

Respiratory virus surveillance after the height of the COVID-19 pandemic

On 11 March 2020, the World Health Organization declared COVID-19 to be a pandemic; 4 years later, we revisit the impacts of the pandemic on provincial viral respiratory illness surveillance, led by the BC Centre for Disease Control (BCCDC) and the BCCDC Public Health Laboratory.

Enhancements to surveillance

Laboratory testing

COVID-19 necessitated changes to viral respiratory monitoring. During the pandemic, both testing and genomic sequencing capacities increased in parallel with changes to testing practices. For example, the current recommendation for each patient sample submitted for viral respiratory illness is to first test for influenza A/B, SARS-CoV-2, and respiratory syncytial virus.¹ Previously, testing may have been limited to only a subset of these viruses. In addition, viral respiratory illness surveillance has been enhanced to include wastewater testing. We currently test wastewater samples for influenza A/B, SARS-CoV-2, and respiratory syncytial virus at 12 sites across the province and will be reporting genomic sequencing of these samples in the future.

Data sources and linkages

Data accessibility and linkages also improved in response to the pandemic. Laboratory data can now be linked to clinical information from administrative data and provincial registries, as well as demographic records

in the BC COVID-19 Data Library surveillance platform, a provincially supported proof-of-concept cloud-based system.² This system is currently being replaced by the Provincial Health Services Authority Platform for Analytics and Data, which has a

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broader focus. These environments allow for simplified data governance, a common user interface, and the ability to link multiple data sources, which enhances surveillance and evaluation capacity.

Dashboards

These comprehensive data are available in near real time and allow for surveillance of multiple indicators. The BCCDC and the BCCDC Public Health Laboratory use these data to provide timely information on viral respiratory illness using wastewater, genomic, and clinical data that is communicated to the public and health partners via a suite of semi-interactive public dashboards with epidemiologic synthesis and interpretation.³ This work is done in partnership with health authorities; the Data, Analytics, Reporting, and Evaluation team at the Provincial Health Services Authority; and the Ministry of Health.

Evaluation of viral respiratory illness surveillance products is ongoing. The surveillance system is nimble, with the goals of providing relevant information to all users and efficiently responding to changing needs.

Where we are now

Innovative technologies and increased resources made available for the COVID-19 response strengthened our ability to provide timely and comprehensive intelligence to inform public health action for viral respiratory illness. These data provide situational awareness for health care providers to support clinical management, such as signaling the beginning of influenza season to help guide decisions on prescribing presumptive influenza antivirals, and for health care settings, to help inform when enhanced infection control measures should begin. In addition, these data inform vaccination schedules and prioritization.

Respiratory virus activity sometimes settles into familiar seasonal patterns, but genetic changes in circulating viruses can make each respiratory season different and somewhat unpredictable. Prevention strategies such as handwashing, getting vaccinated as recommended, and staying home or wearing a mask when sick mitigate viral spread and remain good advice to reduce the risk of viral transmission and severe illness. We continue to monitor several viral respiratory illnesses, assess them across indicators and various data sources, and validate our interpretations with clinicians and other experts to help inform patient and population care. ■

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This article is the opinion of the BC Centre for Disease Control and has not been peer reviewed by the BCMJ Editorial Board.

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