BC Centre for Disease Control
Provincial Health Services Authority

Respiratory Epidemiology Summary

8 December 2022

Summary (Epidemiological week 48, 27 Nov to 03 Dec)

Clinical indicators of acute respiratory illnesses in BC, which have been increasing, have started to show signs of stabilization. Most of the observed relative increase is primarily related to influenza A/H3, but also to other common seasonal respiratory viruses (respiratory syncytial virus (RSV), enterovirus/rhinovirus (ERV), parainfluenza, adenovirus, human metapneumovirus, and seasonal coronavirus). SARS-CoV-2 activity, the virus that causes COVID-19, remains relatively stable across multiple indicators.

Laboratory

Test positivity for influenza A (24%) and RSV (8%) remain high and stable relative to last week. Among children tested in laboratories in Vancouver (including BC Children's Hospital), Richmond, and the North Shore, test positivity for influenza A has remained stable but high at 37%, and test positivity for RSV has increased to 27%.

Currently, influenza A/H3 is the predominant circulating subtype detected. Since epi-week 35 (beginning Aug 28, 2022) to epi-week 48 (ending Dec 3, 2022) about 95% of subtyped influenza A viruses have been H3. There has also been sporadic detection of influenza B so far this season.

Syndromic

The share of visits to community healthcare practitioners for symptoms of a new respiratory illness, such as a cough or fever may be stabilizing.

Wastewater

Wastewater tests from all five water treatment plants suggest a slow increase in levels of SARS-CoV-2 detection.

Outbreaks

In the most recent epi weeks (47 and 48), there were 5 COVID-19 outbreaks (4 and 1, respectively). Of the 5 outbreaks, 1 was in long-term care facility and 4 were in acute care facilities.

During the same time period, there were 6 influenza A outbreaks. Of the 6 outbreaks, there were 5 long-term care facility outbreaks and 1 acute care facility outbreak (4 in epi week 47 and 2 in epi week 48). Of the 3 for which subtyping information is available, all were found to be A/H3.

Severe outcomes

BCCDC is aware of six reports of recent influenza-associated deaths among children and youth in BC this respiratory season. One of the children was under 5 years, three were 5-9 years and two were adolescents 15-19 years of age. Several of the children experienced secondary bacterial infections, which can be a complication of influenza contributing to more severe illness. This is an unusual season with unusual characteristics, including an early and intense surge in cases and several deaths in older children and youth. With this unusual pattern, enhanced surveillance has been implemented.

1.1. Pathogen Characterization

The number of influenza A virus infections detected in the province remained high and stable relative to last week, with a test positivity of 24%. Overall, we are observing expected patterns in seasonal circulation for RSV, albeit higher positivity (~8%) compared to historical averages for this time of year (~4%). The number of SARS-CoV-2 viruses detected and the test positivity (~10%) are stable. The number of entero and/or rhinoviruses (ERV) detected and test positivity (~10%) is on the declining trend.

In this past week (epi-week 48, Nov 27-Dec 3), influenza A was the most detected virus in BC. Influenza A virus positivity was 24% (1250/5146), with subtyping showing that H3 has been the predominant (~95%) subtype since the start of this 2022/23 season.

Among children tested in laboratories in Vancouver (including BC Children's Hospital), Richmond, and the North Shore, influenza A is the most commonly detected virus, and test positivity was highest for influenza A (37%). Both positivity and rate of growth of influenza have been higher this season compared to the 5-year pre-pandemic historical average (2014/15- 2018/19). By contrast, rate of growth and test positivity in the past week for RSV is comparable to historical ranges. SARS-CoV-2 positivity in this group remains low (~4%).

1.2. Community Visits for Respiratory Illness

Overall, the share of community visits to health care practitioners for respiratory symptoms has been increasing since mid-September, but has recently started to show signs of stabilization. A higher proportion of these visits continues to be observed among younger children, which is a typical pattern for seasonal respiratory viruses. Share of visits related to COVID-19 symptoms continues to decline across regions and age groups.

Since mid-September, community visits (based on physician billing codes) for:

- The share of visits for acute respiratory symptoms increased in all regions and particularly among the 0-19 age group, but is showing signs of stabilization over the past week.
- The share of visits for influenza related symptoms among children aged 0-19 years is showing signs of stabilization over the past week.
- The share of visits for COVID-19-related symptoms continue to decline across regions and age groups.
- Note that community visit numbers are based on physician billing codes which are assigned based on clinical suspicion. Presenting symptoms may overlap for various respiratory conditions, and there is potential for misclassification. Trends presented here should be interpreted along with pathogen characterization data. Please refer to the limitations section of the data notes in the Supplementary Information section for further information.

1.3. Wastewater

SARS-CoV-2 viral loads measured in all Metro Vancouver wastewater plants are slowly increasing.

1.4. COVID-19 Weekly Summary

In the most recent week (November 27-December 3, 2022), the number of reported COVID-19 cases among individuals eligible for PCR testing was lower compared to the previous week (November 20-November 26, 2022). Trends in severe outcomes (new hospital admissions, new critical care admissions, and deaths) are relatively stable or declining overall based on reported information so far.

Within the last four weeks (November 6-December 3, 2022):

- The 7-day rolling average for cases has been slowly increasing.
- The number of new hospital admissions has been steady.
- The number of new critical care admissions remained stable. Average numbers ranged from 1 to 9 counts daily.
- The number of deaths within 30 days of a first positive COVID-19 test had declined. Average numbers ranged from 0 to 10 counts daily.

Within the last week (November 27-December 3, 2022):

- There were 539 cases reported.
- There were 140 new hospital admissions reported.
- There were 33 new critical care admissions reported.
- There were 17 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 December 8, 2022:

- There were 359 individuals in the hospital who tested positive for COVID-19.
- There were 34 individuals in critical care who tested positive for COVID-19.

1.5. Outbreaks

The number of COVID-19 care facility outbreaks has been consistent since late October, at 3-4 outbreaks per epiweek from week 44 - 47 (October 30 - November 26).

In epiweek 48 (November 27 - December 3) there was 1 outbreak in a long-term care facility.