COVID-19 Epidemiologic Update
January 4\textsuperscript{th}, 2022

Dr. Reka Gustafson
VP Public Health, PHSA and Deputy Provincial Health Officer
New daily rates per 100K population (7-day moving average)

British Columbia

Alberta

Ontario

Denmark

UK

USA

Cases

Hospitalization Census

Deaths

Data up to 2022-01-04

Copyright: BC Centre for Disease Control, a part of the Provincial Health Services Authority
Fig3.1 Rate of COVID-19 hospitalizations by Age in BC, Jan 01 2021 - Dec 25 2021

*Data based on admission date for hospitalizations*
What’s different in January 2022?

• BC has a very high rate of immunization

• All British Columbians aged 5 years and older are eligible for COVID-19 vaccine

• All adults eligible for booster doses

• A new variant, Omicron, is rapidly increasing, and becoming most common, while co-circulating with previous variants

• Omicron is behaving differently, and we need to adjust our approach
What has been observed about the Omicron variant?

https://www.who.int/publications/m/item/enhancing-readiness-for-omicron-(b.1.1.529)-technical-brief-and-priority-actions-for-member-states

• **Rapid growth** and **replacement** of previously circulating variants
  • May be due to increased transmissibility, shorter incubation period or immune evasion, likely a combination

• **Proportion hospitalized** to date is **lower**
  • May be due to immunization, previous infection or that Omicron variant is less virulent
  • In South Africa, among those who are hospitalized:
    • Shorter stay
    • Less likely to go onto severe illness
    • Much less likely to die
  • In BC, despite rapid growth of Omicron, and high number of cases, the number of people in hospital, critical care and requiring mechanical ventilation is stable.

• **Available tests continue to accurately detect infection**

• **Vaccine effectiveness data are very early and need to be interpreted with caution**
  • Suggest that two doses of vaccine are substantially less protective against infection
  • Re-infection is more common
  • Protection against infection improved by **booster**
  • Retain substantial protection against hospitalization after two doses
Omicron variant in Canada

• As of December 30 (1600h EST), Canada has 38,629 cases of Omicron variant based on genome sequencing results and screening.
  
  • Note that these numbers are considerably underestimated.

• Of those with available information (n=19,510), 64 Omicron cases have been hospitalized.
What does this mean for the pandemic response?

• More widespread community transmission for different periods of time in different communities
  • Pandemics remain a series of local outbreaks

• Substantially lower hospitalization being reported from around the world

• More likely to cause disruption to operations due to staff and students being away due to illness
Changes to pandemic response

• PCR testing in the community ➔ Rapid Antigen Testing or symptomatic management without testing in the community; PCR testing in hospital

• Surveillance and monitoring of cases ➔ monitoring of critical care, vaccine effectiveness

• Case and contact management ➔ Self-management, outbreak response

• Shortened quarantine and isolation requirements

• Ongoing promotion of vaccines, monitoring vaccine effectiveness
Testing

• PCR testing in the community is being supplemented/replaced by rapid antigen testing (self-testing) and self-management or managing at home without testing

• Currently rapid antigen tests available at testing sites, long term care facilities and in remote and Indigenous communities

• As supply of rapid antigen tests increases, they will be available at more community distribution sites

• At times of outbreaks, the Medical Health Officer may provide rapid antigen tests directly to the school to enable symptomatic students and staff to test at home and return to school if negative
Self-management

• Self-isolation if you are sick
  • 7 days if immunized - likely to be reduced to 5 days
  • 10 days if not immunized

• Quarantine
  • Self-monitor if immunized
  • Self-isolate for 10 days if not immunized

• Seek medical care as needed

• Inform close contacts
Surveillance and Monitoring

• Initially, cases, hospitalizations, critical care, deaths

• Challenges:
  • Cases are highly dependent on testing, and most cases were mild infections, which is not what we were trying to prevent
  • Hospitalizations are a better indicator, but as community transmission increases, it becomes more difficult to distinguish hospitalized with COVID-19 and from Covid-19
  • Critical Care admissions are better than hospitalization, though also subject to same bias as hospitalizations during high community transmission; mechanical ventilation may be the best indicator
  • Deaths are a crude indicator that can be improved by measuring excess deaths (above what is expected)

• Surveillance and monitoring of COVID-19 in the future
  • Laboratory surveillance for community trends as for other respiratory infections (detections, genomics, hospital admissions)
  • We have developed more sophisticated linked data to allow us to monitor hospitalizations, risk profiles, and vaccine effectiveness
Case and contact management (contact tracing)

- Contact tracing is a resource intensive public health intervention that is well suited to communicable diseases which have
  - long incubation period
  - low to moderate transmissibility or high community immunity
  - unique distinguishing symptoms or an effective screening test before symptoms appear
- Changes the virus means that contact tracing is no longer a sustainable or effective public health intervention
  - Longer  ➔ shorter incubation
  - Moderate  ➔ higher transmissibility
  - Non-specific respiratory symptoms
- Case and contact management will be replaced by self management and responding to outbreaks, especially in high risk settings