BCCDC Weekly Data Summary

13 May 2021

Purpose

The weekly 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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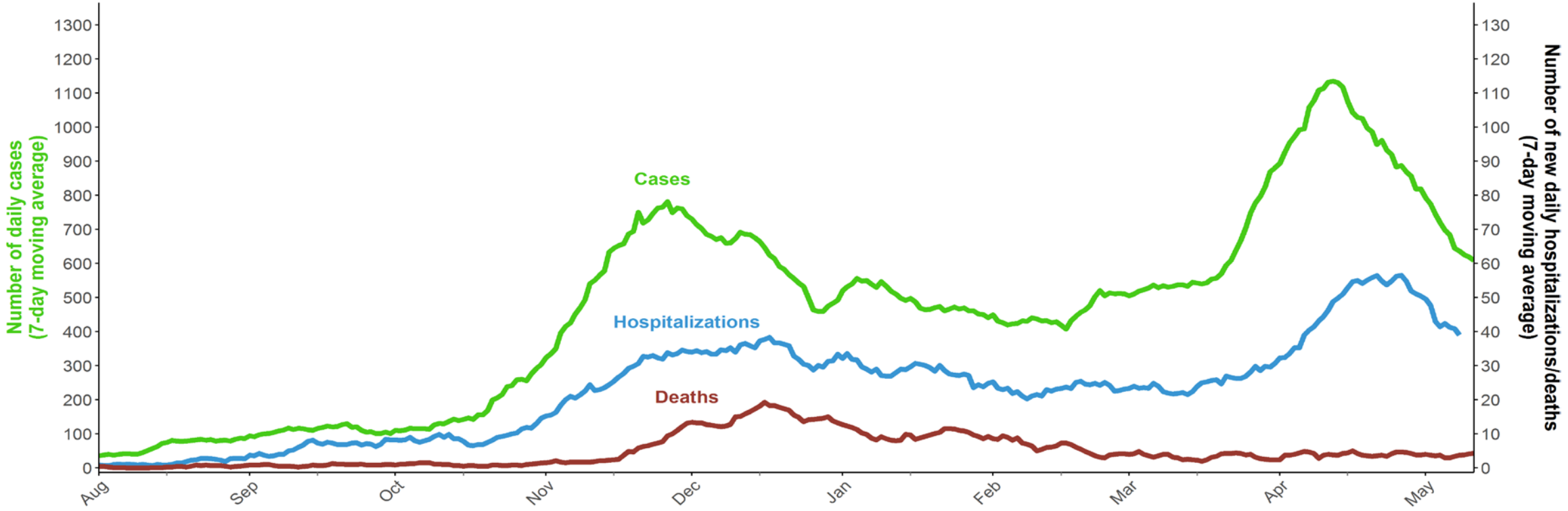
Overall Weekly Summary

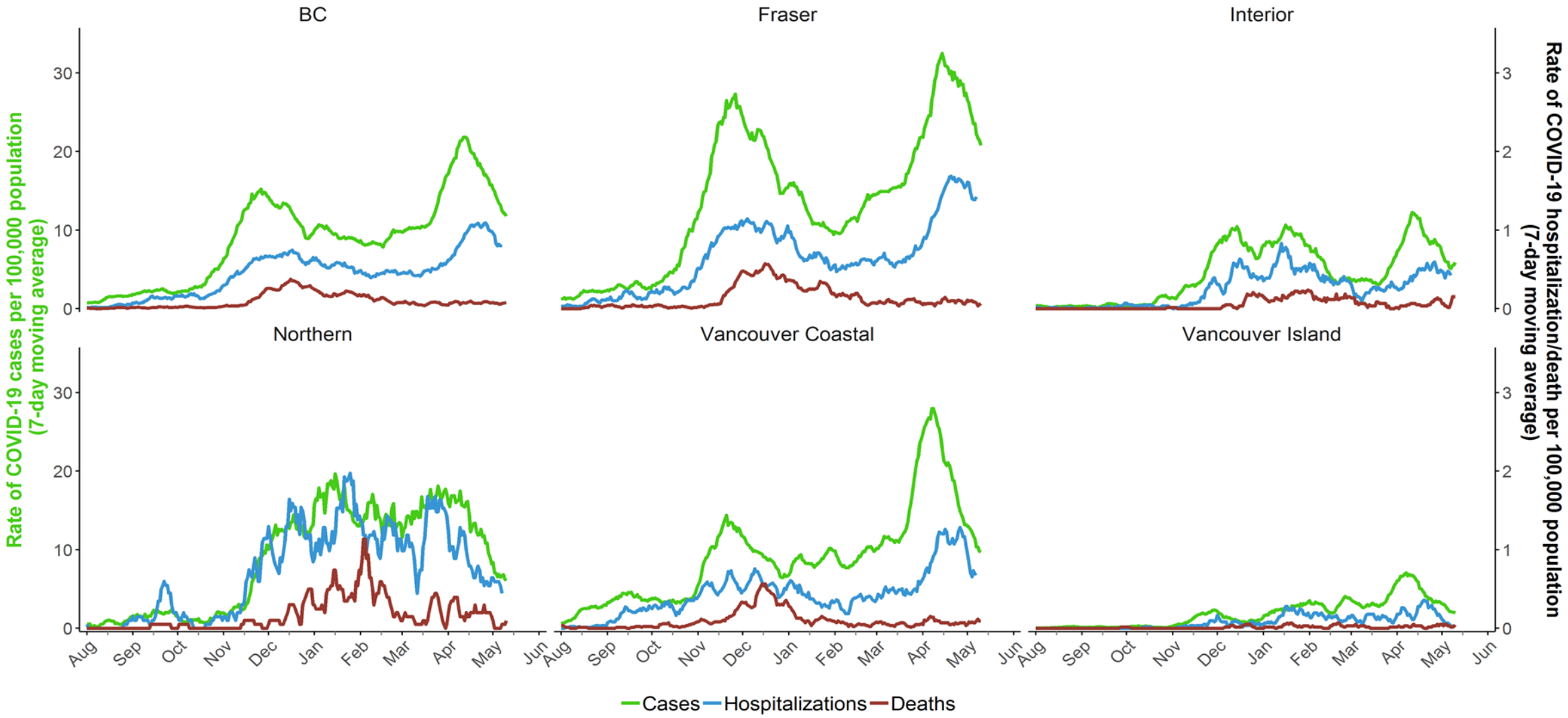
- Case rates continue to decline in all HAs; test positivity is at 9% provincially for publicly funded tests and 7% for all tests.
- New hospitalizations are elevated, but beginning to decline; hospital/critical care census is stable or declining in all HAs; new deaths are stable and low.
  - Majority of hospitalizations are among individuals aged >40 years; declines occurring in individuals ≥ 60 years
  - Majority of deaths in individuals aged >80 years
- The share of VOCs among screened cases in BC is ~83% in epi week 18 (May 2-8). Among sequenced samples provincially based on information for epi week 17, P.1 (~42%) and B.1.1.7 (~57%) remain two dominant VOCs.
- As of May 13, 51% of adult population in BC has received first dose of vaccine; 85% of those over 70 years and 73% of those 55-69 years have been vaccinated.
  - The number of outbreaks in LTCFs remains very low following vaccination campaign
  - Nationally, BC's vaccination rate is very close to Canadian average; internationally, Canada is one of the most vaccinated countries in the world, closely following UK's vaccination trajectory

May 06 to May 12: BC COVID-19 Profile

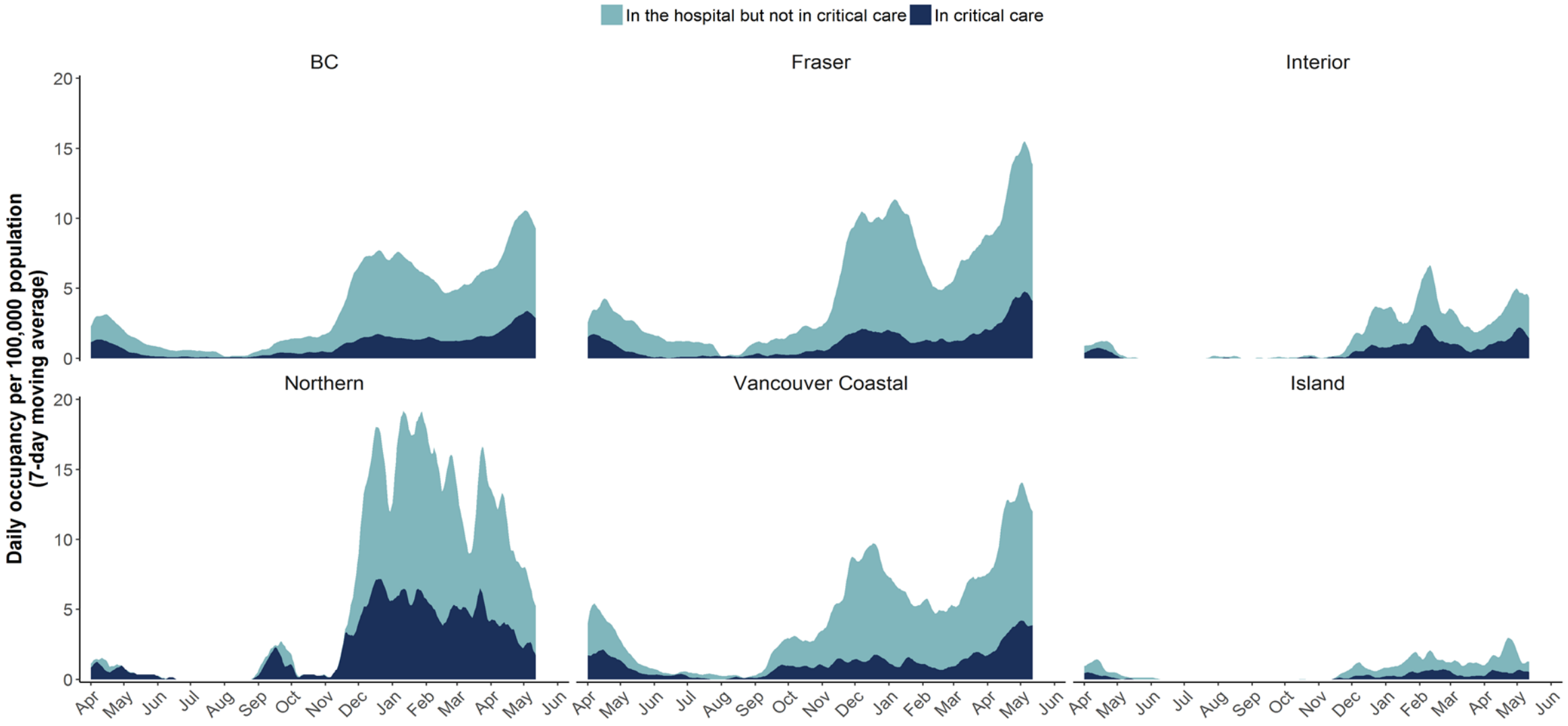
137,223	total cases
4,298	new this week
1,627	total deaths
33	new this week
7,217	ever hospitalized
330	new this week
129,524	removed from isolation
5,272	new this week



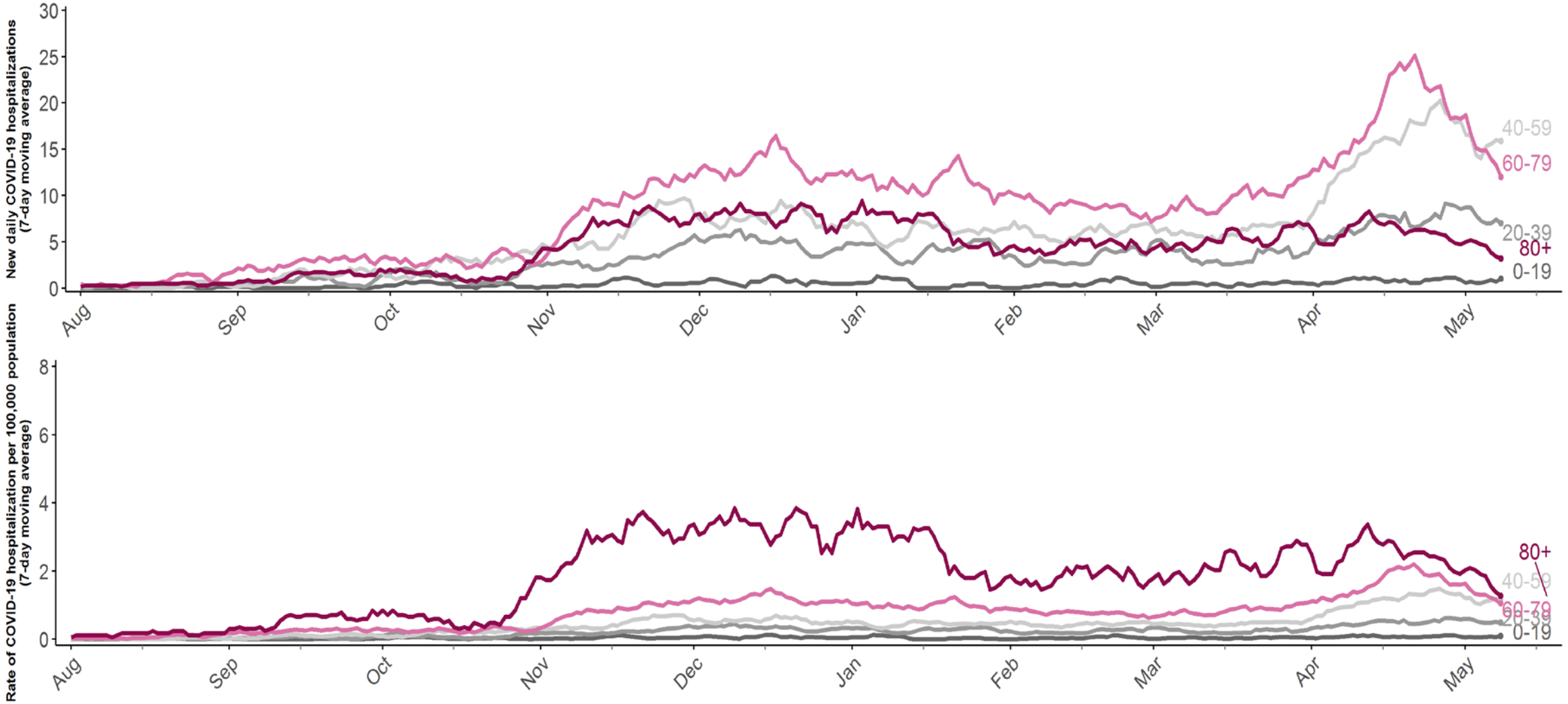
Case rates continue to decline in each HA; new hospitalizations are starting to decline; new deaths are stable and low.



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



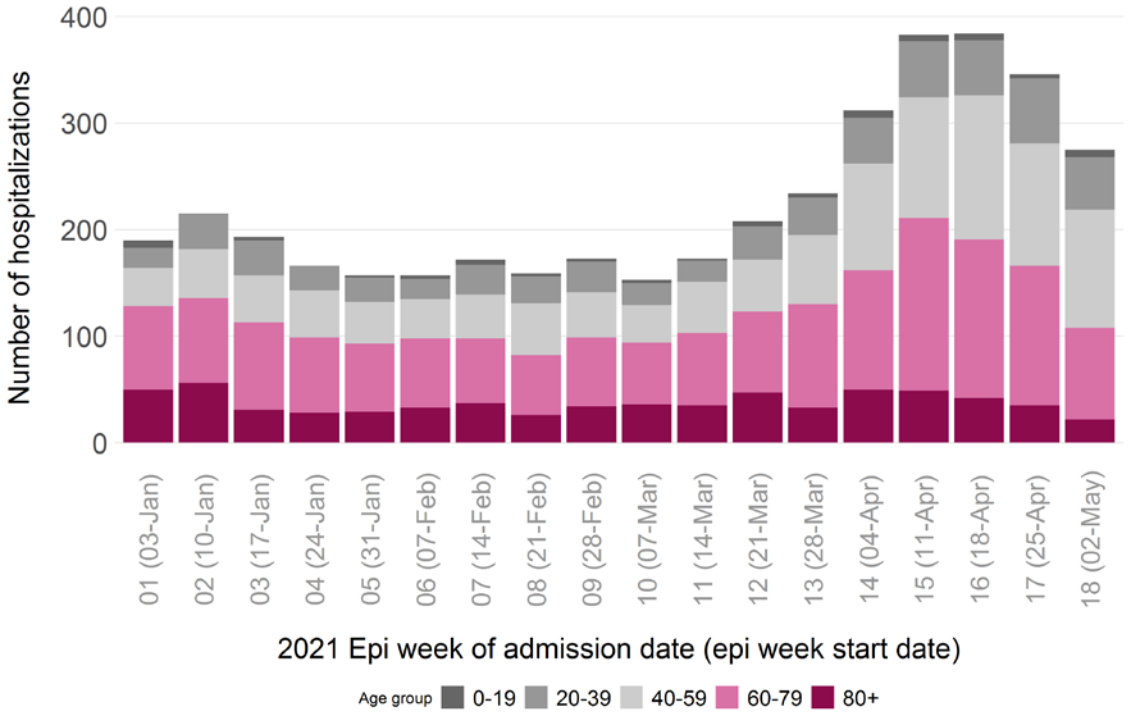
Hospital admissions are declining for individuals aged ≥60 years

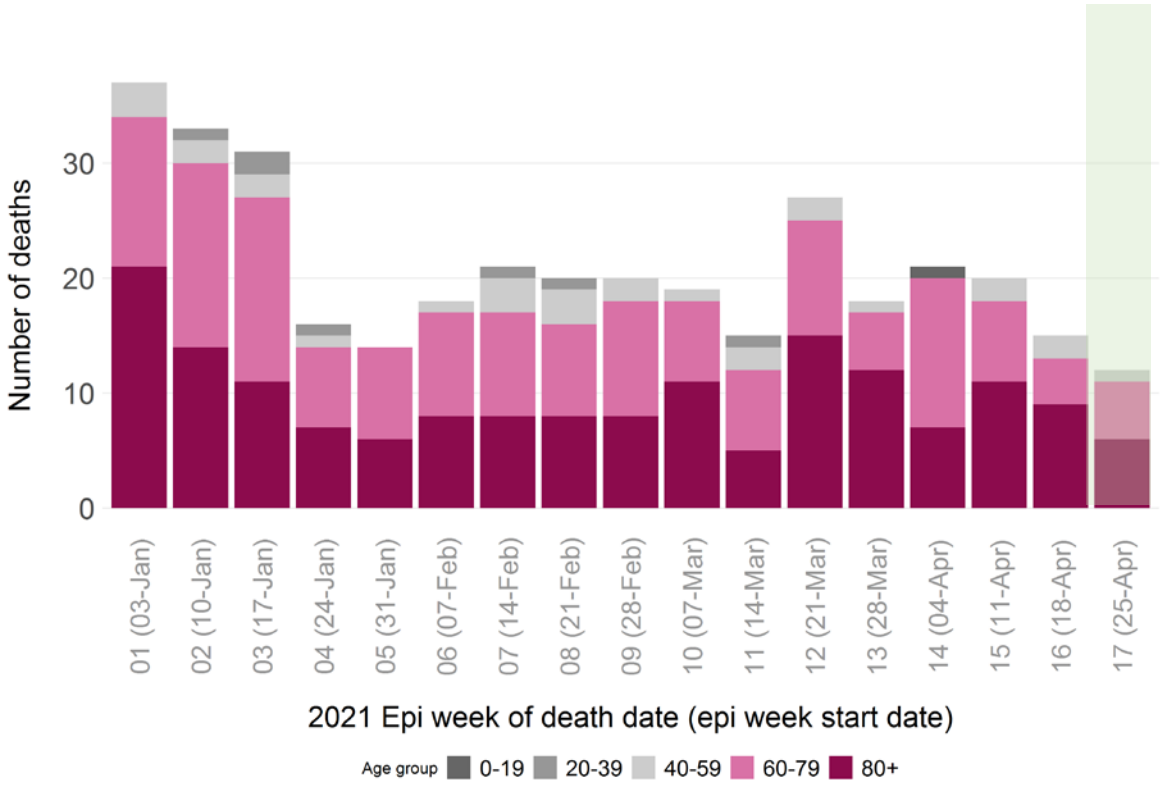


Data to May 8 based on admission date for hospitalizations

Hospital admissions are decreasing recently, primarily among individuals ≥60 years. The number of hospital admissions among <40 years remains relatively low. Deaths are decreasing, primarily among individuals ≥60 years.

Data incomplete





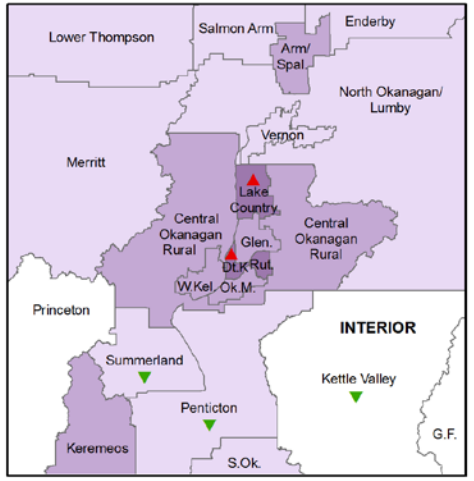
Data to May 8 (hospitalizations) and May 1 (deaths)

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

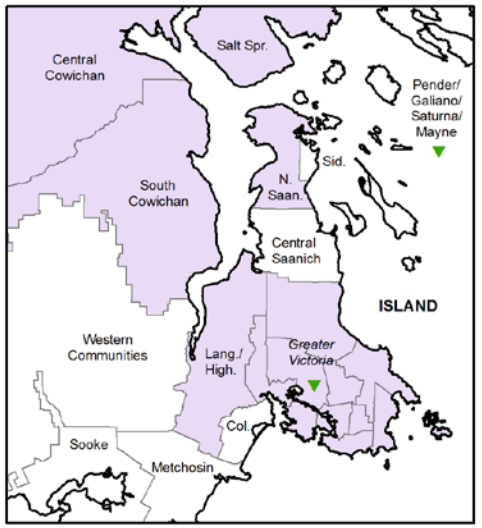
Recent 7-Days Cases

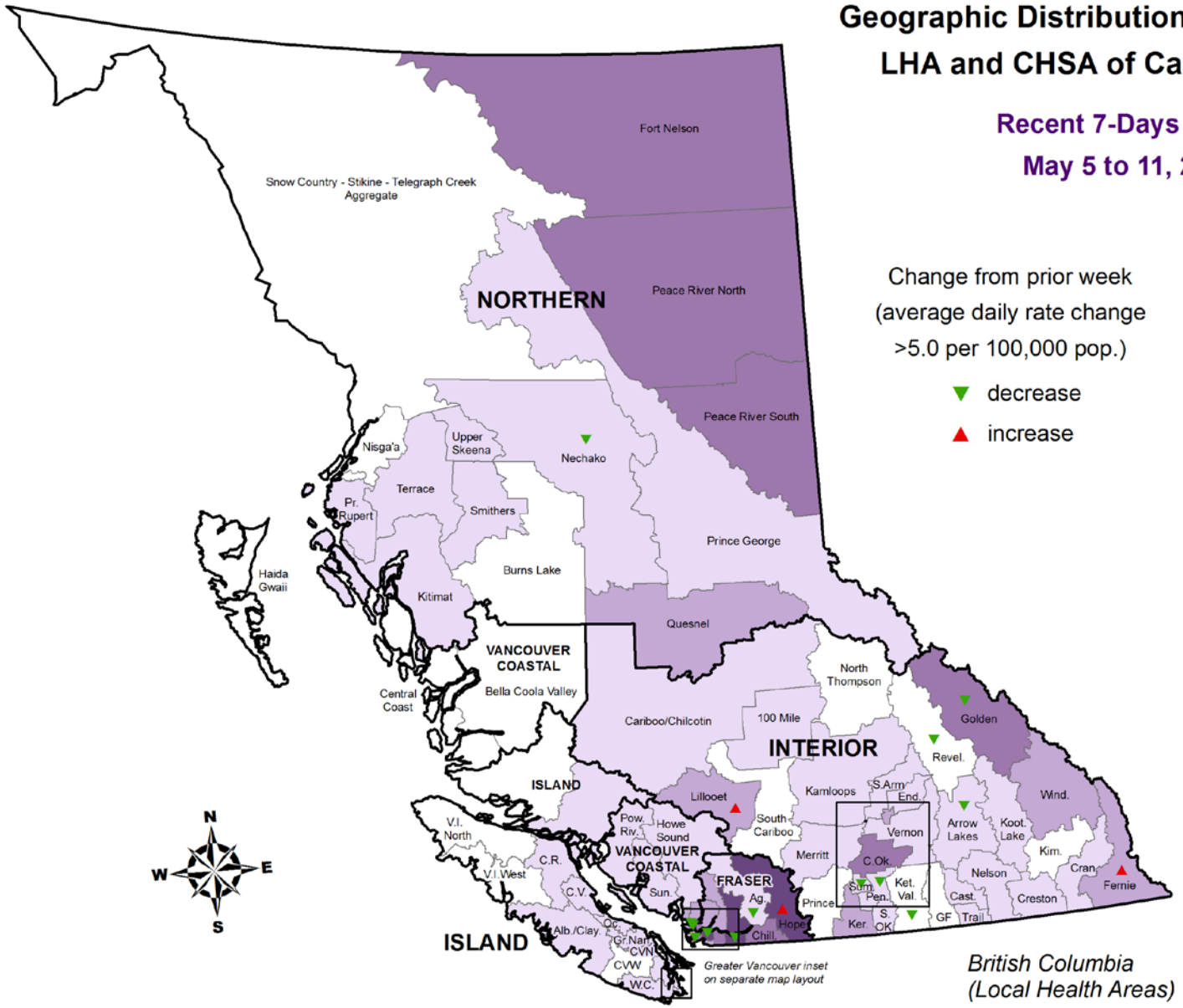
May 5 to 11, 2021

Okanagan Inset
(Community Health Service Areas)



Greater Victoria Inset
(Community Health Service Areas)





British Columbia
(Local Health Areas)

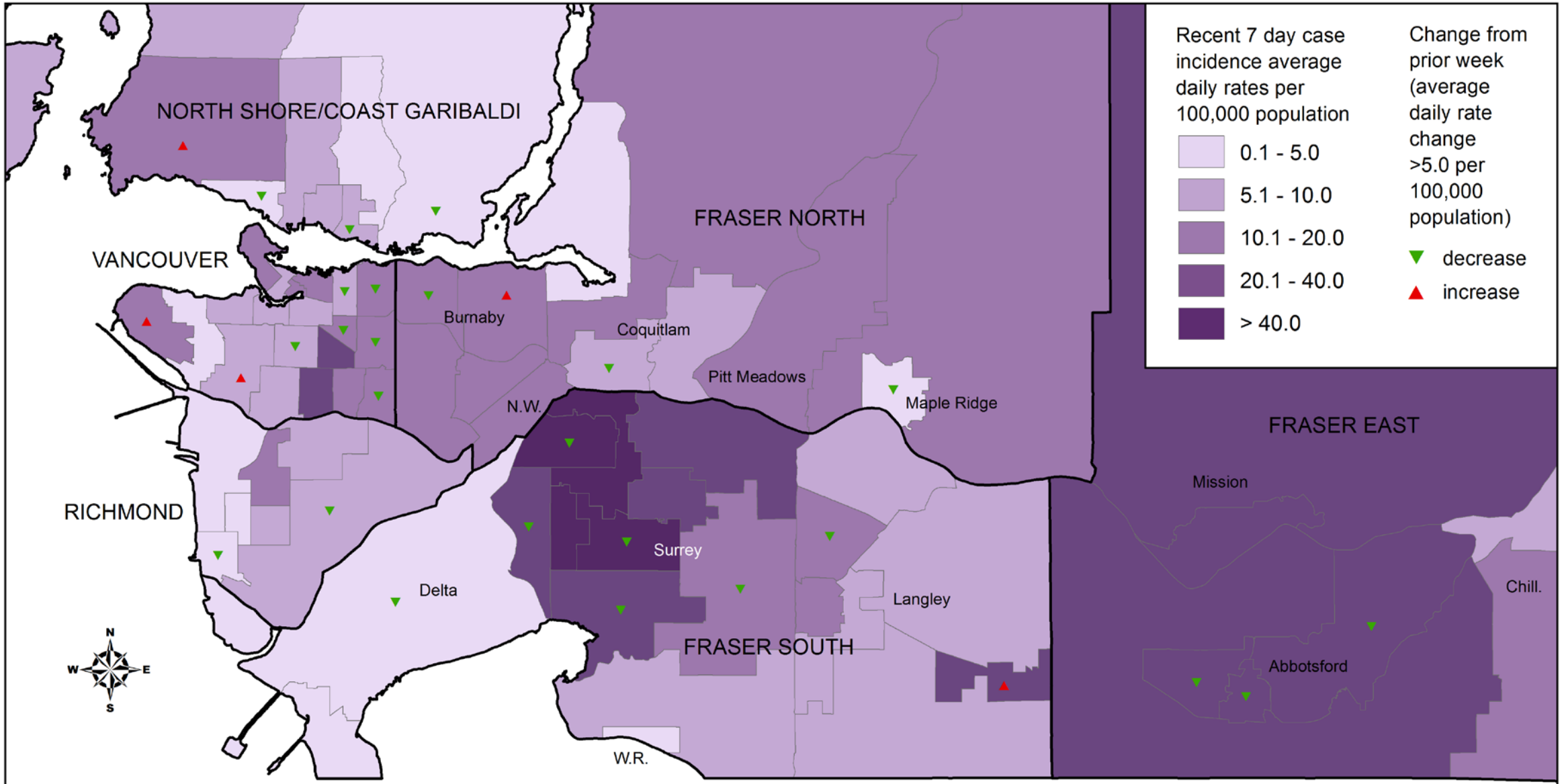
Change from prior week
(average daily rate change >5.0 per 100,000 pop.)

- ▼ decrease
- ▲ increase

Average daily rate per 100,000 population

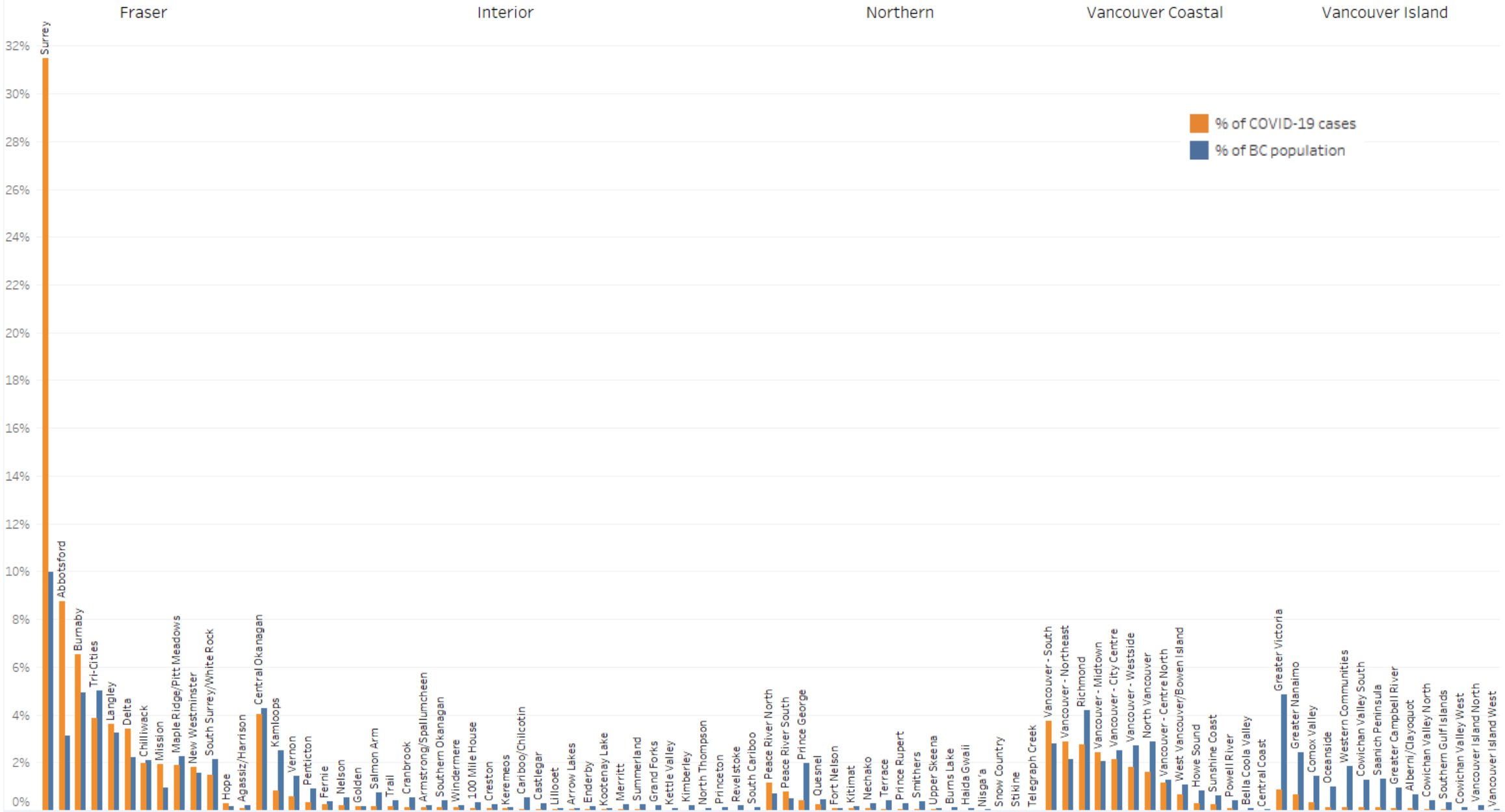
- 0.0
- 0.1 - 5.0
- 5.1 - 10.0
- 10.1 - 20.0
- 20.1 - 40.0
- > 40.0

Notes: data are by surveillance date and location of residence from PHRDW integrated COVID dataset; population denominator from BC Stats PEOPLE dataset.

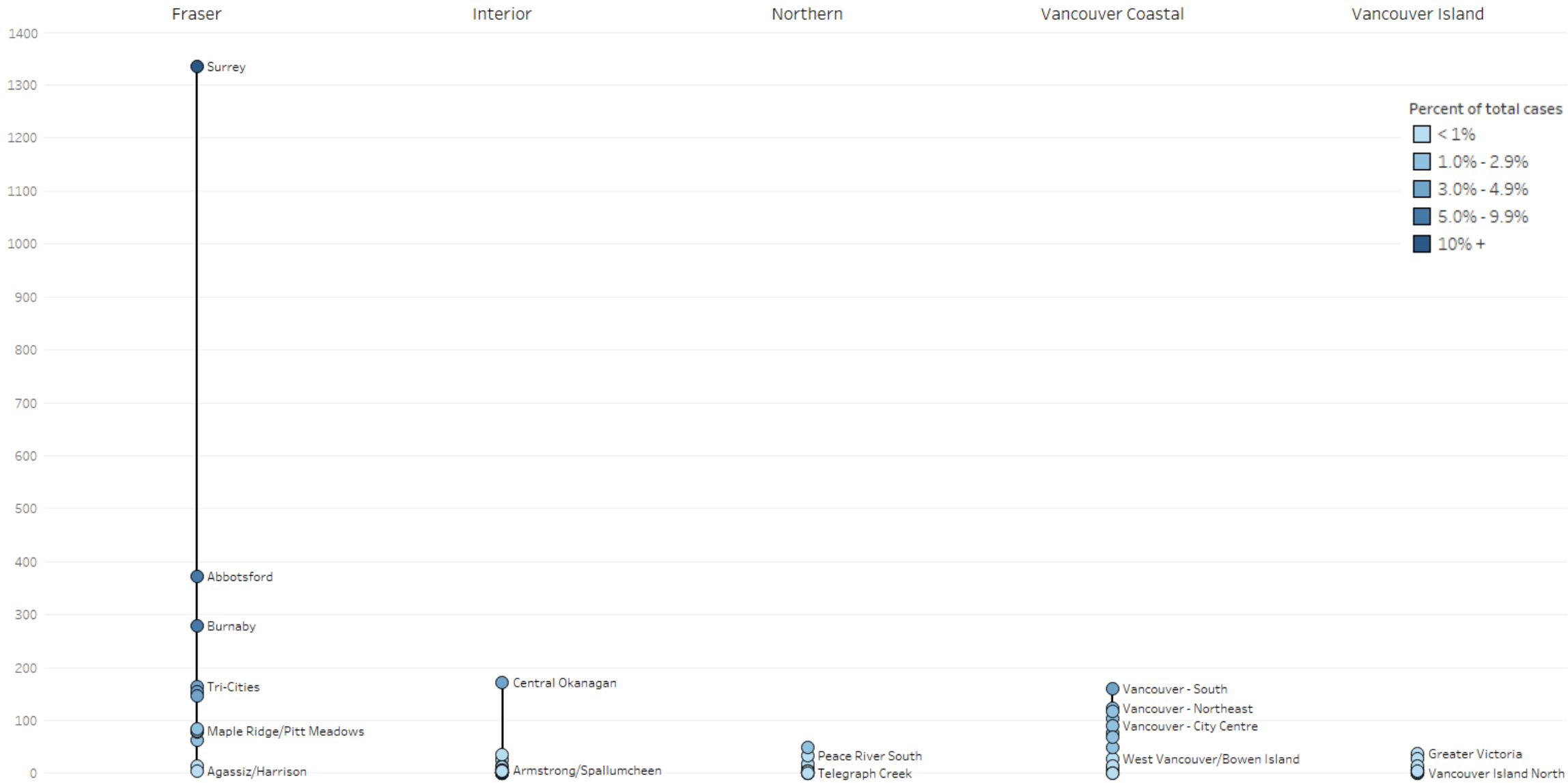


COVID-19 Recent 7-Day Case Incidence Rates by CHSA (May 5 to 11, 2021)

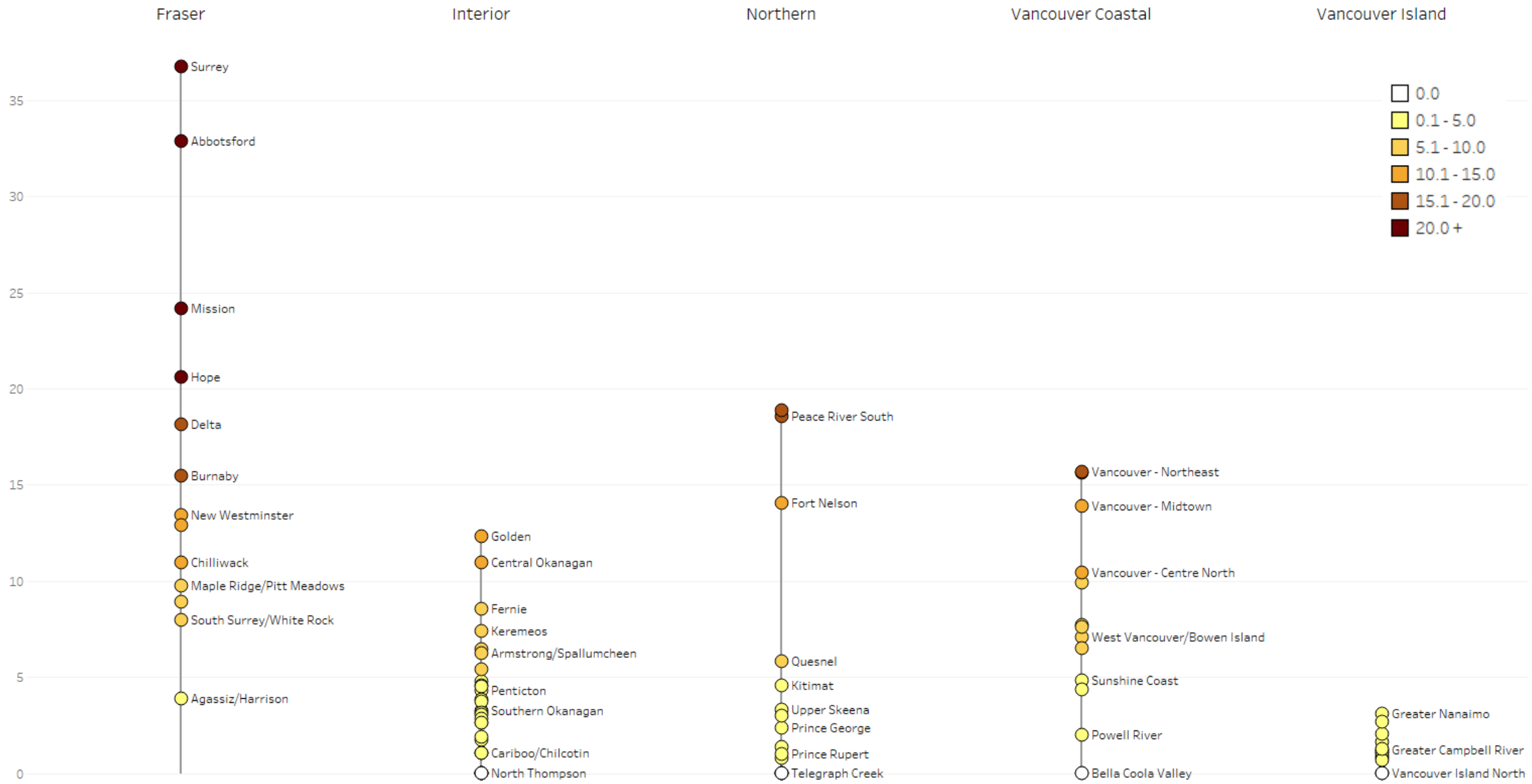
Proportion to total cases & population by local health area, May 05 - May 11, 2021



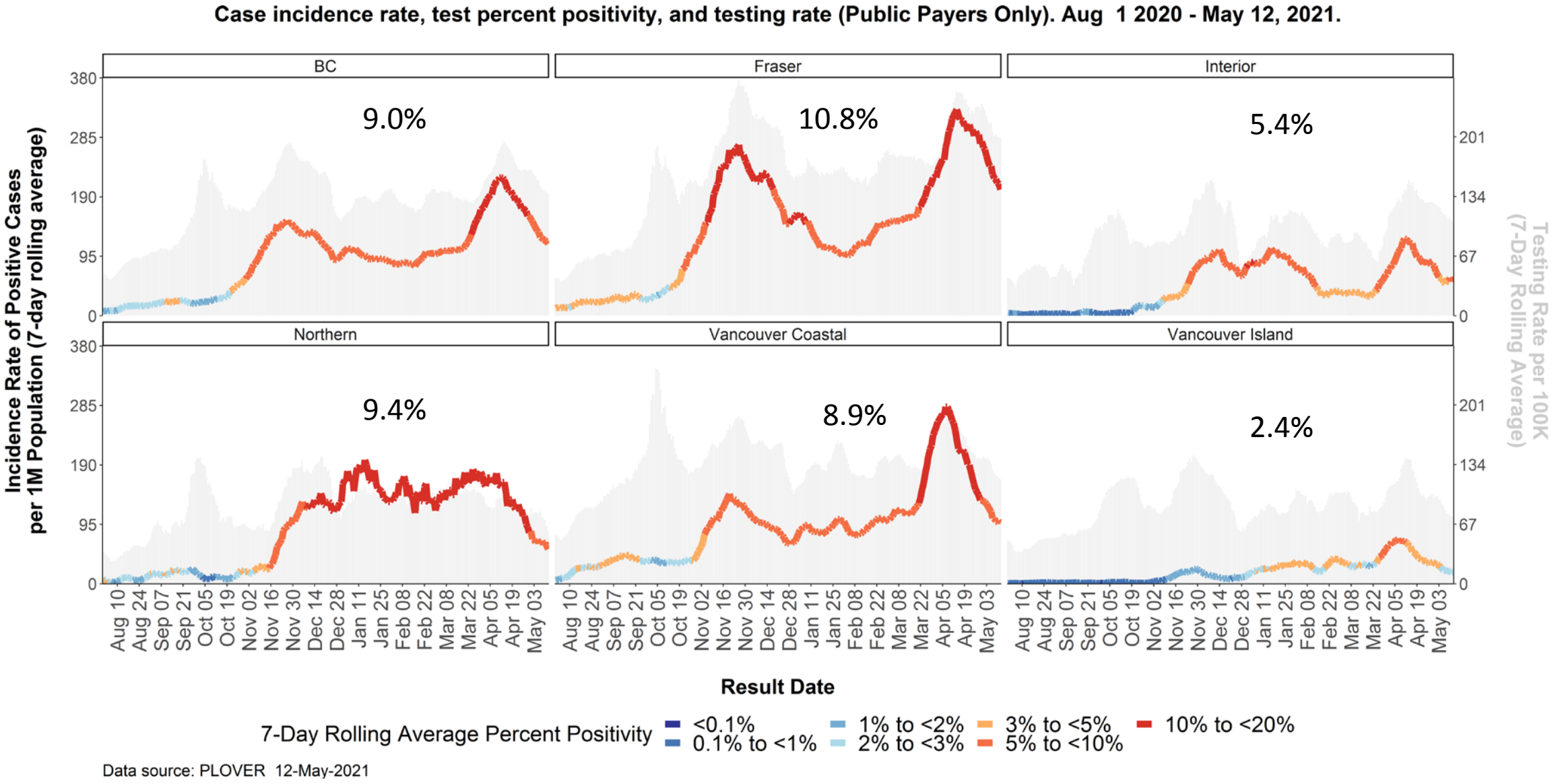
Total cases by local health area, May 05 - May 11, 2021



Average daily rate of new cases per 100,000 population, by local health area, May 05 - May 11, 2021

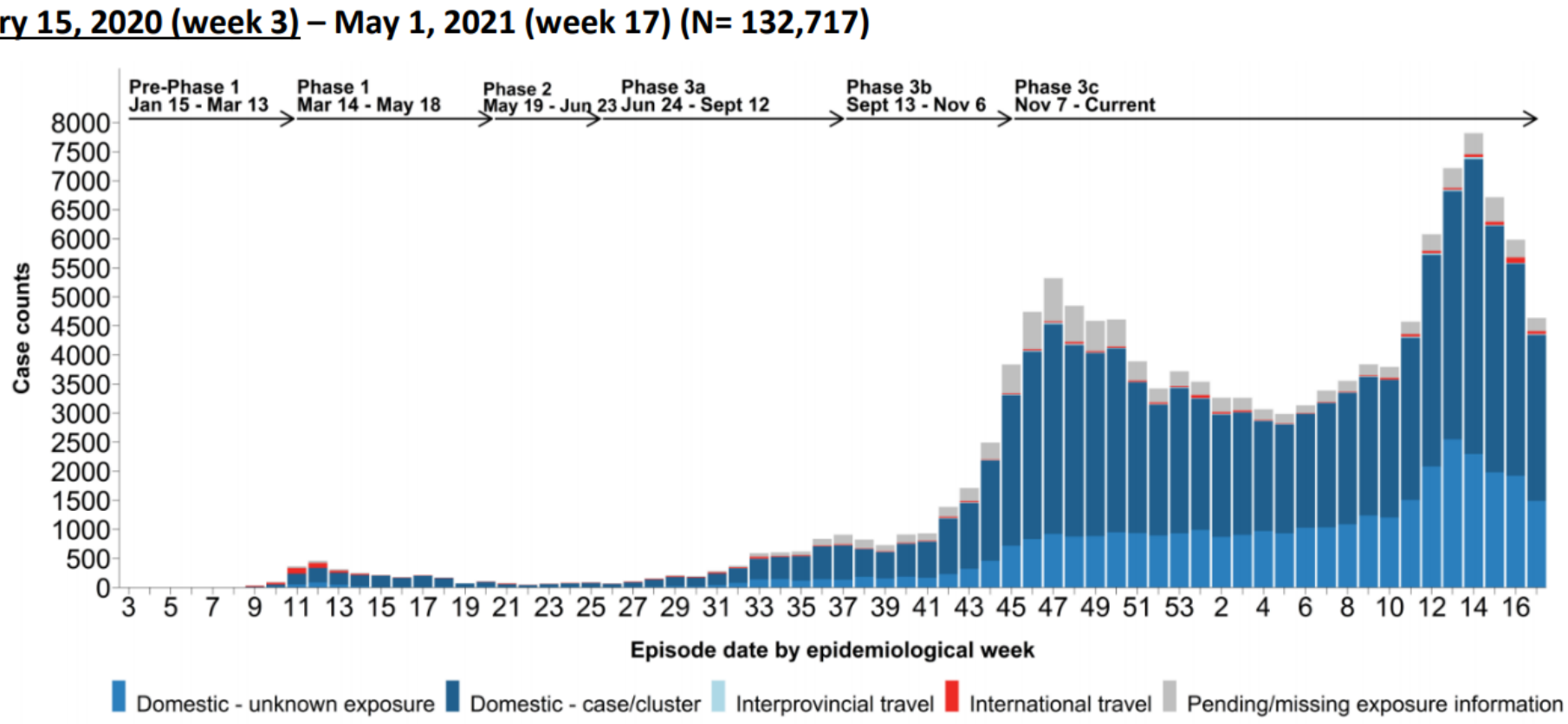


Incidence is decreasing or stable in all HAs. Percent positivity remains >10% in FH.



Data source: PLOVER 12-May-2021

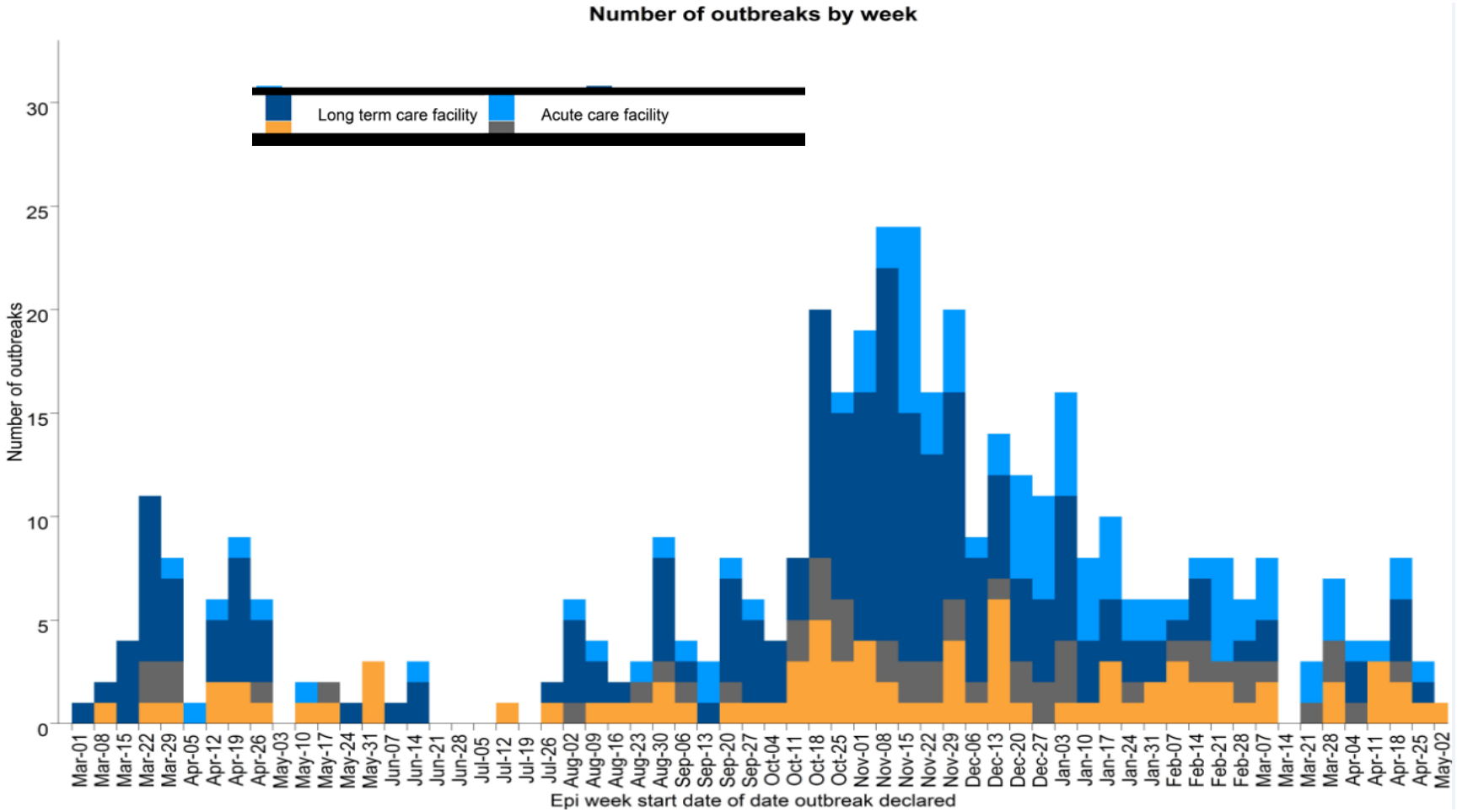
The majority of cases continue to be related to local acquisition through a known case or cluster



Likely source of COVID-19 infection by episode date, BC January 15, 2020 (week3) to May 1, 2021 (week17)

This figure can also be found in the weekly Situation Report

Overall the number of new outbreaks declared remains low, and no new outbreaks declared in acute care and long-term care facilities week of May 2-8, 2021



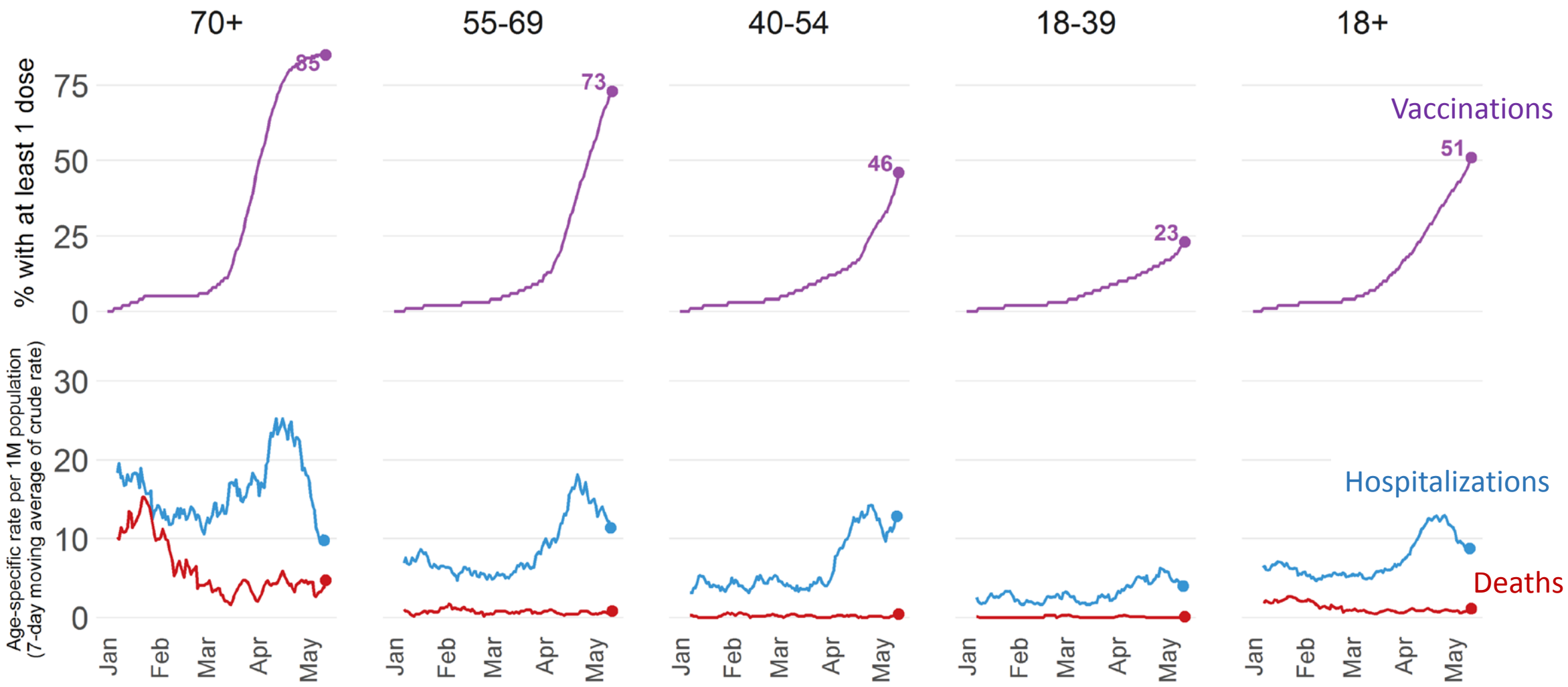
A slightly different version of this figure can also be found in the weekly Situation Report

*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, 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.

Vaccinations– key message

- BC as of May 13th: Individuals ≥ 70 years at 85%; 55-69 years at 73%; 40-54 years at 46%. Overall, half of adult population in BC has received at least 1 dose.
- Rate of cases per 100,000 population continued to drop continuously in Prince Rupert since mid-March compared with individuals living in other parts of NHA.
- The number of cases among health care workers and residents 70+ working or living in long-term care or assisted living facilities declined following vaccination roll-out compared with individuals not working or living in these settings.
- Rate of cases per 100,000 population among individuals 70+ has gone up less during the recent resurgence compared with individuals aged 40-60. Rate of hospitalizations per 100,000 population has been declining faster among individuals 70+ since mid-April compared with individuals aged 40-60.
- Nationally, BC's vaccination rate is very close to Canadian average; internationally, Canada is one of the most vaccinated countries in the world, closely following UK's vaccination trajectory.

Vaccination progress in BC by age group as of May 13

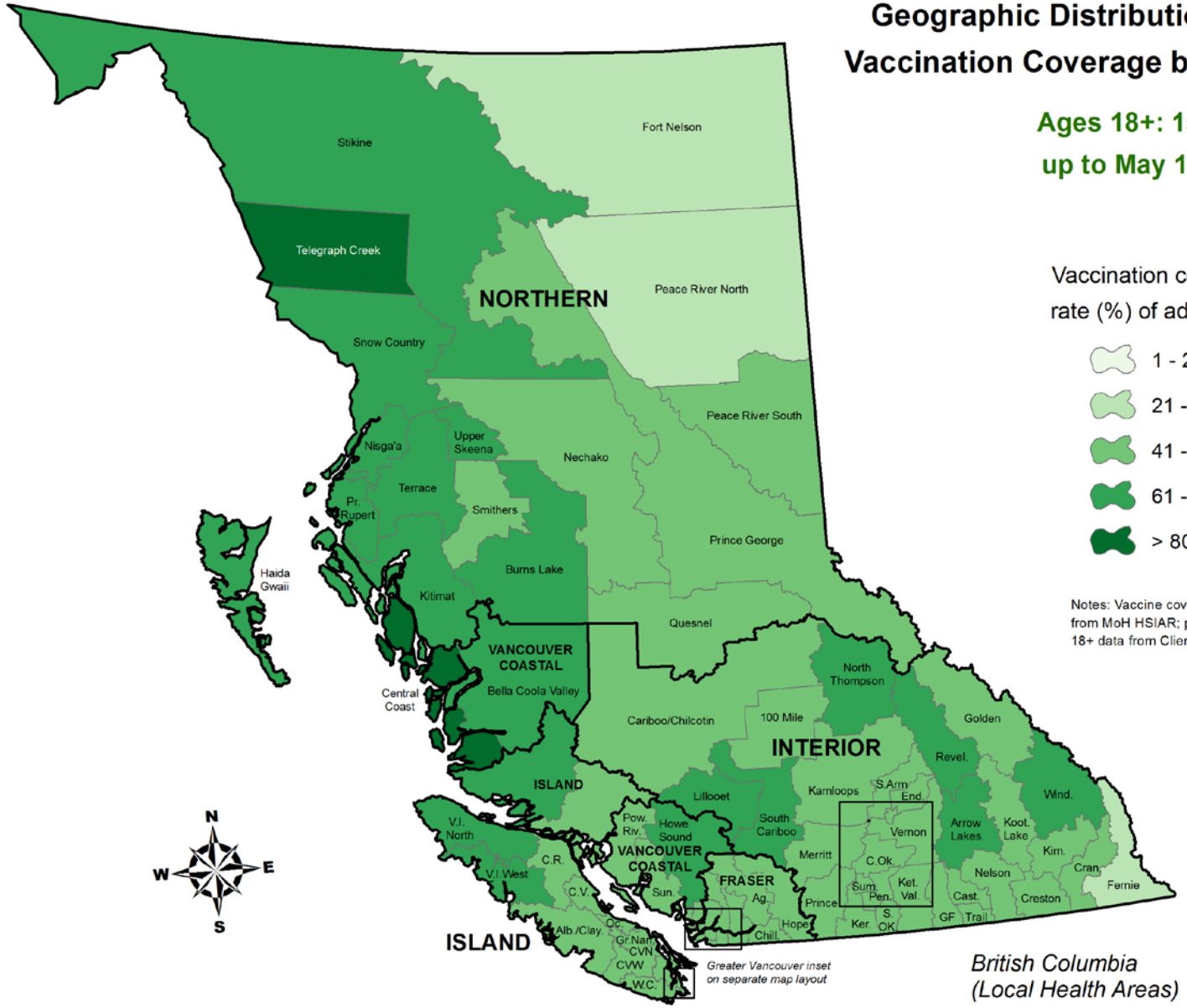


Geographic Distribution of COVID-19 Vaccination Coverage by LHA and CHSA

Ages 18+: 1st Dose
up to May 10, 2021

Okanagan Inset
(Community Health Service Areas)

Greater Victoria Inset
(Community Health Service Areas)

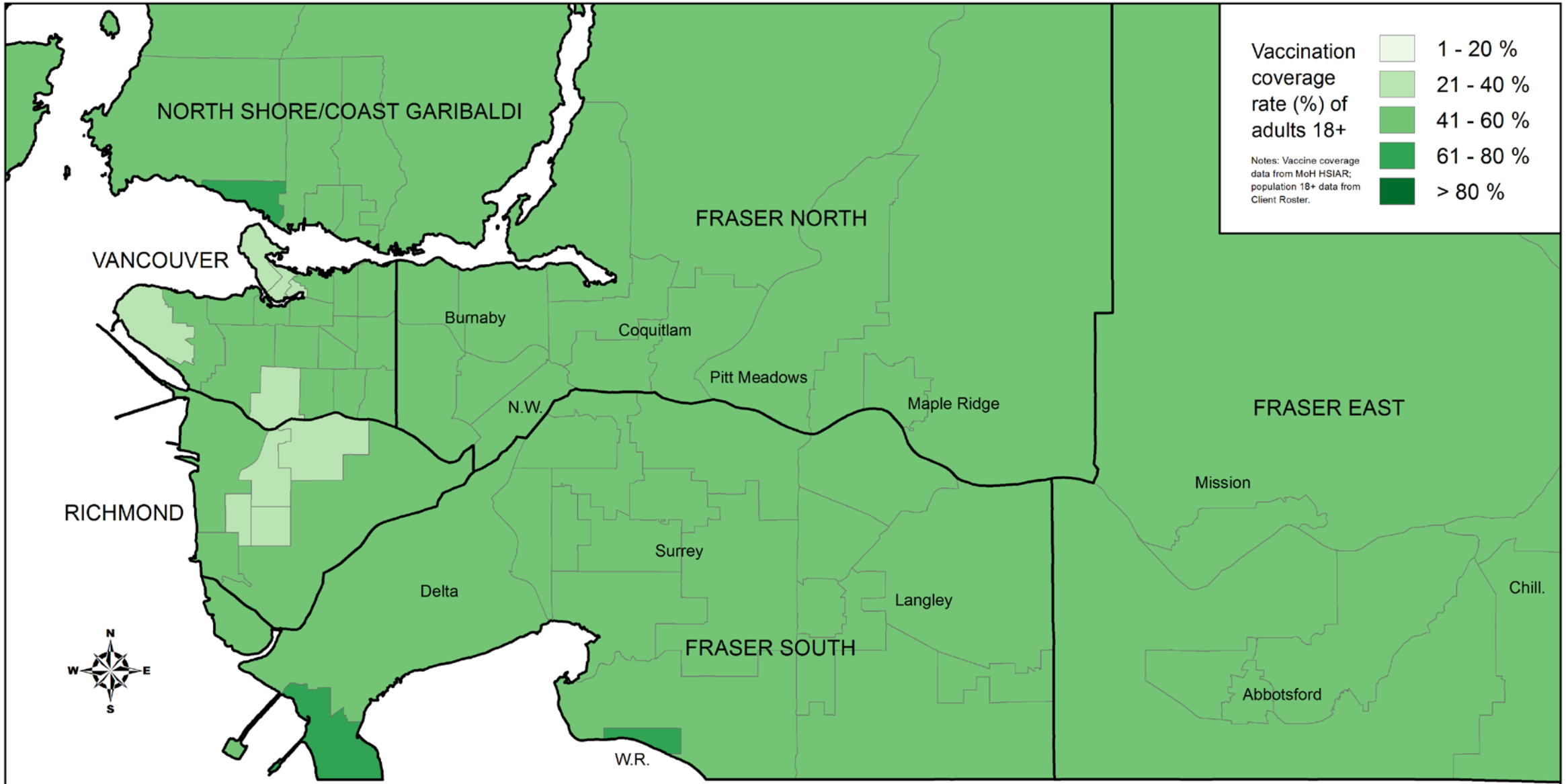


Vaccination coverage rate (%) of adults 18+

- 1 - 20%
- 21 - 40%
- 41 - 60%
- 61 - 80%
- > 80%

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

British Columbia
(Local Health Areas)

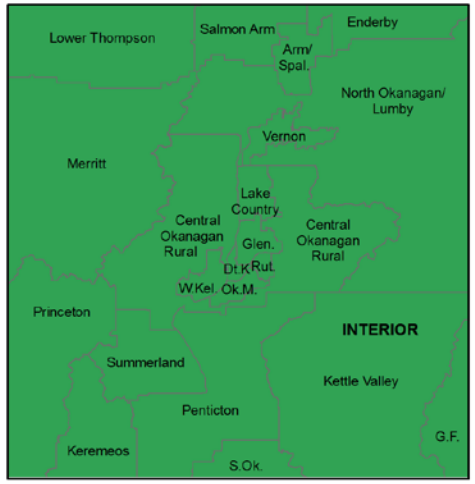


COVID-19 Vaccination Coverage by CHSA: Ages 18+ 1st Dose (up to May 10, 2021)

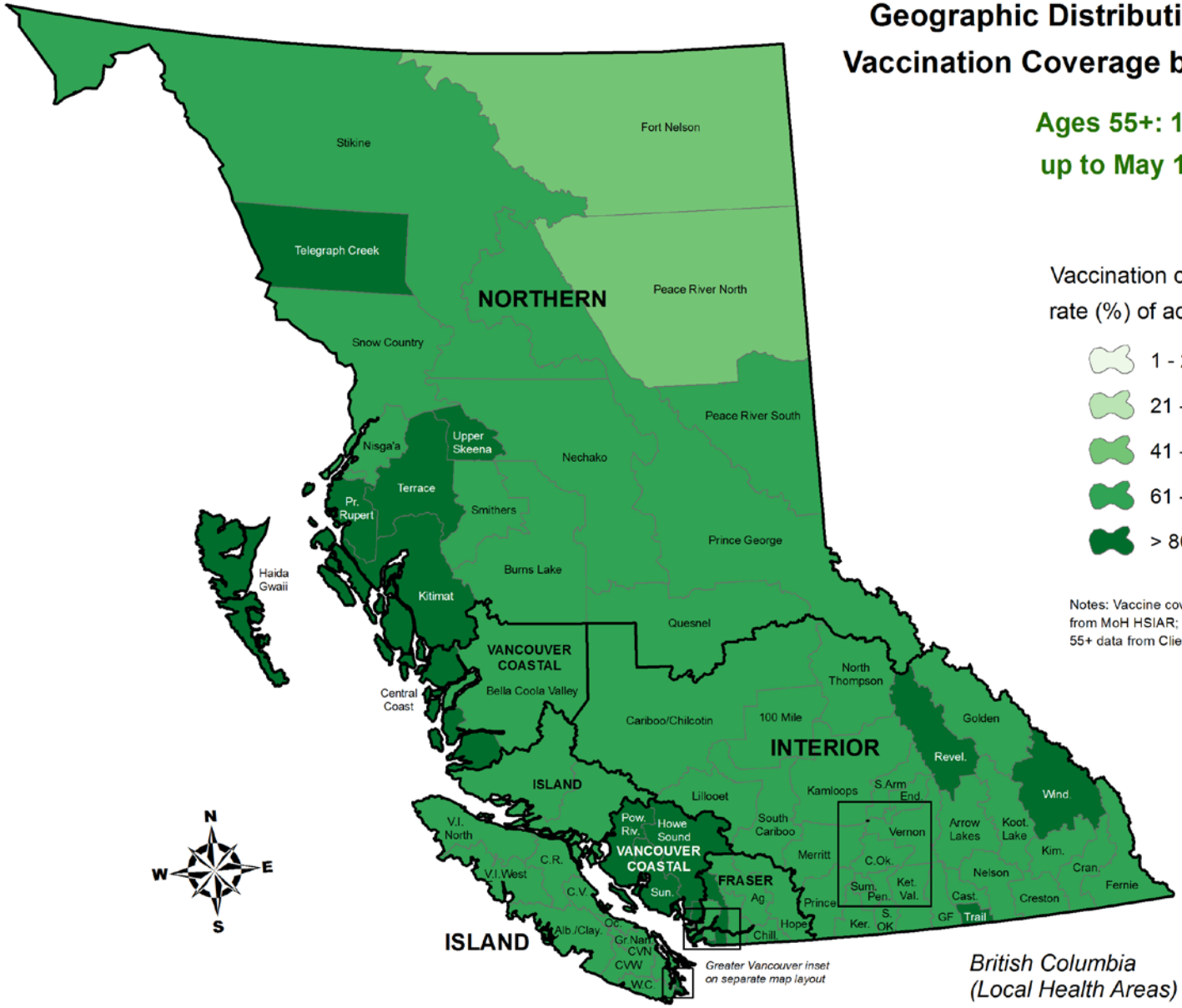
Geographic Distribution of COVID-19 Vaccination Coverage by LHA and CHSA

Ages 55+: 1st Dose
up to May 10, 2021

Okanagan Inset
(Community Health Service Areas)



Greater Victoria Inset
(Community Health Service Areas)



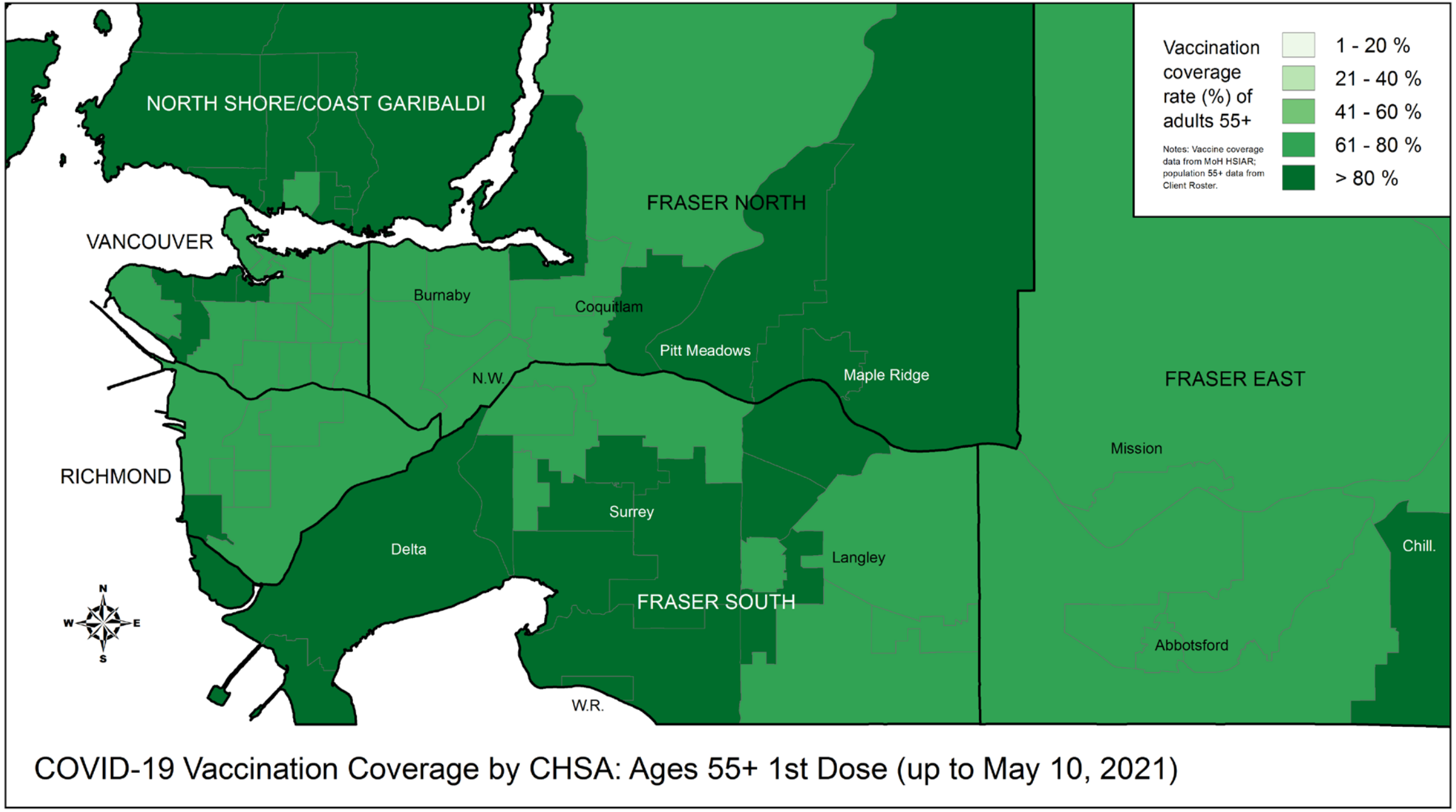
Greater Vancouver inset on separate map layout

British Columbia
(Local Health Areas)

Vaccination coverage rate (%) of adults 55+

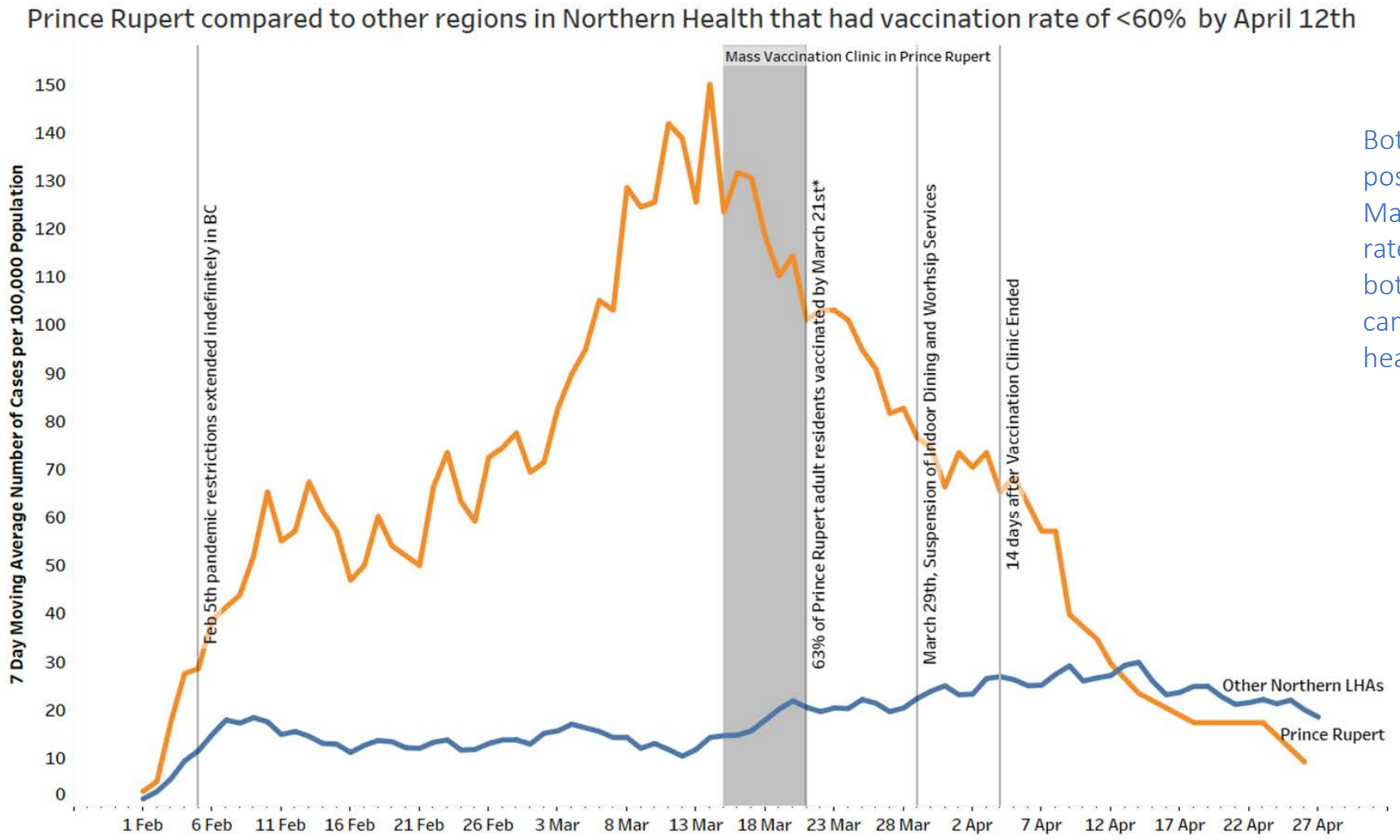
- 1 - 20%
- 21 - 40%
- 41 - 60%
- 61 - 80%
- > 80%

Notes: Vaccine coverage data from MoH HSIAR; population 55+ data from Client Roster.



COVID-19 Vaccination Coverage by CHSA: Ages 55+ 1st Dose (up to May 10, 2021)

Rate of cases per 100,000 population continued to drop continuously in Prince Rupert since mid-March compared with individuals living in other parts of NHA

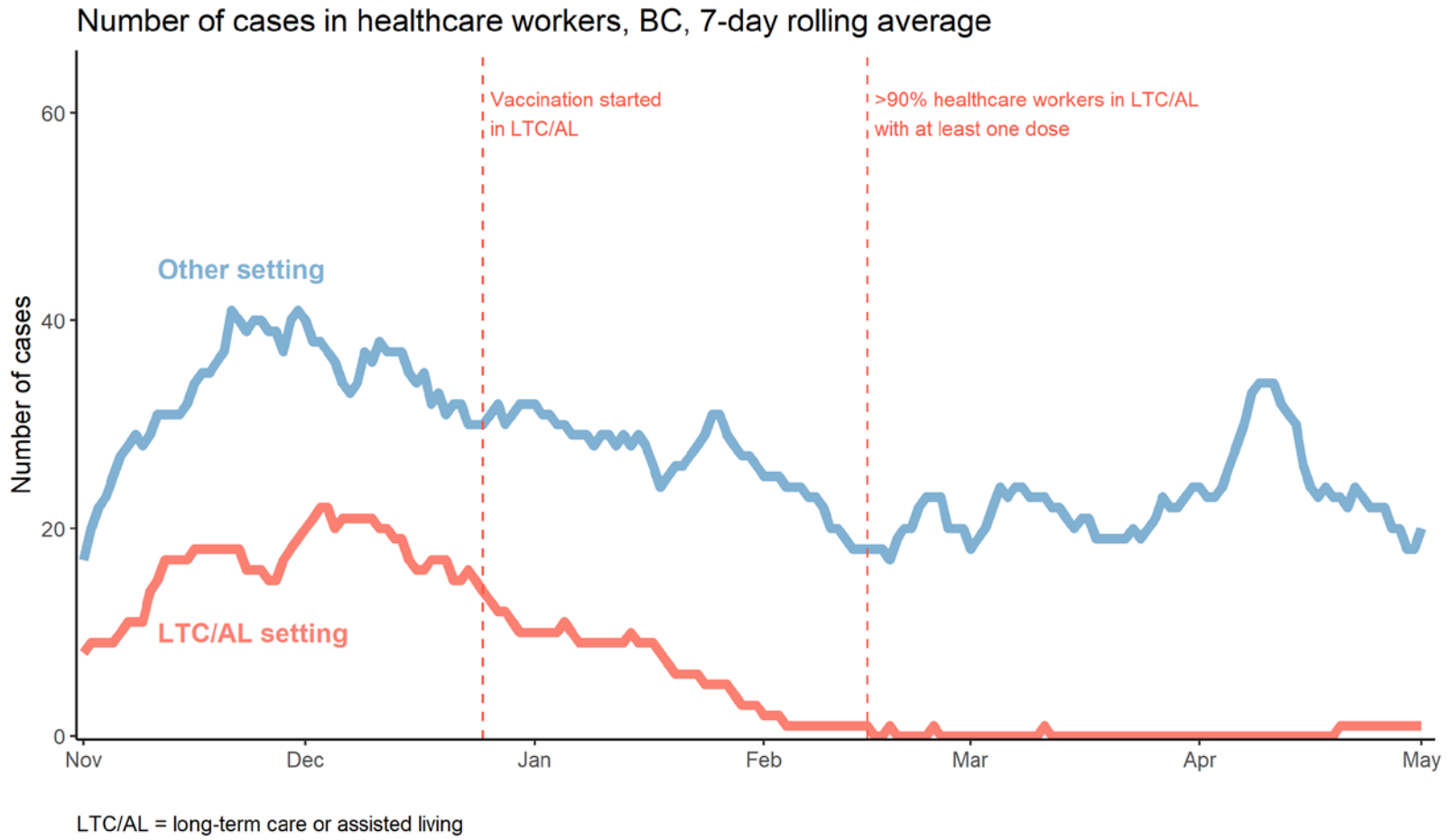


Both testing rates and test positivity declined since March; overall drop in case rate reflects the impact of both the vaccination campaign as well as public health measures

Blue line = comparison local health areas (LHAs) in NH; these exclude LHAs with high vaccination rate and those with very low case rates

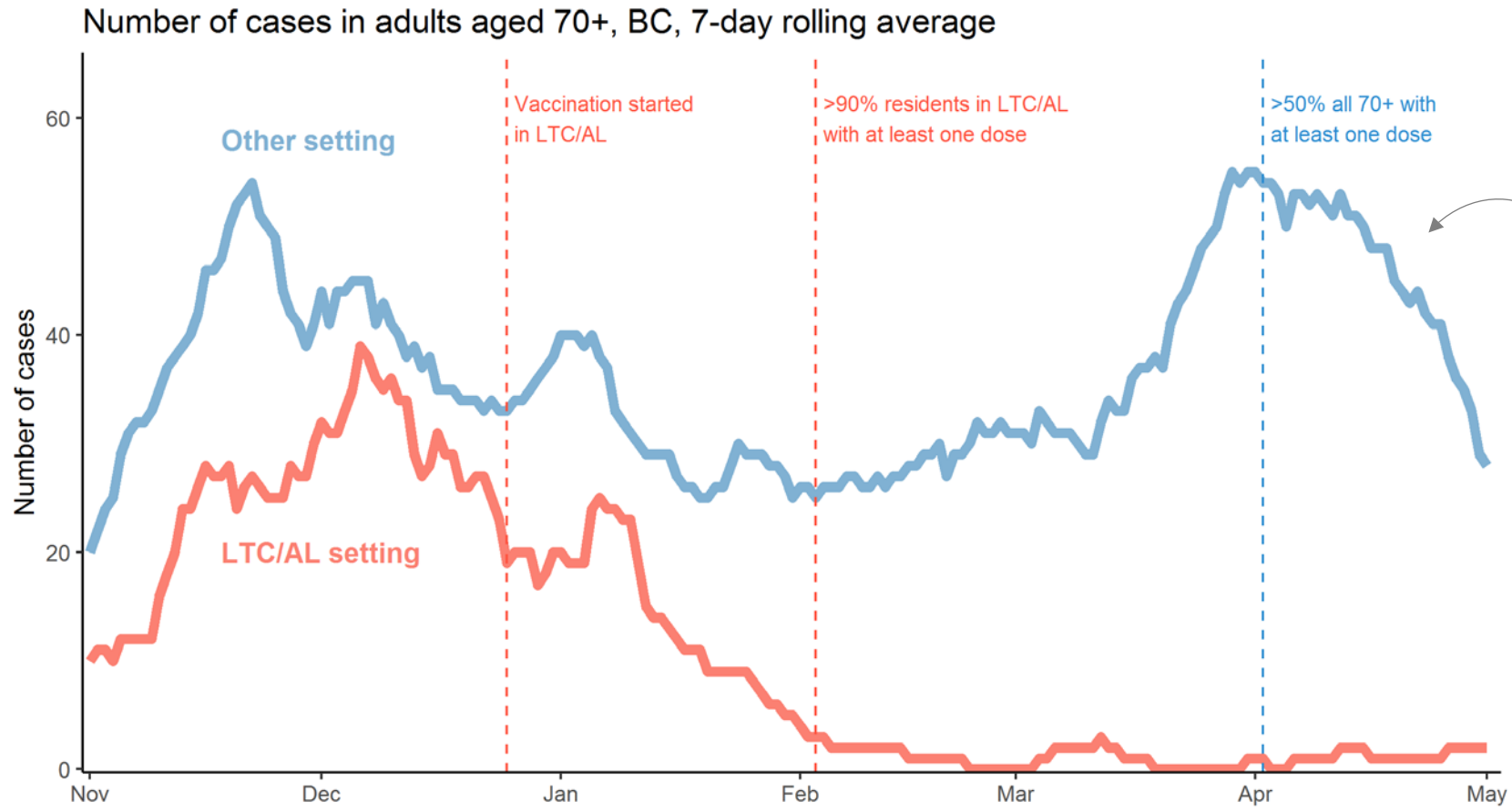
*On the same date, vaccination rate for comparison LHAs were all lower

The number of cases among health care workers working in long-term care or assisted living facilities declined following vaccination roll-out compared with individuals not working in these settings



LTC/AL = long-term care or assisted living

The number of cases among residents aged ≥70 years living in long-term care or assisted living facilities declined following vaccination roll-out and remained low throughout the recent resurgence in the community



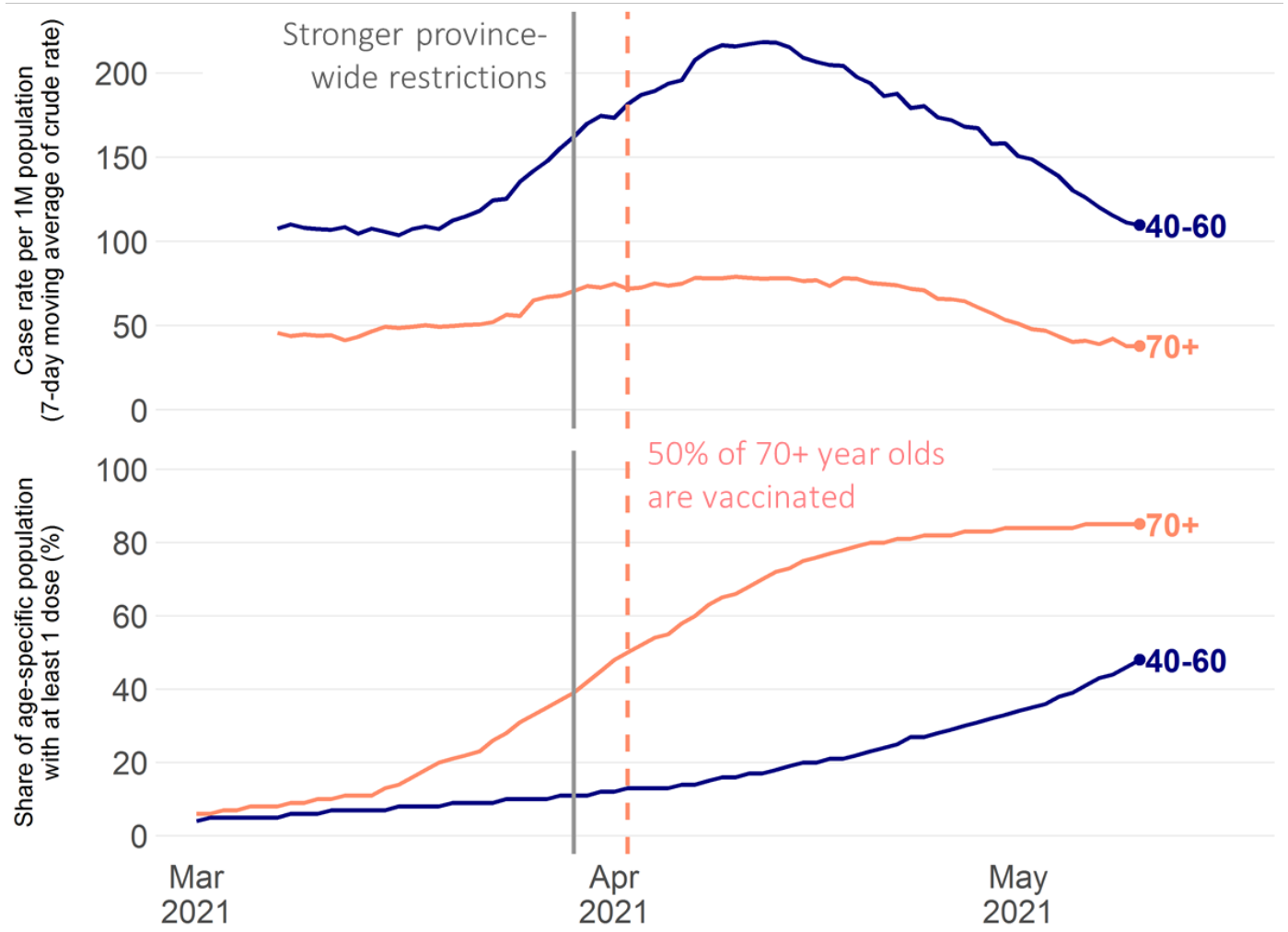
LTC/AL = long-term care or assisted living

Also note the sharp drop in cases throughout April among community-dwelling adults aged 70+, reflecting, at least in part, the impact of vaccination campaign

Rate of cases per 100,000 population among individuals 70+ has gone up less during the recent resurgence compared with individuals aged 40-60

Case rate

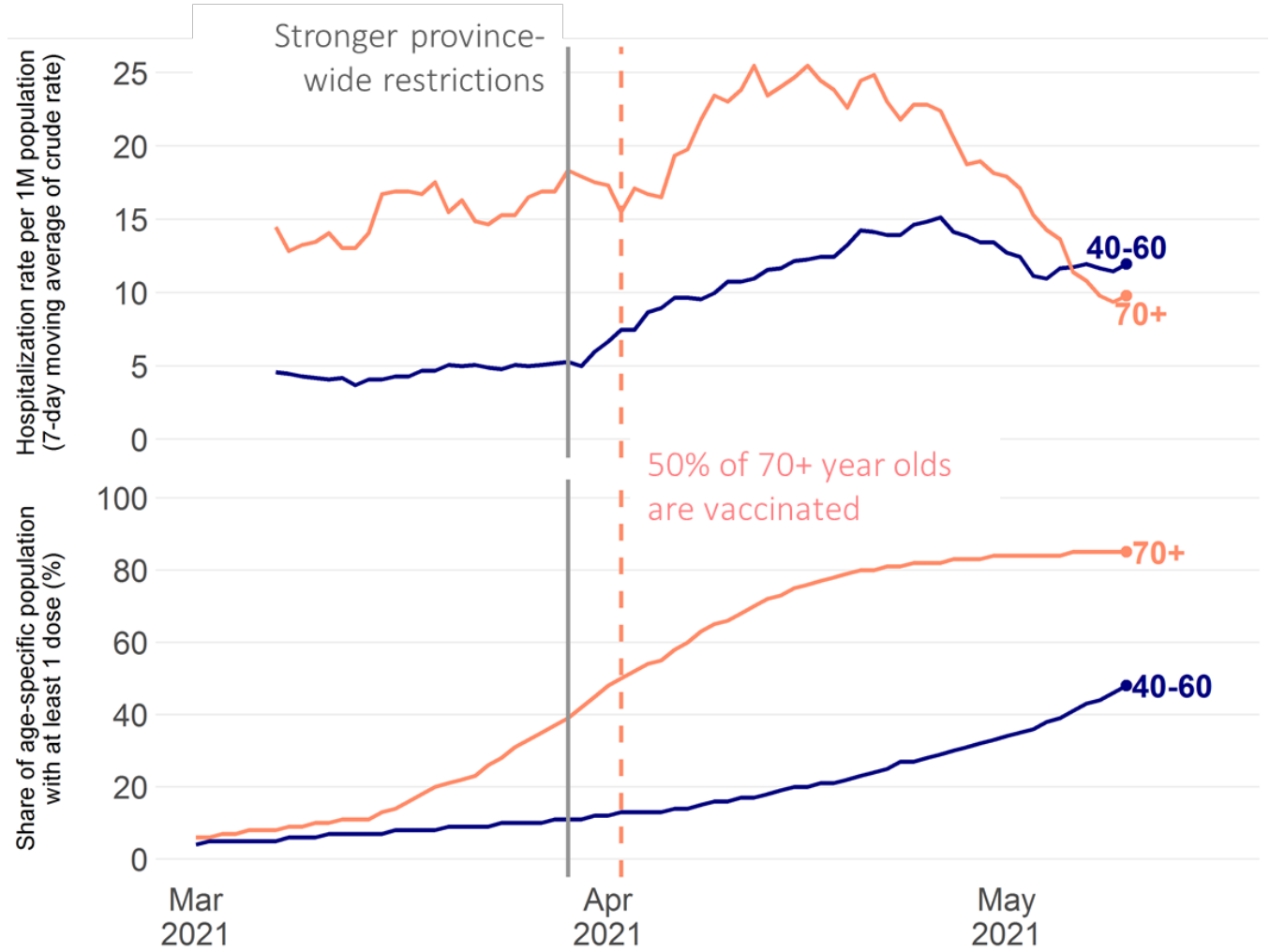
Vaccinations



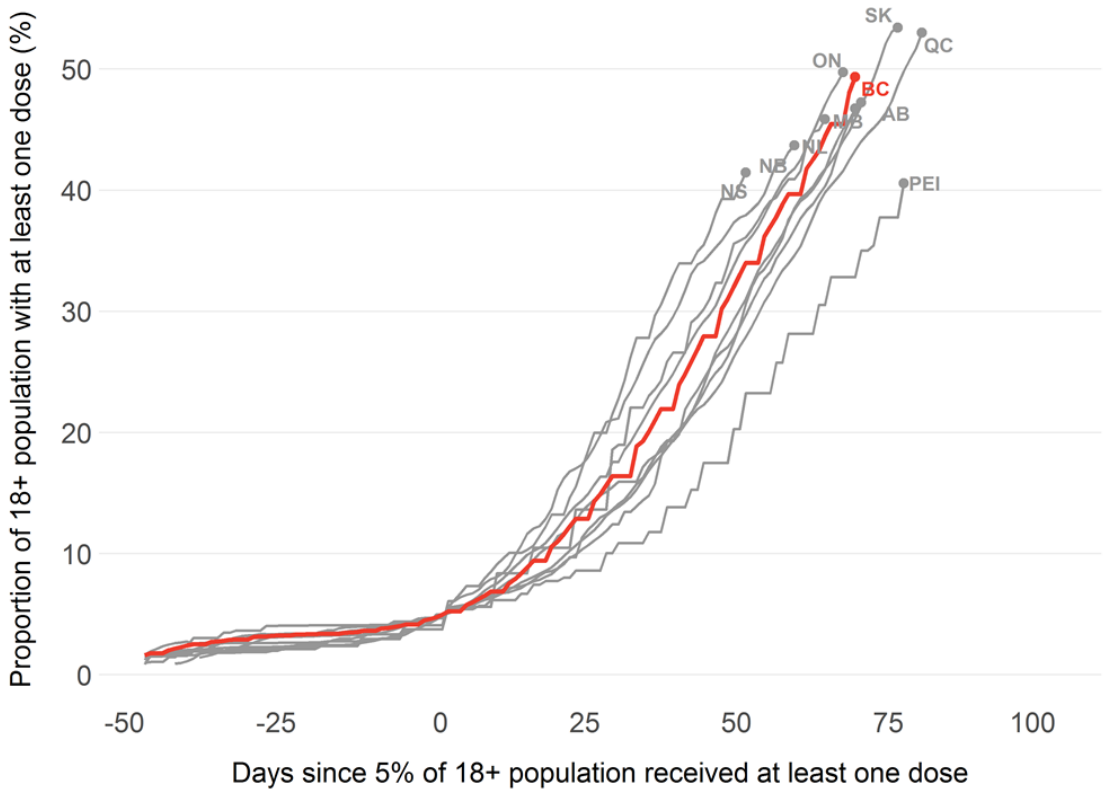
Rate of hospitalizations per 100,000 population has been declining faster among individuals 70+ since mid-April compared with individuals aged 40-60

Hospitalizations

Vaccinations

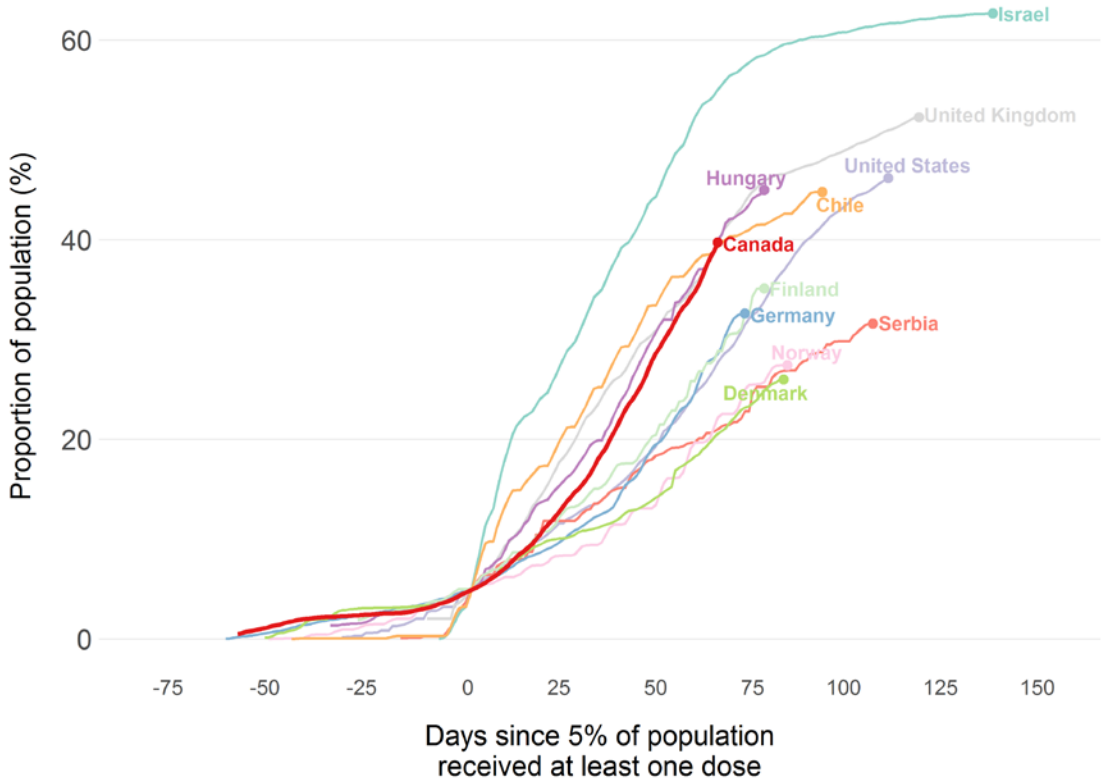


Nationally, BC's vaccination rate is very close to Canadian average; internationally, Canada is one of the most vaccinated countries in the world, closely following UK's vaccination trajectory



Adults only

Data source: COVID-19 Tracker Canada
Visualization: BCCDC



Everyone
(adults only not available for international data)

Data source: Our World in Data
Visualization: BCCDC

Lab - Key Messages

1. Percent positivity among publicly funded tests is 9.0% and among all tests, it is 7.3%.
   - Testing rates decreased 9% this week (~63,000 total tests May 2 to 8)
2. There are regional differences in percent positivity, which range from 2.4 % in VIHA to 10.8% in FH.
3. Incidence is elevated but continues to decline in individuals <65 years and low and stable in individuals ≥65 years. Percent positivity is >10% in individuals aged 13 to 29 years.
4. The provincial weekly median turnaround time (time from specimen collection to lab result) is 14 hours, indicating good testing capacity; only 1 in 4 tests took ≥22 hours to result.
5. Among SARS-COV-2 screened samples, the proportion that were presumptive VOCs for the past epi week was ~83%.
6. VOCs have been detected in all regions of the province.
   - Among sequenced samples provincially based on information for epi week 17, P.1 and B.1.1.7 remain two dominant VOCs, accounting for roughly 42% and 57% of VOCs respectively.

Weekly Summary of ALL lab tests performed

2,601,784	total specimens tested
63,132	new this epi week
143,126	total positive specimens
4,636	new positive this epi week
15 hr	mean turnaround time (TAT)
14 [9-22]	Median [Q1 – Q3] TAT

⬇9% relative to last week

7.3% positivity
⬇0.7% absolute change from last week

⬇ 9% TAT relative to last week

Weekly Summary of Lab tests paid Publicly

2,145,339	total specimens tested
51,232	new this epi week
141,788	total positive specimens
4,613	new positive this epi week

⬇12% relative to last week

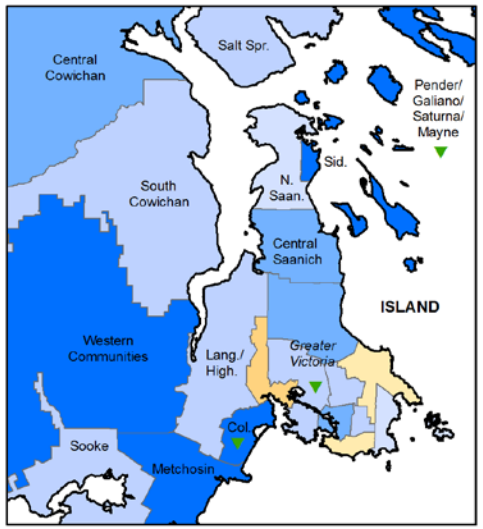
9.0% positivity
⬇0.5% absolute change from last week

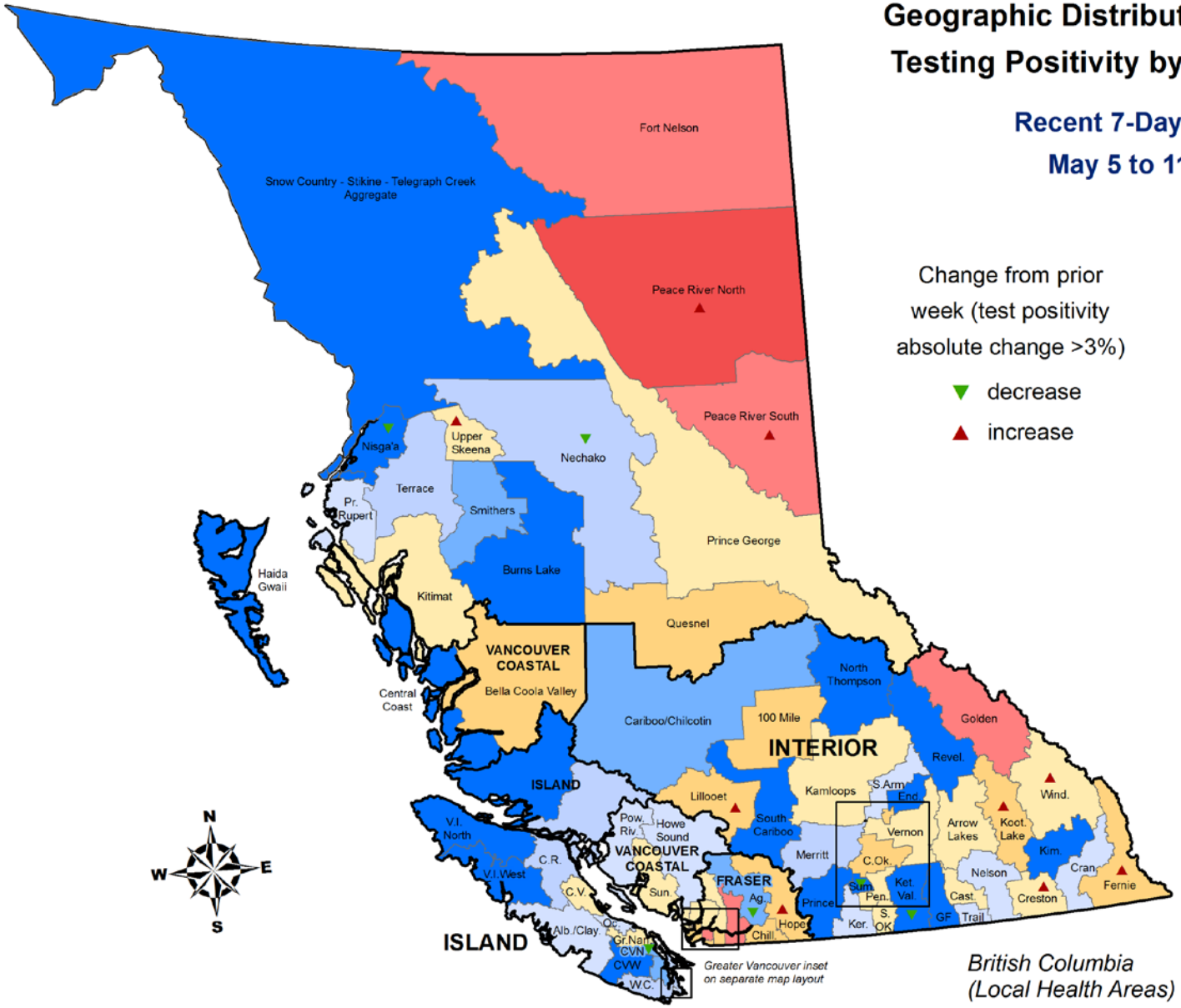
Data source: PLOVER extract at 10:30am on May 13, 2021.
Epi week 18 (May 2 – 8)

BC Centre for Disease Control

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
May 5 to 11, 2021

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

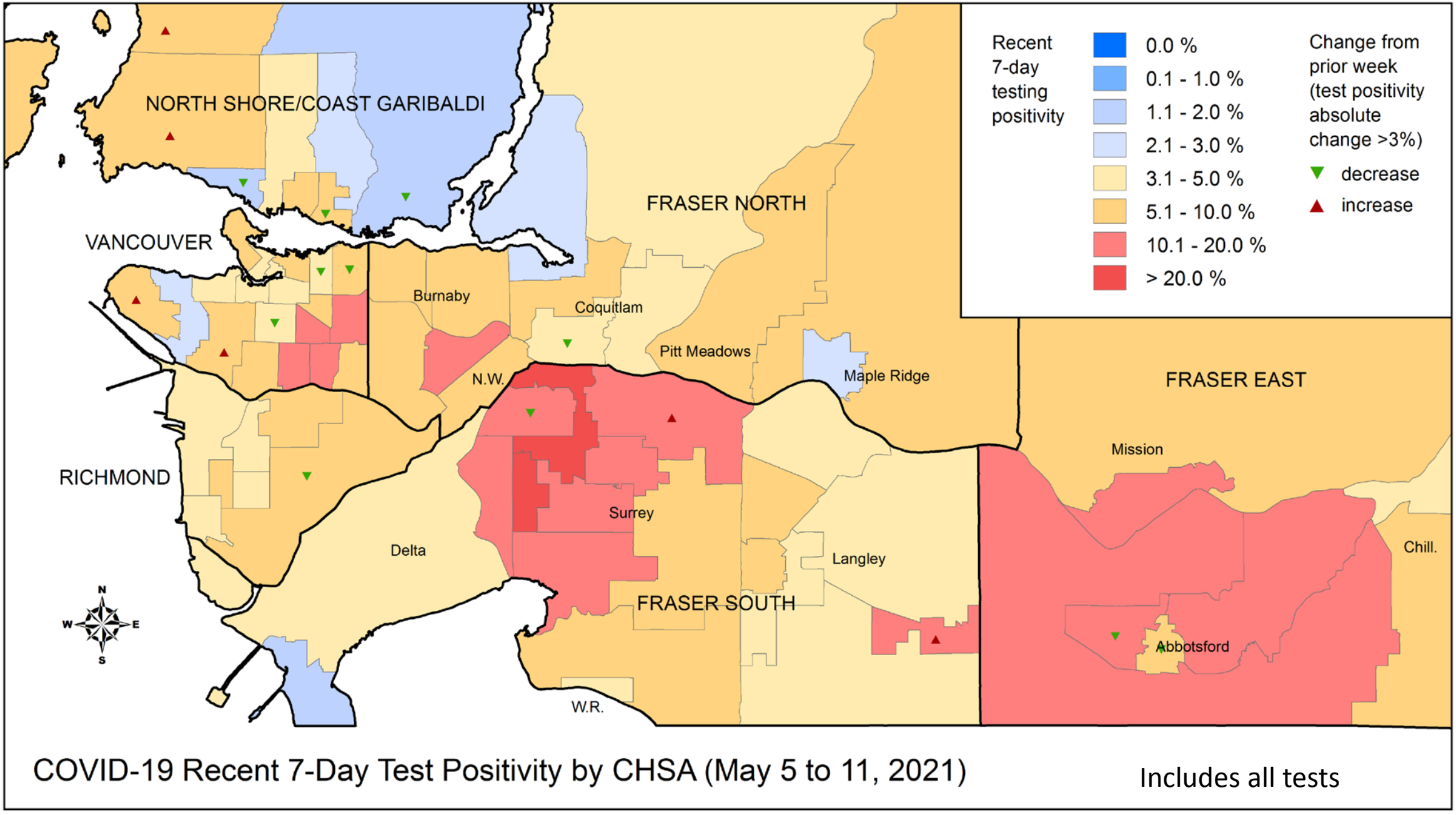
- ▼ decrease
- ▲ increase

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 %

Notes: data are by testing date and location of residence from PLOVER system (all tests performed).

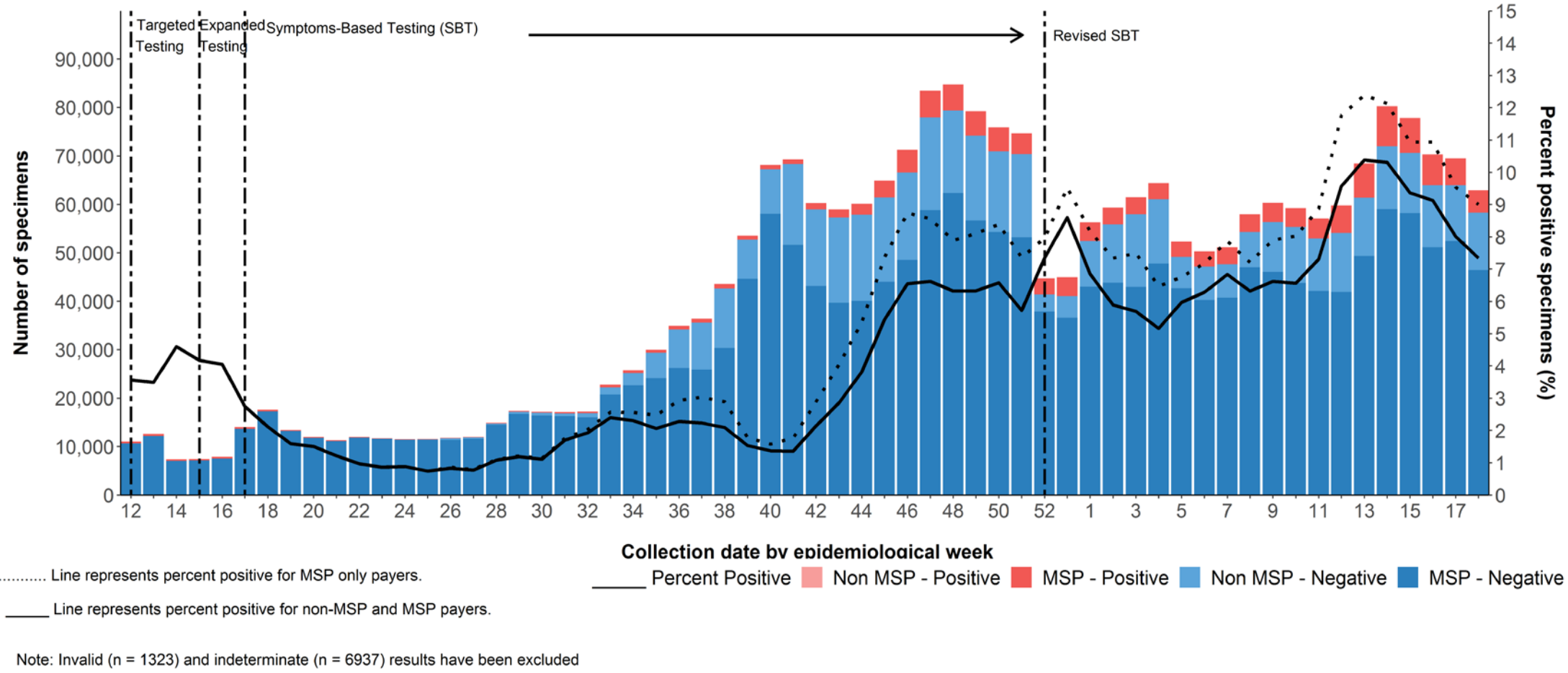
British Columbia
(Local Health Areas)



COVID-19 Recent 7-Day Test Positivity by CHSA (May 5 to 11, 2021)

Includes all tests

Percent positivity among publicly funded tests is 9%.The Total number of tests resulted has declined over last few weeks.



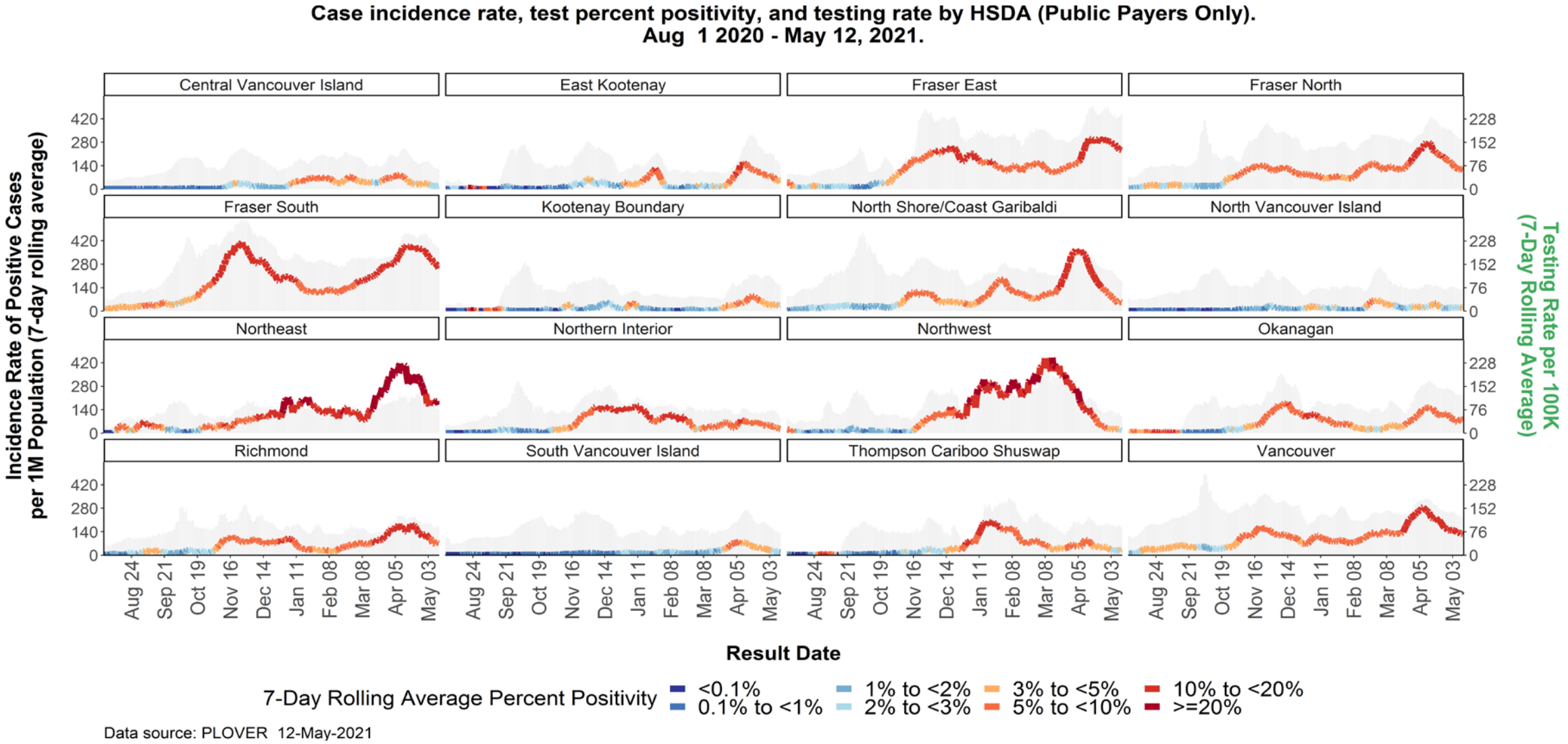
Data source: PLOVER 12-May-2021

This figure can also be found in the weekly Situation Report

Data source: PLOVER extract at 10:30am on May 13, 2021.
Epi week 18 (May 2 – 8)

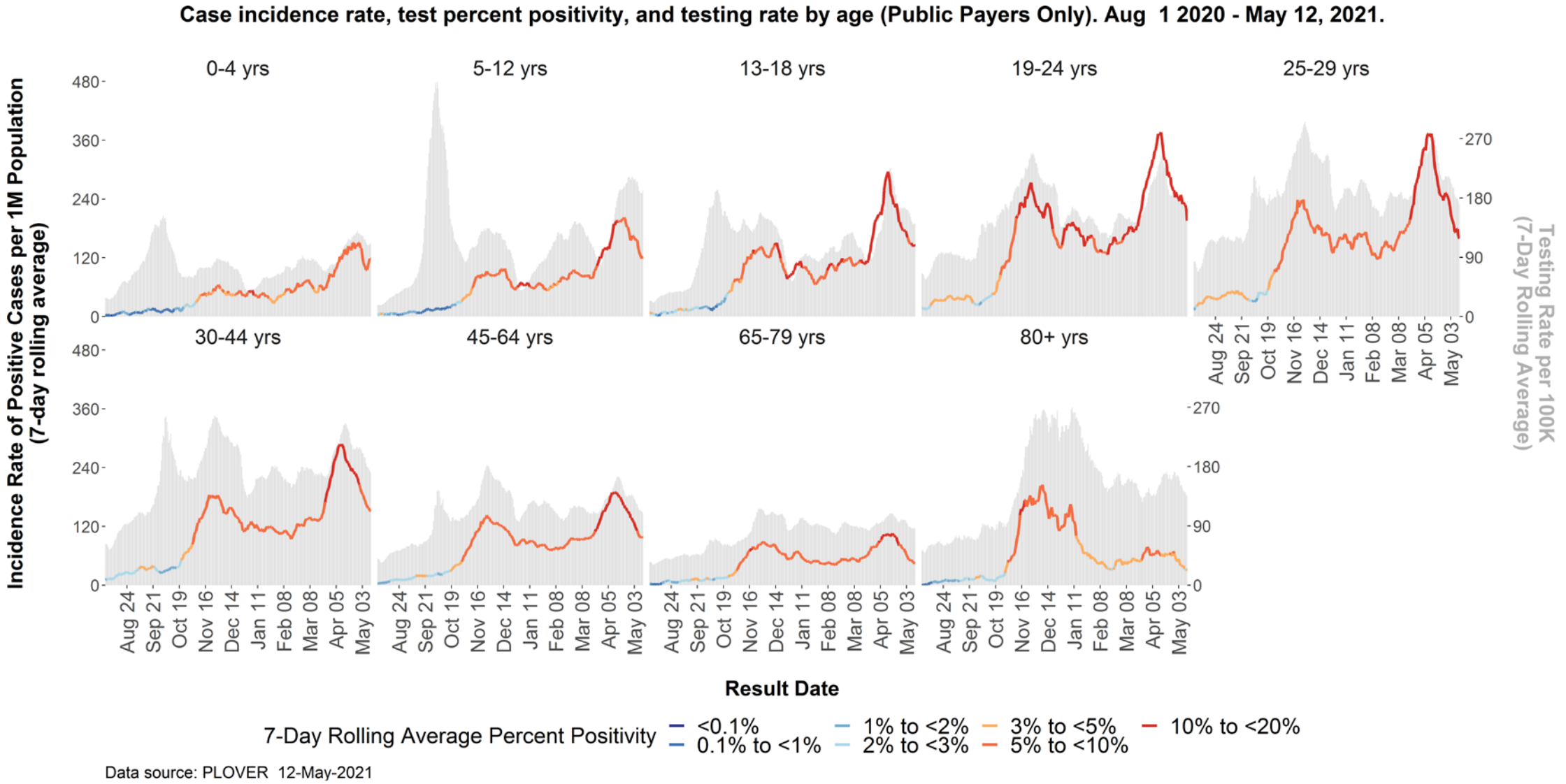
BC Centre for Disease Control

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



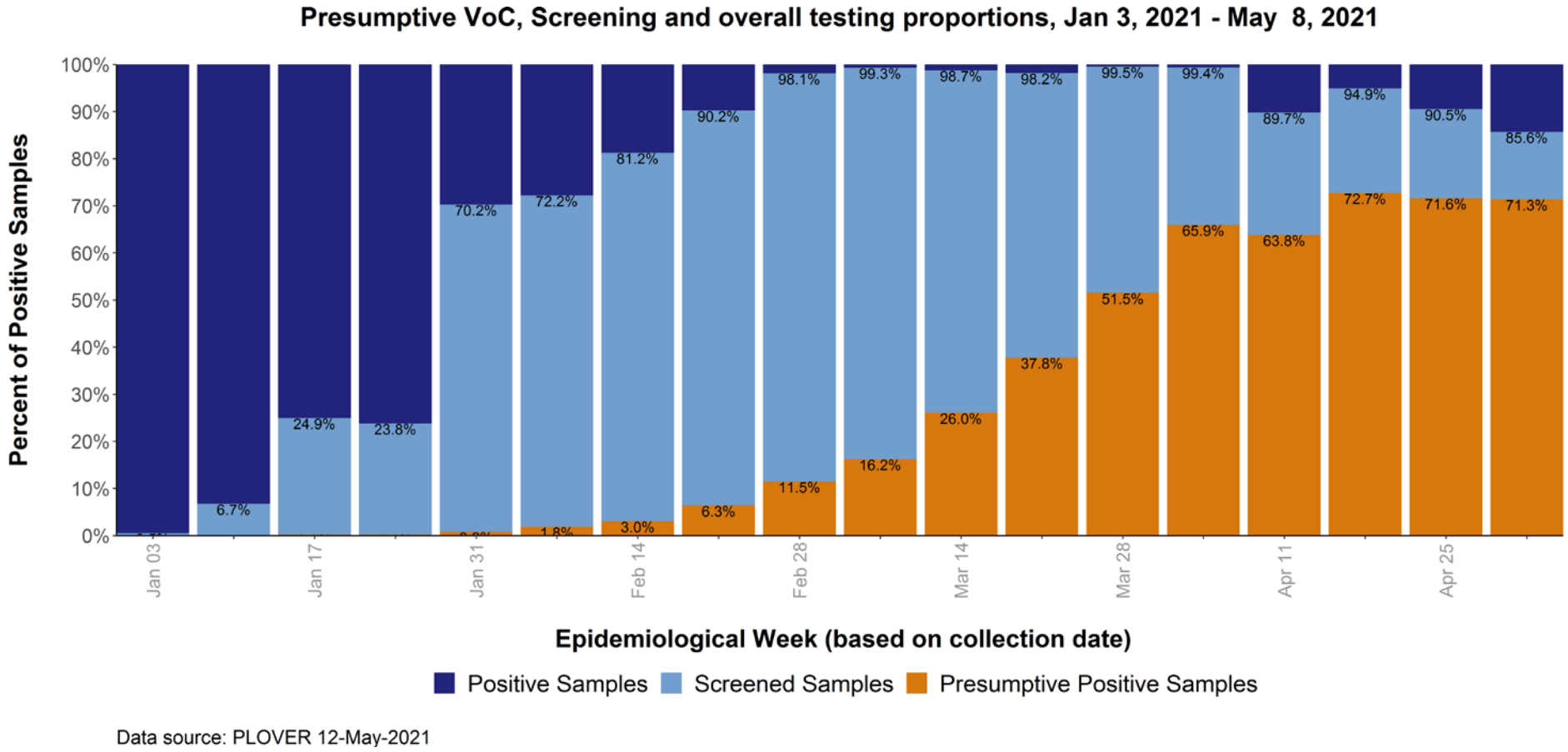
Data source: PLOVER 12-May-2021

Incidence is elevated but continues to decline in individuals <65 years and low and stable in individuals ≥65 years. Percent positivity is >10% in individuals aged 13 to 29 years.



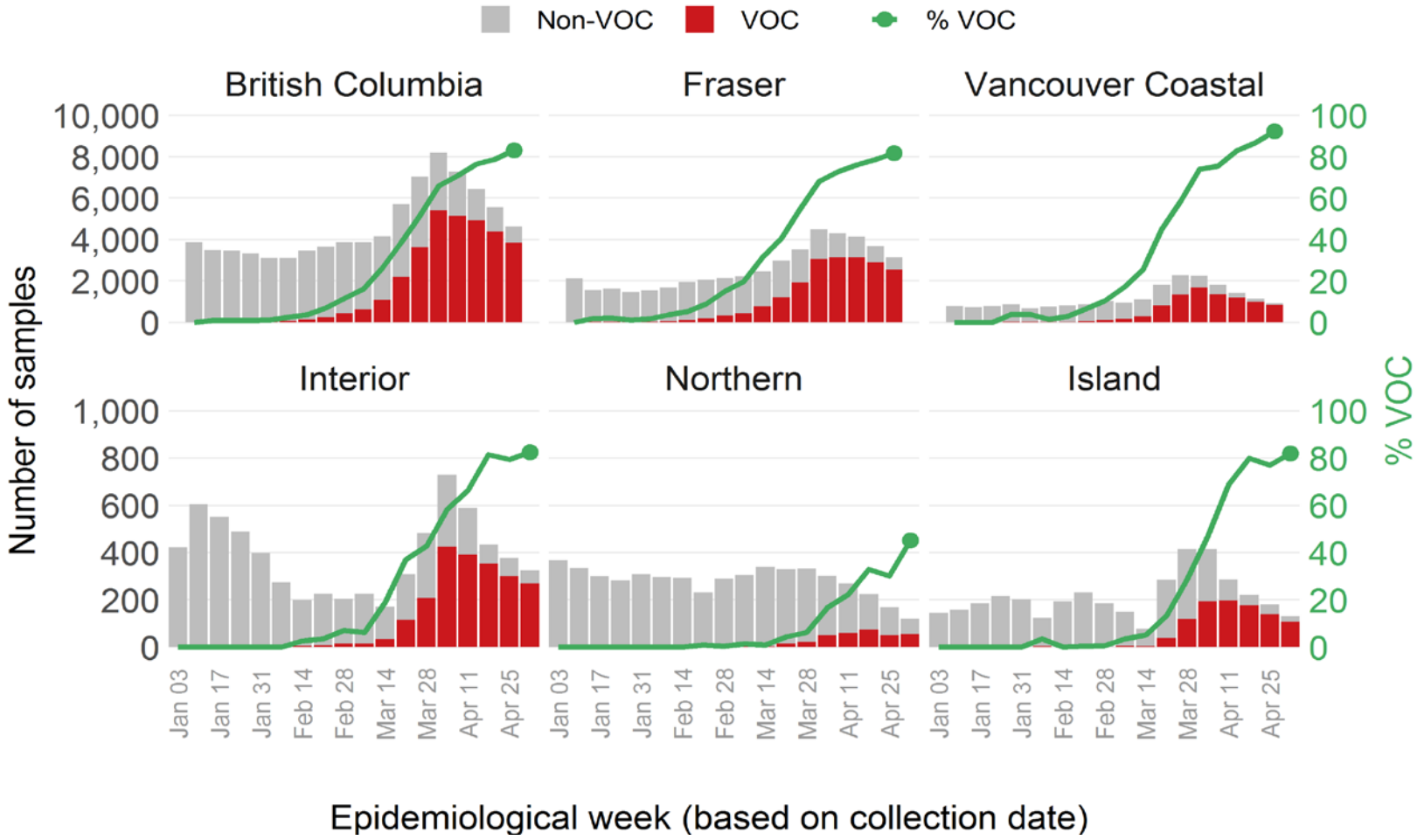
Data source: PLOVER 12-May-2021

The proportion of screened samples remains high >85%



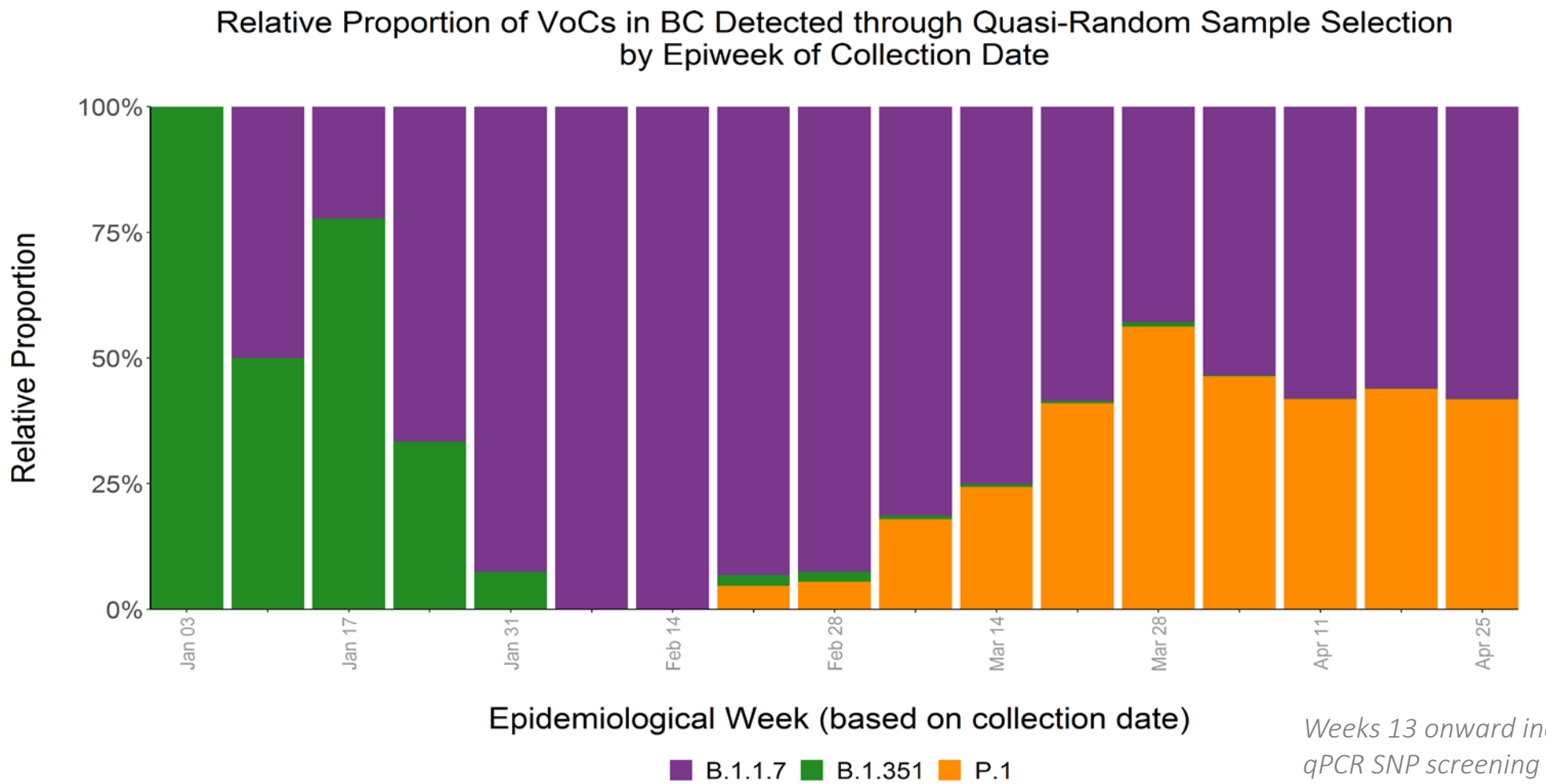
As of week 13, we now include dual assay qPCR SNP screening for N501Y and E484K mutations for BCCDC PHL

Of all COVID-19 positive test samples in epi week 18 (May 02 - May 08) in BC, ~83% were presumptive VOCs. Note that in Northern, the proportion was substantially lower, ~45%.



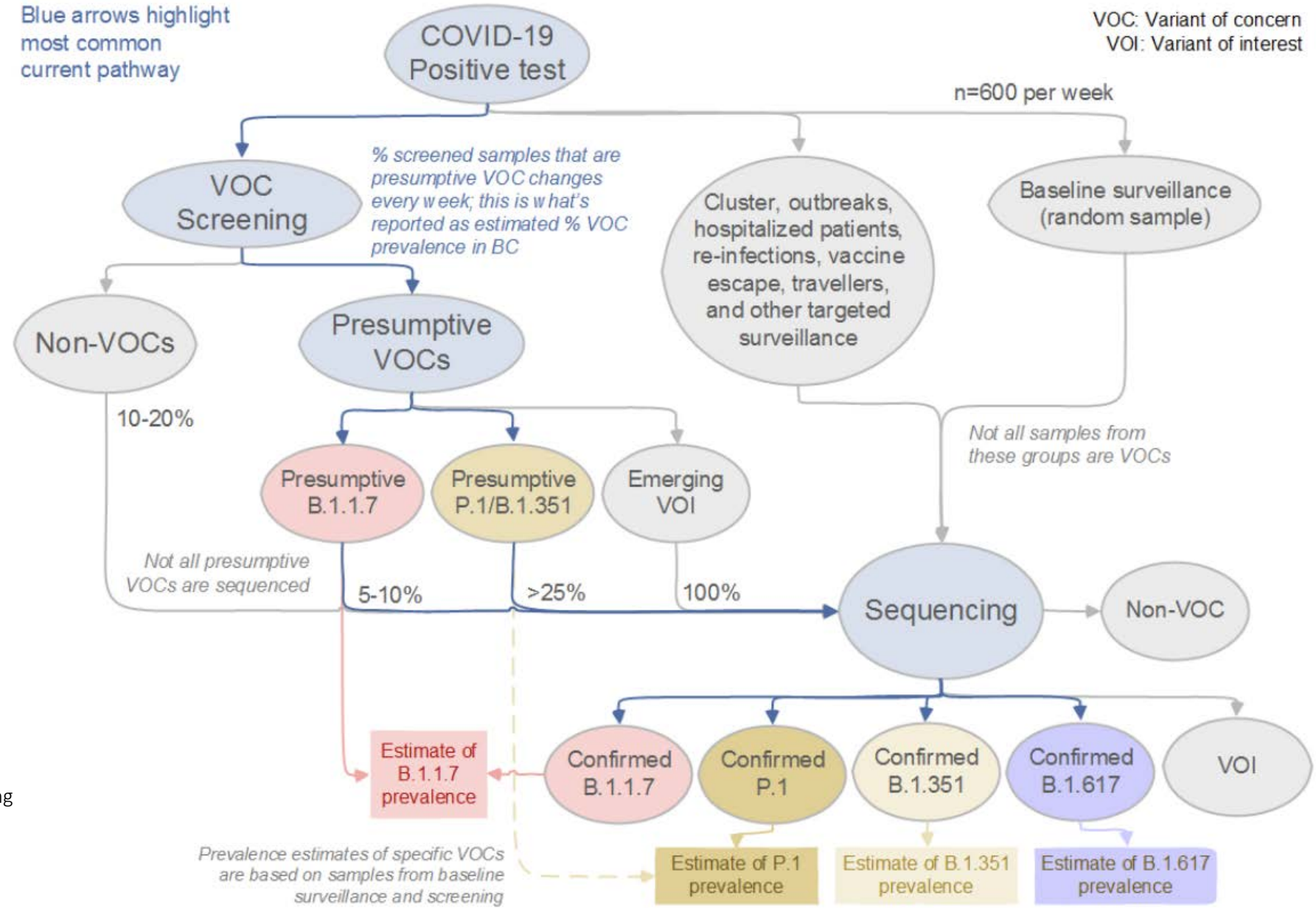
This figure can also be found in the weekly VOC report

Among sequenced samples provincially based on information for epi week 17, P.1 (~42%) and B.1.1.7 (~57%) remain two dominant VOCs.



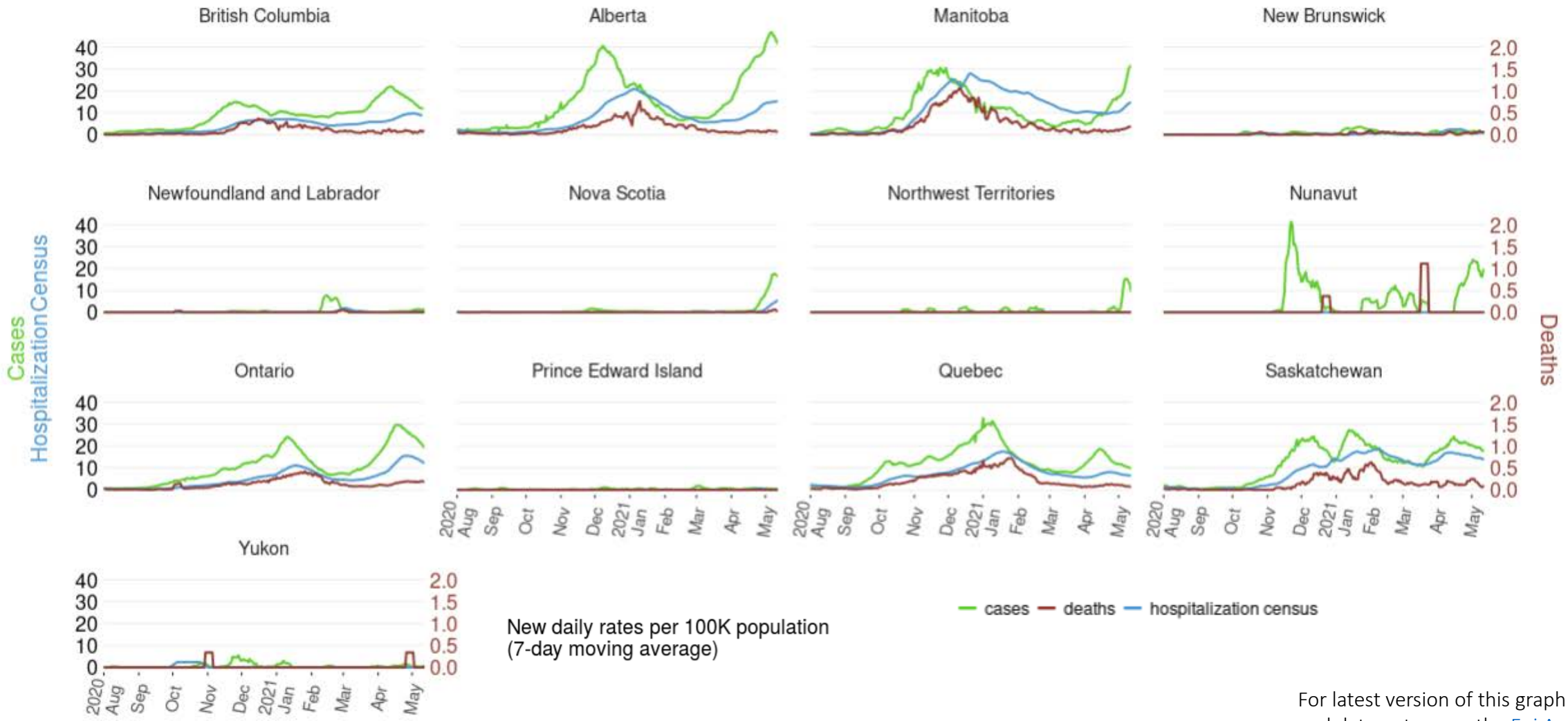
Weeks 13 onward include specimens from qPCR SNP screening that resulted as presumptive positive for B.1.1.7 and P.1.

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



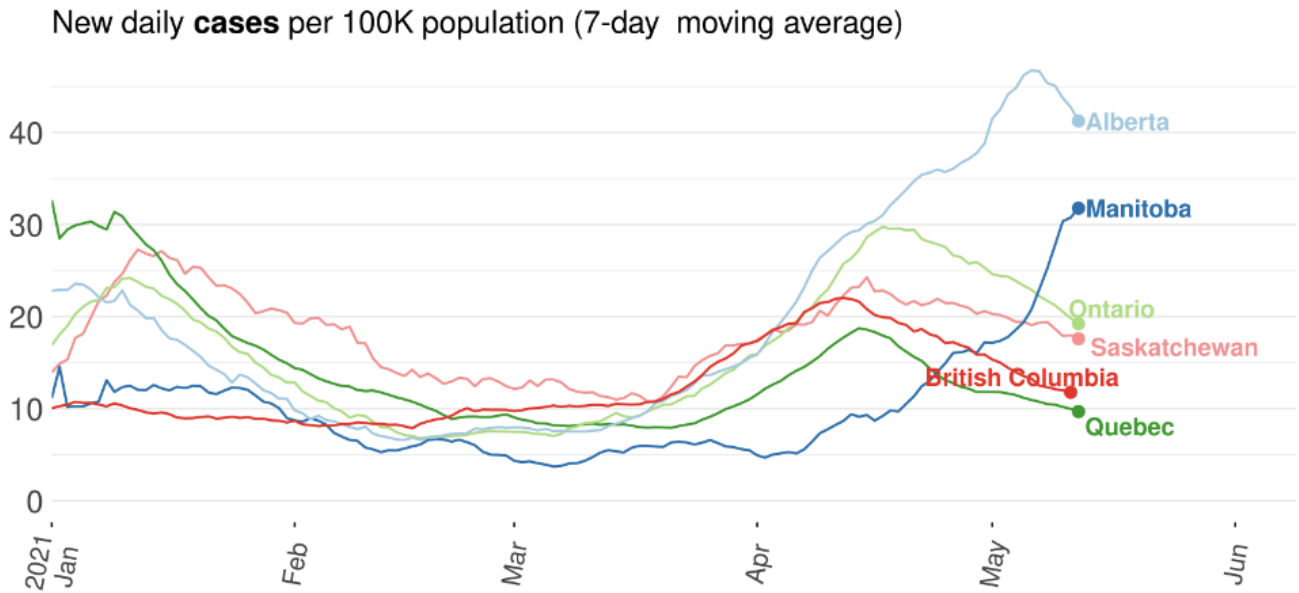
Please note the differences in turnaround time for screening and sequencing: screening results usually come back within 1-2 days, while sequencing results come back after approximately one week, but it could also take longer if there are lab backlogs.

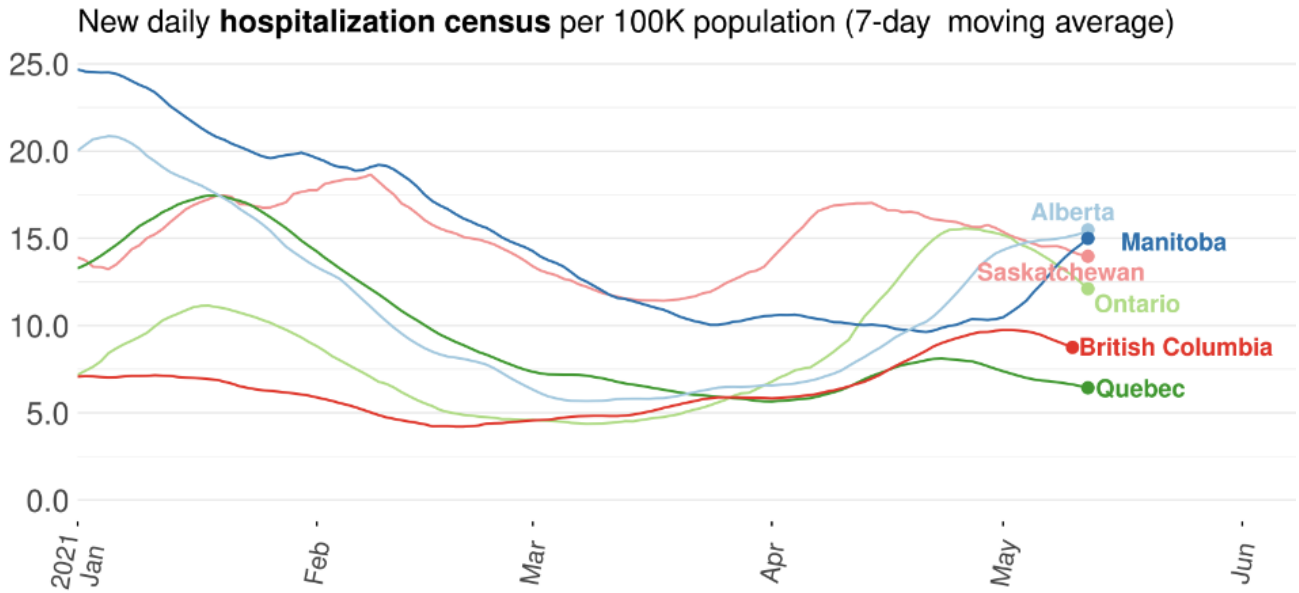
Across Canada, cases are trending up in MB; recent stabilization seen in AB, NS, NWT, and NU. Declining in BC, ON, QC, and SK. Death rates have recently increased in ON and MB.



For latest version of this graph and data notes, see the Epi App

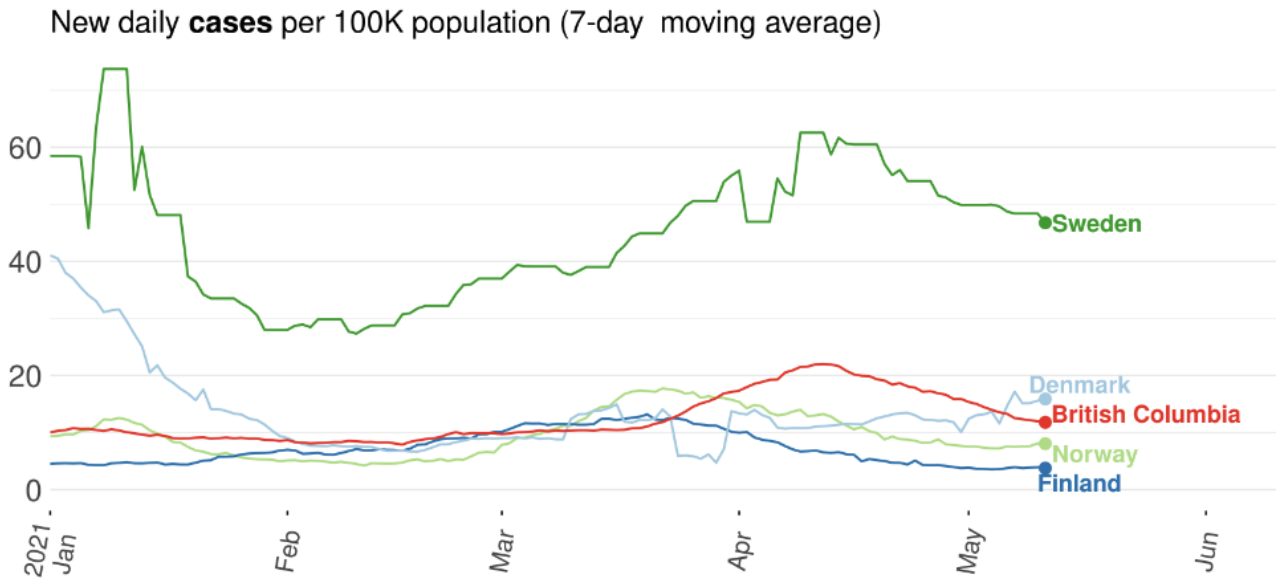
Compared with other large provinces, BC currently has the 2nd lowest case rate and hospitalization census

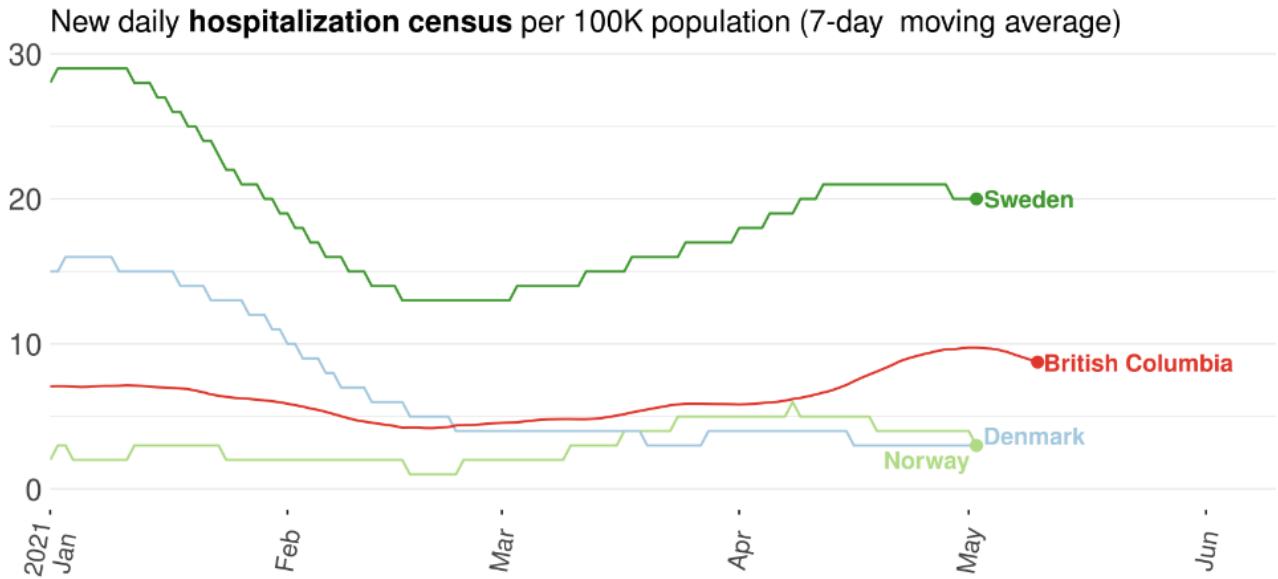




For latest version of this graph and data notes, see the Epi App

BC's case rate and hospitalization census is similar to what is observed in the Nordic countries





For latest version of this graph and data notes, see the Epi App

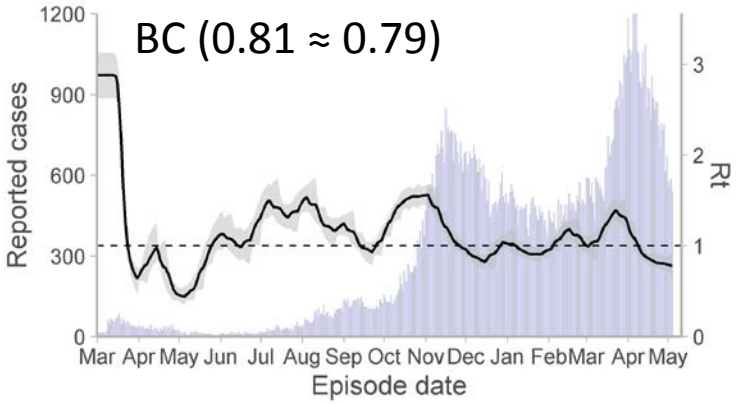
Modelling– key message

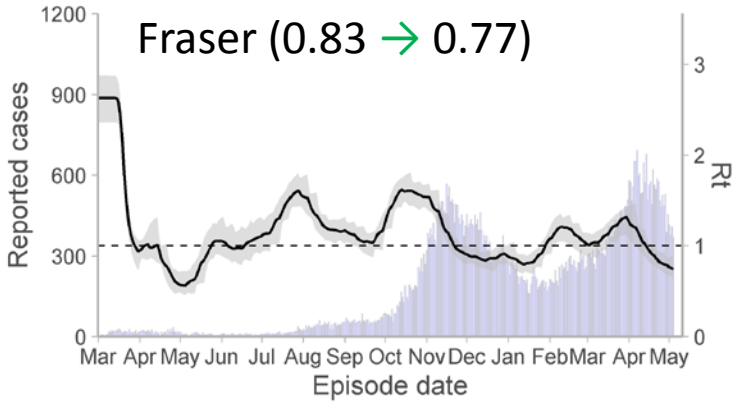
- *The effective reproduction number (Rt)* for BC on May 11,2021, estimated using date of illness onset, was 0.79. Rt remains below one in all regions in BC with largest decrease in Fraser (0.83 – 0.77).

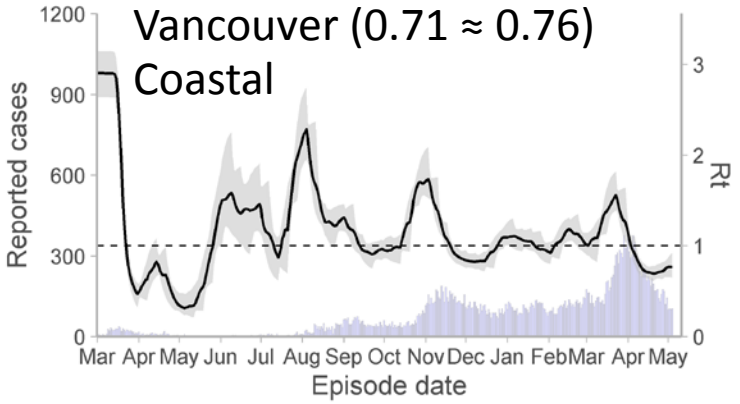
- The dynamic modelling forecast for BC projects case incidence to decrease over the next week in BC under current anticipated rates of infectious contact, vaccination, and proportion of VoC. Hospitalization trajectories under range of infectious contact scenarios indicate a downward trend in all regions. Uncertainty around trend is greater in regions with relatively smaller numbers of hospitalizations.

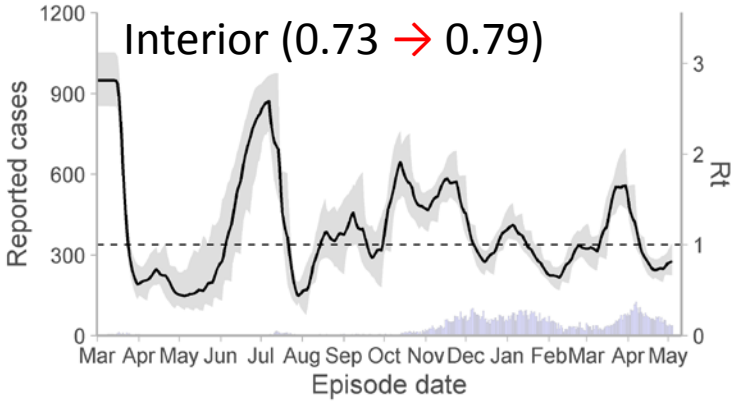
Dynamic compartmental modeling: recent trends

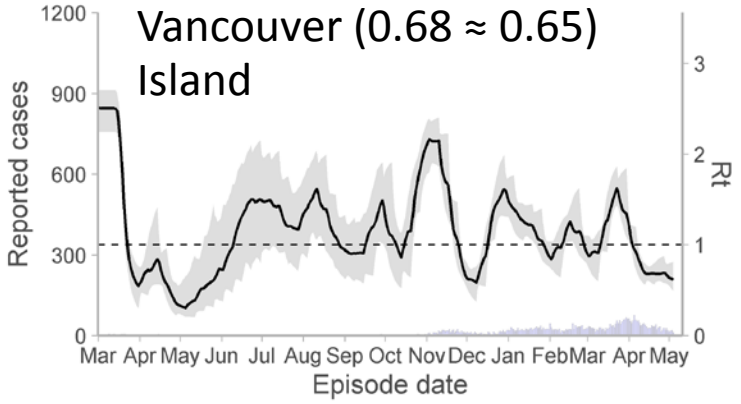
Our model shows that R_t remains below 1 in all regions of BC. Whenever $R_t > 1$, there is a risk that the number of new cases will grow.

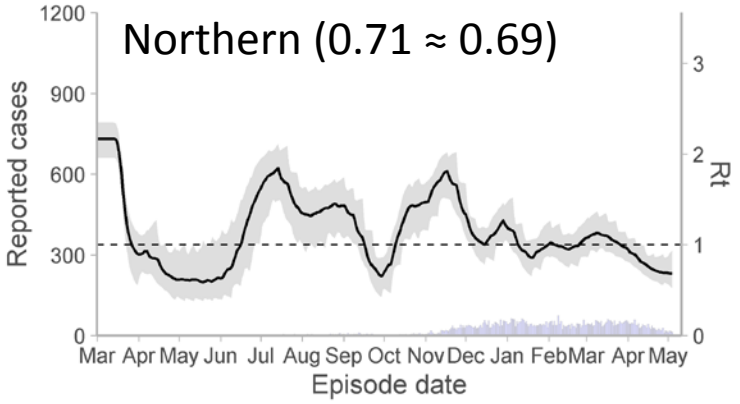










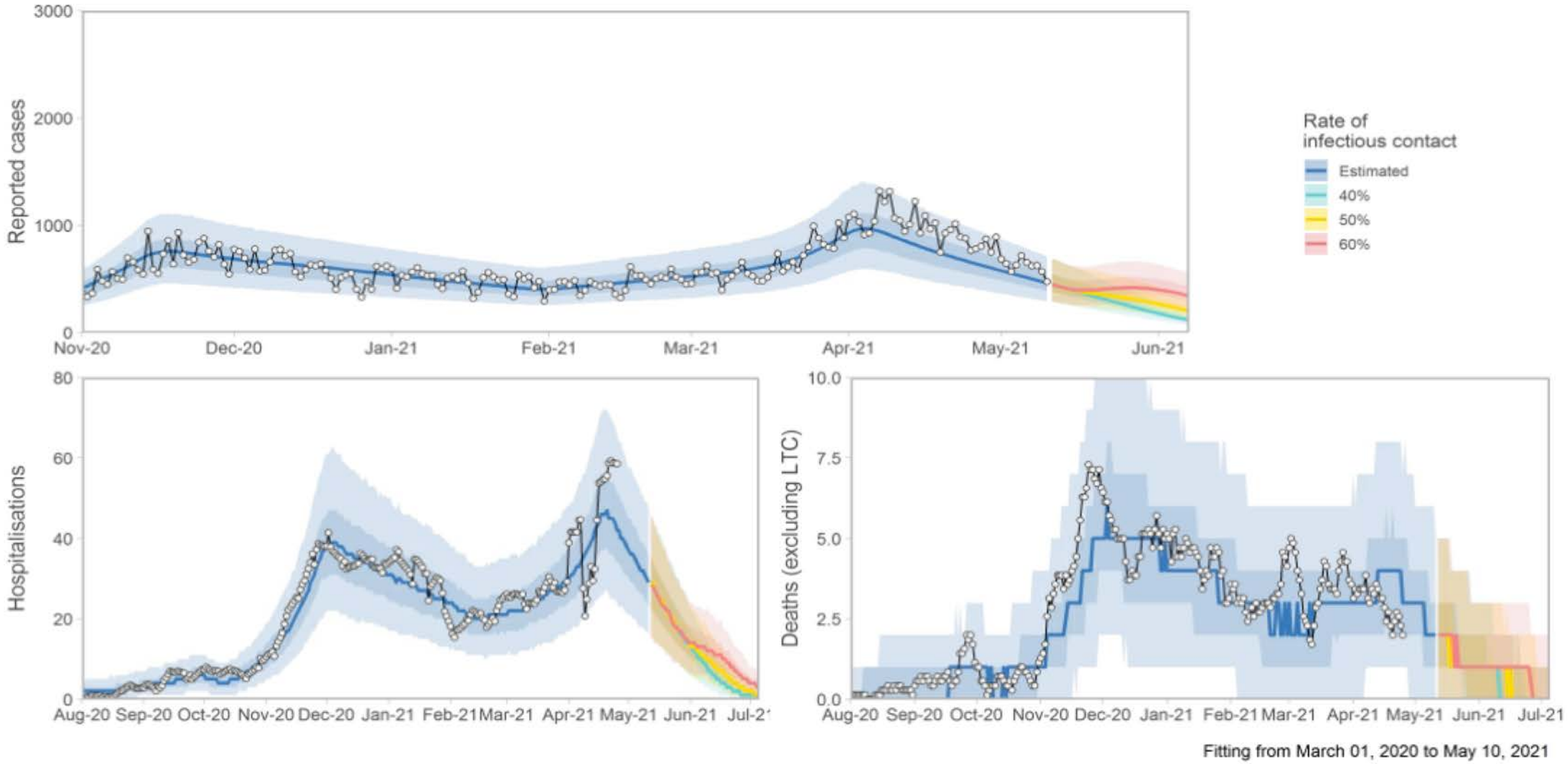


Provincial Health Services Authority
Province-wide solutions. Better health.

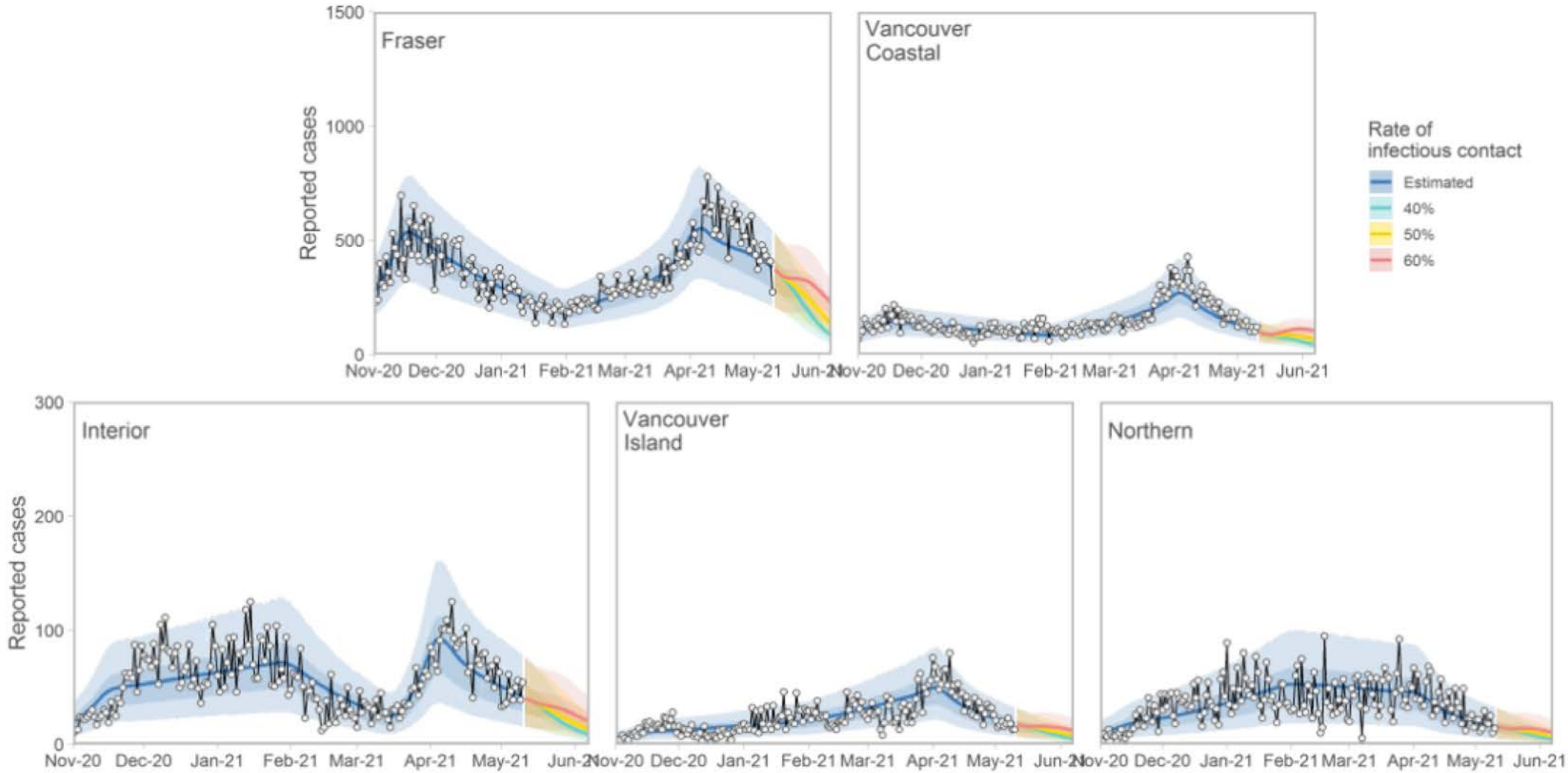
Solid black line: median R_t, data up to May 11, 2021; Grey band: 5%-95% credible interval; Purple bars: all reported cases. Due to lag from symptom onset to reporting, most recent cases are not shown. Recent trend shown comparing 7 day average R_t from (last week ⟶ this week).

BC Centre for Disease Control

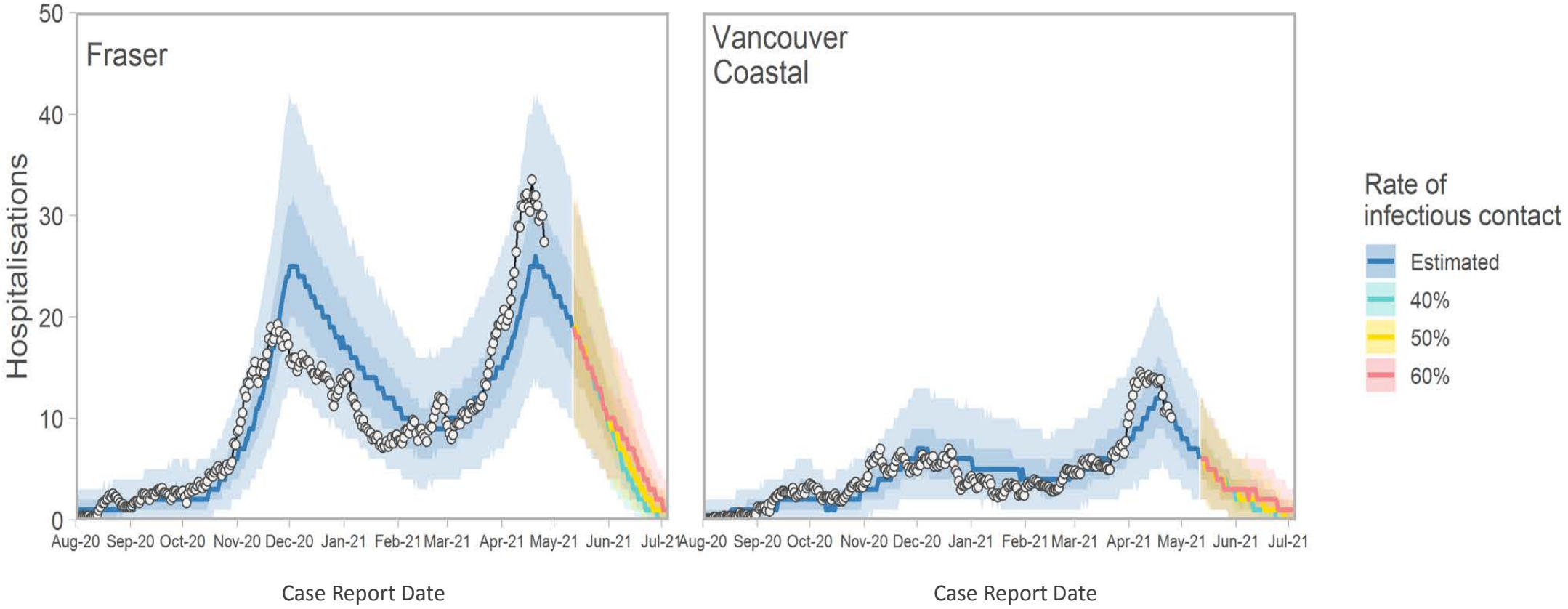
Scenarios of case, hospitalization, and death trajectories in BC by rate of infectious contact



Scenarios of cases trajectories by rate of infectious contact by Health Authority



Scenarios of hospitalization trajectories by rate of infectious contact in Fraser and Vancouver Coastal health authorities



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.

Additional Resources

- 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