

Prince Edward Island Guidelines for the Management and Control of COVID-19

December 2022

Department of Health and Wellness
Chief Public Health Office

COVID-19

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Case Definition

Confirmed case

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

The detection of at least 1 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 1 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)

or

Seroconversion or diagnostic rise (at least 4-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

Probable case - lab

A person who:

1. Has symptoms 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

OR

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

OR

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

Probable case – epi-linked

A person who:

1. Has symptoms compatible with COVID-19

and

Had a high-risk exposure with a confirmed COVID-19 case (i.e. close contact) from their household

and

Is unable to be tested (i.e., unable to drive/be driven, age, mobility, unwell)

Reinfection case

Laboratory-based reinfection

A <u>confirmed case</u> that was previously classified as <u>resolved</u>, that has a subsequent infection of SARS-CoV-2 where there is laboratory evidence supporting two different infections.

Laboratory evidence includes:

- Genome sequencing¹ or variant of concern (VOC) screening PCR testing indicates two distinct SARS-CoV-2 infections
- or
- One of the infections was confirmed to be a variant of interest (VOI)/VOC or mutations associated with VOI/VOC based on genome sequencing¹ or VOC screening PCR testing
- and
- The other infection occurred when the VOI/VOC was not circulating in Canada

Note: A viral lineage is a group of viruses defined by a founding variant and its descendants

Time-based reinfection

A <u>confirmed case</u> that was previously classified as <u>resolved</u>* that has a subsequent confirmed infection of SARS-CoV-2 at least 90 days after the previous infection using episode date**

and

Does not meet the laboratory-based reinfection case definition

Notes:

*Public health or clinical judgement should be used to rule out situations where a possible reinfection has been attributed to prolonged viral shedding (i.e., consider if prolonged viral shedding is more likely than reinfection).

** If case is symptomatic, then episode date uses symptom onset date and 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.

The judgement of a Medical Officer of Health or relevant public health authority may be used to identify reinfection cases based on new exposures or symptoms if the above criteria are not met.

¹ 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

Deceased case

A probable or confirmed COVID-19 case whose death resulted from a clinically compatible illness, unless there is a clear alternative cause of death identified (e.g., trauma, poisoning, drug overdose).

A Medical Officer of Health, relevant public health authority, or coroner may use their discretion when determining if a death was due to COVID-19, and their judgement will supersede the above-mentioned criteria.

A death due to COVID-19 may be attributed when COVID-19 is the cause of death or is a contributing factor, as listed on a registered death certificate.

Reporting Requirements

Health Practitioners

Health practitioners, shall, in accordance with the Notifiable Diseases and Conditions and Communicable Diseases Regulations, as part of the Prince Edward Island (PEI) Public Health Act report all confirmed and probable cases by phone and mail, fax or electronic transfer, as soon as suspected to the Chief Public Health Officer (CPHO) (or designate) as per the PEI Reporting Notifiable Diseases, Conditions, and Events Regulations.

Laboratories

The Provincial Laboratory shall, in accordance with the PEI <u>Public Health Act</u>, report all positive laboratory results by phone and mail, fax or electronic transfer, as soon as the result is known, to the CPHO (or designate), as per the <u>PEI Reporting Notifiable Diseases, Conditions, and Events Regulations</u>.

Etiology

Coronaviruses are a large family of viruses that are common in many different species of animals, including camels, cattle, cats, and bats. Rarely, animal coronaviruses can infect people and then spread between people such as with Middle East Respiratory Syndrome (MERS), Severe Acute Respiratory Syndrome (SARS), and now with COVID-19.

Cases of COVID-19 were initially linked to exposure to live animals at a seafood market in Wuhan City but the substantial increase in cases thereafter is due to human-to-human transmission of the virus.

Clinical Presentation

Signs and symptoms

COVID-19 includes clinical features that present in varying ways with respect to frequency and severity and vary by age, vaccination status and variants of concern. Published reports often over-represent individuals who have more severe symptoms, and these may differ across care settings and between different age groups and vaccine statuses. Symptoms that are absent at the onset of illness may develop over time with disease progression.

To date, there remains no comprehensive list of symptoms that has been validated to have high specificity or sensitivity for COVID-19. The ZOE COVID Study from the United Kingdom is a

comprehensive system that tracks COVID-19 symptoms. This study found that symptom frequency and severity has varied by circulating variant and by vaccination status.

During the Omicron wave that began in November 2021, those who have had at least 2 vaccinations reported milder symptoms; typical symptoms reported during the Omicron wave included runny nose, headache, sneezing, and sore throat. This response is different than the predominant symptoms earlier in the pandemic, which included fever, cough, chills and muscle pain. When fever occurred in Omicron cases, it was more frequently reported in unvaccinated than in vaccinated cases.

As new variants emerge and more of the population becomes vaccinated, there will be ongoing changes in the patterns of symptoms that individuals experience. With Omicron, clinical presumptive diagnosis should be considered with symptoms compatible with COVID-19 and a history of contact with known case(s). Testing may either not be available, or accurate, early in the course of illness. The patient, however, should be advised to take a Point of Care antigen or NAAT test for SARS-CoV-2, when and where available, and follow local/regional public health authority recommendations for cases and contacts. Patients should always be encouraged to seek medical consultation if experiencing worsening symptoms of concern. Table 1 below outlines the common, less frequent, and rare symptoms reported by those with COVID-19 during the Omicron wave.

Table 1: Common, less frequent and rare symptoms for individuals with COVID-19 during the Omicron wave

Common symptoms (>50%)	Less frequent symptoms (≤ 50%)	Rare symptoms (<10%)
 Runny nose Sneezing Sore throat Headache 	 Persistent cough Joint pain Chills Fever Dizziness Muscle pain Gastrointestinal symptoms (nausea, diarrhea, abdominal pain) Hoarse voice New loss of or altered sense of smell 	 Swollen glands Chest pain Irregular heartbeat Shortness of breath Skin changes Delirium Confusion/brain fog

Note: It is important to evaluate whether the patient's symptoms are new, worsening, or different from their baseline.

With the Omicron variant, loss or altered sense of smell is less prevalent than with the Delta variant, and sore throat and hoarse voice were significantly more prevalent. Those infected during the Omicron wave are less likely to experience at least one out of the three classic COVID-19 symptoms (fever, loss of smell, and persistent cough) compared with individuals

infected during the Delta wave. Duration of acute symptoms for those with the Delta variant was longer than those with the Omicron variant (mean duration 9 days vs. 7 days). Regardless of the variant, the duration of symptoms is shorter for those who received three doses of vaccines (Delta mean duration 8 vs. Omicron duration 4 days). Some people can present symptoms for weeks or months after their initial recovery. See Post COVID Condition (Long COVID) section for details on symptoms, mental health, prevention, diagnosis and treatment.

Clinicians should remain aware of signs and symptoms that warrant more urgent or emergency medical attention. Patients with mild disease should be informed to seek medical attention should they experience any of the following:

- trouble breathing or severe shortness of breath
- persistent pressure or pain in the chest
- new onset of confusion or altered level of consciousness
- inability to wake up or stay awake
- pale, gray, or blue-colored skin, lips, or nail beds

Multisystem inflammatory syndrome – children (MIS-C)

In early 2020, MIS-C was newly confirmed to be associated with SARS-CoV-2 infection. It is characterized by hyperinflammation and multi-organ involvement and presents with clinical features similar to Kawasaki disease and toxic shock syndrome. Symptoms typically occur around 2-6 weeks after the initial infection. In Canada, MIS-C is rare, with 269 cases reported to the Public Health Agency of Canada between March 11, 2020 and October 2, 2021. Cases have been reported in infants as young as one week to youth as old as 18 years, with a median age of six years. Cases were more likely to occur in males than females (58% vs 42%). Almost all MIS-C cases (99%) required hospitalization and 36% required intensive care unit admission. No deaths from MIS-C have been reported in Canada as of May 31, 2022.

Multisystem inflammatory syndrome – adults (MIS-A)

Multisystem inflammatory syndrome is a rare but severe complication of SARS-CoV-2 that may also occur in adults. Symptoms typically occur around 2-12 weeks after the initial infection. CDC has developed a working case definition for MIS-A.

In September 2021, a systematic review of all MIS-A publications reported a total of 221 cases, with a median age of 21 years and 70% of the cases being male. Most patients with MIS-A presented with fever (96%), hypotension (60%), cardiac dysfunction (54%), shortness of breath (52%), and/or diarrhea (52%). The median number of organ systems involved was 5. The median hospital stay was 8 days; and of those hospitalized, 57% were admitted to the intensive care unit (ICU). Of those admitted to the ICU, 47% required respiratory support and 7% died. Most patients had elevated markers of coagulopathy and/or inflammation (90%) and a positive SARS-CoV-2 serologic finding (72%).

Although rare, it is important to recognize the symptoms of MIS-A, as it is a serious hyperinflammatory condition associated with COVID-19 and can lead to multiorgan failure.

COVID-19 symptoms in children

In earlier waves of the pandemic, typical symptoms of COVID-19 in children were fever (46-64%) and cough (32-56%). However, many children were asymptomatic or only had a few symptoms. More recently, with the Omicron variant, symptoms have been shown to more likely be upper respiratory, as noted in Table 1 above. Young children are especially vulnerable to upper respiratory acute infection due to their small and relatively collapsible airways. This has resulted in some children experiencing laryngotracheobronchitis, or croup. Croup is classically characterized by a sudden onset "barking cough," inspiratory stridor, and respiratory distress. Some small case series of croup have been reported during the Omicron wave and have been associated with SARS-CoV-2 infection. It is still unknown if cases of croup are due to SARS-CoV-2 or a co-infection with another virus. Other than croup, children's symptoms mimic those of adults for Omicron, which are predominantly upper respiratory symptoms, including runny nose, sneezing and sore throat. Hospitalized children are more likely to have fever, abdominal symptoms like vomiting, and shortness of breath, along with cough and the other upper respiratory symptoms. Symptoms of COVID-19 may overlap with that of other viral infections, including influenza and other respiratory and enteric viral infections. The true incidence of asymptomatic COVID-19 infection is unknown. However, asymptomatic COVID-19 infection has been reported in up to 45% of children who had surveillance testing done at the time of hospitalization for a non-COVID indication.

A MMWR report on hospitalized children aged 5-11 years with SARS-CoV-2 infections in 14 U.S. states found that during the Omicron wave, unvaccinated children had double the rate of hospitalization compared to vaccinated children. Thirty percent (30%) of hospitalized children had no underlying medical conditions, and children with diabetes and obesity were more likely to develop severe COVID-19. Intensive care unit admission occurred in 19% of hospitalized cases. Increasing COVID-19 vaccination coverage among children aged 5–11 years, especially those at higher risk of severe disease, may help prevent hospitalizations and severe outcomes associated with COVID-19.

When assessing children, it is important to consider that the signs and symptoms of COVID-19 are similar to those of other infectious and non-infectious conditions, including influenza, other viral upper respiratory infections, streptococcal pharyngitis, asthma and allergies. The lack of specificity of signs or symptoms and the significant proportion of asymptomatic infections makes symptom-based screening for identification of SARS-CoV-2 in children difficult.

COVID-19 symptoms in older adults

Older adults may present with atypical symptoms due to age-related weakening of the immune system. Weakened immunity can also lead to increased risk of infection. Clinical presentation may differ in older adults, and COVID-19 symptoms may need to be evaluated using a slightly different approach in this patient population.

Symptoms that may present differently in older individuals include: fever (may present with lower temperatures), cough and shortness of breath (differentiate from chronic lung conditions), loss of taste or smell (differentiate if due to medications or neurodegenerative processes causing sensory impairment), and fatigue and body ache (common in older individuals). Sore throat, new-onset congestion, nausea, vomiting, or diarrhea may be more valuable as diagnostic criteria for SARS-CoV-2 infection in older individuals.

In a multicenter study of seven emergency departments in the US, delirium was one of the presenting symptoms in 226 (28%) of 817 patients with COVID-19 and exclusively the primary presenting complaint in 16% of patients with a mean age of 78 years. Estimates of falls and frailty, as a presenting symptom of COVID-19, ranged between 23.5% and 32%. In addition, dehydration in older adults should be considered as an important presentation of COVID-19. Therefore, it is important to ensure older adults receive their recommended vaccination series and boosters as they become available via regional/provincial/territorial public health authorities.

Asymptomatic infection

A person who is asymptomatic is someone who has tested positive for SARS-CoV-2 test and has never developed any symptoms. During the Omicron wave, a large study in South Africa estimated that 31% of cases were asymptomatic (approximately 1 in 3 cases). This study also reported high viral loads in asymptomatic cases. The asymptomatic carriage rate was similar in SARS-CoV-2 seropositive and seronegative cases.

Diagnosis

Diagnosis is made by isolation of the virus in a mid-turbinate swab, nasopharyngeal swab, throat and nose swab, or mouth gargle by PCR at the provincial lab with a confirmatory result. Abbott ID Now/Lucira point of care (POC NAAT) testing may also be completed and considered as a preliminary positive result. Positive rapid antigen test (RAT) results can be used for Paxlovid (nirmatrelvir / ritonavir) antiviral prescribing purposes. Positive RAT results can be confirmed with further testing at a testing site. If not confirmed, the case is considered a probable case.

Epidemiology

Reservoir

Early on, many of the patients in the outbreak of respiratory illness caused by COVID-19 in Wuhan, China had some link to a large seafood and live animal market, suggesting animal-to-person spread. Later, a growing number of patients reportedly did not have exposure to animal markets, indicating person-to-person spread.

Transmission

The understanding of COVID-19 transmission has evolved since the beginning of the pandemic and has informed the public health measures (PHM) used in Canada. Infected individuals generate respiratory droplets and aerosols, which can be transmitted to others. Activities that are more likely to generate respiratory droplets and aerosols include: heavy breathing (e.g., during exercise), talking, singing, shouting, coughing, and sneezing. The droplets vary in size from large droplets that may fall to the ground relatively quickly near the person who is infected, to small droplets called aerosols which may remain suspended in the air and travel on ambient air currents. The risk of transmission via respiratory aerosols is greater in poorly ventilated indoor environments where there is a high density of people and extended duration of contact. The relative infectiousness of droplets of different sizes, and the amount of virus in respiratory droplets needed to cause infection (i.e., infectious dose), is not clear.

Infectious droplets or aerosols may come into direct contact with the mucous membranes of another person's nose, mouth, or eyes, or they may be inhaled into the nose, mouth, and airways, with smaller aerosols penetrating deeper into the lungs. The virus may also spread when a person touches another person (e.g., a handshake) or an object (referred to as fomites) that has the virus on it, and then touches their mouth, nose, or eyes with unwashed hands.

Other factors that may affect the transmission of COVID-19 are age, infectiousness, presence of symptoms, illness severity, and characteristics of the virus itself (e.g., VOC), as well as adherence to personal preventive practices, such as physical distancing, proper use of wellconstructed and well-fitting masks, hand hygiene, and respiratory etiquette. There is no evidence to date to suggest differences in mode of transmission of circulating VOC.

Environmental factors, settings, and specific activities can contribute to the risk of viral transmission, including enclosed spaces, especially those with poor ventilation, crowded settings, congregate living settings and close interactions. Settings where these factors overlap or involve activities such as singing, shouting or heavy breathing (e.g., aerobic exercise) are considered higher risk. Examples of these settings include family gatherings and other social gatherings, religious services, funerals, and choir practices, as well as in occupational settings including health care facilities and meat/seafood processing plants. The duration of exposure in such settings is also likely to increase the risk of transmission. It is exceedingly important that PHM be applied in a "layered" manner in these settings to reduce the risk of transmission

Incubation Period

The incubation period for COVID-19 has been estimated to range from 2 to 14 days, with a median of 5-6 days from exposure to symptom onset. Of all individuals who develop symptoms, 97.5% of the symptoms occur within 11.5 days of exposure and 75% will develop symptoms between 6.7 and 8.5 days. The Omicron variant of concern, which is currently the dominant strain in PEI, has a shorter median incubation period of 3 days (range 0-8 days).

Period of Communicability

The time period in which an individual with COVID-19 can transmit the virus is said to be from 48 hours prior to the onset of symptoms to 10 days after symptom onset for immunocompetent people. The levels of viral RNA from nasopharyngeal, saliva/sputum samples, upper respiratory specimens, and stool samples appear to be highest soon after symptom onset. Transmissibility declines rapidly 2-3 days after symptom onset and is estimated to be less than 3% after seven days from symptom onset. Asymptomatic cases are estimated to be 25% less infectious than symptomatic cases.

Live viral shedding may occur for longer in those with illness of greater severity (e.g., admitted to hospital directly due to COVID-19) and those who are severely immunocompromised², and the period of communicability may extend to 20 days after onset of symptoms in these groups.

² Immunocompromised include cancer chemotherapy, untreated HIV infection with CD4 T lymphocyte count <200, combined primary immunodeficiency disorder, taking prednisone >20 mg/day (or equivalent) for more than 14 days and taking other immune suppressive medications. December 2022

Note that SARS-CoV-2 RNA may be detectable in the upper or lower respiratory tract for weeks after illness onset. However, detection of viral RNA does not necessarily mean that the patient can transmit the virus.

A systematic review and meta-analysis found that SARS-CoV-2 cases with serial upper respiratory tract samples showed peak viral loads within the first week of symptom onset. The highest viral loads were reported soon after or at the time of symptom onset or at day 3–5 of illness, followed by a consistent decline.

Disease severity and risk factors for severe disease

There is a spectrum of COVID-19 disease severity, ranging from asymptomatic to mild, to moderate, severe and critical disease. Severe disease more often occurs in those with increasing age and those with underlying medical conditions, with the risk increasing with the number of underlying conditions.

High risk for mortality was associated with increasing number of comorbid conditions. A comprehensive CDC scientific evidence review process and a Canadian rapid review have recently been published to update the list of underlying medical conditions associated with more severe COVID-19 disease. The conditions identified in these reviews are listed in Table 2 below:

Table 2: Underlying medical conditions associated with more severe COVID-19 disease

Asthma (moderate to severe)	HIV infection
Cancer	Immunocompromised state
Chronic kidney and end-stage	Interstitial lung disease
disease	Liver disease
Chronic lung diseases	Motor neuron diseases
Cystic fibrosis	Overweight and obesity*
Dementia or other neurological	Pregnancy
conditions	Pulmonary hypertension
Diabetes (type 1 or type 2)	Sickle cell disease or thalassemia
Down syndrome	Smoking, current or former
Epilepsy	Solid organ or blood stem cell
Heart conditions	transplant
 such as heart failure, coronary 	Stroke or cerebrovascular disease
artery disease, cardiomyopathies	Substance use disorders
or hypertension	

*Overweight = body mass index (BMI) > 25 kg/m2 but < 30 kg/m2), obesity (BMI ≥30 kg/m2 but < 40 kg/m2), or severe obesity (BMI of ≥40 kg/m2)

Patients with certain medical and/or social vulnerabilities, including people experiencing intellectual and developmental disabilities, persons who use substances regularly, people experience cognitive disabilities, mental health conditions or experiencing homelessness or are unhoused, may make it more difficult for the patient to recognize, clearly communicate, or act on symptom progression. These patients need closer attention and monitoring.

Variants of concern (VOC)

Genetic variations of viruses, such as the one that causes COVID-19, are common and expected. SARS-CoV-2, the virus that causes COVID-19, will naturally develop mutations, which are changes to the genetic material in the virus over time.

Monitoring for genetic changes in the virus allows us to better understand the potential impact of the mutation. VOCs detected in Canada to date include; Alpha (B.1.1.7), Beta (B.1.351), Gamma (P.1), Delta (B.1.617.2) and Omicron (B.1.1.529; including BA.1, BA.2, BA.3, BA.4, BA.5 and descendent lineages).

Occurrence

General

Novel coronavirus (COVID-19) was first detected in Wuhan City, China in December 2019. As of 5 December 2022, there have been 641,435,884 confirmed cases of COVID-19, including 6,621,060 deaths. Up to date global case and death numbers can be found here: https://covid19.who.int/

Canada

There have been 4,408,276 cases and 47,781 deaths in Canada as of November 28, 2022. More information is available on the <u>Public Health Agency of Canada</u> website.

Prince Edward Island

As of December 4, 2022, there are 54,886 cases of COVID-19 reported in PEI and 81 deaths due to the virus.

Control

Management of a Case

 Stay home until feeling better and fever free for 24 hours (or 48 hours if you had nausea, vomiting and/or diarrhea) and have not developed any new symptoms

For 10 days post diagnosis/symptom onset:

- Wear a properly fitted, three-layer mask or medical mask outside the home (and as much as possible during physical/recreational activities)
- Work from home as much as possible.
- When at work, practice physical distancing including while eating or drinking.
- Do not visit high-risk settings or individuals* until after 10 days (settings such as long-term care, community care and other congregate living facilities, and individuals who may be at risk for severe COVID-19 outcomes).
- If the infected person is a health care worker, they should discuss the situation with their employer prior to returning to work.

Contact of a case

Anyone who has been in contact with a case of COVID for 7 days post exposure should:

- Watch for signs and symptoms and be tested if they occur
- Wear a properly fitted, three-layer mask or medical mask outside the home (and as much as possible during physical/recreational activities)
- Work from home as much as possible.

- o When at work, practice physical distancing including while eating or drinking.
- Do not visit high-risk settings or individuals* until after 10 days (settings such as long-term care, community care and other congregate living facilities, , and individuals who may be at risk for severe COVID-19 outcomes).

Outbreak management

Outbreaks may occur in a variety of settings in the community, such as long-term care facilities, hospitals and other high-risk settings. These settings have specific guidelines that address outbreak management.

Vaccination

Vaccination is one of the most effective ways to protect our families, communities and ourselves against COVID-19. Evidence indicates that the vaccines used in Canada are very effective at preventing severe illness, hospitalization and death from COVID-19.

COVID-19 vaccines approved for use in Canada are free of charge. They are available to everyone eligible to get the vaccine 6 months of age and older.

Individuals should get their second dose in the primary series 8 weeks after receiving their first dose.

A booster dose of the COVID-19 vaccine is recommended for individuals 5 years of age and older, 6 months after their last dose of the vaccine.

Important Notice: Islanders infected with COVID-19 should wait 3 months after onset of symptoms or a positive test before getting a COVID-19 vaccine (primary series or booster dose) provided they are eligible for vaccination based on the recommended time between doses.

COVID-19 vaccines approved for use in Canada include:

- mRNA COVID-19 vaccines:
 - Pfizer-BioNTech Comirnaty® for those 6 months of age and older
 - Moderna Spikevax® for those 6 months of age and older
- viral vector COVID-19 vaccines:
 - AstraZeneca Vaxzevria® for those 18 years of age and older
 - Janssen Jcovden
 - o for those 18 years of age and older
- protein subunit COVID-19 vaccines:
 - Novavax Nuvaxovid® for those 12 years of age and older
- plant-based COVID-19 vaccines:
 - Medicago Covifenz® for those 18 to 64 years of age

The National Advisory Committee on Immunization (NACI) recommends that a complete primary series with a mRNA COVID-19 vaccine should be preferentially offered to individuals 12 years of age and older without contraindications to the vaccine.

It is recommended that an authorized protein subunit COVID-19 vaccine (Novavax Nuvaxovid) or VLP COVID-19 vaccine (Medicago Covifenz) may be offered to individuals in the authorized age group without contraindications to the vaccine who are not able or willing to receive an mRNA COVID-19 vaccine.

A viral vector COVID-19 vaccine may be offered to individuals 18 years of age and over, without contraindications to the vaccine, when all other authorized COVID-19 vaccines are contraindicated.

The primary series of mRNA vaccines (Pfizer-BioNTech Comirnaty® or Moderna Spikevax®), plus a booster dose, offers better protection against Omicron infection and severe disease than the primary series alone. Among people who are vaccinated, studies show that:

- their level of protection against infection from the primary series decreases over time and is low against Omicron, but can be improved with a booster dose
- the primary series appears to maintain good protection against severe disease (such as hospitalization) caused by Omicron
- protection against severe disease is higher after a booster dose

Vaccination is very important, even if you've been previously infected with COVID-19. While infection alone provides some protection, vaccination after infection helps improve the immune response and may provide better and longer-lasting protection.

More information on COVID-19 vaccines authorized for use in Canada can be found at: https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19/vaccines.html

For information on Prince Edward Island COVID-19 vaccine clinics visit: https://www.princeedwardisland.ca/en/information/health-and-wellness/getting-the-covid-19-vaccine

Treatment

Several different types of treatments for COVID-19 have been developed and are being evaluated in Canada and around the world. Examples include drugs that reduce or stop the virus from multiplying in human cells and drugs that treat the symptoms of COVID-19. Health Canada only authorizes treatments, including those for COVID-19, following a thorough scientific review of the safety, efficacy and quality data. A treatment must show evidence that it works well, is of high quality and is safe. The available data must demonstrate that the treatment's benefits outweigh its risks.

Health Canada has authorized the following COVID-19 treatments. These treatments are available for provinces and territories to use in their health care systems. Each province and territory are determining the appropriate administration of these drugs based on their needs.

- Remdesivir (Veklury®)
- Nirmatrelvir and ritonavir (Paxlovid®)
- <u>Tixagevimab and cilgavimab (Evusheld®)</u>
- Tocilizumab (Actemra®)
- Bamlanivimab
- Casirivimab and imdevimab
- Sotrovimab

The antiviral drug Paxlovid[™] (nirmatrelvir and ritonavir) is authorized to treat symptomatic adults with mild to moderate COVID-19 who are at high risk of serious illness, including hospitalization or death. This is the first authorized COVID-19 treatment that can be taken orally at home.

All Physicians, Nurse Practitioners and pharmacists (starting January 2023) are able to prescribe Paxlovid. Eligibility criteria for Paxlovid™ is as follows:

- COVID-19 positive (confirmed by PCR, NAAT or rapid antigen test)
 AND
- Presenting with symptoms of COVID-19 that started within the last 5 days AND at least one of the criteria below:
 - Age 18 years and older with underlying medical conditions that lead to high risk of severe outcomes including hospitalizations or death* regardless of COVID-19 vaccine status

OR

Age 50 years and older (regardless of vaccine status)

More information on medications authorized in Canada to treat COVID-19 can be found here: https://www.canada.ca/en/health-canada/services/drugs-health-products/covid19-industry/drugs-vaccines-treatments.html

Testing

There are three types of testing available on PEI, point of care (POC) testing, lab-based PCR testing and rapid antigen test kits.

For more testing information visit: https://www.princeedwardisland.ca/en/information/health-and-wellness/covid-19-testing-in-pei

Patients Admitted to Acute Care

Health PEI Acute Care COVID guidance can be found on the Spectrum app.

Residents Admitted to Long Term Care (LTC) or Community Care Facility (CCF)

Refer to <u>Prince Edward Island Guidelines for the Management and Control of COVID-19 in</u> Long-Term Care Facilities for specific information.

Infection Prevention and Control in the Community

The following Public Health Measures are recommended to prevent the spread of respiratory viruses:

- Wash your hands frequently with soap and water or use alcohol-based hand rub. Use soap and water when hands are visibly soiled.
- Cough and sneeze into your elbow or a tissue. If using a tissue, immediately place it in a waste disposal and wash your hands.
- If possible, stay home when ill with acute respiratory symptoms; if this is not possible, limit close contact with others.
- Limit touching your eyes, nose, and mouth.
- Wear a mask when in public places

^{*} https://www.princeedwardisland.ca/en/information/underlying-medical-conditions

- Physical distance (2 metres/6 feet) in public spaces
- Everyone eligible should get vaccinated with a complete series (and booster dose if applicable) of Health Canada-approved COVID-19 vaccines.

Post COVID Condition (Long COVID)

The World Health Organization (WHO) defines post COVID-19 condition as:

"[...] occurring in individuals with a history of probable or confirmed SARS CoV-2 infection, usually 3 months from the onset of COVID-19 with symptoms and that last for at least 2 months and cannot be explained by an alternative diagnosis. Common symptoms include fatigue, shortness of breath, cognitive dysfunction but also others and generally have an impact on everyday functioning. Symptoms may be new onset following initial recovery from an acute COVID-19 episode or persist from the initial illness. Symptoms may also fluctuate or relapse over time."

Some studies have reported long-term symptoms in patients with a severe COVID-19 infection. For example, those who were hospitalized or needed intensive care during recovery. However, post COVID-19 condition may also occur in people with mild or asymptomatic infection.

Given the limited availability of testing capacity early in the pandemic, there are patients experiencing post COVID-19 condition symptoms who were not formally tested and diagnosed with COVID-19.

Currently, the estimates on how often people experience post COVID-19 condition are inconsistent. This is due to differences in:

- how symptoms are measured
- · what symptoms are examined
- the number of participants in the study
- the length of time the patients were followed
- which populations are included in the study (hospitalized versus outpatient versus undiagnosed or asymptomatic)
- The dominant variants circulating during the period of the study

Symptoms

Post COVID-19 condition is associated with a wide range of <u>diverse symptoms</u> across multiple organ systems. Symptoms can fluctuate in intensity and can sometimes disappear and reappear. Some patients report that mental and physical over-exertion may exacerbate the condition.

The Public Health Agency of Canada (PHAC) recently released a review of the current international evidence (PDF). Over 100 symptoms or difficulties conducting usual activities of daily living were reported. Findings from this review (peer-reviewed studies published up to April 2021) and from a recent peer-reviewed study found the proportion to be 30% to 40% in individuals who were not hospitalized for their initial COVID-19 infection. Current evidence December 2022

suggests that the prevalence is higher among those who were hospitalized during the acute phase compared to those who were not hospitalized. These estimates are likely to change in the future as the results of additional studies become available.

The Government of Canada developed the Canadian COVID-19 Antibody and Health Survey (CCAHS), to find out more about people's longer-term symptoms. The CCAHS covers the period since the beginning of the COVID-19 pandemic until August 31, 2022. The CCAHS surveyed a random sample of Canadian adults between April 1 and August 31, 2022. The questionnaire asked about new or continuing symptoms 3 months or more after a confirmed or suspected case of COVID-19. The survey revealed that 14.8% of adults with a confirmed or suspected infection, experienced longer-term symptoms. More information on this study can be found at: https://health-infobase.canada.ca/covid-19/post-covid-condition/

Post COVID-19 condition typically appears in adult patients. However, emerging evidence shows that children may also develop chronic, persisting symptoms after COVID-19 infection. There is still a lot that we don't know about post COVID-19 condition in children. The prevalence of this condition in children is not yet well established, with high variability in estimates being observed from only a small number of studies. These estimates will become more precise as more studies are conducted and new evidence emerges.

More research is needed on the longer-term symptoms after a COVID-19 infection in children and adolescents.

Mental Health

Mental health symptoms, such as anxiety and depression, are commonly reported by individuals experiencing post COVID-19 condition. Patients should be encouraged to talk to their health care provider if they think they may be experiencing symptoms of anxiety, depression or posttraumatic stress disorder. Wellness Together Canada is a resource for patients in crisis.

Prevention, diagnosis and treatment

Ongoing research about what causes post COVID-19 condition and how to diagnose and treat it will help develop specific supports tailored to patients. The WHO, along with patients, researchers and others, developed a <u>clinical case definition of post COVID-19 condition</u>. This will help both patients and clinicians during the diagnostic process.

There is currently no universally agreed-upon approach to diagnose and treat post COVID-19 condition. Sources of knowledge and support about the management of symptoms include:

- patient-led research
- patient-led initiatives
- emerging research on models of care (PDF, updated December 2021)
- emerging guidelines from <u>UK NICE</u> (updated March 1, 2022) and the <u>Centers for</u> <u>Disease Control and Prevention</u>
- clinical resources for health professionals
- Post COVID-19 Condition (Ontario): Guidance for Primary Care (PDF)

Some preliminary findings also suggest that vaccination with 2 or more doses prior to getting infected with COVID-19 may help reduce the risk of developing post COVID-19 condition. PHAC

continues to monitor new developments to learn more about other preventive measures that can be taken.

National COVID-19 and Infection Prevention and Control Guidelines

Infection Prevention and Control for Novel Coronavirus (COVID-19): Interim Guidance for Acute
Healthcare Settings

Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Healthcare Settings

Interim guidance: Public health management of cases and contacts associated with novel coronavirus disease Updated 2021 (COVID-19)

Reducing COVID-19 risk in community settings

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Appendix A: At a Glance: Case and Close Contact Management

Scenario	Isolation Recommendati on	Further Testing	Notification of Result	Public Health Unit Follow-Up Responsibilities
POSITIVE CASE	Until feeling well and no fever for 24 hours (no vomiting or diarrhea for 48 hours) and enhanced precaution for 10 days *	Further testing not recommended for 60 days but may test with rapid antigen test if symptomatic	Results available On- line Portal; email; phone line	No public health follow up
POSITIVE CASE (Immunocompromised not requiring hospitalization)	Until feeling well and no fever for 24 hours (no vomiting or diarrhea for 48 hours) and enhanced precaution for 10 days *	Further testing not recommended for 60 days but may test with rapid antigen test if symptomatic	Results available On- line Portal; email; phone line	No public health follow up Can contact HCP for paxlovid
POSITIVE CASE (Immunocompromised and severe illness requiring hospitalization)	14 days (or at discretion of hospital Infection Prevention & Control) after the date of specimen collection or symptom onset (whichever is earlier/applicabl e)	Further testing not recommended for 60 days but may test with rapid antigen test if symptomatic	Results available Online Portal; email; phone line	No public health follow up
Contact of a case	No isolation required. Enhanced precautions for 7 days from last exposure	Test if become symptomatic	N/A	N/A

*Enhanced Precautions includes:

For 10 days post diagnosis/symptom onset:

- Wear a properly fitted, three-layer mask or medical mask outside the home (and as much as possible during physical/recreational activities)
- Work from home as much as possible.
- When at work, practice physical distancing including while eating or drinking.
- Do not visit high-risk settings or individuals* until after 10 days (settings such as long-term care, community care and other congregate living facilities, childcare facilities, and individuals who may be at risk for severe COVID-19 outcomes).
- If the infected person is a health care worker, they should discuss the situation with their employer.