Government of **Western Australia**
Department of **Health**

Coronavirus Disease-19 (COVID-19)

Infection Prevention and Control in the Hospital Setting

Version 5, 19 March 2020

Revision History			
Version	Date	Revised by	Changes
5	18/03/2020	PHEOC	Added self isolation for returned travellers from any country. Added isolation in separate area rather than single rooms
4	03/03/2020	PHEOC	HCW who have travelled in or transited from countries listed as higher risk countries must not work in a HCF for 14 days since leaving the high risk country.
3	28/02/2020	PHEOC	Addition to aerosol generating procedures, HCW management, PPE table included, obstetric and neonatal management
2	17/02/2020	PHEOC	
1	14/02/2020	PHEOC	Initial draft developed by PHEOC

This document has been developed using the best available evidence and resources and is believed to be accurate at the time of publication. Information in this document is subject to change and it is essential that users of this document ensure they are accessing the most up to date online publication.

Contents

Introduction

Coronaviruses are a large group of viruses that can cause illnesses ranging from a mild common cold to severe disease such as Severe Acute Respiratory Syndrome (SARS Co-V). The novel coronavirus disease (COVID-19) was recently identified in December 2019 and is caused by the newly identified SARS CoV-2.

It is critical that healthcare workers (HCWs) use appropriate infection prevention and control (IP&C) precautions from point of entry to the healthcare setting when caring for patients with novel respiratory viruses to minimise the possibility of transmission between patients, visitors, HCWs and environmental surfaces. Early reports on the epidemiology of the COVID-19 have indicated that a large proportion of patients have acquired nosocomial infections. Therefore, HCWs and healthcare facilities (HCFs) have a critical role in reducing the spread of infection.

These guidelines are based on the current available knowledge of the transmission of coronaviruses and may change as more evidence becomes available specifically regarding COVID-19.

General Principles

There are two tiers of precautions to prevent the transmission of infectious agents; standard precautions and transmission-based precautions.

Standard precautions are intended to be applied to the care of all patients in a healthcare facility (HCF), regardless of whether the presence of an infectious agent is suspected or has been confirmed. Implementation of standard precautions is the primary strategy for the prevention of disease transmission in an HCF. Standard precautions include hand hygiene, respiratory hygiene, reprocessing of reusable medical devices, sharps/waste disposal and environmental cleaning.

Transmission-based precautions are implemented for patients known or suspected to be infected or colonised with an infectious agent, where transmission is not completely interrupted using standard precautions alone. The three categories of transmission-based precautions are **contact**, **droplet** and **airborne** precautions.

Detailed information on standard and transmission-based precautions can be found in the NHMRC Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019) (external link).

Transmission of Respiratory Viruses

Respiratory droplets are generated when an infected person coughs, sneezes or talks, and during aerosol generating procedures (AGPs). Transmission of respiratory viruses occurs when large respiratory droplets (>5 microns) carrying infectious pathogens are expelled from the respiratory tract of the infectious individual and land on susceptible mucosal surfaces of the recipient.

Studies have shown that the nasal mucosa, conjunctivae, and less frequently the mouth, are susceptible portals of entry for respiratory viruses. These droplets can also contaminate environmental surfaces and be transmitted by direct and indirect contact.

Infection Prevention and Control

The minimum IP&C requirements for hospitalised patients are detailed in the Communicable Disease Network Australia (CDNA) National Guidelines for Coronavirus Disease 2019 (COVID-19) (external link). In addition to the CDNA guidelines, the following interim guidelines are provided for those patients with suspected or confirmed COVID-19 who are admitted to a HCF in Western Australia (WA).

The minimum IP&C measures for suspected or confirmed cases of COVID-19 are the application of **contact and droplet precautions** for the routine care of patients with mild illness. **Contact** and **Airborne** precautions are to be implemented for any AGPs or when managing a patient with symptoms suggestive of pneumonia (fever and breathing difficulty, or frequent severe or productive coughing episodes).[2]

Patient Presentations

Although it is not routine practice to utilise negative pressure isolation rooms (NPIRs) for droplet precautions, placement of all patients under investigation for COVID-19 in a NPIR is the preferred approach to patient management in WA HCFs, to minimise patient movement if a NPIR is ultimately required. This advice may change if there is widespread community transmission in WA and increasing pressure on the healthcare system.

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

- Place a single-use surgical mask on the patient.
- Isolate the patient in a NPIR, when available, or a single room with the door closed. If single rooms are not available, patients should be grouped together with other patients with similar etiological or clinical diagnosis (with epidemiological risk factors) and separated by a distance of at least one metre from other patients. This should be in an area which can be separated from other patients and is not to be used as a thoroughfare.
- The patient should be instructed to cover their mouth and nose with a flexed elbow or tissue when coughing or sneezing and to dispose of the tissue immediately then perform hand hygiene.
- Any person entering the room or separate isolation area should don personal protective equipment (PPE). See Personal Protective Equipment.Non-essential personnel should be instructed not to enter rooms or areas separated for patients who may be a suspected or confirmed case of COVID-19.
- Clear signage indicating the appropriate transmission based precautions and required PPE should be placed at the door of the NPIR, single room or in a prominent position at the entry to separate area.
- Conduct a medical assessment and collect respiratory specimens in accordance with current recommendations contained in the WA Clinical Alert Updates for Health Professionals and GPs.
- If a patient presents to an outpatient setting including mental health facility who meet the criteria and who report respiratory symptoms, the patient should be managed in conjunction with the emergency department. See WA Health COVID-19 Interim Guidance for patients presenting for elective surgery or outpatient clinic appointments under 14 day self-quarantine

- If admission is not required and the patient can return to the community:
  - advise the patient to self-isolate at home, if not already, and minimise contact with other people. Provide the patient with the Australian Government "Home Isolation Guidance when unwell (suspected or confirmed cases)" fact sheet. Ensure patient is aware that further testing may be required if they deteriorate or the illness persists beyond 72 hours and no other cause is found.
  - ensure arrangements are in place for the patient to be contacted with the test result.
- If admission is required:
  - Maintain IP&C precautions and implement the following procedures outlined in this document.

Specimen Collection

When collecting respiratory specimens from patients with suspected or confirmed COVID-19, transmission-based precautions must be observed whether or not respiratory symptoms are present.

For most patients with mild illness, collection of upper respiratory specimens is a low risk procedure and should be performed using a single room with door closed and **contact** and **droplet** precautions.

Where patients have severe symptom suggestive of pneumonia, then **contact** and **airborne** precautions should be observed.[2]

Note: Testing for other endemic respiratory viruses should also be included.

Samples for testing may include:

a) Upper respiratory tract samples – nasopharyngeal and/or oropharyngeal flocked swabs or nasal wash/aspirates
b) Lower respiratory tract samples (must be collected using contact and airborne precautions in a NPIR) – sputum, bronchoalveolar lavage, tracheal aspirate, pleural fluid
c) Serum – to be stored pending serology availability

Refer to Appendix A Laboratory Testing information in the COVID-19 CDNA Guidelines for Public Health Units for further details on samples, collection techniques (p 15 – 17).

PathWest specimen collection centres are listed on the PathWest website under 'PathWest COVID-19 virus Collection Centre" locations.

In-Patient Management

Patient Placement

- Patients are to be admitted to a NPIR, with ensuite facilities, if available. Alternatively, a standard single room with ensuite may be used with door closed.
- If an ensuite is unavailable, use a single room and allocate a dedicated bathroom / toilet. Toilet lids should be closed prior to flushing to minimise risk of aerosolisation.
- If there are hospital bed capacity issues, patients with symptoms suggestive of pneumonia e.g. fever, difficulty in breathing, or frequent, severe, productive cough, should be prioritised for NPIRs.

- Interdepartmental transfers should be restricted unless patient management will be compromised (e.g. admission to intensive care or necessary procedural investigations are required).
- Transfers to other HCFs should be limited unless necessary for medical care.

Cohorting

- Cohorting can be considered in patients presenting with a similar history only when the availability of NPIRs and single rooms is exhausted.
- The decision to cohort patients must be discussed with the IP&C team and on call ID Physician/Clinical Microbiologist.
- HCFs may consider creating cohort wards, especially in those facilities where heating, ventilation air conditioning (HVAC) systems can be isolated.
- In a cohorted unit, gowns, masks and eye protection may remain insitu between patients providing they are not soiled. Gloves must be changed between patients and adherence to the 5 Moments of Hand Hygiene is essential. Upon leaving the cohorted unit all PPE must be removed and discarded.

Patient Transport within HCF's

- The receiving department must be notified prior to patient transfer
- Patients are to wear a surgical mask, if their medical condition allows, when transported within the HCF.
- Patients on oxygen therapy should be transitioned to nasal prongs and wear a surgical mask for transport if their medical condition allows.
- The HCWs accompanying the patient must don fresh PPE prior to transfer, so they are not wearing the same PPE they had on in the patient room. The HCW is to wear a surgical mask, gown, gloves and protective eyewear.
- HCWs must remove PPE prior to leaving the receiving department and perform hand hygiene.

Visitors

- HCFs must advise visitors not to visit if they are unwell.
- Visitors must be kept to a minimum and HCFs must implement a visitor restriction policy.
- The decision to allow visitors should be managed on a case by case basis in conjunction with the treating medical team and the IP&C team. The decision should be based upon a risk assessment dependant on patient condition and visitor profile.
- If a visitor is allowed, they must wear a surgical mask, protective eyewear and perform hand hygiene using either soap and water or alcohol-based hand rub (ABHR) prior to entering and leaving the patient's room.
- Clinical staff need to instruct visitors on how to don and doff the PPE correctly.

Personal Protective Equipment (PPE)

Standard precautions, including hand hygiene (5 Moments) are to be implemented for all patients in conjunction with the following transmission-based precautions:

- **Contact** and **Droplet** precautions are recommended for **routine care** of the patient suspected or confirmed to have COVID-19 with **mild illness or asymptomatic**. The following PPE is required to be donned prior to entering the patient's room or isolation area: a long-sleeved gown, surgical mask, face shield/goggles and gloves.

- **Contact** and **Airborne** precautions are recommended when managing a patient with symptoms suggestive of pneumonia, or who requires frequent interventions outside the Intensive Care Unit (ICU). **Contact** and **Airborne** precautions are also required for any AGPs. The PPE required includes a long-sleeved gown, P2/N95 mask (fit check required), face shield/goggles and gloves.

- Patients admitted to the ICU with severe COVID-19 are likely to have a high viral load. **Contact** and **Airborne** precautions are required. The use of the powered air purifying respirator (PAPR) could be considered, if available, for additional comfort and visibility of the wearer if the HCW is anticipating care for long periods of time e.g. greater than 1 hour.

PPE is only protective when used correctly. Training in the use of the PAPR, fit checking of P2 / N95 respirator masks and donning and doffing procedures is essential to reduce the risk of self-contamination.

N.B. Stock rationalisation is essential and the use of P2/N95 masks should only be used when required as above.

Table 1: Guidance for PPE use by HCWs providing direct patient care

	Close contact asymptomatic	**COVID-19 is suspected or confirmed in patient with mild symptoms**	**COVID-19 is suspected or confirmed in patient with symptoms of pneumonia**
Inpatient Precautions	**Contact** & **Droplet**	**Contact** & **Droplet**	**Contact** & **Airborne**
Room type	Single room with ensuite or single room with dedicated facilities are required If the above is not available- ie in COVID-19 clinics then separate isolation area	NPIR preferred, single room with ensuite or single room with dedicated facilities are required If the above is not available- ie in COVID-19 clinics then separate isolation area	NPIR
PPE	Surgical mask Long sleeved Gown, protective eyewear, gloves	Surgical mask Long sleeved Gown, protective eyewear, gloves	P2/N95 mask Long sleeved Gown, protective eyewear, gloves

Specimen collection	Surgical mask Long sleeved Gown, protective eyewear, gloves	Surgical mask Long sleeved Gown, protective eyewear, gloves	P2/N95 mask Long sleeved Gown, protective eyewear, gloves
Aerosol Generating Procedures (AGPs)	P2/N95 mask Long sleeved Gown, protective eyewear, gloves In NPIR	P2/N95 mask Long sleeved Gown, protective eyewear gloves In NPIR	P2/N95 mask Long sleeved Gown, protective eyewear, gloves In NPIR

See Appendix 1 for donning and doffing sequence and fit checking procedure.

See Appendix 2 for AGPs.

Patient Care Equipment

- Disposable, single-use patient care equipment should be used when possible and disposed of into appropriate waste streams after use.
- Dedicate non-critical items to the patient's room for the sole use of the patient for the duration of their admission e.g. stethoscope, tourniquet.
- Minimal stocks of non-critical disposable items e.g. dressings, gloves, kidney dishes, are to be stored in the room. On patient discharge, these items are to be disposed of appropriately.
- Patient charts shall be left in the anteroom of a NPIR or outside the patient's single room.
- All reusable medical devices/equipment must be cleaned and disinfected following prior to removal from the room.
- Impregnated disinfectant wipes, as per HCF policy, may be used for specialised medical equipment such as X-ray equipment, ECG and ultrasound machines. The manufacturers' recommendations for compatible products must be followed.
- ICUs must ensure mechanical ventilation equipment is protected with viral filters and utilisation of inline suction systems.

Environmental Cleaning

- Each HCF is responsible for ensuring documentation is readily available on the specific product/s to be used including instructions for use and that material safety data sheets (MSDS) are accessible.
- Staff performing cleaning shall wear appropriate PPE, that includes gown, gloves, eyewear and a surgical mask.
- Disinfectant must be TGA approved, hospital grade with viricidal properties.
- Cleaning regimens must ensure all items in the room are cleaned both on a daily basis and on patient discharge (terminal cleaning).

- Cleaning regimens must include all horizontal surfaces, any walls that are visibly contaminated and frequently touched items (e.g. door handles, bed rails, IV poles, bedside lockers, over-bed tables).
- Damp dusting procedures are to be utilised. Vacuums, if utilised, must be fitted with a HEPA filter.
- The HCF may choose to increase cleaning frequency (e.g. twice daily), to reduce environmental contamination, especially in shared and public areas and for frequently touched items.

Daily Cleaning

- The room and patient care equipment is to be cleaned using a combined cleaning and disinfection procedure such as a 2-step clean or a 2 in 1 product, that has both a detergent and disinfectant agent.
- Disposable cleaning cloths are to be discarded after each use.
- If reusable cloths are used, they are to be laundered according the Linen Standards AS/NZS 4146:2000
- Re-useable mop heads can be used but must be bagged and sent for laundering at the completion of each use. Mop handles are to be cleaned and disinfected after each use. Alternatively, disposable mop heads with a detachable cleanable handle may be used.
- All cleaning equipment is to be cleaned and stored dry.

Terminal Cleaning

- Following patient discharge a NPIR must be cleaned according to usual hospital protocols for airborne precautions. Cleaning staff are to wear PPE appropriate to airborne precautions including P2/N95 mask, long sleeved gown, protective eyewear, and gloves. The NPIR can be re-occupied once all surfaces are dry
- Cleaning staff in areas other than NPIR are to wear PPE as per daily cleaning.
- The room and patient care equipment is to be cleaned using an approved combined cleaning and disinfection procedure such as a 2-step clean or a 2 in 1 product, that has both a detergent and disinfectant agent.
- All disposable items in the room are to be discarded on patient discharge.
- Patient bed screens, privacy curtains (and window curtains, if fitted) are to be sent for laundering/dry cleaning or disposed of (if disposable).
- The room or area can be used following completion of cleaning once all surfaces are dry.

Use of Disinfectants

- All solutions need to be prepared and used in accordance with the manufacturers' instructions for use.
- As disinfectants are inactivated by organic material, cleaning with a neutral detergent solution prior to disinfection is required if visible soiling is evident. The use of a 2 in 1 detergent and disinfectant solution or pre-impregnated combination detergent and disinfectant wipes meets these criteria.

Food Services

- Non-essential staff should be restricted. All food and beverages are to be delivered by HCWs directly caring for the patient.
- Standard precautions should be used when handling used crockery and cutlery.
- The combination of hot water and detergents used in automatic dishwashers is sufficient to decontaminate these items.
- Unopened food items or food waste is to be discarded into general waste.

Linen Services

- Standard precautions apply. Laundry practice is to conform to AS/NZS4146:2000.
- A linen skip is to be dedicated to the room and lined with a soluble bag.
- Ensure the linen bag is securely tied prior to transporting from the patient room to collection area.
- Stockpiling supplies of linen in the patient rooms is not to occur and any unused linen is to be sent for laundering and not returned to general use.

Waste Management

- Standard precautions apply.
- All waste shall be bagged and securely sealed prior to exiting patient room.
- WA Health and the HCFs guidelines for classification and disposal of general, clinical and sharps waste are to be followed.

Laboratory Specimens

- Standard precautions apply for handling and transport of specimens.
- It is preferred that specimens for COVID-19 testing are delivered direct to the laboratory and not transported via pneumatic tubes to ensure timely delivery.

Transfer of Patient Between HCFs

- If transfer to another HCF is required, the inter-hospital patient transport provider is to be advised of the patient's status and condition at the time of booking.

Management of the Deceased

- Standard Precautions apply.
- Mortuary HCWs are to follow routine institutional guidelines for management of the deceased.

Duration of Precautions

A discussion with the HCF Infectious Disease/Physician or on call Clinical Microbiologist and the IP&C team must occur prior to release of the patient from isolation.

As per the CDNA Guidelines[2] a confirmed case may be released from isolation if they meet all the following criteria:

- it is at least 7 days after the onset of the acute illness
- the person has been afebrile for the previous 48 hours

- resolution of acute illness for the previous 24 hours*
- after the acute illness has resolved, the PCR is negative on at least two consecutive specimens collected 24 hours apart **.

***** Some people may have pre-existing illnesses with chronic respiratory signs or symptoms, such as chronic cough. For these people, the treating medical practitioner should make an assessment as to whether the signs and symptoms of COVID-19 have resolved.

****** If the patient has a productive cough due to a pre-existing respiratory illness or other ongoing lower respiratory tract disease, then the sputum or other respiratory tract specimens must be PCR negative for SARS-CoV-2. Otherwise upper respiratory tract specimens must be PCR negative.

A small proportion of people may have an illness that has completely resolved but their specimens remain persistently PCR positive. A decision on release from isolation for these patients must be made on a case by case basis.

Follow up should include the patient being reviewed seven days after release from isolation for a clinical review to ensure full symptom resolution and collection of a serum specimen for storage and possible later serologic testing (the patient should be informed that this is for future test development and does not inform their clinical care.[2]

Patients who test negative for COVID-19, should be managed as per hospital policy dependant on their diagnosis.

A risk assessment should be undertaken for suspected cases who initially test negative for SARS CoV-2. If there is no alternative diagnosis and a high index of suspicion remains that the patient may have COVID-19, consideration should be given to continued isolation and use of IP&C precautions, pending further testing and reassessment.[2]

Patient Discharge

- The treating team may consider managing the patient at home through Hospital in the Home services if the following criteria are met:
  - the treating clinician determines the patient is clinically improved and well enough to be managed in the community, and
  - the patient has been afebrile for the previous 24 hours, and
  - a risk assessment has been undertaken to determine whether there is any risk to household members.
- If the patient is discharged while still infectious, ensure the patient and family members are instructed on appropriate IP&C in the home. The Australian Government Department of Health Fact sheets must be provided Home Isolation Guidance when unwell (suspected or confirmed cases) and Isolation Guidance for their close contacts.
- A confirmed COVID-19 case convalescing at home must remain in isolation until the criteria for duration of precautions are met.

Healthcare Worker Management

- Where possible, dedicated staff should manage the patient suspected or confirmed with COVID-19 to minimise risk to other HCW's and patients. Consideration of rostering so as to avoid fatigue of HCWs is to be considered. The wearing of PPE, especially if the wearing P2/N95 is required is only tolerated for limited periods of time.

- A staff log shall be maintained of all staff entering the room of a suspected or confirmed case of COVID-19 to allow for monitoring of potential IP&C breaches and contact tracing. This document should be managed with consideration for staff privacy. See Appendix 3: Staff Register.
- HCFs should put in place strategies to minimise exposure of staff to suspected or confirmed cases of COVID-19 by deploying administrative, research, and other non-clinical staff to areas segregated from patients. For example, office areas away from wards, or home working. Consider installing impermeable screens at reception/ward clerk desks or providing other means of maintaining social distancing for staff required to greet patients and public.
- HCWs working across multiple sites must inform their line manager they have been caring for a patient with suspected or confirmed COVID-19.
- HCWs should avoid wearing their uniforms home from hospital. Use of the HCF laundry facilities to launder uniforms should be
- HCWs who have travelled in or transited through the listed *higher risk* countries must not undertake work in a HCF for 14 days since leaving the higher risk country. They must follow the recommendations for self-quarantine see Isolation Guidance
- HCWs who have travelled in or transited through the listed *moderate risk* countries must self-monitor for symptoms. Should the HCW develop symptoms of COVID19, they should be isolated and managed as per current recommendations for a suspected or confirmed case see Isolation Guidance
- Clearance of confirmed COVID-19 HCWs

  A risk assessment should be performed based on the patient symptom severity, anticipated frequency and duration of interventions required, and likelihood of aerosol generating procedures when allocating staff. HCF may consider limiting exposure of the following HCWs to a patient suspected or confirmed with COVID-19 (as per RIDER plan, p 43):

  - Pregnant women
  - with chronic respiratory conditions including asthma, chronic obstructive pulmonary disease (COPD)
  - morbidly obese
  - Chronic illnesses predisposing to severe disease including: cardiac disease (excluding simply hypertension), diabetes mellitus, chronic renal disease, haemoglobinopathies, immunosuppression (including that caused by cancer, medication or HIV/AIDS) chronic neurological conditions
- HCWS who have taken recommended IP&C measures, including the correct use of PPE, while caring for a confirmed case of COVID-19 are not considered close contacts unless there has been a breach of PPE.
- If there is a breach in PPE when managing a patient with confirmed COVID-19, the breach must be assessed according to the close contact definitions. see National Guidelines for Coronavirus Disease 2019 (COVID-19) (external link). p. 10 - 13 for definitions of contacts and the management of contacts. If they meet the definition of a close contact then the HCW requires self-quarantine at home (see Contact Management below). Support by the local public health unit/Occupational Safety and Health unit/IP&C unit may occur to support at home monitoring.

- All HCWs caring for confirmed cases should carefully monitor their own health.
- If the HCW develops signs and symptoms of acute illness or signs of fever, cough or shortness of breath they should:
    - cease work or not report to work
    - contact their line manager and their HCF infection prevention and control unit
    - seek medical attention, including informing their health care provider they have cared for a patient with suspected or confirmed COVID-19.
- IP&C teams should consider the need for contact tracing based on the CDNA guidelines for close contacts and HCW close contacts (p 10 – 12).

Contact Management

Due to the emerging information regarding the infectivity and transmission of COVID-19 refer to the National Guidelines for Coronavirus Disease 2019 (COVID-19) (external link). p. 10 - 13 for definitions of contacts and the management of contacts. Contact tracing will need to be undertaken by the HCF IP&C unit for inpatients and HCWs.

Close contacts require self-quarantine for 14 days. An Australian Government Department of Health fact sheet for close contacts on Isolation Guidance must be provided. If a contact is required to seek medical care for any reason they must telephone their GP, clinic or hospital emergency department prior to presenting.

Management of Pregnant Women and Neonates

There is limited data on the effects of COVID-19 in pregnancy and neonates. There is also limited information on the transmission of the virus through breast milk. A limited case series report found no evidence of virus in breastmilk. Other members of the coronavirus family (SARS CoV, MERS CoV) are known to cause severe complications in pregnancy and the neonate.[4]

The management of neonates and pregnant women with suspected or confirmed COVID-19 should be managed on a case by case basis with discussion between obstetric, neonatal, ID Physician/clinical microbiologist and IP&C teams and consideration of the HCF capacity to manage such a situation. Asymptomatic infants born to mothers with confirmed COVID-19 are considered as close contacts. An interim guideline based on the Centres for Disease Control in the United States recommendations may include:

Table 2: Interim Inpatient Management Guidelines of Mother and Neonate

	Management Guidelines
Term baby with mother who is suspected or confirmed with COVID-19	Transmission based precautions are to be implemented for both mother and neonate as per PPE recommendations Risks of separating mother and baby should be discussed by her treating team as above based on severity of disease and illness signs and symptoms. If rooming in is considered, mother must wear a surgical mask for all care including breastfeeding of the neonate. Mother must perform hand hygiene before and after caring for the neonate. Dedicated equipment, including breast pump if applicable. All expressing equipment cleaned as per manufacturers, guidelines inclusive of pump. Monitor the neonate for development of signs and symptoms of COVID-19
Term baby with mother who is requiring self-quarantine with no symptoms	Mother and neonate to be managed under **Contact** and **Droplet** Precautions until the 14-day self-quarantine period has completed. Keep baby with mother, mother to wear surgical mask for breast feeds and all cares as above. Monitor the neonate for development of signs and symptoms of COVID-19
Neonate in the nursery with mother who is suspected or confirmed with COVID-19	Manage Neonate under **Contact** and **Droplet** Precautions until the 14-day self-quarantine period has completed. Neonate should remain in isolation for a period of 14 days. Monitor the neonate for development of signs and symptoms of COVID-19 Restrict mother from visiting the nursery until isolation has been completed.
Neonate in the nursery with mother who is requiring self-quarantine with no symptoms	Further discussion with treating medical team, IP&C team and clinical microbiologist. Consider using a side room or room where the neonate is physically separated. Mother could attend the neonate using PPE (eg: surgical mask) Monitor the neonate for development of signs and symptoms of COVID-19

Appendix 1: Personal Protective Equipment

General

- PPE is to be available outside patient room or in the anteroom.
- Donning of PPE should occur in the anteroom or outside the single room
- HCWs must be diligent not to touch their eyes, nose, mouth or hair while wearing PPE. Loose hair must be tied back securely prior to donning PPE.
- Wearing gloves is not a substitute for hand hygiene. Hand hygiene must always be performed on glove removal.
- Hand hygiene products and gloves must be available in the room to facilitate compliance with the 5 Moments of Hand Hygiene
- When gloves are worn, avoid touching environmental surfaces such as light switches and door handles to minimise environmental contamination.
- Doffing of PPE should occur in the anteroom or at the door of the single room, just prior to leaving. Eyewear and masks are to be removed outside the room followed by hand hygiene.

Protective eyewear

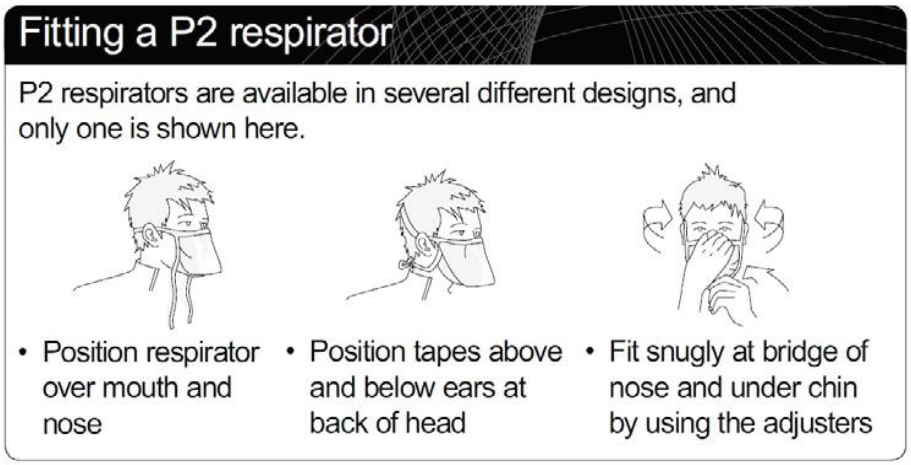
- Designated protective eyewear (e.g. combined mask/shield, visor or goggles), are to be utilised.
- Eyewear should be single use where possible.
- Personal prescription spectacles are inadequate and must be used in conjunction with a face shield.
- Eyewear is to be worn on entering a patient room or cohort ward.
- If reusable eyewear is used it must be cleaned and disinfected with approved HCF products.
- Long sleeved, fluid repellent, cuffed gowns are preferred. If these are not available, cloth gowns can be used with the addition of a plastic apron.
- Gowns are to be worn once and then placed in waste or laundry receptacle as appropriate.
- Gowns must be changed between each patient contact

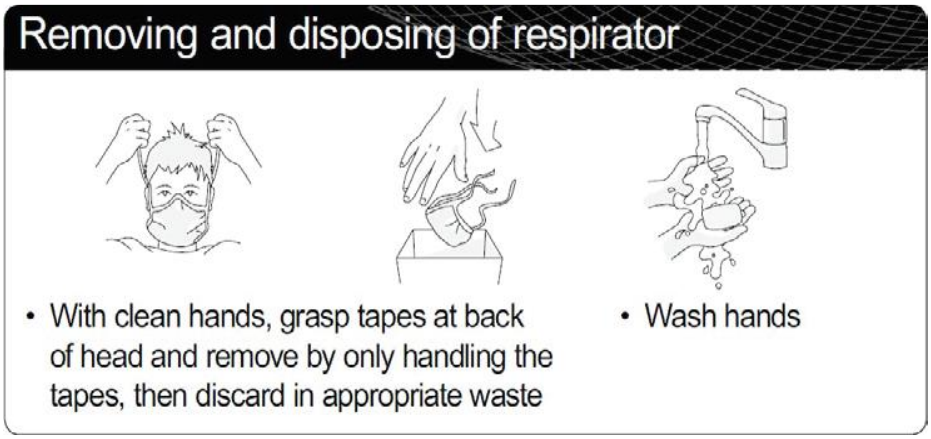
Masks

- Masks used include surgical and P2 or N95 disposable respirators/masks.
  - P2 respirators are those that comply with the *Australian Standard AS/NZS 1716: Selection, use and maintenance of respiratory protective devices*
  - N95 respirators are those that comply with the *United States National Institute for Occupational Safety and Health (NIOSH) 42 CFR part 84,* which is a less stringent standard.
- Surgical masks are utilised to contain respiratory secretions of the wearer and to prevent droplet inhalation of the wearer. Surgical masks are currently recommended for HCWs for most contacts with suspected or confirmed COVID-19 cases, excepting the following dot point.

- P2 or N95 masks are utilised to protect the HCW when there is a risk of airborne transmission. This can occur following AGPs when virus particles may remain suspended in the air for long periods. P2/N95 masks should be used by HCWs attending a patient with symptoms of pneumonia.
- Masks can be worn for more than one patient if cohorting of patients occurs.
- Masks should be removed when soiled, or they become moist or when it is difficult to breathe through.
- Masks are to be removed only by touching the ties/loops.
- All HCWs must receive education, in accordance with the manufacturers' advice, in relation to donning a P2 or N95 mask and the procedure to perform a fit check for each specific mask worn. A fit check must be performed after donning a P2 or N95 mask prior to entering the patient's room and each time a new mask is put on. An effective seal will not be achieved when facial hair is present.
- Where the HCW fails a fit check after appropriate education and assessment, an alternative size or style of mask must be sourced prior to the HCW caring for a suspected or confirmed case of COVID-19.
- If P2 or N95 masks are in limited supply, they should be prioritised for HCWs undertaking AGPs.

Process for fitting and removing P2/N95 mask[1]





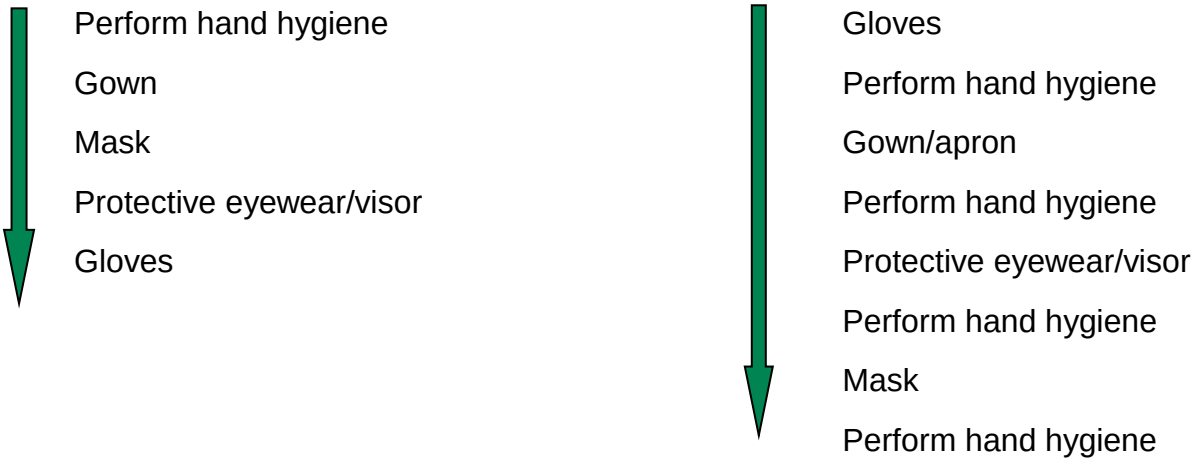
Fit Checking

HCWs are to perform a fit check every time they put on a P2/N95 respirator/mask to ensure it is properly applied. The P2/N95 mask must be sealed over the bridge of the nose and mouth and there are no gaps between the mask and the face. HCWs with facial hair (including 1 – 2 days growth) must be aware that an adequate seal cannot be guaranteed and must be clean shaven.

A good seal is indicated where the P2/N95 mask is drawn in towards the face, when a deep breath is taken, indicating a negative pressure seal.

Royal Perth Bentley Group have produced a video on the correct fitting of an N95 mask (external link).

Sequence for donning and doffing PPE



Appendix 2: Aerosol Generating Procedures

AGPs are those that stimulate coughing and promote the generation of fine airborne viral particles (aerosols) resulting in the risk of airborne transmission. Procedures include tracheal intubation, non-invasive ventilation, cardiopulmonary resuscitation (CPR), manual ventilation before intubation, bronchoscopy, airway suctioning, high flow nasal oxygen. Limit the performance of AGPs on COVID-19 patients unless medically indicated.

- Perform AGPs in a NPIR, alternatively, use a single room with the door closed.
- Limit the number of HCWs in the room when AGPs are performed.
- Anyone who enters the room must adhere to contact and airborne precautions.

Nebulisers are not recommended for use and should be replaced by dedicated single patient use spacers.

Table 3: Classification of respiratory specimens as AGPs[5]

Specimen type	Patients with no fever, and mild or no respiratory symptoms	Patients with fever and mild symptoms e.g. mild cough and/or rhinorrhoea	Patients with fever and symptoms of pneumonia
Nasopharyngeal swab	No	No	Yes
Oropharyngeal swab	No	No	Yes
Sputum (not induced sputum)	No	No	Yes
Nasal wash/aspirate	No	No	Yes
Bronchoalveolar lavage	Yes	Yes	Yes
Induced sputum	Yes	Yes	Yes
Non-invasive ventilation	N/A	No	Yes
High flow intranasal oxygen	N/A	No	Yes

Appendix 3: Staff Register

PATIENT LABEL

STAFF/VISITOR REGISTER					
DATE	***FULL NAME***	***JOB DESCRIPTION***	***TIME IN***	***TIME OUT***	***CONTACT NUMBER (mobile preferred)***

References

1. Australian Guidelines for the Prevention and Control of Infection in Healthcare, Canberra: National Health and Medical Research Council (2019)

2. Coronavirus Disease 2019 (COVID-19) (external link) CDNA National Guidelines for public health units. Australian Government Department of Health.

3. Australian Health Sector Emergency Response Plan for Novel Coronavirus (COVID-19)

4. Centres for Disease Control and Prevention. Interim Considerations for Infection Prevention and Control of Coronavirus Disease 2019 (COVID-19) in Inpatient Obstetric Healthcare Settings [Internet] [updated 2020 Feb 18; accessed 2020 Feb 21]

5. Interim advice on non-inpatient care of persons with suspected or confirmed Coronavirus Disease 2019 (COVID-19), including use of personal protective equipment (PPE)

6. Updated Respiratory Infectious Diseases Emergency Response (RIDER) plan

7. Infectious Diseases Emergency Management Plan (IDEMP), WA Health System

Resources

Government of Western Australia Department of Health Coronavirus (COVID-19)

- COVID-19 Interim Guidance for patients presenting for elective surgery or outpatient clinic appointments under 14 day self-quarantine
- COVID-19 Interim Guidance for patients requiring urgent surgery or medical care who are under 14 day self isolation

Australian Government Resources

- "Home Isolation Guidance when unwell (suspected or confirmed cases)"
- Interim recommendations for the use of personal protective equipment (PPE) during hospital care of people with Coronavirus Disease 2019 (COVID-19)
- COVID-19 Isolation Guidance

This document can be made available in alternative formats on request for a person with disability.