



## Respiratory Epidemiology Summary

---

December 15, 2022

### Summary (Epidemiological week 49, Dec 4 to 10)

Influenza activity remains high, but with signs of recent decline. SARS-CoV-2 activity, the virus that causes COVID-19, remains relatively stable. Other seasonal respiratory viruses, such as respiratory syncytial virus (RSV), continue to be present in the community.

### Laboratory

In this past epi week, influenza A was the most detected virus in BC, with subtyping showing that H3 has been the predominant (~90%) subtype since the start of this respiratory 2022/23 season.

Test positivity for influenza A shows steady decline from a high of 27% in epi week 47 to 20% in current epi week 49. RSV test positivity (9%) continues to increase, up from 6% in week 47. Among children aged 0-18 years, test positivity for both influenza A and RSV (28%) remains higher than in the overall population.

There has been sporadic detection of influenza B so far this season.

### Syndromic

The share of visits to community healthcare practitioners for symptoms of a new respiratory infection remains at elevated but stable levels. Share of visits for influenza symptoms are higher than is typical for this time of year, but are within historical peak levels.

### Wastewater

Wastewater tests from all five water treatment plants suggest a slow increase in levels of SARS-CoV-2.

### Outbreaks

There were 2 COVID-19 outbreaks and 4 influenza outbreaks in long-term care settings. Two settings reported influenza A/H3 and the other two settings reported influenza A (subtype unknown).

Consistent with other influenza surveillance indicators, influenza facility outbreak activity is higher than expected for this time of year.

### Severe outcomes

BCCDC has not received any new notifications of influenza-associated deaths in the pediatric population since last week. So far this respiratory season, BCCDC is aware of 6 reports of recent influenza-associated deaths among children and youth in BC (1 aged <5 years, 3 aged 5-9 years, and 2 aged 15-19 years). Several of the children experienced secondary bacterial infections, which can be a complication of influenza contributing to more severe illness.



## 1.1. Pathogen Characterization

In this past week (epi week 49, Dec 4-10), influenza A was the most detected virus in BC, with test positivity of 20% (1082/5326). Currently, influenza A/H3 is the predominant circulating subtype detected; since epi week 35 (beginning Aug 28, 2022) to epi week 48 (ending Dec 10, 2022) about 90% of subtyped influenza A viruses have been H3.

Other seasonal respiratory viruses (respiratory syncytial virus (RSV), enterovirus/rhinovirus (ERV), parainfluenza, adenovirus, human metapneumovirus, and seasonal coronavirus) are also present in the community. For RSV, test positivity continues to increase and is higher (~9%) compared to historical averages for this time of year (~5%). The number of SARS-CoV-2 viruses detected remains relatively stable. The number of entero and/or rhinoviruses (ERV) detected and test positivity (~10%) remains low and stable.

Among children tested in laboratories in Vancouver (including BC Children's Hospital), Richmond, and the North Shore, influenza A is also the most commonly detected virus. Test positivity for influenza A remains high despite decreases over the past two weeks, with both influenza A and RSV showing a test positivity of 28%. Both positivity and rate of growth of influenza have been higher this season compared to the 5-year pre-pandemic historical average (2014/15- 2018/19). By contrast, rate of growth and test positivity in the past week for RSV is comparable to historical ranges. SARS-CoV-2 positivity among children remains low (~4%).

## 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, but has recently started to stabilize at elevated levels. A higher proportion of these visits continues to be observed among younger children. Share of visits for influenza symptoms are higher than is typical for this time of year, but are within historical peak levels. Share of visits for COVID-19 symptoms continues to decline across regions and age groups.

Note that community visit numbers are based on physician billing diagnostic codes which are often 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. There are natural lags to these 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 epi week (Dec 4-10), the number of reported COVID-19 cases among individuals eligible for PCR testing was higher compared to the previous epi week (Nov 27-Dec 3). 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 (November 13-December 10, 2022):**

- The 7-day rolling average for cases has been slowly increasing.
- The number of new hospital admissions have declined slightly.
- 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 has been stable. Average numbers ranged from 1 to 9 counts daily.

### **Within the last week (December 4-December 10):**

- There were 659 cases reported.
- There were 171 new hospital admissions reported.
- There were 28 new critical care admissions reported.
- There were 27 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 15, 2022:**

- There were 374 individuals in the hospital who tested positive for COVID-19.
- There were 31 individuals in critical care who tested positive for COVID-19.

## 1.5. Outbreaks

The number of COVID-19 care facility outbreaks continues to be relatively stable, at 2-5 outbreaks per week from epi week 46 to epi week 49 (Nov 13-Dec 10).

Consistent with other influenza surveillance indicators, influenza facility outbreak activity is higher than expected for this time of year.

In epi week 49 (Dec 4-10), there were 2 COVID-19 outbreaks and 4 influenza outbreaks, all in long-term care settings. Two settings reported influenza A/H3 and the other two settings reported influenza A (subtype unknown).