

BCCDC Data Summary

9 September 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 for surveillance data up to 7 Sep

- **Case rates** are increasing in Northern, elevated but decreasing across Interior, and stable or declining in other HAs;
- **Test positivity** among public tests is stable (~9% provincially), and is highest in IH (16%) and NH (25%).
- **New hospitalizations** are increasing provincially; **hospital/critical care census** is increasing across BC; **new deaths** are low. Hospitalization rates among children continue to remain very low.
- Based on last week's data, compared with fully vaccinated individuals and after adjusting for age differences, unvaccinated individuals are
 - ≈ **10x** more likely to become a case
 - ≈ **47x** more likely to be hospitalized
 - ≈ **9x** more likely to die
- **Vaccine** coverage in BC, 07 Sep, 1 dose (2 doses): 76% (69%) of total population, 85% (78%) of 12+ eligible population. Lower vaccine coverage in Interior and Northern and among younger individuals.
- Variants of concern (**VOCs**) continue to account for ≈100% of all positive tests in BC. Delta is the dominant VOC (99.5%) across all of BC.

Sep 02 to Sep 07: BC COVID-19 Profile



171,564	total cases
4,711	new this week



1,842	total deaths
24	new this week

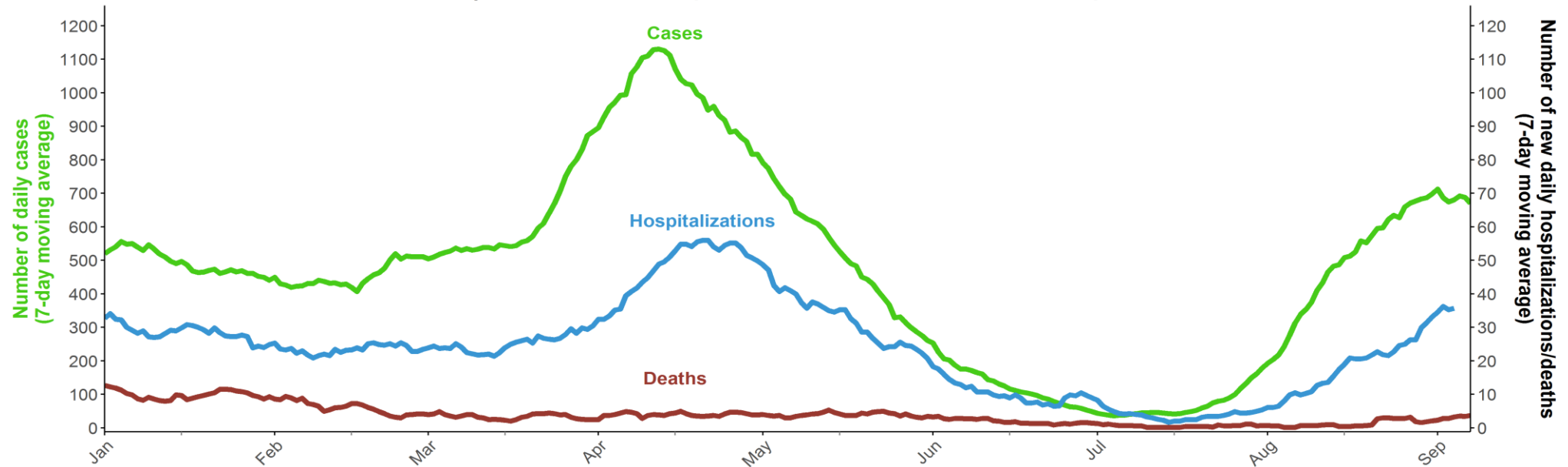


9,007	ever hospitalized
282	new this week



163,793	removed from isolation
4,893	new this week

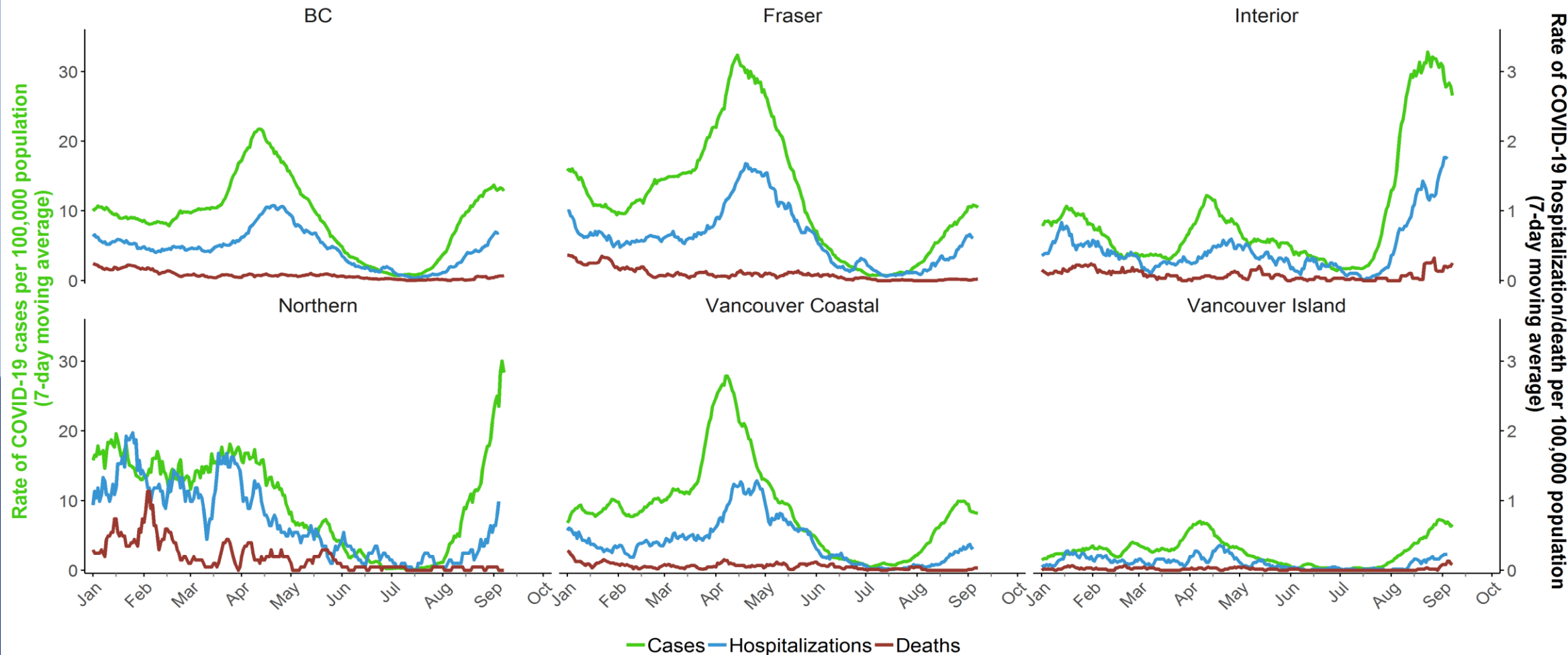
New daily COVID-19 cases, hospitalizations and deaths, Jan 01 2021 - Sep 07 2021



* Data are by surveillance date for cases and deaths, and admission date for hospitalizations
Data source: PHRDW Sep-08-2021

Case rates are levelling in all regions except Northern, where it is increasing; new hospitalizations are increasing in all HAs; new deaths increased in Interior.

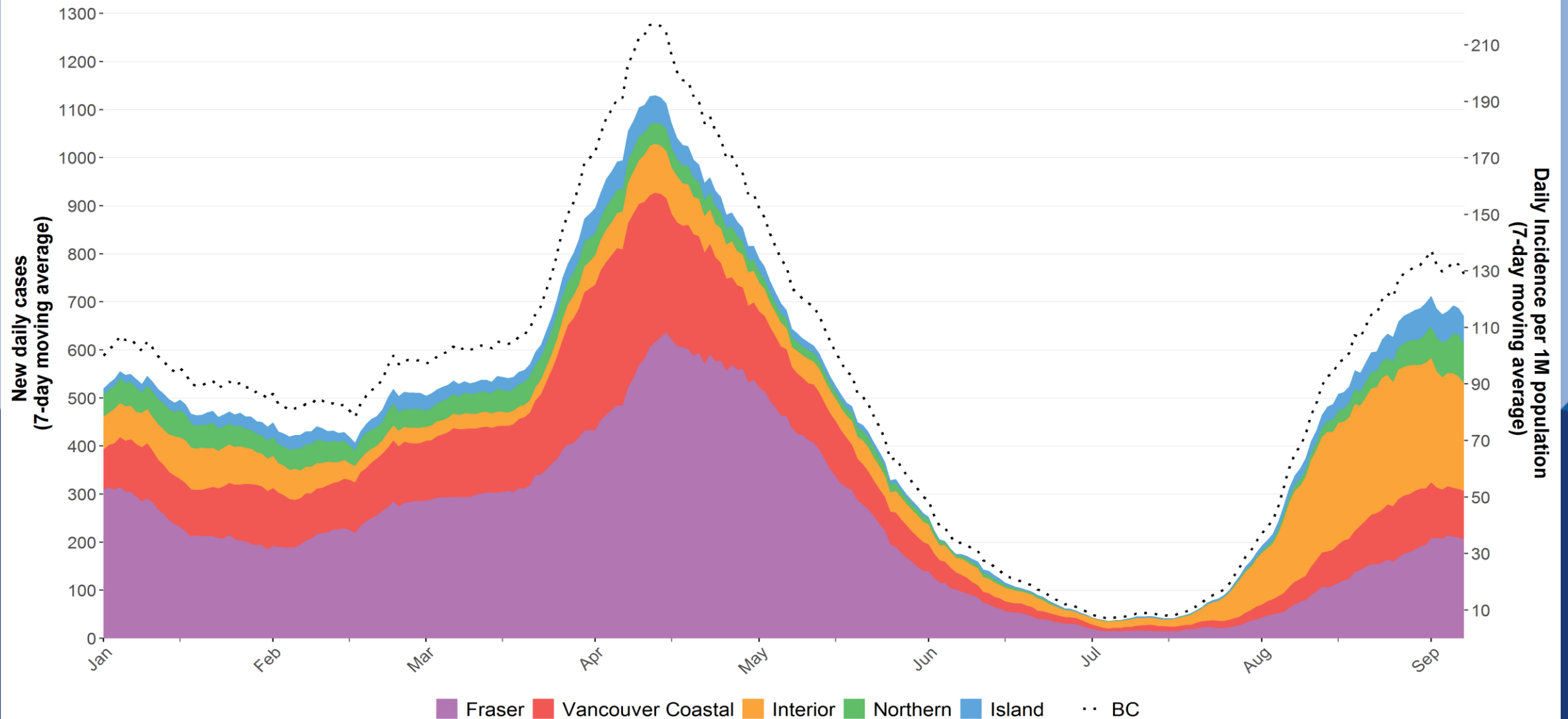
Rate of COVID-19 case, hospitalization and death, Jan 01 2021 - Sep 07 2021



* Data are by surveillance date for cases and deaths, and admission date for hospitalizations
Data source: PHRDW Sep-08-2021

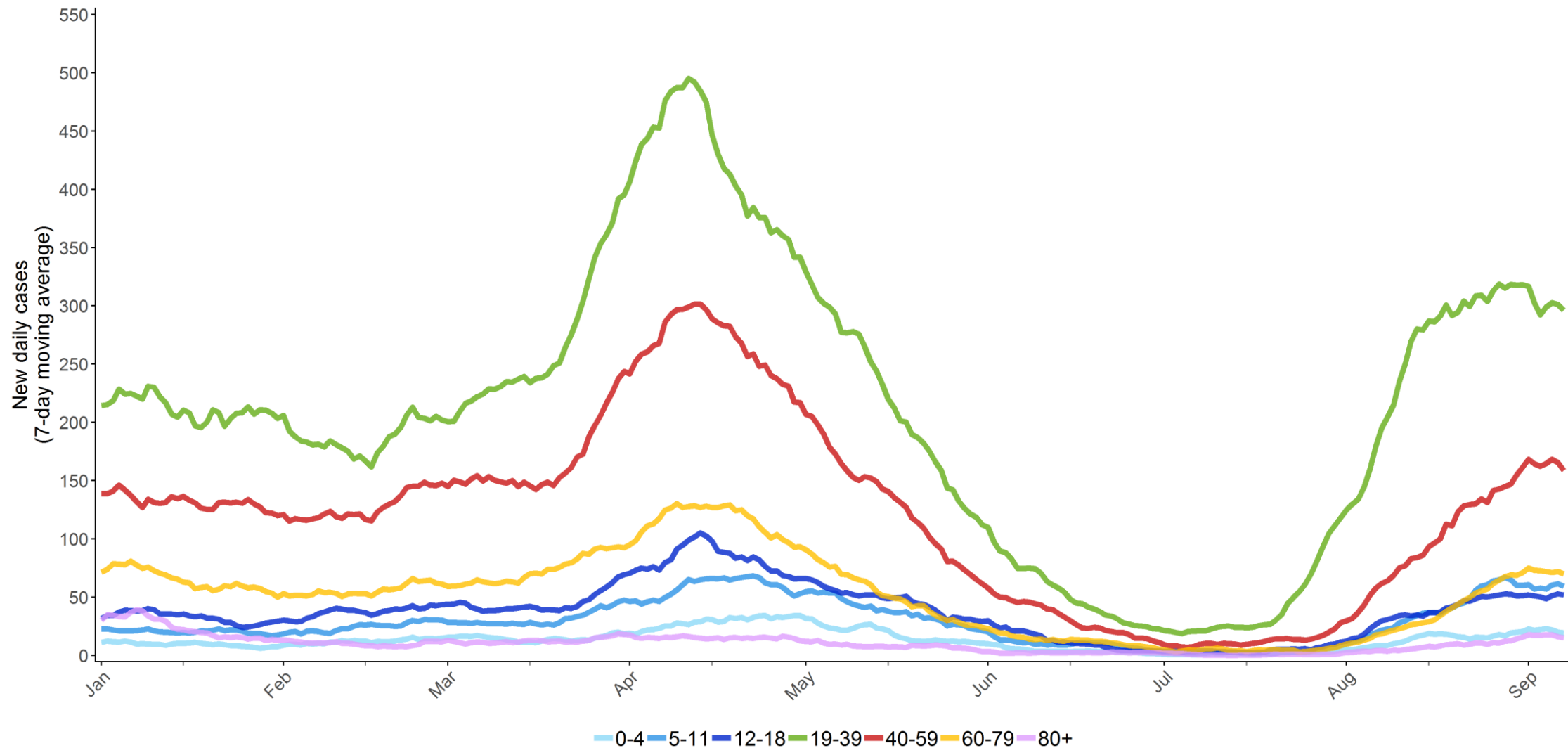
Interior Health experienced the highest number of cases of the five regions in BC during the latest resurgence

New daily COVID-19 cases by HA, Jan 1 2021 – Sept 7 2021



Case counts are highest among 19-39 year olds, followed by 40-59 year olds, consistent with previous resurgences

New daily COVID-19 cases by Age, Jan 1 2021 – Sept 7 2021

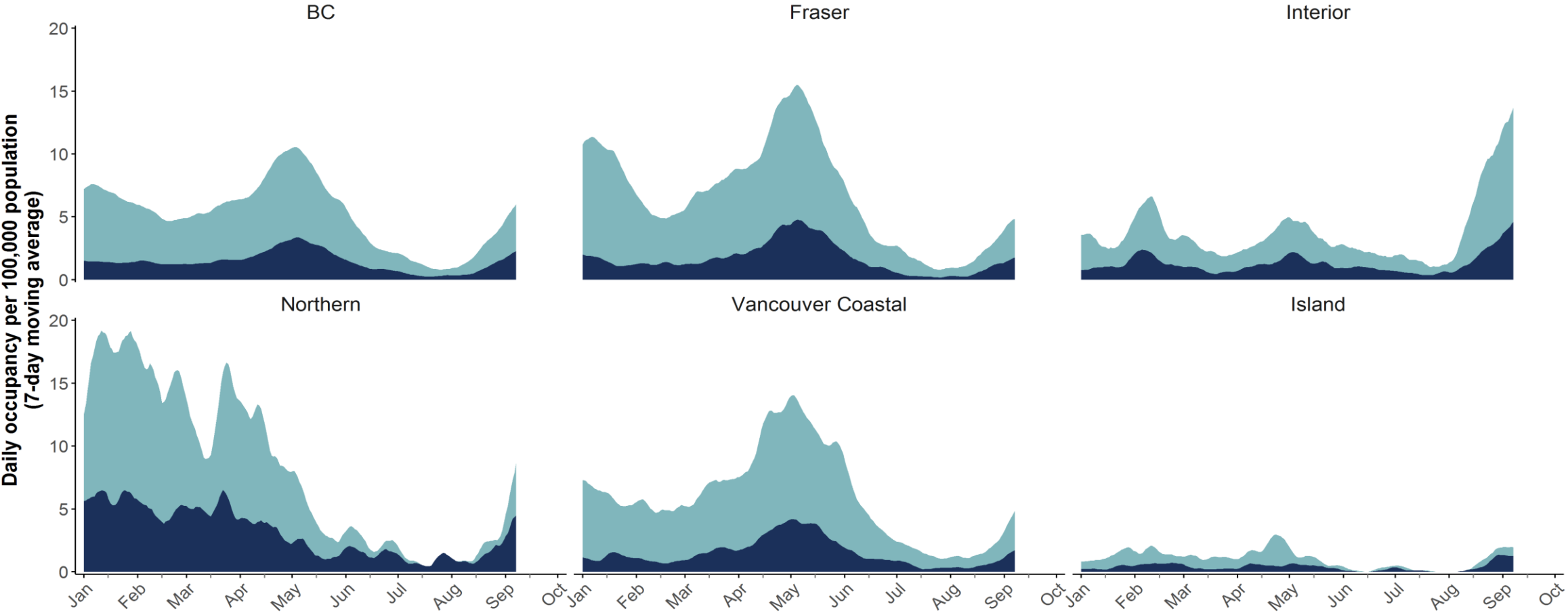


* Data based on surveillance date (i.e. lab result date, or when not available, date reported to public health)

Hospital and critical care census is increasing in all regions except Island, where it is stable

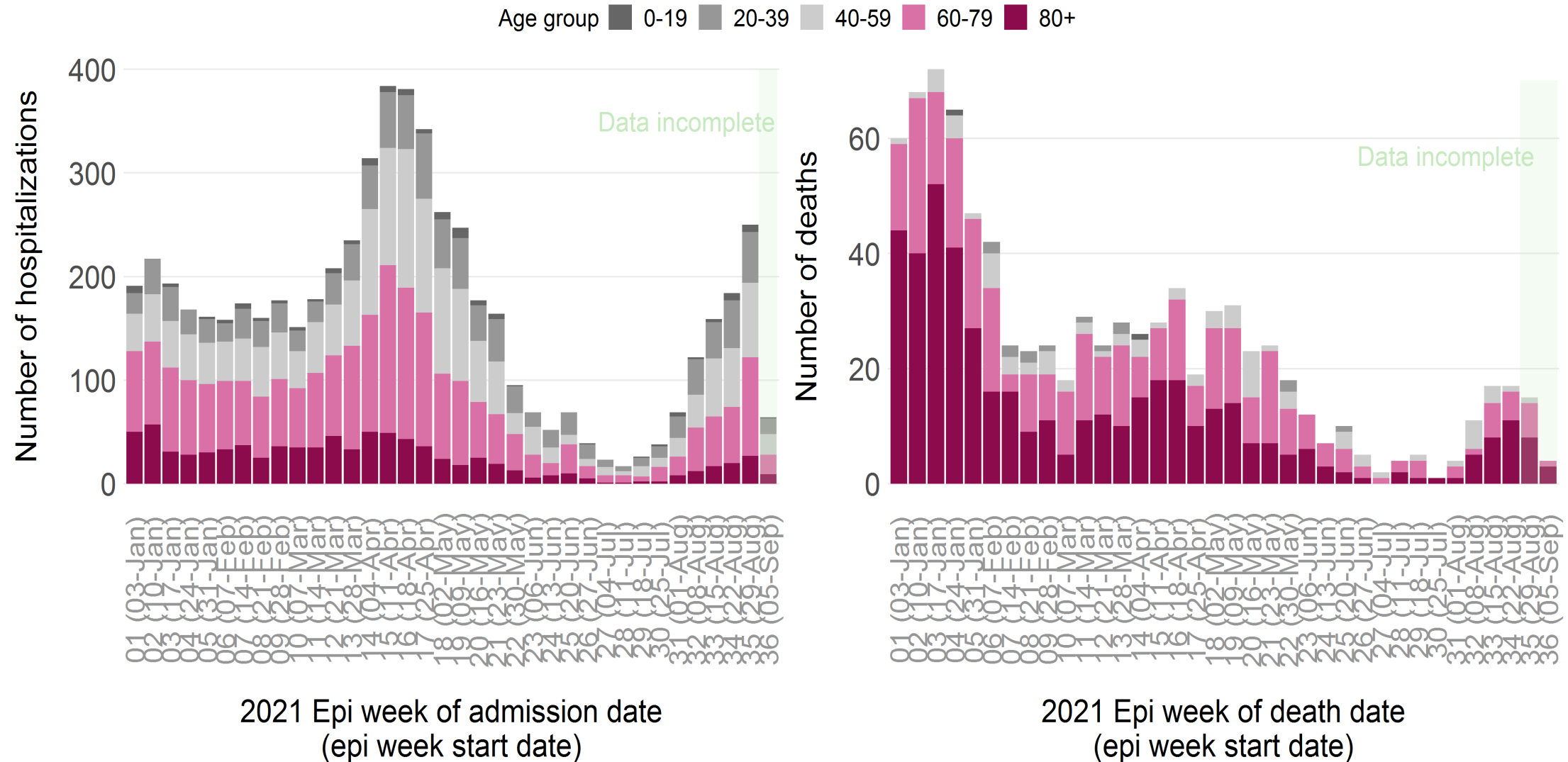
Current COVID-19 hospitalizations, Jan 01 2021 - Sep 07 2021

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



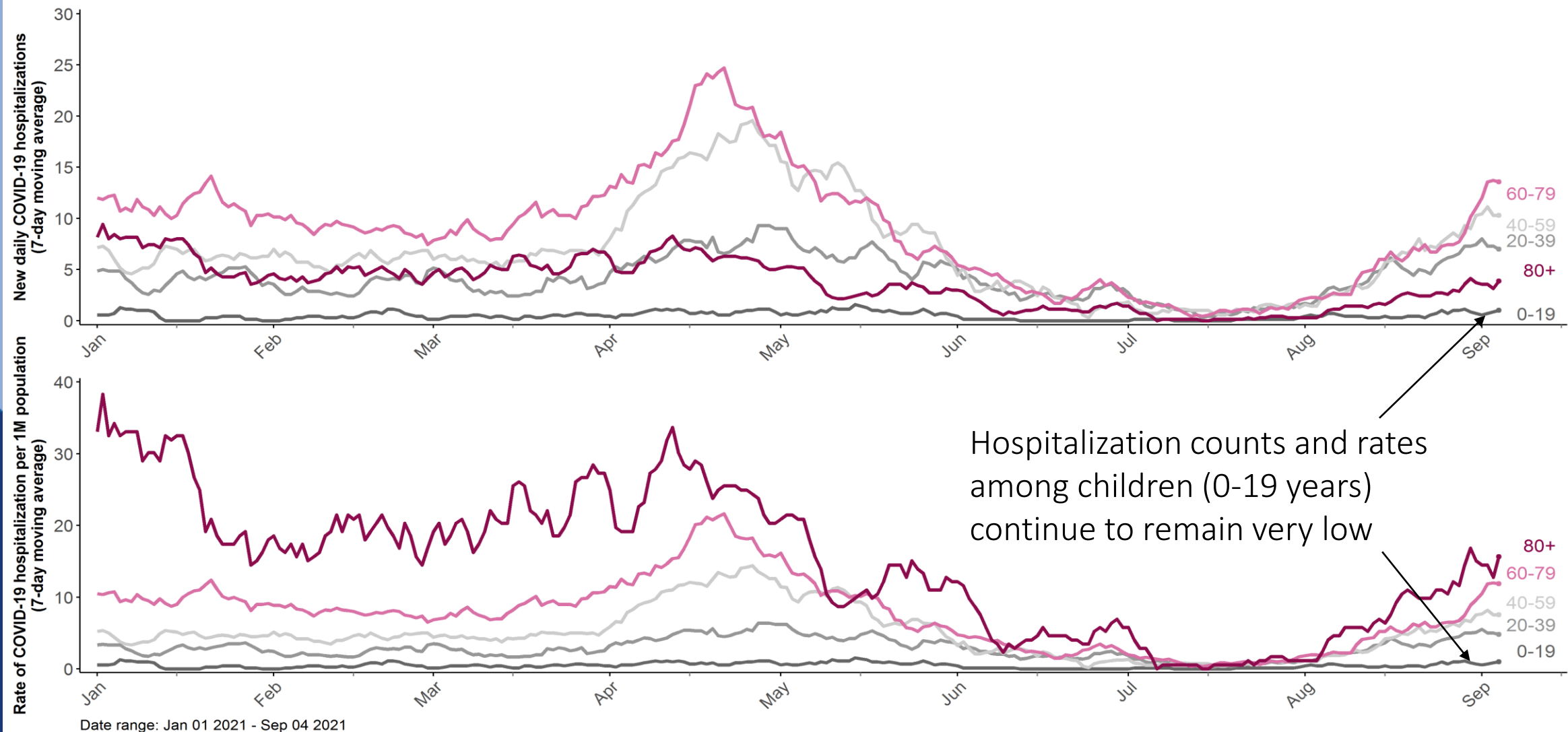
* Data are by census date for hospitalizations
Data source: PHSA Provincial COVID19 Monitoring Solution (PCMS) Sep-08-2021

Number of new hospital admissions is increasing across all ages >20 years (largest increase in 60-79 years), almost all are among unvaccinated individuals (see slide 23). Deaths are low.

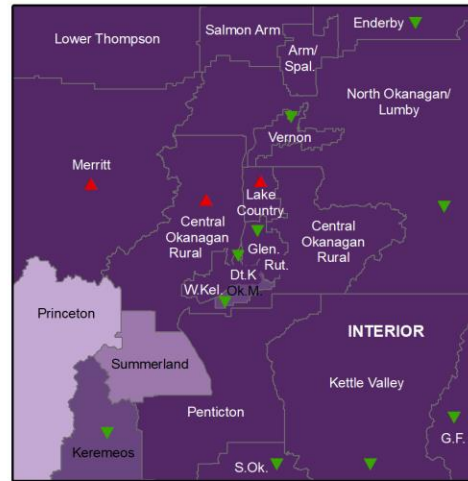


Data extracted on 2021-09-08; hospitalization and death data from health authority case line list data

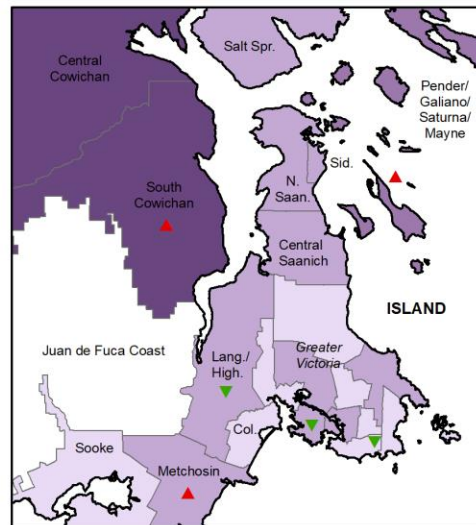
Trends in number and rate of new hospitalizations by age group, BC, 1 Jan – 4 Sept 2021



Okanagan Inset
(Community Health Service Areas)



Greater Victoria Inset
(Community Health Service Areas)



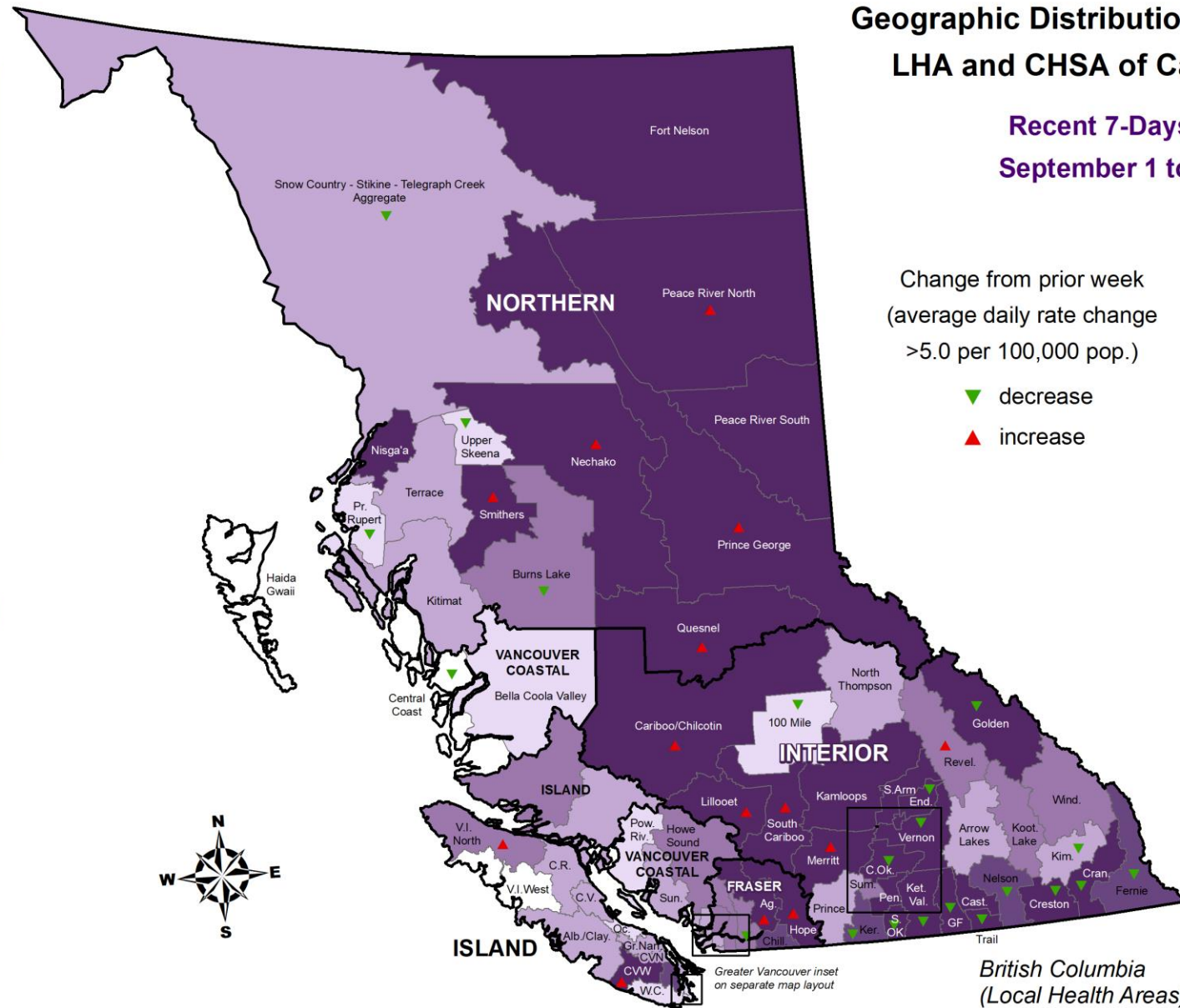
Geographic Distribution of COVID-19 by LHA and CHSA of Case Residence

Recent 7-Days Cases
September 1 to 7, 2021

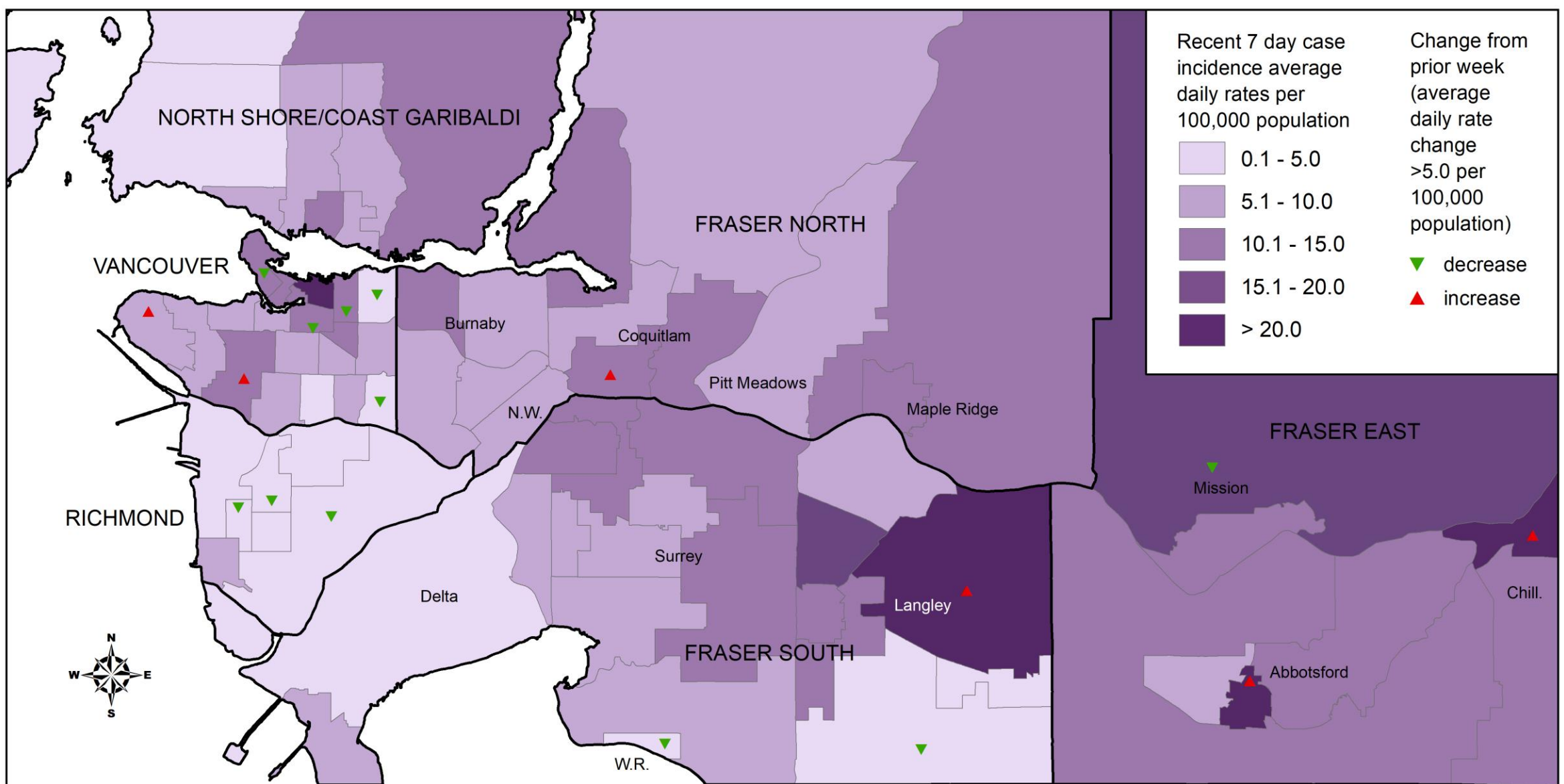
Change from prior week
(average daily rate change
>5.0 per 100,000 pop.)

▼ decrease
▲ increase

Average daily rate per
100,000 population

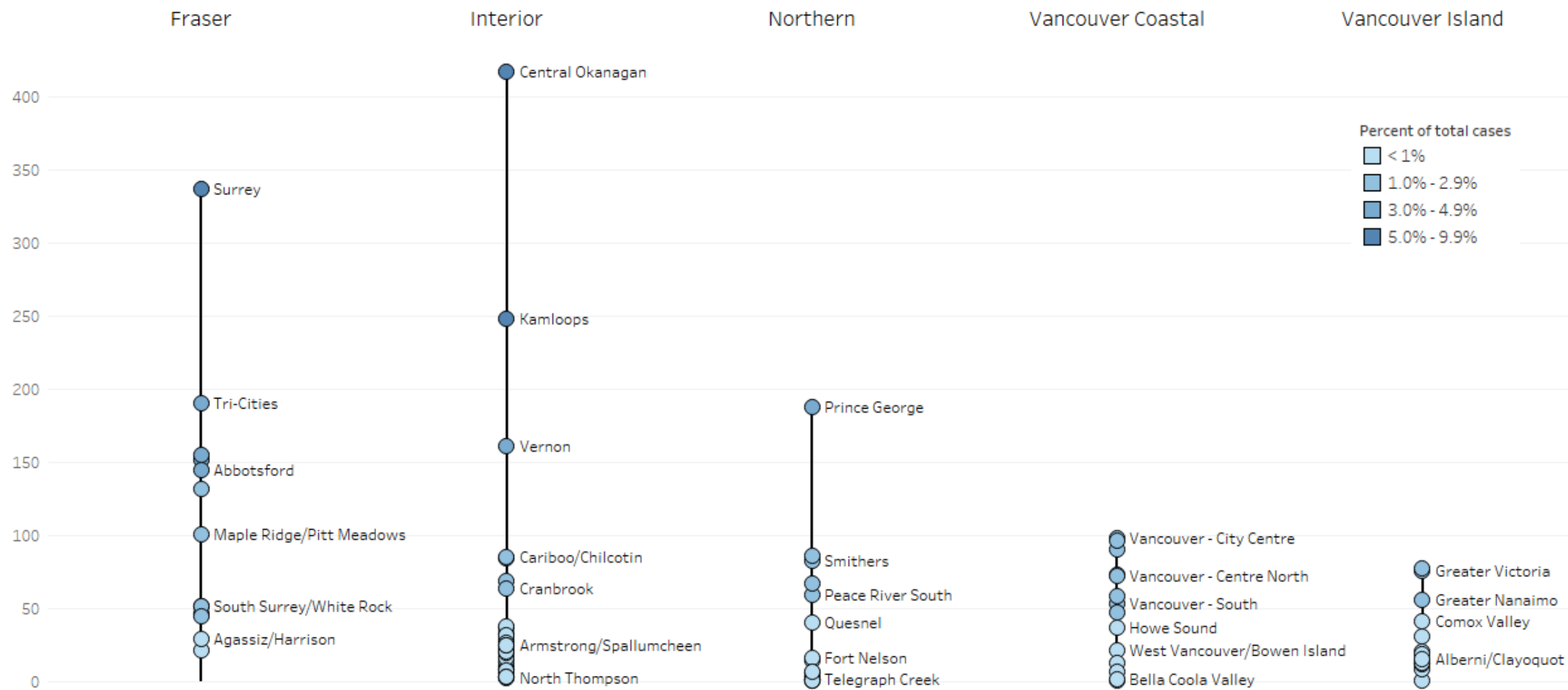


Data source: Public Health Reporting Data Warehouse (PHRDW) integrated COVID dataset; we operate in a live database environment and case information is updated as it becomes available. Cases are mapped by location of residence; cases with unknown residence and from out of province are not mapped. Data 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.

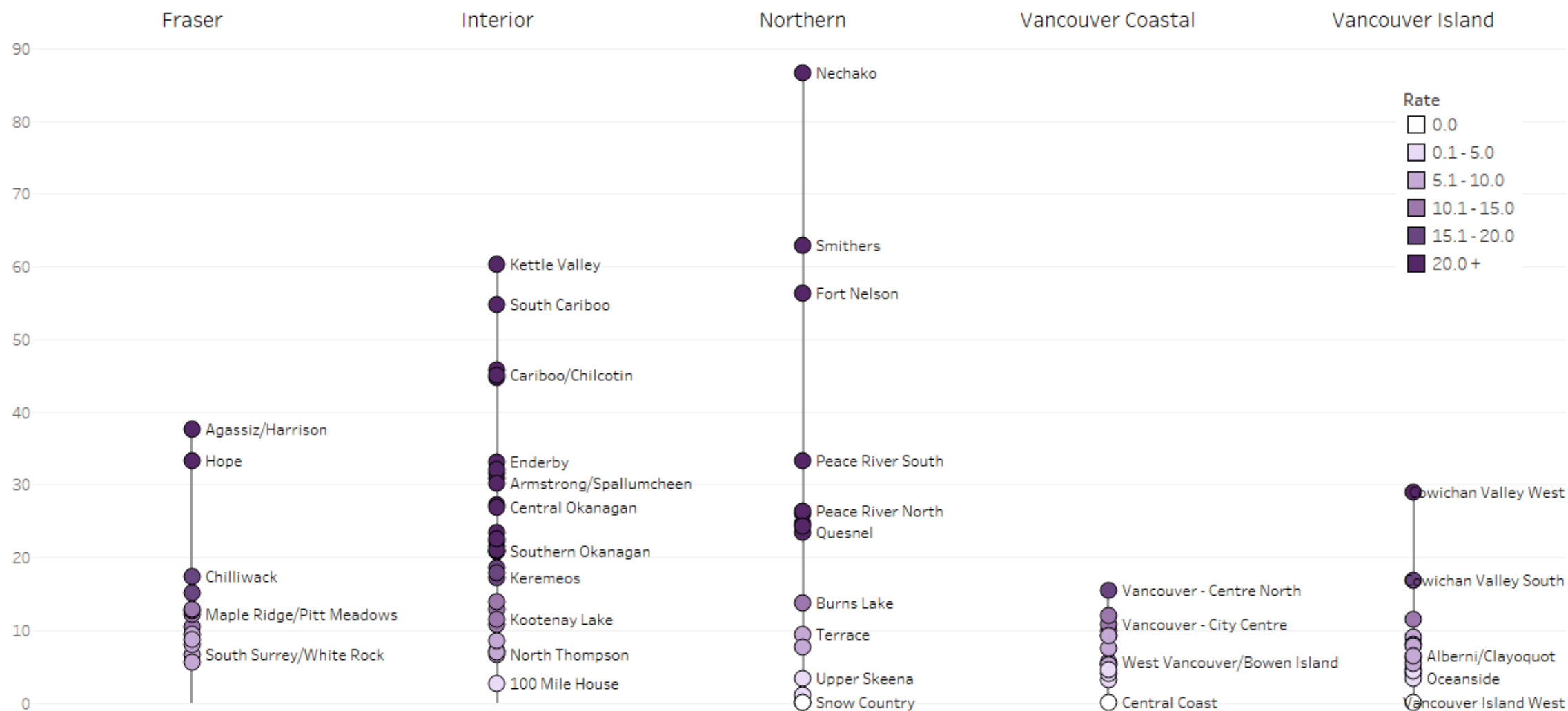


COVID-19 Recent 7-Day Case Incidence Rates by CHSA (September 1 to 7, 2021)

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



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

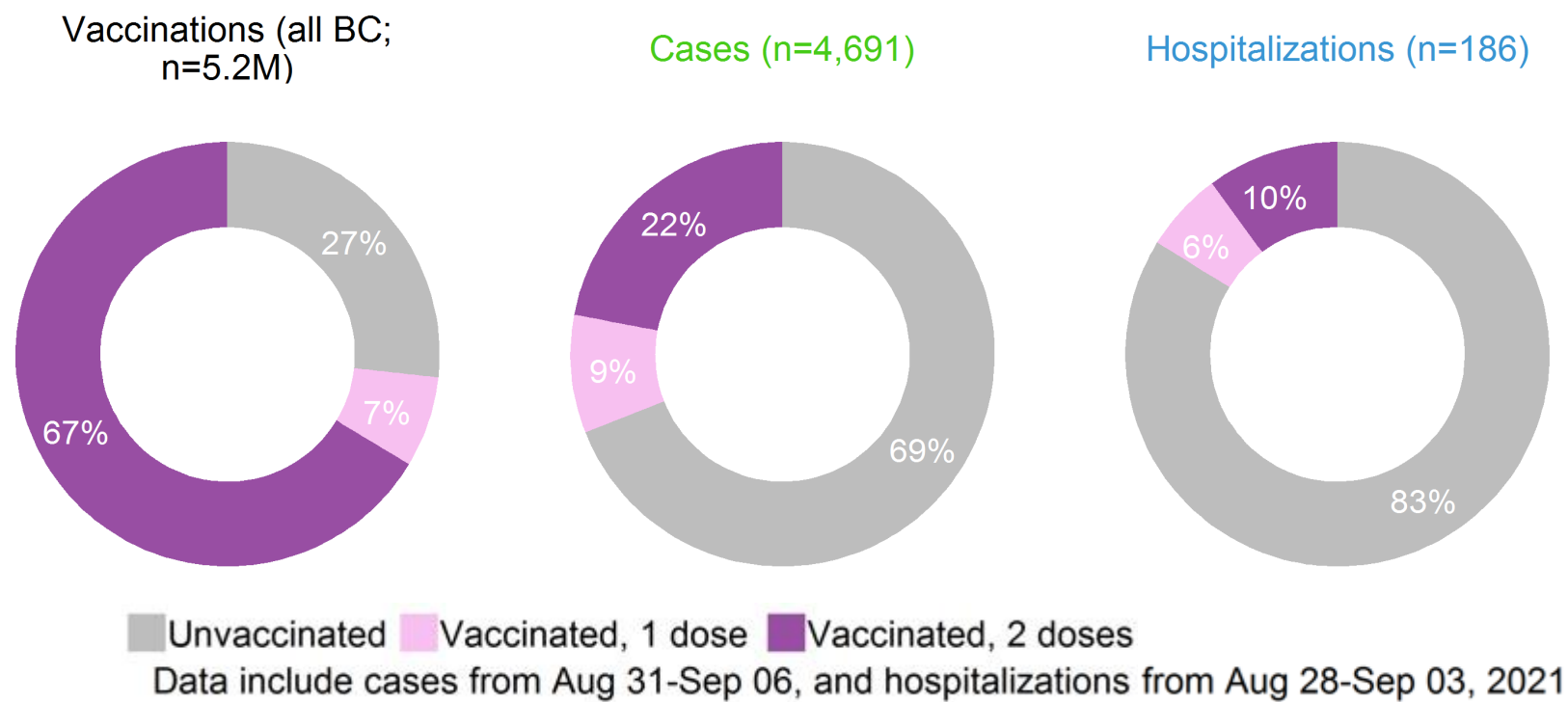


Key messages – Outcomes by vaccine status

- Most of the recent cases and hospitalizations continue to be among unvaccinated individuals
- Based on last week's data, compared with fully vaccinated individuals and after adjusting for age differences, unvaccinated individuals are
 - $\approx 10x$ more likely to become a case
 - $\approx 47x$ more likely to be hospitalized
 - $\approx 9x$ more likely to die
 - NB: relative rates fluctuate over time and do not represent vaccine effectiveness
- Hospitalization rates among children continue to remain very low
- Unvaccinated: no dose or <3 weeks since receipt of 1st dose
- Partially vaccinated = 1 dose: ≥ 3 weeks since receipt of 1st dose and <2 weeks after 2nd dose
- Fully vaccinated = 2 doses: 2 weeks or more after receipt of 2nd dose

Over the past week, fully vaccinated individuals represented 67% of BC's total population, but accounted for only 22% of cases and 10% of hospitalizations.

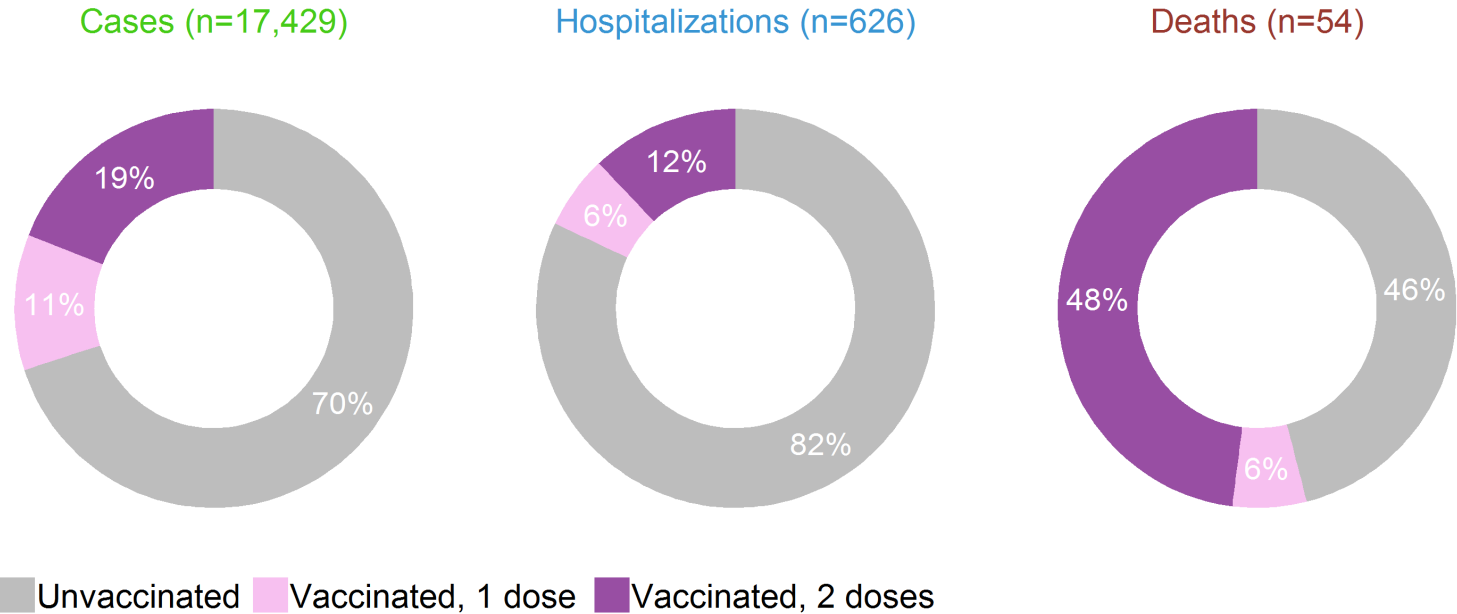
These % fluctuate over time. There are many more vaccinated individuals than unvaccinated individuals, and thus it is important to take the denominator into account. These figures do not represent vaccine effectiveness.



We operate in a live database environment and data get updated retrospectively. These figures were run on Tuesday Sep 7th and may differ slightly from previously reported counts. Cases are captured based on surveillance date. Hospitalizations are by admission date. Please note that there is often a multiple-days lag in recording hospitalizations, e.g. some hospital admissions that occurred on Aug 24th may not be captured by our surveillance system until Aug 29th.

Over the past month, fully vaccinated individuals accounted for 19% of cases and 12% of hospitalizations.

These % are expected to increase over time as more people get fully vaccinated and there are fewer unvaccinated people. If 100% of population gets fully vaccinated (which is almost the case for many long term care residents for example), then any new cases, hospitalizations, or deaths will be among vaccinated people.



Deaths continue to occur primarily among older individuals (see next slide), >90% of whom are vaccinated, which explains the higher relative % of deaths among the fully vaccinated.

Data include cases from Aug 10-Sep 06, and hospitalizations and deaths from Aug 07-Sep 03, 2021

We operate in a live database environment and data get updated retrospectively. These figures were run on Sept 7th and thus will differ slightly from previously reported counts. Cases are captured based on surveillance date. Hospitalizations are by admission date. Deaths are by date of death. Please note that there is often a multiple-days lag in recording hospitalizations and deaths, e.g. some hospital admissions that occurred on Aug 24th may not be captured in our surveillance system until Aug 29th.

COVID-19 health outcomes by vaccination status and age, BC, Aug 7 – Sep 6, 2021

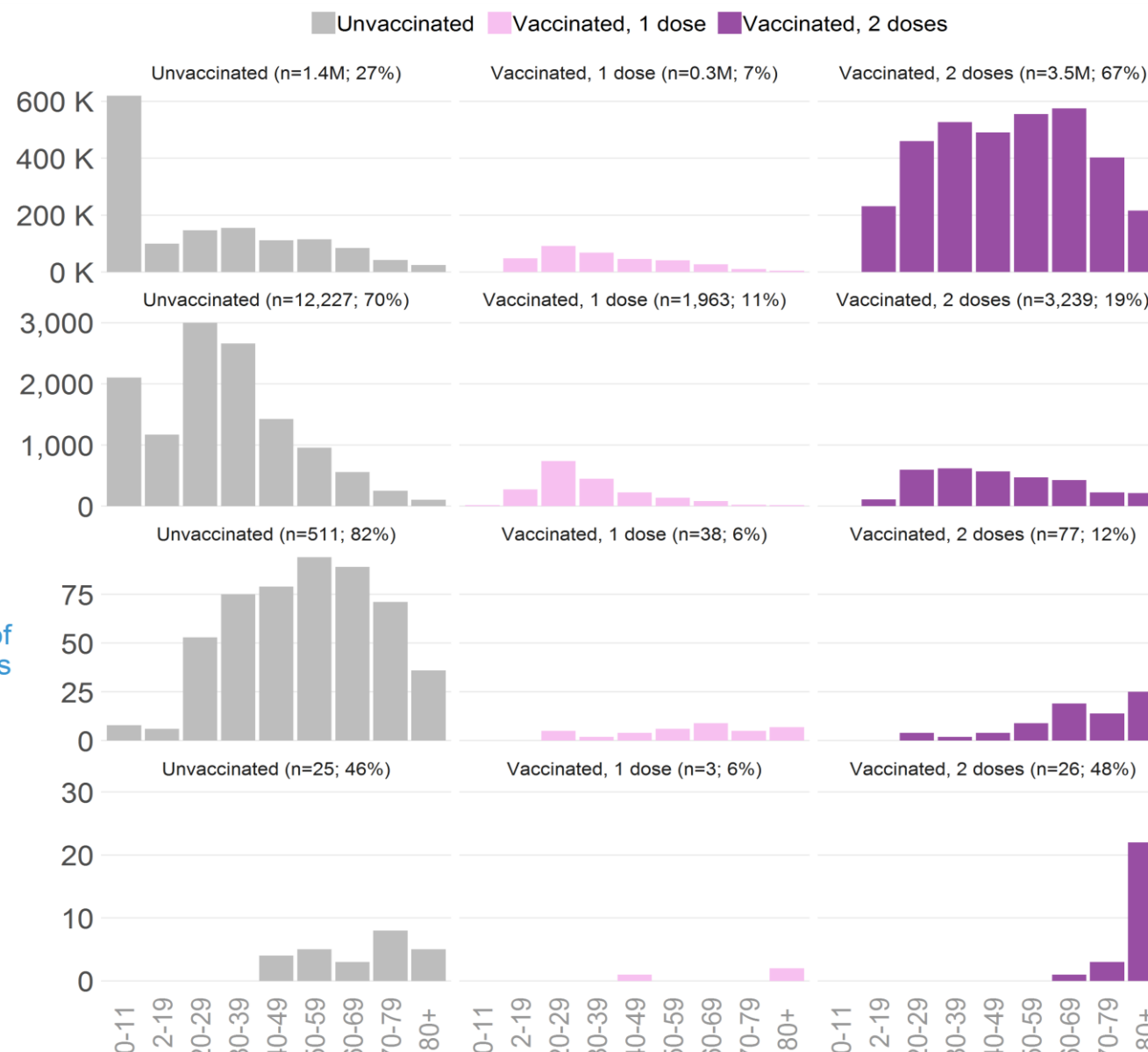
Trend in % total population vaccinated with at least 1 dose



Vaccinations (all BC; n=5.2M)



Number of people



Trend in daily cases per 1M

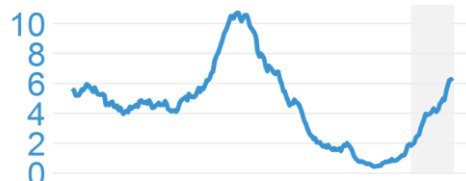


Cases (n=17,429)



Number of cases

Trend in daily hospitalizations per 1M



Hospitalizations (n=626)



Number of hospitalizations

Trend in daily deaths per 1M



Deaths (n=54)



Number of deaths

*Figures include cases from Aug 10-Sep 06, and hospitalizations and deaths from Aug 07-Sep 03, 2021

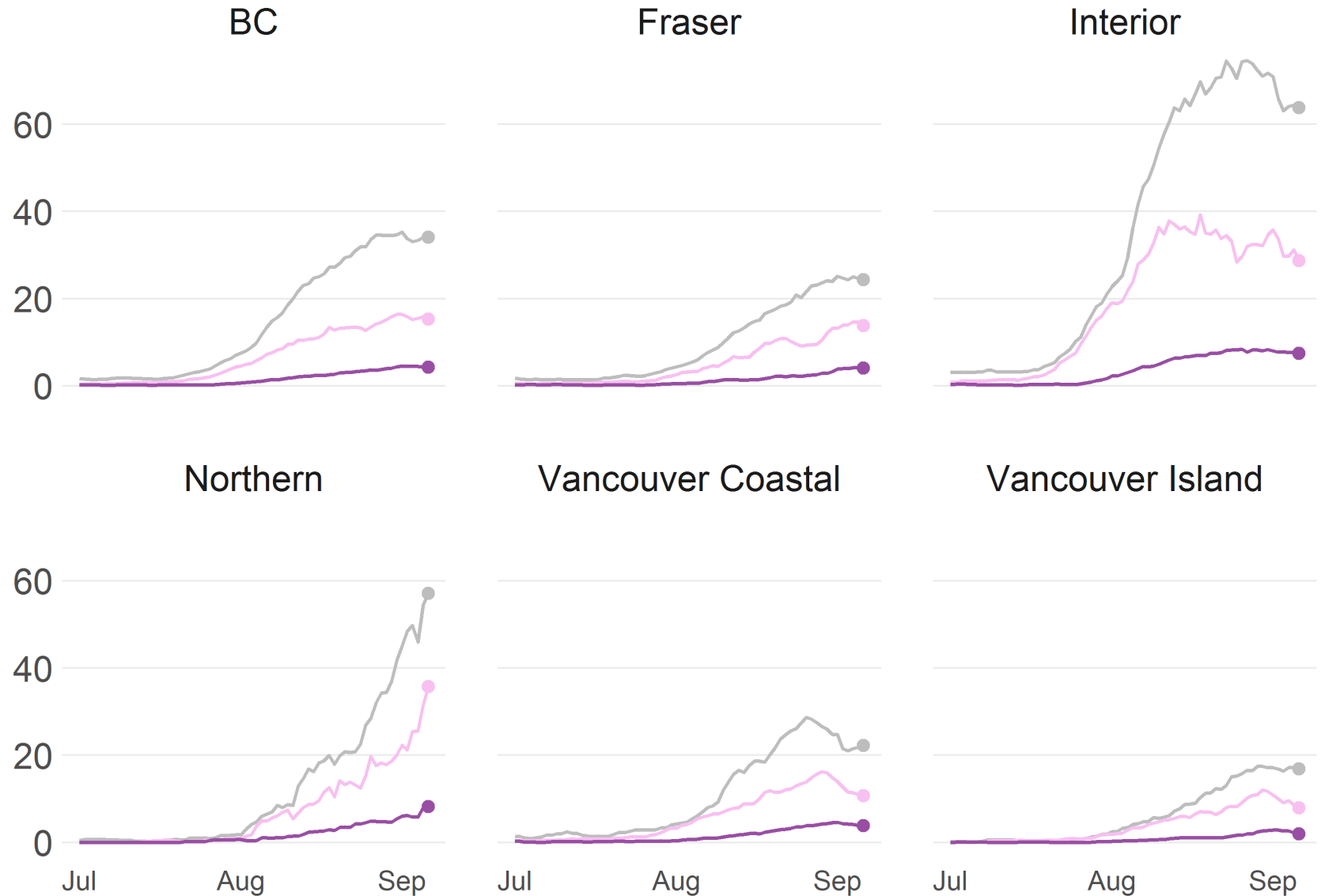
COVID-19 **case** rate by vaccination status and Health Authority, July 1 – Sept 7, 2021

In the past week, case rate among the unvaccinated individuals was ~8x higher than case rate among fully vaccinated individuals – but note that this is crude and not adjusted for age (see slide 24).

Denominators for each vaccine status group are dynamic and change daily as people flow from being unvaccinated to protected by 1 dose to protected by 2 doses. Therefore, the denominators are different across groups and over time.

Rate of new daily cases per 100,000 population (7-day moving average of crude rate)

● Unvaccinated ● Vaccinated, 1 dose ● Vaccinated, 2 doses

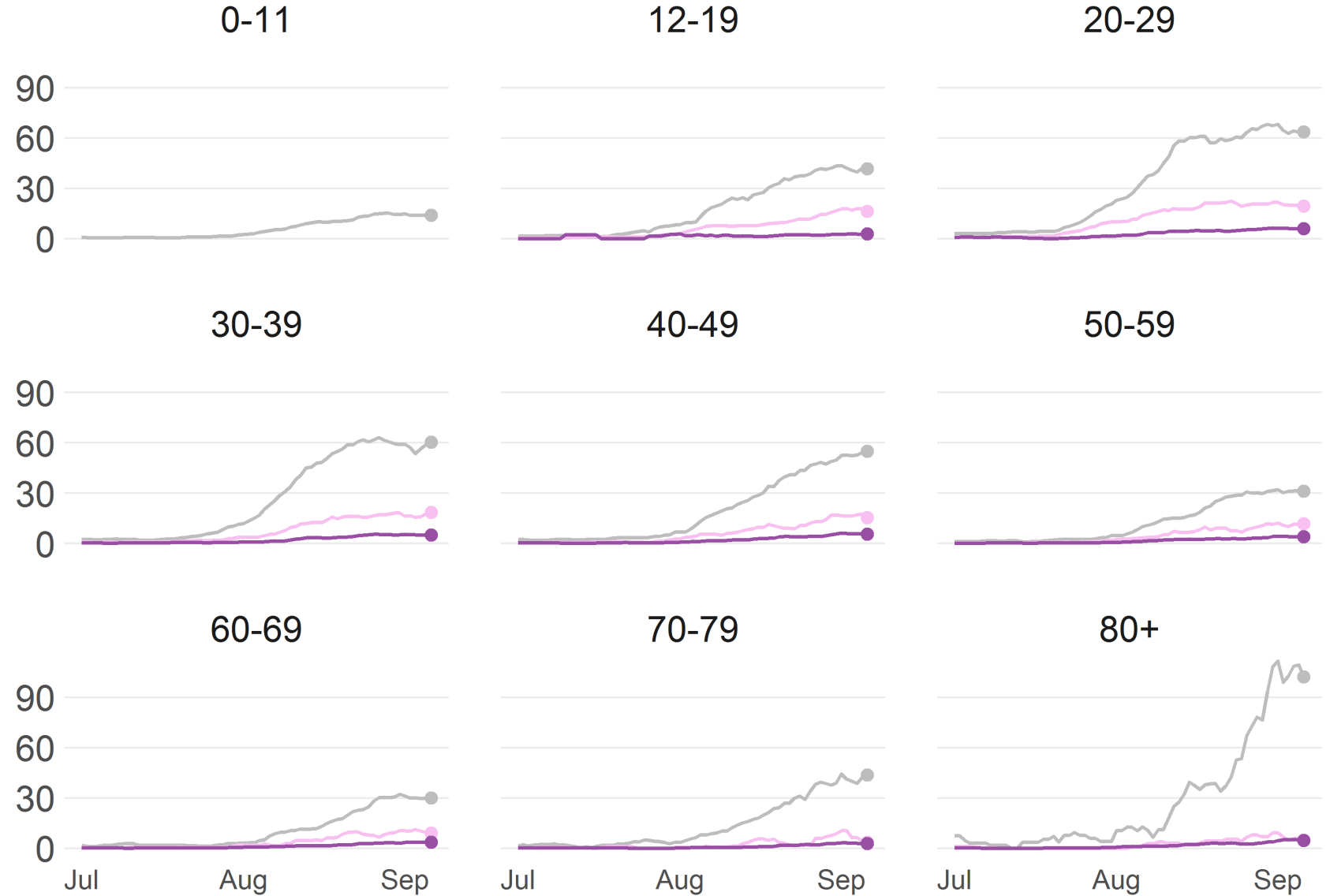


Data extracted from health authority case line list on 07 Sep 2021

COVID-19 case rate by vaccination status and age, July 1 – Sept 7, 2021

Rate of new daily cases per 100,000 population
(7-day moving average of crude rate)

● Unvaccinated ● Vaccinated, 1 dose ● Vaccinated, 2 doses



Denominators for each vaccine status group are dynamic and change daily as people flow from being unvaccinated to protected by 1 dose to protected by 2 doses. Therefore, the denominators are different across groups and over time.

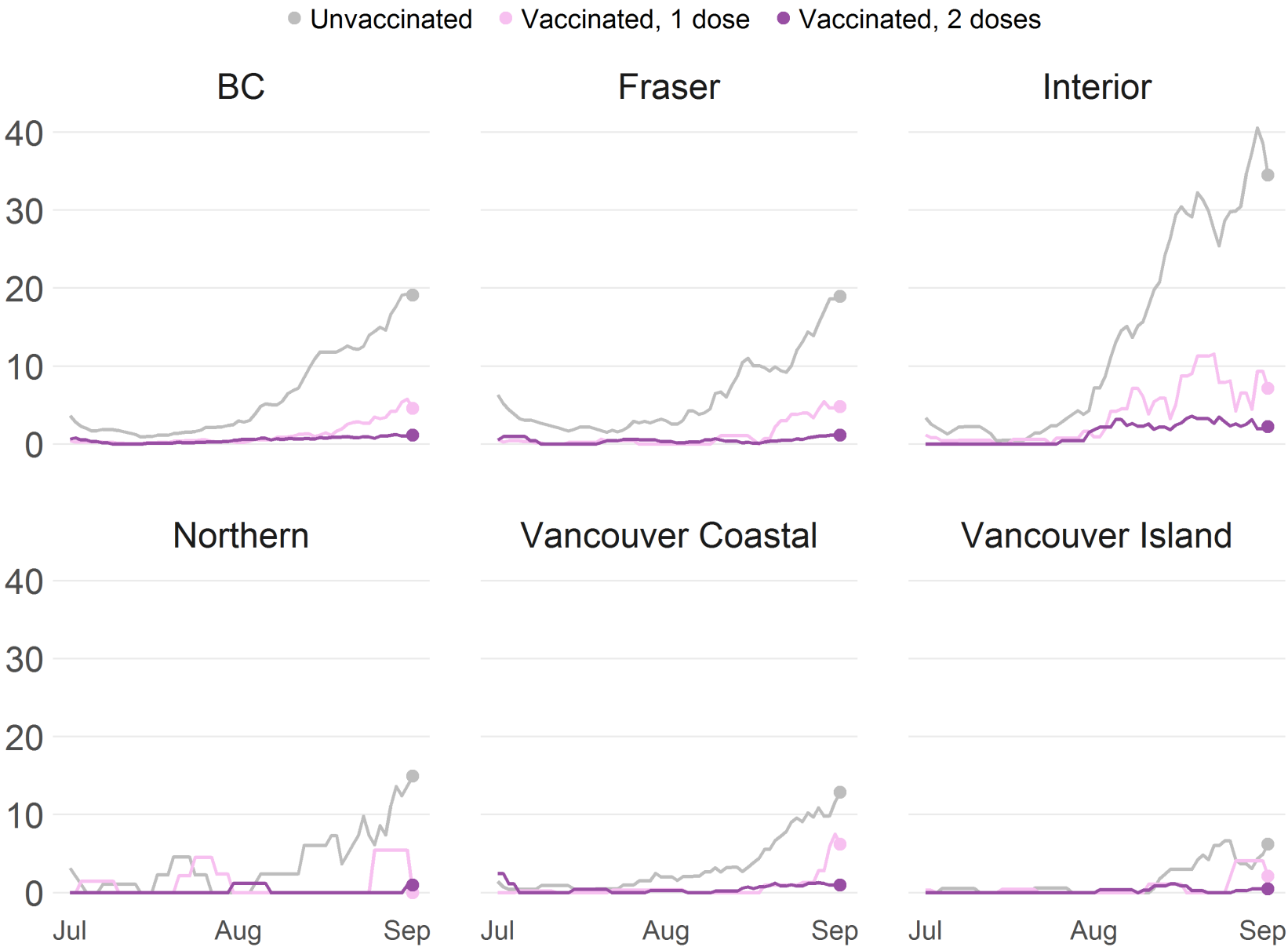
Data extracted from health authority case line list on 07 Sep 2021

COVID-19 **hospitalization**
rate by vaccination
status, July 1 – Sept 2,
2021

In the past week,
hospitalization rate among
the unvaccinated individuals
was ~17x higher compared
with fully vaccinated
individuals – but note that
this is crude and not
adjusted for age (see slide
24).

*Data by hospital admission date.
Denominators for each vaccine status
group are dynamic and change daily
as people flow from being
unvaccinated to protected by 1 dose
to protected by 2 doses. Therefore,
the denominators are different across
groups and over time.*

Rate of new daily hospitalizations per 1M population
(7-day moving average of crude rate)



Data extracted from health authority case line and up to 02 Sep 2021

COVID-19

hospitalization rate by vaccination status and age, July 1 – Sept 2, 2021

Given relatively low numbers, please interpret these results with caution. Trends tend to be unstable with lower counts.

Denominators for each vaccine status group are dynamic and change daily as people flow from being unvaccinated to protected by 1 dose to protected by 2 doses. Therefore, the denominators are different across groups and over time.

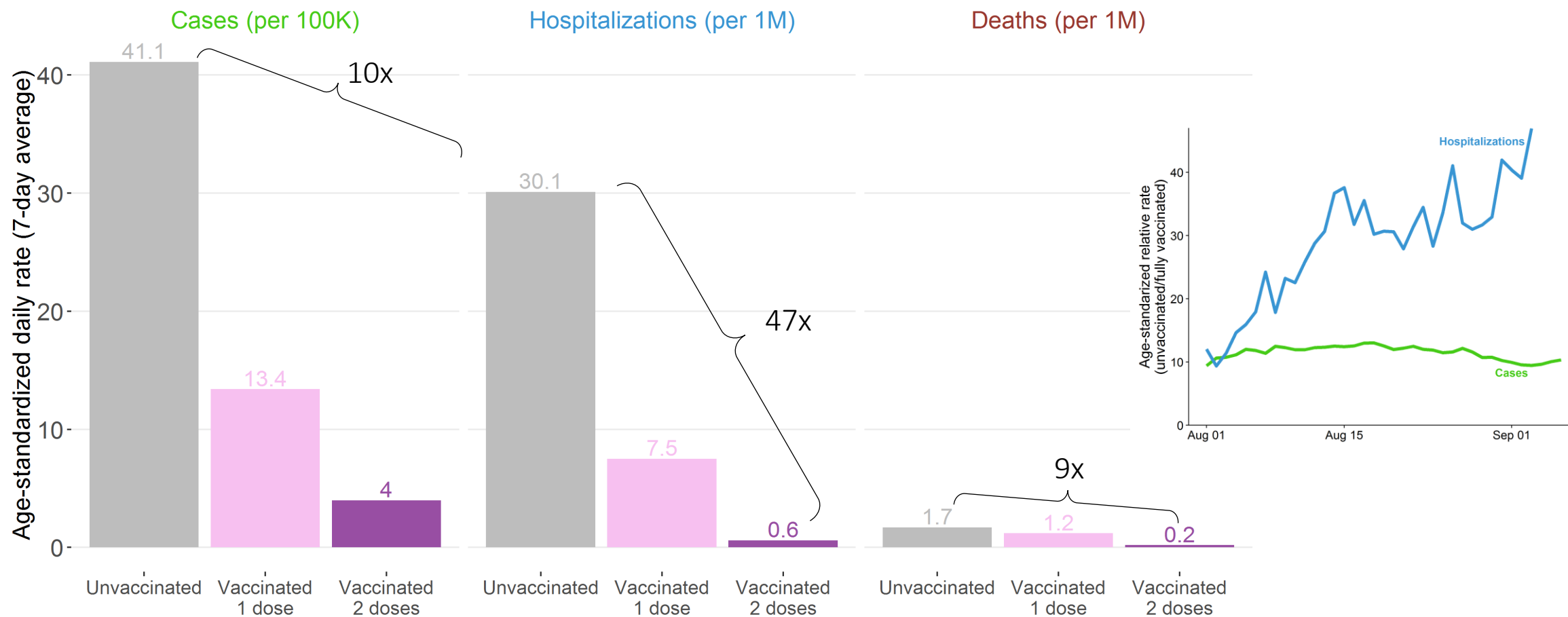
Rate of new daily hospitalizations per 1M population (7-day moving average of crude rate)



Data extracted from health authority case line and up to 02 Sep 2021

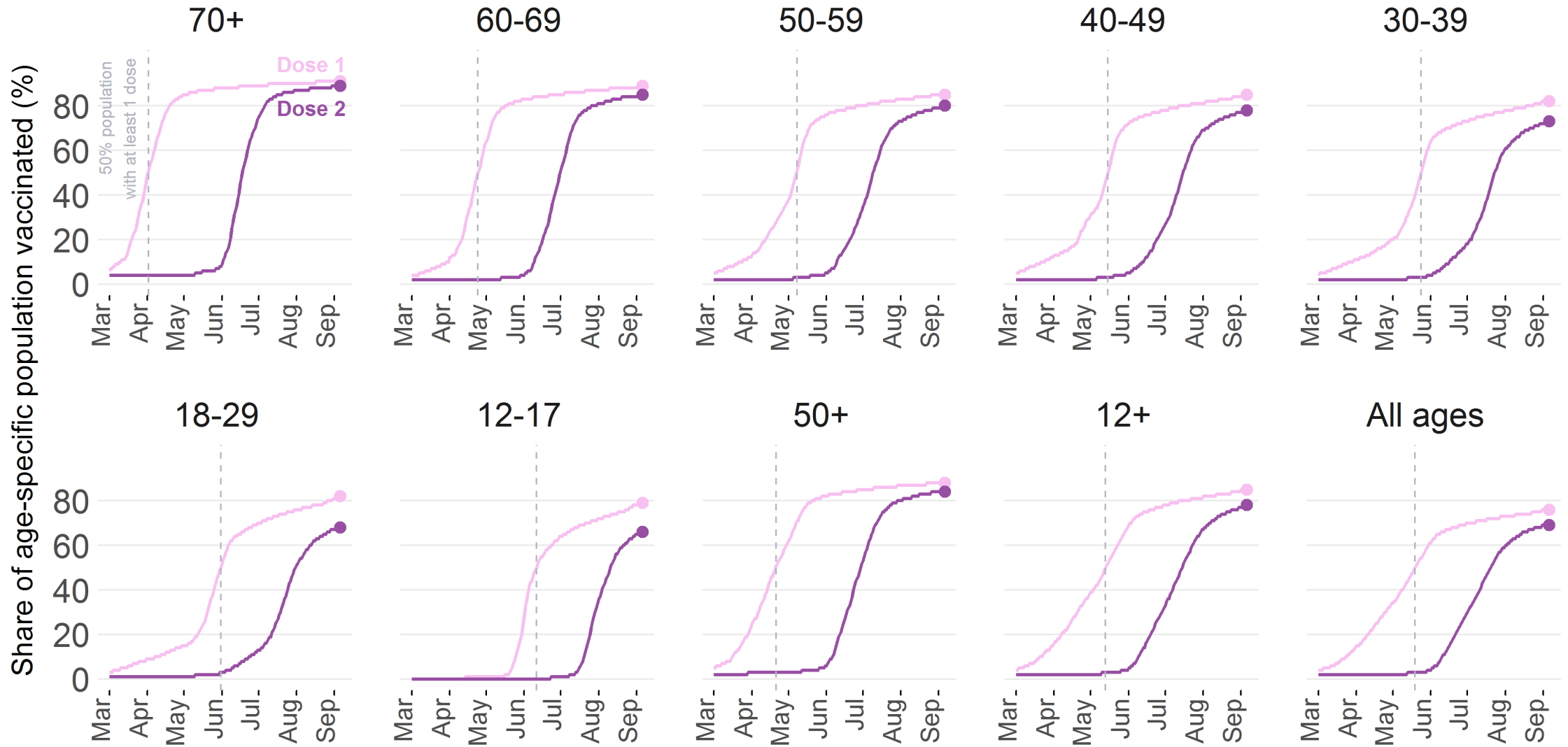
After adjusting for age, unvaccinated individuals continue to be at a significantly higher risk of infection, hospitalization, and death from COVID-19 compared with fully vaccinated

Relative rate fluctuates over time (see graph to the right). These figures do not represent vaccine effectiveness.



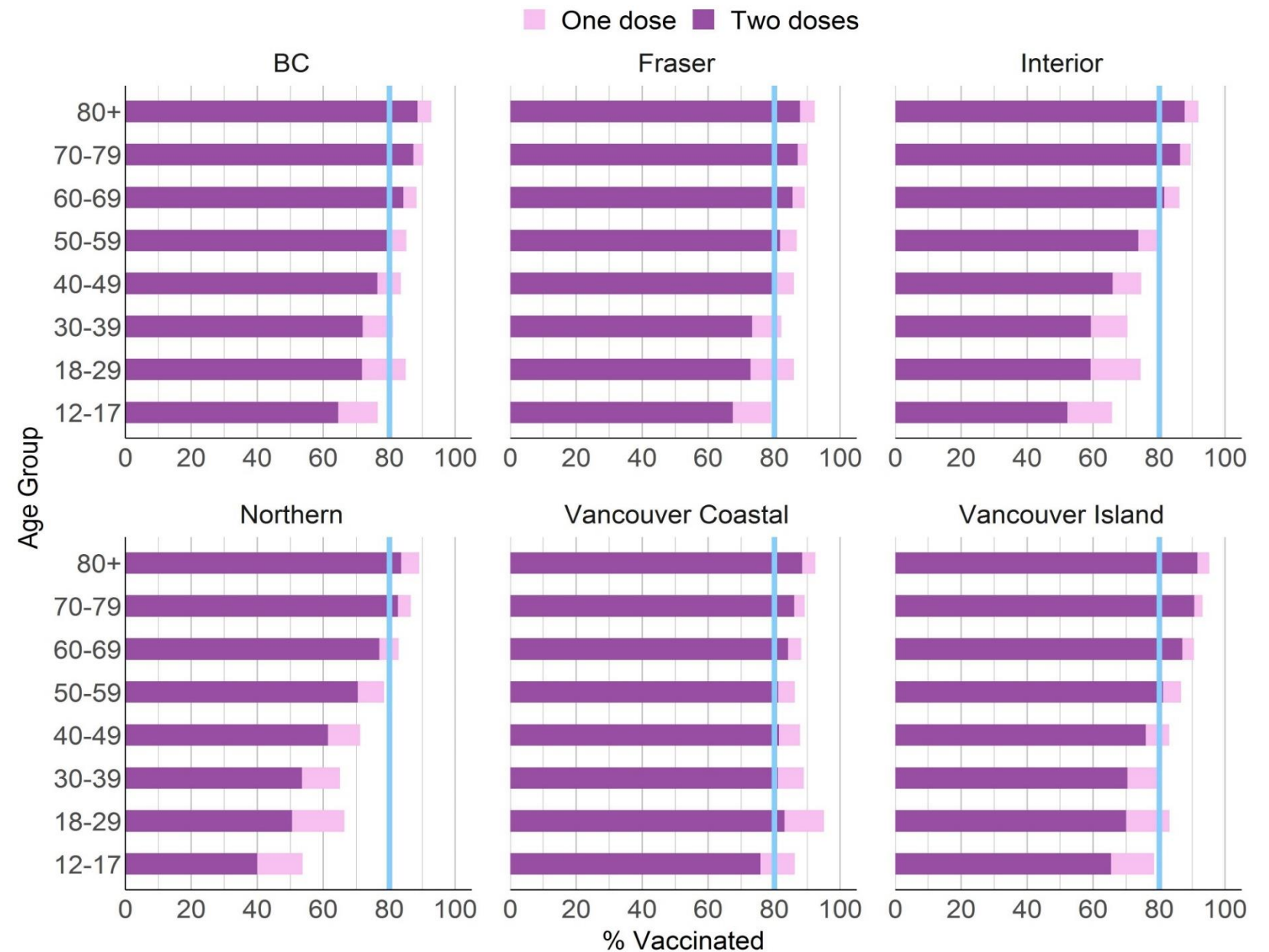
Data include cases from Aug 31-Sep 06, and hospitalizations and deaths from Aug 28-Sep 03, 2021

Vaccination progress in BC over time by age group and dose number up to Sept 7



Data updated 2021-09-07
Data Source: Provincial Immunization Registry, PHSA

Vaccination progress in BC and by Health Authority as of Sept 7, by age group and dose number (%)

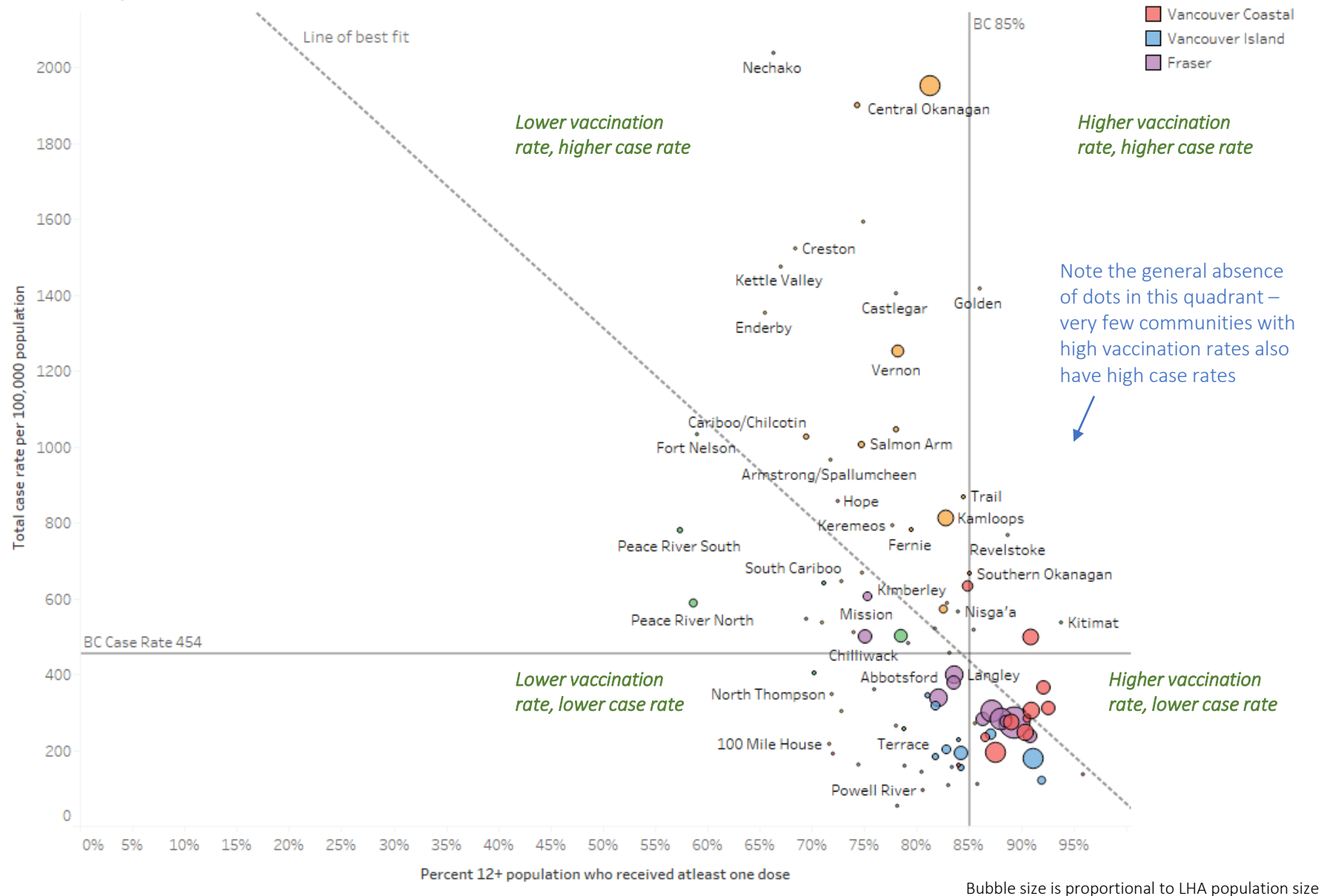


Blue lines at 80% are for visual reference only for easier navigation across panels

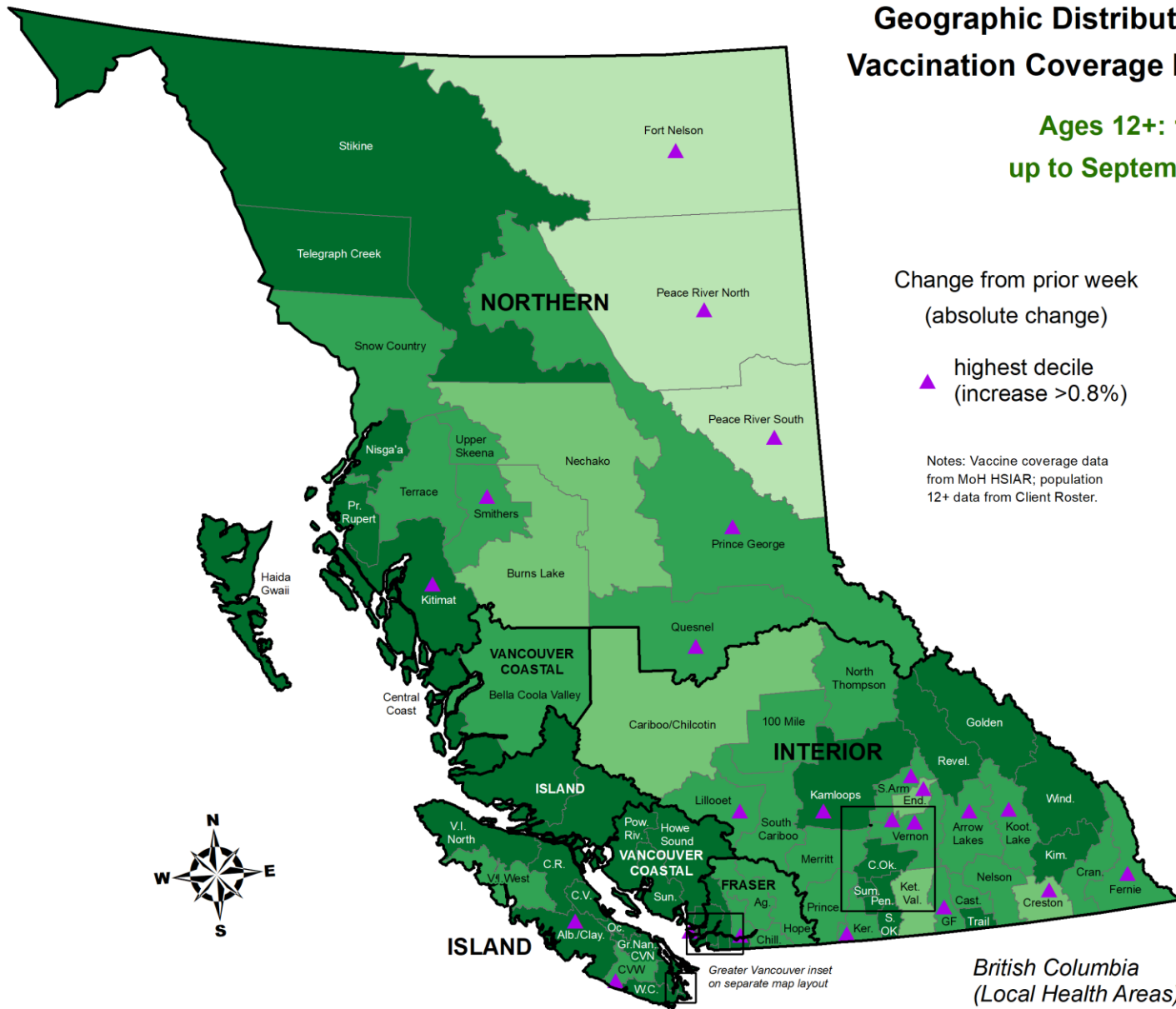
Data updated 2021-09-07
Data Source: Ministry of Health

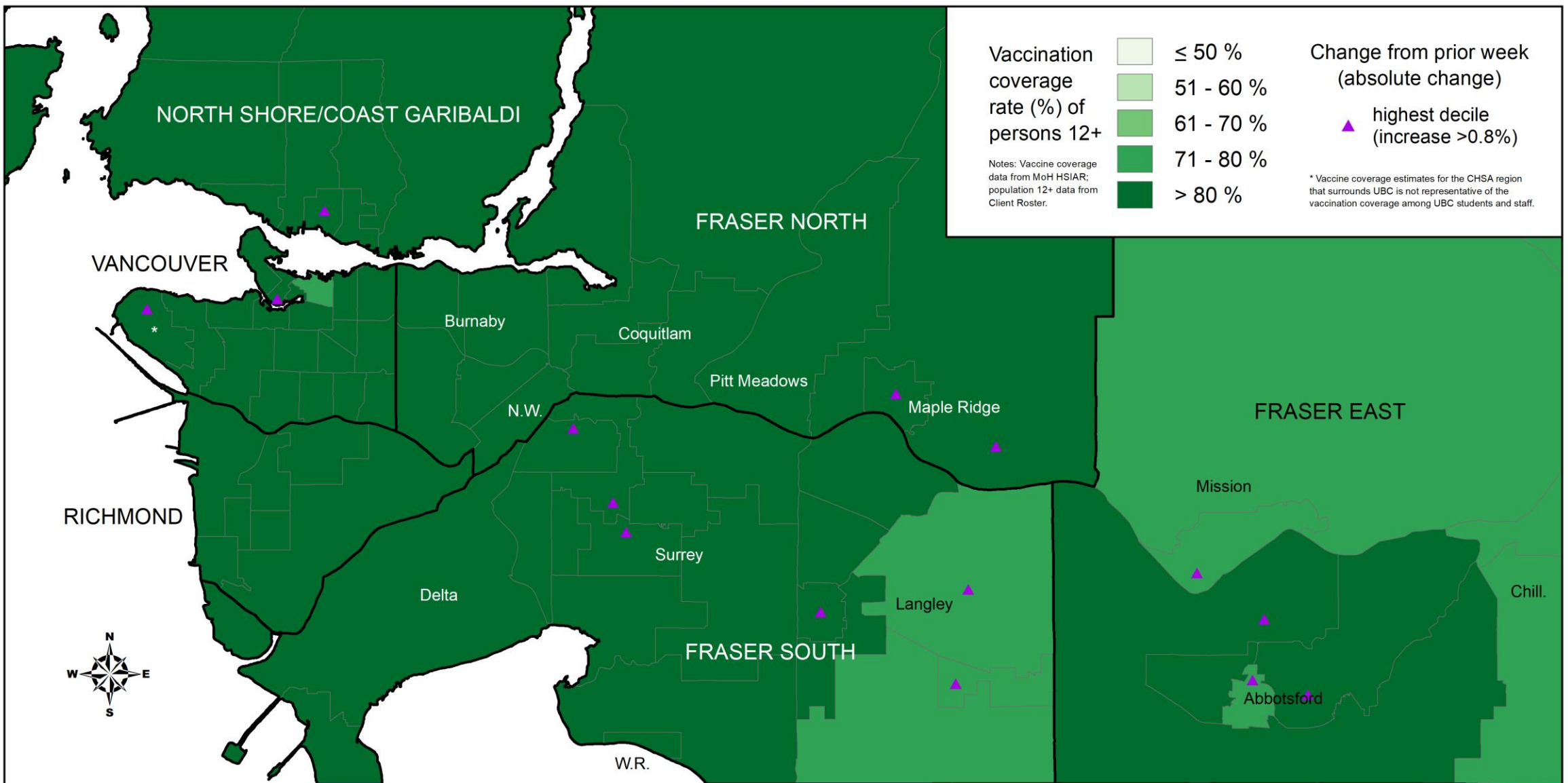
BC communities with higher vaccination rates generally had lower total number of cases per capita between July 1 and Sept 7

Total case rate per 100,000 population, by LHA vs Percentage 12+ population who received first dose, Jul. 01 - Sep. 07



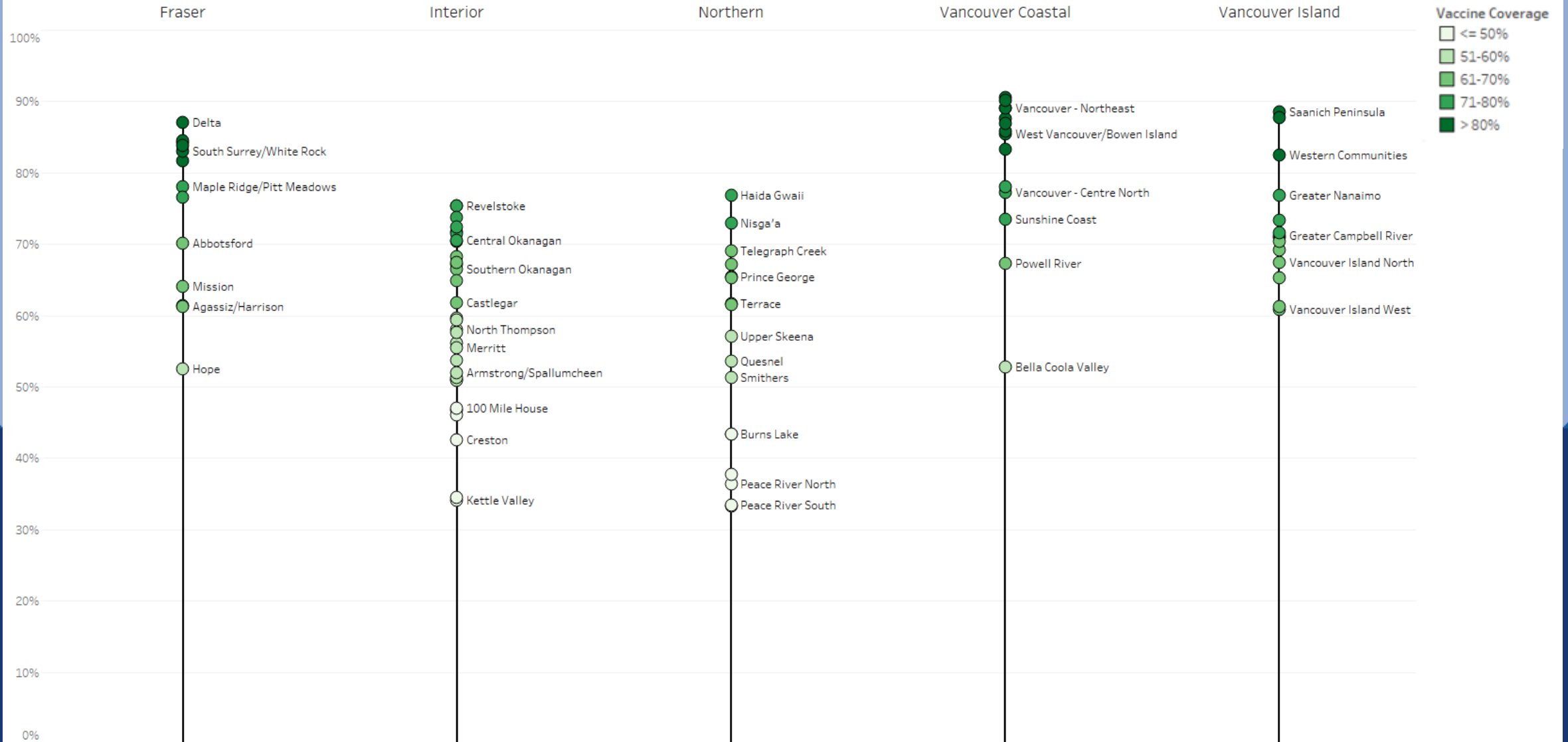
A map of British Columbia, Canada, showing the locations of 15 study sites. The sites are marked with purple triangles and labeled as follows: Lower Thompson, Salmon Arm, Enderby, Arm/Spal., North Okanagan/Lumby, Vernon, Merritt, Lake Country, Central Okanagan Rural, Glen, Rut., W.Kel., Ok.M., Princeton, Summerland, Kettle Valley, Keremeos, Penticton, S.Ok., and G.F. The map also shows major regional boundaries and names like 'INTERIOR'.



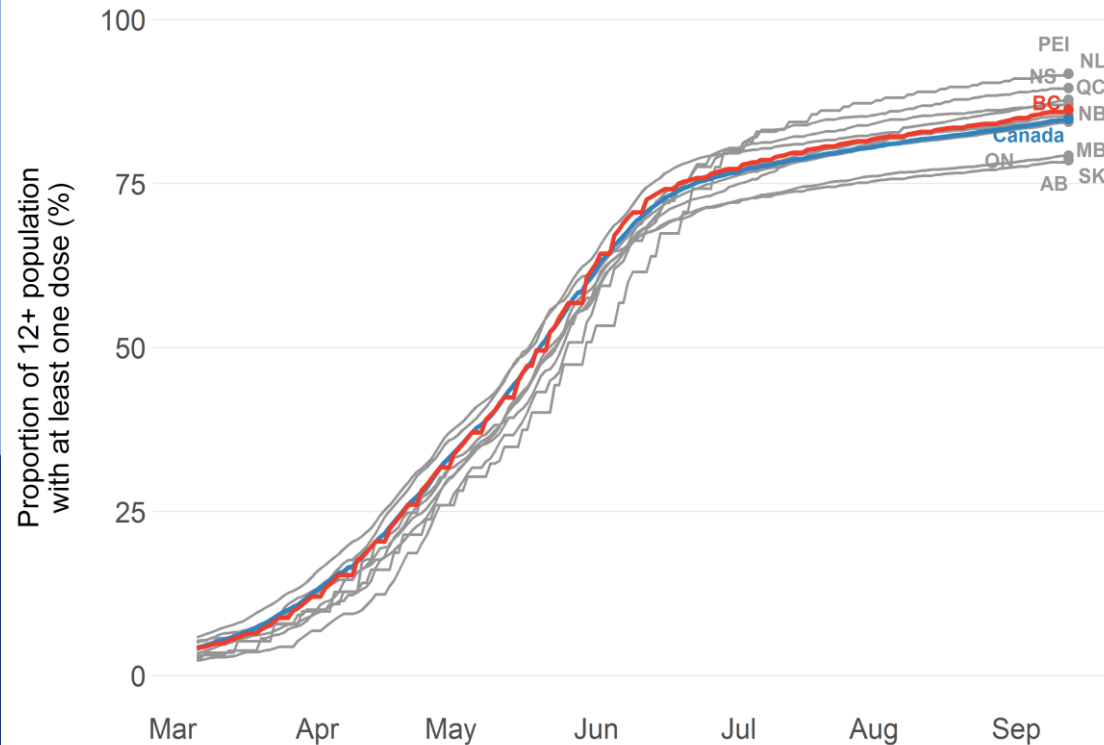


COVID-19 Vaccination Coverage by CHSA: Ages 12+ 1st Dose (up to September 6, 2021)

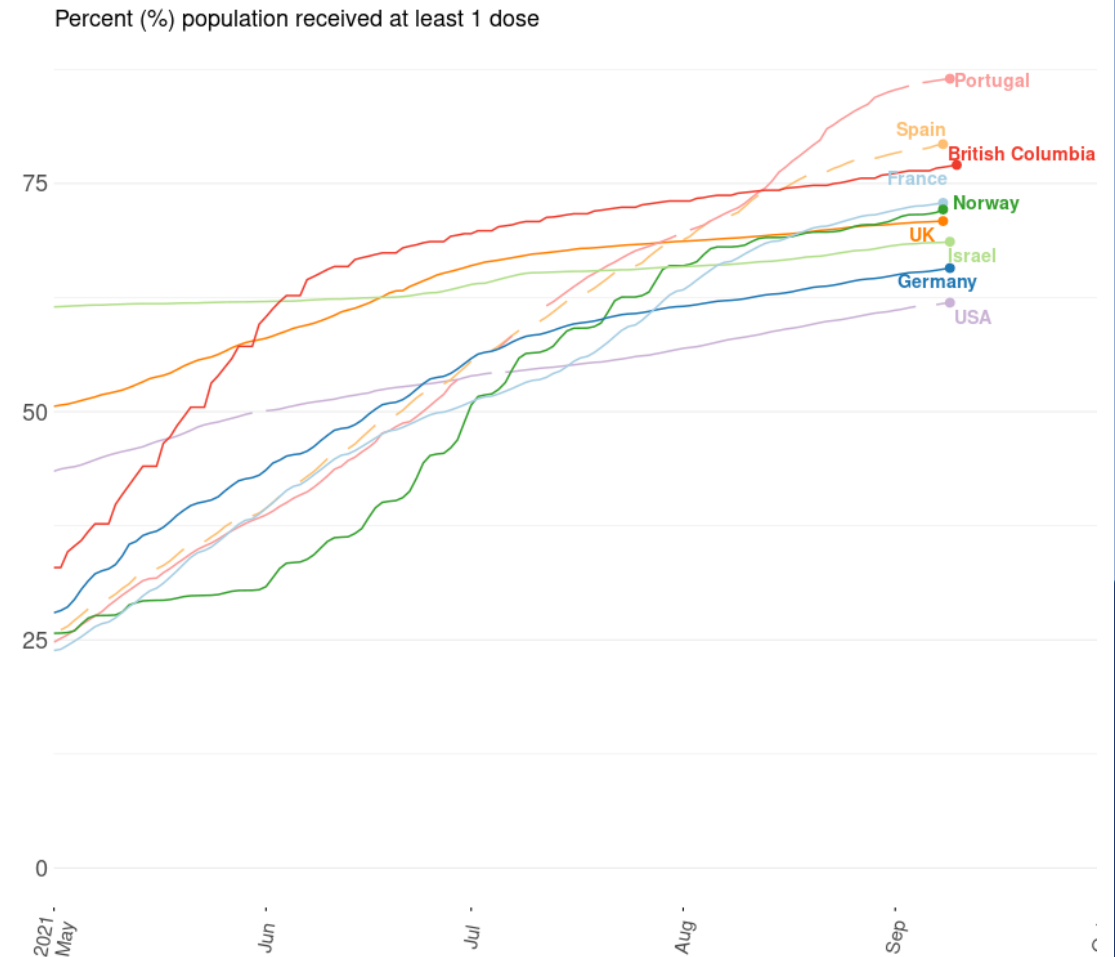
COVID-19 vaccination coverage with 1st dose among 12-17 year olds, by Local Health Area, up to Sept 6, 2021: there is more variation in this age group compared with older age groups



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



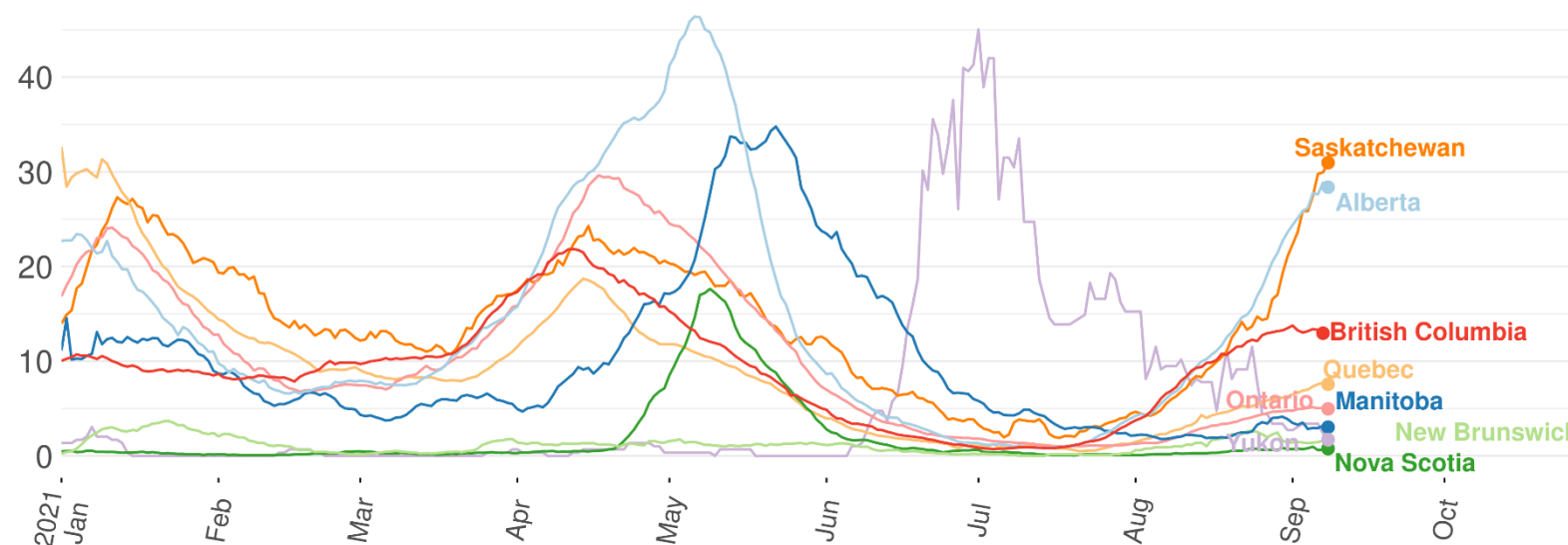
Data from COVID-19 Canada Open Data Working Group and extracted 2021-09-08
Population denominator from Statistics Canada table 17-10-0005-01; 12-14 year old age group estimated



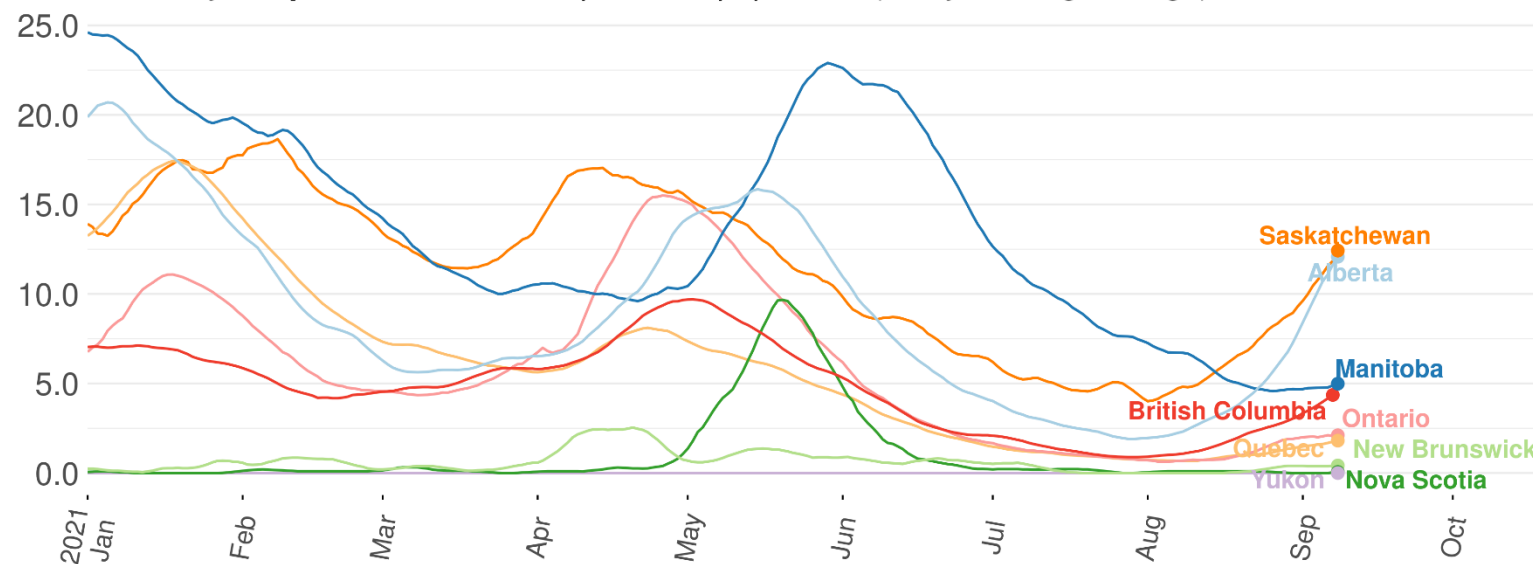
BC's case rate has flattened and has diverged from the continuing increasing trends in AB and SK, but it is higher than in other provinces.

BC's hospital census is increasing more slowly than AB and SK.

New daily **cases** per 100K population (7-day moving average)



New daily **hospitalization census** per 100K population (7-day moving average)

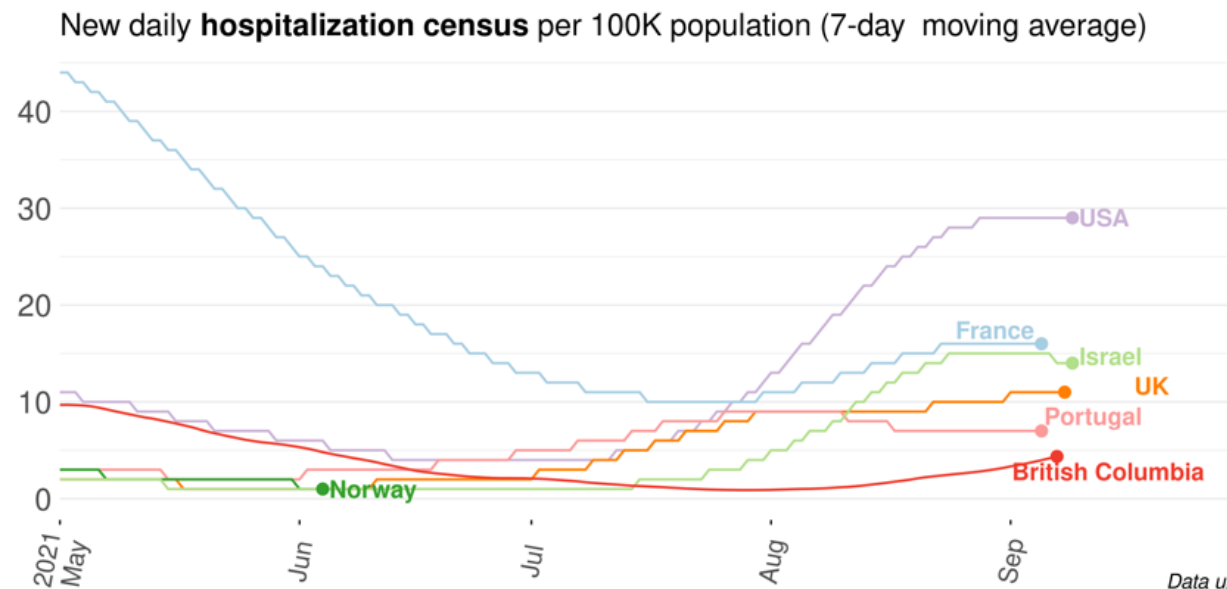
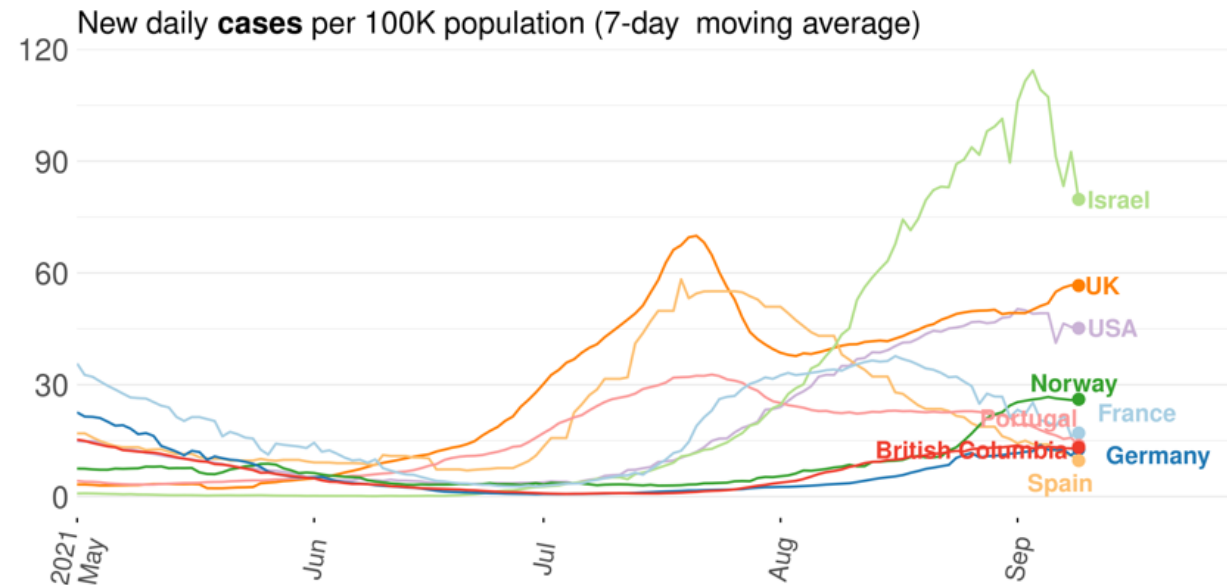


For most up to date figures, and to make your own comparisons, please go to the [Epi App](#)

Data up to 2021-09-08

Case rate is stable in the US, increasing in the UK, and declining in Israel. Case rates for European countries shown here are stable or declining.

Over the past two months, BC's case rate has been similar to Germany's and lower than US, UK and Israel.



For most up to date figures, and to make your own comparisons, please go to the [Epi App](#)

Data up to 2021-09-09

Lab - Key Messages

- **Percent positivity** among publicly funded tests is stable at $\approx 9\%$
 - Test positivity varies by HA, ranging from 6.5% in VIHA to 24.8% in NH.
 - Test positivity in most of NH and IH is $>10\%$; compared to $<10\%$ across FH and VCH
 - Case incidence remains highest among 19-29 years, but rate is levelling; % positivity $>10\%$ among 5 to 29 years.
- Publicly funded **testing rates** were stable this week
- The provincial weekly median **turnaround time** (time from specimen collection to lab result) remains low, at 14 hours indicating good testing capacity; 1 in 4 tests took > 20 hours to result.
- **Delta** is the most prevalent COVID-19 variant in BC representing 99.5% of all sequenced specimens in most recent week.

Weekly Summary of ALL lab tests performed

3,496,496	total specimens tested
82,667	new this epi week
178,303	total positive specimens
4,956	new positive this epi week
15 hr	mean turnaround time (TAT)
14 [9-20]	Median [Q1 – Q3] TAT

↓ 6% relative to last week

6.0% positivity
↑ 0.5% absolute change from last week

↓ 2% TAT relative to last week

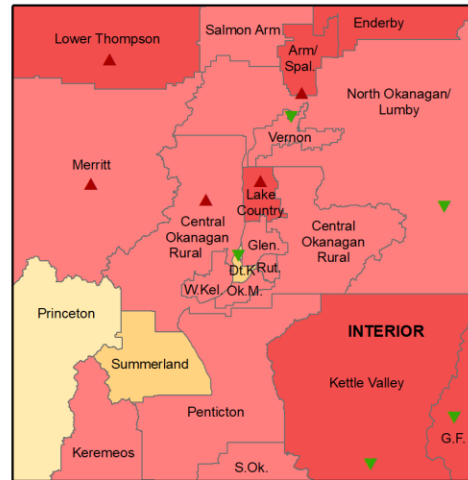
Weekly Summary of Lab tests paid Publicly

2,649,470	total specimens tested
53,617	new this epi week
176,151	total positive specimens
4,861	new positive this epi week

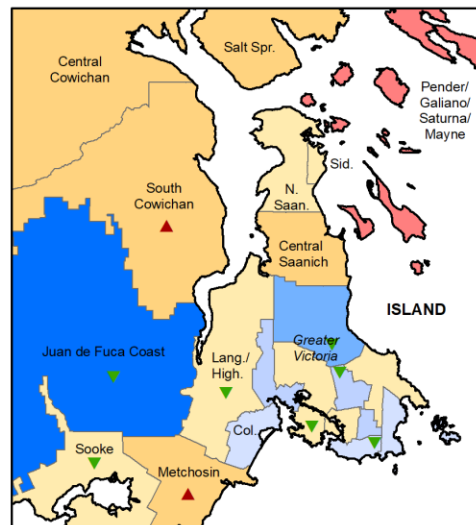
↑ 1% relative to last week

9.1% positivity
↑ 0.2% absolute change from last week

Okanagan Inset
(Community Health Service Areas)

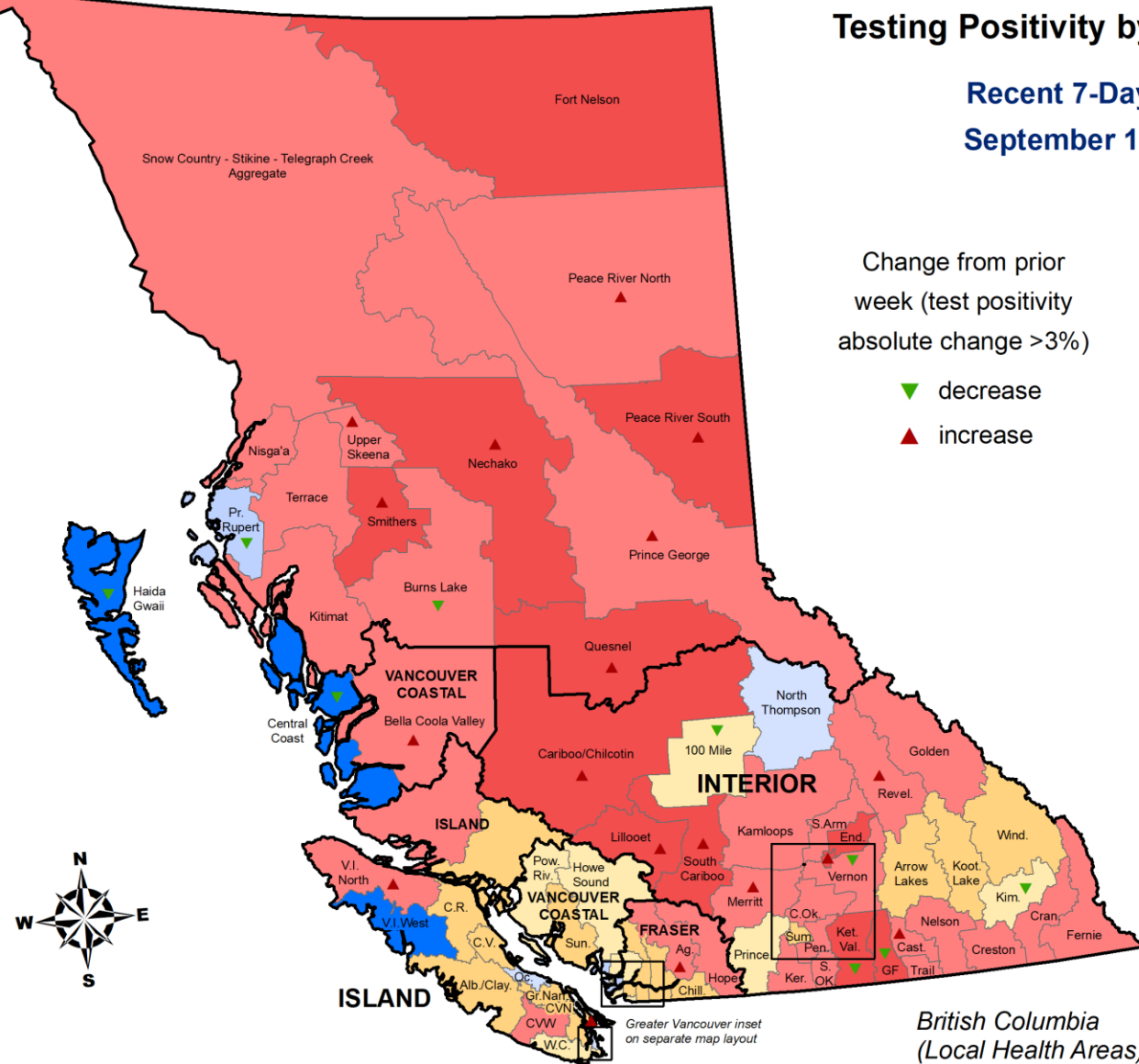


Greater Victoria Inset
(Community Health Service Areas)



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

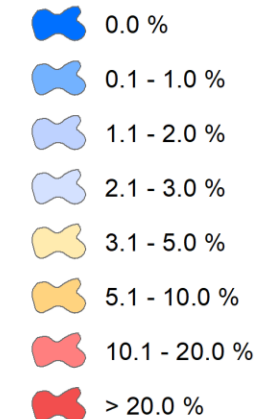
Recent 7-Days Testing
September 1 to 7, 2021



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

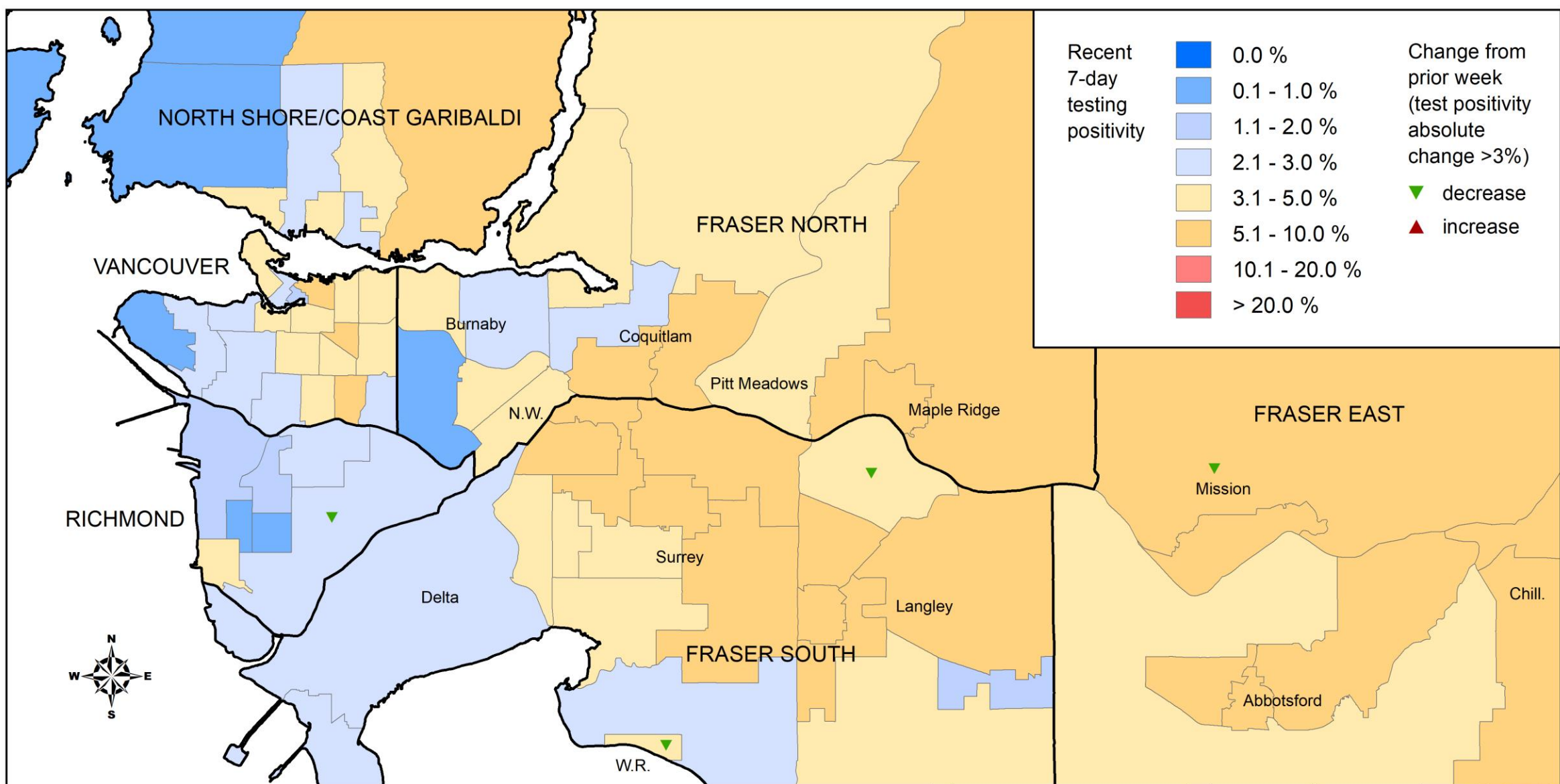
▼ decrease
▲ increase

Test positivity rate



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.

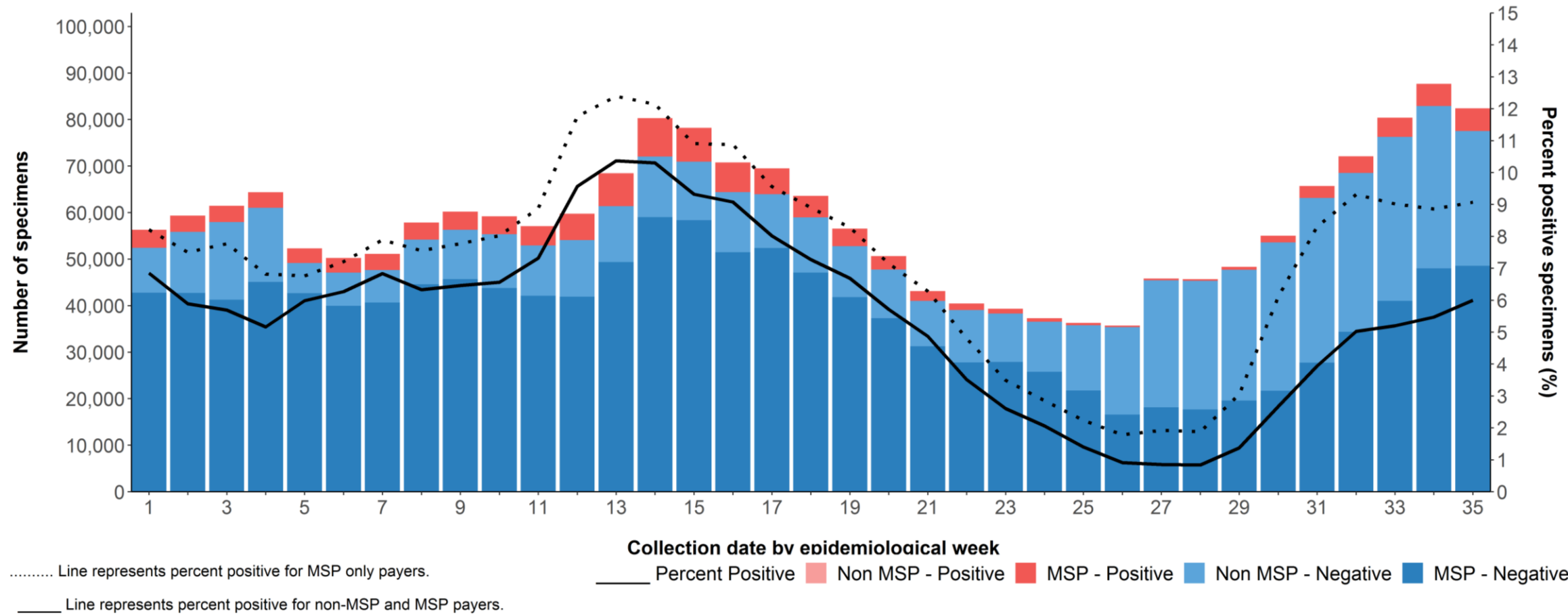
British Columbia
(Local Health Areas)



COVID-19 Recent 7-Day Test Positivity by CHSA (September 1 to 7, 2021)

Includes all tests

Among publicly funded tests: percent positivity is stable at ~9%, and number of tests is stable.

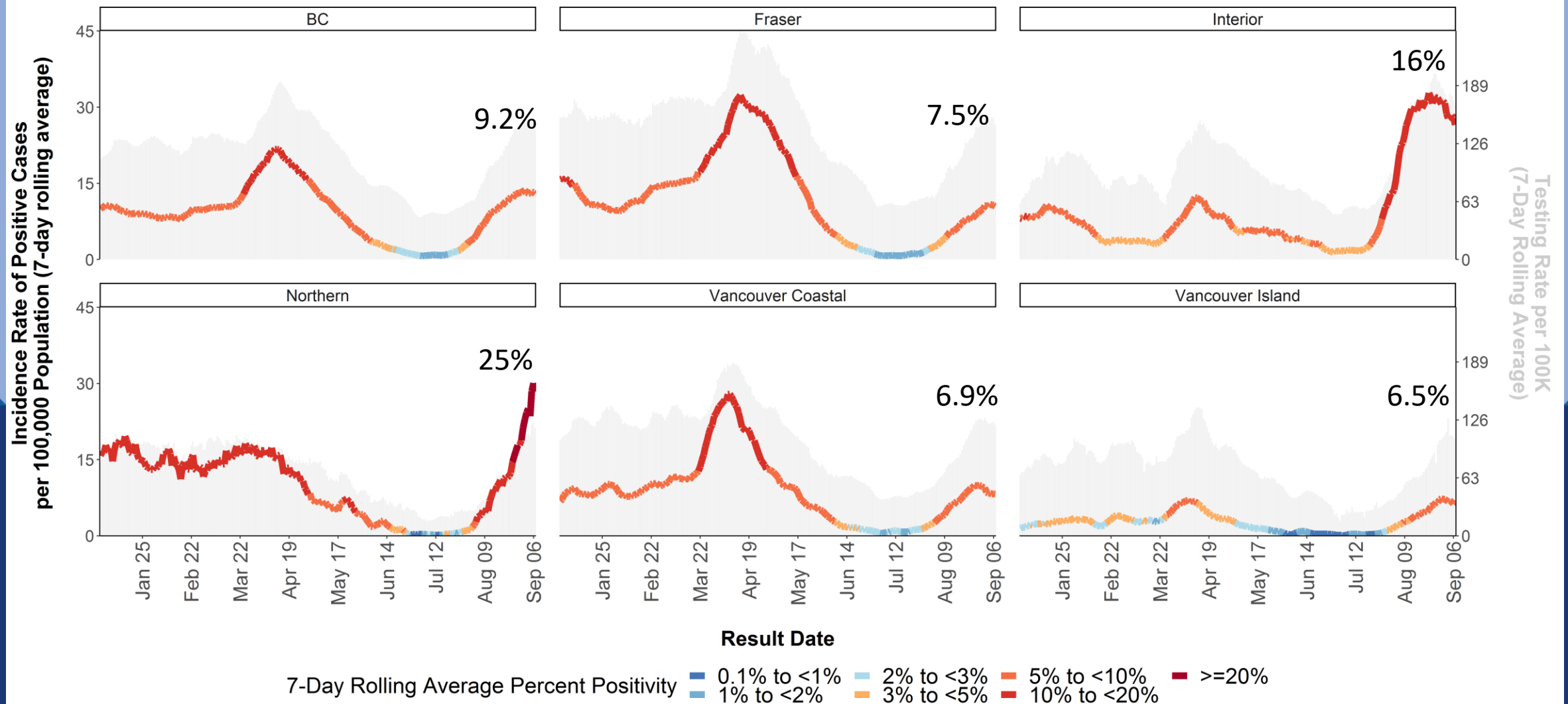


Note: Invalid (n = 1381) and indeterminate (n = 5194) results have been excluded

Data source: PLOVER 08-Sep-2021

Test positivity is highest in Northern Health (25%) and Interior Health (16%)

Case incidence rate, test percent positivity, and testing rate (Public Payers Only). Jan 1 2020 - Sep 7, 2021.

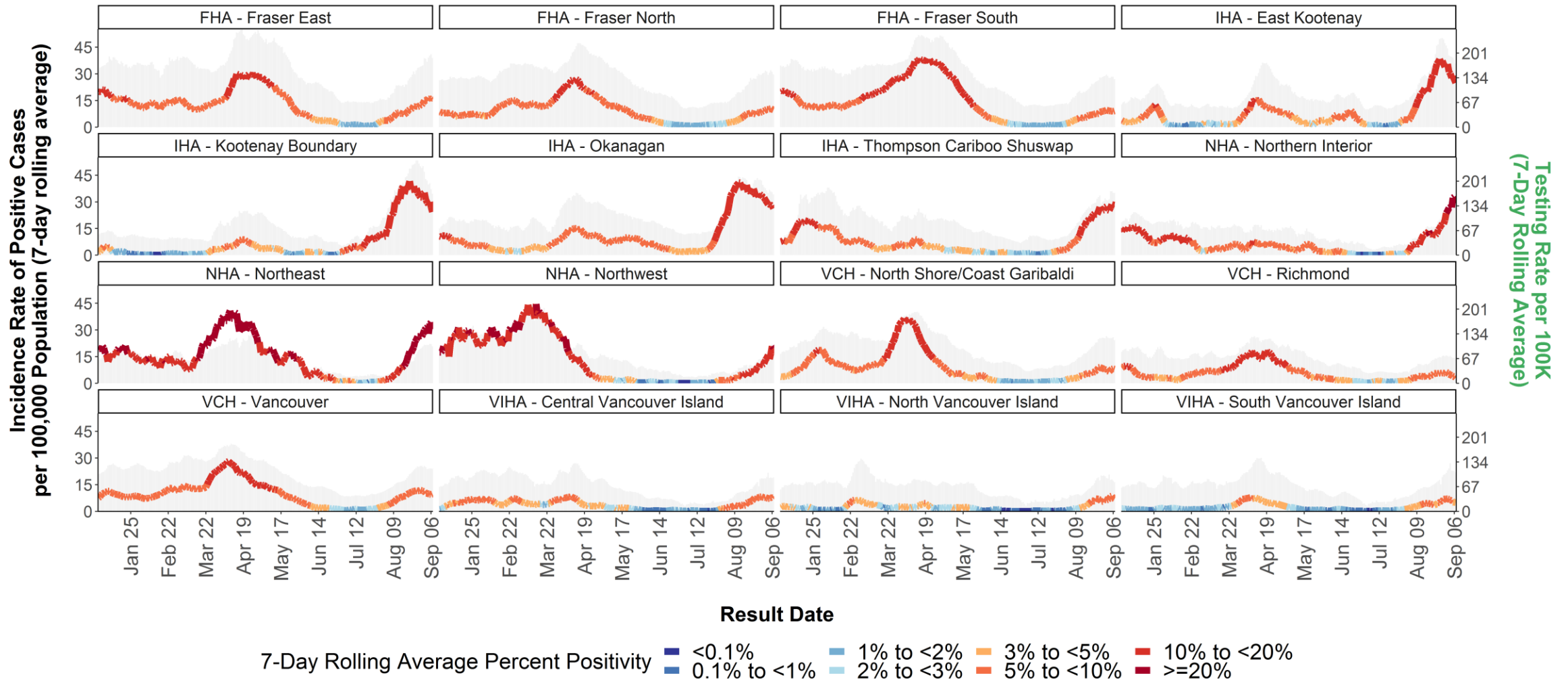


Data source: PLOVER 07-Sep-2021

For latest version of a graph similar to this one (difference: all tests, not public tests), see the [Epi App](#)

Test positivity is high and stable or decreasing in Interior HSDAs, and high and increasing in Northern HSDAs

Case incidence rate, test percent positivity, and testing rate by HSDA (Public Payers Only).
Jan 1 2021 - Sep 7, 2021.

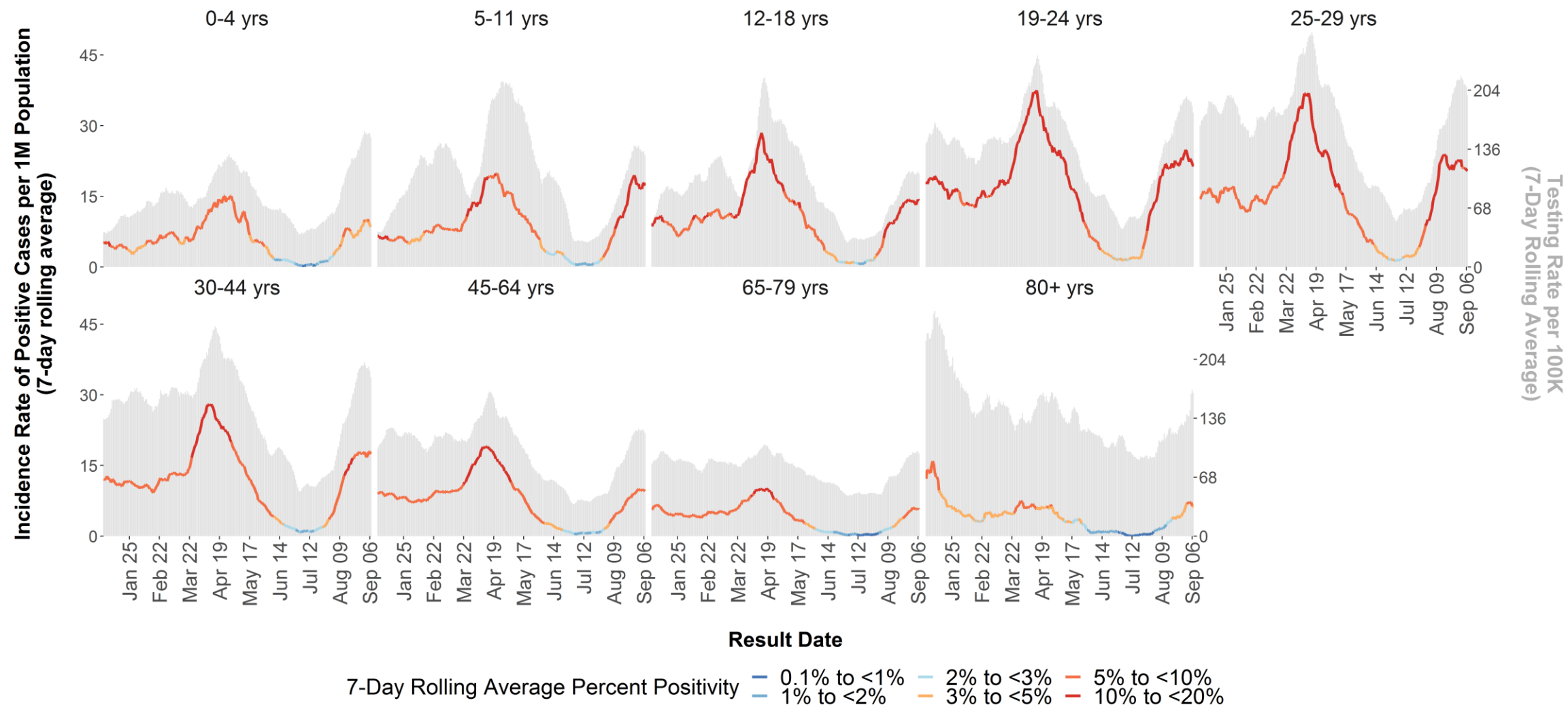


Data source: PLOVER 07-Sep-2021

For latest version of a graph similar to this one
(difference: all tests, not public tests), see the [Epi App](#)

Case incidence rate remains highest among 19-29 years, but rate is levelling; % positivity >10% among 5 to 29 years.

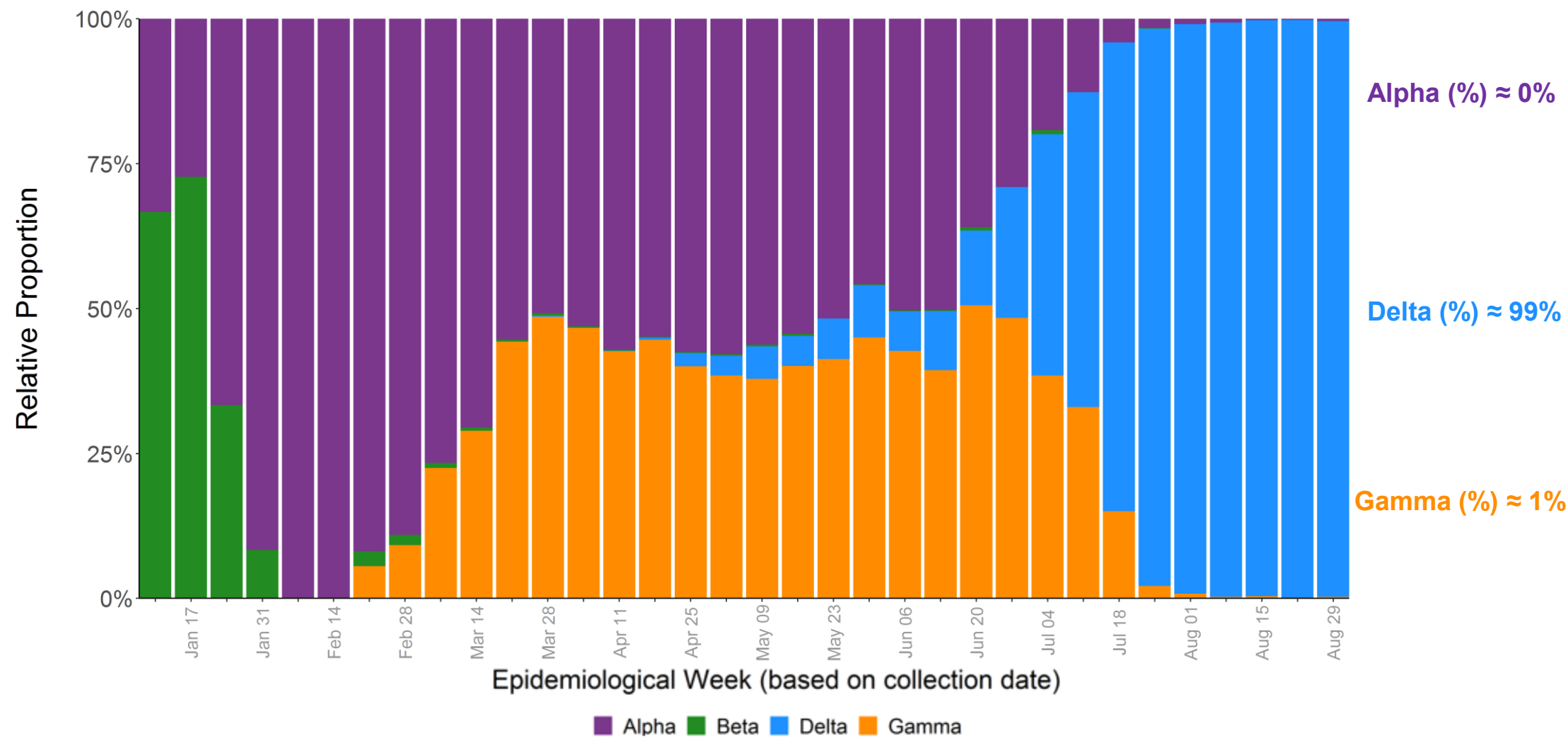
Case incidence rate, test percent positivity, and testing rate by age (Public Payers Only). Jan 1 2020 - Sep 7, 2021.



Data source: PLOVER 07-Sep-2021

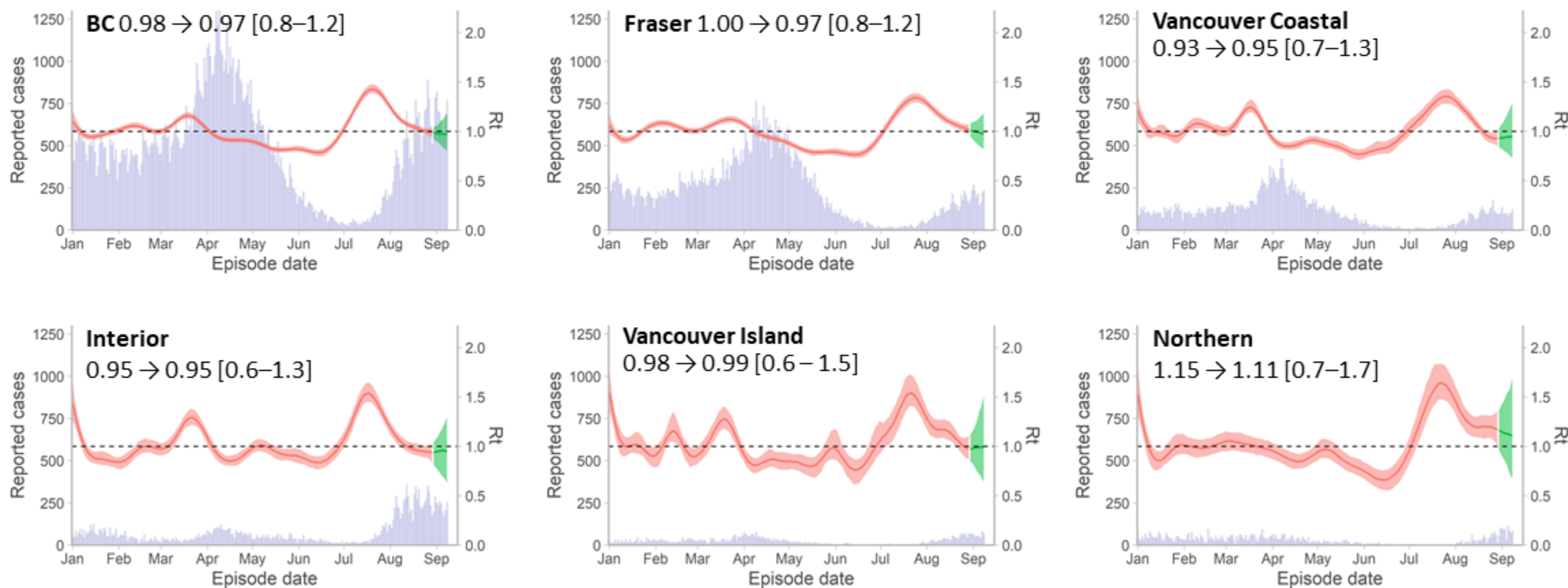
Among sequenced VOC samples provincially based on information for August 29 to September 4, the dominant VOC continues to be Delta 99%

Relative Proportion of VoCs in BC by Epiweek of Collection Date



Dynamic modeling: recent trends

Modelling indicates that R_t has declined to near 1 in all regions. Estimates are shown for last week \rightarrow this week, with 90% range of possible values given next to most recent estimate.



Solid line: median R_t , modeled using all reported cases up to Sept 8, 2021; Red band: 5%-95% credible interval; Green band: estimate based on partial data. 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 median R_t estimate from (last week \rightarrow this week; 5% - 95% credible interval). Only January 2021 onward shown here. Data source: BCCDC HA linelist.

Additional Resources

- BCCDC COVID-19 Regional 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](#)