COVID-19: Pediatric Testing Guidelines for British Columbia

September 16, 2020 – for health care providers

Guidelines for COVID-19 testing in BC are periodically reviewed and updated based on COVID-19 epidemiology, seasonality, public health measures in place, testing capacity, and our evolving understanding of test performance in clinical settings. As a result, BC guidelines may differ from other national or provincial guidelines.

At this time in BC, there are low levels of community transmission of COVID-19. As BC society continues to re-open, and there are changes in the level of interactions between people in the population, early detection and management of COVID-19 cases and their contacts is a critical public health strategy for maintaining low levels of transmission in BC. There is also capacity to expand testing beyond current levels.

Accordingly, at this time providers are recommended to have a low threshold for testing symptomatic individuals of all ages for COVID-19 infection.

This document provides guidance for healthcare professionals on when to test symptomatic children for COVID-19.

Parents and caregivers assessing their child for key symptoms of illness before sending them to school should refer to the Public Health Guidance for K-12 Schools.

Guidance for COVID-19 Testing by Nucleic Acid Tests


Children have similar symptoms to adults, but are less likely to have fever, shortness of breath or cough. COVID-19 causes mild illness in the vast majority of cases in children. The symptoms most commonly found with COVID-19 infection include:

- Fever
- Chills
- Cough or worsening of chronic cough
- Shortness of breath
- Loss of sense of smell or taste
- Diarrhea
- Nausea and vomiting
- Runny nose
- Sore throat
- Headache
- Fatigue
- Loss of appetite
- Muscle aches

If symptoms are consistent with a previously diagnosed health condition and are not unusual for that individual, testing may not be required.

Less common symptoms of COVID-19 infection include stuffy nose, conjunctivitis (pink eye), dizziness, confusion, abdominal pain, and skin rashes or discoloration of fingers or toes. Children who are suspected of having multisystem inflammatory syndrome (MIS-C) should also be tested.

Signs and symptoms of COVID-19 in children may be similar to those of other childhood illnesses. Clinical judgement remains important in the differential diagnosis and work-up of children presenting with these symptoms (e.g., severe symptoms may be more suggestive of bacterial infections). Infants less than 3 months of age who are febrile, or who have suspect COVID-19 should be assessed by a health care provider.

For more information on the diagnosis and management of COVID-19 infection in children, including MIS-C, please refer to the pediatric clinical guidance on the BCCDC website.

2. It is particularly important to test symptomatic infants, children and youth who:

- Have a chronic medical condition, or are immunocompromised due to medication or treatment
- Live with someone at risk of severe disease from COVID-19 infection (e.g., elderly, chronic conditions)
- Attend child care, school, camp or other congregate setting
- Are contacts of a known case of COVID-19
- Are travellers who in the past 14 days returned to BC from outside Canada, or from an area with higher infection rates within Canada
- Are residents of remote, isolated, or Indigenous communities

3. COVID-19 testing is not recommended for asymptomatic infants, children and youth.

Routine COVID-19 screening of asymptomatic people is not recommended (e.g., in daycares or schools, prior to surgery or other procedures, in hospitals or healthcare settings, as a condition of employment or for travel).

4. Medical Health Officers may recommend testing as part of public health investigations.

Medical Health Officers may recommend testing for infants, children and youth who are part of a public health investigation of a cluster or an outbreak, regardless of symptom profile.

Note: In May the Provincial Health Officer temporarily removed the requirement for licensed practical nurses to have a client-specific order prior to performing nasopharyngeal swabs if being done as part of a screening program approved by a Medical Health Officer.
Guidance on Specimen Collection and Labelling

Most COVID-19 testing sites in BC can test children and youth (please refer to BCCDC’s testing information for testing locations in your area).

1. Nasopharyngeal (NP) Swab Specimen Collection

When testing is offered to children of any age, please ensure the tester is appropriately trained to perform the nasopharyngeal swab (NP) safely, and there are adequate supports available.

For older youth, please refer to the adult testing guidelines for specimen collection and labelling information.

For children and infants, collect a nasopharyngeal (NP) swab according to the procedure described in Appendix A, and a video for children/families to watch regarding NP swab collection can be found here.

Use the swab/collection device provided by your institution. The following swabs are currently validated for use in nasopharyngeal specimen collection in infants and young children in BC:

- Copan™ minitip swab with 2mL red top tube
- BD™ minitip swab with 3ml red top tube
- Roche cobas™ PCR Dual Swab Sample Kit

† These swabs have limited availability.

For children >6 years of age, Yocon virus sampling kit is generally appropriate.

2. Saline Gargle Specimen Collection

Saline (salt water) gargle is an approved alternative to NP swab collection for outpatient, school-aged children and youth (grades K – 12) who are able to follow instructions on how to swish, gargle and spit a small amount of saline. Most children 5 years of age and older are able to provide a saline gargle sample with some guidance.

For school-aged children, collect a saline gargle sample according to the procedure described in Appendix B. A video for these children and their families to watch regarding saline gargle sample collection can be found here. It is recommended that the video is reviewed and the method practiced at least two hours before going to a collection centre.

Please ensure that the child has not eaten, had anything to drink, smoked, used a vape or chewed gum for one hour before sample collection.

Use the collection device and saline provided by your institution. The collection system is sterile and consists of a funnel attached to a 10mL collection tube with cap and 5mL of sterile saline.

For hospitalized school-aged children and youth, collect an NP swab. For hospitalized patients with evidence of lower respiratory tract disease, collect a lower respiratory tract sample (e.g., sputum, endotracheal aspirate, bronchoalveolar lavage, etc.) if feasible in a screw-top sterile container in addition to a nasopharyngeal swab.
Specimen Labelling

All specimens (cylindrical tube) must have an attached label with:

- Patient name
- PHN or Date of Birth (DOB)
- Specimen type (e.g., NP swab)
- Date & time of collection

Please add one of the following codes to the specimen label:

- **OBK** – Outbreaks, clusters or case contacts
- **HOS** – Hospitalized
- **CMM** – Community or Outpatient, including Urgent and Primary Care Centres
- **CGT** – People attending or living in congregate settings such as day cares, camps, correctional facilities, shelters, group homes, assisted living and seniors’ residences.
- **SCHOOL** – People attending school in-person including students, teachers and support staff

Please submit each specimen in an individual, sealed biohazard bag. Include a paper requisition which clearly states the patient information, the ordering physician, and the test name (COVID-19 test).

Please refer to the BCCDC Public Health [Laboratory eLab Handbook](#) under COVID-19 test for specimen requirements.

Paper Requisitions [are available here](#).
Appendix A: Nasopharyngeal specimen collection for pediatric patients

Video

- **COVID-19 test procedure in children**: A video for families and children to watch on how COVID-19 testing is done.

Preparation

If a child needs to be bundled (see below), two practitioners will be necessary for safe and expeditious sample collection. Pediatric sample collection is not generally feasible nor advised in a vehicle.

Take measures to put the child and caregiver at ease prior to the specimen collection.

- Approach the child in a gentle and friendly age-appropriate way and introduce yourselves.
- Provide an explanation for your PPE ([Explaining PPE to Children](#)).
- Prior to the procedure, tell the child and caregiver what you need to do in simple terms and answer any questions.
- When swabbing, utilize distraction techniques, if possible (small toys, counting to ten, singing a song, video).
- Have the caregiver talk to the child in soothing tones throughout the procedure; it is preferable for a caregiver to provide a supportive role.

Positioning

- For infants and potentially less cooperative young toddlers, bundle the child securely using a sheet and place the child on a stretcher/examination table with the head slightly elevated.
- Older and/or, more cooperative children may sit on a caregiver’s lap with the caregiver encircling the child’s arms with one arm in a “hug”, using the other hand to support the child’s forehead. (Note: children of all ages may reflexively attempt to move their heads or swipe the swab away during the procedure.)

Procedure

The “mini-tip” flocked swab (Copan or BD UTM Kit) is recommended for children.

- Perform hand hygiene.
- Don PPE (gloves, gown, procedural mask and eye protection).
- Measure the distance from the base of the child’s nose to the external ear canal (ear hole) - the swab will generally need to be inserted approximately just over 2/3 of this distance to reach the nasopharynx.
- For children who are bundled with a blanket, either a second practitioner or a caregiver can place their hands on either side of the child’s head to provide stability.
- **The swabbing practitioner gently inserts the swab straight back (parallel to the roof of the mouth) into the nostril until gentle resistance is felt.**
- Rotate the swab two to three times and allow it to remain in place for ~5 seconds to absorb the sample.
- Withdraw the swab and insert it into the tube of the viral transport medium (found in the package and labeled “UTM-RT MINI” in the Copan or BD UTM Kit).
- Break the shaft at the marked breakpoint and screw on the lid.
- Remove gloves and perform hand hygiene.
Labelling Specimen and Preparing for Transport

- Don new gloves.
- Label the swab with a pre-printed patient label or ensure there are 3 patient identifiers present (Full name, DOB, PHN), Date & Time of collection and “NP swab” handwritten on the label.
- Ensure the following information is entered on the requisition: Patient Identifiers, Ordering Physician, Test name, Date/Time).
- Place the specimen container in a biohazard transport bag and insert the appropriate completed virology requisition into the side pouch.
Appendix B: Saline gargle specimen collection for school-aged children and youth

Video

- COVID-19 saline gargle collection in school-aged children: [A video for families](#) on how the procedure is done

Preparation

Take measures to put the child and caregiver at ease prior to the specimen collection. This form of sample collection could be performed in a vehicle. Ideally they should be familiarized with the sample collection process in advance by viewing the instructional video.

- Approach the child in a gentle and friendly age-appropriate way and introduce yourselves.
- Provide an explanation for your PPE ([Explaining PPE to Children](#)).
- Prior to the procedure, tell the child and caregiver what you need to do in simple terms and answer any questions.

Procedure

Saline gargle is recommended for children and youth from kindergarten to grade 12 who are able to swish, gargle and spit into a funnel. Some children may not be able to provide this sample type (e.g. those with neurocognitive or motor disabilities) and then a nasopharyngeal swab will be required.

- Perform hand hygiene.
- Don PPE (gloves, gown, procedural mask and eye protection).
- Provide procedural mask(s) to child/youth and caregiver for them to don, if collecting indoors.
- For younger children who may require more assistance from their parents (generally those between 4 and 10 years of age), provide the saline gargle collection kit and [instructions for younger children](#).
- Older children and youth (generally those > 10 years of age) may be able to perform the collection without direct parent/caregiver assistance, with [these instructions provided](#).
- Once they are comfortable with the instructions, provide them with a saline gargle collection kit with the collection tube already labelled with pre-printed patient label or ensure there are 3 patient identifiers present (Full name, DOB, PHN) on the collection tube. Time and date of collection on the tube are desired but not mandatory.
- After collection is finished, the child/youth or caregiver will hand the collection tube with funnel still attached to the health care worker.
- The health care worker ensures all saline has descended into the collection tube (e.g. by gently tapping the tube).
- If collection tube contains less than 1mL of saline, reject sample and perform a NP swab.
- The health care worker will remove the funnel and replace it with a screw on lid ensuring a tight seal and place in a biohazard bag.
- Remove gloves and perform hand hygiene.
- For those who attempt the saline gargle collection but are not successful (e.g. swallow saline or spit out saline), re-collection should not be attempted and a nasopharyngeal sample should be collected.
Preparing for Transport

- Perform hand hygiene and don new gloves.
- Ensure the following information is entered on the requisition: Patient Identifiers, Ordering Physician, Test name, Date/Time of collection and that the identifiers match the specimen label.
- If the child attends school in-person, indicate SCHOOL priority code on the requisition
- Place the specimen container in a biohazard transport bag and insert the appropriate completed virology requisition into the side pouch.
- Remove gloves and perform hand hygiene.