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| Coronavirus disease 2019 (COVID-19)Case and contact management guidelines for health services and general practitioners25 April 2020Version 20 |
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Contents

[Background 4](#_Toc38655916)

[Public health response objectives 4](#_Toc38655917)

[Checklist for general practitioners 5](#_Toc38655918)

[Checklist for health services 6](#_Toc38655919)

[Who should be tested for COVID-19? 8](#_Toc38655920)

[Definition of close contact 9](#_Toc38655921)

[Triaging and managing high risk patients on arrival to hospital 10](#_Toc38655922)

[Patient transfer and destination health service 10](#_Toc38655923)

[Case management 11](#_Toc38655924)

[Assessment and management of patients for COVID-19 testing 11](#_Toc38655925)

[Exclusion of COVID-19 11](#_Toc38655926)

[Clinical management of confirmed cases 12](#_Toc38655927)

[Criteria for inpatient discharge 12](#_Toc38655928)

[Release from isolation of a confirmed case 12](#_Toc38655929)

[Return-to-work criteria for health care workers and workers in aged care facilities who are confirmed cases 13](#_Toc38655930)

[Checklist of key actions for the department for confirmed cases 14](#_Toc38655931)

[Checklist of key actions for the clinical team for confirmed cases 14](#_Toc38655932)

[Signage and triage of people presenting to health and other services 14](#_Toc38655933)

[Contact management 15](#_Toc38655934)

[Close contacts 15](#_Toc38655935)

[Healthcare workers 16](#_Toc38655936)

[Infection prevention and control 17](#_Toc38655937)

[Background 17](#_Toc38655938)

[Healthcare workers 17](#_Toc38655939)

[Physical distancing measures in healthcare settings 18](#_Toc38655940)

[Transmission-based precautions 18](#_Toc38655941)

[PPE and routine patient care, during the COVID-19 emergency 19](#_Toc38655942)

[Environmental management 22](#_Toc38655943)

[Care of the deceased if COVID-19 is suspected or confirmed 24](#_Toc38655944)

[Laboratory testing for COVID-19 25](#_Toc38655945)

[Prioritisation of testing 25](#_Toc38655946)

[Specimens for testing 25](#_Toc38655947)

[Specimen collection and transport 26](#_Toc38655948)

[Handling of specimens within diagnostic laboratories 27](#_Toc38655949)

[Information on testing for coronavirus at VIDRL 27](#_Toc38655950)

[Governance 28](#_Toc38655951)

[International response 28](#_Toc38655952)

[Public Health Incident Management Team 28](#_Toc38655953)

[Communications and media 28](#_Toc38655954)

[Role of Ambulance Victoria 28](#_Toc38655955)

[Prevention 29](#_Toc38655956)

[Risk management at ports of entry 30](#_Toc38655957)

[The disease 31](#_Toc38655958)

[Infectious agent 31](#_Toc38655959)

[Reservoir 31](#_Toc38655960)

[Mode of transmission 31](#_Toc38655961)

[Incubation period 31](#_Toc38655962)

[Infectious period 31](#_Toc38655963)

[Clinical presentation 32](#_Toc38655964)

[Information resources 32](#_Toc38655965)

# Background

Coronavirus disease 2019 (COVID-19) was first identified in Wuhan City, Hubei Province, China in December 2019. Updated epidemiological information is available from the World Health Organization (WHO) and other sources. Current information on COVID-19 is summarised in a section at the end of this guideline entitled ‘The disease’.

These guidelines and a range of other resources for health services and general practitioners can be found at the department’s [Coronavirus disease (COVID-19) website](https://www.dhhs.vic.gov.au/novelcoronavirus) <https://www.dhhs.vic.gov.au/novelcoronavirus>.

A hotline is available for the general public who have questions or concerns – 1800 675 398.

# Public health response objectives

This situation is evolving rapidly with new clinical and epidemiological information. Following the declaration of a State of Emergency in Victoria on Monday 16th March and subsequent Directions, the Department of Health and Human Services’ (the department) public health response has now transitioned from the Initial Containment stage (which encompassed an inclusive approach to identifying cases and a precautionary approach to the management of cases and contacts), to the Targeted Action stage, with implementation of physical distancing measures and shutdowns of non-essential services to slow disease transmission, prioritisation of diagnostic testing to critical risk groups, and adoption of sustainable strategies and models of care.

The overall objectives of the public health response are to:

1. Reduce the morbidity and mortality associated with COVID-19 infection through an organised response that focuses on containment of infection.
2. Rapidly identify, isolate and treat cases, to reduce transmission to contacts, including health care, household and community contacts.
3. Characterise the clinical and epidemiological features of cases in order to adjust required control measures in a proportionate manner.
4. Minimise risk of transmission in healthcare and residential aged care environments, including minimising transmission to healthcare and residential aged care workers.

# Checklist for general practitioners

The following actions should be undertaken when a patient presents to a general practice or community health service who may be a case of COVID-19:

1. Provide a single-use surgical mask for the patient to put on.
2. Isolate the patient in a single room with the door closed.
3. Any person entering the room should don droplet and contact precautions personal protective equipment (single-use surgical mask, eye protection, gown and gloves).
4. Conduct a medical assessment, and focus on:
	1. the date of onset of illness and especially whether there are symptoms or signs of pneumonia
	2. contact with confirmed cases of COVID-19
	3. precise travel history and occupation
	4. history of contact with sick travellers or other people or overseas health care facilities
	5. work or residence in a moderate or high risk setting for transmission
	6. residence in a geographically localised area with elevated risk of community transmission, as defined by the department.
5. Determine:
	1. Does the patient need testing for COVID-19? Refer to *Who should be tested for COVID-19*
	2. Does the patient require further assessment in an emergency department? Where there is suspicion of pneumonia or the patient is quite unwell, a suspected case of COVID-19 should be tested and managed in hospital.
	3. If further assessment is required, how will the patient be transferred?

**The department no longer needs to be notified about suspected cases (only confirmed cases).**

If the patient is not tested – advise them to stay at home until their symptoms have resolved, 72 hours have elapsed since the last fever and they feel well.

1. If a suspected case of COVID-19 is unwell enough to require ambulance transfer to hospital, call Triple Zero (000) in the normal manner but advise that the patient may have suspected COVID-19 infection. Ambulance transfers do not need to be approved by the department. Where there is no clinical need for ambulance transfer, alternative means of transport should be used including private car driven by the case or an existing close contact (not bus, taxi or Uber).
2. Remember to provide a surgical face mask for the patient and driver if being transferred to an emergency department by any means.
3. If a patient is tested in the community by a general practitioner, the general practitioner should **undertake testing** as indicated in this guide. Ensure arrangements are in place for contacting the patient with the test result – this is the responsibility of the general practitioner.
4. **Advise a suspected case they must self-isolate at home**, and provide a factsheet for suspected cases from the department’s COVID-19 [webpage](https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19).
5. Undertake **cleaning and disinfection** of the room as detailed in this guide.
6. When the test result is available:
	1. **If the test is negative** for COVID-19 provide the negative result from the laboratory to the patient and manage any other cause of illness you have assessed as requiring treatment. Consider advising the patient in the normal manner that admission to hospital and further testing may be required if they deteriorate.
	2. **If the test is positive** for COVID-19, call the department on 1300 651 160 to confirm that the department is aware of the result and agree on next steps for management of the patient.

# Checklist for health services

The following actions should be undertaken when a patient presents to an emergency department or urgent care centre who may be a suspected case of COVID-19:

1. Staff at triage points should wear personal protective equipment for droplet and contact precautions (single-use surgical mask, eye protection, gown and gloves).
2. Triage high risk patients to a separate isolated waiting area away from low risk patients, staff and general public.
3. Provide a single-use surgical mask for the patient to put on.
4. Isolate the patient in a single room with the door closed.
5. Any person entering the room should don droplet and contact precautions personal protective equipment (single-use surgical mask, eye protection, gown and gloves).
6. Conduct a medical assessment, and focus on:
	1. the date of onset of illness and especially whether there are symptoms or signs of pneumonia
	2. contact with confirmed cases of COVID-19
	3. precise travel history and occupation
	4. history of contact with sick travellers or other people or overseas health care facilities
	5. work or residence in a moderate or high risk setting for transmission
	6. residence in a geographically localised area with elevated risk of community transmission, as defined by the department.
7. Determine whether the patient fits the current criteria for testing. Refer to *Who should be tested for COVID-19*
8. If admission is not required and the patient can return to the community:
	1. for patients that do **not** fit the current criteria for testing for COVID-19 – advise the patient to stay at home until their symptoms have resolved and they feel well. Those with fever should stay at home until at least 72 hours (3 days) after the last fever.
	2. for patients that fit the current criteria for testing - the notifying clinician should **advise the patient to self-isolate at home** (if not already) and minimise contact with other people. Provide a factsheet for suspected cases from the department’s [coronavirus disease (COVID-19) website](https://www.dhhs.vic.gov.au/information-health-services-and-general-practitioners-novel-coronavirus) <https://www.dhhs.vic.gov.au/information-health-services-and-general-practitioners-novel-coronavirus>
	3. consider advising the patient in the normal manner that admission to hospital and further testing may be required if they deteriorate
	4. ensure **arrangements are in place for the patient to be contacted with the test result** – this is the responsibility of the testing clinician and health service.
9. If admission is required:
	1. maintain infection control precautions and actively consider taking multiple samples for testing including from lower respiratory tract specimens.
10. When the test result is available:
	1. **if the test is positive** for COVID-19, provide the result to the patient. The health service infectious diseases lead, or senior clinician should call the department on 1300 651 160 to confirm that the department is aware of the result and to provide any additional clinical information.
	2. **if the test is negative** for COVID-19, provide the negative result to the patient and manage any other cause of illness you have assessed as requiring treatment.
	3. consider advising the patient in the normal manner that admission to hospital and further testing may be required if they deteriorate and no other cause is found.

# Who should be tested for COVID-19?

**People without symptoms should not be tested except in special circumstances such as recovered cases wishing to return to work in a healthcare facility or aged care facility or where requested by the department as part of outbreak management or enhanced surveillance.**

**Patients who meet the following clinical criteria should be tested:**

Fever OR chills in the absence of an alternative diagnosis that explains the clinical presentation\*

OR

Acute respiratory infection (e.g. cough, sore throat, shortness of breath, runny nose or anosmia)

Note: In addition, testing is recommended for people with new onset of other clinical symptoms consistent with COVID-19\*\* AND who are close contacts of a confirmed case of COVID-19; who have returned from overseas in the past 14 days; or who are healthcare or aged care workers

\*Clinical discretion applies including consideration of the potential for co-infection (e.g. concurrent infection with SARS-CoV-2 and influenza)

\*\*headache, myalgia, stuffy nose, nausea, vomiting, diarrhoea

**Confirmed case:**

A person who tests positive to a validated SARS-CoV-2 nucleic acid test or has the virus identified by electron microscopy or viral culture.

**Only confirmed cases need to be notified to the department. Notify the department of confirmed cases as soon as practicable by calling 1300 651 160, 24 hours a day.**

**General comments:**

* All patients being tested for COVID-19 should home isolate until test results are available. All patients should attend an emergency department if clinical deterioration occurs.

## Definition of close contact

For the purposes of testing, the department advises a precautionary understanding of close contact. In keeping with definitions of close contact developed in other jurisdictions, close contact means greater than 15 minutes face-to-face, cumulative, or the sharing of a closed space for more than two hours, with a confirmed case without recommended personal protective equipment (PPE). Recommended PPE includes droplet and contact precautions.

Contact needs to have occurred during the period of 48 hours prior to onset of symptoms in the confirmed case until the confirmed case is no longer considered infectious to be deemed close contact.

Examples of close contact include:

* living in the same household or household-like setting (for example, a boarding school or hostel)
* direct contact with the body fluids or laboratory specimens of a confirmed case without recommended PPE (droplet and contact precautions)
* a person who spent two hours or longer in the same room (such as a GP clinic or ED waiting room, a school classroom; an aged care facility)
* a person in the same hospital room when an aerosol generating procedure (AGP) is undertaken on the case, without recommended PPE for an AGP (airborne and contact precautions)
* Aircraft passengers who were seated in the same row as the case, or in the two rows in front or two rows behind a confirmed COVID-19 case.
* For aircraft crew exposed to a confirmed case, a case-by-case risk assessment should be conducted by the airline to identify which crew member(s) should be managed as close contacts. This will include:
	+ Proximity of crew to confirmed case
	+ Duration of exposure to confirmed case
	+ Size of the compartment in which the crew member and confirmed case interacted
	+ Precautions taken, including PPE worn, when in close proximity to the confirmed case
	+ If an aircraft crew member is the COVID-19 case, contact tracing efforts should concentrate on passengers seated in the area where the crew member was working during the flight and all of the other members of the crew.
* Close contacts on cruise ships can be difficult to identify, and a case-by-case risk assessment should be conducted to identify which passengers and crew should be managed as close contacts.
* Face-to-face contact for more than 15 minutes with the case in any other setting not listed above.

Healthcare workers (HCWs) and other contacts who have taken recommended infection control precautions, including the use of recommended PPE (droplet and contact precautions for the purposes of this contact definition), while caring for a suspected or confirmed case of COVID-19 are **not** considered to be close contacts.

# Triaging and managing high risk patients on arrival to hospital

A patient is considered high-risk for COVID-19 if:

* presenting with acute respiratory tract infection
* presenting with fever (≥38 degrees), without another immediately apparent cause (e.g. UTI or cellulitis)
* they have travelled overseas and have onset of symptoms within 14 days of return
* they have been in close contact with a confirmed coronavirus (COVID-19) case with onset of symptoms within 14 days

they are a confirmed coronavirus (COVID-19) case (this includes healthcare workers who are known confirmed cases and are attending for clearance testing to determine when they can return to work).

## Patient transfer and destination health service

The following is advice on where patients should be managed:

* patients should be assessed and managed by the health service they present to
* transport of patients to other facilities should be avoided unless medically necessary
* ambulance transfer should be reserved for cases where there is clinical need; alternative means of transport should be used for other cases including a private car driven by the case or an existing close contact (not bus, taxi or Uber).
* suspected or confirmed cases in the community who require assessment or admission at a hospital should be seen and assessed at the nearest emergency department

**Arrival to hospital and triage**

Upon arrival to the emergency department, patients assessed as high-risk should be triaged to a separate isolated section of the waiting area, away from the general public and provided with a surgical mask. Assessment centres can support the management of high-risk patients if they are in place at the health service. All staff at triage points and assessment centres should be wearing PPE required for suspected or confirmed cases of coronavirus (COVID-19).

**Ambulance triage**

Patients assessed as high-risk and arriving by ambulance should be triaged to an isolated section of the waiting area away from the general public and be provided with a surgical mask as appropriate. For patients who cannot go to the waiting area (for example, stretcher, ongoing clinical care), they should remain in the ambulance vehicle until their triage and cubicle allocation is completed. Once allocated, the patient should move directly from the ambulance to the cubicle, and not stop in the corridors.

**Emergency department admissions**

A dedicated floor plan should be established that clearly designates areas assigned for high-risk patients within the emergency department. If able, rostering of staff to these areas to support the separation and resourceful use of PPEs should be considered. For staff working directly in the area of suspected or confirmed cases of coronavirus (COVID-19), PPE should be worn accordingly. Designated areas for donning and removing PPE should be in place.

**Patient transfers**

Should high-risk patients need to be moved outside of the initial isolation section, they should be transferred using a route that minimises contact with the general hospital population including clinicians (for example, dedicated lift service, external path). Staff involved in patient transfer should wear PPE required for suspected or confirmed cases of coronavirus (COVID-19). Physical distancing rules apply during all stages of the transfer.

# Case management

## Assessment and management of patients for COVID-19 testing

A checklist above indicates key actions for the assessment of patients for testing.

Victorian health services and general practitioners are only required to notify the department of **confirmed** cases.

The medical assessment of the patient should focus on the following:

* the date of onset of illness and especially whether there are symptoms or signs of pneumonia.
* contact with confirmed cases of COVID-19
* precise travel history and occupation
* history of contact with sick travellers or other people or overseas health care facilities.
* work or residence in a high risk setting for transmission.

People awaiting results of tests for COVID-19 should be isolated until COVID-19 is excluded.

People meeting testing criteria who are not tested for COVID-19 or any other infectious disease should self-isolate until the acute symptoms have resolved and it has been 72 hours since the last fever.

**Further information is available for healthcare services managing healthcare workers with suspected or confirmed COVID-19 in the “Interim guide for healthcare services managing healthcare workers with suspected or confirmed COVID-19” on the** [**department website**](https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19https%3A/www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19) **<** [**https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19**](https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19)**>.**

## Exclusion of COVID-19

For patients with fever or respiratory tract infection who are not hospitalised, a single negative nasopharyngeal/oropharyngeal swab (plus sputum if possible) is sufficient to exclude COVID-19 infection.

Repeat testing (especially of lower respiratory tract specimens) in clinically compatible cases should be performed if initial results are negative and there remains a high index of suspicion of infection.

There is no strong evidence to support a required time interval between exclusion swabs or the need for multiple practitioners performing the swab. Health services should apply discretion and consider the need for this on a case by case basis.

A patient who developed symptoms while in self-quarantine, for example because of recent overseas travel or contact with a confirmed case, who has then tested negative for COVID-19 should continue their quarantine period but be considered for a second test if they deteriorate and require hospitalisation.

## Clinical management of confirmed cases

This is at the discretion of the treating team and at the present time is supportive care only.

Admission to hospital should occur when medically necessary or when directed by the department in order to reduce the risk of transmission or facilitate testing for clearance, such as if the case resides in a communal environment. Emerging information suggests COVID-19 may be associated with a delayed deterioration in clinical status in some cases.

Interim clinical guidelines for the management of patients with COVID-19 have been released by the following peak professional bodies:

* [The Australasian Society for Infectious Diseases (ASID)](https://www.asid.net.au/resources/resources)
* [The Australian and New Zealand Intensive Care Society (ANZICS)](https://www.anzics.com.au/coronavirus-guidelines/)

Persons not requiring hospitalisation who have confirmed COVID-19 can be managed at home. The United States Centers for Disease Control and Prevention (USCDC) has developed principles for such home care management at [https://www.cdc.gov/coronavirus/COVID-19/guidance-home-care.html](https://www.cdc.gov/coronavirus/2019-ncov/guidance-home-care.html).

## Criteria for inpatient discharge

A confirmed case may be discharged if the following criteria are met:

* a senior member of the treating team (or appropriate consulting team) has determined the patient is clinically improved and well enough to be managed in the community, and
* appropriate infection control measures can be implemented in the community or household setting to ensure risk to other household members can be managed, and
* the department is notified about the pending discharge

If a patient is returning to a high-risk setting, consideration should be given for the requirement to be PCR negative on at least two consecutive respiratory specimens collected at least 24 hours apart at least 7 days after symptom onset, prior to going into the higher risk setting. This can be discussed with the department on a case-by-case basis if required.

A confirmed case in the home must remain in isolation until criteria for release from isolation are met.

## Release from isolation of a confirmed case

The department will determine when a confirmed case no longer requires to be isolated in their own home.

Release from isolation will be actively considered when all of the following criteria are met:

* the person has been afebrile for the previous 72 hours, and
* at least **ten days** have elapsed after the onset of the acute illness, and
* there has been a noted improvement in symptoms, and
* a risk assessment has been conducted by the department and deemed no further criteria are needed

In the event that a confirmed case meets the above criteria during an inpatient hospital stay, the department will consult with the patient’s treating clinician (and if applicable the infectious diseases or infection prevention and control team) to determine whether release from isolation is appropriate. For patients with severe disease, requiring hospital admission, consideration will be given to the need for testing prior to release from isolation or a longer period of isolation.

Healthcare workers and workers in aged care facilities who meet the above criteria can be released from isolation. However, these individuals must meet the following additional criteria before they can return to work.

## Return-to-work criteria for health care workers and workers in aged care facilities who are confirmed cases

Healthcare workers and workers in aged care facilities (HCWs) must meet the following additional criteria before they can return to work in a healthcare setting or aged care facility:

* PCR negative on at least two consecutive respiratory specimens collected at least 24 hours apart after the acute illness has resolved.

Testing for return-to-work clearance can commence once the acute illness has resolved, provided this is at least **7 days** after the onset of illness. Testing should be arranged by the healthcare worker’s employer, the healthcare or aged care worker’s treating doctor, or at a coronavirus assessment centre if testing by the treating doctor is not feasible. The patient should inform the department of where they intend to be tested. The department will follow up test results and provide a letter indicating that the patient can return to work once the return-to-work criteria are met.

In the event that a healthcare worker or aged care worker returns a positive PCR result on either of their first two consecutive clearance tests (performed at least 24 hours apart), wait 3 days before performing another “round” of two tests, at least 24 hours apart. If a positive PCR result is returned in this “second round” of testing, a third round of testing should be undertaken after a further 5-7 days. In the event that respiratory specimens remain persistently PCR positive, a decision on suitability to return to work should be deferred until 21 days post symptom onset. At this time, a decision should be made on a case-by-case basis after consultation between the person’s treating doctor, the testing laboratory and the department.

The following criteria should be considered in this discussion:

* the person has met the criteria for release from isolation, AND
* the person’s symptoms have completely resolved, AND
* at least 21 days have passed since onset of the acute illness, AND

consideration should be given to mitigating circumstances such as the characteristics of the patients/residents which the person would care for at work (e.g. elderly or immunocompromised patients/residents) and whether the healthcare worker is immunosuppressed. In certain high-risk settings (such as oncology wards), it may be appropriate for the HCW not to return to this setting until they have returned two negative swabs at least 24 hours apart. The timing of repeat swabs should be discussed with the treating doctor and the department.

The following procedures should be followed when performing return-to-work clearance testing:

* all HCWs should seek medical care from a medical practitioner. They should not be their own testing or treating clinician.
* all HCWs presenting for testing must wear a single use face mask and comply with infection control standards applicable to a confirmed case of COVID-19 until the department determines that release from isolation criteria are met
* specimens should be collected using droplet and contact precautions
* pathology requests must be clearly labelled with the following content under ‘clinical information’ – **‘URGENT: HCW CLEARANCE TESTING, please notify result to DHHS**’ and results should be copied to the department’s COVID-19 Response team and the HCW’s treating physician

HCWs attending for return-to-work testing should be triaged as priority patients for testing.

The department will follow up the results of return-to-work testing and will contact healthcare and aged care workers regarding next steps. Once the return-to-work criteria are met, the department will provide healthcare and aged care workers with a letter confirming that they can return to work.

## Checklist of key actions for the department for confirmed cases

* Confirm the diagnosis with testing laboratory.
* Contact the treating team/GP to confirm that the confirmed case is isolated and agree the management of the patient.
* Contact the confirmed case +/- parent/guardian (for cases under 18 years) to collect relevant social, clinical and epidemiological information.
* Identify close contacts and recommend immediate quarantining of any close contacts.
* Identify any potential exposure sites and assess whether any further action is required.
* Undertake all public health response activities including risk communication and sharing of relevant resources.

## Checklist of key actions for the clinical team for confirmed cases

* If a patient is in the community at the time of diagnosis and if clinically necessary, the department will organise with the nearest appropriate health service to admit the patient, in order for care to be provided in hospital or via Hospital in the Home.
* For patients who do not require admission to hospital or Hospital in the Home, clinical teams only need to provide patients with the initial feedback of their results, information and counselling and usual advice to seek medical attention if their condition deteriorates. Clinical teams do not need to routinely contact cases unless clinically appropriate.
* Notify the department on 1300 651 160 as soon as possible (within 24 hours) if a patient becomes critically unwell, in the case of intensive care admission, or death.
* Commence list of all HCWs and visitors who enter the case’s room. (If the case is at home and being visited by Hospital in the Home only a list of HCWs required.)

Advise HCWs who provide care for the case (even with appropriate use of PPE) to self-monitor for symptoms of COVID-19 for 14 days after their last contact with the case.

## Signage and triage of people presenting to health and other services

Diagnosis and management of COVID-19 must be undertaken by medical practitioners in accordance with the current guidelines from the Victorian Department of Health and Human Services. This will occur primarily in general practice and hospitals.

However, to reduce risks to service providers and detect people with COVID-19 risk factors, rapid pre-assessment is indicated by a broader range of service providers prior to the provision of a service. This pre-assessment may include enquiring about recent travel history and relevant symptoms. Only health-care services who manage unwell patients (such as general practice, hospitals and ambulance services) are expected to assess for symptoms.

For examples of posters that can be used, see the [department’s website](https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19) <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>

# Contact management

The department will conduct contact tracing for confirmed cases in the community and will seek assistance from a health service in relation to any contact tracing required for health service staff.

## Close contacts

### Self-quarantine

The following groups are now required to self-quarantine:

* close contacts of confirmed cases until 14 days after last close contact with the confirmed case.
* As of midnight, 28 March 2020, all travellers arriving into Melbourne from overseas will be quarantined for two weeks in hotel rooms and other accommodation facilities after submitting an Isolation Declaration Card. Interstate travellers can return to their home states after fulfilling the mandatory quarantine requirements.

Self-quarantine means remaining at home except in cases of medical emergency. This means a person recommended to self-quarantine:

* must not visit public settings or mass gatherings.
* must not use public transport.
* must not attend settings like health services, residential aged care facilities or educational settings.

This requirement for people who are in quarantine not to attend health services, includes a requirement that they do not attend a family member who is a confirmed case in a Victorian health service.

Health services and GPs are not required to provide a certificate of medical clearance to those who have completed the required 14 days self-quarantine.

Close contacts should not travel within Australia or internationally within the 14 days after last contact with the infectious case.

### Symptomatic close contacts

Testing for COVID-19 is not indicated unless symptoms develop.

The approach to a symptomatic close contact requires an assessment by a treating clinician. The next steps depend on whether a treating clinician has identified the patient as having a non-infectious cause, a likely non-respiratory infectious cause, or an acute respiratory illness.

**For a symptomatic close contact during the 14-day quarantine period, the department will:**

* Advise the close contact to attend a suitable general practice, emergency department or coronavirus assessment centre for evaluation with a single-use face mask on and to identify themselves immediately on arrival.

Where a close contact has an illness during the 14-day period of quarantine after the step above, the treating clinician will:

* use a single room and appropriate PPE as for a suspected case
* test for COVID-19 and manage the person as a suspected case.
* If the test is positive, the person will be managed as a confirmed case. Notify the department.

**Where the illness is diagnosed as acute respiratory illness:**

* If testing for COVID-19 is negative and the treating clinician has diagnosed an acute respiratory illness or an illness that is highly compatible with COVID-19, the close contact may then require a subsequent test at a short period thereafter.

**Where the illness is diagnosed as likely to be some other form of infection or is not an infection:**

* If testing for COVID-19 is negative and the treating clinician has diagnosed some other infection or a non-infectious cause, then the treating team should consider, in conjunction with an infectious disease specialist, whether testing of relevant specimens such as urine and faeces for COVID-19 might be of value or whether evidence is now clear for an alternative cause, including legionellosis.
* The close contact can be advised to continue to self-quarantine until a full 14 days have expired from date of last close contact with confirmed case.

### Checklist of key actions for the department for close contacts

For all close contacts the department will:

* Advise self-quarantine including restriction on travel until 14 days from the last contact with confirmed case.
* Counsel close contacts about risk and awareness of potential symptoms.
* Provide a close contact fact sheet
* Make regular contact with the close contact to monitor for any symptoms, either through SMS, email or telephone call.
* If after 14 days of quarantine (from the last contact with a confirmed case), the contact remains asymptomatic, the individual is cleared and may cease quarantine.
* If a school or employer requests confirmation from the department that the quarantine period has been met, the department will provide evidence with the consent of the individual.

## Healthcare workers

HCWs and other contacts who have taken recommended infection control precautions, including the use of recommended PPE, while caring for a confirmed case of COVID-19 are not considered to be close contacts. However, they should be advised to self-monitor and if they develop symptoms consistent with COVID-19 infection they should isolate themselves. See also Infection prevention and control.

Any healthcare workers who is unwell with a compatible illness should not attend work and should seek appropriate medical care. All healthcare workers with fever or symptoms of acute respiratory infection should be tested for COVID-19, as per the testing criteria.

**Hospital** workers currently must not enter or remain at a hospital in Victoria if:

* the person has been diagnosed with COVID-19, and has not yet met the criteria for discharge from isolation OR
* if the person has travelled/arrived in Australia from any country in the past 14 days OR
* has had known contact with a person who is a confirmed COVID 19 case in the previous 14 days OR

has a fever or symptoms of acute respiratory infection.

The current Directions and accompanying frequently asked questions can be viewed on the department’s website at <<https://www.dhhs.vic.gov.au/coronavirus>>

Further criteria apply to healthcare workers who become confirmed cases before they can return to work in healthcare settings – see Return-to-work criteria for health care workers and workers in aged care facilities who are confirmed cases.

# Infection prevention and control

## Background

Infection prevention and control recommendations are based on the *Communicable Diseases Network Australia Series of National Guidelines – Coronavirus Disease 2019 (COVID-19) guideline*, and WHO guideline [*Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected: Interim guidance January 2020*](https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-%28ncov%29-infection-is-suspected) <https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected>.

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.

To reduce transmission of COVID-19, there are now general restrictions on who can visit or work at a Victorian hospital and how long visits can last. Screening procedures to prevent unwell visitors entering hospitals are also being implemented. The current restrictions are available on the [department’s website](https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19) <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>.

## Healthcare workers

Healthcare workers are required to self-quarantine for 14 days after overseas travel and self-quarantine for 14 days after close contact of a confirmed case of COVID-19 (see Healthcare workers in Contact management section). If a healthcare worker 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’).

Healthcare workers should only attend work if they are well. Prior to going to work each day, healthcare workers should consider whether or not they feel unwell and should take their own temperature.

Those working in a Victorian public health services are required to report to their manager if they have 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 shortness of breath, cough, sore throat or nasal congestion.

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

### Looking after yourself when wearing PPE

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

### Using mobile phones in healthcare settings

People touch their phones as frequently as their faces. Mobile phones may be dirty, so please:

* ensure mobile phones are cleaned regularly with disinfectant wipes
* ensure hands are cleaned before and after using mobile phone
* do not answer mobile phones when you are wearing PPE
* consider placing your mobile phone in a clear sealed bag at the commencement of each shift and discarding the bag prior to going home as an additional precaution.

## Physical distancing measures in healthcare settings

Physical distancing is to be practiced within clinics and wards, between staff and patients, and between staff and staff. This includes:

* waiting room chairs separated by at least 1.5 metres
* direct interactions between staff conducted at a distance
* staff and patients to remain at least 1.5 metres apart with the exception of clinical examinations and procedures
* hospital cafeterias may only provide takeaways.

## Transmission-based precautions

For the purposes of PPE, healthcare workers are people in close contact with patients or the patient space. For example, doctors and nurses and cleaners who enter the patient’s room or cubicle are included as healthcare workers. Staff who work in non-clinical areas who do not enter patient rooms are not included as healthcare workers for this purpose.

### Patient placement

The following patient placement options should be used in the following order, according to facility resources:

1. Single room with en suite facilities, negative pressure air handling, with or without a dedicated anteroom

2. Single room with en suite facilities without negative pressure air handling

3. Single room without en suite facilities and without negative pressure air handling

4. Cohorted room

A dedicated toilet / commode should be used where possible, ensuring lid is closed when flushed to reduce any risk of aerosolization.

Suspected cases of COVID-19 infection may be cohorted together where single rooms are not available.

Maintain a record of all persons entering the patient’s room including all staff and visitors.

## PPE and routine patient care, during the COVID-19 emergency

During the COVID-19 emergency, **all** **healthcare workers** in Victorian public health services in **high-risk** areas – intensive care units (ICU), emergency departments (ED), Coronavirus (COVID-19) wards, and acute respiratory assessment clinics – are to wear **surgical masks** for **all patient interactions, unless the situations below apply**.

This is in addition to hand hygiene in accordance with the WHO five moments of hand hygiene. Unless damp or soiled, a surgical mask may be worn for the duration of a clinic or shift of up to four hours. Masks must be removed and disposed of for breaks and then replaced.

The risk in birthing suites is unknown, however the use of a surgical face mask and eye protection may be prudent where there is a risk of splashes from body fluids.

**Lung function testing** should only be performed if it is deemed clinically essential by a respiratory physician, and staff performing testing should followed droplet and contact precautions as outlined in the document [Healthcare worker personal protective equipment (PPE) guidance for performing clinical procedures](https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19) <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>.

For all other areas within Victorian public health services, standard precautions apply.

### Caring for suspected and confirmed cases

In line with advice from the WHO and the Communicable Disease Network Australia (CDNA), the department recommends **droplet and contact precautions** for HCWs providing routine care of suspected and confirmed cases of COVID-19 infection, including during initial triaging.

This means that in addition to standard precautions, **all individuals, including family members, visitors and HCWs** should apply droplet and contact precautions. This includes use of 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).

If the gown is disposable and soiled, take it off and dispose of it with clinical waste. If the gown is reusable (non-disposable), take it off and have it reprocessed. Posters showing the order of putting on and taking off PPE (donning and doffing) can be found on the [department’s website](https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19) <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>.

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.

For hand hygiene, use an alcohol-based hand rub with over 60 per cent alcohol if hands are visibly clean, soap and water when hands are visibly soiled.

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. If a visitor attends a confirmed case in hospital, the visitor must wear PPE as described above. Staff should educate visitors on appropriate use of PPE, for example, when and where they should apply PPE. Visitors should be helped to carefully don and doff PPE by a person experienced in infection prevention and control requirements.

### Airborne and contact precautions

Airborne and contact precautions are now recommended in **specific circumstances** when undertaking aerosol generating procedures (AGPs).

Airborne and contact precautions are:

* P2/N95 respirator (mask) – fit-check with each use
* eye protection (for example, safety glasses/goggles or face shield)
* long-sleeved gown
* gloves (non-sterile)

Total head covering is not required as part of airborne and contact precautions.

P2/N95 respirators (mask) should be used only when required. Unless used correctly, that is with fit checking, they are unlikely to protect against airborne pathogen spread. A poorly fitted P2/N95 respirator/mask should not be used, and the procedure either delayed, or performed by a clinician whom can fit their respirator/mask correctly.

#### Aerosol generating procedures (AGPs)

For further information regarding which procedures are AGPs see the document [Healthcare worker personal protective equipment (PPE) guidance for performing clinical procedures](https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19) <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>.

Appropriate cleaning and disinfection should be undertaken following an AGP. See [Environmental cleaning and disinfection](#_Environmental_cleaning_and_1) for further information.

#### Fit checking

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

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

#### When to discard P2/N95 respirators (masks)

P2/N95 respirators (masks) 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.

### Undertaking diagnostic testing for COVID-19

For information on the appropriate specimens for testing see the section on Laboratory testing for COVID-19 below.

There is no requirement for airborne precautions when taking a nose and throat swab.

A patient with clinical evidence of pneumonia who requires testing for COVID-19 should be managed in a hospital setting. Management of patients with pneumonia in the hospital setting will also facilitate lower respiratory tract specimen collection.

Table 3: When airborne precautions are recommended for specimen collection

|  |  |
| --- | --- |
| Specimen type | Airborne precautions required? |
| Nasopharyngeal swab | No |
| Oropharyngeal swab | No |
| Sputum (not induced) | No |
| Nasal wash/aspirate | No |
| Bronchoalveolar lavage | Yes |
| Induced sputum | Yes |

Ref: Infection Control Advisory Group – 2019-nCoV, *Interim recommendations for the use of PPE during clinical care of people with possible nCoV infection*. CDNA

**While patient’s faecal samples may be tested under some circumstances where there is capacity to do so, faecal sampling is not recommended as a standard test.**

### Prioritising PPE for health care workers

To ensure that single-use surgical masks are available to protect health workers and for patients presenting with suspected coronavirus (COVID-19) the following strategies are recommended:

Single-use surgical masks

* Prioritise use to frontline staff (ICU, ED, coronavirus (COVID-19) wards, acute respiratory assessment clinics, theatre and birthing suites).
* Surgical mask supplies are to be stored in secure areas or supervised by a staff member and not accessible to patients
* Unless damp or soiled, a surgical mask may be worn for the duration of a clinic or shift of up to four hours.

General PPE:

* Substitutions that may be considered include:
	+ plastic apron instead of a long-sleeved disposable gown where appropriate
	+ full-face shield instead of a surgical mask for situations that are appropriate.

PPE training should use expired PPE stock only (if available).

### Care of critically ill patients in ICU

* Patients who require admission to ICU with severe COVID-19 infection are likely to have a high viral load, particularly in the lower respiratory tract.
* Contact and airborne precautions (as above) are required for patient care and are adequate for most AGPs. The risk of aerosol transmission is reduced once the patient is intubated with a closed ventilator circuit. There is a potential, but unknown, risk of transmission from other body fluids such as diarrhoeal stool or vomitus or inadvertent circuit disconnection.

**ICU staff caring for patients with COVID-19 (or any other potentially serious infectious disease) should be trained in the correct use of PPE, including by an infection control professional.**

### Case movement and transfers

Where possible, all procedures and investigations should be carried out in the case’s room, with exception of AGPs which should be performed in a negative pressure room whenever possible, or a single room with the door closed.

Transfers to other healthcare facilities should be avoided unless it is necessary for medical care. Inter hospital transfers should use routine providers.

## Environmental management

### Signage

Clear signage should be visible to alert HCWs of required precautions before entering the room, see [Australian Commission on Safety and Quality in Health Care](https://www.safetyandquality.gov.au/our-work/healthcare-associated-infection/infection-control-signage) <https://www.safetyandquality.gov.au/our-work/healthcare-associated-infection/infection-control-signage>.

### Management of equipment

Preferably, all equipment should be either single-use or single-patient-use disposable. Reusable equipment should be dedicated for the use of the case until the end of their admission. If this is not possible, equipment must be cleaned and disinfected (see [Environmental cleaning and disinfection](#_Environmental_cleaning_and) below) prior to use on another patient.

Disposable crockery and cutlery 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.

### Environmental cleaning and disinfection

#### Required agents for cleaning and disinfection

Cleaning of a patient consultation room or inpatient room should be performed 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, following manufacturer’s instructions.

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

#### Wearing PPE whilst undertaking cleaning and disinfection

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 30 minutes 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 within the previous 30 minutes.

#### Steps for disinfection and cleaning of a patient consultation room or inpatient room

The patient consultation room should be cleaned at least once daily and following any AGPs or other potential contamination.

There is no need to leave a room to enable the air to clear after a patient has left the room unless there was an AGP performed. Nose and throat swabs are not considered AGPs unless performed on a patient who has pneumonia. If an AGP was performed, leave the room to clear for 30 minutes.

The patient consultation room (or inpatient room after discharge of the suspected case) should now be cleaned and disinfected using the agents listed above. In most cases this will mean a wipe down with a one-step detergent disinfectant as listed above. There is no requirement to wait before the next patient is seen. The room is now suitable for consultation for the next patient.

### Waste management

Dispose of all waste as clinical waste. Clinical waste may be disposed of in the usual manner.

### Linen

Bag linen inside the patient room. Ensure wet linen is double bagged and will not leak.

Reprocess linen as per standard precautions.

### Environmental cleaning and disinfection in an outpatient or community setting (for example, a general practice)

Cleaning and disinfection methods as below:

* Clean surfaces with a neutral detergent and water first.
* Disinfect surfaces using either a chlorine-based product at 1000ppm or other disinfectant that makes claims against coronavirus. 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 re dilution, use and contact times for disinfection (that is, how long the product must remain on the surface to ensure disinfection takes place).

Follow the manufacturer’s safety instructions for products used regarding precautions and use of safety equipment such as gloves or aprons.

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

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

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

### Deaths in healthcare settings

### Please refer to the guidance “Handling the body of a deceased person with suspected or confirmed COVID-19” on the [department website](https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19https%3A/www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19) < <https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>> for more details regarding care of the deceased.

### Any person having contact with the body of a person with suspected or confirmed COVID-19 must ensure hand hygiene before and after interacting with the body and the environment and wear personal protective equipment (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.

### Deaths in the community

In the event that an unexpected death of a person with suspected or confirmed COVID-19 occurs 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 disinfected using standard household bleach. Further information can be found in the document: Cleaning and disinfecting tips for non-healthcare settings found here < <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.

### 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” on the [department website](https://www.dhhs.vic.gov.au/guidance-handling-body-deceased-person-suspected-or-confirmed-covid-19) < https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>.

# Laboratory testing for COVID-19

## Prioritisation of testing

A number of Victorian laboratories are undertaking testing for COVID-19 in Victorian patients. There is significant pressure on supply of swabs and reagent kits for COVID-19 testing. It is **critical** that clinicians use the current testing criteria to guide patient investigation and use **only one swab** when testing. Please provide **clinical details** on request slips so high-risk patients and healthcare workers, aged care workers or disability workers can be prioritised where resources allow. Specimens taken from health care workers should be marked URGENT- Health Care Worker (or in the case of testing for return-to-work criteria for healthcare and aged care workers, mark with **‘URGENT: HCW CLEARANCE TESTING, please notify result to DHHS**’. Results should be copied to the DHHS COVID-19 Response and the HCW’s treating physician.

## Specimens for testing

For initial diagnostic testing for COVID-19, DHHS recommends collection of the following samples:

1. upper respiratory tract specimens.
2. lower respiratory tract specimens (if possible).
3. serum, where possible (to be stored for later analysis).

Label each specimen container with the patient’s ID number (for example, medical record number), specimen type (for example, serum) and the date the sample was collected.

**Respiratory specimens**

Collection of upper respiratory (nasopharyngeal AND/OR oropharyngeal swabs), and lower respiratory (sputum, if possible) is recommended for patients with a productive cough.

1. Upper respiratory tract
	* + 1. Nasopharyngeal swab: Insert a swab into nostril parallel to the palate. Leave the swab in place for a few seconds to absorb secretions. Swab both nostrils (nasopharyngeal areas) with the same swab.

AND/OR

* + - 1. Oropharyngeal swab (that is, a throat swab): Swab the tonsillar beds, avoiding the tongue.
			2. **To conserve swabs** the same swab that has been used to sample the oropharynx should be utilised for nasopharynx sampling
			3. If testing for other respiratory viruses is indicated, contact your testing laboratory to find out if testing (for example, multiplex PCR) can be undertaken on the same specimen, or if an additional specimen needs to be collected.

Note. Swab specimens should be collected only on swabs with a synthetic tip (such as polyester, Dacron® or Rayon, flocked preferred) with aluminium or plastic shafts. Do not use calcium alginate swabs or swabs with wooden shafts, as they may contain substances that inactivate some viruses and inhibit PCR testing. For transporting samples, recommended options include viral transport medium (VTM) containing antifungal and antibiotic supplements, or Liquid Amies medium which is commonly available. Avoid repeated freezing and thawing of specimens.

1. Lower Respiratory tract (if possible)
	* + 1. Sputum: Have the patient rinse the mouth with water and then expectorate deep cough sputum directly into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container. Refrigerate specimen at 2-8°C. If sending to Victorian Infectious Diseases Reference Laboratory (VIDRL), send on an ice pack.
			2. Bronchoalveolar lavage, tracheal aspirate: Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container. Refrigerate specimen at 2-8°C - if sending to VIDRL, use ice pack.

Lower respiratory tract specimens are likely to contain the highest virus loads based on experience with SARS and MERS coronaviruses.

**Other specimens:**

1. Blood (serum) for storage for serology at a later date:
	* + 1. Children and adults: Collect 1 tube (5-10mL) of whole blood in a serum separator tube.
			2. Infant: A minimum of 1ml of whole blood is needed for testing paediatric patients. If possible, collect 1mL in a serum separator tube.

At the current time there is no serological test for COVID-19 and blood when received at VIDRL will be stored for future testing, when testing is available and if the case is confirmed as COVID-19 infection.

The department is continuously reviewing whether there is a requirement for other specimens such as stool or urine to be sent to VIDRL. At the current time this is not routinely recommended in cases of respiratory illness. A stool specimen may be recommended by the department to provide additional reassurance before a confirmed case is released from isolation.

## Specimen collection and transport

See also [Undertaking diagnostic testing](#_Undertaking_diagnostic_testing) for PPE recommendations.

### Specimen collection process

For most patients with mild illness in the community, collection of upper respiratory specimens (that is, nasopharyngeal or oropharyngeal swabs) is a low risk procedure and can be performed using **droplet** **and contact** precautions.

* Perform hand hygiene before donning gown, gloves, eye protection and single-use surgical mask. See How to put on your PPE poster on the [department’s website](https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19) <<https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>>.
* When collecting throat or nasopharyngeal swabs stand slightly to one side of the patient to avoid exposure to respiratory secretions should the patient cough or sneeze.
* At the completion of the specimen collection process, remove all PPE and perform hand hygiene after removing gloves and when all PPE has been removed. See How to take off your PPE poster on the [department’s website](https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19) <<https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19>>.

Note that, for droplet and contact precautions, the room does not need to be left empty after sample collection. Droplet and contact precautions PPE must be worn when cleaning the room. See [Environmental cleaning and disinfection](#_Environmental_cleaning_and_1) for further information.

If the patient has severe symptoms suggestive of pneumonia, for example, fever and breathing difficulty, or frequent, severe or productive coughing episodes then **airborne and contact precautions** should be observed. This means that a P2 respirator must be used instead of a single-use surgical mask.

Patients with symptoms suggestive of pneumonia should be managed in hospital, and sample collection conducted in a negative pressure room, if available. If referral to hospital for specimen collection is not possible, specimens should be collected in a single room. The door should be closed during specimen collection and the room left vacant for at least 30 minutes afterwards (cleaning can be performed during this time by a person wearing PPE for airborne and contact precautions).

There are no special requirements for transport of samples. They can be transported as routine diagnostic samples for testing (that is, Biological substance, Category B).

## Handling of specimens within diagnostic laboratories

All diagnostic laboratories should follow appropriate biosafety practices, and testing on clinical specimens, including for other respiratory viruses, should only be performed by adequately trained scientific staff.

Current advice from the WHO is that respiratory samples for molecular testing should be handled at Biosafety Level 2 (BSL2), with the USCDC recommending that the following procedures involving manipulation of potentially infected specimens are performed at BSL2 within a class II biosafety cabinet:

* aliquoting and/or diluting specimens
* inoculating bacterial or mycological culture media
* performing diagnostic tests that do not involve propagation of viral agents in vitro or in vivo
* nucleic acid extraction procedures involving potentially infected specimens
* preparation and chemical- or heat-fixing of smears for microscopic analysis.

## Information on testing for coronavirus at VIDRL

VIDRL has moved to utilising Real-Time specific COVID-19 PCR assays as the primary diagnostic tool for COVID-19 detection.

### Real-time COVID-19 PCR assay

* The test takes approximately 2–3 hours to perform.
* Results reported as positive or negative for COVID-19, for example, *COVID-19 not detected*.

The current VIDRL testing algorithm is as follows:

* All suspected cases will be tested by a real-time assay as above.
	+ This test will be performed twice a day at the current time (morning and afternoon), with results released through routine pathways.
* All negative results will be reported and finalised.
* Any positive results will be confirmed by a second specific Real-Time COVID-19 PCR assay targeting a different RNA sequence.
	+ This second Real-Time assay will be run for any presumptive positive results, immediately following completion of the first Real-Time assay.
	+ Samples positive in both Real-Time assays will thus be reported on the same day as initial testing and will be telephoned through to the referring pathology service as well as the department.
	+ Discordant results between the two different Real-Time assays are not anticipated and will be managed on a case by case basis with further molecular testing (for example, Pan-coronavirus PCR assay).
* Urgent specimens can be tested outside of these periods in consultation with the department.
* Viral culture will be attempted from any positive sample under high containment, but such testing is not a diagnostic modality.
* Serum samples will be stored.

As experience with testing develops this algorithm may change further. VIDRL has the intention to register the Real-Time assays with NATA in the near future once sufficient data is available.

### Indeterminate test results

Indeterminate test results have been reported from a number of Victorian laboratories. These are usually samples that have had one gene detected in the assay but not both genes.

Indeterminate results may be referred to VIDRL for further testing, although **these samples should be considered as positive**. Confirmatory testing may not be possible as the sample may already be low titre and degradation due to processing may mean that VIDRL’s PCR may not be sufficiently sensitive to offset loss of titre in the sample.

Cases with indeterminant results should be managed as confirmed cases. If the treating clinician feels that the pre-test probability for COVID-19 is low, another sample may be collected for further testing. If the second sample tests negative, the department will discuss the case with the treating doctor and the testing laboratory to determine whether the case should continue to be managed as a confirmed case.

# Governance

## International response

The WHO declared COVID-19 a Public Health Emergency of International Concern (PHEIC) under the *International Health Regulations 2005* and on 30 January 2020. A pandemic has now been declared.

A State of Emergency was declared in Victoria on 16 March 2020.

## Public Health Incident Management Team

The Department of Health and Human Services (the department, DHHS) has formed a Public Health Incident Management Team, chaired by a Public Health Commander, to coordinate the public health and sector response. A Class 2 Emergency, or public health emergency, was declared on 1 February 2020.

The Infection Clinical Network of Safer Care Victoria will be a network that is requested to provide comment and advice to the department, alongside national committees including the Communicable Diseases Network Australia (CDNA).

## Communications and media

The department will coordinate communications and media in relation to suspected and confirmed cases of COVID-19. In some instances, the department may – in collaboration with a Victorian health service – request a service to provide media responses in relation to one of more cases associated with that service. A health service should contact the department’s Media Unit with any queries.

## Role of Ambulance Victoria

Where clinically appropriate, Ambulance Victoria can be used to transport any suspected cases of COVID-19 from a port of entry or unwell suspected cases from general practice or other settings to an emergency department. Triple 000 should be called in the normal manner but advise that the patient may have suspected COVID-19 infection.

# Prevention

* From midnight, 28 March 2020, all travellers arriving into Melbourne from overseas will be quarantined for two weeks in hotel rooms and other accommodation facilities
* Follow physical distancing advice
* Follow advice on influenza vaccination.
* Ensure adherence to good hand and respiratory hygiene practices.
* Adhere to good food safety practices.
* Consider avoiding live animal markets.
* At the present time, travel within Australia is not recommended, and a ban on overseas travel is currently in place. Check for overseas travel advice or restrictions at [Smartraveller](https://www.smartraveller.gov.au/) <https://www.smartraveller.gov.au>.
* Advice on physical distancing and other transmission reduction measures is available on the [department’s website](https://www.dhhs.vic.gov.au/coronavirus-covid-19-transmission-reduction-measures) <https://www.dhhs.vic.gov.au/coronavirus-covid-19-transmission-reduction-measures>.

# Risk management at ports of entry

Infection with COVID-19 was designated a Listed Human Disease (LHD) under the *Biosecurity Act 2015* on 21 January 2020.

As of 18th March, the Australian Government advises all Australians not to travel overseas to any country at this time.

Currently all passengers from every arriving international aircraft are health screened. The department’s healthcare workers are also conducting health checks on passengers from any international flight if required by the biosecurity officer. Single-use facemasks are provided to arriving passengers who have been identified as unwell. As of midnight, 28 March 2020, all travellers arriving into Melbourne from overseas will be quarantined for two weeks in hotel rooms and other accommodation facilities after submitting an Isolation Declaration Card. Interstate travellers can return to their home states after fulfilling the mandatory quarantine requirements.

# The disease

## Infectious agent

Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2) has been confirmed as the causative agent. Coronaviruses are a large and diverse family of viruses that include 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). They are also found in animals such as camels and bats.

First termed 2019 novel coronavirus (2019-nCoV), the virus was officially named Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2) 11 February 2020. The disease it causes is now called coronavirus disease 2019 (COVID-19).

## Reservoir

The reservoir is essentially unknown, but probably zoonotic, meaning they are likely transmitted between animals and people; however, an animal reservoir has not yet been identified for COVID-19.

Initial cases were business operators at the Hua Nan Seafood Wholesale Market, which sold live animals such as poultry, bats, marmots, and wildlife parts. The source of the outbreak is still under investigation in Wuhan. Preliminary investigations have identified environmental samples positive for COVID-19 in Hua Nan Seafood Wholesale Market in Wuhan City, however some laboratory-confirmed patients did not report visiting this market.

## 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. There were cases with a strong history of exposure to the Hua Nan Seafood Wholesale Market in Wuhan City, China where live animals are sold. However, the mechanism by which transmission occurred in these cases, whether through respiratory secretions after coughing or sneezing, or direct physical contact with the patient or via fomites after contamination of the environment by the patient, is unknown.

Person to person transmission has now occurred worldwide and the WHO declared a pandemic on 11 March 2020. As a result, droplet and contact precautions are recommended.

## Incubation period

The incubation period is not yet known. However, the interim view on the incubation period is that it is 4 to 14 days, based on the nature of previous coronavirus infections.

## Infectious period

Evidence on the duration of infectivity for COVID-19 infection is evolving. Epidemiological data suggests that the majority of transmission occurs from symptomatic cases, however there is some evidence to support the occurrence of pre-symptomatic transmission. As a precautionary approach, cases are considered to be infectious from 48 hours prior to onset of symptoms until they meet the criteria for release from isolation.. Infection control precautions should be applied throughout any admission and until the department has declared the confirmed case to be released from isolation.

Given that little information is currently available on viral shedding and the potential for transmission of COVID-19, testing to detect the virus may be necessary to inform decision-making on infectiousness. Patient information (for example age, immune status and medication) should also be considered. Criteria for release from isolation are described in this guideline.

## Clinical presentation

Common signs of infection include respiratory symptoms, fever, cough, shortness of breath and breathing difficulties. Sore throat, coryzal symptoms, headache and fatigue have been reported.

In more severe cases, it appears that infection can cause pneumonia, severe acute respiratory syndrome and multi-organ failure (including renal failure). In summary the clinical spectrum varies from mild cases, through to severe acute respiratory infection (SARI) cases.

Illness is more likely in the middle-aged and elderly.

The case fatality rate is unknown but appears to be lower than for SARS and higher than the common cold. The case fatality rate may be higher in elderly, people with immune compromise or who have co-morbidities. The case fatality rate also appears to be higher in countries where the rate of infection has overwhelmed the ability of the relevant health system to care for unwell patients. Current estimates are that the case fatality rate may be as high as two to four per cent.

# Information resources

The department will place resources for health professionals on the department’s [Coronavirus website](https://www.dhhs.vic.gov.au/novelcoronavirus) <https://www.dhhs.vic.gov.au/novelcoronavirus>.

It is important that health professionals consult this website regularly, as case definitions and content of this guideline change regularly during the response to this outbreak.