



## Respiratory Epidemiology Summary

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March 16, 2023

### Summary (Epidemiological week 10, March 05-11)

Influenza activity remains at low levels. Respiratory syncytial virus (RSV) activity is declining, consistent with historical trends for this time of year. Enterovirus and/or rhinoviruses (ERV) activity returned to expected levels for this time of year; further characterization indicates that this activity is due to rhinoviruses. There is some evidence of increased COVID-19 activity in wastewater, suggesting a possible rise in community infections. Other indicators such as COVID-19 test positivity and hospitalisations remain stable.

### Laboratory

Influenza A test positivity continued to remain low in epi-week 10 (0.6%). Influenza B test positivity was 0.6% in epi-week 10. RSV test positivity of 5.2% in epi-week 10 remained broadly within the historical range. ERV activity was also broadly consistent with the historical average for this time of year in adults, at 15%. Among children 18 years and younger, RSV positivity was 8.3% in epi-week 10, below historical levels. Test positivity for influenza was 2.9%, below its historical average, and for SARS-CoV-2, 8.9%. ERV positivity in children was 23%, in line with the historical average.

### Syndromic

The proportion of community health care visits for respiratory symptoms remained relatively stable at levels below historical averages for this time of year.

### Wastewater

On February 28<sup>th</sup> 2023, BCCDC began using a more sensitive test for SARS-CoV-2 in wastewater. Increases in the viral signal after this date compared to before it may be due in part to this change. Please use caution when comparing data before and after February 28<sup>th</sup>, 2023. Evidence of increased viral load of SARS-CoV-2 has been detected in the majority of reporting wastewater plants.

### Outbreaks

In epi-week 10, there were 2 COVID-19 outbreaks in long-term care facilities.

### Severe outcomes

Six influenza-associated deaths were reported among children and youth in BC (1 aged <5 years, 3 aged 5-9 years, and 2 aged 15-18 years), all in November/December 2022. Several experienced secondary bacterial infections, which can be a complication of influenza contributing to more severe illness.

### Influenza Vaccine Effectiveness (VE) Estimate

Preliminary estimates by the [Canadian Sentinel Practitioner Surveillance Network \(SPSN\)](#) suggest that between early November and mid-December, the current season's vaccine reduced the risk of medically-attended A/H3 illness by about half in vaccinated compared to unvaccinated individuals. Details are published [here](#).



## 1.1. Pathogen Characterization

### All ages

Influenza A positivity remained very low in epi-week 10 (0.6%). Cumulatively, influenza A/H3 viruses comprise 87% of subtyped influenza viruses this respiratory season. Influenza B detection rose in BC from 0.08% in epi-week 5 to 0.6% in epi-week 10.

Respiratory syncytial virus (RSV) percent positivity continued to decrease in epi-week 10 at 5.2%, similar to the historical average (2014/15-2018/19) for this time of year (7.8%). SARS-CoV-2 test positivity remains relatively stable overall, at 11% in epi-week 10. Enterovirus and/or rhinoviruses (ERV) positivity was 15% in epi-week 10, comparable to the historical average for this time of year (12%). Additional testing was performed on a subset of ERV positive respiratory samples. Samples were negative by enterovirus specific PCR and sequencing based typing. It is therefore assumed that the samples are positive for rhinovirus, suggesting rhinoviruses (and not enteroviruses) are currently circulating.

Activity of adenovirus, at 4.9% in epi-week 10, was higher than the historical average of 1.9%.

The activity of other seasonal respiratory viruses (e.g. parainfluenza, human metapneumovirus, seasonal coronaviruses) is within the historical range for this time of year.

### Children and youth

Among children and youth 18 years and younger tested in laboratories in Vancouver (including BC Children's Hospital), Richmond, and the North Shore, influenza test positivity continued to remain low at 2.9% in epi-week 10. RSV positivity was 8.3% in epi-week 10, below the historical average of 21% for this time of year. ERV test positivity was 23% in epi-week 10, similar to the historical average of 24%. Positivity for SARS-CoV-2 was 8.9% in epi-week 10, and has remained relatively stable over the last several months. Adenovirus positivity in epi-week 10 remained high at 14%, compared to a historical average of 6.0%.

## 1.2. Community Visits for Respiratory Illness

*Note that community visit numbers are based on physician billing diagnostic codes, which are often assigned based on clinical suspicion and which may lag. Presenting symptoms may overlap for various respiratory conditions, and there is potential for misclassification. Please refer to the limitations section of the data notes in the Supplementary Information section for further information.*

The proportion of community visits for respiratory symptoms, including pneumonia and influenza, continued to be relatively stable and at levels below historical averages for this time of year with broadly consistent patterns across health authorities. The proportion of visits for acute respiratory illness (the most common respiratory diagnostic code billed) for individuals in all age groups remained at levels lower than historical averages for this time of year. The proportion of visits for clinically-diagnosed COVID-19 remained low and stable.



### 1.3. Wastewater

On February 28<sup>th</sup> 2023, BCCDC began using a more sensitive test for SARS-CoV-2 in wastewater. Increases in the viral signal after this date compared to before it may be due in part to this change. Please use caution when comparing data before and after February 28<sup>th</sup>, 2023. Evidence of increased viral load of SARS-CoV-2 has been detected in the majority of reporting wastewater plants.

### 1.4. COVID-19 Weekly Summary

In epi-week 10 (March 5-11), the number of reported COVID-19 cases (374) among individuals eligible for PCR testing was higher than in epi-week 9 (February 26-March 4: 347). However, trends in severe outcomes (new hospital admissions, new critical care admissions, and deaths) have been relatively stable or declining overall in the most recent four weeks based on the information available thus far.

**Over the last four weeks, from epi-week 7 to epi-week 10 of 2023 (February 12-March 11, 2023):**

- The 7-day rolling average for cases was stable and ranged from 97 to 119 per day.
- The 7-day rolling average for new hospital admissions decreased from 21 to 15 per day.
- The 7-day rolling average for new critical care admissions was stable, ranging from 3 to 4 per day.
- The 7-day rolling average for deaths within 30 days of a first positive SARS-CoV-2 test result was stable, ranging from 3 to 5 per day.

**Within the last week (March 5-11, 2023):**

- There were 374 cases reported.
- There were 102 new hospital admissions reported.
- There were 31 new critical care admissions reported.
- There were 18 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 March 16, 2023:**

- There were 222 individuals in the hospital who tested SARS-CoV-2 positive.
- There were 17 individuals in critical care who tested SARS-CoV-2 positive.

### 1.5. Outbreaks

The weekly number of reported COVID-19 care facility outbreaks has been less than six since the start of 2023. In epi-week 10 (March 5-11, 2023), there were 2 outbreaks in long-term care facilities (LTCFs).

Over the last 8 epi-weeks (January 15-March 11, 2023), there have been no influenza facility outbreaks reported. Of all influenza facility outbreaks reported since the start of the respiratory season (epi-week 35), there were 38 outbreaks in LTCFs and 5 in acute care facilities. There were 33 facility



outbreaks attributed to influenza A/H3 and 4 facility outbreaks attributed to influenza A/H1. There were 6 facility outbreaks attributed to both influenza A/H1 and A/H3.