



Respiratory Epidemiology Summary

December 02, 2022

Summary (Epidemiological week 47, 20 Nov to 26 Nov)

This report presents information from laboratory testing, community healthcare practitioner visits, and wastewater surveillance indicators used to monitor the activity of seasonal respiratory viruses circulating in British Columbia (BC).

Clinical indicators of acute respiratory illnesses continue to increase in BC, notably among children, as expected with seasonal respiratory viruses. Most of the observed relative increase is primarily related to influenza A/H3N2, but also to other common seasonal respiratory viruses (respiratory syncytial virus (RSV), enterovirus/rhinovirus (ERV), parainfluenza, adenovirus, human metapneumovirus, and seasonal coronavirus). SARS-CoV-2 activity, the virus that causes COVID-19, remains relatively stable across multiple indicators.

Laboratory

One of the key indicators used is laboratory test results of submitted respiratory specimens. Test positivity for influenza A (24%) and RSV (7%) remain high and stable relative to last week. Among the children tested at BC Children's Hospital, test positivity for influenza A has remained high at 35%, and test positivity for RSV has increased slightly to 21%.

Currently, influenza A/H3N2 is the predominant circulating subtype detected. Since epi-week 35 (beginning Aug 28, 2022) to epi-week 47 (ending Nov 26, 2022) about 90% of subtyped influenza A viruses have been H3N2, with H1N1 constituting about 10%. There has also been sporadic detection of influenza B so far this season.

Syndromic

Another indicator for monitoring respiratory virus activity is the share of visits to community healthcare practitioners for symptoms of a new respiratory illness, such as a cough or fever. This indicator has been increasing, with the biggest increase in visits for acute respiratory infections seen among children and youth, and, more recently, for influenza-related symptoms.

Wastewater

Finally, wastewater tests from all five water treatment plants suggest a slow increase in levels of SARS-CoV-2 detection.

Outbreaks

In the most recent epi weeks (46 and 47), there were 7 COVID-19 outbreaks (3 and 4, respectively). Of the 7, 2 were in long-term care facilities and 5 in acute care facilities. During the same time period, there were 7 influenza A long-term care facility outbreaks (3 in epi week 46 and 4 in epi week 47). Of the 4 for which subtyping information is available, all were found to be H3N2.



1.1. Pathogen Characterization

During the month of November, the number of influenza A virus infections detected in the province has increased and stabilized at a test positivity of 24% in the last week, which is earlier than previous seasons. Overall, we are observing expected patterns in seasonal circulation for RSV, albeit higher positivity compared to historical averages for this time of year. The number of SARS-CoV-2 viruses detected and the test positivity (~10%) are stable. The number of entero and/or rhinoviruses (ERV) detected and test positivity (~15%) is on the declining trend.

In this past week (epi-week 47, Nov 20-26), influenza A was the most detected virus in BC. Influenza A virus positivity was 25% (868/3505) with subtyping showing that H3N2 has been the predominant (>90%) subtype since the start of this 2022/2023 season.

Among children tested at BC Children's Hospital, influenza is the most commonly detected virus, and test positivity was highest for influenza (35%). Both positivity and rate of growth of influenza are higher compared to the 5-year pre-pandemic historical average (2014/15 to 2018/19). RSV positivity is 21% (within historical range), while SARS-CoV-2 positivity was 8%.

1.2. Community Visits for Respiratory Illness

Overall, the share of community visits to health care practitioners for respiratory symptoms has been increasing since mid-September. The greatest increase was for acute respiratory infection-related symptoms (see Supplementary Information for more details) and, more recently, influenza-related symptoms, which is above the historical average for this time of year. A higher proportion of these visits was observed among younger children, which is a typical pattern for seasonal respiratory viruses. Share of visits related to COVID-19 symptoms is relatively stable across regions and age groups.

Since mid-September, community visits (based on physician billing codes) for:

- The share of visits for acute respiratory symptoms increased in all regions and particularly among the 0-14 age group and stabilizing in the 15-19 age group.
- The share of visits for influenza related symptoms also continue to increase among children aged 0-14 years, but the rate of growth has slowed down. Among 15-19 year olds, it started to decline.
- The share of visits for COVID-19-related symptoms continue to be relatively stable across regions and age groups.
- Note that community visit numbers are based on physician billing codes which are assigned based on clinical suspicion. Presenting symptoms may overlap for various respiratory conditions, and there is potential for misclassification. Trends presented here should be interpreted along with pathogen characterization data. Please refer to the limitations section of the data notes in the Supplementary Information section for further information.

1.3. Wastewater

SARS-CoV-2 viral loads measured in all Metro Vancouver wastewater plants are slowly increasing.



1.4. COVID-19 Weekly Summary

In the most recent week (November 20–November 26, 2022), the number of reported COVID-19 cases among individuals eligible for PCR testing was higher compared to the previous week (November 13–November 19, 2022). Trends in severe outcomes (new hospital admissions, new critical care admissions, and deaths) are relatively stable or declining overall based on reported information so far.

Within the last four weeks (October 30–November 26, 2022):

- The 7-day rolling average for cases has been slowly increasing since November 4.
- The number of new hospital admissions has been slowly declining.
- The number of new critical care admissions remained stable. Average numbers ranged from 1 to 9 counts daily.
- The number of deaths within 30 days of a first positive COVID-19 test had declined. Average numbers ranged from 0 to 11 counts daily.

Within the last week (November 20–November 26, 2022):

- There were 604 cases reported.
- There were 161 new hospital admissions reported.
- There were 34 new critical care admissions reported.
- There were 26 deaths within 30 days of a first positive COVID-19 test reported.
- We operate in a live database environment and it is expected that the number of new hospital admissions, critical care admissions and deaths in the current report week will increase over time with further updates of data feeds to BC Centre for Disease Control.

On December 2, 2022:

- There were 369 individuals in the hospital who tested positive for COVID-19.
- There were 38 individuals in critical care who tested positive for COVID-19.

1.5. COVID-19 Outbreak

The number of COVID-19 care facility outbreaks have been consistent since late October, at 3-4 outbreaks per epi-week from week 44 - 46 (October 30 - November 19). In epi-week 47 (November 20 - 26) there were 4 outbreaks, all in acute care facilities.