

# **COVID-19: April Data Update**

April 15, 2021



Stay Informed Via These Resources:

[gov.bc.ca/Covid-19](https://gov.bc.ca/Covid-19) | [bccdc.ca](https://bccdc.ca) | 1-888-COVID19

Symptom Self-Assessment:

[covid19.thrive.health](https://covid19.thrive.health)



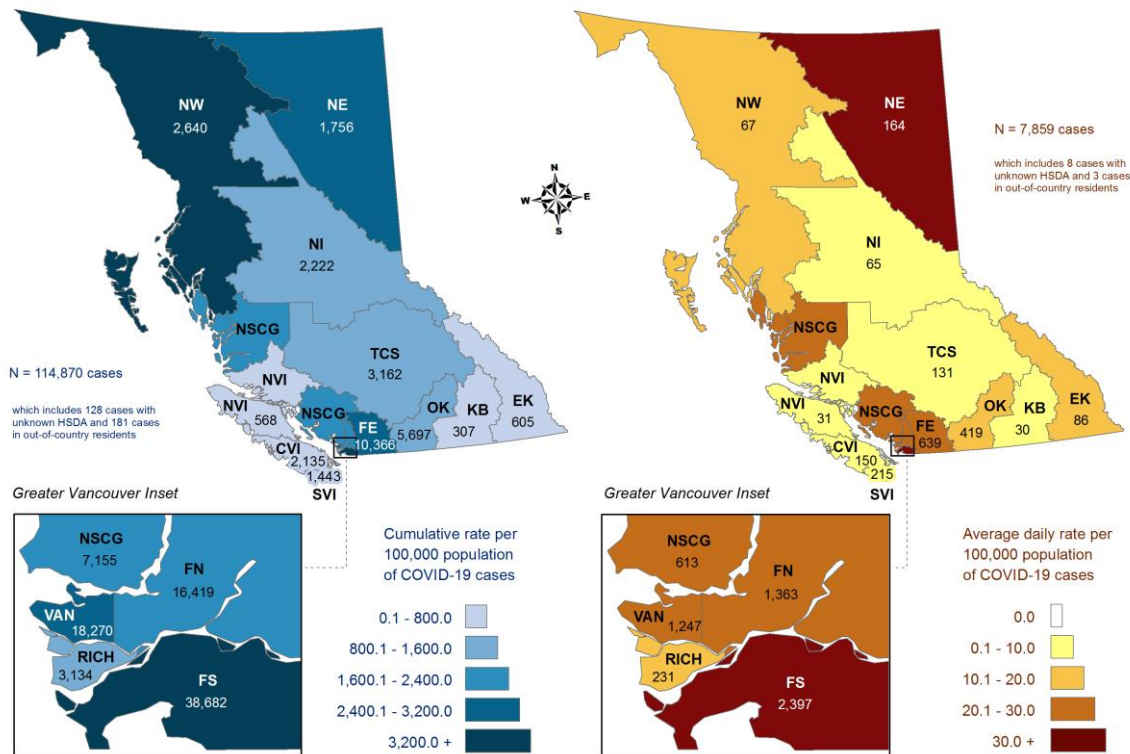
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# Geographic Distribution of COVID-19 by Health Service Delivery Area of Case Residence

Cumulative total: cases reported Jan 1, 2020 to Apr 13, 2021

Past 7 days: cases reported April 7 to 13, 2021

## Geographic Distribution of COVID-19 by Health Service Delivery Area of Case Residence

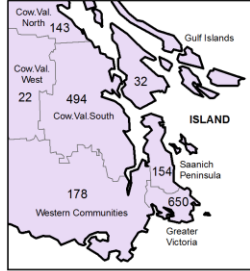


Notes: Cases are mapped by location of residence; cases with unknown residence and from out-of-country are not mapped. Data source: the 5 regional health authorities of British Columbia; we operate in a live database environment and case information from the health authorities is updated as it becomes available. Data may not be directly comparable to published counts from previous maps and reports. How to interpret the maps: The map on the left (blue) illustrates the geographic distribution of all reported cases from January 1, 2020 onwards. The map on the right (brown) illustrates the reported cases during the past 7 days. Health Service Delivery Areas (HSDA) with higher rates per 100,000 population are illustrated in darker colour shading. The number of reported cases appears under each HSDA label. Note that not all COVID-19 infected individuals are tested and reported; the virus may be circulating undetected in the community, including in areas where no cases have been identified by public health. Map created April 14, 2021 by BCCDC for public release.

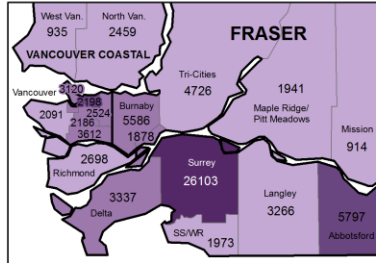
# Geographic Distribution of COVID-19 by Local Health Area of Case Residence Jan 2020-Mar 2021

## Cumulative Cases January 2020 to March 2021

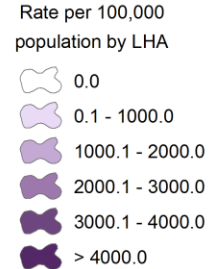
### South Vancouver Island Inset



### Greater Vancouver Inset



## Geographic Distribution of COVID-19 by Local Health Area of Case Residence



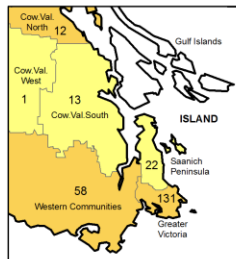
Additional cases with missing address information:  
 25 - Interior Health  
 66 - Fraser Health  
 188 - Vancouver Coastal Health  
 27 - Island Health  
 6 - Northern Health

Notes: Cases are mapped by location of residence; cases with unknown residence and from out of province are not mapped. Data source: the 5 regional health authorities of British Columbia; we operate in a live database environment and case information from the health authorities are updated as it becomes available. How to interpret the maps: The map illustrates the geographic distribution of reported cases from January 1, 2020 to March 31, 2021. Local Health Areas (LHA) with higher rates are illustrated in darker colour shading. The number of reported cases appears in each LHA. Note that the number of cases in the LHA may not represent the location of exposure (e.g. people who acquired disease while traveling or working elsewhere), and that not all COVID-19 infected individuals are tested and reported; the virus may be circulating undetected in the community, including in areas where no cases have been identified by public health. Map created April 7, 2021 by BCCDC for public release.

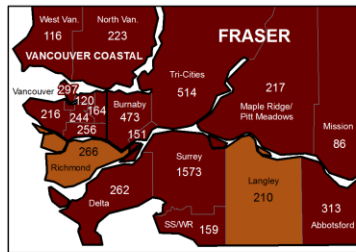
# Geographic Distribution of COVID-19 by Local Health Area of Case Residence in past 7 days

## Epi-Week 14 Cases April 4 to 10, 2021

South Vancouver Island Inset

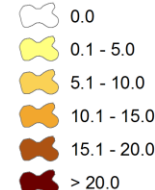


Greater Vancouver Inset

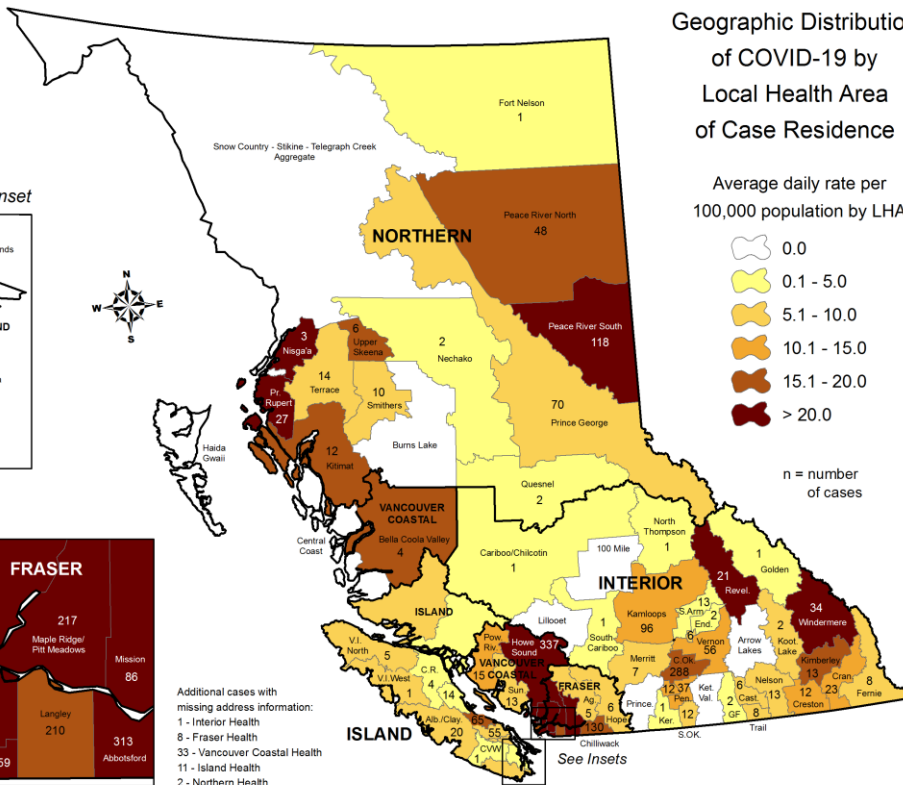


## Geographic Distribution of COVID-19 by Local Health Area of Case Residence

Average daily rate per 100,000 population by LHA



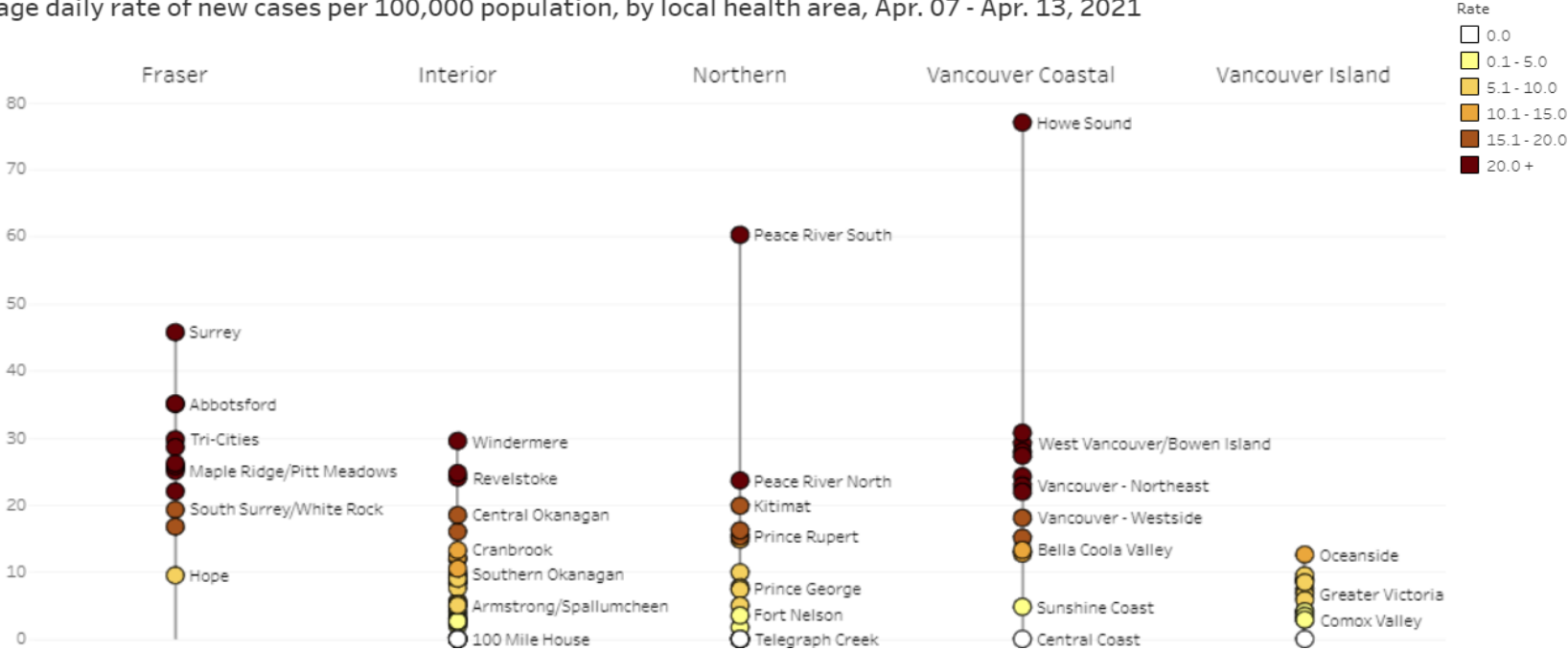
n = number of cases



Notes: Cases are mapped by location of residence; cases with unknown residence and from out of province are not mapped. Data source: the 5 regional health authorities of British Columbia; we operate in a live database environment and case information from the health authorities are updated as it becomes available. How to interpret the maps: The map illustrates the geographic distribution of reported cases for the most recent epidemiological week (from Sunday to Saturday). Local Health Areas (LHA) with higher rates are illustrated in darker colour shading. The number of reported cases appears in each LHA. Note that the number of cases in the LHA may not represent the location of exposure (e.g. people who acquired disease while traveling or working elsewhere); and that not all COVID-19 infected individuals are tested and reported; the virus may be circulating undetected in the community, including in areas where no cases have been identified by public health. Map created April 14, 2021 by BCCDC for public release.

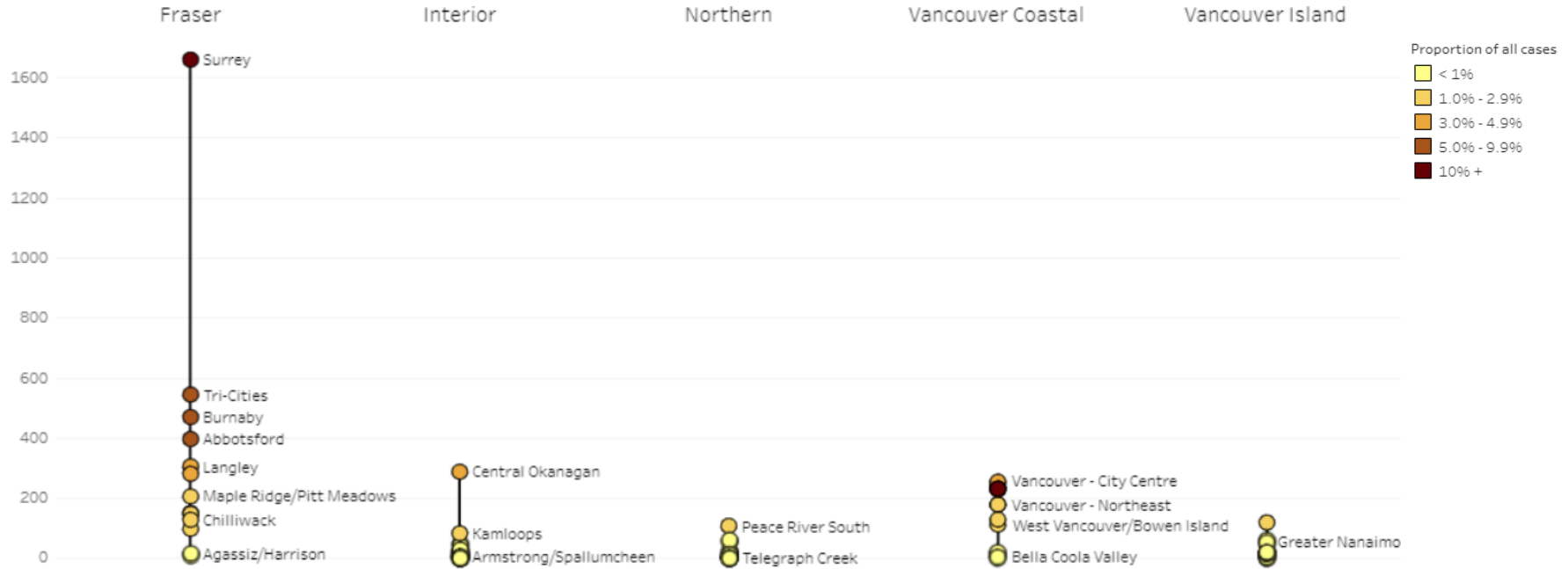
# Average daily rate of new cases per 100,000 population by local health area April 7 to 13, 2021

Average daily rate of new cases per 100,000 population, by local health area, Apr. 07 - Apr. 13, 2021



# Total case counts by local health area April 7 to 13, 2021

Total cases by local health area, Apr. 07 - Apr. 13, 2021



# Daily cases, hospitalizations and deaths by surveillance date January 2020 to April 13, 2021



114,870 total cases



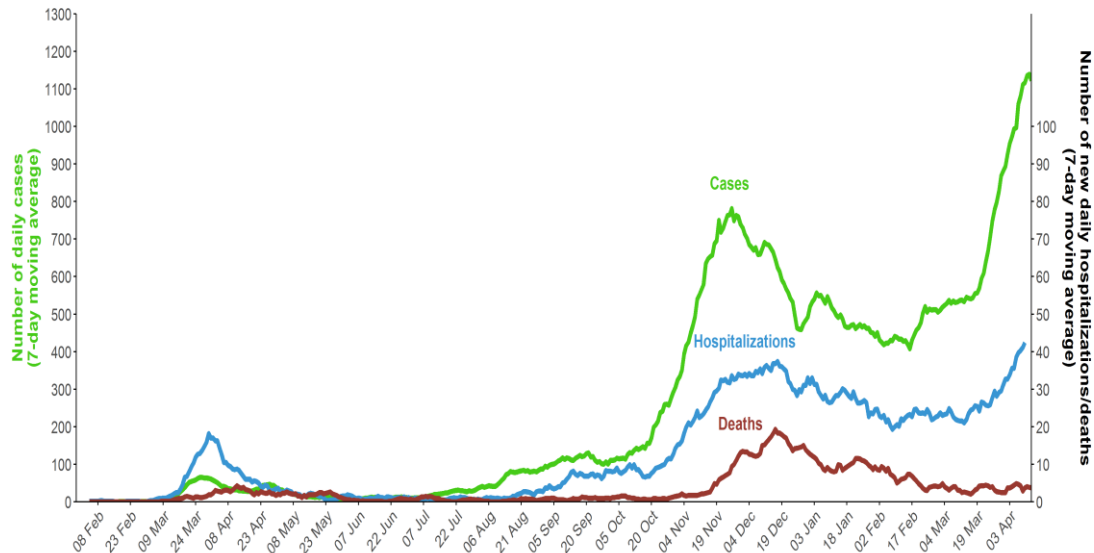
5,755 ever hospitalized



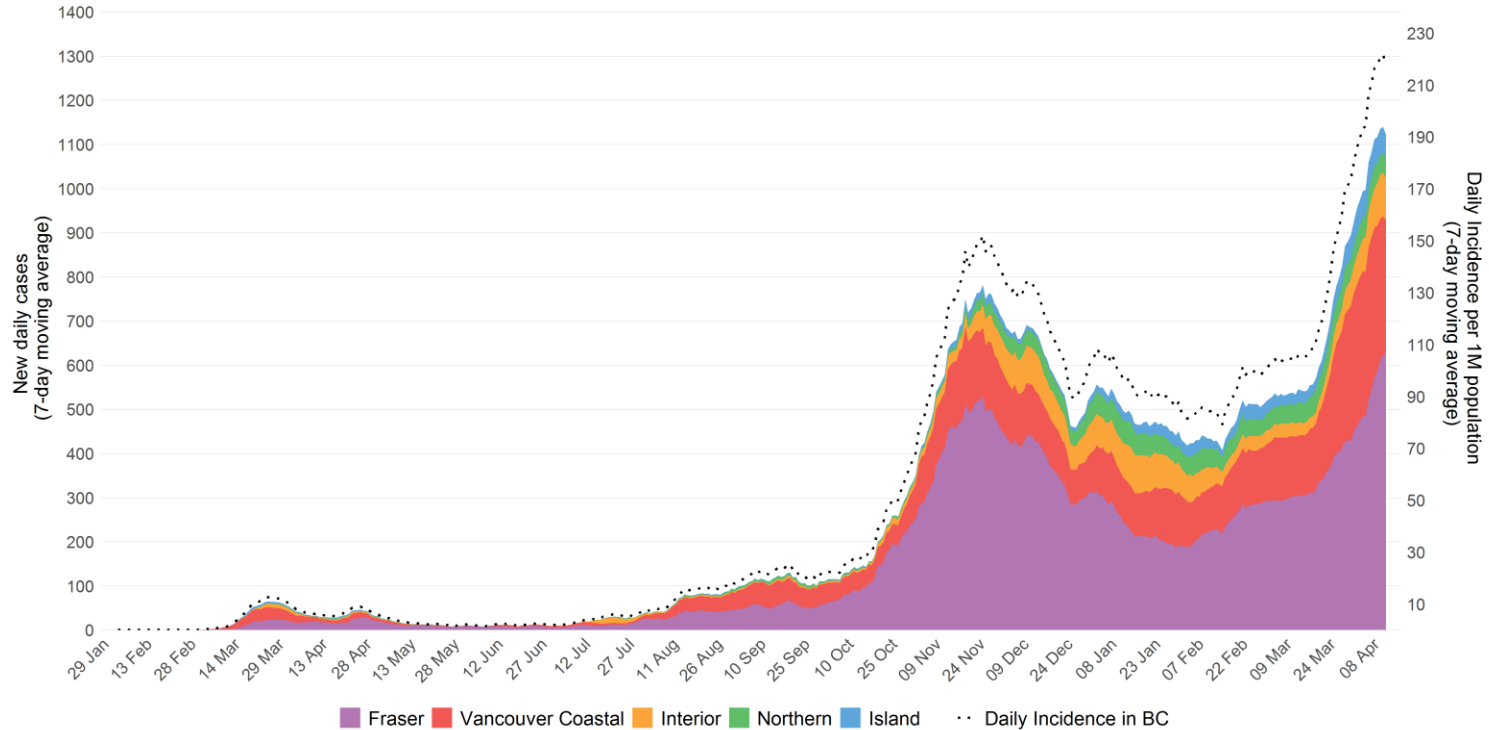
1,521 deaths



103,360 removed from isolation

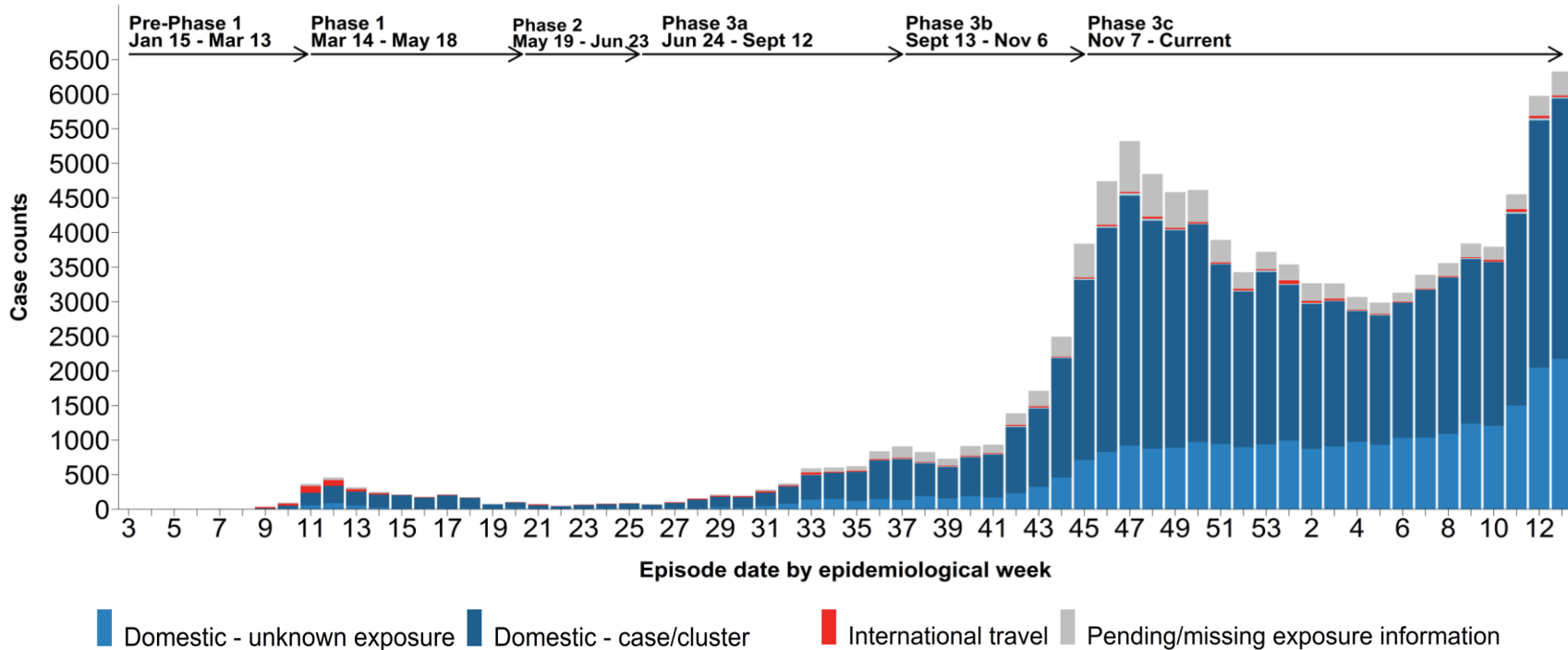


# Epidemic curve, COVID-19 cases in B.C. by surveillance date January 2020 – April 13, 2021

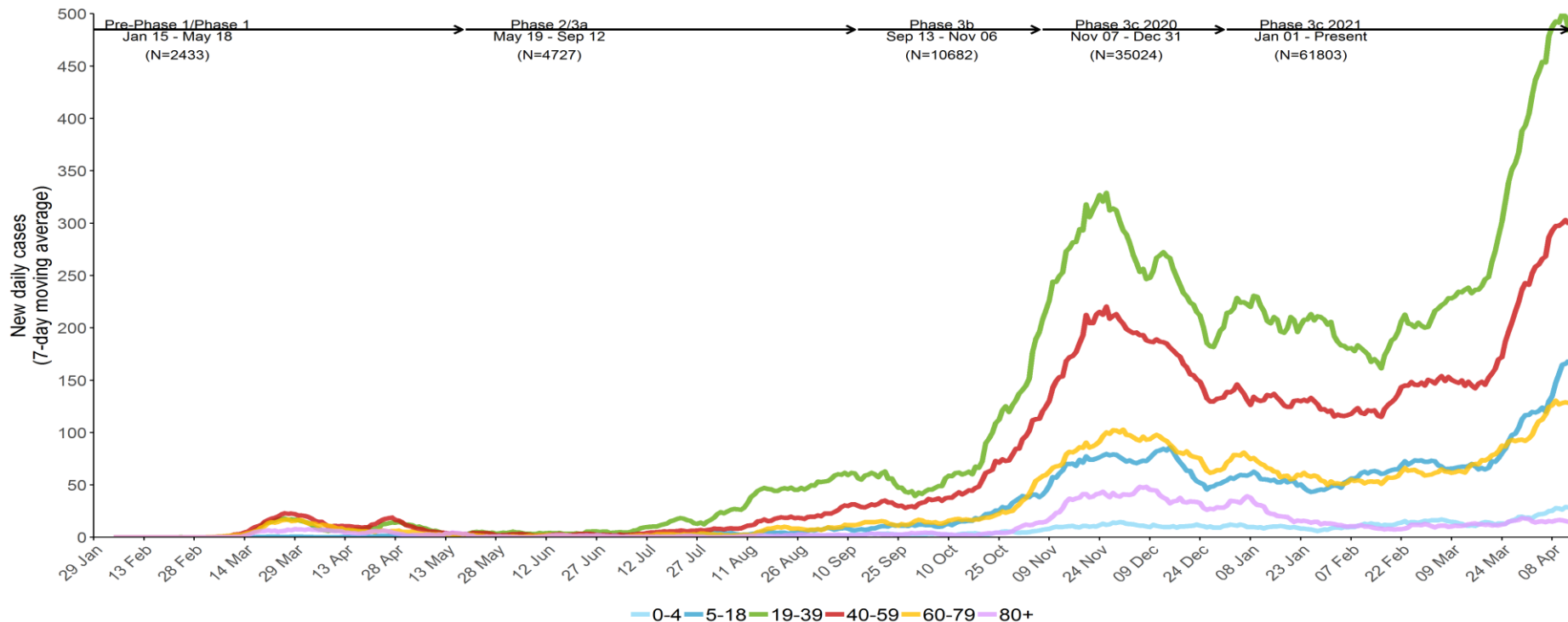




# Likely source of COVID-19 infection by episode date, BC January 15, 2020 – April 3, 2021

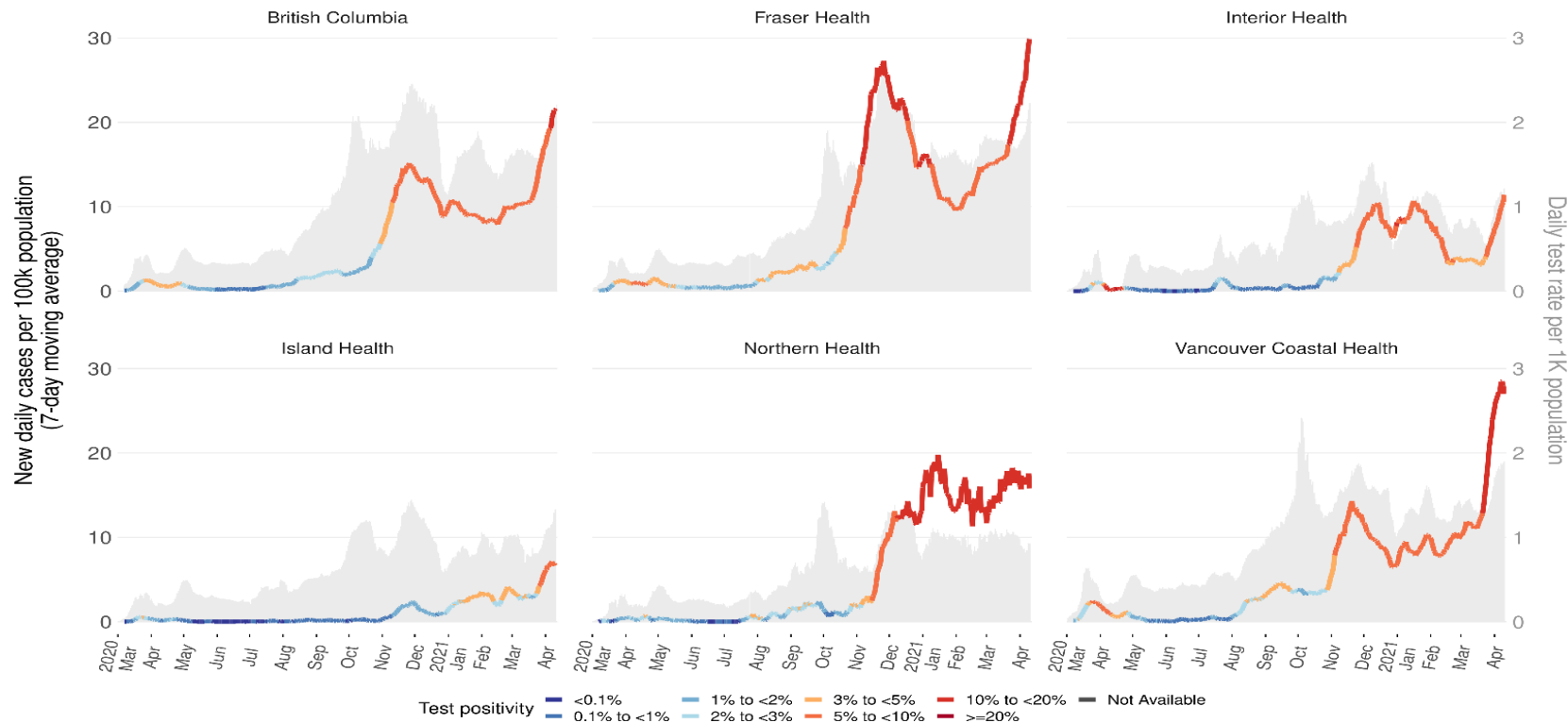


# Daily case count by age January 2020 to April 13, 2021 (7-day moving average)\*

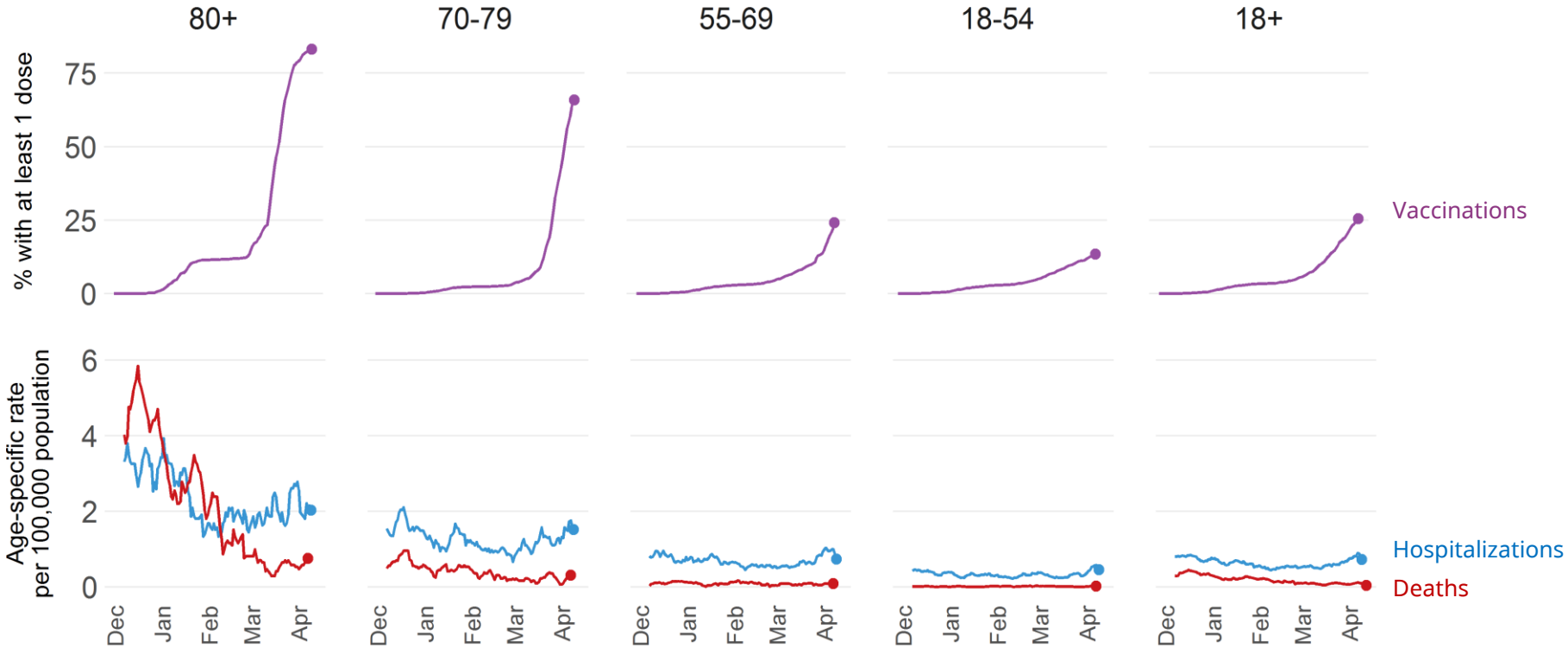


\* Data based on surveillance date (i.e. lab result date, or when not available, date reported to public health)

# Daily case rate, testing rate and percent positivity by Health Authority March 1, 2020 to April 13, 2021

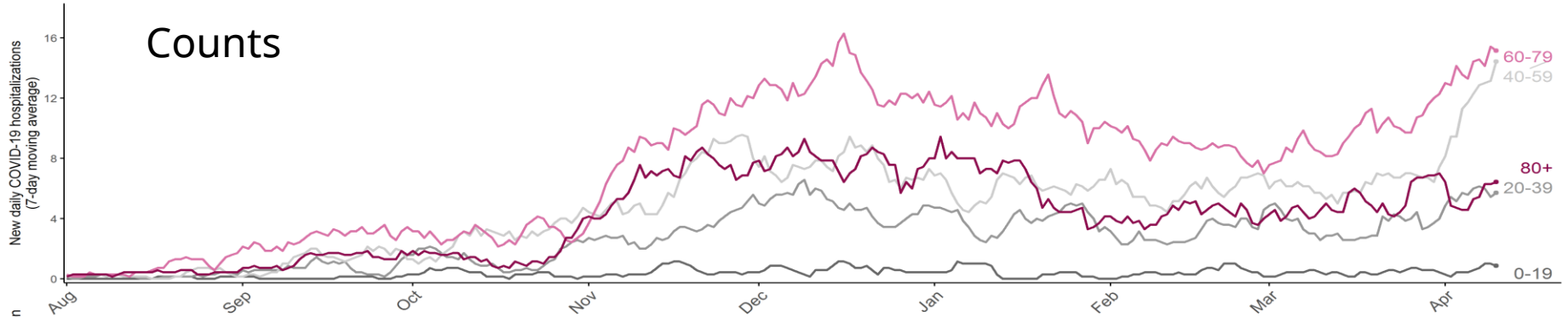


# Vaccination progress in BC by age group up to 13 April 2021

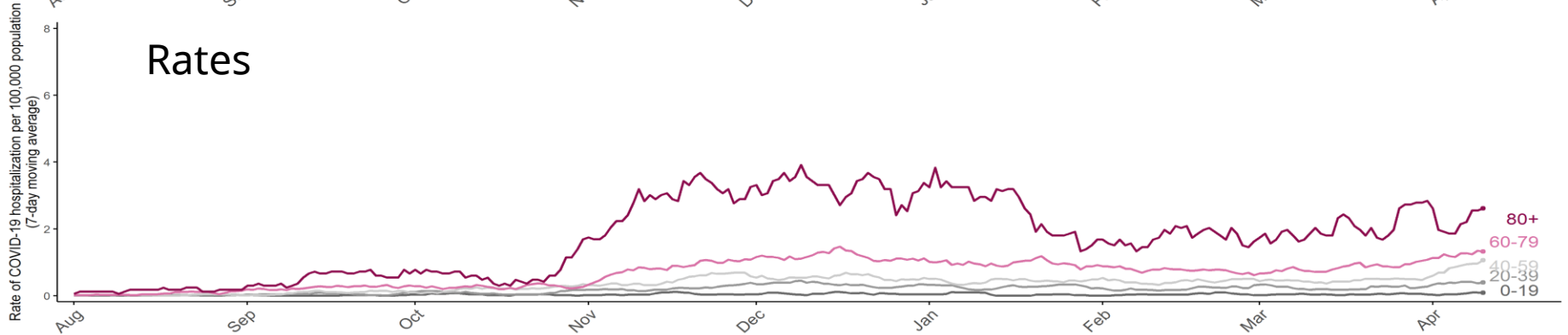


# New daily COVID-19 hospitalization counts and rates per 100,000 (August 2020 to April 2021)

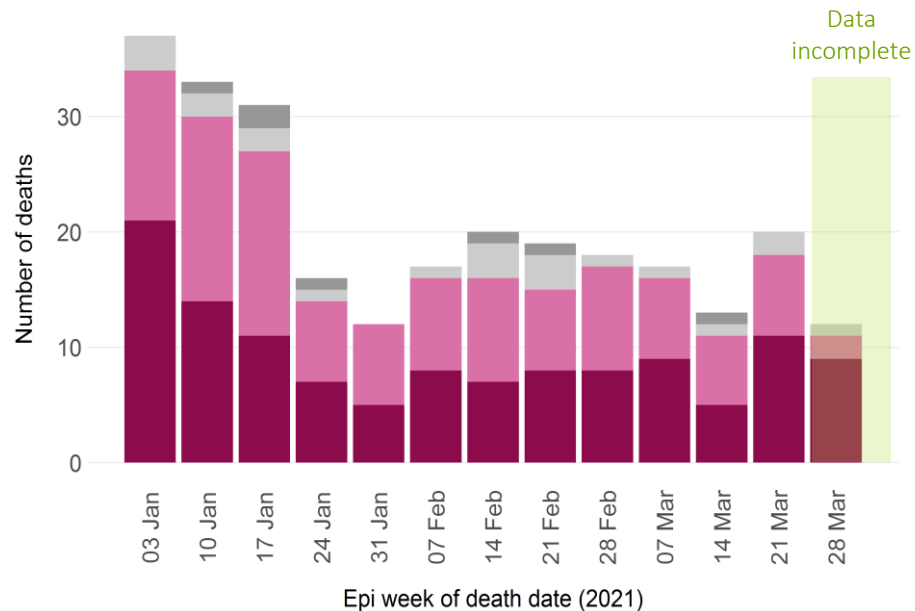
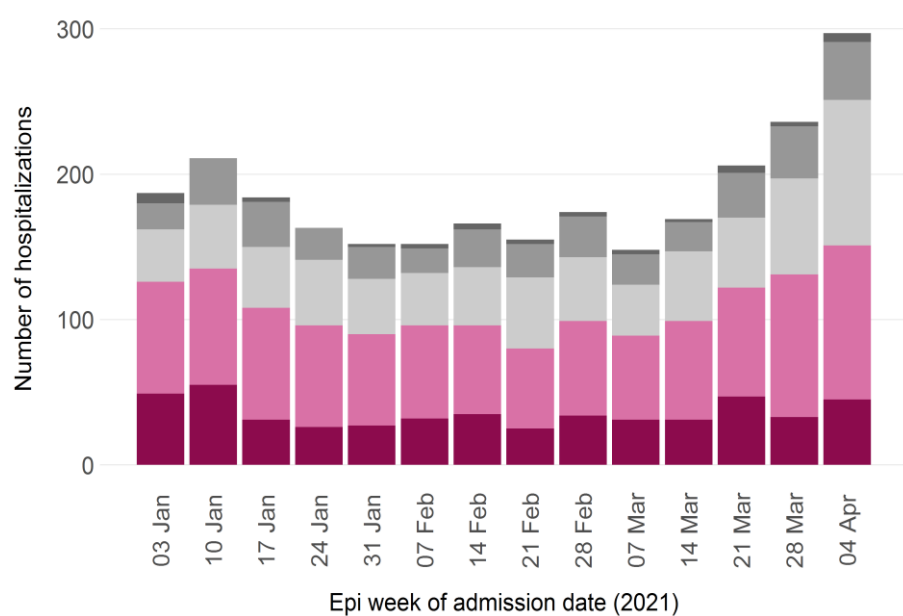
## Counts



## Rates

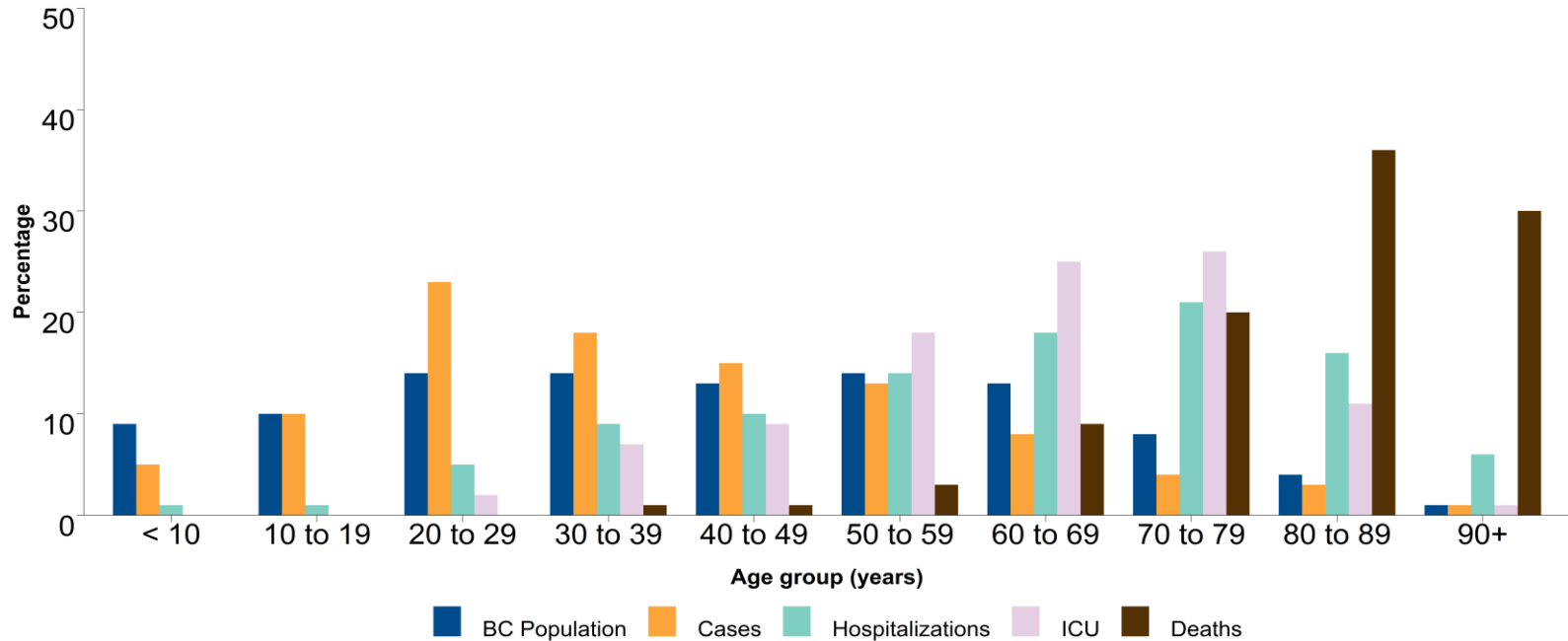


# Age distribution of COVID-19 related hospitalizations and deaths, Jan - Apr 2021



Age group 0-19 20-39 40-59 60-79 80+

# Percentage distribution of COVID-19 cases, hospitalizations, ICU admissions and deaths by age, British Columbia, January 15, 2020 – April 3, 2021



# Variant of Concern (VOC) Detection Approaches in BC



## VOC Screening

**Test:** qPCR that targets specific mutations shared by VOCs

**Population:** Most COVID-19 positive test samples in Feb, March, and early April

**Turn around time:** 1-2 days

**Results:** Presumptive VOC (B.1.1.7) or (P.1/B.1.351)

Not VOC



## Sequencing

**Test:** Sequence whole genome of SARS-CoV-2

**Population:** Presumptive VOCs from screening

Targeted populations (hospitalized patients, travellers, re-infections, others), clusters, outbreaks

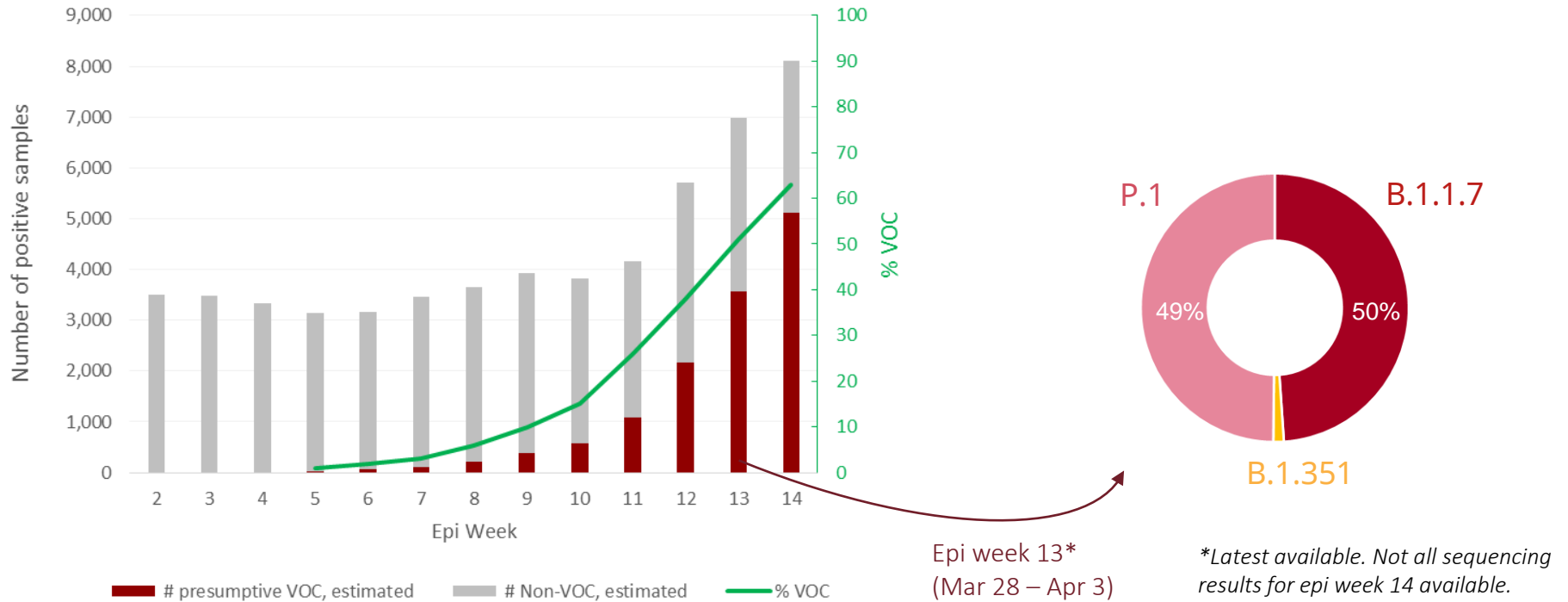
Baseline surveillance

**Turn around time:** ~1 week

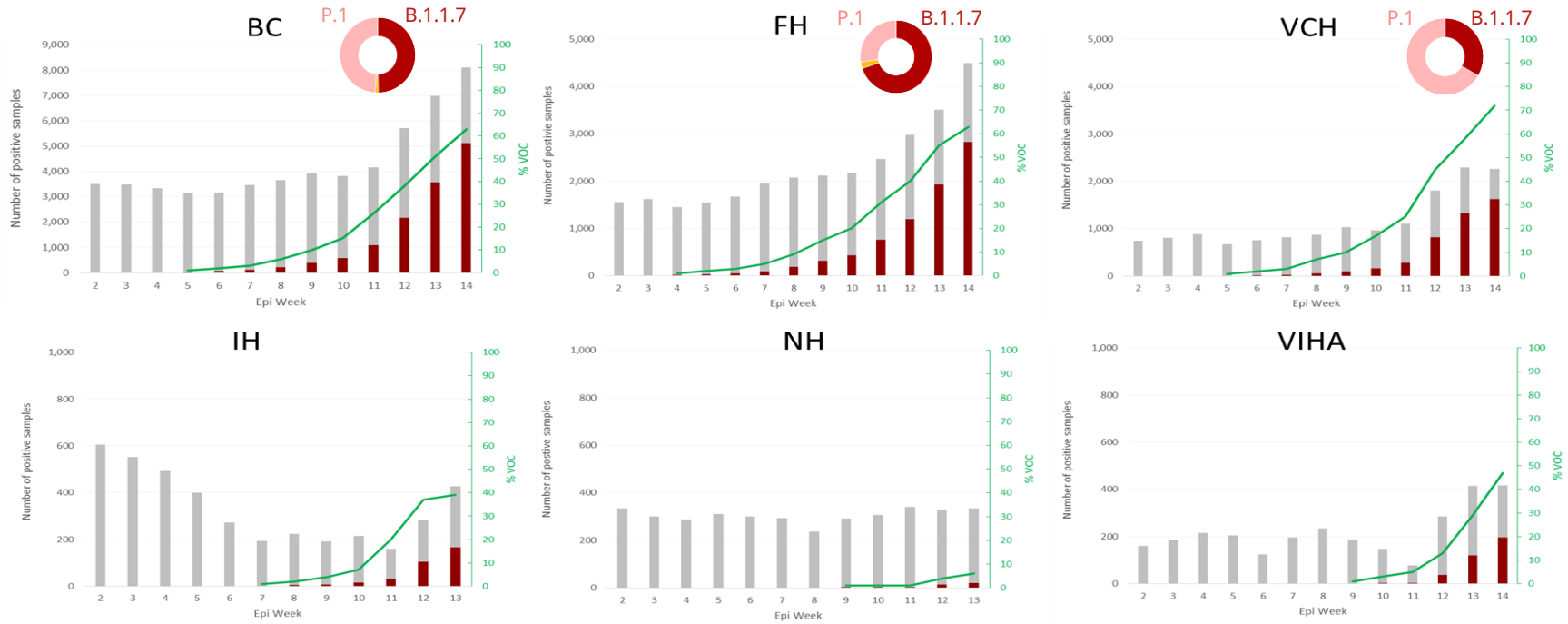
**Results:** Confirmed lineage: VOC, VOI, other



# Estimated prevalence of presumptive VOCs and distribution of confirmed viral lineages in BC, Jan - April 2021



# Approximate distribution of presumptive VOC prevalence by Health Authority - estimates



Estimates of relative distribution of B.1.1.7 and P.1 are available for epi week 13, for BC, FH, and VCH only.

# School Exposures

April 15, 2021



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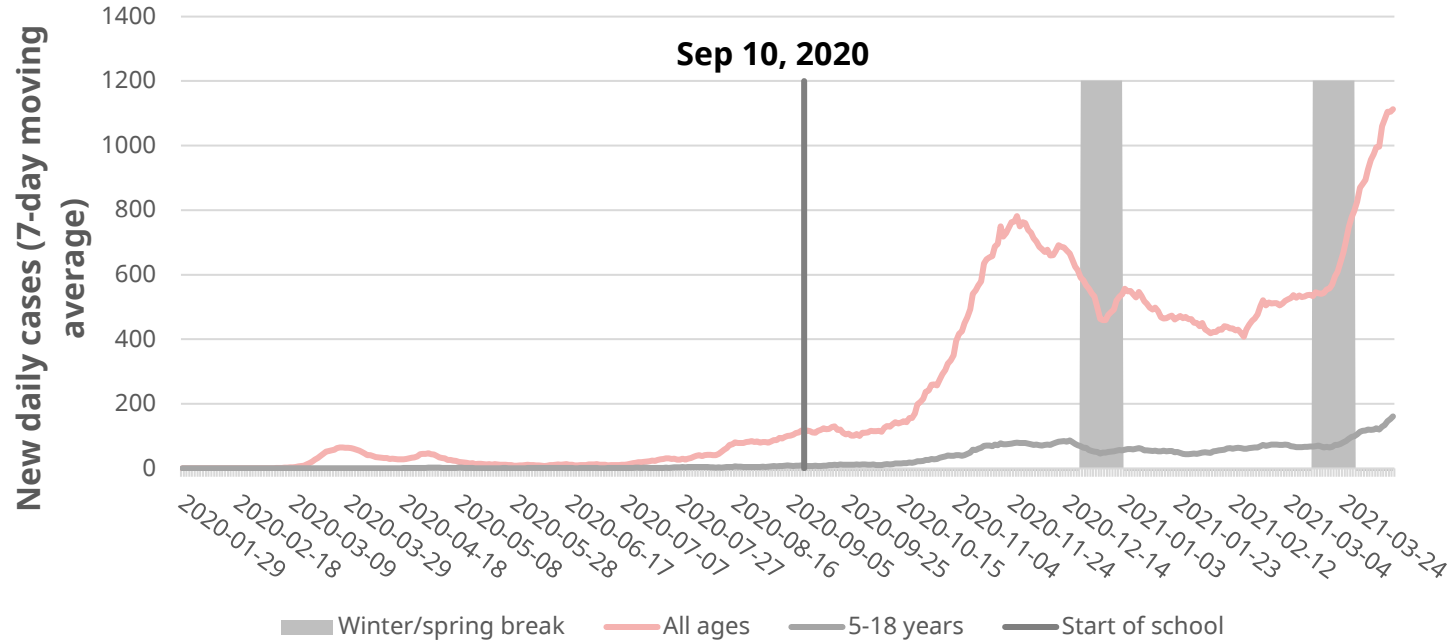
Symptom Self-Assessment:

[covid19.thrive.health](https://covid19.thrive.health)



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# The start of school sessions do not appear to result in significant increases in community transmission of COVID-19 at the provincial level in BC



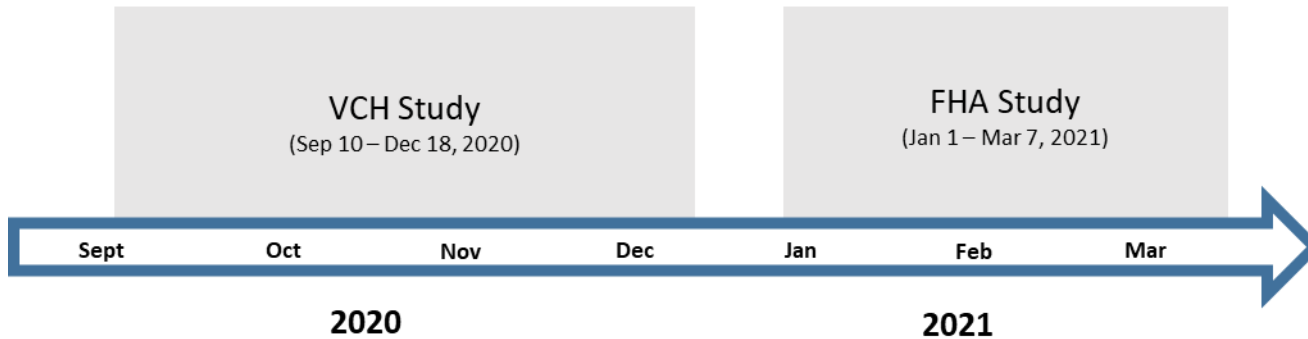
# COVID-19 Virus Has a Relatively Low Infection Rate Among School-Aged Children (5 to 18 Years) in BC, From September 7, 2020 to April 9, 2021

Age Groups	Number of Cases	Percent of Cases	Percent of Population
0 – 4 Years	2113	2.07	4.41
5 – 12 Years	5468	5.37	7.65
13 – 18 Years	6350	6.23	6.16
19+ Years	87941	86.32	81.79

- **No deaths among school age children due to COVID-19**
- **Less than 1 in 200 school aged children with COVID-19 hospitalized, which is considerably lower than adults 19+ years (1 in 20)**

# VCH and FHA School Transmission Studies

- In-depth reviews of COVID-19 cases among students and staff in K-12 schools within the Health Authorities help us understand what transmission looks like in the school setting.
- Identified cases where transmission likely occurred in school through review of contact tracing records.



# Findings from the VCH Study (Sept 10 – Dec 18, 2020)

124,000



699

(< 1% of students and staff)



55

(8% of student and staff cases)

Staff and Students and teachers in VCH Region\*

COVID-19 Cases among students (77%) and staff (23%)

Cases likely acquired **in school**

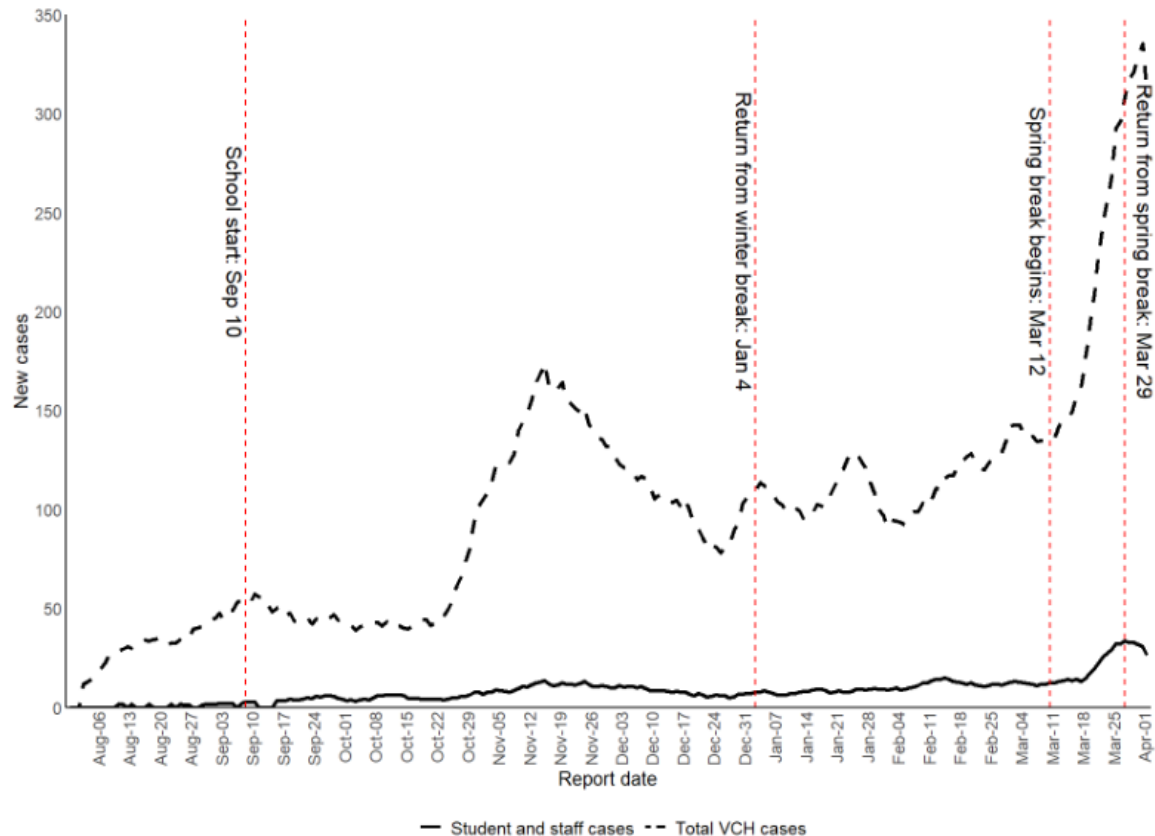
When transmission did occur within a school setting, a case would **typically lead to 1 or 2 other cases in the school**

*During this time period there were a **total of 8,746 cases** reported in the VCH Region*

*\*Approximate estimate based on those attending schools in person during this time period*

# Student and Staff Cases make up a small proportion of overall cases in VCH

School closures during holidays do not appear to lead to reductions in overall cases among students and staff.





# Findings from the Fraser Health Study (Jan 1 – Mar 7, 2021)

315,000



Staff and  
Students in Fraser  
Region\*

2049

(< 1% of students  
and staff)

COVID-19 Cases  
among students  
(83%) and staff (17%)



267

(13% of student  
and staff cases)

Cases likely acquired in school

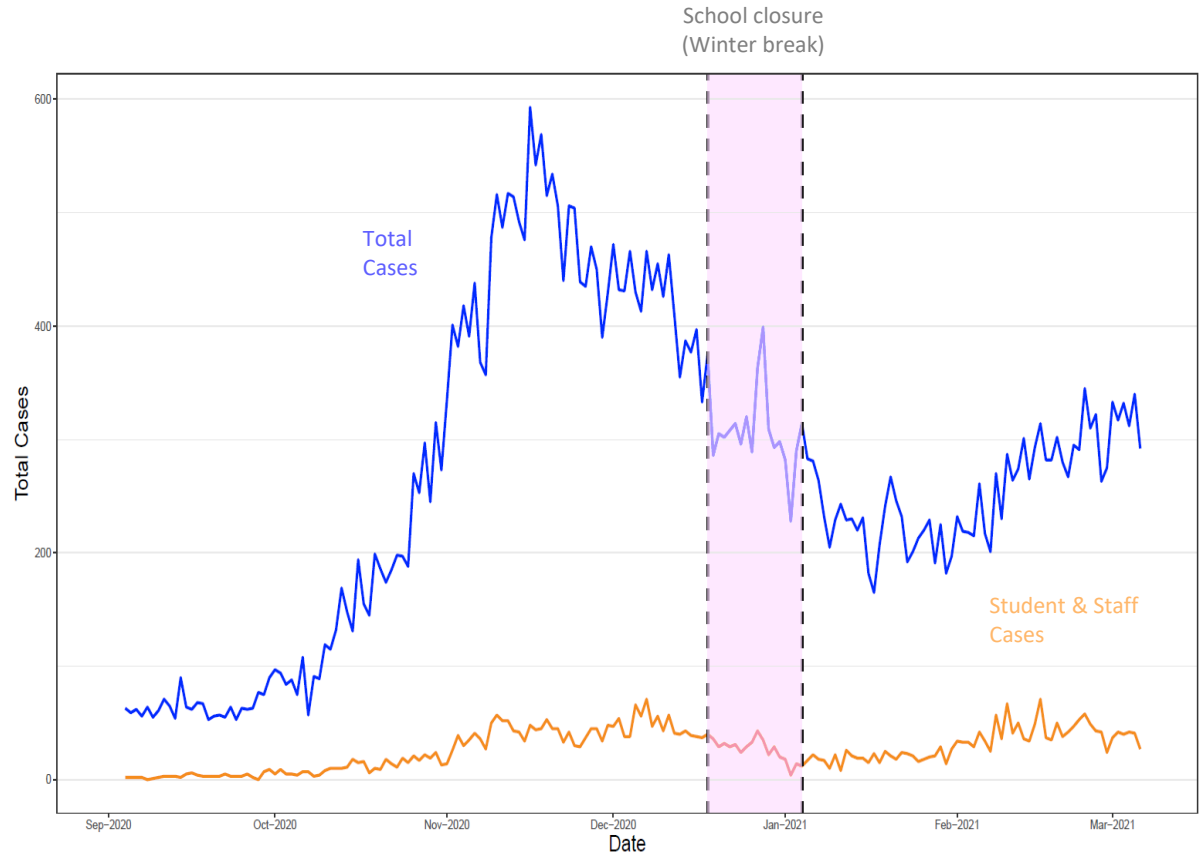
- When transmission did occur within a school setting, a case would **typically lead to 1 other case in the school**
- No transmission was identified in approximately **85%** of schools in the Fraser region during this time period

*During this time period there were a **total of 16,053 cases** reported in the Fraser Region*

*\*Approximate estimate based Ministry of Education data*

# Student and Staff Cases make up a small proportion of overall cases in Fraser Health

Student and staff cases follow community trends – they are a reflection of community COVID-19 activity.

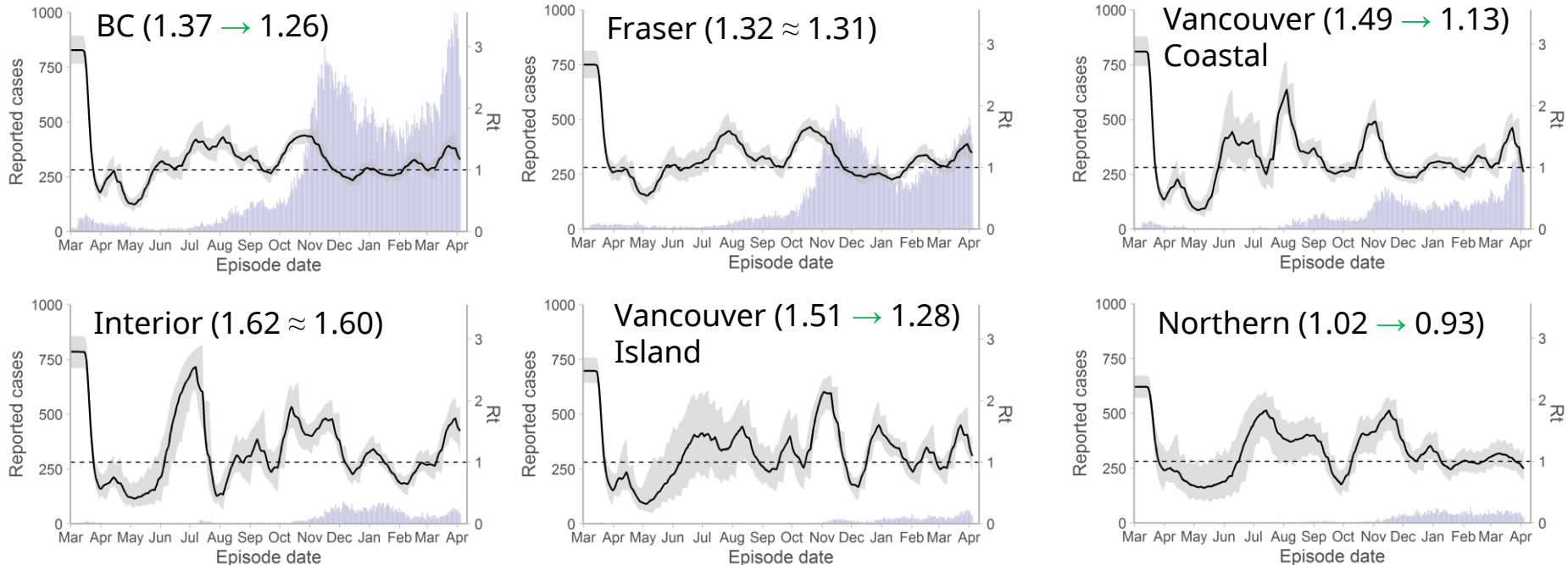


# Key Messages

- COVID-19 cases in schools reflect community transmission
- Most cases of COVID-19 among students and staff are acquired outside of school in their household or community
- When transmission occurs within the school, it is usually limited to one or two additional cases
- School transmission does not appear to be a major driver of community transmission

# Dynamic compartmental modeling: recent trends

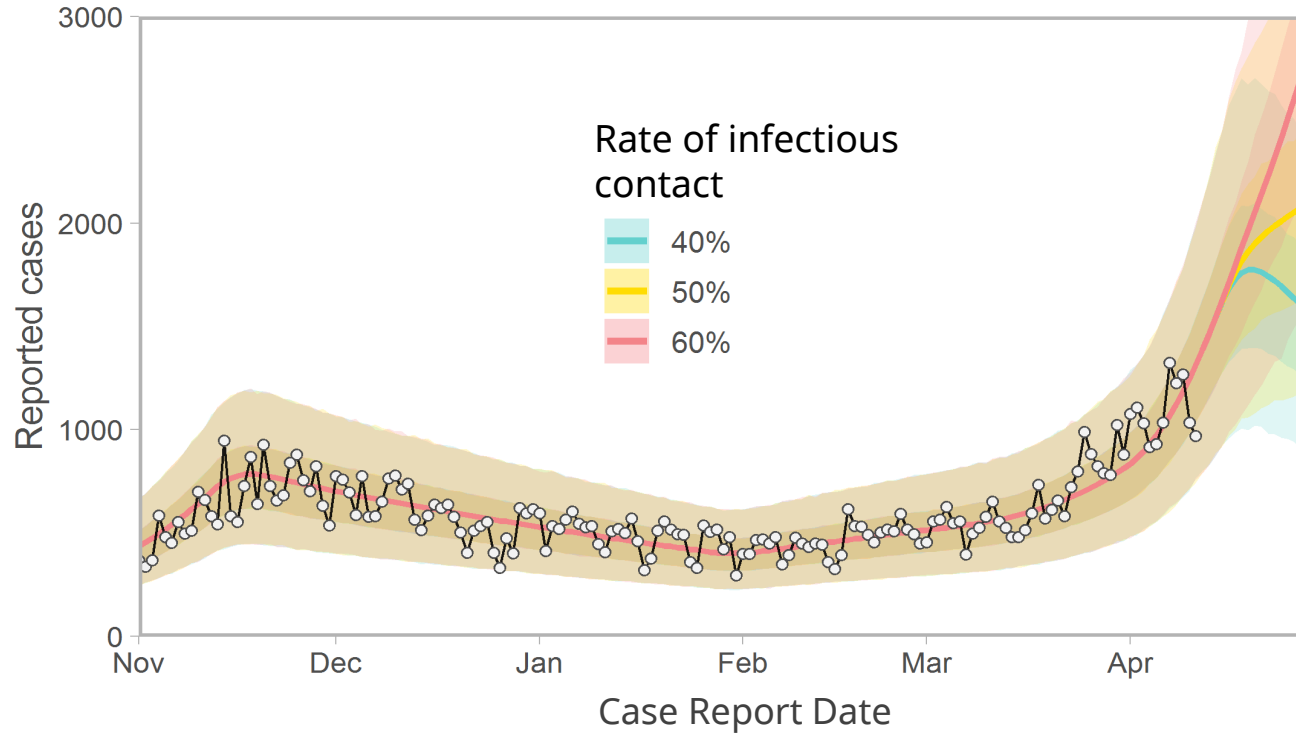
Our model shows that  $R_t$  is above 1 in most regions of BC.



Solid black line: median  $R_t$ , data up to Mar 11, 2021; Grey band: 5%-95% credible interval; Purple bars: all reported cases.

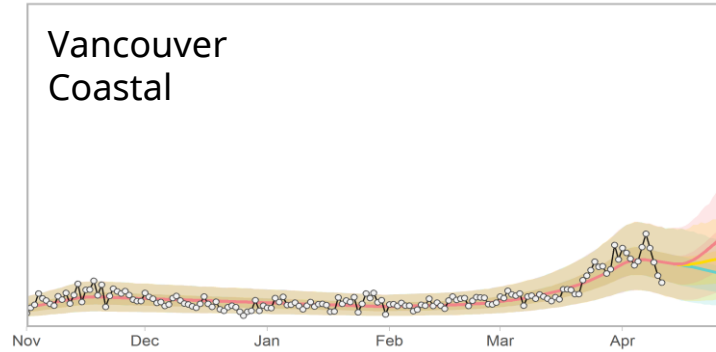
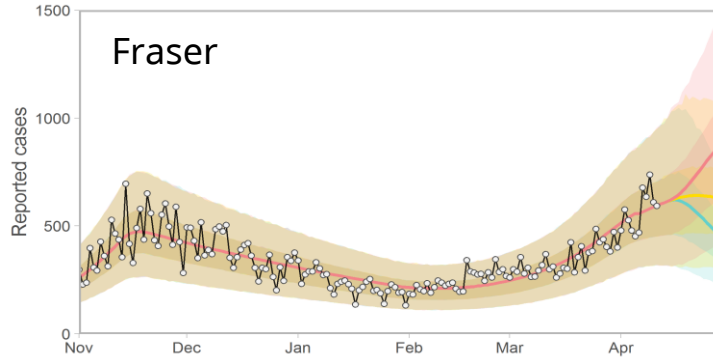
Due to lag from symptom onset to reporting, most recent cases are not shown. Recent trend shown comparing 7 day average  $R_t$  from (last week → this week).

# Dynamic compartmental modeling: recent trends

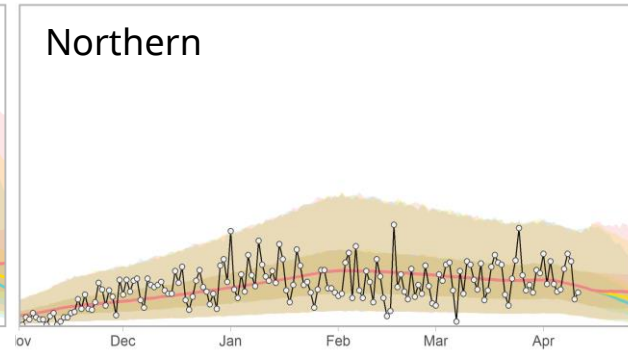
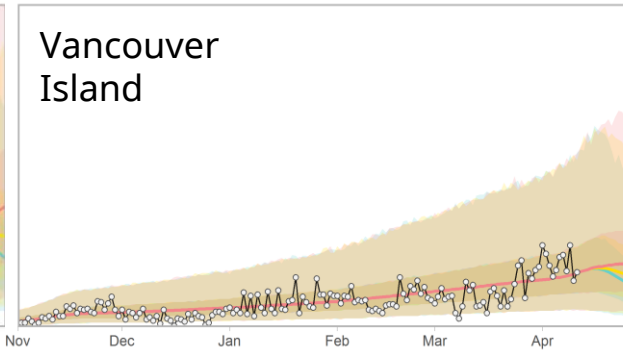
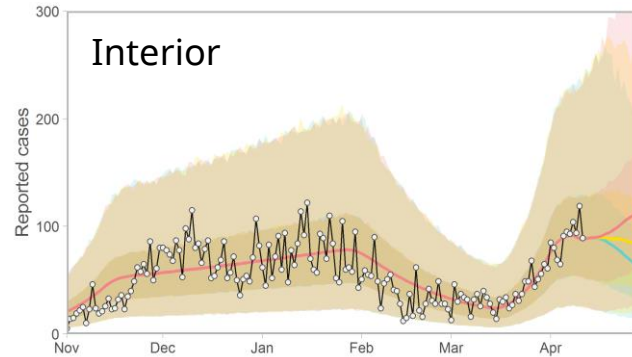
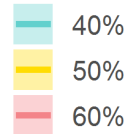


Solid blue line: median model fit; shaded bands: 50% and 90% credible intervals; Open circles: all reported cases, excluding reportable outbreaks, March 1 – April 11, 2021.

# Dynamic compartmental modeling: scenarios



Rate of infectious contact



Case Report Date

Solid blue line: median model fit; shaded bands: 50% and 90% credible intervals; Open circles: all reported cases, excluding reportable outbreaks, March 1 – April 11, 2021.

# BC COVID-19 Population Health Survey – Round 2

## Your Story, Our Future

We encourage all British Columbians to share their experience and how they have been affected by the COVID-19 pandemic one year on, to help inform recovery and re-opening:

<http://www.bccdc.ca/covid19survey>

