Environmental cleaning and disinfection principles for COVID-19

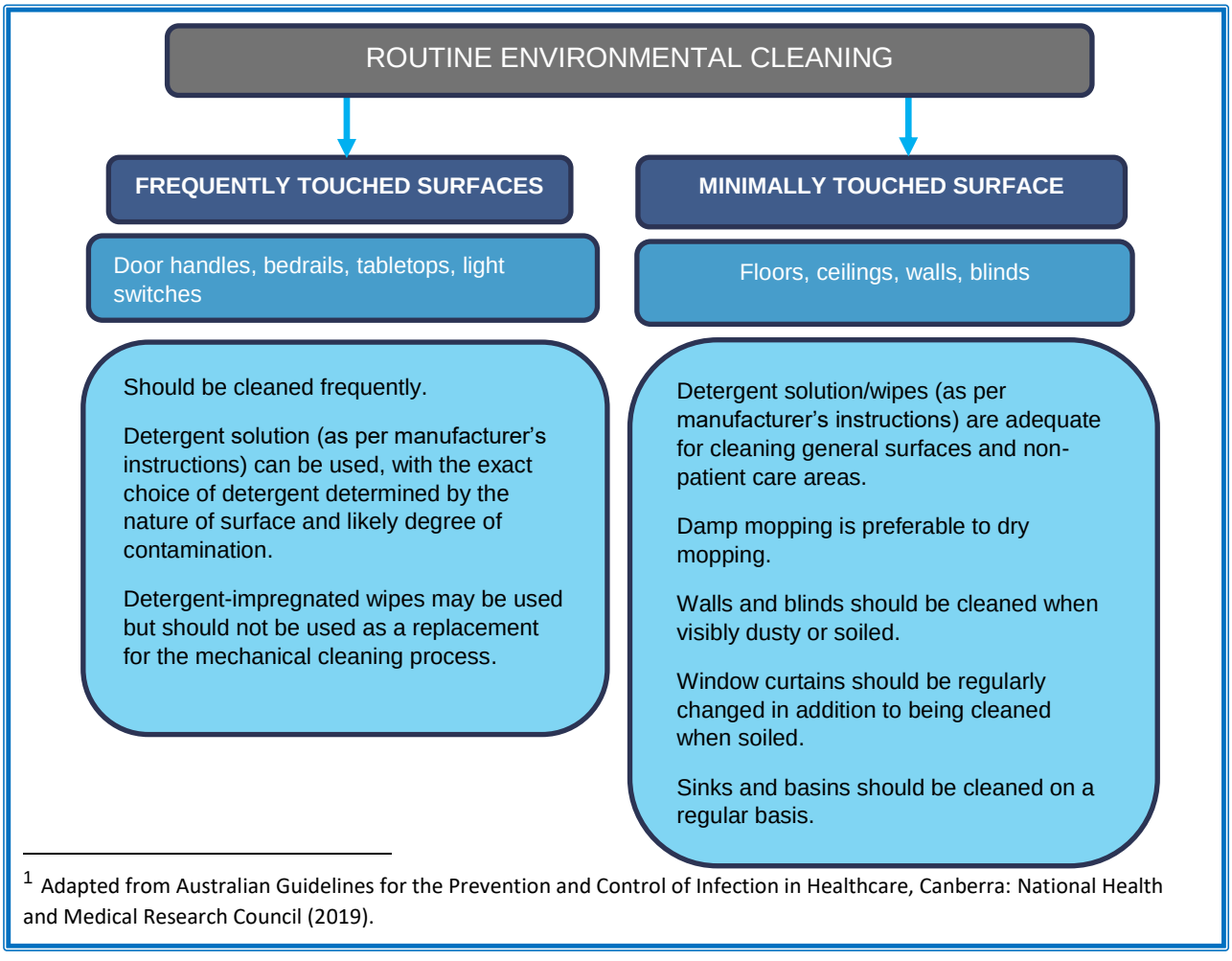
Routine environmental cleaning

- Cleaning is an essential part of disinfection. Organic matter can inactivate many disinfectants. Cleaning reduces the soil load, allowing the disinfectant to work.
- Removal of germs such as the virus that causes COVID-19 requires thorough cleaning followed by disinfection.
- The length of time that SARS-COV-2 (the cause of COVID-19) survives on inanimate surfaces will vary depending on factors such as the amount of contaminated body fluid – such as respiratory droplets – present and environmental temperature and humidity. In general, coronaviruses are unlikely to survive for long once droplets produced by coughing or sneezing dry out.

It is good practice to routinely clean surfaces as follows:

- Clean frequently touched surfaces with detergent solution (see diagram below).
- Clean general surfaces and fittings when visibly soiled and immediately after any spillage.

Routine environmental cleaning requirements can be divided into two groups[1]:



[1] Adapted from Australian Guidelines for the Prevention and Control of Infection in Healthcare, Canberra: National Health and Medical Research Council (2019).

Hand hygiene

Soap and water should be used for hand hygiene when hands are visibly soiled and alcohol-based hand rub at other times (e.g. when hands have been contaminated from contact with environmental surfaces). Cleaning hands also helps to reduce environmental contamination.

Information for cleaning staff

Information for cleaning staff on cleaning and disinfecting can be found below.

CLEANING STAFF

The risk when cleaning is not the same as the risk when face to face with a sick person who may be coughing or sneezing.

- Cleaning staff should be informed to avoid touching their face, especially their mouth, nose, and eyes when cleaning.
- Cleaning staff should wear impermeable disposable gloves and a surgical mask plus eye protection or a face shield while cleaning.
- Cleaners should use alcohol-based hand rub before putting on and after removing gloves.
- Alcohol-based hand rub should also be used before and after removing the surgical mask and eye protection.

The surgical mask and eye protection act as barriers to people inadvertently touching their face with contaminated hands and fingers, whether gloved or not.

  - The disinfectant used should be one for which the manufacturer claims antiviral activity, meaning it can kill the virus (such as chlorine-based disinfectants, which are commonly used - see below)
  - If there is visible contamination with respiratory secretions or other body fluid, the cleaners should wear a full length disposable gown in addition to the surgical mask, eye protection and gloves
  - Advice should be sought from your work health and safety consultants on correct procedures for wearing PPE.

Use of disinfection

- Use freshly made bleach solution and follow manufacturer's instructions for appropriate dilution and use (see below for dilution instructions).
- Wipe the area with bleach solution using disposable paper towels or a disposable cloth.
- Dispose of gloves and mask in a leak proof plastic bag.
- Wash hands well using soap and water and dry with disposable paper or single-use cloth towel. If water is unavailable, clean hands with alcohol-based hand rub.

Preparation of disinfectant solution

- Gloves should be worn when handling and preparing bleach solutions.
- Protective eye wear should be worn in case of splashing.
- Bleach solution should be:
  - made up daily
  - used mainly on hard, non-porous surfaces (it can damage textiles and metals).
- Sufficient time is required to kill the virus, i.e., at least 10 minutes contact time.

Household bleach comes in a variety of strengths. The concentration of active ingredient — hypochlorous acid[2] — can be found on the product label.

Table 1. Recipes to achieve a 1000 ppm (0.1%) bleach solution

Original strength of bleach		Disinfectant recipe		Volume in standard 10L bucket
%	Parts per million	Parts of bleach	Parts of water	
1	10,000	1	9	1000 mL
2	20,000	1	19	500 mL
3	30,000	1	29	333 mL
4	40,000	1	39	250 mL
5	50,000	1	49	200 mL

[2]Hypochlorous acid (HOCl) is a weak acid formed when chlorine (Cl) dissolves in water and dissociated to hypochlorite (ClO^-) which is the oxidising disinfectant in bleach.

Social contact environments

Social contact environments include (but are not limited to), transport vehicles, shopping centres and private businesses.

The risk of transmission of COVID-19 in the social and non-health care work settings can be minimised through a good standard of general hygiene. This includes:

- Promoting cough etiquette and respiratory hygiene.
- Routine cleaning of frequently touched hard surfaces with detergent/disinfectant solution/wipe.
- Providing adequate alcohol-based hand rub for staff and consumers to use. Alcohol-based hand rub stations should be available, especially in areas where food is on display and frequent touching of produce occurs.
- Training staff on use of alcohol-based hand rub.
- Consider signs to ask shoppers to only touch what they intend to purchase.

Vehicle air-conditioning should be set to fresh air ☒  ☑ 

❖ **Note: further information from this point (specific to healthcare settings) has been removed for internal use only by the Uniting Church in SA.**