Laboratory guidance for patients suspected of being infected with the novel coronavirus which originated in Wuhan, China (2019-nCoV) as of Jan 25, 2020

As you know there has been widespread transmission of this agent in China and to other global regions. At this point the global response is based on containment. We are prepared to test for 2019-nCoV if there is ANY index of suspicion based on history. **Persons under investigation must be discussed with your local MHO!** We also recognize that this is our peak influenza season so FluA/B/RSV are the most likely causal infecting agents.

We have developed a specific 2019-nCoV test and it is in the process of being fully validated (when validated it will be shared with frontline labs willing to test). If local FluA/B/RSV testing is available, please test for those agents using your normal processes. If 2019-nCoV is a consideration, please forward the specimen to the BCCDC Public Health Laboratory (BCCDC PHL). Please notify the BCCDC PHL that 2019-nCoV testing is required by emailing the _BCCDC_Micro Oncall (on a health authority email system), or by paging the BCCDC Public Health Laboratory Medical Microbiologist On Call (604-661-7033). Always indicate on the laboratory requisition if 2019-nCoV testing is being requested, or by adding a special label to the requisition.

**If front line respiratory test results are available, please forward those test results to the BCCDC PHL.**

Person(s) under investigation should have:
- Fever and acute respiratory illness, with or without pneumonia; **AND**
- Recent travel to Hubei Province within the 14 days prior to symptom onset; **OR**
- Another potential relevant exposure (e.g. contact with a potential or confirmed 2019-NCoV case)

If the patient has already **TESTED NEGATIVE** for FluA/B/RSV we will test:
- for 2019-nCoV

If the patient has **NOT** had any prior viral respiratory testing we will test:
- for FluA/B/RSV directly; **OR,**
  - On a 22 agent respiratory panel, **AND,**
  - for 2019-nCoV

**PPE for sample collection based on a review of the literature and discussions with medical microbiologists and infection control experts.**

- NP and throat swabs can be performed using contact and droplet precautions with surgical mask and eye protection, and do not require the use of an N95 respirator. Institutions may choose to use an N95 respirator based on a risk assessment of the patient and/or ease of PPE instructions for sample collection.
- N95 respirator and eye protection (i.e. goggles or face shield) should be donned for specimen collection (or other procedures) that are aerosol generating medical procedures
(i.e. open suctioning of respiratory tract, intubation, bronchoscopy, cardiopulmonary resuscitation).

- While coronaviruses are considered CL2 agents within the laboratory context, given the limited information on 2019-nCoV, laboratories should consider handling specimens under CL2+ procedures until further information is available.

To ensure maximal sensitivity please collect at a minimum **BOTH an UPPER and a LOWER respiratory sample** using the collection kits identified below:

### Specimen Collection and Handling

<table>
<thead>
<tr>
<th>Specimen(s)</th>
<th>Container</th>
<th>Collection Volume</th>
<th>Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasopharyngeal washing or swab</td>
<td>COPAN red- or blue-top with Universal Transport Media</td>
<td>Optimal: N/A</td>
<td>• Collection kit includes flocked swab and tube of transport medium.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min: N/A</td>
<td>• Insert the swab approximately 6 cm with a slow, steady motion along the floor of the nose until a point of resistance is met (2/3 of the distance from nostrils to external opening of ear). Rotate the swab several times and then withdraw the swab.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Insert the swab into the transport vial, snap off the stem and close tightly before shipping.</td>
</tr>
<tr>
<td>Throat swab</td>
<td>COPAN red- or blue-top with Universal Transport Media</td>
<td>Optimal: N/A</td>
<td>• Swab back of throat near tonsils (if present) using the collection swab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min: N/A</td>
<td>• Insert the swab into the transport vial, snap off the stem and close tightly before sending to laboratory</td>
</tr>
<tr>
<td>Aspirated respiratory secretions</td>
<td>Sterile container</td>
<td>Optimal: N/A</td>
<td>• Suction catheter and a sterile, leak-proof, screw-cap test tube or jar are required</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min: N/A</td>
<td>• Collect secretions by suctioning and place 1-4 mL of secretions in a sterile test tube or jar. Close container tightly.</td>
</tr>
<tr>
<td>Sputum</td>
<td>Sterile container</td>
<td>Optimal: N/A</td>
<td>• Collection requires a wide mouth screw cap jar.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min: N/A</td>
<td>• Instruct the patient not to spit into the sample container, but to take a deep breath and cough directly into the container.</td>
</tr>
<tr>
<td>Bronchial wash</td>
<td>Sterile container</td>
<td>Optimal: N/A</td>
<td>• Suction catheter and a sterile, leak-proof, screw-cap test tube or jar are required</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min: N/A</td>
<td>• Collect secretions by suctioning and place 1-4 mL of secretions in a sterile test tube or jar. Close container tightly.</td>
</tr>
</tbody>
</table>

See [http://www.elabhandbook.info/PHSA/Test/PrintPageWithMaster.aspx](http://www.elabhandbook.info/PHSA/Test/PrintPageWithMaster.aspx)

**Transport** - All samples must be in acceptable sample collection containers and properly packaged as per Transport Canada, Transport of Dangerous Goods Regulations (TDGR).

REFRIGERATE SAMPLE and SHIP TO:  
BCCDC Lane Level Receiving/drop-off  
Rear of BCCDC building  
655 West 12th Ave  
Vancouver, BC  
OPEN: Monday to Friday - 0700-2100 hrs, Saturday - 0800-1700 hrs, Sunday & Stat holidays - drop-off box
**Guidance on Sample Collection for Novel Coronavirus (2019-nCoV) Testing as of Jan 30, 2020**

Diagnostic testing for 2019-nCov is available at the BCCDC Public Health Laboratory (PHL) and will be available in the coming weeks at front line laboratories.

*Testing is available for patients with compatible symptoms (e.g. fever, cough, or difficulty breathing) AND history of travel to affected areas of China within two weeks prior to illness onset or other index of suspicion (e.g., contact with an ill person with such travel history).*

Consult your local Medical Health Officer for concerns/questions or guidance regarding the investigation and management of cases suspected of 2019-nCoV infection.

**NP and throat swabs should be performed using contact and droplet precautions with surgical mask and eye protection, and do not require the use of an N95 respirator.**

If feasible collect BOTH a Nasopharyngeal (NP) swab AND a Throat swab or sputum sample:

<table>
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<tr>
<th>Specimen</th>
<th>Container</th>
<th>Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasopharyngeal washing or swab</td>
<td>COPAN with UNIVERSAL TRANSPORT MEDIA (UTM)**</td>
<td>NP collection kit includes flocked swab and a tube of transport medium.</td>
</tr>
<tr>
<td></td>
<td>These containers may be with red or blue tops and contain a pink liquid</td>
<td>• Insert the swab approximately 6 cm with a slow, steady motion along the floor of the nose until a point of resistance is met (2/3 of the distance from nares to external opening of ear). Rotate the swab several times and then withdraw the swab.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Insert the swab into the transport vial, snap off the stem and close tightly before sending to laboratory.</td>
</tr>
<tr>
<td>Throat swab</td>
<td>COPAN with UNIVERSAL TRANSPORT MEDIA (UTM)**</td>
<td>• Swab back of throat near tonsils (if present) using the collection swab</td>
</tr>
<tr>
<td></td>
<td>These containers may be with red or blue tops and contain a pink liquid</td>
<td>• Insert the swab into the transport vial, snap off the stem and close tightly before sending to laboratory.</td>
</tr>
<tr>
<td>Sputum</td>
<td>Sterile container</td>
<td>• Collection requires a wide mouth screw cap jar.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Instruct the patient not to spit into the sample container, but to take a deep breath and cough directly into the container.</td>
</tr>
</tbody>
</table>

These are the same collection devices routinely used for NP swabs for flu/other respiratory virus testing or skin/mucosal swabs for HSV/VZV viral testing.

**UNSUITABLE** collection devices systems will be REJECTED and delay testing. These include: COPAN E-swabs for Pertussis testing, bacterial throat swabs for Group A Streptococcus testing, dry swabs, etc.

Please use the Virology Requisition form and write that 2019-nCoV testing is being requested, OR add a special label to the requisition indicating the need for nCoV testing.  

Samples should be submitted as routine, through your local diagnostic Microbiology Laboratories.

For up to date information on Novel Coronavirus (2019-nCoV) please go to:  
COVID-19 Guidance on Sample Collection and Testing as of Feb 27, 2020
Please ensure that you are using the latest guidance document, available at http://www.bccdc.ca/health-professionals/clinical-resources/coronavirus-(novel)

PHSA Laboratories
BCCDC Public Health Laboratory

Given the global spread of COVID-19, we are expanding the COVID-19 testing indications. COVID-19 testing is available for patients with e.g. fever, cough, or difficulty breathing at the BCCDC Public Health Laboratory (PHL) and at a number of hospital laboratories in BC.

1) Who to test and why?
   a) Patients with respiratory illness in relation to recent travel from an affected area or, contact with a person known or suspected to be COVID-19 infected. (Samples will be tested for FLUA/B/RSV and COVID-19).

   b) We are recommending COVID-19 testing for the same patients that you would normally test for FLUA/B/RSV. (Samples will be tested for FLUA/B/RSV and COVID-19).

   c) Patients who are part of a respiratory outbreak cluster (i.e., within a household or facility). It is not necessary to test all cluster members. Testing a maximum of six members from a cluster will identify the cause of most outbreaks. (Samples will be tested for FLUA/B/RSV and COVID-19).

2) Who to call for advice?
   Consult your regional or provincial microbiologist or regional Medical Health Officer.

3) How to protect yourself from a Personal Protection Equipment (PPE) perspective?
   Use contact and droplet precautions with a surgical mask and eye protection when collecting a nasopharyngeal or throat swab or sputum. A N95 respirator is recommended for aerosolizing procedures http://www.bccdc.ca/Health-Professionals-Site/Documents/2019-nCoV_AGMP_PICNet.pdf

4) What samples to collect?
   In the outpatient setting please collect either a Nasopharyngeal swab (NP) or a Throat Swab (NP is the preferred sample collection)

   For patients with severe respiratory illness or hospitalized patients please collect an NP and a Throat Swab or sputum, endotracheal aspirate, Bronchoalveolar lavage.

USE the same collection devices that are routinely used for NP swabs for Influenza or other respiratory virus testing or skin/mucosal swabs for HSV/VZV viral testing.

UNSUITABLE collection device systems will be REJECTED and will delay testing. Unsuitable devices include: COPAN E-swabs for Pertussis testing, bacterial throat swabs for Group A Streptococcus testing, dry swabs, etc.
5) How to collect the samples and what collection devices to use


Please use the Virology Requisition form and write COVID-19 testing is being requested, OR add a special label to the requisition indicating the need for COVID-19 testing.


Submit samples as per routine through your local diagnostic Microbiology Laboratories.

6) Contact numbers and responsible agencies

<table>
<thead>
<tr>
<th>Person</th>
<th>Contact Information</th>
</tr>
</thead>
</table>
| Regional MHO List       | [https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/office-of-the-
|                         | provincial-health-officer/be-medical-health-officers.pdf](https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/be-medical-health-officers.pdf) |
| Regional microbiologists |                                                                                     |
| BCCDC Med Micro On Call | Phone: 604-661-7033 (24/7) Email: [BCCDC_MicroOnCall@bccdc.ca](mailto:BCCDC_MicroOnCall@bccdc.ca) |

For up to date information on COVID-19 please refer to:

As you are aware, COVID-19 has been declared a global pandemic. Testing is available, but a limited resource. Testing should be performed **ONLY** on symptomatic patients. Please note that infants and children may manifest very minor symptoms.

**Who should be tested for COVID-19?**

Patients **with respiratory symptoms** who are:
1. Hospitalized, or likely to be hospitalized
2. Health Care Workers
3. Residents of long term care facilities
4. Part of an investigation of a cluster or outbreak.

To prioritize testing **label the requisition as coming from**:
- Hospital (label as HOSP)
- Long-term care facility (label as LTCF)
- Health Care Worker (label as HCW)

**Who does not need to be tested for COVID-19?**

1. Patients without symptoms. The exception is health care workers with COVID-19 infection who require a negative test after symptom resolution to return to work.
2. Patients with mild respiratory symptoms, who can be managed at home. This includes returning travellers with an onset of illness within 14 days of return to Canada.

Note: for long-term care facility outbreaks, collect samples from up to six symptomatic patients to confirm the outbreak.

Please advise patients, with or without a history of travel, who have respiratory symptoms that can be managed at home, to self-isolate at home for at least **14 days after onset of their symptoms**. After 14 days, if their temperature is normal and they feel better, they can return to their routine activities. Coughing may persist for several weeks, so a cough alone does not mean they need to continue to self-isolate for more than 14 days.

**What about household contact of a patient with respiratory symptoms?** People who live in the same household as a patient with respiratory symptoms are at higher risk of being exposed. We are asking household contacts to self-monitor for respiratory symptoms for 14 days, and if respiratory symptoms do develop, to self-isolate. As much as possible, household contacts should distance themselves from the patient (e.g. stay in separate rooms, sleep in separate beds and use separate bathrooms if possible).

**3) What samples to collect?**

In the outpatient setting collect either a **Nasopharyngeal swab (NP: Preferred)** OR a Throat Swab

For patients with severe respiratory illness or hospitalized patients, collect a NP and/or a Throat Swab or sputum, endotracheal aspirate, Bronchoalveolar lavage, etc.

*Given the global swab and collection media shortage, use either the routine Copan NP swabs used for Influenza or other respiratory virus testing, or the skin/mucosal swabs for HSV/VZV viral testing (the containers have a pink liquid in it and a red or blue cap).*

*Or*

The Hologic Aptima Unisex Swab Specimen Collection Kit used for endocervical and male urethra swab specimen collection. **Use the blue swab to obtain an NP, please note that it is harder and less flexible. Insert the swab gently into the deep nares and rotate the swab for 10 to 30 seconds to obtain an adequate sample. Break the swab at the scoreline and place into the transport vial.**
COVID-19 Guidance on Sample Collection and Testing as of March 15, 2020 at 7 pm

Please ensure that you are using the latest guidance document, available at
http://www.bccdc.ca/health-professionals/clinical-resources/coronavirus-(novel)

4) Who to call for advice?

Only consult your regional Medical Health Officer or regional or provincial Medical Microbiologists to provide guidance with regard to possible outbreaks or infection clusters.

4) How to protect yourself from a Personal Protection Equipment (PPE) perspective?

Use contact and droplet precautions with a surgical mask and eye protection when collecting a nasopharyngeal or throat swab or sputum. A N95 respirator is recommended for aerosolizing procedures http://www.bccdc.ca/health-professionals/clinical-resources/COVID-19-care/infection-control/personal-protective-equipment

5) For information on collection devices and requisitions


Please use the Virology Requisition form and write COVID-19 testing is being requested, OR add a special label to the requisition indicating the need for COVID-19 testing.


Submit samples as per routine through your local diagnostic Microbiology Laboratories.

6) Contact numbers and responsible agencies

<table>
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<tr>
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<tbody>
<tr>
<td>Regional microbiologists</td>
<td></td>
</tr>
<tr>
<td>BCCDC Med Micro On Call</td>
<td>Phone: 604-661-7033 (24/7) Email: <a href="mailto:BCCDC_MicroOncall@bccdc.ca">BCCDC_MicroOncall@bccdc.ca</a></td>
</tr>
<tr>
<td>Approved by</td>
<td>Mel Krajden MD, FRCPC</td>
</tr>
</tbody>
</table>

For up to date information on COVID-19 please refer to:

http://www.bccdc.ca/health-professionals/clinical-resources/coronavirus-(novel)
COVID-19 Testing Guidelines for British Columbia

BCCDC Public Health Laboratory

Please ensure that you are using the latest guidance document, available at: bccdc.ca/covid19care

Nucleic Acid Testing (NAT) recommendations for COVID-19 in BC continue to be updated, based on the changing epidemiology of COVID-19, testing capacity, and our evolving understanding of the test sensitivity in clinical settings.

At this time, laboratory testing capacity has been increased in BC, and any physician can order a test for COVID-19 based on their clinical judgment. For some individuals and populations, the results of a COVID-19 test will change clinical or public health management. The attached recommendations for COVID-19 testing are focused on these individuals and populations.

Over the past two months, we have come to better understand COVID-19 test accuracy. We now know that false negative results can occur both early in the course of the infection as well as in severely infected patients, implying that a negative NAT does not definitively rule out COVID-19 infection.

Please note that depending on the local context and capacity, the Medical Health Officer may recommend additional COVID-19 testing for priority populations in their jurisdiction.

COVID-19 laboratory testing is recommended, for the following priority groups because the test result will change clinical or public health management.

1. **Covid-19 testing is recommended for the following if they develop new respiratory or gastrointestinal symptoms, however mild.** This includes fever, cough, shortness of breath, rhinorrhea, nasal congestion, loss of sense of smell, sore throat, odynophagia, headache, muscle aches, fatigue, loss of appetite, chills, vomiting, or diarrhoea:
   a. Residents and staff of Long Term Care Facilities
   b. Patients requiring admission to hospital or likely to be admitted, including pregnant individuals in their 3rd trimester, patients on hemodialysis, or cancer patients receiving radiation or chemotherapy.
   c. Patients who are part of an investigation of a cluster or outbreak as determined by the Medical Health Officer.
2. Covid-19 testing is recommended for the following if they develop a fever (generally ≥38°C) and new onset of (or exacerbation of chronic) cough or shortness of breath

   a. Health Care Workers

   b. Residents of remote, isolated or Indigenous communities

   c. People living and working in congregate settings such as work-camps, correctional facilities, shelters, group homes, assisted living and seniors’ residences

   d. People who are homeless or have unstable housing

   e. Essential service providers (e.g. first responders)

   f. Returning travellers identified at a point of entry to Canada

In addition to these priority groups, health care providers can order a COVID-19 test for any patient based on their clinical judgment.

COVID-19: Provincial Guidance on Specimen Collection and Labeling

Specimen Collection
In the outpatient setting, collect a Nasopharyngeal (NP) Swab using the procedure described by the New England Journal of Medicine (Collection of Nasopharyngeal Specimens with the Swab Technique): https://www.youtube.com/watch?v=DVJNWefmHjE

Use the swab/collection device provided by your institution. The most common swab types used are the Copan Universal Transport Medium (UTM) System and BD™ Universal Viral Transport System.

For hospitalized patients and/or patients with evidence of lower respiratory tract disease, collect a lower respiratory tract sample (e.g., sputum, endotracheal aspirate, bronchoalveolar lavage, etc.) in a sterile screw-top container in addition to a nasopharyngeal swab.
Specimen Labelling
All specimens (cylindrical tube) must be affixed with a label which states:
- Patient name
- PHN or Date of Birth (DOB)
- Specimen type (e.g., NP swab)
- Date & time of collection

If applicable, please indicate one of the following codes on the specimen label to assist with processing and prioritization:

- **HCW1** – Health Care Worker – Direct Care
  - Essential service providers (incl. first responders)
- **HCW2** – Health Care Worker – Non Direct Care
- **LTC** – Long Term Care Facility
- **OBK** – Outbreak
  - Including people who are homeless or have unstable housing
- **HOS** – Hospital (Inpatient)
  - Emergency Department (with intent to admit)
  - Symptomatic pregnant woman in their 3rd trimester
  - Renal patients
  - Cancer patients receiving treatment
- **CMM** – Community (Outpatient)
  - Residents of remote, isolated or indigenous communities
  - Primary Care Centres and Doctor’s office
  - Emergency Department (non-admitted)
  - Surveillance
  - Returning travellers identified at point of entry

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 requested (COVID-19 NAT).


Nucleic Acid Testing (NAT) recommendations for COVID-19 in BC continue to be updated, based on the changing epidemiology of COVID-19, testing capacity, and our evolving understanding of the test sensitivity in clinical settings.

At this time, laboratory testing capacity has been increased in BC, and any physician or nurse practitioner can order a test for COVID-19 based on their clinical judgment. For some individuals and populations, the results of a COVID-19 test will change clinical or public health management. The attached recommendations for COVID-19 testing are focused on these individuals and populations.

Over the past two months, we have come to better understand COVID-19 test accuracy. We now know that false negative results can occur both early in the course of the infection as well as in severely infected patients, implying that a negative NAT does not definitively rule out COVID-19 infection.

Please note that depending on the local context and capacity, the Medical Health Officer may recommend additional COVID-19 testing for priority populations in their jurisdiction.

COVID-19 laboratory testing is recommended, for the following priority groups because the test result will change clinical or public health management.

1. **Covid-19 testing is recommended for the following if they develop new respiratory or gastrointestinal symptoms, however mild.** This includes fever, cough, shortness of breath, rhinorrhea, nasal congestion, loss of sense of smell, sore throat, odynophagia, headache, muscle aches, fatigue, loss of appetite, chills, vomiting, or diarrhoea:
   
   a. Residents and staff of Long Term Care Facilities
   
   b. Patients requiring admission to hospital or likely to be admitted, including pregnant individuals in their 3rd trimester, patients on hemodialysis, or cancer patients receiving radiation or chemotherapy.
   
   c. Patients who are part of an investigation of a cluster or outbreak as determined by the Medical Health Officer.
2. **Covid-19 testing is recommended for the following if they develop a fever (generally >38°C) and new onset of (or exacerbation of chronic) cough or shortness of breath**

   a. Health Care Workers

   b. Residents of remote, isolated or Indigenous communities

   c. People living and working in congregate settings such as work-camps, correctional facilities, shelters, group homes, assisted living and seniors’ residences

   d. People who are homeless or have unstable housing

   e. Essential service providers (e.g. first responders)

   f. Returning travellers identified at a point of entry to Canada

In addition to these priority groups, health care providers can order a COVID-19 test for any patient based on their clinical judgment.

**COVID-19: Provincial Guidance on Specimen Collection and Labeling**

**Specimen Collection**

In the outpatient setting, collect a **Nasopharyngeal (NP) Swab** using the procedure described by the New England Journal of Medicine (Collection of Nasopharyngeal Specimens with the Swab Technique): [https://www.youtube.com/watch?v=DVJNWefmHjE](https://www.youtube.com/watch?v=DVJNWefmHjE)

Use the swab/collection device provided by your institution. The most common swab types used are the Copan Universal Transport Medium (UTM) System and BD™ Universal Viral Transport System.

For hospitalized patients and/or patients with evidence of lower respiratory tract disease, collect a lower respiratory tract sample (e.g., sputum, endotracheal aspirate, bronchoalveolar lavage, etc.) in a sterile screw-top container in addition to a nasopharyngeal swab.
Specimen Labelling
All specimens (cylindrical tube) must be affixed with a label which states:

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

If applicable, please indicate one of the following codes on the specimen label to assist with processing and prioritization:

- **HCW1** – Health Care Worker – Direct Care
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- **HCW2** – Health Care Worker – Non Direct Care
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  - Renal patients
  - Cancer patients receiving treatment
- **CMM** – Community (Outpatient)
  - Residents of remote, isolated or indigenous communities
  - Primary Care Centres and Doctor’s office
  - Emergency Department (non-admitted)
  - Surveillance
  - Returning travellers identified at point of entry

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


COVID-19: Testing Guidelines for British Columbia
April 23, 2020

Guidelines for COVID-19 testing in BC are updated based on the changing epidemiology, testing capacity, and our evolving understanding of test sensitivity in clinical settings. At this time, it is critical to ensure timely identification of new infections and their contacts to prevent community spread of COVID-19.

Guidance for COVID-19 Testing by Nucleic Acid Tests (NATs)

1. Test all individuals with new respiratory or systemic symptoms compatible with COVID-19, however mild. Symptoms may include fever, chills, cough, shortness of breath, sore throat, odynophagia, rhinorrhea, nasal congestion, loss of sense of smell, headache, muscle aches, fatigue, or loss of appetite.

2. Individuals in the following groups should be prioritized for testing:
   a. Residents and staff of long-term care facilities
   b. Individuals requiring admission to hospital or likely to be admitted, such as pregnant individuals near-term, patients on hemodialysis, or cancer patients receiving radiation or chemotherapy.
   c. Healthcare workers
   d. Individuals with a higher probability of being infected with COVID-19 such as contacts of a known case of COVID-19 and travellers just returned to Canada
   e. Residents of remote, isolated, or Indigenous communities
   f. People living in congregate settings such as work-camps, correctional facilities, shelters, group homes, assisted living and seniors’ residences
   g. People who are homeless or have unstable housing
   h. Essential service providers, such as first responders

3. Healthcare providers can order a COVID-19 test for any patient based on their clinical judgment.

4. COVID-19 testing is not recommended for individuals without symptoms.

5. The Medical Health Officer may recommend testing for others, such as those who are part of an investigation of a cluster or outbreak.
Guidance on Specimen Collecting and Labelling

Specimen Collection

Collect a Nasopharyngeal (NP) Swab using the procedure described by the New England Journal of Medicine (Collection of Nasopharyngeal Specimens with the Swab Technique): https://www.youtube.com/watch?v=DVJNWefmHjE

Use the swab/collection device provided by your institution. The most common swab types used are the Copan Universal Transport Medium (UTM) System and BD™ Universal Viral Transport System.

For hospitalized patients and/or patients with evidence of lower respiratory tract disease, collect a lower respiratory tract sample (e.g., sputum, endotracheal aspirate, bronchoalveolar lavage, etc.) in a sterile screw-top 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:

- HCW1 – Health Care Worker – Direct Care
- HCW2 – Health Care Worker – Non Direct Care
- LTC – Long Term Care Facility
- OBK – Outbreaks, clusters or case contacts
- HOS – Hospitalized
- CMM – Community or Outpatient, including Urgent and Primary Care Centres
- CGT – People living in congregate settings such as work-camps, correctional facilities, shelters, group homes, assisted living and seniors’ residences.

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 NAT).


Paper Requisitions are available here: http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Forms/Labs/VI%20Req.pdf

April 23, 2020
COVID-19: Testing Guidelines for British Columbia
COVID-19: Testing Guidelines for British Columbia

May 11, 2020

Guidelines for COVID-19 testing in BC are updated based on the changing epidemiology, testing capacity, and our evolving understanding of test sensitivity in clinical settings. At this time, it is critical to ensure timely identification of new infections and their contacts to prevent community spread of COVID-19.

Guidance for COVID-19 Testing by Nucleic Acid Tests (NATs)

1. Test all individuals with new respiratory or systemic symptoms compatible with COVID-19, however mild. Symptoms may include fever, chills, cough, shortness of breath, sore throat, odynophagia, rhinorrhea, nasal congestion, loss of sense of smell, headache, muscle aches, fatigue, or loss of appetite.

2. Individuals in the following groups should be prioritized for testing:
   a. Residents and staff of long-term care facilities
   b. Individuals requiring admission to hospital or likely to be admitted, such as pregnant individuals near-term, patients on hemodialysis, or cancer patients receiving radiation or chemotherapy.
   c. Healthcare workers
   d. Individuals with a higher probability of being infected with COVID-19 such as contacts of a known case of COVID-19 and travellers just returned to Canada
   e. Residents of remote, isolated, or Indigenous communities
   f. People living in congregate settings such as work-camps, correctional facilities, shelters, group homes, assisted living and seniors’ residences
   g. People who are homeless or have unstable housing
   h. Essential service providers, such as first responders

3. Healthcare providers can order a COVID-19 test for any patient based on their clinical judgment.

4. COVID-19 testing is not recommended for individuals without symptoms.

5. The Medical Health Officer may recommend testing for others, such as those who are part of an investigation of a cluster or outbreak.
Guidance on Specimen Collecting and Labelling

Specimen Collection

Collect a **Nasopharyngeal (NP) Swab** using the procedure described by the *New England Journal of Medicine* (Collection of Nasopharyngeal Specimens with the Swab Technique): [https://www.youtube.com/watch?v=DVJNWefmHjE](https://www.youtube.com/watch?v=DVJNWefmHjE)

Use the swab/collection device provided by your institution. The following swabs are currently validated and are available for use in BC:

- Copan – Red or Blue top
- Hologic Aptima Unisex
- VWR Starplex

For hospitalized patients and/or patients with evidence of lower respiratory tract disease, collect a lower respiratory tract sample (e.g., sputum, endotracheal aspirate, bronchoalveolar lavage, etc.) in a sterile screw-top 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:

- **HCW1** – Health Care Worker – Direct Care
- **HCW2** – Health Care Worker – Non Direct Care
- **LTC** – Long Term Care Facility
- **OBK** – Outbreaks, clusters or case contacts
- **HOS** – Hospitalized
- **CMM** – Community or Outpatient, including Urgent and Primary Care Centres
- **CGT** – People living in congregate settings such as work-camps, correctional facilities, shelters, group homes, assisted living and seniors’ residences

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 NAT).


COVID-19: Testing Guidelines for British Columbia

June 1, 2020

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Guidance for COVID-19 Testing by Nucleic Acid Tests (NATs)

1. Test all individuals with new respiratory or systemic symptoms compatible with COVID-19, however mild. Symptoms may include fever, chills, cough, shortness of breath, sore throat, odynophagia, rhinorrhea, nasal congestion, loss of sense of smell, headache, muscle aches, fatigue, or loss of appetite.

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   c. Healthcare workers
   d. Individuals with a higher probability of being infected with COVID-19 such as contacts of a known case of COVID-19 and travellers just returned to Canada
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4. COVID-19 testing is not recommended for individuals without symptoms.

5. The Medical Health Officer may recommend testing for others, such as those who are part of an investigation of a cluster or an outbreak.
Guidance on Specimen Collection and Labelling

Specimen Collection

Collect a **Nasopharyngeal (NP) Swab** using the instructions provided in this video “How to perform a nasopharyngeal swab”. Note the instructions for donning and doffing of personal protective equipment (PPE). [https://youtu.be/f0xSKPm8lKA](https://youtu.be/f0xSKPm8lKA) (produced by UBC ENT and Providence Healthcare)

Use the swab/collection device provided by your institution. The following swabs are currently validated and are available for use in BC:

- Copan UTM Viral transport media – Red top
- Copan UTM Viral transport media – Blue top**
- VWR Starplex Multitrans Collector
- EZPro Swab-RT UTM transport media with Nasopharyngeal Swab (ESBE kit)
- Hologic Aptima Unisex Swab Specimen Collection Kit**
- DO NOT use the orange packaged Hologic Aptima Multitest swabs for NP collection

For hospitalized patients and/or patients with evidence of lower respiratory tract disease, collect a lower respiratory tract sample (e.g., sputum, endotracheal aspirate, bronchoalveolar lavage, etc.) in a sterile screw-top container in addition to a nasopharyngeal swab.

**Use with care when inserting into the nasopharyngeal cavity, as these swabs may cause mild trauma. Gently insert only as far as possible, and avoid forcing against resistance. Inserting approximately 2-3 cm will allow swabbing of the mid-turbinate area. In this case, swab bilateral mid-turbinates using a single swab to optimize sampling quality.

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- HOS – Hospitalized
- CMM – Community or Outpatient, including Urgent and Primary Care Centres
- CGT – People living in congregate settings such as work-camps, correctional facilities, shelters, group homes, assisted living and seniors’ residences.
- TRE – Tree planters

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 NAT).
Please refer to the BCCDC Public Health Laboratory eLab Handbook under COVID-19 test for specimen requirements.
http://www.elabhandbook.info/phsa/

Paper Requisitions are available here: http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Forms/Labs/VI%20Req.pdf