

BCCDC Data Summary

8 July 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.

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Overall Summary

- **Case rates** are **low** and continue to decline in all HAs, now approaching levels last observed in August 2020; **test positivity** for public tests is ~2% provincially.
 - Percent positivity $\leq 3\%$ in all age groups
 - Percent positivity $\leq 3\%$ in VIHA, VCH, FH and NH, and between 3 and 5% in IH
- **New hospitalizations** are low and declining or stable in each region (at September 2020 level); **hospital/critical care census** is declining or stable across BC (September 2020 level); **new deaths** are stable and low.
- The share of **VOCs** among all positive tests in BC is ~73% from June 27 to July 3; provincially P.1(Gamma) (~55%) and B.1.1.7 (Alpha) (~35%) remain two dominant VOCs, with B.1.617.2 (Delta) representing ~11% of VOCs.
- **Vaccine** coverage in BC, July 8nd : 7 in 10 individuals have received the first dose of vaccine, and 1 in 3 have received two doses [8 in 10 individuals 12+ have received first dose; 2 in 5 two doses]
- 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 01 to Jul 07: BC COVID-19 Profile



147,856 total cases
235 new this week



1,759 total deaths
5 new this week

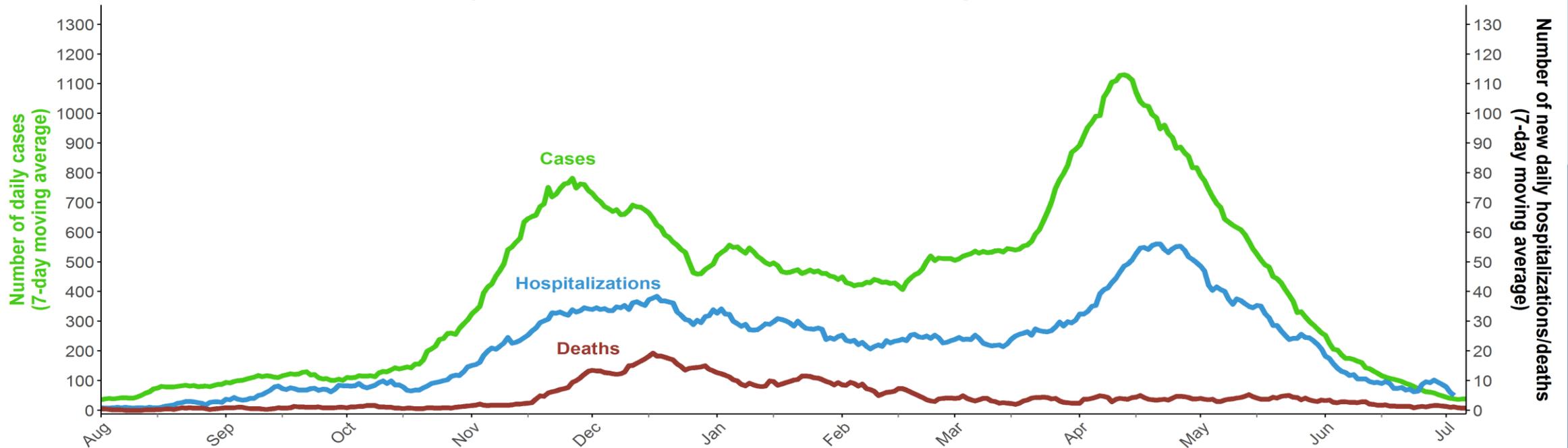


8,059 ever hospitalized
40 new this week



145,455 removed from isolation
423 new this week

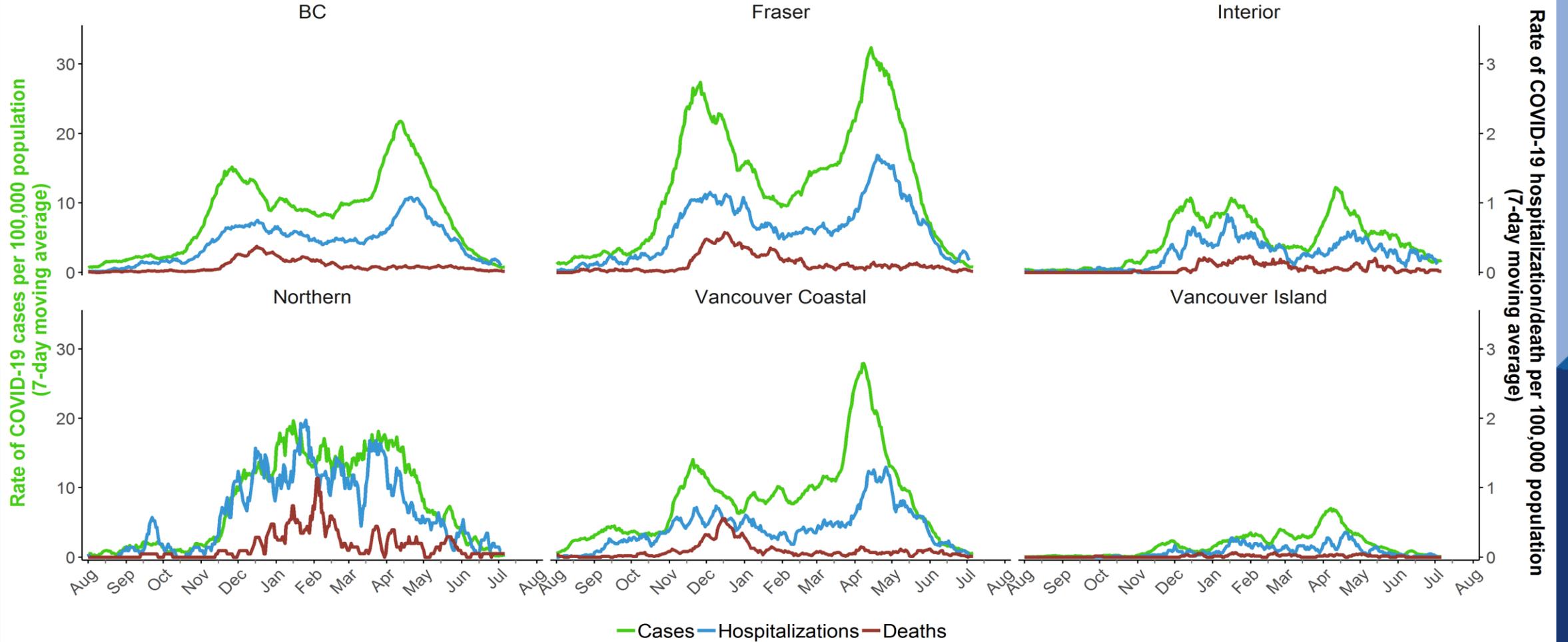
New daily COVID-19 cases, hospitalizations and deaths, Aug 01 2020 - Jul 06 2021



* Data are by surveillance date for cases and deaths, and admission date for hospitalizations
Data source: PHRDW Jul-07-2021

Case rates are declining in all HAs; new hospitalizations are declining or stable in all HAs; new deaths are stable and low.

Rate of COVID-19 case, hospitalization and death, Aug 01 2020 - Jul 06 2021



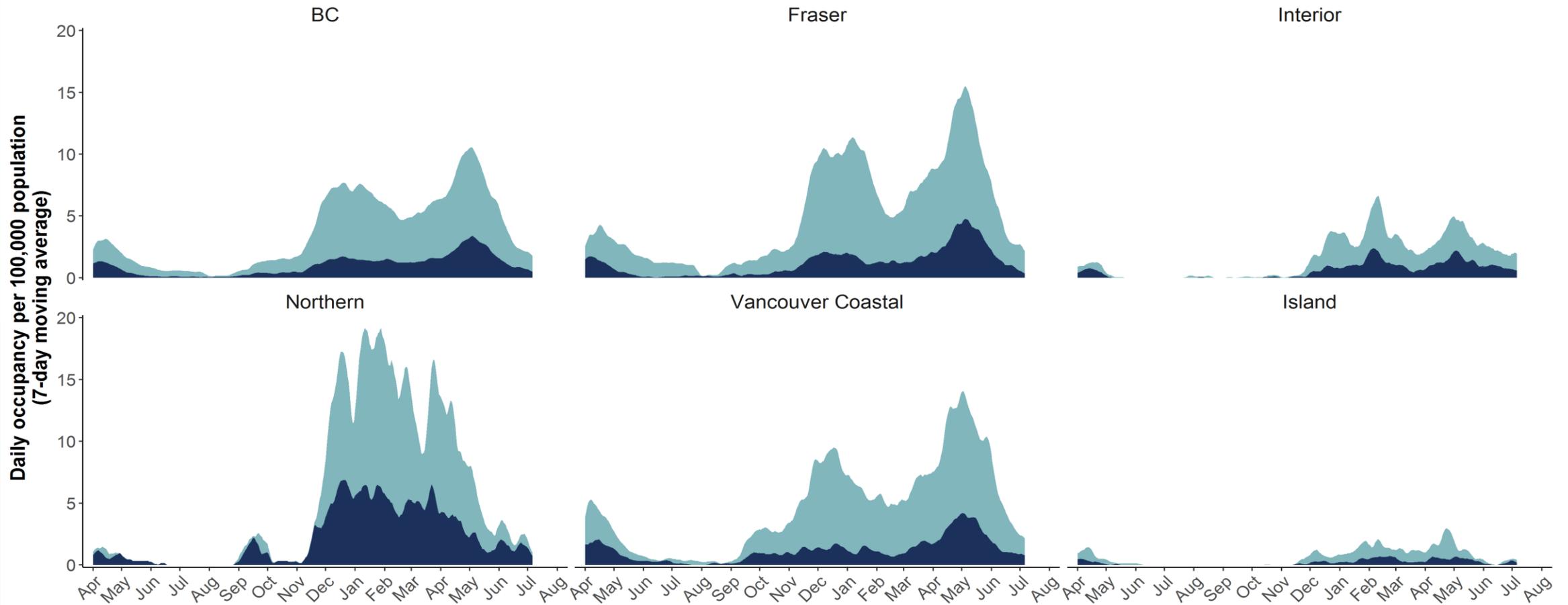
* Data are by surveillance date for cases and deaths, and admission date for hospitalizations
Data source: PHRDW Jul-07-2021

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

Hospital and critical care census is declining or stable in all regions.

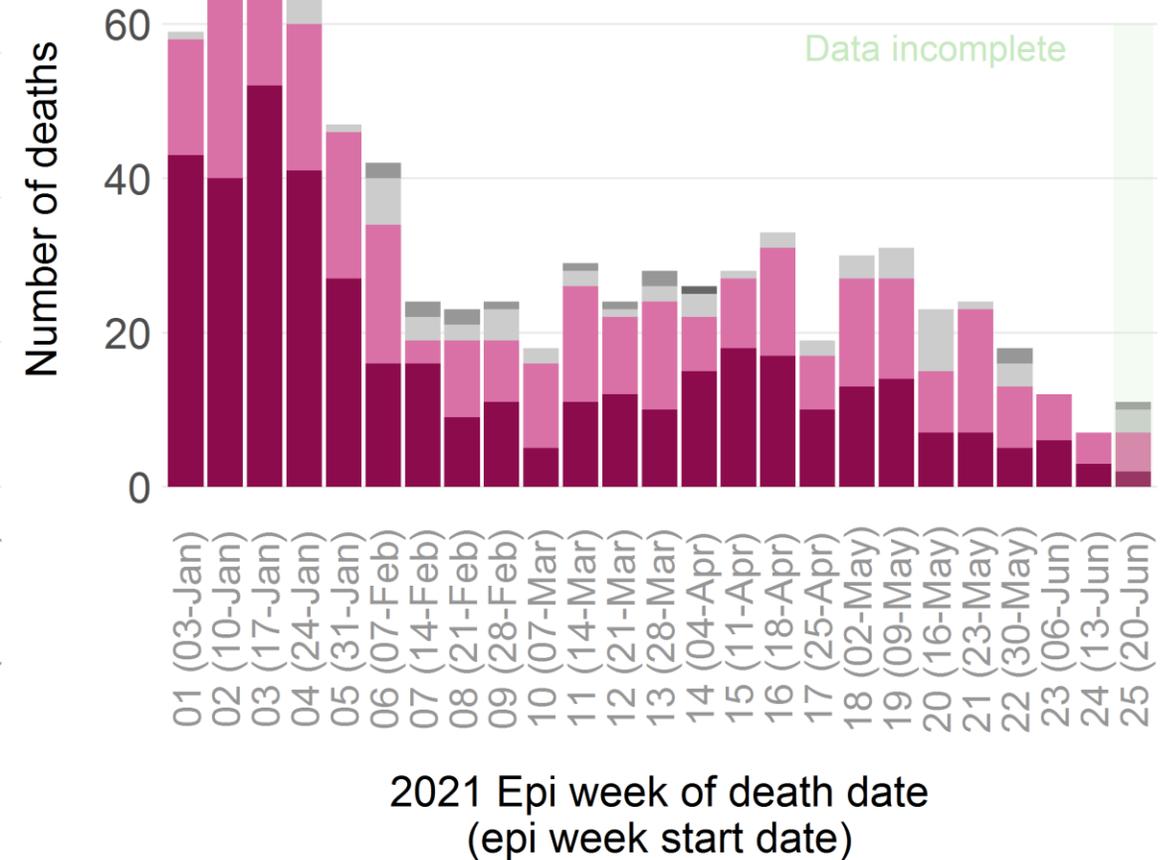
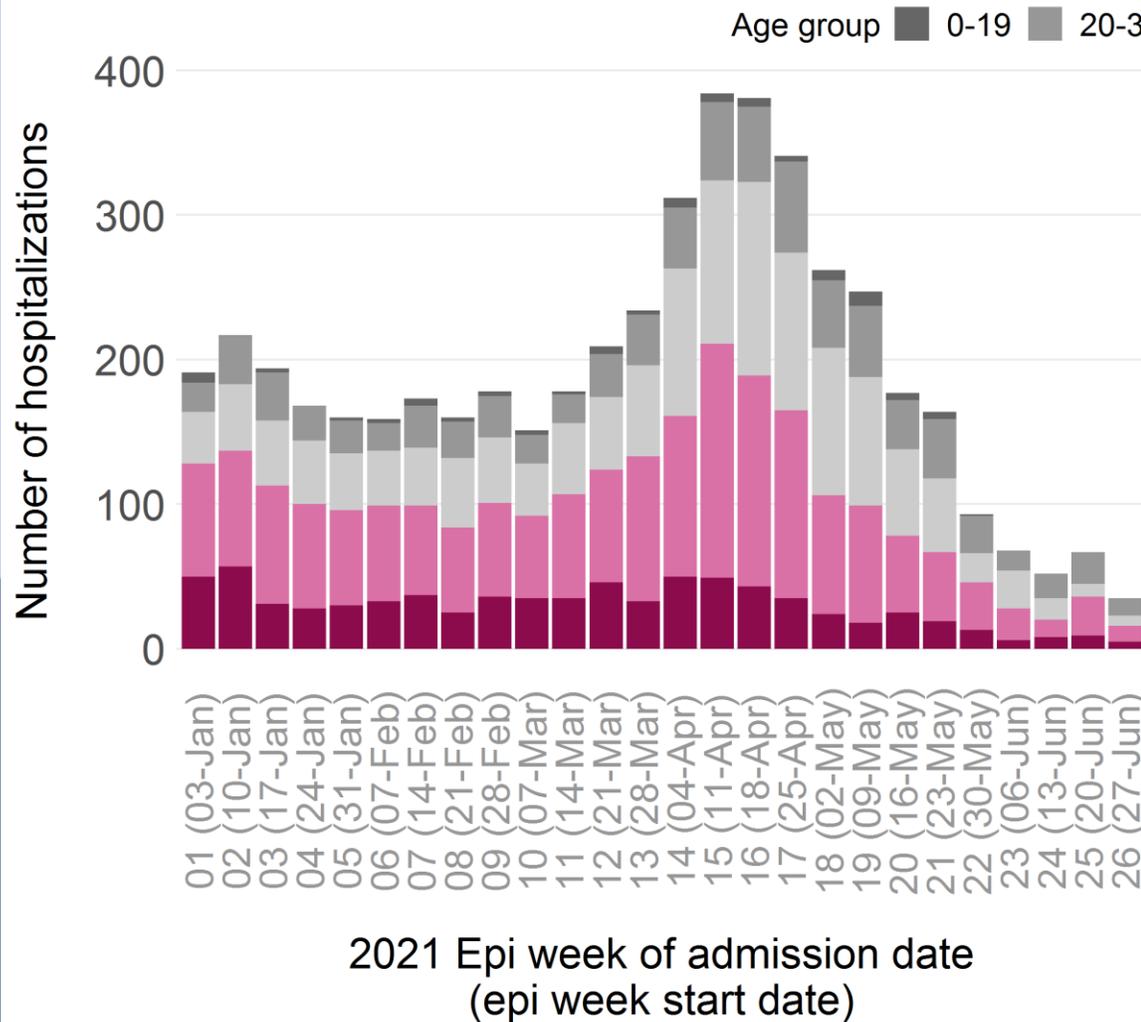
Current COVID-19 hospitalizations, Apr 01 2020 - Jul 06 2021

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



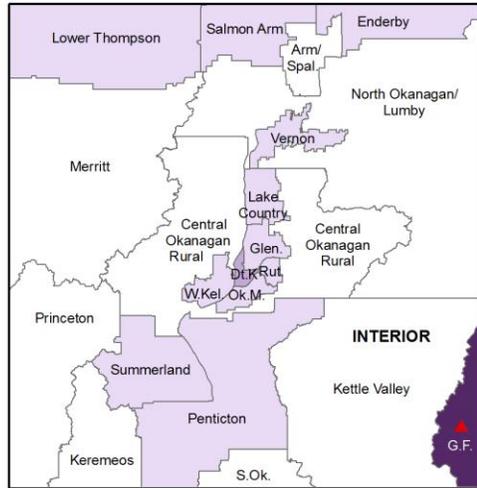
* Data are by census date for hospitalizations
Data source: PHSA Provincial COVID19 Monitoring Solution (PCMS) Jul-07-2021

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

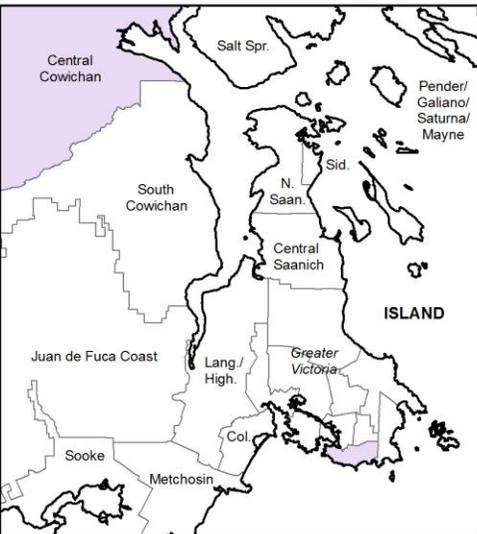


Data extracted on 2021-07-08; hospitalization and death data from health authority case line list data

Okanagan Inset
(Community Health Service Areas)

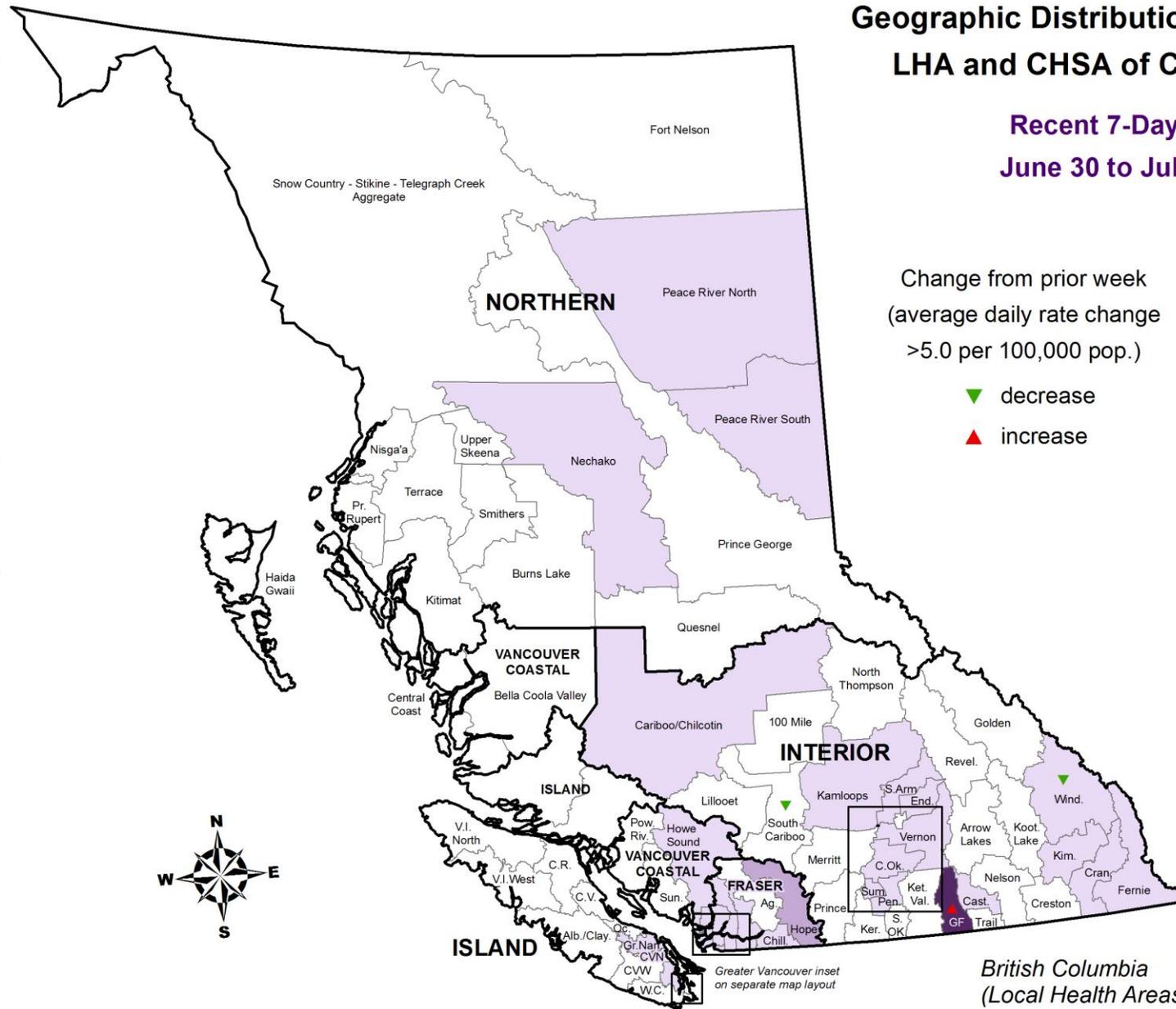


Greater Victoria Inset
(Community Health Service Areas)



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

Recent 7-Days Cases
June 30 to July 6, 2021



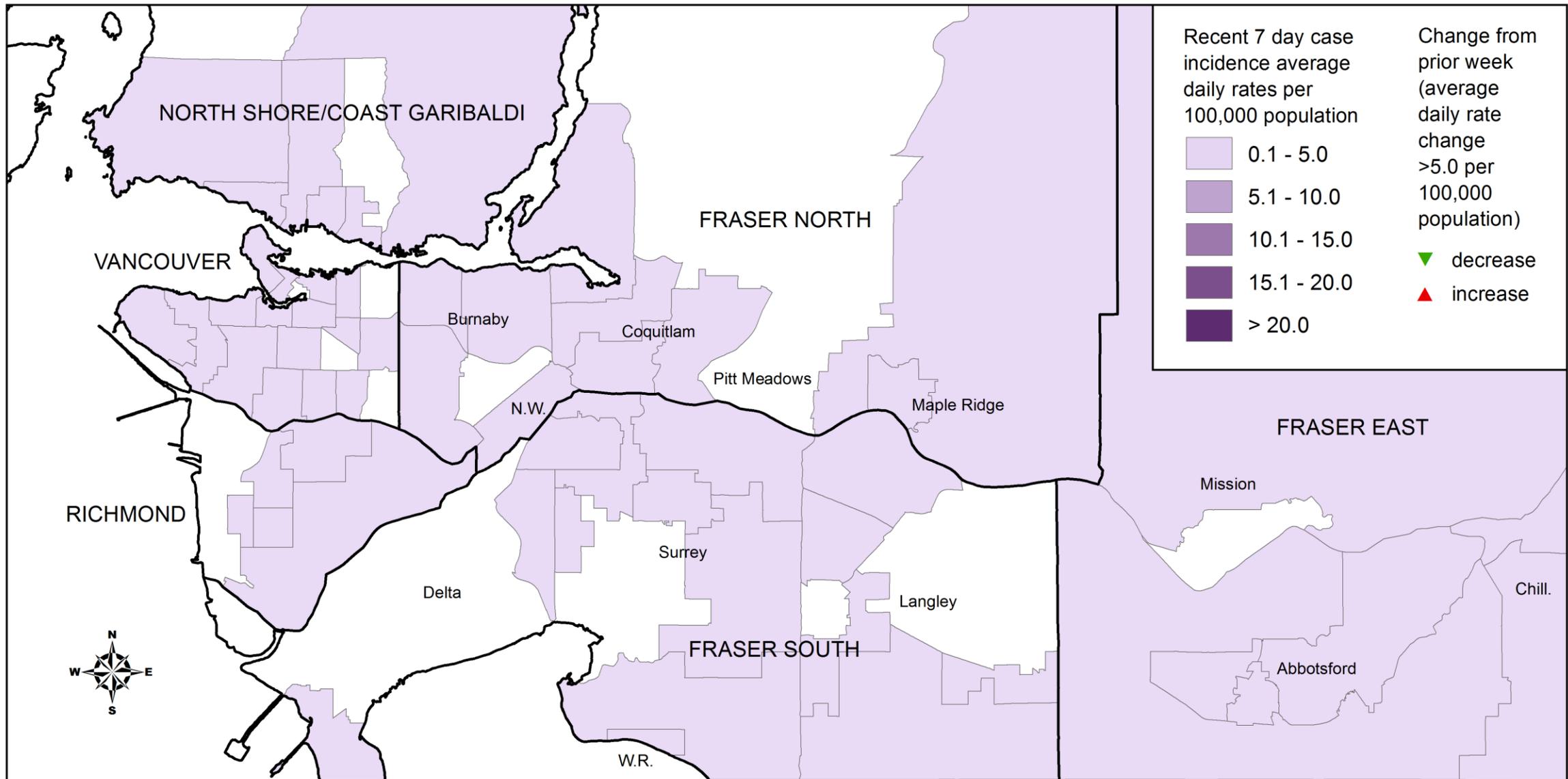
Change from prior week
(average daily rate change
>5.0 per 100,000 pop.)

- ▼ decrease
- ▲ increase

Average daily rate per
100,000 population

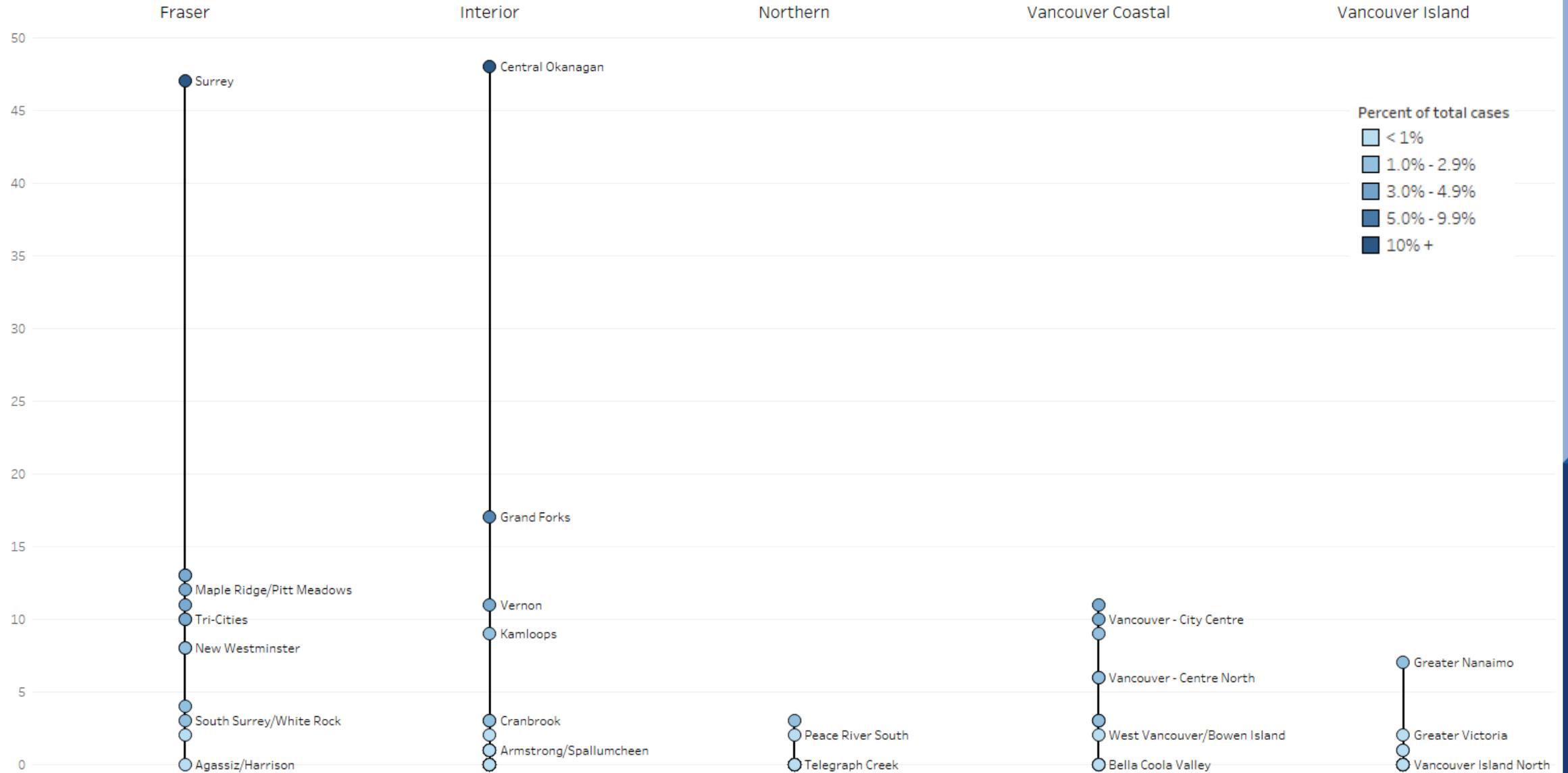
- 0.0
- 0.1 - 5.0
- 5.1 - 10.0
- 10.1 - 15.0
- 15.1 - 20.0
- > 20.0

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.

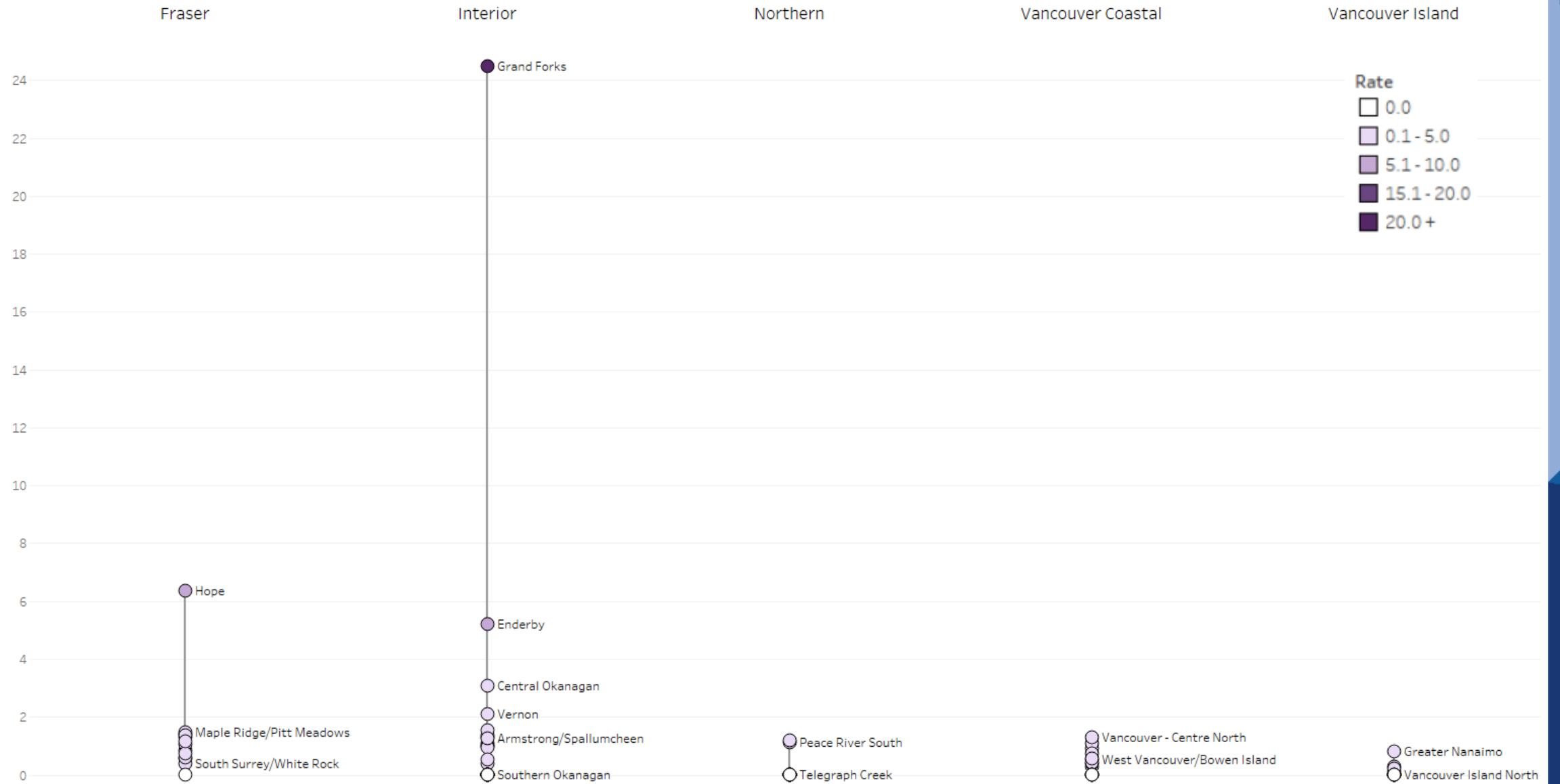


COVID-19 Recent 7-Day Case Incidence Rates by CHSA (June 30 to July 6, 2021)

Total cases by local health area, Jul 01 - Jul 07, 2021

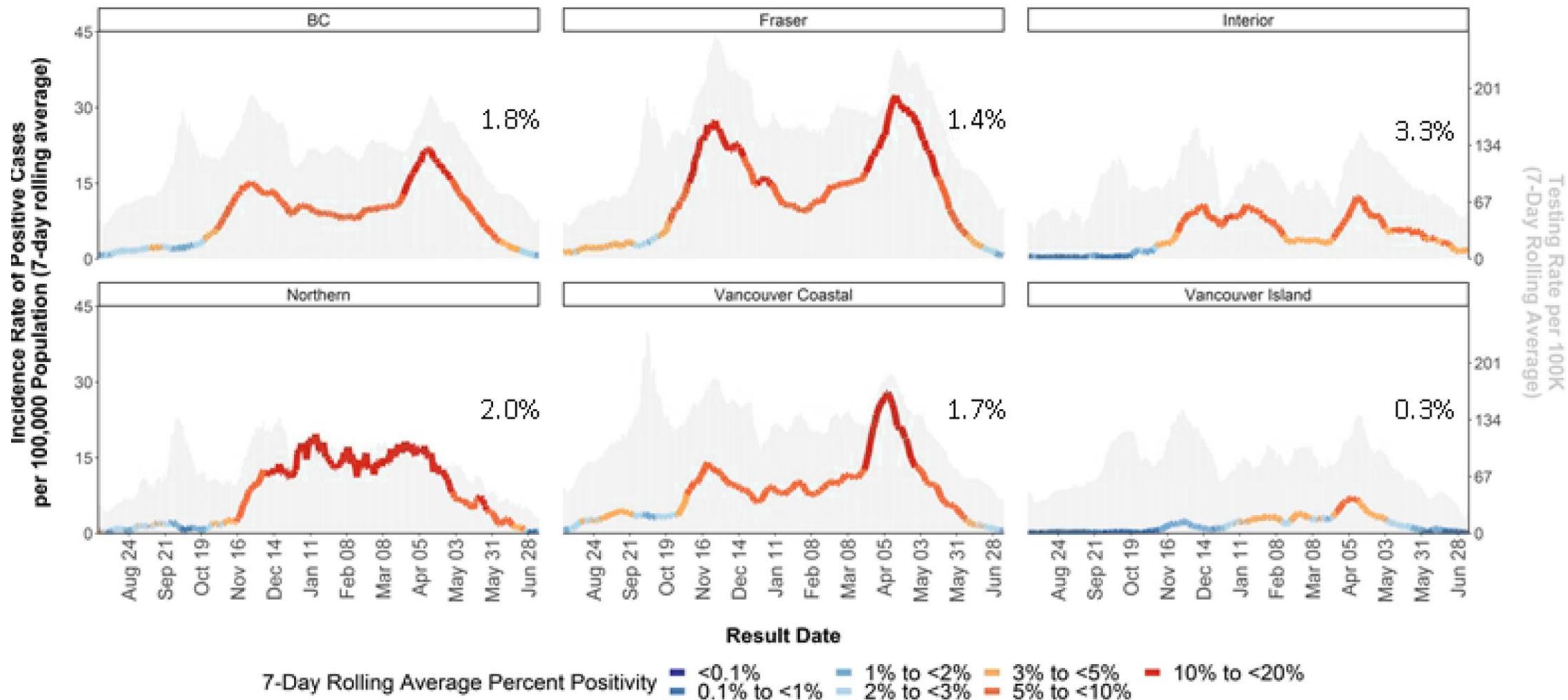


Average daily **rate** of new cases per 100,000 population, by local health area, Jul 01 - Jul 07, 2021



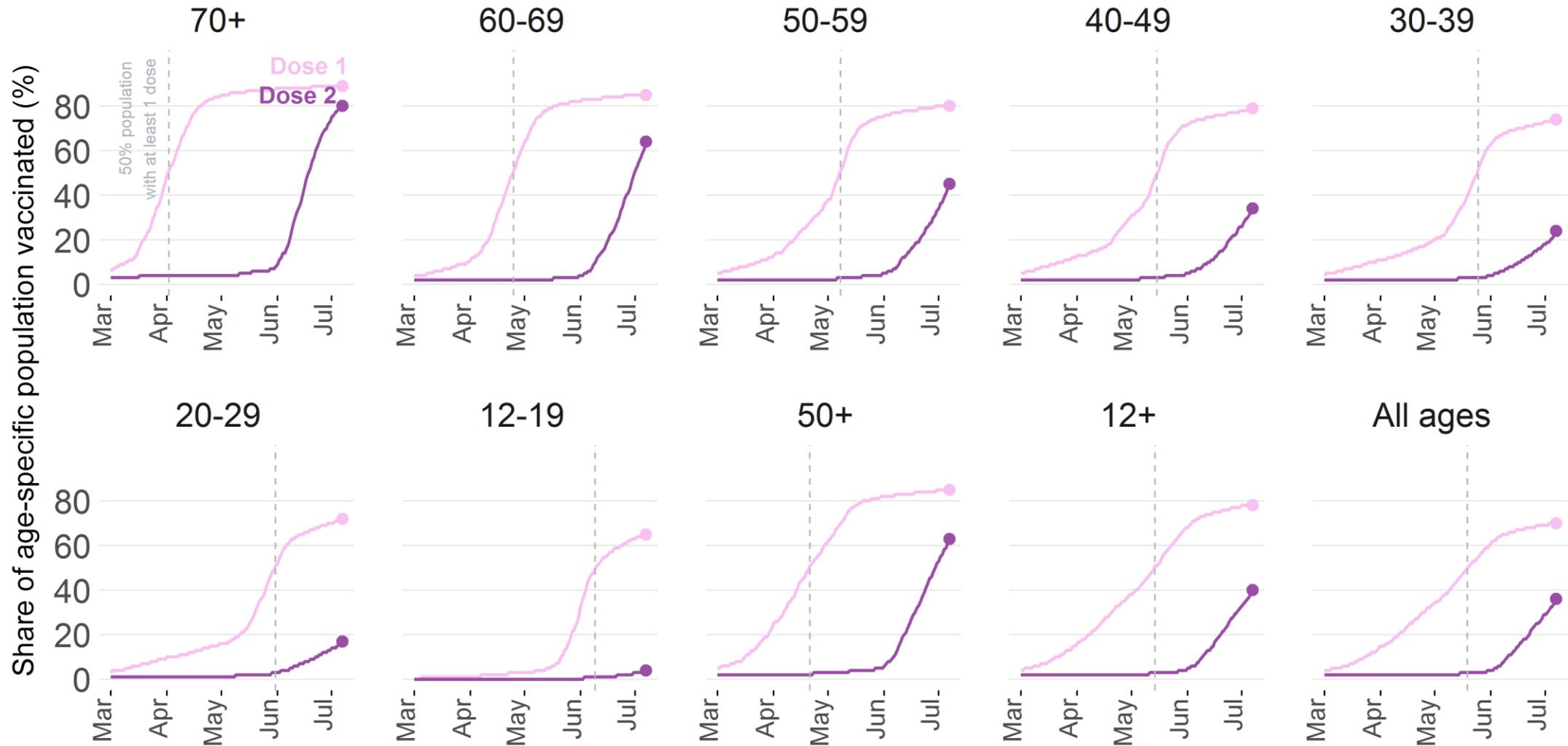
Case incidence is decreasing in all HAs. Percent positivity low in all HAs.

Case incidence rate, test percent positivity, and testing rate (Public Payers Only). Aug 1 2020 - Jul 6, 2021.



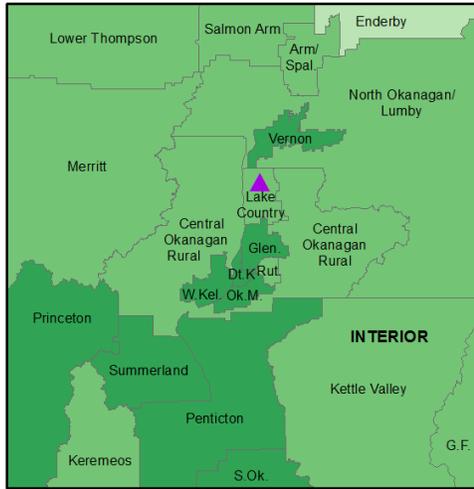
Data source: PLOVER 06-Jul-2021

Vaccine coverage in BC, July 8nd : 7 in 10 individuals have received 1st dose of vaccine, and 1 in 3 have received 2 doses [8 in 10 individuals 12+ have received 1st dose; 2 in 5 two doses]



Data updated 2021-07-08
Data Source: Provincial Immunization Registry, PHSA

Okanagan Inset
(Community Health Service Areas)



Greater Victoria Inset
(Community Health Service Areas)



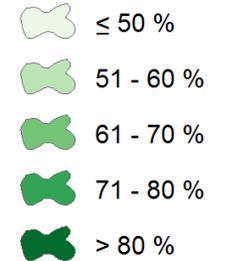
Geographic Distribution of COVID-19 Vaccination Coverage by LHA and CHSA

**Ages 12+: 1st Dose
up to July 5, 2021**

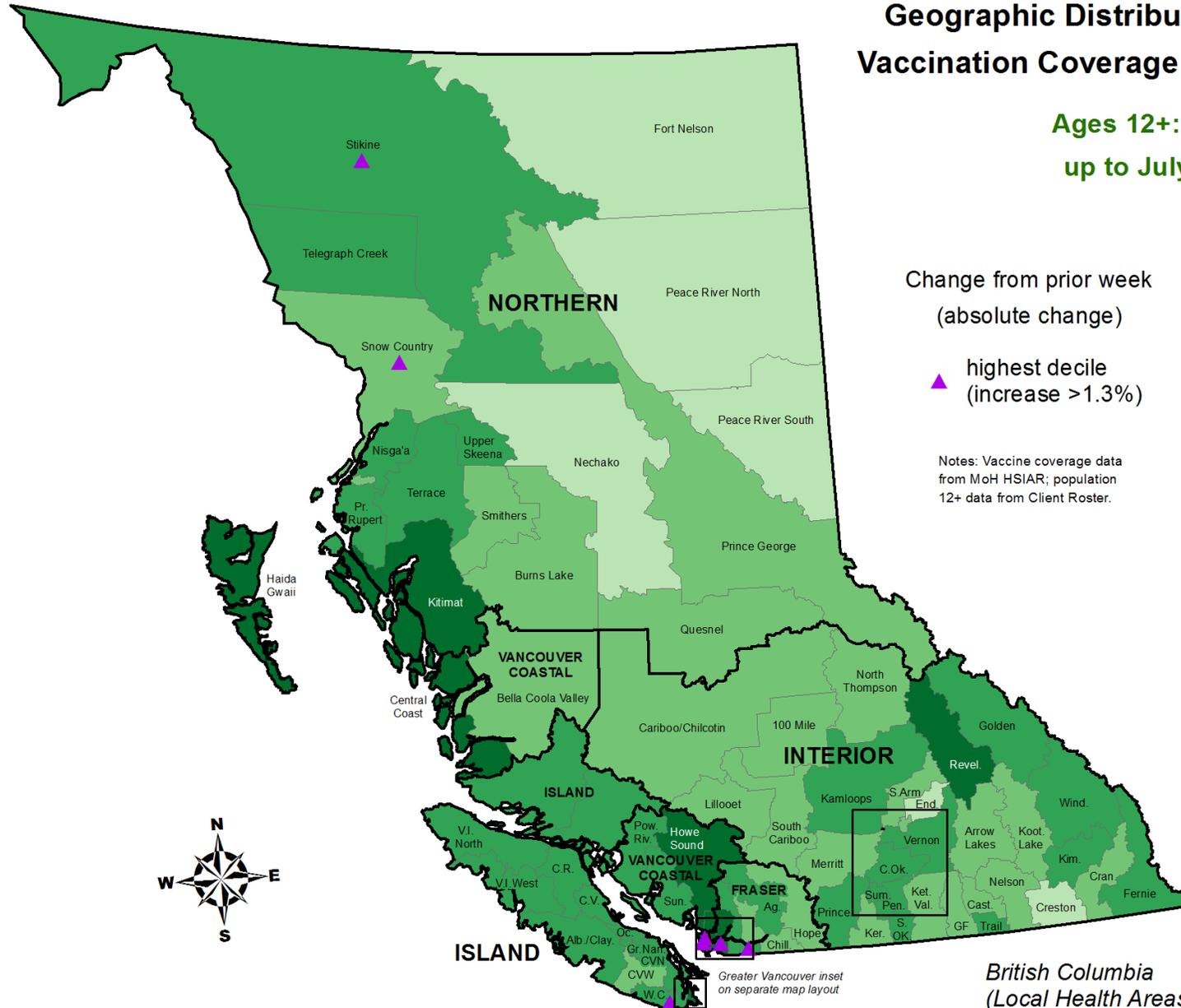
Change from prior week
(absolute change)

▲ highest decile
(increase >1.3%)

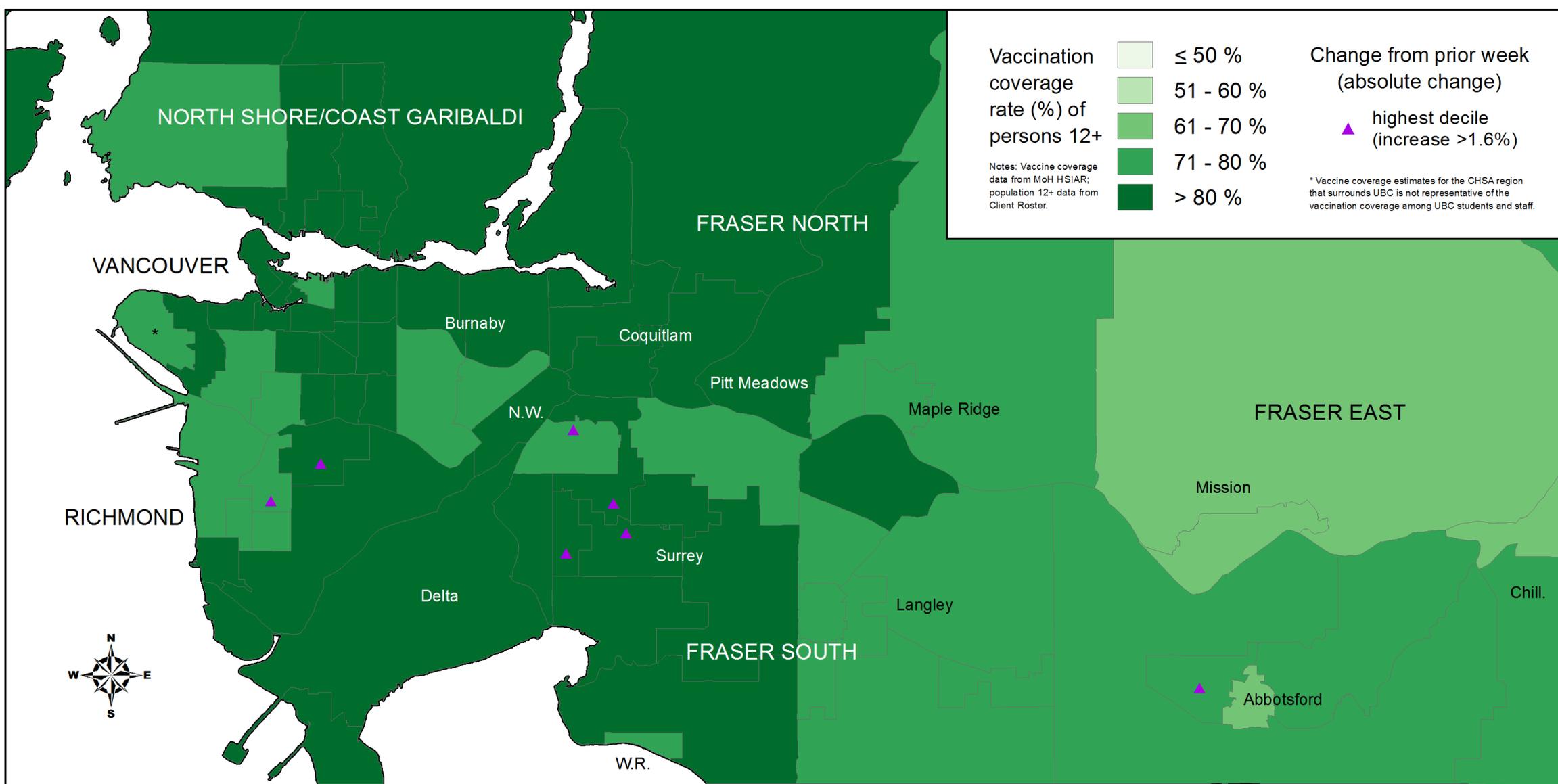
Vaccination coverage
rate (%) of persons 12+



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

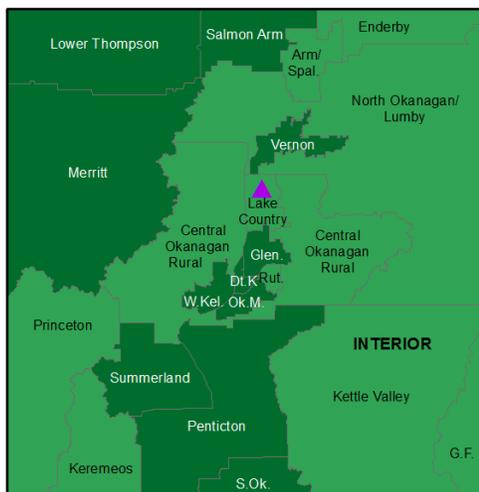


British Columbia
(Local Health Areas)



COVID-19 Vaccination Coverage by CHSA: Ages 12+ 1st Dose (up to July 5, 2021)

Okanagan Inset
(Community Health Service Areas)

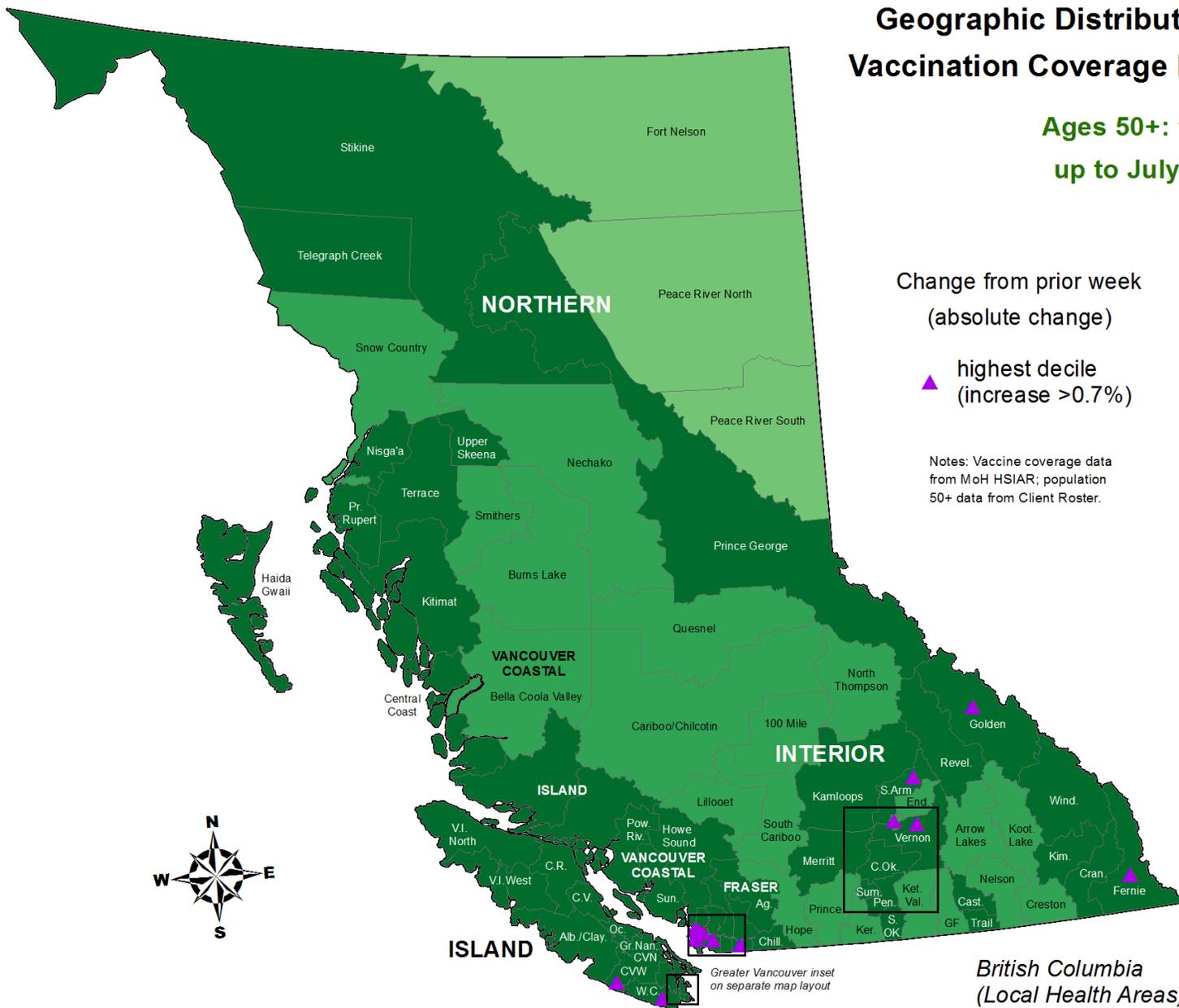


Greater Victoria Inset
(Community Health Service Areas)



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

**Ages 50+: 1st Dose
up to July 5, 2021**



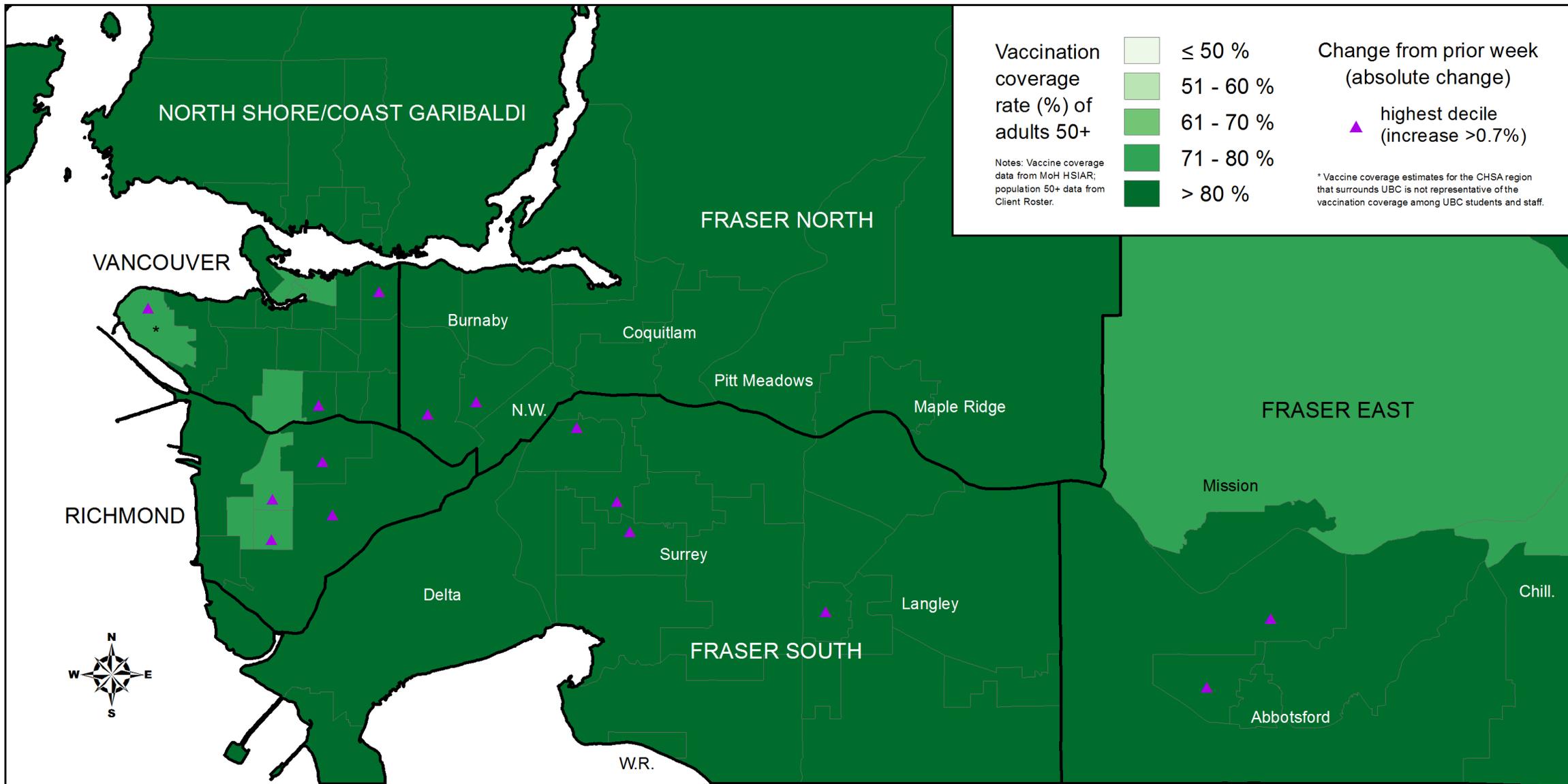
Change from prior week
(absolute change)

▲ highest decile
(increase >0.7%)

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

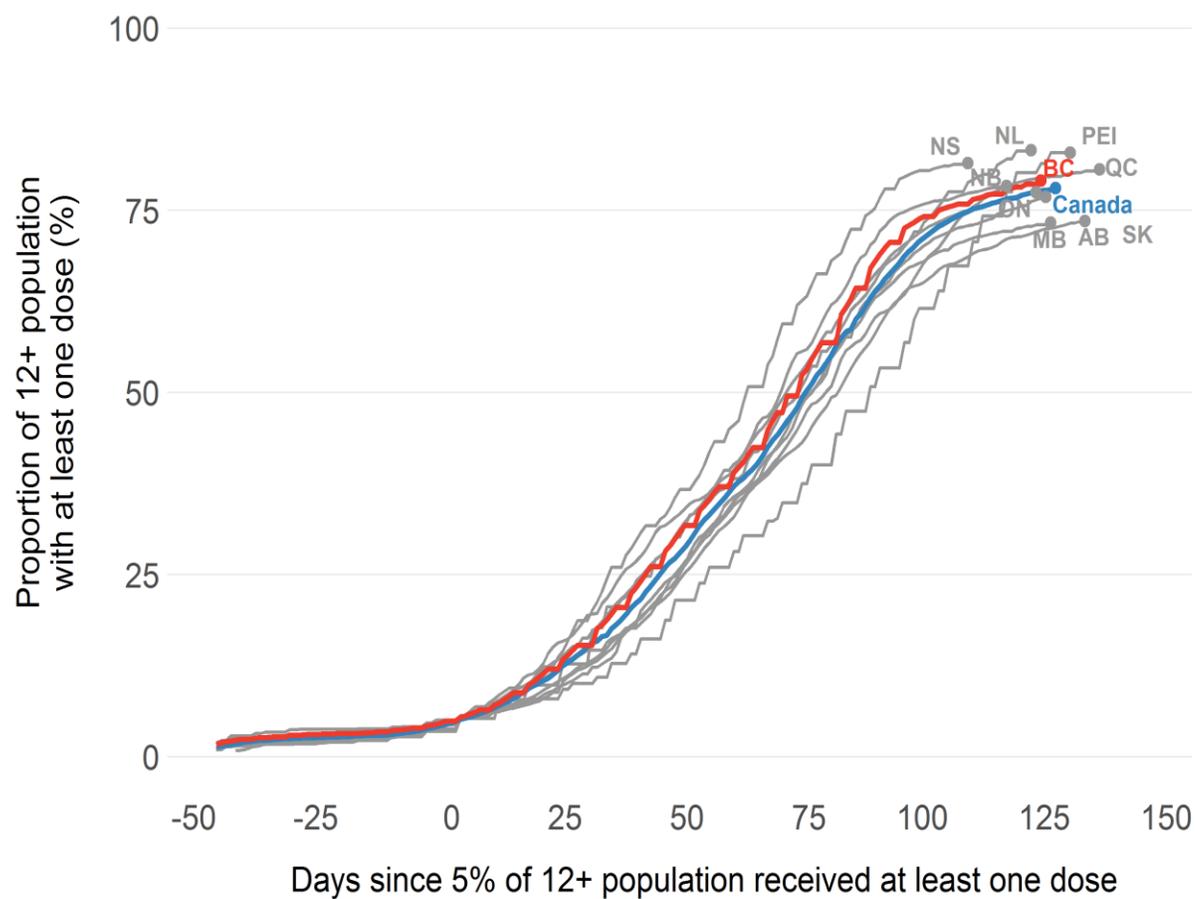
Vaccination coverage
rate (%) of adults 50+

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

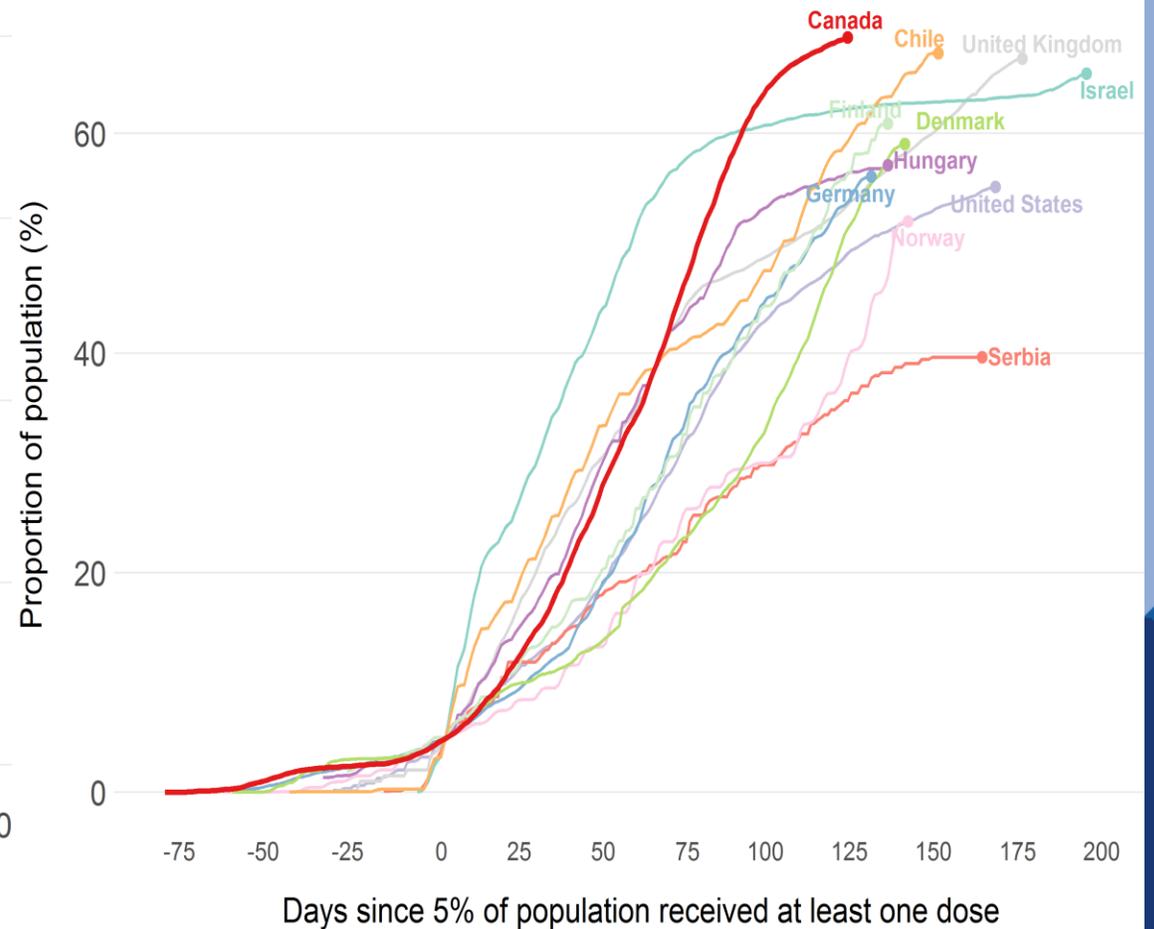


COVID-19 Vaccination Coverage by CHSA: Ages 50+ 1st Dose (up to July 5, 2021)

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 2021-07-06
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 2021-07-06

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

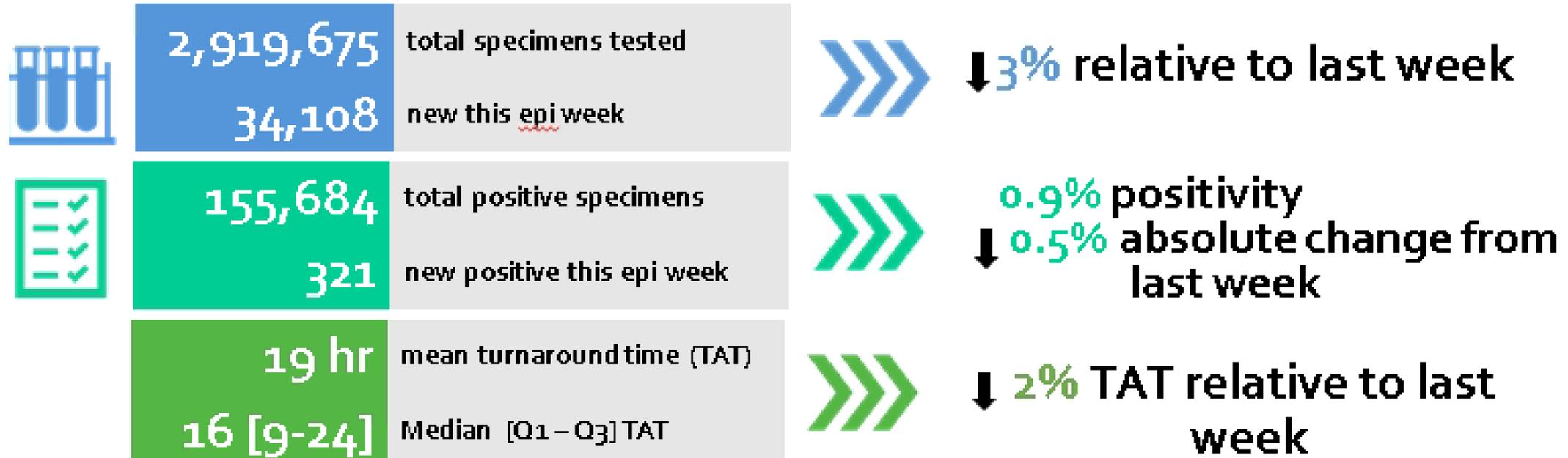
For latest vaccination progress statistics in Canada and internationally, see the [Epi App](#)

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

Lab - Key Messages

- **Percent positivity** among publicly funded tests is 1.9% in BC.
 - Test positivity is low in all HAs, ranging from 0.3% in VIHA to 3.3% in IH.
 - Percent positivity is <3% in all age groups.
- Testing rates decreased 3% this week (~34,000 total tests June 27 to July 3)
- The provincial weekly median **turnaround time** (time from specimen collection to lab result) is 16 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 ~73% from June 27 to July 3. Note that given the much smaller number of weekly cases, percentages are more likely to fluctuate from week to week.
- Sequencing-based VOC prevalence for June 27 to July 3 shows distribution of lineages among VOC samples: P.1 (Gamma) ~55%, B.1.1.7 (Alpha)~35% and B.1.617.2 (Delta) ~11%.

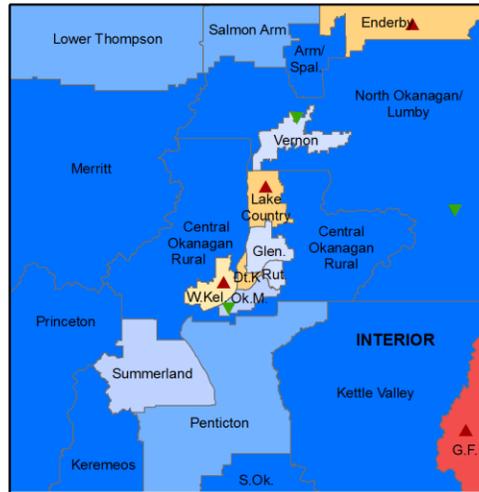
Weekly Summary of ALL lab tests performed



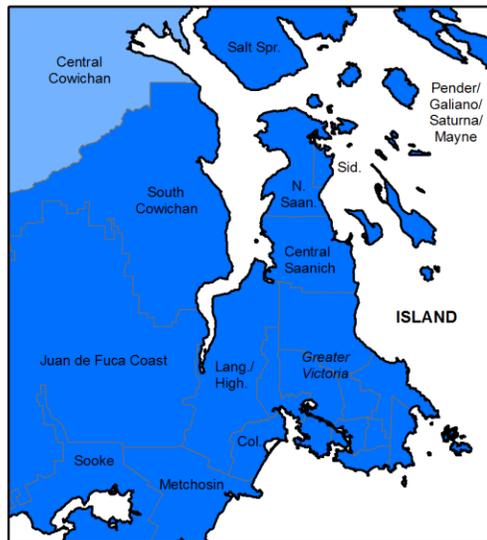
Weekly Summary of Lab tests paid Publicly



Okanagan Inset
(Community Health Service Areas)

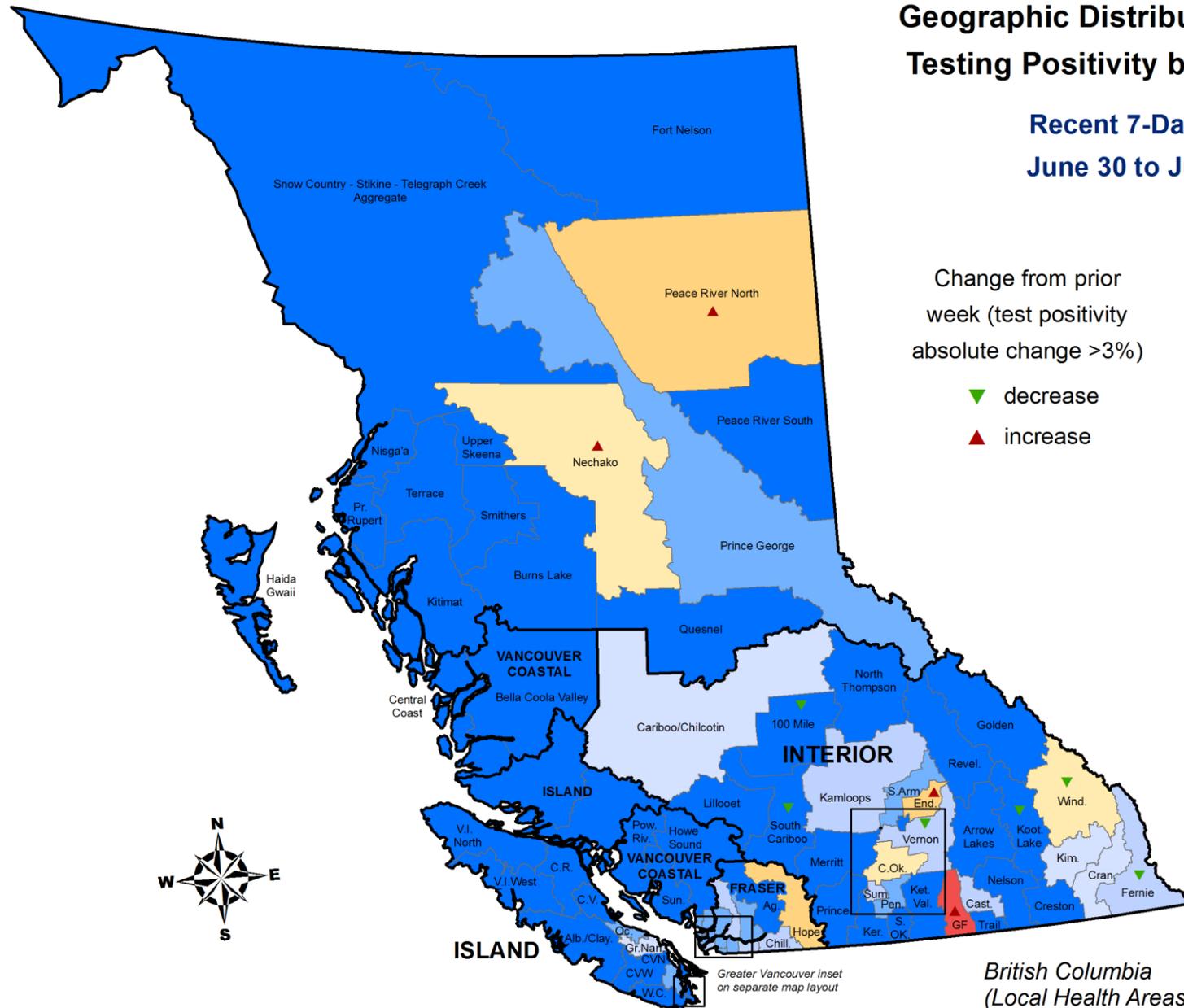


Greater Victoria Inset
(Community Health Service Areas)



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

Recent 7-Days Testing
June 30 to July 6, 2021



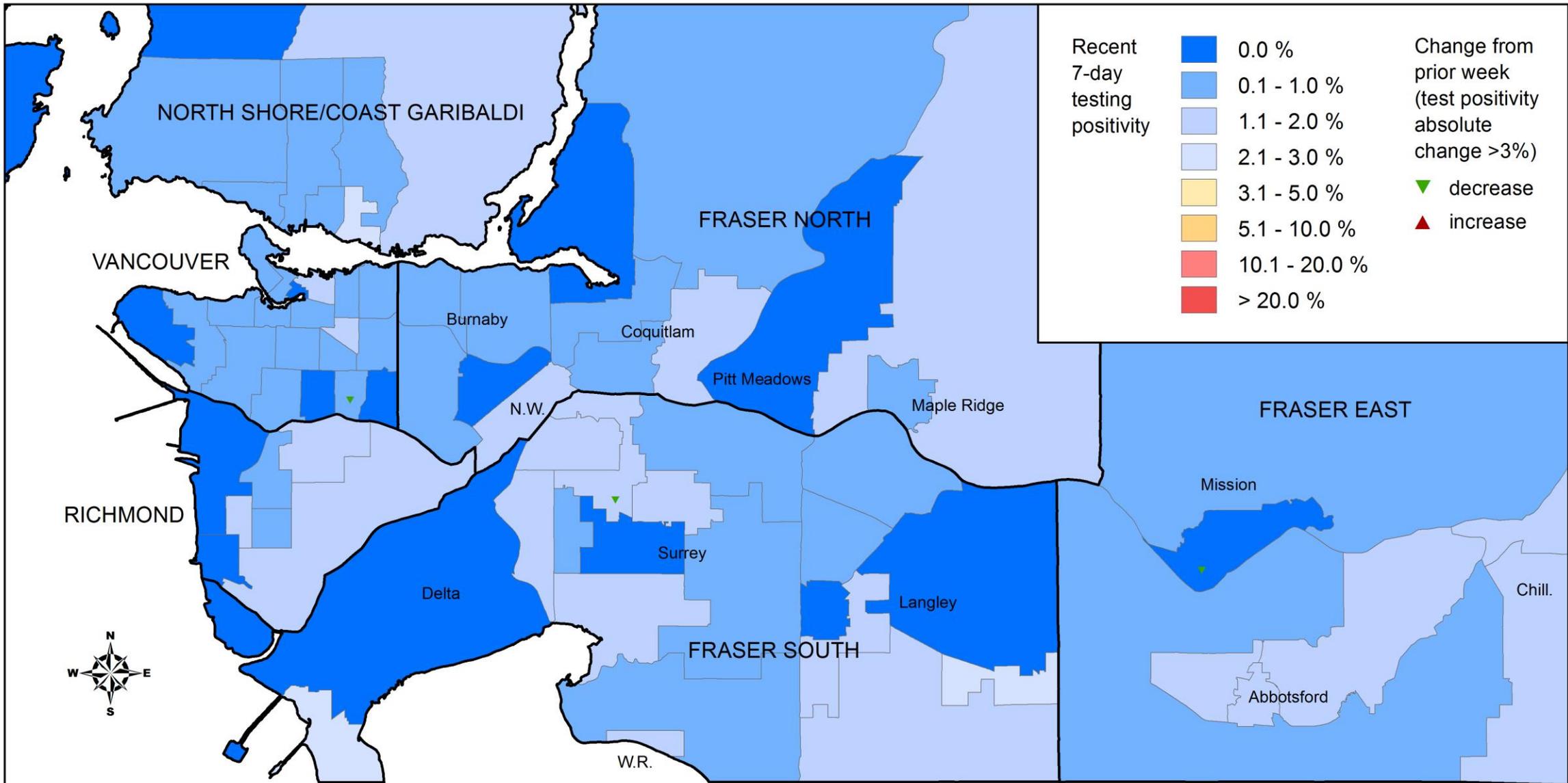
Change from prior week (test positivity absolute change >3%)

- ▼ 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 %

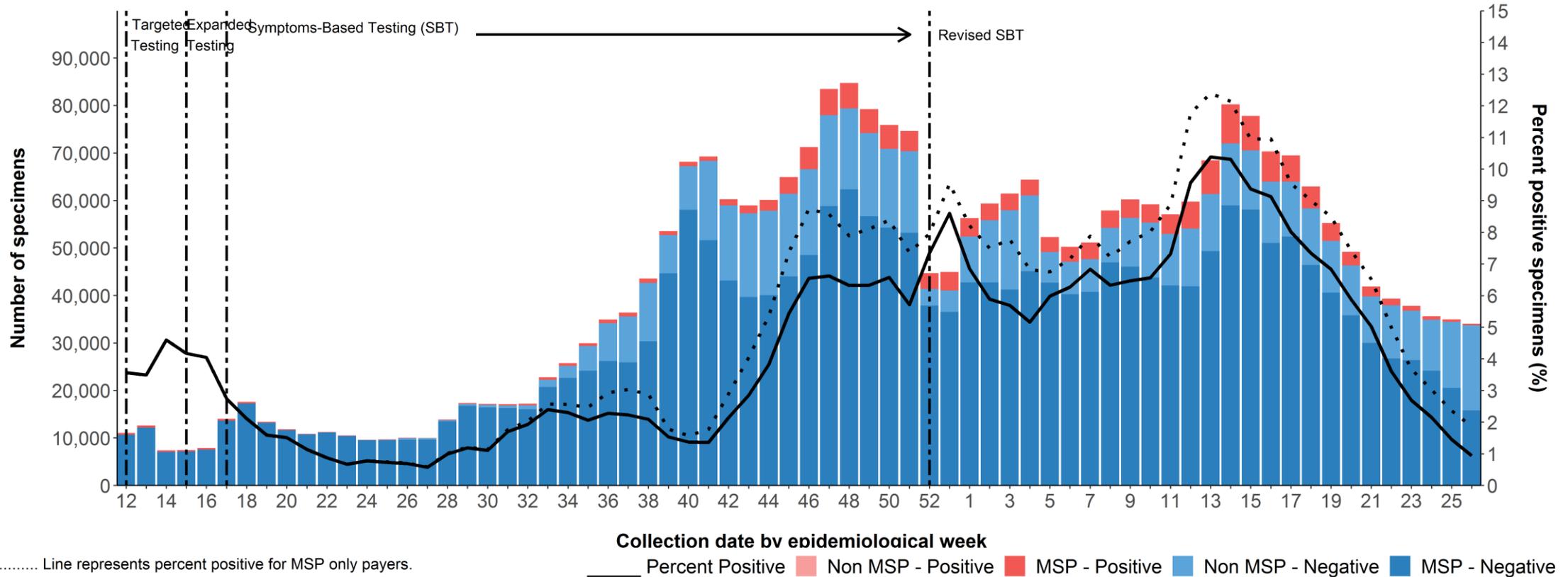
Data source: BCCDC Public Health Laboratory PLOVER system (all tests performed). Data are by testing result date, and location of client's residence or if missing, physician's address.



COVID-19 Recent 7-Day Test Positivity by CHSA (June 30 to July 6, 2021)

Includes all tests

Percent positivity among publicly funded tests continued to decrease (1.9%). The number of publicly funded tests resulted has also decreased relative to the previous epi week.

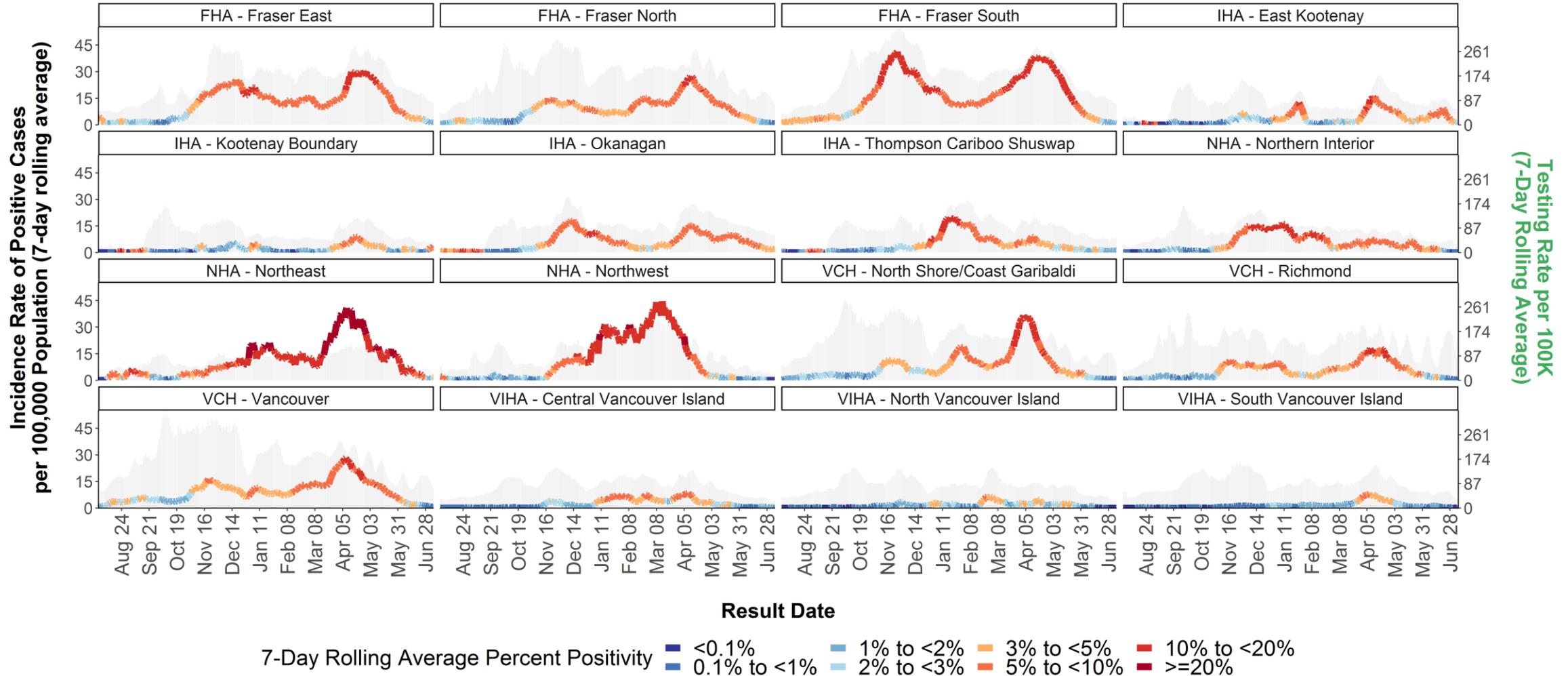


Note: Invalid (n = 1587) and indeterminate (n = 7820) results have been excluded

Data source: PLOVER 03-Jul-2021

Incidence is stable and low in all HSDAs; positivity is <3% in all regions except East Kootenay and Okanagan where it is between 3 and 5%.

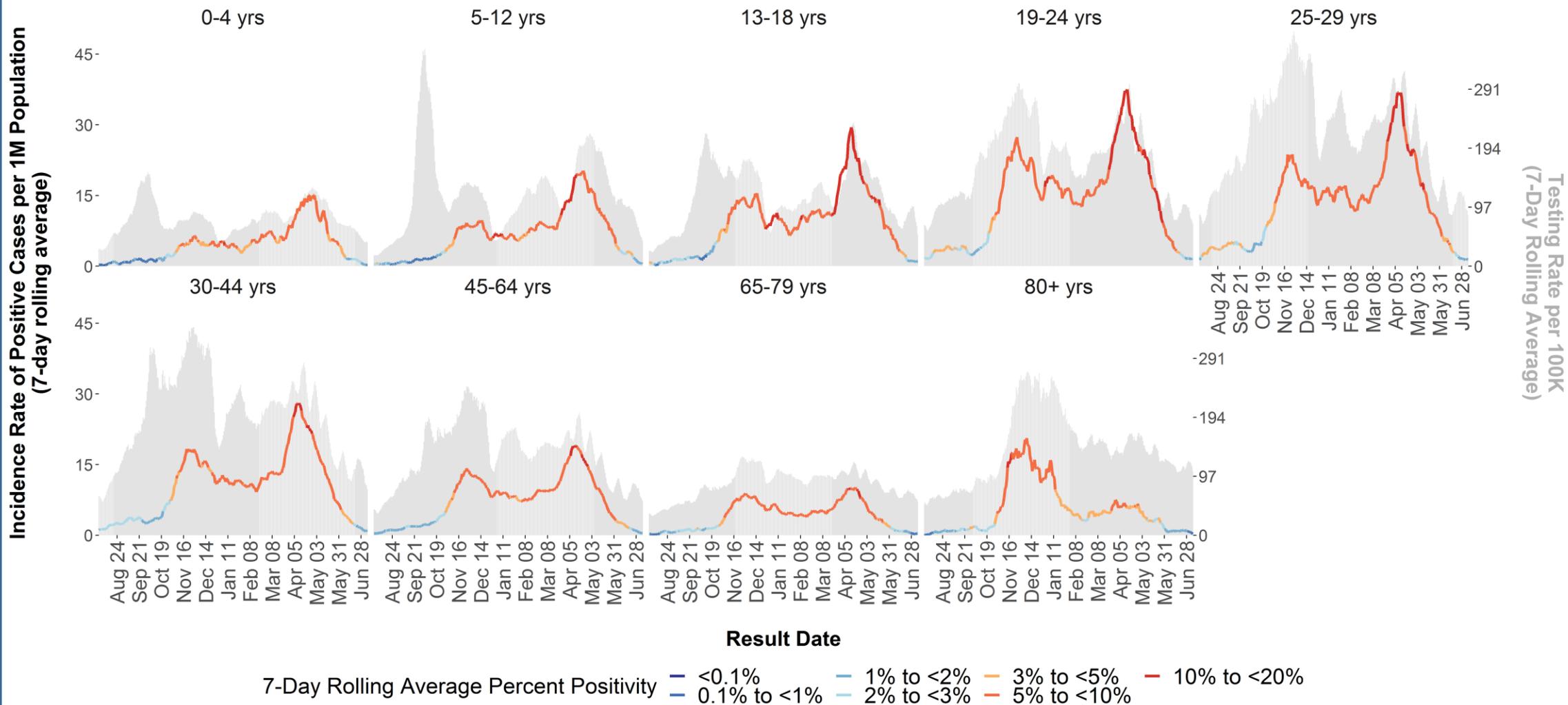
Case incidence rate, test percent positivity, and testing rate by HSDA (Public Payers Only).
Aug 1 2020 - Jul 6, 2021.



Data source: PLOVER 06-Jul-2021

Incidence continues to decline in all age groups; percent positivity is $\leq 3\%$ in all age groups.

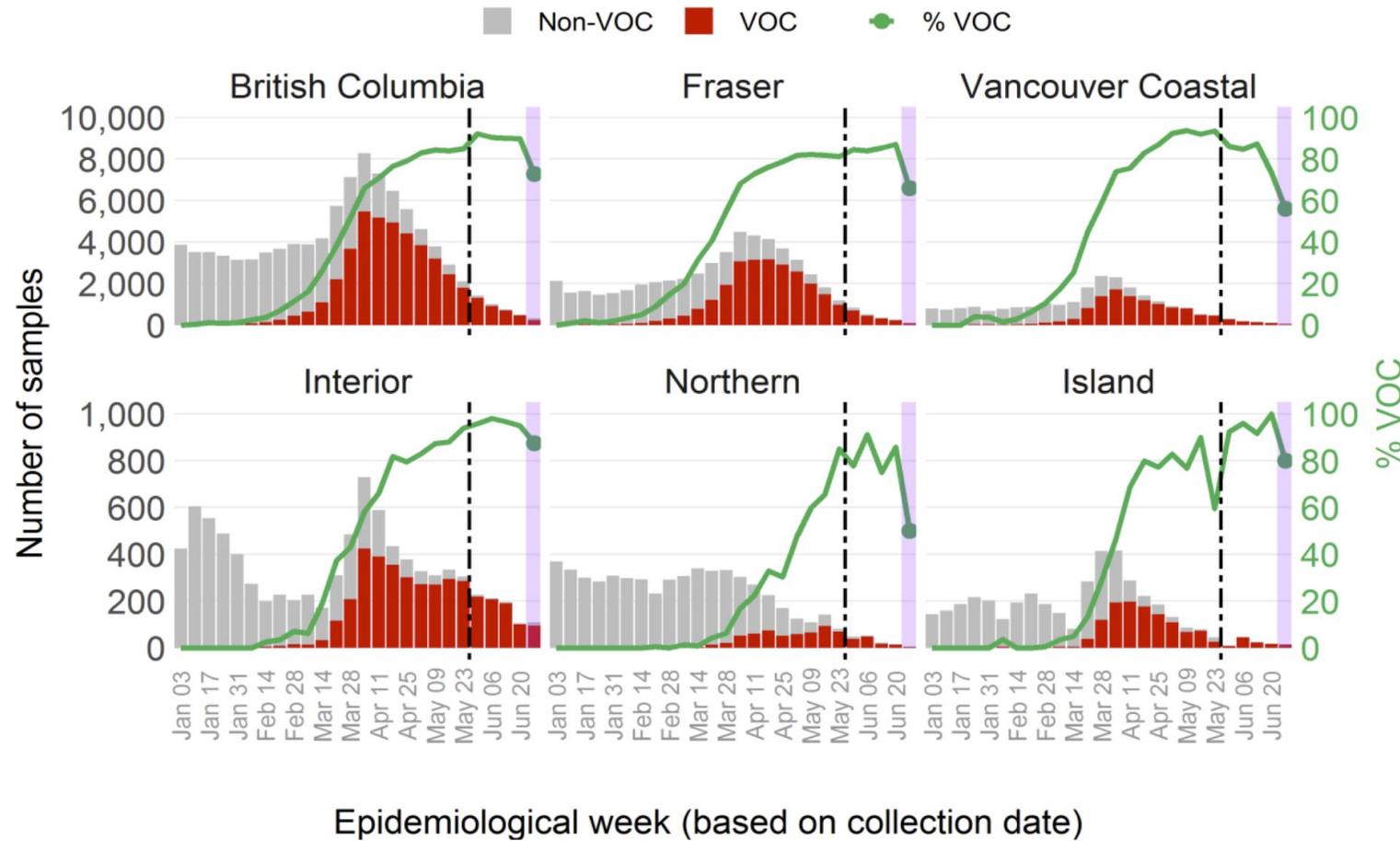
Case incidence rate, test percent positivity, and testing rate by age (Public Payers Only). Aug 1 2020 - Jul 6, 2021.



Data source: PLOVER 06-Jul-2021

The majority of COVID-19 positive samples are VOCs (~73%); but the absolute number of VOC samples is small.

Prevalence of presumptive VOC, by epi week in BC and Health Authorities, June 27-July 3, 2021



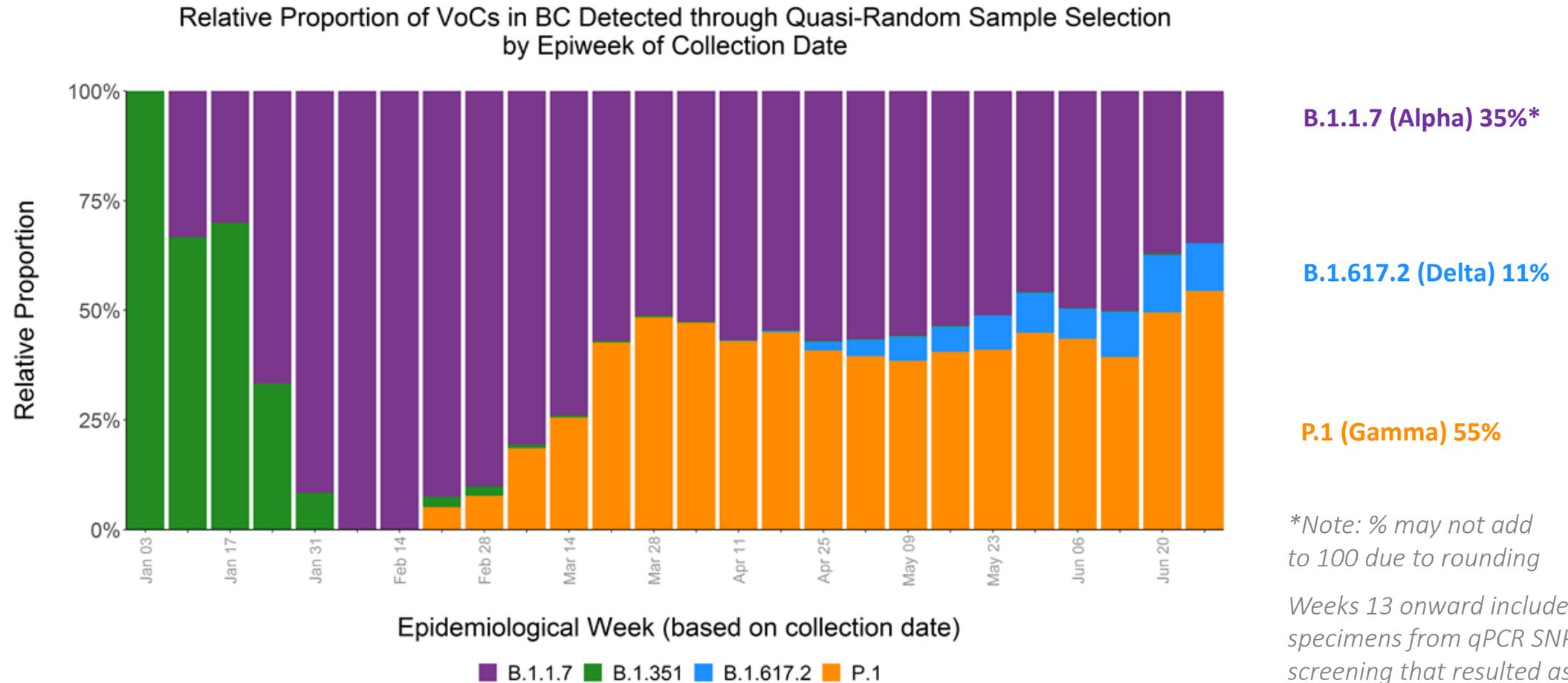
Shaded area reflects partial data and is subject to change

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

Data from the Plover system at the BCCDC Public Health Lab

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

Among sequenced samples provincially based on information for June 27 – July 3, P.1 (~55%) and B.1.1.7 (~35%) remain two dominant VOCs. B.1.617 currently represents ~11% of VOCs.



* the B.1.1.7 and P.1 VoC lineages are captured either by qPCR SNP screen or WGS for randomly selected samples up to epiweek 21; all other circulating VoCs are WGS confirmed and exclude samples sequenced for cluster and/outbreak investigation. In week 12, we used a qPCR SNP that is comprised of a dual N501Y and E484K assay

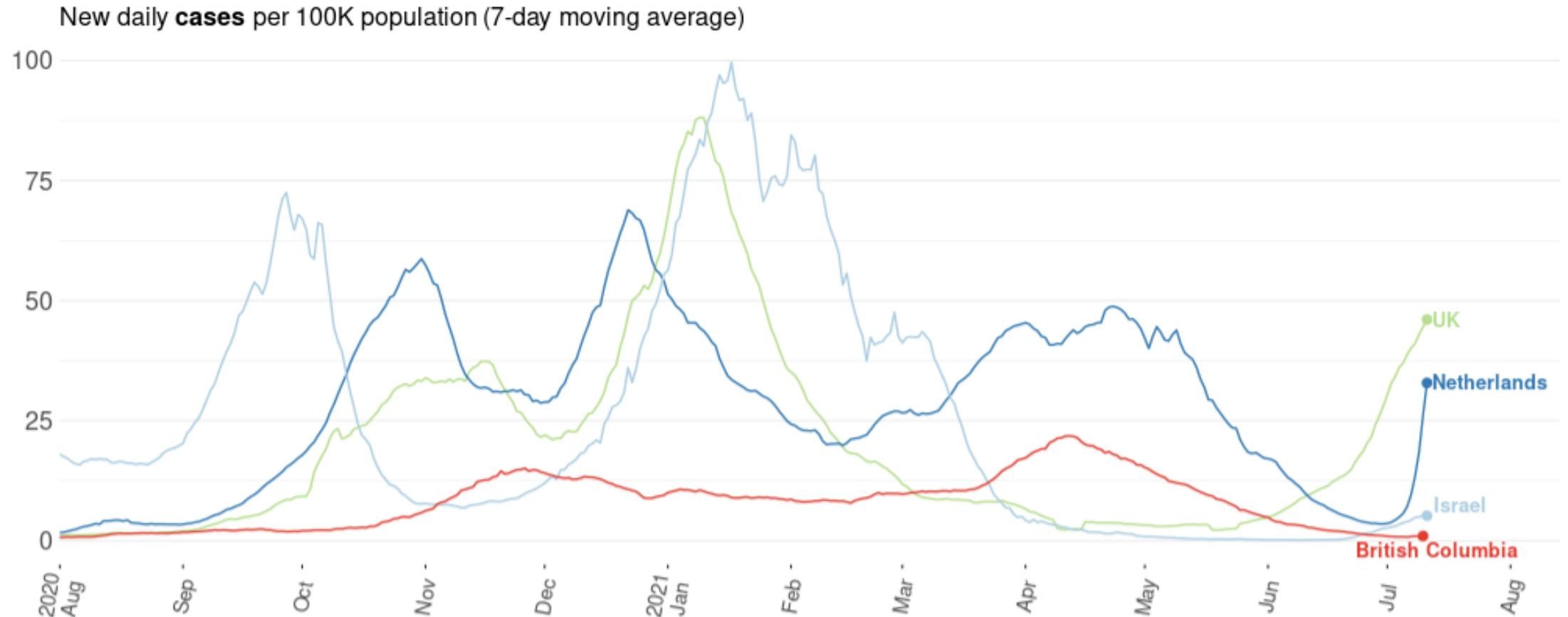
**Note: % may not add to 100 due to rounding*

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

Global epidemiology update

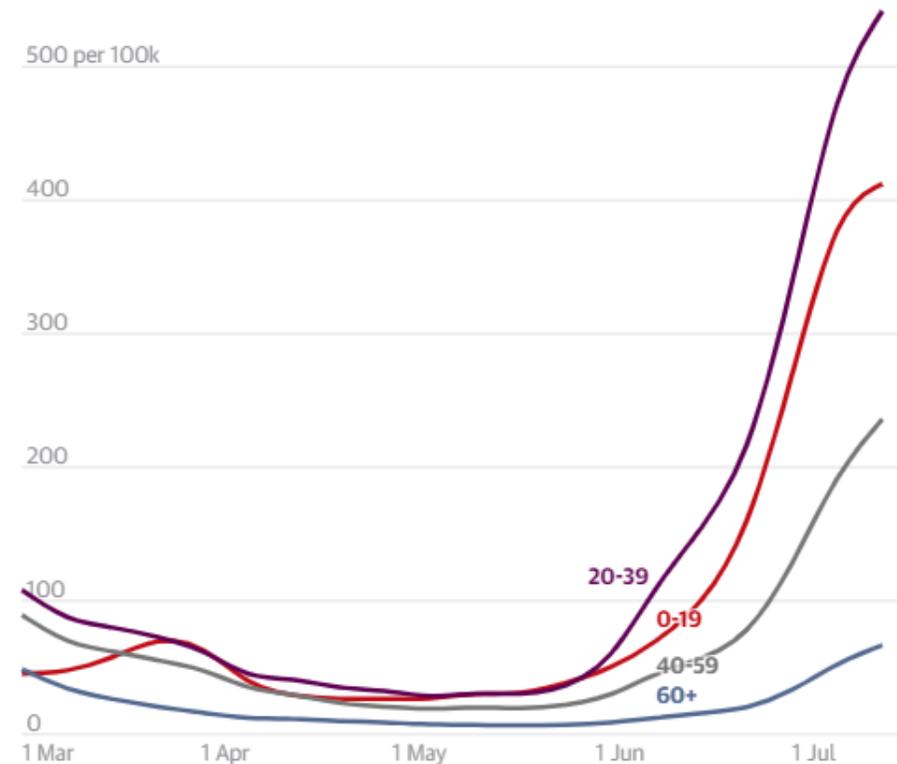
- UK, Israel, and many countries in Europe are experiencing a resurgence of cases
- Recent rises in cases in the UK, Europe, Israel, and the Yukon are largely driven by resurgences in infections among younger susceptible individuals (unvaccinated or partially vaccinated)
- While the number of hospitalizations and deaths have also recently increased in the UK, it has not mirrored the pattern of previous waves and they remain significantly lower than before at the national level (but there is some regional variation)
- 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 it on than unvaccinated individuals

UK, Israel, and many countries in Europe are experiencing a resurgence of cases



England: resurgence is driven by those under 40 years of age, most of whom are not vaccinated yet

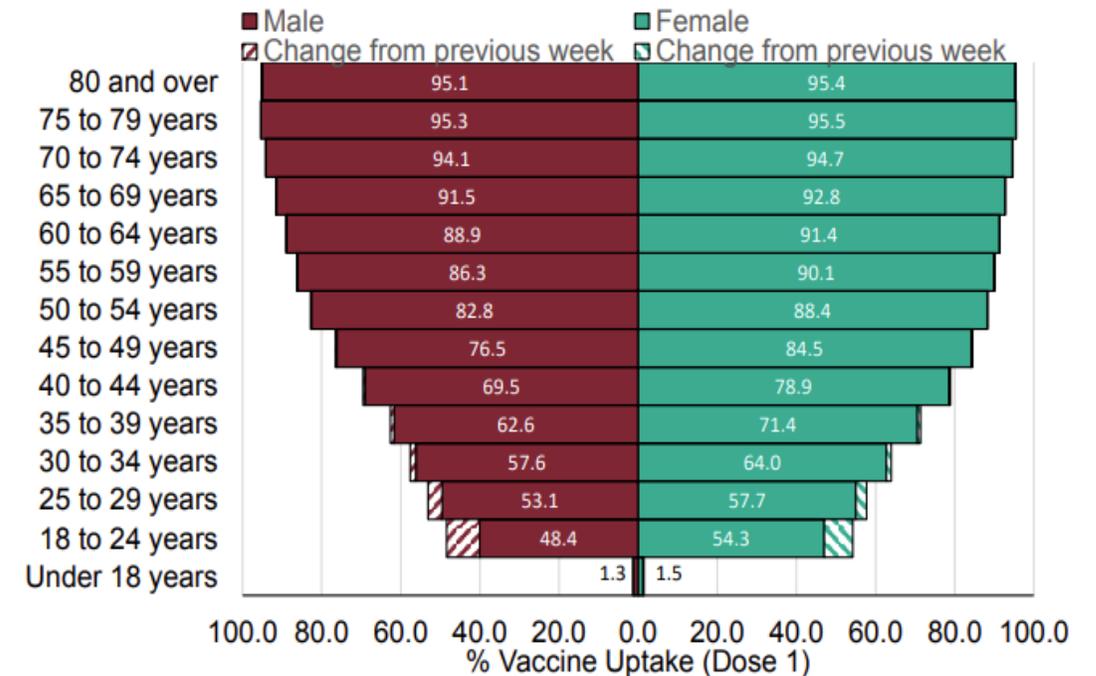
England: coronavirus case rates by age group



Weekly coronavirus case rate per 100,000 people by age group in England. Data.gov.uk, latest 11 July, 2021

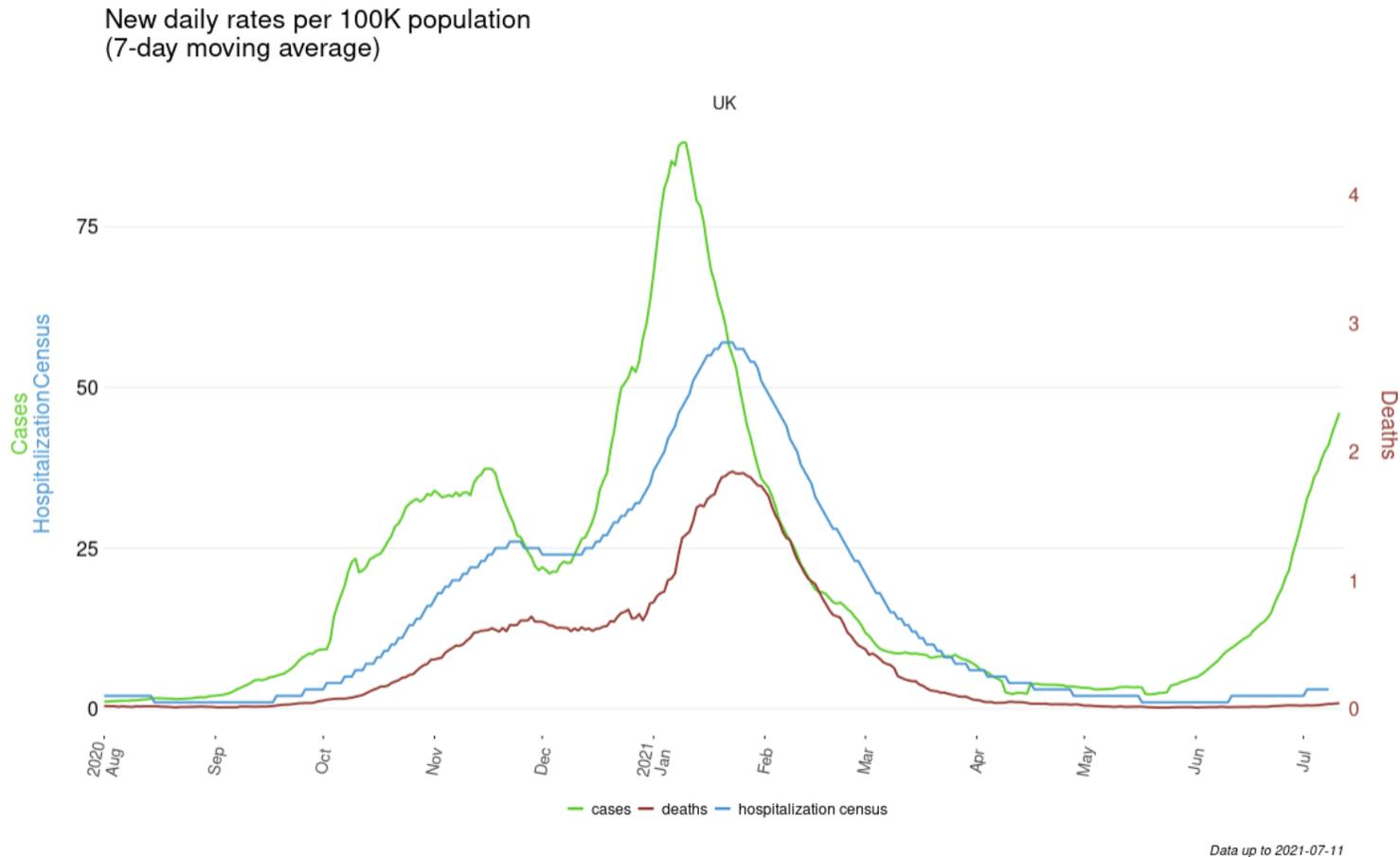
Illustration:
[Guardian](#)

Figure 57: Age/Sex pyramid for COVID-19 vaccine uptake by age in England for Dose 1

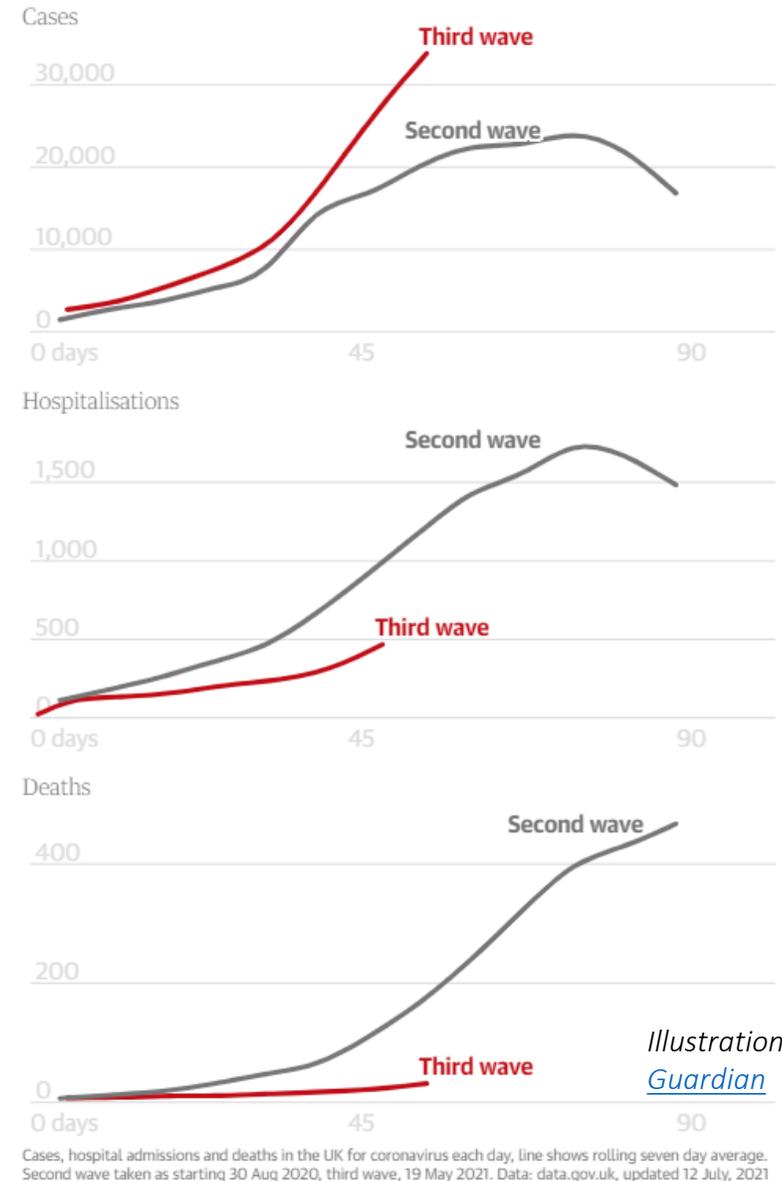


[Source](#)

While the number of hospitalizations and deaths have also recently increased in the UK, it has not mirrored the pattern of previous waves and they remain significantly lower than before at the national level (but there is some regional variation)



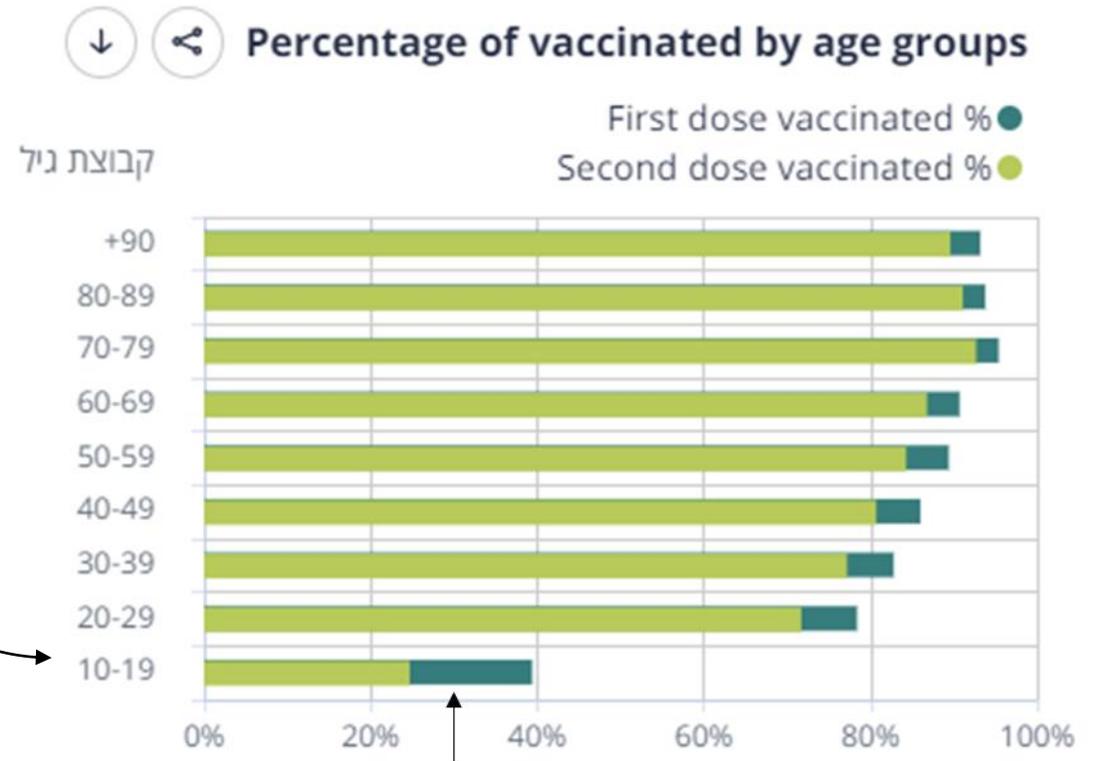
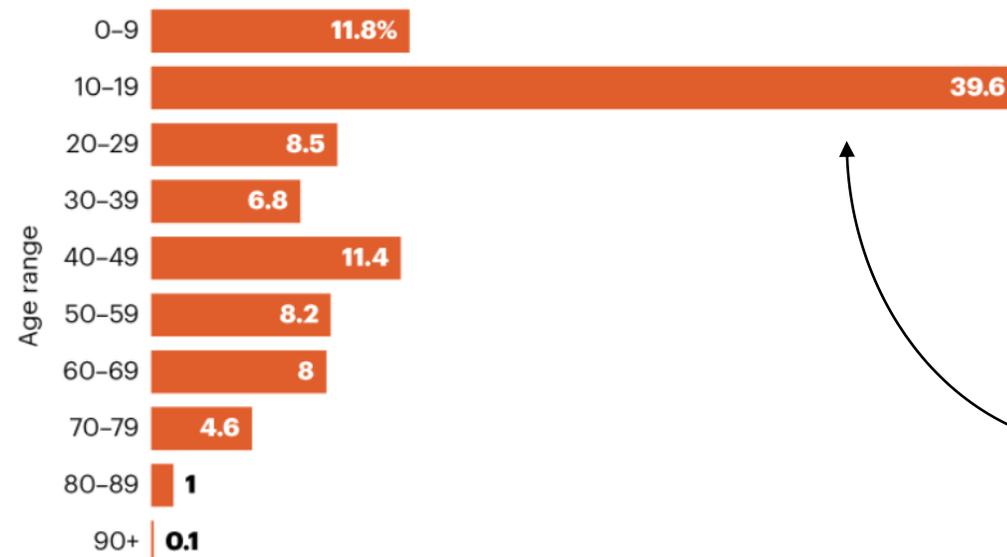
Coronavirus waves compared



Israel: Recent resurgence of cases is driven by infections in children and youth, the majority of whom have not been vaccinated yet

With the majority of adults in Israel now vaccinated, just over half of the country's new COVID-19 cases in the month up to 5 July were in people aged 19 and under.

Proportion of recent COVID-19 cases in Israel by age group



©nature

Note that vaccination of 12-15 year olds only began at the end of June

Source: Israel Ministry of Health

[Source](#)

Several studies have consistently shown that vaccines remain highly effective against the Delta variant, especially against severe outcomes

Symptomatic infection: 1 dose of vaccine is not as effective against Delta as 2 doses

Severe outcomes: vaccines are very effective after 1 dose, and offer excellent protection after 2 doses

Effectiveness estimates against symptomatic disease

Vaccine	1 dose		2 doses	
	Alpha*	Delta	Alpha	Delta
Pfizer	27-66%	33-56%	89-93%	83-88%
Moderna	72-83%	72%	92%	
Astra-Zeneca	39-64%	33-67%	67-81%	60-61%

Effectiveness estimates against hospitalizations

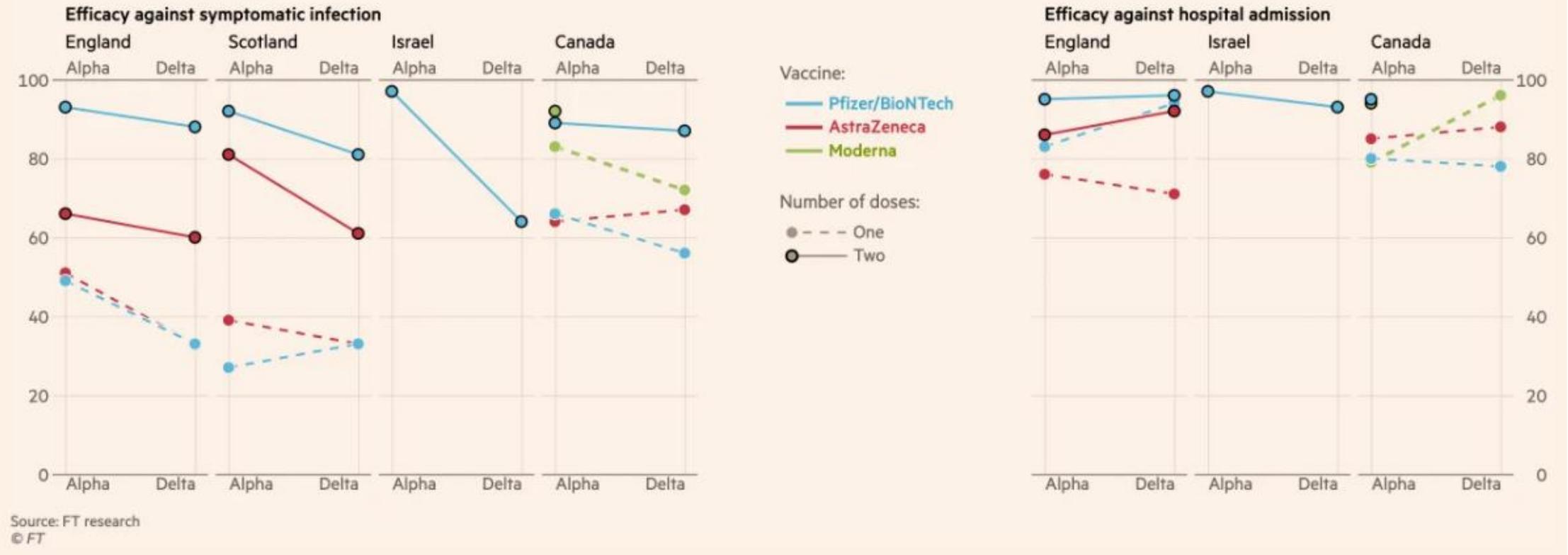
Vaccine	1 dose**		2 doses	
	Alpha	Delta	Alpha	Delta
Pfizer	80-83%	78-94%	95-98%	96%
Moderna	79%	96%	94%	
Astra-Zeneca	76-85%	71-88%	86-94%	92%

Sources: Public Health England ([1](#), [2](#), and [3](#)), [Scotland](#), [Ontario](#)

Visualization of the table on previous slide:

How vaccine efficacy compares against the Alpha and Delta variants

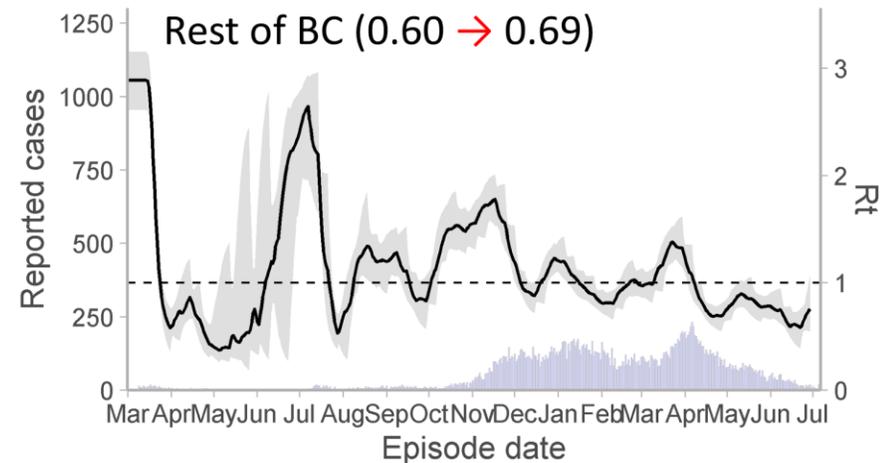
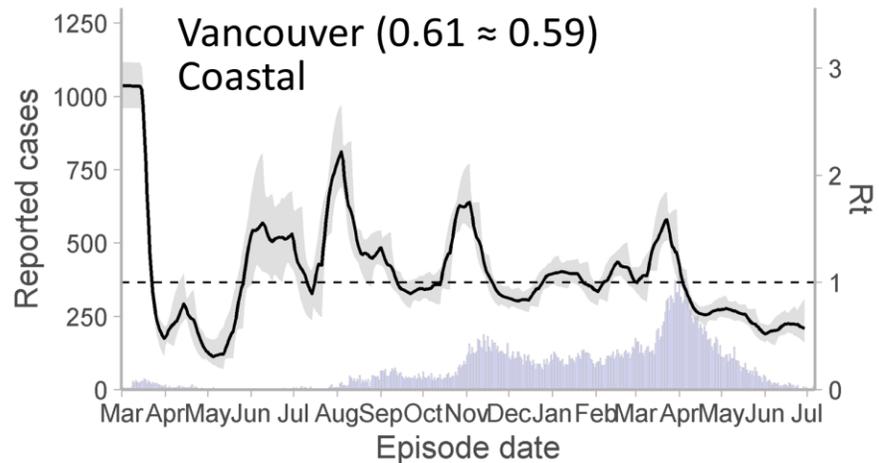
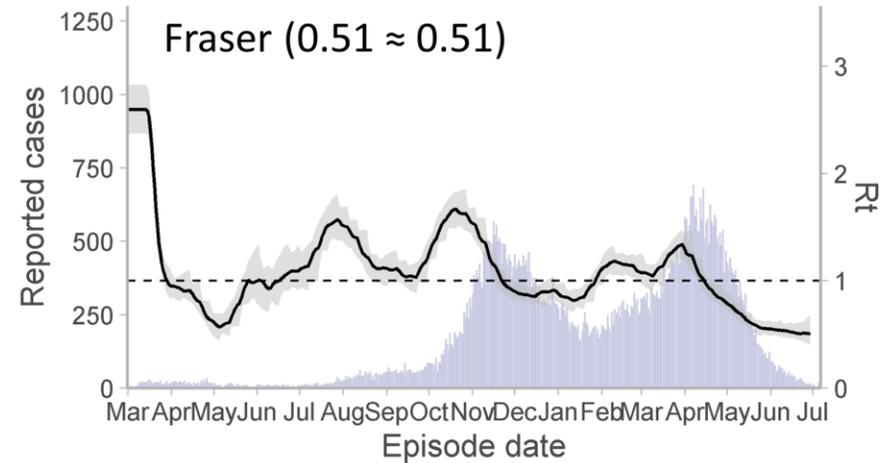
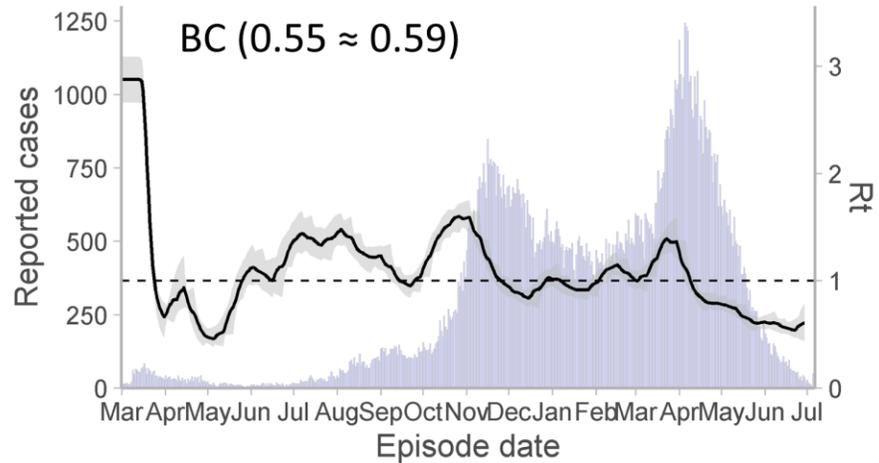
Vaccine efficacy against infection and hospitalisation for each variant, by vaccine manufacturer, number of doses and country of study



Visualization source: [FT](#)

Dynamic compartmental modeling: recent trends

Our model shows that R_t remains below 1 and is stable across BC



Solid black line: median R_t , modeled using all reported cases up to July 6, 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). 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](#)