

Infection Prevention and Control

Decision algorithm for Recommended Personal Protective Equipment in Allied Health Procedures

Introduction

This guide is intended to support Allied Health professionals' decision making in relation to the indications for the recommended use of Personal Protective Equipment (PPE) in hospitals, community health centres and other facilities. The guide was developed in response to the SARS-CoV-2 pandemic but is also intended to support clinician decision making regarding PPE use in usual clinical practice.

The guide was prepared by speech pathologists and physiotherapists and in collaboration with the NSW Health Chief Allied Health Officer and Clinical Excellence Commission (CEC). Broad consultation with NSW Health Physiotherapists, Speech Pathologists and the CEC Infection Prevention and Control Community of Practice and expert reference committee was also undertaken during the development of the guide.

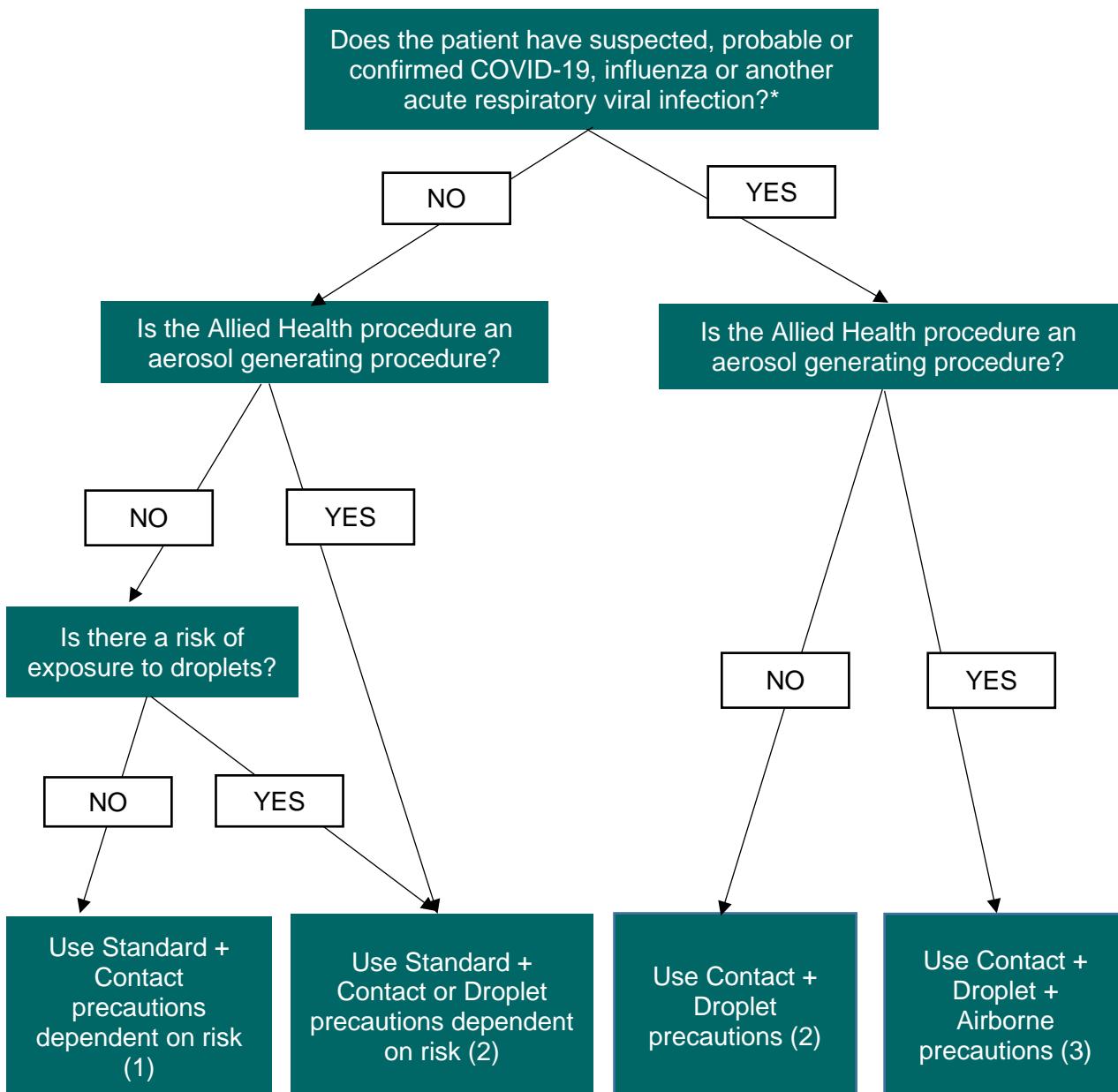
The authors acknowledge that the presence and risks related to SARS-CoV-2 vary between locations and therefore this information should be used in collaboration with individualised advice received from Local Health Districts and services. Where it is felt that particular risks apply to a service, specialist advice should be sought from local specialist infectious disease experts before deviating from the advice contained in this document.

The guidance provided in this document is also consistent with other guidance published by the CEC and expert groups from the NSW Ministry of Health and national bodies referenced in document. Clinicians should refer to all the documents that are relevant to their specific clinical practice.

Underpinning this document is the need for all Allied Health Professionals to use a risk-based approach prior to undertaking clinical assessment, procedures and treatments to ensure that the appropriate PPE is used at all times, not only related to SARS-CoV-2.

The understanding related to SARS-CoV-2 is emerging and therefore this statement may evolve in future to ensure that it remains accurate as more evidence emerges.

Decision algorithm for recommended PPE in Allied Health Procedures



*Definition will depend on the service location, and should be based on national case definitions and be guided by local infectious disease and public health advice.

Algorithm is based on:

- National guidance in the use of personal protective equipment PPE in hospitals during the COVID-19 outbreak¹
- ANZCA Statement on personal protective equipment during the SARS-CoV-2 pandemic (15/05/2020)
- ANZCA Recommendations for PPE according to SARS-CoV-2 risk screening flowchart (28/04/2020)⁵

General considerations

Where possible more than 1.5 metres distance should be maintained between clinician and patient during assessment and treatment and if there are any other risk factors droplet precautions may be required.

Risk factors to be considered:

- Cognition and cooperation of patient
- Secretion control/volume
- Cough etiquette and hygiene
- The position of the clinician during the procedure (e.g.: behind or beside patient) and ability to maintain >1.5 m distance
- The cumulative length of time spent with an individual patient (2 hours >1.5 metres over a 48 hour period is considered low risk). If this is longer or distance can't be maintained, additional PPE may be required.

If these circumstances put the clinician at risk of infection, droplet precautions should be considered

1. Allied health procedures with no risk of droplet exposure

Standard precautions should be adhered to at all times, ensuring ongoing risk assessment approach during patient contact

Examples of procedures (not exclusive):

- General mobilisation of patients
- Outpatient orthopaedics/hydrotherapy/musculoskeletal/lymphoedema/women's health/cardiac and pulmonary rehabilitation
- Videofluoroscopic Swallow Assessment/Modified Barium Swallow
- Clinical dysphagia assessment
- Dysphonia, dysphasia, dyspraxia, chronic cough assessment and treatment

2. Allied health procedures with risk of exposure to droplets or body fluids

Standard precautions, plus contact and droplet precautions

Note: Previous advice from the Commonwealth Department of Health to use airborne precautions for care of patients with severe cough has been withdrawn. Contact plus droplet precautions are only required ¹

Examples of procedures (not exclusive):

- Airway clearance techniques including, closed suction, sputum collection procedure, positioning / gravity assisted drainage techniques, ACBT and manual techniques (excluding where open suction is required)
- Manual assisted cough i.e. abdominal cough or cough with over pressure
- Use of breathing devices with viral filter (PEP devices, excluding NIV)
- Inspiratory and expiratory muscle strength training on non-ventilated
- Non-AGP assessment, weaning and treatment of tracheostomy patient (e.g.: deflating cuff, changing inner cannula or placement of speaking valve in non-ventilated patients).

- Assessment and treatment of laryngectomy patient including change of voice prosthesis/HME management where there is direct manipulation of stoma or treatment in close proximity
- Neonatal/Paediatric feeding assessment where 1.5 m distance cannot be maintained
- Treatment of head and neck cancer patient where 1.5 m distance cannot be maintained
- Spirometry or peak flow meter device (to avoid contamination of the device consider using viral filter)

3. Allied Health aerosol generating procedures

Examples of procedures (not exclusive):

- Use of positive pressure breathing devices, mechanical insufflation-exsufflation devices, intra/extra pulmonary high frequency oscillation devices
- Open suctioning of nasopharynx, oropharynx, tracheostomy, ETT or laryngectomy stoma
- Assessments where a patient is receiving NIV, high-flow nasal prongs, inhalation therapy or a nebuliser
- Manual hyperinflation (MHI) and inspiratory muscle training device on ventilated patient
- Procedures that have risk of ventilator disconnection e.g. manual assisted cough, manual techniques, mobilising
- Induced sputum via ultrasonic jet nebuliser
- Fibrooptic Endoscopic Evaluation of Swallowing (FEES) assessment (Co-phenylcaine spray should not be used at present as aerosolises. It is recommended that this procedure should NOT be conducted on COVID-19 suspected/confirmed cases)

Explanatory Notes

Evidence regarding droplets versus aerosols in coughing

- There is strong evidence that COVID-19, like most respiratory viral infections, is predominantly transmitted by droplets
- Clinical and epidemiological evidence suggest that airborne transmission is rare, but some aerosol-generating procedures (AGPs) can increase the risk. The critical factor here is that the viral load is far higher in droplets.
- It is known that some fine particle (<5 micron) aerosols are produced by infected patients, but the quantity of virus in these particles is significantly less than that in large droplets.
- AGPs can aerosolise the respiratory droplets hence the increased risk as there can be a higher viral load with these procedures and may therefore increase the risk of virus transmission.

Selection of PPE

The Clinical Excellence Commission provides health workers in NSW on further advice on selection of PPE in [Management of COVID-19 in Healthcare Settings](#). An excerpt on PPE selection is included below.



Context COVID-19 Case	DISPOSABLE GLOVES	PLASTIC APRON	FLUID RESISTANT OR ISOLATION GOWN	SURGICAL MASK	P2/N95 MASK	EYE PROTECTION ¹
Acute hospital inpatient and emergency departments, dental and maternity setting (cont.)	Working in a procedural area such as radiology, with suspected, probable or confirmed case(s) ¹ – direct patient care (within 1.5 metres) follow same precautions as per inpatient unit	✓ single use ³	✓ single/extended use ⁶	OR RA ⁷ single/extended use ⁶	✓ single/extended use ⁶	✗ single/extended use ⁶ clean reusable in between use ⁴
	All individuals transferring suspected, probable or confirmed case(s) ¹ (within 1.5metres)	✓ single use ³	✓ RA ⁷ single/extended use ⁶	✗	✓ single/extended use ⁶	✓ single/extended use ⁶ clean reusable in between use ⁴
	Working in an Operating Theatre (non-scrubbed staff) with suspected, probable or confirmed case(s) ¹ – no AGPs²	✓ single use ³	✓ Single use ³	OR RA ⁷ Single use ³	✓ single/extended use ⁶	✗ single/extended use ⁶ clean reusable in between use ⁴
	Working in a delivery/birthing suite with suspected, probable or confirmed case(s) ¹	✓ single use ³	✓ single/extended use ⁶	OR RA ⁷ single/extended use ⁶	✓ single use ³	✗ ✓ single use ³ clean reusable in between use ⁴
	Cleaning a room or zone after a suspected, probable or confirmed case(s) ¹	✓ single use ³	✓ single use ³	✗	✓ single/extended use ⁶	RA ⁷ within 30minutes of an AGP ✓ single/extended use ⁶ clean reusable in between use ⁴
	When providing care to vulnerable ⁸ patient groups during (within 1.5 metres)	✓ single use ³	✓ single use ³	✗	✓ single/extended use ⁶	✗ ✗

References and supporting evidence

1. Australian Government Department of Health. [Guidance on the use of personal protective equipment \(PPE\) in hospitals during the COVID-19 outbreak](#). Version 2 (24/02/2020)
2. World Health Organization. [Modes of transmission of virus causing COVID-19: implications for IPC recommendations](#). 29/03/2020.
3. The Australian Society of Otolaryngology Head and Neck Surgery. [COVID-19 Update: ASOHNS Guidelines addressing the COVID-19 pandemic – The re-introduction of elective surgery](#). 24/04/2020
4. National COVID-19 Clinical Evidence Taskforce. <https://covid19evidence.net.au>
5. Australian and New Zealand College of Anaesthetists (ANZCA) [Recommendations for PPE according to SARS-CoV-2 risk screening flowchart](#) (28/04/2020)
6. Australian Government Department of Health. [Guidance on the use of personal protective equipment \(PPE\) in hospitals during the COVID-19 outbreak](#) (27/05/2020)
7. Clinical Excellence Commission. [Emergency Department – PPE Quick Reference Guide](#). Version 3 (27/04/2020)
8. Clinical Excellence Commission. [Infection Prevention and Control Management of COVID-19 in Healthcare Settings](#). Version 3.2 (07/05/2020).