

Fall outlook - Respiratory viruses in BC

September 28, 2022



Stay Informed Via These Resources:

gov.bc.ca/Covid-19 | bccdc.ca | 1-888-COVID19

Symptom Self-Assessment:

covid19.thrive.health



BRITISH
COLUMBIA

Our focus throughout the pandemic

**Protecting
people at the
highest risk
of severe
illness or
death.**

**Protecting
our health
care system
capacity.**

**Keeping
people and
communities
safe.**

**Bringing
people back
together,
safely.**

Where we are today, 28 Sept 2022



58% of eligible kids 5-11 have received their first dose of the COVID-19 vaccine.



86% of British Columbians 5+ have received two doses of the COVID-19 vaccine.



57% of British Columbians 5+ have received a booster* or third dose.

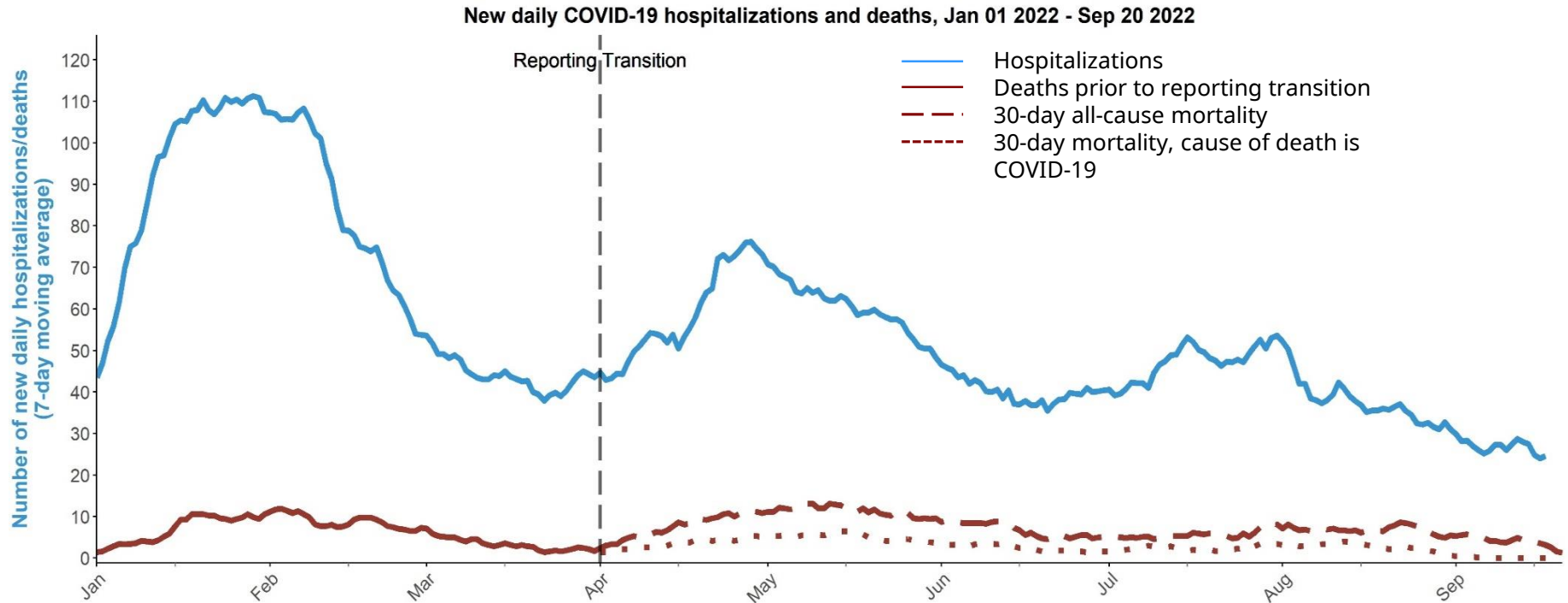
*5+ only recently eligible for booster



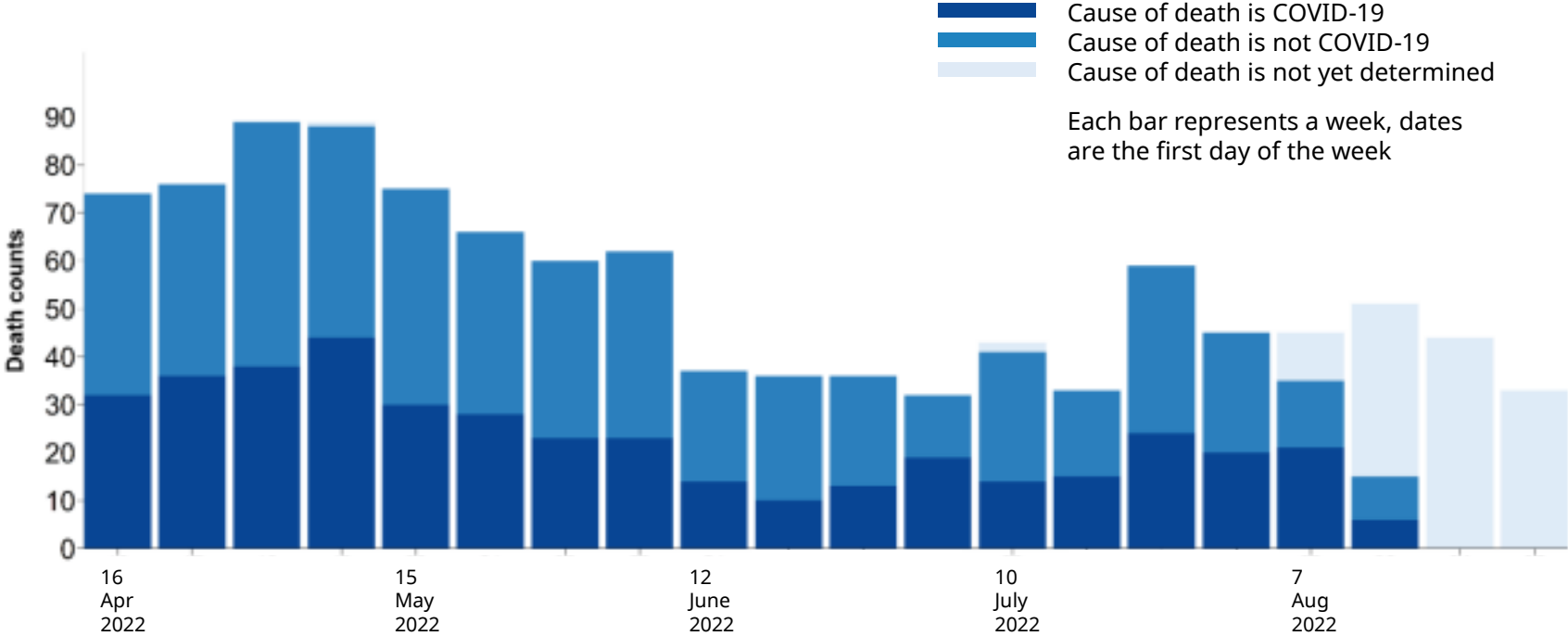
358 COVID-19 positive people are in hospital. The reason for hospitalization may not be related to COVID-19.

Updated 28 Sept 2022

COVID-19 hospitalizations and deaths, 1 Jan 22 – 20 Sept 22

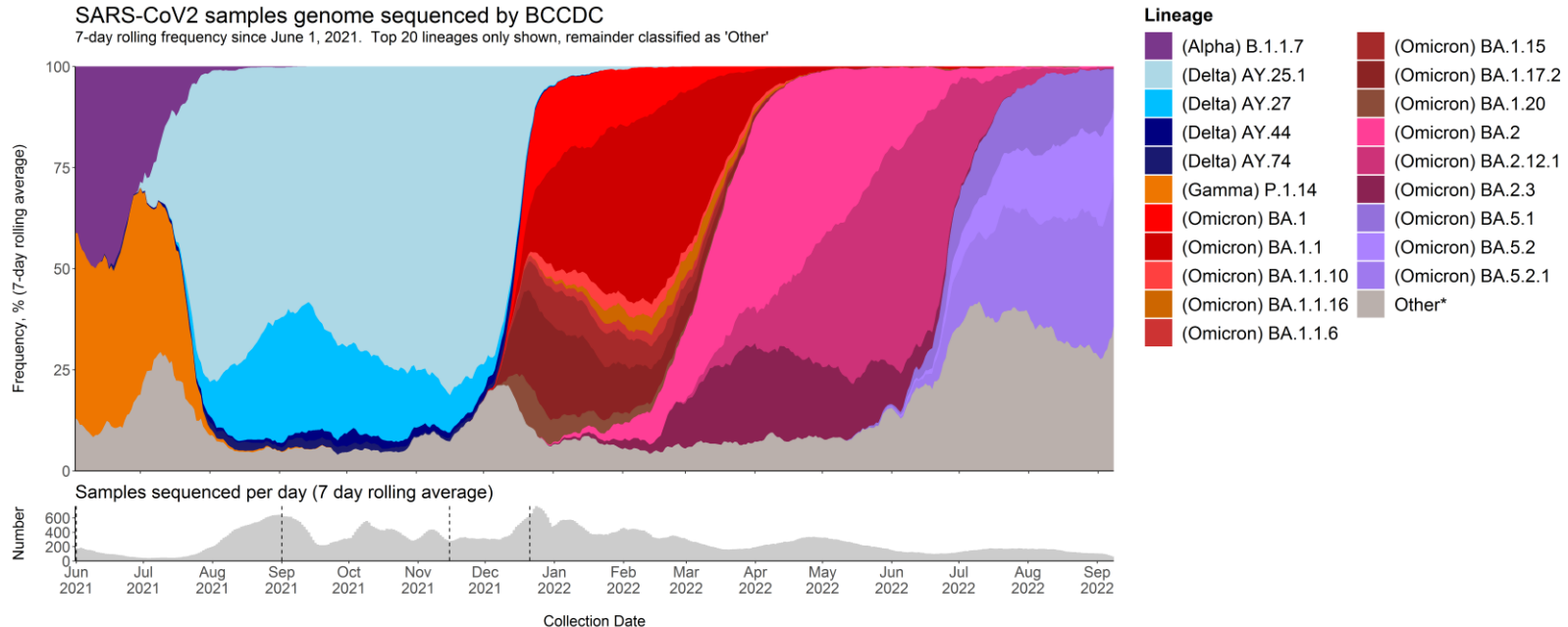


30-day mortality by cause of death, 17 Apr 22 – 3 Sept 22



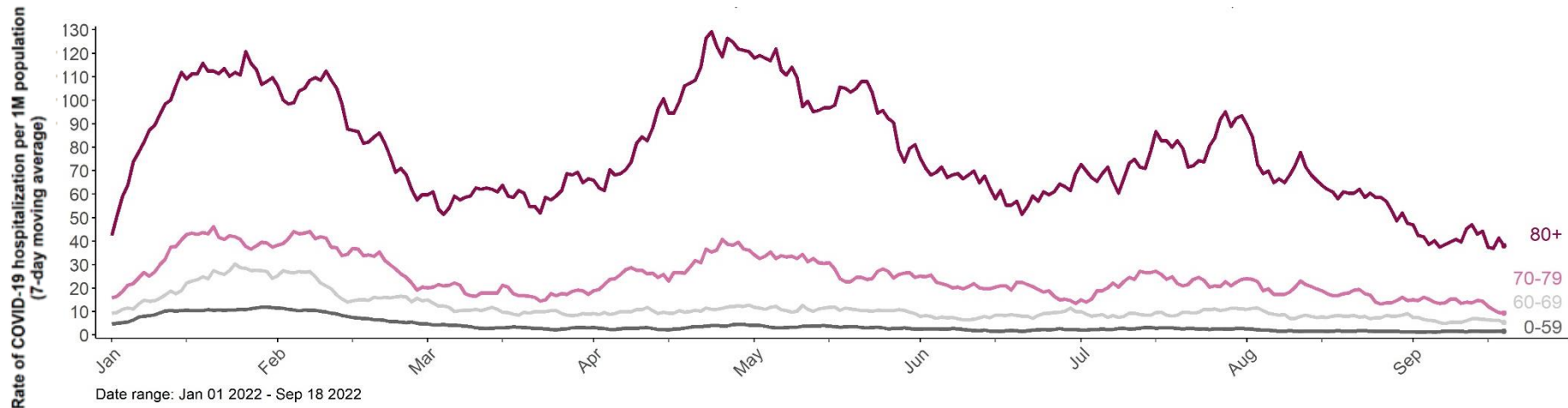
Most prevalent SARS-CoV-2 lineages 1 June 2021 – 21 Sept 2022

SARS-CoV2 samples genome sequenced by BCCDC
7-day rolling frequency since June 1, 2021. Top 20 lineages only shown, remainder classified as 'Other'

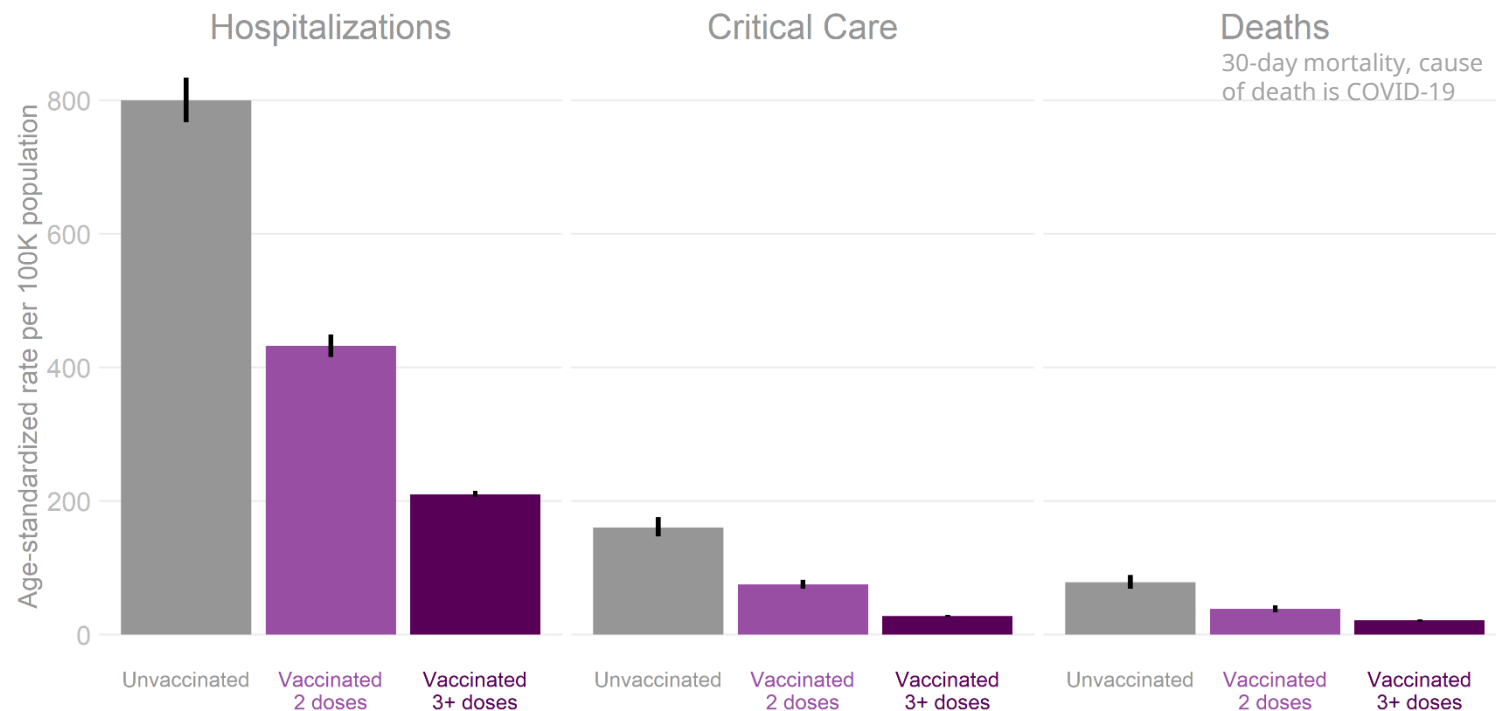


Other includes: BA.4, BA.4.1, BA.4.2, BA.4.4, BA.4.6, BA.5, BA.5.1.1, BA.5.1.10, BA.5.1.2, BA.5.1.3, BA.5.1.4, BA.5.1.5, BA.5.1.6, BA.5.1.7, BA.5.10, BA.5.2.2, BA.5.2.3, BA.5.5, BA.5.6, BE.1, BE.1.1, BF.10, BF.14, BF.4, BF.5, BF.7, BF.8, BF.9, BK.1, other BA.2. in the most recent week
Pangolin version: 4.1.2, Usher version: 1.14, Pango version: 1.14. Total Pango assignments: 54 743; Total Usher assignments: 71 958

Hospitalization rates per 1M by age, 1 Jan 22 – 17 Sept 22

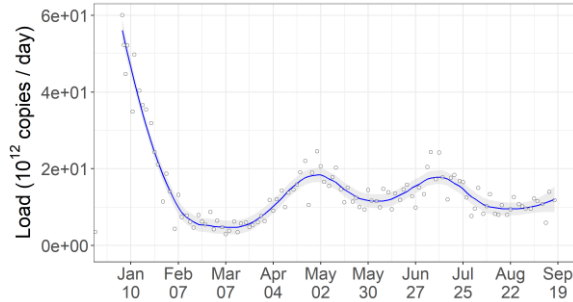


Age-standardized hospitalizations, critical care admissions and deaths by vaccination status, 1 Jan 22 – 17 Sept 22

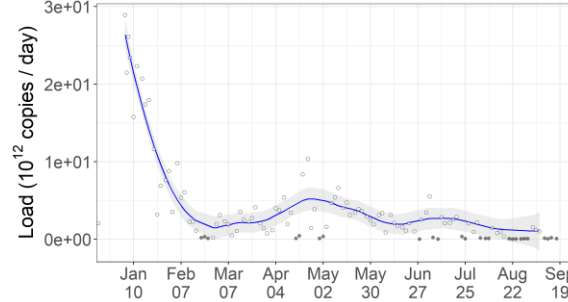


SARS-CoV-2 viral load in Lower Mainland wastewater samples 10 Jan 2022 – 19 Sept 2022

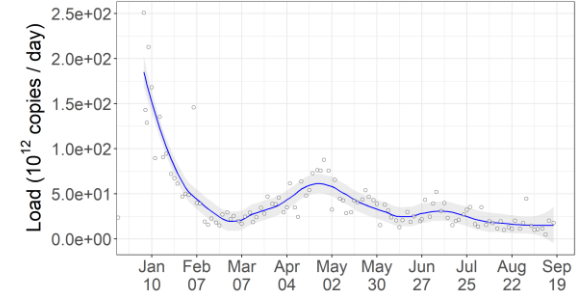
Lulu Island Wastewater Plant
(approximate region: Richmond)



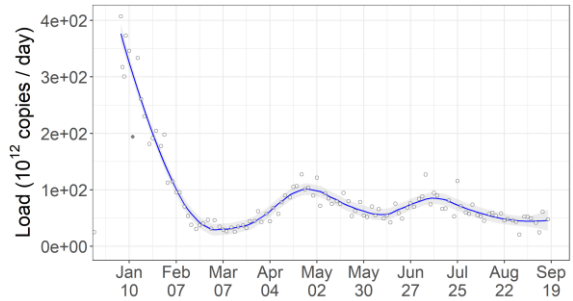
Lions Gate Wastewater Plant
(approximate region: North Shore)



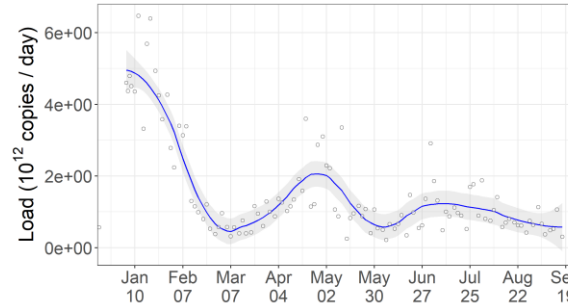
Iona Island Wastewater Plant
(approximate region: Vancouver)



Annacis Island Wastewater Plant
(approximate region: Fraser North and South)

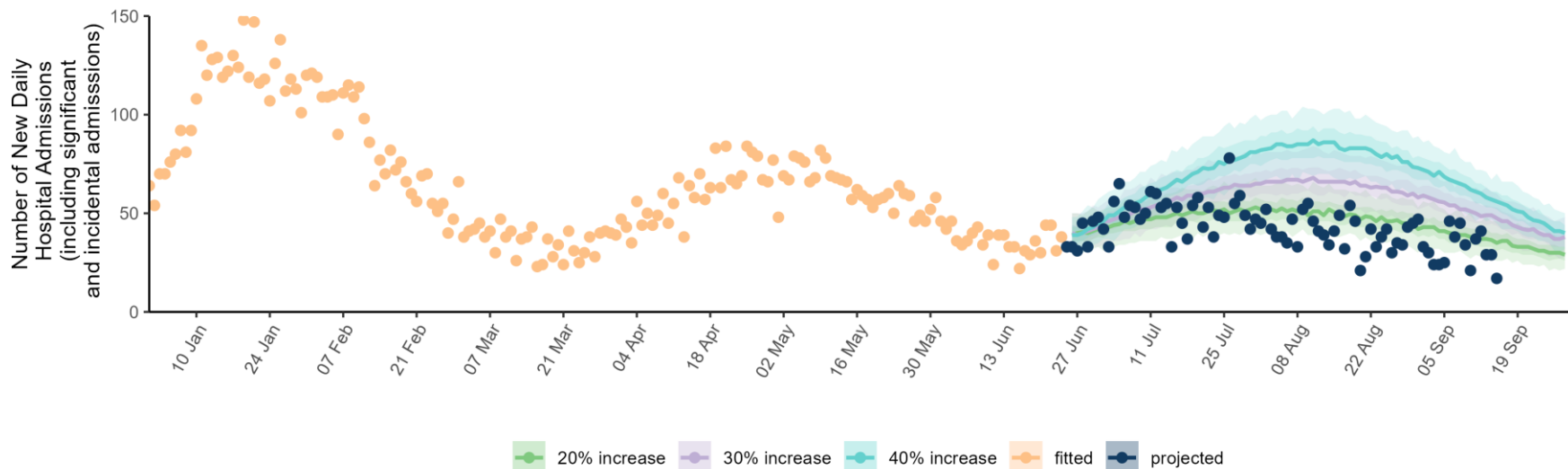


Northwest Langley Wastewater Plant
(approximate region: Northwest Langley)



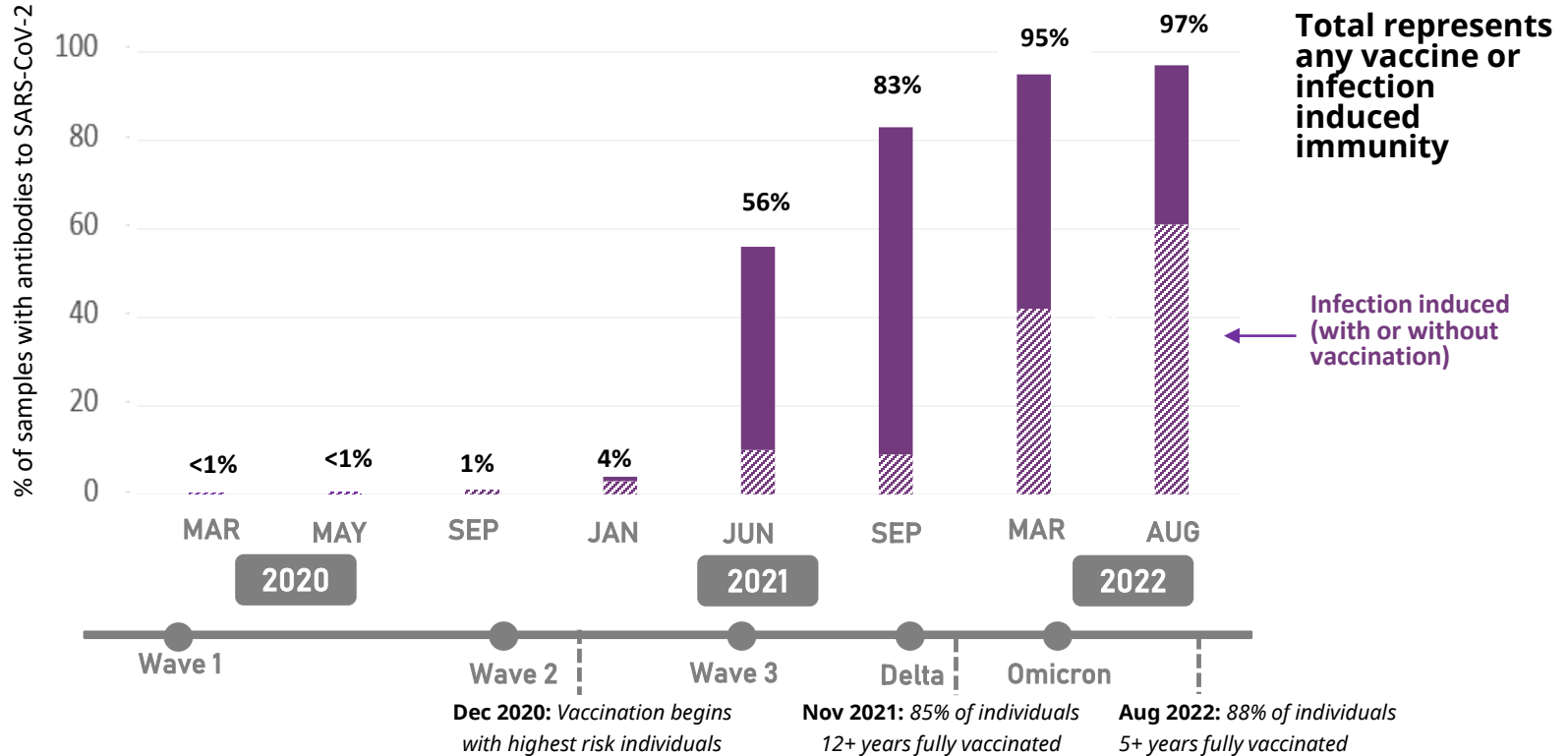
Load is the total viral signal detected over a 24-hour period in the sampled wastewater

New hospitalizations over the past two months have primarily followed the 20% growth advantage scenario

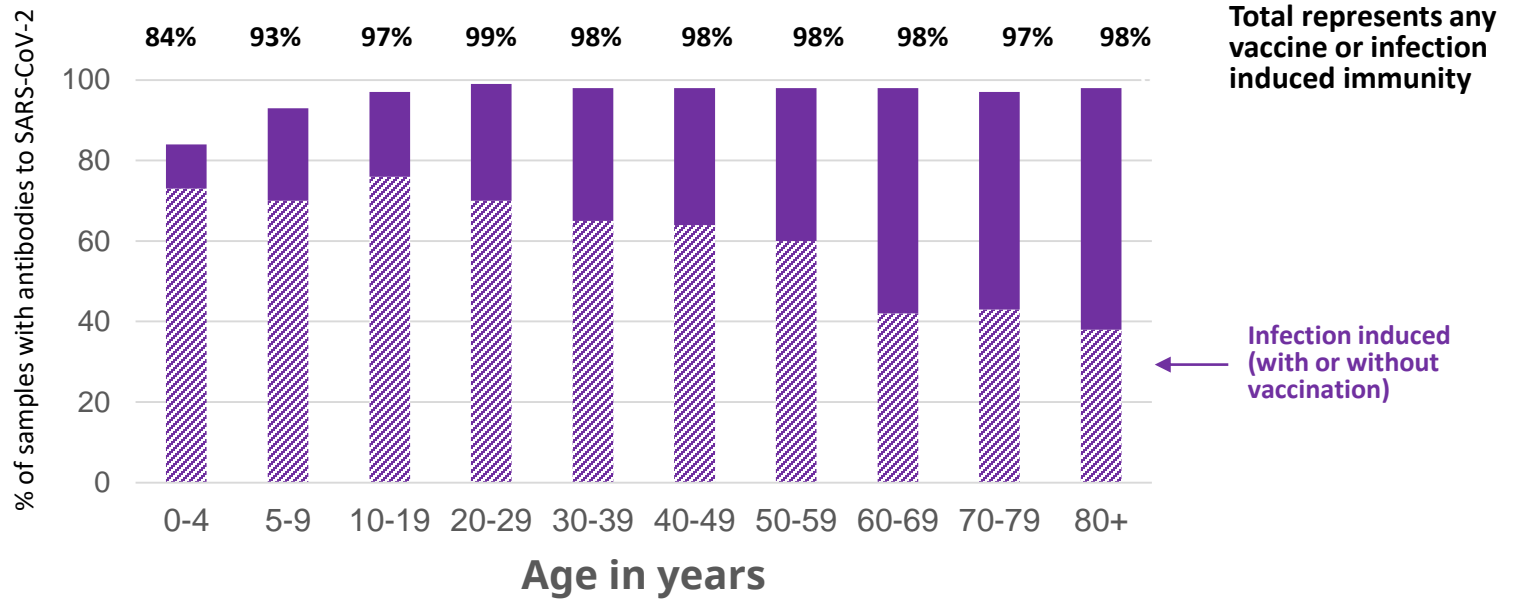


Shading indicates uncertainty due to effectiveness of vaccination, showing 90% and 50% confidence intervals.

Most of the population have accrued some immunity to SARS-CoV-2 from vaccination or infection.



Findings by age group highlight that children have the least vaccine induced antibodies, but most infection-induced antibodies/hybrid immunity, while older adults have less infection-induced antibodies but increased vaccine-induced antibody.



Integrated surveillance to inform public health decisions

**Wastewater
surveillance**

**Serosurveillance
(blood testing)**

**Sentinel
Practitioner
Surveillance
Network**

**Hospitalizations/
critical care**

Testing

**Outbreaks
and clusters**

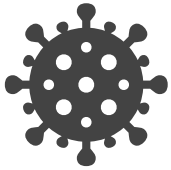
Wastewater surveillance

Scope: Use wastewater to detect and monitor respiratory pathogens of public health interest as a population-level passive surveillance tool.

Pathogen Detection

Detect target pathogens at the population level

Is COVID-19 present in this community?



Pathogen Trends

Monitor target pathogens at the population level

Are COVID-19 numbers increasing?



Pathogen Characterization

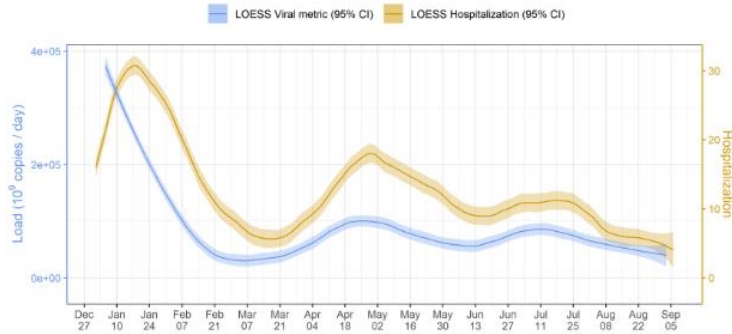
Variant or strain detection

Is an emerging VOC detected?



Wastewater surveillance

Annacis Island Wastewater Plant (approximate region: Fraser North and South)
SARS-CoV-2 Target - E gene in Wastewater



VCH

- Lions Gate (North Vancouver)
- Iona (Vancouver)
- Lulu (Richmond)

FHA

- Annacis (Surrey, Ladner etc.)
- North West Langley

VIHA

- Comox
- Victoria
- Nanaimo

IHA

- Kelowna
- Nelson
- Kamloops

NHA

(Discussions still ongoing)

- Prince George
- Terrace
- Fort St John
- Prince Rupert



Serosurveillance (blood testing)

1- Residual Serological Surveillance – LifeLabs

Scope: To monitor change in community-level sero-prevalence to select respiratory viruses (e.g. influenza, SARS-CoV-2) including among children, adults and the elderly in the Lower Mainland, BC

Surveillance Targets:

- ✓ SARS-CoV-2, Influenza A, Influenza B, Other emerging pathogens

2- Blood Donor Screening - Canadian Blood Service

Scope: To measure antibodies against SARS-CoV-2 among residual samples of blood donors in BC. Data will be used to inform public health policy

Surveillance Targets:

- ✓ SARS-CoV-2, Influenza A, Influenza B, Other emerging pathogens





Serosurveillance (blood testing)

3- Antenatal Serological Surveillance

Scope: Utilize existing residual antenatal serum across BC to ascertain the SARS-CoV-2 sero-prevalence.

- >95% of antenatal women from all regions

Surveillance Targets:

- ✓ SARS-CoV-2, Influenza A, Influenza B, Other emerging pathogens





Sentinel Practitioner Surveillance Network

Scope: To provide real-time respiratory virus surveillance and monitor vaccine effectiveness (VE) across participating provinces and Canada

Surveillance Targets:

✓ SARS-CoV-2, Influenza A, Influenza B, other respiratory virus/bacteria

Population & Geographic Reach:

- 4 Participating provinces with 336 Sites in BC (pre-pandemic)
 - BC
 - Quebec
 - Ontario
 - Alberta

Next steps: Re-activation of network and expansion of sites

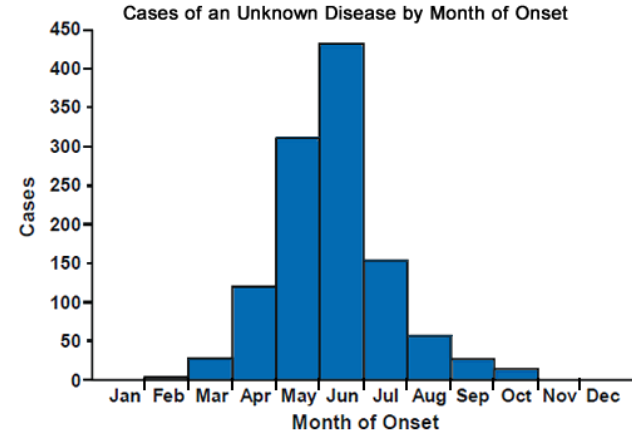




Outbreaks and clusters

Scope:

- Outbreak surveillance informs appropriate interventions to prevent and contain further spread of the virus
- Basic information on COVID-19 and Influenza outbreaks in care facilities are being collected



Testing / Laboratory surveillance

Aggregate lab reporting: Reporting on the positivity of samples based on different viruses and overtime

Continuing Whole Genome sequencing to detect new variants

Emergency department surveillance for respiratory pathogens including influenza, RSV, parainfluenza, SARS-CoV-2



ASDS

Evolution of COVID-19 Testing Guidelines

- COVID-19 testing guidance are evolving to support clinical care.
- Testing is recommended for people to inform care and treatment.
- Rapid antigen test kits are widely available for free in community pharmacies.
- Positive rapid antigen test results are acceptable for initiating treatment:
- To find out if you may benefit from treatment and how to get the treatment, visit **gov.bc.ca/covidtreatments** or call Service BC for assistance: 1-888-COVID-19 (1-888-268-4319) (7:30 am to 8 pm).

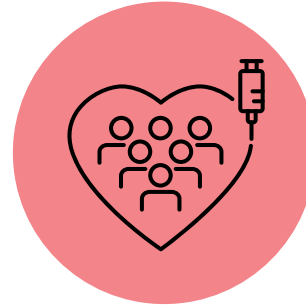
Benefits of Boosters



Optimizes the benefits of the vaccine with longer protections



Strong and quick response from antibodies



Protects people at higher risk of severe illness



Keeps communities safe and hospitalization rates down

Influenza

- The provincial influenza vaccination campaign is set to start in October.
- Recommended and available for free for everyone aged 6 months and older.
- Seniors (65+) can get enhanced vaccines that provide additional protection.
 - FluzoneHD for seniors in long-term care and assisted living
 - Fluad (Adjuvanted vaccine) seniors living in the community
- Influenza vaccine will be offered to BC residents at community COVID-19 booster clinics, pharmacies, as well as physician and nurse practitioner offices.



What you can do - personal toolkit

There are many tools that can help protect you and your family from COVID-19, especially if you are at higher risk of severe illness.



COVID-19 vaccines



Masks



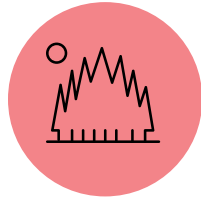
Treatment options



Clean hands



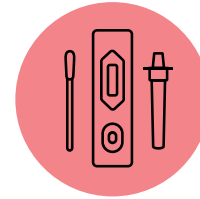
Gathering options



Open spaces, good airflow



Clean surfaces



At home tests

COVID-19 IN BC

Preparation for Fall/Winter 2022/23 Respiratory Illness Season

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Winter Surge Planning – Current Hospital Capacity

Reviewing Hospital Capacity Across B.C.:

- B.C.'s hospital capacity is approximately 9,400 patients

We are planning for additional potential hospitalizations due to:

- COVID-19 surges in the community
- Other respiratory illnesses such as influenza

Winter Surge Planning – Fall and Winter Projections

COVID-19 and Influenza related surges are anticipated, but the volumes are difficult to predict.

- COVID-19 projections suggest up to 700 additional patients may require hospitalization in the coming months, currently at 350.
- Influenza projections suggest a peak of up to 1,200 additional patients may require hospitalization for a few weeks over the coming months

We are planning bed management to support:

- Bed availability based on moderate to high projections
- Planning 1,500 more beds (if needed) late fall through early spring

Winter Surge Planning – Bed Management

Bed management strategies are being refined to manage hospital capacity.

1. Planning underway to open up additional hospital bed capacity:
 - Of the currently admitted patients in hospital, approximately 1,300 could be cared for in the community and 500 are awaiting care home placement
 - Patients are being identified for potential transfer to community; reducing hospitalization by 40% to 60% in case 500 to 800 beds are needed

Winter Surge Planning – Bed Management

2. An operational Task Group is focusing on improving emergency department efficiency, hospital access and flow:
 - 7-day a week active bed management teams will be implemented to optimize in-patient bed utilization.
 - Continuing enhanced air ambulance teams to expedite transfers when needed

3. Worst case scenario planning is underway where as a last resort and where needed, service reductions including postponing surgeries could be required

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