



Respiratory Epidemiology Summary

March 30, 2023

Summary (Epidemiological week 12, March 19-25)

A mix of respiratory viruses continue to contribute to acute respiratory illness in BC, notably enteroviruses and/or rhinoviruses (ERV, likely foremost rhinoviruses), SARS-CoV-2, human metapneumovirus and adenovirus. Respiratory syncytial virus (RSV) has continued to decrease, remaining below the historical average. Influenza activity also remained well below the historical average for this time of year.

Laboratory

Percent positivity in epi-week 12 was highest for ERV (15%), SARS-CoV-2 (15%), and human metapneumovirus (6.7%). Percent positivity was also slightly higher for adenovirus in epi-week 12 (4.6%) compared to the historical average for 2014/15 to 2018/19 (2.9%). RSV percent positivity continued to decrease (3.6%) and remained below the historical average (5.9%). Although influenza positivity (1.4%) also remained well below the historical average (33%), the low-level increase since epi-week 5 (0.5%) has been due mostly to influenza B in epi-week 12. Similar patterns were observed in children and youth among whom influenza positivity also remained well below the historical average, roughly 3% for influenza A and B.

Syndromic

All clinical syndromic indicators of acute respiratory illness remained at stable levels, well below historical averages for this time of year, including all age groups and health authorities.

Wastewater

On February 28th, the BCCDC Public Health Lab began using a different test for SARS-CoV-2 in wastewater. This test is more efficient and more sensitive, meaning it can yield a higher test result even if viral levels have not changed. Therefore, observed increases in viral concentrations in wastewater since the beginning of March are likely due, at least in part, to this new test. Trend analysis and interpretation are influenced as a result.

We are evaluating the full impact of this change by retesting archived samples with the new test. While we evaluate, we have temporarily removed the trend lines on our wastewater graphs (the data points remain, but please interpret with caution, and direct comparisons of recent data points with historical ones are not recommended). BCCDC acknowledges that the public and healthcare partners use wastewater data to understand how SARS-CoV-2 is spreading in BC and to assess their risk of infection. We anticipate next week's wastewater update will describe how the change in test affected trends and recent results.

Outbreaks

In epi-week 12, there were five new COVID-19 outbreaks in acute-care facilities.



Severe outcomes

In November/December 2022, 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) with several experiencing secondary bacterial infections.

Influenza Vaccine Effectiveness (VE) Estimate

2022/23 influenza VE estimates from the [Canadian Sentinel Practitioner Surveillance Network \(SPSN\)](#) show the risk of medically-attended A/H3 illness was reduced by about half among vaccinated compared to unvaccinated individuals. These published SPSN findings are available [here](#). Similar findings have since also been reported from the [United States](#).

1.1. Pathogen Characterization

All ages

A mix of respiratory viruses has recently been contributing to acute respiratory illness in BC, with percent positivity in epi-week 12 highest for enteroviruses (ERV, 15%), SARS-CoV-2 (15%), and human metapneumovirus (6.7%). Percent positivity for all other viruses was 5% or below although was slightly higher for adenovirus in epi-week 12 (4.6%) compared to the historical average for 2014/15 to 2018/19 (2.9%).

ERV positivity gradually decreased from epi-week 6 (20%) to epi-weeks 11 (15%) and 12 (15%), comparable to the historical average for this time of year (16%). Characterization of a subset of ERV detections suggests this recent activity has been due to rhinoviruses. Conversely, SARS-CoV-2 test positivity slightly increased through epi-weeks 9 (10%), 10 (11%), 11 (13%) and 12 (15%). Human metapneumovirus fell below the historical average of 8.2% in epi-week 12, to 6.7%.

Respiratory syncytial virus (RSV) positivity continued to decrease in epi-week 12 (3.6%), with percent positivity remaining below the historical average (5.9%). Although influenza activity remained well below the historical average of 33% for this time of year, percent positivity showed a gradual low-level increase from epi-week 5 (0.5%) to epi-week 12 (1.5%), due mostly to influenza B for which positivity increased from 0.1% to 1.0%, respectively. Overall, influenza B viruses comprised 64% of influenza detections in epi-week 12, although overall number of detections was relatively small. Following the unusually early influenza A(H3N2) epidemic that peaked in epi-week 47, influenza positivity remained low (1.4% at epi-week 12).

Percent positivity for parainfluenza and seasonal coronaviruses combined in epi-week 12 (5.0%) remained close to the historical average (7.4%).

Children and youth

A mix of respiratory viruses has also contributed to acute respiratory illness in children and youth. Among those 18 years and younger tested in laboratories in Vancouver (including BC Children's Hospital), Richmond, and the North Shore, percent positivity exceeded historical levels to varying degrees for this time of year; ERV positivity was 29%, human metapneumovirus 13%, parainfluenza and seasonal coronaviruses combined 14% and adenovirus 13%. At 5.6% in epi-week 12, SARS-CoV-2 positivity showed no clear pattern in children and youth. At 4.3%, RSV positivity in epi-week 12 was



well below the historical average for this time of year (13%). Influenza positivity also remained below the historical average of 10% in epi-week 12 (6.2%), with comparable positivity of 3% for influenza A and B, which is higher than positivity across all age groups.

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.

All clinical syndromic indicators of acute respiratory illness remained at stable levels, well below historical averages for this time of year, including all age groups and health authorities.

1.3. Wastewater

On February 28th, the BCCDC Public Health Lab began using a different test for SARS-CoV-2 in wastewater. This test is more efficient and more sensitive, meaning it can yield a higher test result even if viral levels have not changed. Therefore, observed increases in viral concentrations in wastewater since the beginning of March are likely due, at least in part, to this new test. Trend analysis and interpretation are influenced as a result.

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1.4. COVID-19 Weekly Summary

In epi-week 12 (March 19-25), the number of reported COVID-19 cases (456) among individuals eligible for PCR testing was higher than in epi-week 11 (March 12-18: 405). However, trends in severe outcomes (new hospital admissions, new critical care admissions, and deaths) have been relatively stable overall in the most recent four weeks, based on the information available thus far.

Over the last four weeks, from epi-week 9 to epi-week 12 of 2023 (February 26-March 25, 2023):

- The 7-day rolling average for cases increased slightly and ranged from 48 to 65 per day
- The 7-day rolling average for new hospital admissions was stable and ranged from 18 to 24 per day.
- The 7-day rolling average for new critical care admissions was stable, ranging from 3 to 5 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 19-25, 2023):

- There were 456 cases reported.
- There were 135 new hospital admissions reported.
- There were 29 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 30, 2023:

- There were 294 individuals in the hospital who tested SARS-CoV-2 positive.
- There were 19 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 12 (March 19-25, 2023), there were 5 outbreaks in acute care facilities (ACFs).

Over the last 10 epi-weeks (January 15-March 25, 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 long-term care facilities and 5 in ACFs. 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.