Summary of evidence for updated COVID-19 testing guidance in British Columbia

December 21, 2020 – for Healthcare Providers

The recommendations for COVID-19 testing are being updated. Resources related to testing including information on the BCCDC website, B.C. COVID-19 Self-Assessment Tool , 811, testing guidance for the public and testing guidelines for healthcare providers are being updated accordingly. The following Evidence Review provides the background and research findings that support these new recommendations. The review draws directly from experiences in British Columbia as well as other jurisdictions and provides up-to-date evidence to help support testing guidance, particularly for those **without a known COVID-19 close contact**.

The updated COVID-19 Adult and Pediatric Viral Testing Guidelines for British Columbia will be available on the BCCDC website.

Please note: updates to the testing guidance are not meant to replace clinician assessment, and providers should continue using their clinical judgment in determining whether a COVID-19 test is required.

Key points

- To date, the majority of positive COVID-19 cases in British Columbia are linked to known cases or clusters.
- The most significant predictor of a positive COVID-19 test result in BC is exposure to a known COVID-19 case.
- Symptoms that are more predictive or more strongly associated with a COVID-19 infection include fever or chills, loss or change of sense of smell or taste[1-3], cough, or difficulty breathing.
- General symptoms such as sore throat, nausea/vomiting, diarrhea, and while sometimes associated with COVID-19 infections, are not as strongly or consistently predictive of a positive test result.
- Across studies, the number of symptoms reported by a patient is strongly associated with positivity- the more symptoms, the greater the likelihood of a positive COVID-19 test.

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Summary of evidence on signs and symptoms for COVID-19

This review draws on peer-reviewed literature published on or before October 15, 2020.

A combination of symptoms is more predictive of a positive COVID-19 test[1,4,5].

- In BC, those who self-reported 3-5 symptoms at any point in their illness were 6.3 times more likely to have a positive result, and those who self-reported 1-2 symptoms were 2.2 times more likely than "healthy" controls (no positive "top 6 symptoms").[6]

Across many studies, symptoms more specifically and/or strongly predictive of COVID-19 include:

- Fever or chills[1-3,7-12], Loss/change of sense of smell or taste[1-3], Cough[8,10,11], or difficulty breathing[2,3,8,13].
- US surveillance data shows that a combination of fever, cough, or shortness of breath were reported in 69.7% of cases.[14]

Other general symptoms associated with COVID-19 that have been assessed to date with mixed results

- Nausea, Vomiting, or Diarrhea[3,7], Fatigue[2,8-12], Headache[9,11], and Body/muscle ache[1,11] have been associated with positive tests however, other studies found diarrhea and headache[15], sore throat[1,7], and have also been associated with negative COVID-19 test result.

Some symptoms are less likely to be associated with a positive COVID-19 test

- From U.S. surveillance data, symptoms least commonly reported were: runny nose (6.1%), abdominal pain (7.6%), loss of smell or taste (8.3%), nausea/vomiting (11.5%), diarrhea (19.3%), and sore throat (20%).[14]

Asymptomatic patients and those with varying symptoms mean that relying on common symptoms as recommendations for testing may not be enough to identify COVID-19 infections.

- Positive test results were significantly higher among those with exposure to a known case
- Due to asymptomatic and heterogeneous symptoms presentation, commonly used symptoms may not always be sufficient for assessment of COVID-19 infection in the absence of an exposure.[16] Clinical judgement need to be applied when deciding to test outside of the general population guidance for testing.

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