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 21 July

- **Case rates** are relatively stable; **test positivity** for public tests is ~2% provincially.
  - Percent positivity ≤3% in all age groups
  - Percent positivity <2% in VIHA, VCH, FH and between 3-5% in IH and NH

- **New hospitalizations** are low and declining or stable in each region; **hospital/critical care census** is declining or stable across BC; **new deaths** are stable and very low.

- Most of the cases, hospitalizations and deaths over the past month were among unvaccinated individuals. Severe outcomes are less common among fully vaccinated people (5%).

- **Vaccine** coverage in BC, July 20th: ~90% of 70+ and ~80% of 12+ have received their 1st dose; almost 50% of the total population has received their 2nd dose.

- The share of **VOCs** among all positive tests in BC is ~97% from July 11 to 17; P.1 (Gamma) ~42% and B.1.617 (Delta) ~41% are now two dominant VOCs, followed by B.1.1.7 (Alpha) at ~18%.

- Studies consistently show that both mRNA and AstraZeneca vaccines remain highly effective against the Delta variant, especially against severe outcomes. Vaccinated individuals tend to have milder illness if they get infected and are also less likely to pass virus on than unvaccinated individuals.
Jul 15 to Jul 21: BC COVID-19 Profile

- **Total cases**: 148,641
- **New this week**: 413
- **Ever hospitalized**: 8,098
- **New this week**: 17
- **Total deaths**: 1,763
- **New this week**: 3
- **Removed from isolation**: 146,142
- **New this week**: 325

New daily COVID-19 cases, hospitalizations and deaths, Jan 01 2021 - Jul 20 2021

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

Data source: PHRDW_Jul-21-2021
Most of the cases, hospitalizations and deaths over the past month were among unvaccinated individuals.

*Also see slides 17 and 18*
Case rates are relatively stable provincially, with small increase in Interior; new hospitalizations are declining or stable in all HAs; new deaths are stable and very low.
Overall, % positivity is low and stable at the provincial level, with some regional variation; it is higher in NH and IH (3-5%) and lower in other parts of the province (<2%).

Hospital and critical care census is declining or stable in all regions.
Number of new hospital admissions is low and decreasing. Deaths are low and stable.
For latest version of this map, see the new (note: change symbols not included) COVID-19 Surveillance Dashboard
For latest version of this map, see the new (note: change symbols not included) COVID-19 Surveillance Dashboard

COVID-19 Recent 7-Day Case Incidence Rates by CHSA (July 14 to 20, 2021)
Total cases by local health area, Jul 14 - Jul 20, 2021

For latest version of this map, see the new COVID-19 Surveillance Dashboard
Average daily rate of new cases per 100,000 population, by local health area, Jul 14 - Jul 20, 2021

For latest version of this map, see the new COVID-19 Surveillance Dashboard.
Vaccination progress in BC over time by age group and dose number up to July 20

Data updated 2021-07-20
Data Source: Provincial Immunization Registry, PHSA
Vaccination progress in BC by Health Authority, age group and dose number as of July 22nd.

Blue lines at 80% are for visual reference only for easier navigation across panels.

Data source: Provincial Immunization Registry, PHSA
Over the past month (15 Jun-15 Jul), fully vaccinated individuals accounted for only ~5% of hospitalizations and deaths.*

This % is expected to increase as more people get fully vaccinated and there are fewer unvaccinated people. If 100% of the population gets fully vaccinated, then any new cases, hospitalizations, or deaths will be 100% among vaccinated people.

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**Cases**  
N=1,777

- One Dose (or Second Dose<7 Days): 28%
- Two doses: 4%
- Unvaccinated (or One Dose<21 Days): 68%

**Hospitalizations**  
N=176

- One Dose (or Second Dose<7 Days): 18%
- Two doses: 5%
- Unvaccinated (or One Dose<21 Days): 78%

**Deaths**  
N=21

- One Dose (or Second Dose<7 Days): 24%
- Two doses: 5%
- Unvaccinated (or One Dose<21 Days): 71%

*see next slide for more details

Data source: Health Authority case line list  
Note: % may not add to 100 due to rounding
Trend* in % total population vaccinated with at least 1 dose

Trend in daily cases per 100K

Trend in daily hospitalizations per 100K

Trend in daily deaths per 100K

*Figures include data for 15 Jun – 15 July 2021

Note: % may not add to 100 due to rounding

Data sources: Health Authority case line list and PHSA Provincial Immunization Registry
Severe outcomes tend to occur among older individuals. Median age for severe outcomes is lower for unvaccinated individuals.

<table>
<thead>
<tr>
<th>Vaccine status*</th>
<th>Median age (years)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cases N=1,777</td>
<td>Hospitalizations N=176</td>
<td>Deaths N=21</td>
</tr>
<tr>
<td>Unvaccinated</td>
<td>29</td>
<td>52</td>
<td>63</td>
</tr>
<tr>
<td>Vaccinated, 1 dose</td>
<td>40</td>
<td>62</td>
<td>66</td>
</tr>
<tr>
<td>Vaccinated, 2 doses</td>
<td>55</td>
<td>81</td>
<td>96</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>55</td>
<td>65</td>
</tr>
</tbody>
</table>

This table is based on data for 15 Jun – 15 July 2021

*Unvaccinated is defined as no doses or within 3 weeks of 1st dose; Vaccinated, 1 dose is defined as >3 weeks after 1st dose and <1 week after 2nd dose, if applicable; Vaccinated, 2 doses is defined as >1 week after 2nd dose
For latest version of this map, see the new COVID-19 Surveillance Dashboard.
For latest version of this map, see the new COVID-19 Surveillance Dashboard
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For latest version of this map, see the new COVID-19 Surveillance Dashboard.
Nationally, BC’s vaccination rate is very close to Canadian average; internationally, Canada is one of the countries with the highest proportion of the population with at least one dose.

For latest vaccination progress statistics in Canada and internationally, see the Epi App.
Lab - Key Messages

1. Percent positivity among publicly funded tests remained stable (2.3%).
2. The provincial weekly median turnaround time (time from specimen collection to lab result) remains low, at 24 hours indicating good testing capacity. 1 in 4 tests took ≥ 24 hours to result.
3. Case incidence rates for all age groups remain low and relatively stable.
4. There are regional differences in case incidence rates, with Interior Health seeing a slight increase in case incidence rate.
5. Period prevalence of Delta (B.1.617.2) has increased substantially in the past few epi weeks, whereas it decreased for Alpha (B.1.1.7).
6. Overall, unvaccinated people experience a higher infection rate compared with vaccinated people. Second dose is necessary for full protection, especially for older individuals. Vaccines are effective against all 3 circulating variants in BC.
### Weekly Summary of ALL lab tests performed

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total specimens tested</td>
<td>3,004,640</td>
</tr>
<tr>
<td>New this epi week</td>
<td>44,270</td>
</tr>
<tr>
<td>Total positive specimens</td>
<td>156,360</td>
</tr>
<tr>
<td>New positive this epi week</td>
<td>381</td>
</tr>
<tr>
<td>Mean turnaround time (TAT)</td>
<td>30 hr</td>
</tr>
<tr>
<td>Median [Q1 – Q3] TAT</td>
<td>24 [10-48]</td>
</tr>
</tbody>
</table>

- **1.3%** relative to last week
- **0.9%** positivity
- **0%** absolute change from last week
- **0%** TAT relative to last week

### Weekly Summary of Lab tests paid Publicly

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total specimens tested</td>
<td>2,391,454</td>
</tr>
<tr>
<td>New this epi week</td>
<td>17,206</td>
</tr>
<tr>
<td>Total positive specimens</td>
<td>154,826</td>
</tr>
<tr>
<td>New positive this epi week</td>
<td>339</td>
</tr>
</tbody>
</table>

- **2.3%** relative to last week
- **2%** positivity
- **0%** absolute change from last week

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Data source: PLOVER extract at 10:30am on July 21, 2021.
Epi week 28 (July 11 - 17)
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 (July 14 to 20, 2021)

Includes all tests

For latest version of this map, see the new (note: change symbols not included) COVID-19 Surveillance Dashboard
Percent positivity among publicly funded tests remained relatively stable (2.3%) in the past three epi weeks.
Case incidence rates for all age groups remain low and relatively stable.
HSDAs to watch: Kootenay Boundary

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

<table>
<thead>
<tr>
<th>Incidence Rate of Positive Cases (per 100,000 Population)</th>
<th>Testing Rate per 100K (7-Day Rolling Average)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FHA - Fraser East</td>
<td></td>
</tr>
<tr>
<td>FHA - Fraser North</td>
<td></td>
</tr>
<tr>
<td>FHA - Fraser South</td>
<td></td>
</tr>
<tr>
<td>IHA - East Kootenay</td>
<td></td>
</tr>
<tr>
<td>IHA - Kootenay Boundary</td>
<td></td>
</tr>
<tr>
<td>IHA - Okanagan</td>
<td></td>
</tr>
<tr>
<td>IHA - Thompson Cariboo Shuswap</td>
<td></td>
</tr>
<tr>
<td>NHA - Northern Interior</td>
<td></td>
</tr>
<tr>
<td>NHA - Northeast</td>
<td></td>
</tr>
<tr>
<td>NHA - Northwest</td>
<td></td>
</tr>
<tr>
<td>VCH - North Shore/Coast Garibaldi</td>
<td></td>
</tr>
<tr>
<td>VCH - Richmond</td>
<td></td>
</tr>
<tr>
<td>VCH - Vancouver</td>
<td></td>
</tr>
<tr>
<td>VIHA - Central Vancouver Island</td>
<td></td>
</tr>
<tr>
<td>VIHA - North Vancouver Island</td>
<td></td>
</tr>
<tr>
<td>VIHA - South Vancouver Island</td>
<td></td>
</tr>
</tbody>
</table>

7-Day Rolling Average Percent Positivity
- <0.1%
- 0.1% to <1%
- 1% to <2%
- 2% to <3%
- 3% to <5%
- 5% to <10%
- 10% to <20%
- >=20%

Data source: PLOVER 20-Jul-2021
Over the past epi week, the majority of COVID-19 positive samples were VOCs (~97%); but note that the absolute number of VOC samples is small.

Prevalence of VOC, by epi week in BC and Health Authorities, Jul 11 - Jul 17

Shaded area reflects partial data and is subject to change

Note: given smaller number of weekly cases, percentages are more likely to fluctuate

This figure can also be found in the weekly VOC report

Data from the Plover system at the BCCDC Public Health Lab
Prevalence of the Delta variant among all sequenced samples* has increased substantially over the past few weeks.

Estimated sample prevalence of VOCs by lineage by epi week of collection date, Jan 3 – Jul 17, 2021

*Not all sequenced samples are VOCs; only VOCs are illustrated in this figure.
Among sequenced VOC samples provincially based on information for July 11-17th, P.1 (Gamma) ~42% and B.1.617 (Delta) ~41% are now two dominant VOCs, followed by B.1.1.7 (Alpha) at ~18%.

*Note: % may not add to 100 due to rounding

Weeks 13 onward include specimens from qPCR SNP screening that resulted as presumptive positive for B.1.1.7 and P.1.
Overall, unvaccinated people experience a higher infection rate compared with vaccinated people for every variant and across all ages. Second dose helps to achieve better protection, especially for older individuals. Vaccines provide protection against all 3 circulating variants in BC.
Dynamic compartmental modeling: recent trends

Our model shows that $R_t$ is trending upward and is now at or near 1, but note the overall low case numbers, which make estimates more unstable.

- BC (0.92 → 1.23)
- Fraser (0.80 → 1.03)
- Vancouver (0.96 → 1.16)
- Coastal
- Rest of BC (1.03 → 1.37)

Solid black line: median $R_t$, modeled using all reported cases up to July 21, 2021; Grey band: 5%-95% credible interval; 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 7 day average $R_t$ from (last week → this week). Only January 2021 onward shown here. Data source: BCCDC HA line list.
Model notes and assumptions

• **$R_t$ modelling**: a dynamic compartmental model was fit to COVID-19 data for BC using a Bayesian framework (Anderson et al. 2020. PLoS Comp. Biol. 16(12): e1008274). Results are presented as provincial and regional time-varying estimates of average daily transmission rate ($R_t$).
  • the model does not consider importation of cases, hence all transmission is assumed to arise from local cases
  • the model does not distinguish cases arising from variants of concern (VoCs) versus ‘wild-type’ COVID-19, hence model estimates represent average rates of transmission
• BCCDC COVID-19 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](#).