

BCCDC Data Summary

5 August 2021

Purpose

The surveillance deck is a summary of COVID-19 related indicators that can help inform the pandemic response in British Columbia. This surveillance monitoring constitutes the medical chart for population health assessment that guides the public health community of practice. As such this is a working document that reflects a snapshot in time and may differ from other published reports.

Data Sources

The collection, use and disclosure of case data is subject to the Public Health Act. COVID-19 cases are reported under the Public Health Act to the health authority of residence. Public health case notification, clinical management, contact tracing and follow-up contributes surveillance data for regional and provincial COVID-19 monitoring. Each regional health authority have their own workflows and information systems for capture of relevant data. This data foremost serves the public health and clinical management of the case and their contacts.

Disclaimer

- Data and key messages within these documents are not finalized and considered to be work in progress that is subject to retroactive changes as more data and information become available.
- Accurate interpretation of figures may be difficult with the limited inclusion of data notes and methodology descriptions in this document.

Table of Contents

- Overall Summary4
- Surveillance5
 - BC Epidemiology.....5
 - Vaccinations.....15
 - Labs/Genomics.....25
- Modelling.....35
- Additional Resources.....37

Overall Summary for surveillance data up to 3 Aug

- **Case rates** have increased recently; **test positivity** for public tests is ~7% provincially.
 - Recent increases in cases primarily driven by Interior Health.
 - Increase in incidence and positivity greatest in 19-29 year olds.
 - Percent positivity >10% in IH.
- **New hospitalizations** are low and stable in each region; **hospital/critical care census** is low and stable across BC; **new deaths** are stable and very low.
- Majority of the cases, hospitalizations and deaths over the past month were among unvaccinated individuals. Severe outcomes in fully vaccinated individuals are infrequent.
- **Vaccine** coverage in BC, 3 Aug: ~90% of 70+ and ~81% of 12+ have received their 1st dose; ~60% of the total population has received their 2nd dose. Lower vaccine coverage among <50 year olds in Interior and Northern.
- The share of **VOCs** among all positive tests in BC is ~100% from July 25th to August 1st; Delta is the dominant VOC (95%) compared to Gamma (3%) and Alpha (2%) which have recently declined.
- Studies consistently show that **both mRNA and AstraZeneca vaccines** remain **highly effective against the Delta variant**, especially against severe outcomes. Vaccinated individuals tend to have milder illness if they get infected and are also less likely to pass virus on than unvaccinated individuals.

Jul 29 to Aug 03: BC COVID-19 Profile



150,973 total cases
1,529 new this week



1,772 total deaths
1 new this week

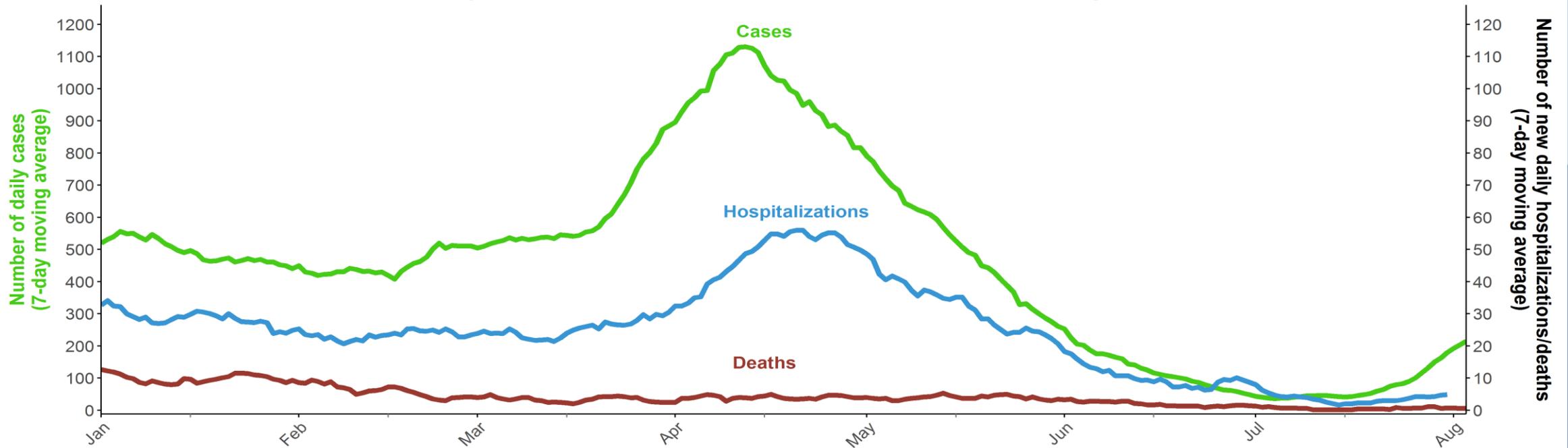


8,162 ever hospitalized
37 new this week



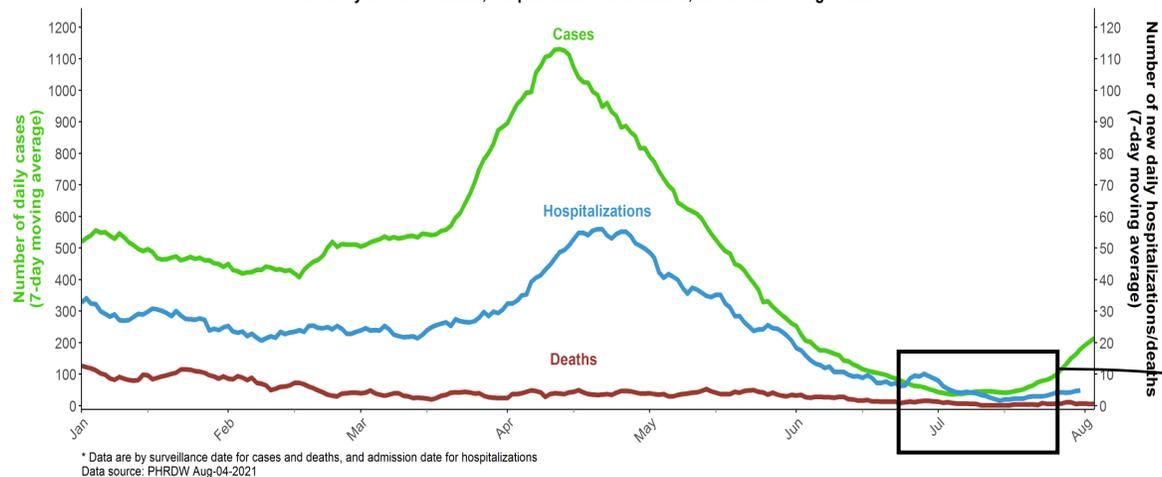
147,409 removed from isolation
653 new this week

New daily COVID-19 cases, hospitalizations and deaths, Jan 01 2021 - Aug 03 2021

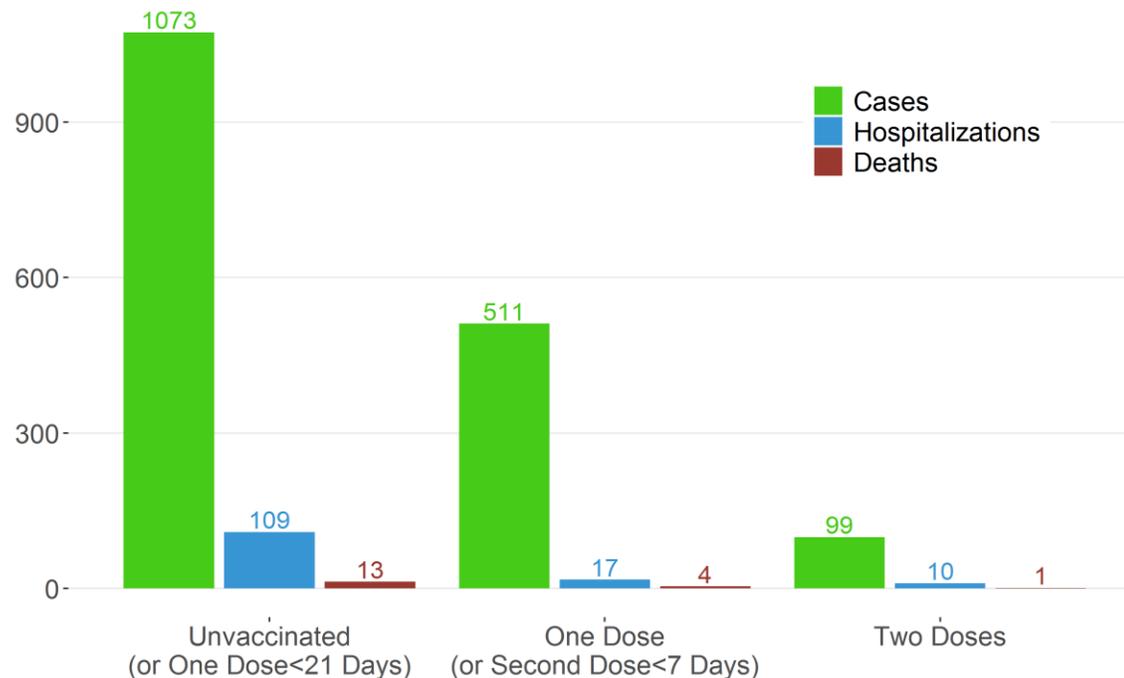


* Data are by surveillance date for cases and deaths, and admission date for hospitalizations
Data source: PHRDW Aug-04-2021

New daily COVID-19 cases, hospitalizations and deaths, Jan 01 2021 - Aug 03 2021



Number of Cases, Hospitalizations and Deaths by Vaccination Status (June 24-July 24, 2021)

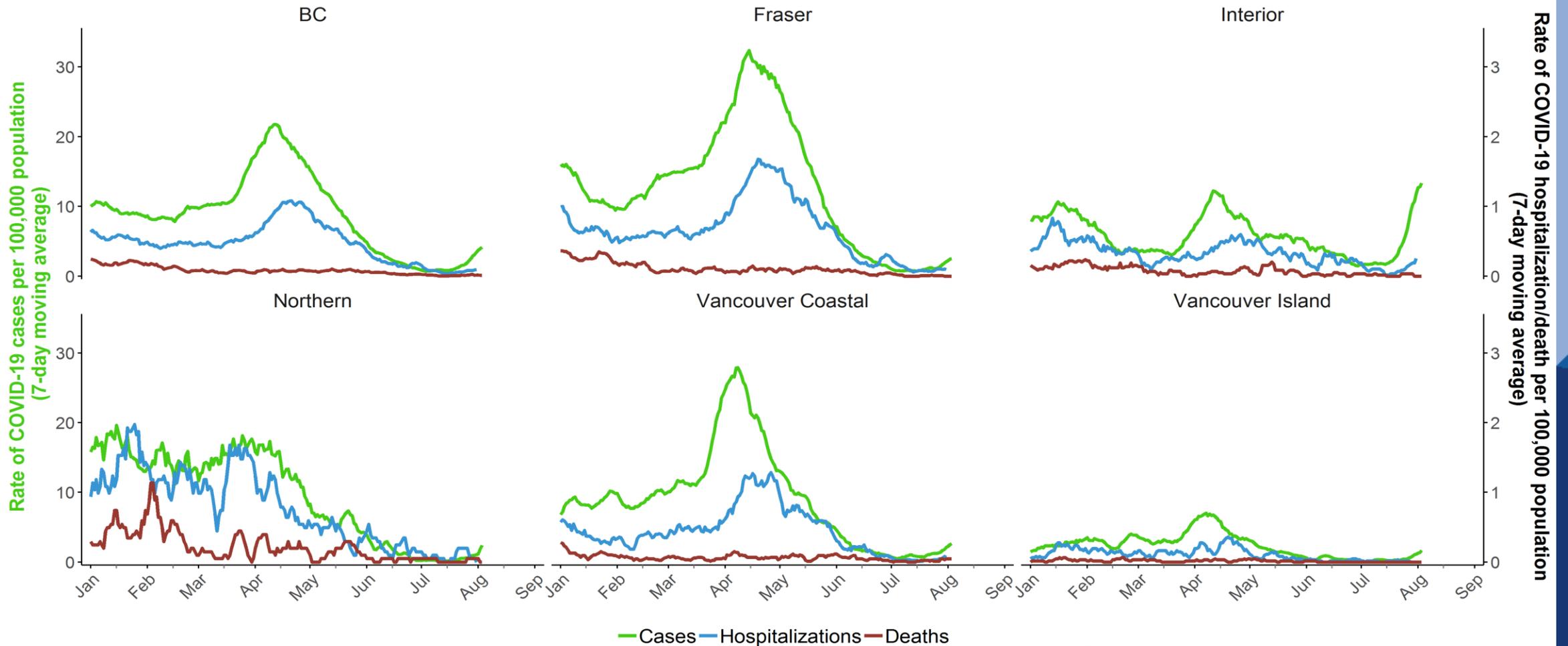


Most of the cases, hospitalizations and deaths over the past month were among unvaccinated individuals

*Also see slides 17 and 18

Case rates are starting to increase provincially, with particularly driven by Interior; **new hospitalizations** are stable and low in all HAs except for Interior, which increased recently; **new deaths** are stable and very low.

Rate of COVID-19 case, hospitalization and death, Jan 01 2021 - Aug 03 2021

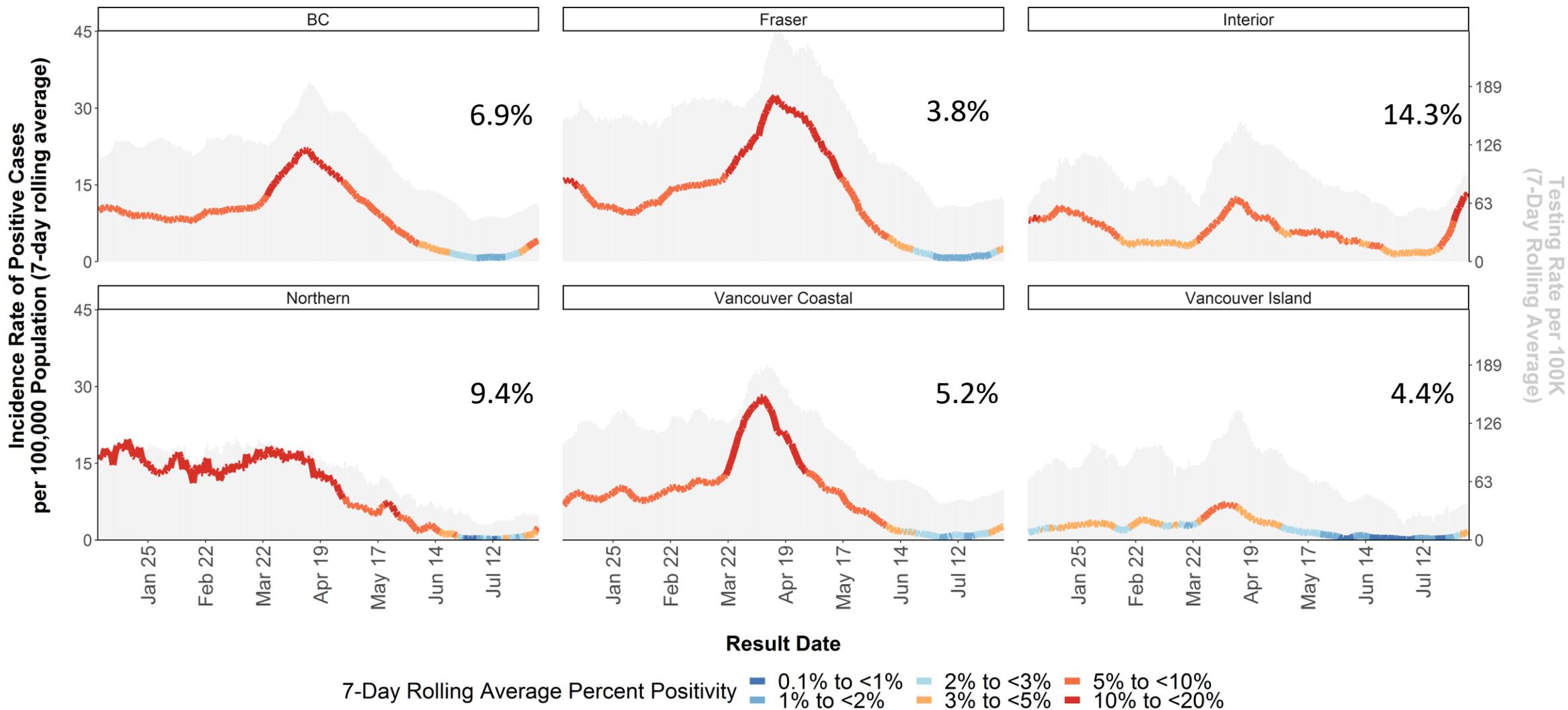


* Data are by surveillance date for cases and deaths, and admission date for hospitalizations
Data source: PHRDW Aug-04-2021

For latest version of a graph similar to this one (difference: hospital census, not new hospitalizations), see the [Epi App](#)

Incidence and % positivity have increased in all HAs. IH reporting record high incidence and % positivity. Note the lower vaccination coverage in individuals <60 years in IH (slide 16).

Case incidence rate, test percent positivity, and testing rate (Public Payers Only). Jan 1 2020 - Aug 3, 2021.

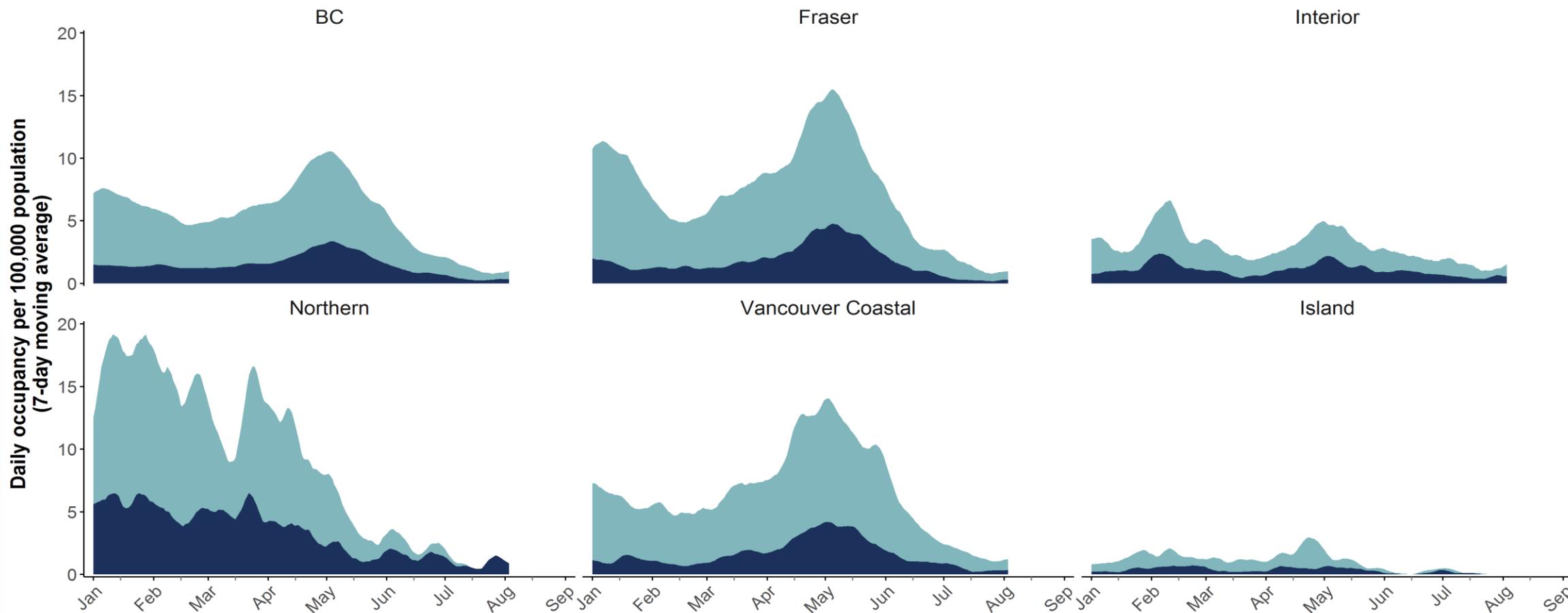


Data source: PLOVER 03-Aug-2021

Hospital and critical care census is stable and low in all regions.

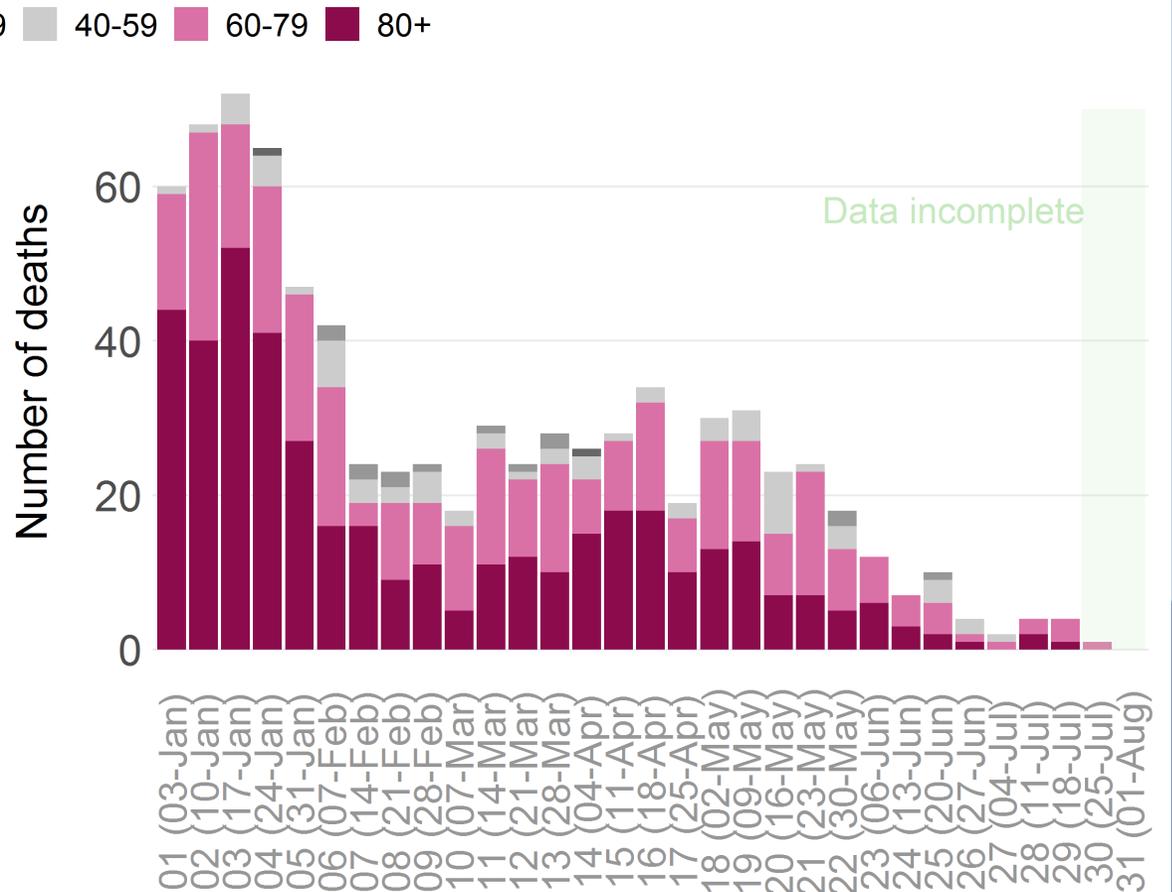
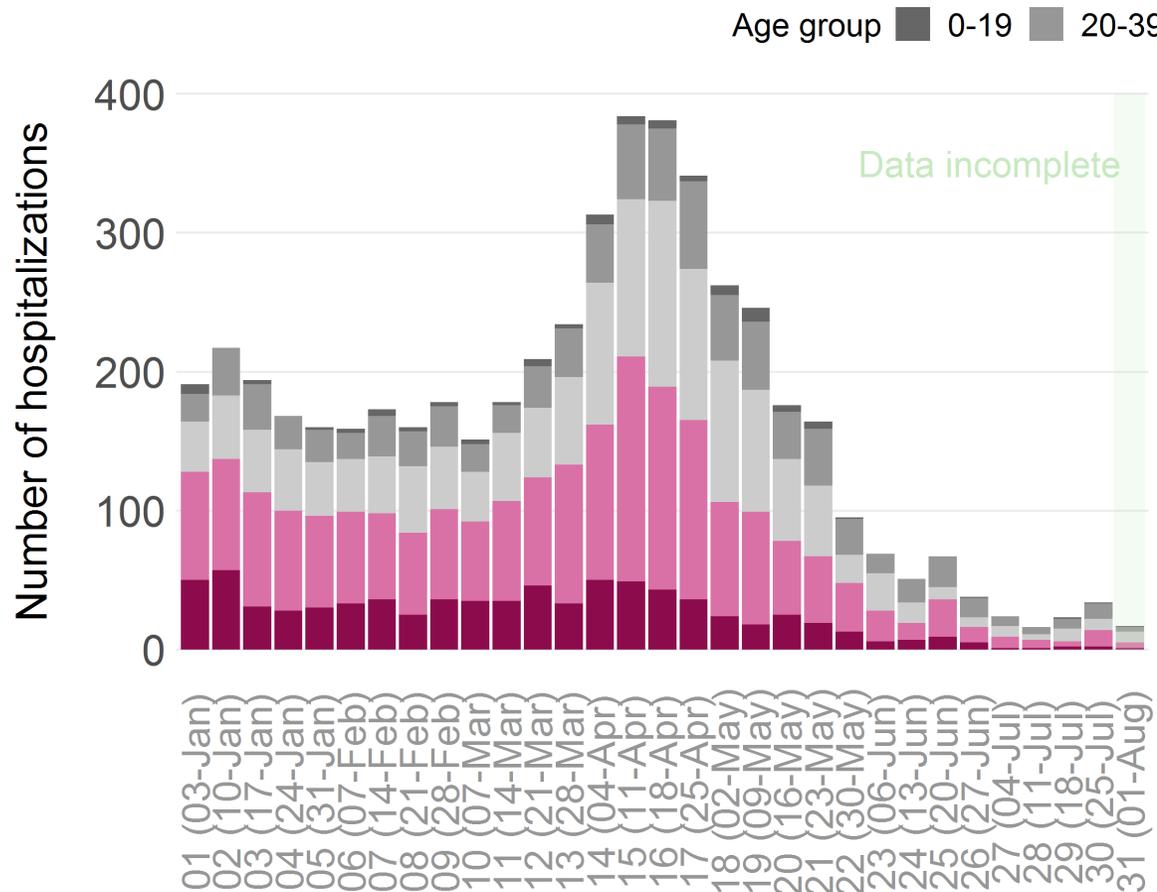
Current COVID-19 hospitalizations, Jan 01 2021 - Aug 03 2021

■ In the hospital but not in critical care ■ In critical care



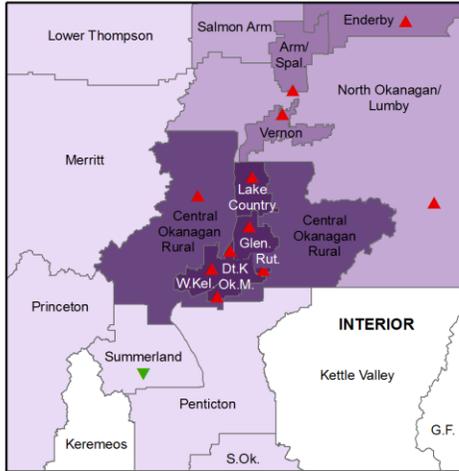
* Data are by census date for hospitalizations
Data source: PHSA Provincial COVID19 Monitoring Solution (PCMS) Aug-04-2021

Number of new hospital admissions is stable and low. Deaths are stable and low.

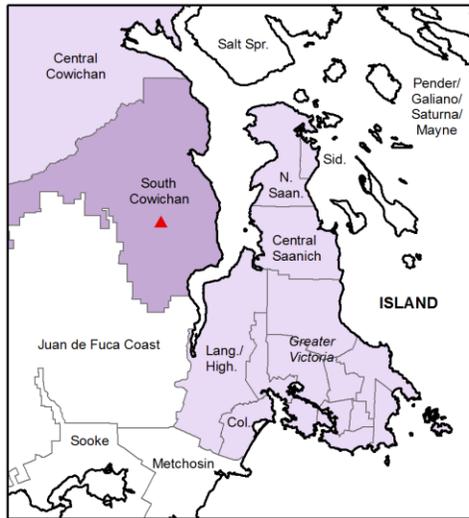


Data extracted on 2021-08-04; hospitalization and death data from health authority case line list data

Okanagan Inset
(Community Health Service Areas)



Greater Victoria Inset
(Community Health Service Areas)



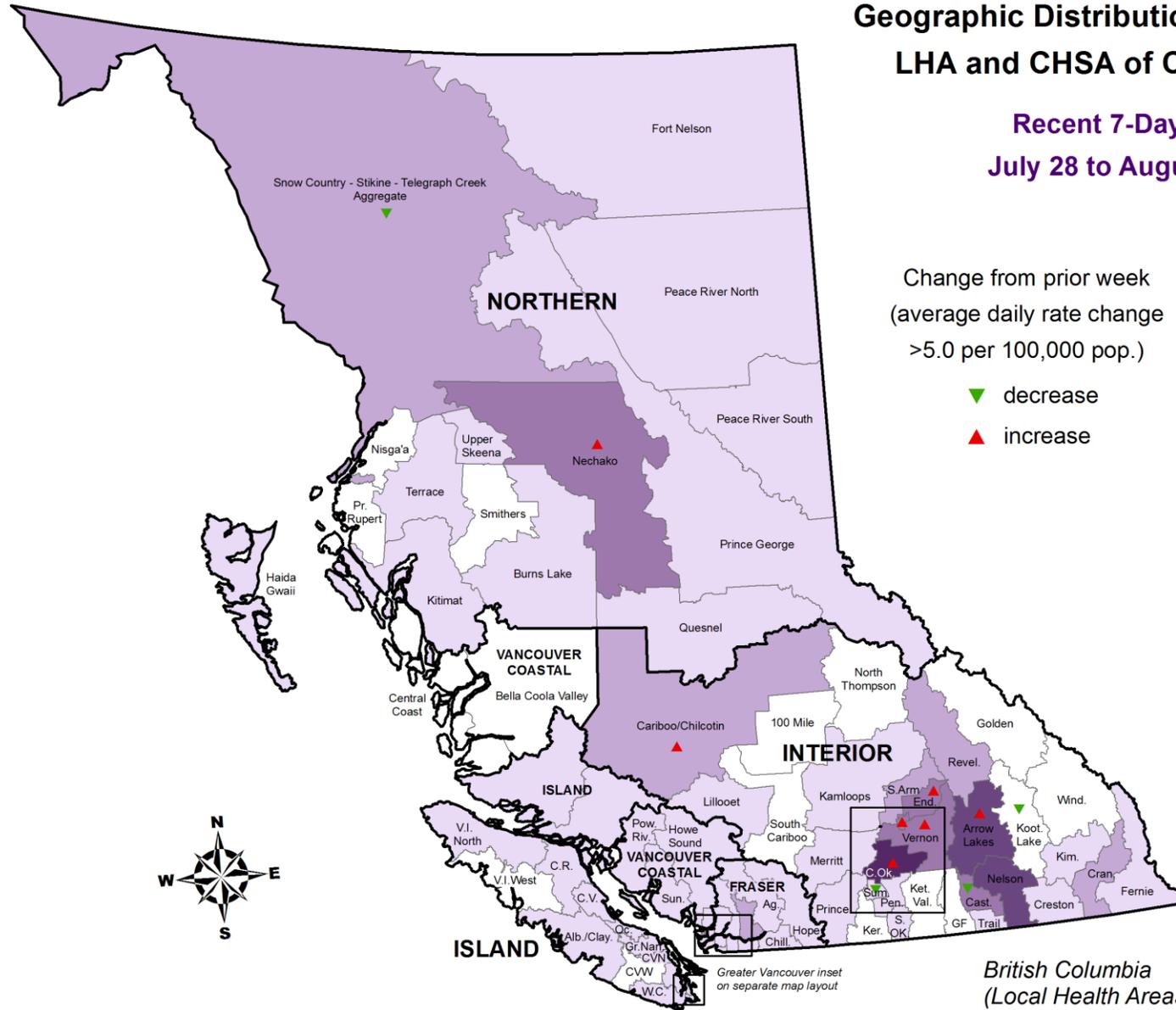
Geographic Distribution of COVID-19 by LHA and CHSA of Case Residence

Recent 7-Days Cases
July 28 to August 3, 2021

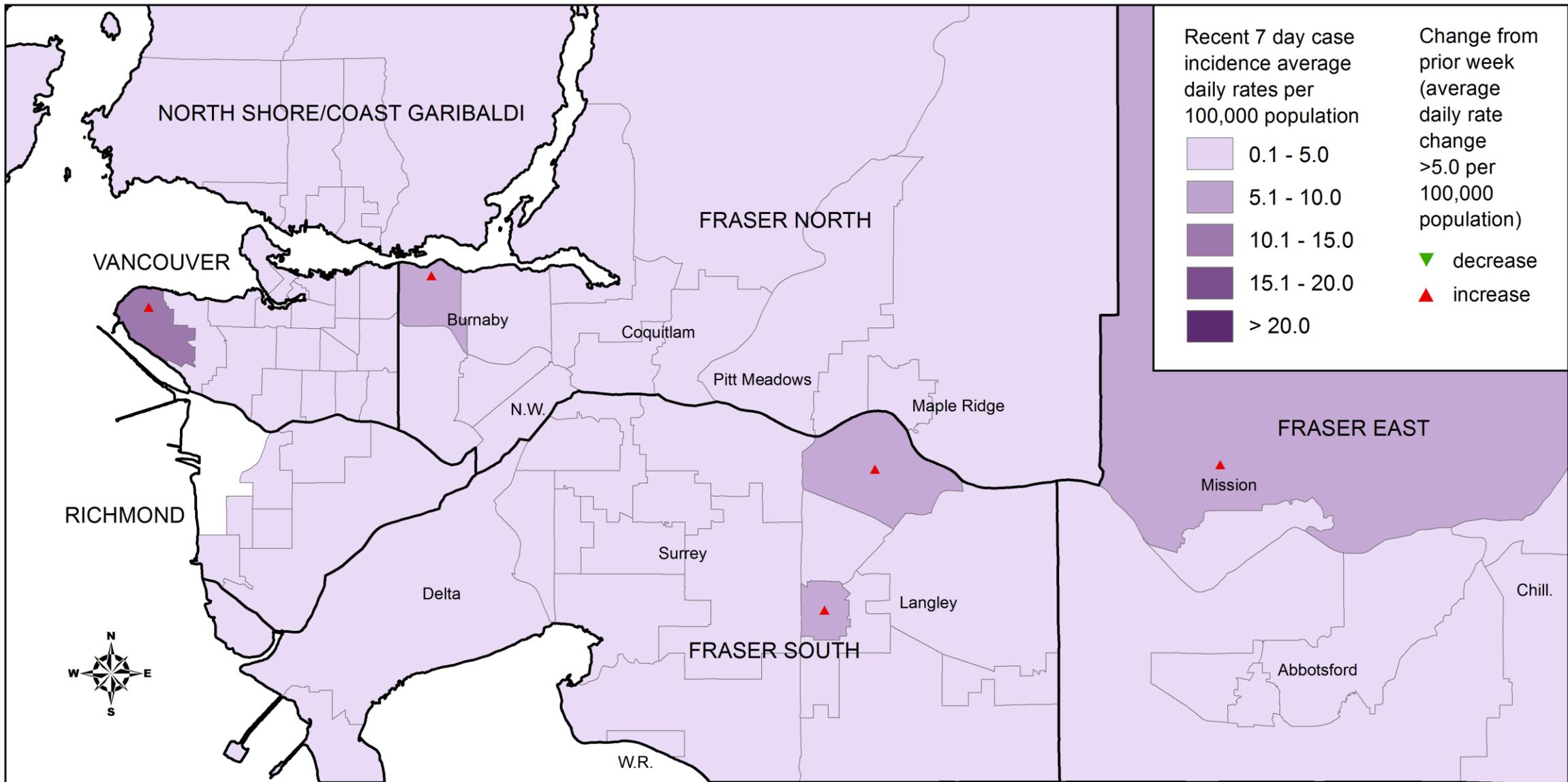
Change from prior week
(average daily rate change
>5.0 per 100,000 pop.)

- ▼ decrease
- ▲ increase

Average daily rate per
100,000 population

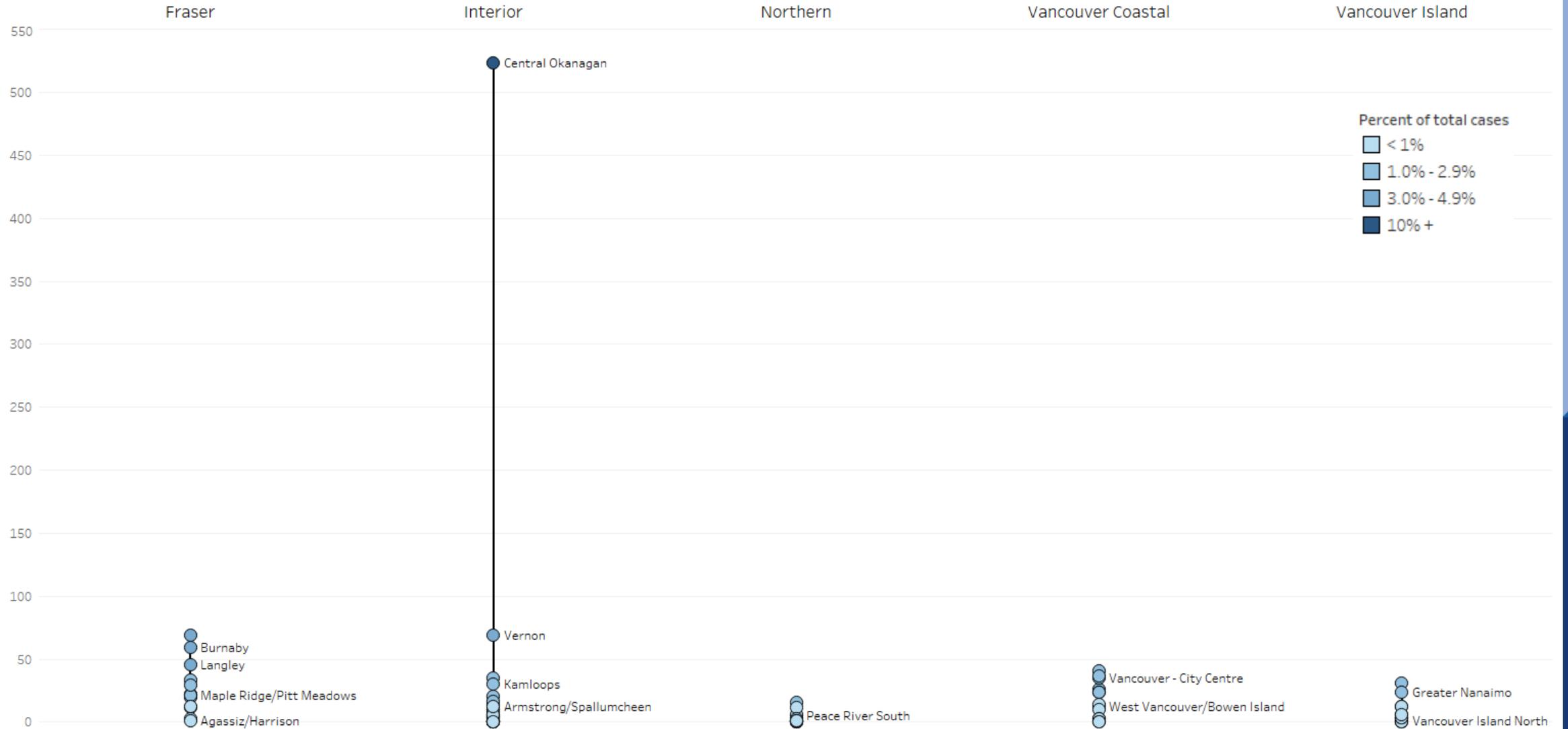


Data source: Public Health Reporting Data Warehouse (PHRDW) integrated COVID dataset; we operate in a live database environment and case information is updated as it becomes available. Cases are mapped by location of residence; cases with unknown residence and from out of province are not mapped. Data are by date of first positive test, or date reported to public health for epi-linked cases. Population denominator from BC Stats PEOPLE estimates for 2021.

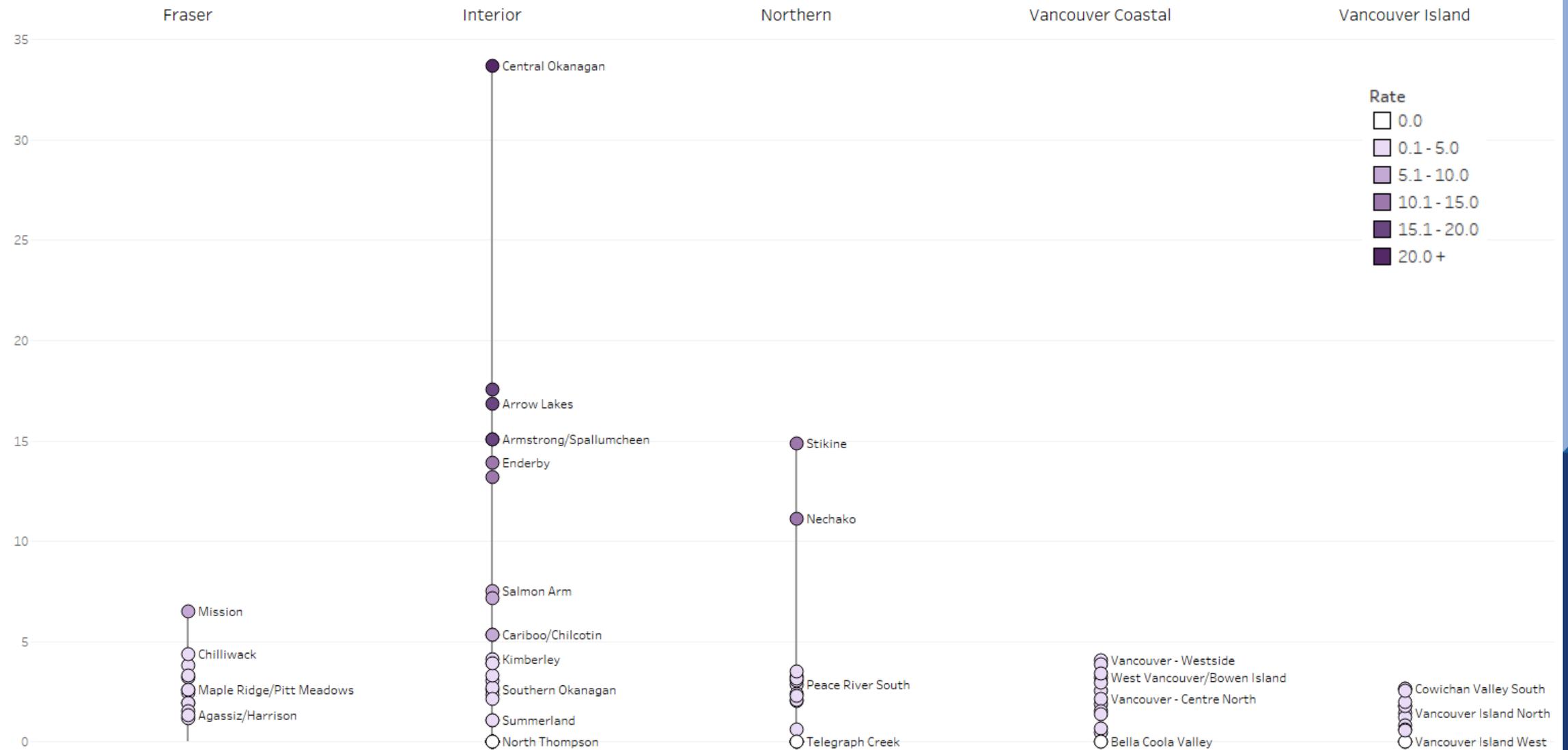


COVID-19 Recent 7-Day Case Incidence Rates by CHSA (July 28 to August 3, 2021)

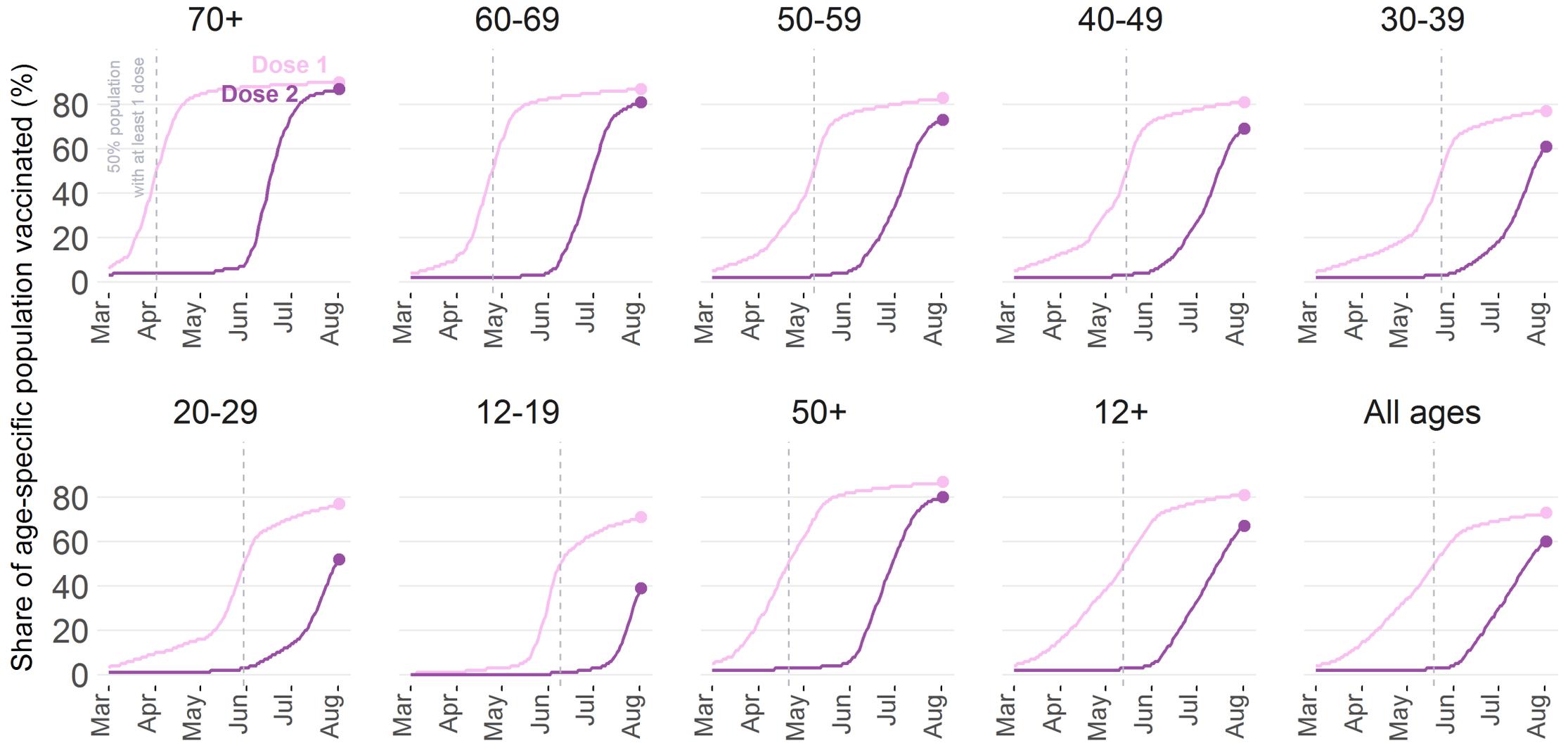
Total cases by local health area, Jul 28 - Aug 03, 2021



Average daily **rate** of new cases per 100,000 population, by local health area, Jul 28 - Aug 03, 2021



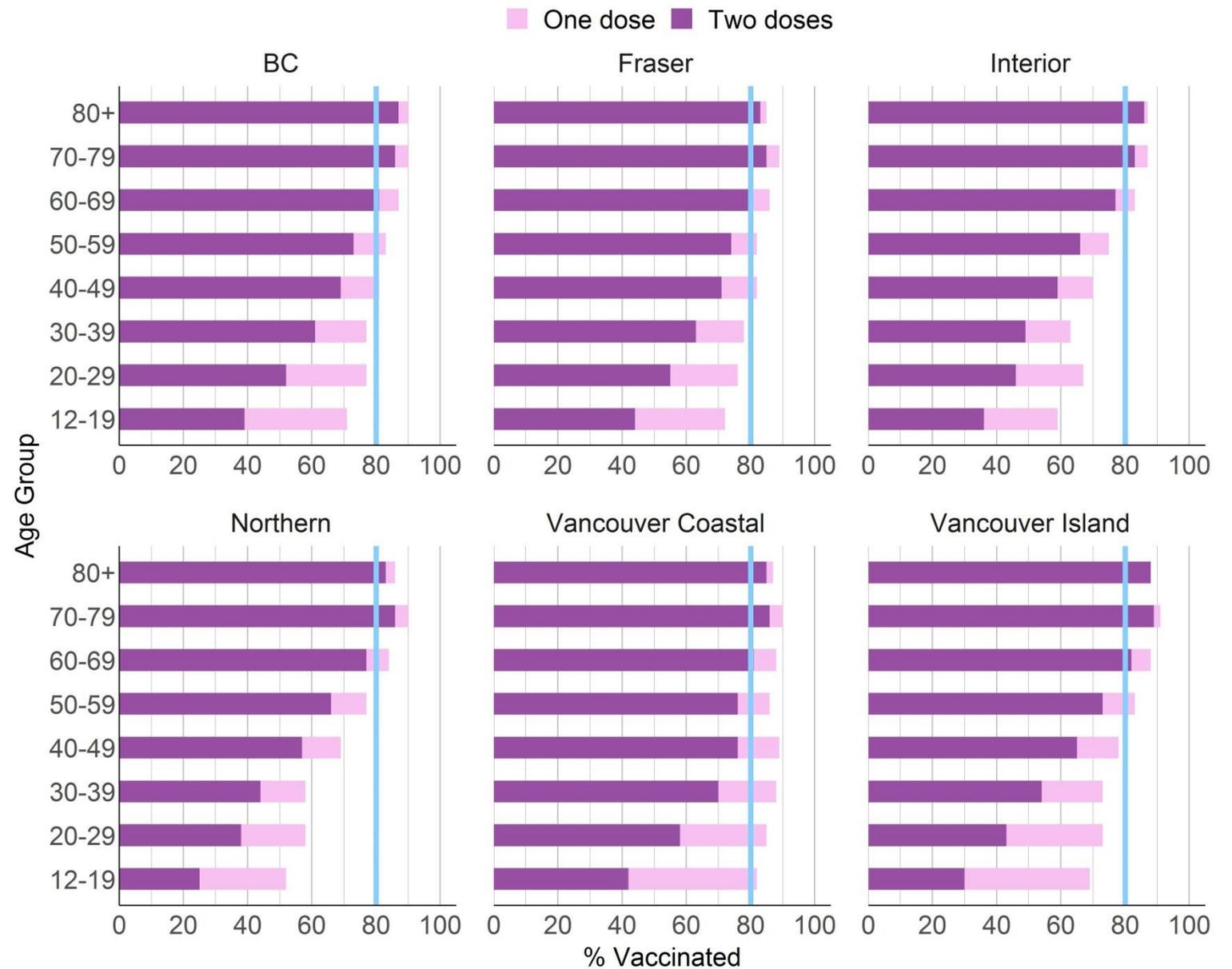
Vaccination progress in BC over time by age group and dose number up to 3 August



Data updated 2021-08-03
Data Source: Provincial Immunization Registry, PHSA

Vaccination progress in BC by Health Authority, age group and dose number as of August 3rd

*Note: BC numbers include individuals where health authority of residence was not assigned



Blue lines at 80% are for visual reference only for easier navigation across panels

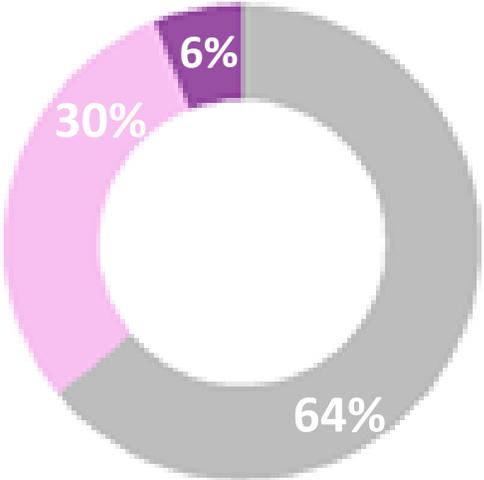
Data updated 2021-08-03
Data Source: Provincial Immunization Registry, PHSA

Over the past month (24 Jun-24 Jul), fully vaccinated individuals accounted for only ~7% of hospitalizations and deaths.*

This % is expected to increase as more people get fully vaccinated and there are fewer unvaccinated people. If 100% of the population gets fully vaccinated, then any new cases, hospitalizations, or deaths will be among vaccinated people. Percentages for severe outcomes among partially or fully vaccinated need to be interpreted with caution given small numbers in this 4 week snapshot.

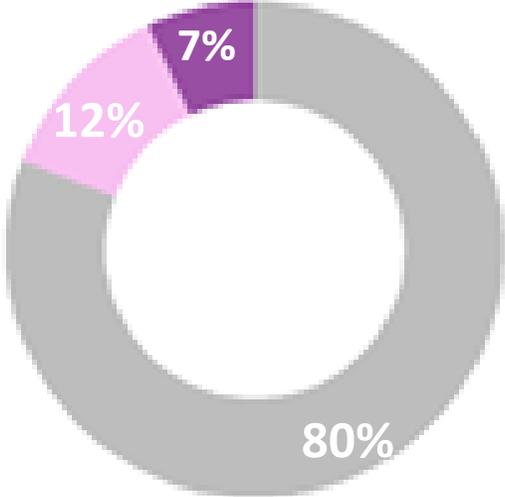
Cases

N=1,683



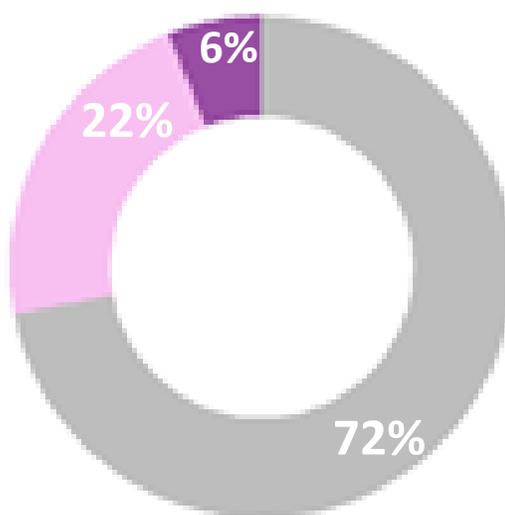
Hospitalizations

N=136



Deaths

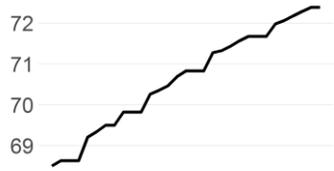
N=18



One Dose (or Second Dose < 7 Days) Two doses Unvaccinated (or One Dose < 21 Days)

*see next slide for more details

Trend* in % total population vaccinated with at least 1 dose



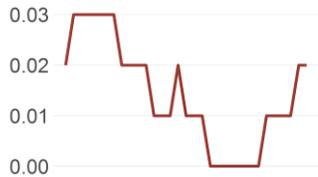
Trend* in daily cases per 100K



Trend* in daily hospitalizations per 100K



Trend* in daily deaths per 100K



Vaccinations (all BC; n=5,197,224)



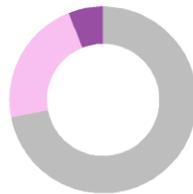
Cases (n=1,683)



Hospitalizations (n=136)



Deaths (n=18)



■ One Dose (or Second Dose < 7 Days)
 ■ Two doses
 ■ Unvaccinated (or One Dose < 21 Days)



*Figures include data for 24 Jun – 24 July 2021

Unvaccinated cases and hospitalized individuals are younger compared to fully vaccinated cases and hospitalized individuals.

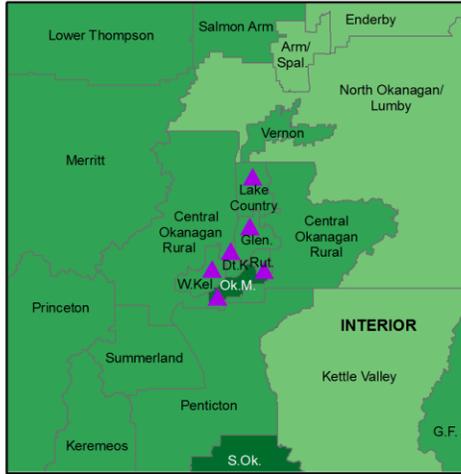
Vaccine status*	Median age (years)		
	Cases <i>N=1,683</i>	Hospitalizations <i>N=136</i>	Deaths <i>N=18</i>
Unvaccinated	28	50	72
Vaccinated, 1 dose	31	43	66
Vaccinated, 2 doses	49	73	67
Total	30	52	68

This table is based on data for 24 Jun – 24 July 2021

*Unvaccinated is defined as no doses or within 3 weeks of 1st dose; Vaccinated, 1 dose is defined as >3 weeks after 1st dose and <1 week after 2nd dose, if applicable; Vaccinated, 2 doses is defined as >1 week after 2nd dose

**Percentages for severe outcomes among partially or fully vaccinated need to be interpreted with caution given small numbers in this 4 week snapshot

Okanagan Inset
(Community Health Service Areas)

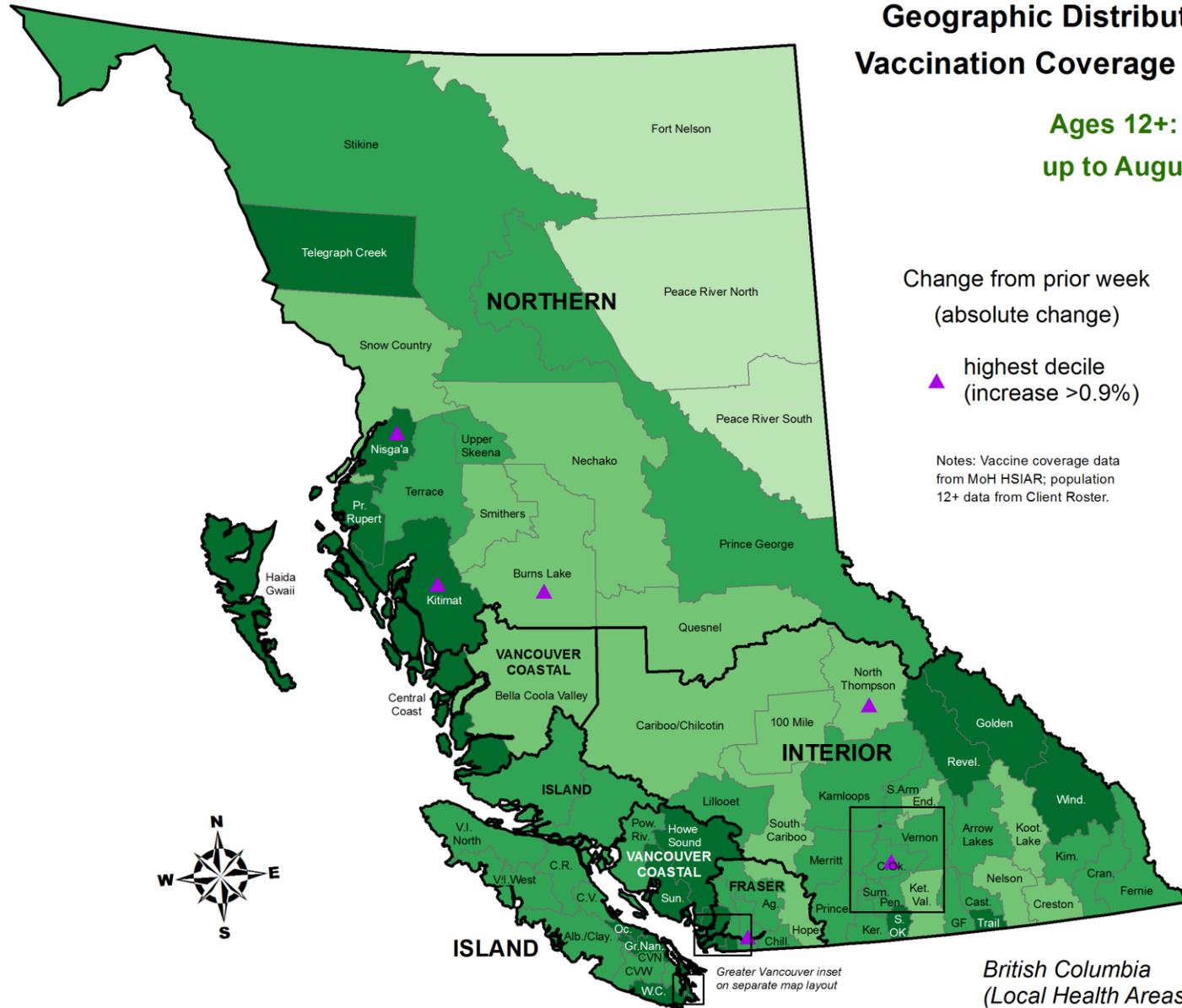


Greater Victoria Inset
(Community Health Service Areas)



Geographic Distribution of COVID-19 Vaccination Coverage by LHA and CHSA

**Ages 12+: 1st Dose
up to August 2, 2021**

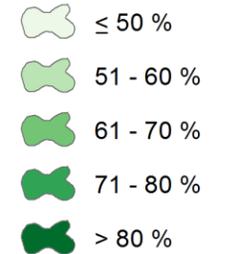


Change from prior week
(absolute change)

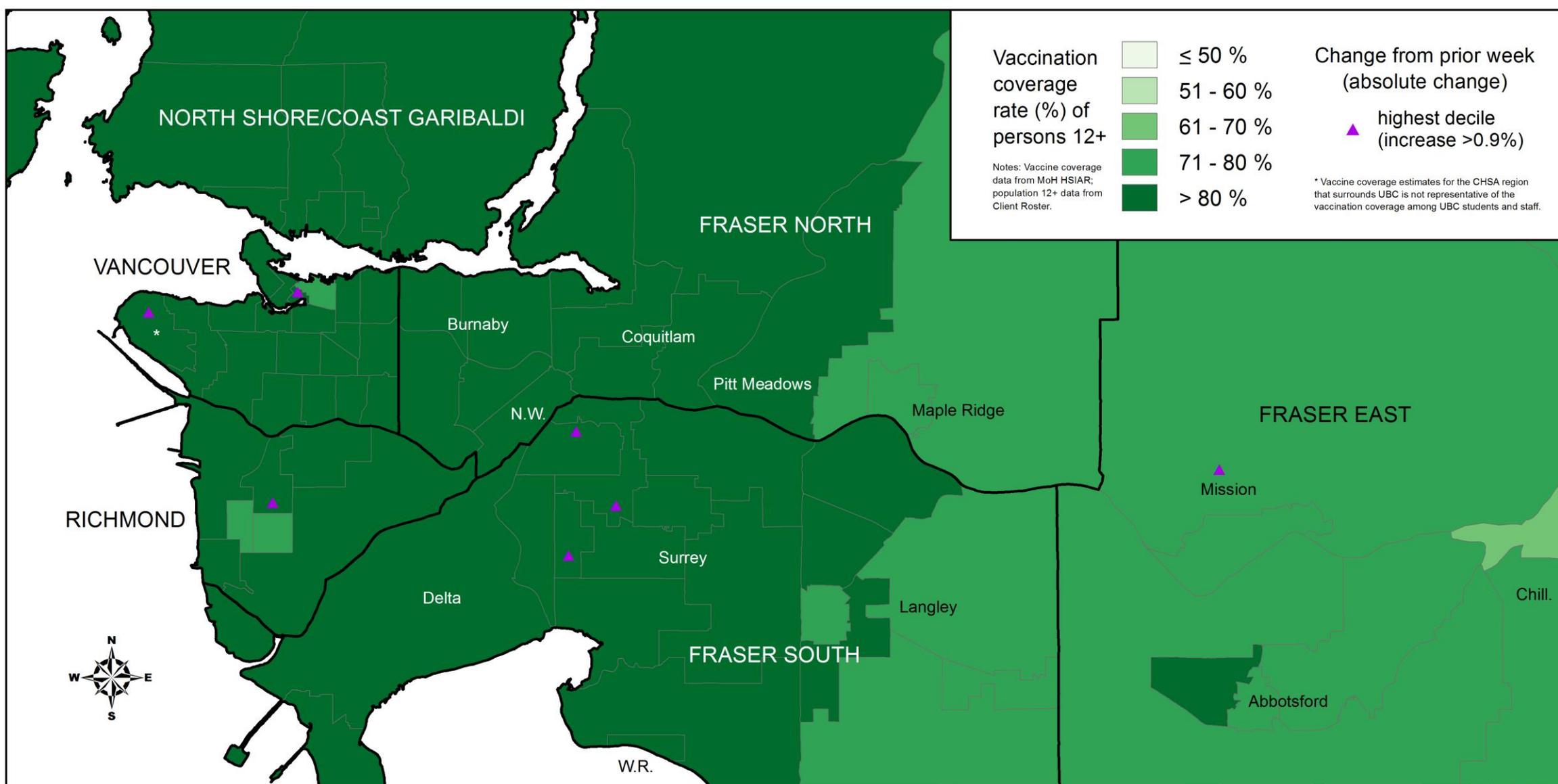
▲ highest decile
(increase >0.9%)

Notes: Vaccine coverage data
from MoH HSIAR; population
12+ data from Client Roster.

Vaccination coverage
rate (%) of persons 12+

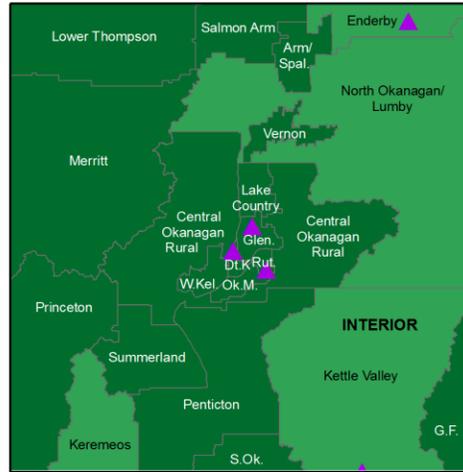


British Columbia
(Local Health Areas)



COVID-19 Vaccination Coverage by CHSA: Ages 12+ 1st Dose (up to August 2, 2021)

Okanagan Inset
(Community Health Service Areas)

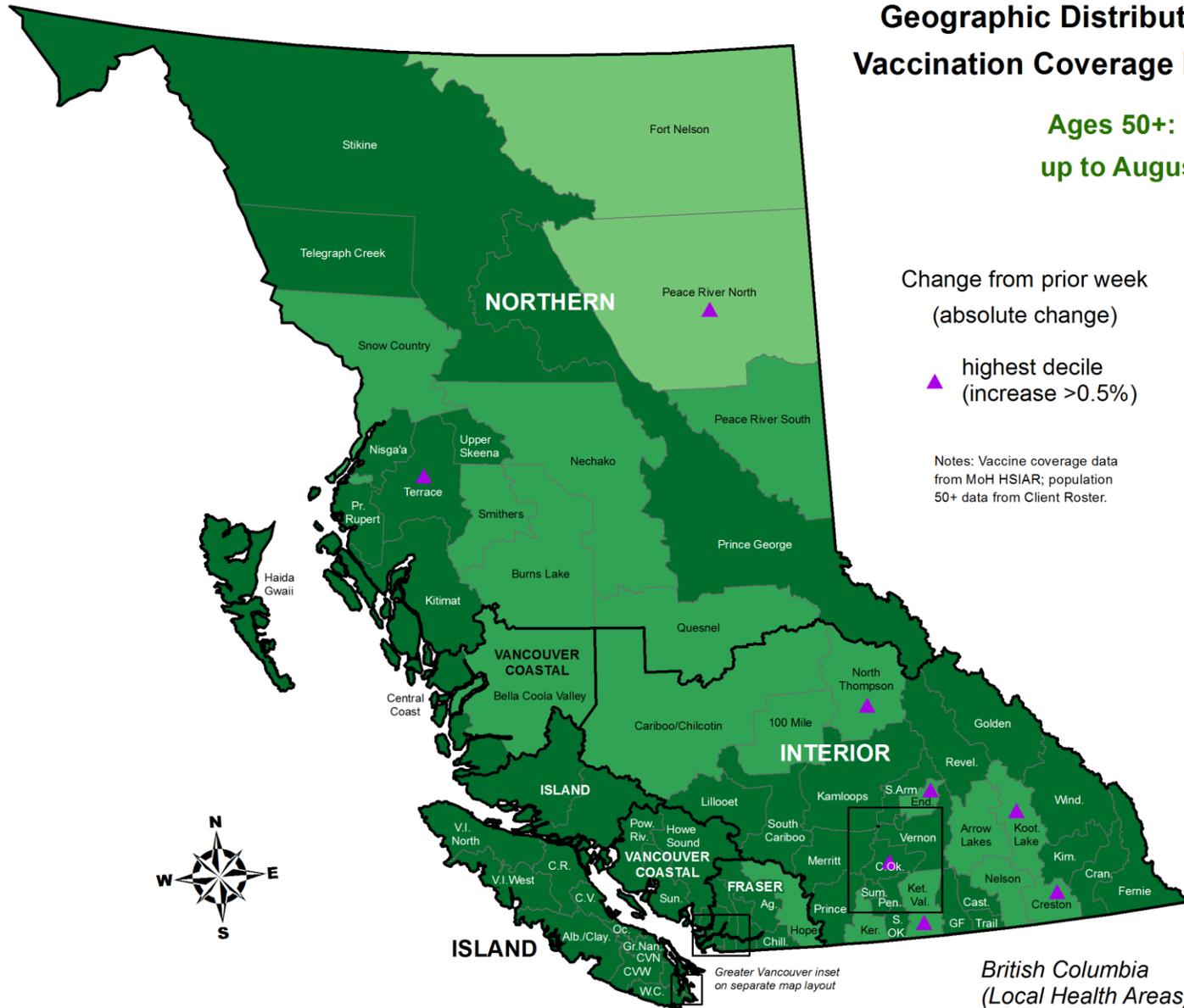


Greater Victoria Inset
(Community Health Service Areas)



Geographic Distribution of COVID-19 Vaccination Coverage by LHA and CHSA

Ages 50+: 1st Dose up to August 2, 2021



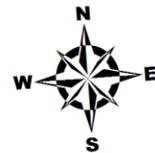
Change from prior week (absolute change)

▲ highest decile (increase >0.5%)

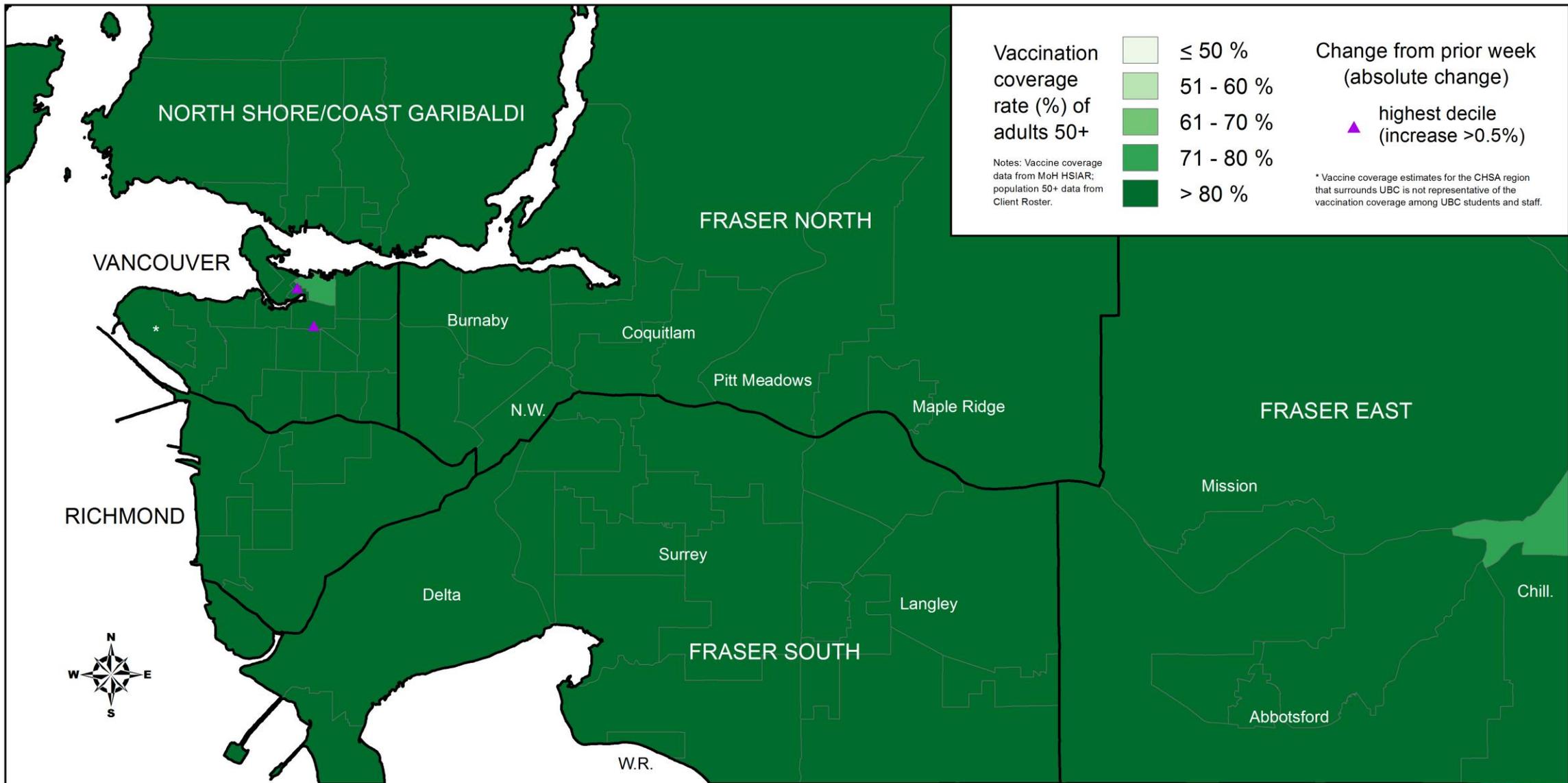
Notes: Vaccine coverage data from MoH HSIAR; population 50+ data from Client Roster.

Vaccination coverage rate (%) of adults 50+

- ≤ 50 %
- 51 - 60 %
- 61 - 70 %
- 71 - 80 %
- > 80 %

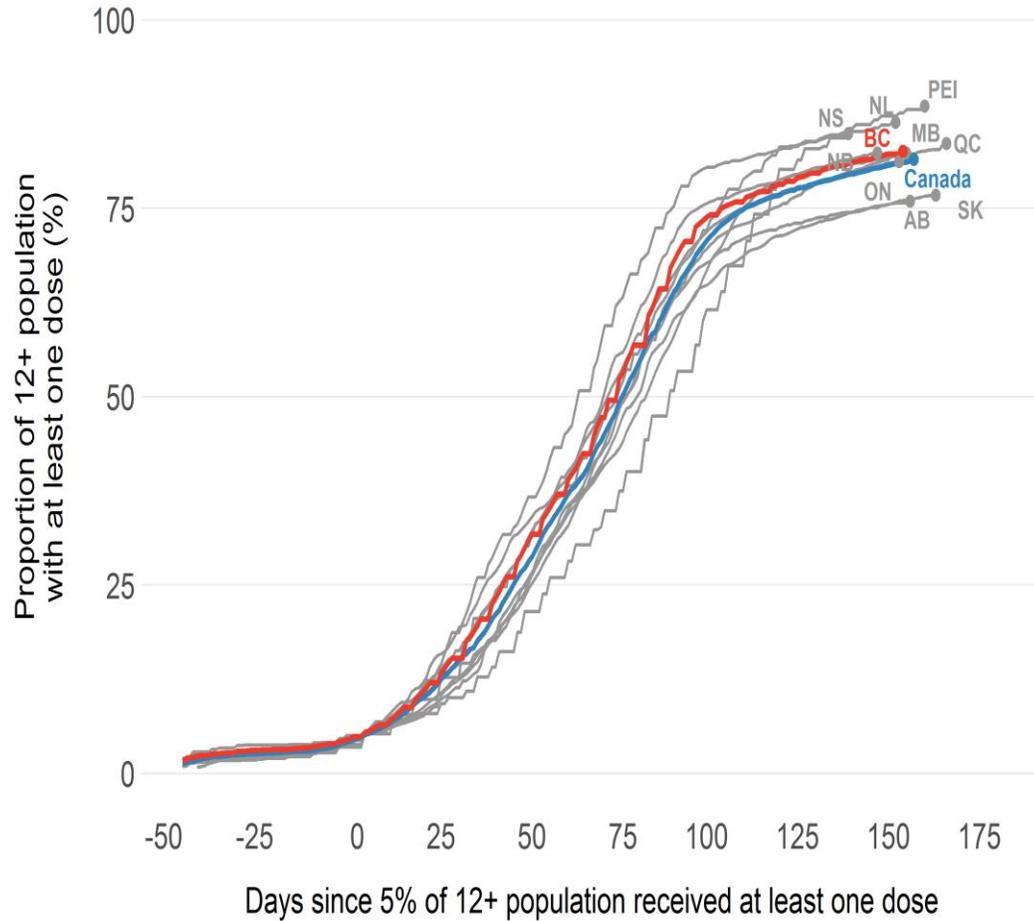


British Columbia
(Local Health Areas)

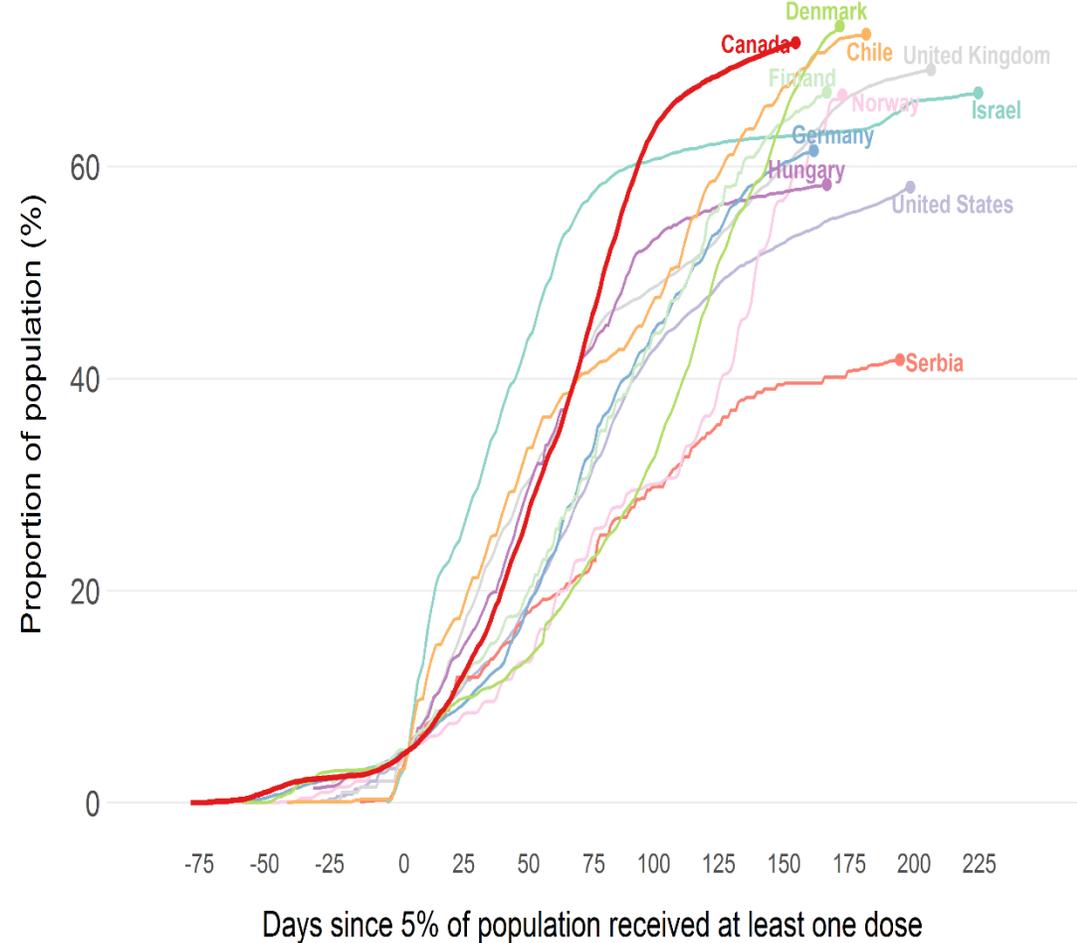


COVID-19 Vaccination Coverage by CHSA: Ages 50+ 1st Dose (up to August 2, 2021)

Nationally, BC's vaccination rate is very close to Canadian average; internationally, Canada is one of the countries with the highest proportion of the population with at least one dose.



Data from COVID-19 Canada Open Data Working Group and extracted 2021-08-04
Population denominator from Statistics Canada table 17-10-0005-01; 12-14 year old age group estimated



Data from Our World in Data and extracted on 2021-08-04

Data source: [Open Data](#)
Visualization: BCCDC

For latest vaccination progress statistics in Canada and internationally, see the [Epi App](#)

Data source: [Our World in Data](#)
Visualization: BCCDC

Lab - Key Messages

- **Percent positivity** among publicly funded tests doubled in last week (from 3.2 to 6.3 %)
 - Test positivity varied by HA, ranging from 3.8% in FH to 14.3% in IH.
 - Increase in incidence and positivity in individuals aged < 45 years; most marked increase in individuals 19 to 29 years.
- Testing rates increased 10% this week (~52,000 total tests July 25 to 31)
- The provincial weekly median **turnaround time** (time from specimen collection to lab result) is 15 hours, indicating good testing capacity; only 1 in 4 tests took ≥ 24 hours to result.
- The share of **VOCs** among all positive tests in BC is ~100% from July 25 to 31.
- Sequencing-based VOC prevalence for July 25 to 31 shows distribution of lineages among VOC samples: predominant B.1.617.2 (Delta) ~95%. P.1 (Gamma) ~3%, and B.1.1.7 (Alpha)~2%.

Weekly Summary of ALL lab tests performed

3,099,755	total specimens tested
52,130	new this epi week
158,387	total positive specimens
1,462	new positive this epi week
21 hr	mean turnaround time (TAT)
15 [9-24]	Median [Q1 – Q3] TAT

↑ **10%** relative to last week

↑ **2.8%** positivity
↑ **1.4%** absolute change from last week

↑ **54%** TAT relative to last week

Weekly Summary of Lab tests paid Publicly

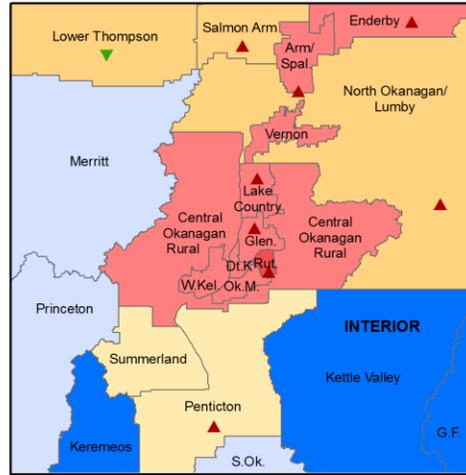
2,424,899	total specimens tested
22,467	new this epi week
156,743	total positive specimens
1,413	new positive this epi week

↑ **17%** relative to last week

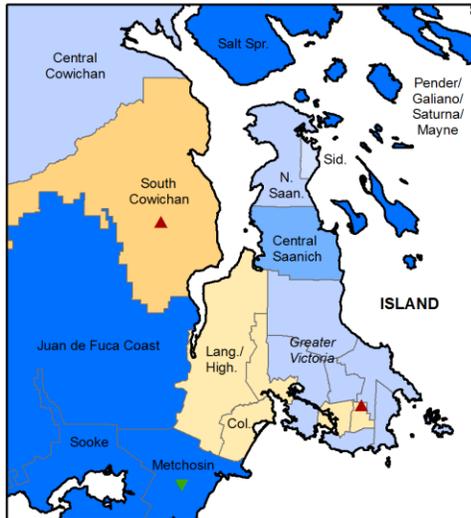
↑ **6.3%** positivity
↑ **3.1%** absolute change from last week

26

Okanagan Inset
(Community Health Service Areas)

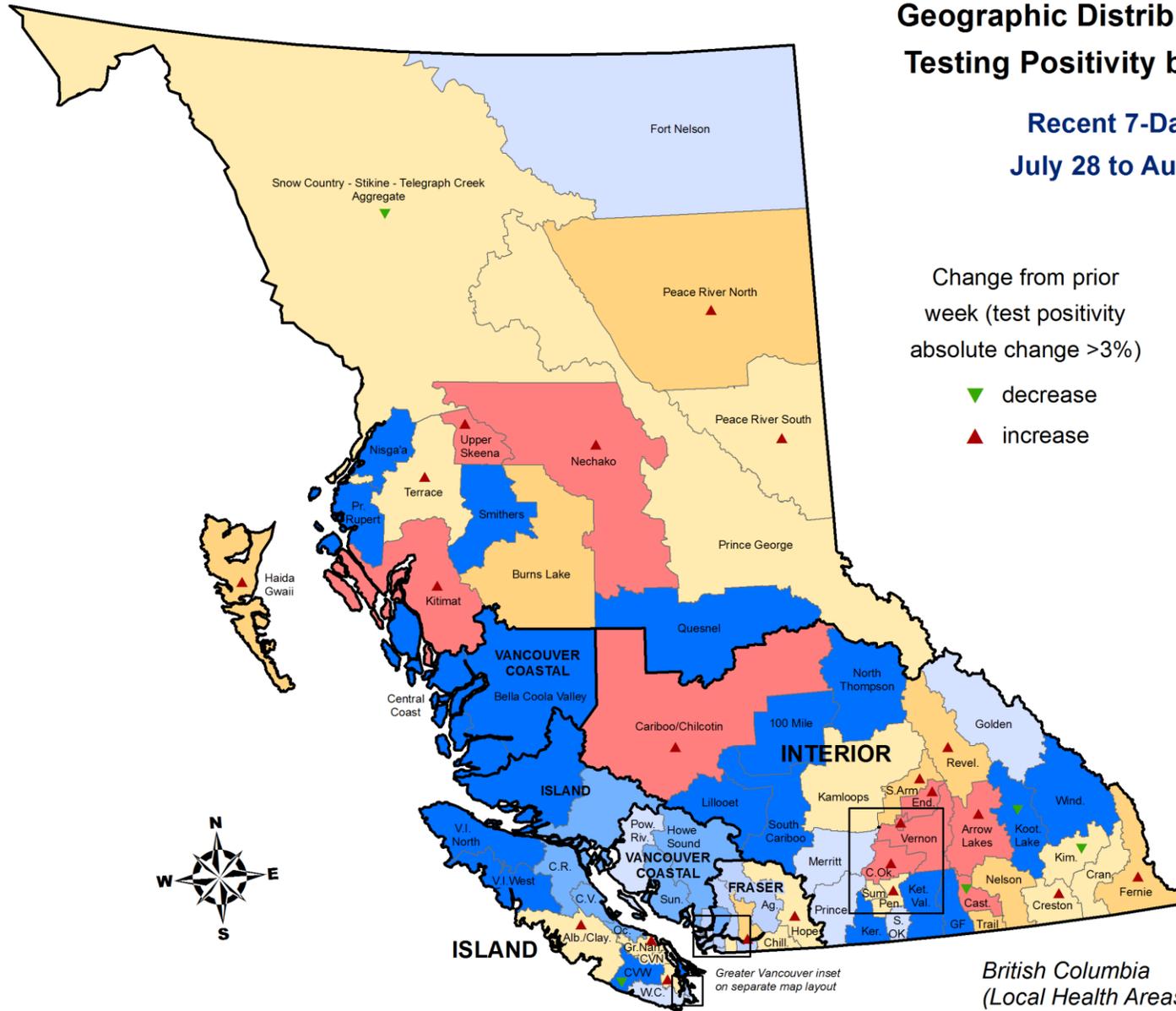


Greater Victoria Inset
(Community Health Service Areas)



Geographic Distribution of COVID-19 Testing Positivity by LHA and CHSA

Recent 7-Days Testing
July 28 to August 3, 2021

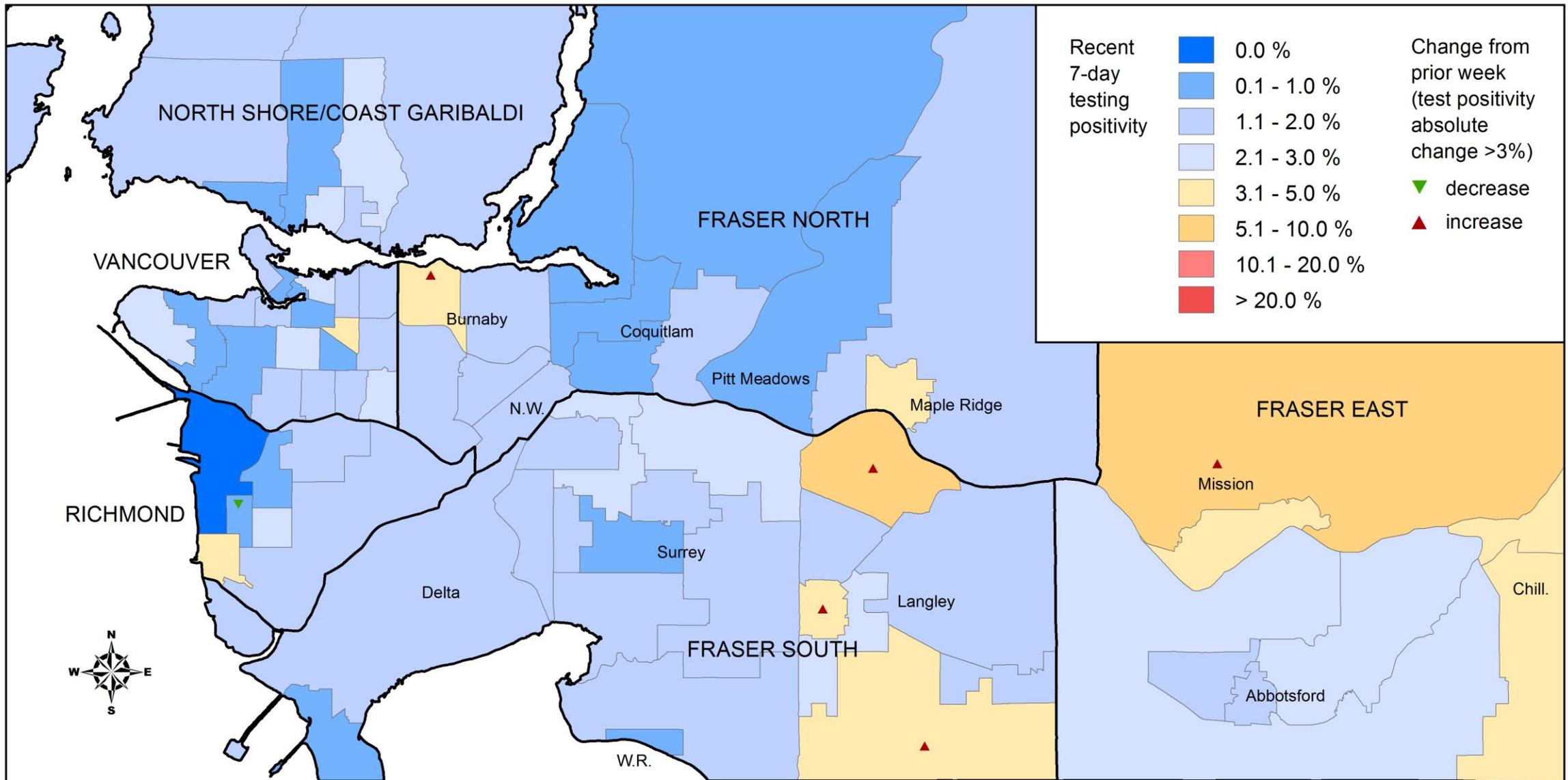


Change from prior week (test positivity absolute change >3%)
▼ decrease
▲ increase

Test positivity rate
0.0 %
0.1 - 1.0 %
1.1 - 2.0 %
2.1 - 3.0 %
3.1 - 5.0 %
5.1 - 10.0 %
10.1 - 20.0 %
> 20.0 %

Data source: BCCDC Public Health Laboratory PLOVER system (all tests performed). Data are by testing result date, and location of client's residence or if missing, physician's address.

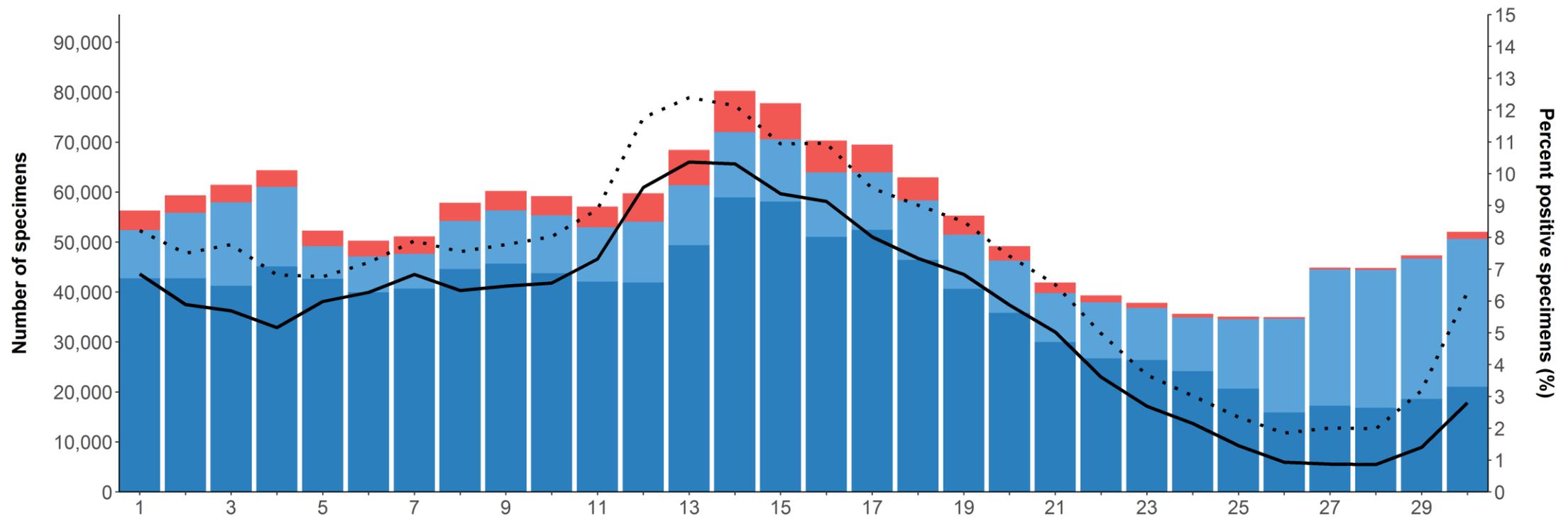
British Columbia
(Local Health Areas)



COVID-19 Recent 7-Day Test Positivity by CHSA (July 28 to August 3, 2021)

Includes all tests

In epi week 30, percent positivity among publicly funded tests has nearly doubled as compared with epi week 29 (6.3% and 3.2% respectively).



..... Line represents percent positive for MSP only payers.
 _____ Line represents percent positive for non-MSP and MSP payers.

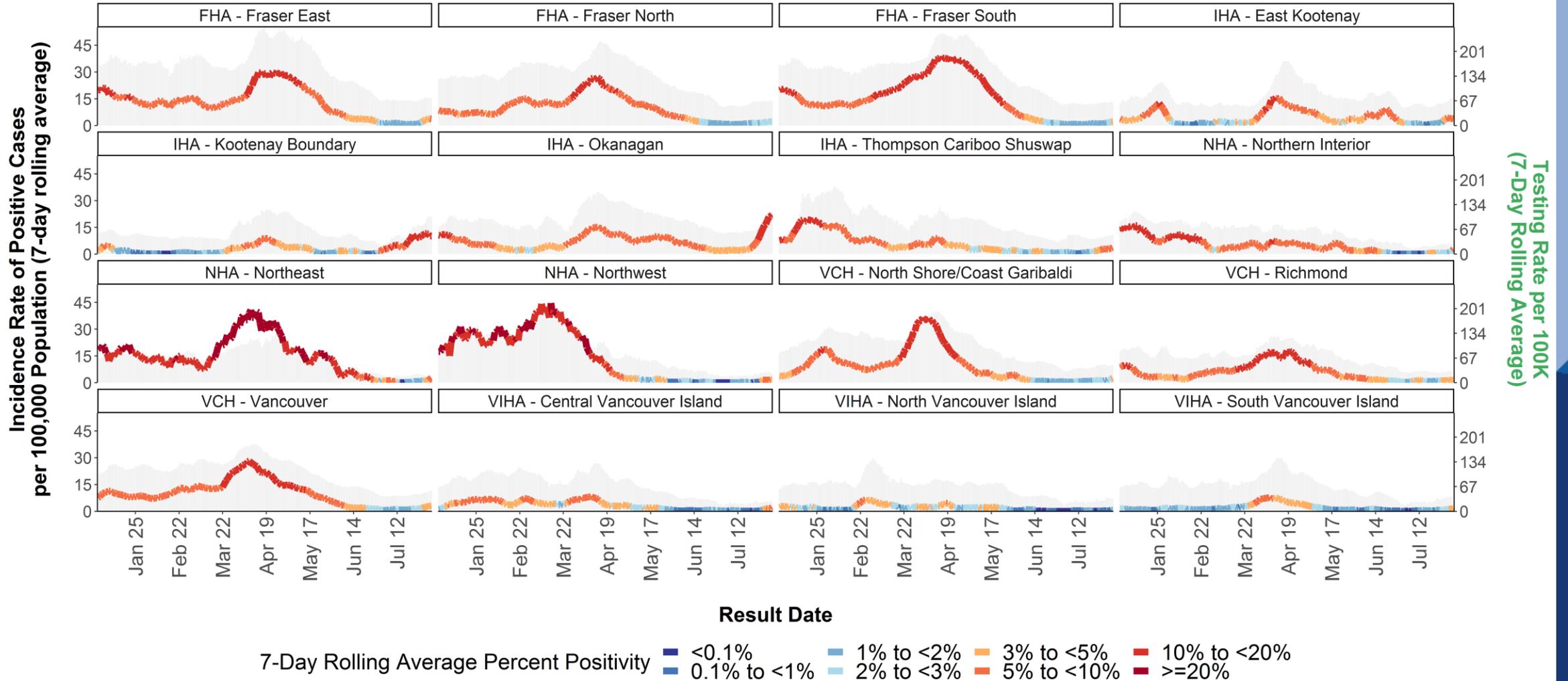
Collection date by epidemiological week
 _____ Percent Positive Non MSP - Positive MSP - Positive Non MSP - Negative MSP - Negative

Note: Invalid (n = 1131) and indeterminate (n = 4483) results have been excluded

Data source: PLOVER 04-Aug-2021

Incidence is increasing rapidly in the Okanagan and Kootenay Boundary HSDAs, but remains low in other HSDAs.

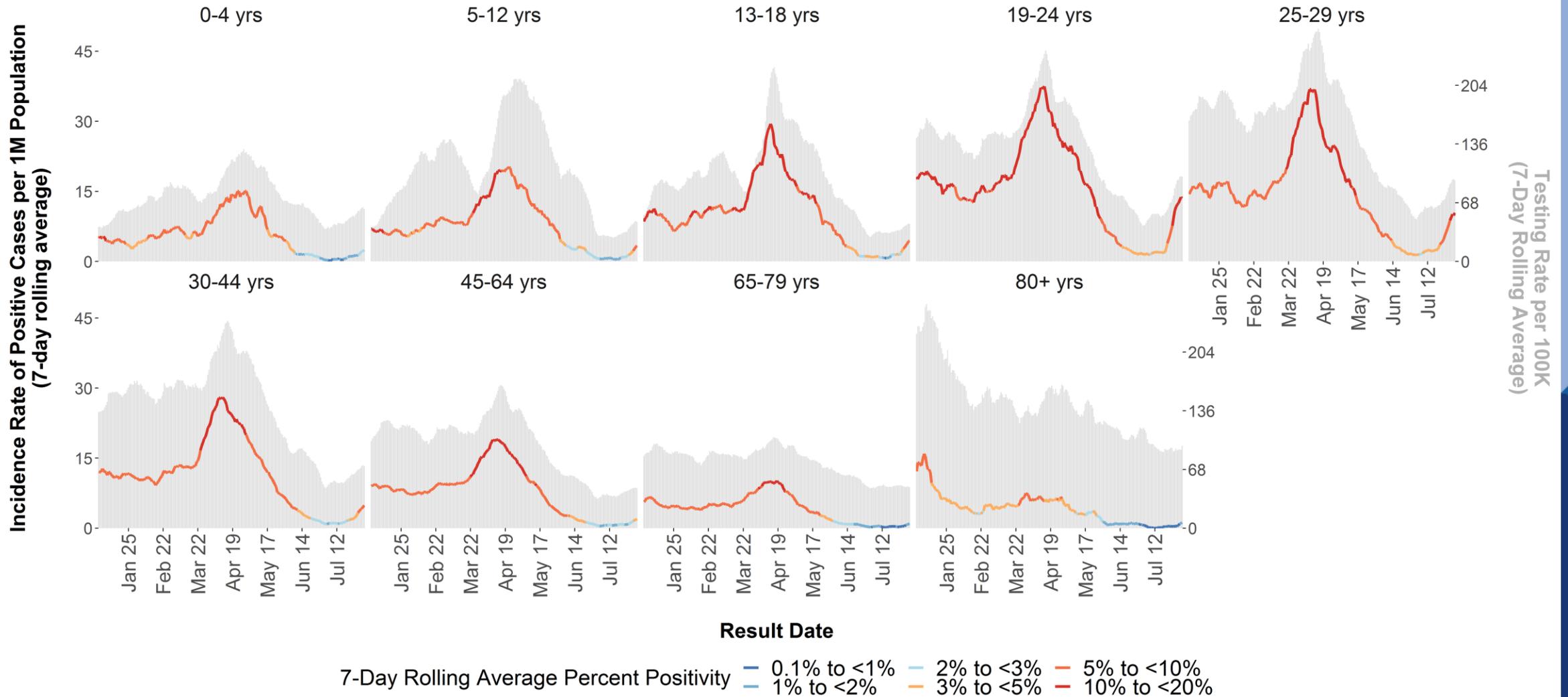
Case incidence rate, test percent positivity, and testing rate by HSDA (Public Payers Only).
Jan 1 2021 - Aug 3, 2021.



Data source: PLOVER 03-Aug-2021

Increase in incidence and positivity in individuals aged < 45 years; most marked increase in individuals 19 to 29 years.

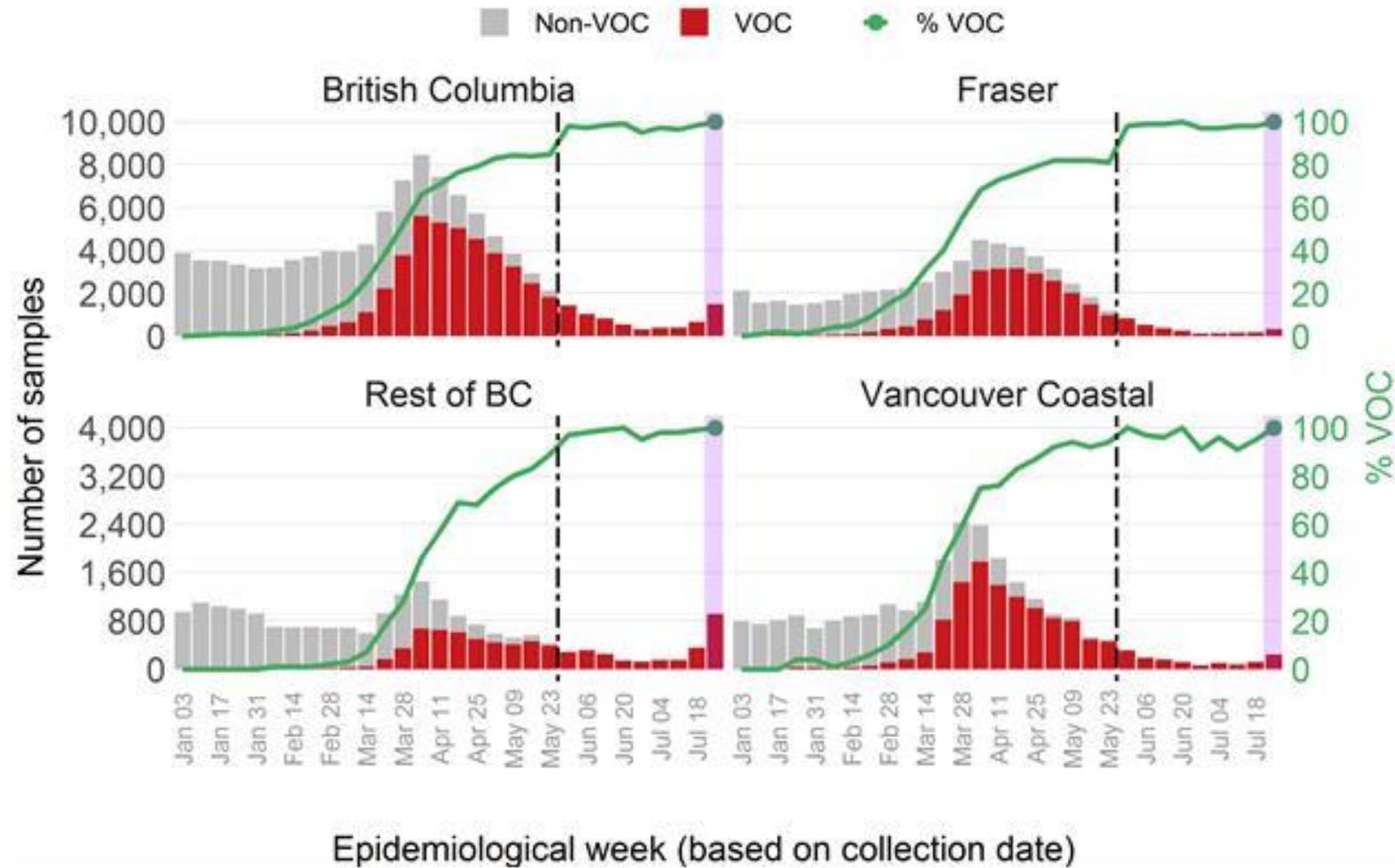
Case incidence rate, test percent positivity, and testing rate by age (Public Payers Only). Jan 1 2020 - Aug 3, 2021.



Data source: PLOVER 03-Aug-2021

Over the past epi week, the majority of COVID-19 positive samples were VOCs (~100%). Note: the absolute number of VOC samples is small but has increased recently.

Prevalence of VOC, by epi week in BC and Health Authorities, Jul 25 - Jul 31



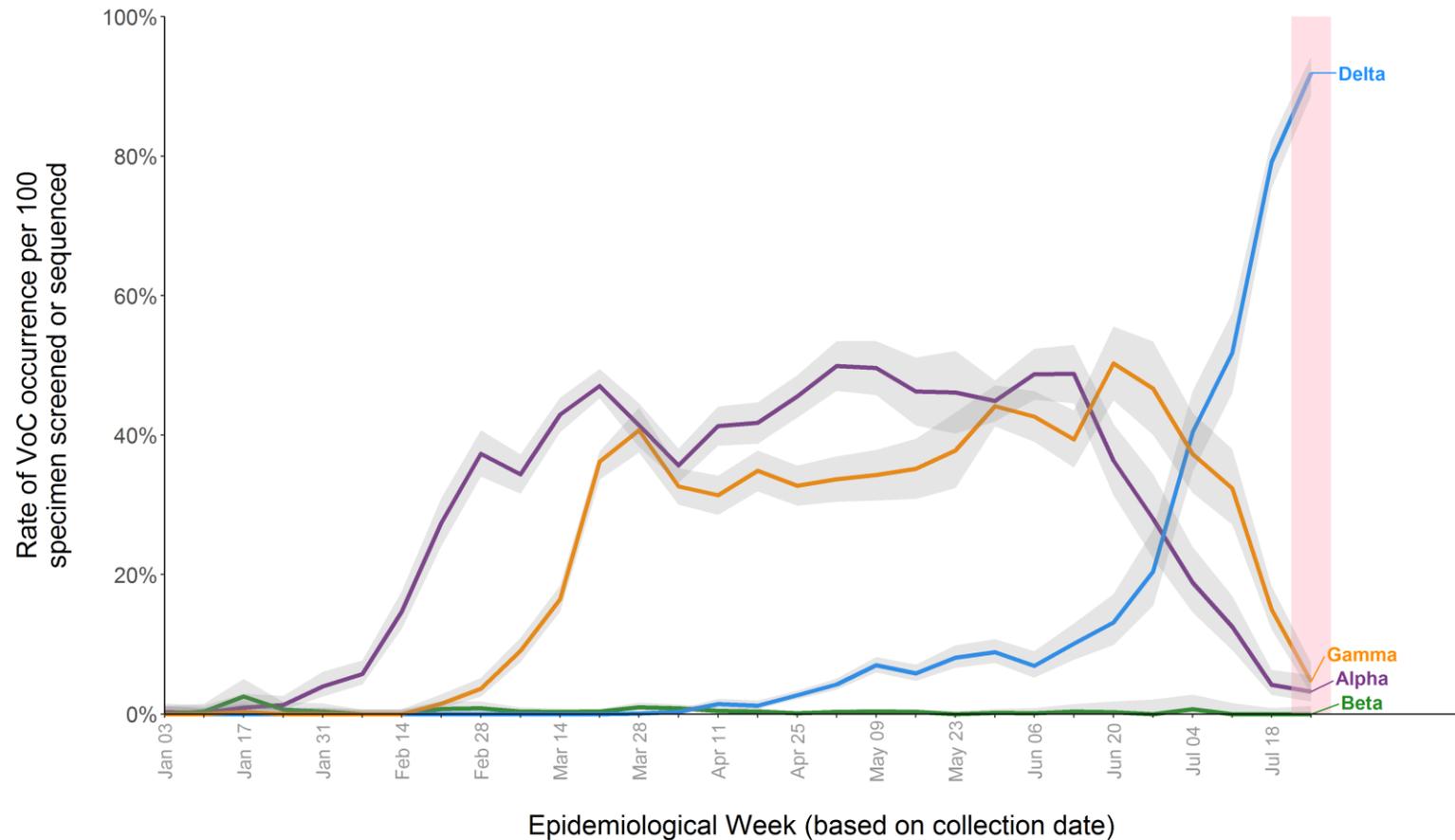
Shaded area reflects partial data and is subject to change

Note: given smaller number of weekly cases, percentages are more likely to fluctuate

This figure can also be found in the [weekly VOC report](#)

Prevalence of the Delta variant among all sequenced samples* has increased substantially over the past few weeks

Estimated sample prevalence of VOCs by lineage by epi week of collection date, Jan 3 – Jul 24, 2021

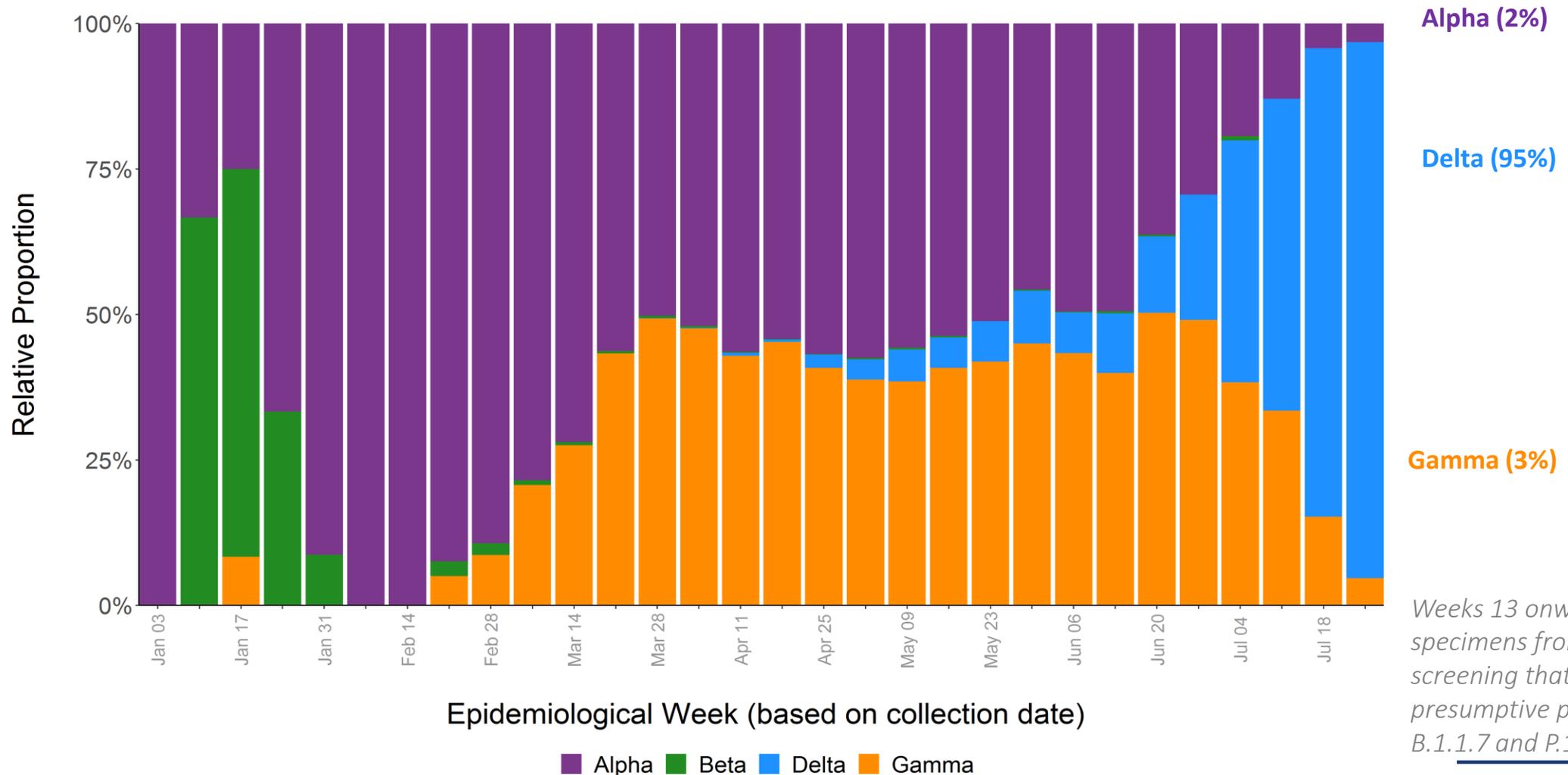


Given the sequencing turnaround time, specimens collected in the last epi week continue to be analyzed.

This figure can also be found in the [weekly VOC report](#)

Among sequenced VOC samples provincially based on information for July 25th to July 31st, the relative proportion of Delta has increased to 95% and is now the dominant variant, while Gamma (3%) and Alpha (2%) and have both declined.

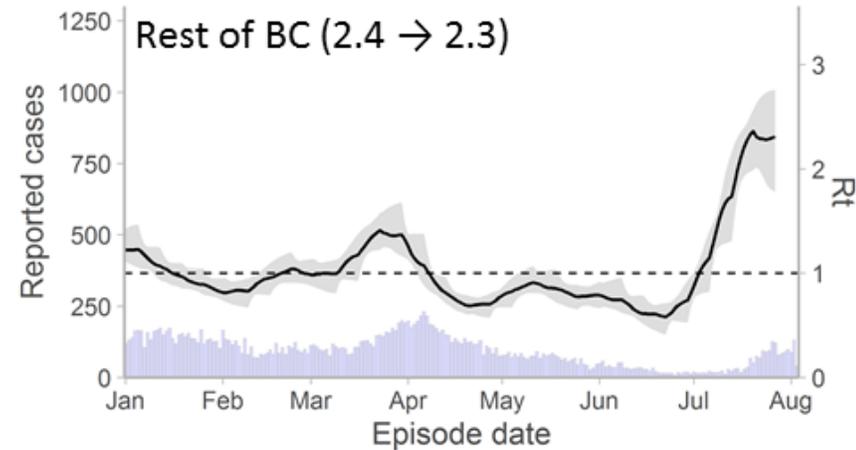
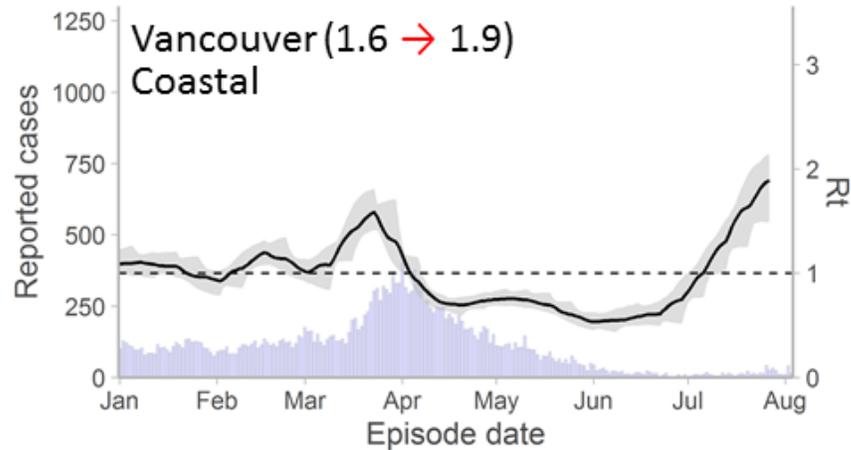
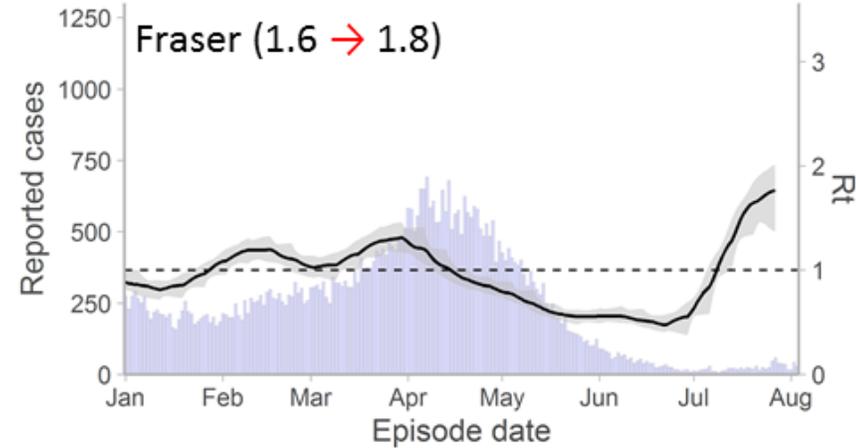
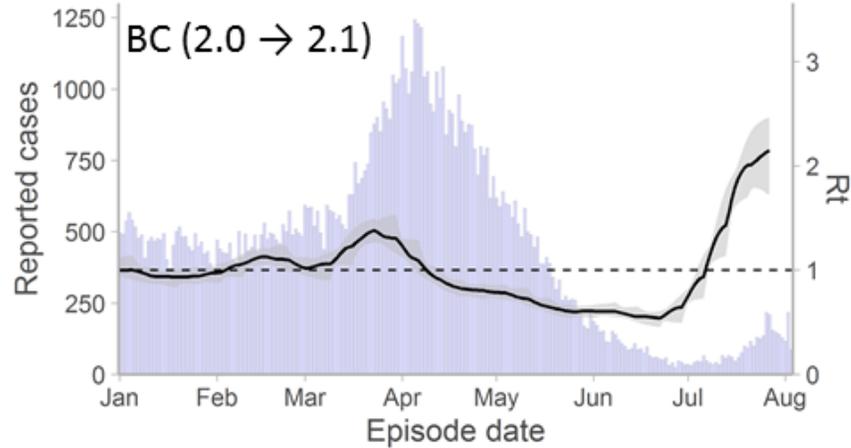
Relative Proportion of VoCs in BC by Epiweek of Collection Date



Weeks 13 onward include specimens from qPCR SNP screening that resulted as presumptive positive for B.1.1.7 and P.1.

Dynamic compartmental modeling: recent trends

Our model shows that R_t is trending upward and is now above 1. Note that in areas with small case numbers fluctuations in R_t are driven by clusters of cases and may not be indicative of the greater community transmission



Solid black line: median R_t , modeled using all reported cases up to July 27, 2021; Grey band: 5%-95% credible interval; Purple bars: all reported cases. Due to lag from symptom onset to reporting, most recent case counts and R_t are not shown. Recent trend shown comparing 7 day average R_t from (last week → this week). Only January 2021 onward shown here. Data source: BCCDC HA linelist.

Model notes and assumptions

- **R_t modelling:** a dynamic compartmental model was fit to COVID-19 data for BC using a Bayesian framework (Anderson et al. 2020. PLoS Comp. Biol. 16(12): e1008274). Results are presented as provincial and regional time-varying estimates of average daily transmission rate (R_t).
 - the model does not consider importation of cases, hence all transmission is assumed to arise from local cases
 - the model does not distinguish cases arising from variants of concern (VoCs) versus 'wild-type' COVID-19, hence model estimates represent average rates of transmission

Additional Resources

- BCCDC COVID-19 Surveillance Dashboard showing maps, vertical plots, and trends by LHA can be found [here](#)
- More BC COVID-19 data, including the latest Situation Report, maps, and BC COVID-19 public dashboard, can be found [here](#)
- For more information on variants of concern and whole genome sequencing, the latest report is posted [here](#)
- To put BC provincial, Health Authority, and HSDA trajectories into national and international context, see [BCCDC COVID-19 Epidemiology app](#)
- [COVID SPEAK 2020 Round 1 Survey results](#)
- Slides for previous public and modelling briefings by Dr. Bonnie Henry can be found [here](#)
- PHAC's COVID-19 Epidemiology update can be found [here](#)