CORONAVIRUS-COVID-19

Manitoba
Public Health Branch

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Abbreviations

AGMPs	Aerosol-generating medical procedures
CPL	Cadham Provincial Laboratory
EIA	Enzyme immunoassay
ETT	Endotracheal tube
FSVSG	Federal SARS-CoV-2 Variant Surveillance Group
HCW	Health Care Workers
HVAC	Heating, ventilation, and air conditioning
ILI	Influenza-like illness
IgG	Immunoglobulin G
IgM	Immunoglobulin M
IMPACT	Canada's Immunization Monitoring Program ACTive
IP&C	Infection Prevention and Control
LOD	Limit of detection
LTC	Long-Term Care
MERS-CoV	Middle East Respiratory Syndrome coronavirus
MHSU	Manitoba Health Surveillance Unit
MIS-A	Multisystem inflammatory syndrome in adults
MIS-C	Multisystem inflammatory syndrome in children
NAAT	Nucleic acid amplification test
NP	Nasopharyngeal
POC	Point of Care
PPE	Personal protective equipment
PRN	Plaque reduction neutralization
RAT	Rapid Antigen Test
RSV	Respiratory syncytial virus
RTI	Respiratory tract infection
RT-PCR	Reverse transcription polymerase chain reaction
SARS-CoV	Severe Acute Respiratory Syndrome coronavirus
SARS-CoV-2	Severe Acute Respiratory Syndrome coronavirus 2

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VOC	Variant of Concern
VOI	Variant of Interest
VUM	Variant Under Monitoring
WHO	World Health Organization

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1. Summary of Updates

May 2025

Amendments included updates to the following sections:

- 3.1- Variants- updated information
- 5- Reporting and Other Requirements- updated to reflect current guidance
- 8.4- Self-administered Rapid Antigen Tests (RATs)- updated this section and throughout the protocol to reflect discontinued use of RATs
- 8.5- Surveillance of Variants- updated information
- 9.3- Reinfection- removed reference to RATs to determine re-infection and communicability
- 9.4- Management of contacts- updated guidance for self-isolation
- 10.1- Management of Simultaneous COVID-19 and Influenza Outbreaks- updated to reflect current testing and treatment recommendations
- 11- Documentation Guidelines and Resources- update to public health documentation of outbreaks in PHIMS (updated SOP)

November 2023

Amendments included updates to the following sections:

- 3.1 – Variants – updated information.
- 5.5 – COVID-19 Outbreaks – update to include guidance for public health reporting of outbreaks in acute and long-term care.
- 8.6 – Surveillance of Variants – update to examples of when PCR testing is recommended.
- 9.1 – Management of Cases – update to reflect current public health guidance and current COVID-19 landscape.
- 9.5 – Preventative Measures – update to reflect current public health guidance.
- 10.1 – Outbreak management – additional guidance to manage simultaneous COVID-19 and Influenza outbreaks
- 11 – Documentation Guidelines and Resources – update to public health documentation of outbreaks in PHIMS.

April 2023

Transition from the Interim Guidance - Public Health Measures - Managing Novel Coronavirus (COVID-19) Cases and Contacts in Community to the format of a communicable disease protocol. All sections reviewed and updated to reflect ongoing management of COVID-19 infections. Some sections removed to reflect changes in practice.

Amendments that may result in a change in practice:

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- Positive Point of Care (POC) test results are no longer required to be reported to Manitoba Health by health care providers.
- Multi-inflammatory Syndrome in Children (MIS-C) surveillance continues to be monitored by Canada's Immunization Monitoring Program ACTive (IMPACT). Reporting of MIS-C cases by health care providers is no longer required.

2. Background

COVID-19 is an illness caused by a coronavirus (SARS-CoV-2) first identified in December 2019 in Wuhan, China. In March 2020, the World Health Organization (WHO) declared COVID-19 a global pandemic. On May 5, 2023, the WHO announced that COVID-19 was no longer a public health emergency of concern.

Public health measures implemented during the acute phase of the pandemic slowed the transmission of COVID-19, reduced associated severe outcomes, and helped to maintain capacity in the health care system, and had other significant impacts on society. Some of these impacts have been positive, but many have caused disruption and negative societal impacts. Removal of public health restrictions was possible due to the decreasing incidence of associated severe outcomes, high vaccination coverage, infection-acquired immunity, availability of treatments for individuals at high risk of severe outcomes, and the reduced virulence of circulating strains.

Manitoba removed public health orders related to COVID-19 on March 15, 2022, and transitioned from an acute response to a longer-term response to ongoing COVID-19 cases in the community.

3. Etiology

First identified in the 1960s, there are now seven known coronaviruses that can infect humans. Common types that generally cause mild illness are 229E, OC43, NL63 and HKU1. The types that can cause severe illness are: Middle East Respiratory Syndrome coronavirus (MERS-CoV), Severe Acute Respiratory Syndrome coronavirus (SARS-CoV) and more recently Severe Acute Respiratory Syndrome coronavirus 2 (SARS- CoV-2) which causes COVID-19 (1).

3.1 Variants

Viruses like SARS-CoV-2 constantly change through mutation, and new variants are expected to occur. Variants include different lineages and sublineages that share similar genetic mutations. There is also a possibility that variants can merge to form a hybrid or recombinant version. Genetic lineages of SARS-CoV-2 have been emerging and circulating around the world since the beginning of the COVID-19 pandemic.

A SARS-CoV-2 variant is a variant of interest (VOI) if it:

- has a genome with mutations associated with changes in epidemiology, antigenicity, or virulence, or changes that potentially have a negative impact on available diagnostics, vaccines, therapeutics, or public health measures; and

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- is known to have a growth advantage over the currently circulating lineages but the population impact is unknown or expected to be similar to the currently circulating lineages in Canada or internationally; or
- is otherwise assessed to be a VOI by the WHO; or
- is otherwise assessed to be a VOI by the Federal SARS-CoV-2 Variant Surveillance Group (FSVSG) (2).

A SARS-CoV-2 variant is a variant of concern (VOC) if, through a comparative assessment, it has been demonstrated to be associated with one or more of the following:

- increased virulence or detrimental change in clinical disease presentation;
- decreased effectiveness of available diagnostics, vaccines, therapeutics, or public health measures;
- substantial impact on the ability of the healthcare system to provide care; or is otherwise assessed to be a VOC by WHO; or
- is otherwise assessed to be a VOC by the FSVSG

A SARS-CoV-2 variant under monitoring (VUM) is classified as a VUM if it has genetic changes with potential to affect virus characteristics or has early signals of growth advantage relative to other circulating variants, but for which current evidence is limited or unclear requiring enhanced monitoring and reassessment pending new evidence. Lineages can be escalated from VUM to VOI to VOC but can also be de-escalated as new lineages emerge and replace currently circulating lineages.

Surveillance for new variants and their impact continues globally as part of the ongoing COVID-19 response. For more information including current VOCs in Canada refer to SARS-CoV-2 variants: National definitions, designations and public health actions - Canada.ca.

4. Case Definitions

4.1 Lab Confirmed Case

A person with confirmation of infection with SARS-CoV-2 documented by:

- The detection of at least one specific gene target by a validated laboratory-based nucleic acid amplification test (NAAT) assay (e.g., real-time PCR or nucleic acid sequencing) performed at a community, hospital, or reference laboratory (the National Microbiology Laboratory or a provincial public health laboratory).

OR

- The detection of at least one specific gene target by a validated point-of-care (POC) NAAT, that has been deemed acceptable to provide a final result (i.e. does not require confirmatory testing).

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- Seroconversion or diagnostic rise (at least four-fold or greater from baseline) in viral specific antibody titre in serum or plasma using a validated laboratory-based serological assay for SARS-CoV-2 (note: serological assays are not routinely done for diagnostic purposes)[1] (3).

4.2 Probable Case

A person who:

- Has clinical symptoms[2] compatible with COVID-19,

AND

- Had a high-risk exposure with a confirmed COVID-19 case (i.e., close contact) OR was exposed to a known cluster or outbreak of COVID-19,

AND

- Has not had a laboratory-based NAAT assay for SARS-CoV-2 completed or the result is inconclusive.

OR

- Had SARS-CoV-2 antibodies detected in a single serum, plasma, or whole blood sample using a validated laboratory-based serological assay for SARS-CoV-2 collected within 4 weeks of symptom onset (note serological assays are not routinely done for diagnostic purposes).

OR

- Had a POC NAAT or POC antigen test[3] for SARS-CoV-2 completed and the result is preliminary (presumptive) positive.

OR

- Had a validated POC antigen test[3] for SARS-CoV-2 completed and the result is positive (3).

For more information, visit: National case definition: Coronavirus disease (COVID-19) - Canada.ca.

5. Reporting and Other Requirements

5.1 Laboratory

All positive laboratory results for SARS-CoV-2 are reportable to the Manitoba Health Surveillance Unit (MHSU) by secure fax (204-948-3044) or electronic transfer.

Self-administered Rapid Antigen Tests (RATs) are not reported to Manitoba Health. If confirmatory testing is completed and is positive, the result will be reported as above.

[1] A diagnostic rise in antibody titre can be established using paired acute and convalescent sera taken 2-4 weeks apart and tested using by an end-point enzyme immunoassay (ETT), quantitative EIA, or neutralizing antibody titres (e.g., plaque reduction neutralization (PRN)).

[2] Clinical symptoms: One or more of the following: fever/chills, new or worsening cough, shortness of breath, sore throat, loss or altered sense of taste/smell, runny nose/nasal congestion, fatigue (significant and unusual), muscle ache/joint pain, headache, nausea/diarrhea

[3] COVID-19 testing devices: Authorized medical devices - Canada.ca

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5.2 Health Care Provider

Health care providers are expected to report COVID-19 associated deaths that occur OUTSIDE of hospitals, such as in community or long-term care facilities by completing the Clinical Notification of Reportable Diseases and Conditions form and faxing to MHSU who will document the death in PHIMS. If regional public health is notified of a death (e.g. through the medical examiner) the death should be documented directly within PHIMS.

5.3 COVID-19 Associated Severe Outcomes

COVID-19 associated hospital admissions, ICU admissions and fatalities are captured and provided on the Provincial Respiratory Virus Surveillance Report. This dashboard is updated weekly and includes severe outcomes in addition to case counts and trends, test volumes/test positivity, outbreaks, syndromic data, and vaccine monitoring. Severe outcomes are defined in the technical notes.

5.4 COVID-19 Outbreaks

In general, only institutional outbreaks require management. COVID-19 outbreaks in the community are not monitored, except under exceptional circumstances. Institutional outbreaks are reportable to Public Health and will be documented in the PHIMS Outbreak module by regional CD Coordinators. PHIMS is used as the source of data for provincial outbreak reporting.

Regional Infection Prevention and Control (IP&C) are required to report all acute care and long-term care outbreaks to regional public health including outbreaks managed completely by IP&C and outbreaks that may require Public Health support. Information regarding the outbreak(s) will be reported to the regional communicable disease coordinator(s) and/or MOH at the onset of an outbreak and when the outbreak has been declared over. Regional processes should be established regarding frequency of outbreak reporting/updates and additional notification requirements.

Refer to the Standard Operating Procedure: Regional Management of Outbreaks and Clusters in PHIMS.

Setting specific outbreak definitions and guidelines have been created and should be followed in outbreaks occurring in these settings. Please refer to:

- The COVID-19 Infection Prevention and Control Guidance for Personal Care Homes (covid-19-ipc-guidance-for-pch.pdf (sharedhealthmb.ca)).
- COVID-19 Infection Prevention and Control Guidance for Acute and Community Health-care settings (IPC-acute-care-manual-provincial.pdf (sharedhealthmb.ca)).

6. Epidemiology

6.1 Reservoir

No natural reservoir for SARS-CoV-2 has been identified. The original source of viral transmission to humans remains unclear.

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6.2 Transmission

SARS-CoV-2 is transmitted from person to person through respiratory droplets and aerosols. The droplets vary in size, from large droplets that fall to the ground rapidly (within seconds or minutes) near the infected person (i.e., less than 2 metres), to smaller particles (aerosols), which suspend in the air for longer periods of time, especially in indoor spaces. The droplets or aerosols may come into direct contact with the mucous membranes of another person, or they may be inhaled into their respiratory system (4).

The virus is most frequently transmitted when people are in close contact with others who are infected with the virus (symptomatic or asymptomatic). Activities that increase generation of respiratory droplets and aerosols may increase risk of transmission such as singing, shouting, or exercising.

The virus can remain suspended in the air for minutes to hours. The length of time the virus remains suspended and is infectious depends on numerous factors, including viral load in respiratory particles, disturbance of air and surfaces, ventilation, temperature, and humidity (5). Reports of outbreaks in settings with poor ventilation suggest that infectious aerosols were suspended in the air and that people inhaled the virus at distances beyond 2 metres. Such settings have included choir practice, fitness classes, and restaurants, as well as other settings. Transmission can be facilitated by certain environmental conditions, such as re-circulated air (4).

It is possible for people to be infected through contact with contaminated surfaces or fomites, but the risk is generally considered to be low.

Naturally acquired SARS-CoV-2 has been detected in a range of domestic and wild animal species. Transmission of the disease between humans and animals has mostly happened after close contact with people infected with the virus. Based on available information to date, animal-to-human transmission is likely very uncommon, and the risk to most people in Canada appears to be very low. However, there have been many reports of infected humans spreading SARS-CoV-2 to their dog or cat after a period of close contact. Precautions to avoid transmission to pets and other animals should be followed (6, 7). Refer to the provincial COVID-19 website for further information: Province of Manitoba | COVID-19.

6.3 Occurrence

For cases reported in Manitoba refer to the following link: Provincial Respiratory Surveillance Report | Health | Province of Manitoba (gov.mb.ca).

For cases reported in Canada refer to the following link: COVID-19: Current situation - Canada.ca.

World Health Organization provides daily updates on global case counts and situation reports: Coronavirus Disease (COVID-19) Situation Reports.

6.4 Incubation Period

The incubation period ranges from 1 to 14 days. The median is 5 to 6 days between exposure and symptom onset. Most people (97.5%) develop symptoms within 11.5 days of exposure (16).

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6.5 Period of Communicability

The period of communicability begins 2 to 3 days prior to the development of overt symptoms in the case (14).

Infected individuals are more likely to be communicable in the earlier stages of illness when viral RNA levels from upper respiratory specimens are the highest. Contact tracing and household studies show that the transmission probability of SARS-CoV-2 usually peaks around symptom onset with large individual variations and decreases gradually from day three (8).

The exact duration of when COVID-19 cases are infectious is unknown and is likely to vary between variants as well as between individuals. It is dependent on many factors including the individual's immune status and disease severity (9).

Transmissibility declines rapidly 2-3 days after symptom onset and is estimated to be less than 3% after seven days from symptom onset. Communicability after 10 days of illness is unlikely for immunocompetent patients with non-severe infection in which the case is afebrile and improved clinically. Absence of cough should also not be required for those known to have chronic cough or for those who are experiencing reactive airways post infection (7, 8).

Patients with severe COVID-19 disease or who are immunosuppressed can have prolonged shedding of infectious virus and thereby may have a longer period of communicability.

Asymptomatic cases can also have viral loads that are just as high as those of symptomatic cases, however, asymptomatic cases are estimated to be less infectious due to the absence of symptoms that promote transmission (9).

7. Clinical Presentation and Natural History

The clinical presentation of SARS-Cov-2 ranges from asymptomatic to severe and symptoms may change over the course of illness. The clinical features can also vary by age, vaccination status and variants. Severe disease occurs more often in older age and in those with underlying medical conditions, and the risk increases with the number of underlying medical conditions (9).

Symptomatic cases may experience one or more of the following common symptoms: fever or chills, cough, shortness of breath, sore throat, congestion or runny nose, fatigue, myalgia, headache, loss of taste or smell, nausea, vomiting, or diarrhea (10, 11). Less common clinical manifestations include but are not limited to are dermatological changes (i.e., rash) and ocular symptoms (i.e., conjunctivitis) (10, 11).

Multisystem inflammatory syndrome is a rare but severe post-infection complication of SARS-CoV-2 that can occur in children (MIS-C) and adults (MIS-A). It is a hyperinflammatory condition that can lead to multi-organ failure. Symptoms in children typically occur around 2-6 weeks; and adults around 2-12 weeks after the initial infection (9). Ongoing surveillance of MIS-C has been included in IMPACT, Canada's Immunization Monitoring Program ACTive, a pediatric hospital-based national active

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surveillance network for adverse events following immunization, vaccine failures and selected infectious diseases that are, or will be, vaccine preventable (13). Refer to the following link for more information on Multisystem inflammatory syndrome in children in Canada. MIS-C/A has become less prevalent since the start of the pandemic.

Post COVID-19 condition (i.e., long COVID) refers to a variety of physical and/or psychological symptoms that persist more than 12 weeks after the initial infection. Symptoms can vary in intensity and resolve or re-emerge. It can affect both children and adults. For more information: COVID-19 for health professionals: Post-COVID-19 condition (long COVID) - Canada.ca.

8. Diagnosis of COVID-19

Laboratory testing strategies have evolved over time, and will continue to evolve, including:

- Multiplex assays to test simultaneously for SARS-CoV-2 and other respiratory infections such as respiratory syncytial virus (RSV), and influenza.
- Genome sequencing for SARS-CoV-2 and its variants.
- Self-tests and emerging novel testing technologies.

Testing for COVID-19 is currently only recommended for patients with compatible symptoms and who are at high risk for serious outcomes as they need to know if they have COVID-19 to receive early treatment options such as antivirals. In general, PCR testing is recommended where test results have an impact on client care: e.g., individuals who are eligible for treatment or hospitalized patients. Asymptomatic testing is not routinely recommended.

For further information on testing eligibility, visit: Province of Manitoba | COVID-19 Testing and Treatment Guidance.

8.1 Laboratory Based Tests

At present, a validated reverse transcription polymerase chain reaction (RT-PCR) test on a clinically appropriate sample collected by a trained health care provider is the gold standard for the diagnosis of SARS-CoV-2 infection.

Specimen selection is dependent on the specific test being used and how the test was validated and/or Health Canada authorization for different specimen types.

RT-PCR testing typically requires a nasopharyngeal (NP) swab placed in viral transport medium for conventional laboratory nucleic acid. If such a specimen is being collected for influenza-like illness (ILI) or presumed viral respiratory tract infection (RTI), then a second swab is not required.

Note: There may be some clinical indications for the use of an oropharyngeal swab instead of a NP swab, but, when possible, a NP swab is the preferred specimen as it is more sensitive compared to other specimen types. Refer to Shared Health's Respiratory Virus Specimen Collection.

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More severely ill patients may also require deep lung specimens be submitted, such as sputum, endotracheal tube (ETT) secretions or broncho-alveolar lavage (BAL) specimens.

For samples being sent to Cadham Provincial Laboratory (CPL), include the following information on the *CPL General Requisition*: relevant symptoms, priority group/reason for test, outbreak code if applicable, and request for COVID-19. If reason to test is recent travel, indicate "travel" and the location of travel on the requisition (e.g. for genomic surveillance).

An inconclusive result on a real-time PCR assay is defined as an indeterminate result on a single or multiple real-time PCR target(s) without sequencing confirmation, or a positive result from an assay for which limited performance data are available.

An indeterminate result on a real-time PCR assay is defined as a late amplification signal in a real-time PCR reaction at a predetermined high cycle threshold value. This may be due to low viral target quantity in the clinical specimen approaching the limit of detection (LOD) of the assay or may represent nonspecific reactivity (false signal) in the specimen. When clinically relevant, indeterminate samples should be investigated further in the laboratory (e.g., by testing for an alternate gene target using a validated RT-PCR or nucleic acid sequencing that is equally or more sensitive than the initial assay or method used) or by collection and testing of another sample from the patient.

8.2 Serology Tests

Serology tests measure antibodies the body produces after infection with the virus. Of note, depending on the antibody that is being measured, it may also indicate immunization status. Serology tests are generally not recommended for use as a diagnostic tool to confirm acute infection and are mainly used for population serosurveys. It is still unknown what antibody level correlates with protection against COVID-19.

SARS-CoV-2 serology tests may be considered as an adjunct to SARS-CoV-2 NAAT in individuals with compatible symptoms who present late and therefore may test negative, and in the diagnosis of multisystem inflammatory syndrome in children (MIS-C) and multisystem inflammatory syndrome in adults (MIS-A).

8.3 Point-of-Care Tests

Point-of-care tests in which sample collection and testing is completed at the place of care and immediate results are provided, are available. The direction for the particular test should be followed as outlined in the testing kit. Only testing devices authorized by Health Canada can be imported or sold in Canada. Further information is available at Testing devices for COVID-19: Point-of-care and self-testing devices - Canada.ca.

8.4 Self-administered Rapid Antigen Tests (RATs)

Rapid antigen tests are less sensitive than standard NAAT tests. They provide faster results and can be self-administered to allow for an increased number of individuals to be tested. Manitoba is no longer

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providing RAT kits as the federal supply of COVID-19 RATs has come to an end. Healthcare providers continue to offer confirmatory lab-based testing for Manitobans who need it for treatment decisions.

8.5 Surveillance of Variants

Knowledge and understanding of COVID-19 variants continue to evolve and is a focus for ongoing surveillance. New variants have the potential to require a different response, particularly if there is a significant impact on virulence. As a result, ongoing monitoring and contingency planning is required. Laboratories continue to perform surveillance of variants on clinical specimens and wastewater.

Refer to the following links for more information:

COVID-19: Canadian respiratory virus surveillance report (FluWatch+) — Canada.ca

COVID-19 Variants - Wastewater monitoring dashboard — Canada.ca

9. Control

9.1 Management of Cases

Epidemiologic evidence suggests that the majority of people who develop COVID-19 will have mild illness and will not require care in a hospital. In addition, decreased virulence of current circulating COVID-19 viruses, immunity from both COVID-19 infections and vaccines, and the availability of treatments, has further reduced the severe impacts of COVID-19 compared to the beginning of the pandemic.

Reduced isolation periods in the community were adopted after the introduction of the Omicron variant to balance the need to manage COVID-19 cases and reduce transmission, with minimizing the impact on social, economic, and educational factors and encouraging adherence to recommendations.

Since then, the frequency of community testing has decreased, and is now only recommended for people who are at high risk for serious outcomes to inform receipt of early treatment options such as antivirals. In addition, other respiratory viruses have returned to circulate similar to pre-pandemic years. As a result, COVID-19 guidance has been integrated and aligned with approaches for all respiratory viruses. The following guidance is provided for management of individuals with respiratory symptoms in the community:

- People who are ill should stay home and avoid contact with others until symptoms have improved, they feel well enough to resume normal activities and are free of fever for around 24 hours without the use of fever-reducing medication.
- Avoid close contact with others, especially people at higher risk of severe illness or complications from a respiratory infection.
- Avoid non-essential visits to high-risk settings (e.g. personal care homes, health care facilities).

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- Clean your hands regularly – wash your hands with soap and water for at least 15 seconds or use alcohol-based hand sanitizer that contains at least 60% alcohol.
- Cover your coughs and sneezes.
- If appropriate, open windows to encourage airflow.
- If you cannot avoid close contact with others, take other prevention measures such as wearing a mask in indoor settings.
- Those with worsening or persistent symptoms should be clinically assessed (e.g., fever, increasing shortness of breath).

9.2 Health Care Settings

For residents in long term care facilities, isolation requirements and precautions may differ. Refer to the following resources for further guidance: covid-19-ipc-guidance-for-pch.pdf (sharedhealthmb.ca).

In the acute care setting, seriously ill patients can have prolonged shedding of infectious viruses and thereby may have a longer period of communicability. Decisions on discontinuing isolation should be made in conjunction with the case's health care provider and Infection Prevention and Control (IP&C), considering both the clinical and laboratory findings. Information on discontinuing precautions in hospitalized cases can be found in the COVID-19 Specific Disease Protocol (Provincial) – Acute and Community Settings - IPC-acute-care-manual-provincial.pdf (sharedhealthmb.ca).

Health Care Workers (HCWs): Those who work in health care settings may need to meet additional requirements before returning to their workplace. Further information is available here: Occupational Health Services - Shared Health (sharedhealthmb.ca).

9.3 Treatment of Cases

The health care provider will provide clinical management of the case as required. Treatment is available for clients at high risk of severe outcomes due to medical condition and/or age, including those who have been vaccinated. Individuals at high risk should be assessed for treatment and treatment prescribed if indicated. Depending on the type of treatment it must be started within 5-7 days of symptom onset for the treatment to be effective. Treatments available for COVID-19 continue to evolve, and their effectiveness may vary with different variants of SARS-CoV-2.
Further information on treatment is available here: Clinical Practice Guideline for the Use of Therapeutics in Mild-Moderate COVID-19 (Shared Health).

9.4 Re-infection

Following infection, more than 90% of individuals will develop Immunoglobulin M (IgM) and Immunoglobulin G (IgG) antibodies within weeks of symptom onset. The relationship between antibody levels and the level of protection against reinfection remains undetermined, as well as the role of cellular immunity in preventing reinfection (including cross-protective immunity following exposure to common coronaviruses).

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Based on current evidence, individuals previously infected have a low risk for reinfection until around 4-6 months after the initial infection. Reinfection can occur within 6 months of previous infection and may be more likely in certain populations, such as the elderly and immunocompromised (12). The risk and timeframe may also vary with different variants.

NAATs can continue to detect the virus six months or longer after the infection, therefore, a decision cannot be made on reinfection strictly based on time frame and repeat testing needs to be considered carefully.

9.5 Management of Contacts

Individuals in the community are no longer required to self-isolate (quarantine) if they had close contact with a case. With the emergence of the Omicron VOC, with shorter incubation periods and high transmissibility, contact tracing became less effective and is no longer recommended in the community setting. The majority of exposures will occur prior to case identification, as SARS-CoV-2 is most transmissible during the few days before and after the onset of symptoms.

Whether notified of a COVID-19 exposure or not, everyone should routinely monitor symptoms of COVID-19 and stay home if unwell or symptomatic.

If a situation arises where close contacts are identified, the following definition would apply:

A close contact is a person who, within the period of communicability:

- provided care for the case, including HCWs, family members or other caregivers, or who had other similar close physical contact without consistent and appropriate use of personal protective equipment (PPE), OR
- who lived with or otherwise had close prolonged* contact (within 2 metres) with a probable or confirmed case while the case was infectious, OR
- had direct contact with infectious body fluids of a probable or confirmed case (e.g., was coughed or sneezed on) while not wearing recommended PPE.

**As part of the individual risk assessment, consider the duration of the contact's exposure (e.g., a longer exposure time likely increases the risk), the case's symptoms (coughing or severe illness likely increases exposure risk) and whether exposure occurred in a health care setting. Prolonged exposure is defined as lasting for more than 10 minutes, cumulative over 24 hours.*

Individuals who are staying in a high-risk setting, such as a hospital or long-term care facility, should follow facility guidance.

Workers in health care and congregate settings should also consult with occupational health or their workplace manager for further guidance.

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9.6 Preventative Measures

Immunization:
COVID-19 immunizations lower the risk of severe outcomes, such as hospitalizations and death. For further information on recommendations and eligibility requirements refer to: Province of Manitoba | COVID-19 Vaccine Eligibility, Vaccine Schedule and Proof of Vaccination.

Additional Preventative Measures:

- Monitor for symptoms and stay home/avoid others when sick.
- Practice respiratory etiquette (cover cough/sneeze) and good hand hygiene by washing hands with soap and water or using an alcohol-based hand sanitizer after contact with infected people, animals or contaminated materials or items. Clean and disinfect surfaces and objects frequently touched by many people.
- Wearing a mask is a personal choice and is no longer required by public health. Masks can be an additional layer of protection along with other measures. Mask use may be considered in particular when:
  - Individuals are sick and cannot avoid close contact with others in indoor spaces.
  - Individuals are at higher risk of severe illness, especially in crowded settings during periods when respiratory virus activity is high in the community.
  - In settings where there are many people who are at higher risk for severe disease (e.g. healthcare facilities, personal care homes).
  - Individuals are caring for someone who is sick.
- Improve ventilation. Poorly ventilated spaces, crowds, and large gatherings will increase the risk of exposure to a respiratory virus. Ventilation, whether through opening windows or the use of heating, ventilation, and air conditioning (HVAC) systems, can increase the amount of outside air brought inside. This will dilute the number of viral particles in the air and help to reduce the risk of exposure. Ensure HVAC systems receive routine maintenance. Spending time outside may also be an alternative.

9.7 Infection Prevention and Control

Healthcare Workers
Health care workers (HCWs) providing care for a case should follow relevant guidance developed for infection prevention and control including Routine Practices and Additional Precautions and COVID-19 specific infection prevention and control (IP&C) guidance. For further information on resources and current recommendations refer to sharedhealthmb.ca/covid19/providers/.

Additional measures are recommended for aerosol-generating medical procedures (AGMPs): AGMPs are medical procedures that can generate aerosols as a result of artificial manipulation of a person's airway. There are several types of AGMPs which have been associated with a documented increased risk of tuberculosis or SARS transmission including intubation and related procedures. For further information see: See aerosol-generating-medical-procedures-AGMPs.pdf (sharedhealthmb.ca).

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Additional provincial IP&C guidance documents are available at sharedhealthmb.ca/covid19/providers/ipc-resources/.

10. Key Investigation Components for Public Health Response

Due to the high transmissibility of the Omicron VOC and widespread community transmission, individual case, contact and outbreak management is no longer required for cases in low-risk community settings. However, ongoing surveillance of COVID-19 activity, from a variety of sources, continues to occur.

10.1 Outbreak Management

Long-Term Care
Long-Term Care (LTC) residents are vulnerable to infection with COVID-19 due to behavioral factors, shared spaces, and transit between other healthcare facilities. Older adults and those with pre-existing medical conditions are also at risk for more severe disease and have higher mortality when infected with COVID-19. Outbreak management strategies and definitions are listed in COVID-19 Infection Prevention and Control Guidance for Personal Care Homes covid-19-ipc-guidance-for-pch.pdf (sharedhealthmb.ca).

Acute and Community Health-care Settings
Outbreak management strategies and definitions are listed in the COVID-19 Infection Prevention and Control Guidance for Acute and Community Health-care settings IPC-acute-care-manual-provincial.pdf (sharedhealthmb.ca).

Other High-Risk Settings
Vulnerable congregate settings based on populations at risk of severe outcomes (e.g., seniors housing) may implement measures, based on the situation and setting.

Other Community Settings
In community settings, case numbers will mirror the community rates, and management of settings with high transmission rates/high absenteeism should follow general advice on community measures to decrease transmission. Settings such as schools and daycares may connect with public health for guidance when absenteeism rates are higher than expected. Note that absenteeism rates have been influenced by the additional impact of COVID-19 on top of the typical pre-pandemic circulating respiratory viruses, along with recommendations to stay home when sick. As a result, there is not a specific threshold for concern about absenteeism, but rather a change in what has been observed.

Management of Simultaneous COVID-19 and Influenza Outbreaks
In facility outbreaks, more than one respiratory pathogen may be isolated. Consider the following guidance to assist with management of **symptomatic** individuals when **both** COVID-19 and influenza are identified during an outbreak:

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- Send a swab for PCR testing for both COVID-19 and influenza.
- While results are pending, provide influenza antiviral therapy.
    - If positive for influenza and negative for COVID-19, continue influenza antiviral therapy as indicated.
    - If negative for influenza and positive for COVID-19, discontinue influenza antiviral therapy and begin COVID-19 antiviral therapy as indicated.
    - If positive for both influenza and COVID-19, provide both COVID-19 antiviral therapy and influenza antiviral therapy (note that whether significant drug–drug interactions occur with co-administration is presently uncertain).
    - If negative for both influenza and COVID-19 but respiratory disease is continuing or progressing, further diagnostic testing and clinical consultation may be considered before influenza antiviral therapy is discontinued (15).

11. Documentation Guidelines and Resources

Individual case and contact documentation are no longer required.

For surveillance purposes, Manitoba Health Surveillance Unit (MHSU) will enter COVID-19 probable or lab-confirmed reports and assign to service delivery organizations.

Upon declaration of an outbreak (i.e., in high-risk community settings such as in acute care and long-term care facilities) regional Public Health is responsible to document the COVID-19 outbreak in PHIMS. For the process of outbreak documentation and the required data elements, refer to the **Standard Operating Procedure: Regional Management of Outbreaks and Clusters in PHIMS**.

COVID-19 associated deaths that occur OUTSIDE of hospitals, such as in community or long-term care facilities should be documented directly within PHIMS, or by completing a clinical notification form and fax to the MHSU who will document the death in PHIMS.

12. Additional Resources

MHSLTC:

- Province of Manitoba | COVID-19
- Standard Operating Procedure: Regional Management of Outbreaks and Clusters in PHIMS
- Routine Practices and Additional Precautions: Preventing the Transmission of Infection in Health Care (gov.mb.ca)
- Respiratory Surveillance | Health | Province of Manitoba
- Clinical Notification of Reportable Diseases and Conditions

Shared Health:

- COVID-19 IPC Guidance for Personal Care Homes - Shared Health
- COVID-19 IPC Guidance for Acute Care - Shared Health

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- Clinical Practice Guide for the Use of Therapeutics in Mild-Moderate COVID-19
- Provincial COVID-19 Resources for Health-care Providers and Staff
- Infection Prevention and Control
- Occupational Health Services - Shared Health
- Provincial Guidance for Aerosol Generating Medical Procedures (AGMPs)

PHAC:

- Coronavirus disease (COVID-19): For health professionals - Canada.ca
- COVID-19: Current situation - Canada.ca
- COVID-19: Canadian respiratory virus surveillance report (FluWatch+) — Canada.ca
- COVID-19 Variants - Wastewater monitoring dashboard — Canada.ca
- Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Healthcare Settings - Canada.ca
- Update with consideration of Omicron – Interim COVID-19 infection prevention and control in the health care setting when COVID-19 is suspected or confirmed– April, 2024 - Canada.ca
- Multisystem inflammatory syndrome in children (MIS-C) in Canada, CCDR 47(11) - Canada.ca
- COVID-19 Guidelines for Indoor Ventilation - Canada.ca
- COVID-19 mask use: Advice for community settings - Canada.ca

WHO:

- Coronavirus Disease (COVID-19) Situation Reports
- WHO Coronavirus (COVID-19) Dashboard | WHO Coronavirus (COVID-19) Dashboard With Vaccination Data

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8. Health Canada. *Public Health Management of Cases and Contacts Associated with COVID-19.* (December 24, 2021) [Public health management of cases and contacts associated with COVID-19 - Canada.ca]

9. Health Canada. *COVID-19 Signs, Symptoms and Severity of Disease: A Clinician Guide.* (June 1, 2022) [COVID-19 signs, symptoms and severity of disease: A clinician guide - Canada.ca]

10. Centers for Disease Control and Prevention. *Clinical Presentation*: *Clinical Considerations for care of children and adults with confirmed COVID-19.* (October 19, 2022) [Clinical Presentation | Clinical Care Considerations | CDC]

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12. Centers for Disease Control and Prevention. *Science Brief: SARS-CoV-19 Infection-induced and Vaccine-induced Immunity*. (October 29, 2021) [Science Brief: SARS-CoV-2 Infection-induced and Vaccine-induced Immunity | CDC]

13. IMPACT, Canadian Immunization Monitoring Program, ACTive. [Surveillance | Canadian Paediatric Society (cps.ca)]

14. Health Canada. *COVID-19 vaccines: Canadian Immunization Guide.* (November 6, 2023) [COVID-19 vaccines: Canadian Immunization Guide]

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