Health New Zealand
Te Whatu Ora

COVID-19 infection prevention and control guidance for acute care hospitals

March 2024

Latest updates to this guidance

Update to recommended guidance for household contacts of a COVID-19 positive case.

Contents

About this guidance

This guidance document has been reviewed and updated by the Covid-19 Clinical Advisory Group including best evidence, national and international guidance and resources to provide a national approach for district hospitals to use as a resource to enable infection prevention and control teams to develop their own hospital policies and procedures based on their own local situation.
Local data on levels of community transmission should be used to guide selection of best IPC practices to reduce transmission of COVID-19.

This is a living document and replaces previous versions of the COVID-19 infection prevention and control guidance for acute care hospitals and as such updates and changes may occur**.**

This guidance is applicable to all district hospitals that are receiving, assessing, and caring for patients suspected or confirmed to have COVID-19 infection or patients who during risk assessment are identified as being at high risk of COVID-19 infection and outlines the <u>infection prevention and control (IPC) measures</u> to provide a safe workplace for people, patients, and staff in acute care hospitals.

1. Transmission of SARS CoV-2 (COVID-19)

Transmission of COVID-19 is primarily through the respiratory route via inhalation of infectious particles. An infectious person will generate a range of different sized infectious particles through breathing, talking, shouting, coughing and sneezing.

There are three main routes in which transmission of COVID-19 can occur:

Inhalation of infectious particles released into the air generated by shouting, coughing, singing. Particles generated through sneezing can travel greater distances and may disseminate further through the room. Concentration of particles is greatest closer to the infectious person. The evidence supporting aerosol generation of infective particles during different medical interventions is of low quality.[1]

Deposits of respiratory particles through deposits of infectious respiratory particles on mucous membranes of the eyes, nose and mouth.

Direct and indirect transmission may also occur through direct and indirect contact with contaminated surfaces, or by contact with equipment used on or by the infected person (e.g. stethoscope or thermometer) but the evidence to support this is limited[2].

Risks of transmission can be decreased by mask wearing, good ventilation and reducing the time of exposure.

1.1 **Re-infection:** Duration of immunity following infection varies between people but reinfection is unlikely in the first 30 days and uncommon in the first three months after an infection. A diagnosis of reinfection with COVID-19 can be important for some individuals particularly those who are elderly, have high risk conditions, or who have frequent close contact with such people. Testing will help make early decisions on patient placement and use of transmission based precautions. All healthcare facilities that have overnight admissions should have processes for testing appropriate to the clinical situation.

 Refer to : Clinical Guidance on testing for possible COVID-19 reinfection
COVID-19 Testing Plan and Testing Guidance

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[1] Assessing the evidence base for medical procedures which create a higher than usual risk of respiratory infection transmission from patient to healthcare worker, Version 20: 04 November 2021 Antimicrobial Resistance and Healthcare Associated infection, National Services Scotland.

[2] European Centre for Disease Prevention and Control. Infection prevention and control and preparedness for COVID-19 in healthcare settings. Sixth update – 9 February 2021. https://www.ecdc.europa.eu/en/publications-data/infection-prevention-and-control-and-preparedness-covid-19-healthcare-settings

2. COVID-19: Infection prevention and control strategies

2.1 Risk assessment is a key component to ensuring that patients at high risk of COVID-19 infection are identified on entry to acute care facilities and IPC measures, including isolation, are implemented in timely way to protect HCW's, patients and visitors.

Hospitals should ensure there are clear up-to-date processes in place informing people of the recommended IPC practices to prevent transmission of COVID-19 if they have any of the following criteria

- Clinical symptoms of COVID-19, a positive RAT or other COVID-19 viral test - refer to Case definition and clinical testing guidelines for COVID-19
- Household contact of a COVID-19 positive case, or high risk healthcare worker/transmission event

2.2 IPC controls - use of controls to minimise exposure to occupational work hazards to protect healthcare workers.

- **Elimination controls** – HCW should stay home when unwell and test for COVID-19 or other transmissible respiratory infections as appropriate to the local epidemiology. They should return to work only after a negative test result has been reported and symptoms resolved or cleared by Occupational Health and Safety.
  Vaccination and boosters are encouraged for all HCW.
- Unwell visitors should be discouraged from entering the hospital until recovered and recommend that they were a mask up-to 10 days after any respiratory infection.
- **Engineering controls** are required to provide tools to reduce risk of infection transmitting outside of the environment. This can include, physical barriers, patient placement, (single rooms, AIIR, zones or cohorting, use of additional ventilation controls e.g. portable or fixed HEPA filtration units and hand hygiene stations.
- **Administrative controls** are required to ensure HCW understand how they should work differently to protect themselves and others. These include policies, procedures, education, training and information. Ensure there are visual reminders throughout the hospital advising on the current IPC practices within the hospital (eg hand hygiene, mask use). Administrative controls also include adequate staffing and rosters, cleaning and disinfection.

3. Standard and transmission-based precautions

Standard Precautions and Transmission-based Precautions must be adhered to when managing patients with probable or confirmed COVID-19 and other acute respiratory infections (ARI). In addition to practices carried out by health care workers when providing care, all individuals (including patients and visitors) should comply with infection prevention and control practices in health care settings. The control of spread from the source is essential to avoid transmission of COVID-19.

3.1 Key elements of standard precautions

- Patient placement and risk assessment for infection risk
- Hand hygiene
- Use of appropriate personal protective equipment (PPE)
- Aseptic technique
- Safe use and disposal of needles and other sharps
- Respiratory etiquette patient, visitors and staff

- Environmental cleaning and disinfection
- Safe waste management
- Management of patient care equipment
- Safe handling of linen

3.1.1 Transmission-based precautions for COVID-19 and ARI

Transmission-based precautions are used for patients who may be infected or colonised with infectious pathogens, specifically to prevent transmission of infections and include appropriate use of PPE for airborne and droplet transmission, appropriate room placement and used in conjunction with standard precautions when providing care to patients with suspected or confirmed COVID-19 infection.

Refer to: Standard and transmission based precautions for further information.

3.1.2 Source control

The use of medical masks for symptomatic patients where tolerated, and support for the patient to follow appropriate hand and respiratory hygiene.
- When there is widespread and increasing community transmission, universal masking of all patients presenting to high density areas where physical distancing is not possible while awaiting triage and COVID-19 risk assessment, e.g. emergency department waiting rooms is strongly recommended. If necessary triage physically outside the emergency department (or outside the hospital building).

3.1.3 Mask use and visitor guidance for hospitals and other health and disability care settings [Refer here](#) for all information

4. Ventilation and patient placement

4.1 Ventilation

The role of ventilation and air movement plays a key role in minimising transmission of COVID-19 infections and should be part of your risk assessment for where you assess a patient and or where a patient is transferred to if needing to be admitted.

Indoor air quality in shared spaces can be improved by:
- Ensuring that the system in use provides appropriate directional air movement and a minimum of 6 air exchanges per hour in clinical zones where patients with COVID-19 may be placed.
- Providing filtration of the air through high-efficiency particulate absorbing filters in HVAC systems where required.
- Ensuring the mechanical ventilation system in use in each hospital is fit for purpose, correctly installed, and regularly maintained.
- Using portable HEPA filtration units in high-risk areas where permanent air-handling systems are not feasible.
- In places where it is safe and possible to do so, windows may be opened to provide natural ventilation if mechanical ventilation is not available. Risk assessment regarding thermal comfort, external wind direction and force, and safety for patients must be performed.
- The IPC Service maintaining a close working relationship with the relevant service that provides oversight for air quality.

4.2 Patient placement considerations

Patients with suspected or confirmed COVID-19 infection[3] must be appropriately isolated from other patients who do not have COVID-19 infection until they have been clinically considered non-infectious and can de-isolate as per hospital guidance. Use of negative pressure isolation/airborne infection isolation rooms (AIIR) rooms, single rooms and COVID-19 cohort zones should be based on availability. Rooms should have suitable ventilation and visibility. If available, an AIIR room is recommended. If there is no available AIIR room, a single room with the door closed is an acceptable option. This room should <u>not</u> be positively pressured to the outside corridor. A portable HEPA filtration unit, if available, may be used in this setting to provide an additional measure of infection prevention.

Hospitals should assess how well their facility meets the current minimum ventilation requirements for healthcare settings.

In situations where indoor air quality may be poor, such as single rooms with less than a minimum of 6 air changes per hour, internal rooms with no mechanical ventilation, rooms where windows cannot

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[3] Current COVID-19 case definition: www.health.govt.nz/covid19-case-definition

be opened to allow for air movement or where alternate strategies such as portable filtration units are not available, then consideration should be given to transfer the patient to another area with adequate ventilation controls. In the event of needing to transfer a patient(s) to another area, there should be pathways included in the hospital's COVID-19 pandemic preparedness planning.

To provide a safe environment in surge situations, additional measures such as the placement of physical barriers e.g. doors, to create cohort areas, the use of portable mechanical ventilation systems, or providing increased physical distancing by limiting the number of occupants in a multi-bedded room may be required. When this situation arises, the IPC Service should be involved in the risk assessment and development of mitigation strategies to minimise the risk of transmission between patients, staff and family/whanau. This process should be clearly documented, recorded on the hospital risk register, reviewed on a regular basis and reverted back to usual processes as soon are allowable.

Patients requiring AGPs with COVID-19 should be prioritised for an AIIR room. This recommendation remains in place while further evidence review is ongoing.

Further information on <u>aerosol general procedures</u> and on <u>reducing risk through ventilation</u>.

4.2.1 Cohorting of patients

Definition: cohorting refers to the co-location of patients with the same characteristic, in this case the same infectious disease. It may be in a multi-bedded room, part of a ward or an entire ward. If a cohort zone for COVID-19 patients is used, this must have physical separation including air handling from non-COVID treatment zones. The COVID-19 cohort zone must have own entry and exit, not be a thoroughfare to other clinical areas, must have necessary equipment located within unit, and ideally should not be located adjacent to wards containing vulnerable patient populations. IPC team should be involved in implementation of COVID-19 cohort zone to ensure appropriate risk mitigation processes are in place. Consider use of portable air handling units to enhance ventilation in shared spaces. Depending in capacity, consider reducing patient density in cohort areas (e.g. only fill every second bed). Processes for PPE use, cleaning and management of emergencies should be in place for COVID-19 cohort areas.

It is advised not to place suspected COVID-19 patients (those pending test results or those on symptom watch following an exposure event) in a cohort zone. MDTs and other meetings should not occur in a COVID-19 cohort zone.

5. Management of patient exposure events to COVID-19

All patients admitted to hospital should be assessed to ensure the correct testing criteria is implemented using the <u>COVID-19 Testing Plan for Aotearoa New Zealand</u> or their facility testing plan.

Hospitals should have a process in place for managing patients who develop COVID-19 after and during admission. This will include a mechanism to facilitate COVID-19 testing in those that develop compatible symptoms after admission, and early implementation of IPC precautions including patient isolation. Delays in implementing IPC interventions may result in healthcare-acquired COVID-19 transmission to other patients. In this situation the IPC service will need to assess the risk to other patients and develop a plan to manage the exposure event.

Factors to consider include but are not limited to:
- Movement of the patient to an AIIR, single room or COVID-19 ward/area
- determining the risk of transmission to the other patients by considering the following:
    - time in the shared space
    - patient was wearing a mask
    - physical space – quality of the ventilation, physical distancing between patients, curtains drawn around the bed space etc.
    - ability to cohort the contacts

Typically, there may be staff members also involved in the exposure event – **see 6.1 below**.

6. Staff occupational health and safety

Staff assigned to care for suspected or confirmed COVID-19 patients should:
- meet the occupational health policy for fitness to work in this situation
- follow the local procedure for follow up with Occupational Health
- follow their hospital guidance for staff surveillance monitoring for COVID-19.

6.1 Management of staff COVID-19 exposure events

Staff may be exposed to patients, colleagues, family/whanau and household members with COVID-19 infection. This may occur during their working shift, their home situation or in the community.

The hospital should have established processes to manage such events. Exposure events should be discussed with the hospital IPC and Occupational Health Services. Further guidance documents and templates for risk exposure events can be found here. [Guidance for critical health services during an Omicron outbreak](#)

6.2 Vaccination

COVID-19 vaccination and boosters are recommended for all healthcare workers. HCW should follow district policy on staff vaccination. Further information on Work requiring COVID-19 vaccination can be found [here.](#)

For the complete suite of healthcare worker advice please can be found [here.](#)

7. Discharge of patients

If a patient is ready for discharge prior to any completed hospital isolation requirements, the clinical team must provide recommendations to either the patient and their family/whānau/support person or any institution (eg ARC, Corrections, Student or School boarding house) of managing reduction of on-going transmission to others.

8. Minimal guidance for hospitalised patient de-isolation after COVID-19

The appropriate removal of a patient with infectious COVID-19 from isolation is important to both prevent onward transmission of COVID-19 in health care, appropriately manage single rooms, and optimise patient care. Although legally mandated COVID-19 isolation has been revoked, isolation of 5 days is still recommended.

The onward transmission of COVID-19 may still occur after 5 days, especially in environments with inadequate air handling, where patients share rooms, and where those with COVID-19 are severely unwell or immune compromised.

Refer to Appendix 3 for Minimal acceptable patient / client de-isolation guidance pathways

9. Surge or resurgence of COVID-19 and variants of concern

It is imperative that all district hospitals have plans in place in the event of a surge or resurgence of COVID-19 cases or introduction of new variants of concern to be able to;

- Reduce transmission of healthcare facility associated transmission thereby enhance safety to staff, patients and visitors
- To improve the ability to respond to an outbreak, resurgence or introduction of variants of concern

The WHO have published a COVID-19 strategic preparedness, readiness and response plan and an IPC tool for IPC services, emergency management and healthcare managers and administrators for a surge of resurge of cases.

10. Appendix 1. Recommendations for minimum PPE requirements in acute hospital settings based on risk assessment

Respiratory risk assessment for PPE requirements Consider risk assessment category below		Precautions required					
		Hand hygiene	Medical mask	P2/N95 particulate respirator[3]	Eye protection	Fluid resistant gown/ apron	Gloves
No acute respiratory infection or symptoms AND no recognised COVID-19 epidemiological risk[4]	STANDARD PRECAUTIONS FOR ALL[2]	✓	✗[4]	✗	As per standard precautions[2]	As per standard precautions[2]	As per standard precautions[2]
Acute Respiratory Infections		✓	✗	✓	✓ for close cares	As per standard precautions[2]	As per standard precautions[2]
Patient(s) with suspected or confirmed COVID-19 OR Identified as a household contact		✓	✗	✓	✓	As per standard precautions[2]	As per standard precautions[2]

Adapted from NSW Clinical Excellence Commission – COVID-19 IPC manual (V 3.1 – 27 February 2023)

https://www.cec.health.nsw.gov.au/__data/assets/pdf_file/0018/644004/COVID-19-IPAC-manual.pdf

Notes:

1. COVID-19 contact history includes household contact or room contact in healthcare facility, that meets local definition.

2. Standard precautions always include a risk assessment for the need for further PPE.

3. HCW wearing P2/N95 respirators should be trained in correct use including seal checking, donning and safe removal.

4. In periods of higher prevalence (e.g. winter months/outbreaks/community surges), medical masks recommended for healthcare workers providing direct care in all environments with the healthcare facility. In undifferentiated admission area, a particulate respirator may be recommended by local policy.

For extended use, masks or respirators may be worn as per sessional use recommendations. Eye protection can also remain on between patients.

Masks/respirators should be changed if they become moist or contaminated with body fluids or after removal.

Wearing a mask is currently recommended for staff members providing clinical care. See Personal protective equipment guidance for healthcare settings.

11. Appendix 2 - IPC procedures for acute care hospitals

The table below is for use by infection prevention teams to refer to in developing IPC processes for managing patients, visitors and procedures throughout the hospital including admission from accident and emergency, or out-patient department.

Circumstances (where, who, what)	Actions and IPC measures
1. Pre-hospital interface	Ideally primary care or ambulance service have notified the emergency department or the designated SMO of a patient transfer to hospital that patient either suspected or confirmed to have COVID-19.
2. Patients presenting to the Emergency Department or other direct admission service with **suspected or confirmed COVID-19 infection** or who during risk assessment are identified as **moderate or higher risk of COVID-19 infection**	Triage and risk assess. **Refer to your hospital screening tool or COVID-19 pathway** **Refer to Appendix 1** for the appropriate PPE to be worn by HCW. Test patients per your hospital policy. Patients to wear a medical mask for source control at a minimum and tolerated. A P2/N95 respirator can be offered if tolerated and need to be moved to an airborne infection isolation room (AIIR), or a single room with the door closed. They should be supported to follow respiratory and hand hygiene, and cough etiquette if able. Patients at high risk of COVID-19 infection but without clinical symptoms consistent with an acute respiratory tract infection, should still wear a medical mask.
3. Movement of patients, with **suspected or confirmed**	Each hospital should have a patient pathway for movement of patients through their hospital starting in the Emergency Department.

	COVID-19 infection or who during risk assessment are identified at moderate or **high risk of COVID-19 infection**, from the Emergency Department to another department or to a ward	The movement and transport of patients should be limited to essential purposes only. Staff at the receiving department or ward should be advised that the patient is or is suspected of having COVID-19 infection. All health care workers involved in transferring the patient should adhere to Standard and Transmission-based Precautions **Refer to Appendix 1.** Clean PPE must be donned before transfer, and it should be doffed when the transfer process is completed. The patient must wear at a minimum a medical mask for source control if tolerated a P2/N95 respirator can be offered, on transfer to and from department(s), or on transfer to a ward, and must not wait in communal areas.
4.	Accompanying family/ whānau, carer or support person in the Emergency Department who want to remain with a patient with **suspected or confirmed COVID-19 infection** .	Each hospital should have a policy and or process to manage accompanying family/ whānau, carer or a support person through their hospital starting in the Emergency Department. The following additional actions can be considered to support this situation. • Discussion with the senior clinical team, and the IPC service within the hospital to discuss a mitigation risk plan to manage the situation. • It is strongly recommended that an accompanying person or people should wear a medical mask and be supported to adhere to respiratory and hand hygiene and cough etiquette. • The accompanying person or people should be advised to remain in the room/bay that the patient is in and not to leave this space unless it has been discussed with, and agreed to, by a senior member of the Emergency Department clinical team. If the patient is discharged home from the Emergency Department, the patient and their family/whānau/support person should also be provided with information on testing for COVID-19 and any other relevant information.

| 5. | In exceptional circumstances when accompanying family/ whānau, carer or support person **who have a positive covid test** and should be isolating and wants/needs to remain with the patient following **admission to the ward.** | Each hospital should have a policy and process to manage this situation.

The following additional actions should be undertaken to mitigate risk:
• Ideally the patient should be admitted to a single room.
• Ensure that accompanying carer/support person is well enough to self-care for themselves.
• The accompanying covid positive person should be provided and asked to wear a particulate respirator if can tolerate otherwise a well- fitting clean medical mask prior to leaving the Emergency Department to wear during transfer to the ward including the rationale of the request.
• Once in the ward they should be provided with guidance about respiratory and hand hygiene, and the safe donning and doffing of a respirator or medical mask.
• There should be a clear set of expectations provided to the family/whānau, carer or support person by the hospital about what they should do whilst in attendance. This-could be provided verbally and in written form. If necessary, this may require assistance from interpreters. This will cover, but is not limited to the following:
    o the accompanying person should be advised not leave the room unless they have discussed this with the health care worker team
    o communication with other family/whānau should be via digital means only.
    o Food, clothing etc, can be handed to the reception area of the ward for delivering to the room. |
| 6. | Management of patients **who are risk assessed** as high risk for COVID-19 infection, e.g., a household contact for an **unrelated medical event** | When interacting with patients who are risk assessed as high risk for COVID-19 infection, HCWs should **Refer to Appendix 1**
Hospital policy for testing for COVID-19 to be followed to determine COVID-19 status.
Standard and Transmission-based Precautions should be followed at all times, until the patient is discharged or until the self-isolation period has ended; whichever is the soonest. **Refer to Appendix 1**

Patient to be reviewed daily for symptoms. |

7.	Entry into room (general information across all settings)	There should be; - clear signage on the door with instructions on the level of PPE required before entering the room - clearly demarcated donning and doffing areas including the sequence for donning and doffing PPE. - Access is limited to essential health care workers only. Local policy should guide non-essential health care workers access to the room, for example, meal delivery. As with any other health and safety issue identified (including blood and body fluid exposures), HCWs who experience a failure in PPE should notify their line manager and Occupational Health Department for advice.
8.	Visitors (to patients)	- Each hospital should have a visitor's policy that includes COVID-19. - Additional information for visitors and mask recommendations. - It is recommended that visitors who are unwell do not visit the hospital. Signage should be visible at the entrance to the room and guidance on the required PPE and IPC measures visitors should follow. - Medical masks, hand sanitisers and waste bins should be available as needed. - There should be clear simple instructions on how to don and doff a medical mask, how to safely dispose of it and when to perform hand hygiene. Both written and verbal advice around safe practice should be provided by the IPC Service, where feasible.
9.	Collection of clinical specimens	Ensure the collection, type of specimen and transport media required are followed for the receiving laboratory. Refer to: PPE for COVID-19 testing
10.	Diagnostic testing	See local laboratory guidance.
11.	Clinical investigations and procedures	- Use portable equipment wherever possible. - Where this not possible, discuss with the relevant department before transferring the patient. - The patient should go directly into the imaging/treatment room. The patient should wear a medical mask on transfer to and from department, and during the procedure.

		• Standard, droplet and airborne precautions should be adhered to by the staff.
		• Clean the equipment and the procedure room after use as per local hospital IPC guidance.
12.	Food service	• Local policy should guide non-essential health care worker access to the room, including meal delivery. • Standard Precautions should be used when handling used crockery and cutlery. • Unopened food items or food waste is to be discarded as per local waste policy.
13.	Management of deceased patients	PPE must be worn when handling the deceased. The body should be placed in a fluid-proof body bag and once this has occurred Standard Precautions should be followed. For further advice refer to [COVID-19: Funeral directors, religious and faith-based leaders](#)
14.	Outbreak management	If an outbreak of COVID-19 is suspected, implement the Outbreak Management Policy as per local hospital guidance, including contacting relevant departments or specialists such as the IPC service, clinical microbiologist, infectious diseases specialist and Public Health Unit.
15.	Personal care considerations for patients with COVID-19 infection.	If assistance with personal cares is required for patients who are COVID-19 positive, the patient should wear a medical mask as appropriate and the assisting health care worker to **refer to Appendix 1** for PPE guidance.
16.	Reuse of PPE	The reprocessing of single use PPE is not recommended.

12. Appendix 3 – Minimal acceptable patient / client de-isolation guidance pathways

The below table has been developed to provide guidance on de-isolation of patients or clients in a healthcare setting. Healthcare facilities should develop their own policies or procedures.

Minimal acceptable patient / client de-isolation guidance pathways

Immune competent	Immune compromise**

TTR from day 6, if illness resolving.
 	
   ➢ 1 negative RAT required or
 	
   ➢ PCR with Ct value of $\geq$30.
 	
or
 	
   ➢ release from isolation day 10 if symptoms resolving.
 	
Or follow local guidance
	TTR from day 10, if immune compromised
	
	   ➢ 1 negative RAT
	or
	   ➢ PCR with Ct value of $\geq$30.
	
	Contact Infectious disease service if RAT still positive at day 16.
	
	Or follow local guidance

*TTR means test to release.
** Conditions that are considered severe immune compromise are available through this link to Immunisation hand book 2020.
Day 0 is first day of symptoms or positive test. Whichever is earlier.