



Infection Prevention and Control Expert Group – Cleaning and disinfection for health and residential aged care homes

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Background

The Infection Prevention and Control Expert Group (ICEG) provides advice and information to support best practice for infection prevention and control in community, hospital, and institutional settings.

ICEG developed this guidance to provide cleaning and disinfection measures to reduce the risk transmission in health and residential aged care homes. For advice on infection prevention and control during a COVID-19 outbreak, see the [Department of Health and Aged Care](#) website.

This document aims to provide general advice to those who have a role in the management of cleaning/housekeeping services in health and residential aged care homes including those in clinical, procedural, or primary care settings.

Key recommendations

Cleaning and disinfection of surfaces and reusable equipment remains an important infection prevention and control measure to minimise the risk of transmission of infectious agents including COVID-19. For more information on infection prevention and control measures for COVID-19 in residential aged care homes, refer to the [National Guidelines for the Prevention, Control and Public Health Management of Outbreaks of Acute Respiratory Infection in Residential Care](#).

Coronaviruses like SARS-CoV-2 (the virus that causes COVID-19) can survive on surfaces for many hours, but cleaning and disinfection will kill them.

Thorough cleaning must always be completed before disinfection or be incorporated as part of the disinfection process (2 step or 2 in 1 step clean and disinfection).

Reusable equipment that is shared between patients/residents/clients should be appropriately cleaned before use on the next patient/resident/client (as per routine infection prevention and control practice).

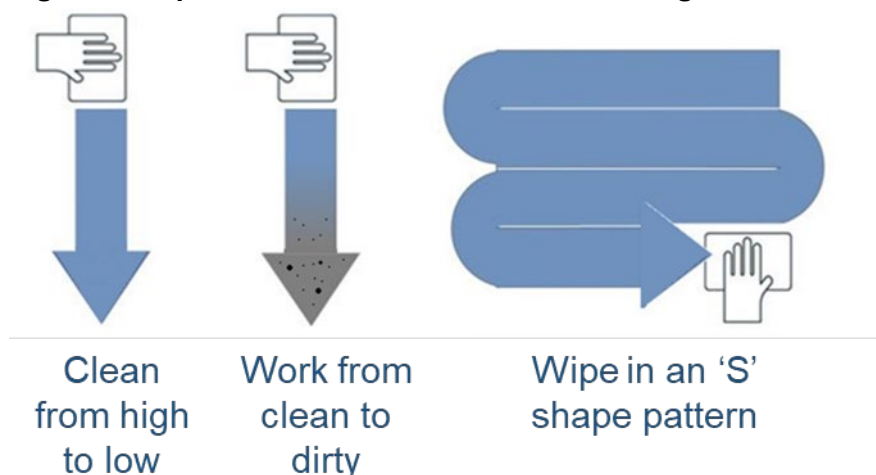
Definitions

Cleaning

Cleaning means using a detergent and warm water or detergent wipes to remove organic matter, allowing the disinfectant to work. This process does not necessarily kill germs but reduces their numbers and the risk of spreading infection.

Cleaning is to be completed in a methodical way to prevent cross contamination of surfaces. When cleaning, it is important to clean from high to low, from clean to dirty and wipe in an 'S' shape pattern. Use of a damp dusting technique prevents dust particle dispersion when dusting surfaces (refer Figure 1).

Figure 1: Important methods for surface cleaning



Disinfection

Environmental disinfection eliminates most germs by using particular chemicals.

For a disinfectant to be effective it must be made and used in line with the manufacturer's instructions and have full contact with the surface being disinfected. Note disinfectant products may have a minimum contact time that the solution needs to remain wet on the surface to be effective.

Information on which disinfectants are effective against SARS CoV-2 i.e. have virucidal properties, is available on the [Australian Register of Therapeutic Goods](#) (TGA).

Cleaning and disinfection processes

2-step clean

This is when cleaning is done with detergent followed by disinfection. Use a TGA-listed hospital-grade disinfectant with activity against viruses (according to the label and product information) or a hydrogen peroxide disinfectant OR a disinfectant that contains a minimum of 1000 ppm available chlorine.

2-in-1 clean and disinfection

This is when cleaning is done with a combined detergent/disinfectant product. Use a detergent and TGA-listed hospital-grade disinfectant with activity against viruses (according to the label and product information) or a hydrogen peroxide disinfectant OR a disinfectant that contains a minimum of 1000 ppm available chlorine.

Using a disinfectant

- Provide Safety Data Sheets in all locations where the disinfectant is in use.
- If separate detergent and disinfectant solutions are used, they must be prepared fresh each day.

Environmental¹ cleaning principles for COVID-19

Cleaning is an important element in infection prevention to reduce the risk of transmission of infectious agents like SARS-CoV-2 (the virus that causes COVID-19).

Cleaning and disinfection is essential to:

- reduce the number of microorganisms on surfaces
- minimise the potential transmission of microorganisms from surfaces.

Documented workplace procedures and training

Workplaces should have cleaning and disinfection processes documented and readily available for all staff. Content should include the surfaces to be cleaned, cleaning processes,

¹ For the purpose of this document, 'environmental' refers to surfaces, furnishings, and patient care equipment. This aligns with the Australian Guidelines for the Prevention and Control of Infection in Healthcare (2022).

cleaning and disinfection products, and scheduled frequency. Contracted cleaning staff should be trained by their employer in the appropriate use of cleaning and disinfection procedures, products to be used and in the use of any personal protective equipment (PPE) that may be required. Consideration should be given to auditing or evaluating the standard of cleaning and disinfection on a regular basis.

Always clean before disinfecting

It is important to ensure surfaces are cleaned before any disinfection occurs, as dirt and grime can stop effective disinfection either by preventing surface contact or affecting how well a disinfectant works.

Choose the right cleaning product for the right surface

Cleaning products chosen are to be appropriate for the surface to be cleaned. In general, combined detergent / disinfectant solutions or wipes are suitable for hard surfaces.

Chlorine and hydrogen peroxide solutions are effective, however some products such as bleach can damage fabrics or corrode metals. Refer to manufacturer's instructions for safe use and recommended dilutions.

Soft furnishings

Steam cleaning or dry cleaning are acceptable processes for soft furnishings if they become visibly soiled. Workplaces should have a schedule for routine cleaning of all soft furnishings.

Carpets

Carpets should be regularly vacuumed using a vacuum cleaner with a high efficiency particulate absorbing (HEPA) filter. It is important to follow the manufacturer's schedule on filter replacement to ensure the filter remains effective.

Electronic equipment

Some cleaning products and disinfectants may damage electronic equipment. Refer to manufacturer's instructions and only use approved products to clean any electronic equipment.

Do not mix cleaning products

Never mix different cleaning products as in some instances chemical reactions can occur which could be harmful to the person cleaning. Avoid 'topping up' detergent or disinfectant containers as this can lead to contamination of the containers and solutions.

Occupational health and safety procedures should always be followed. Cleaning and disinfection chemical Safety Data Sheets (MSDS) must be available and have correct labelling and be stored according to manufacturer's instructions.

Cleaning equipment

Where disposable cleaning equipment is the preferred² option, ensure correct waste disposal.

When using reusable cleaning equipment such as reusable mopheads and cleaning cloths, ensure these items are used in dedicated areas. Reusable mops and cloths should be bagged and laundered daily/after each cleaning activity (e.g., after cleaning each resident's room or shared common area). Laundry process should meet the disinfection clauses in laundry standard AS/NZS AS4146:200. Disinfect all reusable cleaning equipment (like mop handles) after each use following manufacturer's instructions. All cleaning equipment should be stored clean and dry.

Frequency of cleaning

Adjust cleaning schedules to reflect changes in the risk of COVID-19 transmission. Increased cleaning may be required:

- if patients/residents/clients with probable or confirmed COVID-19 are/have receiving care
- if there is a known COVID-19 outbreak among patients/residents/clients and/or staff in all high traffic areas, with attention to frequently touched surfaces including door handles, light switches, waiting room chairs, railings, and tea rooms.

In clinical, procedural, and primary care settings:

- frequently touched environmental surfaces should be cleaned between each patient in line with standard and transmission-based precautions.

Disinfectant fogging

Disinfectant fogging (sometimes called misting) is delivered from a free-standing machine that generates a wet or dry fog of small particles of a disinfectant solution, usually hydrogen peroxide (H₂O₂) into the air. This type of disinfection can cause chemical exposure to the operator and other people within the plume of the mist and requires training and appropriate PPE, including eye and respiratory protection. Fogging also needs a long time to allow the droplets to settle onto surfaces before the room can be used again.

Ultraviolet disinfection

Ultraviolet (UV) light is delivered from a free-standing or fixed device that emits UV light on a continuous basis onto surfaces to kill microorganisms, including viruses. UV devices usually emit UV in the shorter wavelength 'C' spectrum, known as UVC, which can be very irritating to skin and eyes. Therefore, UVC disinfection should not be used in areas occupied by people. This type of disinfection requires training and the use of appropriate PPE, including skin and eye protection. UV disinfection will not disinfect surfaces which are in shadow from the UVC source.

² Consider the impact of wastage and the sustainable use of resources, refer to the Preventing and Controlling Infections Standard of the National Safety and Quality Health Service Standards (2021).

Surface coatings

Long lasting coating technology with claims of making surfaces hostile to germs have emerged during COVID-19. This technology does not reduce the need for cleaning or a cleaning workforce and usually requires perpetual application and significant resource allocation for very uncertain benefit. Limited studies may claim reduction in bioburden however translation of this bioburden reduction to reducing healthcare-associated infections is less clear. This approach to environmental decontamination should consider resources, costs, and uncertain benefits to determine suitability.

Other methods for disinfection

When exploring emerging disinfection technologies as an adjunct to traditional surface cleaning and disinfection programs, staff should consider the objectives of their use and current evidence for their effectiveness.

Despite evidence supporting the efficacy of some emerging disinfection technologies in reducing the burden of pathogens on environmental surfaces, these technologies should only be used after manual cleaning with detergent has been completed, until evidence changes, and should not replace manual surface cleaning and disinfection methods.

There are many novel approaches to environmental decontamination emerging, that may report similar benefits to traditional surface cleaning and disinfection program. However, effectiveness and suitability data are limited.

Information for cleaning staff

When cleaning rooms where patients/residents/clients with probable or confirmed cases of COVID-19 have been treated, cleaners should ensure they:

- avoid touching their face, especially their mouth, nose, and eyes
- are trained in the correct PPE to be worn when performing their duties and the correct way to put on (don) and take off (doff) PPE and observe correct hand hygiene moments (see Appendix 1)
- wear a gown or apron, a surgical mask or particulate filter respirator (PFR) P2/N95 or equivalent³, protective eyewear⁴ (goggles or face shield) and disposable gloves while cleaning
- perform hand hygiene after removing each item of PPE on completion of cleaning tasks.

For further resources on surface cleaning, refer to the [Australian Commission on Safety and Quality in Health Care](#).

³ The decision to choose a surgical mask or PFR should be based on a local risk assessment, policies, and procedures.

⁴ If they wish to use prescription protective eyewear; the eyewear needs to meet the appropriate standard for impact as described in AS/NZS 1337.6.2012

Routine cleaning and disinfection during a COVID-19 outbreak

Surfaces can be categorised into two groups, frequently touched, and minimally touched (refer to Figure 2).

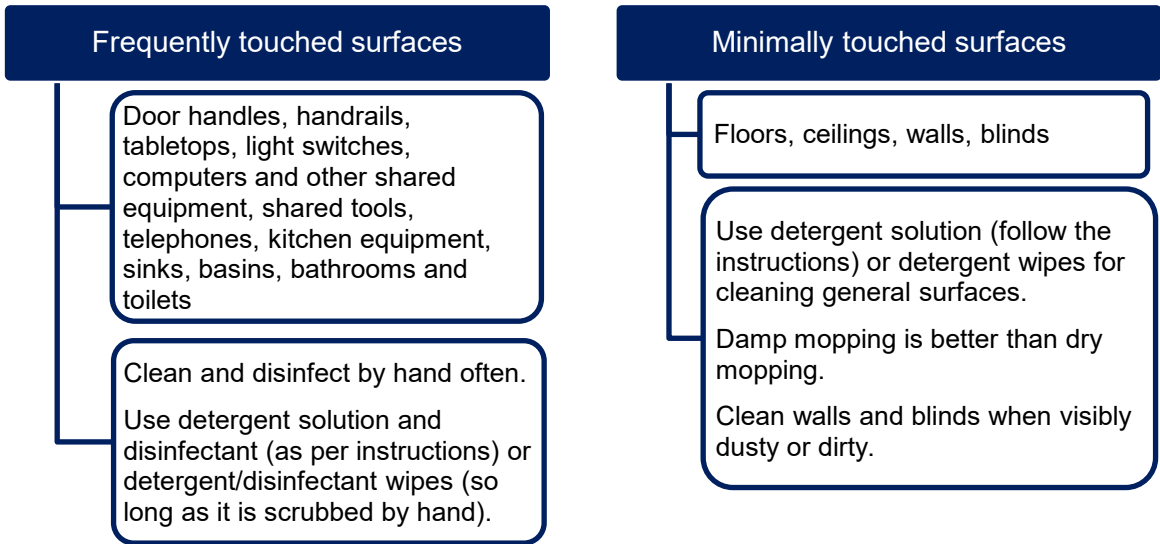
Frequently touched surfaces

- Any shared workspaces should be cleaned and disinfected at the end of each person's use of the workspace including the keyboard, mouse, and touchscreens.
- Clean and disinfect frequently touched surfaces at least twice a day using a 2-in-1 clean and disinfection or a 2-step-clean (see definitions section above).

Minimally touched surfaces

- Clean minimally touched surfaces, such as floors at least once a day.
- Clean general surfaces and fittings straight away when visibly dirty and after spills (see Figure 2).

Figure 2: Routine environmental cleaning during a COVID-19 outbreak⁵



⁵ Adapted from Australian Guidelines for the Prevention and Control of Infection in Healthcare, Canberra: National Health and Medical Research Council (2022).

Terminal cleaning of COVID-19 positive residents' rooms

Terminal cleaning of rooms used by COVID-19 positive residents requires both thorough cleaning and disinfection to remove the virus.

- Wear PPE – surgical mask, protective eyewear, gloves, and gown.
- Prepare the room, clean, disinfect and remove all equipment not required to remain in the room. Pack up personal items and store safely. Remove clutter and throw away disposable items and rubbish.
- Remove bed screens, privacy curtains, and window curtains (if fitted), and send for laundering or dry cleaning. Throw away if they are disposable.
- Follow or combine cleaning with a disinfectant process using a 2-step clean or 2-in-1 step clean and disinfection (see definitions section).
- Clean and disinfect all surfaces, furniture (including all surfaces of the bed and mattress), fittings and the ensuite.
- Vacuum or mop floor using detergent solution. Assess need for steam-cleaning carpets.
- Steam-clean soft furnishings.
- Following cleaning and disinfection, remove PPE and perform hand hygiene.
- Replace any bed/privacy screens and curtains and other fixtures and fittings as standard for the area/room.
- In a separate area, put on fresh gloves and protective eyewear, then clean and disinfect any reusable cleaning equipment (for example mop handles). Return cleaned equipment to the cleaners' room or storage area.
- Remove gloves and other PPE and perform hand hygiene.

Appendix 1 – PPE Donning and doffing procedure

Donning PPE (putting on)

- Perform hand hygiene
- Don gown or apron
- Perform hand hygiene
- Don surgical mask or PFR
- Perform hand hygiene
- Don protective eyewear/visor
- Perform hand hygiene
- Don gloves

Doffing PPE (taking off)

- Doff gloves
- Perform hand hygiene
- Doff gown or apron
- Perform hand hygiene
- Doff protective eyewear/visor
- Perform hand hygiene
- Doff surgical mask or PFR
- Perform hand hygiene