CanCOVID Speaker Series Event Summary

Guiding Our Public Health Response: Real-Time Integration of Diagnostics & Genomics

Speaker

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Objective

This summary provides an overview of the Speaker Series presentation on 'Guiding Our Public Health Response: Real-Time Integration of Diagnostics & Genomics' led by Dr. Krajden. In his presentation, Dr. Krajden described the work undertaken by the British Columbia Centre for Disease Control to create a dashboard to track testing for COVID-19, including test turnaround rates, positivity rates, etc. This data set has allowed for detailed tracking of COVID-19 cases and was used to identify trends in COVID-19 infections and inform real-time provincial public health measures.

Key Messages

- There are multiple tests used to detect positive COVID-19 cases, with varying degrees of sensitivity, and which can be influenced by factors such as stage of illness, and sampling technique. Point-of-Care Rapid Antigen Tests (RATs), with potential as a screening tool, may be useful in high-congregate settings. However, the pre-test probability is important and influenced by population characteristics. In a virus low-prevalence population, the rate of false positives may be higher, compared to high-prevalence populations, where RATs would have a higher rate of true positives.
- British Columbia used whole genome sequencing to look at ongoing virus community transmission and repeated introduction of new strains. In January 2020, the majority of transmissions in Canada were related to introductions from the US and Europe. As of March 2021, the British Columbia CDC is looking at viral evolution in real-time. British Columbia has applied a multipronged sequencing strategy, tracking outbreaks (such as those in LTC facilities), targeted surveillance (such as travellers, pediatrics, etc.), and background surveillance (random unbiased testing, looking for variants of concern).
- Canada is in a five-way race in combating the COVID-19 pandemic. It involves the public (who are exhausted by the pandemic and the restrictions), the virus (as it is mutating and resulting in variants of concern), the vaccines, the challenges in distributing vaccines to Canadians, and the challenges in achieving global vaccine distribution.

Implications/Next Steps

- As the SARS-CoV-2 pandemic is devasting people and economies, emerging evidence has shown that the vaccines established against the infection are effective. The next challenge to overcome is supply issues with the distribution of vaccines, including global vaccine distribution, to limit the emergence and establishment of new variants of concern. The solution to the mixed messages around the circulation of the virus and variants of concern is real-time integrated data, which can be used to monitor the epidemiology, as well as anticipate and model challenges.

Click here to view the recording of this event.