BCCDC COVID Data Summary

2 December 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.
Note: Information provided in this slide deck is or will be available in the data products listed below, at the same or greater frequency. As of December 15, 2021 this product will be discontinued.

**BCCDC COVID-19 Regional Surveillance Dashboard**: updated 2x week (Tues & Fri)

**BCCDC COVID-19 Epidemiology app**: updated 3x week (Mon, Wed, Fri)

**Situation Report**: updated weekly

**Laboratory report on variants and lineages**: updated weekly

**School report**: updated monthly

**BC COVID-19 SPEAK Survey Dashboards**
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Overall Summary for surveillance data to Dec 2

- **Case rates** continue to decline provincially; decreasing in FH, NH, IH and VCH and relatively stable in VIHA.

- **Test positivity** among public tests continues to decline slowly (~4.9% provincially), and remains high in NH (16%).

- **New hospitalizations** and **hospital census** are beginning to decline provincially, **critical care** census is stable, but there is regional variation across BC; **new deaths** are low and stable.

- 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, 30 Nov, 1 dose (2 doses): ~81% (78%) of total population, ~91% (88%) 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. There are 2 main sub-lineages circulating in BC: AY.25 and AY.27.

- 1 case of Omicron reported
Nov 25 to Nov 30: BC COVID-19 Profile

- **Total cases**: 218,801
  - New this week: 2,467

- **Ever hospitalized**: 12,351
  - New this week: 180

- **Total deaths**: 2,340
  - New this week: 27

- **Removed from isolation**: 213,394
  - New this week: 2,566

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New daily COVID-19 cases, hospitalizations and deaths, Jan 01 2021 - Nov 30 2021

*Data are by surveillance date for cases and deaths, and admission date for hospitalizations.
Data source: PHRDW Dec-01-2021*
Case rates continue to decline slowly provincially; new hospitalizations are beginning to decline provincially; new deaths are low and stable. Note the regional variation.

For latest version of a graph similar to this one (difference: hospital census, not new hospitalizations), see the Epi App.
The majority of new cases and hospitalizations continue to be among unvaccinated individuals.
Incidence is stable among 5 to 11 years (currently unvaccinated), and decreasing in all other age groups. Note: this graph looks different once separated out by vaccine status (next slide)
For all age groups 12+, those who are vaccinated have very low case rates. Among those unvaccinated, case rates are lowest among children < 9 years.
Trends in number and rate of new hospitalizations by age group, BC, 1 Jan – 27 Nov 2021

Hospitalization counts and rates among children (0-19 years) continue to remain very low.
Hospital census is declining provincially; critical care census is stable. Note the variation by health authority.
Number of new hospital admissions is elevated but has declined in the last 2 weeks. The majority of deaths are among individuals ≥60 years.
COVID-19 Recent 7-Day Case Incidence Rates by CHSA (November 24 to 30, 2021)

For latest version of this map, (note: change symbols not included), see COVID-19 Regional Surveillance Dashboard
Total cases by local health area, Nov 24 - Nov 30, 2021

For latest version of this graph, see COVID-19 Regional Surveillance Dashboard
Average daily case rate of new cases per 100,000 population, by local health area, Nov 24 - Nov 30, 2021

For latest version of this graph, see COVID-19 Regional Surveillance Dashboard.
Key messages – vaccination coverage and outcomes by vaccine status

• **Vaccine coverage** in BC, 30 Nov, 1 dose (2 doses): ~81% (78%) of total population, ~91% (88%) 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
  • ≈ 8x more likely to become a case
  • ≈ 32x more likely to be hospitalized
  • ≈ 52x more likely to be admitted to critical care
  • 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)

• **Vaccinated, 1 dose**: ≥3 weeks since receipt of 1st dose and <2 weeks after 2nd dose

• **Vaccinated, 2 doses**: 2 weeks or more after receipt of 2nd dose and <2 weeks after 3rd dose (if applicable)

• **Vaccinated, 3 doses**: 2 weeks or more after receipt of 3rd dose
Over the past month, unvaccinated individuals accounted for ~19% of the population but ~56% of cases, ~69% of hospitalizations, and ~80% of critical care admissions.

These % are expected to increase over time as more people get fully vaccinated and there are fewer unvaccinated people. 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. 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 24th may not be captured in our surveillance system until Sept 29th.

A large proportion of deaths is among older (80+) individuals, >90% of whom are fully vaccinated, which explains the higher relative % of deaths among the fully vaccinated.
COVID-19 health outcomes by vaccination status and age, BC, Nov 2021

- Trend in % total population vaccinated with at least 1 dose
- Trend in daily cases per 1M
- Trend in daily hospitalizations per 1M
- Trend in daily critical care per 1M
- Trend in daily deaths per 1M

Data include cases from Nov 03-Nov 30, hospitalizations, critical care admissions and deaths from Oct 31-Nov 27, and vaccination statistics on Nov 18, 2021.
COVID-19 case rate by vaccination status and Health Authority, July 1 – Dec 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 Dec 2021

For latest version of this figure, see COVID-19 Regional Surveillance Dashboard
COVID-19 case rate by vaccination status and age, July 1 – Dec 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.

For latest version of this figure, see COVID-19 Regional Surveillance Dashboard
COVID-19 hospitalization rate by vaccination status, July 1 – Nov 28, 2021

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.

For latest version of this figure, see COVID-19 Regional Surveillance Dashboard.
COVID-19 hospitalization rate by vaccination status and age, July 1 – Nov 28, 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.

For latest version of this figure, see COVID-19 Regional Surveillance Dashboard.
After adjusting for age, **unvaccinated** individuals continue to be at a significantly higher risk of diagnosed infection, hospitalization, critical care admission and death from COVID-19 compared with **2-dose vaccinated**

Relative rates fluctuate over time. These figures do not represent vaccine effectiveness.

Data include cases from Nov 03-Nov 30, and hospitalizations, critical care admissions and deaths from Oct 31-Nov 27, 2021
Vaccination progress in BC over time by age group and dose number up to Nov. 30, 2021

Data updated 2021-11-30
Data Source: Provincial Immunization Registry, PHSA
Vaccination progress in BC and by Health Authority as of Nov. 30, 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.

Blue line is for visual reference only
For latest version of this map, see COVID-19 Regional Surveillance Dashboard
Geographic Distribution of COVID-19 Vaccination Coverage by LHA and CHSA

Ages 12+: 2nd Dose
up to November 29, 2021

Change from prior week (absolute change)

Vaccination coverage rate (%) of persons 12+

- highest decile (increase ≥0.8%)

Notes: Vaccine coverage data from Merit HISAR; population 12+ data from Client Roster.

For latest version of this map, see COVID-19 Regional Surveillance Dashboard
COVID-19 Vaccination Coverage by CHSA: Ages 12+ 1st Dose (up to November 29, 2021)

For latest version of this map, see [COVID-19 Regional Surveillance Dashboard](#).
COVID-19 Vaccination Coverage by CHSA: Ages 12+ 2nd Dose (up to November 29, 2021)

For latest version of this map, see COVID-19 Regional Surveillance Dashboard
Lab - Key Messages

• Test positivity among publicly funded tests continues to slowly decline (~4.9%)
  • Test positivity varies by HA, ranging from 3% in VCH to 16% in NH
  • Test positivity and incidence are increasing in North Vancouver Island

• Publicly funded testing continue to slowly decline (~50K total public tests this week)

• The provincial weekly median turnaround time (time from specimen collection to lab result) is low at 13 hours, indicating good testing capacity. 3 in 4 tests took ≤ 18 hours to result.

• Delta sublineages AY.25 and AY.27 remain the most prevalent COVID-19 variants in BC across all age groups and all health authorities. In the last epi week, Delta consisted of ~100% of all sequenced specimens.

• 1 case of Omicron variant was confirmed this week

• Viral signals from wastewater collection sites in Metro Vancouver reflect case trends in these regions
### Weekly Summary of ALL lab tests performed

<table>
<thead>
<tr>
<th>Test Status</th>
<th>Value</th>
<th>Change from Last Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total specimens tested</td>
<td>4,621,976</td>
<td>↓3%</td>
</tr>
<tr>
<td>New this epi week</td>
<td>80,546</td>
<td></td>
</tr>
<tr>
<td>Total positive specimens</td>
<td>229,068</td>
<td>3.1% positivity</td>
</tr>
<tr>
<td>New positive this epi week</td>
<td>2,486</td>
<td>↓0.3% absolute change from last week</td>
</tr>
</tbody>
</table>

#### Mean Turnaround Time (TAT)
- **15 hr**

### Weekly Summary of Lab tests paid Publicly

<table>
<thead>
<tr>
<th>Test Status</th>
<th>Value</th>
<th>Change from Last Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total specimens tested</td>
<td>3,438,255</td>
<td>↓4%</td>
</tr>
<tr>
<td>New this epi week</td>
<td>49,784</td>
<td></td>
</tr>
<tr>
<td>Total positive specimens</td>
<td>226,118</td>
<td>4.9% positivity</td>
</tr>
<tr>
<td>New positive this epi week</td>
<td>2,426</td>
<td>↓0.4% absolute change from last week</td>
</tr>
</tbody>
</table>

Data source: PLOVER extract at 10:30am on November 30, 2021.
Epi week 47 (Nov 21 – Nov 27)
For latest version of this map, see the new (note: change symbols not included) COVID-19 Surveillance Dashboard.
COVID-19 Recent 7-Day Test Positivity by CHSA (November 24 to 30, 2021)

For latest version of this map, see the new (note: change symbols not included) COVID-19 Surveillance Dashboard
Among publicly funded specimens, percent positivity (4.9% this week) and number of specimens tested continue to slowly decline.

Note: Invalid (n = 1890) and indeterminate (n = 7596) results have been excluded

Data source: PLOVER 01-Dec-2021
Percent positivity is declining provincially, but increasing in VIHA. Testing rates are declining but remain elevated across province.


Data source: PLOVER 30-Nov-2021
Test positivity is >10% in NH but is decreasing; in North Vancouver Island, test positivity is >10% and incidence is increasing.

For latest version of a graph similar to this one (difference: all tests, not public tests), see the Epi App.
Percent positivity highest among 5 to 18 years and 30-64 years (between 5 and 10%).


<table>
<thead>
<tr>
<th>Age Group</th>
<th>Incidence Rate of Positive Cases per 1M Population (7-day rolling average)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 yrs</td>
<td></td>
</tr>
<tr>
<td>5-11 yrs</td>
<td></td>
</tr>
<tr>
<td>12-18 yrs</td>
<td></td>
</tr>
<tr>
<td>19-24 yrs</td>
<td></td>
</tr>
<tr>
<td>25-29 yrs</td>
<td></td>
</tr>
<tr>
<td>30-44 yrs</td>
<td></td>
</tr>
<tr>
<td>45-64 yrs</td>
<td></td>
</tr>
<tr>
<td>65-79 yrs</td>
<td></td>
</tr>
<tr>
<td>80+ yrs</td>
<td></td>
</tr>
</tbody>
</table>

Result Date

7-Day Rolling Average Percent Positivity

- 0.1% to <1%
- 1% to <2%
- 2% to <3%
- 3% to <5%
- 5% to <10%
- 10% to <20%

Data source: PLOVER 30-Nov-2021
In every region, trends in testing rates are broadly similar by vaccination status
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.
**Delta** is the most prevalent COVID-19 variant in BC representing ~100% of all sequenced specimens in most recent week; there are 2 main Delta sub-lineages: AY.25 and AY.27

![Graph showing the prevalence of different COVID-19 variants (Alpha, Beta, Delta, Gamma, Omicron)]

- **Lineage**:
  - Alpha (B.1.1.7)
  - Alpha (Other Q.1)
  - Alpha (Q.3)
  - Alpha (Q.8)
  - Beta (B.1.351)
  - Beta (B.1.351.3)
  - Delta (AY.25)
  - Delta (AY.27)
  - Delta (B.1.617.2)
  - Delta Other (AY.1)
  - Gamma (P.1)
  - Gamma (P.1.14)
  - Gamma (P.1.17)
  - Gamma Other (P.1.1)
  - Omicron (B.1.1.529)

# indicates an additional numerical value (e.g. AY.1)

Please see the latest [VOC report](#) for more details
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 $R_t$ is hovering near 1 in most regions. Estimates are shown for last week → this week, with 90% range of possible values given next to most recent estimate.

**BC** 0.99 → 0.99 [0.8–1.2]

**Fraser** 0.95 → 0.96 [0.8–1.2]

**Vancouver Coastal** 1.01 → 1.02 [0.8–1.3]

**Interior** 1.00 → 1.02 [0.8–1.3]

**Vancouver Island** 1.05 → 1.01 [0.7–1.4]

**Northern** 0.86 → 0.84 [0.6–1.2]

Solid line: median $R_t$ modeled using all reported cases up to Dec 5, 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. Only January 2021 onward shown here. Data source: BCCDC HA line list.
Pediatric Report - Key Messages

• Case numbers in <18 years remain relatively stable
  • Incidence varies regionally and by pediatric age group
• Case rates are highest in regions with lower 12+ vaccine coverage
• Severe outcomes are rare in children

Also see the Data for K-12 Schools November report posted on the BCCDC website:
**Nov 25 to Dec 01: Pediatric COVID-19 Profile**

<table>
<thead>
<tr>
<th>Age group: 0-4</th>
<th>Age group: 0-4</th>
<th>Age group: 0-4</th>
<th>Age group: 0-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>6,014 total cases</td>
<td>126 ever hospitalized</td>
<td>12 ever in critical care</td>
<td>2 total deaths</td>
</tr>
<tr>
<td>100 new this week</td>
<td>2 ever hospitalized</td>
<td>0 new this week</td>
<td>0 new this week</td>
</tr>
<tr>
<td>Age group: 5-11</td>
<td>Age group: 5-11</td>
<td>Age group: 5-11</td>
<td>Age group: 5-11</td>
</tr>
<tr>
<td>16,483 total cases</td>
<td>63 ever hospitalized</td>
<td>5 ever in critical care</td>
<td>0 total deaths</td>
</tr>
<tr>
<td>451 new this week</td>
<td>0 ever hospitalized</td>
<td>0 new this week</td>
<td>0 new this week</td>
</tr>
<tr>
<td>Age group: 12-17</td>
<td>Age group: 12-17</td>
<td>Age group: 12-17</td>
<td>Age group: 12-17</td>
</tr>
<tr>
<td>13,094 total cases</td>
<td>57 ever hospitalized</td>
<td>8 ever in critical care</td>
<td>0 total deaths</td>
</tr>
<tr>
<td>133 new this week</td>
<td>1 ever hospitalized</td>
<td>0 new this week</td>
<td>0 new this week</td>
</tr>
</tbody>
</table>

* New hospitalizations and critical care census numbers are as of Nov 30 2021
* New cases and new deaths are net new between Line lists of Nov 24 and Dec 01
Incidence varies regionally and by pediatric age group.

Masking for grades K-3
Number of new daily hospitalizations remains very low and stable; deaths are extremely rare

Note: Absolute number of new hospitalizations still low (see y-axis on right)
Case rates are relatively stable among children and youth.

Hospitalization rates remain low.

For latest version of this figure, see COVID-19 Regional Surveillance Dashboard.
COVID-19 vaccination coverage with 1st dose among 12-17 year olds, by Local Health Area, Nov. 29, 2021

For latest version of this map, see COVID-19 Regional Surveillance Dashboard
Testing rates among 5-17 year olds continue to decrease 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%).

Testing rates among 0-4 year olds remain high in all HSDAs. Percent positivity is variable; very low in most regions.

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

Data source: PLOVER 30-Nov-2021
Percent positivity is high throughout NH.
Additional Resources

• BCCDC COVID-19 Regional Surveillance Dashboard showing maps, vertical plots, and trends by LHA can be found here

• More BC COVID-19 data, including the latest Situation Report, maps, and BC COVID-19 public dashboard, can be found here

• For more information on variants of concern and whole genome sequencing, the latest report is posted here

• To put BC provincial, Health Authority, and HSDA trajectories into national and international context, see BCCDC COVID-19 Epidemiology app

• COVID SPEAK 2020 Round 1 Survey results

• Slides for previous public and modelling briefings by Dr. Bonnie Henry can be found here

• PHAC’s COVID-19 Epidemiology update can be found here