

## ENVIRONMENTAL SCAN

# (ARCHIVED) COVID-19 Screening Tools for Children in the Post-Vaccination Era

Published: July 2021

Archived: February 2022

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### ARCHIVED DOCUMENT

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## Key Findings

- Jurisdictions scanned (i.e., United States, Australia, United Kingdom and several Canadian provinces/territories), have not made any changes to their COVID-19 screening tools to date based on vaccination status, increasing vaccination rates and lower incidence of community transmission. Most jurisdictions did account for and had differential guidance for individuals experiencing 'main' COVID-19 symptoms and those with more non-specific symptoms.
- Some jurisdictions have recently updated screening tools with differential testing guidance based on symptom type and age-based recommendations, however still maintained some public health advice to prevent spread (e.g., stay home and re-evaluate symptoms after 24 hours) even if testing was not recommended. It is not clear what specific changes were made to these updated screening tools from previous versions.
- In general, children who exhibit symptoms consistent with an underlying chronic medical condition (e.g., allergies) do not have to self-isolate and seek testing.
- There is emerging evidence of milder symptom (e.g., headache, runny nose) presentation in younger populations associated with the Delta variant. Further evidence is needed as to the impact of variants and partial vaccination status on symptom presentation.

## Objectives and Scope

This environmental scan was conducted to revisit the COVID-19 school and child care screening tool symptoms list, with specific implications for children attending camps this summer. Considerations for updates to the screening tool was prompted by the increasing vaccination rates provincially, including one (and possibly two) dose eligibility for those 12 years and older this summer, and declining case counts. Self-isolation and testing guidance for household members of symptomatic children was out of scope.

# Background

## Ontario COVID-19 Screening Tool

Ontario requires the screening of students attending school, child care and camps as part of interventions to prevent the introduction and transmission of COVID-19.

The screening tool for children in school and child care was updated in October 2020<sup>1</sup> to provide differential guidance for children based on symptom type. Children were required to self-isolate and contact their health care provider (HCP) if they experienced one symptom from the category 1 list (e.g., fever, cough, shortness of breath, decrease or loss of smell or taste), which were considered the more common signs of COVID-19. Children who experienced one symptom from the category 2 list (e.g., sore throat, headache or runny nose) were advised to stay home for 24 hours from symptom onset and return to school once the symptom improved. Children who experienced two or more symptoms from the category 2 list were advised to self-isolate immediately and contact their HCP for further advice.

As the incidence of COVID-19 in Ontario increased<sup>2</sup>, in part due to the increased transmissibility of variants of concern (VOC), Ontario applied stricter screening measures and updated the tool to advise testing for a single symptom screen<sup>3</sup> on 22 Feb 2021.

## Ontario Vaccination Roll-Out and Re-Opening

The mass delivery of vaccines to the broader adult community began in April 2021, marked by Phase 2 of Ontario's vaccination plan<sup>4</sup>. As vaccination coverage increased and reinstatement of stricter public health measures (e.g., provincial stay-at-home order), Ontario observed a decline in overall case numbers<sup>2</sup>.

As of 23 May 2021, youth between the ages of 12 and 17 years old were able to book an appointment for the Pfizer-BioNTech COVID-19 vaccine<sup>5</sup>. Ontario entered Step 1 of its three-step Roadmap to Reopen<sup>6</sup> on 11 June 2021, which allowed for gradual re-opening of day camps and other outdoor spaces. Step 2 of the reopening plan began on 30 June 2021, which saw the opening of some indoor spaces, including overnight camps.

## Methods

A rapid jurisdiction scan was conducted to review COVID-19 screening tools, with a focus on symptom screening for school-aged children. The list of jurisdictions selected was not exhaustive, but included examples from other Canadian provinces (Quebec, British Columbia) and the Northwest Territories. International jurisdictions included Australia, the United States (US) and the United Kingdom (UK). A summary of the COVID-19 screening tools across jurisdictions can be found in [Appendix A](#).

## Results

The following jurisdictions have a single symptom screening tool, requiring self-isolation and testing for individuals experiencing any one COVID-19 symptom.

## New York, USA

- The New York City (NYC) Health Screening Questionnaire<sup>7</sup> intended for staff, students and visitors entering any education facility focusses on any one of the ‘main’ symptoms (fever, new cough, new loss of taste or smell, shortness of breath), however there is a broader list of COVID-19 symptoms referenced in the NYC Department of Health website<sup>8</sup>.
- Furthermore, the New York State Interim guidance for child care, day camp, and overnight camp programs<sup>9</sup> advises that individuals who experience any symptom of COVID-19 should not be allowed to enter the facility and must be sent home with instructions to contact a healthcare provider for assessment and testing.

## Victoria, Australia

- The Victorian Government (Australia)<sup>10,11</sup> advises that children who exhibit any one symptom of COVID-19 get tested and self-isolate, emphasizing even children with ‘the mildest of symptoms’ should follow the same public health advice. The symptoms list highlights some common signs and other non-specific signs, but treatment guidance remains the same for any one symptom.

The jurisdictions listed below have differential guidance based on symptom and age categories. The symptoms are categorized into ‘main’ symptoms and other less specific symptoms. One jurisdiction accounted for age groups, with less stringent symptom screening for younger children.

## Quebec, Canada

- The COVID-19 Symptom Self-Assessment Tool<sup>12</sup> has a lower threshold for children 6 years and older and advises self-isolation and testing for this group if they experience one or more COVID-19 symptoms.
- Symptomatic children between 6 months and 5 years old are advised to stay home and monitor their symptoms for 24 hours. If symptoms persist more than 24 hours, then testing is recommended.

## Northwest Territories, Canada

- The Daily Symptom Screening Tool for Students and Staff<sup>13</sup> categorizes its symptom list into 3 colour-coded groups (red, yellow, green).
- The red and yellow symptoms align with the ‘main’ COVID-19 symptoms (e.g., shortness of breath, fever, cough, loss of smell or taste) seen in other screening tools. Green symptoms capture the more non-specific symptoms (e.g., sore throat, runny nose, headache).
- Testing is advised if an individual experiences only one green symptom but individuals experiencing one yellow symptom or two or more green symptoms are advised to contact their healthcare provider.
- The green symptom list is more inclusive of symptoms not included in Ontario’s screener (e.g., abdominal pain, skin changes or rash).

## British Columbia, Canada

- The BC self-assessment tool categorizes its symptom list into two groups, with symptoms in the first group (e.g., fever, chills, cough, loss of sense of smell or taste, difficulty breathing) prompting stricter guidance including self-isolation and testing.
- The second group consists of the non-specific symptoms (e.g., sore throat, body aches, headache). An individual with one of these symptoms is advised to stay home until they feel better. Two or more symptoms would prompt self-isolation and re-evaluation of symptoms after 24 hours. Testing is advised if symptoms do not improve after 24 hours.
- Data from the self-assessment tool is used to create a dashboard predicting COVID-19 case trends based on a validated algorithm developed from an observational study<sup>14</sup> published in May 2020. The algorithm uses a combination of COVID-19 symptoms and demographic factors (personal email communications with Dr. Jason Wong at BC Centre for Disease Control).

## England, United Kingdom

- The school guidance<sup>15</sup> advises self-isolation and testing for anyone who experiences one or more symptoms of COVID-19, however the symptom list is limited to 3 of the ‘main’ symptoms<sup>16</sup> (a high temperature, a new continuous cough and a loss or change to smell or taste).
- It is noted in the guidance for households<sup>17</sup> that there are other symptoms (not explicitly specified) linked to COVID-19, but these symptoms may be a result of another cause and would not, on their own, be a reason to require testing.

## Considerations for Delta Variant

Based on a Threat Assessment Brief from the ECDC<sup>18</sup>, the Delta variant is estimated to be 40-60% more transmissible than the Alpha variant and may be associated with a higher risk of hospitalization. The report referenced modelling scenarios which indicate that any relaxation of the non-pharmaceutical interventions implemented in the beginning of June in the European Union/European Economic Area over the summer months could lead to a rapid and significant increase in case numbers, including increased morbidity and mortality.

Early evidence from the United Kingdom<sup>19</sup> suggests that the clinical presentation of individuals infected with the Delta variant of concern may be milder, and consist more commonly of non-specific symptoms. It is unclear if this represents a true shift in symptom presentation, or a reflection of shifting demographics of who is being infected given high rates of vaccination.

The prevalence of the Delta variant in Ontario is quickly increasing, with an effective reproduction number  $R(t)$  of 1.00 as of 01 Jul 2021<sup>20</sup>. As the global community prepares for the Delta variant to become the dominant variant, Ontario has ramped up its vaccination roll-out<sup>21</sup> to offer accelerated second doses for youth between the ages of 12 and 17 who live in designated Delta hot spots.

## Limitations

Our scan was not exhaustive, and relied on a convenience search strategy which looked at only jurisdictions with webpages in English.

Most jurisdictions did not maintain a record of previous versions of its screening tool, hence it was difficult to identify the specific changes made and if the changes correlated with any public health indicators such as increasing vaccination rates and lower case counts.

It is unclear the rationale behind symptom and age-specific guidance across jurisdictions, although most jurisdictions had a lower threshold for requiring testing and isolation for symptoms generally thought to be non-specific for COVID-19.

## Conclusion

While there are overall lower case numbers, there is still a need for vigilance in identifying COVID infection in symptomatic individuals, given the emerging dominance of the Delta variant.

This scan did not identify any jurisdictions that had differential advice for assessing symptoms based on vaccination status or incidence of community transmission. However, the provincial COVID-19 Fully Vaccinated Individuals interim guidance<sup>22</sup> supports the management of symptomatic individuals in accordance with the Management of Cases and Contacts guidance<sup>23</sup> (self-isolate and seek testing immediately), regardless of vaccination status.

A more sensitive and inclusive approach to COVID-19 screening for any one symptom is recommended to ensure we do not miss any possible cases and prevent transmission. Another approach that can be considered is to assess non-specific symptoms for 24 hours prior to requiring testing, which is what some jurisdictions have implemented.

Considerations for increased accessibility to rapid testing for children and families would serve as an additional tool to facilitate earlier detection of individuals with COVID-19 and prevent spread to others in the school, child care and camp settings.

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# Appendix A

## Ontario<sup>1</sup>

### Symptom List

- Fever (37.8 C or higher) and/or chills
- Cough or barking cough
- Shortness of breath
- Decrease or loss of taste or smell
- Sore throat or difficulty swallowing
- Runny or stuffy/congested nose
- Headache
- Nausea, vomiting, diarrhea
- Extreme tiredness or muscle aches

Symptoms that are related to other known causes or medical conditions should be screened out.

### Screening Tool Recommendation

The COVID-19 school and child care screening tool advises that a student who experiences any one symptom must self-isolate and see a healthcare provider for further advice or assessment.

## New York City, United States<sup>7</sup>

### Symptom List

- Fever (37.8 C or higher) and/or chills
- Cough or barking cough
- Shortness of breath
- Decrease or loss of taste or smell
- Sore throat or difficulty swallowing
- Runny or stuffy/congested nose
- Headache
- Nausea, vomiting, diarrhea
- Extreme tiredness or muscle aches

Symptoms that are related to other known causes or medical conditions should be screened out.

### Screening Tool Recommendation

The NYC Department of Education Health Screening Questionnaire advises that an individual who experiences any symptom of COVID-19 in the past 10 days are not required to self-isolate if they also meet both of the following criteria:

- Lab-confirmed negative COVID-19 result, AND
- No symptoms for at least 24 hours

### Victoria, Australia<sup>10,11</sup>

#### Symptom List

'Main' symptoms:

- Fever (100 F or greater)
- New cough
- New loss of taste or smell
- Shortness of breath

Other symptoms include, but not limited to:

- Fatigue
- Muscle or body aches
- Headache
- Sore throat
- Congestion or runny nose

Nausea, vomiting, diarrhea

#### Screening Tool Recommendation

Children with any one symptom, however mild, should self-isolate and seek testing.

### Quebec<sup>12</sup>

#### Symptom List

- Fever (rectal temperature 38.5 C or higher in children ages 5 and under; oral temperature of 38.1 C or higher in children 6 years and older)
- Sudden loss of sense of smell without nasal congestion, with or without a loss of taste
- Major fatigue
- Significant loss of appetite

- General muscle pain (not related to physical exertion)
- Headaches (6-17 years old only)
- Cough (new or worse)
- Shortness of breath, difficulty in breathing
- Sore throat
- Runny or stuffy nose\*
- Nausea, vomiting, diarrhea
- Stomach aches

\*Individuals with seasonal allergies and have clear nasal discharge or nasal congestion with sneezing or itchy eyes during allergy season need to test for COVID-19 if:

- Symptoms change over time or accompanied by other signs of COVID-19
- Symptoms do not respond to allergy medication
- Symptoms appear within 14 days of close contact with a case of COVID-19
- Test is recommended by a healthcare professional (e.g., during outbreak)

### **Screening Tool Recommendation**

The COVID-19 Symptom Self-Assessment Tool provides differential guidance for children of two age groups:

- 6 months to 5 years old
- 6 – 17 years old

A child (6 months and 5 years old) who experiences one or more symptoms should stay home and re-evaluate the situation after 24 hours. If no change or symptom(s) worsens after 24 hours, the child is advised to continue self-isolation and seek testing.

A child (6-17 years) who experiences one or more symptoms should self-isolate and seek testing

## **Northwest Territories, Canada<sup>13</sup>**

### **Symptom List**

'Red' symptoms: Shortness of breath or difficulty breathing

'Yellow' symptoms:

- Fever
- New or worsening cough
- Loss of sense of smell or taste

'Green' symptoms:

- Generally feeling unwell
- Chills
- Muscle aches
- Fatigue or weakness
- Sore throat
- Congestion or runny nose
- Headache
- Nausea, vomiting, diarrhea
- Abdominal pain
- Skin changes or rash

Children with chronic symptoms e.g., seasonal allergies should seek guidance from their health care provider to determine if re-testing is required and, if so, how often.

#### **Screening Tool Recommendation**

The Daily Symptom Screening Tool for Students and Staff advises:

Individuals with any 'red' symptoms should call 911.

Individuals with one 'yellow' symptom or two or more 'green' symptoms should get assessed by a healthcare provider.

Individuals with one 'green' symptom should seek testing.

### **British Columbia<sup>14</sup>**

#### **Symptom List**

Category 1:

- Fever (above 38 C)
- Chills
- Cough
- Loss of sense of smell or taste
- Difficulty breathing

Category 2:

- Sore throat

- Loss of appetite
- Headache
- Body aches
- Extreme fatigue or tiredness
- Nausea, vomiting, diarrhea

#### **Screening Tool Recommendation**

- Individuals with one or more category 1 symptoms are advised to self-isolate and get tested.
- Individuals with one category 2 symptom should self-isolate until they feel better.
- Individuals with two or more category 2 symptoms should self-isolate and wait 24 hours. Testing is advised if they do not feel better after 24 hours.

### **England, United Kingdom<sup>16-18</sup>**

#### **Symptom List**

Main' symptoms:

- High temperature (you feel hot to touch on your chest or back)
- New, continuous cough (coughing a lot for more than an hour, or 3 or more coughing episodes in 24 hours)
- Loss or change to sense of smell or taste

#### **Screening Tool Recommendation**

- Individuals with one or more main symptoms must self-isolate and seek testing as soon as possible.
- There are several other symptoms linked with COVID-19, but may have another cause and are not on their own a reason to seek testing.

## Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). COVID-19 screening tools for children in the post-vaccination era. Toronto, ON: Queen's Printer for Ontario; 2021.

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