Respiratory Epidemiology Summary

March 2, 2023

Summary (Epidemiological week 8, February 19-25)

Influenza activity remains at low levels. RSV activity is declining, consistent with historical trends for this time of year. ERV activity remains higher than expected for this time of year in children; further characterization indicates that this activity is due to rhinoviruses. COVID-19 activity remains stable.

Laboratory

Influenza test positivity continued to remain very low in epi-week 8 (0.9%). There remains no indication of a secondary influenza wave at this stage. Respiratory syncytial virus (RSV) test positivity of 6.8% in epi-week 8 remained broadly within the historical range. Entero and/or rhinoviruses (ERV) activity was also broadly consistent with the historical average for this time of year in adults, at 17%. Among children 18 years and younger, RSV positivity was 9.6% in epi-week 8, declining at a faster rate than what was historically observed for this time of year, and currently below historical levels. Test positivity for influenza was 2.6%, below its historical average, and for SARS-CoV-2, 4.6%. ERV positivity in children was 37%, above the historical average.

Syndromic

The proportion of community health care visits for respiratory symptoms was 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 8, there was one COVID-19 outbreak in an acute care facility.

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 positivity remained very low in epi-week 8 (0.9%). 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 8 at 6.8%, similar to the historical average (2014/15-2018/19) for this time of year (10%). SARS-CoV-2 test positivity remains relatively stable overall, at 12% in epi-week 8. Entero and/or rhinoviruses (ERV) positivity was 17% in epi-week 8, comparable to, if slightly above, the historical average for this time of year (9.8%). 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 in circulation.

Activity of other seasonal respiratory viruses (e.g. parainfluenza, adenovirus, 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 2.6% in epi-week 8. RSV positivity was 9.6% in epi-week 8, below the historical average of 23% for this time of year. Entero/rhinovirus test positivity was 37% in epi-week 8, above the historical average of 21%. Positivity for SARS-CoV-2 was 4.6% in epi-week 8, and has remained relatively stable over the last several months. A recent increase in adenovirus warrants further close monitoring.

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 pattern was broadly consistent 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**

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

In epi-week 8 (February 19-25), the number of reported COVID-19 cases (405) among individuals eligible for PCR testing was higher than in epi-week 7 (February 12-18: 356). 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 5 to epi-week 8 of 2023 (January 29, 2023 - February 25, 2023):

- The 7-day rolling average for cases increased from 77 to 116 per day.
- The 7-day rolling average for new hospital admissions fluctuated between 13 and 22 per day, but decreased overall.
- The 7-day rolling average for new critical care admissions was relatively 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 has decreased slightly, ranging from 2 to 5 per day.

Within the last week (February 19-25, 2023):

- There were 405 cases reported.
- There were 93 new hospital admissions reported.
- There were 22 new critical care admissions reported.
- There were 11 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 2, 2023:

- There were 237 individuals in the hospital who tested SARS-CoV-2 positive.
- There were 14 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 8 (February 19-25, 2023), there was 1 outbreak in an acute care facility (ACF).

Over the last 6 epi-weeks (January 15-February 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 6 in ACFs. There were 33 facility outbreaks attributed to influenza A/H3 and 5 facility outbreaks attributed to influenza A/H1. There were 6 facility outbreaks attributed to both influenza A/H1 and A/H3.