.
- Secure bag when  $\frac{3}{4}$  full - never over-fill it. If cloth bags are used, workers should wear gloves and handle bags with care. Bags of soiled

linen should be left in a secure place for pick-up and transport.

- Bags should be taken to an area in the laundry dedicated for pre-wash sorting.
- Laundry sorters must be educated on procedures and the proper use of barriers, and provided with puncture- and water-resistant gloves and plastic aprons or water-resistant gowns.
- Safely pre-sorting soiled linen into washer loads of sheets, pillow cases, towels, gowns, etc., facilitates laundry turn-around times.
- Minimise handling soiled linen as much as possible.

### **Washing processes**

- A pre-wash rinse cycle of 15 minutes will remove gross soil.
- If using a cold water wash, chemicals such as bleach must be added (2 mL of household bleach for every litre of water) with detergent to facilitate disinfection.
- A high temperature wash must be performed (>71°C) if cold water detergents with bleach are not used.
- A souring agent should be added to the rinse cycle to reduce alkalinity and prevent yellowing. This decreases the likelihood of skin irritation and further reduces the number of bacteria present.
- Linen should be dried as soon as possible after washing to prevent regrowth of any bacteria not killed by the washing procedure.
- Hot air drying or drying on a clothes-line in sunlight will reduce the numbers of bacteria present.
- Ironing (especially using a steam iron) will destroy pathogens.

Clean linen must be stored and transported in such a manner that contamination is avoided. Storage must be at least 4-6 inches off the floor and linen must be covered during transport.

Linen to be sterilised must be appropriately wrapped before being sent to the sterile processing department.

### **Guidelines/Web Sites**

Guidelines for Environmental Infection Control in Health-Care Facilities. Recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC), 2003. <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5210a1.htm> [Accessed July 28, 2011]

The Healthcare Laundry Accreditation Council <http://www.hlacnet.org/index.php> [Accessed July 28, 2011]

Hospital Laundry Arrangements for Used and Infected Linen. NHS Executive HSG (95) 18. 1995. <http://www.silverguard.co.uk/static/contentfiles/pdf/hsg9518.pdf> [Accessed July 28, 2011]

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4. Rutala WA, Weber DJ. Uses of inorganic hypochlorite (bleach) in health care facilities. *Clin Microbiol Rev* 1997; 10:597-610.
5. Tompkins DS, Johnsson P, Fittall BR. Low-temperature washing of patients' clothing; effects of detergent with disinfectant and a tunnel drier on bacterial survival. *J Hosp Infect* 1988; 12:51-58.