BC Centre for Disease Control
Provincial Health Services Authority

# Respiratory Epidemiology Summary

November 24, 2022

## 1. Summary (Epidemiological week 46, 13 Nov to 19 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. They show a notable increase in test positivity for influenza (24%) and RSV (6%), especially among the pediatric population (28% and 16%, respectively). Currently, influenza H3N2 is the predominant circulating subtype detected. Since epi-week 35 (beginning Aug 28, 2022) to epi-week 46 (ending Nov 19, 2022) about 90% of subtyped influenza A viruses have been H3N2, with H1N1 constituting about 10%. There has also been sporadic and rare 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.

**Wastewater**

Finally, wastewater tests from four of five water treatment plants suggest relatively stable levels of SARS-CoV-2 detection, with an increase at one water treatment plant.

## 1.1. Pathogen Characterization

*Since the start of November, the number of influenza infections detected in the province has been nearly doubling every week. Increases in influenza A and RSV are being detected earlier this season. The number of SARS-CoV-2 viruses detected are stable. The number of entero and/or rhinoviruses (ERV) are declining.*

As of this past week, influenza is now the most commonly detected virus in BC, surpassing SARS-CoV-2. Influenza A positivity was 24%, with subtyping showing that H3N2 is the predominant (>90%)

subtype. Nationally, influenza test positivity continues to surpass the 5% threshold, which prompted the Public Health Agency of Canada to announce the start of the 2022-23 seasonal influenza epidemic last week, see: https://www.canada.ca/en/public-health/services/diseases/flu-influenza/influenza-surveillance/weekly-influenza-reports.html.

Among children tested at BC Children's and Women's Hospitals, influenza is the most commonly detected virus, and percent positivity was also highest for influenza (28%). 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 16% (within historical range), while SARS-CoV-2 positivity is ~10%.

A targeted proportion of enterovirus/rhinovirus specimens is further subtyped among children and teenagers in seasons when enterovirus D68 is expected to more commonly circulate (for further details, see Data Notes). Of the samples that undergo targeted subtyping, in epidemiological week 45, 6% are testing positive for enterovirus D68, which has been declining over the past 3 weeks. This proportion is not necessarily representative of broader patterns in the community.

## 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 symptoms. A higher proportion of these visits is observed among younger children, which is a typical pattern for seasonal respiratory viruses. COVID-19-related visits have started to show early signs of decline 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 0-19 age group.
- More recently, there has been a sharp increase in the share of visits for influenza related symptoms among children aged 0-19.
- The share of visits for COVID-19-related symptoms have started to show an early sign of decline 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 load is slowly but consistently increasing at the Annacis wastewater plant. Viral loads are stable at other Metro Vancouver wastewater plants.*

## 1.4. COVID-19 Weekly Summary

*In the most recent week (November 13–November 19, 2022), the number of reported COVID-19 cases among individuals eligible for PCR testing was slightly higher compared to the previous week (November 6–November 12, 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 23–November 19, 2022)**:

- The 7-day rolling average for cases declined slowly from October 23 to November 4 and has increased slowly up to November 19.
- 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 10 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 13–November 19, 2022)**:

- There were 498 cases reported.
- There were 144 new hospital admissions reported.
- There were 23 new critical care admissions reported.
- There were 21 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.

## 1.5. COVID-19 Outbreak

*The number of COVID-19 care facility outbreaks has been steady since October (range 1 to 3 outbreaks per epi week), peaked the week of November 6-12, 2022 (8 outbreaks), and is low the week of November 12-19, 2022.*

From November 13-19, one COVID-19 care facility outbreak in an acute care facility was declared.