BCCDC Data Summary

2 September 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.
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Overall Summary for surveillance data up to 31 Aug

- **Case rates** are increasing in Northern, Fraser and Island Health, incidence in Interior remains elevated, but rate is stable; **test positivity** for public tests has been stable at ≈ 9% provincially, and is highest in IH (16%) and NH (22%).

- **New hospitalizations** are increasing provincially but declining in Interior; **hospital/critical care census** is increasing throughout BC; **new deaths** are low. Hospitalization rates among children continue to remain very low.

- Based on last week’s data, compared with fully vaccinated individuals and after adjusting for age differences, unvaccinated individuals are
  - ≈ 11x more likely to become a case
  - ≈ 31x more likely to be hospitalized
  - ≈ 4x more likely to die

- **Vaccine** coverage in BC, 31 Aug, 1 dose (2 doses): 75% (68%) of total population, 84% (77%) of 12+ eligible population. Lower vaccine coverage in Interior and Northern and among younger individuals.

- **Variants of concern (VOCs)** continue to account for ≈ 100% of all positive tests in BC. Delta is the dominant VOC (99.5%) across all of BC.
Aug 26 to Aug 31: BC COVID-19 Profile

- **Total cases**: 166,853
  - New this week: 4,884
- **Ever hospitalized**: 8,725
  - New this week: 225
- **Total deaths**: 1,818
  - New this week: 16
- **Removed from isolation**: 158,900
  - New this week: 4,231

New daily COVID-19 cases, hospitalizations and deaths, Jan 01 2021 - Aug 31 2021

*Data are by surveillance date for cases and deaths, and admission date for hospitalizations*

Data source: PHRDW Sep-01-2021
Case rates are increasing in Northern, Fraser and Island regions and stabilizing in Interior and Vancouver Coastal; new hospitalizations are declining in Interior, increasing provincially; new deaths are stable and low.
Case counts have increased in all health authorities, with the largest increases in Interior and Fraser.

New daily COVID-19 cases by HA, Jan 01 2021 - Aug 31 2021

*Data based on surveillance date (i.e. lab result date, or when not available, date reported to public health)
Case counts are highest among 19-39 year olds, consistent with previous resurgences.
Hospital and critical care census is high and increasing in Interior, and trending upwards in other parts of BC

Current COVID-19 hospitalizations, Jan 01 2021 - Aug 31 2021

- BC
- Fraser
- Interior
- Northern
- Vancouver Coastal
- Island

Daily occupancy per 100,000 population

* Data are by census date for hospitalizations
Data source: PHSA Provincial COVID19 Monitoring Solution (PCMS) Sep-01-2021
Number of new hospital admissions is increasing across all ages >20 years, almost all are among unvaccinated individuals (see slide 23). Deaths are low.
Hospitalization counts and rates among children (0-19 years) continue to remain very low

*Data based on admission date for hospitalizations
For latest version of this map (note: change symbols not included), see COVID-19 Regional Surveillance Dashboard.
COVID-19 Recent 7-Day Case Incidence Rates by CHSA (August 25 to 31, 2021)

For latest version of this map, (note: change symbols not included), see COVID-19 Regional Surveillance Dashboard
Total cases by local health area, Aug 25 - Aug 31, 2021

For latest version of this graph, see COVID-19 Regional Surveillance Dashboard.
Average daily rate of new cases per 100,000 population, by local health area, Aug 25 - Aug 31, 2021

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

• Most of the recent cases and hospitalizations continue to be among unvaccinated individuals
• Based on last week’s data, compared with fully vaccinated individuals, unvaccinated individuals are
  • $\approx 8x$ more likely to become a case ($\approx 11x$ after adjusting for age differences)
  • $\approx 18x$ more likely to be hospitalized ($\approx 31x$ after adjusting for age differences)
  • $\approx 4x$ more likely to die, taking into account age differences

• Hospitalization rates among children continue to remain very low

• Unvaccinated: no dose or <3 weeks since receipt of 1st dose
• 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 accounted for 20% of cases, 13% of hospitalizations, and 65% of BC’s total population.

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 were run on Tuesday Aug 31st and may differ slightly from previously reported counts. Vaccinations represent vaccination coverage as of the last date (Aug 30th). 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 Aug 24th may not be captured by our surveillance system until Aug 29th.
Over the past month, fully vaccinated individuals accounted for 16% of cases and 14% 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 is fully vaccinated (which is almost the case for many long term care residents for example), then any new cases, hospitalizations, or deaths will necessarily be among vaccinated people.

We operate in a live database environment and data get updated retrospectively. These figures were run on Tuesday Aug 31st and thus will 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 Aug 24th may not be captured in our surveillance system until Aug 29th.

Deaths continue to occur primarily among older individuals (see next slide), >90% of whom are vaccinated, which explains the higher relative % of deaths among the fully vaccinated.
COVID-19 health outcomes by vaccination status and age, BC, July 31 – August 30, 2021

*Figures include cases from Aug 03-Aug 30 ,and hospitalizations and deaths from Jul 31-Aug 27, 2021*
COVID-19 case rate by vaccination status and Health Authority, July 1 – Aug 30, 2021

In the past week, case rate among the unvaccinated individuals was \(\approx 8x\) higher than case rate among fully vaccinated individuals – but note that this is crude and not adjusted for age (see slides 21, 24).

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.

Data extracted from health authority case line list on 31 Aug 2021
COVID-19 case rate by vaccination status and age, July 1 – August 30, 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.

Data extracted from health authority case line list on 31 Aug 2021
COVID-19 hospitalization rate by vaccination status, July 1 – Aug 26, 2021

In the past week, hospitalization rate among unvaccinated individuals was \( \approx 18x \) higher compared with fully vaccinated individuals – but note that this is crude and not adjusted for age (see slide 14).

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.
COVID-19 hospitalization rate by vaccination status and age, July 1 – Aug 26, 2021

Given relatively low numbers, please interpret these results with caution. Trends tend to be unstable with lower counts.

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.

Data extracted from health authority case line and up to 26 Aug 2021
After taking age differences into account, unvaccinated individuals are much more likely to get infected, be hospitalized, or die from COVID-19.

Relative rates fluctuate over time (see graph to the right). These figures do not represent vaccine effectiveness.

Data include cases from Aug 24-Aug 30, and hospitalizations and deaths from Aug 21-Aug 27, 2021.
Vaccination progress in BC and by Health Authority as of August 31, by age group and dose number

Blue lines at 80% are for visual reference only for easier navigation across panels
BC communities with higher vaccination rates generally had lower total number of cases per capita between July 1 and Aug 30.
COVID-19 Vaccination Coverage by CHSA: Ages 12+ 1st Dose (up to August 30, 2021)

For latest version of this map, see COVID-19 Regional Surveillance Dashboard.
COVID-19 vaccination coverage with 1st dose among 12-17 year olds, by Local Health Area, up to August 30, 2021: there is more variation in this age group compared with older age groups.
Nationally, BC’s vaccination rate is very close to the Canadian average; internationally, Canada is one of the countries with the highest proportion of the population with at least one dose.
Vaccination rates with at least 1 dose, Canada and US, August 26, 2021

Canada 72%

US 61%

Source: Dr. Trevor Tombe
In recent months, BC’s case rate has been similar to AB and SK rates, but hospital census has been lower.

For most up to date figures, and to make your own comparisons, please go to the Epi App.
Growth rate of cases in the UK and US has slowed down; Israel case rate is declining. In Europe, situation is variable, with case rate declining in some countries (e.g. Spain, France), but increasing in others (e.g. Norway, Germany).

Over the past two months, BC’s case rate has been similar to Germany’s and lower than US, UK and Israel.

For most up to date figures, and to make your own comparisons, please go to the Epi App.
Lab - Key Messages

- **Percent positivity** among publicly funded tests is stable at \( \approx 9\% \)
  - Test positivity varies by HA, ranging from 6.8% in VIHA to 21.9% in NH.
  - Case incidence rate remains highest among 19-29 years, but rate is levelling; % positivity >10% among 5 to 29 years.

- **Testing rates** continue to increase this week
  - The provincial weekly median **turnaround time** (time from specimen collection to lab result) remains low, at 14 hours indicating good testing capacity; 1 in 4 tests took > 22 hours to result.

- **Delta** is the most prevalent COVID-19 variant in BC representing 99.5% of all sequenced specimens in most recent week.
## Weekly Summary of ALL lab tests performed

<table>
<thead>
<tr>
<th></th>
<th>Count</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total specimens tested</td>
<td>3,414,547</td>
<td></td>
</tr>
<tr>
<td>New this epi week</td>
<td>86,735</td>
<td>↑8% relative to last week</td>
</tr>
<tr>
<td>Total positive specimens</td>
<td>173,386</td>
<td></td>
</tr>
<tr>
<td>New positive this epi week</td>
<td>4,795</td>
<td>5.5% positivity</td>
</tr>
<tr>
<td>Mean turnaround time (TAT)</td>
<td>16 hr</td>
<td></td>
</tr>
<tr>
<td>Median [Q1 – Q3] TAT</td>
<td>14 [9-22]</td>
<td>↑10% TAT relative to last week</td>
</tr>
</tbody>
</table>

## Weekly Summary of Lab tests paid Publicly

<table>
<thead>
<tr>
<th></th>
<th>Count</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total specimens tested</td>
<td>2,597,748</td>
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<tr>
<td>New this epi week</td>
<td>52,874</td>
<td>↑17% relative to last week</td>
</tr>
<tr>
<td>Total positive specimens</td>
<td>171,336</td>
<td></td>
</tr>
<tr>
<td>New positive this epi week</td>
<td>4,678</td>
<td>8.9% positivity</td>
</tr>
</tbody>
</table>

**Data source:** PLOVER extract at 10:30am on September 1, 2021.
Epi week 34 (Aug 22 - 28)
Geographic Distribution of COVID-19
Testing Positivity by LHA and CHSA
Recent 7-Days Testing
August 25 to 31, 2021

For latest version of this map, see the new (note: change symbols not included) COVID-19 Surveillance Dashboard

Data source: BC CDC Public Health Laboratory Public Health Laboratory (ulti-Heberson format). Data are by testing result date, and location of client’s residence or filling physician’s address.
COVID-19 Recent 7-Day Test Positivity by CHSA (August 25 to 31, 2021)

For latest version of this map, see the new (note: change symbols not included) COVID-19 Surveillance Dashboard.
Among publicly funded tests: percent positivity is stable at ~9%, and testing rates have continued to increase (+17%).

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Note: Invalid (n = 1325) and indeterminate (n = 5031) results have been excluded

Data source: PLOVER 02-Sep-2021
Overall incidence rate has increased, with positivity being highest in Northern (22%) and Interior (16%).


For latest version of a graph similar to this one (difference: all tests, not public tests), see the Epi App.
Incidence and test positivity are high across Interior and Northern HSDAs, with many showing increasing trends.

For latest version of a graph similar to this one (difference: all tests, not public tests), see the Epi App.
Case incidence rate remains highest among 19-29 years, but rate is levelling; % positivity >10% among 5 to 29 years.
Among sequenced VOC samples provincially based on information for August 22 to 28, the dominant VOC continues to be Delta 99%.
Dynamic modeling: recent trends

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

- **BC**: 1.03 → 1.03 [0.9–1.3]
- **Fraser**: 1.09 → 1.11 [0.9–1.3]
- **Vancouver Coastal**: 0.90 → 0.83 [0.6–1.0]
- **Interior**: 0.95 → 0.94 [0.7–1.3]
- **Vancouver Island**: 1.13 → 1.12 [0.7–1.7]
- **Northern**: 1.28 → 1.37 [0.9–2.1]

Solid line: median $R_t$ modeled using all reported cases up to August 31, 2021; Red band: 5%-95% credible interval; Green band: estimate based on partial data; Purple bars: all reported cases. Due to lag from symptom onset to reporting, most recent case counts and $R_t$ are not shown. Recent trend shown comparing median fit estimate from (last week → this week; 5% - 95% credible interval). Only January 2021 onward shown here. Data source: BC CDC HA Illness.
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