



Respiratory Epidemiology Summary

January 26, 2023

Summary (Epidemiological week 3, January 15 to 21)

Following an earlier than usual November peak, influenza activity continues to decline, reaching low levels. Conversely, RSV activity remains high overall, but has begun to decline. COVID-19 activity remains relatively stable, with early signs of a potential decline.

Laboratory

From a peak of 27% in epi-week 47 (Nov 20-26), influenza positivity has continued to fall and was below 5% in epi-week 3 (0.8%). A/H3 viruses comprise 88% of subtyped viruses overall this season. However, A/H1 comprised a higher proportion in epi-week 3 (Jan 15-21: 44%) compared to epi-week 2 (Jan 8-14: 30%), although small numbers were tested. RSV activity remains elevated with test positivity (12%) similar to SARS-CoV-2 (11%) in epi-week 3. Among children 18 years and younger, RSV positivity fell from a peak of 43% and was 25% in epi-week 3, exceeding that of influenza (3.0%) and SARS-CoV-2 (6.3%).

Syndromic

The proportion of community health care visits for respiratory symptoms continued to decline. There was a small increase in the proportion of visits for acute respiratory infection among children.

Wastewater

Wastewater results for SARS-CoV-2 differed by geography, and were either relatively stable or declining.

Outbreaks

In epi-week 3 (Jan 15-21), there were 2 COVID-19 and 0 influenza outbreaks reported in care facilities.

Severe outcomes

BCCDC has received no additional reports of pediatric influenza deaths in epi-week 3. BCCDC is aware of 6 reports of influenza-associated deaths 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. Estimates will be updated as the season progresses.



1.1. Pathogen Characterization.

In epi-week 3 (Jan 15-21), data submissions were not complete across all sites, therefore results should be interpreted with caution.

All ages

Following an earlier than usual peak in November, the influenza activity continued to decline, reaching low levels. From a peak of 27% in epi-week 47 (Nov 20-26), influenza positivity continued to fall and was below 5% in epi-week 3 (3.2%). In epi-week 3, with low numbers tested, A/H3 viruses comprised 56% of subtyped influenza A viruses. This represents a decrease in proportion compared to epi-week 2 (70%). Influenza B viruses have only been detected sporadically.

Respiratory syncytial virus (RSV) percent positivity declined in epi-week 3 to 12%, but remained higher than the historical average (2014/15-2018/19) for this time of year (7.0%). SARS-CoV-2 test-positivity remained stable at 11% in epi-week 3 compared with the previous week, while enterovirus and/or rhinoviruses (ERV) increased to 14% in epi-week 3 compared with 5.0% in epi-week 1. Other seasonal respiratory viruses (e.g. parainfluenza, adenovirus, human metapneumovirus, seasonal coronaviruses) contributed but with combined percent positivity of ~4.5%.

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, respiratory virus activity showed a small increase. Influenza test positivity declined from a peak of 41% in epi-week 47 and was 3.0% in epi-week 3, signaling a low level of activity in this population. There was a steep increase in RSV from 6.7% in epi-week 1 to 27% in epi-week 3. Test positivity was similar in enterovirus/rhinovirus and other viruses, at around 25%. Positivity for SARS-CoV-2 among children remained stable at 6.3% in epi-week 3.

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 decrease in BC. This pattern is consistent across health authorities. For acute respiratory illness (the most common respiratory diagnostic code billed), there was a continued decrease in most age groups, with the exception of children aged 5-14 years. The proportion of visits for clinically-diagnosed COVID-19 remained low and stable.

1.3. Wastewater

Wastewater tests for SARS-CoV-2 differ by geography but were relatively stable or declining.



1.4. COVID-19 Weekly Summary

In epi-week 3 (Jan 15-21), the number of reported COVID-19 cases (408) among individuals eligible for PCR testing was lower than in epi-week 2 (Jan 8-14: 560). Trends in severe outcomes (new hospital admissions, new critical care admissions, and deaths) have been relatively stable or declining.

Over the last four weeks, from epi-week 52 of 2022 to epi-week 3 of 2023 (Dec 25, 2022 - Jan 21, 2023):

- The 7-day rolling average for cases was relatively stable. Average numbers ranged from 58 to 105 new cases per day.
- The number of new hospital admissions decreased. The average number of daily hospital admissions has decreased from approximately 35 to 15.
- The number of new critical care admissions was relatively stable. Average numbers ranged from 2 to 8 new critical care admissions per day.
- The number of deaths within 30 days of a first positive COVID-19 test result has remained stable. Average numbers ranged from 4 to 9 deaths per day.

Within epi-week 3 (Jan 15-21, 2023):

- There were 408 cases reported.
- There were 104 new hospital admissions reported.
- There were 19 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 Jan 26, 2023:

- There were 228 individuals in the hospital who tested positive for COVID-19.
- There were 22 individuals in critical care who tested positive for COVID-19.

1.5. Outbreaks

The weekly number of reported COVID-19 facility outbreaks has decreased over the past 4 weeks, from 7 in epi-week 52 (Dec 25-31, 2022), to 2 in epi-week 3 (Jan 15-21, 2023). In epi-week 3, there was 1 outbreak in a long-term care facility (LTCF) and 1 outbreak in an acute care facility (ACF).

In epi-week 3, there were no influenza facility outbreaks reported. The weekly number of influenza facility outbreaks reported has continued to decrease over the past four weeks, ranging from 0 to 2 outbreaks per week. Of all influenza facility outbreaks reported since epi-week 52, there were five outbreaks in LTCFs. There were 3 outbreaks attributed to influenza A/H3, 1 attributed to influenza A/H1, and 1 attributed to influenza A (subtype unknown).