

BCCDC Data Summary

2 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 31 Aug

- **Case rates** are increasing in Northern, Fraser and Island Health, incidence in Interior remains elevated, but rate is stable; **test positivity** for public tests has been stable at $\approx 9\%$ provincially, and is highest in IH (16%) and NH (22%).
- **New hospitalizations** are increasing provincially but declining in Interior; **hospital/critical care census** is increasing throughout 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
 - $\approx 11x$ more likely to become a case
 - $\approx 31x$ more likely to be hospitalized
 - $\approx 4x$ more likely to die
- **Vaccine** coverage in BC, 31 Aug, 1 dose (2 doses): 75% (68%) of total population, 84% (77%) of 12+ eligible population. Lower vaccine coverage in Interior and Northern and among younger individuals.
- Variants of concern (**VOCs**) continue to account for $\approx 100\%$ of all positive tests in BC. Delta is the dominant VOC (99.5%) across all of BC.

Aug 26 to Aug 31: BC COVID-19 Profile



166,853 total cases
4,884 new this week



1,818 total deaths
16 new this week

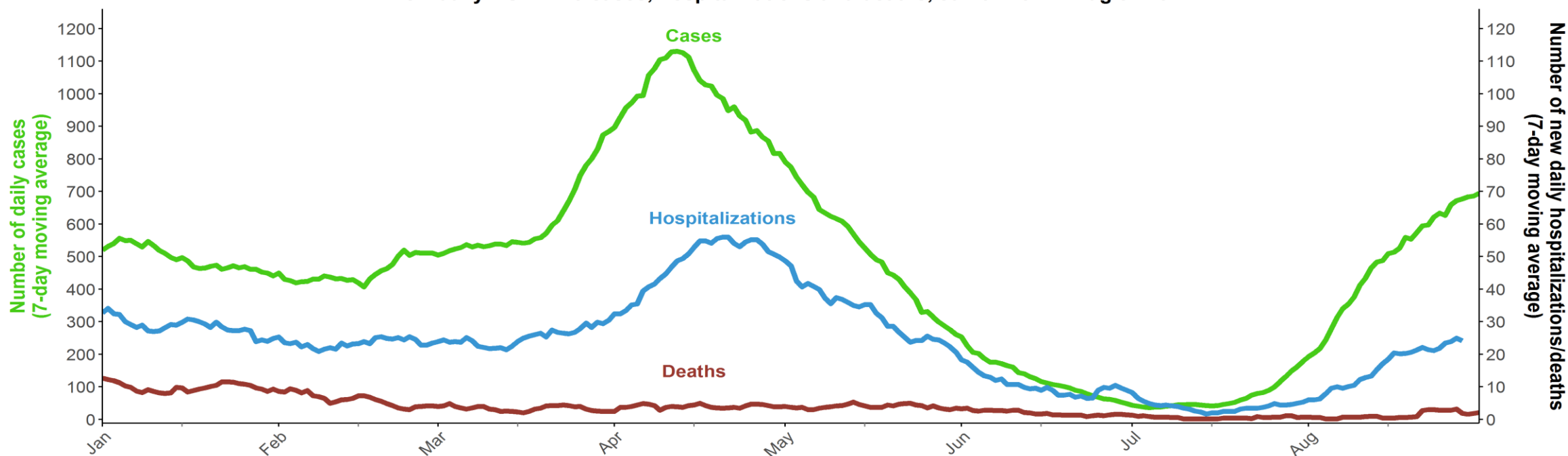


8,725 ever hospitalized
225 new this week



158,900 removed from isolation
4,231 new this week

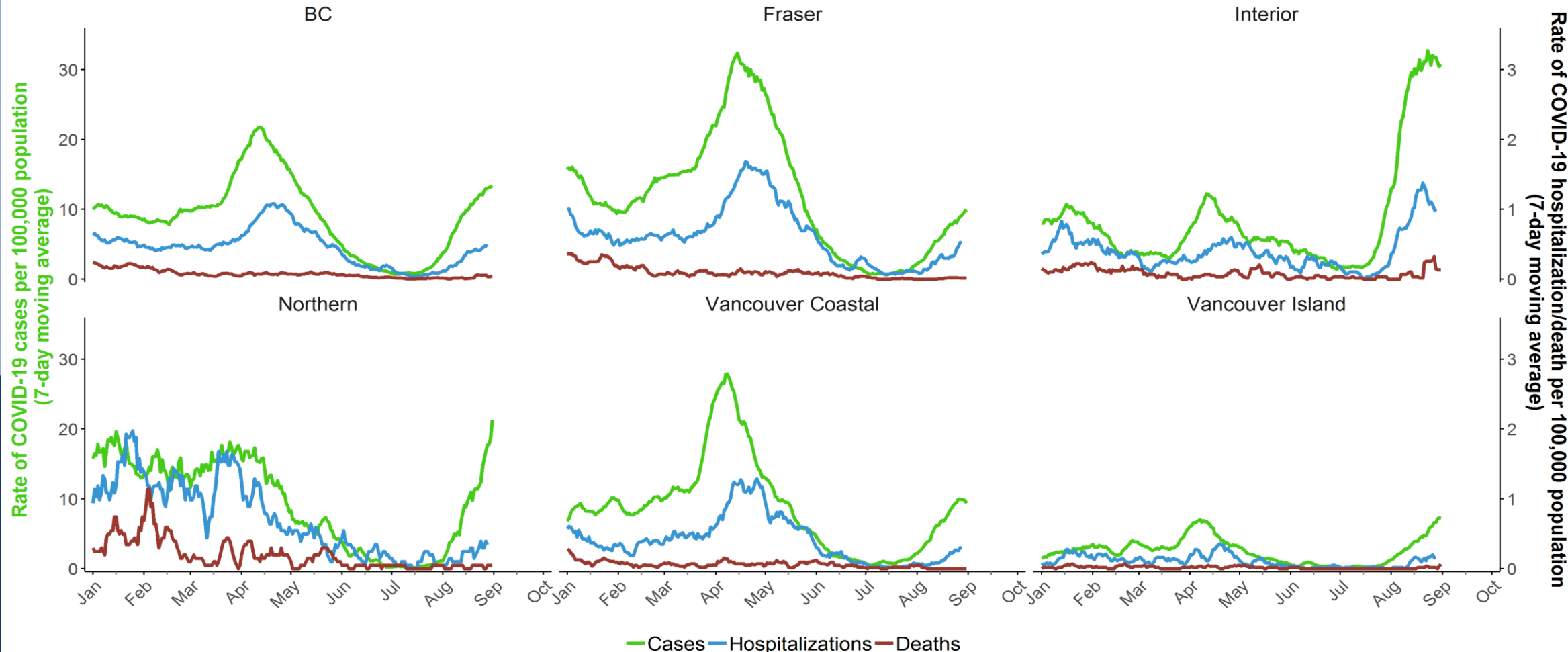
New daily COVID-19 cases, hospitalizations and deaths, Jan 01 2021 - Aug 31 2021



* Data are by surveillance date for cases and deaths, and admission date for hospitalizations
Data source: PHRDW Sep-01-2021

Case rates are increasing in Northern, Fraser and Island regions and stabilizing in Interior and Vancouver Coastal; **new hospitalizations** are declining in Interior, increasing provincially; **new deaths** are stable and low.

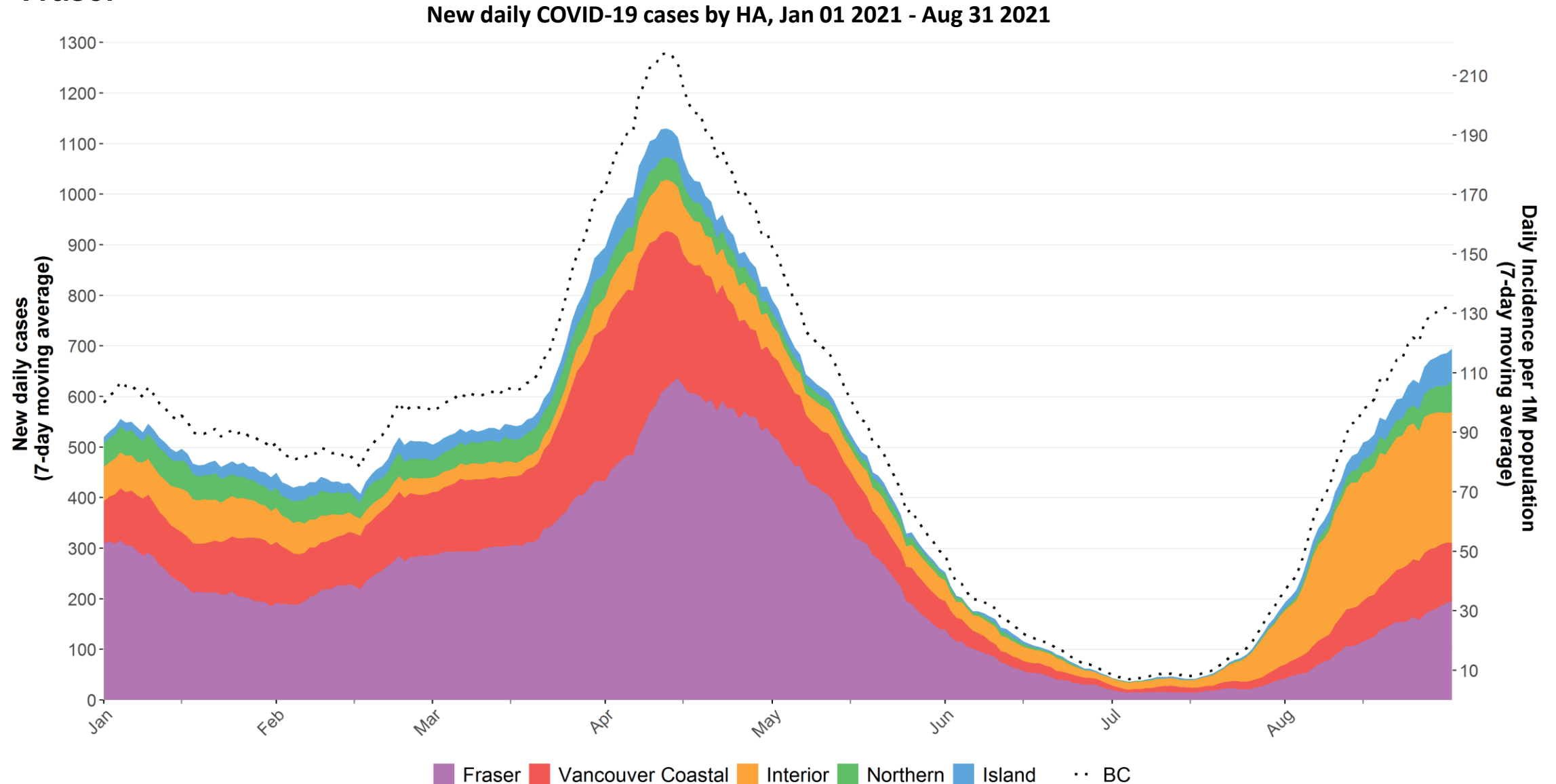
Rate of COVID-19 case, hospitalization and death, Jan 01 2021 - Aug 31 2021



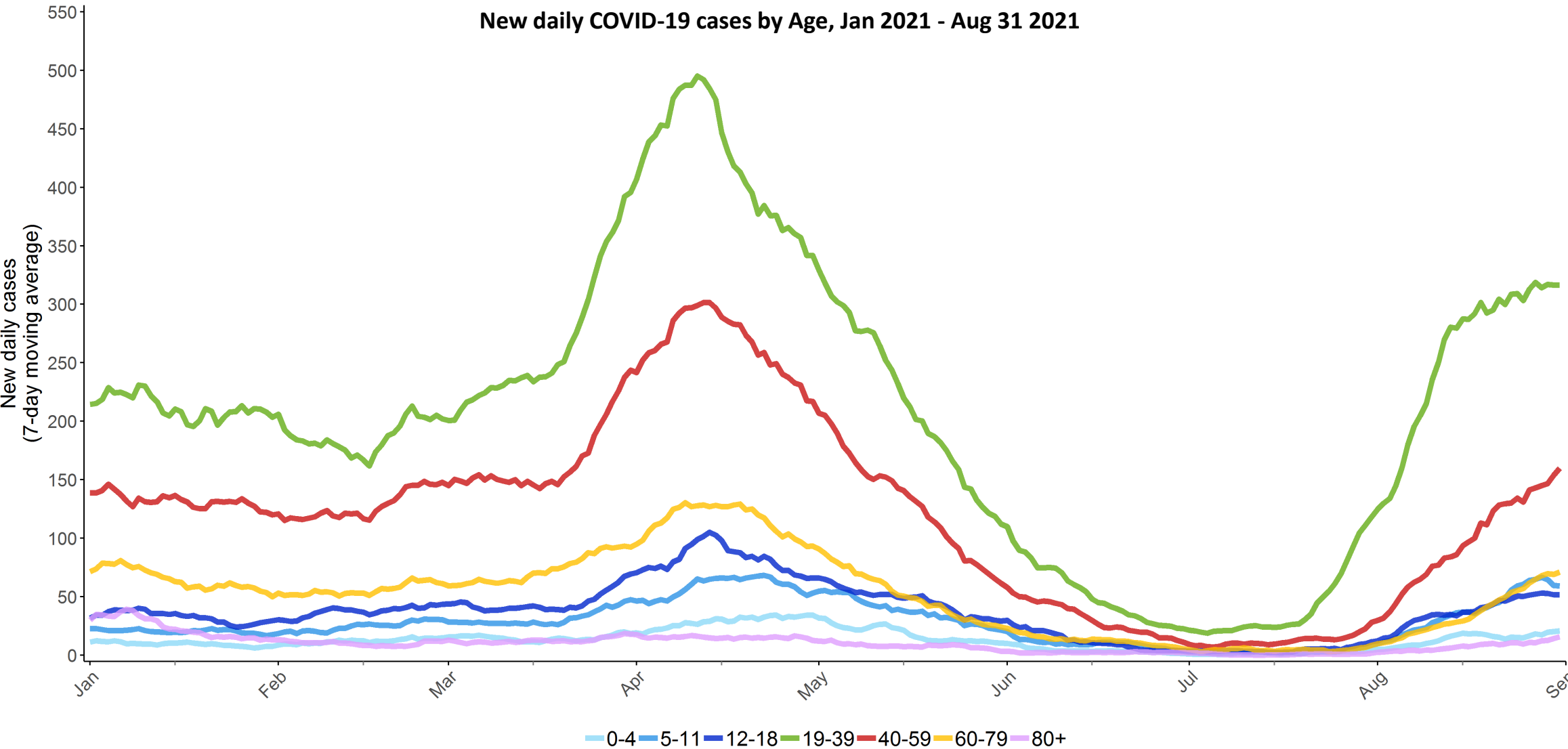
* Data are by surveillance date for cases and deaths, and admission date for hospitalizations
Data source: PHRDW Sep-01-2021

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

Case counts have increased in all health authorities, with the largest increases in Interior and Fraser



Case counts are highest among 19-39 year olds, consistent with previous resurgences

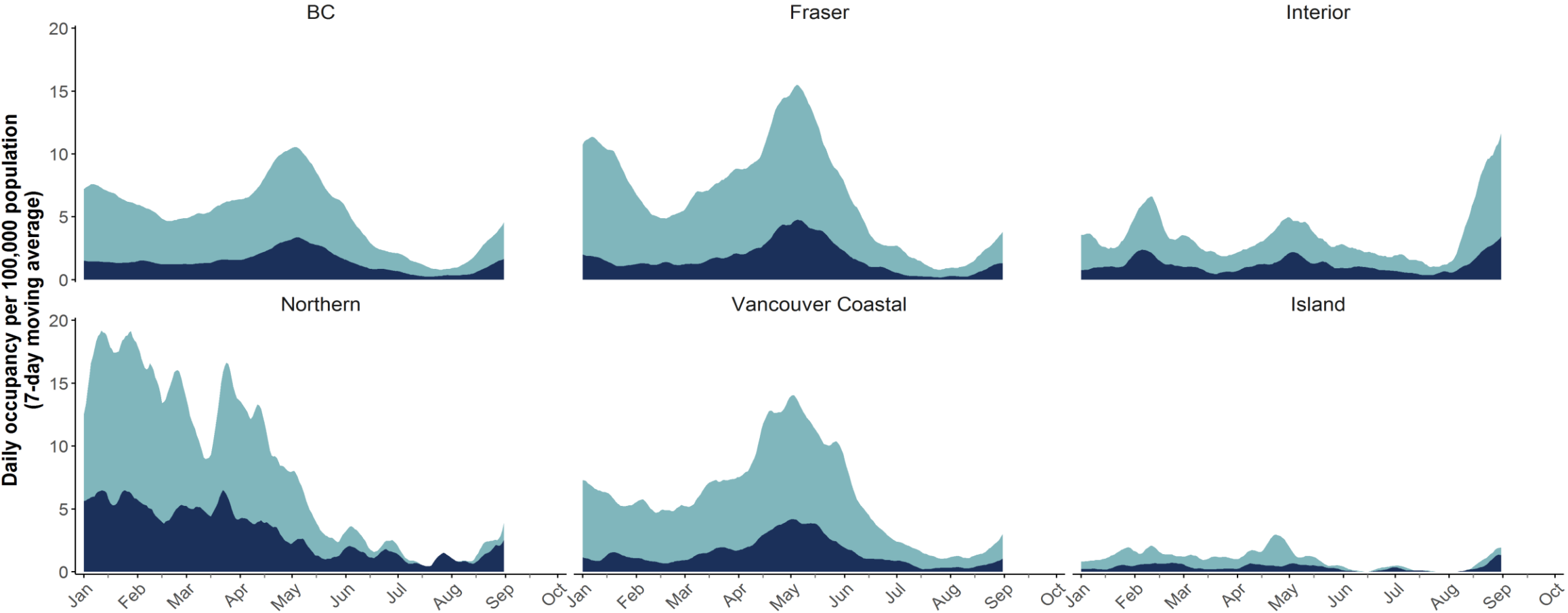


* Data based on surveillance date (i.e. lab result date, or when not available, date reported to public health)

Hospital and critical care census is high and increasing in Interior, and trending upwards in other parts of BC

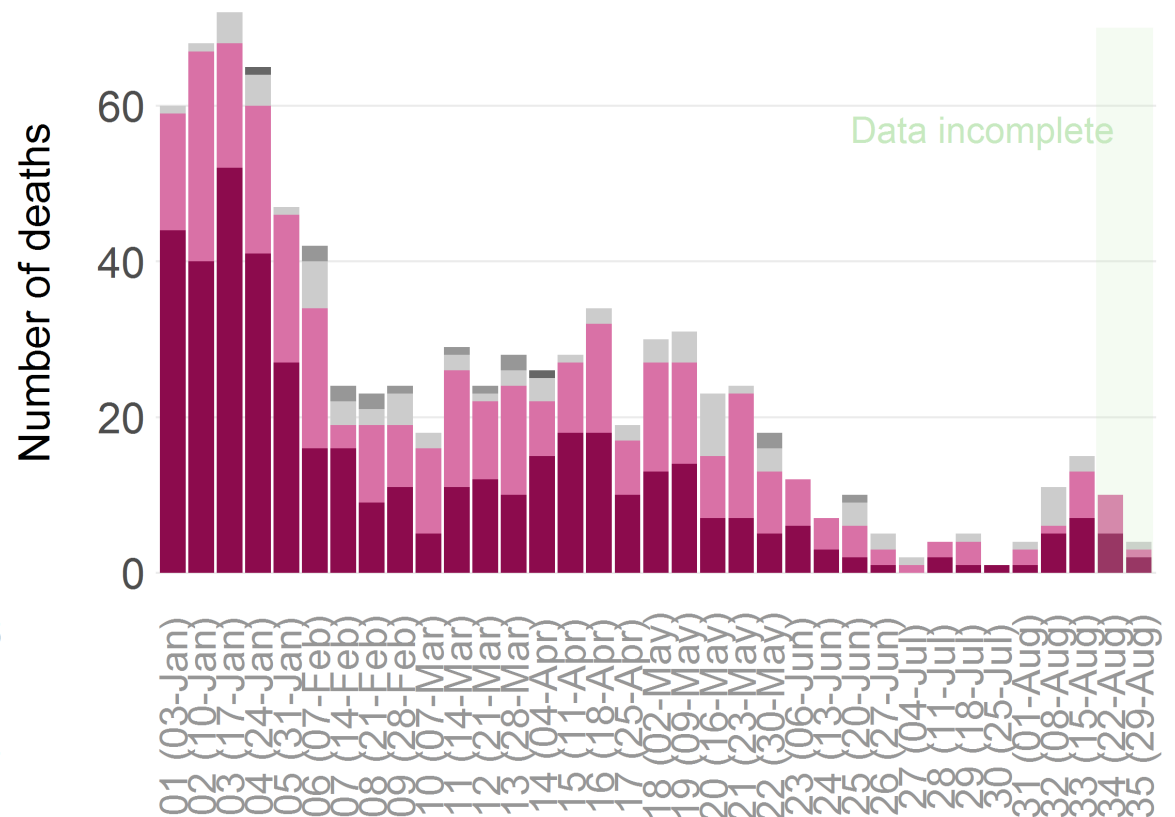
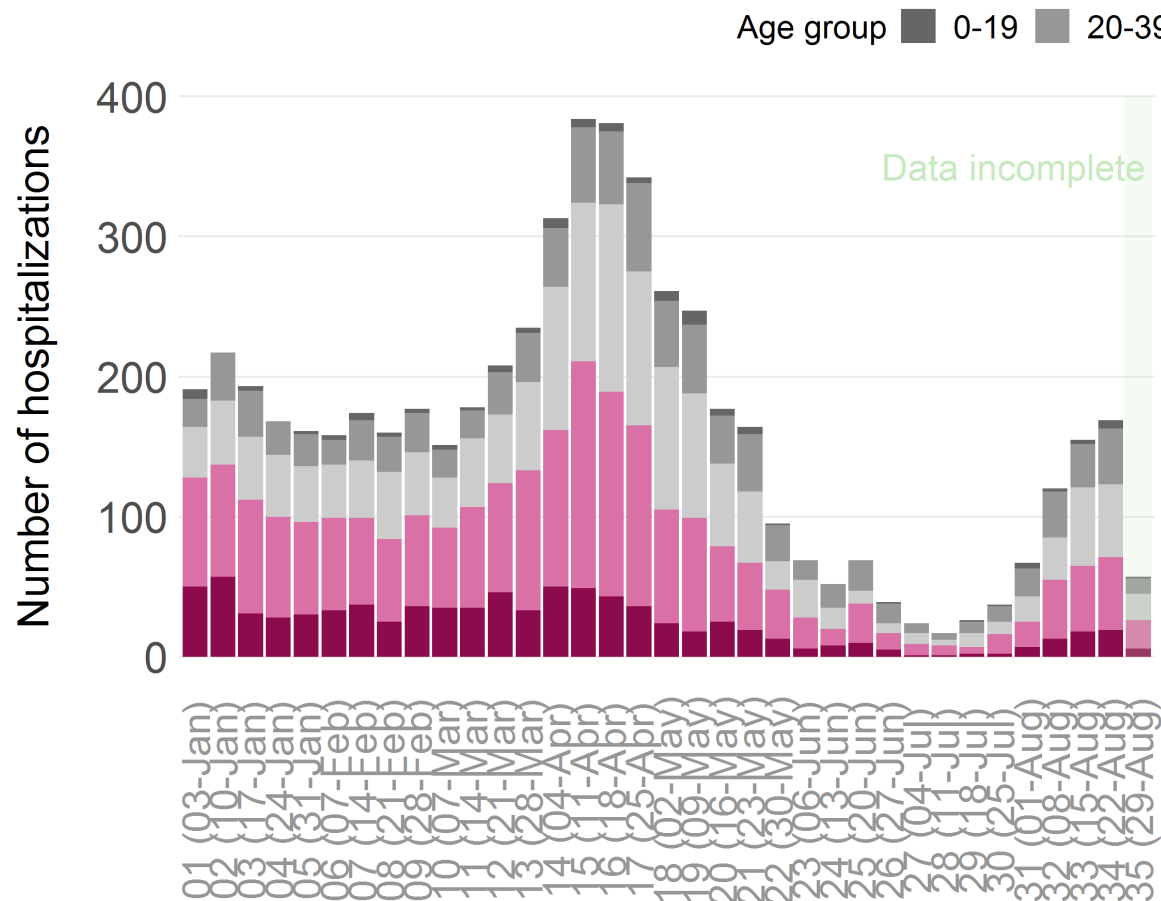
Current COVID-19 hospitalizations, Jan 01 2021 - Aug 31 2021

In the hospital but not in critical care In critical care



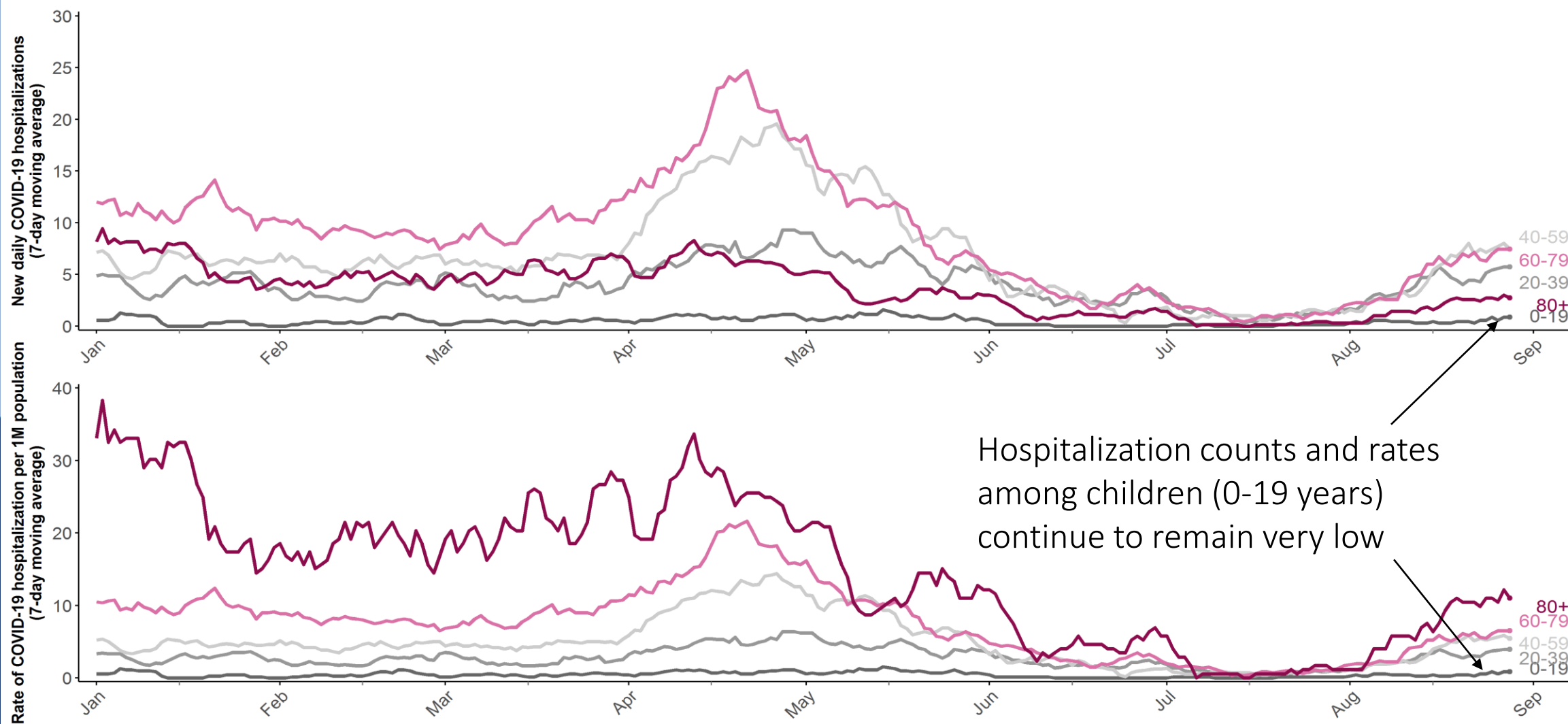
* Data are by census date for hospitalizations
Data source: PHSA Provincial COVID19 Monitoring Solution (PCMS) Sep-01-2021

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



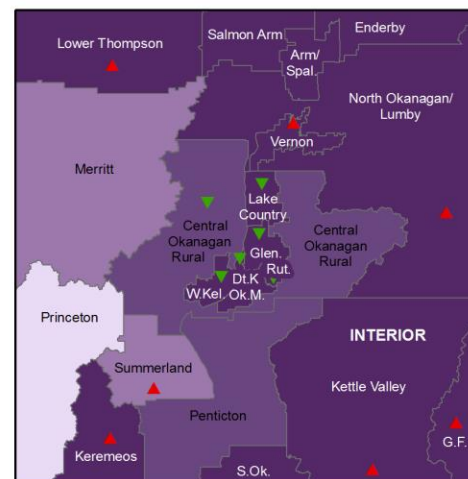
Data extracted on 2021-09-01; hospitalization and death data from health authority case line list data

Trends in number and rate of new hospitalizations by age group, BC, 1 Jan – 28 August 2021

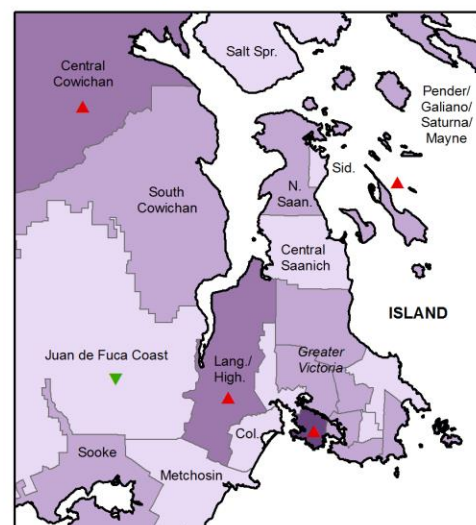


Date range: Jan 01 2021 - Aug 28 2021

Okanagan Inset
(Community Health Service Areas)



Greater Victoria Inset
(Community Health Service Areas)



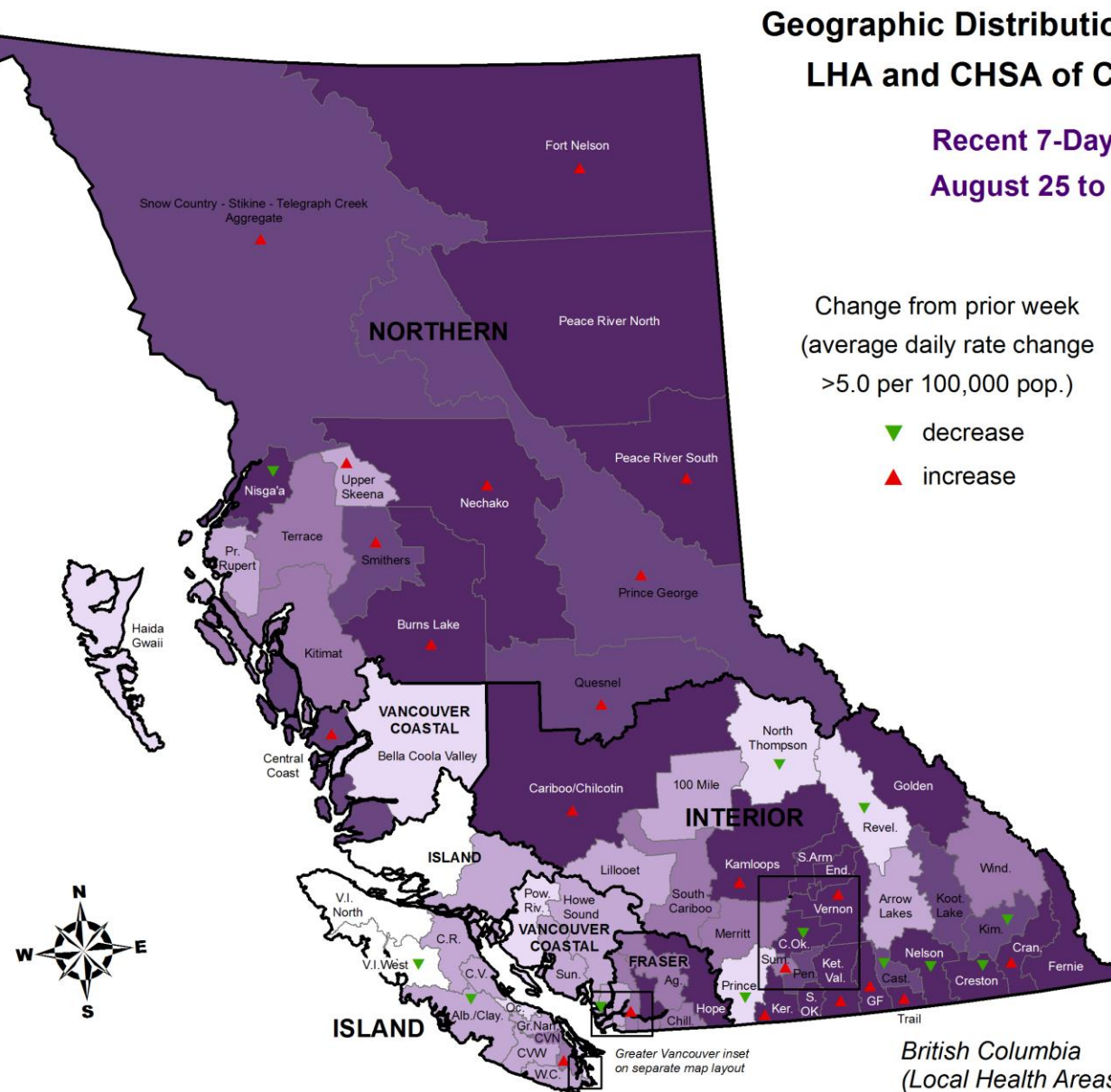
Geographic Distribution of COVID-19 by LHA and CHSA of Case Residence

Recent 7-Days Cases
August 25 to 31, 2021

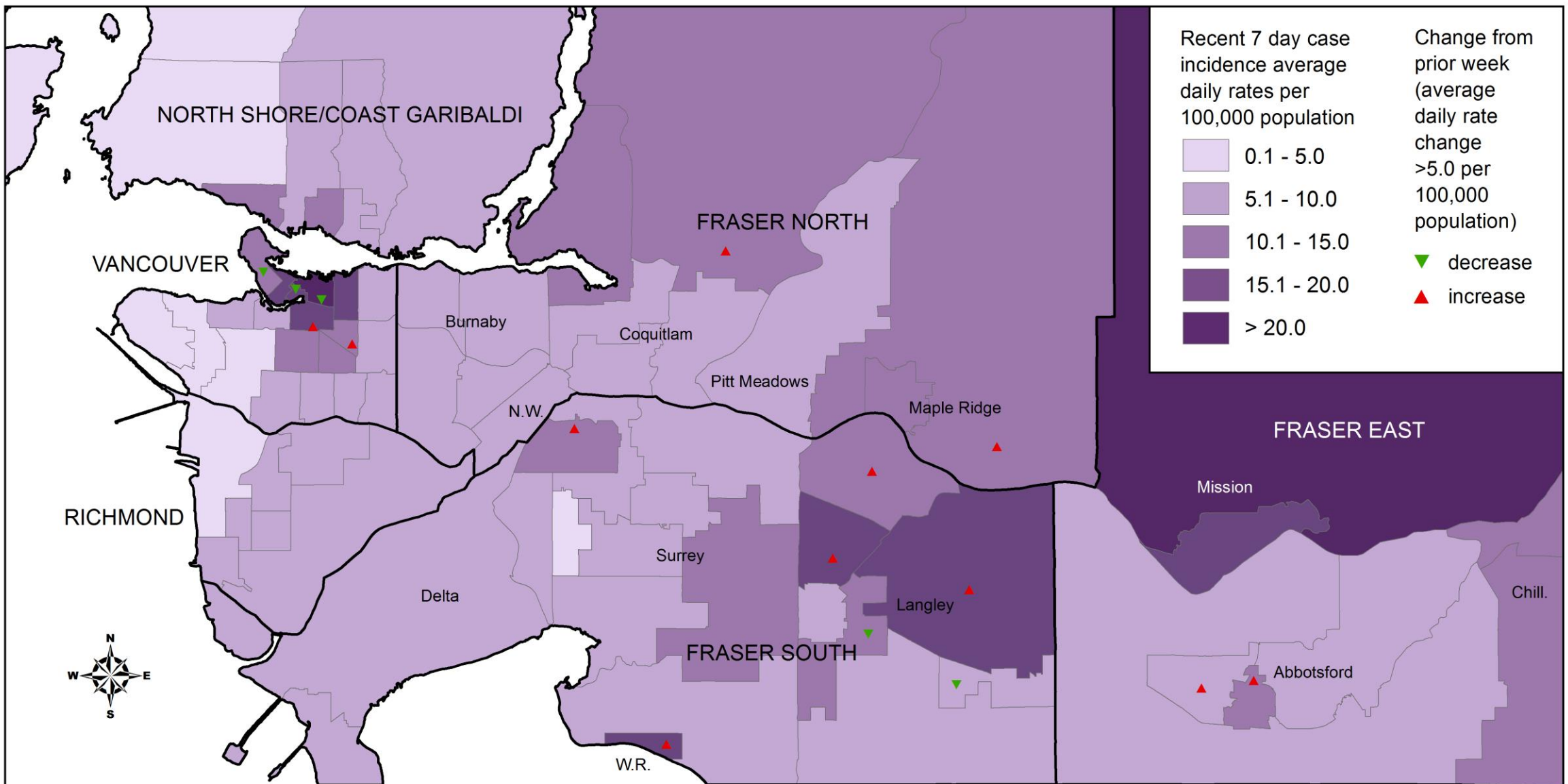
Change from prior week
(average daily rate change
>5.0 per 100,000 pop.)

- ▼ decrease
- ▲ increase

Average daily rate per
100,000 population

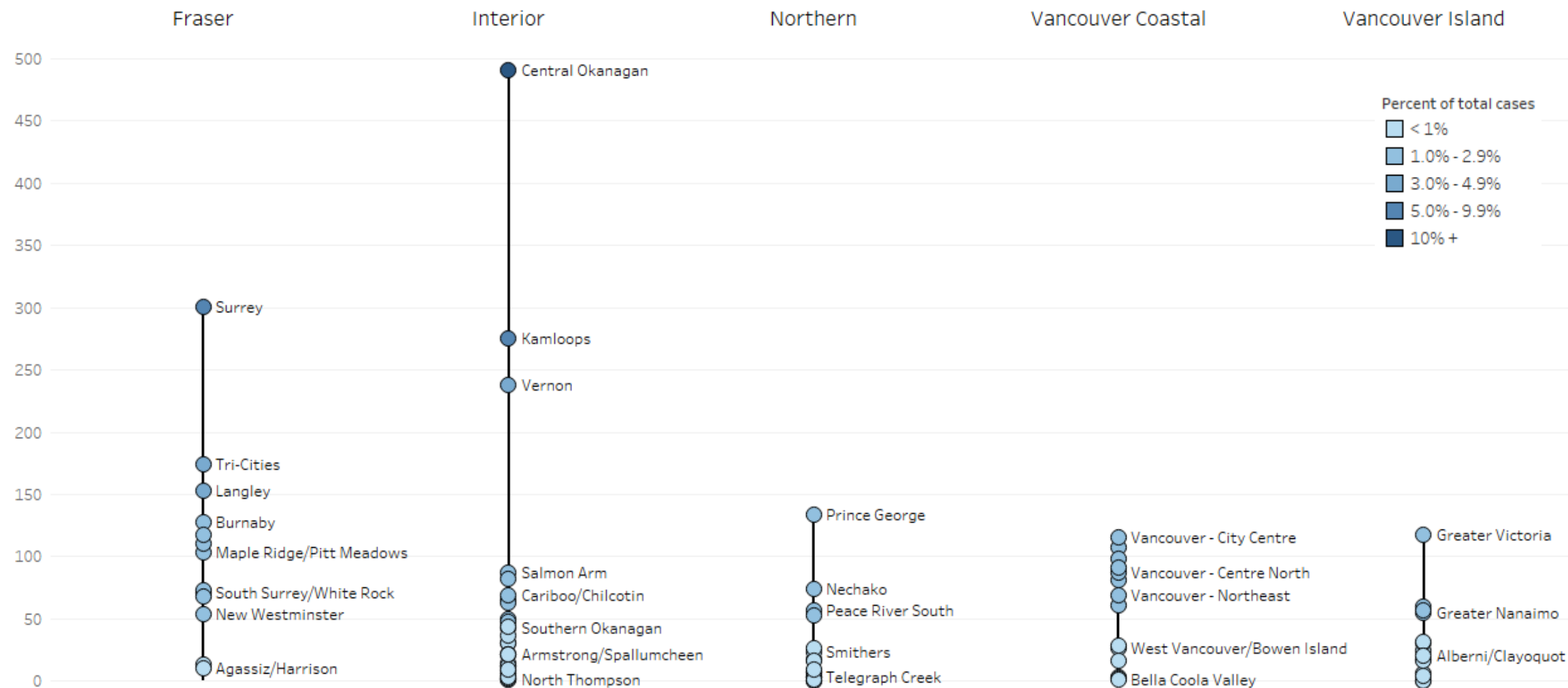


Data source: Public Health Reporting Data Warehouse (PHRDW) integrated COVID dataset; we operate in a live database environment and case information is updated as it becomes available. Cases are mapped by location of residence; cases with unknown residence and from out of province are not mapped. Data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

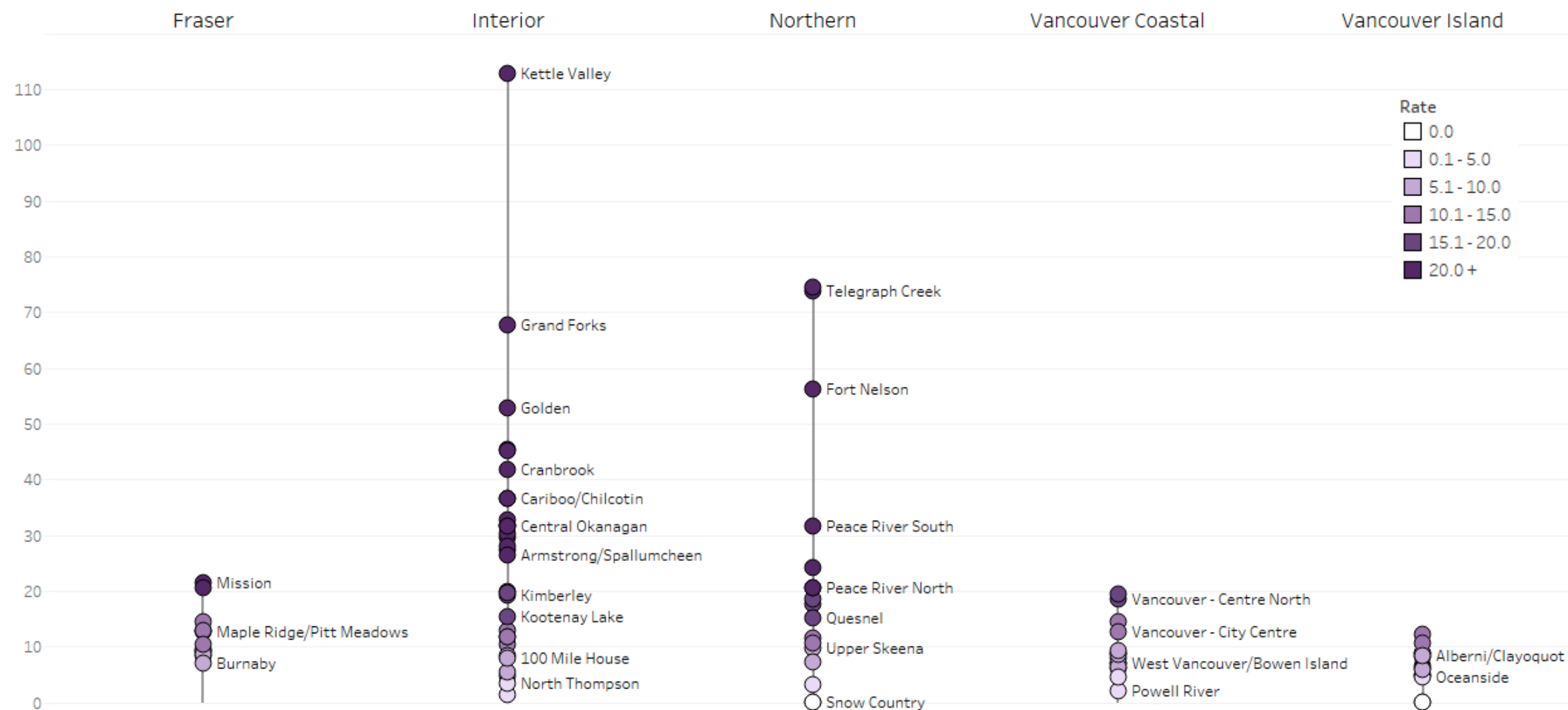


COVID-19 Recent 7-Day Case Incidence Rates by CHSA (August 25 to 31, 2021)

Total cases by local health area, Aug 25 - Aug 31, 2021



Average daily **rate** of new cases per 100,000 population, by local health area, Aug 25 - Aug 31, 2021

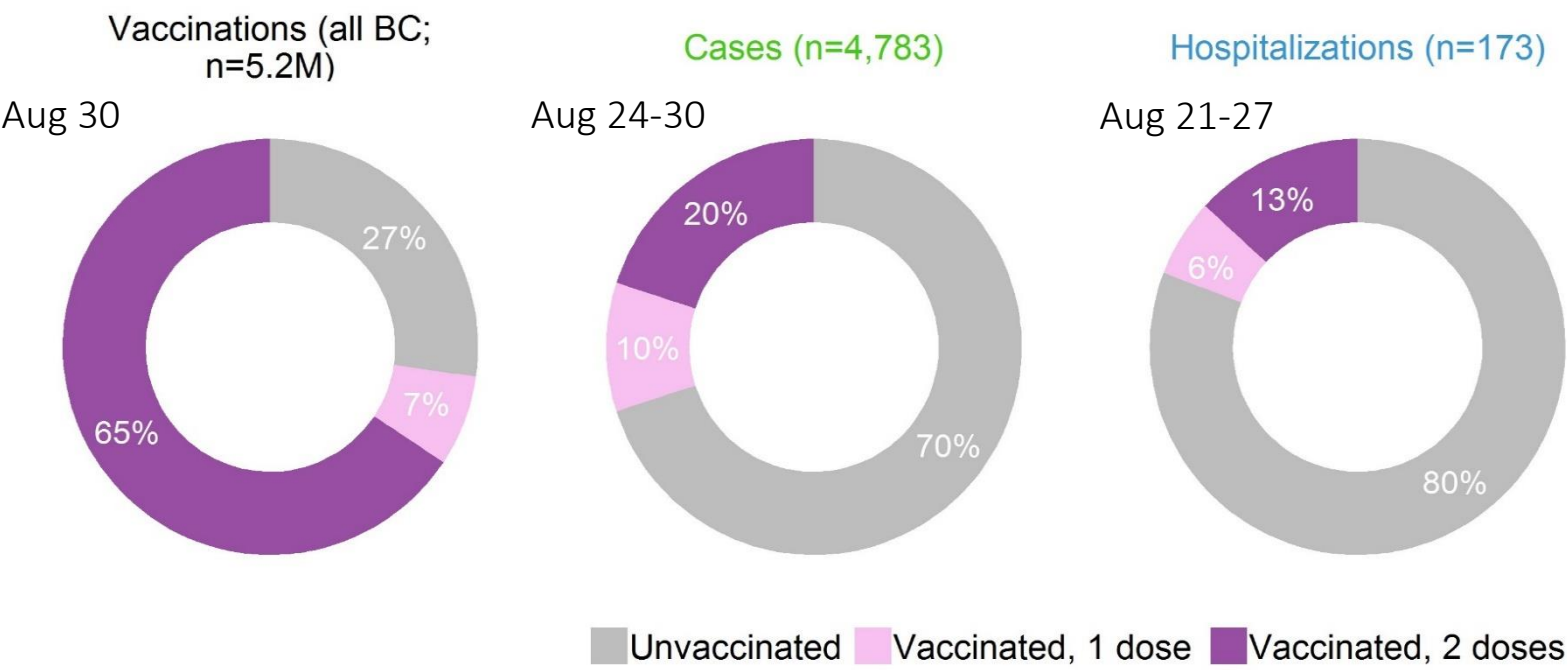


Key messages – COVID-19 outcomes by vaccine status

- Most of the recent cases and hospitalizations continue to be among unvaccinated individuals
- Based on last week's data, compared with fully vaccinated individuals, unvaccinated individuals are
 - $\approx 8x$ more likely to become a case ($\approx 11x$ after adjusting for age differences)
 - $\approx 18x$ more likely to be hospitalized ($\approx 31x$ after adjusting for age differences)
 - $\approx 4x$ more likely to die, taking into account age differences
- 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 accounted for 20% of cases, 13% of hospitalizations, and 65% of BC's total population

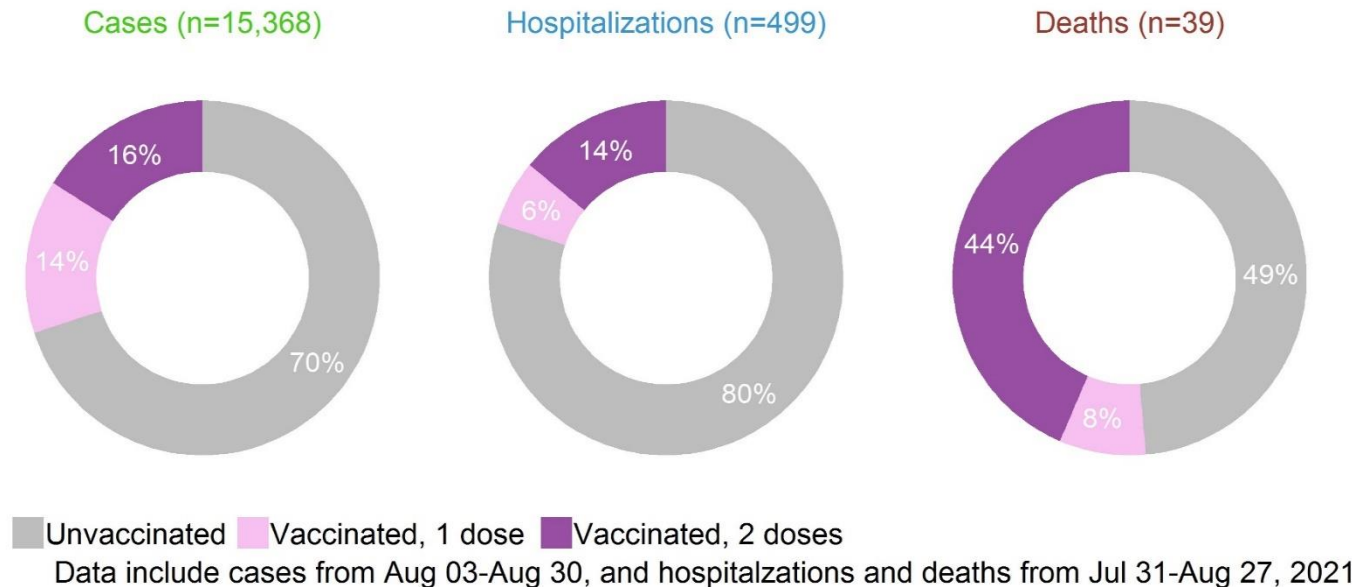
These % fluctuate over time. There are many more vaccinated individuals than unvaccinated individuals, and thus it is important to take the denominator into account. These figures do not represent vaccine effectiveness.



We operate in a live database environment and data get updated retrospectively. These figures were run on Tuesday Aug 31st and may differ slightly from previously reported counts. Vaccinations represent vaccination coverage as of the last date (Aug 30th). 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 16% of cases and 14% 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 is fully vaccinated (which is almost the case for many long term care residents for example), then any new cases, hospitalizations, or deaths will necessarily be among vaccinated people.

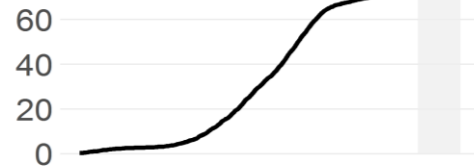


Deaths continue to occur primarily among older individuals (see next slide), >90% of whom are vaccinated, which explains the higher relative % of deaths among the fully vaccinated.

We operate in a live database environment and data get updated retrospectively. These figures were run on Tuesday Aug 31st 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, July 31 – August 30, 2021

Trend in % total population vaccinated with at least 1 dose



Vaccinations (all BC; n=5.2M)



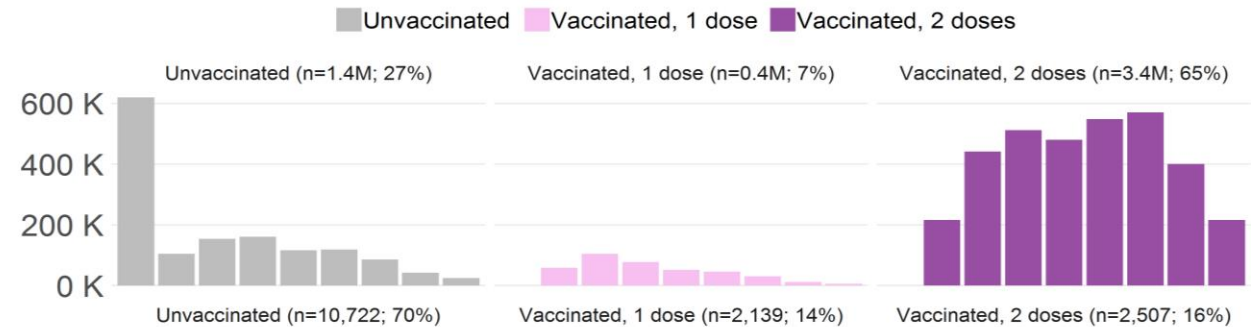
Cases (n=15,368)



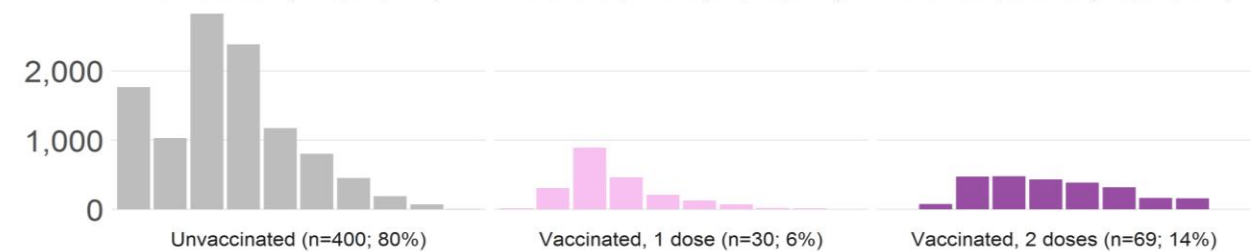
Trend in daily cases per 1M



Number of people



Number of cases



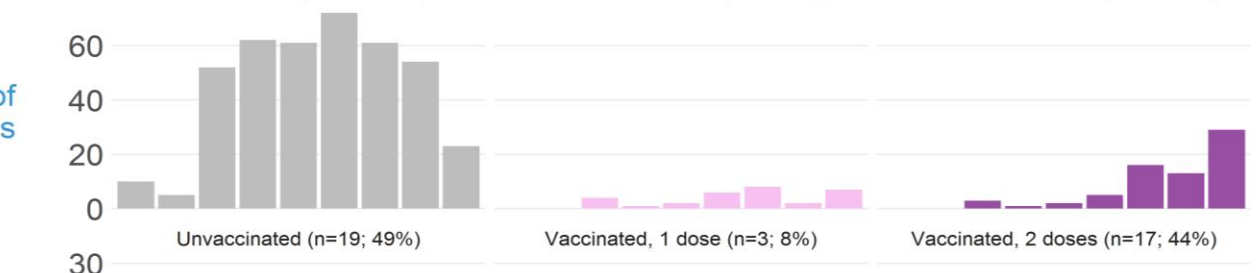
Trend in daily hospitalizations per 1M



Hospitalizations (n=499)



Number of hospitalizations



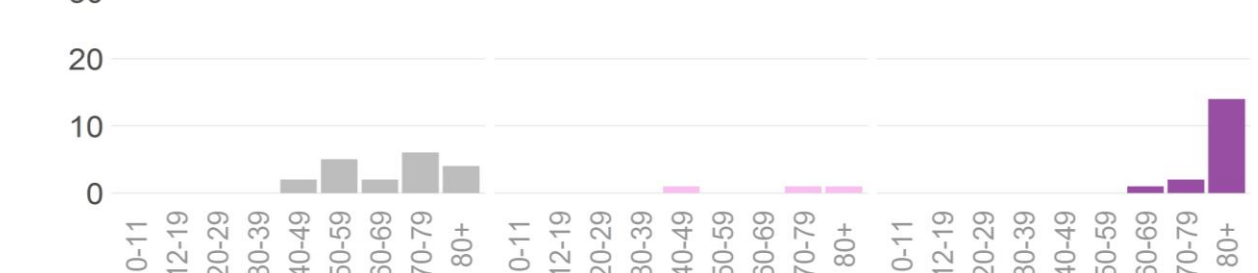
Trend in daily deaths per 1M



Deaths (n=39)



Number of deaths

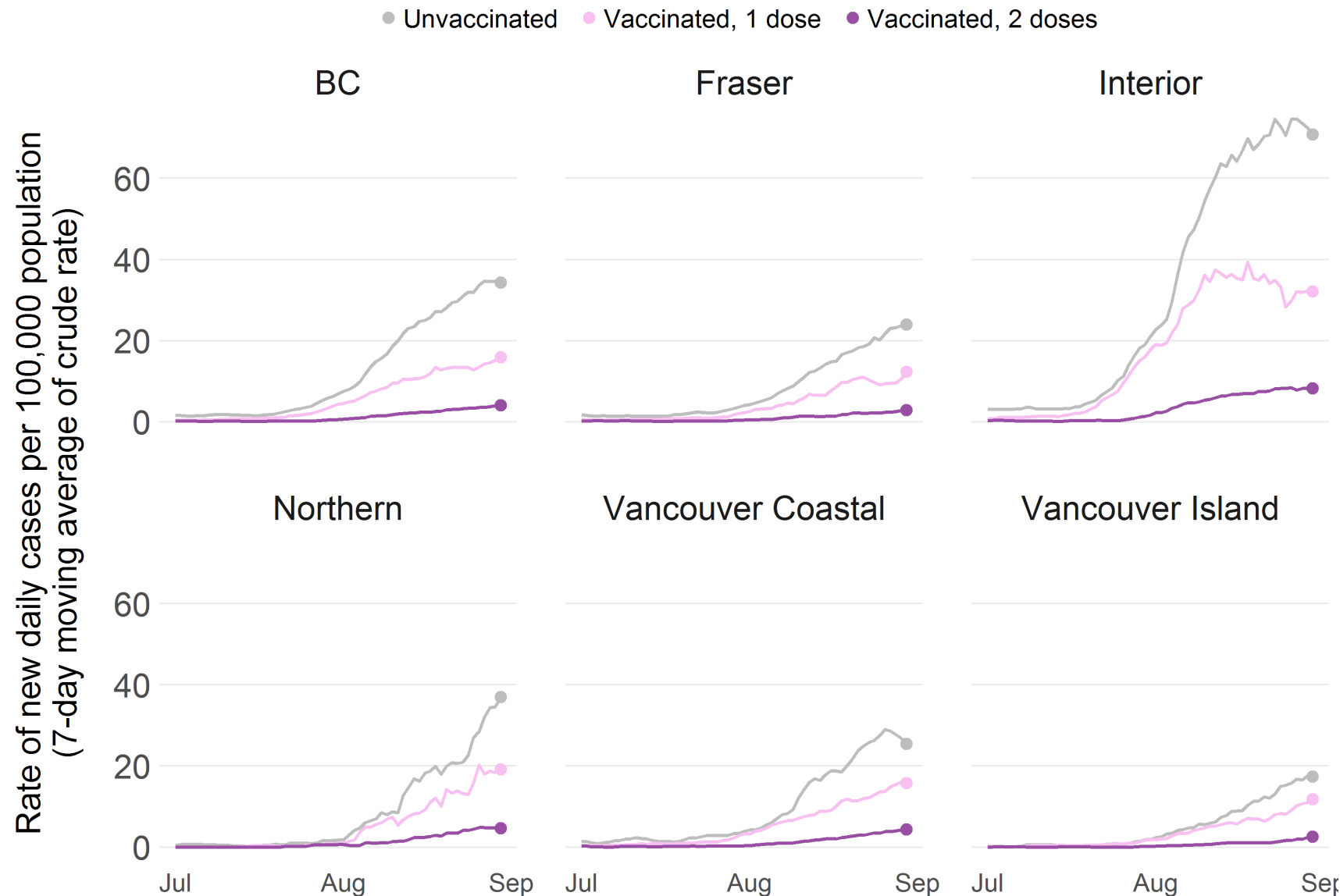


*Figures include cases from Aug 03-Aug 30, and hospitalizations and deaths from Jul 31-Aug 27, 2021

COVID-19 **case** rate by vaccination status and Health Authority, July 1 – Aug 30, 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 slides 21, 24).

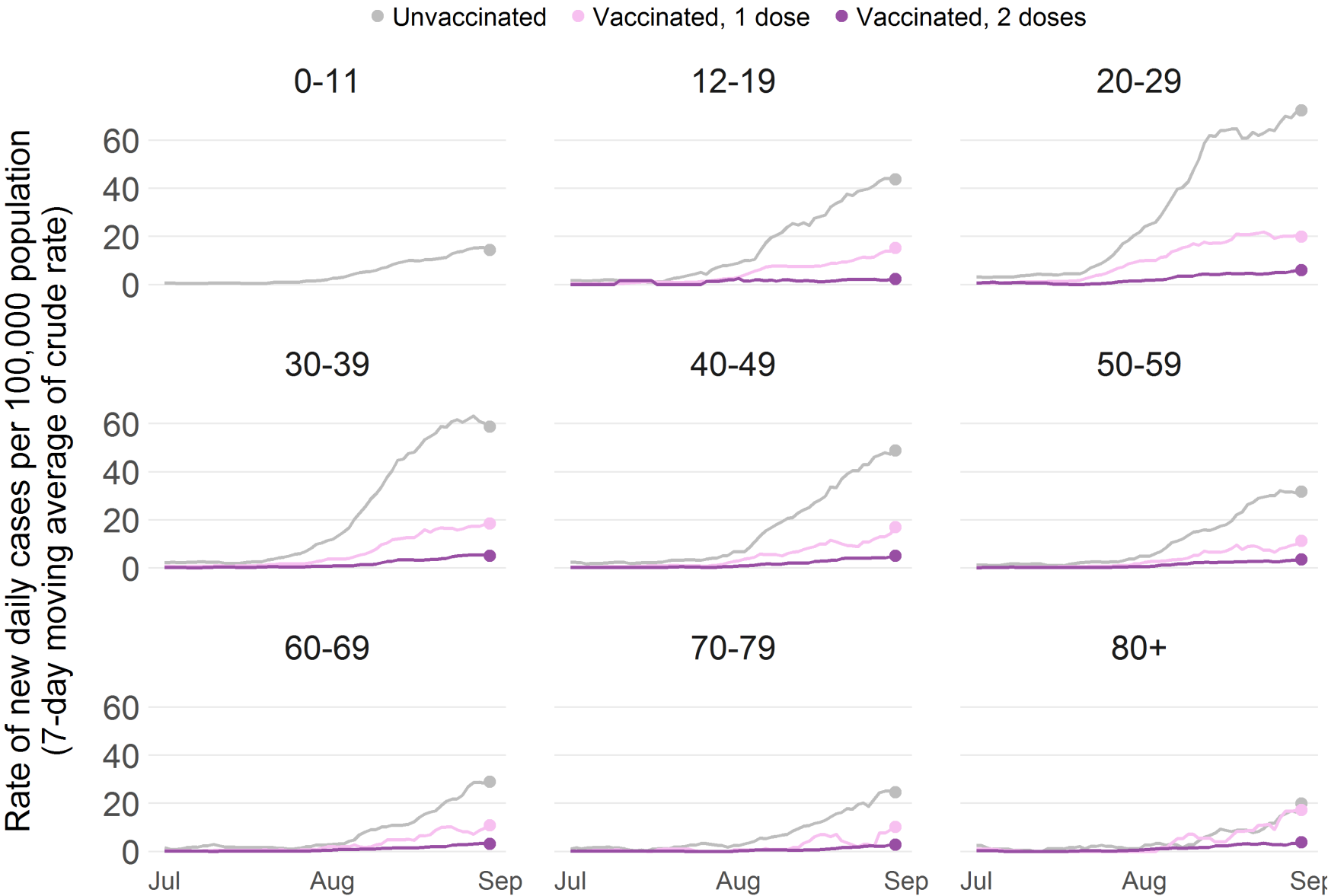
Denominators for each vaccine status group are dynamic and change daily as people flow from being unvaccinated to protected by 1 dose to protected by 2 doses. Therefore, the denominators are different across groups and over time.



Data extracted from health authority case line list on 31 Aug 2021

COVID-19 case rate by vaccination status and age, July 1 – August 30, 2021

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.

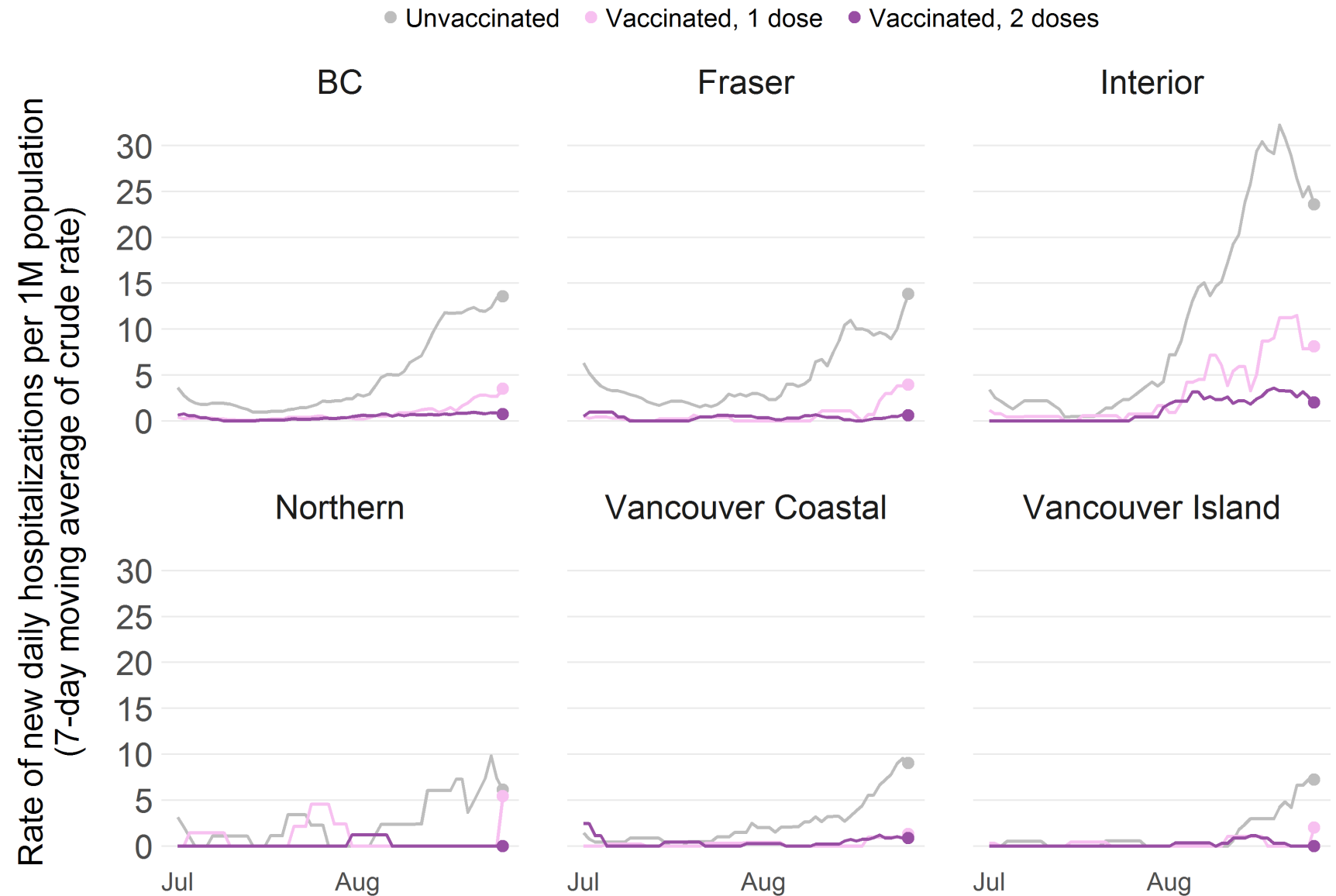


Data extracted from health authority case line list on 31 Aug 2021

COVID-19 hospitalization rate by vaccination status, July 1 – Aug 26, 2021

In the past week, hospitalization rate among unvaccinated individuals was **≈ 18x** higher compared with fully vaccinated individuals – but note that this is crude and not adjusted for age (see slide 14).

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.



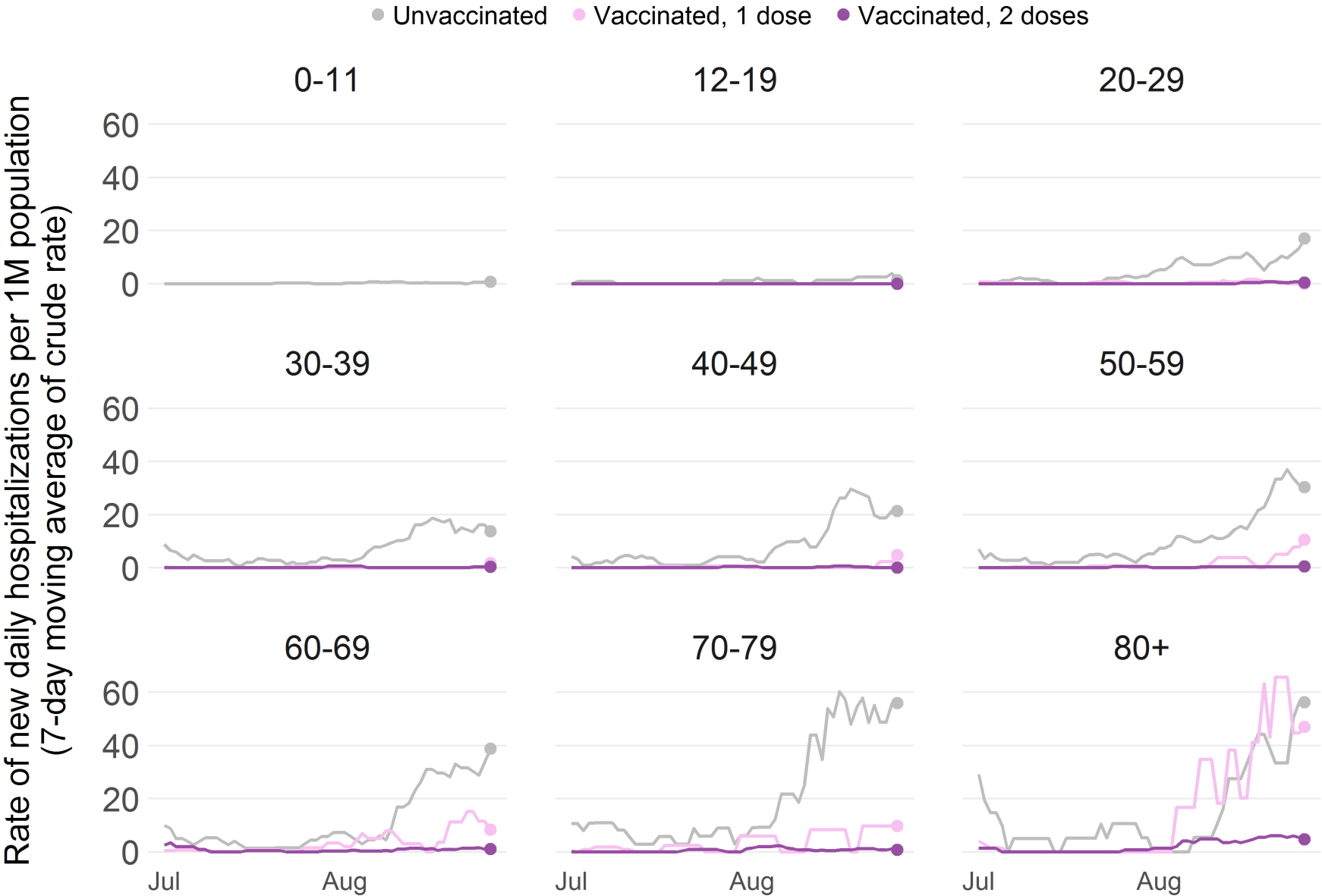
Data extracted from health authority case line and up to 26 Aug 2021

COVID-19

hospitalization rate by vaccination status and age, July 1 – Aug 26, 2021

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

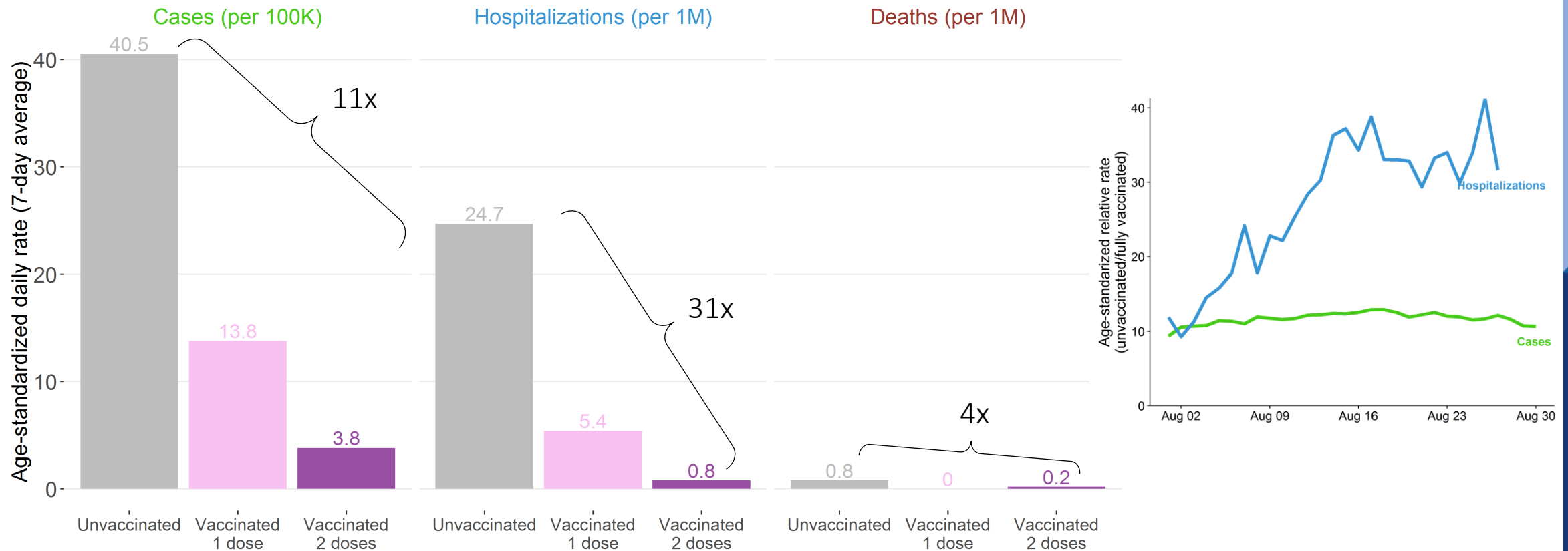
Denominators for each vaccine status group are dynamic and change daily as people flow from being unvaccinated to protected by 1 dose to protected by 2 doses. Therefore, the denominators are different across groups and over time.



Data extracted from health authority case line and up to 26 Aug 2021

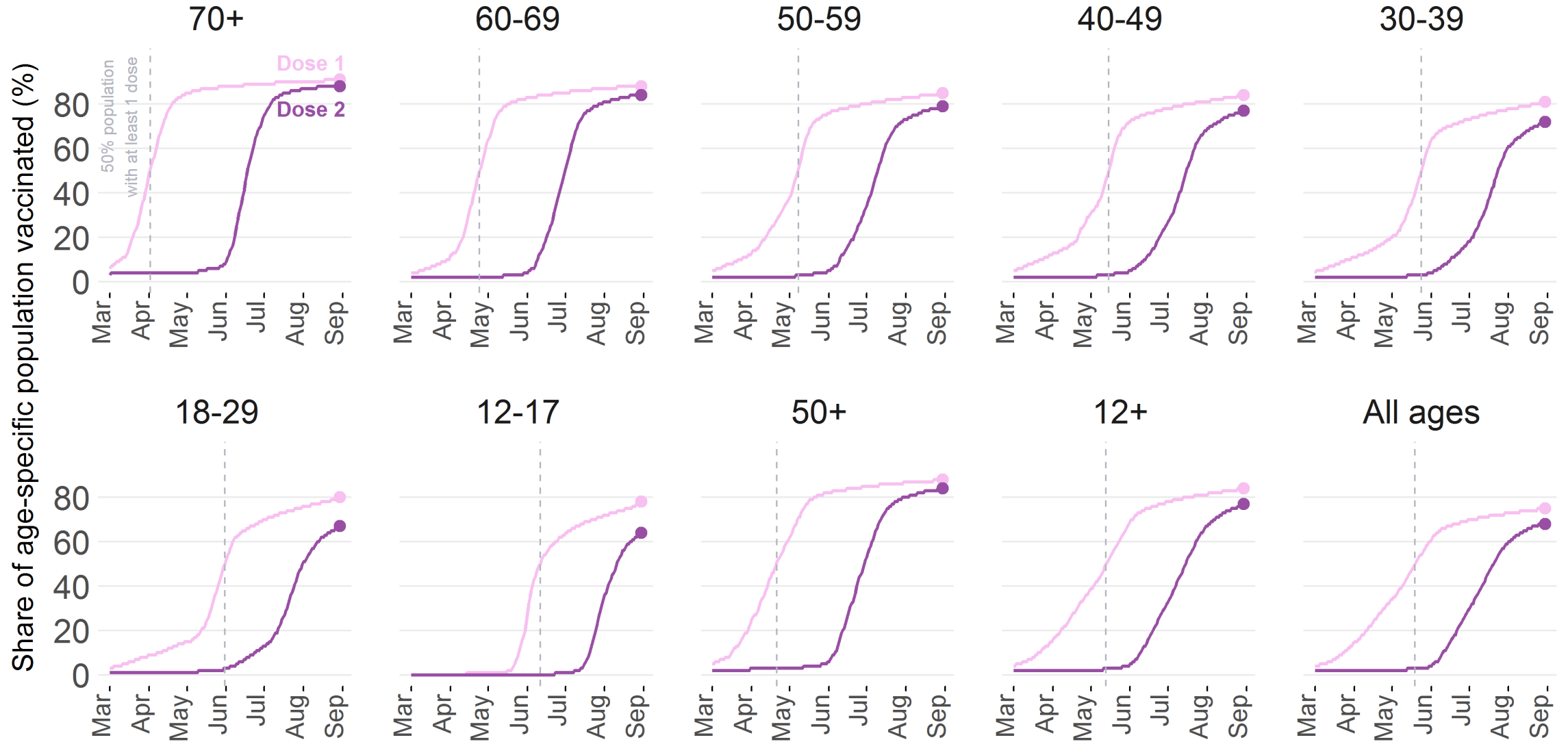
After taking age differences into account, unvaccinated individuals are much more likely get infected, be hospitalized, or die from COVID-19

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



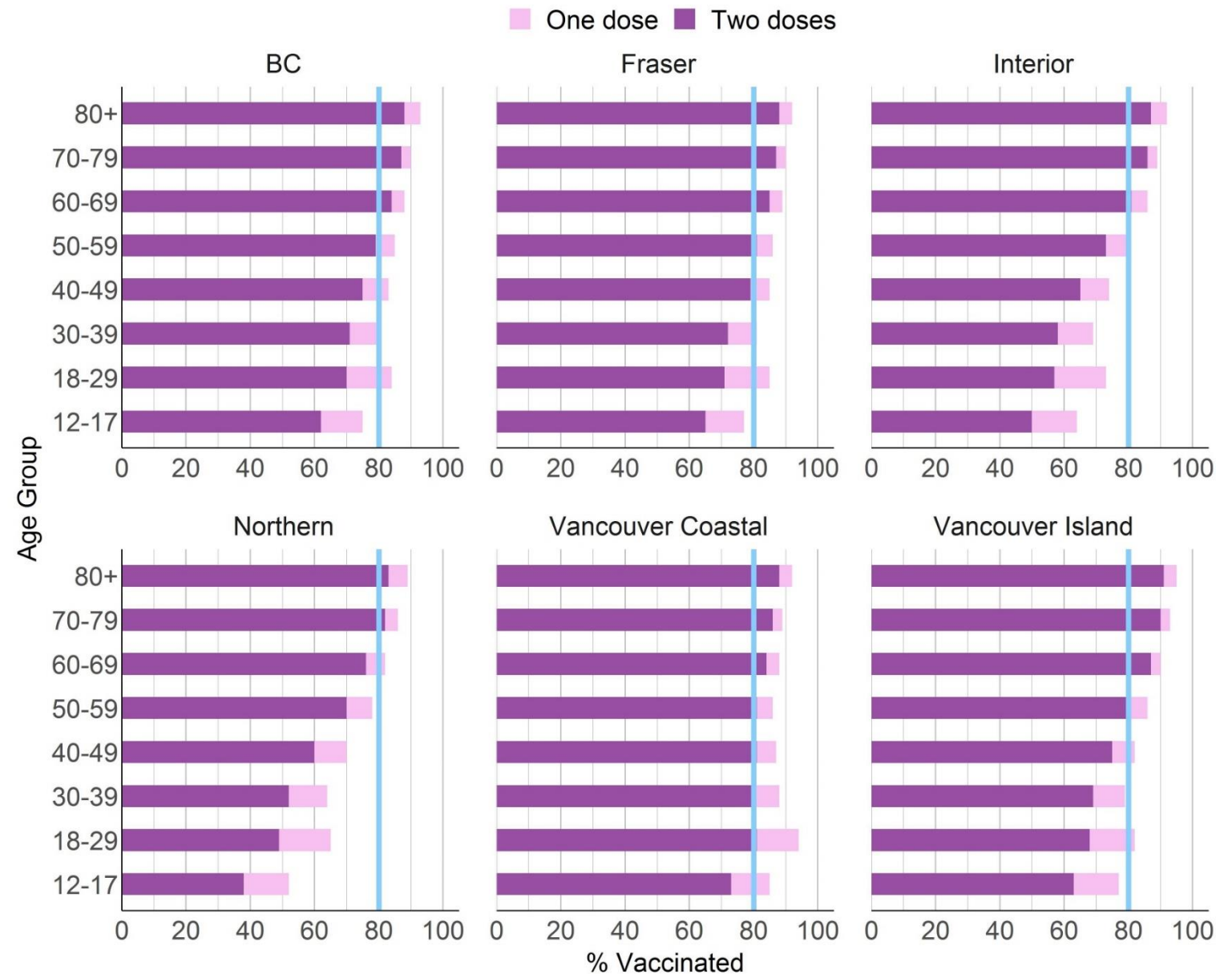
Data include cases from Aug 24-Aug 30, and hospitalizations and deaths from Aug 21-Aug 27, 2021

Vaccination progress in BC over time by age group and dose number up to 31 August



Data updated 2021-08-31
Data Source: Provincial Immunization Registry, PHSA

Vaccination progress in BC and by Health Authority as of August 31, by age group and dose number

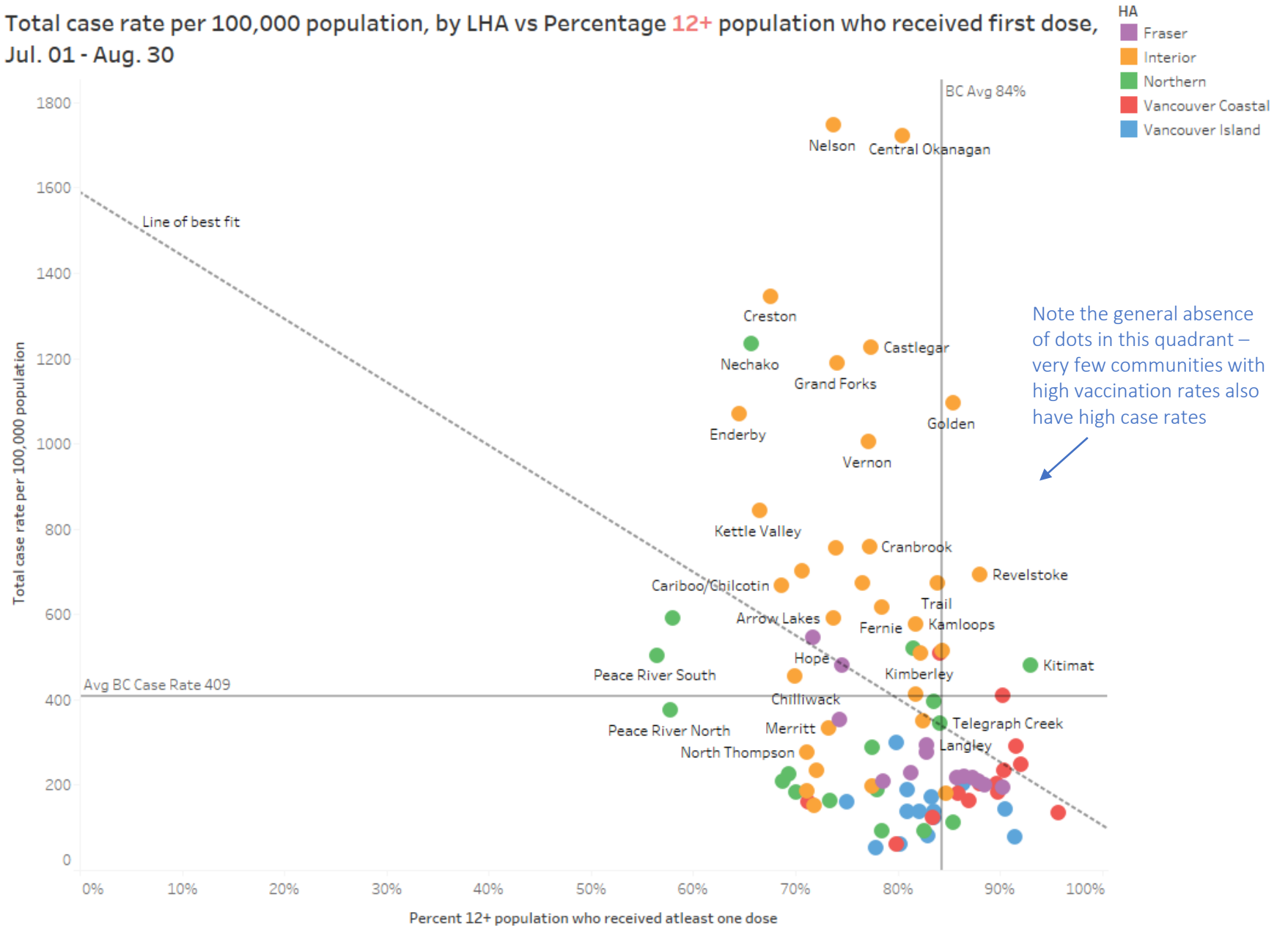


Blue lines at 80% are for visual reference only for easier navigation across panels

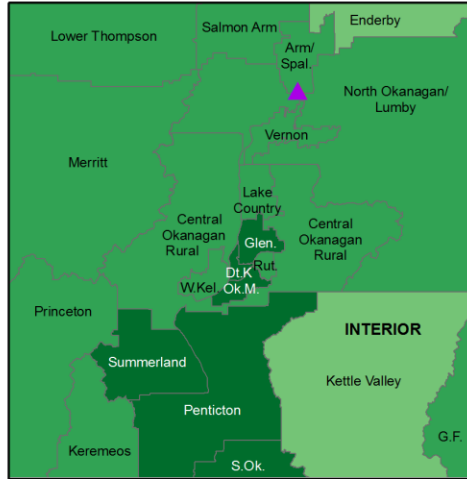
Data updated 2021-08-31
Data Source: Ministry of Health

BC communities with higher vaccination rates generally had lower total number of cases per capita between July 1 and Aug 30

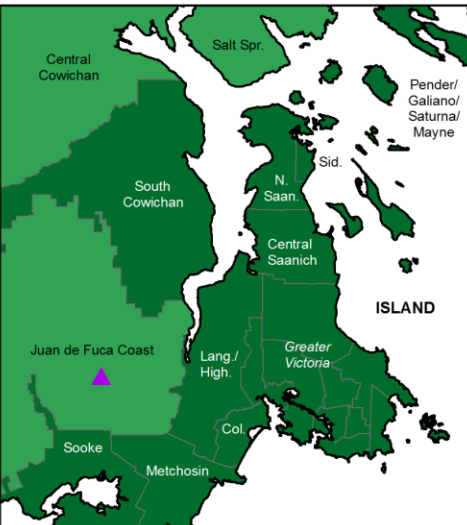
Total case rate per 100,000 population, by LHA vs Percentage 12+ population who received first dose, Jul. 01 - Aug. 30



Okanagan Inset
(Community Health Service Areas)



Greater Victoria Inset
(Community Health Service Areas)



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

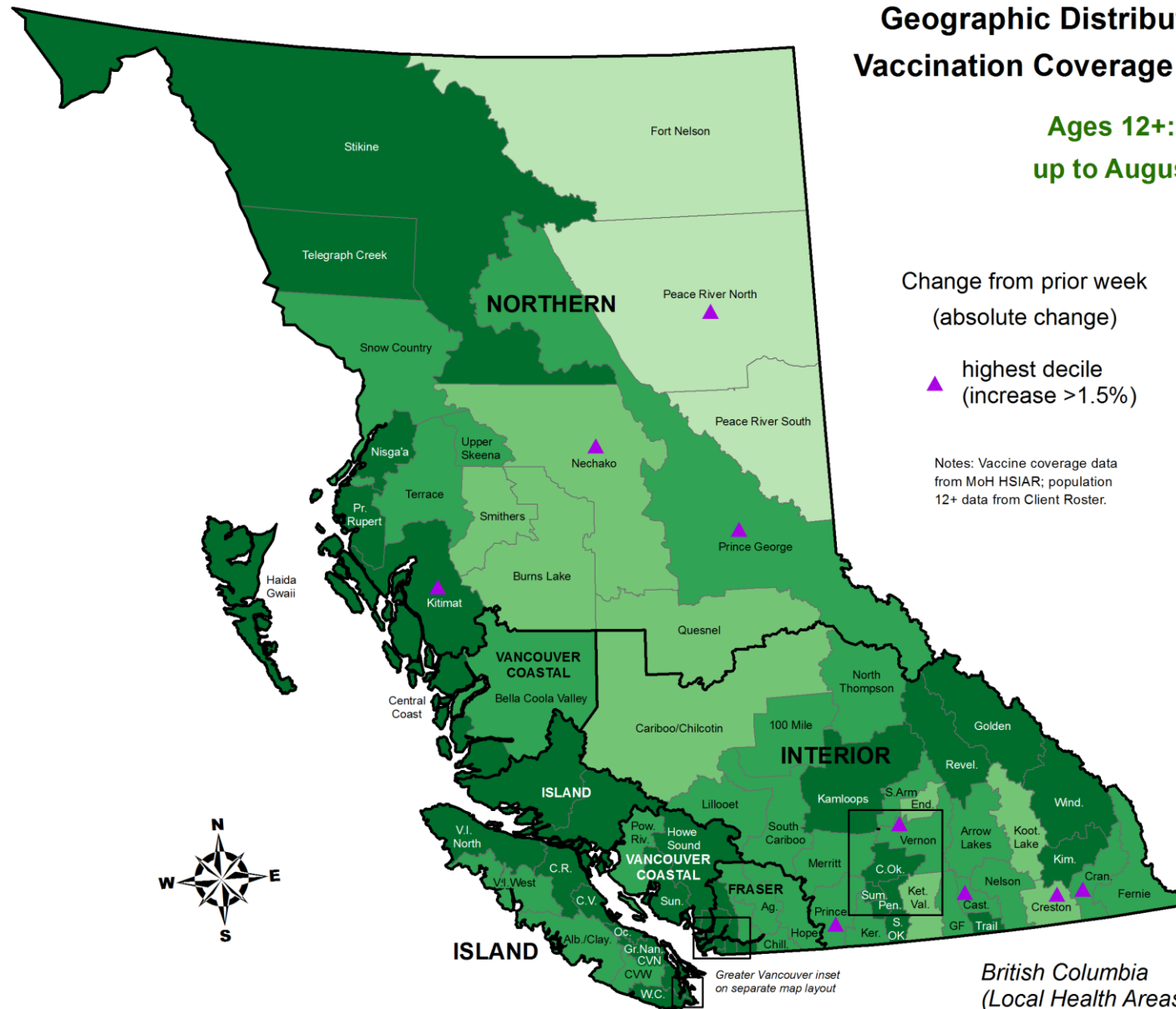
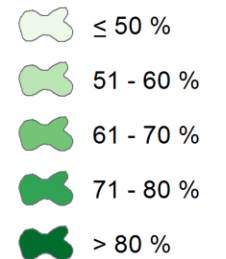
**Ages 12+: 1st Dose
up to August 30, 2021**

Change from prior week
(absolute change)

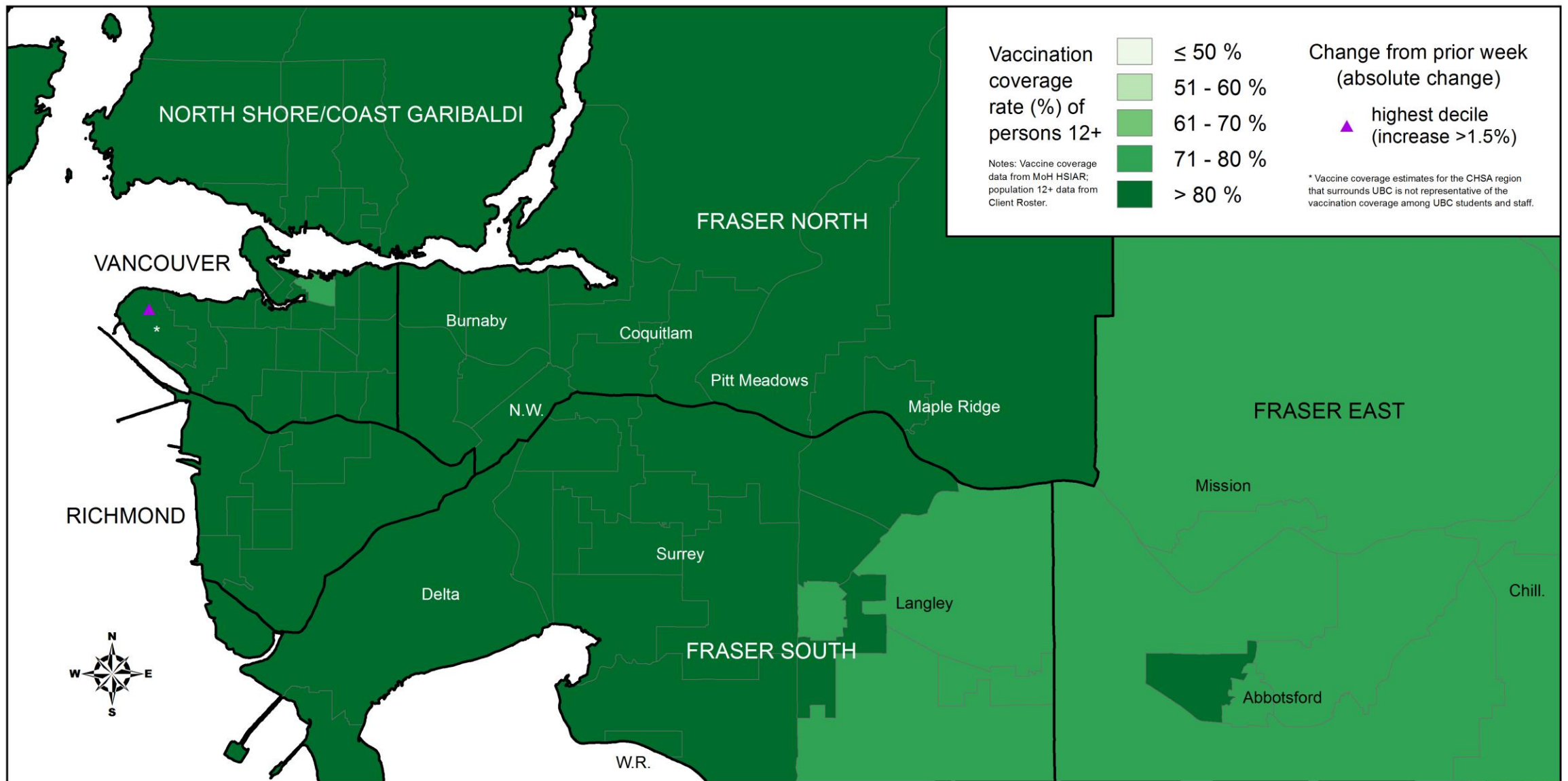
▲ highest decile
(increase >1.5%)

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

Vaccination coverage
rate (%) of persons 12+

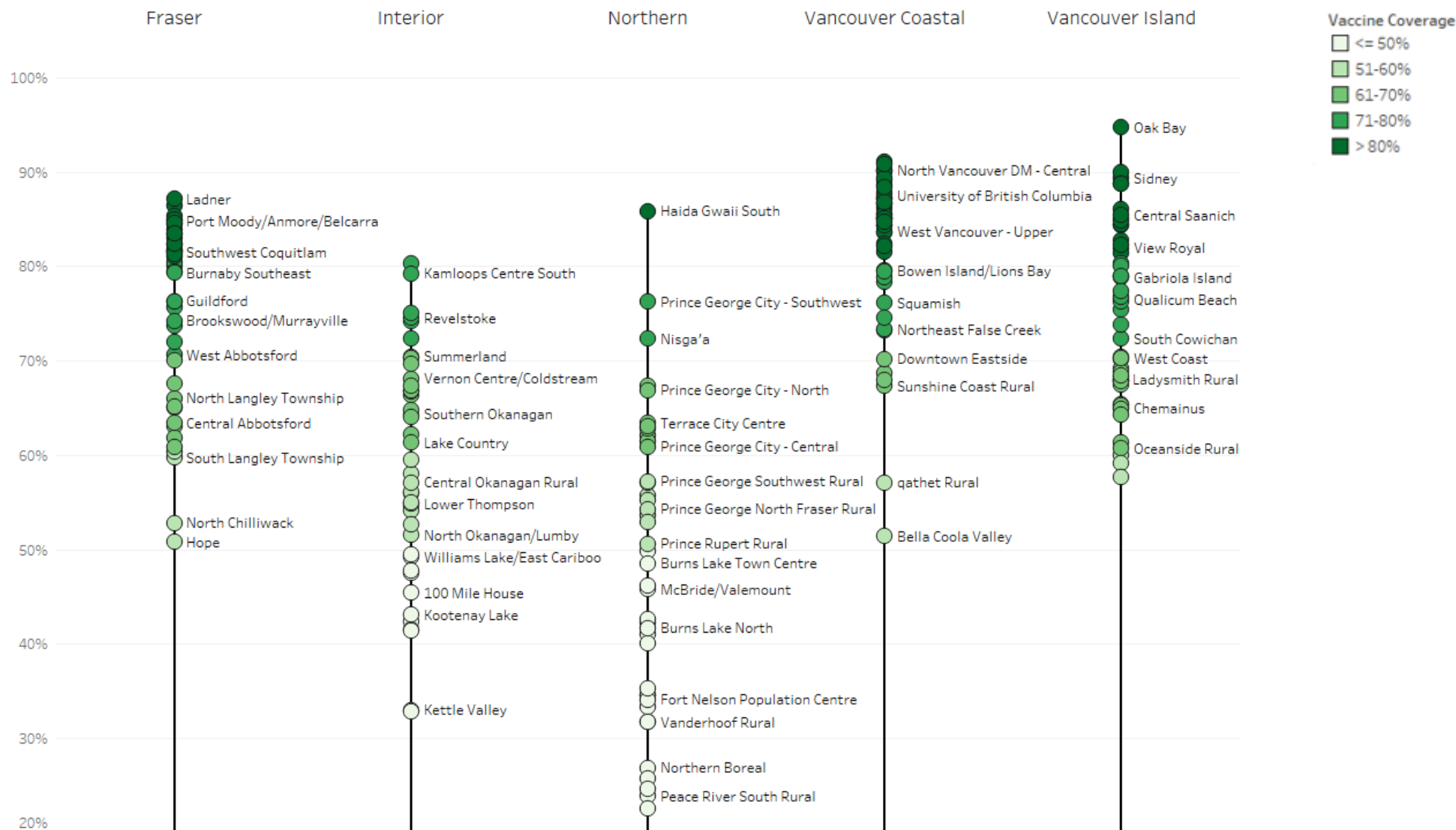


British Columbia
(Local Health Areas)

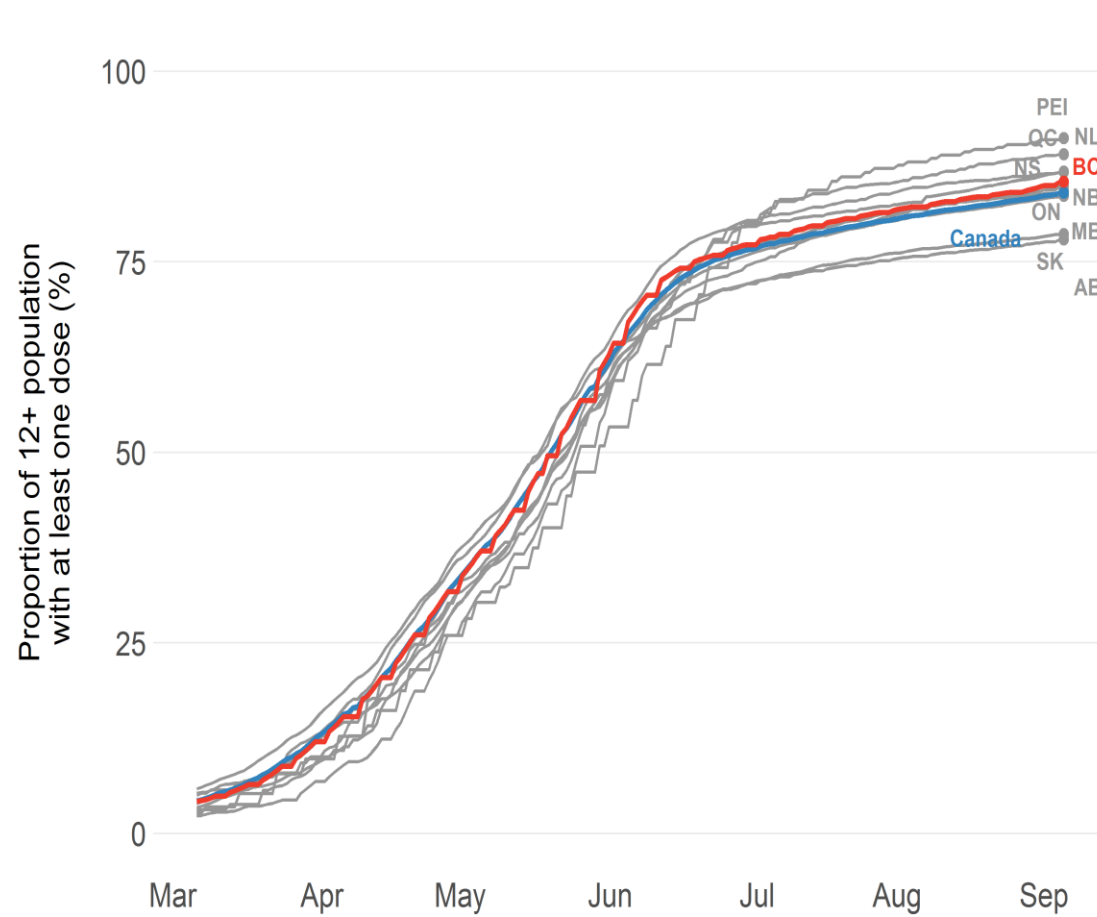


COVID-19 Vaccination Coverage by CHSA: Ages 12+ 1st Dose (up to August 30, 2021)

COVID-19 vaccination coverage with 1st dose among 12-17 year olds, by Local Health Area, up to August 30, 2021: there is more variation in this age group compared with older age groups



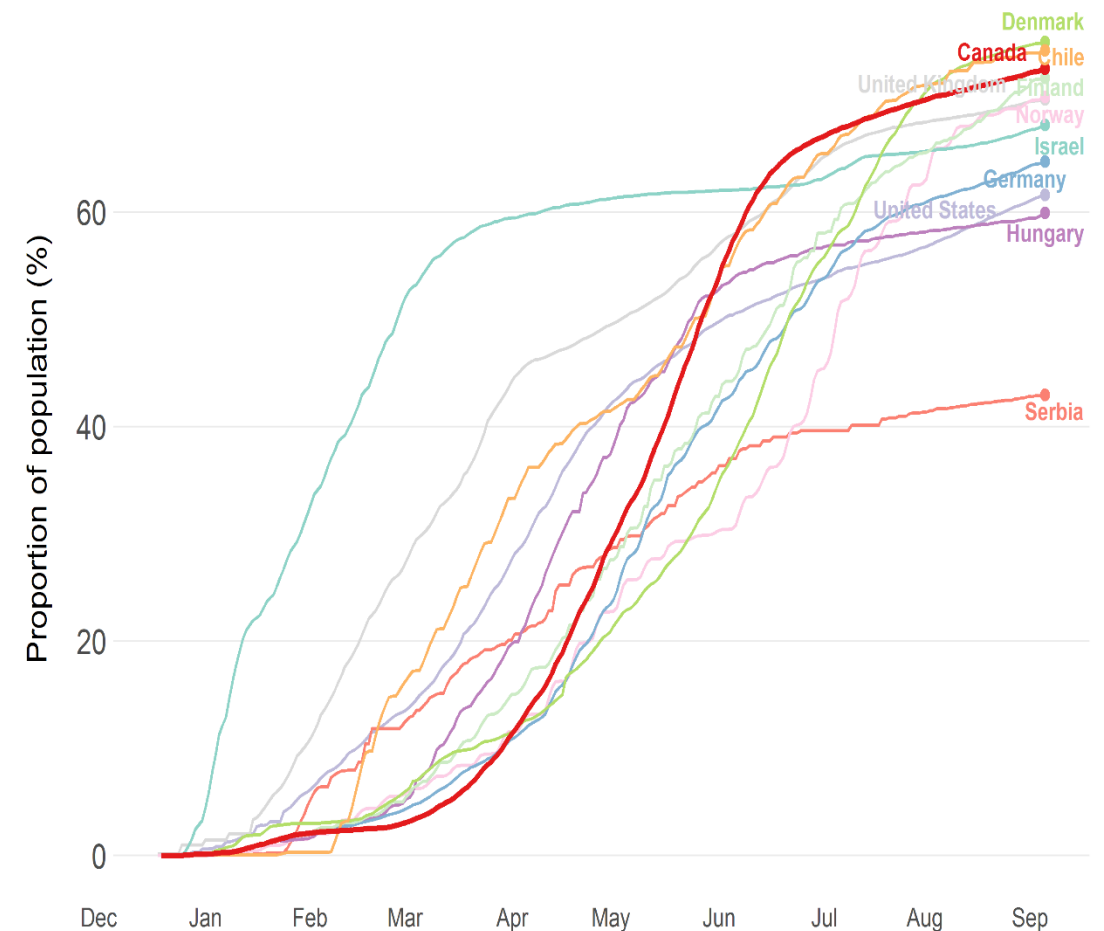
Nationally, BC's vaccination rate is very close to the Canadian average; internationally, Canada is one of the countries with the highest proportion of the population with at least one dose.



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

Data source: [Open Data](#)

Visualization: BCCDC

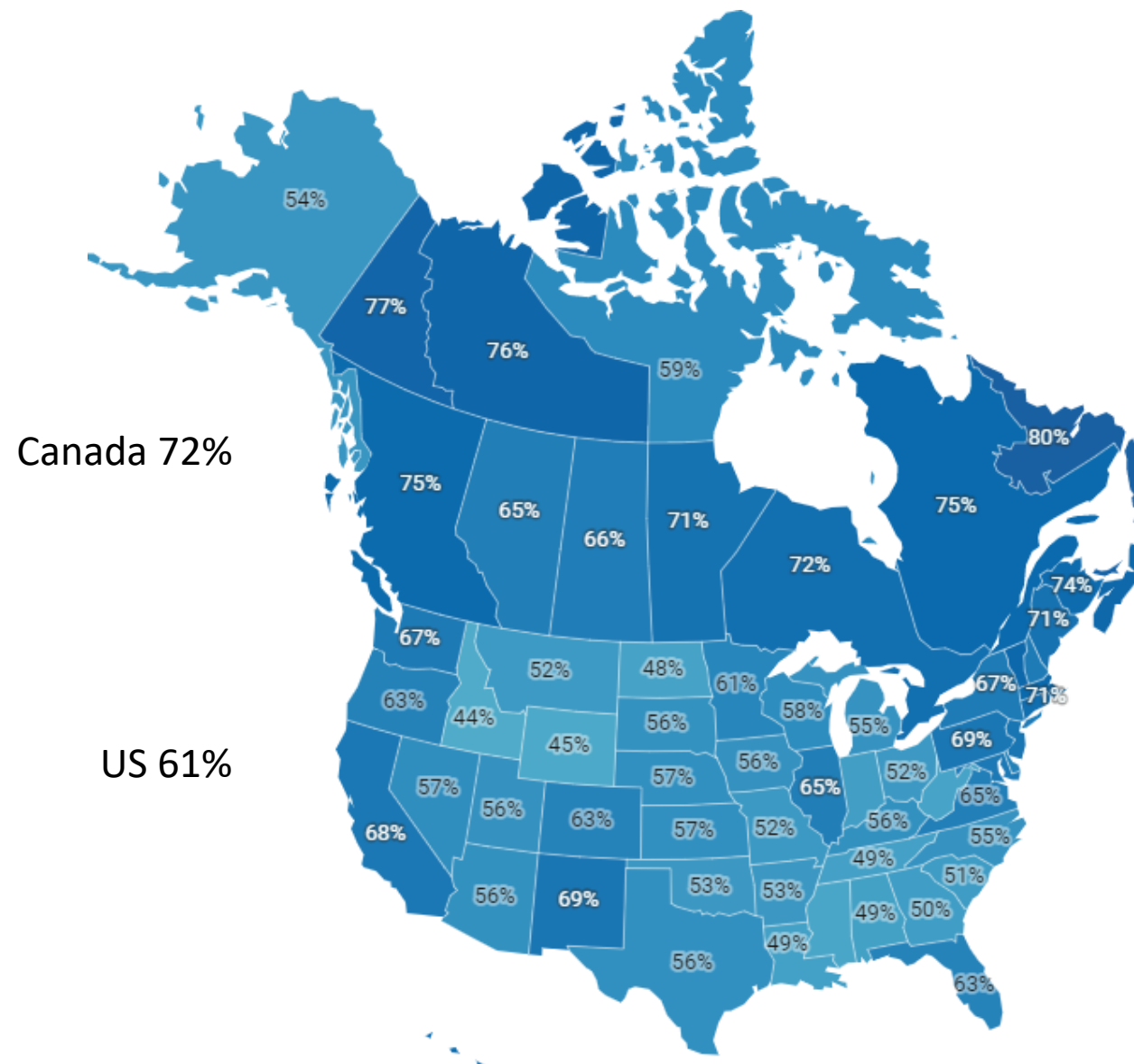


Data from Our World in Data and extracted on 2021-09-01

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

Visualization: BCCDC

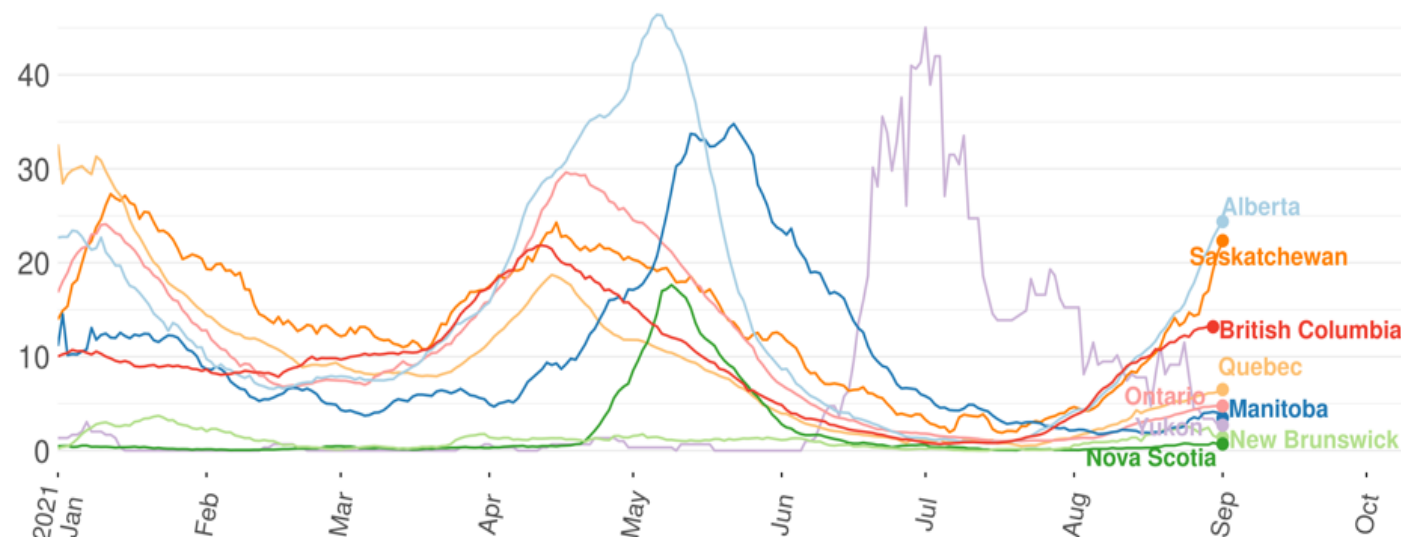
Vaccination rates with at least 1 dose, Canada and US, August 26, 2021



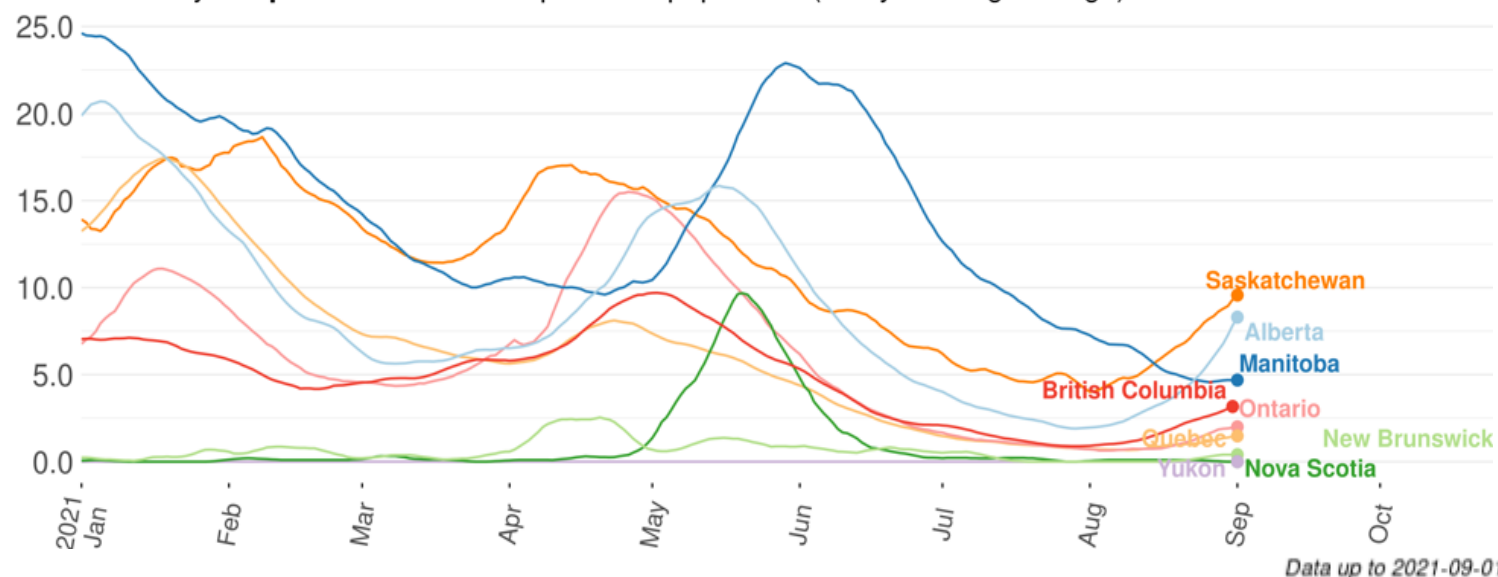
Source: Dr. Trevor Tombe

In recent months, BC's case rate has been similar to AB and SK rates, but hospital census has been lower

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



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

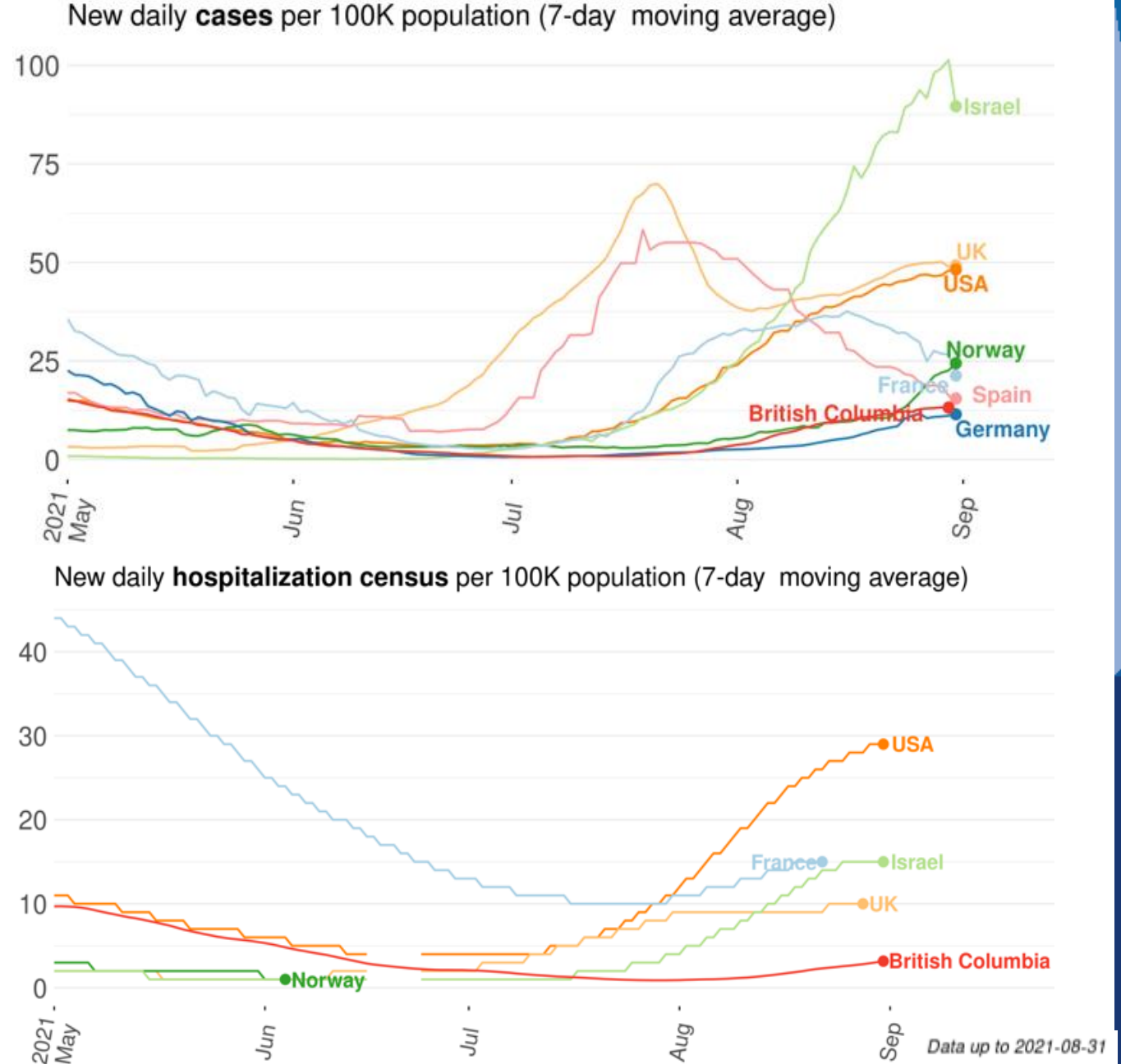


For most up to date figures, and to make your own comparisons, please go to the [Epi App](#)

Growth rate of cases in the UK and US has slowed down; Israel case rate is declining. In Europe, situation is variable, with case rate declining in some countries (e.g. Spain, France), but increasing in others (e.g. Norway, Germany).

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](#)



Lab - Key Messages

- **Percent positivity** among publicly funded tests is stable at $\approx 9\%$
 - Test positivity varies by HA, ranging from 6.8% in VIHA to 21.9% in NH.
 - Case incidence rate remains highest among 19-29 years, but rate is levelling; % positivity $>10\%$ among 5 to 29 years.
- **Testing rates** continue to increase 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 > 22 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

3,414,547	total specimens tested
86,735	new this epi week
173,386	total positive specimens
4,795	new positive this epi week
16 hr	mean turnaround time (TAT)
14 [9-22]	Median [Q1 – Q3] TAT

↑ **8%** relative to last week

↑ **5.5%** positivity
↑ **0.3%** absolute change from last week

↑ **10%** TAT relative to last week

Weekly Summary of Lab tests paid Publicly

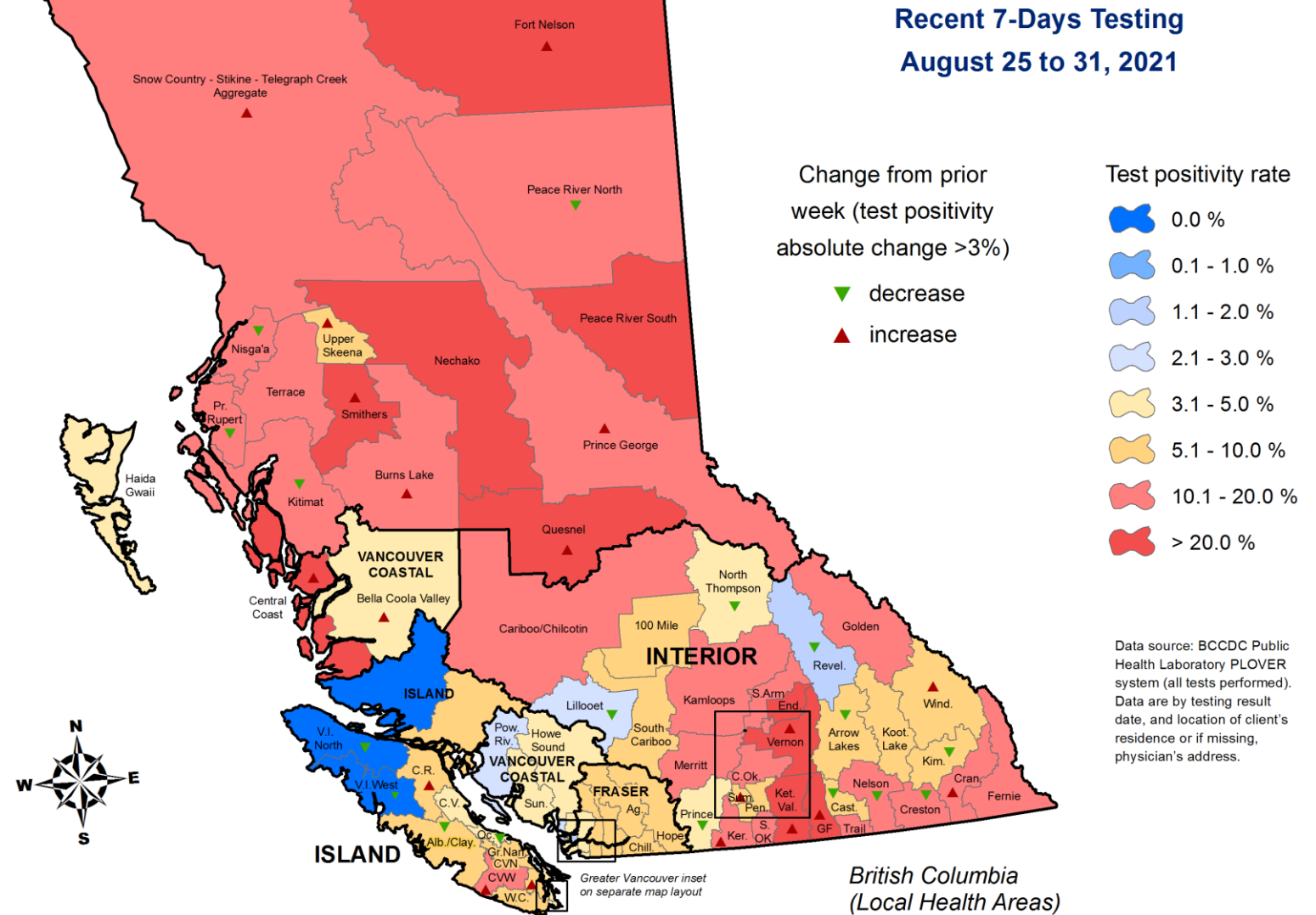
2,597,748	total specimens tested
52,874	new this epi week
171,336	total positive specimens
4,678	new positive this epi week

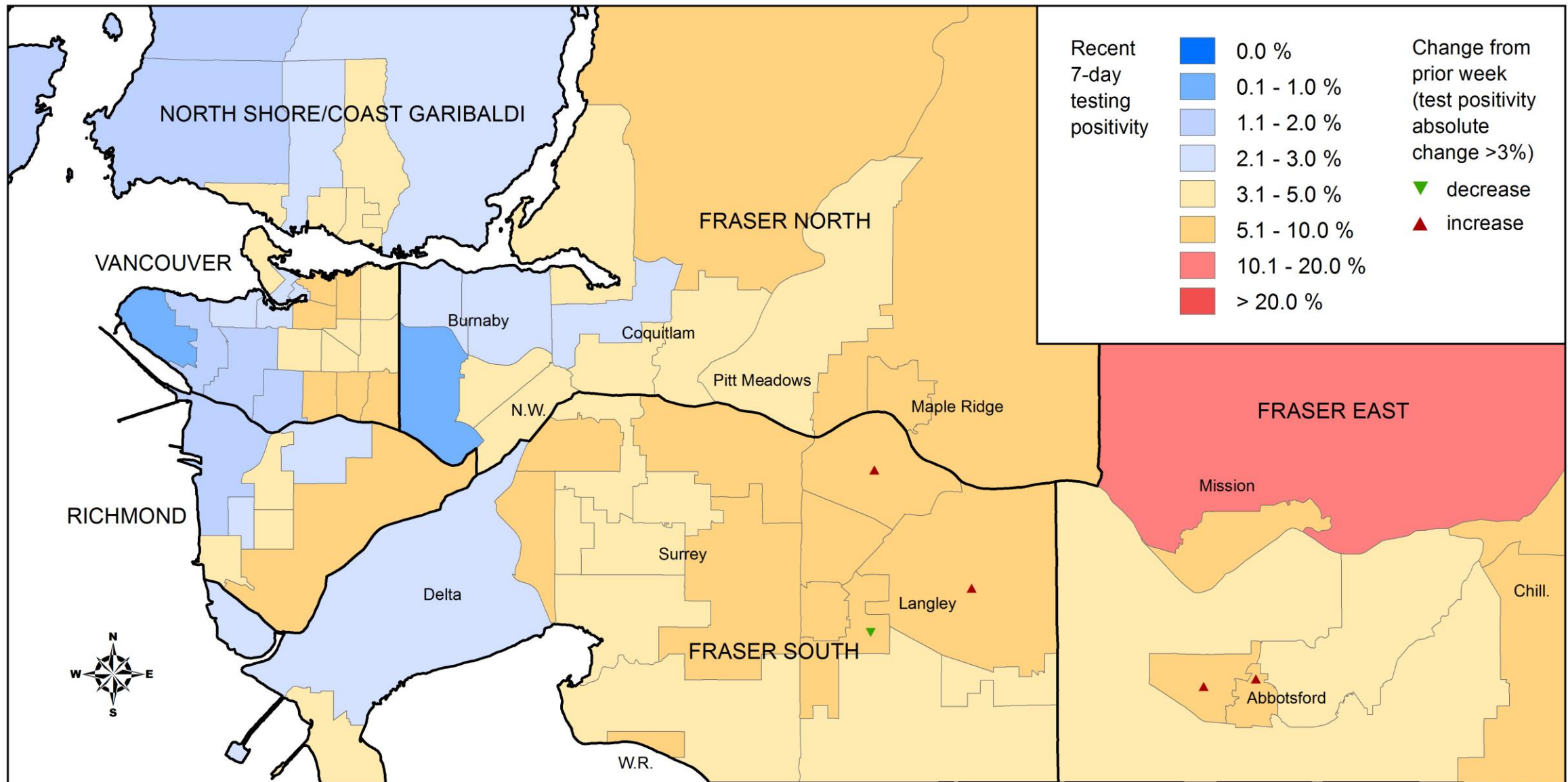
↑ **17%** relative to last week

↓ **8.9%** positivity
↓ **0.2%** absolute change from last week

Map of British Columbia showing the distribution of 12 salmon populations. The map is color-coded: orange for Central Cowichan, South Cowichan, Juan de Fuca Coast, Sooke, and Metchosis; light blue for Salt Spr., Col., and Greater Victoria; yellow for N. Saan, Central Saanich, and Pender/Galiano/Saturna/Mayne; and dark blue for the Strait of Georgia. Red triangles indicate populations with high genetic differentiation, while green and blue triangles indicate populations with low differentiation. The Strait of Georgia is labeled 'ISLAND'.

Recent 7-Days Testing
August 25 to 31, 2021

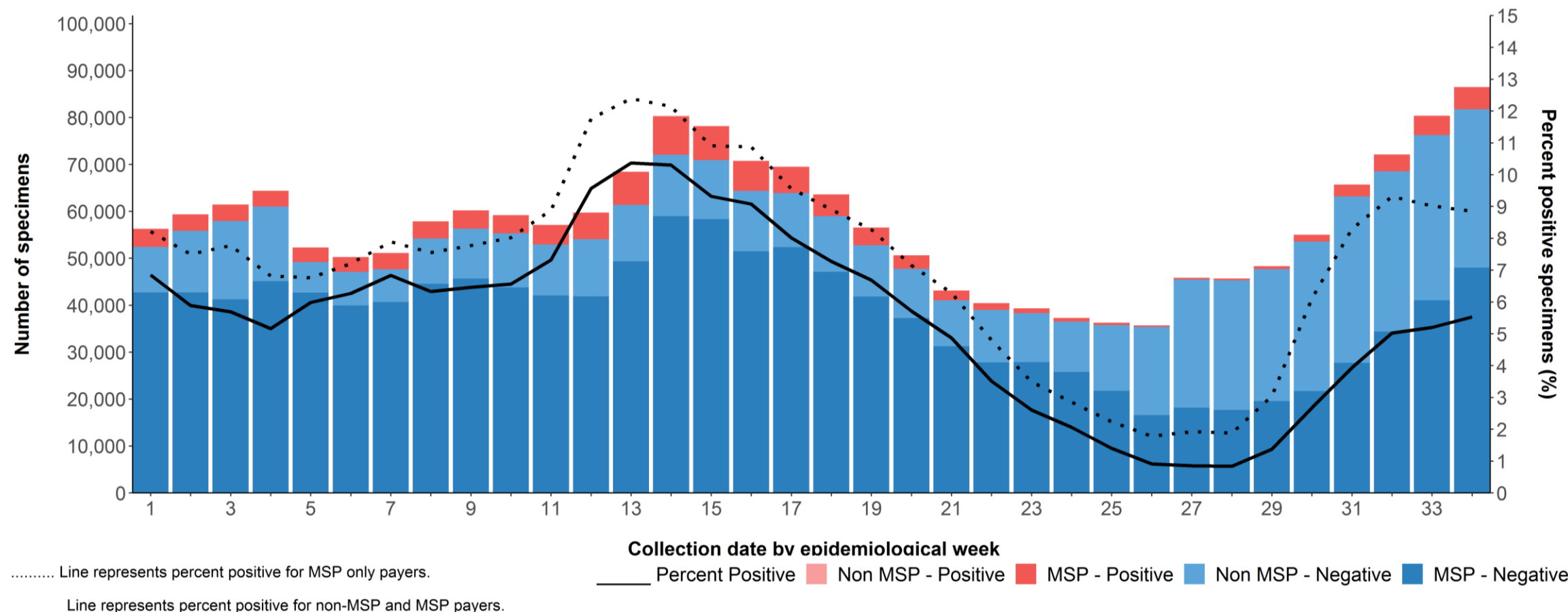




COVID-19 Recent 7-Day Test Positivity by CHSA (August 25 to 31, 2021)

Includes all tests

Among publicly funded tests: percent positivity is stable at ~9%, and testing rates have continued to increase (+17%).

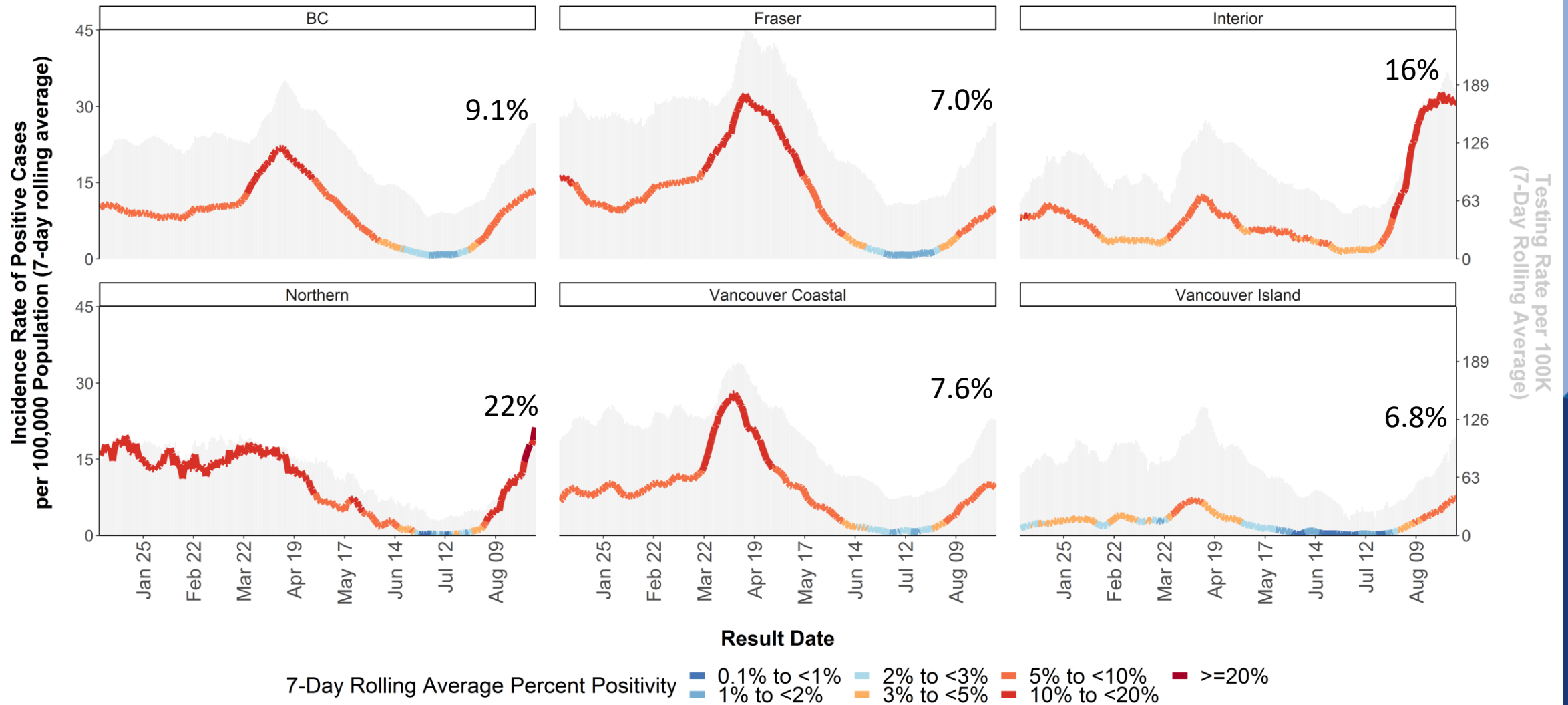


Note: Invalid (n = 1325) and indeterminate (n = 5031) results have been excluded

Data source: PLOVER 02-Sep-2021

Overall incidence rate has increased, with positivity being highest in Northern (22%) and Interior (16%)

Case incidence rate, test percent positivity, and testing rate (Public Payers Only). Jan 1 2020 - Aug 31, 2021.

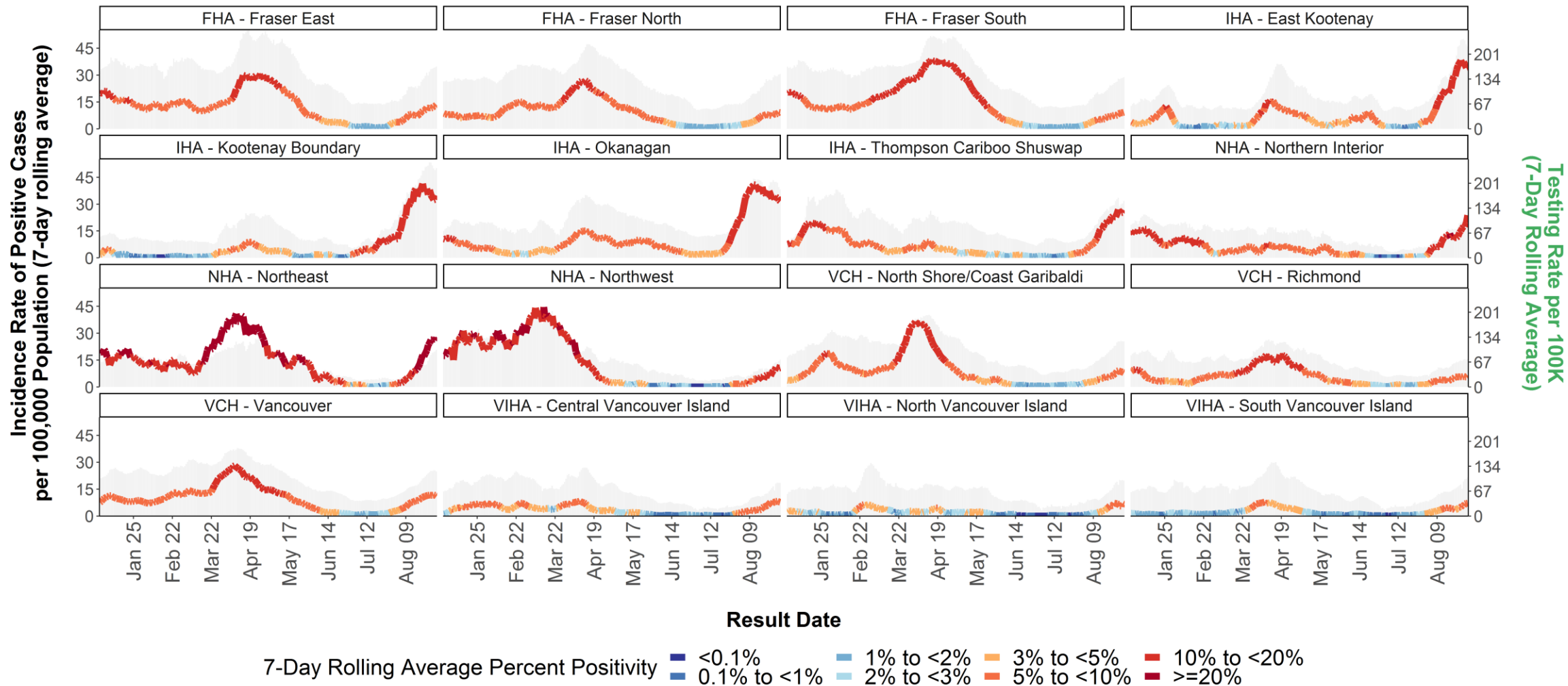


Data source: PLOVER 31-Aug-2021

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

Incidence and test positivity are high across Interior and Northern HSDAs, with many showing increasing trends.

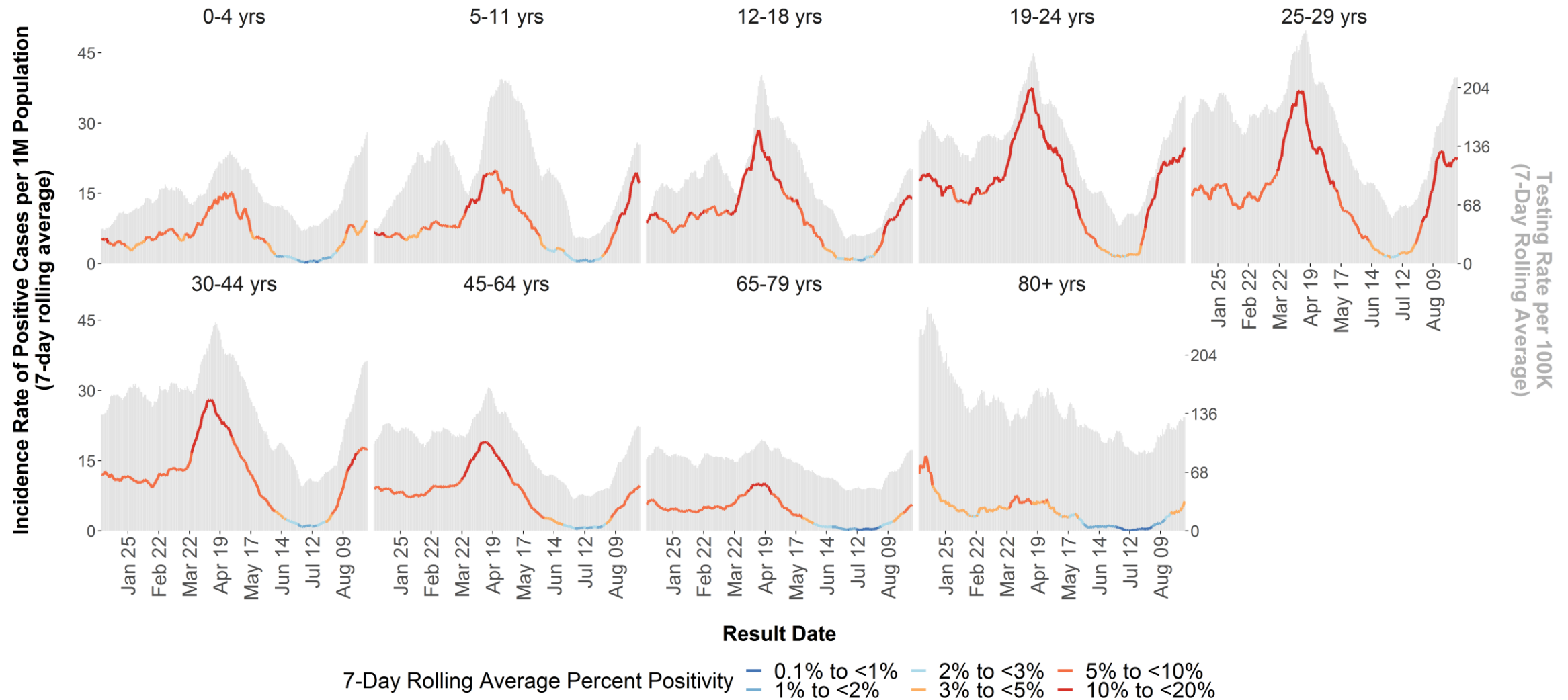
Case incidence rate, test percent positivity, and testing rate by HSDA (Public Payers Only).
Jan 1 2021 - Aug 31, 2021.



Data source: PLOVER 31-Aug-2021

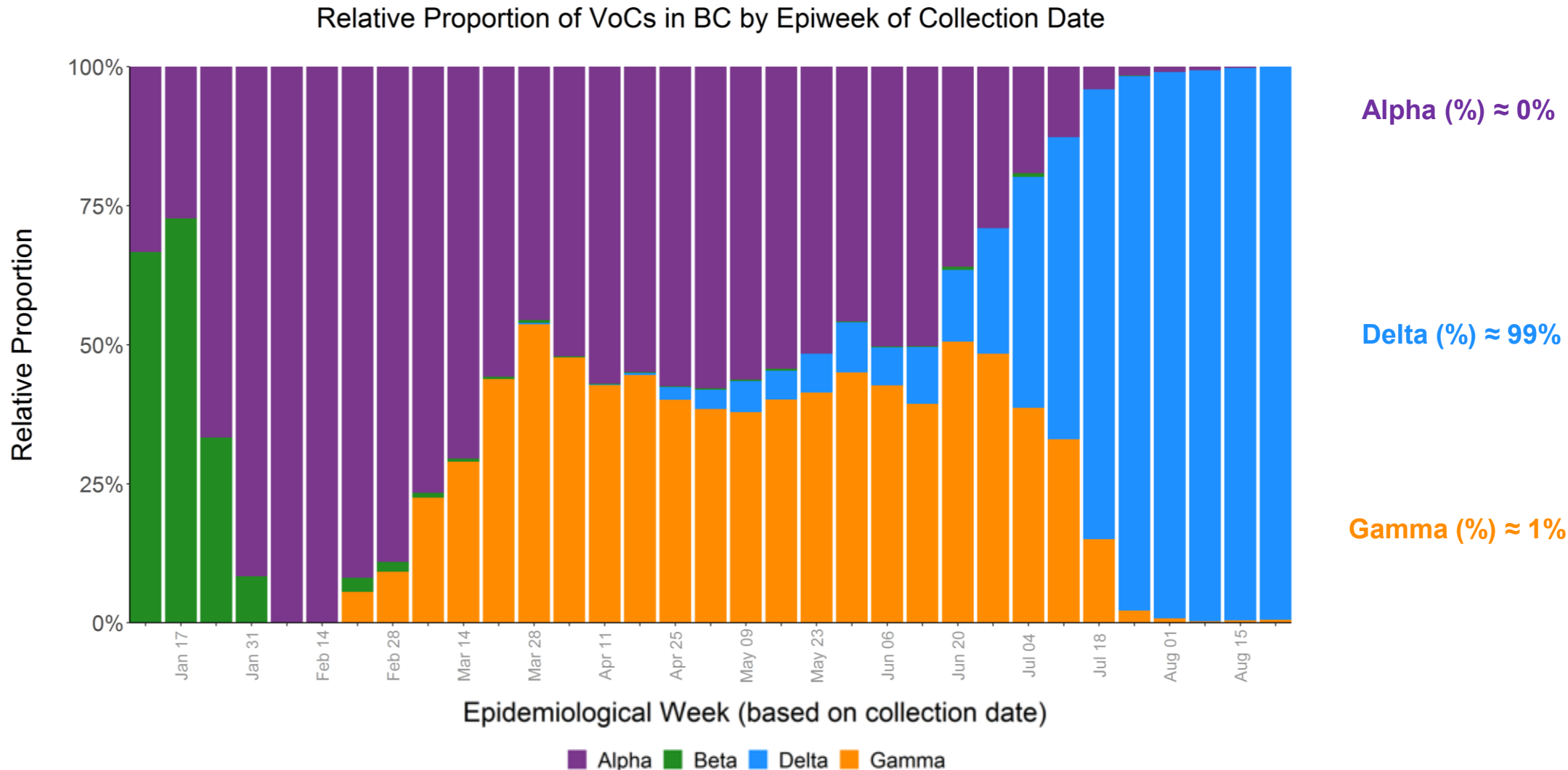
Case incidence rate remains highest among 19-29 years, but rate is levelling; % positivity >10% among 5 to 29 years.

Case incidence rate, test percent positivity, and testing rate by age (Public Payers Only). Jan 1 2020 - Aug 31, 2021.



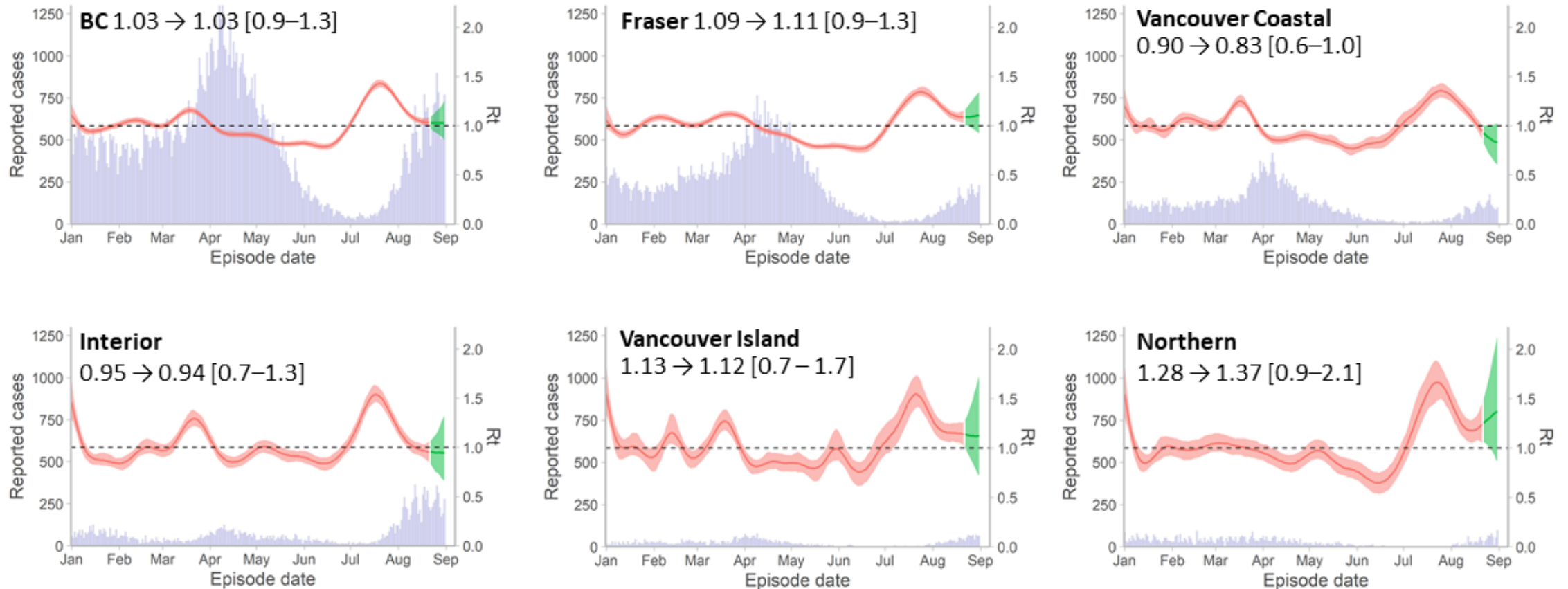
Data source: PLOVER 31-Aug-2021

Among sequenced VOC samples provincially based on information for August 22 to 28, the dominant VOC continues to be Delta 99%



Dynamic modeling: recent trends

Modelling indicates that overall R_t is near 1, but trends differ by region. Estimates are shown for last week → 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 August 31, 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 → 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](#)