# Coronavirus disease 2019 (COVID-19)

## Infection Prevention and Control guideline

10 September 2020

Version 4.1

| Revision history | | | |
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| Version | Date | Revised by | Changes |
| 4.1 | | Infection Prevention and Control Cell | The use of particulate filter respirators with valves |

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| 4 | 2 September 2020 | Infection Prevention and Control Cell | Inclusion of definition of close contact.<br>Showering a suspected or confirmed COVID-19 patient<br>Update to 'Use of mobile phones in the healthcare setting' to include other electronic devices and further information/link to cleaning of electronic equipment<br>Inserted 'Options for staff who work in healthcare/high risk settings and are unable to wear a surgical mask'<br>Inserted requirements for face shields<br>Inserted Fit testing statements<br>Added information about the use of face masks in children under 18 years of age in health care services to align with the DHHS advice |
| 3 | 8 August 2020 | Infection Prevention and Control Cell | Inserted link to 'Disinfectants for use against COVID-19 in the ARTG for legal supply in Australia'<br>Inserted statement that Disinfectant fogging/misting is not recommended for general use against COVID-19<br>Updated physical distance section to align with updated physical distance advice, including references.<br>Updated and added information on the use of face masks to align with latest DHHS guidance<br>Updated extended use of PPE |
| 2 | 21 June 2020 | Infection Prevention and Control Cell | Update to information about:<br>Victoria's restrictions and physical distancing requirements<br>Clinical transport services (non-critical) requirements<br>Fit testing<br>Handling medical records<br>Reference to Maintenance Standard for critical areas for Victorian |

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| | | | Healthcare Facilities |
| 1 | 20 May 2020 | Infection Prevention and Control Cell | Consolidation of infection prevention and control advice into one document. Documents retired or changed:<br>Removed – Infection Prevention and Control section from Case and contact management guidelines for health services and general practitioners<br>Retired – Healthcare worker personal protective equipment (PPE) guidance for performing clinical procedures<br>Retired – Fact sheet for higher-risk healthcare workers<br>Retired – Rational use of personal protective equipment and laboratory testing |

# Contents

# 1. Acronyms and abbreviations

| | |
|---|---|
| ABHR | alcohol-based hand rub |
| AGP | aerosol generating procedure |
| ACSQHC | Australian Commission for Safety and Quality in Health Care |
| CDC | Centers for Disease Control and Prevention |
| CDNA | Communicable Diseases Network Australia |
| COVID-19 | coronavirus disease 2019 |
| EPA | Environment Protection Authority Victoria |
| HCW | healthcare worker |
| PPE | personal protective equipment |
| SARS-CoV2 | Severe Acute Respiratory Syndrome coronavirus 2 |
| TGA | Therapeutic Goods Administration |
| the department | Department of Health and Human Services |
| WHO | World Health Organization |

# 2. Background

## 3. Coronavirus disease 2019 (COVID-19)

### 4. The infectious agent

Coronaviruses are a large and diverse family of viruses that are known to cause illness of variable severity in humans, including the common cold, severe acute respiratory syndrome (SARS-CoV), and Middle East Respiratory Syndrome (MERS-CoV). Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2) has been confirmed as the causative agent of the disease now called coronavirus disease 2019 (COVID-19).

### 5. Mode of transmission

The mode or modes of transmission of COVID-19 are not yet fully understood, although based on the nature of other coronavirus infections, transmission is likely through droplet and contact routes.

Respiratory droplets are generated when an infected person coughs, sneezes or talks, and during aerosol generating procedures (AGPs). Transmission of respiratory viruses occurs when large respiratory droplets (>5microns) carrying infectious pathogens are expelled from the respiratory tract of infectious individuals and land on susceptible mucosal surfaces of the recipient. These droplets can also be transmitted by direct and indirect contact via healthcare workers (HCWs) hands and clothing, shared patient equipment and environmental surfaces.

Early recognition of cases and prompt implementation of appropriate infection prevention and control precautions is critical for preventing transmission of COVID-19. In order to minimise transmission of the virus between patients, HCWs, visitors and environmental surfaces appropriate precautions should be applied throughout any admission and until the department has declared the confirmed case to be released from isolation.

## 6. National guidelines

These infection prevention and control recommendations are based on the Communicable Diseases Network Australian (CDNA) Series of National Guidelines – Coronavirus 2019 (COVID-19) guideline <https://www1.health.gov.au/internet/main/publishing.nsf/Content/cdna-song-novel-coronavirus.htm> and the World Health Organisation (WHO) guideline, Infection prevention and control during health care when COVID-19 is suspected: Interim guidance 29 June 2020 <https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC-2020.4>.

Nationally consistent advice regarding the management of COVID-19 suspected and confirmed cases has evolved as further information regarding the specific risks of transmission associated with this infection have become known. As it becomes available, this advice has been incorporated into this guideline.

## 7. Scope of this guideline

These guidelines aim to prevent the transmission of COVID-19 through the implementation of appropriate Infection Prevention and Control measures. The principles outlined in this document apply broadly to all settings including:

Acute/Subacute Care

Residential Care, also see COVID-19 Plan for the Victorian Aged Care Sector <https://www.dhhs.vic.gov.au/aged-care-sector-coronavirus-disease-covid-19>

Community health care

Patient transport

Non-healthcare settings, for example, office buildings, retail businesses, social venues, construction and industrial workplaces

The term patient in this document also applies to residents and clients

The advice in this document pertains to HCW in close contact with patients or the patient space. For example, doctors, nurses, midwives, allied health, paramedics, students on clinical placements, personal care attendants, cleaners, food service staff and those working in other care environments such as Residential Care, Hospital in the Home (HITH) and Residential in Reach (RIR).

## 8. Definition of a Close Contact

To be considered a close contact the following criteria should be met:

face-to-face contact in any setting with a confirmed or probable case, for greater than 15 minutes cumulative over the course of a week, in the period extending from 48 hours before onset of symptoms in the confirmed or probable case

OR

sharing of a closed space with a confirmed or probable case for a prolonged period (for example, more than 2 hours) in the period extending from 48 hours before onset of symptoms in the confirmed or probable case.

To be noted:

Healthcare workers and other contacts who have taken recommended infection control precautions, including the use of appropriate PPE, while caring for a symptomatic confirmed or probable COVID-19 cases are not considered to be close contacts.

However, HCWs may be considered a close contact in the setting of an outbreak in their work environment even if they have not had had close contact with the index case.

Further information may be found on the department's website <https://dhhs.vic.gov.au/health-services-and-professionals-coronavirus-covid-19>

# 9. Healthcare Settings

## 10. Standard Precautions

Implementation of standard precautions is the primary strategy for the prevention of infectious disease transmission in a healthcare facility. Standard precautions protect HCWs from contact and droplet transmission regardless of patient infection status by assuming that every person is potentially infected or colonized with a pathogen that could be transmitted in the healthcare setting. Standard precautions include hand hygiene, appropriate use of personal protective equipment (PPE), respiratory hygiene, reprocessing of reusable medical devices, aseptic technique, sharps/waste disposal, appropriate handling of linen and routine environmental cleaning.

Standard precautions are used when treating patients who are not suspected to have COVID-19 however are necessary to help prevent exposure/infection by asymptomatic or pre-symptomatic carriers of COVID-19. These principles apply to all settings where care is provided or there is a risk of blood or body fluid exposure including acute and subacute care facilities, residential care facilities, home care settings, community settings and other settings such as mortuaries.

This document does not emphasise all aspects of standard precautions that are required for all patient care; the full description is provided in the Australian Guidelines for the Prevention and Control of Infection in Healthcare <https://www.nhmrc.gov.au/about-us/publications/australian-guidelines-prevention-and-control-infection-healthcare-2019>. Elements of standard precautions that particularly apply to preventing transmission of respiratory infections, including COVID-19, are summarised below.

### 11. Hand hygiene

Hand hygiene is the single most important strategy in preventing transmission of infections. HCWs should perform hand hygiene in accordance with the WHO 5 Moments using alcohol-based hand rub (ABHR) as per manufacturer's recommendations unless hands are visibly soiled in which case hands should be washed with liquid soap and water for 20 seconds. Patients and visitors should also be educated about the benefits of hand hygiene and encouraged and offered the opportunity to clean their hands when appropriate.

## 12. Alcohol based hand rubs (ABHR)

In the healthcare setting, hand rubs must be alcohol based and either registered with the Therapeutic Goods Administration (TGA) or be a specified hand sanitiser formulation excluded from TGA regulation for the duration of the COVID-19 pandemic. These formulations must contain only specified ingredients and meet strict labelling requirements. Manufacturers must test the alcohol concentrations of each batch, manufacture under sanitary conditions and maintain production record-keeping. Provided that the exact formulation and other requirements are followed, these formulations are permitted for use in both healthcare facilities and for consumer use. Further information can be found on the TGA website <https://www.tga.gov.au/hand-sanitisers-and-covid-19>

## 13. Gloves

Gloves are never a substitute for hand hygiene. If they become contaminated, for example, during patient care (and immediately before and after procedures), they should be removed, hand hygiene performed, and a new pair donned. Gloves should not be washed or have ABHR applied. There is no need to double glove. Such practices may affect glove integrity, result in inappropriate glove use which is

associated with unnecessary resource consumption, and result in sub-optimal hand hygiene performance.

### 14. Respiratory hygiene and cough etiquette

Cover your nose and mouth with a disposable, single use tissue when you cough or sneeze and discard immediately into a bin. If you do not have a tissue, cough or sneeze into your inner elbow. Keep contaminated hands away from the mucous membranes of the mouth, eyes and nose. Hand hygiene must be performed after coughing, sneezing, using tissues, or after contact with respiratory secretions or objects contaminated by these secretions. Patients with respiratory symptoms should be provided with a surgical mask to wear, if tolerated, and placed separately to other patients while awaiting care. Any HCW who is unwell with symptoms of acute respiratory infection should not attend work and should be tested for COVID-19, as per testing criteria. Testing criteria can be found at *Health services and general practice - coronavirus disease (COVID-19)/Current Victorian coronavirus disease COVID-19 case definition and testing criteria* <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>.

### 15. Personal protective equipment (PPE)

Staff must wear PPE when it is anticipated that there may be contact with a patient's blood or body fluids, mucous membranes, non-intact skin or other potentially infectious material or equipment. PPE should be removed in a manner that prevents contamination of the HCWs clothing, hands and the environment. Eye protection (includes safety glasses, goggles or face shields) should be worn whenever there is the risk of splash or splattering of blood or body fluids, secretions or excretions.

### 16. Routine environmental cleaning

The frequency and efficiency of routine environmental cleaning should be reviewed and increased to ensure any contaminants are promptly removed particularly in communal areas. A cleaning regime targeting frequently touched surfaces such as lift buttons, door handles, keyboards, shared telephones, handrails etc. should be implemented.

**Cleaning** means physically removing germs, dirt and organic matter from surfaces. Cleaning alone does not kill germs, but by reducing the numbers of germs on surfaces, cleaning helps to reduce the risk of spreading infection.

**Disinfection** means using chemicals to kill germs on surfaces. This process does not necessarily clean dirty surfaces or remove germs, but by killing germs that remain on surfaces after cleaning, disinfection further reduces the risk of spreading infection. **Cleaning before disinfection** is essential as organic matter and dirt can reduce the ability of disinfectants to kill germs.

## 17.Transmission-Based Precautions

Transmission-based precautions are applied in addition to standard precautions where the route of transmission may not be interrupted completely by standard precautions.

They apply to HCWs, residential care workers, community workers, families/visitors of those suspected or confirmed to be infected with COVID-19.

The key concepts:

Timely identification and isolation/quarantining of suspected or confirmed COVID-19 patients/residents/clients.

Protection of HCWs, visitors and the wider community by employing transmission-based precautions.

In line with advice from the World Health Organisation (WHO), droplet and contact precautions are the recommended transmission-based precautions for HCWs providing routine care of suspected and confirmed cases of COVID-19 infection, including during initial triaging.

Release from isolation (home or in hospital) will be determined on a case by case basis by the department in consultation with the treating clinician.

## 18. Early recognition of suspect cases and immediate action

Early recognition and prompt implementation of appropriate infection prevention and control precautions is critical for preventing transmission of COVID-19. This applies not only at triage but also to inpatients/residents/clients/HCW and visitors.

Inpatients/residents should be routinely assessed each shift for potential COVID-19 signs and symptoms.

## 19. How COVID-19 is spread

There is strong clinical and epidemiological evidence that the predominant mode of spread of COVID-19 is via respiratory droplets (produced during speaking, coughing, sneezing etc.). The droplets produced are large particles >5 microns that do not remain suspended in the air but travel a short distance before falling downwards to horizontal surfaces.

Transmission may occur:

**Directly** during close face-to-face contact (within ~1.5 metres) by exposure of the mucosae of mouth, nose or eyes. This is known as **droplet transmission**.

OR

**Indirectly** by touching surfaces or fomites contaminated by respiratory droplets and then touching the face. This is known as **contact transmission**.

**Airborne transmission** may occur during AGPs (see further information below).

## 20. Showering a suspected or confirmed COVID-19 positive patient or resident

The aerosolisation of shower mist as a potential source of infection has been proven in relation to specific pathogens such as legionella. This has not been demonstrated in transmission of COVID-19.

Any risk of infection transmission is mitigated by using a gentle stream of water from a handheld shower head, which would reduce any risk of droplet aerosolisation.

When HCWs are assisting the patient or resident in showering they should wear a mask and face shield as described in the Guide to the conventional use of PPE. <https://www.dhhs.vic.gov.au/coronavirus-covid-19-guide-conventional-use-personal-protective-equipment-ppe>. The mask should be replaced after the shower.

## 21. Use of face masks

The latest guidance on the use of personal protective equipment (PPE) for health workers is available on the department's website <https://www.dhhs.vic.gov.au/personal-protective-equipment-ppe-covid-19>.

All staff must wear a level 1 or type 1 surgical mask (at a minimum) while at work. This now includes non-public facing staff. Staff who are directly involved in treating patients must also wear eye protection.

Cloth face masks should only be worn by healthcare workers when arriving or leaving the healthcare facility otherwise goggles, eye protection, surgical masks and P2/N95 respirators should be worn as per Guide to the conventional use of PPE <https://www.dhhs.vic.gov.au/coronavirus-covid-19-guide-conventional-use-personal-protective-equipment-ppe>.

## 22. Physical distancing

Physical distancing is to be practiced within all clinical and non-clinical settings in a health service. It applies to interactions between staff, patients, visitors and contractors.

The principles of physical distancing may be applied more broadly in any workplace setting. This includes:

For enclosed rooms

- Limit the number of people present to maintain appropriate space.
- Aim for 4 square metres per person in an enclosed space.
- Use signage to indicate the safe capacity of lifts or rooms.
- While within the space, maintain 1.5 metres distance from other people.
- If 1.5 metres is unable to be maintained minimise time in close proximity or wear a mask
- Waiting room chairs should be positioned 1.5 metres apart where possible or block out interval chairs

Direct interactions between staff conducted at a distance

- for example (but not limited to): ward rounds, shift handovers and meal breaks
- Meal breaks—consider staggering break times to limit levels of staff congregation

Staff and patients to remain at least 1.5 metres apart with the exception of clinical examinations, procedures and nursing care

In residential care settings, communal activities may still proceed as long as physical distancing is practiced. This may mean smaller groups offered more frequently.

For detailed and specific information on physical distancing advice see the department's website <https://www.dhhs.vic.gov.au/clinical-guidance-and-resources-covid-19>.

For more information on Victoria's current restrictions visit the department's website <https://www.dhhs.vic.gov.au/victorias-restriction-levels-covid-19>.

## 23. Patient placement and cohorting

For COVID-19 patients, the following patient placement options should be used in the following order, according to facility resources:

24. Single room with ensuite facilities, negative pressure air handling, with or without a dedicated anteroom
25. Single room with ensuite facilities without negative pressure air handling
26. Single room without ensuite facilities and without negative pressure air handling
27. Cohorted room

If ensuite facilities are not available a dedicated toilet / commode should be used where possible, ensuring lid is closed when flushed to reduce any risk of aerosolisation. This equipment should be wiped with a disinfectant wipe or equivalent after each use. It should be clearly signed that the toilet/equipment is dedicated for the use of one patient.

# 28.Patient placement in residential care facilities

Wherever possible, a single room with ensuite facilities should be utilised for any suspected or confirmed COVID-19 cases.

PPE should be available outside the room

Special arrangements may be made for residents with dementia

Residents who are suspected for COVID-19 should:

not be cohorted while awaiting results

be nursed in a single room using transmission-based contact/droplet precautions until results are known.

Residents who have had close contact (back to 48 hours prior to of onset of symptoms) with someone who has confirmed COVID-19:

- should be quarantined in a single room for 14 days
- monitored for symptoms

if COVID-19 is confirmed in only one resident, other residents will be classified as a close contact and need to remain in quarantine.

Residents who have left the facility to attend a medical appointment or have had a hospital inpatient admission and have had no contact with a suspected or confirmed COVID-19 case do not need to be isolated or quarantined upon return unless they have symptoms as described by the case definition <https://www.dhhs.vic.gov.au/assessment-and-testing-criteria-coronavirus-covid-19>.

## 29.HCW cohorting

HCWs caring for COVID-19 positive patients/residents should be cohorted where possible to avoid potential exposure of additional HCWs and patients/residents.

In the context of a known outbreak of COVID-19, follow the department's advice for cohorting staff and residents/patients.

### 30. Patient movement

Movement of patients within a facility should be limited to essential purposes.

If a patient who is suspected or confirmed to have COVID-19 needs to be transferred to another department within the facility they should wear a surgical mask wherever possible (and if tolerated).

If being transferred to another department within the facility, the receiving department should be notified in advance.

HCWs transferring the patient will be required to wear clean PPE for droplet/contact precautions. If transferring via a lift, ensure the route is clear and the lift is used for the sole purpose of transferring the patient.

If an aerosolising generating procedure is expected to be performed on route (for example, intubated patient moved from operating theatre to ICU) staff should wear airborne and contact precautions (for example, a P2/N95 respirator).

The medical record should not be placed on the patient's bed.

### 31. Signage

Signage relating to cough etiquette/respiratory hygiene and hand hygiene should be displayed in a variety of clinical and non-clinical settings (for example, lifts, cafeterias, waiting areas, facility and ward entry points)

- Cough etiquette/respiratory hygiene poster can be found on the department's website <https://www2.health.vic.gov.au/about/publications/policiesandguidelines/cover-your-cough-sneeze-poster>
- hand hygiene posters on the National Hand Hygiene Initiative website <https://www.safetyandquality.gov.au/our-work/infection-prevention-and-control/national-hand-hygiene-initiative-nhhi/promotional-material>

Triage/Screening Clinic settings

Directions should be clearly delineated with appropriate signage

COVID-19 wards should have limited access (for example, key pass or code) and should have clear signage

Doors to suspected/confirmed COVID-19 patient rooms should remain closed and signage "Contact/Droplet" to be clearly and predominantly displayed. Examples of signage can be found on the Australian Commission for Safety and Quality in Health Care (ACSQHC) website <https://www.safetyandquality.gov.au/our-work/healthcare-associated-infection/infection-control-signage>

PPE sequencing posters should be displayed at PPE stations. An example of a PPE sequence is available on the department's website <https://www.dhhs.vic.gov.au/sites/default/files/documents/202004/COVID-19_How%20to%20put%20on%20and%20take%20off%20your%20PPE.pdf>

Where a patient may be undergoing an aerosol generating procedure signage should indicate no entry as a procedure is underway, and the number of people present in the room limited to essential people only.

# 32.Personal Protective Equipment (PPE)

## 33. Looking after yourself when wearing PPE

It is important that HCWs look after themselves during this time of increased use of PPE. Upon removal of PPE, HCWs should remember to practice hand hygiene, hydrate themselves and avoid touching their faces. Regular application of hand cream should be considered. HCWs who are sensitive to latex should ensure that they wear non-latex gloves.

## 34. Dos and don'ts of PPE use

Avoid touching PPE in use (such as re-adjusting eyewear or mask). If PPE needs to be touched, hand hygiene should be performed before and after.

Masks should only be touched by the ties.Masks should not be worn around the neck.

If wearing a face shield a mask should be worn concurrently.

## 35. PPE – single use or re-use

Where a PPE is labelled as single use it must not be reused.

Since the pandemic began there have been serious concerns regarding the supply levels of some PPE, namely masks and specifically N95/P2 respirators.

If supply levels of PPE, particularly masks, become critical, and there are no alternatives, it may be necessary for healthcare facilities to put in strategies to allow for the decontamination and reuse[5].

If a health facility does employ these strategies it is considered to be "off-label" and the health facility is responsible for any risk or associated liability. In reprocessing these items, factors to consider, aside from the removal of the infectious risk, is the damage to the integrity and function of the item which can affect its efficacy.

PPE which may be re-used are:

items that may be laundered such as re-usable gowns

goggles or face shields that are described by the manufacturer as reusable and can be cleaned and disinfected between uses

re-usable face shields should be cleaned and disinfected after each use.

Each organization should develop a local procedure for cleaning and disinfecting these items, including which products are to be used and where cleaning and disinfection will occur.

Follow the manufacturer's instructions for the number of times item can be reused knowing it will be dependent on what has occurred to the item and if damaged.

## 36. PPE – extended use

Extended use is the practice of wearing PPE for repeated encounters with several different COVID-19 patients without removing between encounters.

Extended use of PPE is dependent on the context (pandemic) and the cohort (outbreak setting).

Cohort 1--- No cases—standard precautions

Cohort 2--- Suspected or close contacts

Cohort 3--- Confirmed cases

**Face masks – provide respiratory tract protection (for example, surgical face masks, P2/N95 respirators)** must be removed and disposed of when taking breaks

P2/N95 respirator—unless damp or visibly soiled, maybe worn until it becomes hard to breath, the mask no longer conforms to the face or loses its shape or for the duration of a clinic or shift of no more than four hours.

P2/N95 respirators must be worn: (Cohort 2 and 3)

Undertaking an AGP on a person with suspected[1] or confirmed COVID-19

Settings where suspected or confirmed COVID-19 patients are cohorted, where frequent, prolonged episodes of care are provided

In uncontrolled settings where suspected or confirmed COVID-19 patients are cohorted, to avoid the need for frequent changes of N95/P2 respirators

Settings where suspected or confirmed COVID-19 patients are cohorted and there is risk of unplanned AGPs and/or aerosol generating behaviours[3]

Note: aerosol generating behaviours include screaming, shouting, crying out and vomiting.

Surgical Masks—unless damp or visibly soiled, a surgical mask may be worn for the duration of a clinic or shift of up to four hours. (Cohort 1, 2 & 3)

Surgical masks must be worn in all other clinical settings as defined by 'A guide to the conventional use of PPE' on the department's website <https://www.dhhs.vic.gov.au/coronavirus-covid-19-guide-conventional-use-personal-protective-equipment-ppe>

**Protective eyewear – provide eye mucosal protection – (for example, eye goggles, face shields*)** is now required for all clinical care.

Single use or reusable goggles or face shields must be worn for the duration of the clinic or shift under the following conditions:

Single use goggles and face shields must be removed, and disposed of when they become contaminated or after assisting with an AGP. They must be removed and disposed of before going on breaks and on return a new.

Reusable goggles and face shields must be removed, cleaned and disinfected between use according to the manufacturer's guidelines and the health facilities procedure on cleaning and disinfection of reusable items. They must also be cleaned when they become contaminated or after assisting with an AGP. They must be removed, cleaned, disinfected and stored safely before going on breaks or at the end of the shift.

Protective eyewear must be discarded if damaged, if visibility is obscured and cleaning does not restore visibility and if it can no longer be fastened securely to the head.

** Face shields should be well designed and should extend below the chin anteriorly, to the ears laterally, and there should be no exposed gap between the forehead and the shield's headpiece. All should provide a clear plastic barrier that covers the face.*

Cleaning and Disinfection of reusable goggles and face shields

Each facility should develop a guideline to suit their specific service.

Following the health facilities doffing procedure, cleaning and disinfection of reusable eye protection should be as follows:

37. Wipe the inside followed by the outside using a neutral detergent wipe*
38. Wipe the outside of the face shield/goggles with a TGA registered hospital disinfectant wipe*
39. Allow sufficient contact time (according to the manufacturers specifications)
40. If there is a residue from the disinfectant then wipe with clean water
41. Allow to air dry or dry with an absorbent, lint free cloth
42. End of shift or during a break store safely and separately from other users.

*A two-in-one wipe may be used to replace step 1 & 2.

More information regarding cleaning and disinfection of reusable goggles and face shields is available from the Australian Government Department of Health <https://www.health.gov.au/sites/default/files/documents/2020/07/coronavirus-covid-19-iceg-guidelines-on-cleaning-and-disinfection-of-face-shields.pdf >

**Gowns – provides clothing protection (for example, disposable fluid-repellant gowns)**

Extended use of gowns may occur in screening clinics where there are multiple people waiting for a COVID-19 swab.

Extended use of gowns may also occur when providing care in a cohorted COVID-19 room or ward area as long as patients do not have known co-infections/colonisations, for example, a multi-drug resistant organism.

The same gown **must not** be worn between a patient with confirmed COVID-19 and a patient who is not yet confirmed to have COVID-19. This includes patients who are deemed to be a close contact or who are suspected but not yet confirmed.

**Gloves – provides hand protection (for example, single-use disposable gloves)**

Gloves **must not** be used for multiple patients. They **must always** be changed between patients and hand hygiene performed.

## 43. Conventional use of PPE

PPE requirements are outlined in *Guidelines on the conventional use of PPE for health workers* available on the department's website <https://www.dhhs.vic.gov.au/coronavirus-covid-19-guide-conventional-use-personal-protective-equipment-ppe>.

Levels of PPE required are described as Tier 0 to Tier 3 according to the level of patient risk for COVID-19 and type of clinical procedure being undertaken.

Tier 0 Standard Precautions – Currently not applicable in Victorian healthcare facilities due to current high prevalence of COVID-19 in Victoria

Tier 1 Area of higher clinical risk – In areas where the person is NOT suspected[1] or confirmed to have COVID-19.

Tier 2 (Droplet and contact precautions) – Limited contact, for a short duration, in a controlled environment with a person who is suspected or confirmed to have COVID-19.

Tier 3 (Airborne and contact precautions) – Undertaking an AGP[2] on a person with suspected or confirmed COVID-19; Settings where suspected or confirmed COVID-19 patients are cohorted, where frequent, prolonged episodes of care are provided; In uncontrolled settings where suspected or confirmed COVID-19 patients are cohorted, to avoid the need for frequent changes of N95/P2 respirators, or Settings where suspected or confirmed COVID-19 patients are cohorted and there is risk of unplanned AGPs and/or aerosol generating behaviours[3].

*[1] Suspected includes person in quarantine or where history cannot be obtained*

*[2]AGPs = aerosol generating procedures (see list in Summary Table page 22)*

*[3] Aerosol generating behaviour = screaming, shouting, crying out, vomiting*

## 44. Tier 0 – Standard precautions (For patients assessed as low to no risk for COVID-19, that is, they do not meet the clinical criteria for COVID-19) – NOT CURRENTLY APPLICABLE

## 45. Tier 1 – Area of higher clinical risk (In areas where the person is NOT suspected or confirmed to have COVID-19)

Wherever a face-to-face appointment or clinical examination or procedure is deemed essential, all patients should be screened prior to presenting for their appointment to ensure they have none of the following risk factors:

are a suspected or confirmed case of COVID-19 and have not yet been cleared to end self-isolation

meet the current Victorian COVID-19 case definition and testing criteria (for up to date definition see the department's website <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>

- symptoms of an acute respiratory tract infection characterised by cough, sore throat, shortness of breath, runny nose or anosmia
- a fever or chills in the absence of an alternative diagnosis

have returned from overseas within the last 14 days (should be in hotel quarantine)

are a close contact of a confirmed COVID-19 case (should be in self-quarantine)

All staff must wear (at a minimum) a level 1 or type 1 surgical mask while at work. This now includes non-public facing staff. Staff who are directly involved in treating patients must also wear eye protection.

Otherwise, standard precautions apply for any encounter where the risk for COVID-19 is determined to be low or no-risk.

If there is a risk of blood or body fluid exposure/splash additional PPE (gloves and gowns) may be required.

Ensure hand hygiene is performed in accordance with the WHO My 5 Moments of hand hygiene.

## 46. Tier 2 – Droplet and contact precautions (Limited contact, for a short duration, in a controlled environment with a person who is suspected or confirmed to have COVID-19)

Droplet and contact precautions need to be in place for any limited contact, for a short duration, in a controlled environment with a person who is suspected or confirmed to have COVID-19, including during initial triaging. This means:

single-use face mask (surgical mask level 2 or 3)

eye protection (for example, safety glasses/goggles or face shield. Note: prescription glasses are not sufficient protection)

long-sleeved gown (level 2,3 or 4)

gloves (non-sterile)

If the gown is disposable and soiled, take it off and dispose of it. If the gown is reusable (non-disposable), take it off and get it reprocessed.

Masks, gloves and gowns are not to be worn outside of patient rooms (for example, between wards, break room, reception area) and are to be removed before proceeding to care for patients that are not isolated for COVID-19.

Specific area recommendations are outlined in more detail below.

## 47. Inpatient areas (hospitals)

When providing direct patient care or transferring a suspected or confirmed COVID-19 patient the following PPE should be used:

single-use surgical mask

eye protection (for example, safety glasses/goggles or face shield. Note that prescription glasses are not sufficient protection)

long-sleeved gown

gloves (non-sterile).

## 48. Operating theatres

Where a suspected or confirmed COVID-19 patient requires surgery the following applies:

For procedures without AGPs:

- PPE for surgical team as per standard precautions in the operating room
- PPE for anaesthetic and circulating teams:
  - single-use surgical mask
  - eye protection (for example, safety glasses/goggles or face shield. Note that prescription glasses are not sufficient protection)
  - long-sleeved gown
  - gloves (non-sterile)

Where AGPs are to be performed in a positive pressure operating theatre, the PPE guidance set out for AGPs should be followed.

A positive pressure operating room with adequate air changes will quickly eliminate the virus from the environment. The risk of infection to the HCW from an airborne source is low if the HCW is wearing the appropriate PPE. Air passing to adjacent areas becomes diluted and is not considered a risk.

In addition, the following should be considered:[1,2,3]

- If emergency surgery is indicated for a patient with suspected/confirmed COVID-19, where safe to do so, schedule the patient as the last surgical case to provide maximum time for adequate air changes.
- Minimise the number of staff entering and leaving the theatre.
- Minimise the amount of equipment in the room.
- Ensure air outlets are not blocked
- Place an airborne precaution sign on every door of the theatre.
- If possible, intubate patient closest to the exhaust fan located in the operating room.
- Keep the operating room door closed after the patient is intubated.

Extubate the patient in the operating room.

Allow the patient to recover in the operating room rather than in the regular open recovery facilities.

Leave the room for at least 30 minutes (or as determined by the number of air exchanges per hour – see Tier 3 – Airborne and contact precautions below for further information) after the patient has left the area.

Breathing circuit filters with 0.1–0.2 µm pore size can be used as an adjunct infection-control measure.

Dispose of a single use anaesthetic circuit or reprocess a reusable anaesthetic circuit according to organisational protocols.

Minimum maintenance schedules for air handling is described in the 'Maintenance Standard for critical areas for Victorian Healthcare Facilities' which can be found on the department's website <https://www2.health.vic.gov.au/about/publications/researchandreports/maintenance-standards-for-critical-areas-in-victorian-health-facilities>. The standards cover air change rates, air flow visualisation, HEPA filter validation, door seal checks and more. Scheduled maintenance should be reported to the Infection Control team 3 monthly ensuring patient safety.

As an adjunct to this, air movement may be mapped on an ad hoc basis (for example, using a smoke stick) from sterile field to ventilation exhaust.

## 49. Birthing suites

PPE requirements for birthing suites is outlined in the Personal protective equipment (PPE for Maternity and Neonatal services document which can be found on the department's website <https://www.dhhs.vic.gov.au/clinical-guidance-and-resources-covid-19

## 50. Ambulance/paramedics

When providing direct patient care to a suspected or confirmed COVID-19 patient the following PPE should be used:

Place a mask on the patient if assessed as at risk (and can be tolerated)

Adhere to Tier 2 droplet/contact precautions

single-use surgical mask

eye protection (for example, safety glasses/goggles or face shield. Note that prescription glasses are not sufficient protection)

long-sleeved gown or coveralls

gloves (non-sterile)

If an AGP (for example, intubation) is to be undertaken use airborne and contact precautions (for more information see below)

P2/N95 respirator (for team (driver and buddy) instead of surgical mask

## 51. Clinical transport services (non-critical)

Clinical transport staff are to screen all passengers for risk of COVID-19.

Transfer of patients in non-critical transport services is dependent on individual organisation policy and procedure. Consideration should be given to the following:

clinical appropriateness (for example, acuity of the patient)

access to required PPE as per organisation policy

ability to safely don and doff PPE (has appropriate training been provided)

ability to adequately clean the interior of the vehicle and timely access to appropriate facilities, consumables and equipment to undertake decontamination.

Apply physical distancing (1.5 metres). Place client in the rear of the vehicle.

## 52. Transferring home with family member (following testing in ED or discharged following admission for COVID-19 infection)

Driver and patient to wear a surgical mask.

Must remain in home isolation/quarantine until advised by the department.

## 53. Residential care facilities (for HCWs, family & visitors)

When providing care to residents who are low/no risk for COVID-19 a surgical mask and eye protection is required as per Tier 1. Gowns and gloves may be required as per standard precautions.

When providing direct patient care to suspected or confirmed COVID-19 residents the following PPE applies:

single-use surgical mask

eye protection (for example, safety glasses/goggles or face shield. Note that prescription glasses are not sufficient protection)

long-sleeved gown

gloves (non-sterile)

## 54. Primary care/ Ambulatory care/ Outpatient settings

All patients should be screened for COVID-19 risk factors prior to any appointments in these settings. If assessed as low or no risk for COVID19 PPE as per Tier 1 is required; standard precautions apply for all examinations.

If deemed at risk, suspected or confirmed to have COVID-19, wherever possible, appointments should be deferred until recovered or no longer at risk (for example, quarantine period is complete). If the appointment cannot be deferred, place a mask on the patient (if tolerated) and immediately place them into a single room. Use the following PPE:

single-use surgical mask

eye protection (for example, safety glasses/goggles or face shield. Note that prescription glasses are not sufficient protection)

long-sleeved gown

gloves (non-sterile).

## 55. Individual's homes (HCWs providing clinical care, social services staff)

All patients should be screened for COVID-19 risk factors prior to attending an individual's home. If assessed as low or no risk for COVID-19 PPE as per Tier 1 is required; standard precautions apply for all interactions.

PPE requirements for community service providers are available on the department's website <https://www.dhhs.vic.gov.au/information-community-services-coronavirus-disease-covid-19#personal-protective-equipment-ppe-for-community-service-providers>.

If providing direct care of a confirmed or suspected COVID-19 person in home isolation/quarantine:

single-use surgical mask

eye protection (for example, safety glasses/goggles or face shield. Note that prescription glasses are not sufficient protection.)

long-sleeved gown

gloves (non-sterile)

hand hygiene products such as alcohol-based hand rub or hand wipes should be available.

## 56.Taking nasopharyngeal swabs

Deep nasal and oropharyngeal specimens are taken for diagnosis of COVID-19. Swabs may also be taken in 'clearing' a HCW to return to work following a COVID-19 diagnosis. Use the following PPE when taking samples from symptomatic patients:

single-use surgical mask

eye protection (for example, safety glasses/goggles or face shield. Note that prescription glasses are not sufficient protection.)

long-sleeved gown

gloves (non-sterile)

## 57.Patient use of PPE

In clinical areas, communal waiting areas and during transportation, it is recommended that suspected or confirmed COVID-19 patients wear a surgical face mask if this can be tolerated. The aim of this is to minimise the dispersal of respiratory secretions, reduce both direct transmission risk and environmental contamination.

A face mask should **not** be worn by patients if there is potential for their clinical care to be compromised (for example, when receiving oxygen therapy via a mask). A face mask can be worn until damp or uncomfortable.

## 58.For children (0-2 years of age)

Children two years old and under should never wear a face mask due to choking and strangulation risks.

## 59.Children (3-17 years of age) in health services

Children three to seventeen years of age only need to wear a surgical face mask if they are suspected or confirmed COVID-19 positive if this can be tolerated, when they are:

in a primary care setting e.g. General practitioner or paediatrician's rooms

in an outpatient department

in an emergency department unless a single room can be organised

unable to be located in a single room in an inpatient area

outside of their room e.g. during transfer to another department for a medical procedure.

### 60. Tier 3 – Airborne and contact precautions

**Airborne/Contact precautions are required:**

when undertaking an AGP (see Summary Table below for list of AGPs) on a person with suspected or confirmed COVID-19 (including a person in quarantine and an unconscious patient when a COVID-19 history is unknown)

Settings where suspected or confirmed COVID-19 patients are cohorted, where frequent, prolonged episodes of care are provided

In uncontrolled settings where suspected or confirmed COVID-19 patients are cohorted, to avoid the need for frequent changes of N95/P2 respirators

Settings where suspected or confirmed COVID-19 patients are cohorted and there is risk of unplanned AGPs and/or aerosol generating behaviours

This requires the use of:

P2/N95 respirator (see fit testing and fit checking below)

long sleeved gown

gloves

eye protection (goggles or a face shield)

The care of patients with severe coughing is no longer considered to require airborne precautions because:[4]

viral load does not necessarily correlate with clinical condition

coughing predominantly generates droplets

surgical masks used by patient, if possible, and healthcare worker provide adequate protection

Other considerations when performing AGPs on suspected and confirmed COVID-19 patients:

61. AGPs should only be carried out when essential. All non-essential clinical/surgical procedures should be delayed until the acute COVID-19 infection has resolved or a suspected case has been cleared.
62. Only healthcare workers who are needed to undertake the procedure should be present.
63. Healthcare workers who would be considered at greater risk from COVID-19 should avoid performing AGPs.
64. All unnecessary equipment should be removed from the room prior to performing the AGP.
65. AGPs should be performed in single rooms with the door closed, or in negative pressure rooms if available.
66. After an AGP has been performed, the room will need to be left for the maximum period of time required to achieve a 99% reduction in air contaminants regardless of the type of room it was performed in (negative pressure or standard single room). A table for determining time required based on the number of air changes per hour is available on the Centers for Disease Control and Prevention (CDC) website <https://www.cdc.gov/infectioncontrol/guidelines/environmental/appendix/air.html>. Where this cannot be determined a minimum of 30 minutes will be required.
67. Airborne and contact precautions should be used during any cleaning and disinfection of a room where there has been an AGP performed and the time required to clear airborne contaminants **has not been** achieved. If cleaning and disinfection of the room is performed after this time, then contact and droplet precautions can be applied.
68. Cleaning and disinfection of the room should be undertaken following an AGP. See the Environmental cleaning and disinfection section below for further information.
69. PPE donning and doffing should follow your organisational procedure. Guidance is available here. <https://www.dhhs.vic.gov.au/how-put-and-take-your-ppe>

Please refer to the operating room section if performing an AGP in this environment.

**Summary Table: Health Care Worker PPE requirements for procedures performed on patients with or without suspected or confirmed COVID-19**

| Procedure type | PPE requirements | |
|---|---|---|
| | **Suspected or confirmed COVID-19**<br>**Unconscious patient with COVID-19 status unknown**<br>**Asymptomatic patients in quarantine** | **No COVID-19 symptoms**<br>**No risk factors for COVID-19**<br>**Cleared suspected or confirmed COVID-19** |
| Aerosol generating procedures:<br>tracheal intubation and extubation<br>non-invasive ventilation<br>tracheostomy<br>cardiopulmonary resuscitation[4]<br>manual ventilation before intubation<br>bronchoscopy<br>high flow nasal oxygen[1]<br>open airway suctioning<br>sputum induction<br>nebulisation, and<br>specific respiratory procedures (for example, ENT, dental and faciomaxillary).[2] | Airborne and contact precautions:<br>N95/P2 respirator<br>long sleeved gown<br>face shield or goggles<br>gloves | Tier 1 Precautions - Surgical Mask, Eye protection and standard precautions apply, type of PPE is dependent on blood and body fluid exposure but may include[3]:<br>long sleeved gown<br>gloves<br>Note: N95/P2 respirator used if tuberculosis is a clinical concern (for example, bronchoscopy) |
| All other procedures<br>all other surgical procedures[3]<br>lung function testing<br>nasopharyngeal and oropharyngeal swab<br>colonoscopy<br>general patient care activities | Contact and droplet precautions<br>surgical mask<br>long sleeved gown<br>face shield or goggles<br>gloves | Tier 1 Precautions - Surgical Mask, Eye protection and Standard precautions apply, type of PPE is dependent on risk of blood and body fluid exposure but may include:<br>long sleeved gown<br>gloves |

[1] *Refer to local organisational procedures*
[2] *Specific respiratory and upper digestive procedures (for example, ENT, dental and faciomaxillary) utilising high-speed devices (for example, drills); and endoscopy involving the respiratory tract and the upper part of the digestive tract.*
[3] *While it is recognised that many surgical procedures produce aerosols, in the context of COVID-19, these procedures should not be considered to be an AGP and should be undertaken applying routine surgical PPE requirements.*
[4] *It has been identified that there is no clear evidence to suggest that chest compressions and defibrillation are AGPs. In the healthcare setting the appropriate PPE should be available to enable healthcare workers to perform their roles safely.*

Further information regarding AGPs may be found in the Australian Government's document *Guidance on the use of personal protective equipment (PPE) in hospitals during the COVID-19 outbreak* on their website <https://www.health.gov.au/sites/default/files/documents/2020/04/guidance-on-the-use-of-personal-protective-equipment-ppe-in-hospitals-during-the-covid-19-outbreak.docx>.

## 70.Fit testing

Fit testing refers to a standardised procedure for testing the seal achieved with an P2/N95 respirator. There are two ways of performing this test, either qualitative, using a hood and a fit test solution to determine whether the wearer can smell or taste the airborne substance, or quantitatively, using an instrument to measure the particulate levels inside and outside the respirator to calculate a fit factor. If fit testing is readily available, then it should be considered, however, if it is not reasonably practicable to conduct fit testing due to a shortage of supply of respirators it may be adequate to implement a program that includes:

providing appropriate training in the selection, fit and use of a respirator, including fit checking

where possible, ensuring a range of respirator types and sizes are available for staff to try on before use

ensuring wearers are clean-shaven where the respirator touches the face

making sure no clothing or jewellery gets between the respirator and the face.

A fit-test does not remove the need for a fit-check with each mask use.

Immediate/short term recommendation:

A fit testing program may be an important adjunct where the availability of a range of types or brands and sizes of respirators can be guaranteed.

Staff should be trained in the appropriate use of P2/N95 respirators. Training should include how to safely don and doff a P2/N95 respirator and how to conduct a fit check with each use.

There should be alternatives, for example, powered air purifying respirator (PAPR), available for staff working in high-risk environments who cannot achieve a fit check.

Medium/long term recommendation:

Fit testing should be part of an organisation's on-boarding or orientation process, conducted for all staff required to use a P2/N95 respirator in the course of their work as part of a P2/N95 respirator training program.

## 71.Fit checking

Fit checking is the process of ensuring a P2/N95 respirator achieves a good seal once it has been applied and should occur each time a respirator is donned, even if fit testing has previously been undertaken.

HCWs must perform fit checks every time they put on a P2/N95 respirator to ensure a facial seal is achieved.

HCWs who have facial hair (including 1–2 day stubble) must be aware that an adequate seal cannot be achieved between the P2/N95 respirator and the wearer's face. The wearer must either shave or seek an alternative protection.

No clinical activity should be undertaken until a satisfactory fit has been achieved. Fit checks ensure the respirator is sealed over the bridge of the nose and mouth and that there are no gaps between the respirator and face. HCWs must be informed about how to perform a fit check.

The procedure for fit checking includes:

placement of the respirator on the face so the top rests on your nose and the bottom is secured under your chin.

placement of the top strap or ties over the head and position it high on the back of the head.

pull the bottom strap over your head and position it around your neck and below your ears.

place fingertips from both hands at the top of the nosepiece. Using two hands, mould the nose area to the shape of your nose by pushing inward while moving your fingertips down both sides of the nosepiece.

checking the negative pressure seal of the respirator by covering the filter with both hands or a non-permeable substance (for example, plastic bag) and inhaling sharply. If the respirator is not drawn in towards the face, or air leaks around the face seal, readjust the respirator and repeat process, or check for defects in the respirator.

always refer to the manufacturer's instructions for fit checking of individual brands and types of P2/N95 respirator.

## 72. When to discard P2/N95 respirators

P2/N95 respirators should be:

**Discarded** and **replaced** if contaminated with blood or bodily fluids

**Replaced** if it becomes hard to breathe through or if the mask no longer conforms to the face or loses its shape

**Removed** outside of patient care areas (for example, between wards, break room, reception area) and are to be removed before proceeding to care for patients that are not isolated for COVID-19.

## 73. The use of particulate filter respirators with valves

There are a number of particulate filter respirators (PFRs) available which contain exhalation valves. These include but are not limited to:

- Elastomeric masks
- N99 masks

Exhalation valves are designed to open during exhalation to allow exhaled air to exit the respirator and then close tightly during inhalation.

Exhalation valves allow the wearer to exhale more easily, however they also allow the wearer to exhale potentially infected or contaminated droplets. Exhalation valves are not appropriate for use in the case of the wearer working in a sterile field such as an operating theatre, because exhaled particles can contaminate the sterile area. While these PFRs with exhalation valves may offer equivalent protection to the user, they will not protect others if the wearer is infected. For this reason, PFRs with exhalation valves will not protect the vulnerable from the health care worker, and are not appropriate for use and fit for purpose where the required protection is often bidirectional.

While there could be a potential role for the use of PFRs with exhalation valves on wards with only COVID-19 infected patients, this does not protect against healthcare worker to healthcare worker infection. It has been reported that internationally some PFRs with valves are being utilised with staff wearing a surgical mask underneath the PFR in order to afford greater protection. This approach is however not endorsed as appropriate.

## 74. Options for staff* who are unable to wear a surgical mask due to a medical exemption

**This includes healthcare service staff, community care providers, and staff working with high risk populations in a closed environment e.g. correctional facilities, hotel quarantine and communal residences that are required to wear a surgical mask as per recommendations in Coronavirus disease 2019 (COVID-19) - A guide to the conventional use of PPE <https://www.dhhs.vic.gov.au/personal-protective-equipment-ppe-covid-19>*

Organisations should have a process in place to risk assess employees who are unable to wear a surgical mask and provide suitable alternatives. Depending on staff role this may include:

Public Facing Role/ Non-public facing role but working with colleagues in a shared space

Facilitate ability to work from home

Offer hypo-allergenic surgical masks

Try different brands of surgical masks (different materials and chemicals used in manufacturing process)

Redeployment to alternative duties that do not have a public facing role or shared space

Non-public facing supportive role working with colleagues in a separate building from public facing staff

Options as above

Commercially available re-usable cloth masks*

**Commercially available re-useable cloth masks must comply with Victorian requirements for a cloth mask which are based on the world health organisation (WHO) specifications.*
*<https://www.dhhs.vic.gov.au/sites/default/files/documents/202007/Design%20and%20preparation%20of%20cloth%20mask_0.pdf>*
*Each employee must have enough masks to change as soon as they become damp or soiled or at a minimum 2-hourly and masks must be laundered daily and stored in clean sealed packaging*
*List of manufacturers for re-usable cloth face masks*
*<https://www.business.vic.gov.au/__data/assets/pdf_file/0005/1915853/Facemasks-Manufacturers-Directory.pdf>*

# 75.Environmental and Equipment Management

## 76. Environmental cleaning and disinfection

Environmental cleaning and disinfection are crucial to preventing transmission of infection in the healthcare environment. Coronaviruses can persist on surfaces but can be effectively inactivated by appropriate cleaning and disinfection.

# 77.Required agents for cleaning and disinfection

As disinfectants are inactivated by organic material, cleaning of a patient consultation room or inpatient room should be performed first using a neutral detergent. Disinfection should then be undertaken using a chlorine-based disinfectant (for example, sodium hypochlorite) at a minimum strength of 1000ppm, or any hospital-grade, TGA-listed disinfectant with claims against coronaviruses or norovirus, <tga.gov.au/disinfectants-use-against-covid-19-artg-legal-supply-australia> following manufacturer's instructions.

A one-step detergent/disinfectant product may also be used. Ensure manufacturer's instructions are followed for dilution and/or use of products, particularly contact times for disinfection.

Follow the manufacturer's safety instructions for products used regarding precautions and use of safety equipment such as gloves, safety eye wear or gown.

The department does not recommend disinfectant fogging/misting for COVID-19 cleaning and disinfection as it does not achieve the mechanical action of cleaning and there are a number of associated work health and safety risks <https://www.safeworkaustralia.gov.au/glossary#risks>. It should not be undertaken as a response to, or element of a response to contamination of an area with COVID-19. Further information can be found at Safework Australia <https://www.safeworkaustralia.gov.au/covid-19-information-workplaces/industry-information/agriculture/cleaning#heading--23--tab-toc-what_is_disinfectant_fogging,_and_do_i_need_to_do_it?>.

# 78.Wearing PPE whilst undertaking cleaning and disinfection

There is no need to leave a room to enable the air to clear after a suspected or confirmed COVID-19 patient/resident has left the room unless there was an AGP performed. If an AGP was performed, leave the room to clear for at least 30 minutes or as determined by the number of air exchanges per hour (see

Tier 3 – Airborne and contact precautions above for further information). Collection of nose and throat swabs are not considered AGPs.

Droplet and contact precautions should be used during any cleaning and disinfection of a room where there has not been an AGP or if more than the time required to clear airborne contaminants has elapsed since the AGP was done.

Airborne and contact precautions should be used during any cleaning and disinfection of a room where there has been an AGP performed and the time required to clear airborne contaminants has **not** elapsed since the AGP was done.

## 79. Cleaning and disinfection of an inpatient room, outpatient or community setting (for example, a general practice)

The patient room should be cleaned and disinfected using the agents listed above at least once daily, following any AGP or other potential contamination and on discharge of the patient. Particular attention should be paid to frequently touched surfaces and those in closest proximity to the patient (within 1.5 metres). Frequently touched items include handrails, bedside lockers, over-bed tables, door handles, taps, toilets, IV poles, call bells, and shared equipment.

Cleaning and disinfection methods as below:

Clean surfaces with a neutral detergent and water first.

Disinfect surfaces using a disinfectant product as noted above. Follow the manufacturer's instructions for dilution and use.

A one-step detergent/disinfectant product may be used as long as the manufacturer's instructions are followed.

All linen should be washed on the hottest setting items can withstand.

Wash crockery and cutlery in a dishwasher on the hottest setting possible.

## 80.On discharge/transfer

Clean and disinfect as above and in addition:

clean, disinfect and remove any shared equipment

discard all consumable items that are unable to be cleaned

clean all surfaces of bed and mattress

clean/disinfect all surfaces, furniture and fittings

change patient privacy curtains and window curtains (if fitted) and send for laundering/dry cleaning or discard if disposable

damp mop the floor or steam clean the carpet

In the case of an outbreak of COVID-19 advice should be sought from Infection Prevention and Control experts as to whether additional, enhanced cleaning/disinfecting of the facility is warranted.

There is no requirement to wait before the next patient is seen / admitted as long as at least 30 minutes (or as determined by the number of air exchanges per hour – see Tier 3 – Airborne and contact precautions above for further information) has elapsed since an AGP was performed.

### 81. Management of equipment

Preferably, all equipment should be disposable and either single-use or single-patient-use. Where possible reusable equipment should be dedicated for the use of the case until the end of their admission or cleared of COVID-19. Equipment must be cleaned and disinfected according to manufacturer's recommendations prior to use on another patient. Equipment used in clinical areas should have a smooth, non-porous, intact surface to facilitate cleaning/disinfecting. Equipment that cannot be cleaned/disinfected between patients should not be reused.

### 82. Waste management

Segregate waste as per Environment Protection Authority Victoria (EPA) guidelines. Waste generated during healthcare provision of a COVID-19 patient is considered clinical waste as per Victorian clinical waste guidelines which are available on the EPA website <https://www.epa.vic.gov.au/about-epa/publications/iwrg612-1>. General and clinical waste may be disposed of in the usual manner as per standard precautions.

### 83. Linen

Bag linen inside the patient room. Ensure wet linen is double bagged and will not leak. Reprocess linen as per standard precautions.

In residential care/outpatient/community settings that do not use commercial linen services linen should be washed on the hottest setting items can withstand. Linen should not be taken home for laundering by relatives.

### 84. Food services

Non-essential staff should be restricted from entering COVID-19 patient care areas. Food trays should be delivered to and removed from patient rooms by HCWs directly caring for the patient. Unused food items should be discarded.

## 85.Crockery and Cutlery

Disposable crockery and cutlery are not necessary but may be useful in the patient's room to minimise the number of contaminated items that need to be removed. Otherwise, crockery and cutlery can be reprocessed as per standard precautions.

In residential care/outpatient/community settings use a dishwasher on the highest setting possible. If a dishwasher is not available wash with hot water and detergent, rinse in hot water and leave to dry.

### 86. Medical records / Patient charts

Standard precautions apply to the management of all patient charts/ medical records. Where possible patient charts / records should remain outside patient rooms.

HCWs should not perform any documentation, either paper based or electronic, without first removing gloves and performing hand hygiene. Facilities that utilise electronic systems are to ensure shared computer equipment can be cleaned and disinfected between patients.

Manage all paper medical records that have been in the patient's room as potentially contaminated and ensure hand hygiene is performed after handling.

There is no requirement to quarantine medical records prior to returning to health information services.

## 87.Healthcare workers (HCWs)

### 88. Screening

HCWs should only attend work if they are well. Prior to going to work each day, HCWs should consider whether they feel unwell and should take their own temperature.

Some health services may require HCWs to be screened (temperature and/or symptom check) on site prior to starting work.

Those working in a Victorian public health service are required to report to their manager if they have any of the following symptoms prior to starting work or at any time while at work:

temperature higher than 37.5 degrees Celsius

symptoms of acute respiratory infection, such as cough, sore throat, shortness of breath, runny nose, or anosmia or other signs outlined at *Health services and general practice - coronavirus disease (COVID-19)/Current Victorian coronavirus disease (COVID-19) case definition and testing criteria* <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>.

### 89. Self-isolation/Self-quarantine

Anyone who works in health, aged or residential care who has implemented the recommended infection control precautions, including the use of recommended PPE, while caring for a suspected or confirmed case of COVID-19, is not considered to be a close contact.

However, if a HCW develops symptoms consistent with COVID-19, they should self-isolate and seek appropriate medical care. All HCWs with fever or symptoms of acute respiratory infection should be tested for COVID-19, as per the testing criteria.

HCWs are required to self-quarantine for 14 days after overseas travel and after close contact with a confirmed case of COVID-19 without the use of appropriate PPE (see *Coronavirus disease 2019 (COVID-19), Case and contact management guidelines for health services and general practitioners/Contact Management/HCWs*) <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>.

### 90. Clearance

If a HCW is identified as a confirmed case of COVID-19, they must not return to work until they are advised by the department that they meet return to work criteria (see section 'Return-to-work criteria for health care workers and workers in aged care facilities who are confirmed cases in the *Case and contact management guidelines for health services and general practitioners/Contact Management/HCWs*) <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>).

### 91. Higher risk HCWs

HCWs who are in the most-at-risk population groups for COVID-19:

Aboriginal and Torres Strait Islander people 50 years and older with one or more chronic medical conditions

People 65 years and older with chronic medical conditions

People 70 years and older

People with compromised immune systems

Pregnant women should be considered potentially vulnerable, particularly from 28 weeks gestation.

## 92. What are the work options for healthcare workers in the higher-risk population?

Supported to work in non-clinical facing roles, or clinical roles away from suspected or confirmed COVID-19 cases.

Where possible, try to work from home, using alternative communication methods such as teleconferencing or videoconferencing.

If using shared office space, design it to ensure four square meters of space is given to each staff member. Clean work surfaces regularly.

Practice physical distancing, hand hygiene and adhere to standard precautions

Alternatively, you may want to request leave or alternate working arrangements from your employer.

In all cases, refer to your health service guidelines and apply clinical judgement when determining work restrictions. Seek advice from your health service's occupational health and safety team.

### 93. Pregnant HCWs

Pregnant women do not appear to be more likely to develop severe COVID-19 than the general population. It is expected that most pregnant women who develop COVID-19 will experience mild or moderate illness from which they will make a full recovery. However, there is currently limited information available regarding the impact of COVID-19 on pregnant women and their babies. Therefore, it would be prudent for pregnant women to practice physical distancing, ensure good hygiene practices and adhere to Standard and Transmission Based Precautions to reduce the risk of infection.

Refer to *Health services and general practice - coronavirus disease (COVID-19) / Advice for Clinicians/Vulnerable Groups* <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>.

## 94. HCW education

HCWs should know and be able to recognise the signs and symptoms of COVID-19.

HCWs should be trained in basic infection prevention and control practices that are appropriate to their roles including hand hygiene.

COVID-19 infection control training modules for HCWs are available from the Australian Government, Department of Health at <https://www.health.gov.au/resources/apps-and-tools/covid-19-infection-control-training>.

HCWs should be trained in the appropriate and correct use of PPE. Sequencing of donning and doffing is key in ensuring HCWs don't inadvertently contaminate themselves. An example demonstration video of a donning and doffing sequence is available on the department's website <https://vimeo.com/409688385/2f537daad5> and a donning and doffing sequence poster <https://www.vicniss.org.au/media/2159/covid-19_how-to-put-on-and-take-off-your-ppe.pdf>.

## 95. Uniforms and personal apparel

Uniforms are made from porous fabric and do not appear to be high-risk vectors for virus contamination and transmission.

Recommendations for managing uniforms and personal apparel:

have dedicated work clothes (these may be scrubs or other personal clothing items)

change out of work clothes at the end of the shift

wash clothes at home using a hot water wash with usual detergent.

## 96. Use of mobile phones and other electronic devices in healthcare settings

Mobile phones and other electronic devices such as tablets, laptops, touch-screens, remote controls, mouse and keyboards are potential vectors for contamination and transmission of virus:

These devices should not be taken into clinical areas unless absolutely necessary

- if required in a clinical area, consider a cover/keyboard cover that can be wiped over or a sealed plastic bag that can be discarded at the end of shift

ensure mobile phones and other electronic devices are cleaned and disinfected regularly (particularly after use in COVID-19 suspected/positive area) following the manufacturer's instructions. If no manufacturer guidance is available, consider the use of detergent/disinfectant wipes or alcohol-based wipes containing at least 70% alcohol. Further information, including cleaning of screens is available at *How to clean and disinfect after a COVID-19 case in the workplace* <https://www.dhhs.vic.gov.au/preventing-infection-workplace-covid-19#how-to-clean-and-disinfect-after-a-coronavirus-covid-19-case-in-the-workplace>

ensure hand hygiene is performed before and after using mobile phones and other electronic devices

do not answer mobile phones when you are wearing personal protective equipment

## 97.Visitors

To reduce transmission of COVID-19, visitor restrictions and screening procedures to prevent unwell visitors entering facilities may be required. Advice regarding current restrictions is available at *Health services and general practice - coronavirus disease (COVID-19) / Restrictions on hospital visitors and workers* <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>.

## 98. Signage

Clear signage should be posted at the entrance to facilities and departments indicating the importance of hand hygiene, respiratory hygiene, cough etiquette and screening.

## 99. Screening

Visitors should be screened for the following and not allowed to enter the facility (with some exemptions) if they:

have been diagnosed with COVID-19 and have not been discharged from isolation/quarantine

have arrived in Australia within 14 days of the planned visit

have recently come into contact with a person who is a confirmed case of coronavirus

have a temperature over 37.5 degrees or symptoms of acute respiratory infection.

Residents in residential care facilities may have visitors if the guidelines above are followed and in addition:

have had their annual influenza vaccination (if such a vaccine is available to them). For further information on visiting restrictions for residential care facilities, see *Influenza vaccination advice for residential aged care staff and visitors* available of the department's website <https://www.dhhs.vic.gov.au/aged-care-sector-coronavirus-disease-covid-19>

## 100. Visiting confirmed COVID-19 cases

Visiting confirmed cases of COVID-19 is discouraged due to the high likelihood of contamination of the environment of the room of an infectious confirmed case. The decision to allow visitors to a suspected or confirmed COVID-19 positive patient is to be managed on a case by case basis in conjunction with the treating medical team and health service Infection Prevention and Control team.

If visiting a suspected or confirmed COVID-19 patient visitors should be trained on the risk of transmission and the use of infection prevention measures including hand hygiene and the use of PPE.

Visitors should also be assisted to fit and remove PPE and be supervised while in the patient room to ensure compliance with infection prevention and control measures.

A log of all visitors who enter the patient room should be maintained.

# 101. Non-Healthcare Settings

These settings include office buildings, retail businesses, social venues, building and industrial workplaces.

Employers have a duty to provide and maintain, so far as is reasonably practicable, a working environment that is safe and without risks to the health of employees. This includes preventing, and where prevention is not possible, reducing, risks to health and safety associated with potential exposure to COVID-19.

Some activities in the workplace that may pose a risk of exposure to COVID-19 can include:

work that requires employees to be in close contact with others

sharing facilities such as bathrooms, kitchens and communal break areas.

using shared tools or equipment

travelling in lifts or personnel hoists

## 102. Preventing COVID-19 in the workplace

The practice of standard precautions including hand hygiene, respiratory hygiene, cough etiquette and regular environmental cleaning, as well as physical distancing and early recognition of cases should be adequate to prevent transmission of COVID-19 in non-healthcare settings.

## 103. Personal hygiene

Promote hand hygiene, cough etiquette and respiratory hygiene.

Discourage staff from working if unwell.

Provide 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.

Train staff on hand hygiene and correct use of alcohol-based hand rub.

## 104. Routine cleaning and disinfection

Clean frequently touched surfaces at least daily. These include table tabletops, door handles, light switches, desks, toilets, taps, TV remotes, kitchen surfaces and cupboard handles.

Clean surfaces and fittings when visibly soiled and immediately after any spillage. Where available, a disinfectant may be used following thorough cleaning.

Advice should be sought from DHHS regarding more intensive cleaning requirements if COVID-19 positive cases are identified.

Information on cleaning and disinfection in non-health care settings can be found in the Cleaning and disinfection to reduce COVID-19 transmission – tips for non-healthcare settings document available on the department's website <https://www.dhhs.vic.gov.au/business-sector-coronavirus-disease-covid-19>.

## 105. Use of face masks in the community

Where Victoria's current restriction level <https://www.dhhs.vic.gov.au/victorias-restriction-levels-covid-19> requires the use of a face mask ~~covering~~ there are several important points to be aware of in order to wear a face masks safely (see Face masks: whole of Victoria <https://www.dhhs.vic.gov.au/face-masks-vic-covid-19> for further information on face ~~coverings~~):

Infants and children under the age of 12 are not required to wear a face mask.

Due to risk of strangulation/choking it is not safe to use a face mask on a child under two years of age.

Perform hand hygiene before putting on and after removing the face mask

Face masks must cover the nose and mouth to be effective

Do not touch the front of the face mask while wearing it

Face masks should not be worn around the neck for eating, drinking, smoking etc

Replace if the face mask becomes damaged, damp or contaminated.

Face masks are potentially contaminated and should not be reapplied after removal. If disposable e.g. surgical mask discard in a general waste bin after each use

If reusable e.g. cloth mask wash with hot water and detergent and dry before reuse

## 106. Further information

More information is available from:

WorkSafe Victoria <https://www.worksafe.vic.gov.au/coronavirus-covid-19>

Safe Work Australia <https://www.safeworkaustralia.gov.au/covid-19-information-workplaces>

# 107. Care of the deceased if COVID-19 is suspected or confirmed

## 108. Deaths in healthcare settings

Care of the deceased death in the hospital should follow the health service's own guidelines. Use the same level of infection prevention and control precautions to manage a deceased person as before their death.

Any person having contact with the body of a person with suspected or confirmed COVID-19 must perform hand hygiene before and after interacting with the body and the environment and wear PPE appropriate for droplet and contact precautions. This includes a gown, disposable gloves, a surgical mask and appropriate eye protection.

Additional precautions may be required, for example airborne and contact precautions, if conducting an autopsy. This will be dependent upon the risk of generation of aerosols.

For more details regarding care of the deceased, refer to the guidance *Handling the body of a deceased person with suspected or confirmed COVID-19* available on the department's website <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>.

## 109. Deaths in the community

In the event of an unexpected death of a person with suspected or confirmed COVID-19 at home, family members should be advised that:

they may view the body but must continue the same precautions as when they were living with the person. Family members should not touch or kiss the body.

relevant authorities should not touch the body unless equipped with appropriate PPE upon arrival at the place of death.

they must leave the room (or vicinity) or maintain a distance greater than 1.5 metres when handling or transferring the body for transportation.

The area of death must be cleaned and then disinfected using standard household bleach. Further information can be found in the document *Cleaning and disinfecting tips for non-healthcare settings* available on the department's website <https://www.dhhs.vic.gov.au/business-sector-coronavirus-disease-covid-19>.

If there is a suspicion that the deceased may have had undiagnosed COVID-19, or on request of paramedics or other first responders, the medical practitioner certifying a death in the community should take a nasopharyngeal AND/OR oropharyngeal swab for PCR testing of the deceased for COVID-19 and advise first responders and the family of the test results. Positive test results must be notified to the Department on 1300 651 160, 24 hours a day, to allow contact tracing to occur.

## 110. Advice for funeral workers

Advice for funeral industry workers may be found in the document *Handling the body of a deceased person with suspected or confirmed COVID-19* available on the department's website <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>.

# 111. Management of an unconscious community collapse

The underlying principles for cardiopulmonary resuscitation (CPR) remain the same, what has changed with the COVID-19 pandemic is the risk to rescuers. Any attempt at resuscitation is better than no attempt. Many sudden cardiac arrests occur in the community and many will be unrelated to COVID-19. For lay rescuers who are unable or unwilling to do rescue breathing, compression only CPR (+/- defibrillation) is acceptable. After any attempts at resuscitation, please adhere to current advice about hand washing, cleaning and decontamination of equipment.

See Australian Resuscitation Council website <https://resus.org.au/>

Guidelines will be continually updated but current suggestions can be found on the International Liaison Committee on Resuscitation website <https://costr.ilcor.org/document/covid-19-infection-risk-to-rescuers-from-patients-in-cardiac-arrest>.

This includes the suggestions that:

Chest compressions and CPR have the potential to generate aerosols (weak recommendation, very low certainty evidence).

In the current COVID-19 pandemic lay rescuers consider chest compressions and public access defibrillation (good practice statement).

In the current COVID-19 pandemic, lay rescuers who are willing, trained and able to do so, consider providing rescue breaths to infants and children in addition to chest compressions (good practice statement).

# 112. Where can I find more information?

## 113. Cleaning and disinfection

Victorian Department of Health and Human Services How to clean and disinfect after a COVID-19 case in the workplace: Information for cleaners, business owners and managers <https://www.dhhs.vic.gov.au/cleaning-and-disinfecting-reduce-covid-19-transmission-building-and-construction-sites>

Australian Government Coronavirus (COVID-19) Environmental cleaning and disinfection principles for health and residential care facilities <https://www.health.gov.au/resources/publications/coronavirus-covid-19-environmental-cleaning-and-disinfection-principles-for-health-and-residential-care-facilities>

Australian Government Coronavirus (COVID-19) Information about routine environmental cleaning and disinfection in the community <https://www.health.gov.au/resources/publications/coronavirus-covid-19-information-about-routine-environmental-cleaning-and-disinfection-in-the-community>

## 114. Educational resources

### 115. COVID-19

Australian Government, Department of Health COVID-19 infection control training module for all healthcare workers <https://www.health.gov.au/resources/apps-and-tools/covid-19-infection-control-training>.

### 116. Infection prevention and control

The Australian Commission on Safety and Quality in Healthcare (ACSQHC) has developed 10 infection prevention and control modules for healthcare workers who require more detailed information on infection prevention and control. These modules are based on the content of the Australian Guidelines for the Prevention and Control of Infection in Healthcare.

An orientation module on the basics of infection prevention and control is also available. This module is suitable for staff working in both clinical and non-clinical settings.

All modules can be found on the ACSQHC website <https://www.safetyandquality.gov.au/our-work/infection-prevention-and-control/infection-prevention-and-control-elearning-modules>.

## 117. Latest COVID-19 information

Infection Control Expert Group updates: https://www.health.gov.au/committees-and-groups/infection-control-expert-group-iceg

Victorian updates: coronavirus.vic.gov.au

National updates: health.gov.au/news/latest-information-about-novel-coronavirus

International updates: who.int/westernpacific/emergencies/novel-coronavirus

WHO resources: who.int/health-topics/coronavirus

## 118. Personal protective equipment

A guide to the conventional use of PPE <https://www.dhhs.vic.gov.au/coronavirus-covid-19-guide-conventional-use-personal-protective-equipment-ppe>

The appropriate use of personal protective equipment for coronavirus (COVID-19) in the work environment FAQ <https://www.dhhs.vic.gov.au/appropriate-use-personal-protective-equipment-coronavirus-covid-19-workplaces-coronavirus-covid-19>

Procurement of personal protective equipment for workplaces in the coronavirus (COVID-19) environment <https://www.dhhs.vic.gov.au/procurement-personal-protective-equipment-workplaces-coronavirus-covid-19-environment-frequently>

COVID-19 PPE for maternity and newborn services <https://www.dhhs.vic.gov.au/coronavirus-disease-covid-19-ppe-maternity-and-neonatal-services>

Personal Protective Equipment (PPE) – infection control and supply <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19#personal>. Includes 'How to put on and take off your PPE' poster and video.

# 119. References


1. Public Health England (May 2020) Guidance—Reducing the risk of transmission of COVID-19 in the hospital setting viewed 20 May 2020 <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/reducing-the-risk-of-transmission-of-covid-19-in-the-hospital-setting>
2. Chow TT, Kwan A, Lin Z, Bai W. Conversion of operating theatre from positive to negative pressure. *Journal of Hospital Infection* (2006) 64, 371-378
3. Park J, Yoo SY, Ko JH, Lee SM, Chung YJ, Lee JH, Peck KR, Min JJ. Infection Prevention Measures for Surgical Procedures during a Middle East Respiratory Syndrome Outbreak in a Tertiary Care Hospital in South Korea. Scientific Reports (2020) 10:325
4. Australian Government Department of Health. Guidance on the use of personal protective equipment (PPE) in hospitals during the COVID-19 outbreak. Australian Health Protection Principal Council, 19 June 2020 <https://www.health.gov.au/resources/publications/guidance-on-the-use-of-personal-protective-equipment-ppe-in-hospitals-during-the-covid-19-outbreak>

120. Australian Government Department of Health, Therapeutic Goods Administration. Reuse of face masks and gowns during the COVID-19 pandemic, 21 May 2020 <https://www.tga.gov.au/behind-news/reuse-face-masks-and-gowns-during-covid-19-pandemic>