BCCDC Weekly Data Summary

6 May 2021
Disclaimer

Data and key messages within these documents are not finalized and considered to be work in progress that is subject to change.

Data within these documents are updated on a rolling basis and may not be final. Data may be subject to retroactive changes.

Correct interpretation of figures may be difficult with the limited inclusion of data notes and methodology descriptions.
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• **Case rates** continue to decline in all HAs; **test positivity** is at 9.2% provincially for publicly funded tests, a slight decline from last week.

• **New hospitalizations** continue to be elevated, but beginning to stabilize; **hospital/critical care census** are increasing in FH, VCH, IH; **new deaths** are stable and low.
  • Majority of hospitalizations among individuals aged >40 years
  • Majority of deaths in individuals aged >80 years

• The share of **VOCs** among screened cases in BC is ~80% in epi week 17. VOCs have been detected in all regions of the province. Among sequenced samples provincially based on information for epi week 16, P.1 (~43%) and B.1.1.7 (~57%) remain two dominant VOCs.

• **Alberta’s** case rate continues to be the highest of all jurisdictions in Canada and the US (~3.3x the BC rate). Potential for importation into BC is high.

• As of May 6, 43% of adult population in BC has received first dose of **vaccine**, 84% of those over 70 years.
  • Vaccine coverage varies regionally
  • The number of outbreaks in LTCFs remains very low following vaccination campaign
April 30 to May 6: BC COVID-19 Profile

- **Total cases**: 132,925
  - New this week: 3,443

- **Ever hospitalized**: 6,887
  - New this week: 218

- **Total deaths**: 1,594
  - New this week: 13

- **Removed from isolation**: 124,252
  - New this week: 4,467

Data are by surveillance date for cases and deaths, and admission date for hospitalizations.
Case rates are continuing to decline in each HA; new hospitalizations are stabilizing; new deaths are stable and low.
Number of new hospitalizations stabilizing; the majority of hospitalizations are primarily among individuals 40-79 years. Deaths decreasing and mostly among individuals ≥ 80 years.
Hospital and critical care census is showing early signs of stabilization.

Data source: DARE, PHSA

Data to May 6
 Geographic Distribution of COVID-19 by LHA and CHSA of Case Residence

Recent 7-Days Cases
April 28 to May 4, 2021

Change from prior week
(average daily rate change >5.0 per 100,000 pop.)
▲ decrease
▼ increase

Average daily rate per 100,000 population

0.0
0.1 - 5.0
5.1 - 10.0
10.1 - 20.0
20.1 - 40.0
> 40.0

FOR AUTHORIZED INTERNAL PUBLIC HEALTH USE ONLY - NOT FOR PUBLIC DISTRIBUTION
COVID-19 Recent 1 Week Case Incidence Rates by CHSA (April 28 to May 4, 2021)
Proportion to total cases & population by local health area, Apr. 29 - May 05, 2021

Fraser
Interior
Northern
Vancouver Coastal
Vancouver Island

% of COVID-19 cases
% of BC population
Total cases by local health area, Apr. 29 - May. 05, 2021

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

- Surrey
- Abbotsford
- Tri-Cities
- Langley
- Maple Ridge/Pitt Meadows
- Agassiz/Harrison
- Central Okanagan
- Peace River South
- Vancouver - Northeast
- Vancouver - Midtown
- Vancouver - Centre North
- West Vancouver/Bowen Island
- Greater Victoria
- Vancouver Island North
Rate has declined ~10% in Surrey in last 10 days

Rate has increased 3x in Golden in last week
Incidence is decreasing in all HAs. Percent positivity remains >10% in FH.
The majority of cases continue to be related to local acquisition through a known case or cluster.

**January 15, 2020 (week 3) – April 24, 2021 (week 16) (N= 127,322)**

![Case counts by episode date and phase](image-url)

**Episode date by epidemiological week**

- Domestic - unknown exposure
- Domestic - case/cluster
- Interprovincial travel
- International travel
- Pending/missing exposure information

*episode date, BC January 15, 2020 (week3) to April 24, 2021 (week16)*
Vaccination progress in BC by age group as of May 6

Hospitalizations by admission date, deaths by report date

Data sources: hospitalizations and deaths – BCCDC, vaccinations – DARE, PHSA
Geographic Distribution of COVID-19 Vaccination Coverage by LHA and CHSA

Ages 18+: 1st Dose up to May 3, 2021

Vaccination coverage rate (%) of adults 18+

- 1 - 20%
- 21 - 40%
- 41 - 60%
- 61 - 80%
- > 80%

Notes: Vaccine coverage data from Math HSAR; population 18+ data from Client Roster.

FOR AUTHORIZED INTERNAL PUBLIC HEALTH USE ONLY - NOT FOR PUBLIC DISTRIBUTION
COVID-19 Vaccination Coverage by CHSA: Ages 18+ - 1st Dose (up to May 3, 2021)
The number of cases among individuals aged ≥70 years and HCWs working in long-term care or assisted living facilities is very low following vaccination roll-out compared with individuals not living or working in these settings.

*Phase 1 COVID-19 vaccinations start in FHA and VCH
** Phase 1 COVID-19 vaccinations start in IHA, NHA, and VIHA

Note: Phase 1 target populations include residents and staff of long term care and assisted living facilities, individuals being assessed for long term care, essential visitors of long term care and assisted living residents, hospital health care workers who may provide care for COVID-19 patients, and remote and isolated Indigenous communities. Immunizations of target populations may have been staggered depending on vaccine availability and health region.
The number of new outbreaks declared remains low, but a handful of new outbreaks declared in acute care and long-term care facilities week of April 18-24.

Note that the two graphs cover different time periods.
1. Percent positivity among publicly funded tests is at 9.2%, slightly declined from last week. 
   • Testing rates are similar to last week (~69,000 total tests April 18 to 24)
2. There are regional differences in percent positivity, which range from 3% in VIHA to 11% in FH.
3. Percent positivity is elevated and declining in individuals aged 13 to 64 years. Incidence is elevated but declining in individuals <80 years and low and stable in individuals ≥80 years.
4. The provincial weekly median turnaround time (time from specimen collection to lab result) is 16 hours, indicating good testing capacity; only 1 in 4 tests took ≥24 hours to result.
5. Among SARS-COV-2 screened samples, the proportion that were presumptive VOCs for the past epi week 17 was ~80%.
6. VOCs have been detected in all regions of the province. 
   • Among sequenced samples provincially based on information for epi week 15, P.1 and B.1.1.7 remain two dominant VOCs, accounting for roughly 43% and 57% of VOCs respectively.
### Weekly Summary of ALL lab tests performed

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Change from Last Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total specimens tested</td>
<td>2,532,066</td>
<td>↓1% relative to last week</td>
</tr>
<tr>
<td>New this epi week</td>
<td>68,910</td>
<td></td>
</tr>
<tr>
<td>Total positive specimens</td>
<td>138,104</td>
<td>8.0% positivity</td>
</tr>
<tr>
<td>New positive this epi week</td>
<td>5,534</td>
<td>↓1.1% absolute change from last week</td>
</tr>
</tbody>
</table>

### Mean Turnaround Time (TAT)

- 17 hr

### Weekly Summary of Lab tests paid Publicly

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Change from Last Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total specimens tested</td>
<td>2,087,521</td>
<td>↑1% relative to last week</td>
</tr>
<tr>
<td>New this epi week</td>
<td>57,378</td>
<td></td>
</tr>
<tr>
<td>Total positive specimens</td>
<td>136,789</td>
<td>9.6% positivity</td>
</tr>
<tr>
<td>New positive this epi week</td>
<td>5,500</td>
<td>↓1.4% absolute change from last week</td>
</tr>
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**Data source:** PLOVER extract at 10:30am on May 5, 2021.
Epi week 17 (April 25 – May 1)
COVID-19 Recent 1 Week Test Positivity by CHSA (April 28 to May 4, 2021)
Percent positivity among publicly funded tests decreased compared to the previous epi week and continues to be elevated at almost 10%. The total number of tests resulted has remained stable relative to the previous epi week.

Data source: PLOVER extract at 10:30am on May 4, 2021.
Epi week 17 (April 25 – May 1)
Incidence remains elevated, but is stable or decreasing across regions; positivity is >10% in health service delivery areas in FH, VCH and NH.

<table>
<thead>
<tr>
<th>Area</th>
<th>Test Positivity</th>
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<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>
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<tr>
<td>IHA - Kootenay Boundary</td>
<td></td>
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<tr>
<td>IHA - Okanagan</td>
<td></td>
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<tr>
<td>IHA - Thompson Cariboo Shuswap</td>
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</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>

Note: Data to May 6.
Percent positivity is elevated and declining in individuals aged 13 to 64 years. Incidence is elevated but declining in individuals <80 years and low and stable in individuals ≥80 years.
Of all COVID-19 positive test samples in epi week 16 (Apr 18-25) in BC, ~80% were presumptive VOCs. Note that in Northern, the proportion was substantially lower, ~34%.
The proportion of screened samples remains high—close to 90% in week 17.

Data source: PLOVER May 5, 2021

Presumptive VoC, Screening and overall testing proportions, Jan 3, 2021 - May 1, 2021

Percent of Positive Samples

Epidemiological Week (based on collection date)

- Positive Samples
- Screened Samples
- Presumptive Positive Samples

Data source: PLOVER May 5, 2021
The proportion of variants sequenced can be interpreted at the population level, given that it includes only samples sequenced from background surveillance and random screening.

Weeks 13 onward include specimens from qPCR SNP screening that resulted as presumptive positive for B.1.1.7 and P.1.

Given the high volume of screened specimens, those collected in week 16 continue to be analyzed.
• The main circulating variants are B.1.1.7 and P.1, with their relative proportion accounting for 57% and 43% respectively in epi week 16 (Apr 18 - Apr 24).
• The proportion of variants sequenced can be interpreted at the population level, given that it includes only samples sequenced from background surveillance and random screening.
• Weeks 13 onward include specimens from qPCR SNP screening that resulted as presumptive positive for B.1.1.7 and P.1.

Figure 2. Estimated Sample prevalence† of VOCs by lineage by epi week, Jan 3 – May 1, 2021.
Prevalence of VoCs Detected through Quasi-Random Sample Selection*
by Epiweek of Collection Date

Epidemiological Week (based on collection date)
Overview of the screening and sequencing process applied to positive COVID-19 tests in BC, April 2021

Blue arrows highlight most common current pathway

COVID-19 Positive test

VOC Screening

Non-VOCs

Presumptive VOCs

Presumptive B.1.1.7
Presumptive P.1/B.1.351
Emerging VOI

Sequencing

Cluster, outbreaks, hospitalized patients, re-infections, vaccine escape, travellers, and other targeted surveillance

Baseline surveillance (random sample)

Not all samples from these groups are VOCs

% screened samples that are presumptive VOC changes every week; this is what’s reported as estimated % VOC prevalence in BC

n=600 per week

Not all presumptive VOCs are sequenced

10-20%

5-10%

>25%

100%

Not all presumptive VOCs are sequenced

Estimate of B.1.1.7 prevalence

Prevalence estimates of specific VOCs are based on samples from baseline surveillance and screening

Confirmed B.1.1.7

Confirmed P.1

Confirmed B.1.351

Estimate of P.1 prevalence

Estimate of B.1.351 prevalence

VOI

CONFIDENTIAL DRAFT
1. **Globally**, growth in cases in South America, Europe, and North America have declined while it has increased in parts of Asia, driven by recent resurgence in India.

2. **Across Canada**, cases are trending up in AB & MB. NS and NWT are seeing the highest increases yet during the pandemic. In BC, ON, QC and SK cases are on the decline. Hospital census increasing in AB, MB, and NS; recent declines observed in BC, ON, QC, and SK. Death rates are generally stable or declining, overall very low.

3. Alberta’s case rate continues to be the highest of all jurisdictions in Canada and the US, and is currently ~3.3x the BC rate. Potential for importation into BC is high.

4. **VOCs** are now dominant (>80%) in BC, ON and QC.

5. **Canadian vaccination update:** >50% population vaccinated in the YK and NWT; QC ~39%; BC ~36%; Canada overall ~36%. In AB, 96% of delivered doses have been administered.

6. **Global vaccination update:** % population that has been vaccinated with at least one dose: Israel ~63%, UK ~51%, US ~44%, Chile ~43%, Europe 24-35%.

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**BC in Canadian and Global Context - Key Messages**
Globally, growth in cases in South America, Europe, and North America have declined while it has increased in parts of Asia, driven by recent resurgence in India.
Across Canada, cases are trending up in AB & MB. NS and NWT are seeing the highest increases yet since the pandemic began. In BC, ON, QC and SK cases are on the decline. Death rates are generally stable or declining, overall very low.
Hospital census increasing in AB, MB, and NS; recent declines observed in BC, ON, QC, and SK
Alberta’s case rate continues to be the highest of all jurisdictions in Canada and the US, and is currently ~3.3x the BC rate. Potential for importation into BC is high.

New daily cases per 100K population (7-day moving average)
VOCs are now dominant (>80%) in BC, ON and QC. This is the last week this graph will be shown.

Gray lines = European countries for which data are available. Their trajectories have consistently shown that it takes ~2 months for B.1.1.7 to become a dominant strain, regardless if COVID cases were stable or increasing.

NB: AB data hasn’t been updated since last week; due to back log, AB’s figures may not be an accurate reflection of the current situation and may not be comparable to other jurisdictions.

Please note that these are approximate estimates only and may not be accurate. Data across jurisdictions are not directly comparable due to different sampling methodologies. There were likely changes in methodology over time within the same jurisdiction, especially during the early part of the curve. Some data points were extrapolated/approximated to complete the visualization.
Canadian vaccination update, 6 May: >50% population vaccinated in the YK and NWT; QC ~39%; BC ~36%; Canada overall ~36%.

Note how in AB, almost every delivered dose has been administered.
Global vaccination update, May 5

BC – and Canada – have been closely following the vaccination trajectories of the UK, Hungary and Chile. Many European countries have recently started to extend the interval between the doses.

Note the differences in the speed of vaccine rollout between countries that have delayed administration of second dose have vs those that haven’t.
Our model shows that $R_t$ remains below 1 in all regions of BC. Whenever $R_t > 1$, there is a risk that the number of new cases will grow.

Solid black line: median $R_t$, data up to May 4, 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).
Scenarios of trajectory in cases, hospitalizations, and deaths in BC based on infectious contact

Fitting period: March 1, 2020 – April 29, 2021
Scenarios of trajectories in cases based on infectious contact, by HA

Fitting period: March 1, 2020 – April 29, 2021
Scenarios of trajectories in hospitalizations incidence based on infectious contact, by FH and VCH
Model notes and assumptions

• **Rt 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 following caveats apply to these results
  
  • 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

• **Scenarios going forward**: levels of infectious contact characterized by historic estimated rates:
  
  • 40% would be similar to what was observed after the 8th September, 2020 announcement
  
  • 50% would be similar to changes observed after 7th November 2020 announcement
  
  • 60% would be similar rate of contact observed at beginning of 2021.

• Current BC Vaccination schedule incorporated into model fitting and projections incorporating variable rates of contact and susceptibility by age. Note vaccination of higher contact workers not explicitly included, which may under-estimate total impact of vaccination.

• Vaccination was modeled using the current proposed one dose schedule by age group, with all eligible age groups vaccinated by end of June, adjusting for age-dependent impact on transmission. Further assumed a 15% hesitancy of all age groups.

• Establishment of VoC varied by region and estimated from sequencing of cases. Estimates used were: Fraser: 20th January, Vancouver Coastal: 7th February, Interior: 15th March, and 25th March Vancouver Island and Northern.

• Dominance of VoC assumed to be 7 weeks in line with other jurisdictions. 50% increased transmission and disease severity selected to reflect experienced changes in other jurisdictions.