23 October 2020

Recommended minimum requirements for the use of masks or respirators by health and residential care workers in areas with significant community transmission of COVID-19

The Infection Control Expert Group (ICEG) recognises the significant concern among health and care workers (including in aged care) caring for patients and residents, who are doing vital work in very difficult times. It is important to protect and support them and, with appropriate use of personal protective equipment (PPE), minimise the risk of transmission from staff to aged care residents.

ICEG advice for the minimum PPE required in geographic areas with community transmission,[1] aims to protect both patients/residents and workers.

ICEG advice is updated as situations change and new evidence and information become available. It is important that health and care workers[2] keep up to date with the advice in their state or territory.

Current evidence indicates, like other respiratory viruses, COVID-19 is mainly transmitted by respiratory droplets produced by an infected person during talking, coughing, singing, shouting or sneezing. Droplets can spread directly to someone nearby (usually within 1.5 m) or settle on an object or surface. The virus can be transmitted by someone touching the contaminated surface or object and then touching their face. **There is little clinical or epidemiological evidence of significant transmission of SARS-CoV-2 (the virus that causes COVID-19) by aerosols.[3]**

There is reliable evidence the application of recommended infection control measures including administrative, engineering, environmental controls, hand hygiene and other protective measures during patient/resident care, can minimise occupational acquisition of COVID-19, and spread to others.

This guidance outlines the minimum PPE which should be used by health and care workers in areas with significant community transmission of COVID-19. Individual organisations may choose to recommend the use of a particulate filter respirator (PFR), such as a P2 or N95 respirator, in some circumstances, as outlined below. However, current evidence does not indicate any additional benefit from the use of a PFR rather than a surgical mask, in preventing SARS-CoV-2 transmission during routine care of patients/residents with suspected or confirmed COVID-19.

Health and care workers who use PFRs must be trained in their correct use. This includes how to perform fit-checking and how to put them on and remove them safely.

[1] As determined by jurisdictional public health authorities.

[2] Refers to all health and residential care workers with direct patient/resident contact.

[3] Conly, J., Seto, W. H., Pittet, D., Holmes, A., Chu, M., & Hunter, P. R. on behalf of the WHO Infection Prevention and Control Expert Group for COVID-19 (2020). Use of medical face masks versus particulate respirators as a component of personal protective equipment for health care workers in the context of the COVID-19 pandemic. *Antimicrobial Resistance & Infection Control*, *9*(1), 1-7.

They will not be effective, and the risk of infection can increase, if they are not used correctly. Men must be clean shaven to achieve a good seal on the face.

PFRs with valves should not be used as there is a risk that exhaled air, from an infected wearer will contain infectious viral particles.

In areas with community transmission of COVID-19, health and care workers may wish to take extra respiratory precautions. State and territory public health units will advise where these extra precautions are recommended.

Routine clinical care

In areas with significant community transmission, the following are minimum requirements:

- Standard precautions,[4,5] eye protection, AND a surgical mask in **all clinical settings**
- Contact[6] and droplet[7] precautions, and eye protection, for routine non-hospital and hospital care of patients/residents
    - **with suspected or confirmed COVID-19 OR**
    - **who are in quarantine or have acute respiratory symptoms**

PFR use in specified clinical settings

Until there is more evidence, health and care workers may consider using contact and droplet precautions (i.e. gown, gloves, protective eyewear) with a PFR instead of a surgical mask, in specified settings. These include emergency departments, residential care facilities, COVID-19 wards, and other hospital in-patient settings, in areas with significant community transmission, where one or both of the following apply:

1. **For the clinical care of patients/residents with suspected or confirmed COVID-19, who have cognitive impairment, are unable to cooperate, or exhibit challenging behaviours** (see below).
2. **Where there are high numbers of suspected or confirmed COVID-19 patients/residents AND a risk of challenging behaviours and/or unplanned aerosol-generating procedures** (e.g. including intermittent use of high flow oxygen).

In these situations, use of a PFR, for up to four hours, if tolerated, will avoid the need for frequent changes of face covering.

This advice reflects:

- Recent experience in settings such as those described above that suggests an increased risk of health and care worker infection, despite apparent compliance with infection control precautions.
- Anecdotal evidence of a link between health and care worker infection and **challenging behaviour,** such as shouting, by patients/residents who are agitated or find instructions hard to follow, especially during the first week of infection, when viral load may be high.
- The risk of health and care worker infection seems to have been increased in settings with high case numbers and prolonged patient/resident contact.

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[4] Approach 3 Standard Precautions Photo (Australian Commission on Safety and Quality in Health Care [ACSQHC])

[5] For the care of all patients undertake a risk assessment to determine the need for additional PPE, in accordance with the Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019)

[6] Contact Precautions in addition to Standard Precautions (ACSQHC)

[7] Droplet Precautions in addition to Standard Precautions (ACSQHC)

- However, it is not clear whether any increased risk reflects enhanced infection potential from greater dispersal of droplets and/or heavy environmental contamination or aerosolisation due to increased vocal/respiratory activity such as shouting.
- It is also not clear that the use of a PFR will reduce the risk. Past experience indicates that health and care worker infections can occur despite their use.
- Despite these uncertainties, **correct use of a PFR**, along with all other infection prevention and control measures, *may* provide added protection in the specific situations outlined above.

Note: *Settings of heavy workload and stress, such as those described above, are known to be associated with inadvertent breaches of infection control precautions and transmission of health care associated infections, irrespective of COVID-19.*

Aerosol generating procedures

Health care workers should:

- Avoid unnecessary aerosol generating procedures (AGPs).
- Use contact, droplet and airborne precautions (including eye protection) if an AGP is required.
- Ensure procedures occur in a closed door single negative pressure room, if available.
- Ensure only essential health and care workers are in the room during the procedure.
- Leave the room empty for at least 30 minutes after the procedure,[8] and undertake environmental cleaning.

Health and care workers must use PPE in line with the principles in the Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019).

For more information visit the Department of Health website.

[8] Source: https://www.cdc.gov/infectioncontrol/guidelines/environmental/appendix/air.html#tableb1