

Respiratory physiotherapy guidelines for managing patients with COVID or of unknown COVID status

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The role of respiratory physiotherapy in managing patients with COVID-19 is most likely to be in a hospital setting.

Physiotherapists may have a role in the management and physical rehabilitation of patients with confirmed COVID-19. Covid-19 is a multi-system disease, but it primarily affects the respiratory system. Some people will have a mild illness, others may develop respiratory failure and /or require admission to an intensive care unit (ICU). Although a productive cough is a less common symptom in patients with COVID-19, physiotherapy may be indicated in patients with copious secretions from pre-existing lung conditions, because of secondary bacterial infections, and/or in those patients who are not able to independently clear their airway.

World Physiotherapy and the Australian Physiotherapy Association have a range of resources for physiotherapists available on their [COVID-19 information hub](#).

Infection prevention and control precautions

Scientific studies have shown that exhaled particles generated by talking, shouting, singing sneezing or coughing are predominantly small particles. These small particles can carry viable infectious viruses and bacteria. The evidence supports that SARS-CoV-2 is transmitted by aerosols when in enclosed spaces, during prolonged exposure to respiratory particles and, in settings where there is poor ventilation or air handling. Close range contact with the infectious individual is required for transmission of the infectious agent.

Some medical procedures, termed aerosol generating procedures (AGPs), can generate aerosols, also termed droplet nuclei. Equally some behaviours are associated with generating aerosols such as talking loudly, shouting, and singing.

[The hierarchy of infection prevention and control](#) measures include source control, engineering and environmental control, administrative control, and personal protective equipment (PPE).

Source control, engineering and environmental control, and administrative control are the first-line interventions. PPE adds a further layer of protection and is essential when the other approaches cannot guarantee complete protection; it is not a substitute for the other measures.

To prevent transmission of infectious pathogens within healthcare settings [Standard Precautions](#) are used for all patient care episodes. They are based on a risk assessment of the likely exposure and make use of infection prevention practices and the use of PPE to protect healthcare workers from infection and to prevent the spread of infection from patient to patient.

In addition to Standard Precautions, a second tier of infection prevention practices, called [Transmission-based Precautions](#), is required for patients who may be infected or colonized with certain infectious agents for which additional precautions are needed to prevent infection transmission.

- **Contact Precautions** – for patients with known or suspected infections that represent an increased risk for contact transmission
- **Droplet Precautions** – for patients known or suspected to be infected with pathogens transmitted by respiratory droplets
- **Airborne Precautions** – for patients known or suspected to be infected with pathogens transmitted by the airborne route (e.g. tuberculosis, measles, chickenpox, disseminated herpes zoster and SARS-CoV-2)

The use of **Contact and Airborne Precautions** is required when providing care for **patients with suspected or confirmed COVID-19 infection**.

Patients requiring Contact and Airborne Precautions should be cared for in an airborne infection isolation room (AIIR), if available, otherwise in a single room with the door closed. Healthcare workers providing direct clinical care to patients should be fully vaccinated for COVID-19, and are required to wear the following PPE:

- Long sleeve impervious gown (if contact with blood and body fluids anticipated)
- Single use non-sterile gloves
- P2/N95 particulate respirator
- Eye protection – face shield, close fitting safety glasses or goggles

Hand hygiene should be performed before the donning and after the doffing of PPE.

When an AGP is being performed **Contact and Airborne Precautions** should be adhered to. As stated above the patient should be cared for in an AIIR, if available, otherwise in a single room with the door closed. Refer to [COVID-19 infection prevention and control guidance for acute care hospitals](#).

COVID-19 vaccination and boosters are no longer mandatory but are recommended for all healthcare workers including boosters.

Personal protective equipment recommendations:

- Long sleeve impervious gown
- Single use non-sterile gloves
- P2/N95 particulate respirator
- Eye protection – face shield, close fitting safety glasses or goggles

Note: Healthcare staff including Physiotherapists wearing P2/N95 particulate respirators should

have undergone **fit testing** and be competent with performing a fit check (user seal check) each and every time a particulate respirator is donned.

Faces should either be clean shaven or, ensure that facial hair does not encroach the edge of the seal of a P2/N95 particulate respirator.

Aerosol generating procedures

Aerosol generating procedures (AGPs) are those procedures that produce aerosols or droplet nuclei that are small enough to remain suspended around the patient zone for longer periods of time than larger droplets. Because of their small size they can be inhaled. They pose a higher infection risk for health professionals.

The following procedures are aerosol-generating:

- Tracheal intubation and extubation
- Non-invasive ventilation (NIV); bilevel continuous airway pressure- and CPAP
- Tracheotomy or tracheostomy procedures (insertion and removal)
- Manual ventilation
- Bronchoscopy
- High Frequency oscillating ventilation
- High flow nasal oxygen
- Induction of sputum using nebulisation
- Respiratory tract suctioning
- Dental procedures -high speed dental drills and ultrasound scalers
- High-speed cutting instruments in surgery/post-mortem
- Upper ENT airway procedures that involve suctioning
- Upper gastro-intestinal endoscopy where there is open suctioning of the upper respiratory tract

Specific respiratory physiotherapy procedures associated with aerosol generating procedures

- Use of positive pressure breathing devices (e.g. IPPB), mechanical insufflation-exsufflation (MI-E) devices, intra/extra pulmonary high frequency oscillation devices (eg The Vest, MetaNeb, Percussionaire)
- PEP and oscillating PEP devices, including bubble PEP
- Nasopharyngeal and oropharyngeal suctioning
- Manual hyperinflation (MHI)
- Saline instillation via an open circuit/ endotracheal tube
- Inspiratory muscle training, particularly if is required to be used with people who are intubated/ventilated and/or disconnected from a breathing circuit
- Lung function testing, Spirometry

- Cough generating procedures (e.g., coughing and huffing during treatment)
- Positioning/gravity assisted drainage techniques and manual techniques (e.g., expiratory vibrations, percussion, manual assisted cough) that may trigger a cough and the expectoration of respiratory secretions
- Any mobilisation or therapy that may result in coughing and/or expectoration of respiratory secretions

Guidance for undertaking a risk assessment

For each patient care episode, the physiotherapist must first risk assess the situation as part of Standard Precautions.

The following should be considered in the risk assessment: Need for face-to-face intervention

- Type of intervention
- Likelihood of repeated forceful coughing and respiratory secretions
- Proximity of therapist to patient of <2 metre
- Duration of intervention
- The location where the procedure will be undertaken
- If Transmission-based Precautions are required

Additional information for respiratory risk assessment and PPE guidance for healthcare workers can be found [here](#).

PPE requirements during respiratory physiotherapy (including the use of aerosol generating procedures) for patients not diagnosed with COVID-19

Standard and Transmission-based Precautions should be followed for all patient care activities; this includes any medical procedure or intervention where exposure to blood and body fluids, including secretions or excretions, may occur.

Organisational guidance should be followed on how to put on and take off PPE safely including disposal of PPE. Hand hygiene should always be performed before putting on, and after taking off PPE.

Additional information

[Personal protective equipment guidance for healthcare settings](#)

[Covid-19 infection prevention and control recommendations for health and disability care workers](#)

[Infection prevention and control](#)