

BCCDC Weekly Data Summary

6 May 2021

Disclaimer

Data and key messages within these documents are not finalized and considered to be work in progress that is subject to change.

Data within these documents are updated on a rolling basis and may not be final. Data may be subject to retroactive changes.

Correct interpretation of figures may be difficult with the limited inclusion of data notes and methodology descriptions.

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Overall Weekly Summary

- **Case rates** continue to decline in all HAs; **test positivity** is at 9.2% provincially for publicly funded tests, a slight decline from last week.
- **New hospitalizations** continue to be elevated, but beginning to stabilize; **hospital/critical care census** are increasing in FH, VCH, IH; **new deaths** are stable and low.
 - Majority of hospitalizations among individuals aged >40 years
 - Majority of deaths in individuals aged >80 years
- The share of **VOCs** among screened cases in BC is ~80% in epi week 17. VOCs have been detected in all regions of the province. Among sequenced samples provincially based on information for epi week 16, P.1 (~43%) and B.1.1.7 (~57%) remain two dominant VOCs.
- **Alberta's** case rate continues to be the highest of all jurisdictions in Canada and the US (~3.3x the BC rate). Potential for importation into BC is high.
- As of May 6, 43% of adult population in BC has received first dose of **vaccine**, 84% of those over 70 years.
 - Vaccine coverage varies regionally
 - The number of outbreaks in LTCFs remains very low following vaccination campaign

April 30 to May 6: BC COVID-19 Profile



132,925 total cases
3,443 new this week



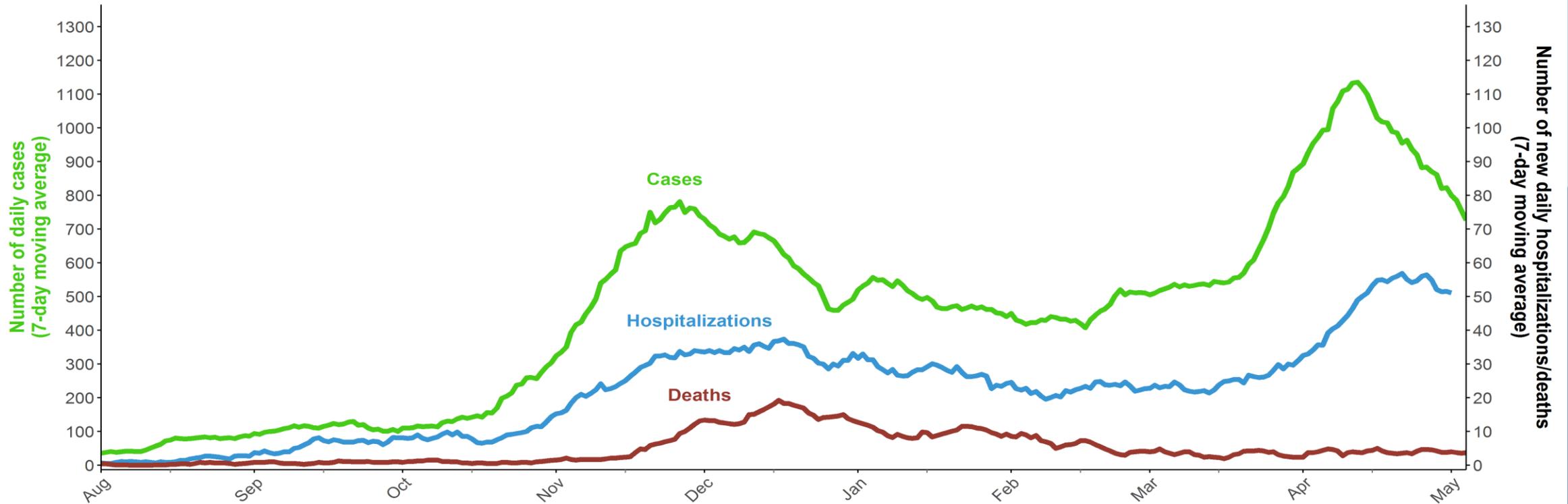
1,594 total deaths
13 new this week



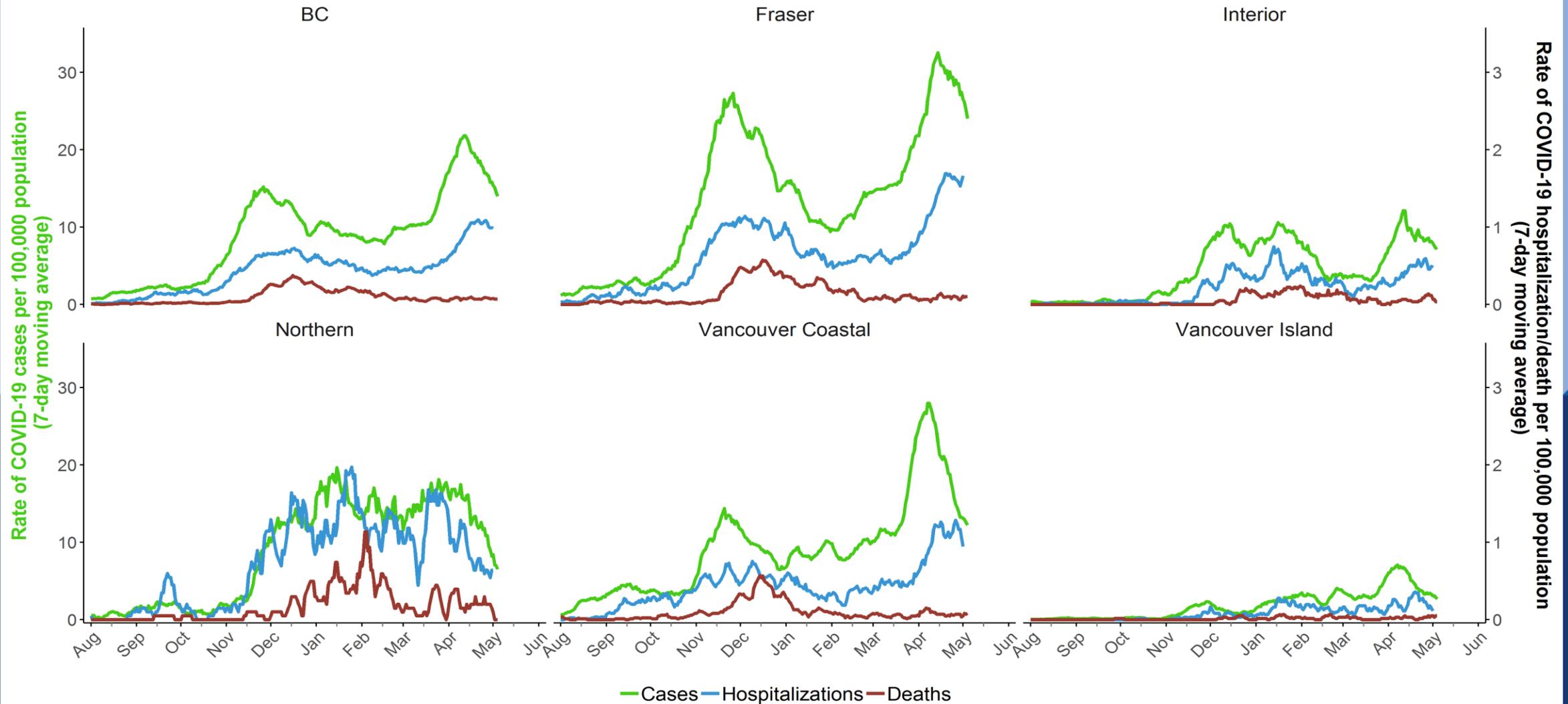
6,887 ever hospitalized
218 new this week



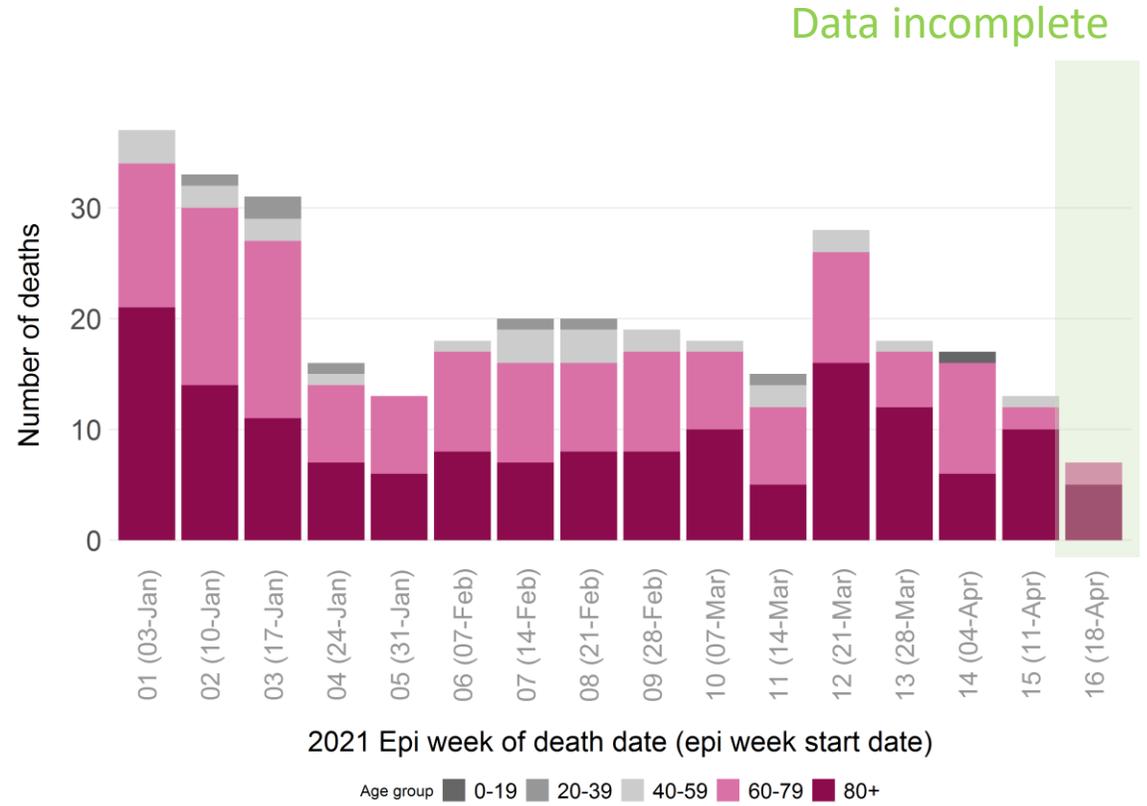
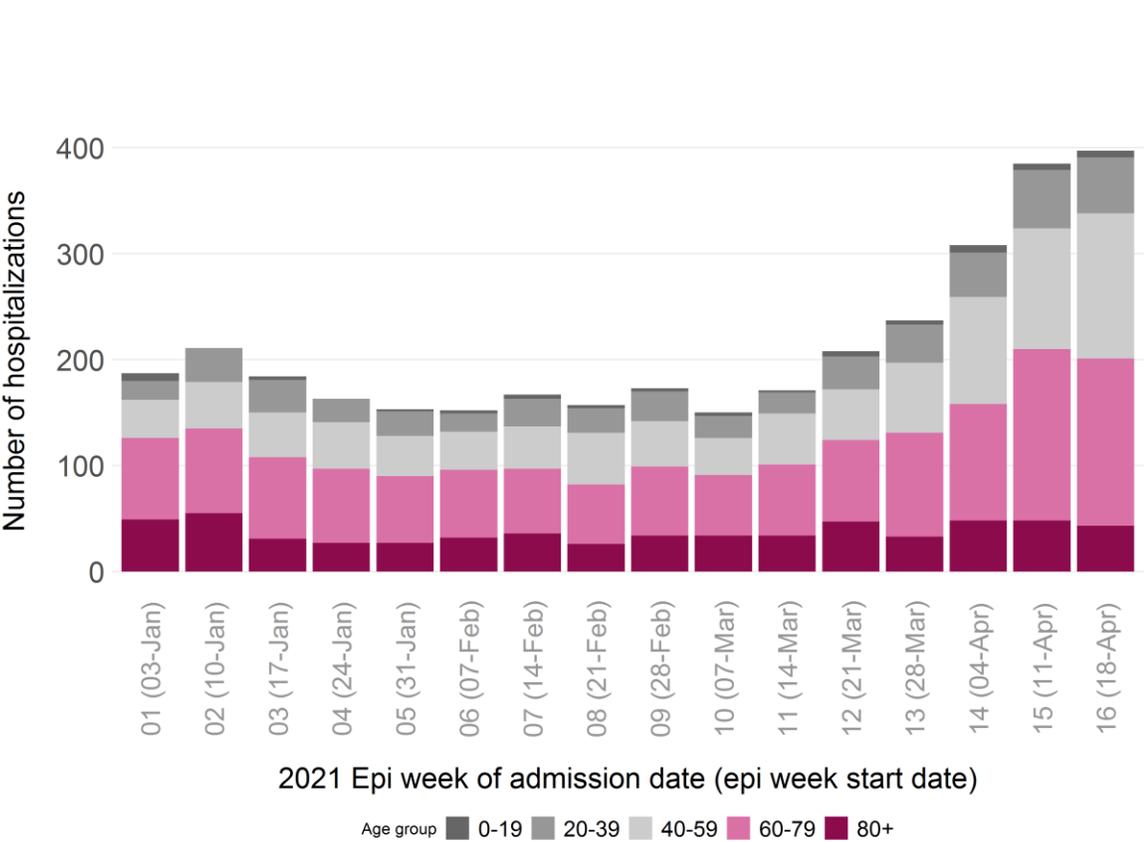
124,252 removed from isolation
4,467 new this week



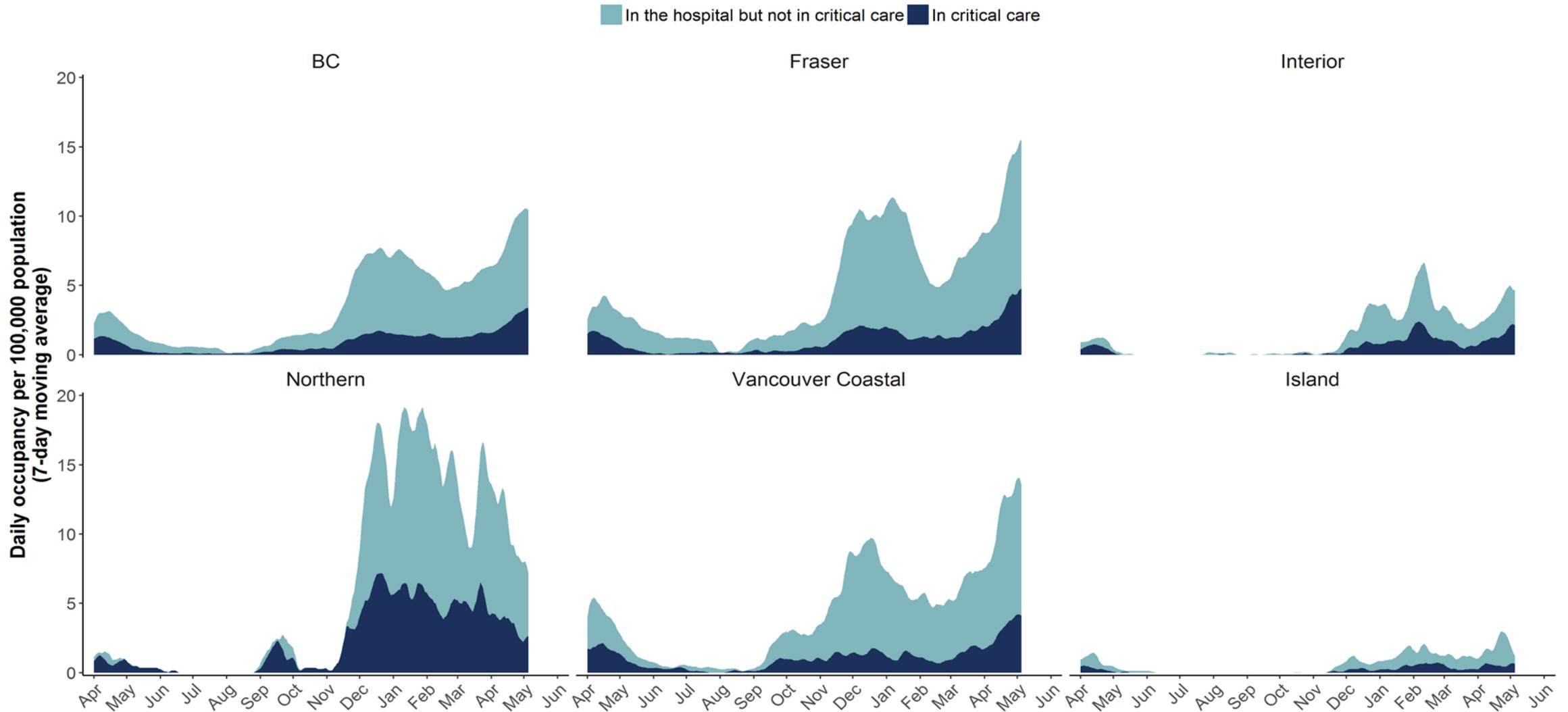
Case rates are continuing to decline in each HA; **new hospitalizations** are stabilizing; **new deaths** are stable and low.



Number of new hospitalizations stabilizing; the majority of hospitalizations are primarily among individuals 40-79 years. Deaths decreasing and mostly among individuals ≥ 80 years.

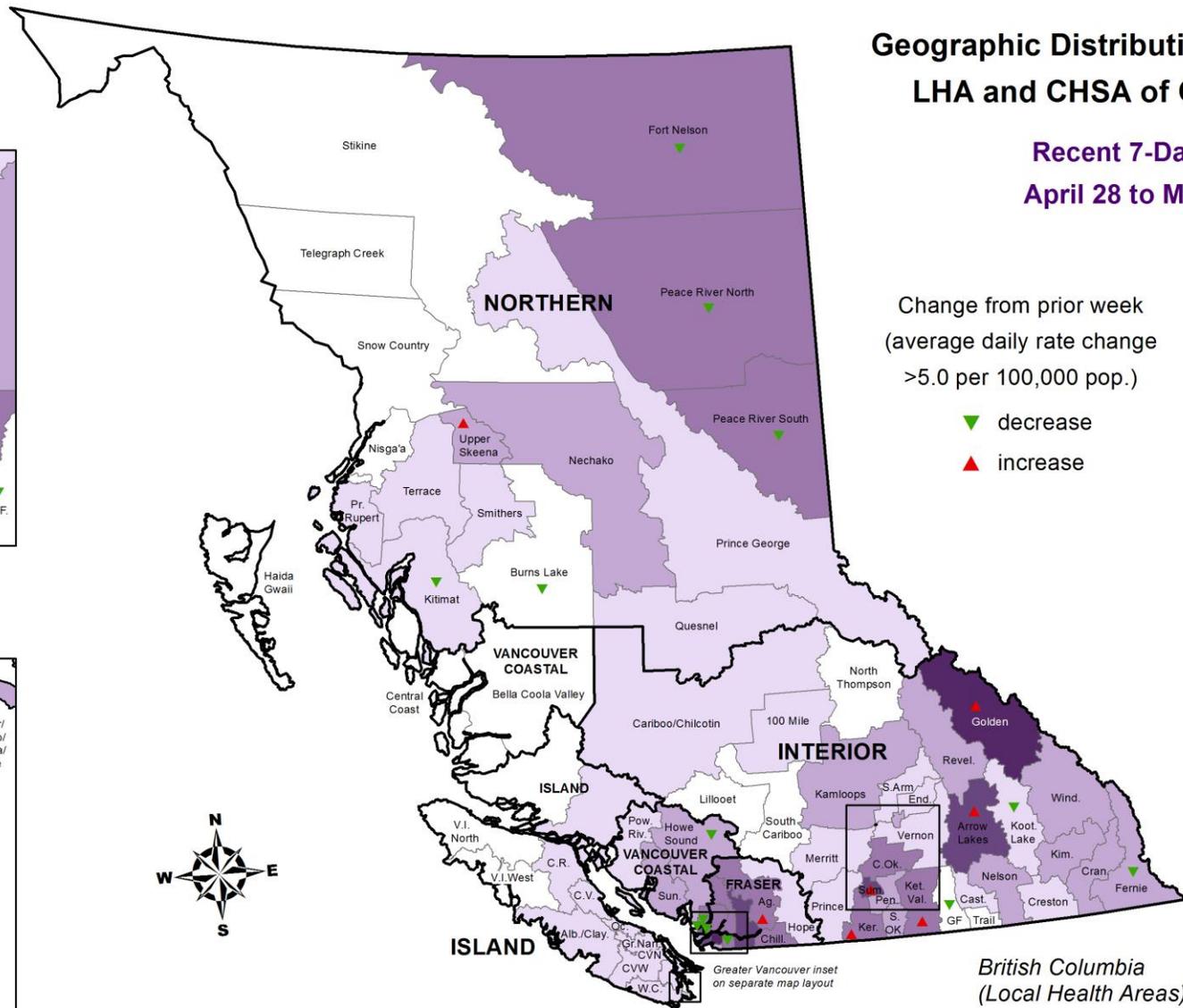
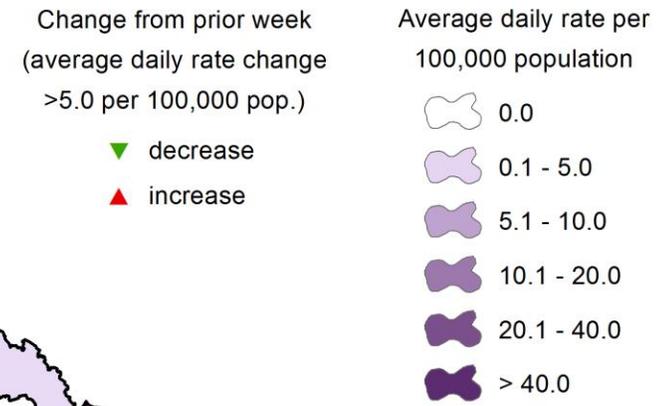


Hospital and critical care census is showing early signs of stabilization

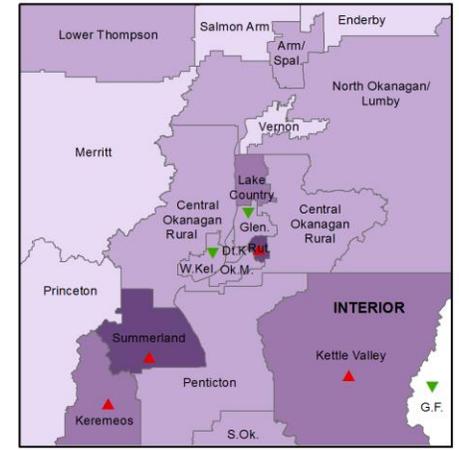


Geographic Distribution of COVID-19 by LHA and CHSA of Case Residence

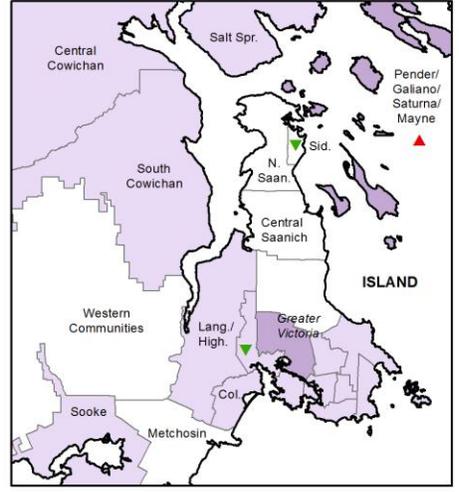
Recent 7-Days Cases
April 28 to May 4, 2021



Okanagan Inset (Community Health Service Areas)

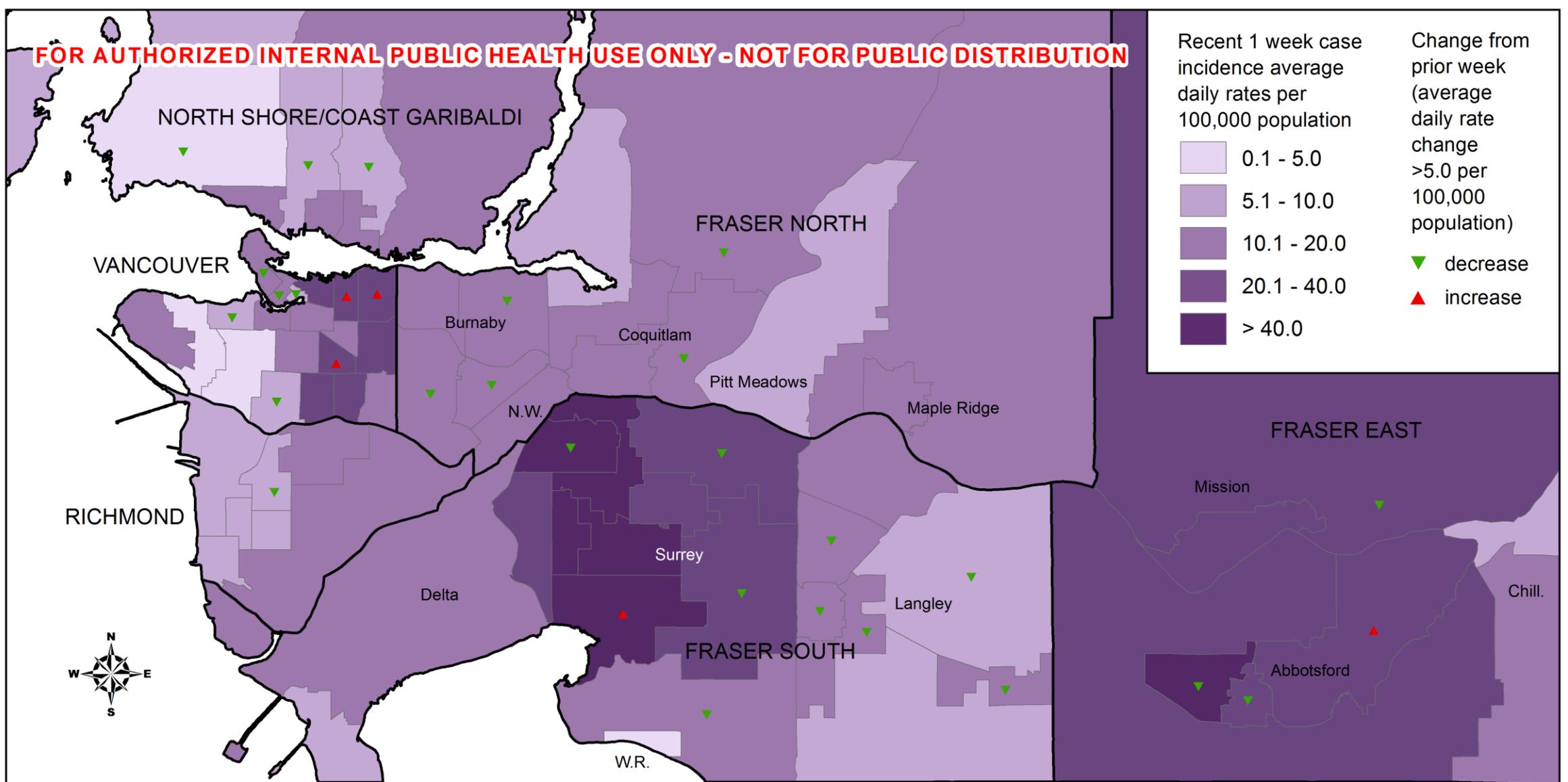


Greater Victoria Inset (Community Health Service Areas)



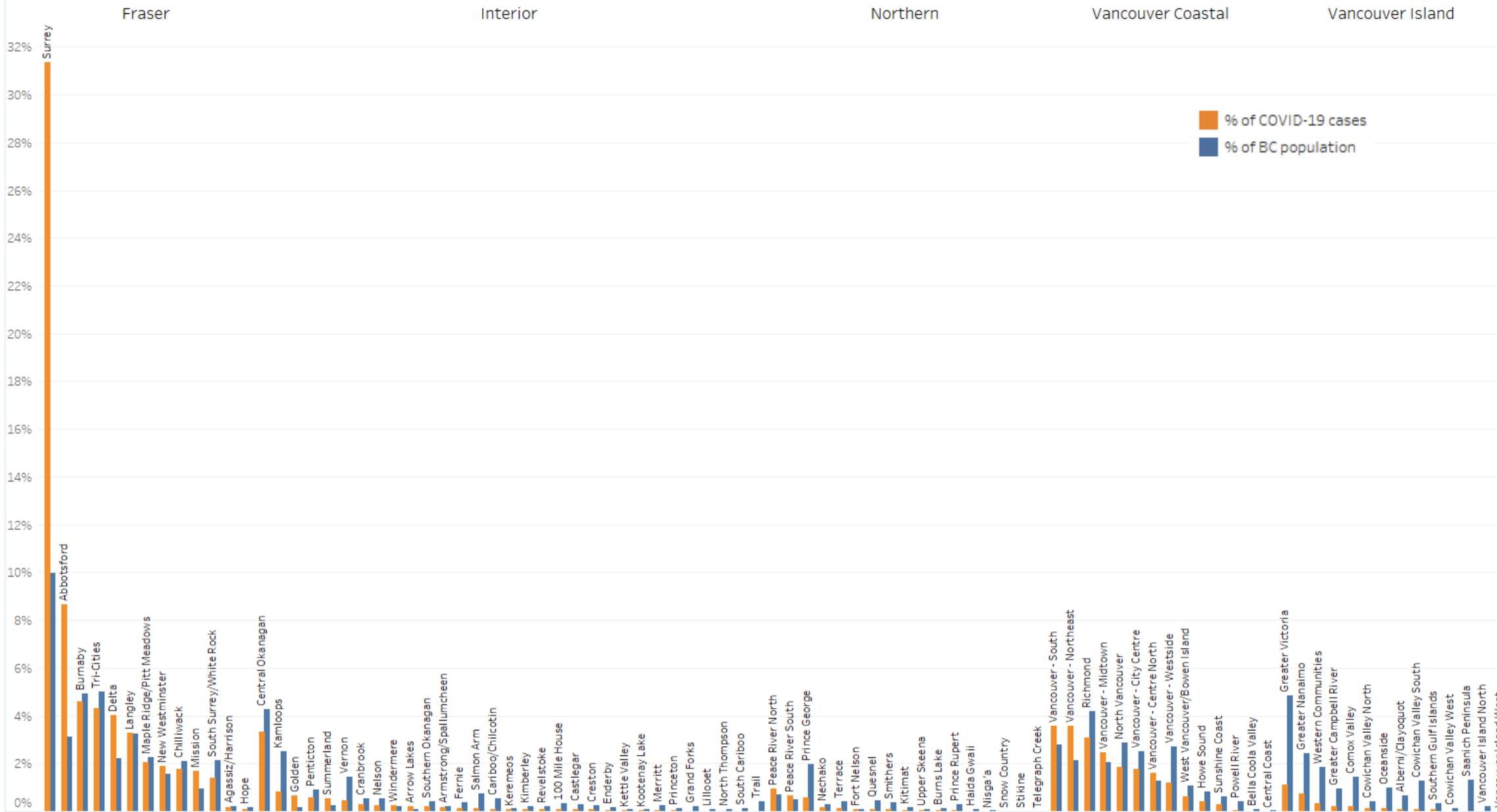
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COVID-19 Recent 1 Week Case Incidence Rates by CHSA (April 28 to May 4, 2021)

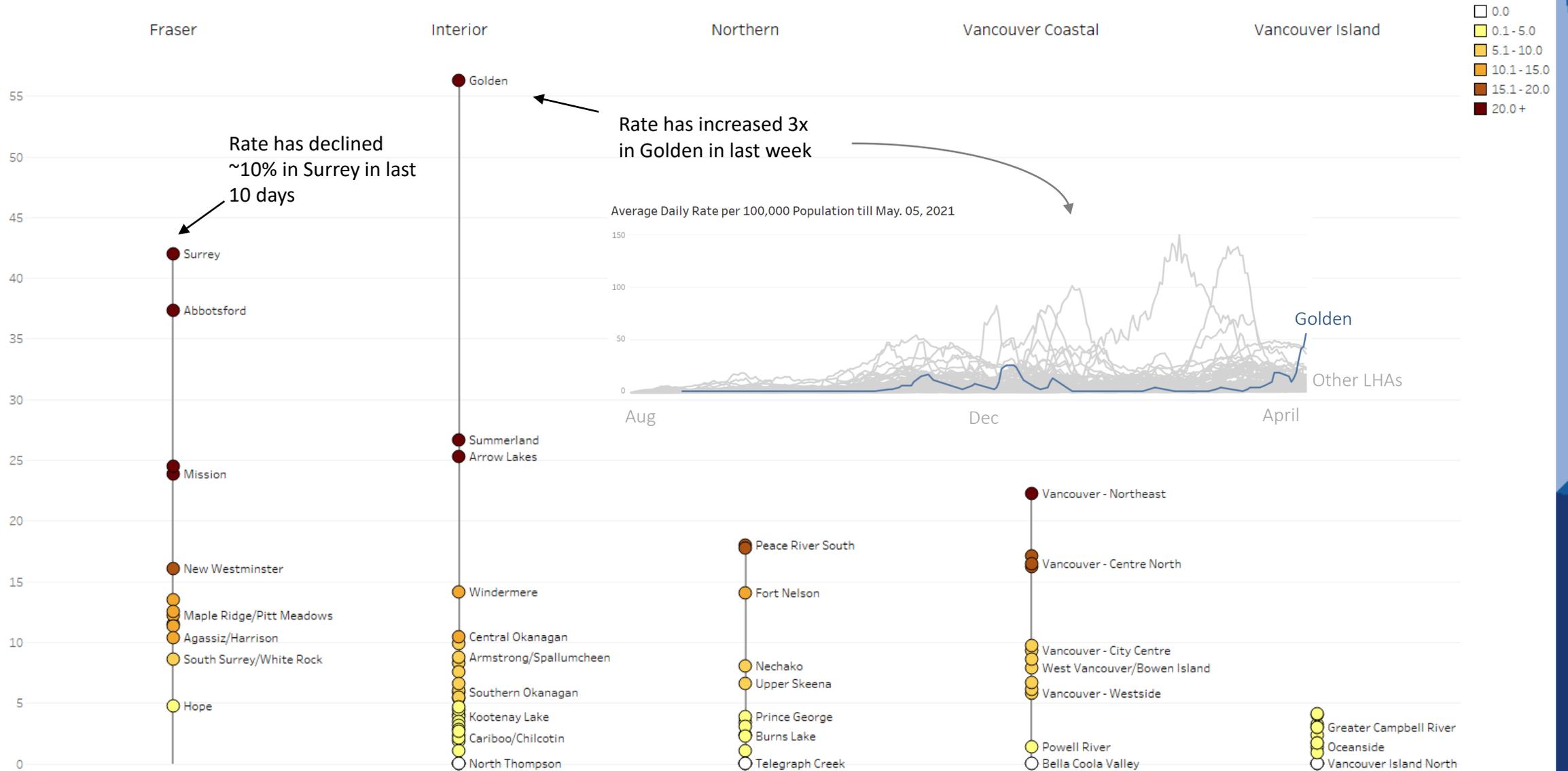
Proportion to total cases & population by local health area, Apr. 29 - May. 05, 2021



Total cases by local health area, Apr. 29 - May. 05, 2021

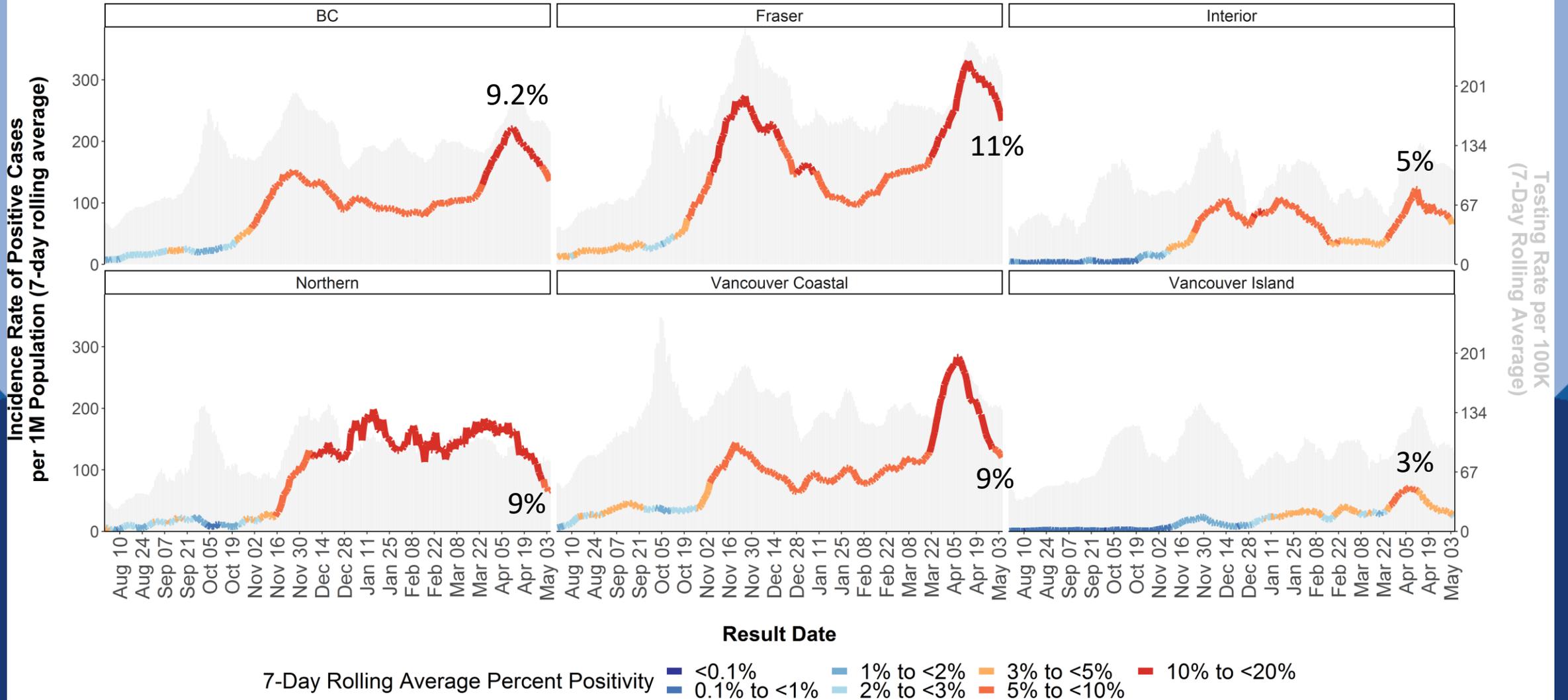


Average daily rate of new cases per 100,000 population, by local health area, Apr. 29 - May. 05, 2021



Incidence is decreasing in all HAs. Percent positivity remains >10% in FH.

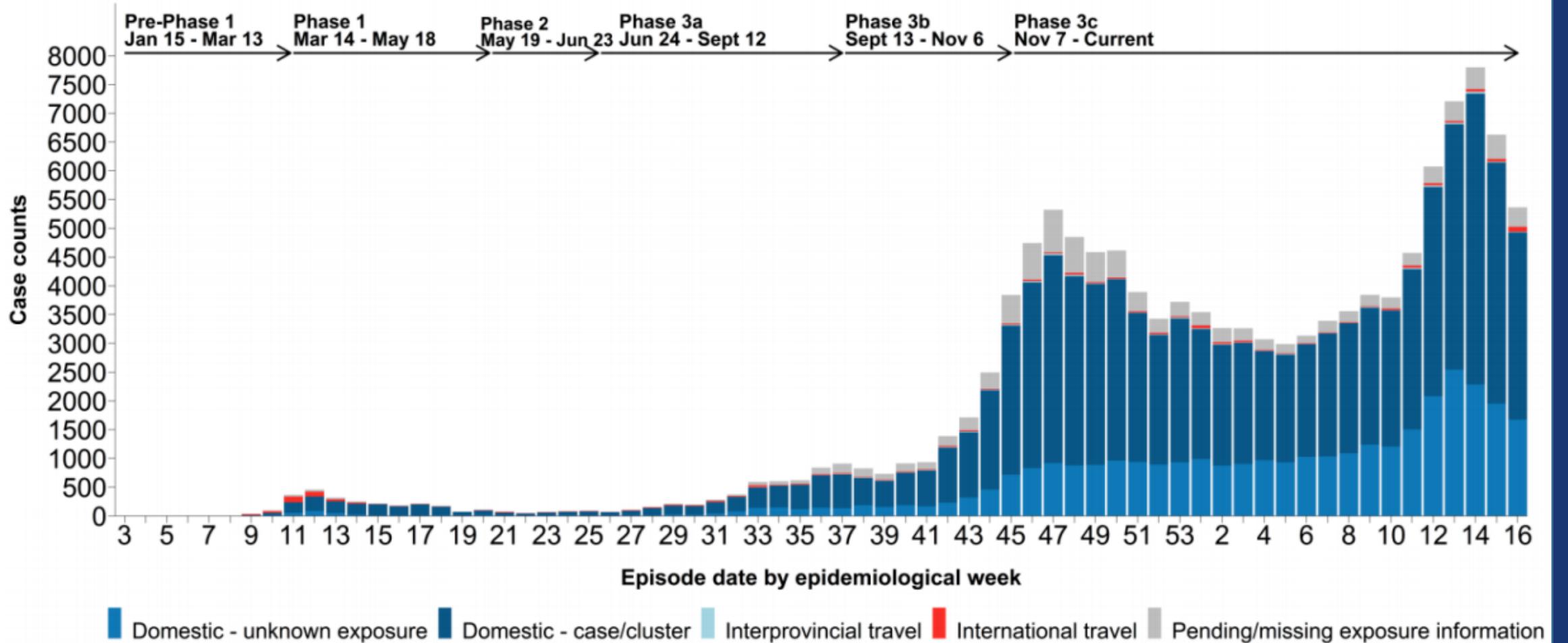
Case incidence rate, test percent positivity, and testing rate (Public Payers Only). Aug 1 2020 - May 5, 2021.



Data source: PLOVER 05-May-2021

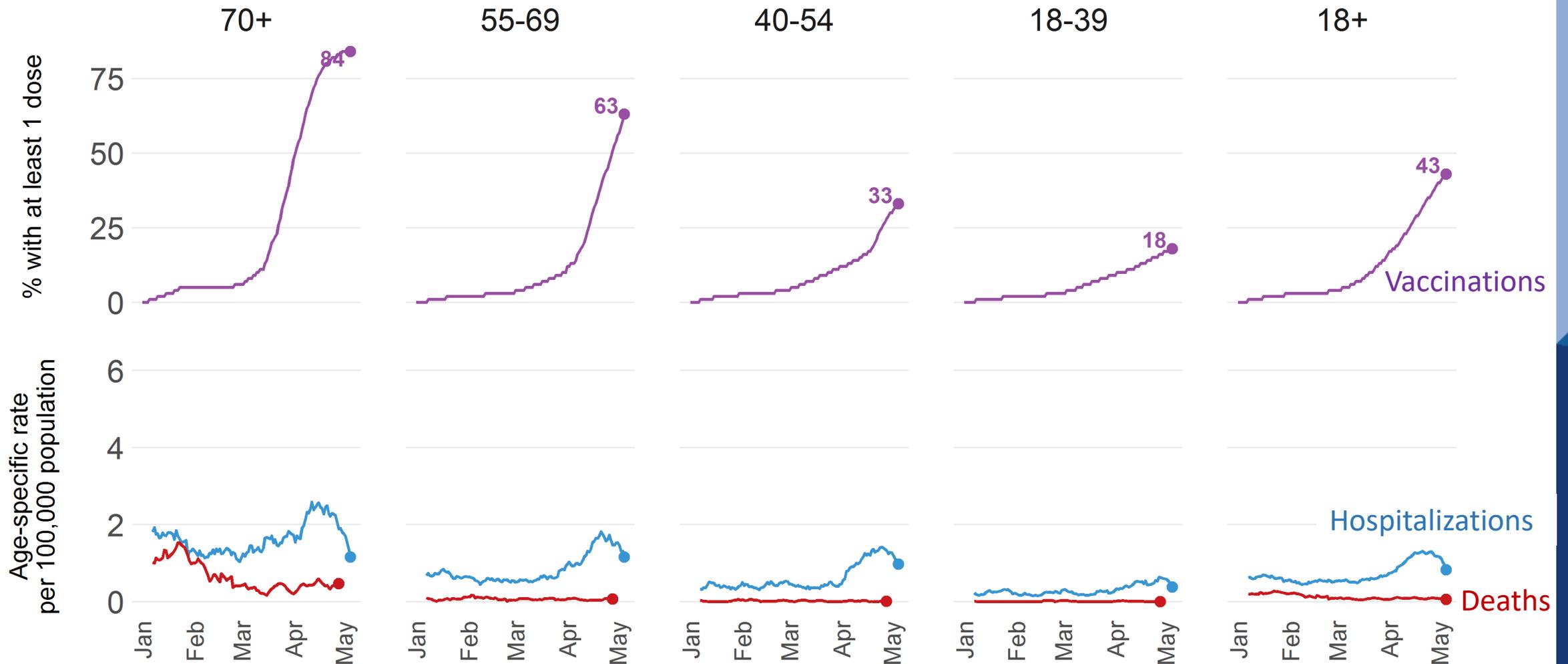
The majority of cases continue to be related to local acquisition through a known case or cluster

January 15, 2020 (week 3) – April 24, 2021 (week 16) (N= 127,322)



episode date, BC January 15, 2020 (week3) to April 24, 2021 (week16)

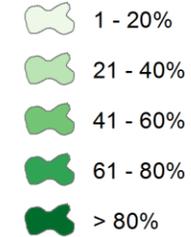
Vaccination progress in BC by age group as of May 6



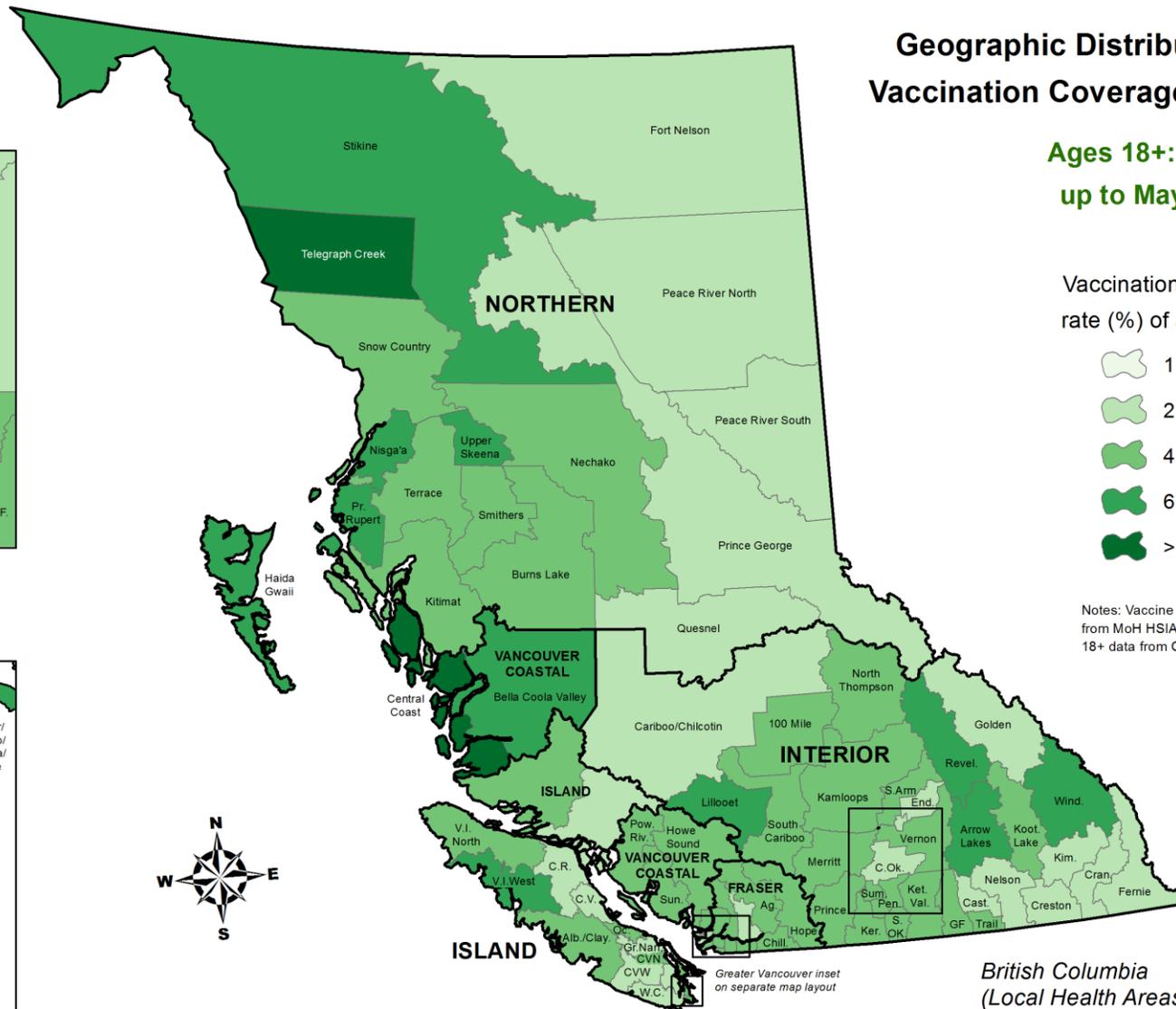
Geographic Distribution of COVID-19 Vaccination Coverage by LHA and CHSA

Ages 18+: 1st Dose up to May 3, 2021

Vaccination coverage rate (%) of adults 18+



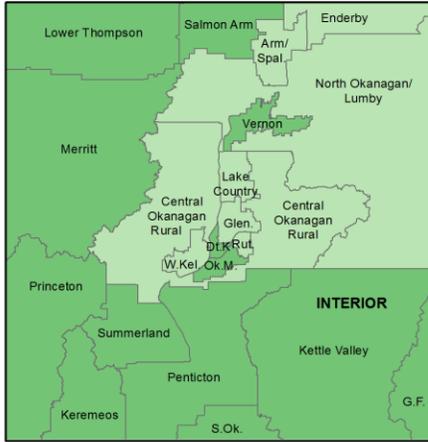
Notes: Vaccine coverage data from MoH HSIAR; population 18+ data from Client Roster.



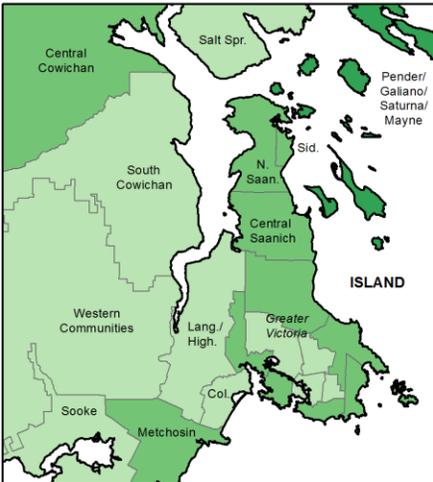
Greater Vancouver inset on separate map layout

British Columbia (Local Health Areas)

Okanagan Inset (Community Health Service Areas)

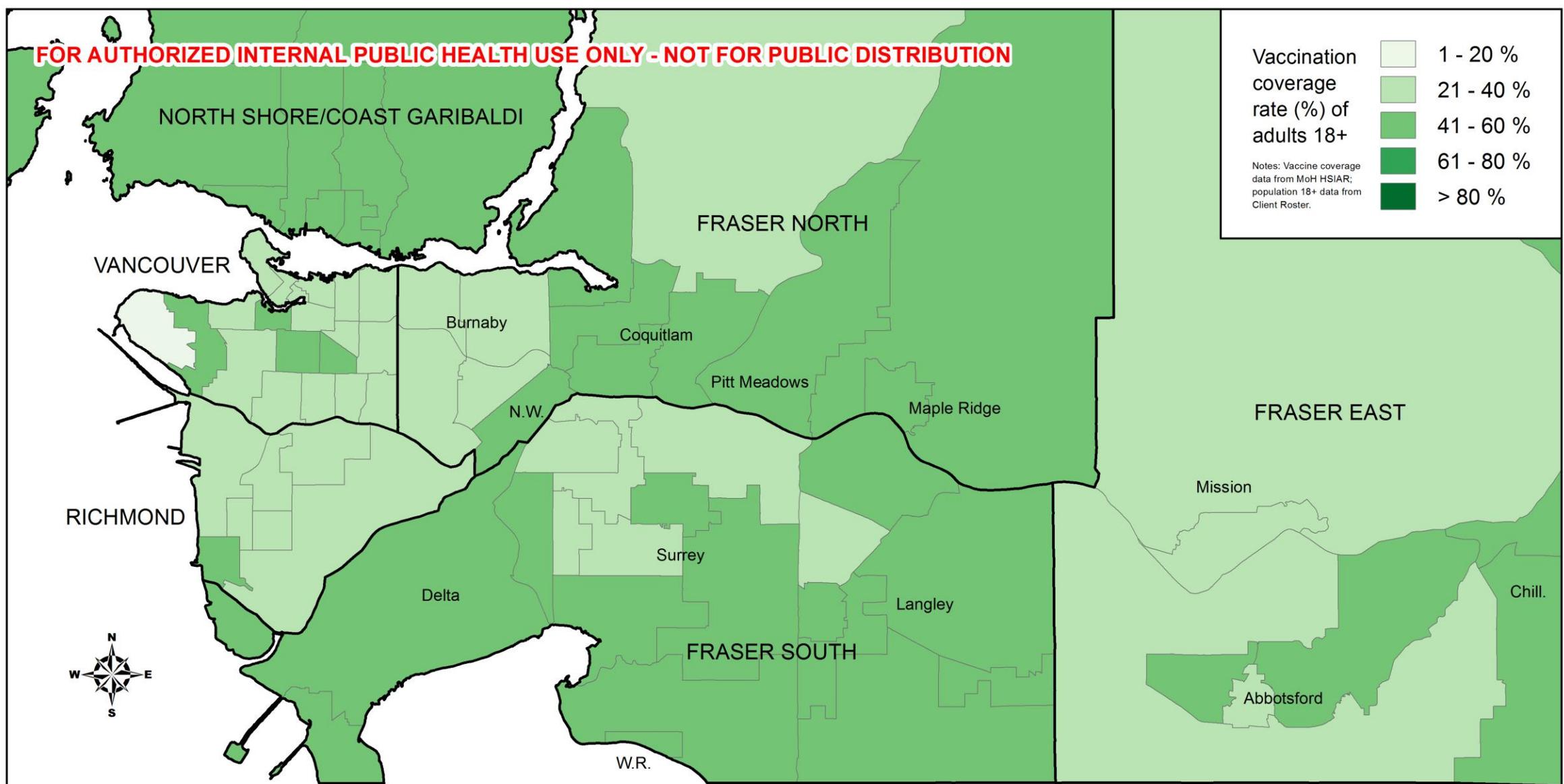


Greater Victoria Inset (Community Health Service Areas)



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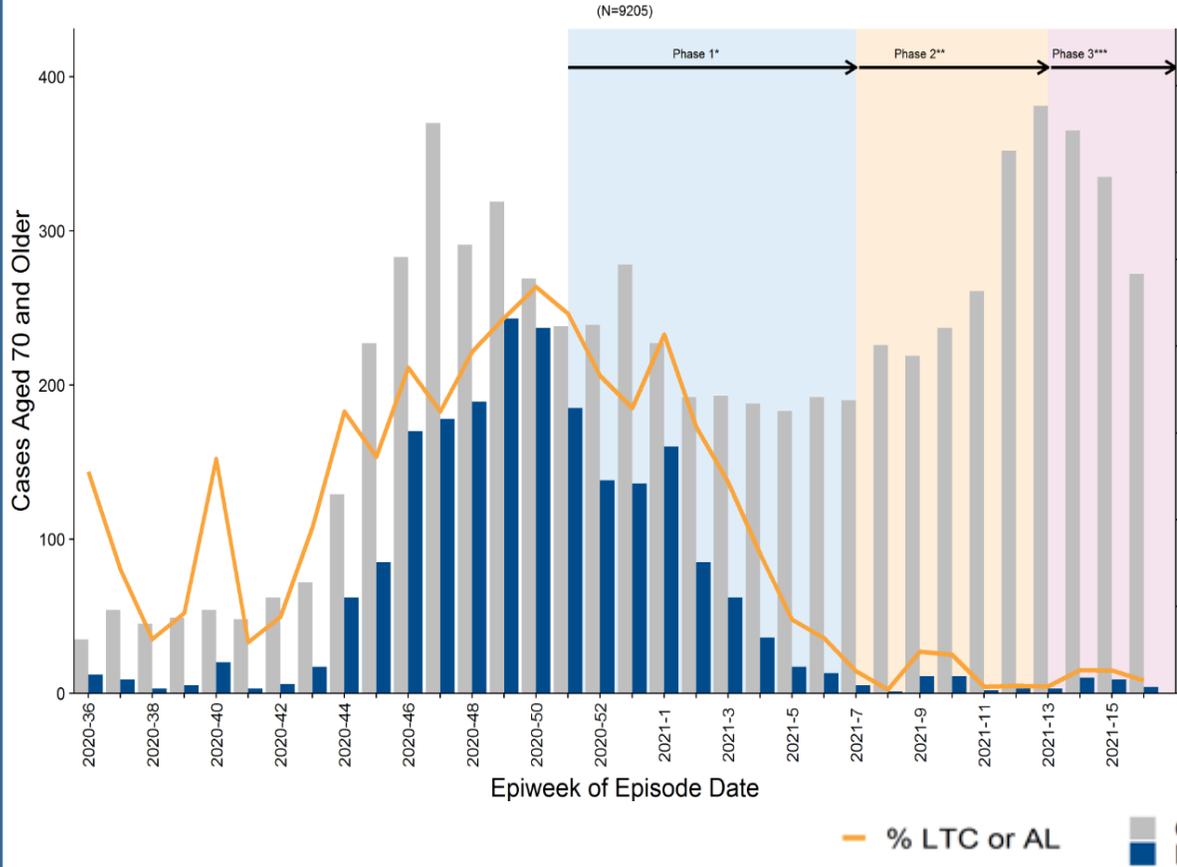
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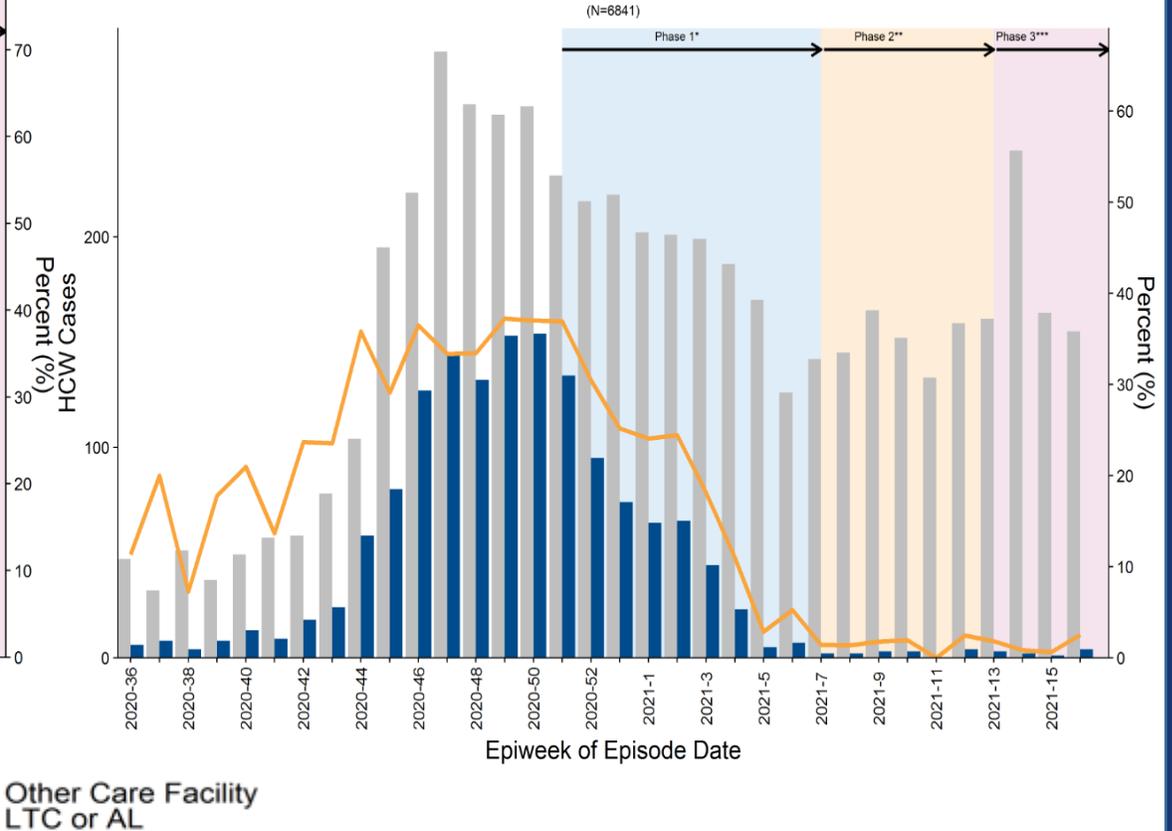
COVID-19 Vaccination Coverage by CHSA: Ages 18+ - 1st Dose (up to May 3, 2021)

The number of cases among individuals aged ≥ 70 years and HCWs working in long-term care or assisted living facilities is very low following vaccination roll-out compared with individuals not living or working in these settings.

Number and proportion of LTC or AL residents amongst cases aged 70 and over by epidemiological week of episode date (N=9205)



Number and proportion of health care workers in LTC or AL outbreaks amongst all health care workers by epidemiological week of episode date (N=6841)

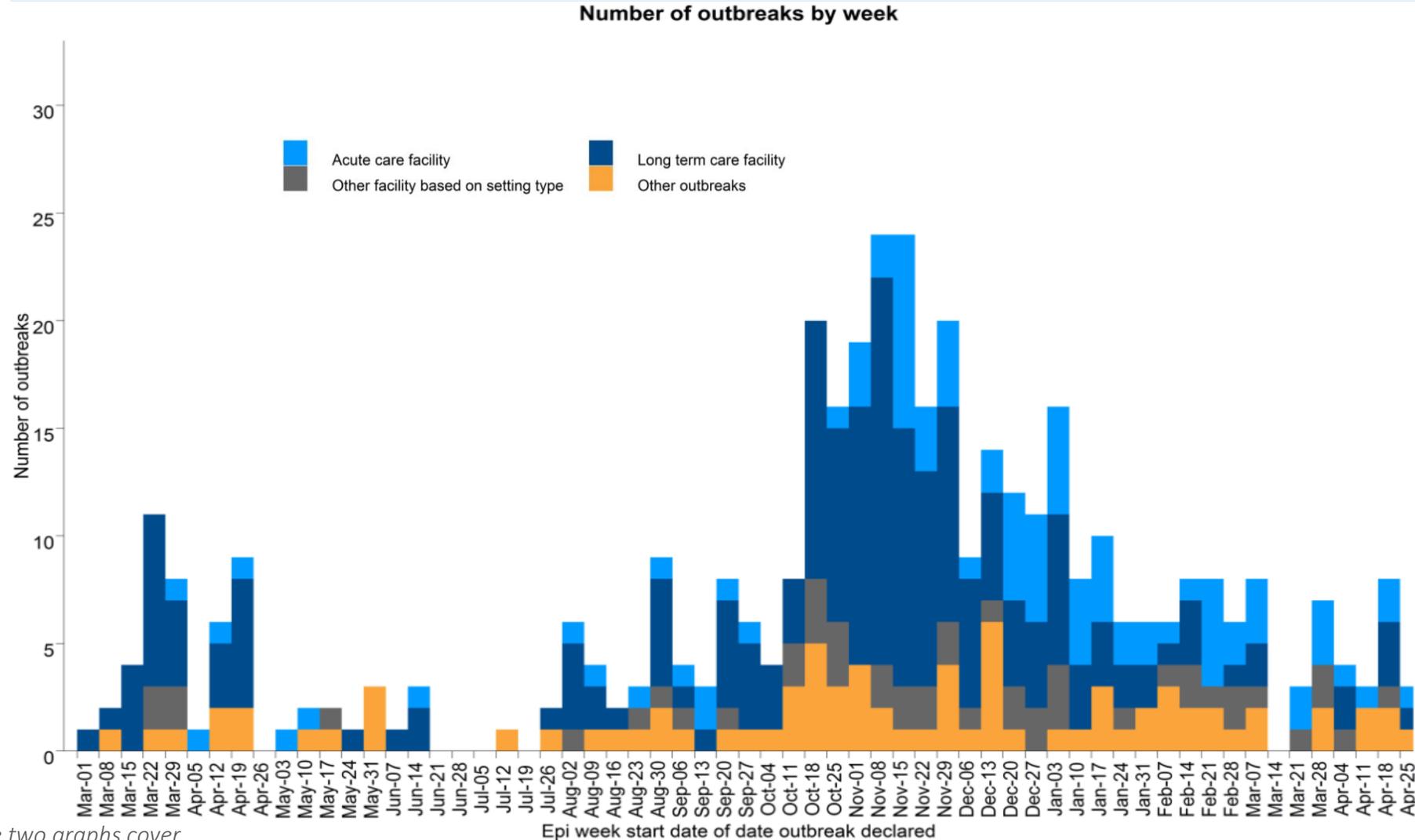


*Phase 1 COVID-19 vaccinations start in FHA and VCH

** Phase 1 COVID-19 vaccinations start in IHA, NHA, and VIHA

Note: Phase 1 target populations include residents and staff of long term care and assisted living facilities, individuals being assessed for long term care and assisted living facilities, essential visitors of long term care and assisted living residents, hospital health care workers who may provide care for COVID-19 patients, and remote and isolated Indigenous communities. Immunizations of target populations may have been staggered depending on vaccine availability and health region.

The number of new outbreaks declared remains low, but a handful of new outbreaks declared in acute care and long-term care facilities week of April 18-24.



Note that the two graphs cover different time periods

Lab - Key Messages

1. **Percent positivity** among publicly funded tests is at 9.2%, slightly declined from last week.
 - Testing rates are similar to last week (~69,000 total tests April 18 to 24)
2. There are regional differences in percent positivity, which range from 3% in VIHA to 11% in FH.
3. Percent positivity is elevated and declining in individuals aged 13 to 64 years. Incidence is elevated but declining in individuals <80 years and low and stable in individuals ≥80 years.
4. 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.
5. Among SARS-COV-2 screened samples, the proportion that were **presumptive VOCs** for the past epi week 17 was ~80%.
6. **VOCs** have been detected in all regions of the province.
 - Among sequenced samples provincially based on information for epi week 15, P.1 and B.1.1.7 remain two dominant VOCs, accounting for roughly 43% and 57% of VOCs respectively.

Weekly Summary of ALL lab tests performed

2,532,066	total specimens tested
68,910	new this epi week
138,104	total positive specimens
5,534	new positive this epi week
17 hr	mean turnaround time (TAT)
16 [10-24]	Median [Q1 – Q3] TAT

↓ **1%** relative to last week

8.0% positivity
↓ **1.1%** absolute change from last week

↓ **14%** TAT relative to last week

Weekly Summary of Lab tests paid Publicly

2,087,521	total specimens tested
57,378	new this epi week
136,789	total positive specimens
5,500	new positive this epi week

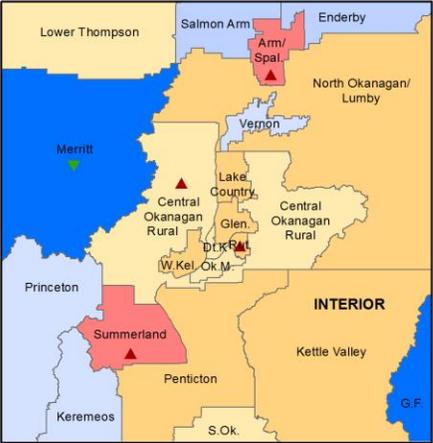
↑ **1%** relative to last week

9.6% positivity
↓ **1.4%** absolute change from last week²²

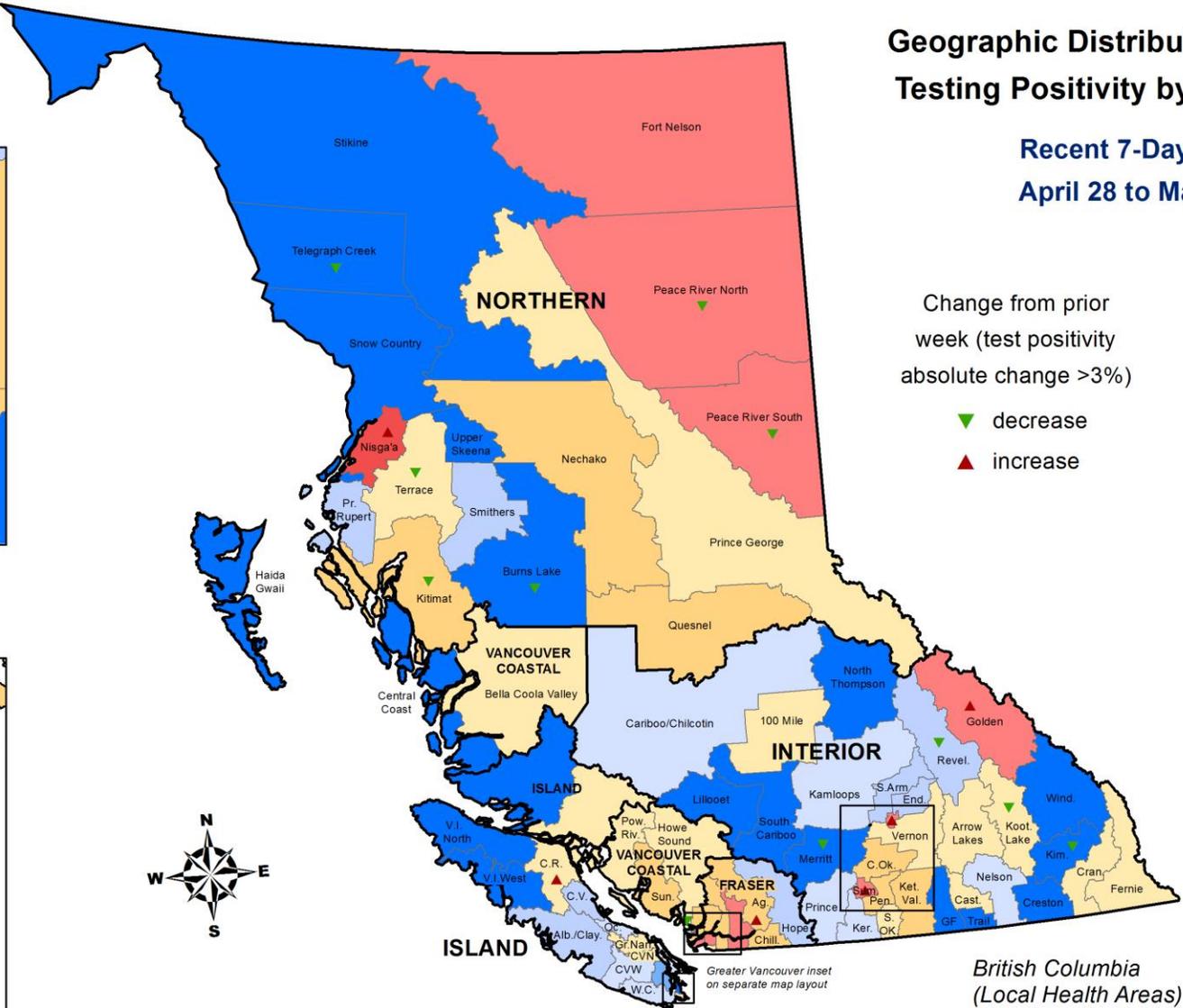
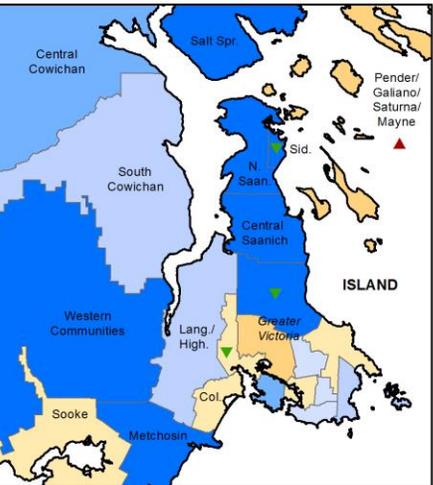
Geographic Distribution of COVID-19 Testing Positivity by LHA and CHSA

Recent 7-Days Testing
April 28 to May 4, 2021

Okanagan Inset
(Community Health Service Areas)



Greater Victoria Inset
(Community Health Service Areas)



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

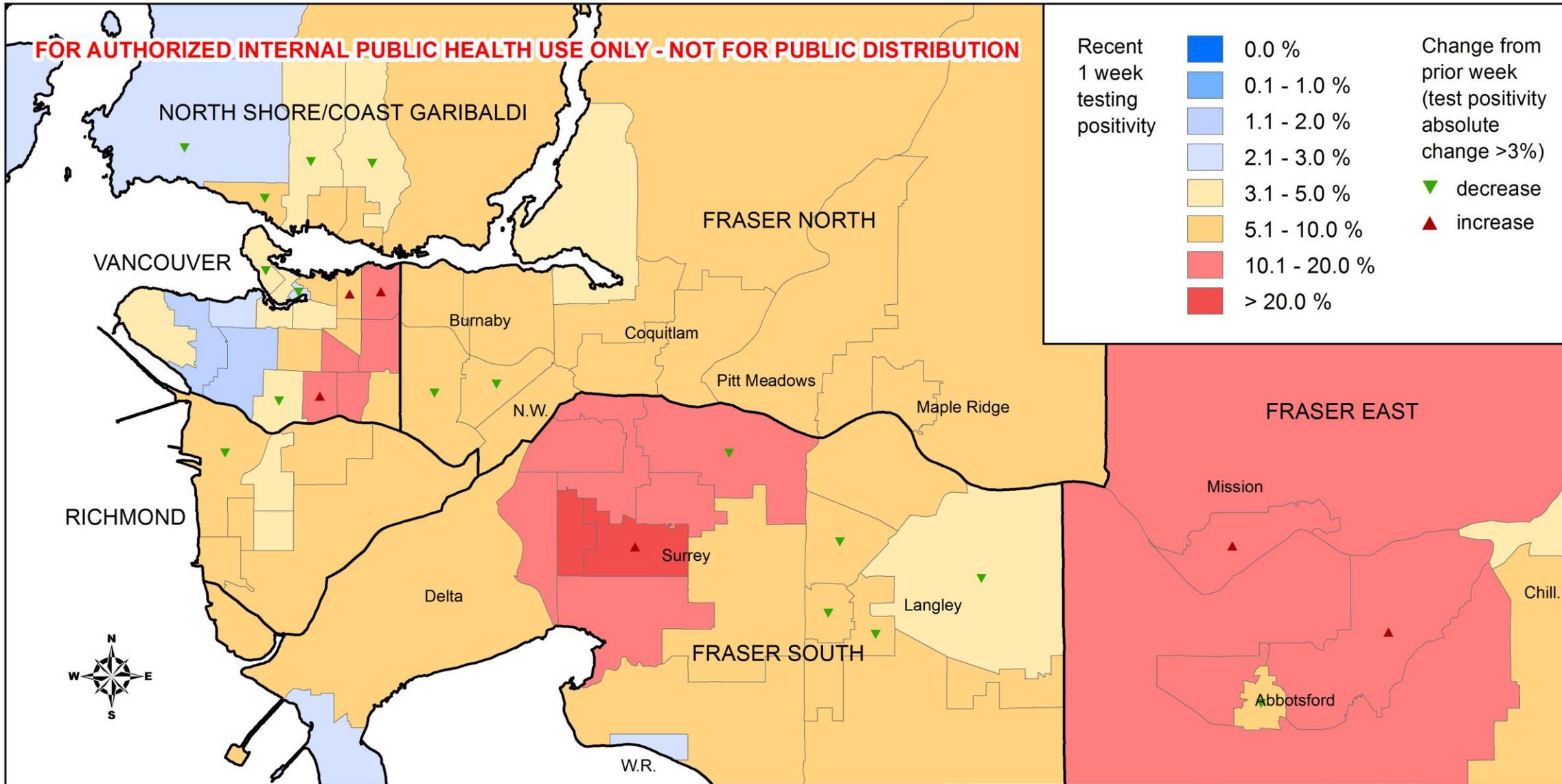
Test positivity rate

- 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 %

British Columbia
(Local Health Areas)

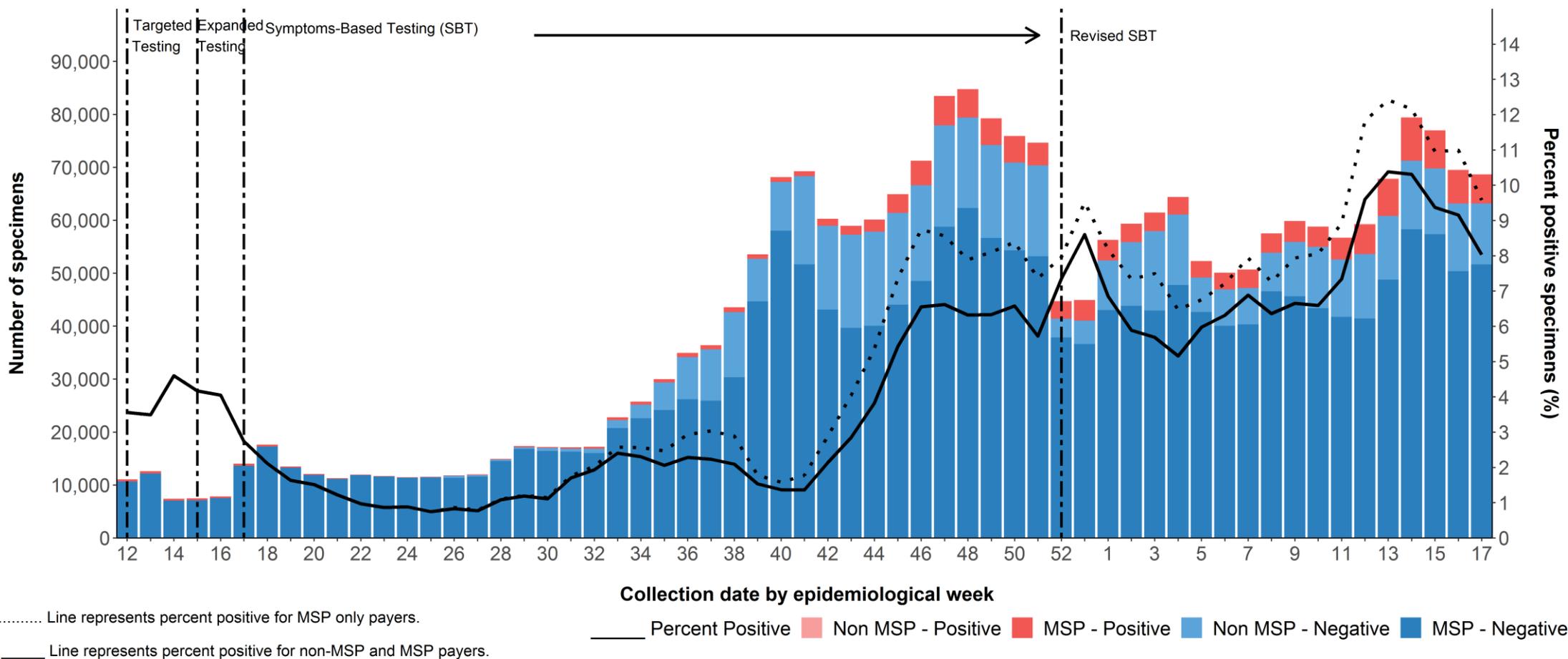
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COVID-19 Recent 1 Week Test Positivity by CHSA (April 28 to May 4, 2021)

Percent positivity among publicly funded tests decreased compared to the previous epi week and continues to be elevated at almost 10%. The total number of tests resulted has remained stable relative to the previous epi week.



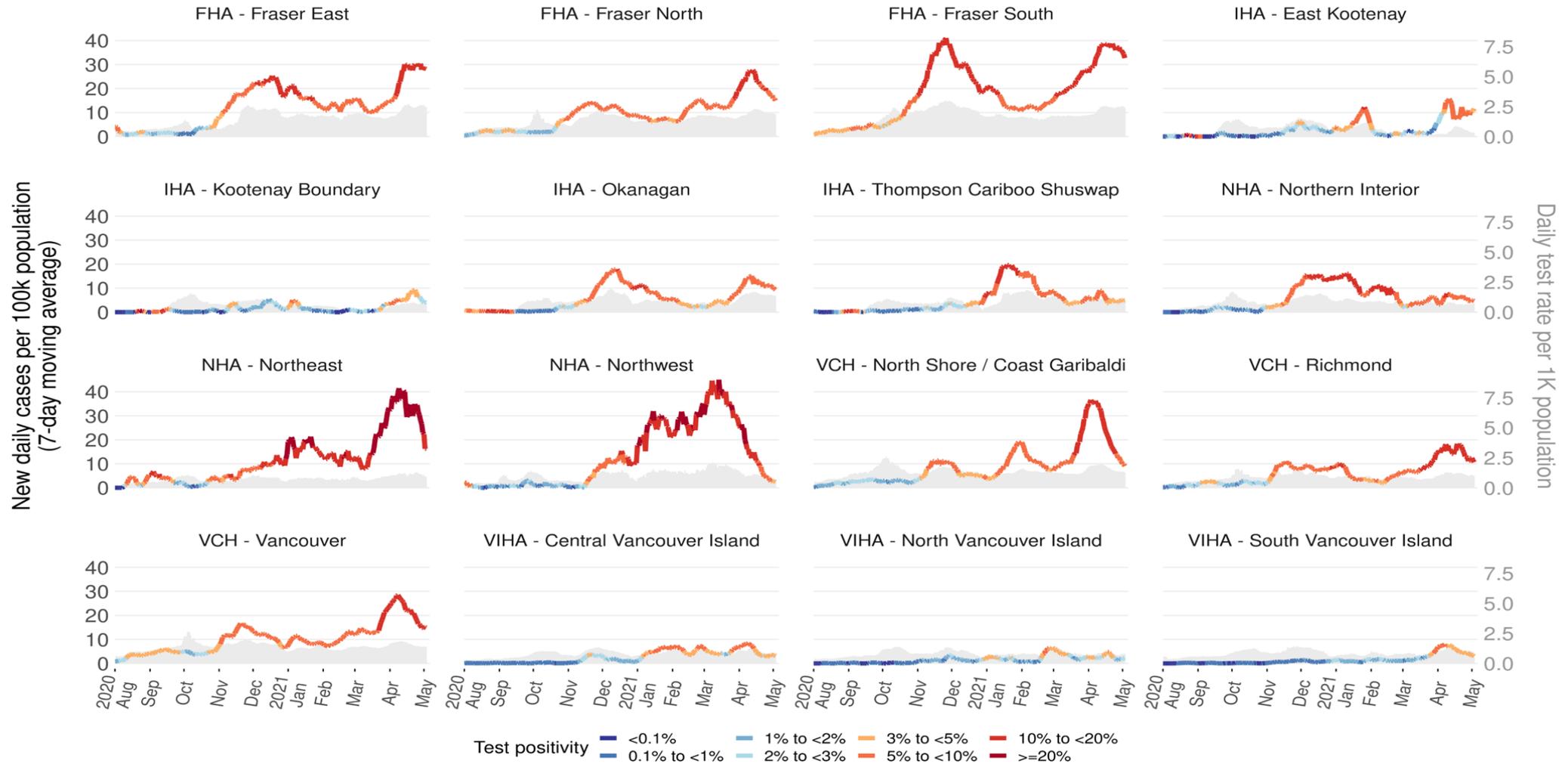
Note: Invalid (n = 1292) and indeterminate (n = 6750) results have been excluded

Data source: PLOVER extract at 10:30am on May 4, 2021.
 Epi week 17 (April 25 – May 1)

CONFIDENTIAL DRAFT

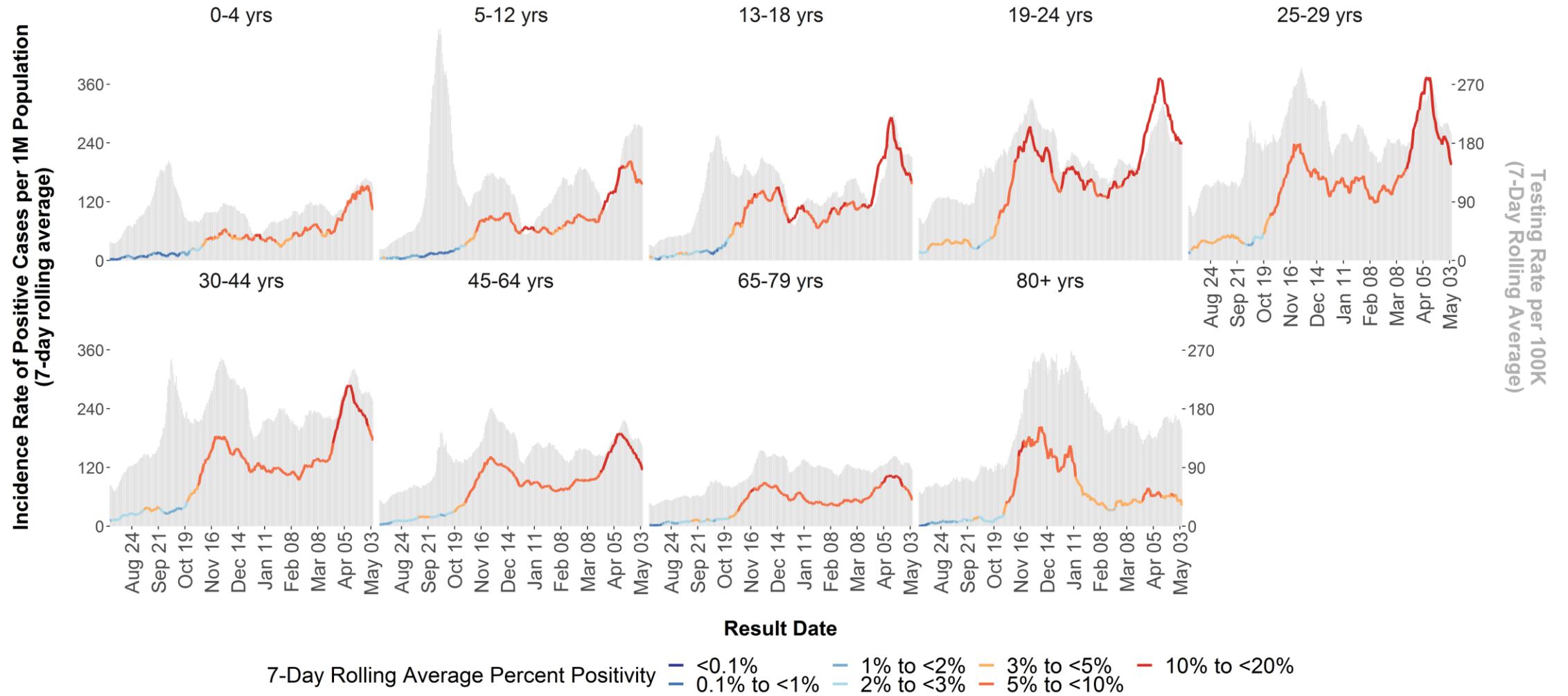


Incidence remains elevated, but is stable or decreasing across regions; positivity is >10% in health service delivery areas in FH, VCH and NH



Percent positivity is elevated and declining in individuals aged 13 to 64 years. Incidence is elevated but declining in individuals <80 years and low and stable in individuals ≥80 years.

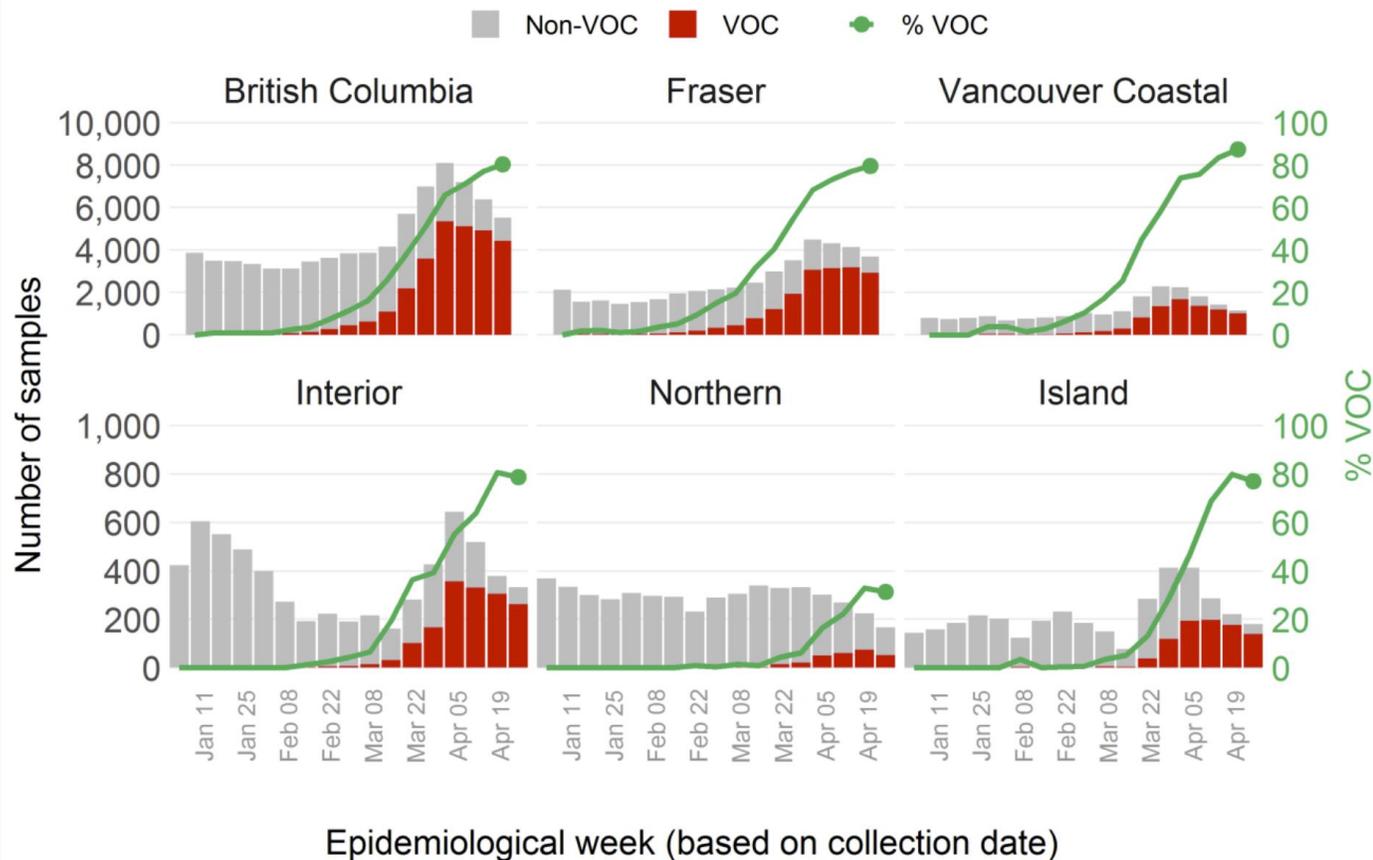
Case incidence rate, test percent positivity, and testing rate by age (Public Payers Only). Aug 1 2020 - May 5, 2021.



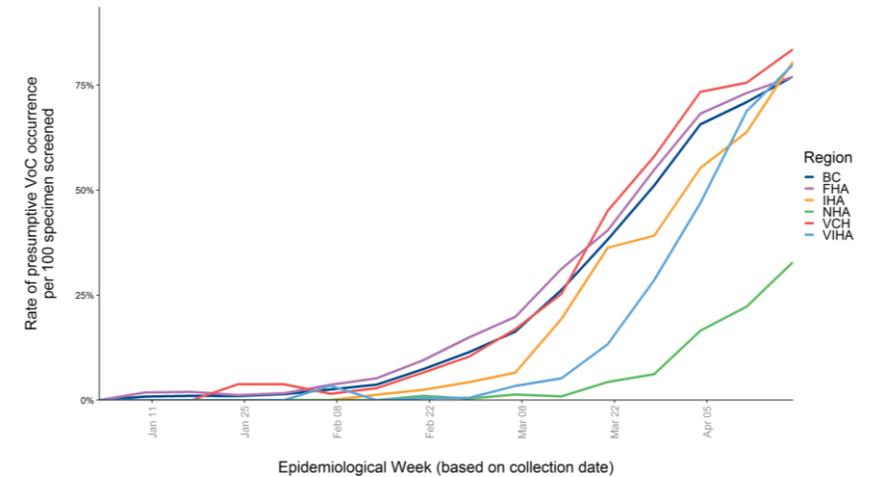
Data source: PLOVER 05-May-2021

Of all COVID-19 positive test samples in epi week 16 (Apr 18-25) in BC, ~80% were presumptive VOCs. Note that in Northern, the proportion was substantially lower, ~34%.

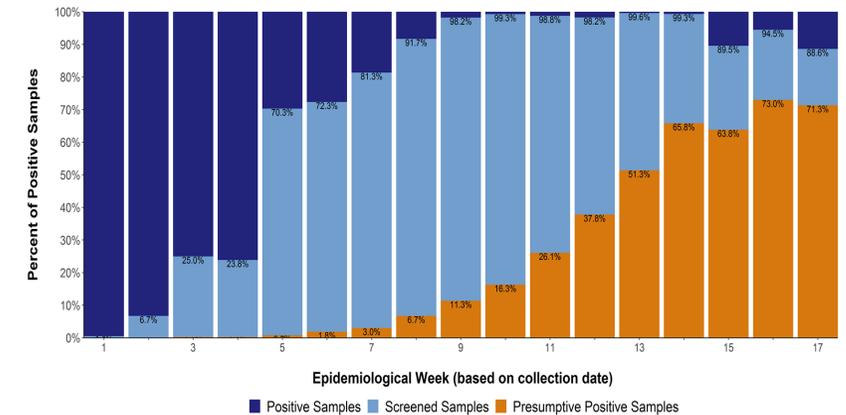
Figure 1. Presumptive VOC prevalence in BC by epi week and by Health Authority, Jan 3 – May 1, 2021



Prevalence of presumptive VoCs among all screened samples by epiweek of collection date and HA



Presumptive VoC, Screening and overall testing proportions, Jan 3, 2021 - May 1, 2021

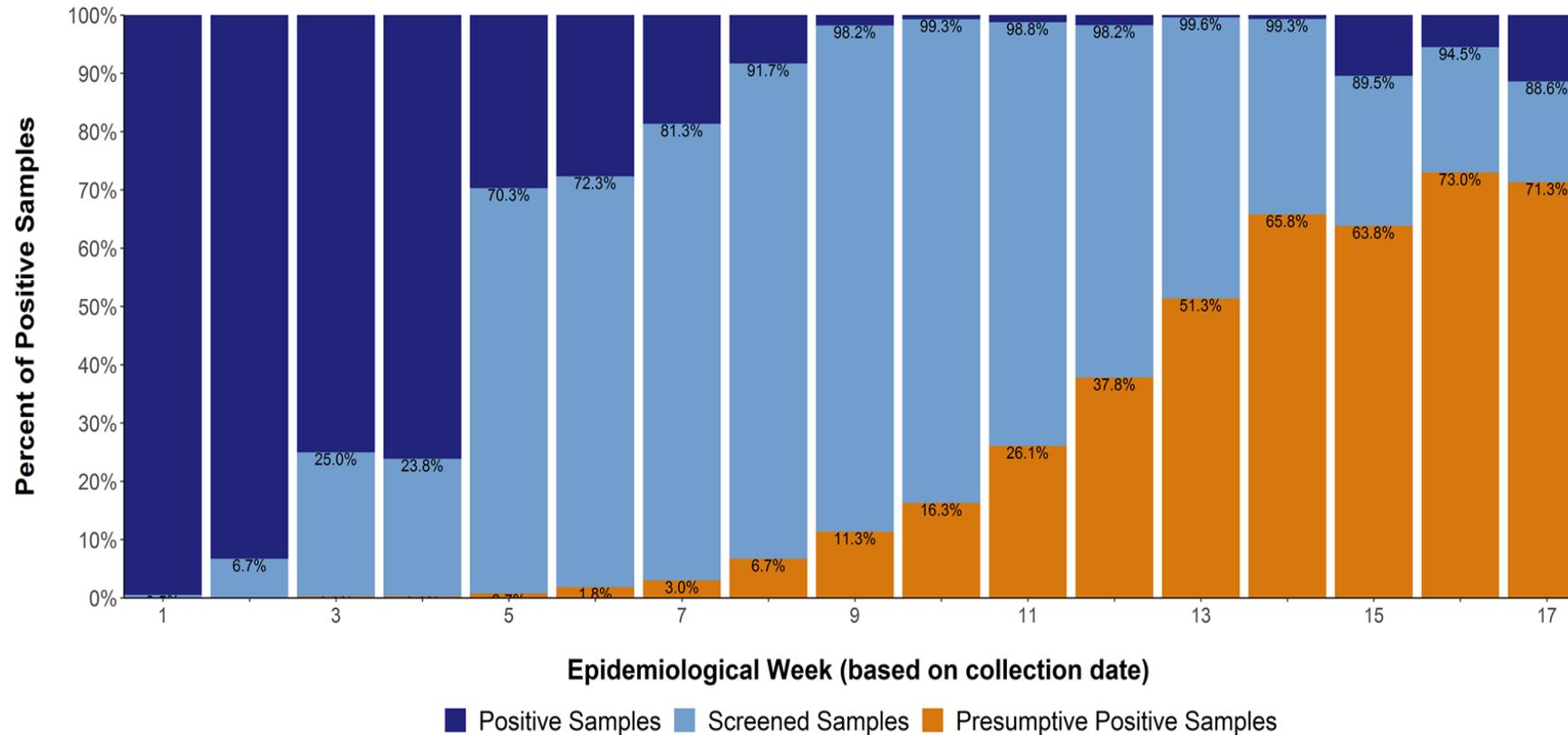


Data source: PLOVER 05-May-2021

Figure can also be found at: http://www.bccdc.ca/Health-Info-Site/Documents/VoC/VoC_weekly_05062021.pdf

The proportion of screened samples remains high- close to 90% in week 17.

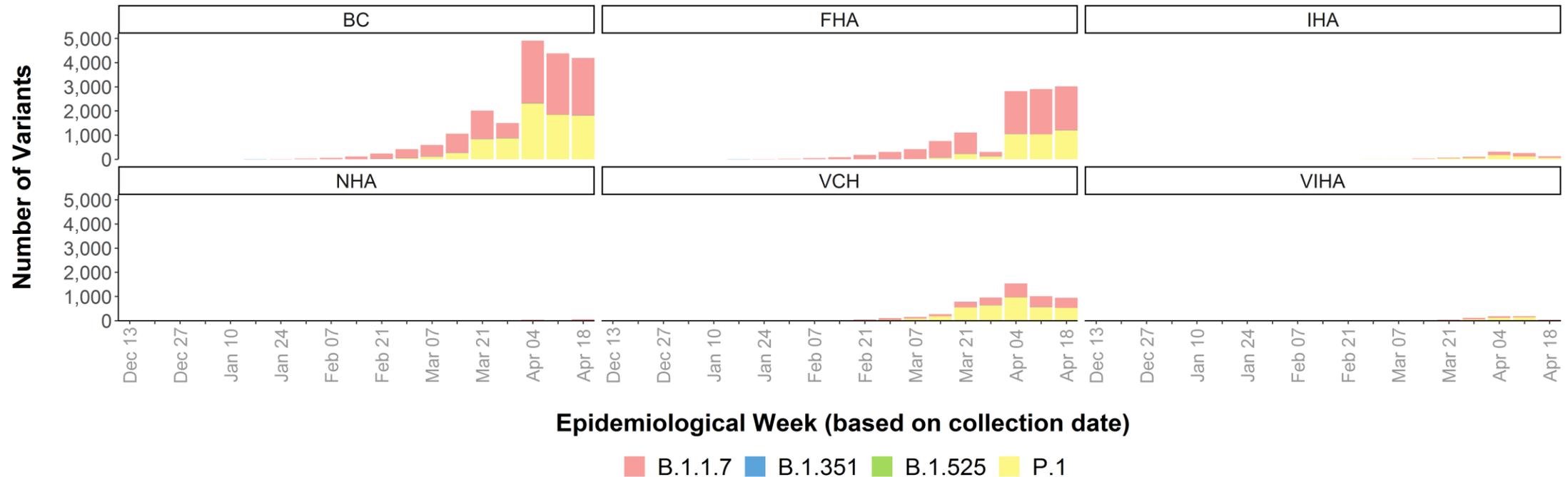
Presumptive VoC, Screening and overall testing proportions, Jan 3, 2021 - May 1, 2021



Data source: PLOVER May 5, 2021

- The proportion of variants sequenced can be interpreted at the population level, given that it includes only samples sequenced from background surveillance and random screening.
- Weeks 13 onward include specimens from qPCR SNP screening that resulted as presumptive positive for B.1.1.7 and P.1.
- Given the high volume of screened specimens, those collected in week 16 continue to be analyzed.

**SARS-CoV-2 circulating VoC detected in BC through quasi-random sample selection*
by epi week, December 13, 2020 - April 24, 2021**



Data source: PLOVER 06-May-2021

Places of origin: United Kingdom (B.1.1.7); South Africa (B.1.351); Nigeria (B.1.525)**; Brazil (P.1)

* the B.1.1.7 VoC lineage is captured either by qPCR SNP screen or WGS for randomly selected samples;
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.

** This variant is not a VoC in Canada

- The main circulating variants are B.1.1.7 and P.1, with their relative proportion accounting for 57 % and 43% respectively in epi week 16 (Apr 18 - Apr 24).
- The proportion of variants sequenced can be interpreted at the population level, given that it includes only samples sequenced from background surveillance and random screening.
- Weeks 13 onward include specimens from qPCR SNP screening that resulted as presumptive positive for B.1.1.7 and P.1.

Figure 2. Estimated Sample prevalence† of VOCs by lineage by epi week, Jan 3 – May 1, 2021.

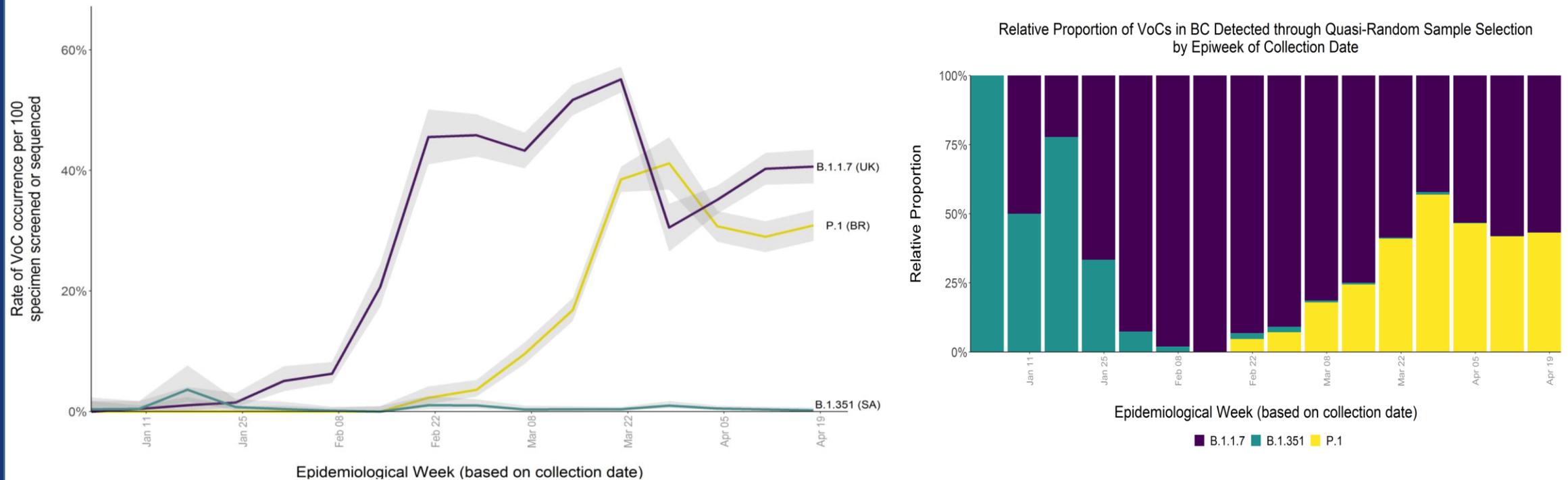
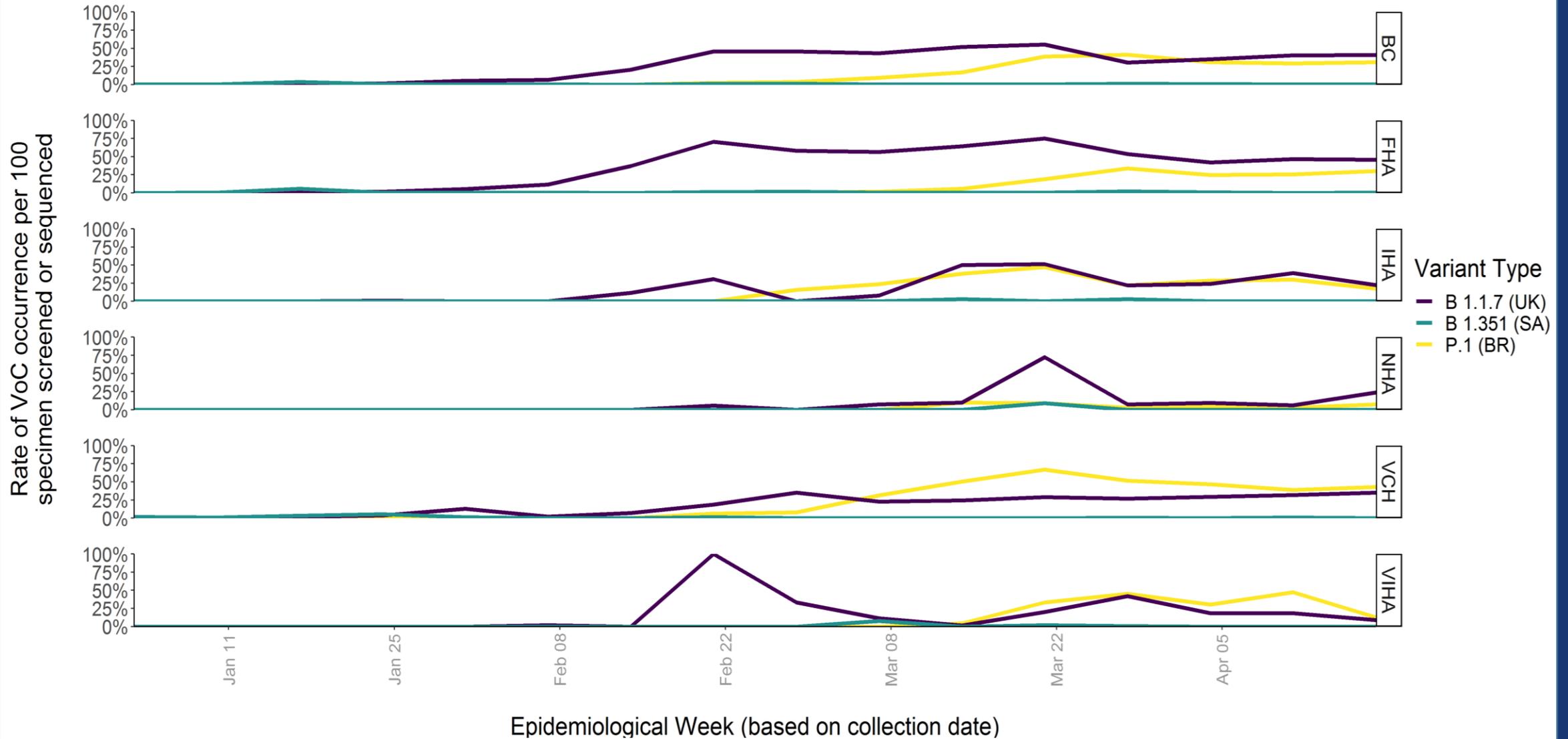


Figure can also be found at: http://www.bccdc.ca/Health-Info-Site/Documents/VoC/VoC_weekly_05062021.pdf

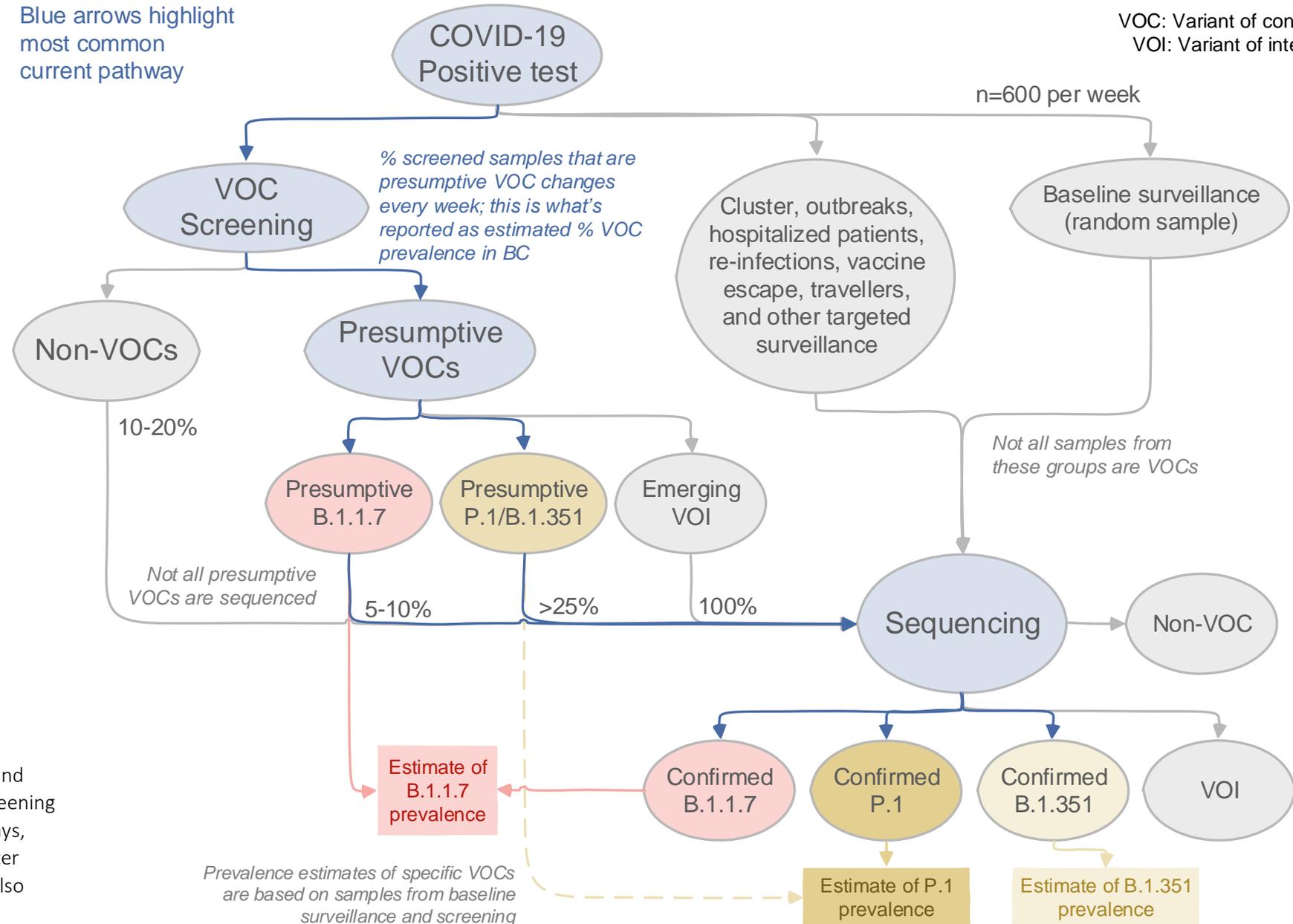
Prevalence of VoCs Detected through Quasi-Random Sample Selection* by Epiweek of Collection Date



Overview of the screening and sequencing process applied to positive COVID-19 tests in BC, April 2021

Blue arrows highlight most common current pathway

VOC: Variant of concern
VOI: Variant of interest



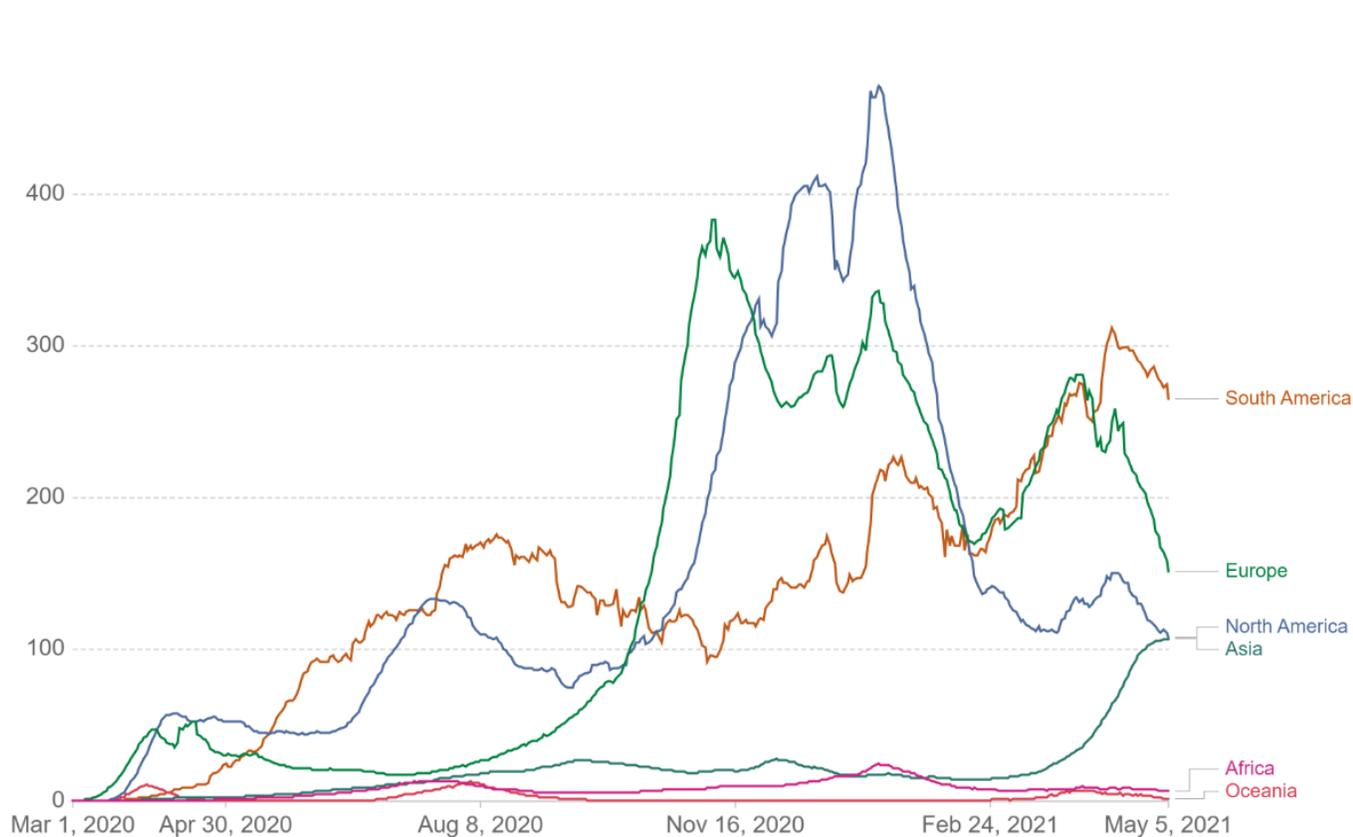
Please note the differences in turnaround time for screening and sequencing: screening results usually come back within 1-2 days, while sequencing results come back after approximately one week, but it could also take longer if there are lab backlogs.

BC in Canadian and Global Context - Key Messages

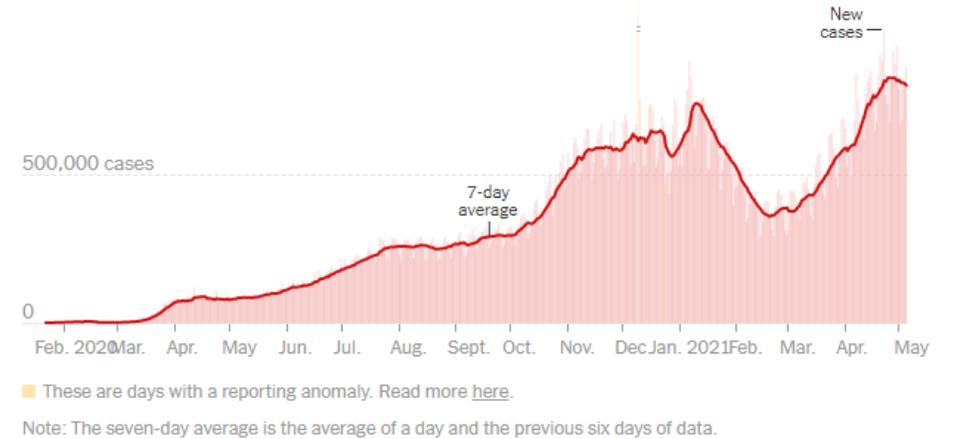
1. **Globally**, growth in cases in South America, Europe, and North America have declined while it has increased in parts of Asia, driven by recent resurgence in India.
2. **Across Canada**, cases are trending up in AB & MB. NS and NWT are seeing the highest increases yet during the pandemic. In BC, ON, QC and SK cases are on the decline. Hospital census increasing in AB, MB, and NS; recent declines observed in BC, ON, QC, and SK. Death rates are generally stable or declining, overall very low.
3. **Alberta's** case rate continues to be the highest of all jurisdictions in Canada and the US, and is currently ~3.3x the BC rate. Potential for importation into BC is high.
4. **VOCs** are now dominant (>80%) in BC, ON and QC.
5. **Canadian vaccination update**: >50% population vaccinated in the YK and NWT; QC ~39%; BC ~36%; Canada overall ~36%. In AB, 96% of delivered doses have been administered.
6. **Global vaccination update**: % population that has been vaccinated with at least one dose: Israel ~63%, UK ~51%, US ~44%, Chile ~43%, Europe 24-35%.

Globally, growth in cases in South America, Europe, and North America have declined while it has increased in parts of Asia, driven by recent resurgence in India

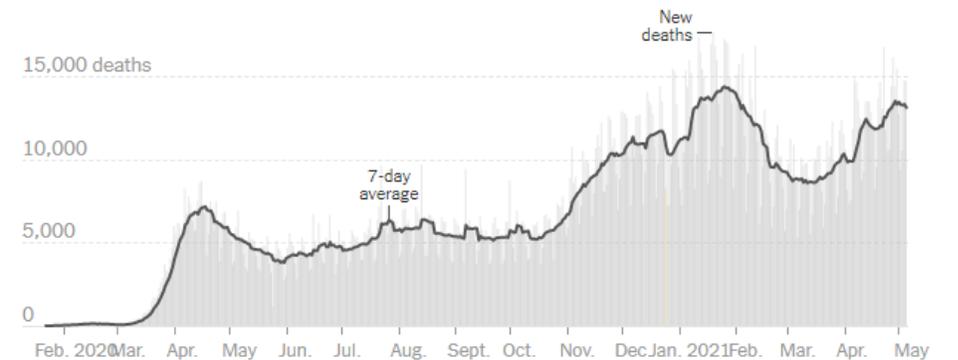
Daily new confirmed COVID-19 cases per million people



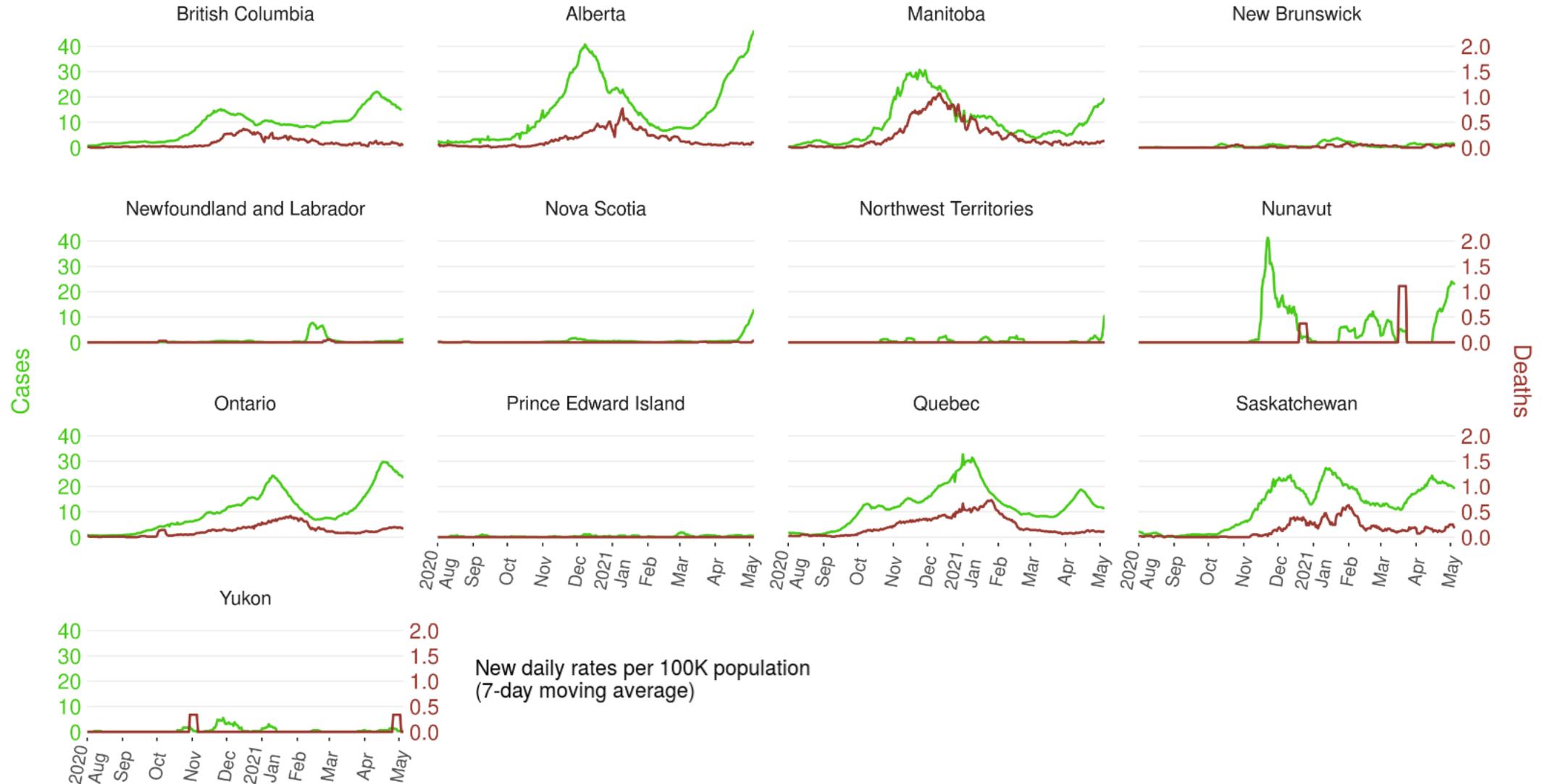
New reported cases by day across the world



Reported deaths by day across the world



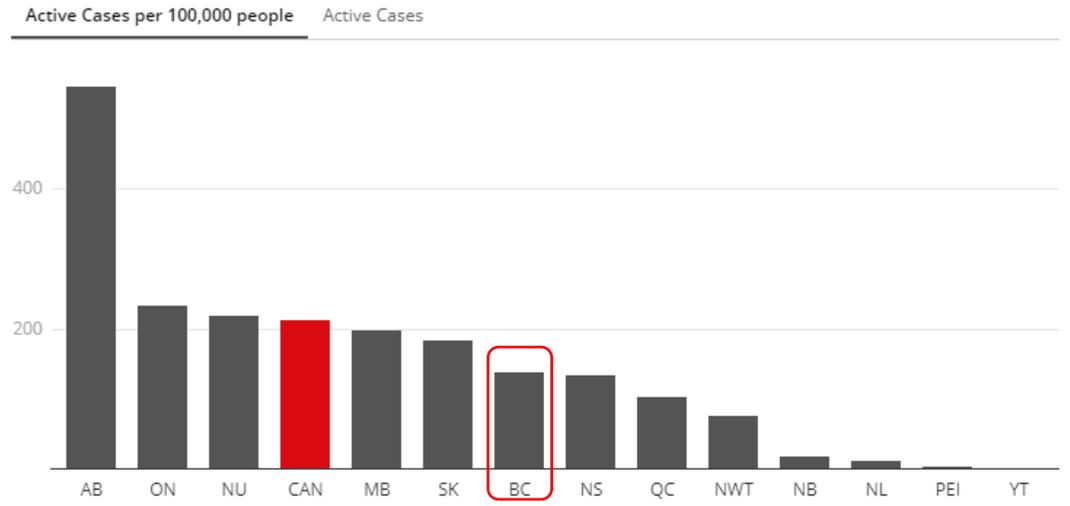
Across Canada, cases are trending up in AB & MB. NS and NWT are seeing the highest increases yet since the pandemic began. In BC, ON, QC and SK cases are on the decline. Death rates are generally stable or declining, overall very low.



Hospital census increasing in AB, MB, and NS; recent declines observed in BC, ON, QC, and SK

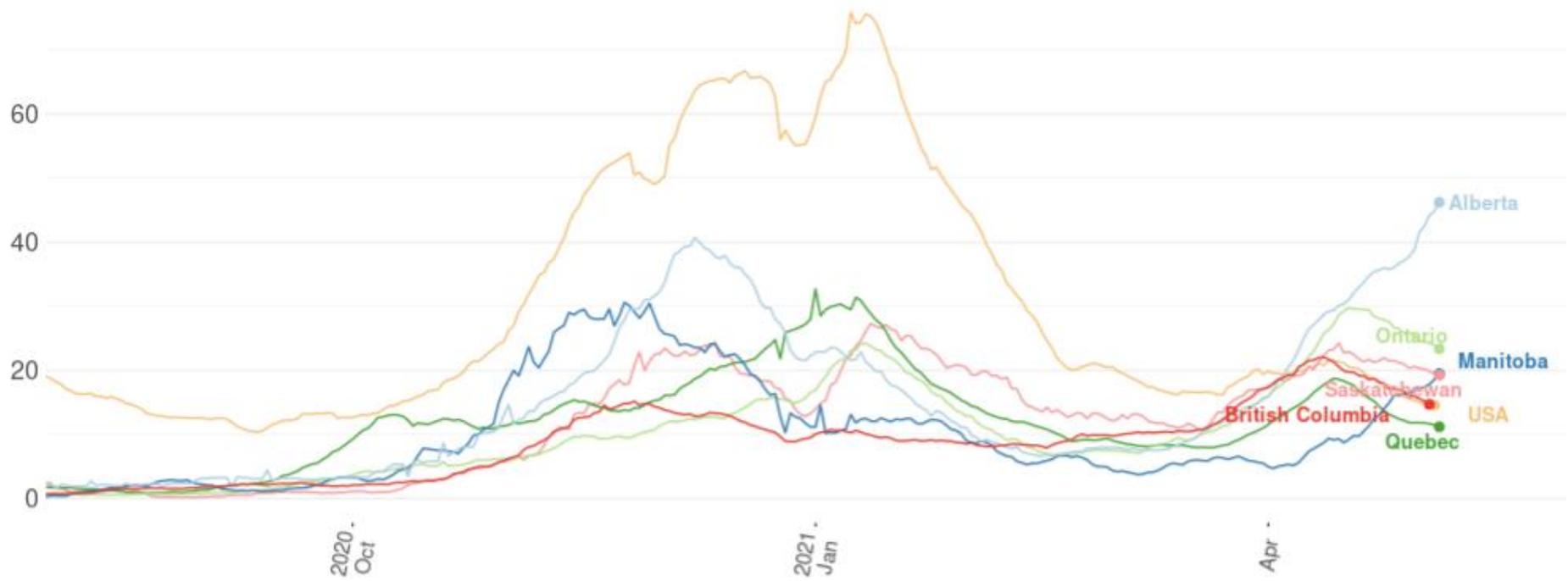


Alberta's case rate continues to be the highest of all jurisdictions in Canada and the US, and is currently ~3.3x the BC rate. Potential for importation into BC is high.

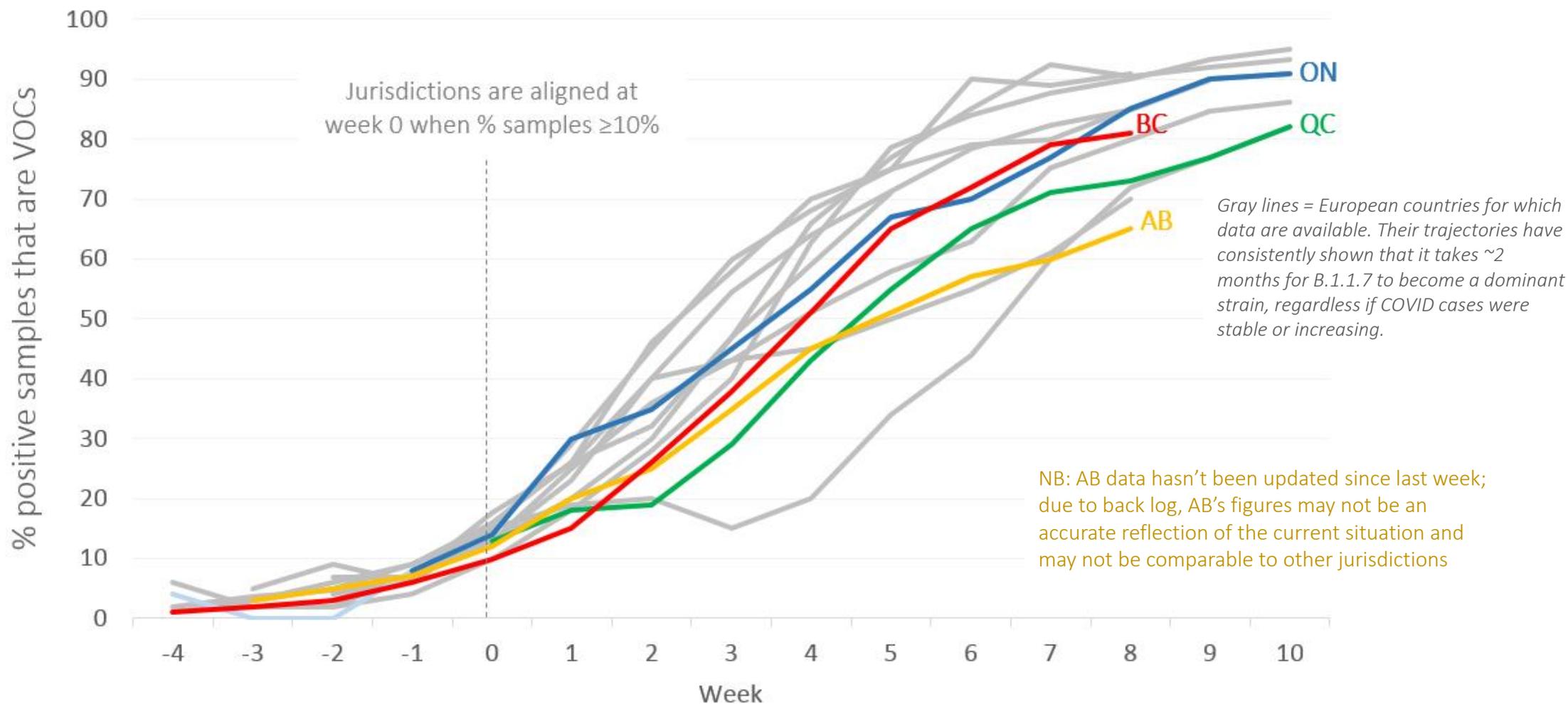


CBC NEWS Chart: Robson Fletcher / CBC • Source: Provincial health authorities & Statistics Canada Table 17-10-0009-01

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



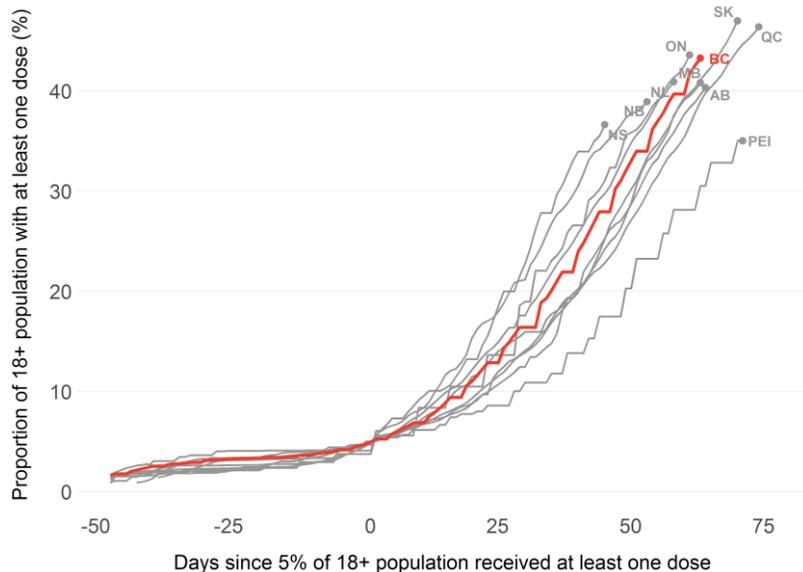
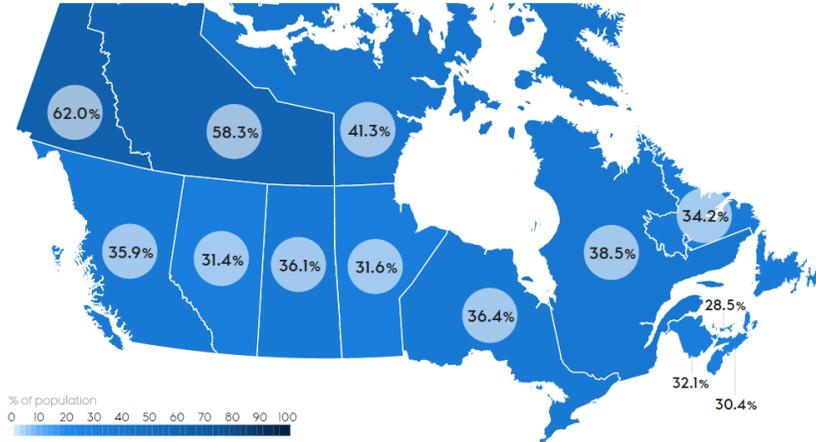
VOCs are now dominant (>80%) in BC, ON and QC. This is the last week this graph will be shown.



Please note that these are **approximate estimates only and may not be accurate**. Data across jurisdictions are not directly comparable due to different sampling methodologies. There were likely changes in methodology over time within the same jurisdiction, especially during the early part of the curve. Some data points were extrapolated/approximated to complete the visualization.

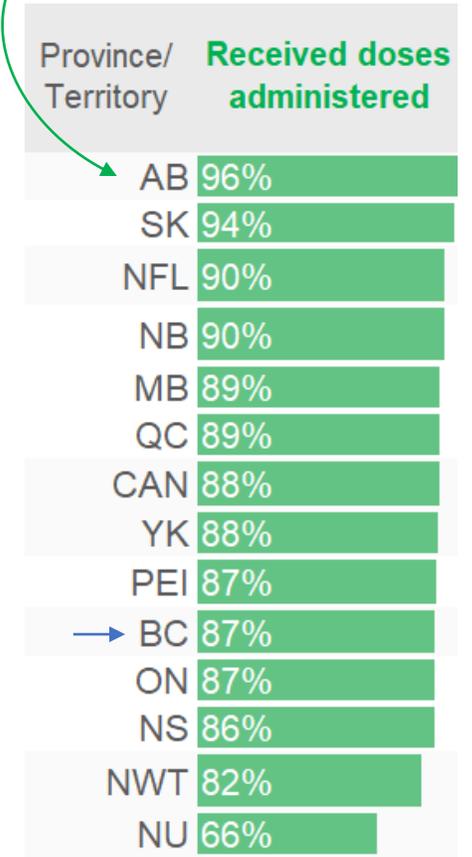
Canadian vaccination update, 6 May: >50% population vaccinated in the YK and NWT; QC ~39%; BC ~36%; Canada overall ~36%.

Percentage of total population vaccinated (at least one dose)



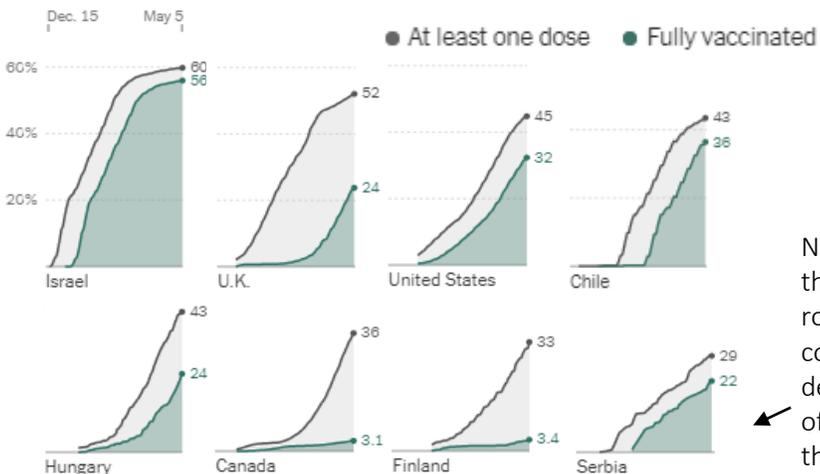
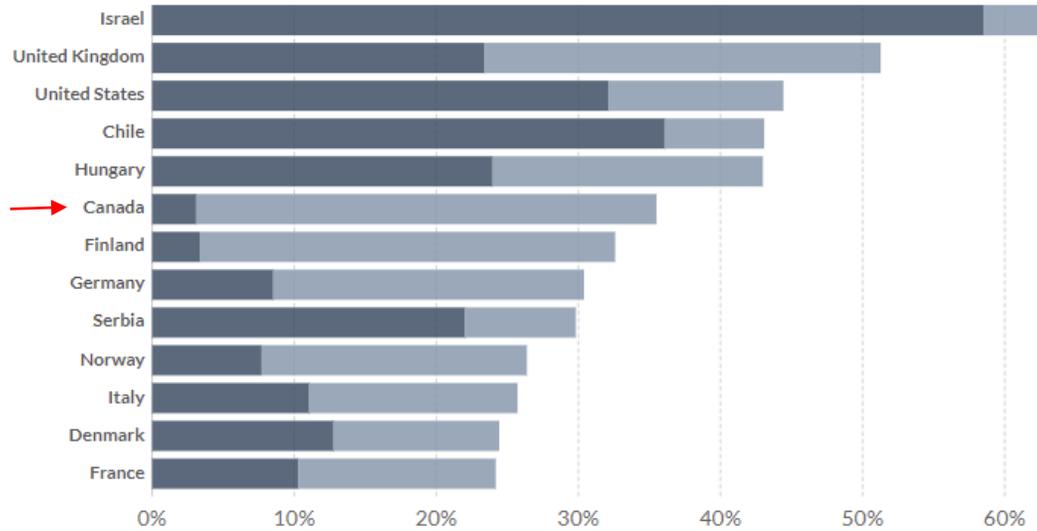
Province/Territory	% of population vaccinated (at least one dose)	% of eligible population (16+)	First dose	Updated
Yukon	62.0%	75.7%	26,093	May.5
Northwest Territories	58.3%	74.1%	26,333	May.3
Nunavut	41.3%	62.1%	16,271	May.6
Quebec	38.5%	46.3%	3,302,24	May.6
Ontario	36.4%	43.6%	5,356,172	May.6
Saskatchewan	36.1%	45.6%	425,522	May.5
British Columbia	35.9%	42.2%	1,849,574	May.5
Canada	35.8%	43.1%	13,600,30	May.6
Newfoundland and Labrador	34.2%	39.9%	178,528	May.5
New Brunswick	32.1%	38.0%	251,071	May.5
Manitoba	31.6%	39.6%	435,966	May.5
Alberta	31.4%	39.2%	1,389,164	May.5
Nova Scotia	30.4%	35.8%	297,917	May.5
Prince Edward Island	28.5%	34.1%	45,456	May.4

Note how in AB, almost every delivered dose has been administered



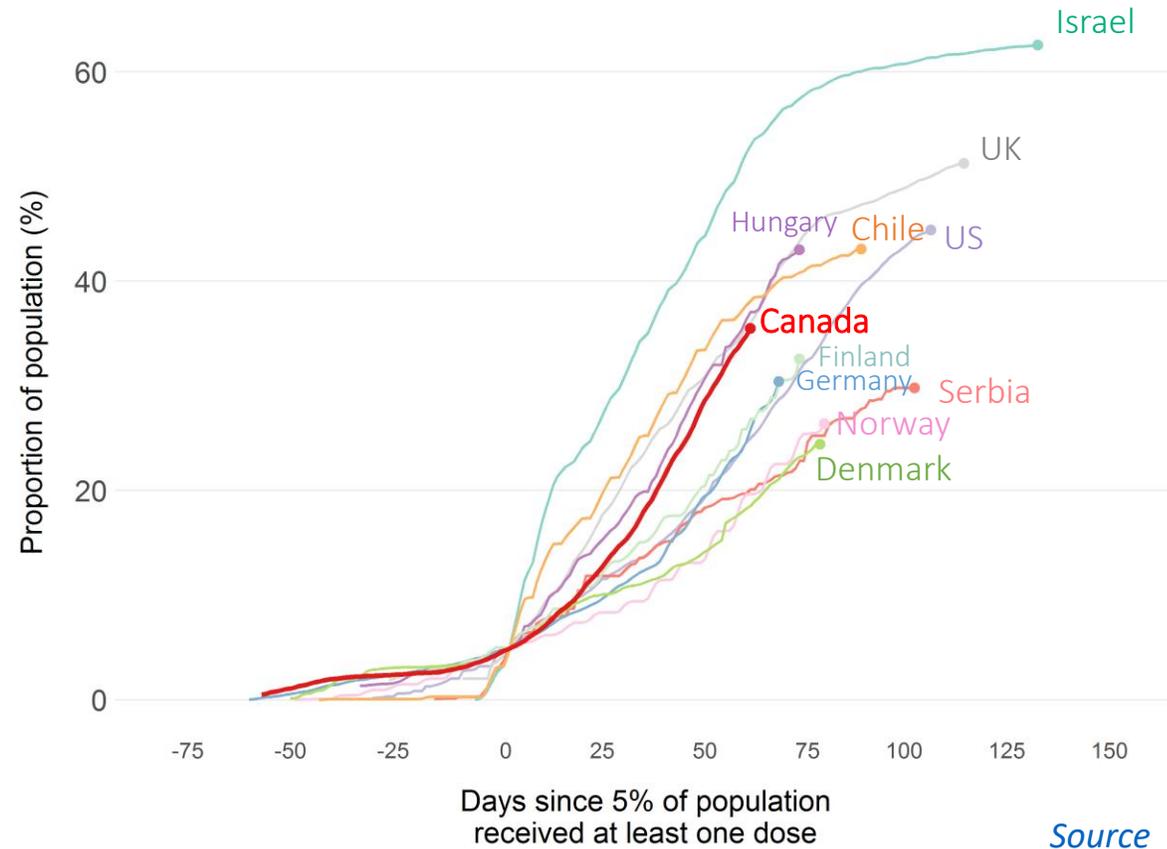
Global vaccination update, May 5

■ Share of people fully vaccinated against COVID-19 ■ Share of people only partly vaccinated against COVID-19



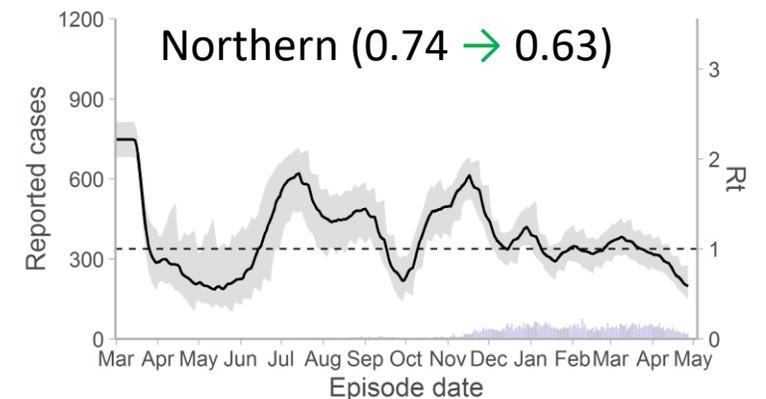
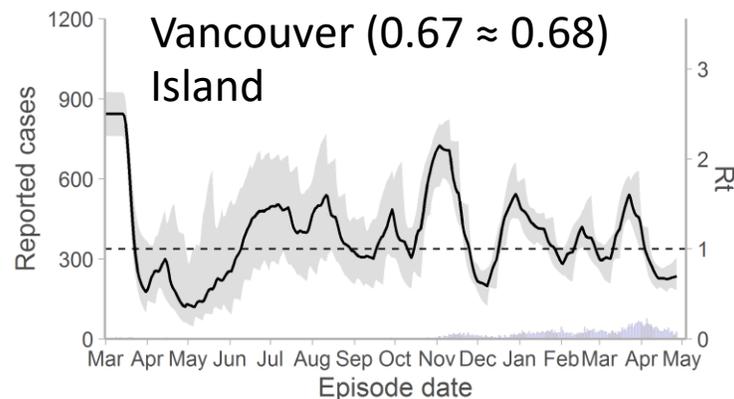
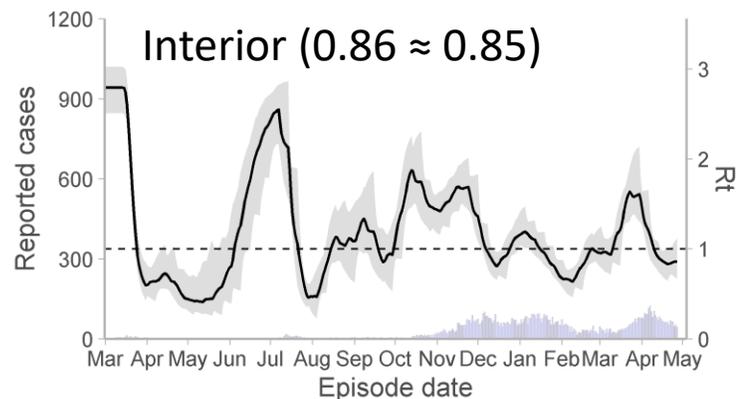
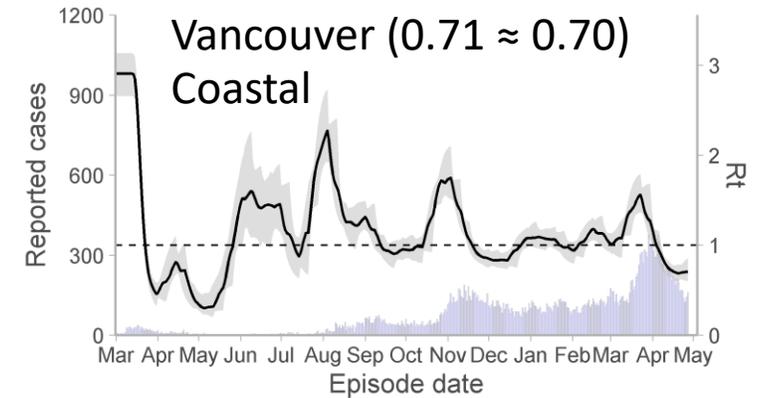
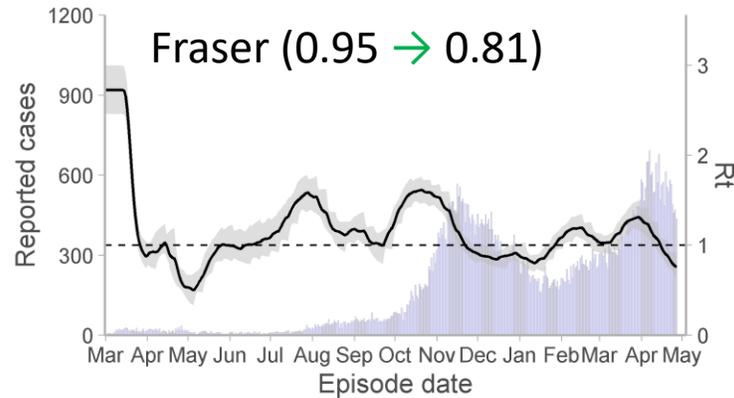
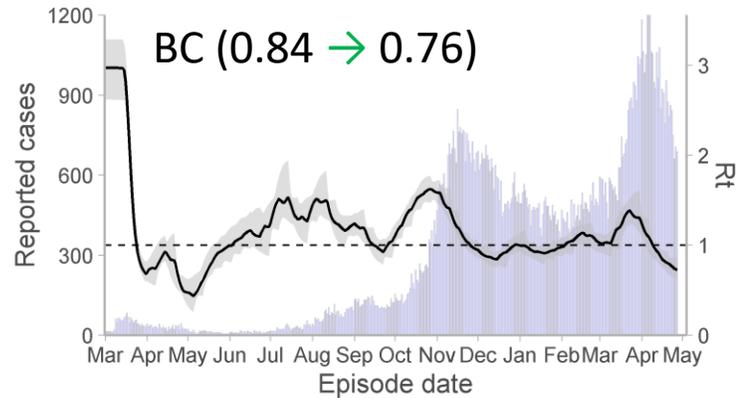
Note the differences in the speed of vaccine rollout between countries that have delayed administration of second dose have vs those that haven't

BC – and Canada – have been closely following the vaccination trajectories of the UK, Hungary and Chile. Many European countries have recently started to extend the interval between the doses.

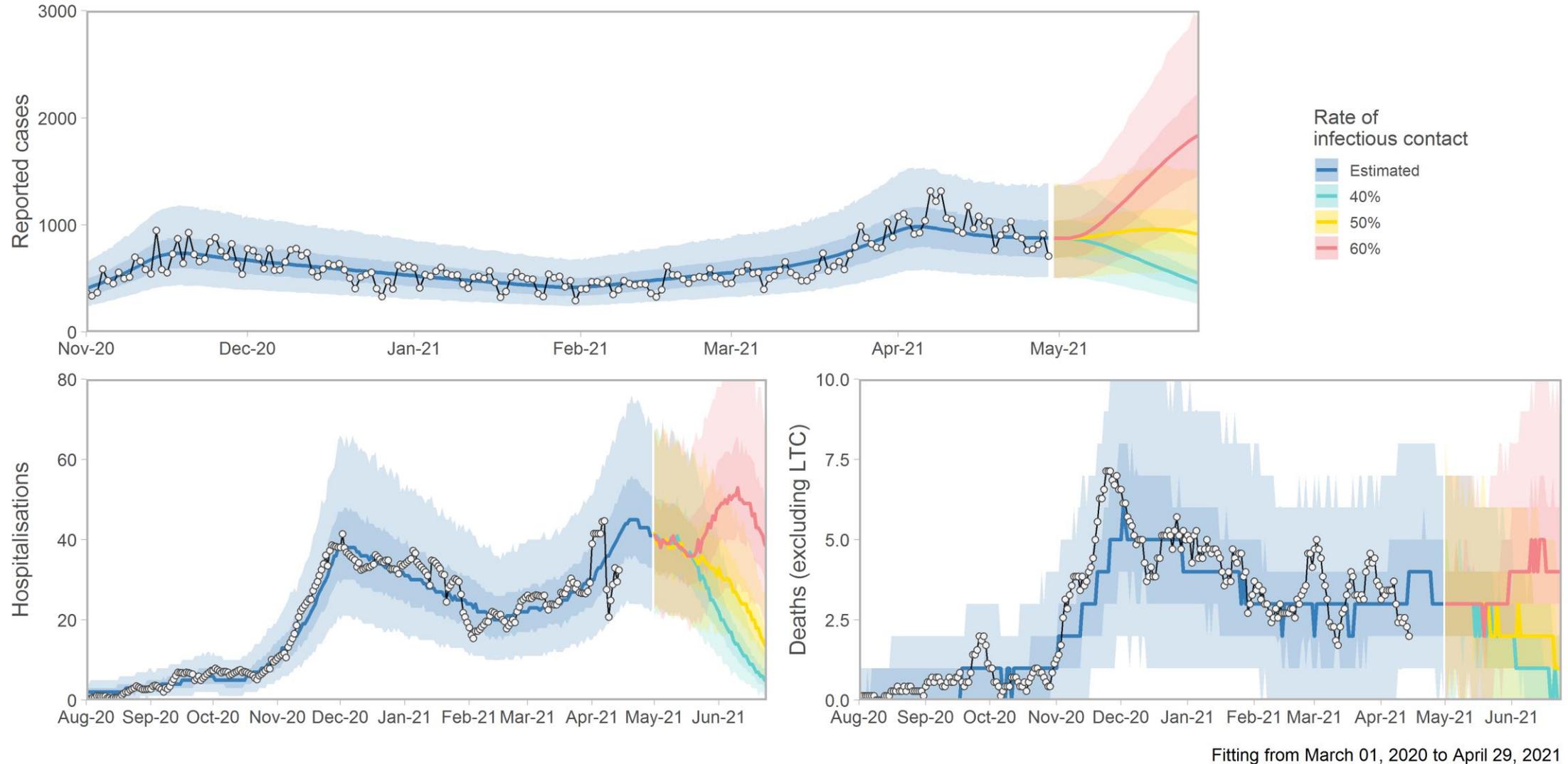


Dynamic compartmental modeling: recent trends

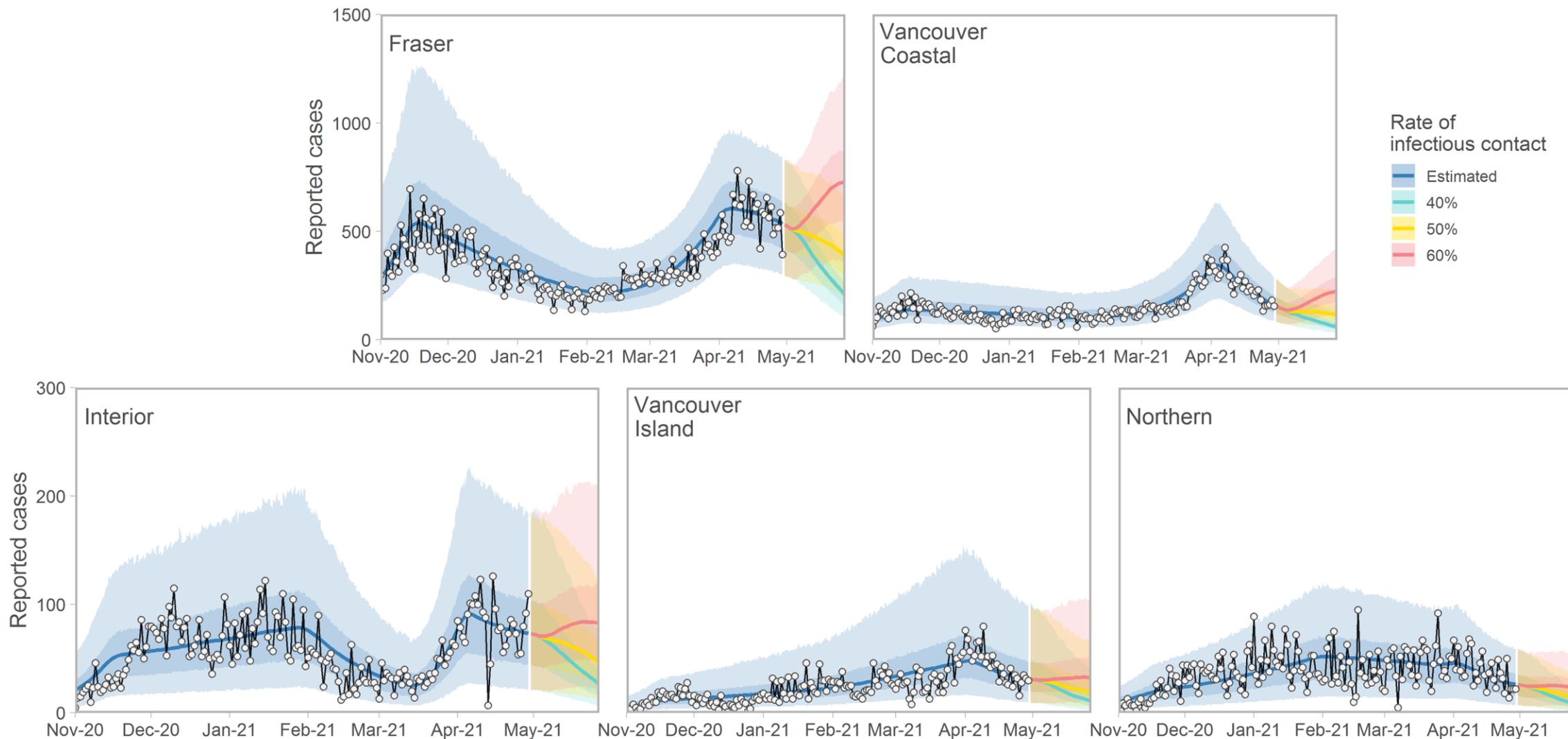
Our model shows that R_t remains below 1 in all regions of BC. Whenever $R_t > 1$, there is a risk that the number of new cases will grow.



Scenarios of trajectory in cases, hospitalizations, and deaths in BC based on infectious contact

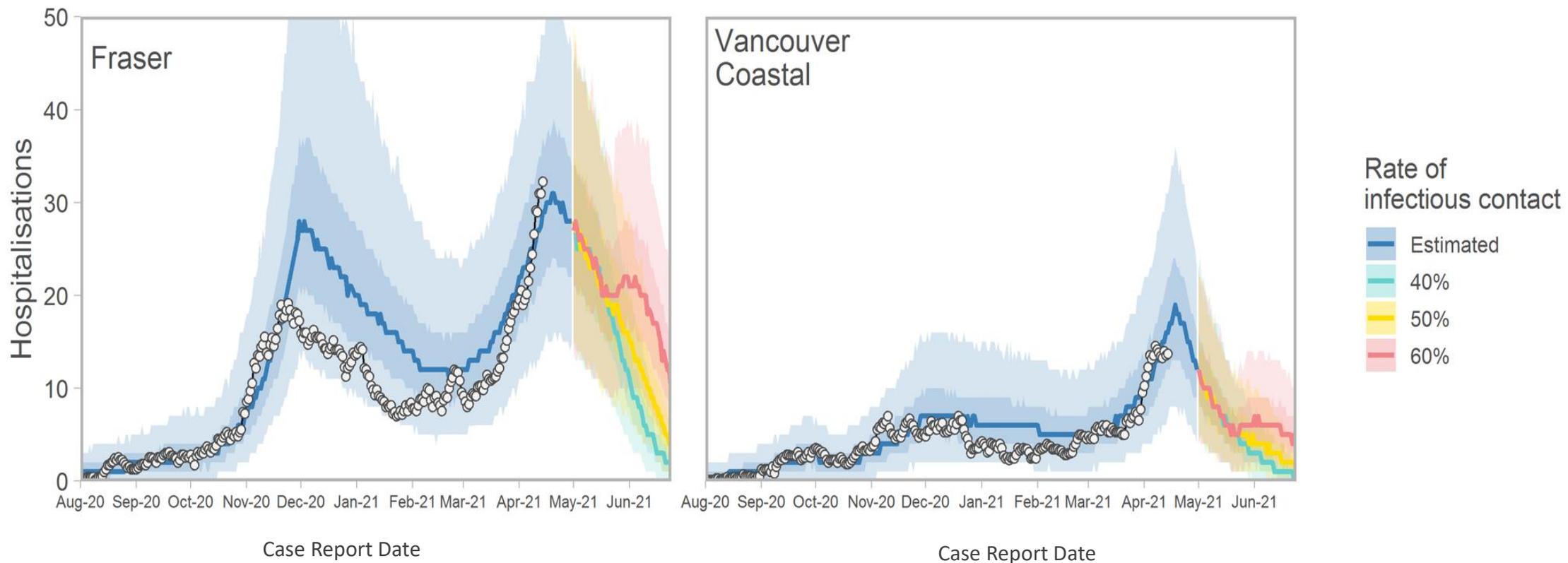


Scenarios of trajectories in **cases** based on infectious contact, by HA



Fitting from March 01, 2020 to April 29, 2021

Scenarios of trajectories in hospitalizations incidence based on infectious contact, by FH and VCH



Model notes and assumptions

- **Rt 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 following caveats apply to these results
 - 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
- **Scenarios going forward:** levels of infectious contact characterized by historic estimated rates:
 - 40% would be similar to what was observed after the 8th September, 2020 announcement
 - 50% would be similar to changes observed after 7th November 2020 announcement
 - 60% would be similar rate of contact observed at beginning of 2021.
- Current BC Vaccination schedule incorporated into model fitting and projections incorporating variable rates of contact and susceptibility by age. Note vaccination of higher contact workers not explicitly included, which may under-estimate total impact of vaccination.
- Vaccination was modeled using the current proposed one dose schedule by age group, with all eligible age groups vaccinated by end of June, adjusting for age-dependent impact on transmission. Further assumed a 15% hesitancy of all age groups.
- Establishment of VoC varied by region and estimated from sequencing of cases. Estimates used were: Fraser: 20th January, Vancouver Coastal: 7th February, Interior: 15th March, and 25th March Vancouver Island and Northern.
- Dominance of VoC assumed to be 7 weeks in line with other jurisdictions. 50% increased transmission and disease severity selected to reflect experienced changes in other jurisdictions.