Canterbury
District Health Board
Te Poari Hauora ō Waitaha

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21 April 2021

9(2)(a) [redacted]

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RE Official Information Act request CDHB 10568

I refer to your email dated 19 March 2021 requesting the following information under the Official Information Act from Canterbury DHB regarding information about patients placed in isolation within DHB hospitals to prevent the spread of disease. Specifically:

1. **The number of patients placed in isolation in a DHB hospital in the 2018, 2019 and 2020 calendar years, broken down by year**
2. **What condition each person had?**
3. **What type of isolation were they in - contact, droplet, airborne, protective etc**

Also, can you please tell me:

4. **What the longest stint in continuous isolation was during those three years, what condition it was for and what type of isolation they were in.**
6. **How many of last year's cases were Covid-19 related?**

Isolation data is kept in multiple places and Infection Prevention Control (IPC) may not be aware of all patients in isolation as management is based on admission flowcharts e.g. Multi Drug Resistant Organisms (MDRO) risk assessment, diarrhoea or respiratory illness

On admission patients are screened by ward/ clinic nursing staff for any potential infections as below.

The IPC team are alerted via ICNet *(Infection Control Net – system to record infectious diseases in hospital)* to known and new MDRO and other alert organisms.

- **Known MDRO:** Staff check this on admission and place patient in isolation as per MDRO risk assessment for patient placement.
  Patient isolation requirements are documented in the clinical case notes and in more detail on patient notes.
- **New MDRO and other alert organisms** - IPC notify ward staff of new MDRO and isolation requirements. This is documented in the clinical notes and patient notes.
- **Diarrhoea/ vomiting/ respiratory illness** If the patient presents to hospital with diarrhoea and vomiting the patient is placed under contact+/- droplet precautions pending results
- **Respiratory symptoms** Post 2020- If the patient presents with respiratory symptoms staff follow the COVID-19 adult admission guidelines pending results (see response to Question 5)
- **MIQF guest and Border workers:** staff follow COVID-19 admission guidelines.
- **Unknown MDRO**: staff follow the MDRO admission assessment flow chart- depending on what risk factors the patient presents with, patients may be placed in isolation (contact precautions) pending MDRO screening results.

To provide you with the specific detail you have requested would require a manual search through clinical notes and individual patient notes which would take a substantial amount of time and resource. We are therefore declining a response pursuant to section 18(f) of the Official Information Act.

We have however answered three Official Information Act requests about the Rosewood Rest Home residents who were isolated at Burwood Hospital following the Covid outbreak in the rest home. (2020). These responses are available on our website. (CDHB10300 / CDHB 10305 / CDHB 10339). There are also several responses on the link below regarding PPE. (CDHB 10295 / CDHB 10303 / CDHB 10304 / CDHB 10317)
https://www.cdhb.health.nz/about-us/document-library/?_sft_document_type=official-information-act-response

5. **What PPE and protocols are required for each type of isolation (contact, droplet, airborne, protective, etc)?**

Infection Prevention Control (IPC) Policies and posters are available for staff on the Canterbury DHB internal website related to Transmission based precautions. Please refer to **Appendix 1** (attached) for Transmission Based Precautions (Isolation Guidelines) Policy, **Appendix 2** (attached) for the A-Z Infection Prevention and Control Management of Infectious Diseases policy. We have also attached as **Appendix 3** the poster, Infectious Illness Outbreak – visitor instructions.

7. **Did the emergence of Covid-19 cause changes to any of the PPE or protocols required?**

COVID-19 guidelines were produced and are updated in line with international/ Ministry of Health guidance and includes recommendations around enhanced PPE e.g. eye protection/face shields/ N95 mask (as applicable) current protocols around correct use of PPE. This information is available to staff on the specially created internal webpage 'Covid19 information'. Please refer to **Appendix 4** (attached) (**Note:** this information is not publicly available but has been created for Canterbury DHB staff).

Please also refer to the Ministry of Health links below:

https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-information-specific-audiences/covid-19-personal-protective-equipment-workers

Information regarding guidance on the use of Personal protective equipment (PPE) in health and disability care settings is also available on the Ministry of Health website.

https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-information-specific-audiences/covid-19-personal-protective-equipment-workers/personal-protective-equipment-use-health-and-disability-care-settings

I trust this satisfies your interest in this matter.

You may, under section 28(3) of the Official Information Act, seek a review of our decision to withhold information by the Ombudsman. Information about how to make a complaint is available at www.ombudsman.parliament.nz; or Freephone 0800 802 602.

Please note that this response, or an edited version of this response, may be published on the Canterbury DHB website after your receipt of this response.

Yours sincerely

Ralph La Salle
Acting Executive Director
Planning, Funding & Decision Support

APPENDIX 1

Transmission Based Precautions (Isolation Guidelines)

Contents

The latest version of this document is available on the CDHB intranet/website only. Printed copies may not reflect the most recent updates.

Policy

Transmission-based Precautions are used in addition to Standard Precautions when use of Standard Precautions alone does not fully prevent transmission of pathogenic organisms.

Purpose

To provide guidance on measures required to minimise the risk of transmission of pathogenic organisms to patients, staff and visitors.

Scope/Audience

All employees of CDHB Staff

Associated Documents

- CDHB IPC Guidelines A-Z Alphabetical List of Diseases
- CDHB IPC Policy: Standard Precautions
- CDHB IPC Policy: Multi-drug Resistant Organisms
- Transmission Based Isolation Precaution Signage
- PPE Flipchart (Ref. 1685)
- Patient pamphlet: "Why am I in Isolation ?" (Ref. 0106)
- Infection Prevention & Control Intranet page: Isolation Procedures

1.1 Transmission-based Precautions

Transmission-based Precautions are put in place for patients suspected or confirmed to be infected or colonised with microorganisms transmitted by the contact, droplet or airborne routes. Included here also is Protective Isolation. In all of these instances the route(s) of transmission of the micro-organism is/are not completely interrupted using Standard Precautions.

There are four categories of precautions that can be implemented in the CDHB

1. Contact Precautions
2. Droplet Precautions
3. Airborne Precautions
4. Protective Isolation

Depending on the route of transmission, Transmission-based Precautions involves a combination of the following infection prevention measures:

a. Allocation of single rooms or cohorting of patients
b. Appropriate use of Personal Protective Equipment (PPE)
c. Patient dedicated equipment
d. Enhanced cleaning and disinfection of the patient environment
e. Appropriate air handling requirements

Table 1 summarises the IPC measures required for each category of precautions. Refer also to Transmission-based Precautions signage

- Transmission-based Precautions are always **used in addition to Standard Precautions.**
- Some diseases have multiple routes of transmission and several categories of Transmission-based Precautions may be combined, e.g. Chickenpox may require Airborne and Contact precautions, Norovirus with vomiting requires Droplet and Contact
- Refer to the CDHB IPC Guidelines A-Z Alphabetical List of Diseases for details of precautions required
- All staff members must comply with Transmission-based Precautions.
- The duration of Transmission-based Precautions may be extended for immunosuppressed patients with viral infections due to the prolonged shedding of viral agents that may be transmitted to others.
- Ensure that the patient receives the information pamphlet: "Why am I being Nursed in Isolation" (Ref. 0106) - download from the IP&C intranet site
- It is important to advise the patient's family, whanau and significant others regarding Transmission-based Precautions rationale and procedures.
- Contact the Infection Prevention & Control (IP&C) Service to arrange staff education sessions as required in the clinical area.
- Where single room accommodation is not available a risk assessment in consultation with the IP&C service is required.

1.1.1 Contact Precautions

Contact Precautions are intended to prevent transmission of (known or suspected) infectious agents including epidemiologically important micro-organisms, which are spread by direct or indirect

contact with the patient or the patient's environment or patient care items, e.g. multi-drug resistant organisms, scabies, excessive wound drainage, drainage of body fluids causing extensive environmental contamination, and gastrointestinal tract pathogens such as Norovirus, *Clostridium difficile* and Rotavirus.

1.1.2 Droplet Precautions

Droplet Precautions are intended to prevent transmission of (known or suspected) infectious agents including epidemiologically important micro-organisms, which are spread by close respiratory or mucous membrane contact with respiratory secretions, e.g. influenza, pertussis (whooping cough), meningococcal meningitis (for first 24 hours of effective antimicrobial therapy).

1.1.3 Airborne Precautions

Airborne Precautions are intended to prevent transmission of (known or suspected) infectious agents that remain infectious over long distances when suspended in the air and are transmitted person to person by inhalation of airborne particles, e.g. chicken pox, measles, pulmonary tuberculosis.

NB Refer to separate section on care of patients with pulmonary tuberculosis and use of negative pressure rooms for Airborne isolation.

1.1.4 Protective Isolation Precautions

A protective environment is most commonly used for stem cell transplant patients to minimise fungal spore counts in the air and reduce the risk of invasive environmental fungal infections; this usually requires HEPA filtered positive pressure rooms such as those in the Bone Marrow Transplant Unit (BMTU).

Dependant on neutrophil count, only patients considered to be sufficiently immunosuppressed by their clinical team should be placed in Protective Isolation.

Generally there is no evidence to support the need for special diets for those in protective isolation and general good hygiene practice must be observed.

Staff & visitors with upper respiratory tract infections should not enter a room in Protective Isolation.

Table 1: Summary Chart for Transmission-based Precautions

Action	Contact Precautions	Droplet Precautions	Airborne Precautions	Protective Isolation
Single Room with ensuite facilities	Yes, or cohort If single room not available risk assessment necessary in consultation with IP&C	Yes, or cohort	Yes	Yes
No ensuite facilities available	Designate toilet/shower and label clearly for individual room number **OR** use individually assigned commode in patient's room. Shower last and terminally clean afterwards.	Patient to wear surgical mask while transferring to WC/Shower **OR** use individually assigned commode in patient's room. Shower last, if possible.	Non applicable as should have ensuite/dedicated bathroom.	Designate toilet/shower and label clearly for individual room number **OR** use individually assigned commode in patient's room. Shower in freshly cleaned shower.
Specialised Air Handling	No	No	Yes – negative pressure	Yes – may have positive pressure HEPA filtered
Door Closure	Open	Open	Closed at all times	Closed at all times in positive pressure room.
Equipment	Dedicated equipment or disinfect between uses. Ensure equipment and furniture can be disinfected. Keep supplies in room to a minimum. Patient's records outside room.	Dedicated equipment or disinfect between uses. Ensure equipment and furniture can be disinfected. Keep supplies in room to a minimum. Patient's records outside room.	As per Standard Precautions	Ensure equipment is clean before being taken into room.
Hand Hygiene	Antimicrobial soap or alcohol-based hand rub. NB. Hand washing with liquid soap is required after contact with patient with *Clostridium difficile* infection	Plain liquid soap or alcohol-based hand rub.	Plain liquid soap or alcohol-based hand rub.	Plain liquid soap or alcohol-based hand rub.
Gloves (must be used in line with 'The 5 Moments for Hand Hygiene')	For direct contact with patient or environment. Remove when exiting room, then perform hand hygiene	As per Standard Precautions	As per Standard Precautions	As per Standard Precautions
Gowns/aprons	Wear gown when close physical contact, e.g.	As per Standard Precautions	As per Standard Precautions	As per Standard Precautions

Action	Contact Precautions	Droplet Precautions	Airborne Precautions	Protective Isolation
	manual handling is anticipated. Wear plastic apron when limited contact with patient or environment is planned except in a case of Scabies where a long sleeved gown is required. Remove and dispose of **before leaving** room avoiding contact with outer surface.			
Mask	As per Standard Precautions	Surgical mask when entering the patient's room. Remove at exit to the room	Particulate Respirator (N95) on entering room (sized and fitted correctly). Remove outside room.	No mask required. Restrict entry to staff or visitors with upper respiratory tract infection
Goggles/Face shield	As per Standard Precautions	As per Standard Precautions	As per Standard Precautions	As per Standard Precautions
Linen	Place in red linen bag with water soluble liner.	Place in red linen bag with water soluble liner.	No special precautions for linen.	No special precautions for linen.
Waste	As per infectious/medical waste disposal. Dispose of inside room.	As per infectious/medical waste disposal. Dispose of inside room.	No special requirements	No special requirements
Visitors **Refer also 1.2.4**	Perform hand hygiene. Not required to wear PPE. See additional information.	Perform hand hygiene. Not required to wear PPE. Discourage visiting whilst patient actively symptomatic.	Perform hand hygiene. Not required to wear N95 if they have been in contact prior to / or immune to identification of causative organism. Visitors may need to be restricted.	Perform hand hygiene. Do not visit if unwell.
Transfer to other departments/ hospitals	Ensure receiving area is aware of status of Contact Precautions prior to transfer.	Ensure receiving area is aware of status of Droplet Precautions prior to transfer. Patient to wear surgical mask.	Limit to essential transportation only. Ensure receiving area is aware of status of Airborne Precautions prior to transfer. Patient to wear **surgical mask.**	Ensure receiving area is aware of status of Protective Environment prior to transfer. Patient to wear surgical mask or N95 mask if high dust risk (risk assess).

1.2 Additional General Information

1.2.1 Points to Consider when Working in Transmission-Based Precautions

1. Minimise the frequency of entrances into the room by collecting all the equipment required before entering the room.
2. Have the minimum amount of people in the room.
3. Have minimum amount of equipment in the room. When admitting into an isolation room, remove surplus equipment where possible.
4. Spend a minimum amount of time in the room if the person is acutely unwell with a highly transmissible infectious disease such as Norovirus.
5. When patients are placed in Transmission-based Precautions due to an infection or colonisation with an MDRO, efforts should be made to ensure patients continue to receive adequate medical and nursing care to counteract potential psychological adverse effects such as anxiety, depression and/or feeling of stigmatisation.
6. Consider nominating a buddy or runner who can assist staff working in Transmission-based Precautions, e.g. collecting and removing supplies or equipment.

1.2.2 Use of Personal Protective Equipment (PPE) in Isolation Rooms

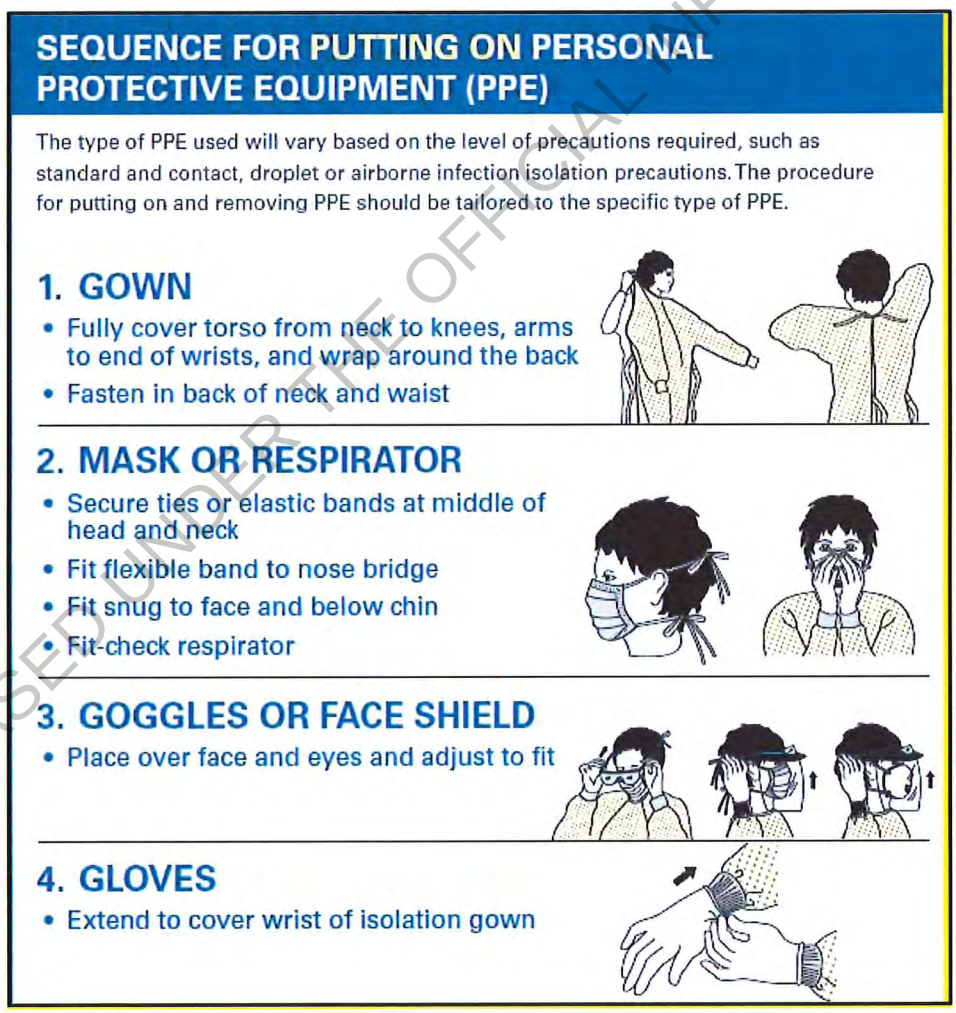
- Generally, PPE should be put on outside and removed inside the room and placed directly into infectious/medical waste bins (exception is a N95 mask). Hand hygiene is performed prior to exiting the room.
- Remove PPE in a manner that prevents self-contamination or self-inoculation or environmental contamination with contaminated PPE or hands
- Remove the most heavily contaminated items first, i.e. gloves.
- Do NOT remove PPE prior to leaving a room when transporting blood or body fluid substance to the sluice for disposal e.g. a bedpan. Go directly to the sluice and remove PPE in the sluice after completion of task.
- In Contact Precautions ensure compliance with hand hygiene prior to a procedure or aseptic technique is maintained by changing gloves and performing hand hygiene within the room as per The 5 Moments of Hand Hygiene.

- Refer Standard Precautions for more information on use of PPE.

1.2.2.1 Particulate Respirator (N95) Mask

- A Particulate Respirator (N95) Mask is used for Airborne Precautions and aerosol generating procedures with any respiratory infection.
- NB: N95 mask fit testing of staff is no longer a routine requirement. However, staff must ensure that the mask worn forms a tight seal around nose/mouth before entering isolation room. Refer IPC Intranet site for video demonstrating correct fitting of mask
- Used Particulate Respirator (N95) Masks are considered contaminated and must be discarded following a patient episode of care. DO NOT REUSE

1.2.3 Sequences for Putting on and Removing PPE

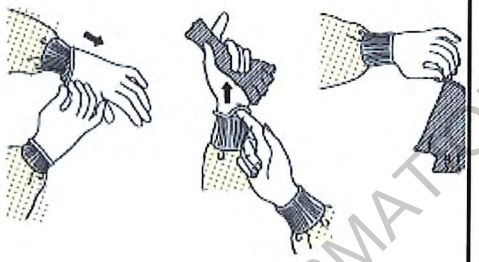


SEQUENCE FOR REMOVING PERSONAL PROTECTIVE EQUIPMENT (PPE)

Except for respirator, remove PPE at doorway or in anteroom. Remove respirator after leaving patient room and closing door.

1. GLOVES

- Outside of gloves is contaminated!
- Grasp outside of glove with opposite gloved hand; peel off
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist
- Peel glove off over first glovet
- Discard gloves in waste container

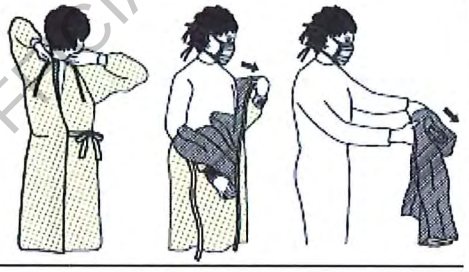


2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield is contaminated!
- To remove, handle by head band or ear pieces
- Place in designated receptacle for reprocessing or in waste container

3. GOWN

- Gown front and sleeves are contaminated!
- Unfasten ties
- Pull away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard



4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- Grasp bottom, then top ties or elastics and remove
- Discard in waste container

1.2.4 Visitors

- Visitors, especially children, should consider delaying their visiting for patients in the acute phase of highly transmissible diseases such as Norovirus, Rotavirus, Influenza, Mumps and Measles.
- Visitors must not be discouraged from visiting patients with multidrug resistant organisms.

- Visitors wishing to see other inpatients are requested to do so prior to visiting the patient in Transmission-based Precautions.
- Prior to entering a Transmission-based Precautions room, visitors require instructions on performing hand hygiene.
- All visitors must wash their hands or use alcohol-based hand rub prior to leaving a Transmission-based Precautions room.
- Visitors generally do not need to wear PPE (Refer Summary Chart for Isolation Precautions). There may be exceptions to this based on risk assessment e.g. TB – discuss with the IP&C service or Charge Nurse Manager.
- Visitors should not use ward toilets or enter staff areas.
- Visitors should not visit if they have symptoms of an infectious disease in the previous two days.

1.2.5 Cohort Isolation (Sharing Rooms)

- When a single room is not available, an infected or colonised patient may be placed with another patient who is infected with the same micro-organism provided that:
  - Neither patient is infected with other potentially transmissible micro-organisms.
  - The likelihood of re-infection with the same micro-organism is minimal.
- Ensure the patients are physically separated.
- Change PPE and perform hand hygiene between contact with patients in the same room.
- It is important to be certain of the mode of transmission of the known or suspected pathogens. Contact the Infection Prevention and Control Service if cohorting of patients is being considered.

1.2.6 Laboratory Specimens

- All human blood and body substances must be treated as if they are infected or contaminated with infectious agents; therefore there is no need to label as infectious.
- Care should be taken when collecting specimens to avoid contamination of the outside of the container. Ensure specimen container is closed securely.

1.2.7 Deceased Patients and Infectious Diseases

Body bags are **only** required in the following circumstances:

The body is:

- Leaking body fluids which are not containable or where gross external contamination of blood is present, ***OR***
- Deemed to be at high risk of leaking body fluids by nature of condition, e.g. oedema, aspiration, extensive burns, trauma, ***OR***

The patient:

- Had or was suspected of having a Viral Haemorrhagic Fever, ***OR***
- Has confirmed/suspected Emerging New Infectious Disease (ENID) which may have resulted in death.

Body bags are available from Mortuary or Undertaker and can be requested via the Mortuary staff or orderlies out-of-hours.

- The ward staff **must** advise the Mortuary if a patient is known or strongly suspected of having one of the following infectious diseases. **However, a body bag is not necessary unless any of the criteria above are present.**
- Spongiform encephalitis, e.g. Creutzfeld Jacob Disease
- Ebola Virus Disease
- Hepatitis B
- HIV/AIDS
- Hepatitis C
- Tuberculosis
- Typhoid/paratyphoid
- Meningococcal meningitis/septicaemia (if death occurs before 48 hours of suitable antibiotics given).
- Invasive Beta-haemolytic Streptococcus Group A disease (if death occurs before 24 hours of suitable antibiotics given).

1.3 Transmission-Based Precautions Cleaning and Disinfection

1.3.1 Daily Cleaning

- Clean room last.
- No special cleaning solutions are required for daily cleaning of room.
- Disposable cloths must be used.
- Focus on frequently touched surfaces and equipment such as bed rails, over bed tables, commodes, door knobs, call bells.
- Protective equipment is worn by cleaning staff in accordance with Transmission-Based Precautions sign outside room.

1.3.2 Terminal Cleaning

Terminal Cleaning occurs on patient discharge from Contact Precautions.

Terminal cleaning can be undertaken using steam cleaning or the use of an environmental disinfectant.

- Nurse-in-Charge contacts cleaning services to arrange.
- Privacy, window, shower curtains (if applicable) require removing prior to terminal clean.
- Curtains to be sent to laundry in black laundry bags.
- Steam clean or disinfect surfaces using an approved CDHB disinfectant e.g. Sodium hypochlorite (Presept/Chlorwhite) 1000ppm. 70% alcohol wipes may be used for electronic equipment but not to be used on display panels of electronic equipment.

1.3.3 Bed Space Disinfection

The disinfection of the bed space follows the identification of an infectious patient in a multi bed room and their subsequent transfer to a single room or discharge. The multi bed room in these instances is not in Contact Precautions.

- Transfer or Discharge
  - privacy curtains are removed for laundering
  - bed, locker, chair and equipment transferred to the single room with patient
  - horizontal and touch points disinfected

1.5 Notifiable Diseases in New Zealand (includes suspected cases)*

Refer to Intranet guidelines

Measurement/Evaluation

Environmental audits

Ward rounds

References

1. Department of Labour (2000) Managing Health and Safety Risks in New Zealand Mortuaries, Occupational Safety and Health Service, Wellington

2. Guidelines for the Control of Multidrug-resistant Organisms in New Zealand, 2007
http://www.moh.govt.nz/moh.nsf/pagesmh/1804?Open

3. Guidelines for the Control of methicillin-resistant Staphylococcus aureus in New Zealand, 2002. MOH
http://www.moh.govt.nz/moh.nsf/pagesmh/1804?Open

4. Guidelines for preventing the transmission of mycobacterium tuberculosis in healthcare settings (2005) MMWR, 54, RR-17, 1-141.

5. Management of Multi Drug resistant Organisms in Healthcare settings, 2006 CDC

6. Occupational Safety and Health Service of the Department of Labour (2000) Managing Health and Safety Risks in New Zealand Mortuaries. Guidelines to promote safe working conditions.

7. Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Prevention and Control Practices Advisory Committee, 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings, June 2007

8. Heymann D: Control of Communicable Disease Manual, 19th Edition, 2008.

9. Ministry of Health Tuberculosis Control in New Zealand
http://www.moh.govt.nz/cd/tbcontrol

10. Ministry of Health, Schedule of Notifiable Diseases, 2013. Accessed 23rd June 2015. http://www.health.govt.nz/our-work/diseases-and-conditions/notifiable-diseases

Policy Owner	CDHB Infection Prevention & Control Service
Policy Authoriser	Executive Director of Nursing
Date of Authorisation	9 September 2015

APPENDIX 2

A-Z Infection Prevention & Control Management of Infectious Diseases

Vulnerable Patient Wards

Note: In this document reference is made to vulnerable patient wards.

These include:

- Paediatric wards and CAAU
- ICU
- NICU
- CHOC
- BMTU
- Ward 26
- Ward 25 (respiratory viruses and TB)
- Burwood Spinal Unit (BSU)
- Care of the Elderly wards

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
Acquired Immunodeficiency Syndrome (AIDS) (see also HIV)	Blood & body fluids	Standard	
Adenovirus			
• Respiratory	Respiratory secretions/ infections	Standard with Respiratory Hygiene Contact and Droplet for vulnerable patient wards	Duration of illness. Viral shedding may be prolonged in immunosuppressed patients.
• Keratoconjunctivitis	Purulent exudate	Contact Contact for vulnerable patient wards	Duration of illness Duration of illness
• Gastroenteritis (see Gastroenteritis viral)	Faeces		

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
Aeromonas species (see Gastroenteritis bacterial)	Faeces	Dedicated toilet for all patients Contact for incontinent patients or vulnerable patient wards	Duration of symptoms
Amebiasis (Dysentery)	Faeces	Standard	
Anthrax • Cutaneous • Pulmonary	 Pus Environmental/soil	 Standard Standard	
Arthropod borne Viral Fevers (see Dengue Fever, Yellow Fever, Ross River Virus)	Blood	Standard	
Aspergillosis	Airborne dust particles in the environmental	Standard	
Astrovirus (see Gastroenteritis viral)	Faeces	Contact with dedicated toilet/commode	Until 48 hours following last loose bowel
Bocavirus • Gastroenteritis (see Gastroenteritis viral) • Respiratory	 Faeces Respiratory Secretions	 **Standard** & dedicated toilet/commode **Contact** for incontinent patients or those in vulnerable patient wards Standard with Respiratory Hygiene Contact and Droplet for vulnerable patient wards	 Until 48 hours following last loose bowel Duration of illness
Botulism (*Clostridium botulinum*)	Food	Standard	
Bronchiolitis • Respiratory Syncytial Virus (RSV) • Human metapneumonvirus	Respiratory Secretions	Standard with Respiratory Hygiene Contact for vulnerable patient wards	Duration of illness
Brucellosis (undulant, Malta, Mediterranean fever)	Body fluid	Standard	

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
Campylobacter (see Gastroenteritis bacterial)		**Standard** & dedicated toilet/commode **Contact** for incontinent patients or those in vulnerable patient wards	
Candidiasis, all forms including mucocutaneous e.g. thrush	Skin and mucous membrane	Standard	
Cellulitis • Uncontrolled drainage • Controlled drainage	 Serous ooze Serous ooze	 Contact Standard	Until drainage contained
Chancroid (soft chancre)	Pus	Standard	
Chickenpox (Varicella)	Respiratory and direct contact with lesion.	Airborne and Contact if non immune staff. Susceptible HCW's should not enter room if immune caregivers are available.	Maintain precautions until all lesions are crusted. If immunoglobulin required for susceptible exposed individuals, e.g. Neonates, discuss with Microbiology or Infectious Diseases staff.
Chlamydia trachomatis • Conjunctivitis • Genital • Pneumonia (infants < 3 months of age)	 Pus Genital Discharge Respiratory secretions	 Standard Standard Standard	
Cholera (see Gastroenteritis bacterial)	Faeces	Standard with dedicated toilet Contact Precautions for incontinent or vulnerable patient wards.	Duration of clinical symptoms.
Clostridium botulinum	Foodborne	Standard	

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
Clostridium. Difficile Infection	Faeces	Contact – with dedicated toilet/commode.	Until 48 hours asymptomatic. Note: No further specimens required to determine clearance once asymptomatic
Clostridium perfringens	Food (food poisoning) Soil (Gas gangrene)	Standard	
Conjunctivitis Acute bacterial Chlamydia Gonococcal Viral (e.g. Adenovirus)	 Purulent exudate Purulent exudate Purulent exudate Purulent exudate	 Standard Standard Standard Contact	 Duration of illness
Coronavirus OC43, NL63,229E, HKU1	Respiratory and contact	Contact Precautions in vulnerable patient wards	Duration of illness
Coxsackievirus disease – See Hand, Foot & Mouth Disease See Enteroviral infections			
Creutzfeldt-Jakob disease (see CJD guidelines on IP&C intranet for further information)	CNS or neurological tissue	Standard Use disposable instruments or special sterilisation/disinfection for surfaces, objects contaminated with neural tissue if CJD or vCJD suspected.	Duration of illness
Croup	Respiratory secretions Presumed by inhalation.	Contact and Droplet	Duration of clinical illness
Cryptococcosis		Standard	
Cryptosporidiosis (Gastroenteritis bacterial)		**Standard** & dedicated toilet/commode	

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
Cryptosporidium species		**Contact** for incontinent patients or those in vulnerable patient wards	
Cytomegalovirus infection, neonatal or immunosuppressed	Mucosal contact with infectious tissue, secretions (urine) and excretions	Standard	
Dengue Fever	Blood via bite from infected mosquito.	Standard	
Diarrhoea acute or suspected infectious – see Gastroenteritis	Faeces	Contact Precautions until infective cause ruled out	
Diphtheria • Cutaneous • Pharyngeal	Lesions Respiratory secretions	Contact Droplet	Until two cultures taken at least 24 hours apart are negative.
Dysentery	Faeces	Standard	
Ebola Viral Disease (see EVD IPC Guidelines)	Contact and ? Droplet	As per EVD Guidelines	
E.Coli O157:H7 Enterohemorrhagic (see Gastroenteritis bacterial)	Faeces	**Standard** & dedicated toilet/commode **Contact** for incontinent patients or those in vulnerable patient wards	
Encephalitis or encephalomyelitis (see specific etiologic agents)			
Endometritis (see also Group A Streptococcus)	Vaginal Discharge	Standard	
Enterobiasis (pinworm disease, oxyuriasis)	Faecal/oral	Standard	
Enterovirus			

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
• Respiratory • Parechovirus (see Gastroenteritis viral) • Echo viruses (see Gastroenteritis viral) • Group A and B Coxsackieviruses (see also Hand, Foot & Mouth Disease) • (Excludes polio virus)	Respiratory secretions Faeces	Standard with Respiratory Hygiene Contact and Droplet for vulnerable patient wards **Standard** & dedicated toilet/commode **Contact** for incontinent patients or those in vulnerable patient wards	Duration of clinical illness
Epiglottitis, due to Haemophilus influenza, Type B	Respiratory secretions	Droplet	24hrs after start of effective treatment
Epstein-Barr virus infection, including infectious mononucleosis (Glandular Fever)	Respiratory secretions including saliva	Standard	
Erythema infectiosum (See Parvovirus B19)			
Food poisoning Botulism *Clostridium botulinum* *Clostridium perfringens* Staphylococcal	 Food Food Food	 Standard Standard Standard	
Furunculosis – Staphylococcal (adults) Infants and young children	Contact with lesions Contact with lesions	Contact Contact	Duration of illness Duration of illness
Gastroenteritis – bacterial (excludes *Clostridium difficile* infection) • *Aeromonas*	 Faeces		Duration of clinical symptoms

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
• *Campylobacter species* • Cholera • *Cryptosporidium species* • Enterohemorrhagic *E.coli* O157:H7 • *Giardia lamblia* • *Salmonella species* • *Shigella species* • *Vibrio parahaemolyticus* • *Yersinia entercolitica*		Contact Precautions until bacterial cause confirmed or ruled out -then **Standard** & dedicated toilet/commode **Contact** for incontinent patients or those in vulnerable patient wards	Community & Public Health brochures: - Campylobacter - Cryptosporidium - E.coli 0157 - Giardia - Salmonella - Shigella - Yersinia
Gastroenteritis – viral			
• *Adenovirus*	Faeces	**Standard** & dedicated toilet/commode **Contact** for incontinent patients or those in vulnerable patient wards	Duration of clinical symptoms
• *Astrovirus*	Faeces		
• *Bocavirus*	Faeces		
• *Enterovirus*	Faeces		
• *Norovirus* (see Norovirus Guidelines on IP&C Intranet for further information)	Faeces/Vomit	Contact and Droplet (if vomiting) with dedicated toilet/commode	Duration of clinical symptoms and until asymptomatic for at least 48-72 hours. Prolonged shedding may occur in immunocompromised children and the elderly
• *Rotavirus*	Faeces/Vomit	Contact and Droplet with dedicated toilet/commode	Duration of clinical symptoms and until asymptomatic for at least 48 hours. Prolonged shedding may occur in mmune-compromised children and the elderly.
• *Sapovirus*	Faeces	**Standard** & dedicated toilet/commode **Contact** for incontinent patients or those in vulnerable patient wards	Duration of clinical symptoms and until asymptomatic for at least 48 hours
• Viral (if not covered elsewhere)	Faeces	**Standard** & dedicated toilet/commode **Contact** for incontinent patients or those in vulnerable patient wards	Duration of clinical symptoms.
German measles (see Rubella)			

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
Giardia *(see* Gastroenteritis bacterial)	Faeces		Duration of clinical symptoms
Glandular Fever (infectious mononucleosis)	Respiratory secretions including saliva	Standard	
Gonococcal ophthalmia neonatorum (gonorrheal ophthalmia, acute conjunctivitis of newborn)	Mucous membranes & pus	Standard	
Gonorrhea	Mucous membranes/sexual contact	Standard	
Guillain-Barré syndrome	Respiratory secretions/faeces	Standard	
Haemorrhagic fevers (eg. Ebola, Lassa Fever, Marburg) Refer also IPC Ebola policies and procedures	Blood and body fluid and respiratory secretions.	Contact and Airborne including protective eyewear. Negative air pressure room during infectious period. Advanced PPE	Duration of illness
Hand, Foot and Mouth disease Commonly caused by Group A Coxsackieviruses	Nasal discharge Saliva Blister fluid Faeces	Contact Precautions for children and infants	Duration of symptoms Most infectious during 1st week of illness Community & Public Health brochure
***Hantavirus* pulmonary syndrome**	Rodents/ blood	Standard	Duration of illness
Helicobacter pylori	Faecal/oral	Standard	Duration of illness
Hepatitis, viral • Type A	Faeces	**Standard** & dedicated toilet/commode **Contact** for incontinent patients or those in vulnerable patient wards	For one week of jaundice. Maintain precautions – In infants & children <3 yrs of age for duration of hospitalisation.

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
			– In children 3-14yrs, until 2 weeks after onset of symptoms – In others until one week after onset of symptoms.
• Type B (HBsAG Positive)	Blood/body fluids	Standard	Community & Public Health brochure
• Type C and other non-specified (non-A, non-B)	Blood/body fluids	Standard	
• Type D (co infection with Type B)	Blood/body fluids	Standard	
• Type E – see Type A	Faeces	Standard – with dedicated toilet/commode	
• Type G		Standard	
Herpes simplex (*cold sore*)			
Encephalitis	Lesions & mucous membranes	Standard	
Neonatal Exposure	Lesion secretions	Standard	For asymptomatic, exposed infants delivered vaginally or by C-section to mother with active infection and membranes which have been ruptured for more than 4 to 6 hours, monitor closely for signs of infection.
		Contact	For symptomatic infants contact precautions until lesions dry.
Mucotaneous, disseminated or primary severe	Lesion secretions	Contact	Until all lesions crusted
Mucotaneous, recurrent (skin, oral, genital)	Lesion secretions	Standard	
Herpes zoster (varicella-zoster/shingles)			
• Disseminated (wide spread) usually in compromised patients	Lesion secretions	Contact and Airborne	Until all lesions crusted. Avoid contact unless immune to chickenpox

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
• Area cannot be contained by an occlusive dressing	Lesion secretions	Contact	Until all lesions crusted. Avoid contact unless immune to chickenpox
• Localised in normal patient and area covered by occlusive dressing	Lesion secretions	Standard	Avoid contact unless immune to chickenpox
HIV (Human immunodeficiency virus)	Blood borne virus – direct contact with blood or body substances	Standard	
Human Metapneumovirus	Respiratory secretions	Standard with Respiratory Hygiene Contact those in vulnerable patient wards	Duration of illness. Similar to RSV
Impetigo	Lesions	Contact	Until 24hrs after effective treatment
Infectious mononucleosis (see Glandular Fever)	Respiratory secretions and saliva	Standard	
Influenza (see Influenza Guidelines on IP&C intranet for further information)	Respiratory secretions	Droplet	5 days from onset of illness without chemoprophylaxis. Duration of clinical illness in immunocompromised persons 72 hours if treated with Tamiflu
Kawasaki syndrome	No known person-to-person spread	Standard	
Lassa Fever	Blood and body fluids	Contact – refer Ebola Viral Diseases Guidelines	
Legionnaires' disease	Contaminated water from environment, aspirated/inhaled. Not person to person transmission	Standard	
Leprosy	Long term close contact	Standard	
Leptospirosis	Not person to person transmission	Standard	

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
Lice (Pediculosis) –			Person not infectious to close contacts 24 hours after effective treatment
head lice	Head to head	Standard	
pubic lice	Sexual/intimate contact	Standard	http://www.cph.co.nz/files/MED0030.pdf (Community & Public Health brochure)
body lice	Clothing	Standard	
Listeriosis	Contaminated foods	Standard	
Lyme Disease	Ticks	Standard	
Malaria	Mosquito	Standard	
Marburg Haemorrhagic Fever	Blood and body fluids	Contact & Droplet – refer Ebola Viral Diseases Guidelines	
Measles (Rubeola, Morbilli)	Airborne spread	Airborne	4 days after onset of rash. Duration of clinical illness for immune compromised. Avoid contact unless immune.
Meningitis			
• Aseptic nonbacterial or viral meningitis (also see enteroviral infections)	Faeces/oral	Standard	
• Bacterial, gram-negative enteric, in neonates		Standard	
• Fungal	Inhalation from environmental after aerosolation	Standard	
• Haemophilus 11xanthema, known or suspected	Respiratory secretions	Droplet	Until 24hrs after initiation of effective treatment See meningococcal disease below
• Listeria monocytogenes	Food or faecal/oral	Standard	
• Neisseria (meningococcal) known or suspected	Respiratory secretions	Droplet	Until 24 hrs after initiation of effective treatment

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
• M.Tuberculosis	Respiratory secretions	Standard	Patient should be examined for evidence of current (active) pulmonary tuberculosis. If evidence exists, see Tuberculosis
• Other diagnosed bacterial	Depends on organism	Standard	
Meningococcal pneumonia or sepsis (Meningococcemia)	Blood/Respiratory secretions	Droplet	Until 24hrs after initiation of effective therapy
MERS-CoV - Middle East Respiratory Syndrome	Respiratory secretions. Contaminated surfaces	Contact & Airborne	Refer to latest Ministry of Health Guidelines
Molluscum contagiosum	Close contact/lesions	Standard	Viral disease causing skin lesions
Multidrug-resistant organisms, infection or colonisation (e.g. MRSA, VRE, VISA/VRSA, ESBL's, resistant *S. pneumoniae*	As per site identified.	Refer IPC Policy for MDRO	On advice from IP&C team/Infectious Diseases
Mumps (infectious parotitis)	Saliva	Droplet	For 9 days after onset of swelling. Avoid contact unless immune.
Mycobacterium Tuberculosis (see Tuberculosis)	Airborne particles	Airborne	
Mycobacteria, nontuberculosis (atypical)	Not person to person transmission		
Pulmonary	Respiratory secretions	Standard	
Wound	Drainage	Standard	
***Mycoplasma* pneumonia**	Respiratory secretions	Droplet and Contact	Duration of illness
Necrotizing enterocolitis	Faeces	Standard	Contact Precautions when cases temporarily clustered.
Norovirus Type 1 & 2(see Gastroenteritis viral))			
Parainfluenza (types 1-4)	Respiratory secretions	Contact	Duration of illness

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
			Viral shedding may be prolonged in immunosuppressed patients.
Parechovirus • Respiratory	Respiratory secretions		
Parvovirus B19 (erythema infectiosum)	Respiratory secretions	Droplet Pregnant staff should avoid caring for these patients.	Maintain precautions for duration of hospitalisation when chronic disease occurs in an immunocompromised patient. For patients with transient aplastic crisis or red cell crisis, maintain precautions for 7 days http://www.cph.co.nz/files/MED0078.pdf
Pertussis (whooping cough)	Respiratory secretions	Droplet	Until 5 days after effective treatment. Consider3ed non-infectious if >2 weeks since onset of cough
Pharyngitis	Respiratory secretions	Contact and Droplet until aetiology known	Until aetiology known
Pinworm infection (See Enterobiosis)			
Plague • Bubonic • Pneumonic	 Pus Respiratory infections	 Standard Droplet	 Until 48 hours after initiation of effective treatment
Pneumonia • Adenovirus • Bacterial not listed elsewhere (including gram negative bacteria) • *Burkholderia cepacia* in cystic fibrosis (CF) pts including respiratory tract colonisation	 Respiratory secretions Respiratory secretions Respiratory secretions	 Droplet and Contact Standard Contact Avoid exposure to other CF patient. Persons with CF who visit or provide care and are not infected or colonised	 Duration of illness

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
		with *B.cepacia* may elect to wear a mask when within a metre of a colonised or infected patient.	
• Chlamydia	Respiratory secretions	Standard	
• Fungal	Respiratory secretions	Standard	
• Haemophilus xanthema Type B	Respiratory secretions	Standard	
Adults			
Infants & children any age	Respiratory secretions	Droplet	Until 24hrs after initiation of effective therapy.
• Legionella (See Legionnaires' Disease)			
• Meningococcal	Respiratory secretions	Droplet	Until 24hrs after initiation of effective therapy.
• Multi-drug resistant bacteria (see Multidrug resistant organism)			
• *Mycoplasma pneumoniae*	Respiratory secretions	Droplet	Duration of illness
• *Pneumococcal* pneumonia		Standard	
• *Pneumocystis carinii*	Respiratory secretions	Standard Do not place in room with immunocompromised patient.	
• *Staphylococcus aureus*	Respiratory secretions	Standard	
• *Streptococcus,* Group A	Respiratory secretions	Droplet	
Adults	Respiratory secretions	Droplet	24 hours after start of effective therapy
Infants & young children			
• Viral	Respiratory secretions	Standard	

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
Poliomyelitis	Faeces	Contact	Duration of illness
Psittacosis (ornithosis)	Zoonoses Not transmitted person to person	Standard	
Rabies	Respiratory secretions	Standard for routine care. Contact and Droplet including full face visor for aerosol generating high risk procedures e.g. suction, intubation	Duration of illness. Post exposure prophylaxis available through pharmacy – contact Infectious Diseases and Occupational Health
Respiratory Syncytial Virus (RSV)	Respiratory secretions	**Standard** and respiratory hygiene **Contact** for those in vulnerable patient wards	
Rheumatic fever (Group A Streptococcal)	Not person-to-person transmission	Standard	
Rhinovirus	Respiratory secretions	**Standard** **Droplet** for those in vulnerable patient wards	
Ringworm (dermatophytosis, dermatomycosis, tinea)	Lesions	Standard	
Roseola infantum xanthema subitum)	Oral secretions	Standard	
Rotavirus (see Gastroenteritis viral))			
Rubella • German Measles		Droplet Non immune staff should avoid caring for these patients.	Until 7 days after onset of rash. Susceptible case who has known exposure – precautions for 7 days or until rash appears then 7 days after onset of rash.
• Congenital Rubella	Respiratory secretions	Droplet	Until 1 yr of age

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
			Standard precautions if nasopharyngeal and urine cultures repeatedly negative > 3 months of age
Rubeola (see Measles)			
Salmonella (see Gastroenteritis bacterial))			
Sapovirus (see Gastroenteritis viral)			
Scabies	Skin contact	Contact	Until 24hrs after initiation of effective therapy.
Scalded skin syndrome staphylococcal (Ritters disease)	Lesion drainage	Contact	Duration of clinical symptoms
Scarlet Fever (see Streptococcal Disease)			
Schistosomiasis (bilharziasis)	Environmental (water)	Standard	
Severe Acute Respiratory Syndrome (SARS) Probable or confirmed case	Respiratory Secretions Faecal /Oral Blood/Body Fluids Environmental	Airborne and Contact including protective eyewear	Duration of illness plus 10 days after resolution of fever, provided respiratory symptoms are absent or improving (and discuss with Infectious Diseases Physician).
Shigellosis (see Gastroenteritis bacterial))			
Shingles (see Herpes Zoster)			
Staphylococcal disease (*S.aureus*) Refer separate policy for MRSA) • Skin, wound or burn - Major (No dressing or dressing does not contain drainage adequately)	Pus/exudate	Contact	Until drainage contained
- Minor (dressing covers and contains drainage adequately)	Pus/exudate	Standard	

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
• Entercolitis	Faeces	Standard Contact Precautions for diapered or incontinent children for duration of illness	
• Pneumonia	Respiratory secretions	Standard	
• Scalded Skin Syndrome	Lesion, drainage	Contact	Duration of illness
• Toxic Shock Syndrome	Vaginal discharge or pus	Standard	Duration of illness
Streptococcal disease (Group A Streptococcus)			N.B. Ensure disinfection of articles likely to have been contaminated by lesions/secretions
• Skin, wound or burn			
- Major (No dressing or dressing does not contain drainage adequately)	Pus/exudate	Contact	Until 24 hours after initiation of effective therapy and drainage contained
- Minor (dressing covers and contains drainage adequately)	Pus/exudate	Standard	
• Endometritis (puerperal sepsis)	Vaginal discharge	Standard	
• Pharyngitis in infants, young children	Respiratory secretions	Droplet	Until 24 hours after initiation of effective therapy
• Pneumonia	Respiratory secretions	Droplet	Until 24 hours after initiation of effective therapy
• Scarlet fever in infants, young children	Respiratory secretions	Droplet	Until 24 hours after initiation of effective therapy
• Serious invasive disease		Droplet Plus Contact if draining wound	Until 24 hours after initiation of effective therapy
Streptococcal disease (not group A or B) unless covered elsewhere	Lesions/secretions	Standard	
Syphilis			

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
• Skin and mucous membrane, including congenital, primary, secondary	Lesion secretions and blood	Standard	
• Latent (tertiary) and seropositivity without lesions	Blood	Standard	
Tapeworm Disease • Hymenolepis nana • Taenia solium (pork) • Other	Ingestion of parasite from undercooked meat	Standard Standard Standard	
Tetanus	Environmental via skin injury	Standard	
Tinea (fungus infection dermatophytosis, dermatomycosis, ringworm)	Direct skin-to-skin contact or indirect contact from infected fomites from people or animals.	Standard	
Toxoplasmosis	Cat faeces, undercooked meat	Standard. No restrictions for pregnant staff.	
Toxic Shock syndrome (see Staphylococcal disease, Streptococcal disease)		Standard	If Group A streptococcus likely then Droplet Precautions Until 24 hours after initiation of effective therapy.
Trachoma (acute)	Purulent exudate	Standard	
Tuberculosis (refer also to Care of Patients with Pulmonary Tuberculosis, CDHB Infection Prevention & Control Policies and Procedures) • Extra pulmonary, draining lesion (including scrofula)	Pus/Exudate	Standard Contact for wound care Airborne for wound care that may involve aerosol, e.g. irrigation.	Discontinue precautions when drainage has ceased.

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
• Extra pulmonary and meningitis	Drainage from infected area	Standard	Patients should be examined for evidence of current (Active) pulmonary TB.
• Pulmonary or laryngeal disease confirmed	Airborne, Droplet nuclei	Airborne	Until all of the following has been met: ▪ The patient has had a minimum of 2 weeks effective chemotherapy ▪ The patient has stopped coughing ▪ Patient is infected with a fully sensitive strain of Mycobacterium tuberculosis ▪ The patient is responding well to treatment ▪ At least 2 of the patient's sputum specimens are smear-negative or the patient remains smear-positive but is culture negative.
• Pulmonary or laryngeal disease suspected	Airborne, Droplet nuclei	Airborne	When likelihood of infectious TB disease deemed negligible and either: 1. There is another diagnosis that explains the clinical syndrome OR 2. The results of two consecutive sputum specs are smear negative on separate days. (at least one of these should be an early morning specimen)
Typhoid (*Salmonella typhi*) (see Gastroenteritis bacterial))	Faeces	**Standard** & dedicated toilet/commode **Contact** for incontinent patients or those in vulnerable patient wards	
Varicella (see Chickenpox)			
***Vibrio* parahaemolyticus** (see Gastroenteritis bacterial)	Faeces	**Standard** & dedicated toilet/commode **Contact** for incontinent patients or those in vulnerable patient wards	

Disease	Mode of Transmission	Recommended Precautions	Precaution Duration
Viral haemorrhagic fevers (VHFs) (refer specific virus)	Blood and body fluids	Contact & Droplet	
Whooping cough (see Pertussis)			
Wound/Skin Infection/Abscess/Decubitus Ulcer - Major (No dressing or dressing does not contain drainage adequately) - Minor (dressing covers and contains drainage adequately)	Pus/exudate Pus/exudate	Contact Standard	Until drainage contained.
Yersinia enterocolitica (see Gastroenteritis bacterial))	Faeces	**Standard** & dedicated toilet/commode **Contact** for incontinent patients or those in vulnerable patient wards	
Zika Virus	Vector (mosquito) & sexual intercourse	Standard	

APPENDIX 3

Infectious Illness Outbreak

Visitor Instructions

Staff on this ward are working hard to control an outbreak of infection. In order to help them, please follow the instructions below:

- Is your visit necessary? Delay if possible.
- **No children.**
- You do not have to wear gowns, gloves and masks when visiting. Staff will wear protective clothing when caring for your relative as they are also caring for other patients.
- You **MUST WASH YOUR HANDS** or **USE THE ALCOHOL GEL** before leaving the area.
- **DO NOT USE** the ward toilets, kitchen or enter staff areas.
- **DO NOT** visit any other area of this or another hospital today.
- **DO NOT VISIT** if you or your family at home have had symptoms of an infectious disease in the last two days, e.g. diarrhoea /vomiting/ influenza.

By following these simple rules, we hope to keep you and our patients safe.

Canterbury
District Health Board
Te Poari Hauora ō Waitaha

Authorised by: CDHB infection Prevention and Control Service

Ref: 2109 June 2019

Canterbury
District Health Board
Te Poari Hauora ō Waitaha

Infection Prevention & Control Service

COVID-19 Guidelines for Patient Management

(includes Influenza and Influenza-like Illnesses Supplement)

Updated February 2021

Table of Contents

NB: This information is subject to review in a rapidly changing environment and further advice will be provided as required.

1. Case Definition for COVID-19

The case definition is changing rapidly and is updated in line with the global situation and information received from the Technical Advisory Group (TAG) at the Ministry of Health (MOH). It provides updated information on the website:
https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus

Note that due to the ongoing changing global and domestic situation, clinical judgement should apply as to whether someone who does not quite meet the current case definition should be tested or not.

Ministry of Health definition: https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-resources-health-professionals/case-definition-and-testing-guidance-covid-19#definition

A '**Close contact**' is defined as any person with the following exposure to a confirmed or probable case during the case's infectious period, without appropriate personal protective equipment (PPE):

- Direct contact with the body fluids or the laboratory specimens of a case
- Presence in the same room in a health care setting when an aerosol-generating procedure is undertaken on a case
- Living in the same household or household-like setting (eg, shared section of a hostel) with a case
- Face-to-face contact in any setting within two metres of a case for 15 minutes or more
- Having been seated on an aircraft within two metres of a case (for economy class this would mean 2 seats in any direction including seats across the aisle, other classes would require further assessment)
- Aircraft crew exposed to a case (a risk assessment conducted by the airline is required to identify which crew should be managed as close contacts)
- Border, Airline and Managed Isolation Facility (MIF) staff identified as close contacts of a confirmed or probable case

While at this point this criterion is predominantly for surveillance purposes. Case management, including isolation and PPE, should be based on clinical judgement.

Casual contact: Any person with exposure to the case who does not meet the criteria for a close contact

2. Case Classification

- **Probable**: A case that meets both clinical and epidemiological criteria/self-isolation where other known aetiologies that fully explain the clinical presentation have been excluded and either has laboratory suggestive evidence or for whom testing for SARS-CoV-2 is inconclusive.
- **Confirmed**: A case that has laboratory definitive evidence.
- **Not a case**: A case that has been investigated and subsequently found not to meet either the probably or confirmed case definition.

3. Admission from Managed Isolation and Quarantine Facility

Refer to: MIQF Returnees, MIQF Staff, Border Staff Inpatient Admissions

Regardless of reason for admission, the following applies to admissions from Managed Isolation and Quarantine Facilities (MIQF):

- 24 hours and/or ACNM MIQF will co-ordinate admission with the receiving unit e.g. ED, SARA, GAU, Maternity, SMHS
- ACNM MIQF will notify Infection Prevention & Control Service of admission.
- Strict isolation precautions required ("ENHANCED DROPLET AND CONTACT PRECAUTIONS")
- Single room with dedicated shower/ensuite required with door kept closed.
- A negative pressure room (with an anteroom facility and ensuite) as directed and if available

MIQF specific considerations

- Covid-19 swabs need to be taken on Day 0/1, Day 3 and Day 12 of the managed isolation period. Additional screening may be required on a case by case basis on direction of C&PH or responsible medical officer.
- Visiting restrictions apply i.e. no visitors, unless an MBIE exemption has been requested and granted
- Movement restrictions apply to inpatient admission during their 14-day managed isolation period. The patient is to remain in their room unless a specific procedure is being undertaken
- **If the patient attempts to abscond, notify CDHB Security and report event to Police (call 111), clearly stating patient is from a managed isolation facility**
- Staff must follow Standard Precautions at all times in addition to Enhanced Contact and Droplet precautions.
- Particular care must be taken to avoid touching eyes, nose or mouth with contaminated hands (gloved or un-gloved). Keep hands below shoulders.
- All PPE must be removed on leaving the room and disposed of in medical (yellow) waste stream.
- Reusable eye protection should be disinfected using Clinell Universal wipes.

Other considerations

- Nebulisers should be avoided. Consider alternative method of medication delivery.
- Educate patient on the importance of correct Hand Hygiene and Respiratory Hygiene and Cough Etiquette practice
- Monitor daily for symptoms – if patient becomes symptomatic, consider COVID swab (in consultation with Infectious Diseases/Clinical Microbiologist).

Note: Patients should not be removed from isolation without consultation with Infectious Disease Physician

4. Patient Admission from Level 3/Level 4 region in New Zealand

Refer to: **Adult Admission Guidelines flowchart**

- Notify Infection Prevention & Control Service of admission
- Patient/support person to wear surgical mask on entry to hospital whilst transferring to ward
- Any accompanying staff must wear a surgical mask and perform 5 Moments of Hand Hygiene whilst in the CDHB facility
- Strict isolation precautions required ("ENHANCED DROPLET AND CONTACT PRECAUTIONS")
- Single room with dedicated shower/ensuite required with door kept closed.
- A negative pressure room (with an anteroom facility and ensuite) as directed and if available
- Staff must follow Standard Precautions at all times in addition to Enhanced Contact and Droplet precautions.
- Particular care must be taken to avoid touching eyes, nose or mouth with contaminated hands (gloved or un-gloved). Keep hands below shoulders.

- All PPE must be removed on leaving the room and disposed of in medical (yellow) waste stream.
- Reusable eye protection should be disinfected using Clinell Universal wipes.

Other considerations

- Nebulisers should be avoided. Consider alternative method of medication delivery.
- Educate patient on the importance of correct Hand Hygiene and Respiratory Hygiene and Cough Etiquette practice
- Monitor daily for symptoms – if patient becomes symptomatic, consider COVID swab (in consultation with Infectious Diseases/Clinical Microbiologist).
- Visiting restrictions may apply. i.e. an exemption may be required where accompanied from another region.

Note: Patients should not be removed from isolation without consultation with Infectious Disease Physician

5. Suspected COVID-19 on cases presenting to healthcare facility from community

Refer to: **Adult Admission Guidelines flowchart**

- Ensure patient wears a surgical mask on presentation at point of entry e.g. ED, AMAU, AAU, MAU, Birthing Suite
- Single room with dedicated shower/ensuite recommended with door kept closed.
- A negative pressure room (with an anteroom facility and ensuite) as directed and if available
- Isolation precaution signage (purple "ENHANCED PRECAUTIONS" Contact and Droplet sign) clearly visible
- Staff must follow Standard Precautions at all times in addition to Enhanced Contact and Droplet precautions.
- Particular care must be taken to avoid touching eyes, nose or mouth with contaminated hands (gloved or un-gloved). Keep hands below shoulders.
- All PPE must be removed on leaving the room and disposed of in medical (yellow) waste stream.
- Reusable eye protection shall be transported to the dirty utility room in a designated receptacle or disinfected at point of use using Clinell Universal wipes. Refer to reprocessing reusable safety glasses/face shield.
- Nebulisers should be avoided. Consider alternative method of medication delivery.
- Educate patient on the importance of correct Hand Hygiene and Respiratory Hygiene and Cough Etiquette practice

Note: Patients should not be removed from isolation without consultation with Infectious Disease Physician

6. Radiological investigations for suspected cases, confirmed cases and persons at epidemiological risk of COVID-19

1. Electronic Radiology-Referral will state probable or confirmed COVID-19 case.
2. Portable imaging performed in patient's room where possible.
3. Radiographers should wear PPE as Enhanced Droplet ad Contact Precautions.
4. If CT imaging is required, the referring SMO must be involved and contact Radiology to discuss:
   - **CT imaging should not be used for routine screening for COVID-19 disease**
   - **CT imaging should not be used as a first-line test to diagnose COVID-19 disease**
   - **CT imaging should be reserved for hospitalised, symptomatic patients with specific clinical indication for scanning**

5. Where the patient must attend Radiology areas, their isolation requirements should be communicated by the ward to radiology and transit staff.
6. The patient must be brought directly to the imaging room i.e. they are not to wait in waiting room or corridor areas.
7. Patient is to wear a surgical mask.
8. Radiology staff in direct contact with patient while in the department are to wear PPE as per Enhanced Contact and Droplet Precautions.
9. Doors in the imaging room and adjacent areas are to be kept closed during the procedure.
10. The patient is to be returned directly to their room on the ward.
11. All radiology equipment and environment must be cleaned and decontaminated with Clinell Universal wipes following procedure (or with Tristel NCU DUO for ultrasound equipment).

7. Operating Theatre

1. Theatre coordinator, duty anaesthetist and charge technician to be notified of either probable or confirmed COVID-19 case that requires a procedure in OPTH.
2. Patient should be transferred directly from their isolation room to the operating room (patient must wear a surgical mask during transfer).
3. Staff should follow standard precautions and enhanced droplet and contact precautions.
4. Operating theatre local protocols for COVID-19 cases to be followed.

Cleaning: the operating theatre will be decontaminated after the case using an approved cleaning/disinfection process. A stand-down period may be required where aerosol generating procedures are involved (refer to Main Theatre COVID-19 policy).

8. Aerosol generating (and high risk) procedures

Aerosol-generating procedures are invasive procedures that aerosolise respiratory secretions and therefore increase the likelihood of disease transmission. Refer to COVID-19 Aerosol Generating Procedures AGP

NB: Aerosol-generating and high-risk procedures (see Table 2 below). Aerosol generating and high risk procedures should be carried out in a single room with negative pressure (if available) and door closed. High-risk procedures may be carried out in a single room (doesn't require negative pressure) with door closed. Staff PPE requires use of an N-95 mask in addition to eye protection e.g. safety glasses or face shield plus gown and gloves.

Table 2: Aerosol generating and High-Risk procedures

• Bronchoscopy	• Manual Ventilation
• Induced Sputum	• Cardiopulmonary resuscitation
• Non-invasive ventilation (CPAP, BIPAP)	• Dental procedures • Open airway suctioning
• Intubation and Extubation	• Tracheostomy
• Surgery and post-mortem procedures in which high-speed devices are used	• High frequency oscillatory ventilation
ADDITIONAL HIGH-RISK PROCEDURES	
• Chest physiotherapy • Administration of pressurised humidified O2 / high-flow nasal cannulae >15 l/min	• ENT procedures

- Cleaning and disinfection of equipment and environment should be carried out post procedure.
- Donning PPE and Doffing PPE posters are available and this is demonstrated in this video
- Ensure careful hand hygiene is followed at all times as per the 5 Moments for Hand Hygiene and when removing PPE as per CDHB Hand Hygiene policy

9. Management of Cohorting

- Patient cohorting only on advice from the CDHB IPC Service

10. Palliative Care

- Those who are elderly, frail, and/or with underlying chronic or serious illness are most at risk from COVID-19.
- Utilizing the unique skills and strengths found in palliative care must be part of the response.
- If ventilators and ICU beds are in short supply, hospitals will have to triage cases and communicate to patients and families an alternative path.

11. Patient Movement and Transport within hospital

- Only as essential
- Ensure patient isolation requirements are communicated in requisition/verbal request to the receiving department
- Patient must transfer directly to destination and not sit in holding bays etc
- Patients requiring transfer are to wear a surgical mask during transport and perform hand hygiene before leaving the room
- Transfer staff are to wear a clean surgical mask and may carry gloves during transit

NB: Clinical staff e.g. from ICU accompanying acutely unwell/unstable patients are required to wear clean full PPE due to potential risk of deterioration/need for intervention during transport

12. Visitor Restrictions

- Visitor restrictions apply. Alternative systems for communication should be supported e.g. telephone
- Visitors (as contacts) may well be required to be in self isolation for 14 days
- While visitor restrictions may be difficult for families and whanau, it is an important temporary measure for their protection. Compassionate exemptions are managed through the MoH.

NB: Exceptions for compassionate care only in consultation with ID Physician e.g. end of life situations.

Decisions about visitation during an end of life situation should be made on a case by case basis, which should include careful screening of the visitor (including clergy, bereavement counsellors, etc.) for fever or respiratory symptoms. Such visitors will be required to wear PPE and the visit will be limited to a specific time and room only.
Visitors will need instruction on how to put on / take off PPE correctly.

13. Laundry, Food Services and Waste

- Manage Linen/Laundry as for Contact Precautions
    - Alginate liner

- Red laundry bag
- Do not overfill

- Food service staff are not to enter rooms of COVID-19 patients. Consider use of disposable containers for meals
  - When handling the meal trolley, food services staff to wear gloves
  - perform hand hygiene on removal of gloves once tray placed in trolley
- Manage waste as for contact precautions
  - Clinical waste to be double bagged or placed in lined 240L waste bin
  - Secure bags with cable ties

14. Daily Cleaning and Disinfection

- Daily cleaning will be undertaken by nursing staff whilst the patient remains in the room
- Staff to wear full PPE as per Enhanced Contact and Droplet Precautions and ensure careful hand hygiene performed.
- Frequent cleaning of patient equipment and environment each shift is recommended using Clinell Universal wipes is required
- This includes frequently touched fixtures e.g. handles, call bells, taps, knobs, bed frame and rails
- Also, all horizontal surfaces including locker and bed table
- Use disposable equipment where available.
- Shared patient equipment must be cleaned and disinfected between patients
- Floors will require daily mopping with Oxivir TB – a disposable mop head will be required and re-usable handle and bucket which can remain in the room for the duration of the patient's stay. Liaise with the CDHB Cleaning Supervisor.

15. Terminal Clean

- A terminal clean is required following patient discharge or transfer to another ward/facility including curtain change.
- Contact Environmental Services to request a terminal clean and advise this is a post COVID-19 patient
- All cleaning processes for contact precautions must be followed by or combined with a disinfectant process (see *cleaning/disinfection below).
  a) Ensure room is prepared prior to cleaning, remove medical equipment and patient used items, ensuring any item is cleaned and disinfected
  b) Environmental staff to wear PPE – gown/gloves (protective eyewear and mask may be used as required)
  c) Remove bed screens and privacy/window curtains (including disposable curtains/screens)
  d) Focus to be placed on:
     - Horizontal surfaces including windows, sills and frames
     - Furniture and fittings
     - Bed frames, rails and mattress
  e) Mop floor and discard mop head as per normal process
  f) Remove PPE and perform hand hygiene

- All cleaning equipment should be wiped over with a disinfectant and returned to the cleaners' room or storage area
  - Discard waste in appropriate area
- Perform hand hygiene on completion

****Cleaning/disinfection**

Physical cleaning with detergent followed by disinfection with an IPC Service approved, hospital-grade disinfectant with activity against viruses (according to label/product information). This is currently either a chlorine-based product such as sodium hypochlorite or a combined cleaning/disinfection product e.g. Oxivir TB/ Clinell Universal Wipes.

16. Care after Death

- Personal cares after death as per nursing procedure
- The deceased is wrapped in a disposable sheet and placed in a body bag
- Body bag is to be identified with the deceased's name (which is copied from the patient ID tag on the deceased not from the notes).
- The closed body bag is to be wiped down with Clinell Universal wipes and not reopened.
- Transport to mortuary on mortuary trolley, which is to be cleaned with Clinell Universal wipes once the deceased has been removed.
- There are to be no viewings of the deceased by the family in the mortuary.
  NB: Please contact your preferred Funeral Director to discuss this possibility.

Supplement: Influenza and Influenza-like Illnesses

This section describes the infection prevention and control (IPC) measures, which must be taken to minimise transmission of influenza and other influenza-like illnesses (ILI) within CDHB healthcare facilities.

NB: The IPC measures for the management of influenza differ from other respiratory viruses in some high-risk areas and are described in Section 8.3.

Respiratory Hygiene / Cough Etiquette

- Respiratory hygiene must be practised at all times. Educate patients in the importance of respiratory hygiene.
- Cover your mouth and nose with a tissue or elbow when coughing or sneezing
- Use in the nearest waste receptacle to dispose of the tissue after use
- Perform hand hygiene

****Staff who have signs and symptoms of respiratory illness must NOT be at work**

Definition of Influenza-like Illness

Acute upper respiratory tract infection characterised by abrupt onset with the following: fever, chills, headache, myalgia, malaise, non-productive cough, sore throat and rhinitis (CDC, 2019)

- Children and elderly patients may not present with classical symptoms
- Elderly may only present with cough symptoms and/or confusion without a fever
- Some groups e.g. infants / children may present with a wide variety of clinical syndromes including vomiting and diarrhoea.

Laboratory Testing

Hospitalised patients meeting the ILI definition (see above) should be tested for COVID-19. Discuss with Microbiologist other appropriate tests e.g. rapid flu or multiplex panel.

General Information about Transmission

ILI may be caused by a number of viruses other than the influenza viruses. The use of hand hygiene and respiratory hygiene / cough etiquette will limit the transmission of ILI:

- Influenza viruses are spread from person to person primarily through large-particle respiratory droplet transmission (e.g., when an infected person coughs or sneezes near a person). This requires close contact between source and recipient persons, as larger droplets generally travel only a short distance (1 metre or less) through the air.
- Contact with respiratory-droplet contaminated surfaces is a possible source of transmission.
- In the healthcare setting, the principal mode of transmission of other respiratory viruses is via the healthcare worker's hands, following contact with the patient and their environment, making good hand hygiene practice a priority as well as daily cleaning of the room or bed space with an emphasis on high-touch points e.g. bedrails, call bell.

For influenza:

- The typical incubation period for influenza is 1–4 days (average: 2 days).
- The highest viral loads are usually shed within the first 72 hours after onset of symptoms in adults, but may continue up until 7 days from onset of symptoms

- In children, the higher viral loads are shed within the first 5 days and may continue up until 10 days after onset of symptoms
- Severely immunocompromised persons can shed virus for weeks or months.
- Patients may be transferred or discharged to other care facilities including long term care with appropriate infection prevention and control measures in place. The CDHB IPC community liaison nurses are available for advice and/or to facilitate discharges to the long-term care sector.

General IPC Measures for Influenza

- Hand hygiene is performed as per WHO 5 Moments for Hand Hygiene. Either alcohol-based hand rub or liquid soap and water may be used for hand hygiene
- A surgical mask should be worn when entering the patient's room/bed space as part of Droplet Precautions. Remove the mask using the ear loops when leaving the patient's room/bed space and dispose of the mask into hazardous waste. Perform hand hygiene
- Aprons and gloves are worn if required as part of Standard Precautions e.g. risk of direct hand or body exposure to blood or body fluids. If worn, gloves and aprons are changed between each patient
- Where possible, cohort patients with the same strain of virus (if confirmed by laboratory testing). In a cohort situation, staff may wear the same mask when caring for more than one patient unless the mask becomes wet, when it must be changed
- Ensure environmental surfaces are cleaned frequently each shift by ward staff to reduce contamination

General Measures for Patients with Influenza

- Patient to wear surgical mask and perform hand hygiene when leaving room/bed space for duration of transmission-based precautions
- **Do not use nebulisers in multi-bed rooms**. If required, nebulisers can be used in a single room with the door closed whilst in use. Refer to Nebuliser Risk Assessment Flowchart 2018
- If patient movement or transport is necessary, have the patient wear a surgical mask (if tolerated).

Bed Management for Influenza (Patient Placement)

- Maintain **Droplet Precautions**
- Patient to be nursed in a single room
- Where there are no single rooms available, patients in general areas can be cohorted in a multi-bed room with privacy curtains drawn between bed heads (1 metre) provided there is no additional risk to the patient management
- Maintain **Contact & Droplet Precautions** for patients confirmed with Influenza in **BMTU, CHOC, and NICU**
- Applicable transmission-based signage must be used and be visible
- Patients presenting within 48 hours of onset of symptoms may benefit from anti-viral therapy with Oseltamivir (Tamiflu) and shall remain in Droplet Precautions for 72 hours from commencement of treatment

- Severely ill, immunocompromised, or pregnant patients may benefit from treatment beyond 48 hours of symptom onset – consult Infectious Diseases. Patients shall remain in droplet precautions for 72 hours

For influenza: Droplet and Contact precautions for 7 days from outset of illness (if not given anti-viral treatment) and / or until symptoms resolve (Children < 5 years for 5 days
Suspected ILI in BMTU, CHOC and NICU. Admit to single room (incubator or spatial separation in NICU) in Contact and Droplet Precautions until patient is asymptomatic (regardless of chemoprophylaxis) (Children < 5 years for 5 days)

- Precautions should be continued longer than the recommended times while the patient remains symptomatic

IPC Measures for Vulnerable Patients with ILI

- Paediatric patients with viral illnesses other than influenza are to be nursed in a single room, adhering to the 5 moments for hand hygiene and use of PPE as required.
- Patients in BMTU, CHOC and NICU (baby may be transferred to an incubator awaiting confirmation of results) are to be nursed in a single room with **Contact and Droplet Precautions**
- Applicable transmission-based signage must be used and be visible

Management of Contacts with Confirmed Influenza Exposure

- A 'Contact' is any patient who is exposed to a confirmed influenza case prior to the use of Droplet Precautions. This is typically other patients who have been sharing the same multi-bed room with a confirmed influenza patient
- Contacts DO NOT require Droplet Precautions or isolation unless they subsequently develop signs and symptoms of influenza
- If the index case is confirmed positive, contacts should be assessed by their clinical team and prescribed prophylactic Oseltamivir (Tamiflu) if clinically indicated. Note that prophylaxis is only funded for hospitalised patients therefore non-hospitalised contacts would need to self-fund
- The multi-bed room shall remain open to further admissions. However, the confirmed patient should be transferred to a single room or cohorted where possible
- Avoid admitting patients from the following vulnerable groups into contact/cohort rooms:
    - those with chronic respiratory conditions
    - pregnant women
    - the morbidly obese
    - those with immunosuppressive conditions e.g. cancer, transplant, immunosuppressive medication or HIV
    - those with other chronic illnesses such as cardiac disease, diabetes mellitus, chronic metabolic diseases, renal failure, chronic liver disease, chronic neurological disease
- Refer to 'Management of Healthcare Workers' (section 7.5) for non-immunised staff contacts

Antiviral Medicines

Oseltamivir (Tamiflu) is an antiviral medicine that is specifically used for treatment and prophylaxis of influenza. It is only funded for hospitalised patients and needs to be dispensed form the hospital pharmacy is prescribed via the hospital pharmacy

- Oseltamivir:
  - is an important line of defence in the prevention of seasonal influenza.
  - can be used either to treat influenza or prevent influenza (prophylaxis)
  - as a prophylaxis could be considered for exposed patient contacts of confirmed influenza cases (although not funded for this
  - should not be considered a substitute for influenza vaccination
- Patients presenting within 48 hours of onset of symptoms and **confirmed to have influenza**, may benefit from anti-viral therapy with Oseltamivir (Tamiflu)
- Oseltamivir is usually prescribed as follows:
  - If started on Oseltamivir in hospital, give the patient the remainder of any course to take home on discharge (it is not funded on prescription)
  - 75mgs BD for 5 days for treatment of influenza cases
  - 75mgs daily for at least 10 days for prophylaxis
  - Refer to the Pink Book for other dosage requirements e.g. renal impairment

Management of Healthcare Worker exposure

Seasonal influenza vaccination for healthcare workers is the internationally recognised best practice for protection of patients and staff against influenza. These are offered free of charge each year throughout the CDHB during the annual staff vaccination campaign

- Staff are advised NOT to self-diagnose by sending a viral swab to the laboratory
- Unvaccinated staff members who are exposed to influenza should contact their GP for further advice

Cleaning

- Ensure environmental surfaces in the single room or bed space are cleaned frequently each shift with a detergent wipe or Clinell Universal Wipe
- Full terminal cleaning is not required following discharge of ILI patients in general wards and departments but staff undertaking a **discharge clean** e.g. with Clinell Universal Wipes, should ensure the following environmental surfaces and touch points are focussed on:
  - Bed mattress, frame and rails
  - All horizontal surfaces including locker and bed table
  - Frequently touched fixtures e.g. handles, call bells, knobs and rails
- Bed space curtains/screens do not require changing unless visibly soiled

  NB: A terminal clean is required in high risk areas where Contact and Droplet Precautions have been implemented

IPC Measures for ILI in BMTU, CHOC and NICU

Other respiratory viruses e.g. RSV, adenovirus and parainfluenza may cause severe morbidity or mortality in high-risk patients, therefore, this requires a different approach than with the general population:

- Use Contact and Droplet Precautions for patients in high-risk areas
- Prolonged shedding with respiratory viruses can occur in immunocompromised individuals. Therefore, it is **not** recommended that re-testing of patients is used as an indicator to remove the patient from isolation
- Contact and Droplet precautions should remain in place in these areas until the patient is asymptomatic for 48 hours
- A terminal clean is where Contact and Droplet precautions have been implemented for a patient positive for ILI

Outbreaks

If influenza or an ILI outbreak is suspected, the following measures should be taken to manage the outbreak and limit transmission:

- Contact the CDHB Infection Prevention & Control Service
- Restrict staff movement from areas of the facility affected by the outbreaks
- Refer to Outbreak and Incident Management

References

1. New Zealand Ministry of Health [Internet]. Wellington: Influenza; [updated 16 January 2020; cited 2020 March 03]. Available from: https://www.health.govt.nz/our-work/preventative-health-wellness/immunisation/influenza

2. National Influenza Strategy Group (NISG) [Internet]. Auckland: Influenza information for health professionals [update not stated; cited 2019 May 15]. Available from: https://www.influenza.org.nz/

3. Centers for Disease Prevention and Control. [Internet]. Druid Hills, Georgia: Influenza (Flu); [updated 28 February 2020; cited 2020 March 03]. Available from: https://www.cdc.gov/flu/

4. New Zealand Ministry of Health [Internet]. Wellington: COVID-19; [updated 15 March 2020; cited 2020 March 15]. Available from: https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus

5. JAMA. Corona Virus Resource Centre; [updated 15 March 2020; cited 2020 March 15]. Available from: https://jamanetwork.com/journals/jama

6. New England Journal of Medicine. Coronavirus (Covid-19); [updated 15 March 2020; cited 2020 March 15]. Available from: https://www.nejm.org/coronavirus

7. World Health Organisation. Coronavirus disease (COVID-19) outbreak; [updated 15 March 2020; cited 2020 March 15]. Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019

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COVID-19

INSTRUCTIONS ON SPECIMEN COLLECTION – FOR HOSPITAL USE

Updated 17 March 2020

Significant changes have been made regarding specimen collection in the anticipation of limited supply of swabs and increasing demand for testing.

PERSONAL PROTECTIVE EQUIPMENT

Detailed guidelines for COVID-19 infection prevention and control measures can be viewed from the World Health Organisation website.

Droplet and contact precautions are advised when collecting specimens, which includes the use of:

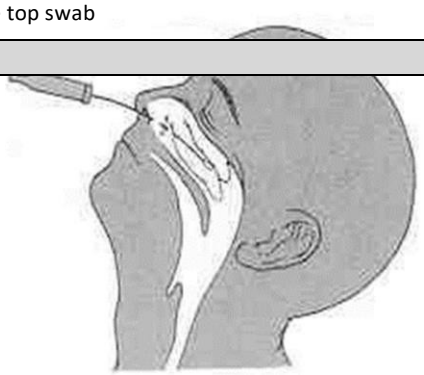
- Disposable, fluid resistant gown (long sleeved)
- Gloves
- Surgical mask
- Eye protection (e.g. goggles or face shield)

SWAB TO USE

In anticipation of increasing testing requirements and limited supply of swabs (these originate from Italy), we now recommend using **a single nasopharyngeal swab only** – this is a change from previous where two separate swabs were used for two sites.

Adult: orange top swab / Paediatric: white top swab

INSTRUCTIONS



1. Wear appropriate PPE.
2. ENSURE PATIENT BLOWS NOSE PRIOR TO COLLECTION.
3. Using a synthetic fibre-tipped nasopharyngeal swab, insert swab into one nostril. For adequate collection the swab tip must extend well beyond the anterior nares until some resistance is met (see diagram).
4. Press on swab tip and rotate the swab tip several times across the mucosal surface to collect cellular material.
5. Break swab into VIRAL TRANSPORT MEDIUM and recap. Ensure there is no leakage.

6. Label specimen with patient's name, date of birth AND/OR NHI number, and collection time and date.
   Place in clean specimen bag, place request form in outer pouch and send to the lab via the orderlies. Do not use the Lamson tube system.

ENHANCED PRECAUTIONS

STOP

DROPLET & CONTACT

(in addition to Standard Precautions)

RESTRICTED VISITING (only on approval)
Encourage other forms of communication, e.g. phone call or video call

PLACEMENT

- ✓ Single Room (cohort as advised by IP&C)
- ✓ Door closed

MASK

- ✓ Surgical Mask (or N95 mask where indicated)
- ✓ Put on at entrance to room
- ✓ Remove when exiting the room

EYE PROTECTION

- ✓ Safety glasses
- ✓ Put on at entrance to room
- ✓ Remove when exiting the room

GLOVES / GOWN

- ✓ Put on at entrance to room
- ✓ Remove before exiting room

PERFORM HAND HYGIENE

- ✓ As per 5 Moments of Hand Hygiene

PATIENT TRANSPORT

- ✓ Limit to essential purposes only
- ✓ Patient to wear surgical mask during transport
- ✓ Patient to perform hand hygiene

WASTE

- ✓ Place in the infectious/medical waste bag

PATIENT CARE EQUIPMENT / ENVIRONMENT

- ✓ Dedicated equipment
- ✓ Clean and disinfect on frequently high-touch points & equipment

Ref: 2406828 Authorised by: Infection Prevention & Control Service Feb 2021

Canterbury District Health Board

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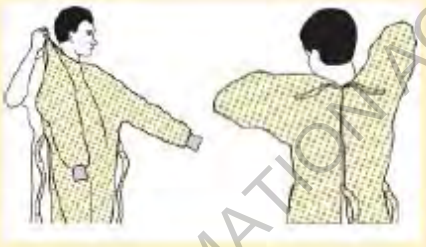
SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

Perform Hand Hygiene

1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



2. SURGICAL MASK or N95 MASK

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Check N95 mask for seal

3. GOGGLES OR FACESHIELD

- Place over face and eyes and adjust to fit

4. GLOVES

- Extend to cover wrist of isolation gown

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene

USE SAFEWORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

Adapted from CDC Guidance

Canterbury District Health Board

West Coast

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE)

Safely remove PPE without contaminating your clothing, skin or mucous membranes with potentially infectious materials. **Remove PPE in the following sequence:**

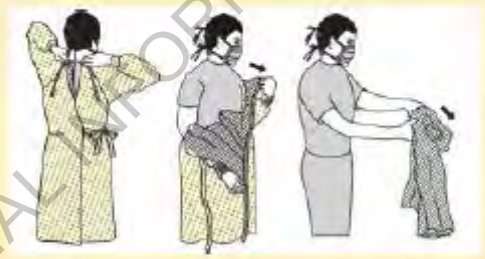
1. GLOVES

- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves into a waste container

Perform Hand Hygiene

2. GOWN

- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll carefully into a bundle and discard into a waste container



Perform Hand Hygiene

3. GOGGLES OR FACESHIELD

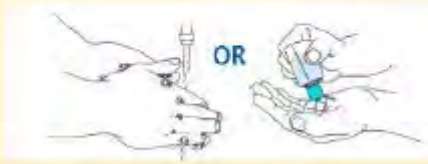
- Remove goggles or face shield from the back by lifting head band or ear pieces
- if the item is reusable clean and disinfect, place in designated receptacle for reprocessing.

Perform Hand Hygiene

4. MASK

- Grasp bottom ties or elastics of mask and remove without touching the front
- Discard into a waste container

WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITISER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE

Adapted from CDC Guidance

Canterbury District Health Board
West Coast District Health Board

Ref: 2407757 Authorised by: CDHB Infection Prevention and Control Service September 2020

COVID-19 – ADULT ADMISSION GUIDELINES

DOES THE PATIENT FULFILL ANY OF THE FOLLOWING CRITERIA?

CONTACTS OF CONFIRMED COVID-19 CASES WITHIN LAST 14 DAYS[1]
OR RECENT TRAVEL TO AND/OR FROM LEVEL 3 OR LEVEL 4 ALERT REGIONS IN NZ WITHIN LAST 14 DAYS[1]
OR A RETURNED OVERSEAS TRAVELLER OR THEIR CLOSE CONTACT WITHIN 14 DAYS[1] OF TRAVEL/CONTACT/LEAVING MIQF

FOR MIQF RETURNEES, MIQF STAFF[2], INTERNATIONAL AIR CREW, AND BORDER STAFF
(INCL. AVIATION & MARITIME SECTOR WORKERS AND THEIR HOUSEHOLD AND CLOSE WORK CONTACTS)
REFER TO: MIQF RETURNEES, MIQF STAFF, BORDER STAFF INPATIENT ADMISSIONS

YES

DO THEY HAVE AN ACUTE RESPIRATORY ILLNESS?

THIS MAY INCLUDE SYMPTOMS OF NEW COUGH (OR ACUTE EXACERBATION OF CHRONIC COUGH), SHORTNESS OF BREATH, SORE THROAT, CORYZA, ANOSMIA, WITH OR WITHOUT FEVER (≥38°C)

YES
TEST FOR COVID-19

HIGH PROBABILITY OF COVID-19

- **Single room, preferably with dedicated shower/en suite**
- **Use Enhanced Droplet & Contact Precautions[3] (with N95 masks)**

If aerosol generating or high risk procedures[4] are required, patient should be managed in a single room (door shut) with N95 mask in addition to above.

- **Notify Community & Public Health immediately[5]**

NO

COVID-19 RISK FACTORS PRESENT

- **Notify IP&C** team (or Clinical Microbiologist afterhours) and **discuss role of COVID-19 testing** in this group
- **Single room**
- **Use Enhanced Droplet and Contact Precautions[3]**
- Question patient daily for development of COVID-19 symptoms (see above)

NO

DO THEY HAVE AN UNDIFFERENTIATED ACUTE RESPIRATORY ILLNESS?

THIS MAY INCLUDE SYMPTOMS OF NEW COUGH (OR ACUTE EXACERBATION OF CHRONIC COUGH), SHORTNESS OF BREATH, SORE THROAT, CORYZA, ANOSMIA, WITH OR WITHOUT FEVER (≥38°C)

YES

UNDIFFERENTIATED ACUTE RESPIRATORY ILLNESS WITHOUT COVID-19 RISK FACTORS

- **Use Droplet Precautions and Standard Precautions**

If patient has clearly identifiable aetiology for acute respiratory symptoms without risk factors for COVID-19 (e.g. malignant pleural effusion, pulmonary oedema), apply usual Infection, Prevention & Control precaution measures as appropriate.

NO

FOLLOW USUAL ADMISSION PATHWAYS

- **Use Standard Precautions**
- **Consider wearing a surgical mask where social distancing is not possible**
- **5 moments of hand hygiene**

ALL PATIENTS:

Refer to **Multi-Drug Resistant Organisms (MDRO) Admission Assessment Flowcharts** for baseline additional screening requirements.

[1] *Or within 14 days of symptom development*
[2] *Household and close work contacts of MIQF staff are no longer included as part of the Higher Index of Suspicion (HIS) criteria and should follow this guideline as per the general population.*
[3] *Enhanced droplet & contact precautions require the use of a surgical mask (or N95 mask where indicated), eye protection, a gown, and gloves.*
[4] *Refer to Infection Prevention & Control's "Aerosol Generating Procedures in Acute Respiratory Illness" tables for further guidance. This can be accessed via the COVID-19 page on PRISM under "PPE Specific Information" section.*
[5] *Notification to Community & Public Health can be done via faxing Notifiable Diseases Fax Form (can be accessed via Hospital Health Pathways under "Notifiable Diseases" section) to (03) 379 6484 or via Cortex.*

COVID-19 – ADULT ADMISSION GUIDELINES

SUPPLEMENTARY TABLE

ENSURE OTHER TRANSMISSION-BASED PRECAUTIONS ARE ADHERED TO SUCH AS **MULTI-DRUG RESISTANT ORGANISMS (MDRO) ADMISSION ASSESSMENT FLOWCHARTS**

SCENARIO / DEMOGRAPHICS	PRESENTATION	NEGATIVE PRESSURE ROOM	SINGLE ROOM	N95 MASK	ENHANCED[7] DROPLET & CONTACT	DROPLET PRECAUTIONS	CONTACT PRECAUTIONS	STANDARD PRECAUTIONS	RAPID COVID-19 TESTING[5]	COVID-19 SCREENING REQUIREMENTS
CONFIRMED COVID-19		✓		✓	✓		✓	✓	*N/A*	*No additional routine screening is required*
CLOSE CONTACT OF CONFIRMED COVID-19 CASE[3]	***COMPATIBLE ILLNESS[1]***	*Preferred if available*	✓	✓	✓		✓	✓	✓ 5	*Question daily for new symptoms.*
	UNRELATED CONDITION[2]		✓	*Required during AGP[6] if unable to rapid test prior*	✓ Surgical mask		✓	✓	*Consider if urgent AGP[6] is required*	
MIQF[4] RETURNEE *i.e. returned overseas traveller in managed isolation*	***COMPATIBLE ILLNESS[1]***	*Preferred if available*	✓	✓	✓		✓	✓	✓ 5	*COVID-19 screening to continue as per MIQF protocol (Days 0/1, 3, and 12 from arrival at MIQF) +* ***question daily for new symptoms****.*
	UNRELATED CONDITION[2]		✓	*Required during AGP[6] if unable to rapid test prior*	✓ Surgical mask		✓	✓	*Consider if urgent AGP[6] is required*	
MIQF[4] STAFF[8]	***COMPATIBLE ILLNESS[1]*** *Whilst awaiting results*	*Preferred if available*	✓	✓	✓		✓	✓	✓ 5	*COVID-19 screening to continue as per MIQF protocol (usually weekly or fortnightly) +* ***question daily for new symptoms.***
	UNRELATED CONDITION[2] *If ≥48hrs from last COVID-19 test or whilst awaiting results*		✓	*Required during AGP[6] if unable to rapid test prior*	*Required during AGP[6] if unable to rapid test prior*	✓	*Required during AGP[6] if unable to rapid test prior*	✓	✓ 5	
	UNRELATED CONDITION[2] *AND negative COVID-19 test in the last 48hrs*	***If symptoms develop subsequently, alert IP&C team and re-test & manage as per compatible illness***						✓	*Not required*	
BORDER STAFF (AVIATION/MARITIME) & INTERNATIONAL AIR CREW + THEIR HOUSEHOLD MEMBERS AND CLOSE WORK CONTACTS	***COMPATIBLE ILLNESS[1]*** *Whilst awaiting results*	*Preferred if available*	✓	✓	✓		✓	✓	✓ 5	*Question daily for new symptoms.*
	UNRELATED CONDITION[2] *OR FOLLOWING NEGATIVE COVID-19 TEST*	***If symptoms develop subsequently, alert IP&C team and re-test & manage as per compatible illness***	✓		✓ Surgical mask		✓	✓	*Consider if urgent AGP[6] is required and ≥48hrs since last COVID-19 test*	
RETURN FROM NZ LEVEL 3 OR 4 REGION IN LAST 14 DAYS *Not including close contacts of confirmed COVID-19 cases*	***COMPATIBLE ILLNESS[1]***		✓	✓	✓			✓	*Consider if urgent AGP[6] is required*	*Question daily for new symptoms.*
	UNRELATED CONDITION[2]		✓		✓ Surgical mask		✓	✓	*Consider if urgent AGP[6] is required*	

[1] *Compatible illness refers to an acute respiratory illness that may include symptoms of new cough, acute worsening of chronic cough, fever (≥38°C), shortness of breath, sore throat, coryza, and anosmia.*
[2] *Patients who do not fulfil COVID-19 compatible illness criteria. This may also include patients with acute respiratory illness where there is a clear alternative diagnosis e.g. malignant pleural effusion, pneumothorax.*
[3] *Last contact within 14 days of symptom onset.*
[4] *Managed Isolation and Quarantine Facility.*
[5] *Rapid COVID-19 PCR is only available in discussion with on call Clinical Microbiologist or Microbiology Registrar.*
[6] *Aerosol generating procedures (AGP) include bronchoscopy, induced sputum, non-invasive ventilation (NIV; CPAP or BiPAP), intubation, extubation, manual ventilation, cardiopulmonary resuscitation (CPR), chest physiotherapy in the absence of closed-circuit ventilation, dental procedures, open airway suctioning, tracheostomy, high frequency oscillatory ventilation, and surgery and post-mortem procedures in which high-speed devices are used.*
[7] *Enhanced droplet & contact precautions require the use of a surgical mask (or N95 mask where indicated), eye protection, a gown, and gloves.*
[8] *Household and close work contacts of MIQF staff are no longer included as part of the Higher Index of Suspicion (HIS) criteria and should follow this guideline as per the general population.*

COVID-19 – INPATIENT GUIDANCE FOLLOWING TEST RESULTS

COVID-19 TEST RESULT

POSITIVE
(SARS-CoV-2 DETECTED)

Clinical Microbiology will inform clinical team as well as Infectious Diseases, Community & Public Health (C&PH), and Infection, Prevention & Control (IP&C).

Patient must remain in Enhanced Droplet and Contact Precautions[a] at all times.

If aerosol generating or high risk procedures[b] are required, patient should be managed in a single room (door shut) with N95 mask in addition to above.

Patient will also be assigned a C&PH case manager once they are able to discharge from hospital who will monitor them in the community.

NEGATIVE
(SARS-CoV-2 NOT DETECTED)

CLINICAL TEAM TO DECIDE ONGOING PROBABILITY OF COVID-19

For complex cases or where assistance is required in the decision making process, please contact Infectious Diseases or Clinical Microbiology for advice.

HIGH PROBABILITY OF COVID-19

Patients WITH epidemiological risk factors[c] and/or no alternative explanation for symptoms should be considered in this category.

CONTINUE TO MANAGE IN ENHANCED DROPLET & CONTACT PRECAUTIONS[a]

If aerosol generating or high risk procedures[b] are required, patient should be managed in a single room (door shut) with N95 mask in addition to above.

Consider repeat testing for COVID-19 depending on patient progress. For patients who have radiographic changes of pneumonia, sputum sample may be of better yield.

LOW PROBABILITY OF COVID-19

Patients WITHOUT epidemiological risk factors[c] and/or those who have alternative explanation for symptoms should be considered in this category.

MAY STAND DOWN FROM COVID-19 RELATED INFECTION, PREVENTION & CONTROL PRECAUTION MEASURES

Other transmission-based precautions may still apply.

Ensure baseline IP&C screening has been completed. Refer to Multi-Drug Resistant Organisms (MDRO) Admission Assessment Flowcharts.

[a] *Enhanced Droplet & Contact Precautions require the use of a surgical mask, eye protection, a gown, and gloves.*
[b] *Refer to Infection Prevention & Control Service's "COVID-19 Guidelines for Patient Management" for more details. This can be accessed via the COVID-19 page on PRISM.*
[c] *Epidemiological risk factors for COVID-19 include returned overseas travellers arriving in New Zealand within 14 days of symptom onset, air crew undertaking international flights (and their household and work contacts), border control staff in contact with returning overseas travellers (and their household and work contacts), staff of isolation facilities, port staff with contact with overseas vessels, and contacts of confirmed COVID-19 cases.*

COVID-19 – Paediatric Inpatient Management Flowchart (Elimination)

Canterbury District Health Board
Te Poari Hauora ō Waitaha

Updated 8 March 2021

IS THE PATIENT?

a close contact of a confirmed or probable case of COVID-19 within the previous 14 days or within 14 days of symptom onset
OR a returned overseas traveller or close contact of a returned overseas traveller within 14 days of travel/contact/leaving MIQF[a]
OR a close contact of international flight crew, airport staff, border control staff, MIQF[a] staff, port workers
OR have they been in or had close contact with someone who has been in a Level 3 contact tracing location of interest or Level 4 COVID-19 region in the previous 14 days?

YES

DOES THE PATIENT HAVE ANY OF:

a new cough | acute worsening of chronic cough | fever ≥ 38°C with no clear focus
sore throat | shortness of breath | coryza | anosmia

YES

HIGH RISK OF COVID-19 (OR CONFIRMED COVID-19 INFECTION)

- Rapid test for COVID-19 (unless already confirmed positive).
- Manage in negative pressure room.
- ENHANCED DROPLET + CONTACT precautions with N95 MASK.[b]
- Notify Community and Public Health immediately.[c]
- If initial screening negative, continue screening MIQF[a] returnees during admision as per MIQF protocols (D0/1, D3, D12)

NO

RISK FACTORS FOR COVID-19

- Test for COVID-19.
- Manage in single room.
- ENHANCED DROPLET + CONTACT precautions with SURGICAL MASK.[b]
- Add N95 mask if needing increased risk therapy[d]
- Monitor for development of COVID-19 symptoms (see above). Repeat test for COVID-19 if patient develops respiratory symptoms.
- Continue screening MIQF[a] returnees during admission as per MIQF protocols (D0/1, D3, D12).

NO

NO RISK FACTORS FOR COVID-19

- Standard admission pathways apply.
- Infection control precautions as per normal policies.
- Consider wearing a surgical mask when social distancing is not possible.
- Review diagnosis and managment as clincal picture changes.
- If patient develops severe respiratory illness requiring Children's High Care admission +/- increased risk therapy[d] notify Paediatrician on call and discuss role of COVID-19 testing.[a]

If an urgent COVID-19 test result is required, discuss with IP&C team (or Clinical Microbiologist after hours).

[a] *Managed Isolation Quarantine Facility*
[b] *As patient/caregiver at risk of developing COVID-19 (and becoming infectious) whilst in hospital, maintain ENHANCED DROPLET + CONTACT precautions for duration of admission, even if initial test negative for COVID-19. Monitor for development of COVID-19 symptoms. Patients and caregivers with COVID-19 risk factors must remain in their room at all times. If they must leave their room, they must wear a surgical mask at all times.*
[c] *Notification to Community & Public Health via Notifiable Diseases Fax Form (accessed via Hospital Health Pathways "Notifiable Diseases") to (03) 379 6484 or via Cortex.*
[d] *Increased risk therapies include: Nebulizers, High-Flow Nasal Cannulae (HFNC), CPAP, NeoPuff™, Bronchoscopy, Induced sputum, Chest physiotherapy, Dental procedures, Open airway suctioning, Tracheostomy, High frequency oscillatory ventilation, Bag-mask ventilation, Chest compressions, Intubation/extubation, Surgery or post-mortem procedures utilising high-speed devices.*

COVID-19 – GUIDELINES FOR OUTPATIENT & DAY CASE PATIENTS

THIS GUIDELINE APPLIES TO THE FOLLOWING INDIVIDUALS

STAFF OF MANAGED ISOLATION QUARANTINE FACILITIES (MIQF)
AIR CREW UNDERTAKING INTERNATIONAL FLIGHTS OR THEIR HOUSEHOLD & WORK CONTACTS
BORDER CONTROL STAFF IN CONTACT WITH RETURNING OVERSEAS TRAVELLERS OR THEIR HOUSEHOLD & WORK CONTACTS
PORT STAFF WITH CONTACT WITH OVERSEAS VESSELS

DO THEY HAVE AN ACUTE RESPIRATORY ILLNESS* OR CONFIRMED (AND CURRENTLY ACTIVE) COVID-19?

*THIS MAY INCLUDE SYMPTOMS OF NEW COUGH (OR ACUTE EXACERBATION OF CHRONIC COUGH), SHORTNESS OF BREATH, SORE THROAT, CORYZA, ANOSMIA, WITH OR WITHOUT FEVER (≥38°C)

YES

DEFER PROCEDURE/APPOINTMENT

Consider virtual consultation if appropriate.

IF NON-DEFERRABLE PROCEDURE/APPOINTMENT:

These individuals should be rapid tested for COVID-19 urgently, if not done so already.

- **Contact IP&C team**
- Place in dedicated room (not waiting area)
- Use Enhanced Droplet & Contact Precautions[a] (with N95 mask)

If aerosol generating or high risk procedures[b] are required, patient should be managed in a single room (door shut) with N95 mask in addition to above AND discuss with Clinical Microbiologist for consideration of rapid COVID-19 testing.

NO

AEROSOL GENERATING OR HIGH RISK PROCEDURE[b] REQUIRED

This include patients undergoing elective surgery under general anaesthesia or day case procedures e.g. induced sputum, bronchoscopy.

STANDARD PRECAUTIONS

IF negative COVID-19 test within 48hrs prior to planned procedure/appointment.

Arrange rapid COVID-19 testing prior to appointment if required. Discuss with Clinical Microbiologist if urgent testing is required.

N95 MASK
+ ENHANCED DROPLET & CONTACT PRECAUTIONS

IF COVID-19 result not available within 48hrs prior to planned procedure/appointment.

AEROSOL GENERATING OR HIGH RISK PROCEDURE[b] NOT REQUIRED

This include patients attending routine outpatient clinics, treatment, and/or investigations e.g. infusion at Medial Day Unit, radiology

STANDARD PRECAUTIONS

IF negative routine COVID-19 screening test within last 14 days

[a] *Enhanced droplet & contact precautions require the use of a surgical mask (or N95 mask where indicated), eye protection, a gown, and gloves.*
[b] *Refer to Infection Prevention & Control's "Aerosol Generating Procedures in Acute Respiratory Illness" tables for further guidance. This can be accessed via the COVID-19 page on PRISM under "PPE Specific Information" section. Aerosol generating procedures (AGP) include bronchoscopy, induced sputum, non-invasive ventilation (NIV; CPAP or BiPAP), intubation, extubation, manual ventilation, cardiopulmonary resuscitation (CPR), chest physiotherapy in the absence of closed-circuit ventilation, dental procedures, open airway suctioning, tracheostomy, high frequency oscillatory ventilation, and surgery and post-mortem procedures in which high-speed devices are used.*

ENHANCED PRECAUTIONS

DROPLET & CONTACT

(in addition to Standard Precautions)

RESTRICTED VISITING (only on approval)

Encourage other forms of communication, e.g. phone call or video call

PLACEMENT

- ✓ Single Room (cohort as advised by IP&C)
- ✓ Door closed

MASK

- ✓ Surgical Mask (or N95 mask where indicated)
- ✓ Put on at entrance to room
- ✓ Remove when exiting the room

EYE PROTECTION

- ✓ Safety glasses
- ✓ Put on at entrance to room
- ✓ Remove when exiting the room

GLOVES / GOWN

- ✓ Put on at entrance to room
- ✓ Remove before exiting room

PERFORM HAND HYGIENE

- ✓ As per 5 Moments of Hand Hygiene

PATIENT TRANSPORT

- ✓ Limit to essential purposes only
- ✓ Patient to wear surgical mask during transport
- ✓ Patient to perform hand hygiene

WASTE

- ✓ Place in the infectious/medical waste bag

PATIENT CARE EQUIPMENT / ENVIRONMENT

- ✓ Dedicated equipment
- ✓ Clean and disinfect on frequently high-touch points & equipment

Canterbury District Health Board Te Poari Hauora ō Waitaha
West Coast District Health Board Te Poari Hauora a Rohe o Tai Poutini

AEROSOL GENERATING & HIGH RISK PROCEDURES

To be used in conjunction with ENHANCED DROPLET & CONTACT

(in addition to Standard Precautions)

PLACEMENT

- ✓ Single Room (with negative pressure if possible)
- ✓ Door closed
- ✓ Room to be stood down for 1 hour post patient discharge
- ✓ Room & equipment to be cleaned with Clinell or other approved disinfectant

MASK

- ✓ N95 mask
- ✓ Put on before entering room/clinical area
- ✓ Remove after exiting the room/clinical area

EYE PROTECTION

- ✓ Face shield or safety glasses
- ✓ Put on at entrance to room
- ✓ Remove when exiting the room

GLOVES / GOWN

- ✓ Put on at entrance to room
- ✓ Remove before exiting room

PERFORM HAND HYGIENE

- ✓ As per 5 Moments of Hand Hygiene

Aerosol generating procedures

- intubation/ extubation
- trachesostomy
- bronchoscopy
- induced sputum
- CPR
- Non-invasive ventilation e.g. BiPAP/ CPAP
- open airway suctioning
- manual ventilation/ bagging
- dental procedures
- surgical and post mortem procedures with high speed devices that involve the respiratory system

High risk

- high flow nasal (>15L/min) 2
- chest physiotherapy

Note: Do not transport patients whilst undergoing aerosol generating / high risk procedures

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AEROSOL GENERATING PROCEDURES (AGP)[1] IN ACUTE RESPIRATORY ILLNESS

SEE SEPARATE TABLE FOR HIGH-FLOW NASAL CANNULAE OXYGEN THERAPY AND NEBULISATION OF MEDICATIONS

SCENARIO	NEGATIVE PRESSURE ROOM	SINGLE ROOM DOOR SHUT	MULTI-BED ROOM	N95 MASK	ENHANCED DROPLET & CONTACT	DROPLET PRECAUTIONS	CONTACT PRECAUTIONS	STANDARD PRECAUTIONS
CONFIRMED COVID-19	✓ Required[2]			✓ Required	✓		✓	✓
CONFIRMED/SUSPECTED INFLUENZA[7] *After COVID-19 excluded by PCR AND assessment by clinical team*		✓ 3		✓ 3 *Under review*		✓ 3	✓ 3	✓
CONFIRMED/SUSPECTED OTHER VIRAL RESPIRATORY ILLNESS *After COVID-19 and influenza excluded by PCR AND assessment by clinical team*		Preferable if available	May cohort with patients with viral illness (not COVID-19/influenza) if required			✓		✓
CONFIRMED/SUSPECTED NON-VIRAL RESPIRATORY ILLNESS ***EXCLUDING PULMONARY TUBERCULOSIS***[4] *E.g. bacterial and fungal infections, non-infectious exacerbations*			May cohort *Exceptions apply*[5]					✓
HIGH PROBABILITY OF COVID-19[6] *Pending COVID-19 test results* or ongoing clinical suspicion of COVID-19* **Discuss with Clinical Microbiologist for urgent COVID-19 PCR*	✓ Required			✓ Required	✓		✓	✓
LOW PROBABILITY OF COVID-19 **REQUIRING AEROSOL GENERATING PROCEDURE RELATED TO ACUTE RESPIRATORY ILLNESS (NOT INCLUDING CPR)** *Pending COVID-19 test results** *E.g. HFNP O_2, NIV, or intubation for respiratory failure, bronchoscopy* **Discuss with Clinical Microbiologist for urgent COVID-19 PCR*		✓ Required		Use if influenza-like illness[7] until influenza excluded by PCR	✓			✓
LOW PROBABILITY OF COVID-19 **DURING CARDIOPULMONARY RESUSCITATION (CPR)**[8] *Pending COVID-19 test results*				Use if influenza-like illness[7] if influenza has not yet been excluded	✓ White apron instead of gown			✓
LOW PROBABILITY OF COVID-19 **REQUIRING AEROSOL GENERATING PROCEDURE FOR NON-RESPIRATORY REASONS (NOT INCLUDING CPR)** *Pending COVID-19 test results* *E.g. intubation for urgent surgery, upper GI endoscopy, ENT procedures*		Procedure likely to be done in dedicated areas e.g. theatre, endoscopy suite				✓		✓

[1] Aerosol generating procedures (AGP) include bronchoscopy, induced sputum, non-invasive ventilation (NIV; CPAP or BiPAP), intubation, extubation, manual ventilation, cardiopulmonary resuscitation (CPR), chest physiotherapy in the absence of closed-circuit ventilation, dental procedures, open airway suctioning, tracheostomy, high frequency oscillatory ventilation, and surgery and post-mortem procedures in which high-speed devices are used.

[2] Single room (door shut) for AGP instead of negative pressure room is acceptable in dedicated unit for confirmed COVID-19 patients (not COVID-19 Assessment Unit) provided N95 mask and enhanced droplet & contact precautions are used by staff during AGP.

[3] Influenza-confirmed patients may be cohorted if required but must be with other patients with same strain of influenza. Duration of isolation for influenza is 7 days from outset of illness or 5 days if under the age of 5 years (if not given anti-viral treatment) and/or until symptoms have resolved. If patient is treated with oseltamivir (Tamiflu), isolation period is until 72 hours from the commencement of treatment. In BMTU, NICU or CHOC, Droplet and Contact Precautions must continue until patient is symptom-free regardless of treatment.

[4] Pulmonary tuberculosis is not covered in this table as it requires strict Infection, Prevention & Control measures until all criteria are met for ending isolation period.

[5] Patients with pneumocytis jirovecii pneumonia (PJP) or pulmonary non-tuberculous mycobacterial (NTM) infections should not be cohorted if non-invasive ventilation (NIV; CPAP or BiPAP) is required.

[6] High probability of COVID-19 group include patients with acute respiratory illness meeting the current Ministry of Health case definition for COVID-19 AND have epidemiological risk factors for COVID-19 (resident or healthcare worker (HCW) from COVID-19 affected aged residential care (ARC) facility, HCW with exposure to COVID-19, contacts of confirmed/probable case of COVID-19, or overseas travel within 14 days of symptom development).

[7] Influenza-like illness is defined as acute upper respiratory tract infection characterised by abrupt onset with the following: fever, chillds, headache, myalgia, non-productive cough, sore throat and rhinitis (CDC, 2019).

[8] Refer to specific CDHB guidelines for cardiopulmonary resuscitation during the COVID-19 pandemic for further information, available on PRISM under COVID-19 Useful Resources page.

HIGH-FLOW NASAL CANNULAE OXYGEN THERAPY[1] AND NEBULISATION OF MEDICATIONS[2] IN ACUTE RESPIRATORY ILLNESS

SCENARIO	NEGATIVE PRESSURE ROOM	SINGLE ROOM DOOR SHUT	MULTI-BED ROOM	N95 MASK	ENHANCED DROPLET & CONTACT	DROPLET PRECAUTIONS	CONTACT PRECAUTIONS	STANDARD PRECAUTIONS
CONFIRMED/PROBABLE COVID-19		✓ 3		✓ Required	✓		✓	✓
CONFIRMED/SUSPECTED INFLUENZA[8] *After COVID-19 excluded by PCR AND assessment by clinical team*		✓ 4				✓ 4	✓ 4	✓
CONFIRMED/SUSPECTED OTHER VIRAL RESPIRATORY ILLNESS *After COVID-19 and influenza excluded by PCR AND assessment by clinical team*			May cohort			✓		✓
CONFIRMED/SUSPECTED NON-VIRAL RESPIRATORY ILLNESS ***EXCLUDING PULMONARY TUBERCULOSIS***[5] *E.g. bacterial and fungal infections, non-infectious exacerbations*			May cohort *Exceptions apply*[6]					✓
HIGH PROBABILITY OF COVID-19[7] *Pending COVID-19 test results* *or ongoing clinical suspicion of COVID-19* **Discuss with Clinical Microbiologist for urgent COVID-19 PCR*		✓		✓ Required	✓		✓	✓
LOW PROBABILITY OF COVID-19 *Pending COVID-19 test results*		✓				✓	Use if influenza-like illness[8] until influenza excluded by PCR	✓

[1] High-flow nasal cannulae oxygen therapy where >15L/min flow rate is used. Pressurised humidified oxygen therapy is also included in this table.
[2] Excludes where nebuliser is used as part of induced sputum procedure. This is considered an aerosol generating procedure. Please refer to Infection, Prevention & Control Guidelines for Aerosol Generating Procedures in Acute Respiratory Illness table instead.
[3] May be cohorted in multi-bed room in dedicated cohorted unit for confirmed COVID-19 patients (not COVID-19 Assessment Unit) provided N95 mask and enhanced droplet & contact precautions are used by all staff in the unit throughout the shift.
[4] Influenza-confirmed patients may be cohorted if required but must be with other patients with same strain of influenza. Duration of isolation for influenza is 7 days from outset of illness or 5 days if under the age of 5 years (if not given anti-viral treatment) and/or until symptoms have resolved. If patient is treated with oseltamivir (Tamiflu), isolation period is until 72 hours from the commencement of treatment. In BMTU, NICU or CHOC, Droplet and Contact Precautions must continue until patient is symptom-free regardless of treatment.
[5] Pulmonary tuberculosis is not covered in this table as it requires strict Infection, Prevention & Control measures until all criteria are met for ending isolation period.
[6] Patients with pneumocytis jirovecii pneumonia (PJP) or pulmonary non-tuberculous mycobacterial (NTM) infections undergoing these therapies should not be cohorted with other patients. If single room is unavailable, patients with PJP may be cohorted in a multi-bed room provided other patients are not immunocompromised. Discuss with clinical team before considering cohorting in a multi-bed room.
[7] High probability of COVID-19 group include patients with acute respiratory illness meeting the current Ministry of Health case definition for COVID-19 AND have epidemiological risk factors for COVID-19 (resident or healthcare worker (HCW) from COVID-19 affected aged residential care (ARC) facility, HCW with exposure to COVID-19, contacts of confirmed/probable case of COVID-19, or overseas travel within 14 days of symptom development).
[8] Influenza-like illness (ILI) is defined as acute upper respiratory tract infection characterised by abrupt onset with the following: fever, chillds, headache, myalgia, non-productive cough, sore throat and rhinitis (CDC, 2019).

FIT TESTING for Respiratory Protection Masks

Information for staff being tested

Tight-fitting masks/respirators must seal to the wearer's face to provide the expected level of protection. This includes disposable respirators. Fit testing is required before a user wears a respirator on the job and should be reassessed annually. In addition, fit tests should be performed:

- Whenever a different size, style, model or make of respirator is used
- When any facial changes occur that could affect fit, such as significant weight fluctuation or dental work.

Mask/respirator fit is important because it involves several major issues:

- Seal
- Comfort
- Compatibility
- Stability

Qualitative fit testing involves a taste test using strongly flavoured solutions and a hood (with a window) designed to provide a breathing zone where the test solutions can be concentrated. The preferred solution is Bitrex® which has a strong bitter flavour. The alternative solution is sweet and is flavoured with saccharine. The solutions are aerosolised with a nebuliser and administered through an aperture in the hood window. Both solutions are safe for people to be exposed to and have been widely used for many decades.

Being Prepared for the Fit Testing

As the test is a taste test, staff being fit tested must not eat, drink, smoke or chew gum within 30 minutes prior to being tested. Plain water is permissible. Staff must also be clean shaven. For most people, less than 12 hours of growth is preferable as facial hair will result in a leak and a failed test. Long hair must also not cross the mask/face seal for the same reasons.

Stages of the Fit Test

The staff member will be advised of the process and complete the fit testing form with personal details (employee number is on the top left of the ID card). Then they will be checked for health status, vulnerability category and any conditions that could affect the wearing of a mask or ability to complete the fit test.

Sensitivity test – to determine the subject's sensitivity to the test solution

1. The worker being tested will have a hood placed over their head while not wearing any respiratory protection. The worker will be instructed to breathe through their mouth with their tongue slightly extended
2. The tester will administer a mist of the sensitivity check solution using the nebuliser through the hood aperture and will continue to pump until the worker being tested advises they can taste the product.
3. The count of pumps is used to determine the number of pumps to be used during the mask fit testing

4. If the sensitivity check solution cannot be tasted after 30 pumps the alternative taste solution will be used
5. If the subject can't taste either solution, they will be tested using the quantitative method by a contractor
6. Once the sensitivity test is completed the staff member will be given access to water to rinse/spit/drink to cleanse their palate, so the solution can't be tasted.

Mask fit self-check – an essential everyday test

Workers wearing tight-fitting respiratory protection must perform a mask fit self check each time they put on a respirator. A fit test ensures that a worker can achieve a tight seal with a specific brand, model and size of mask but, a user seal check ensures that it's being worn right each time.

Users perform a positive-pressure and negative-pressure seal check:

- A positive-pressure check involves blocking the exhalation route of the mask. For a disposable mask this means covering the mask surface with your hands and exhaling. On a re-useable mask this means blocking the exhalation port and breathing out. If slight pressure builds up, without air leaking, a good seal has been achieved.
- A negative-pressure check involves blocking the inhalation route of the mask. For a disposable mask this means covering the mask surface with your hands and inhaling. If the mask collapses slightly and compresses onto the face the mask is not leaking and fitting well. On a re-useable mask this means blocking the inhalation ports and breathing in. If the mask collapses and no air enters the mask, it is not leaking and fitting well.

The worker will be given a mask and asked to don it to check they are able to wear the mask correctly and then complete a mask fit self-check, including a positive and negative pressure check. Advice will be given by the tester where technique changes are required.

Qualitative Fit Test (QLFT) – to challenge the seal between mask and face

A qualitative fit test is pass/fail and relies on the test subject sensing the taste of the challenge agents

1. The worker will be asked to don the mask with no instruction from the tester. The worker will also be asked to wear other PPE that may interfere with the mask fitting such as glasses or goggles.
2. The tester will place a hood over the workers head. The worker will be instructed to breathe through their mouth with their tongue slightly extended
3. A pre-determined dose of fit test solution mist will be administered using the nebuliser via the hood aperture
4. The solution mist will be topped up every thirty (30) seconds for 7 minutes
5. The tester will instruct the worker to perform seven separate exercises for 1 minute each. These exercises are designed to replicate the movements people make when they are working and wearing a mask and assist with challenging the seal provided by the mask on each wearer. The exercises include: normal breathing; deep breathing; moving head side to side; moving head up and down, talking, bending over (or jogging in place); normal breathing again
6. If the wearer can taste the challenge agent at any time during the test, the test is failed. The next step may be to improve how the mask is being worn or to try a different mask. If none of the available masks are proven to fit the worker, other means of protection for respirable hazards will need to be explored. This information will be given to workers manager.
7. After finishing the exercises, the test is complete.

At the end of the 7 exercises the worker being tested will, while wearing the hood, be asked to remove their mask to validate to the tester and themselves that they can note the difference of the filtered air of the respirator compared to the product filled hood.

After the Fit Test

The test result will be recorded, and the worker informed of the result. The mask that is successfully fitted is the only mask that the worker may wear. Other masks must not be worn as they have not been fit tested. Staff will be advised when annual retesting is due. Earlier retesting is required if face shape changes that could affect how a mask fits, such as:

- Significant weight fluctuations
- Dental work
- Facial scarring
- Mask supply changes

HOW TO WEAR A MEDICAL MASK SAFELY

Do's

Wash your hands before touching the mask

Inspect the mask for tears or holes

Find the top side, where the metal piece or stiff edge is

Ensure the colored-side faces outwards

Place the metal piece or stiff edge over your nose

Cover your mouth, nose, and chin

Adjust the mask to your face without leaving gaps on the sides

Avoid touching the mask

Remove the mask from behind the ears or head

Keep the mask away from you and surfaces while removing it

Discard the mask immediately after use preferably into a closed bin

Wash your hands after discarding the mask

Remember that masks alone cannot protect you from COVID-19. Maintain 2 metre distance from others and wash your hands frequently and thoroughly, even while wearing a mask.

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CDHB IPC Service: Updated advice on "source control" mask use in healthcare settings 15/02/2021

Below is a table updating guidance on mask use for "source control" while CDHB remains at Level 2 with no community transmission. Source control means using the mask to protect others from being infected by the wearer rather than to protect the wearer themselves.

PPE USE FOR PATIENT CARE IS DETERMINED BY RISK ASSESSMENT AND USING COVID-19 – ADULT ADMISSION GUIDELINES AND COVID-19 PAEDIATRIC INPATIENT MANAGEMENT FLOWCHART (ELIMINATION) AND COVID-19 GUIDELINES FOR OUTPATIENT & DAY CASE PATIENTS

This guidance is informed by current local epidemiology as well as practice in other DHBs operating under Level 2. The guidance seeks to strike the right balance between the goal of minimising transmission risk from pre-symptomatic staff while minimising unnecessary imposition on staff and wasteful consumption.

This guidance may need to be updated with updated MOH guidance or if more information comes to hand.

TABLE 1 - MASK USE FOR SOURCE CONTROL: ADVICE FOR CDHB STAFF (UNDER ALERT LEVEL 2 – NO EVIDENCE OF LOCAL COMMUNITY TRANSMISSION)

ALERT LEVEL		STAFF TO STAFF	STAFF TO PATIENTS	VISITORS
2	**Physical distancing**	Staff to staff interactions (clinical areas) • Maintain 1m distance where possible • For prolonged close contact e.g. >15mins at less than 1m consider mask Staff to staff interactions (non-clinical areas) • Maintain 1m distance where possible • For prolonged close contact e.g. >15mins at less than 1m consider mask	Staff to patient interactions (clinical areas) • Maintain 2m distance where possible/appropriate • For prolonged close contact e.g. >15mins at less than 1m consider disposable surgical mask • Assess for COVID-19 risk factors/symptoms (PRISM link) and apply transmission-based precautions as appropriate	• Maintain 2m distance if not possible face covering required
	Mask type	Clinical areas • disposable surgical mask as required Non-clinical areas • Fabric face covering/fabric mask acceptable	• disposable surgical mask as required	• Fabric face covering/face mask acceptable
**** Maintain 5 Moments of Hand Hygiene and frequent decontamination of patient equipment and environment as per CDHB policies**				

TABLE 2- MASK USE FOR SOURCE CONTROL: ADVICE FOR CDHB STAFF (UNDER ALERT LEVEL 3 - EVIDENCE OF LOCAL COMMUNITY TRANSMISSION)

ALERT LEVEL		STAFF TO STAFF	STAFF TO PATIENTS	VISITORS
3	**Physical distancing**	Staff to staff interactions (clinical areas) • Maintain 1m distance if not possible disposable surgical mask required Staff to staff interactions (non-clinical areas) • Maintain 1m distance if not possible face covering required	Staff to patient interactions (clinical areas) • Maintain 1m distance if not possible use disposable surgical mask required	• Maintain 2m distance if not possible face covering required
	Mask type	Clinical areas • disposable surgical mask required Non-clinical areas • Fabric face covering/fabric mask acceptable	• N95 for aerosol generating and high-risk procedures	• disposable surgical mask required
**** Maintain 5 Moments of Hand Hygiene and frequent decontamination of patient equipment and environment as per CDHB policies**				