Respiratory Epidemiology Summary

February 16, 2023

Summary (Epidemiological week 6, February 5 - 11)

Following an earlier than usual November peak, influenza activity remains at low levels. Consistent with historical trends for this time of year, RSV activity remains high and stable among adults and declining among children. COVID-19 activity remains stable.

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 6 (0.7%). Respiratory syncytial virus (RSV) activity remained high with test positivity of 10%, in line with the historical average. Entero and/or rhinoviruses (ERV) activity was above the historical average in adults, at 20%. Among children 18 years and younger, RSV positivity fell from a peak of 43% in epi-week 52 (Dec 25-31) to 15% in epi-week 6, similar to that of SARS-CoV-2 (12%), and exceeding that of influenza (1.5%). ERV was above the historical average in children, at 40%.

Syndromic

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

Wastewater

Wastewater tests for SARS-CoV-2 differed by geography but were relatively stable overall.

Outbreaks

In epi-week 6, there was one 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

From a peak of 27% in epi-week 47 (Nov 20-26), influenza positivity remained low and stable, well below 5% in epi-week 6 (0.7%). 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 6 at 10%, similar to the historical average (2014/15-2018/19) for this time of year (9.5%). SARS-CoV-2 test positivity declined from 15% in epi-week 52 (Dec 25-31) to 9.0% in epi-week 5, then slightly increased to 11% in epi-week 6. Entero and/or rhinoviruses (ERV) positivity increased to 20% in epi-week 6 compared with a recent low of 5% in epi-week 1. This is above the historical average of 11%. Other seasonal respiratory viruses (e.g. parainfluenza, adenovirus, human metapneumovirus, seasonal coronaviruses) had a combined percent positivity of 4.8%.

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 5. Influenza test positivity continued to remain low at 1.5% in epi-week 6. There was a decline in RSV positivity from a peak of 43% in epi-week 52 to 15% in epi-week 6, below the historical average of 25%. The rate of increase of entero/rhinovirus test positivity slowed from 39% in epi-week 5 to 40% in epi-week 6, up from 7.0% in epi-week 1. It remained above the historical average of 20%. Positivity for SARS-CoV-2 increased from 3.9% in epi-week 5 to 12% in epi-week 6.

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 all respiratory illness among community visits. This pattern was consistent across health authorities. The proportion of visits for acute respiratory illness (the most common respiratory diagnostic code billed) stabilized for individuals in all age groups 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

Wastewater tests for SARS-CoV-2 differed by geography but were relatively stable overall.
1.4. COVID-19 Weekly Summary

In epi-week 6 (February 5-11), the number of reported COVID-19 cases (341) among individuals eligible for PCR testing was higher than in epi-week 5 (January 29-February 4: 278). 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 3 to epi-week 6 of 2023 (January 15, 2023 - February 11, 2023):

- The 7-day rolling average for cases decreased between January 15, 2023 and January 29, 2023 from 165 to 77, followed by an increase to 97 as of February 11, 2023.
- The number of new hospital admissions decreased. The average number of daily hospital admissions has decreased from approximately 26 to 12.
- The number of new critical care admissions was relatively stable. Average numbers ranged from 2 to 4 new critical care admissions per day.
- The number of deaths within 30 days of a first positive SARS-CoV-2 test result has declined slightly. Average numbers ranged from 2 to 7 deaths per day.

Within the last week (February 5-11, 2023)

- There were 341 cases reported.
- There were 81 new hospital admissions reported.
- There were 23 new critical care admissions reported.
- There were 13 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 February 16, 2023:

- There were 193 individuals in the hospital who tested SARS-CoV-2 positive.
- There were 15 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 6 since early January. In epi-week 6 (February 5-11, 2023), there was 1 outbreak in a long-term care facility (LTCF).

The weekly number of influenza facility outbreaks reported has continued to decrease from a peak of 10 in epi-week 50 (December 11-17, 2022). Over the last 4 epi-weeks (January 15-February 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 6 in acute care facilities. Of these, 33 facility outbreaks were attributed to influenza A/H3 and 5 facility outbreaks attributed to influenza A/H1; 6 facility outbreaks were attributed to both influenza A/H1 and A/H3.