Respiratory Epidemiology Summary

November 10, 2022

1. Summary

This report presents information from laboratory testing, community healthcare practitioner visits, and wastewater surveillance indicators used to monitor the activity of seasonal respiratory viruses circulating in British Columbia (BC).

Our data suggest that respiratory illnesses are continuing to increase in BC. This is expected, as many viruses that cause respiratory illnesses circulate more in the fall and winter. Most of the observed relative increase is related to common seasonal respiratory viruses (enterovirus/rhinovirus (ERV), influenza, respiratory syncytial virus (RSV), parainfluenza, adenovirus, human metapneumovirus, and seasonal coronavirus). SARS-CoV-2, the virus that causes COVID-19, is present in the community at a relatively stable rate.

One key indicator is the share of visits to community healthcare practitioners that are because of symptoms of a new respiratory illness, such as a cough or fever. This indicator has been slowly increasing, with the biggest increase in visits for acute respiratory infections seen among children and youth, which is typical of seasonal respiratory infections. Because presenting symptoms may overlap for various respiratory conditions, there is potential for misclassification. Clinical visit data should be interpreted along with pathogen characterization data.

Other important indicators are laboratory test results of submitted respiratory specimens. Only some people visiting a healthcare practitioner or people who are part of an identified outbreak are sent for further testing to identify the virus causing their illness. Although SARS-CoV-2 is the predominant virus detected among these tests, the percent positivity is relatively stable. Overall, most respiratory pathogens are circulating with a seasonal pattern, including a notable increase in positivity for Influenza A, RSV and ERV, among the pediatric population.

Finally, wastewater tests from water treatment plants suggest relatively stable or declining levels of SARS-CoV-2 detection.

1.1. Community Visits for Respiratory Illness

Overall, the share of community visits to health care practitioners for respiratory symptoms have been increasing since mid-September. The greatest increase was for acute respiratory infection-related symptoms (see Supplementary Information for more details). Higher proportion of visits is observed among younger children, which is a typical pattern for seasonal respiratory viruses. COVID-19-related visits have started to show early signs of 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.

- The share of visits for COVID-19-related symptoms have started to show an early sign of 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.

1.2. COVID-19 Weekly Summary

In the most recent week (October 30–November 5, 2022), the number of reported COVID-19 cases among individuals eligible for PCR testing was lower compared to the previous week (October 23–October 29, 2022). Trends in severe outcomes (new hospitalizations admissions, new critical care admissions, and deaths) are relatively stable or declining overall based on reported information so far.

Within the last four weeks (October 8–November 5, 2022):

- The 7-day rolling average for cases has been slowly declining.
- The number of new hospital admissions has been slowly declining.
- The number of critical care admissions remained stable. Average numbers ranged from 1 to 10 counts daily.
- The number of deaths within 30 days of a first positive COVID-19 test remained stable. Average numbers ranged from 2 to 16 counts daily.

Within the last week (October 30–November 5, 2022):

- There were 407 cases reported.
- There were 124 new hospital admissions reported.
- There were 24 new critical care admissions reported.
- There were 20 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 hospitalizations 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 November 10, 2022:

- There were 290 individuals in the hospital who tested positive for COVID-19.
- There were 26 individuals in critical care who tested positive for COVID-19.

1.3. Pathogen Characterization

Over the past two weeks, the number of influenza and respiratory syncytial viruses (RSV) has been increasing, while the number of detected entero and/or rhinoviruses (ERV) is elevated but stabilizing.

Overall, we are observing expected patterns in seasonal circulation of most respiratory pathogens, with a noted increase in positivity for Influenza A, RSV and ERV among the pediatric population.

Currently, SARS-COV-2 is the most commonly detected virus in the province. ERV are the second most commonly detected viruses in B.C. However, after accounting for testing volumes, test positivity for SARS-CoV-2 is lower than that of ERV.

A targeted proportion of ERV specimens is further subtyped among children and teenagers in the season when enterovirus D68 is expected to peak (for further details, see Data Notes). Of the samples that undergo targeted subtyping, in the current 2022 season, approximately 26% are testing positive for enterovirus D68. This proportion is not necessarily representative of broader patterns in the community.

1.4. Wastewater

SARS-CoV-2 viral loads measured in wastewater plants in Metro Vancouver are stable or declining across all sites.