

Risk management principles for dentistry

During the COVID-19 pandemic

Preface

This document supplements the ADA COVID-19 Risk Management Guidance document published in August 2020, and the Managing COVID-19 Guidelines published in March 2020. These Risk Management Principles for Dentistry replace the ADA Restrictions Levels framework.

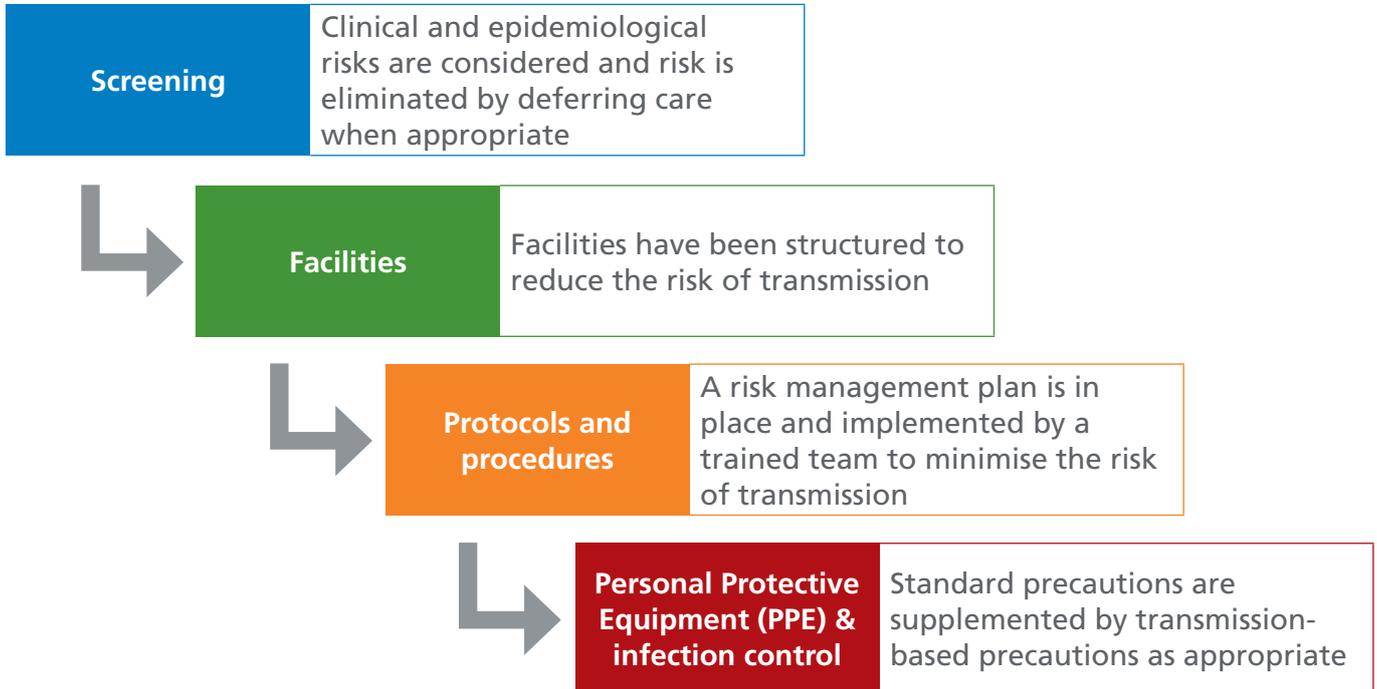
Evidence continues to emerge that improves our understanding of the effectiveness of risk reduction strategies in the dental care setting. Most of these have already been adopted by the dental profession in Australia. As the pandemic persists, the effects of delaying medical and dental care are evident. All health professions are faced with the challenge of facilitating access to care with an enhanced understanding of COVID-19 transmission and effective, sustainable strategies to reduce risks.

The following **Risk Management Principles for Dentistry** outline how to apply evidence-informed infection control measures within a broader risk-based approach. These Principles are based on the 'hierarchy of controls' framework summarised in **Figure 1**.

This document does not replace the need for clinical judgement based on the individual presentation and modifying factors, or the requirement to comply with your current state and federal health directives. The advice from public health regulators and State-based organisations may change rapidly, and it is critical that practices remain informed of current local requirements.

This document describes the management of risks using terms consistent with the COVID-19 Communicable Disease Network Australia (CDNA) guidelines, however your jurisdiction may use different terms.

Figure 1. Application of the hierarchy of controls for COVID-19 risk management in dentistry



Risk Assessment and Management

Assessment and management of risk remains a key responsibility of dental practitioners providing care during the current COVID-19 pandemic. Information on risk management in the context of COVID-19 is available from the Australian Commission on Safety and Quality in Health Care (ACSQHC).

One of the key principles underpinning the Risk Management Principles for dentistry during the COVID-19 pandemic is recognition that some strategies will be more effective in controlling risk. Wherever possible, a risk should be identified and eliminated. If it is not possible to eliminate the risk, the likelihood and consequences should be analysed, evaluated and managed by applying appropriate controls.

The 4 systems outlined by the [Infection Control Expert Group](#) that dental practitioners can control to mitigate COVID-19 transmission risks in practice are:

- Screening (elimination)
- Preparation of facilities (engineering controls)
- Planning, protocols and procedures (administrative controls)
- PPE

Appendices are provided to demonstrate key concepts within the Risk Management Principles.

Appendix 1. Examples of risk management controls in dentistry

Appendix 2. Example of a screening protocol

Appendix 3. Summary of risk-based infection control precautions

Appendix 4. Glossary of common terminology

A [reference list for the Risk Management Principles for Dentistry during the COVID-19 pandemic](#) is available as a separate document.

Vaccination

Vaccination is an essential community-wide measure for reducing the spread of disease to dental staff and patients and may influence the overall assessment of risk.

It is important to note that breakthrough infections can occur among fully vaccinated persons. Since vaccinated individuals may have reduced symptoms, risk management controls beyond screening will remain important when there is COVID-19 transmission in the community.

Further information on workplace health and safety including information in relation to vaccination can be found on the [ADA HR hub](#).

Screening

Screening typically involves the use of questions relating to epidemiological and clinical risk factors for COVID-19. It may also include temperature and/or COVID-19 testing. Screening is performed to determine that members of the workforce, patients and visitors do not meet the current Australian definition of a suspect, probable or confirmed COVID-19 case. Case definitions may change from time to time and are available from CDNA Series of [National Guidelines \(SONG\) COVID-19 Guidelines](#). Case definitions available at the time of writing this document are provided in **Appendix 4. Glossary of common terminology**.

Assessment of COVID-19 risk should be determined by screening the workforce, patients, and visitors for epidemiological and clinical risk factors for COVID-19 while considering current public health advice and state or territory regulations, local epidemiology, and community transmission of COVID-19.

Screening protocols are adopted on presenting to the clinical setting but are also typically performed in advance to assess and manage the risks prior to attendance (e.g. phone call, SMS). An example of a screening protocol can be found in **Appendix 2**.

Where risk criteria are identified, systems should be in place to manage patients appropriately. This may include appointing a suitable person (e.g. a senior clinician) to assess whether treatment should be deferred or if it is appropriate to provide treatment, and if so, what additional patient management and infection control processes may be required. Consideration should be given as to how to manage patients who may be poor historians and/or may not have the capacity to answer COVID-19 screening or risk assessment questions accurately.

If a patient requires a support person, this person should also be screened. Minimising the number of people in the facility by encouraging only one support person to attend will assist with social distancing and reduce the overall risk that a person with COVID-19 will enter the facility.

If on screening a worker, patient or visitor it is deemed necessary to determine COVID-19 status, you may wish to consider the use of rapid antigen testing (RAT) or refer them to an appropriate health service. Further guidance on the appropriate use of RAT is provided by the [TGA](#) and state and territory governments.

When it is determined that a patient is known or suspected to have COVID-19, the risk of transmission should ideally be eliminated by deferring treatment. If care cannot be safely deferred, the practice will need to determine if they have the appropriate facilities, protocols, PPE and infection control to provide care. If the facility is retrospectively notified about the exposure of a worker, patients or visitor to COVID-19 contact should be made with the state or territory health department and/or ADA Branch to assist with management.

Preparation of facilities

The preparation of a dental facility¹ may include measures to ensure that physical distancing, patient flow, ventilation, single operator and negative pressure room availability has been assessed and implemented in the management plan for the facility.

It is critical to determine what transmission-based infection prevention control precautions can be provided in the facility. For instance, if facilities are not available for the safe management of a COVID-19 positive patient, a clinic will need to plan to refer these patients to another facility.

Practical dental facility measures in the context of the COVID-19 pandemic include:

- Use [signage](#) at the facility entrance asking patients not to enter if they are unwell or have COVID-19 symptoms, have been tested for COVID-19 and are awaiting test results, have been in contact with anyone diagnosed or suspected to have COVID-19, or have been in an area identified as high risk for community transmission
- Adopt 'check in' points and processes consistent with recommendations from the state or territory jurisdiction.
- Implement a process to safely screen patients for COVID-19 symptoms and epidemiological factors on entry to the facility.
- Remove all high touch, unnecessary items in communal areas e.g. toys and magazines.
- Use appropriate measures to remind patients of the need for hand hygiene, cough etiquette and physical distancing. Household members who are normally in close contact can be permitted to sit together, and patients may also be given the option to wait in their vehicle if practical.
- Provide facilities to enable hand and respiratory hygiene such as alcohol-based hand rub (ABHR), hand washing facilities, tissues, and rubbish bins. Ensure all patients undertake hand hygiene prior to sitting in the waiting area.

1. Dental facility is inclusive of dental practices, mobile dental services, outreach and on location dental services.

Protocols

To help mitigate the risk of COVID-19 transmission, organisations should adopt the following protocols:

- Follow the requirements stated by local public health authorities, including those regarding limitations on the movements of people and the range of services that can be provided.
- Maintain a current risk management plan in response to COVID-19.
- Use protocols to screen the workforce, patients and visitors for risks of COVID-19.
- Comply with physical distancing requirements except when this is not possible such as when providing care.
- Ensure compliance with standard and transmission-based precautions in accordance with the current [ADA Guidelines for Infection Prevention and Control](#).
- Adopt PPE protocols (and ensure PPE availability) appropriate to care being provided.
- Provide the opportunity for patients to perform hand hygiene prior to leaving the treatment area as patients may have contaminated their hands with saliva (such as when inserting and removing dental appliances).
- Frequent cleaning of high-touch surfaces with detergent solution and then disinfection wipe/solution (or with a combined detergent/disinfectant product). The ADA's [Environmental Cleaning and Disinfection Guidance in the context of COVID-19](#) document outlines the recommended environmental cleaning and disinfection processes based on a risk assessment including individual patient risks as well as community risks of disease transmission.

Staff training, rehearsing of protocols and compliance monitoring should be part of a current risk management plan. It is imperative to ensure that all staff have completed infection prevention and control training relevant to COVID-19 including the use of appropriate personal protective equipment.

Dental Procedure Considerations

Guidance may be provided by state, territory or local health authorities and/or associations when there are specific requirements to defer certain types of treatments for local areas.

General principles that may assist in the management of procedural risks in dentistry are:

- The use of dental dam significantly reduces aerosolisation of saliva.
- The routine use of high-volume evacuation significantly reduces the number of aerosols present in the environment.
- It has been recommended by the [National Health and Medical Research Council](#) (NHMRC) that a 30-minute fallow time, is used where airborne precautions are required. **Fallow times are not required for all AGPs in all patients.** (See Appendix 3).
- There is some evidence that the following commercially available mouth rinses when used before dental treatment reduce the viral load in saliva:
 - Hydrogen peroxide (0.5-1.0%).
 - Essential oils (Listerine™).
 - Cetylpyridinium chloride (0.07-0.1%).
 - Povidone iodine solutions (0.23%-1%).
 - Chlorhexidine (0.12-0.2%).

Freshly generated [ozonated water](#) can also be used as a preprocedural mouth rinse provided the ozone concentration is at least 0.1ppm.

For supporting references, refer to the manufacturer's instructions and the section on mouth rinses in the reference list.

If patients are unable to undertake a pre-procedural mouth rinse (e.g. young or special needs) consider providing topical mouth cleansing with gauze soaked in mouth rinse, focusing on wiping the buccal mucosa and dorsal tongue surface.

PPE and additional infection control considerations

PPE serves as the last line of defence against transmission of COVID-19. Transmission of COVID-19 can occur through direct, indirect, or close contact with infected people through saliva and respiratory secretions expelled through coughing, sneezing, talking, singing ('aerosol generating behaviours') or aerosol generating procedures.

Standard precautions are required for all patients regardless of known COVID-19 status. Standard precautions consist of:

1. Hand hygiene
2. PPE
3. Respiratory & cough etiquette
4. Aseptic technique
5. Routine environmental cleaning
6. Appropriate reprocessing of reusable medical devices
7. Safe handling of sharps
8. Linen and waste management

Since COVID-19 may be transmitted by contact, droplets or airborne particles, **transmission-based precautions** are adopted for patients with known or suspected COVID-19 including the use of:

- Disposable single use long sleeved fluid resistant gown
- P2/N95 respirator
- Full face shield or visor

Dental team members using a P2/N95 respirator should be trained in their correct use. Fit testing is recommended as the gold-standard to ensure that the P2/N95 respirator is appropriate for the person wearing it. As a minimum, a well-fitting respirator that has been fit-checked to ensure at the time of each use that there is an airtight protective seal should be adopted.

If a suitable respirator cannot be found, or if facial hair impedes an adequate seal, an alternative respirator (e.g. powered air-purifying respirator) should be considered.

Follow the proper procedures for donning and doffing of PPE.

See Appendix 3. A summary of risk-based infection control precautions

All patient surrounds and frequently touched objects are to be cleaned with a Therapeutic Goods Administration (TGA) registered Hospital Grade Disinfectant using either a 2-step clean, which involves a physical clean using detergent solution followed by use of a chemical disinfectant; OR a 2-in-1 clean in which a combined detergent/disinfectant wipe or solution is used and mechanical/manual cleaning action is involved.

Follow the manufacturer's instructions for correct use of the product(s).

Patients with known or suspected COVID-19 should be asked to wear a surgical mask at all times when access to the mouth is not required (e.g. moving around the clinic or when taking a history).

If AGPs are not being performed for suspected COVID-19 patient (e.g., assessment only):

Use negative pressure rooms where available. If a negative pressure room is not available, use a standard isolation room or single room with negative airflow. Avoid rooms with positive pressure airflow.

If AGPs are being performed for suspected or any procedure for a confirmed COVID-19 patient:

Patients must be placed in a negative pressure room.

Do not proceed with a procedure if the facility does not have the correct set up/PPE to manage any assessed risk.

Further information about adoption of standard and transmission-based precautions in a dental setting can be found in the ADA Guidelines for Infection Prevention and Control.

Appendix

Appendix 1. Examples of risk management controls in a dental context

CATEGORY	SOME EXAMPLE CONTROL MEASURES
Elimination (screening)	Screen all patients, workers and visitors for clinical and epidemiological risk factors for COVID-19
	Do not treat suspected or confirmed COVID-19 patients when care can be appropriately deferred
Engineering controls (facility)	Use signage to enhance screening protocols, implement 'check in', and deliver key messages such as respiratory hygiene
	Remove high touch items such as toys and magazines from communal areas
	Provide facilities for hand hygiene (such as alcohol-based hand rub) and respiratory hygiene (such as tissues)
	Identification and frequent cleaning of high touch surfaces
Administrative controls (policies and procedures)	Review and optimise air flow, ventilation, and air quality (including consideration of availability of negative pressure facilities in area)
	Maintain a current risk management plan in response to COVID-19 that takes into consideration any state-based/local guidance
	Implement vaccination policies for health care workers consistent with legal requirement in each jurisdiction
	Implement physical distancing requirements
	Ensure staff training on infection prevention and control and implementation of Guidelines
	Adopt protocols that reduce viral load and saliva being aerosolised by use of protocols such as pre-procedural mouth rinse, dental dam, and high-volume evacuation (suction)
PPE and additional infection control considerations (protecting the worker)	Consider appropriate 'fallow times' if COVID-19 suspect or confirmed patients are being treated in the facility
	Adopt PPE protocols consistent with Guidance on the use of PPE for health care workers in the context of COVID-19
	Adopt appropriate airborne precautions (including appropriate PPE) when patients with suspected or confirmed COVID-19 are being treated in the facility
	Have enough PPE supplies available based on the risk-based infection control precautions required for patients receiving care in the facility
	Ensure that PPE is appropriately used (e.g. team training on selection, donning, doffing, fit testing, fit checking)
	<i>Defer or transfer care if appropriate PPE is not available</i>

Appendix 2. Example of a screening protocol

It is important that screening protocols are amended to accommodate changes to epidemiological and clinical risks as they emerge.

If the patient answers YES to ANY of the questions below, inform them that the Dentist will need to discuss their situation to assess the risk further.

1. Have you been feeling unwell,

Yes

No

OR have you had any of the following symptoms?

Fever or temperature now or in the past 3 days?

Sore throat, cough or shortness of breath?

Runny/stuffy nose or other respiratory symptoms?

Loss of smell or taste

2. Have you, or a person with whom you live, been asked to quarantine due to:

Attending an area identified as high risk for community transmission?

Interstate or international travel?

If YES, when does your quarantine period end?

3. Have you, or a person with whom you live, been asked to self-isolate while waiting for COVID-19 test results?

Yes

No

4. Do you, or a person with whom you live, work in a medi-hotel used for quarantine?

Yes

No

5. Are you, or a person with whom you live, an essential worker who is travelling interstate?
(e.g. freight, transport, removalists, aircrew).

Yes

No

Appendix 3. A summary of risk-based infection control precautions

LOW RISK OF TRANSMISSION	MODERATE RISK OF TRANSMISSION Defer non-urgent treatment#	HIGHER RISK OF TRANSMISSION Defer non-urgent treatment#
PATIENT IS NOT KNOWN OR SUSPECTED TO HAVE COVID-19	COVID-19 STATUS UNCERTAIN, NO AGP REQUIRED	KNOWN COVID-19 OR SUSPECTED COVID-19 CASE WITH AN AGP REQUIRED



GOWN

Practitioner discretion based on the procedure.

Disposable single use long sleeved fluid resistant gown.

Disposable single use long sleeved fluid resistant gown.



MASK

Fluid resistant surgical mask (level 2 or 3).

*P2/N95 recommended.

*P2/N95 mandatory.



EYE PROTECTION

Standard eye protection (face shield, safety glasses or goggles).

Standard eye protection (face shield, safety glasses or goggles).

Standard eye protection. Consider face shield or a visor mask for procedures with high risk of splash.



GLOVES

Standard requirements.

Standard requirements.

Standard requirements.



ROOM

CHARACTERISTICS

No specifications. Practitioner discretion.

Ideally negative pressure room. Alternatively, standard isolation room avoiding positive air flow.

Negative pressure room. Avoid rooms with positive air flow.



CLEANING

Detergent for all patient surrounds and consider more frequent cleaning for high touch surfaces.

Detergent and disinfectant for all patient surrounds and high touch surfaces.

Detergent and disinfectant for all patient surrounds and high touch surfaces.



ADDITIONAL PRECAUTIONS

Patients may wear a surgical mask when not receiving treatment, if requested or required by state and/or federal health directives.

Patients to wear a surgical mask when oral access is not required.

Patients to wear a surgical mask when oral access is not required. Take precautions to minimise viral load of saliva and aerosols generated. Fallow time 30 mins.

#Urgent dental treatment Management of patients with urgent needs or where deferring care is likely to lead to adverse health outcomes.

*P2/N95 If unable to source P2/N95 respirator for moderate risk patients (with no AGP) consider possible alternative use of level 2 or 3 surgical mask plus full-face shield or visor e.g. when assessing only.

Appendix 4. Glossary of common terminology

Aerosol generating procedure: (AGPs) in dentistry include procedures that use any of the following devices: high speed handpieces, low speed/prophy handpieces, surgical handpieces, ultrasonic and sonic devices, air polishing devices, and hard tissue lasers. The triplex when air and water are used together or when used with air on a wet surface is considered an AGP.

COVID-19: Coronavirus disease 2019. The name of the disease caused by the virus SARS-CoV-2, as agreed by the World Health Organization, the World Organisation for Animal Health and the Food and Agriculture Organization of the United Nations.

Close contact: a definition used to rapidly identify all persons who may be incubating the disease. These are generally defined as primary close contact, a casual contact and secondary close contact. These classifications are made at the discretion of the public health unit when contact tracing. (See [CDNA Guidance](#) for further details on different contact types).

Confirmed case: a patient with COVID-19 as confirmed by laboratory definitive evidence (see [CDNA guidance](#) for testing protocols).

Fallow time: a period in which the room is 'rested' before being used again to allow aerosols suspended in the air to settle. They can then be removed through environmental cleaning processes. There is variable evidence for the use of specific fallow times. It has been recommended by the [National Health and Medical Research Council](#) (NHMRC) that a 30-minute fallow time is used where airborne precautions are required.

Fit check: ensures the respirator fits the user's face snugly (ie. creates a seal) to minimise the number of particles that can then bypass the filter through gaps between the user's skin and the respirator seal.

Fit test: a validated method for matching P2/N95 respirators with an individual's face shape (performed by an appropriately trained person)

Negative pressure room: a negative pressure room is a room in which air flows from hallways and corridors (cleaner areas) into the isolation room to prevent cross-contamination and spread of the virus. In Australia, facilities for the management of patients for which airborne precautions are indicated (including negative pressure rooms) should comply with the guidelines outlined by the Australasian Health Infrastructure Alliance.

SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2. The formal name of the coronavirus that causes COVID-19, as determined by the International Committee on Taxonomy of Viruses.

Suspect case: those who may have an increased likelihood of current SARS-CoV-2 infection. A person who meets the below **clinical** and **epidemiological** criteria as defined in the [CDNA COVID-19 SoNG](#):

Clinical evidence (in the past 14 days):

- Fever (≥ 37.5 °C) or history of fever (e.g. night sweats, chills); or
- Acute respiratory infection (e.g. cough, shortness of breath, sore throat); or
- Loss of smell or loss of taste.

Epidemiological evidence (in the past 14 days):

- Close contact with a confirmed case
- International travel, with the exception of green zone countries
- Workers supporting designated COVID-19 quarantine and isolation services
- International border staff
- International air and maritime crew
- Health, aged or residential care workers and staff with potential COVID-19 patient contact
- People who have been in a setting where there is a COVID-19 case
- People who have been in areas with recent local transmission of SARS-CoV-2.

Urgent treatment: Management of patients with urgent needs or where deferring care is likely to lead to adverse health outcome such as uncontrolled bleeding, infection or trauma. The ADA recommends deferring non-urgent care if a patient is known or suspected to have COVID-19. Dental practitioners are trained in the triage prioritisation of emergency and urgent care and some organisations (such as health departments) will produce their own triage documents. An example of such a document from the American Dental Association can be accessed [here](#):

NOTE: The ADA endorses provision of the full range of dental treatment to patients without confirmed or suspected COVID-19 in accordance with the risk management principles outlined in this document.

Rapid antigen tests (RAT): detect the presence of specific proteins of the SARS-CoV-2 virus. These may produce a result within 15-30 minutes, although their ability to detect the virus may not be as good as a nucleic acid test. Further information on the use of rapid antigen tests can be found on the [TGA website](#):

Key reference organisations

ACSQHC: The Australian Commission on Safety and Quality in Health Care is a corporate Commonwealth entity and part of the Health portfolio of the Australian Government. It's purpose is to contribute to better health outcomes and experiences for all patients and consumers, and improved value and sustainability in the health system by leading and coordinating national improvements in the safety and quality of health care.

ADA Branches: Australian Dental Association Branches (States and Territories) assist members to access, interpret and apply local and regional guidance in relation to infection prevention and control requirements.

ADA ICC: The Australian Dental Association Infection Control Committee synthesise national requirements, recommendations and research evidence to assist practitioners with implementing relevant infection control and prevention in a dental setting including through publication of the [ADA Guidelines for Infection Prevention and Control](#).

AHPPC: The [Australian Health Protection Principal Committee](#) is the key decision-making committee for health emergencies. It is comprised of all state and territory Chief Health Officers and is chaired by the Australian Chief Medical Officer.

CDNA: [Communicable Disease Network Australia](#) provide nationally consistent advice and guidance to public health units in responding to a notifiable disease event.

DBA: The [Dental Board of Australia](#) regulates dental practitioners in Australia under the National Registration and Accreditation Scheme (the National Scheme).

ICEG: The [Infection Control Expert Group](#) advises the Australian Health Protection Principal Committee (AHPPC) and its other standing committees on infection prevention and control issues.

NHMRC: The National Health and Medical Research Council provides research funding, health guidelines and ethical standards for the health sector including the Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019).

State and Territory Governments: provide directives, hotspot information and travel restriction information:

- [Australian Capital Territory COVID-19](#)
- [New South Wales COVID-19](#)
- [Northern Territory COVID-19](#)
- [Queensland COVID-19](#)
- [South Australia COVID-19](#)
- [Tasmania COVID-19](#)
- [Victoria COVID-19](#)
- [Western Australia COVID-19](#)