

Ontario Public Health Standards:
Requirements for Programs, Services and Accountability

Infectious Disease Protocol

Appendix 1: Case Definitions and Disease- Specific Information

**Disease: Coronavirus Disease 2019
(COVID-19)**

Effective: June 2024

Coronavirus Disease 2019 (COVID-19)

- Communicable
- Virulent

[Health Protection and Promotion Act \(HPPA\)](#)¹

[Ontario Regulation \(O. Reg.\) 135/18 \(Designation of Diseases\)](#)²

Provincial Reporting Requirements

- Confirmed case
- Probable case
- Laboratory-based case of reinfection
- Time-based case of reinfection

As per Requirement #3 of the “Reporting of Infectious Diseases” section of the [Infectious Diseases Protocol, 2018](#) (or as current), the minimum data elements to be reported for each case are specified in the following:³

- [O. Reg. 569](#) (Reports) under the HPPA;⁴
- The iPHIS User Guides published by Public Health Ontario (PHO); and
- Bulletins and directives issued by PHO.

Type of Surveillance

Case-by-case.

Case Definition

Confirmed Case

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

- Detection of at least one specific gene target by a validated laboratory-based nucleic acid amplification testing (NAAT) assay (e.g., real-time PCR) performed at a community, hospital or reference laboratory (e.g., Public Health Ontario Laboratory or the National Microbiology Laboratory);^{a,b,c}

OR

- A validated point-of-care (POC) NAAT that has been deemed acceptable by the Ontario Ministry of Health to provide a final result;^d

OR

- Demonstrated seroconversion or diagnostic rise (at least 4-fold or greater from baseline) in viral specific antibody titre in serum, plasma, or whole blood using a validated laboratory-based serological assay for SARS-CoV-2.^{c,e}

OR

- A report from an Ontario coroner, as defined in the [Coroners Act, R.S.O. 1990, c. C.37](#), indicating that COVID-19 or SARS-CoV-2 was the cause of death or a contributing factor to the death.⁵

Probable Case

A person who:

- Has symptoms compatible with COVID-19;

AND

- Had high-risk or close contact exposure;^f **OR**
- Was exposed to a known cluster or outbreak;

AND

- In whom a laboratory-based NAAT-assay (e.g., real-time Polymerase Chain Reaction [PCR]) for SARS-CoV-2 has not been completed;^g **OR**
- SARS-CoV-2 antibody is 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;^{c,e}

OR

- Has symptoms compatible with COVID-19;

AND

- In whom a laboratory-based NAAT assay (e.g., real-time PCR) for SARS-CoV-2 was inconclusive;^h

OR

- Is asymptomatic;

AND

- Had high-risk or close contact exposure;^f **OR**

- Was exposed to a known cluster or outbreak;

AND

- In whom a laboratory-based NAAT-based assay (e.g., real-time PCR) for SARS-CoV-2 is inconclusive.^h

Laboratory-Based Case of Reinfection

A previous confirmed case that has a subsequent confirmed SARS-CoV-2 infection where there is laboratory evidence supporting two different infections.

Laboratory evidence includes:

- Genome sequencing; **OR**
- Variant of concern (VOC) screening PCR testing indicates two distinct SARS-CoV-2 infections.

*Genome sequencing indicates two distinct SARS-CoV-2 infections as:

- They belong to different genetic lineages; **OR**
- They belong to the same lineage but contain sufficient single nucleotide variants to support two different infections.

Time-Based Case of Reinfection

A previous confirmed case of SARS-CoV-2:^{i,j,k}

- That has a subsequent confirmed SARS-CoV-2 infection at least 90 days after the previous infection using episode date,

AND

- Does not meet the laboratory-based case of reinfection definition.

Clinical Presentation

Clinically compatible signs and symptoms may vary. See Public Health Agency of Canada's [COVID-19 signs, symptoms and severity of disease: a clinician's guide](#), for full description of clinical presentation.⁶

If an individual has [COVID-19 symptoms](#), they can assume that they may have the virus and may be contagious. Even if they do not meet the case definition, they are recommended to follow the case and contact guidance in this document.⁷

Approved/Validated Tests

Review [PHOL's Test Information Sheet for Coronavirus Disease 2019 \(COVID-19\)](#) for more information on laboratory testing.⁸

Case Management

In addition to the requirements set out in the Requirement #2 of the “Management of Infectious Diseases – Sporadic Cases” and “Investigation and Management of Infectious Diseases Outbreaks” sections of the [Infectious Diseases Protocol, 2018](#) (or as current), the board of health shall investigate cases to determine the source of infection. Refer to Provincial Reporting Requirements above for relevant data to be collected during case investigation.³

Individuals who are confirmed or probable cases, OR have [COVID-19 symptoms](#), OR have tested positive on a rapid antigen test, are recommended to:⁷

- Self isolate until symptoms have been improving for 24 hours (or 48 hours if gastrointestinal symptoms) and no fever present.
 - Asymptomatic individuals with a positive test result do not need to self-isolate unless symptoms develop. If symptoms develop, they should self-isolate immediately.
- For a total of 10 days after the date of specimen collection or symptom onset (whichever is earlier/applicable), cases should:
 - Wear a well-fitted medical mask in all public settings (including schools and childcare, unless under 2 years old) and avoid non-essential activities where mask removal is necessary (e.g., dining out, playing a wind instrument, high contact sports where masks cannot be safely worn)
 - Reasonable exceptions would include temporary removal for essential activities like eating in shared space at school/childcare/work while maintaining as much distancing from others as possible). Individuals who are unable to mask (e.g., children under two years of age) may return to public settings without masking.
 - Avoid non-essential visits to individuals who are immunocompromised or at higher risk of illness (e.g., seniors).
 - Avoid non-essential visits to highest risk settings such as hospitals and long-term care homes (see below for further guidance when case is an employee in high-risk settings).
 - Where visits cannot be avoided, cases should wear a medical mask, maintain physical distancing, and notify the highest risk setting of their recent illness/positive test. If the individual being visited can also wear a mask, it is recommended they do so.
- Cases with immunocompromise may be infectious for longer and are generally

recommended to isolate for 10 days from symptom onset (or positive test, whichever is earlier).

- Cases who are hospitalized for COVID-19 related illness can be removed from Droplet/Contact precautions in hospital based on consultation with an infectious diseases specialist and/or hospital infection prevention and control (IPAC).
 - Individuals with severe illness may be infectious for longer durations (e.g., 10 days or more), and even longer (e.g., 20 days or more) for those requiring ICU level of care for COVID-19.
- Testing for clearance is generally not recommended.
 - Serial testing may be considered for ending isolation due to the risk of prolonged shedding in those with severe immunocompromise.
- Individuals should follow any workplace guidance (as applicable) for return to work.
 - Individuals returning to work in highest risk settings (e.g., acute care, long-term care homes, etc.) should follow any relevant workplace guidance on return to work. In general, return to work in highest risk settings after self-isolating as above, may occur while following measures to reduce the risk of transmission for 10 days after symptom onset/positive test date, including:
 - Avoiding caring for patients/residents at highest risk of severe COVID-19 infection, where possible
 - Ensuring well-fitting source control masking (e.g., a well-fitting medical mask or fit or non-fit tested N95 respirator or KN95)
 - Reviewing PPE and IPAC practices, where possible
 - Taking unmasked breaks in a separate breakroom, or with physical distancing, to avoid exposing co-workers
 - Working on a single ward or area of the setting as much as possible
 - Working in a single facility, as much as possible
- COVID-19 positive cases who live in highest risk settings (e.g., long-term care homes, retirement homes and congregate living settings) should follow setting-specific guidance, as applicable.
 - Where there is no setting-specific guidance, cases may follow general guidance above.
- Case management is at the discretion of the PHU.

- PHUs may make specific considerations for case management for First Nations, Inuit, and Métis communities, in dialogue with the communities and/or Indigenous health service providers, and with respect of the principle of self-determination, to support ongoing surveillance and response that allows for differences in community needs, recognizes differential impacts to communities, and changing needs over time.
- PHUs should refer to the iPHIS data entry guidance from Public Health Ontario.

For public information on recommendations for individuals with COVID-19 symptoms, please visit <https://www.ontario.ca/page/protection-covid-19-and-other-respiratory-illnesses>

Contact Management

A close contact is defined as:

- An individual who has a high-risk exposure to a case, an individual with COVID-19 symptoms, or an individual with a positive rapid antigen test, during their infectious period (i.e., within the 48 hours prior to the case's symptom onset if symptomatic or specimen collection date (whichever is earlier/applicable) and until the case has completed their self-isolation period.
- A high-risk exposure is generally those who were in close proximity (less than 2 metres) for at least 15 minutes or for multiple short periods of time without measures such as masking, distancing, and/or use of personal protective equipment (PPE) depending on the nature of contact. This includes, but is not limited to:
 - Household, roommates, or similar living situation contacts
 - Individuals who had direct contact with infectious body fluids of the case (e.g., coughed on or sneezed on)
 - Health care workers and/or staff who provided direct care for the case, or who had other similar close physical contact (i.e., less than 2 metres from the patient for more than a transient duration of time) **without** consistent use of PPE for the setting and interaction.
 - Workers should follow organizational policies on the use of PPE for patients with suspected and confirmed COVID-19. However, for public health follow-up purposes, if the exposed worker had consistent medical masking, this would generally not be considered a high-risk exposure.
- Management of close contacts

- For a total of 10 days after the last exposure to the case, close contacts should:
 - Self-monitor for symptoms, and self-isolate immediately if symptoms develop
 - Wear a well-fitted mask in all public settings:
 - Individuals should maintain masking as much as possible in public settings (including school and child care, unless under 2 years old). Reasonable exceptions would include removal for essential activities like eating, while maintaining as much distancing as possible;
 - Participation in activities where masking can be maintained throughout may be resumed, but individuals should avoid activities where mask removal would be necessary (e.g., dining out; playing a wind instrument; high contact sports where masks cannot be safely worn); and
 - Individuals who are unable to mask (e.g., children under two years of age, etc.) may return to public settings without masking.
 - Avoid non-essential visits to anyone who is immunocompromised or at higher risk of illness (e.g., seniors)
 - Avoid non-essential visits to highest risk settings such as hospitals and long-term care homes.
 - Where visits cannot be avoided, close contacts should wear a medical mask, maintain physical distancing, and notify the highest risk setting of their recent exposure. If the individual being visited can also wear a mask, it is recommended they do so.
- Close contacts who live in highest risk settings (e.g., long-term care homes, retirement homes and congregate living settings) should follow setting-specific guidance, as applicable.
 - Where there is no setting-specific guidance, contacts may follow guidance as above.
- For acute care settings, it is the **responsibility of the acute care setting** to identify, notify and manage close contacts of cases within the setting to reduce the risk of exposure to other patients and staff. It is up to the discretion of the acute care setting and/or PHU to notify close contacts who are no longer admitted in the acute care setting.
- Close contacts who work in a highest risk setting (e.g., acute care, long-term

care, etc.), should follow any relevant workplace guidance on return to work.

- Where feasible, additional workplace measures during the 10 days of self-monitoring may include:
 - Active screening for symptoms ahead of each shift, where possible
 - Close contacts should avoid removing their mask when in the presence of other staff to reduce exposure to co-workers (e.g., not eating meals/drinking in shared spaces) and maintain physical distancing if mask removal is required
 - Working in only one facility, where possible
 - Ensuring well-fitting source control masking for the staff to reduce the risk of transmission (e.g., a well-fitted medical mask or fit or non-fit tested respirator or KN95)
- Employers must also follow requirements as per the [Occupational Health and Safety Act](#).⁹

Risk of COVID-19 spread between people and animals

- There have been infrequent reports of SARS-CoV-2 spreading from animals to humans. Animal-to-human transmission is likely very uncommon and the risk to most people in Canada for acquiring COVID-19 from animals appears to be very low.¹⁰
- See the Government of Canada's website for more information:
<https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks/animals-covid-19.html>

Outbreak Case Definition

The outbreak case definition varies with the outbreak under investigation. Please refer to the [Infectious Diseases Protocol, 2018](#) (or as current) for guidance in developing an outbreak case definition as needed.³

The outbreak case definitions are established to reflect the disease and circumstances of the outbreak under investigation. The outbreak case definitions should be developed for each individual outbreak based on its characteristics, reviewed during the course of the outbreak, and modified if necessary, to ensure that the majority of cases are captured by the definition. The case definitions should be created in consideration of the outbreak definitions.

Outbreak cases may be classified by levels of probability (i.e., confirmed and/or suspect).

Outbreak Case Definitions for Specific Settings

For Acute Care, Long-term Care Homes, Retirement Homes, and applicable Congregate Living Settings

Refer to the following document for further information on outbreaks in long-term care homes, retirement homes, and other congregate living settings: [Recommendations for Outbreak Prevention and Control in Institutions and Congregate Living Settings \(ontario.ca\)](https://www.ontario.ca).¹¹

Declaring a confirmed outbreak:

- Two or more residents/patients who are epidemiologically linked (e.g., within a specified area/unit/floor/ward), both with positive results from a polymerase chain reaction (PCR) test OR rapid molecular test OR rapid antigen test within a 7-day period where **both** cases have reasonably acquired their infection in the setting.

Suspect outbreak:

- One positive PCR OR rapid molecular test OR rapid antigen test in a resident/patient (individual who lives in the setting) who has reasonably acquired their infection in the setting.

Notes on outbreaks considerations:

- A confirmed outbreak is based on two or more **patients/residents** who have reasonably acquired their infection in the setting, such as those admitted for more than four days before symptom onset or positive COVID-19 test result.
 - In the situation where the second case is a current or former roommate of a known case, and the second case has been appropriately maintained on Droplet and Contact Precautions since identification of the first case, **and** there is no other evidence of uncontrolled transmission or risks of exposures in the affected area, this would generally **not** trigger the declaration of an outbreak.
- At the discretion of the facility and the public health unit, an outbreak may be declared based on cases amongst staff when there is evidence of uncontrolled transmission in the facility.
- One positive patient who could reasonably have acquired their infection in the setting would not trigger the declaration of an outbreak. However, if the setting confirms a single nosocomial case, this should prompt a thorough investigation to obtain additional information and enhanced surveillance. Based on the case investigation, additional control measures may be warranted.
- Based on discussion with the facility and the public health unit, other similar

situations where there is evidence to support a low likelihood of ongoing transmission beyond the initial two cases may also not trigger the declaration of an outbreak.

Declaring the outbreak over

- In consultation with the outbreak management team and the local public health unit, the outbreak may be declared over when no new cases, which were reasonably acquired in the setting, have occurred for 7 days, and there is no evidence of ongoing transmission.
 - For example, in the circumstance of a case in a roommate of a case, where the roommate had already been in isolation prior to testing positive and therefore did not pose a risk for ongoing transmission, the roommate should be counted as part of the outbreak, but would not extend the duration of the outbreak.

Prevention and Control Measures

Personal Prevention Measures

- All individuals presenting to a health care facility with symptoms of an acute respiratory infection should be provided with a medical face mask and receive information about the importance of respiratory etiquette and hand hygiene; and
- Ensure early recognition and prevention of transmission of COVID-19 and other respiratory viruses at the initial encounter with a health care facility.
- For COVID-19 specific personal prevention measures:
 - [COVID-19 Guidance for the Health Sector](#).¹²
 - [COVID-19 Vaccine-Relevant Information and Planning Resources](#).¹³

Infection Prevention and Control Strategies

Infection prevention and control strategies focus on the use of Routine Practices and additional precautions in healthcare settings and among health care workers:

- All health care workers should be educated in regards to Routine Practices related to infection prevention and control; and
- All health care workers should wear appropriate PPE, based on their point of care risk assessment, when assessing patients with suspect acute respiratory infections.

Educate health care staff about the importance of strict adherence to, and proper use of, routine infection prevention and control measures especially hand hygiene as well as

isolation procedures and use of appropriate PPE.

For COVID-19 specific guidance on PPE, see [IPAC Recommendations for Use of Personal Protective Equipment for Care of Individuals with Suspect or Confirmed COVID-19 \(publichealthontario.ca\)](#).¹⁴

For COVID-19 specific guidance for infection prevention and control measures in health care settings, see:

- [PHO's Interim Infection Prevention and Control Measures based on COVID-19 Transmission Risks in Health Care Settings](#).¹⁵
- [PHO's Interim Guidance for Infection Prevention and Control of SARS-CoV-2 Variants of Concern for Health Care Settings, 2nd revision](#).¹⁶

Encourage and maintain respiratory hygiene and cough etiquette in order to reduce transmission. Persons with signs and symptoms of respiratory infection should:

- Cover their nose and mouth when coughing and sneezing;
- Use tissues to contain respiratory secretions;
- Dispose of tissue in the nearest waste receptacle after use; and
- Perform hand hygiene after contact with respiratory secretions and contaminated objects and materials.
- Wear a medical face mask

For the most up-to-date information on Infection Prevention and Control, please refer to PHO's IPAC webpage¹⁷ at: <https://www.publichealthontario.ca/en/Health-Topics/Infection-Prevention-Control>

Case Definition Sources

Government of Canada (2023). National case definition: Coronavirus disease (COVID-19). Retrieved June 20, 2024, from <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/national-case-definition.html>

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Case Definition Endnotes

- a. Laboratory tests continue to evolve, and laboratory testing recommendations will change accordingly as new assays are developed and validated.
- b. Some hospital and community laboratories have implemented and validated COVID-19 NAAT testing inhouse and report final positive results, which is sufficient for case confirmation. Other hospital and community laboratories will report positives as preliminary positive during the early phases of implementation and will require confirmatory testing at another licenced laboratory with a validated SARS-CoV-2 NAAT assay, which can be a community, hospital or reference laboratory (e.g., Public Health Ontario's laboratory or the National Microbiology Laboratory).
- c. In cases where individuals received a Health Canada approved COVID-19 vaccine, detection of the nucleocapsid antibody can be used to determine exposure to SARS-CoV-2 through natural infection. Spike antibody can be generated through natural exposure and/or COVID-19 vaccination, but cannot differentiate between the two. Seroconversion of the spike and/or nucleocapsid antibody in an individual who has received no doses of vaccine suggests natural exposure to SARS-CoV-2.
- d. All positive results issued from molecular point-of-care assays are reportable to public health units. Final results can be issued from certain Ministry of Health approved POC assays that have been evaluated, and do not require further testing for confirmation. Additional testing may be recommended to guide case and public health management.
- e. COVID-19 antibody (serology) testing should not be used as an acute screening or diagnostic tool or used to determine a patient's immune status, vaccination status, or infectivity. It 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). Only results from a laboratory in Ontario that is licensed to conduct serology testing AND where testing is done for clinical purposes will be reported to the Medical Officer of Health and used for case classification. SARS-CoV-2 IgM and serology POC tests are not widely available and are not recommended for use at this time due to a lack of adequate performance data.
- f. A close contact is defined as a person who has an exposure to a confirmed positive COVID-19 case or an individual with a positive rapid antigen test result. This includes household, community and healthcare exposures.

- g. Any case classified as probable based on a high-risk exposure (i.e., close contact) or exposure to a known cluster or outbreak, which subsequently tests negative/not detected for SARS-CoV-2 by NAAT should no longer be classified as a probable case. Exceptions may be made for negatives on a compromised sample or if NAAT testing is delayed (e.g., >10 days following symptom onset), whereby such persons remain as probable cases.
- h. Inconclusive is defined as an
 - i. indeterminate result on a single or multiple NAAT gene target(s)
 - OR
 - ii. a positive test with an assay that has limited performance data 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 (Ct) value range (note: Ct values of an indeterminate range vary by assay and not all assays have an indeterminate range). This may be due to low viral target quantity in the clinical specimen approaching the limit of detection of the assay, or alternatively in rare cases may represent nonspecific reactivity (false signal) in the specimen. When clinically relevant, repeat testing is recommended.
 - i. A viral lineage is a group of viruses defined by a founding variant and its descendants.
 - j. If case is symptomatic, then episode date uses symptom onset date. If symptom onset date is unavailable or the case is asymptomatic, then the earliest of the following dates could be used as proxy for classification: laboratory specimen collection date, laboratory testing date or reported date.
 - k. VOC PCR screen testing and/or genome sequencing is not routinely required if the case meets the time-based case of reinfection definition.

Document History

Revision Date	Document Section	Description of Revisions
June 2024	Entire document	Document created

