BCCDC COVID Data Summary

4 November 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.



Table of Contents

| Overall Summary4 |
|---|
| Surveillance5 |
| BC Epidemiology5 |
| Vaccination coverage and outcomes by vaccine status20 |
| Labs/Genomics35 |
| Modelling48 |
| Pediatric Report49 |
| Additional Resources57 |



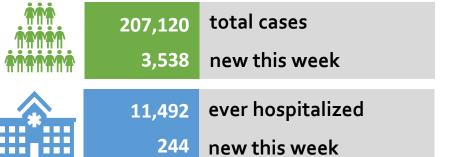
Overall Summary for surveillance data to Nov 4

- Case rates are elevated but beginning to decrease provincially; decreasing in NH, IH and VCH and stable in FH and VIHA.
- Test positivity among public tests is stable (~6.7% provincially), and remains high in NH (21%).
 - Testing rates remain higher than historical trends among <12 year olds
- The number of healthcare facility outbreaks during Aug-Oct 2021 was similar to Aug-Oct 2020.
- New hospitalizations are elevated and stable provincially; hospital/critical care census is stable provincially, but there is variation across BC; new deaths are low but elevated compared to Wave 3.
 - New hospitalizations are increasing in FH
- Hospitalization rates among children continue to remain very low.
- The majority of new cases and hospitalizations continue to be among unvaccinated individuals.
- Vaccine coverage in BC, 2 Nov, 1 dose (2 doses): ~80% (76%) of total population, ~90% (85%) of 12+ eligible population. Lower vaccine coverage in Interior and Northern.
- The Delta variant continues to account for ≈100% of all positive tests in BC.





Oct 28 to Nov 02: BC COVID-19 Profile





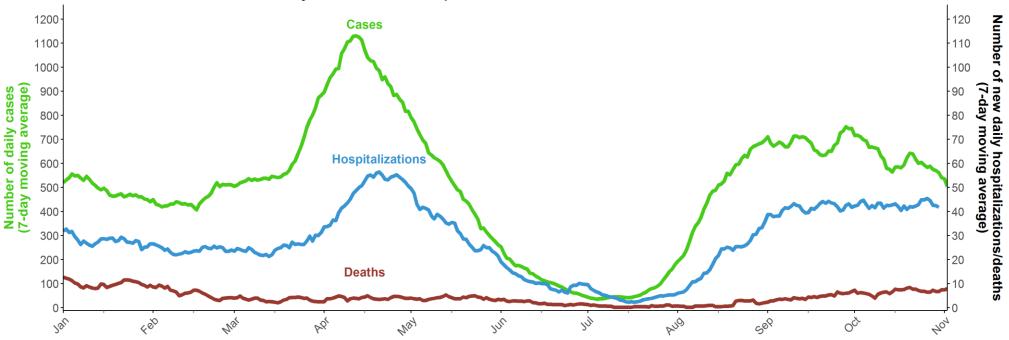
2,192 total deaths
55 new this week



200,220

removed from isolation new this week

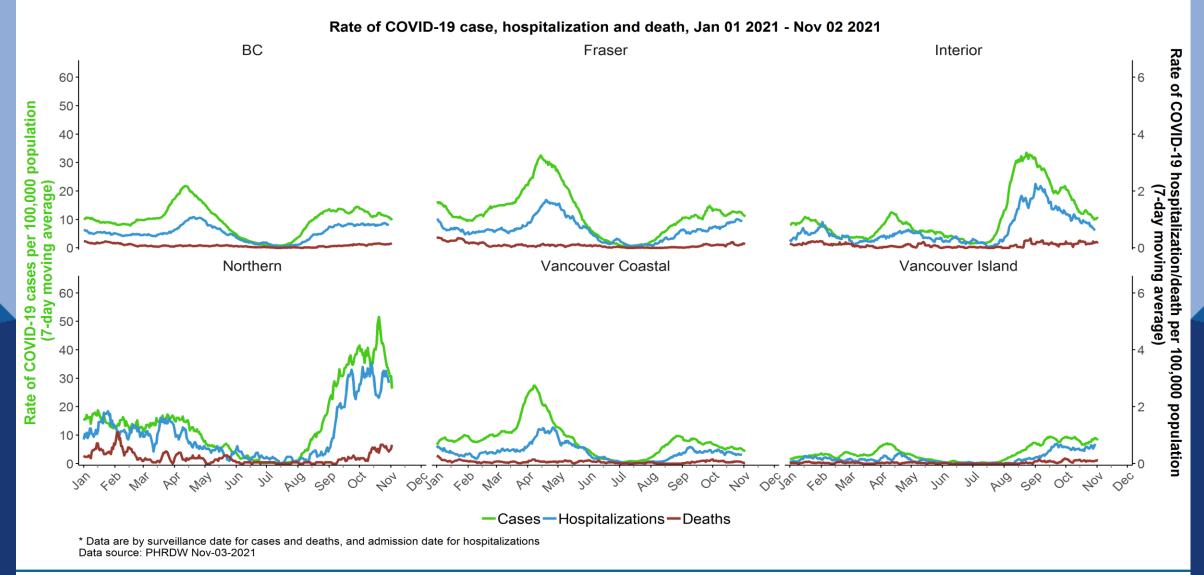
New daily COVID-19 cases, hospitalizations and deaths, Jan 01 2021 - Nov 02 2021



* Data are by surveillance date for cases and deaths, and admission date for hospitalizations Data source: PHRDW Nov-03-2021



Case rates are elevated with signs of early decrease, and new hospitalizations are elevated and relatively stable; new deaths are low but slowly increasing.

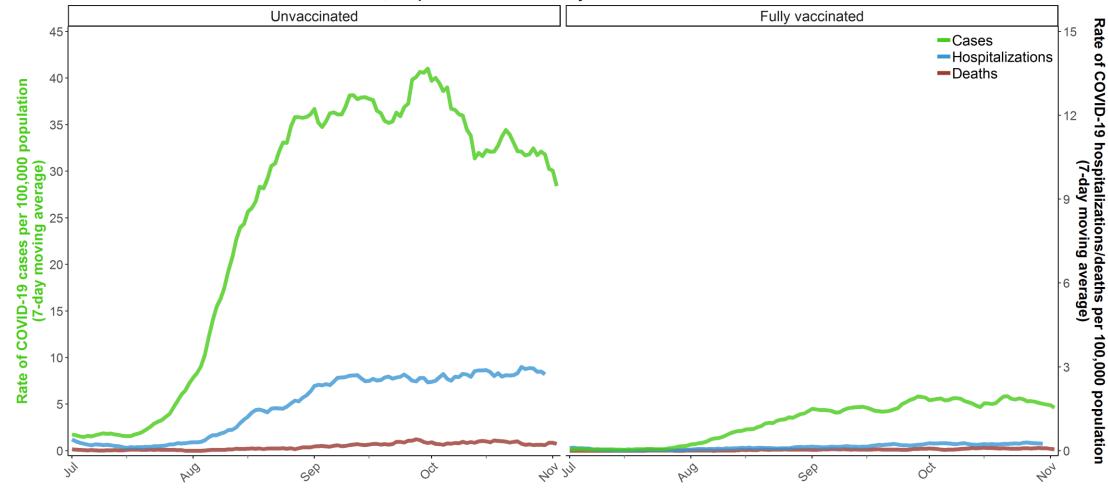






The majority of new cases and hospitalizations continue to be among unvaccinated individuals

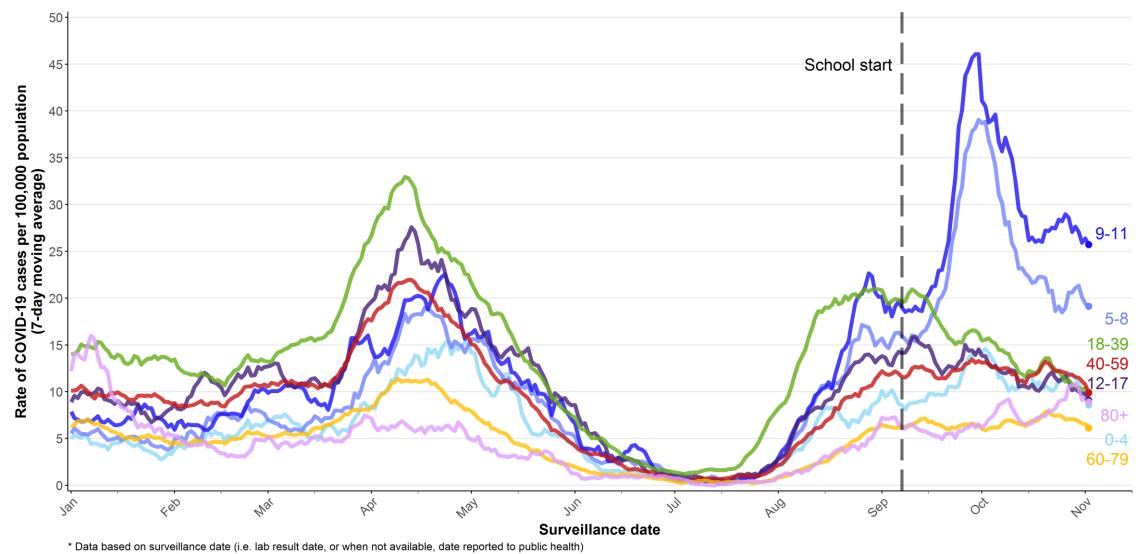




^{*} Data are by surveillance date for cases and deaths, and admission date for hospitalizations Data source: PHRDW Nov-03-2021



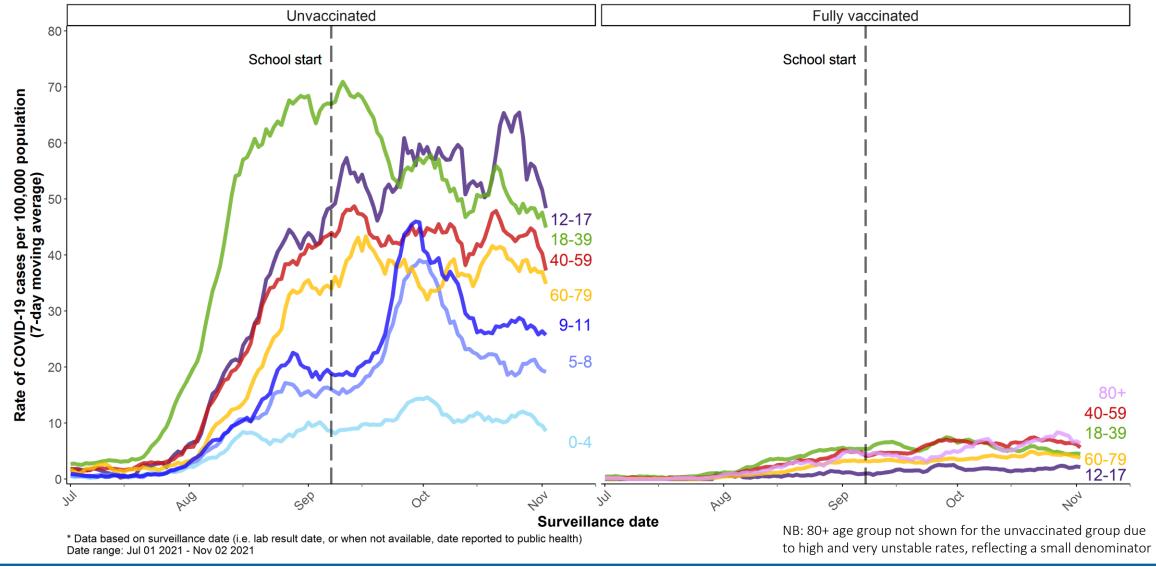
Overall incidence is either relatively stable or decreasing across all age groups – but note how different this graph looks once separated out by vaccine status (next slide)



Data range: Jan 01 2021 - Nov 02 2021

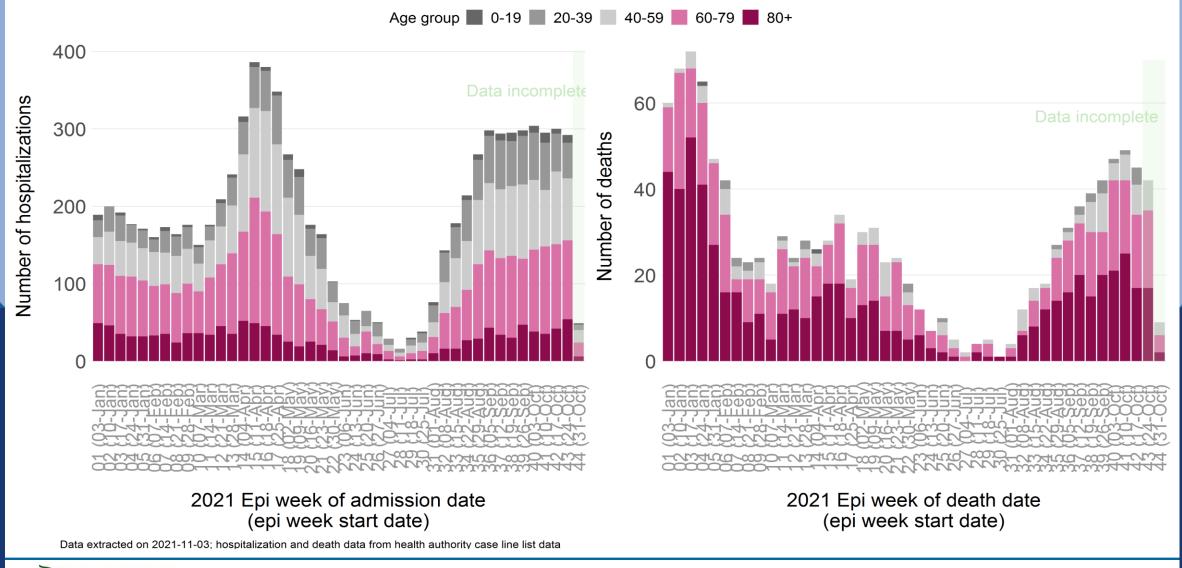


For all age groups 12+, those who are vaccinated have very low case rates. Among those unvaccinated, case rates are lowest among children.



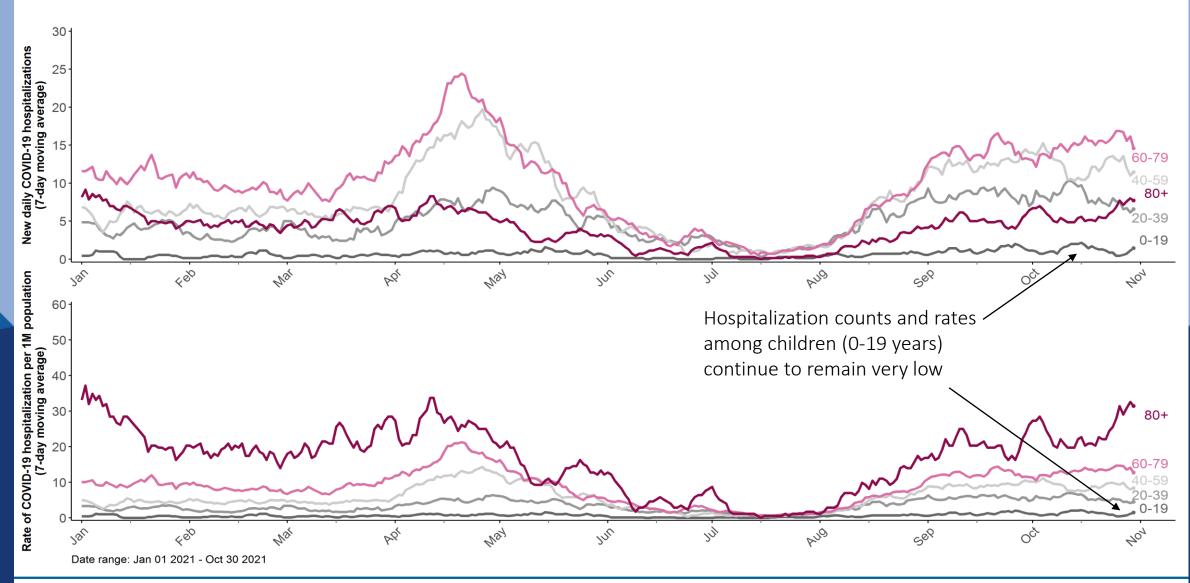


Number of new hospital admissions is elevated and stable overall as well as across age groups. Deaths are low, but higher than in the spring. The majority of deaths are in individuals ≥60 years.





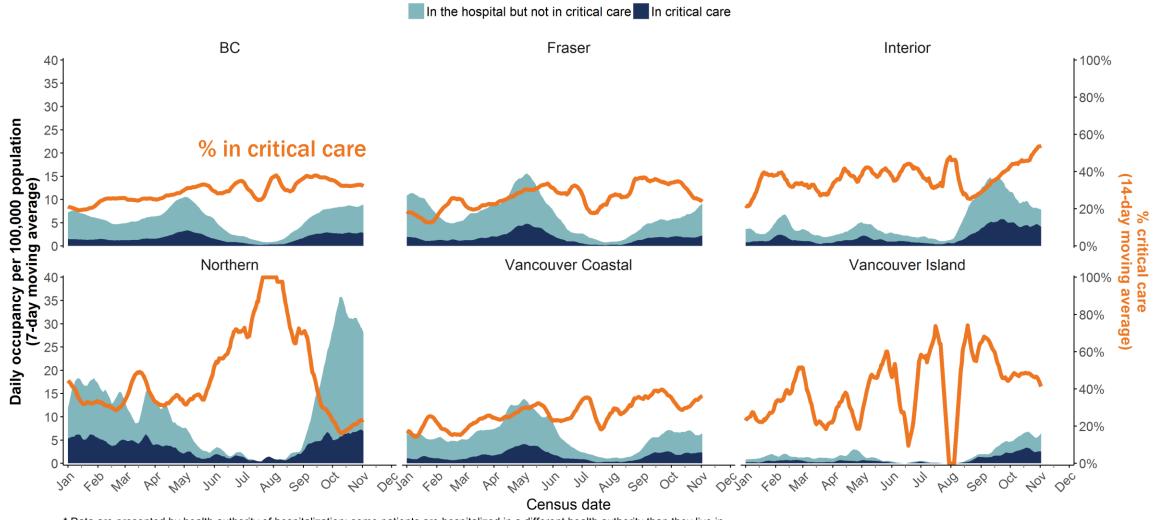
Trends in number and rate of new hospitalizations by age group, BC, 1 Jan - 30 Oct 2021





Critical care census is stable across province. Hospital census is increasing in FH, declining in IH and NH, and stable in VIHA and VCH.

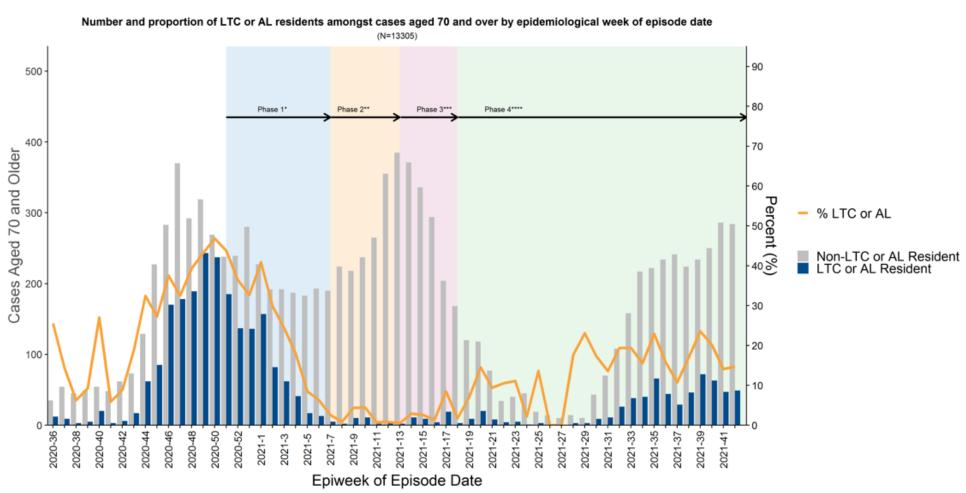




^{*} Data are presented by health authority of hospitalization; some patients are hospitalized in a different health authority than they live in Data source: PHSA Provincial COVID19 Monitoring Solution (PCMS) Nov-03-2021



During the most recent resurgence, approximately 15-20% of cases in individuals aged 70 and above have been among residents of long-term or assisted living facilities



^{*} Phase 1 COVID-19 vaccinations started December 2020-February 2021. Phase 1 target populations include residents, staff and essential visitors to long-term care and assisted-living residences; individuals assessed and awaiting a long-term care placement; health care workers providing care for COVID-19 patients; and remote and isolated Indigenous communities.

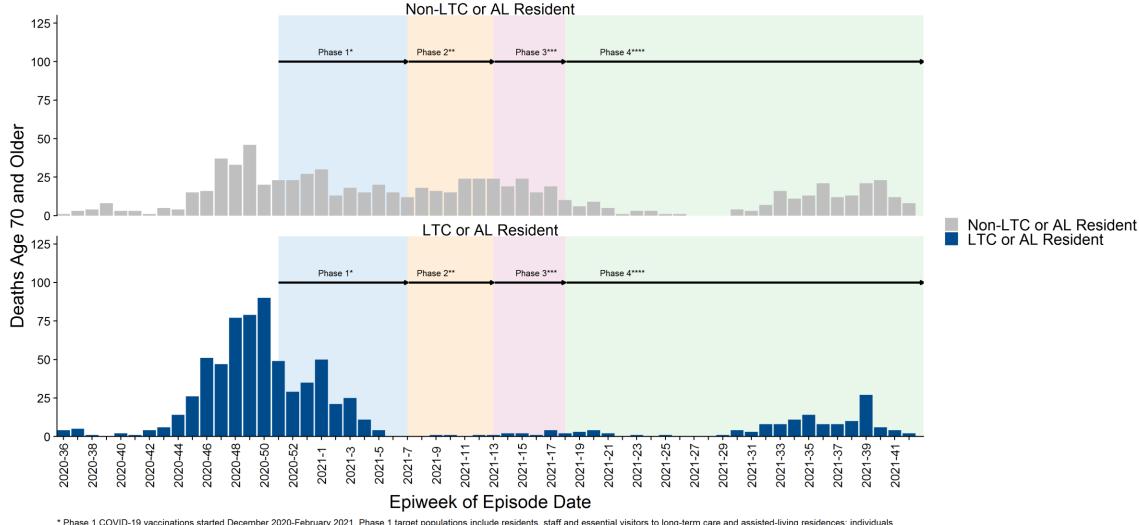
^{***} Phase 3 COVID-19 vaccinations started April 2021-May 2021. Phase 3 target populations include people aged 60-79 years, Indigenous peoples aged 18-64 and people aged 16-74 who are clinically extremely vulnerable.
**** Phase 4 COVID-19 vaccinations started May 2021-Present. Phase 4 target populations include people aged 18 to 59 years.



^{**} Phase 2 COVID-19 vaccinations started February-April 2021. Phase 2 target populations include seniors, age 80 and over; Indigenous peoples age 65 and over and Indigenous Elders; Indigenous communities; hospital staff, community general practitioners (GPs) and medical specialists; vulnerable populations in setget ect congregate settings; and staff in community home support and nursing services for seniors. Immunizations of target populations within each phase may be staggered depending on vaccine availability and health region.

Number of deaths of LTC or AL facility residents compared to non-LTC or AL resident cases aged 70 and over by epidemiological week of episode date

(N=1567)



^{*} Phase 1 COVID-19 vaccinations started December 2020-February 2021. Phase 1 target populations include residents, staff and essential visitors to long-term care and assisted-living residences; individuals assessed and awaiting a long-term care placement; health care workers providing care for COVID-19 patients; and remote and isolated Indigenous communities.

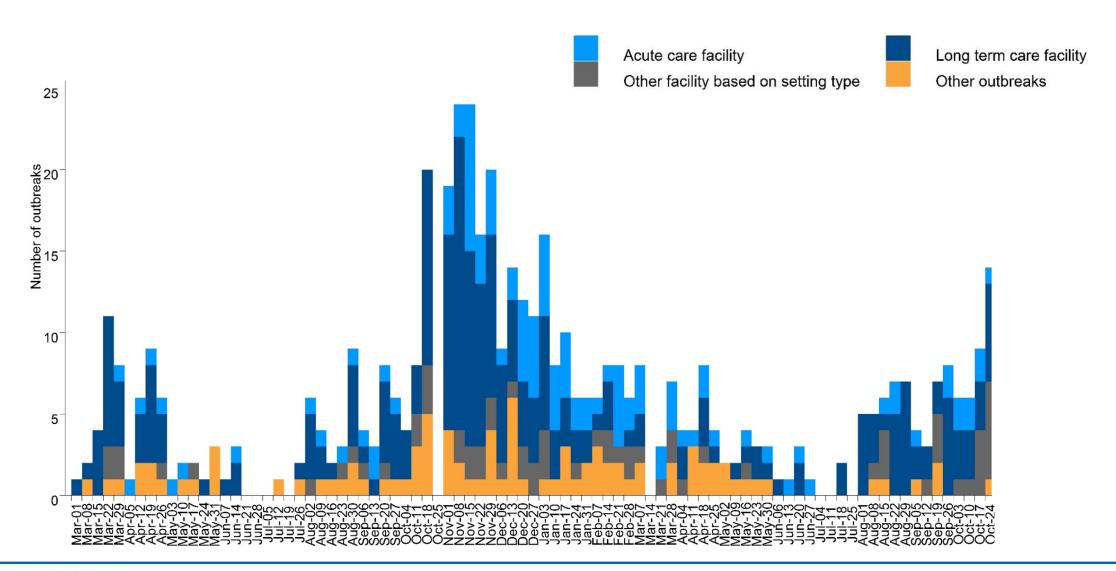
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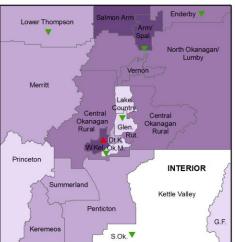
^{**} Phase 2 COVID-19 vaccinations started February-April 2021. Phase 2 target populations include seniors, age 80 and over; Indigenous peoples age 65 and over and Indigenous Elders; Indigenous communities; hospital staff, community general practitioners (GPs) and medical specialists; vulnerable populations in select congregate settings; and staff in community home support and nursing services for seniors. Immunizations of target populations within each phase may be staggered depending on vaccine availability and health region.

The number of new healthcare facility outbreaks during Aug-Oct 2021 was similar to Aug-Oct 2020.

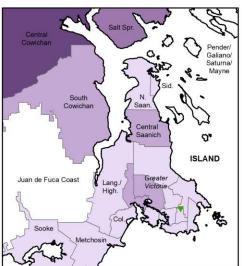


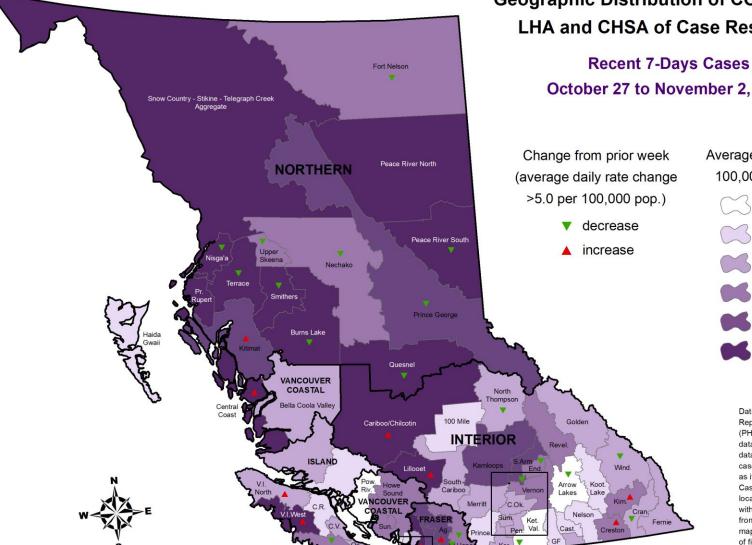


Okanagan Inset (Community Health Service Areas)



Greater Victoria Inset (Community Health Service Areas)





ISLAND

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

October 27 to November 2, 2021

Average daily rate per 100,000 population

0.1 - 5.0

5.1 - 10.0

10.1 - 15.0

15.1 - 20.0

> 20.0

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

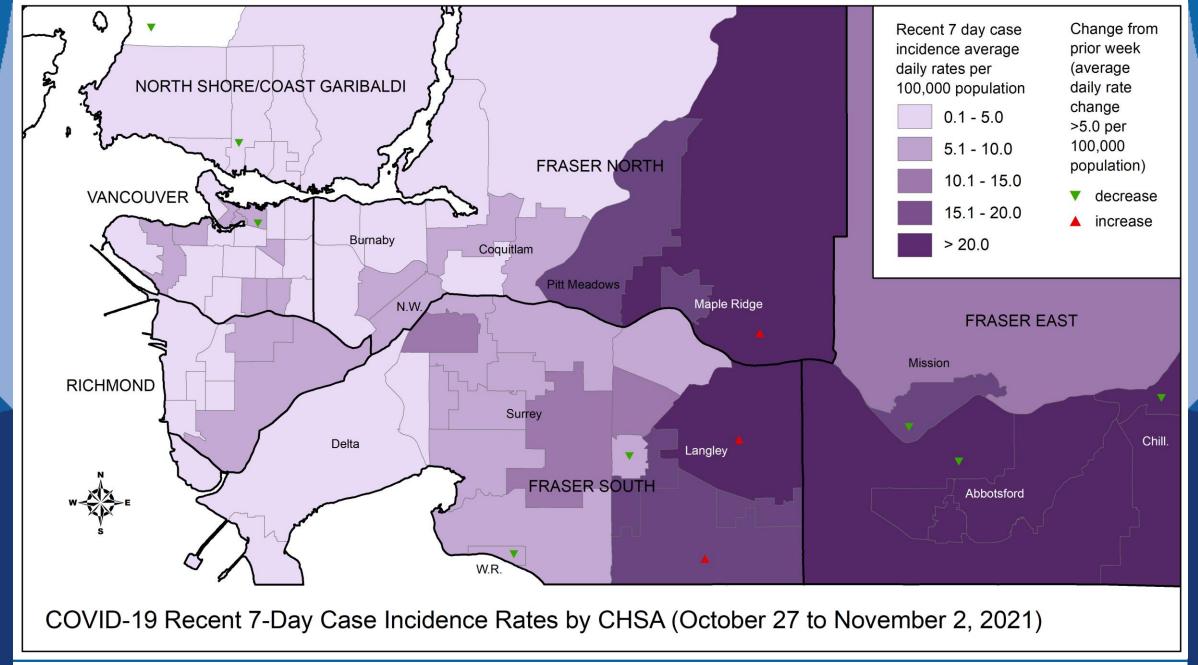


Greater Vancouver inset

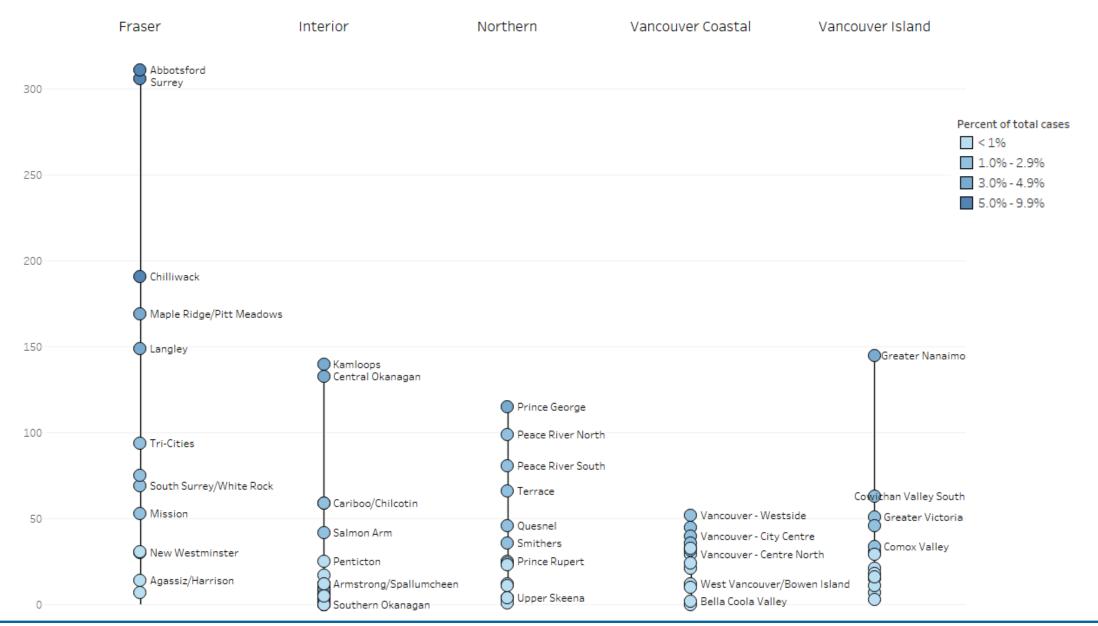
on separate map layout

British Columbia

(Local Health Areas)

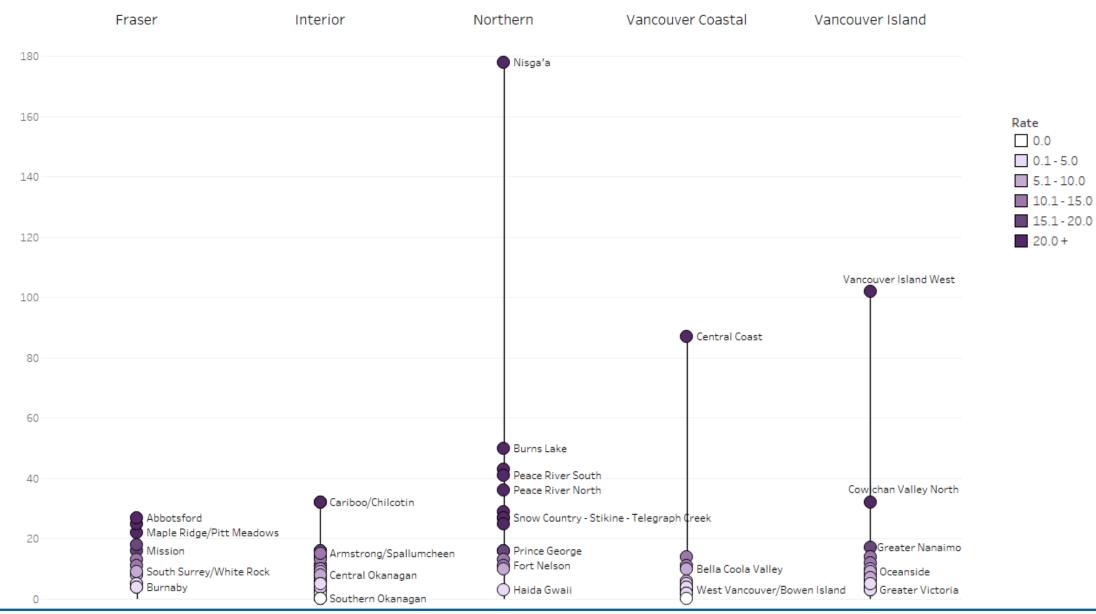


Total cases by local health area, Oct 27 - Nov 02, 2021





Average daily case rate of new cases per 100,000 population, by local health area, Oct 27 - Nov 02, 2021





Key messages – Vaccination coverage and outcomes by vaccine status

- Vaccine coverage in BC, 2 Nov, 1 dose (2 doses): ~80% (76%) of total population, ~90% (85%) of 12+ eligible population. Lower vaccine coverage in Interior and Northern.
- Most of the recent cases and hospitalizations continue to be among unvaccinated individuals
- Based on data over the last 4 weeks, compared with fully vaccinated individuals and after adjusting for age differences, unvaccinated individuals are
 - ≈ 10x more likely to become a case
 - ≈ 55x more likely to be hospitalized
 - ≈ 45x more likely to die
 - NB: relative rates fluctuate over time and do not represent vaccine effectiveness

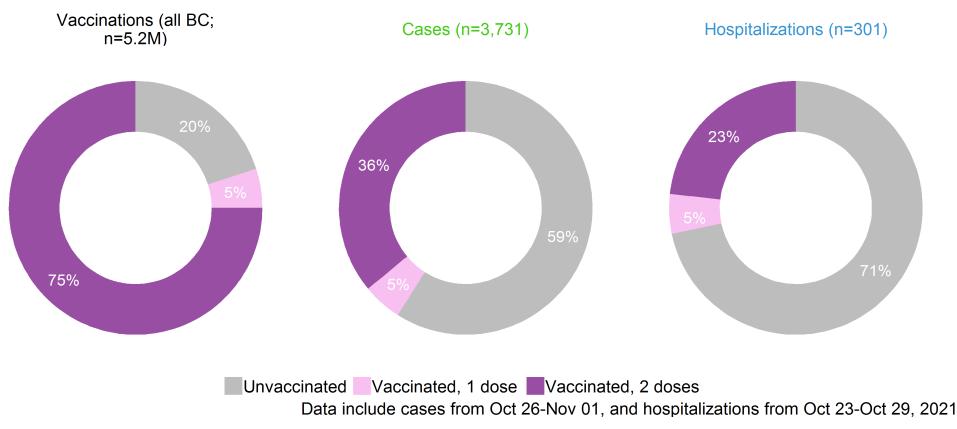
- Unvaccinated: no dose or not yet protected (<3 weeks since receipt of 1st dose; <10% of unvaccinated cases)
- Partially vaccinated = 1 dose: ≥3 weeks since receipt of 1st dose and <2 weeks after 2nd dose
- Fully vaccinated = 2 doses: 2 weeks or more after receipt of 2nd dose





Over the past week, fully vaccinated individuals represented 75% of BC's total population, but accounted for 36% of cases and 23% of hospitalizations.

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

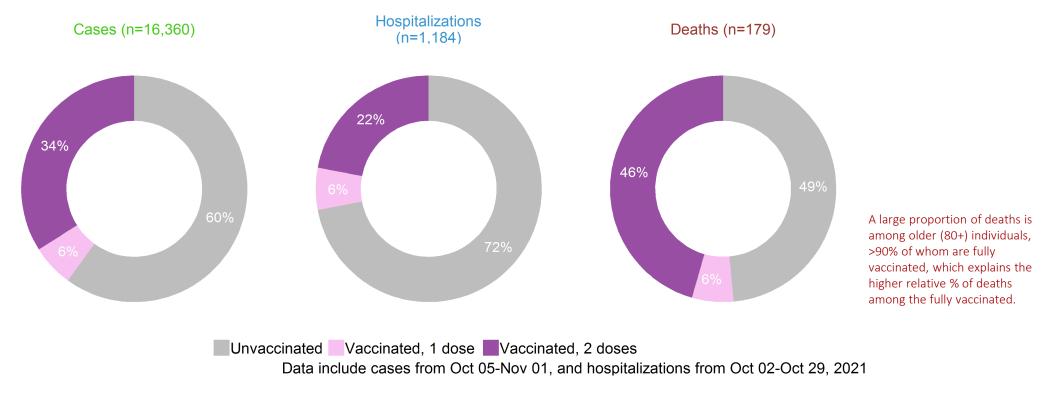


We operate in a live database environment and data get updated retrospectively. These figures may differ slightly from previously reported counts. Cases are captured based on surveillance date. Hospitalizations are by admission date. Please note that there is often a multiple-days lag in recording hospitalizations,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



Over the past month, fully vaccinated individuals accounted for 34% of cases and 22% of hospitalizations.

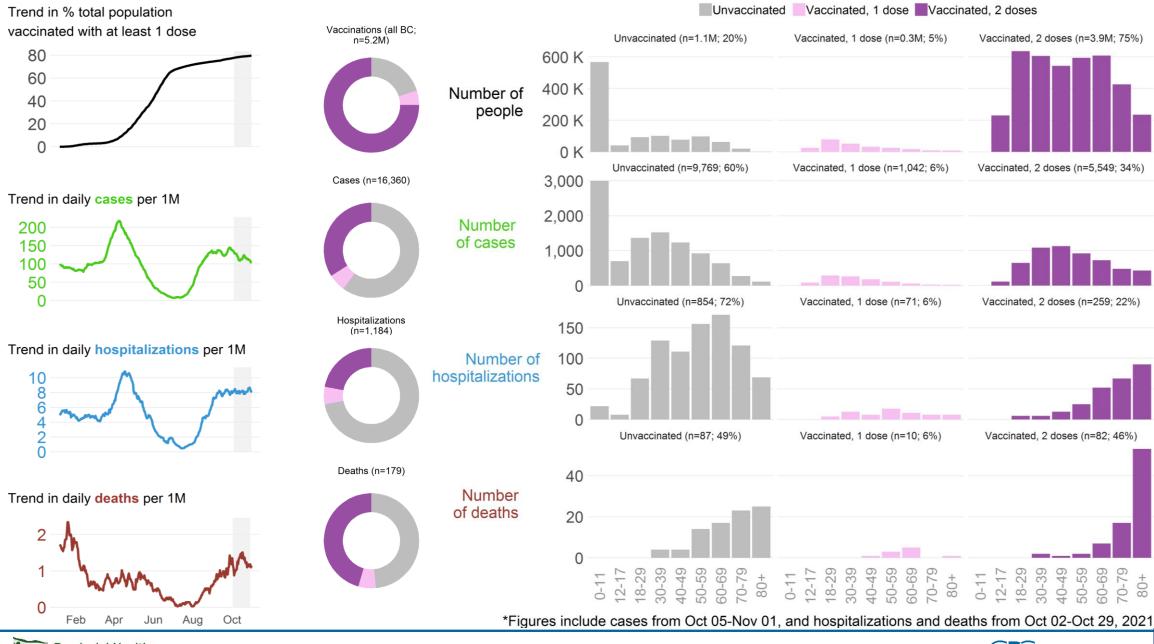
These % are expected to increase over time as more people get fully vaccinated and there are fewer unvaccinated people. If 100% of population gets fully vaccinated (which is almost the case for many long term care residents for example), then any new cases, hospitalizations, or deaths will be among vaccinated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



We operate in a live database environment and data get updated retrospectively. These figures may 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 Sept 24^{th} may not be captured in our surveillance system until Sept 29^{th} .



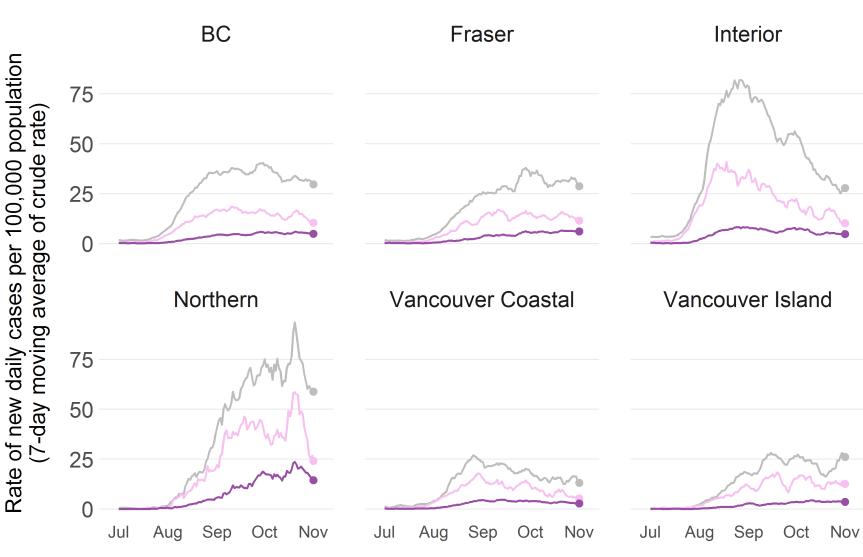
COVID-19 health outcomes by vaccination status and age, BC, October 2021







COVID-19 case rate by vaccination status and Health Authority, July 1 – Nov 2, 2021



Unvaccinated*
 Vaccinated, 1 dose
 Vaccinated, 2 doses

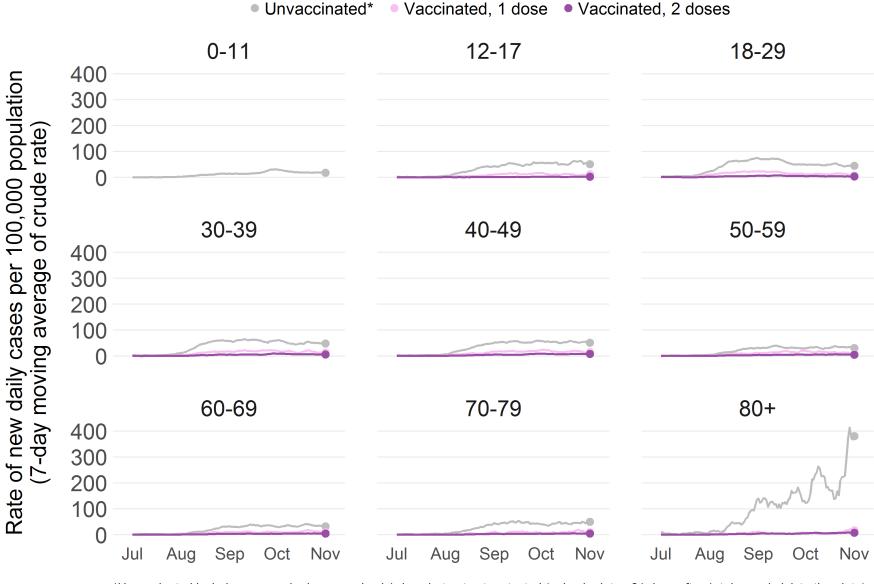
Denominators for each vaccine status group are dynamic and change daily as people flow from being unvaccinated to protected by 1 dose to protected by 2 doses. Therefore, the denominators are different across groups and over time.

*Unvaccinated includes cases who have received 1 dose but not yet protected (episode date <21 days after 1st dose administration date); These represent 6% of the total unvaccinated cases since 1 July 2021.

Data extracted from health authority case line list on 02 Nov 2021



COVID-19 case rate by vaccination status and age, July 1 – Nov 2, 2021



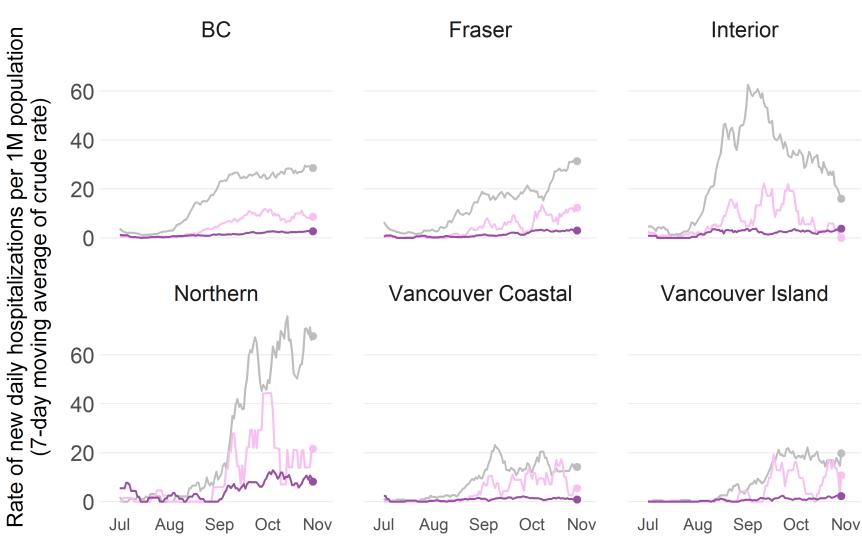
Denominators for each vaccine status group are dynamic and change daily as people flow from being unvaccinated to protected by 1 dose to protected by 2 doses. Therefore, the denominators are different across groups and over time.

*Unvaccinated includes cases who have received 1 dose but not yet protected (episode date <21 days after 1st dose administration date); These represent 6% of the total unvaccinated cases since 1 July 2021.

Data extracted from health authority case line list on 02 Nov 2021



COVID-19 hospitalization rate by vaccination status, July 1 – Oct 29, 2021



Unvaccinated*
 Vaccinated, 1 dose
 Vaccinated, 2 doses

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.

*Unvaccinated includes cases who have received 1 dose but not yet protected (episode date <21 days after 1st dose administration date); These represent 5% of hospitalized unvaccinated cases since 1 July 2021.

Data extracted from health authority case line list and up to 29 Oct 2021



COVID-19

hospitalization rate by vaccination status and age, July 1 - Oct 29, 2021

per 1M population

250 200

150

100

50

crude rate) 30 - 3940-49 of new daily hospitalizations (7-day moving average of 250 200 150 100 50 60-69 70-79 250 200 150 100 Rate 50 Sep Nov *Unvaccinated includes cases who have received 1 dose but not yet protected (episode date <21 days after 1st dose administration date); These represent 5% of hospitalized unvaccinated cases since 1 July 2021. Data extracted from health authority case line list and up to 29 Oct 2021

• Unvaccinated*

0-11

Vaccinated, 1 doseVaccinated, 2 doses

Nov

12-17



Denominators for each vaccine status

group are dynamic and change daily

unvaccinated to protected by 1 dose

the denominators are different across

to protected by 2 doses. Therefore,

as people flow from being

groups and over time.

18-29

50-59

+08

Rates for unvaccinated/1 dose 80+

interpret data for other age groups

year olds not shown as they are

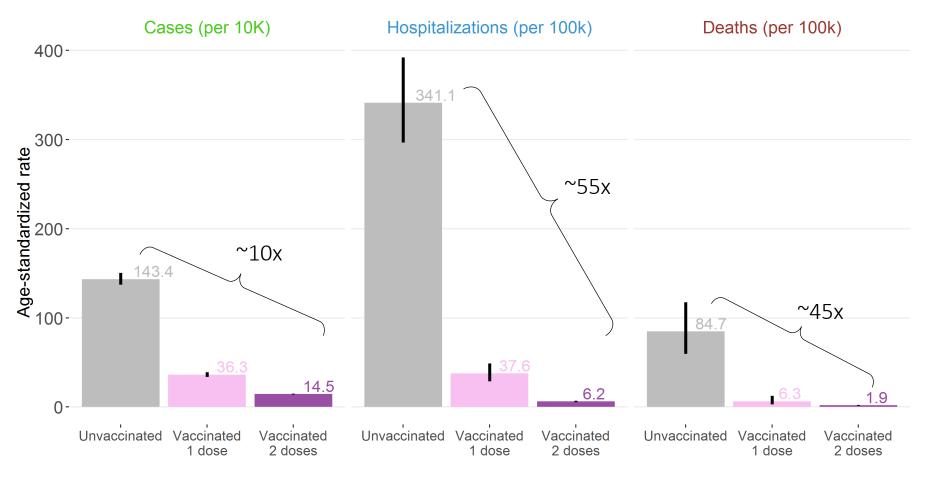
unstable, making it difficult to

27

Nov

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

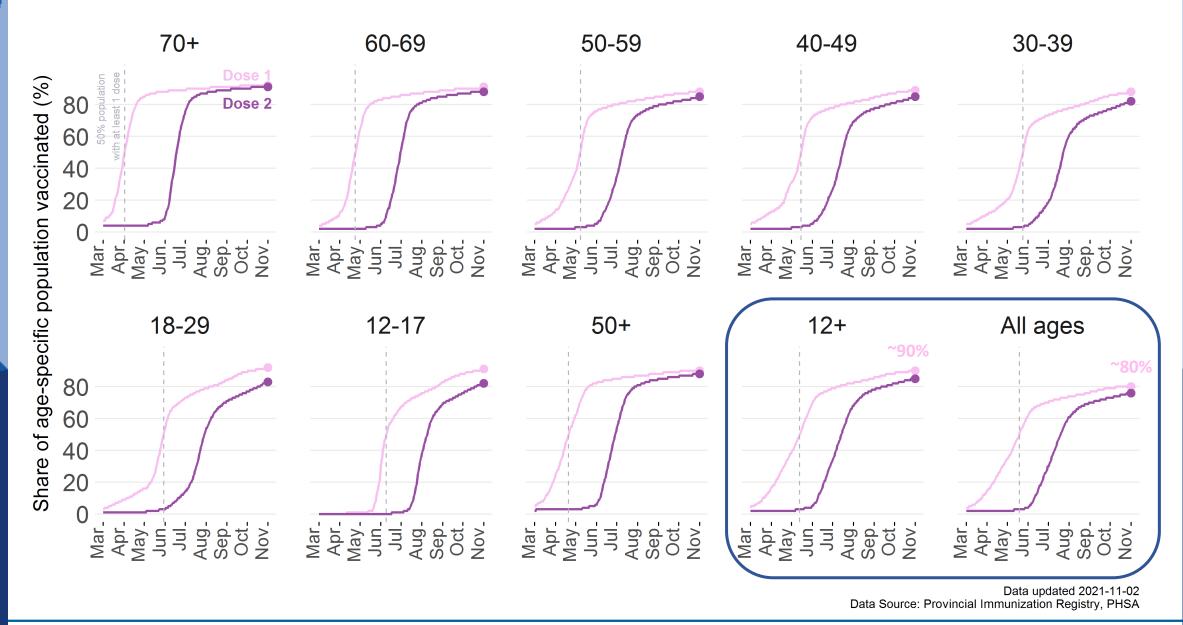
Relative rate fluctuates over time. These figures do not represent vaccine effectiveness.



Data include cases from Oct 05-Nov 01, and hospitalizations and deaths from Oct 02-Oct 29, 2021



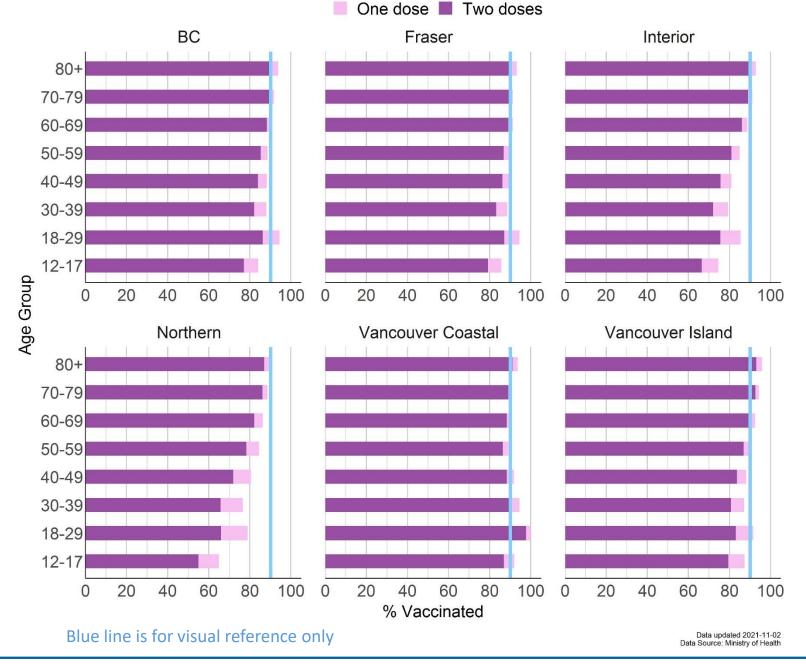
Vaccination progress in BC over time by age group and dose number up to Nov. 2, 2021



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

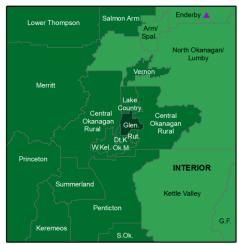
Vaccination progress in BC and by Health Authority as of Nov. 2, by age group and dose number (%)

Denominator for this graph is Client Roster maintained by the BC Ministry of Health. Client Roster population data are sourced from a list of all residents registered with Medical Services Plan as of March 12, 2021. Since this date, people may have moved, permanently or temporarily, and have been vaccinated or reported their vaccination status. As a result, there are areas in BC where there will be more people vaccinated than there were living in that area in March 2021. The Client Roster likely underrepresents new arrivals into a region such as young adults relocating to attend post-secondary institutes and workers at major construction project areas. An alternative denominator would be based on projections derived from Census 2016, which is also not representative of the current BC population. There is no perfect denominator.



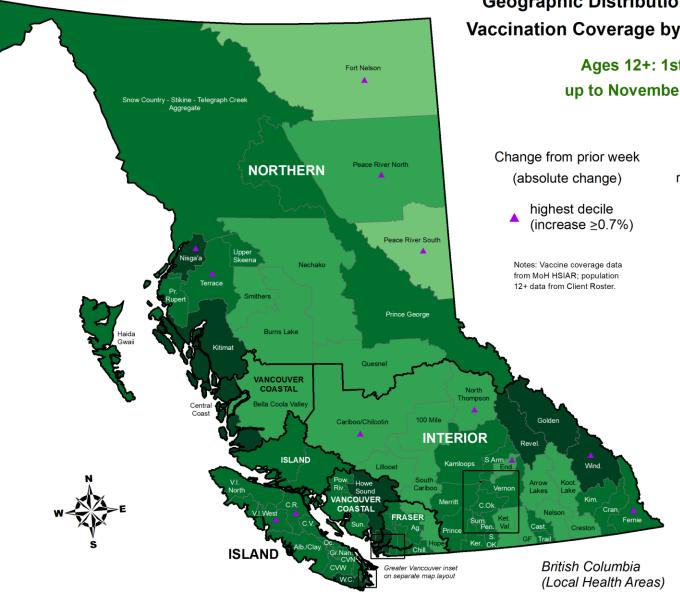


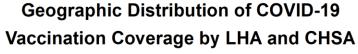
Okanagan Inset (Community Health Service Areas)



Greater Victoria Inset (Community Health Service Areas)







Ages 12+: 1st Dose up to November 1, 2021

> Vaccination coverage rate (%) of persons 12+

> > ≤ 50 %

51 - 60 %

61 - 70 %

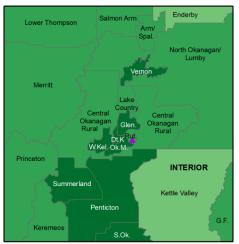
71 - 80 %

81 - 90 %

> 90 %

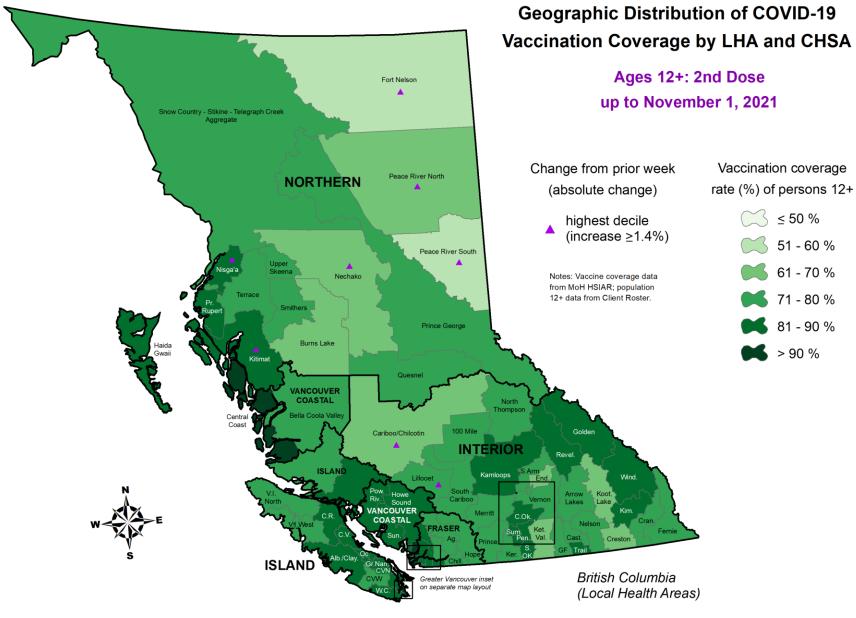
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Okanagan Inset (Community Health Service Areas)



Greater Victoria Inset (Community Health Service Areas)





≤ 50 %

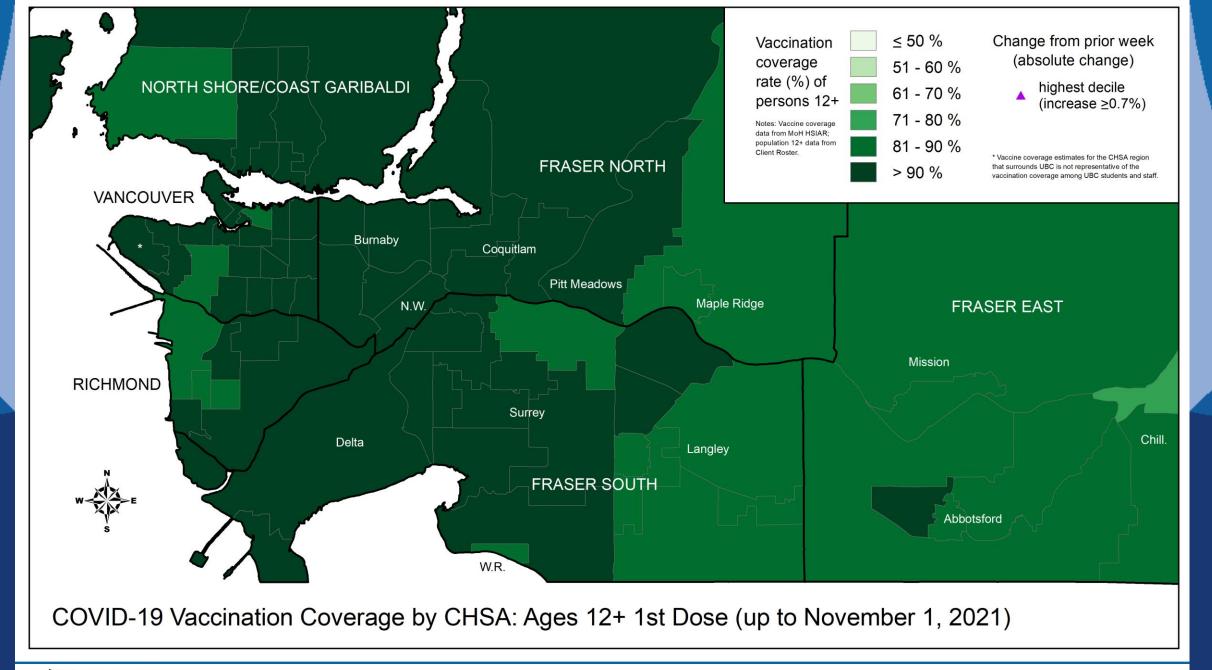
51 - 60 %

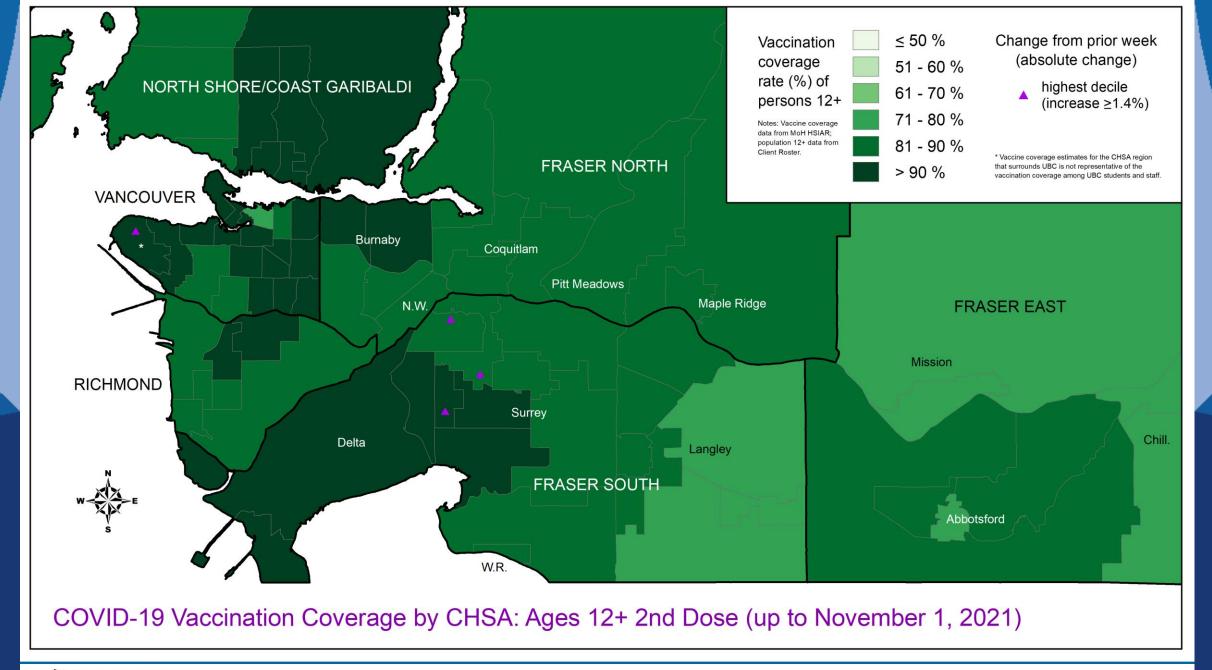
61 - 70 %

71 - 80 %

81 - 90 %

> 90 %





Lab - Key Messages

- Test positivity among publicly funded tests was stable this week (~6.7%)
 - Test positivity varies by HA, ranging from 3.6% in VCH to 21% in NH
 - Test positivity is consistently ~2-3x higher among unvaccinated individuals than in 2 dose recipients
- Publicly funded testing decreased 7% this week (~60K total public tests)
 - Testing rates remain higher than historical trends among <12 year olds
 - In each region, testing rates are similar by vaccination status
- The provincial weekly median turnaround time (time from specimen collection to lab result) is low at 15 hours, indicating good testing capacity.
- Delta is the most prevalent COVID-19 variant in BC representing ~100% of all sequenced specimens in most recent week.
- Wastewater samples can act as a population-level sentinel surveillance tool
 - Viral signals in Metro Vancouver wastewater plants have plateaued or are declining slowing, consistent with case-counts in these regions





Weekly Summary of ALL lab tests performed



4,277,665

total specimens tested

new this epi week



■3% relative to last week



216,739

89,695

total positive specimens

new positive this epi week 4,061



4.5% positivity
0.2% absolute change from last week



mean turnaround time (TAT)

15 [**10-23**] Median [Q1-Q3]TAT



♣ 3% TAT relative to last week

Weekly Summary of Lab tests paid Publicly



3,219,153

total specimens tested

59,514

new this epi week



■7% relative to last week



214,036

4,012

total positive specimens

new positive this epi week



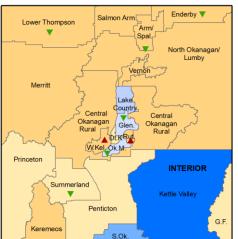
6.7% positivity o% absolute change from last week

Data source: PLOVER extract at 10:30am on November 3, 2021.

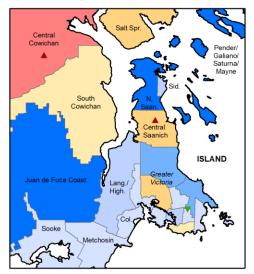
Epi week 43 (Oct 24 – 30)



Okanagan Inset (Community Health Service Areas)



Greater Victoria Inset (Community Health Service Areas)





Recent 7-Days Testing
October 27 to November 2, 2021

Test positivity rate

0.0 %

 \sim

3 0.1 - 1.0 %

 \sim

1.1 - 2.0 %



2.1 - 3.0 %



3.1 - 5.0 %



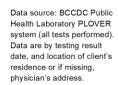
5.1 - 10.0 %

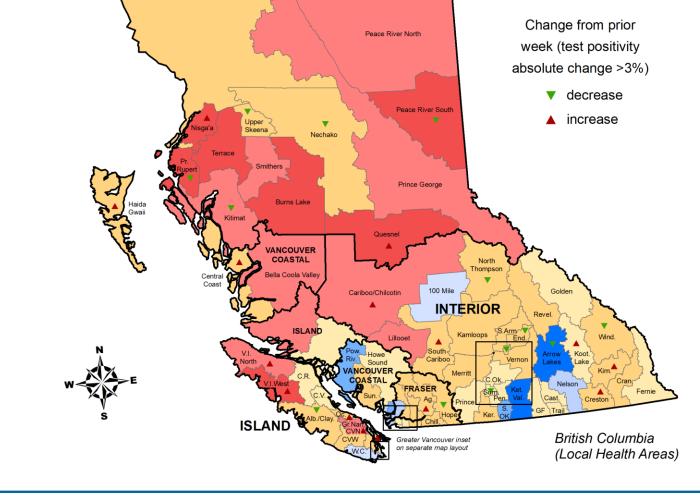


10.1 - 20.0 %

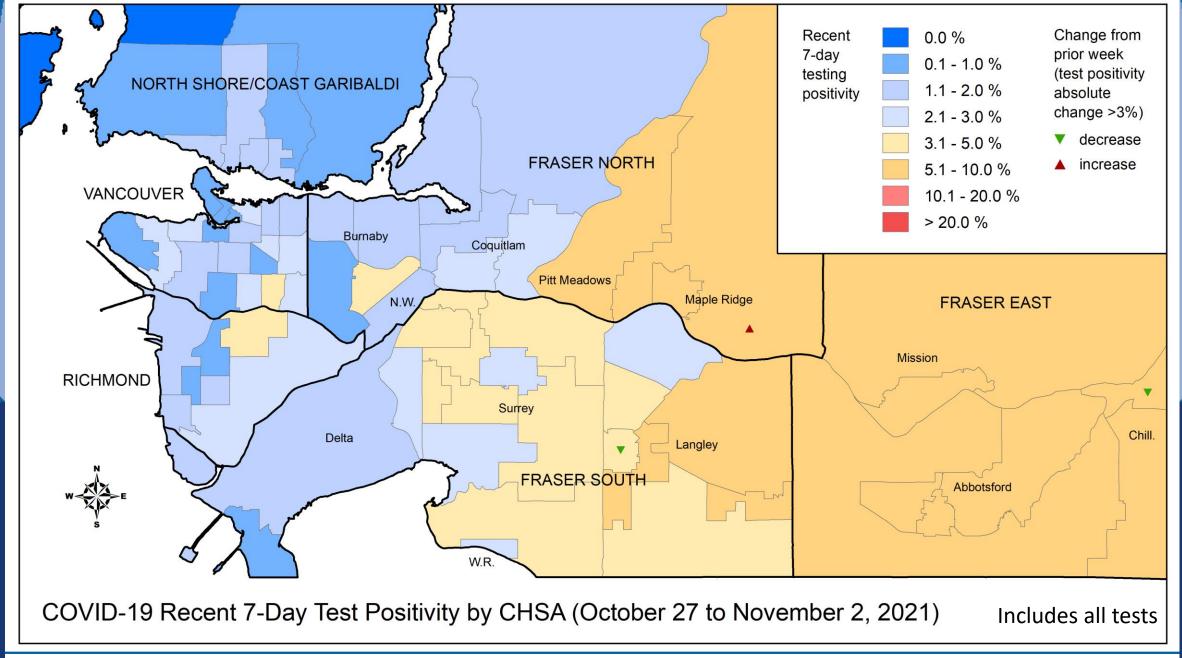


> 20.0 %

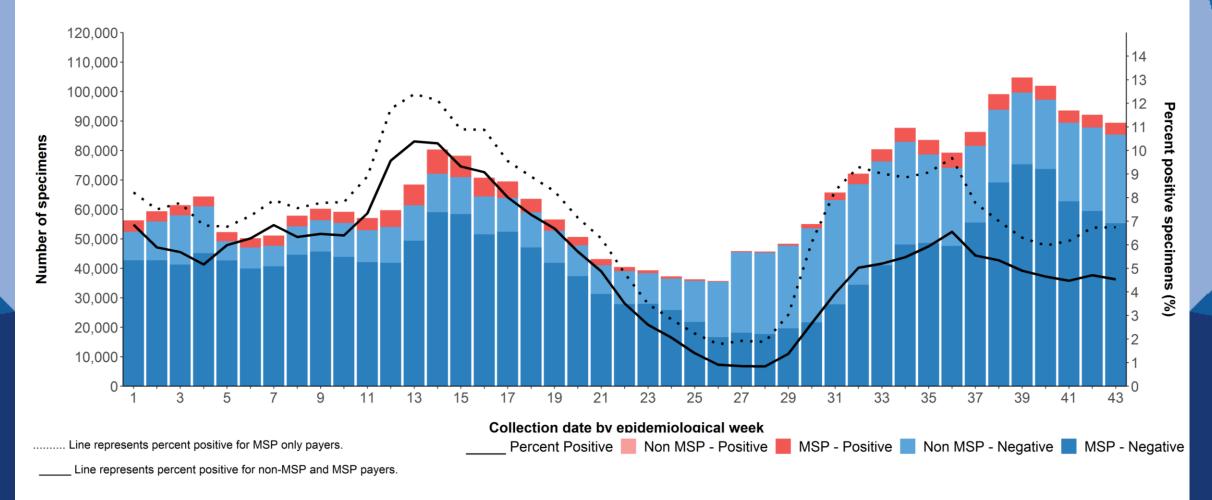




Snow Country - Stikine - Telegraph Creek Aggregate



Among publicly funded specimens, percent positivity is stable (~6.7%), and testing rates have decreased 7% since the last week.

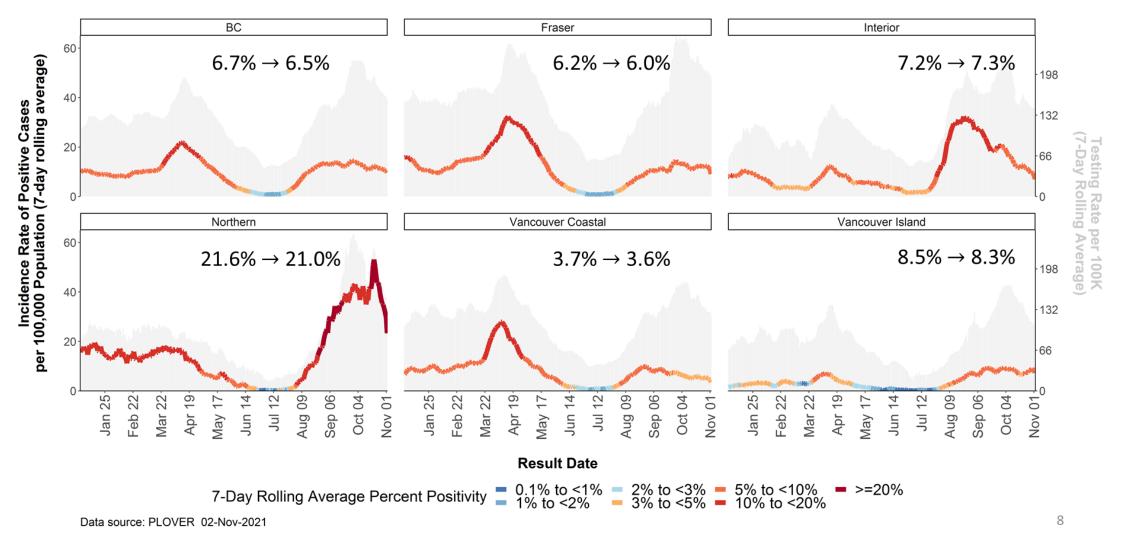


Note: Invalid (n = 1707) and indeterminate (n = 6904) results have been excluded

Data source: PLOVER 04-Nov-2021

Percent positivity is stable provincially, but varies by region: lowest in VCH (3.6%), high in NH (21%). Testing rates are elevated and declining across the province (highest in Fraser Health and Northern Health)

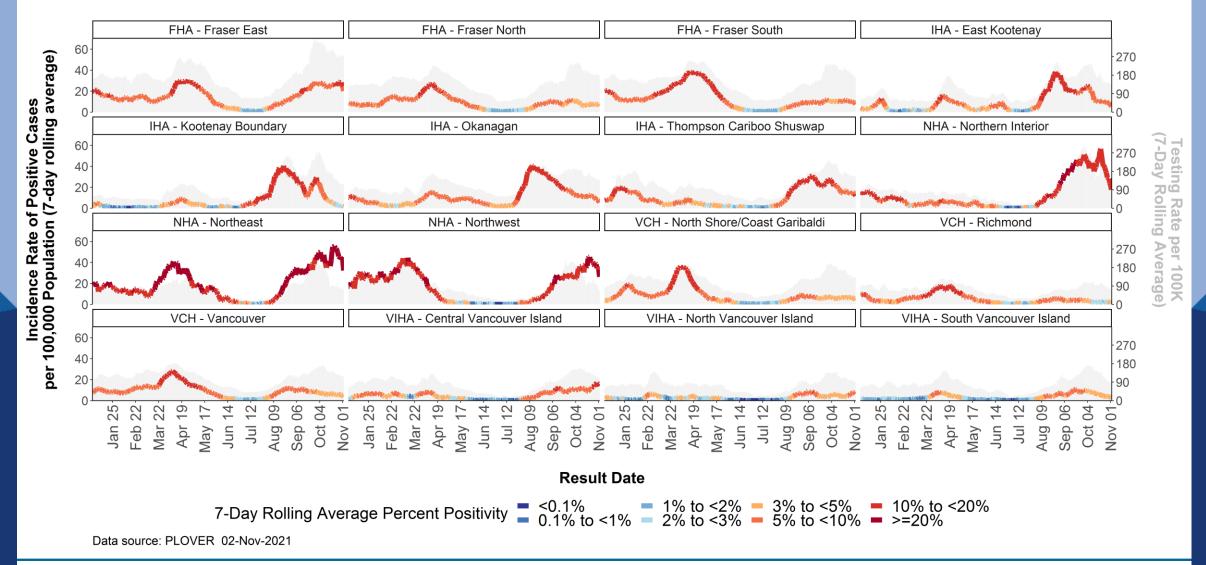
Case incidence rate, test percent positivity, and testing rate (Public Payers Only). Jan 1 2020 - Nov 2, 2021.





Test positivity remains high throughout NH

Case incidence rate, test percent positivity, and testing rate by HSDA (Public Payers Only). Jan 1 2021 - Nov 2, 2021.

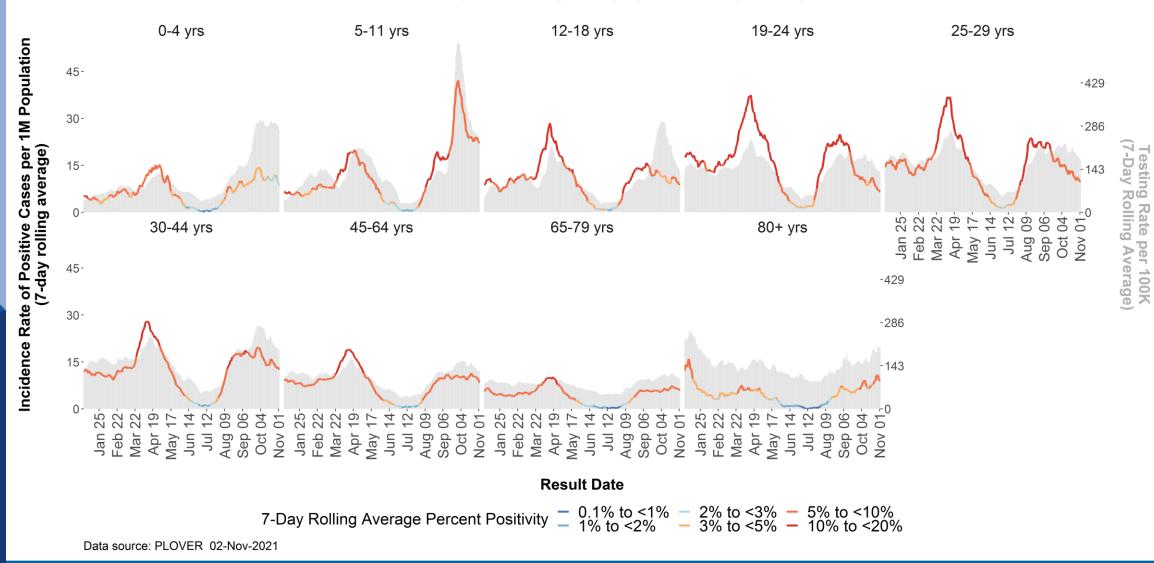






Testing rates remain higher than historical trends among <12 year olds

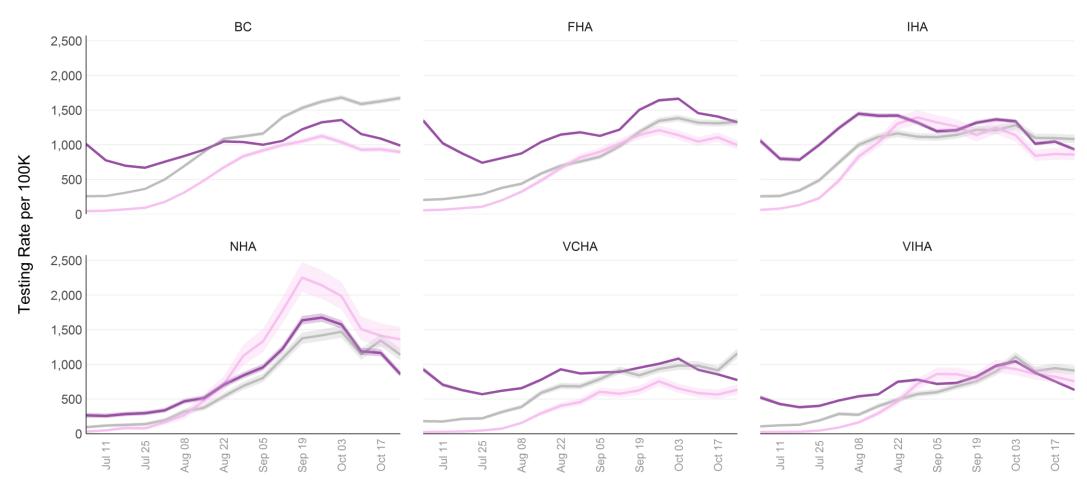
Case incidence rate, test percent positivity, and testing rate by age (Public Payers Only). Jan 1 2020 - Nov 2, 2021.





In every region, testing rates are broadly similar by vaccination status

MSP Only Testing Rate by Vaccination Status and Epiweek of Collection Date (12+ year olds) Jul 4 - Oct 30, 2021



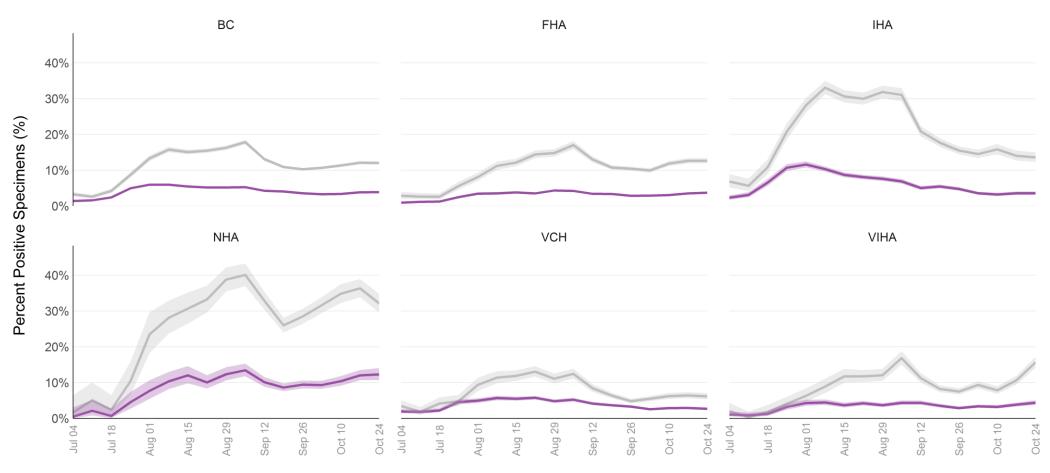
Epidemiological Week (based on collection date)

Unvaccinated or underprotected Vaccinated 1 dose >= 21 days Vaccinated 2 doses >= 14 days



In every region over the past 3 months, test positivity for publicly funded tests has been consistently ~2-3x higher among the unvaccinated than in fully vaccinated individuals

MSP Only Percent Positive Specimens by Vaccination Status and Epiweek of Collection Date
Jul 4 - Oct 30, 2021

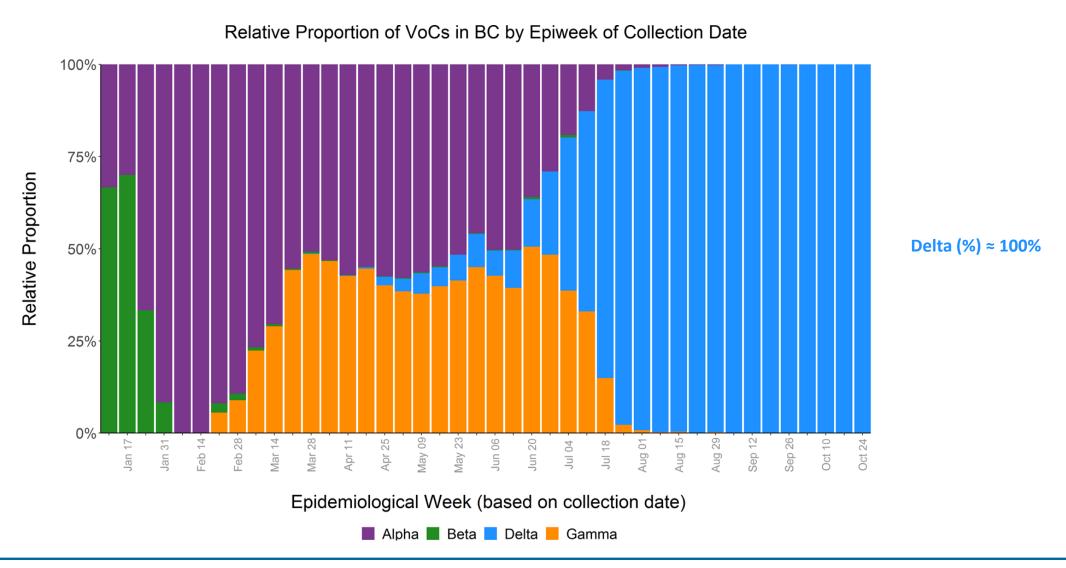


Epidemiological Week (based on collection date)

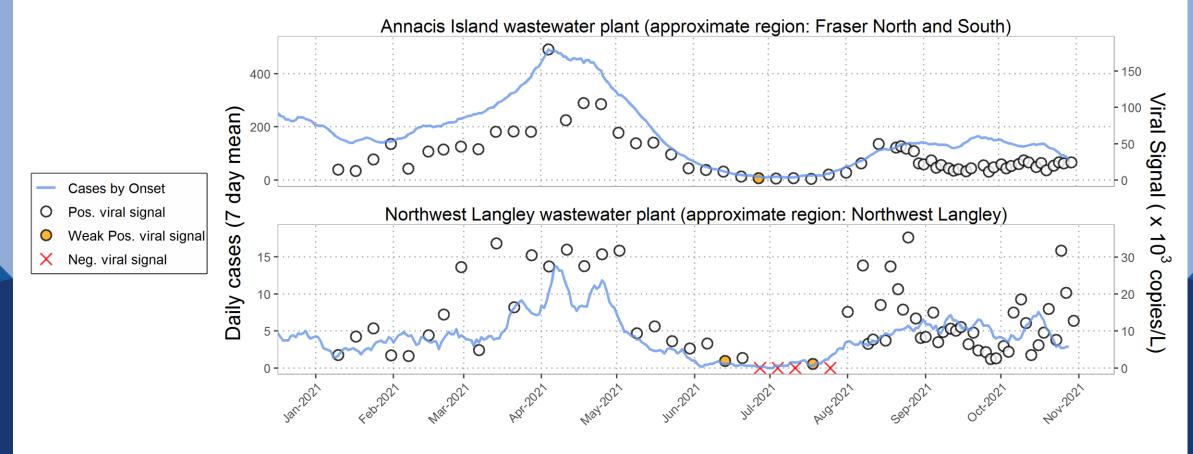
Unvaccinated or underprotected Vaccinated 2 doses >= 14 days



Among sequenced VOC samples provincially based on information until Oct 30, the dominant VOC continues to be Delta ~100%



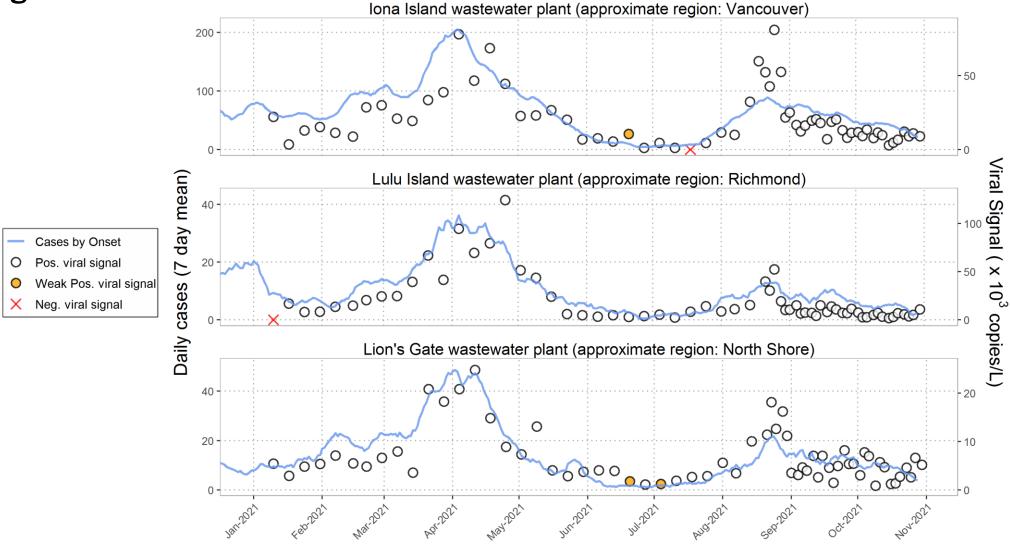
In FHA, the viral signal from wastewater reflects the trends in case counts in this region



Time-series plots show weekly or bi-weekly viral signals from each wastewater plant (right y-axis), overlaid with rolling 7-day mean of daily new cases within wastewater catchment area (left y-axis).

Plot title shows wastewater plant name, followed by approximate catchment area.

In VCH, the viral signal from wastewater reflects the declining trends in case counts in this region

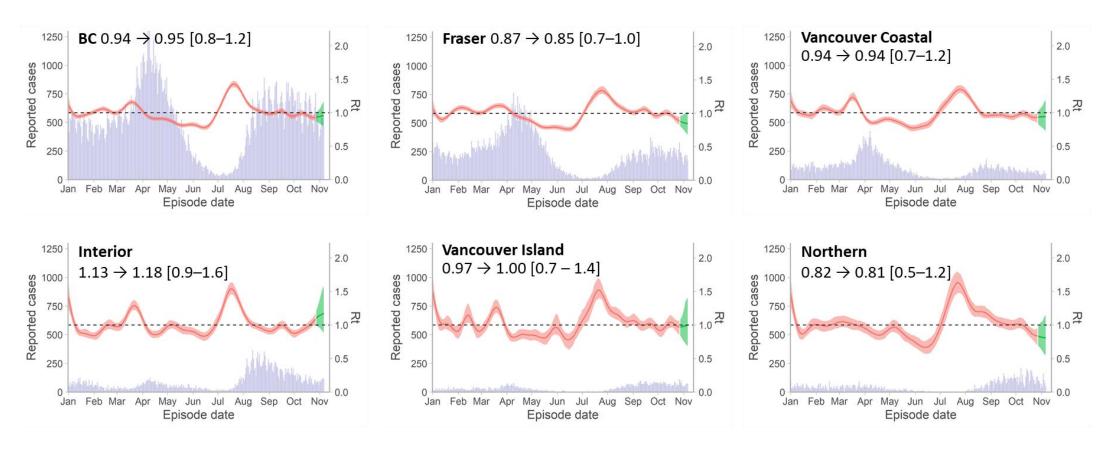


Time-series plots show viral signals from each wastewater plant (right y-axis), overlaid with rolling 7-day mean of daily new cases within wastewater catchment area (left y-axis). Plot title shows wastewater plant name, followed by approximate catchment area.



Dynamic modeling: recent trends

Modelling indicates that R_t remains near 1 overall, but trends vary by region. Estimates are shown for last week \rightarrow this week, with 90% range of possible values given next to most recent estimate.



Solid line: median R_t , modeled using all reported cases up to Nov 6, 2021; Red band: 5%-95% credible interval; Green band: estimate based on partial data – each week, current estimates are updated with new data to provide a clearer understanding of the trend. Purple bars: all reported cases. Recent trend shown comparing median Rt estimate from (last week \rightarrow this week; 5% - 95% credible interval). Only January 2021 onward shown here. Data source: BCCDC HA linelist.





Pediatric Report - Key Messages

- Case numbers in <18 years remain relatively stable, with signs of a downward trend
 - Incidence varies regionally and by pediatric age group
- Case rates are highest in regions with lower 12+ vaccine coverage
- Severe outcomes continue to remain rare in children.
- Among youth 12-17 years old, vaccination coverage is ~84% provincially, but varies significantly by local area

Also see the Data for K-12 Schools October report posted on the BCCDC website:

http://www.bccdc.ca/Health-Info-Site/Documents/COVID sitrep/K12 Situation Report/SitRep K-12 October 2021.pdf





Oct 28 to Nov 03: Pediatric COVID-19 Profile









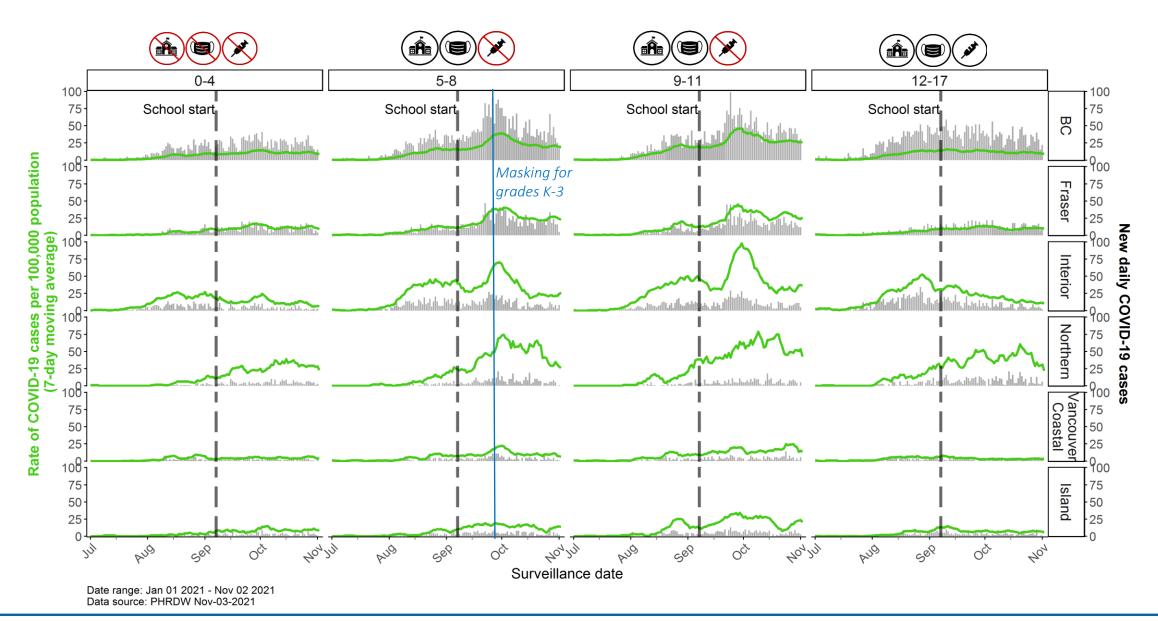
| Age group | Age group: 0-4 | | Age group: 0-4 | | Age group: 0-4 | | Age group: 0-4 | |
|-----------------|----------------|------------------|-------------------|------------------|-----------------------|------------------|----------------|--|
| 5,564 | total cases | 119 | ever hospitalized | 12 | ever in critical care | 2 | total deaths | |
| 139 | new this week | 4 | new this week | 0 | new this week | 0 | new this week | |
| Age group: 5-11 | | Age group: 5-11 | | Age group: 5-11 | | Age group: 5-11 | | |
| 14,426 | total cases | 57 | ever hospitalized | 4 | ever in critical care | 0 | total deaths | |
| 536 | new this week | 1 | new this week | 1 | new this week | 0 | new this week | |
| Age group | o: 12-17 | Age group: 12-17 | | Age group: 12-17 | | Age group: 12-17 | | |
| 12,444 | total cases | 51 | ever hospitalized | 8 | ever in critical care | 0 | total deaths | |
| 186 | new this week | 3 | new this week | 0 | new this week | 0 | new this week | |

^{*} New hospitalizations and critical care census numbers are as of Nov 02 2021

^{*} New cases and new deaths are net new between Line lists of Oct 27 and Nov 03

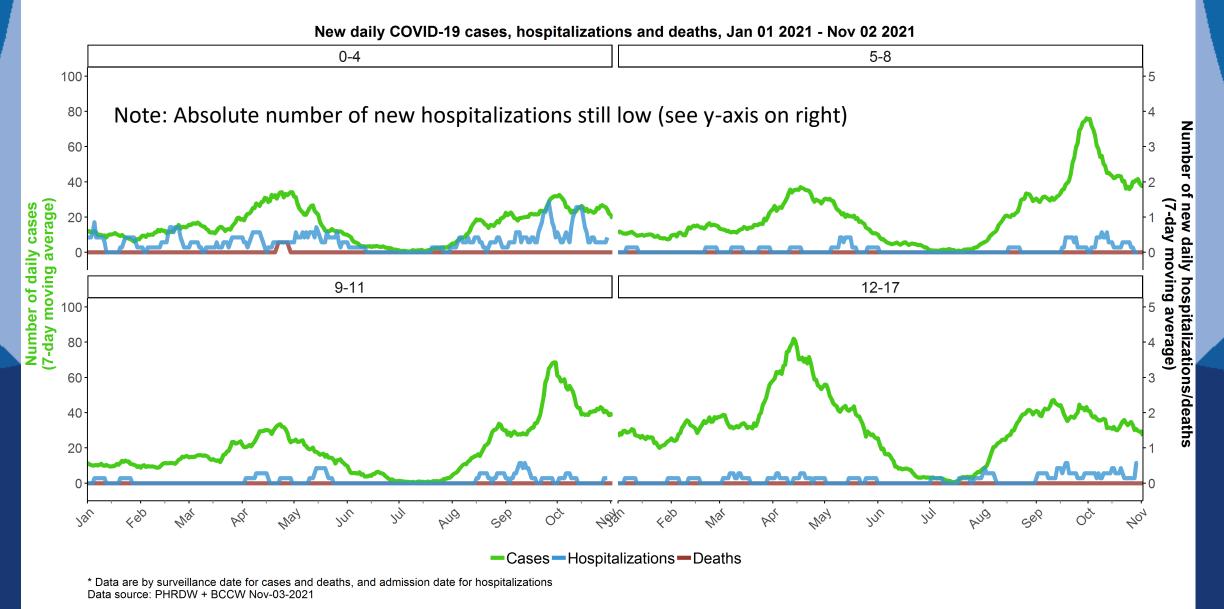


Incidence varies regionally and by pediatric age group





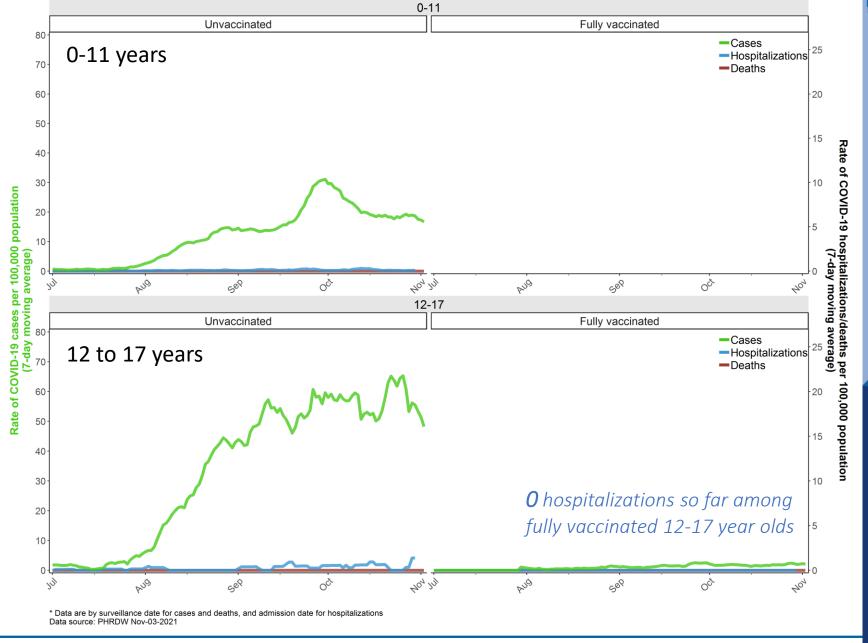
Number of new daily hospitalizations remains very low and stable; deaths are extremely rare





Case rates are relatively stable among children and youth.

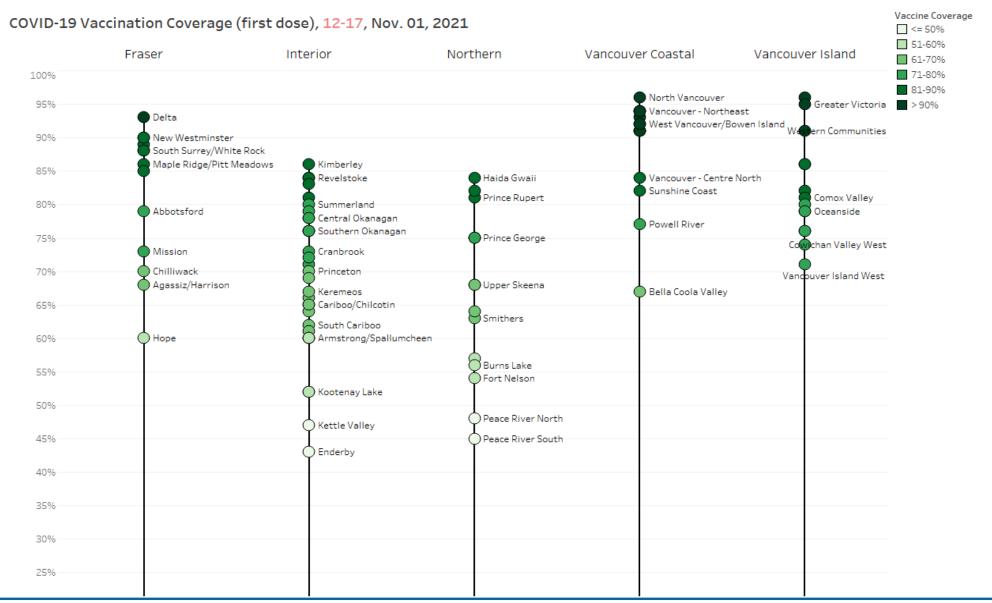
Hospitalization rates remain low.





53

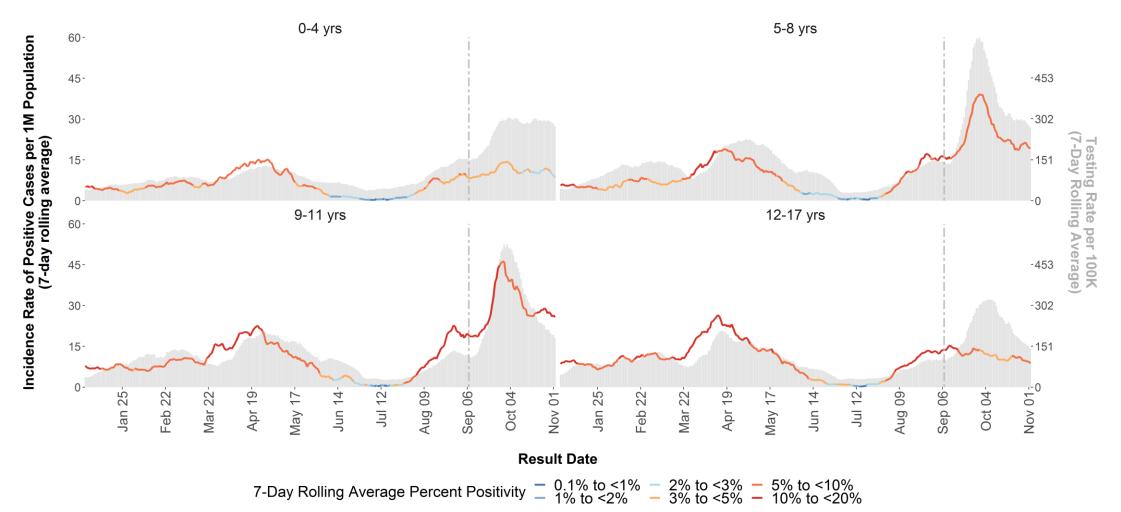
COVID-19 vaccination coverage with 1st dose among 12-17 year olds, by Local Health Area, up to Nov. 1, 2021: there is more variation in this age group compared with older age groups





Testing rates among 5-17 year olds have recently decreased but remain elevated and stable among 0-4 year olds. Test positivity is highest among 9-11 year olds (>10%) and lowest in the 0-4 year olds (<3%).

Case incidence rate, test percent positivity, and testing rate by age (Public Payers Only). Jan 1 2020 - Nov 2, 2021.



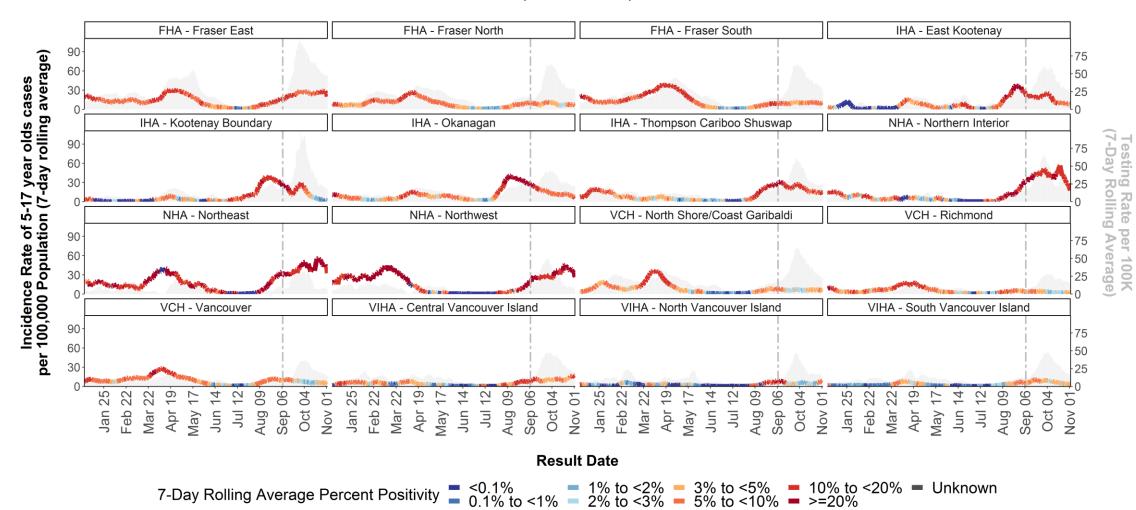
Data source: PLOVER 02-Nov-2021



Testing rates among 5-17 year olds remain high in all HSDAs. Percent positivity is high throughout NH.

Case incidence rate, test percent positivity, and testing rate by HSDA (Public Payers Only).

Jan 1, 2021 - Nov 2, 2021.



Data source: PLOVER 02-Nov-2021

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 <u>here</u>
- For more information on variants of concern and whole genome sequencing, the latest report is posted <u>here</u>
- To put BC provincial, Health Authority, and HSDA trajectories into national and international context, see <u>BCCDC COVID-19 Epidemiology app</u>
- 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 <u>here</u>



