



Respiratory Epidemiology Summary

February 2, 2023

Summary (Epidemiological week 4, January 22 to 28)

Following an earlier than usual November peak, influenza activity remains at low levels. RSV activity remains high and relatively stable among adults; among children, it is high but declining, in line with historical trends for this time of year. COVID-19 activity is on the decline.

Laboratory

From a peak of 27% in epi-week 47 (Nov 20-26), influenza positivity fell to below 5% in epi-week 1 and continued to remain low in epi-week 4 (1.2%). In epi-week 4, A/H3 comprised 62% of subtyped viruses, although small numbers were tested. RSV activity remains elevated with test positivity of 13% in epi-week 4. Among children 18 years and younger, RSV positivity fell from a peak of 43% in epi-week 52 (Dec 25-31) and was 19% in epi-week 4, exceeding that of influenza (2.3%) and SARS-CoV-2 (9.7%).

Syndromic

The proportion of community health care visits for respiratory symptoms are relatively stable at levels below historical averages for this time of year. There was a small increase in the proportion of visits for acute respiratory infection among children.

Wastewater

Wastewater results for SARS-CoV-2 were declining in all geographic areas.

Outbreaks

In epi-week 4, there was 1 COVID-19 and no influenza outbreaks reported in care facilities.

Severe outcomes

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 in vaccinated compared to unvaccinated individuals. Details are published [here](#).



1.1. Pathogen Characterization.

All ages

Following an earlier than usual peak in November, influenza activity continued to decline, reaching low levels. From a peak of 27% in epi-week 47 (Nov 20-26), influenza positivity remained low and stable below 5% in epi-week 4 (1.2%). In epi-week 4, with low numbers tested, A/H3 viruses comprised 62% of subtyped influenza A viruses. A/H3 viruses comprise 88% of subtyped viruses overall this respiratory season, but the relative distribution of A/H3 and A/H1 has changed throughout the season. Influenza B viruses continued to only be detected sporadically.

Respiratory syncytial virus (RSV) percent positivity remained stable in epi-week 4 at 13%, but higher than the historical average (2014/15-2018/19) for this time of year (8.8%). SARS-CoV-2 test-positivity continued to decline since epi-week 52 (Dec 25-31) to 9.0% in epi-week 4. Enterovirus and/or rhinoviruses (ERV) increased to 16% in epi-week 4 compared with a recent low of 5% in epi-week 1. Other seasonal respiratory viruses (e.g. parainfluenza, adenovirus, human metapneumovirus, seasonal coronaviruses) contributed but with combined percent positivity of ~4.0%.

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 overall decrease compared to week 3. Influenza test positivity continued to remain low at 2.2% in epi-week 4. There was a decline in RSV positivity from a recent peak of 43% in epi-week 52 to 19% in epi-week 4. Enterovirus/rhinovirus test positivity continued to increase sharply, from 7.0% in epi-week 1 to 38% in epi-week 4. Positivity for SARS-CoV-2 increased slightly from 6.3% in 1 to 9.7% in epi-week 4.

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 at levels below historical averages for this time of year. This stabilization was due to a flattening of the proportion of acute respiratory illness among community visits; the proportion of visits for other respiratory illnesses continued to decline. This pattern is consistent across health authorities. The proportion of visits for acute respiratory illness (the most common respiratory diagnostic code billed) stabilized for individuals greater than 14 years or less than 5 years of age, and continued to increase slowly among children 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 declining in every region.



1.4. COVID-19 Weekly Summary

In epi-week 4 (January 22-28), the number of reported COVID-19 cases (293) among individuals eligible for PCR testing was lower than in epi-week 3 (Jan 15-21: 408). Trends in severe outcomes (new hospital admissions, new critical care admissions, and deaths) have been relatively stable or declining overall based on the information available thus far.

Over the last four weeks, from epi-week 1 to epi-week 4 of 2023 (Jan 1, 2023 - Jan 28, 2023):

- The 7-day rolling average for cases was relatively stable. Average numbers ranged from 35 to 105 new cases per day.
- The number of new hospital admissions decreased. The average number of daily hospital admissions has decreased from approximately 38 to 10.
- 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 SARS-CoV-2 test result has remained stable. Average numbers ranged from 4 to 7 deaths per day.

Within the last week (January 22-28, 2023):

- There were 293 cases reported.
- There were 73 new hospital admissions reported.
- There were 26 new critical care admissions reported.
- There were 30 deaths within 30 days of a first positive SARS-CoV-2 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 February 2, 2023:

- There were 204 individuals in the hospital who tested SARS-CoV-2 positive.
- There were 23 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 below 5 since early January. In epi-week 4, there was 1 COVID-19 outbreak in an acute care facility.

The weekly number of influenza facility outbreaks reported has continued to decrease from a peak of 9 in epi-week 50 (Dec 11-17). Over the last two epi-weeks (Jan 15-28), there have been no influenza facility outbreaks reported. Of all influenza facility outbreaks reported since the start of respiratory season (epi-week 35), there have been 37 outbreaks in long-term care facilities and 6 in acute-care facilities. Over the same time period, there have been 25 facility outbreaks attributed to influenza A/H3 and 15 attributed to influenza A (subtype unknown).