Data for week 23 (June 05 - June 11, 2022) may differ from the data published in the BCCDC weekly report. Data was extracted on June 20, 2022 for this situation report compared to June 22, 2022 for the latest weekly report.

### Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epidemic curve and regional incidence</td>
<td>3</td>
</tr>
<tr>
<td>Test rates and % positive</td>
<td>4</td>
</tr>
<tr>
<td>Age profile, testing and cases</td>
<td>5</td>
</tr>
<tr>
<td>Severe outcomes</td>
<td>7</td>
</tr>
<tr>
<td>Age profile, severe outcomes</td>
<td>8</td>
</tr>
<tr>
<td>Care facility outbreaks</td>
<td>9</td>
</tr>
<tr>
<td>Wastewater surveillance</td>
<td>9</td>
</tr>
<tr>
<td>Additional resources</td>
<td>11</td>
</tr>
<tr>
<td>Appendix</td>
<td>11</td>
</tr>
</tbody>
</table>

### Report Summary

Due to changes in testing strategies in BC, current case counts are an underestimate of the true number of COVID-19 cases in BC. This underestimation has increased compared to the period prior to the emergence of the Omicron variant in BC. The provincial incidence by episode date was 14 per 100K (719 cases) in week 23, which decreased from 17 per 100K in week 22.

Incidence by Health Authority from week 22 to week 23:
- Fraser Health incidence decreased from 16 to 15 per 100K
- Interior Health incidence decreased from 18 to 12 per 100K
- Vancouver Island Health incidence decreased from 19 to 16 per 100K
- Northern Health incidence was stable from 13 and 14 per 100K
- Vancouver Coastal Health incidence decreased from 16 to 11 per 100K

Testing of MSP-funded specimens decreased from ~8,200 in week 22 to ~7,500 in week 23, and the percent positivity of MSP-funded specimens decreased from 12.5% in week 22 to 11.5% in week 23.

The per capita testing rates for MSP-funded specimens decreased from week 22 to week 23 in all HAs. In week 23, NH had the highest testing rate at 165 per 100K. The percent positivity for MSP-funded specimens decreased or remained the same from week 22 to week 23 in all HAs except for NH, where it increased from 7.6% in week 22 to 10.3% in week 23.

Age-specific incidence rates between week 22 and week 23 decreased or remained stable in all age groups. Incidence rates decreased the most in the 80+ year-olds from 127 per 100K in week 22 to 92 per 100K in week 23.

The number of people in hospital with a positive COVID-19 test decreased from 248 in week 22 to 203 in week 23. In week 23, 60+ year-olds had the highest number of people in hospital with a positive COVID-19 test, with 71 hospitalizations in 60-79 years-olds and 85 hospitalizations in 80+ year-olds.

The weekly number of deaths from any cause among people testing positive for COVID-19 was stable at 58 in week 22 and 59 in week 23. In week 23, 80+ year-olds had the highest number of deaths from any cause among people testing positive for COVID-19 (40 deaths).

In week 22, based on earliest symptom onset, 1 new outbreak in long-term care was declared.

### BELOW ARE IMPORTANT NOTES relevant to the interpretation of cases, hospitalizations, and deaths:

- Due to changes in testing strategies in BC in 2022 focusing on targeted higher risk populations, current case counts are an underestimate of the true number of COVID-19 cases in BC. This underestimation has increased compared to the period prior to the emergence of the Omicron variant in BC.
- Hospital data include admissions for people who test positive for COVID-19 through hospital screening practices, regardless of the reason for admission. Therefore, reported hospitalizations overestimate the true number of people who are hospitalized specifically due to COVID-19 infection.
- Pre-transition (case line list) deaths include COVID-19 related deaths reported by Health Authorities up to April 1, 2022. As of April 2, 2022, post-transition (automated linkage) deaths include people who died from any cause recorded in Vital Statistics within 30 days of their first positive COVID-19 lab result date. Deaths reported after the system transition use a broader definition and will overestimate the true number of deaths due to COVID-19 since death registration is recorded before the underlying cause of death is determined. Due to the change in data source for death data, the number of pre-transition deaths should not be compared to the number of post-transition deaths.
BELOW ARE IMPORTANT NOTES relevant to the interpretation of data displayed in this bulletin:

- Cases include lab confirmed, lab probable, and epi-linked cases. Case definition can be found at http://www.bccdc.ca/health-professionals/clinical-resources/case-definitions/covid-19-(novel-coronavirus). Cases include those reported in Health Authority case line lists and positive laboratory results in the Provincial Laboratory Information Solution (PLIS) up to April 1, 2022. As of April 2, 2022, only positive laboratory results in the PLIS are included and cases who are residents from outside of BC are not included.

- Episode date is defined by date of illness onset when available. When illness onset date is unavailable, earliest laboratory date is used (collection or result date); if also unavailable, then public health case report date is used. As of April 2, 2022, episode date reflects earliest laboratory date (collection or result date) only. Analyses based on episode date may better represent the timing of epidemic evolution. Episode-based tallies for recent weeks are expected to increase as case data are more complete.

- Surveillance date is defined by lab result date, if unavailable, then public health case report date is used. As of April 2, 2022, surveillance date reflects lab result date only. The weekly tally by surveillance date includes cases with illness onset date in preceding weeks.

- Hospitalizations include those reported by Health Authorities up to April 1, 2022. As of April 2, 2022, hospitalizations are defined as individuals who test positive for COVID-19 and are hospitalized as recorded in the PHSA Provincial COVID-19 Monitoring Solution (PCMS). Hospitalizations for individuals 0-19 years-old are reported by linked hospitalization episodes from the PCMS since the beginning of the pandemic. Episode date for hospitalization is defined by admission date, if unavailable, surveillance date is used. Previously only ICU admissions were presented in this report. Critical care admissions comprises a broader category than ICU admissions and therefore, the number of critical care admissions should not be compared to number of ICU admissions from previous weeks.

- Deaths include COVID-19 related deaths reported by Health Authorities up to April 1, 2022. As of April 2, 2022, deaths are any COVID-19 lab positive cases who died from any cause recorded in Vital Statistics within 30 days of their first positive lab result date. Episode date for death is defined by death date, if unavailable, surveillance date is used.

- As of April 2, 2022, data on Health Authority outbreaks are compiled from outbreak files provided by the Health Authorities.

- Laboratory PLOVER data include Medical Service Plan (MSP) funded (e.g. clinical diagnostic tests) and non-MSP funded (e.g. screening tests) specimens.

- As of June 15, 2021, per capita rates/incidences for year 2020 are based on Population Estimates 2020 (n= 5,147,772 for BC overall) and for year 2021 are based on PEOPLE 2021 estimates (n= 5,194,137 for BC overall).

- Data sources include Health Authority case line lists, PHSA Provincial COVID-19 Monitoring Solution (PCMS), Vital Statistics, laboratory PLOVER data, and aggregate outbreak files from Health Authorities.

- Integrated case data (including surveillance variables created using Health Authority case line lists, PCMS, and Vital Statistics) were extracted on June 20, 2022, laboratory PLOVER data on June 16, 2022, and Health Authority outbreak files on June 15, 2022.
A. COVID-19 case counts and epidemic curves

Due to changes in testing strategies in BC in 2022 focusing on targeted higher risk populations, current case counts are an underestimate of the true number of COVID-19 cases in BC. This underestimation has increased compared to the period prior to the emergence of the Omicron variant in BC. Up to week 23, there have been 373,382 cases for a cumulative incidence of 7,093 per 100K (Table 1, Figure 1). The provincial incidence by episode date was 14 per 100K (719 cases) in week 23, which decreased from 17 per 100K in week 22. Incidence by episode date may increase as data become more complete in recent weeks.

As shown in Figure 2, incidence rates decreased or remained stable from week 22 to week 23 in all HAs. Incidence rates decreased the most in Vancouver Coastal Health (VCH) and Interior Health (IH) from 16 per 100K in week 22 to 11 per 100K in week 23 and from 18 per 100K in week 22 to 12 per 100K in week 23, respectively. In week 23, the highest incidence rate was in Vancouver Island Health (VIHA) at 16 per 100K.

Table 1. Episode-based case tallies by Health Authority, BC, Jan 15, 2020 (week 3) – Jun 11, 2022 (week 23) (N=373,382)

<table>
<thead>
<tr>
<th>Case tallies by episode date</th>
<th>Health Authority of Residence</th>
<th>Outside Canada</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FH</td>
<td>IH</td>
<td>VIHA</td>
</tr>
<tr>
<td>Week 23, case counts</td>
<td>296</td>
<td>102</td>
<td>138</td>
</tr>
<tr>
<td>Cumulative case counts</td>
<td>164,566</td>
<td>66,566</td>
<td>36,247</td>
</tr>
<tr>
<td>Week 23, cases per 100K population</td>
<td>15</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Cumulative cases per 100K population</td>
<td>8,281</td>
<td>8,035</td>
<td>4,118</td>
</tr>
</tbody>
</table>

Figure 1. Episode-based epidemic curve (bars), surveillance date (line) and Health Authority (HA), BC Sept 13, 2020 (week 38) – Jun 11, 2022 (week 23) (N= 365,535)
B. Test rates and percent positive

**COVID-19 testing guidelines** recommend testing for people who have COVID-19 symptoms, and who are at risk of more severe disease or live/work in high-risk settings. As shown by the darker-colored bars and dotted line in Figure 3, the number of MSP-funded specimens decreased from ~8,200 in week 22 to ~7,500 in week 23, and the percent positivity of MSP-funded specimens decreased slightly from 12.5% in week 22 to 11.5% in week 23.

As shown by the dotted lines in Figure 4, the per capita testing rates for MSP-funded specimens (dotted lines in Panel A) decreased from week 22 to week 23 in all HAs. In week 23, NH had the highest testing rate at 165 per 100K. The percent positivity (dotted lines in Panel B) for MSP-funded specimens decreased or remained the same from week 22 to week 23 in all HAs except for NH, where it increased from 7.6% in week 22 to 10.3% in week 23. In week 23, percent positivity ranged from 9.7% in FH to 17.2% in VIHA.

**Figure 3.** Number of specimens tested and percent SARS-CoV-2 positive, by collection week, BC Sept 13, 2020 (week 38) – Jun 11, 2022 (week 23)
Figure 4. Testing rates and percent SARS-CoV-2 positive by Health Authority and collection week, BC Sept 13, 2020 (week 38) – Jun 11, 2022 (week 23)

Data source: Laboratory PLOVER data

C. Age profile – Testing and cases

Testing rates and percent positivity by age group
As shown by the bars in Figure 5, the per capita testing rates for MSP-funded specimens between week 22 and week 23 decreased or remained stable in all age groups except in the 10-14 year-olds, where testing rates increased slightly from 39 per 100K in week 22 to 43 per 100K in week 23.

As shown by the black dots in Figure 5, percent positivity between week 22 and week 23 decreased or remained stable in all age groups. In week 23, percent positivity ranged from 4.6% in 10-14 year-olds to 15.1% in 80+ year-olds.

Case distribution and weekly incidence by age group
As shown in Figure 6, age-specific incidence rates between week 22 and week 23 decreased or remained stable in all age groups. Incidence rates decreased the most in the 80+ year-olds from 127 per 100K in week 21 to 92 per 100K in week 23. Age-specific incidence may increase as data become more complete.
Figure 5. Average weekly SARS-CoV-2 MSP testing rates and MSP percent positive by known age group, BC May 07, 2022 (week 18) – Jun 11, 2022 (week 23)

Data source: Laboratory PLOVER data

Figure 6. Weekly age-specific COVID-19 incidence per 100K population by epidemiological week, BC Sept 13, 2020 (week 38) – Jun 11, 2022 (week 23) (N= 365,441)
D. Severe outcome counts and epi-curve

Hospital data include admissions for people who test positive for COVID-19 through hospital screening practices, regardless of the reason for admission. Therefore, reported hospitalizations overestimate the true number of people who are hospitalized specifically due to COVID-19 infection. The number of people in hospital with a positive COVID-19 test decreased from 248 in week 22 to 203 in week 23. In week 23, 60+ year-olds had the highest number of people in hospital with a positive COVID-19 test, with 71 hospitalizations in 60-79 years-olds and 85 hospitalizations in 80+ year-olds.

As of April 2, 2022, death data include people who test positive for COVID-19 and died from any cause (COVID-19 or non-COVID-19) within 30 days of their first positive lab result date. The weekly number of deaths from any cause among people testing positive for COVID-19 was stable at 58 in week 22 and 59 in week 23. In week 23, 80+ year-olds had the highest number of deaths from any cause among people testing positive for COVID-19 (40 deaths) (Table 2, Figure 8). Detailed information about outcomes by vaccination status can be accessed at BCCDC COVID-19 Regional Surveillance Dashboard.

Cumulatively, there have been 33 confirmed cases of Multi-system Inflammatory Syndrome in children and adolescents (MIS-C) in BC since January 1, 2020. There have been no new confirmed cases of MIS-C since the last report. The median age of all cases is 9 years old (range from 4 months old to 16 years old).

Table 2. COVID-19 severe outcomes by episode date, Health Authority of residence, BC Jan 15, 2020 (week 3) – Jun 11, 2022 (week 23)

<table>
<thead>
<tr>
<th>Severe outcomes by episode date</th>
<th>Health Authority of residence</th>
<th>Residing outside of Canada</th>
<th>Total n/Na (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FH</td>
<td>IH</td>
<td>VIHA</td>
</tr>
<tr>
<td>Week 23, hospitalizations</td>
<td>96</td>
<td>17</td>
<td>46</td>
</tr>
<tr>
<td>Cumulative hospitalizations</td>
<td>11,034</td>
<td>4,107</td>
<td>2,204</td>
</tr>
<tr>
<td>Week 23, critical care admissionsb</td>
<td>18</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Cumulative critical care admissionsb</td>
<td>2,347</td>
<td>952</td>
<td>392</td>
</tr>
<tr>
<td>Week 23, deaths</td>
<td>17</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>Cumulative deaths, pre-transition (case line list)c</td>
<td>1,348</td>
<td>367</td>
<td>241</td>
</tr>
<tr>
<td>Cumulative deaths, post-transition (automated linkage)f</td>
<td>218</td>
<td>150</td>
<td>134</td>
</tr>
</tbody>
</table>

a. Cases with unknown outcome are included in the denominators (i.e. assumed not to have the specified severe outcome).
b. Due to the change in data source for hospitalization data, ICU admissions are no longer available. Critical care admissions are now being provided, which comprises a broader category than ICU admissions (please see Important Notes on Page 2 for more information). Number of critical care admissions should not be compared to number of ICU admissions from previous weeks.
c. Pre-transition (case line list) deaths include COVID-19 related deaths reported by Health Authorities up to April 1, 2022. As of April 2, 2022, post-transition (automated linkage) deaths are any COVID-19 lab positive cases who died from any cause recorded in Vital Statistics within 30 days of their first positive lab result date. Deaths reported after the system transition use a broader definition and will overestimate the true number of deaths due to COVID-19 since death registration is recorded before the underlying cause of death is determined. Due to the change in data source for death data, the number of pre-transition deaths should not be compared to the number of post-transition deaths.
Figure 8. Weekly COVID-19 hospital admissions (A) and deaths (B) by age groups, BC, Sept 13, 2020 (week 38) – Jun 11, 2022 (week 23)

a. Among those with available age information only.
**E. Age profile, severe outcomes**

**Table 3** displays the distribution of cases and severe outcomes. In week 23, median age of hospital admissions, critical care admissions, pre-transition deaths, and post-transition deaths with underlying cause of death (UCD) as COVID-19 was 66 years, 63 years, 82 years, and 87 years, respectively.

In the past four weeks (from week 20 to week 23), there has been a weekly average of 3 deaths in those <60 years of age, 5 deaths in 60-69 year-olds, 16 deaths in 70-79 year-olds and 41 deaths in the 80+ year-olds (data not shown). The number of deaths may increase over time as data becomes more complete.

**Table 3: COVID-19 cases, hospitalizations, critical care admissions, and deaths by age group, BC, Jan 15, 2020 (week 3) – Jun 11, 2022 (week 23) (N= 373,351)**

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>Cases</th>
<th>Hospitalizations n (%)</th>
<th>Critical care admissions(b) n (%)</th>
<th>Pre-transition (case line list) deaths(c) n (%)</th>
<th>Post-transition (automated linkage) deaths(c)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N (case line list)</td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td>UCD as COVID-19(d) n (%)</td>
</tr>
<tr>
<td>&lt;10</td>
<td>30,448</td>
<td>511 (2)</td>
<td>63 (&lt;1)</td>
<td>2 (&lt;1)</td>
<td>1 (&lt;1)</td>
</tr>
<tr>
<td>10-19</td>
<td>35,704</td>
<td>335 (1)</td>
<td>47 (&lt;1)</td>
<td>0 (&lt;1)</td>
<td>0 (&lt;1)</td>
</tr>
<tr>
<td>20-29</td>
<td>72,947</td>
<td>1,306 (2)</td>
<td>195 (&lt;1)</td>
<td>6 (&lt;1)</td>
<td>0 (&lt;1)</td>
</tr>
<tr>
<td>30-39</td>
<td>69,760</td>
<td>2,247 (3)</td>
<td>409 (1)</td>
<td>31 (&lt;1)</td>
<td>2 (&lt;1)</td>
</tr>
<tr>
<td>40-49</td>
<td>53,930</td>
<td>2,168 (4)</td>
<td>568 (1)</td>
<td>64 (&lt;1)</td>
<td>0 (&lt;1)</td>
</tr>
<tr>
<td>50-59</td>
<td>43,713</td>
<td>3,006 (7)</td>
<td>1,016 (2)</td>
<td>166 (&lt;1)</td>
<td>3 (&lt;1)</td>
</tr>
<tr>
<td>60-69</td>
<td>30,024</td>
<td>4,042 (13)</td>
<td>1,376 (5)</td>
<td>353 (1)</td>
<td>17 (1)</td>
</tr>
<tr>
<td>70-79</td>
<td>17,276</td>
<td>4,618 (27)</td>
<td>1,246 (7)</td>
<td>655 (4)</td>
<td>34 (1)</td>
</tr>
<tr>
<td>80-89</td>
<td>12,720</td>
<td>4,114 (32)</td>
<td>532 (4)</td>
<td>989 (10)</td>
<td>73 (3)</td>
</tr>
<tr>
<td>90+</td>
<td>6,829</td>
<td>1,733 (25)</td>
<td>71 (1)</td>
<td>736 (15)</td>
<td>82 (5)</td>
</tr>
<tr>
<td>Total</td>
<td>373,351</td>
<td>24,080</td>
<td>5,523</td>
<td>3,002</td>
<td>212</td>
</tr>
<tr>
<td>Median age</td>
<td>36</td>
<td>66</td>
<td>63</td>
<td>82</td>
<td>87</td>
</tr>
</tbody>
</table>

a. Among those with available age information only.  
b. Due to the change in data source for hospitalization data, ICU admissions are no longer available. Critical care admissions are now being provided, which comprises a broader category than ICU admissions (please see Important Notes on Page 2 for more information). Number of critical care admissions should not be compared to number of ICU admissions from previous weeks.  
c. Pre-transition (case line list) deaths include COVID-19 related deaths reported by Health Authorities up to April 1, 2022. As of April 2, 2022, post-transition (automated linkage) deaths are any COVID-19 lab positive cases who died from any cause recorded in Vital Statistics within 30 days of their first positive lab result date. Deaths reported after the system transition use a broader definition and will overestimate the true number of deaths due to COVID-19 since death registration is recorded before the underlying cause of death is determined. Due to the change in data source for death data, the number of pre-transition deaths should not be compared to the number of post-transition deaths.  
d. Since underlying cause of death (UCD) takes approximately 8 weeks to be recorded, all-cause mortality is initially reported and then retrospective evaluations of underlying cause of death are provided here to better understand true COVID-19 mortality. UCD as COVID-19 are deaths that have been determined to be caused by COVID-19 in their Vital Stats record. UCD as non-COVID-19 are deaths that have been determined to be not attributable to COVID-19 in their Vital Stats record that are reported as deaths due to a lab positive COVID-19 test within 30 days of death. UCD pending are all post-transition deaths that do not yet have a recorded UCD.
**Figure 9** displays the underlying cause of death (UCD) as recorded in Vital Statistics. From the weeks of April 3-24, 2022, where the UCD has been reported for 98% of deaths, on average, 45% of deaths occurring within 30 days of a first lab positive result of COVID-19 had an UCD of COVID-19. Deaths pending an UCD are expected to decrease over time.

**Figure 9: Pre- and post-transition deaths by underlying cause of death, BC, January 23, 2022 (week 4) to June 11, 2022 (week 23)**

- Pre-transition (case line list) deaths include COVID-19 related deaths reported by Health Authorities up to April 1, 2022. As of April 2, 2022, post-transition (automated linkage) deaths are any COVID-19 lab positive cases who died from any cause recorded in Vital Statistics within 30 days of their first positive lab result date. Deaths reported after the system transition use a broader definition and will overestimate the true number of deaths due to COVID-19 since death registration is recorded before the underlying cause of death is determined. Due to the change in data source for death data, the number of pre-transition deaths should not be compared to the number of post-transition deaths.

- Since underlying cause of death (UCD) takes approximately 8 weeks to be recorded, all-cause mortality is initially reported and then retrospective evaluations of underlying cause of death are provided here to better understand true COVID-19 mortality. UCD as COVID-19 are deaths that have been determined to be caused by COVID-19 in their Vital Stats record. UCD as non-COVID-19 are deaths that have been determined to be not attributable to COVID-19 in their Vital Stats record that are reported as deaths due to a lab positive COVID-19 test within 30 days of death. UCD pending are all post-transition deaths that do not yet have a recorded UCD.

**F. Care facility outbreaks**

As shown in **Table 4** and **Figure 10**, 675 care facility (acute care and long-term care settings) outbreaks were reported in total in BC to the end of week 23. In week 23, based on earliest symptom onset date (if unavailable, then outbreak declared date is
used), 1 new care facility outbreaks was declared in long-term care. In the past four weeks (from week 20 to week 23), there has been a weekly average of 2 care facility outbreaks.

Table 4. COVID-19 care facility outbreaks by earliest case onset, associated cases and deaths by episode date, BC Jan 15, 2020 (week 3) – Jun 11, 2022 (week 23) (N=675)

<table>
<thead>
<tr>
<th>Care facility outbreaks and cases by episode date</th>
<th>Outbreaks</th>
<th>Cases</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Residents</td>
<td>Staff/other</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>Residents</td>
<td>Staff/other</td>
<td>Total</td>
</tr>
<tr>
<td>Week 23, Care Facility Outbreaks</td>
<td>1</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>Cumulative, Care Facility Outbreaks</td>
<td>675</td>
<td>9,549</td>
<td>3,817</td>
</tr>
</tbody>
</table>

Figure 10. COVID-19 care facility outbreaks by earliest case onset, facility type (A) and Health Authority (B), BC Sept 13, 2020 (week 38) – Jun 11, 2022 (week 23) (N=607)

a. Case and death counts include PCR positive cases only for outbreaks in NHA and VIHA. Vancouver Coastal Health, Fraser Health Authority, and Interior Health Authority outbreaks may also include those diagnosed by rapid antigen tests or considered as suspect reinfection.

b. Earliest dates of onset of outbreak cases are subject to change as investigations and data are updated. If unavailable, outbreak declared date is used.

c. New outbreaks reported since the last report with an earliest case onset date (if unavailable, outbreak declared date is used) prior to the current reporting week will be included in the cumulative care facility outbreak total.

d. Cases with unknown role are included in the case count for Staff/other.

e. Data might be incomplete or vary from what was reported previously due to updates by Health Authorities.
G. Wastewater surveillance

The BCCDC and Metro Vancouver measure SARS-CoV-2 in wastewater at five wastewater treatment plants (treating wastewater from 50% of BC’s population). To account for changing wastewater volume due to rainfall or snowmelt, SARS-CoV-2 concentrations are normalized to wastewater flow. Normalized SARS-CoV-2 wastewater levels (measured as viral copies per day) are shown alongside incident COVID-19 cases in each wastewater catchment area in Figure 10 and Figure 11. The BCCDC’s test results are obtained from the liquid fraction of the wastewater sample. Other organizations, such as the National Microbiology Laboratory, test from the solid fraction of wastewater and therefore, their results are not directly comparable.

Key messages with results through to June 18, 2022:
- Generally, viral loads detected at VCH wastewater treatment plants are decreasing, while there are minimal/modest increases at FHA wastewater treatment plants.
  - VCH
    - Viral loads at Iona Island plant (Vancouver) have decreased by 56% over the past 3 weeks.
    - Viral loads at Lions Gate plant (North Shore) have decreased by 67% over the past 5 weeks.
    - After two weeks of modest increases, viral loads at Lulu Island (Richmond) have decreased by 10% over the past week.
  - FHA
    - After decreasing over 7 weeks, viral loads at Annacis Island plant (Fraser North and South) have stabilized.
    - After decreasing over 6 weeks, viral loads at Northwest Langley plant (Northwest Langley) have stabilized.

Figure 10. Wastewater surveillance, FH
Figure 11. Wastewater surveillance, VCH

- Iona Island waste water plant (approximate region: Vancouver)
- Lulu Island waste water plant (approximate region: Richmond)
- Lions Gate waste water plant (approximate region: North Shore)
H. Additional resources

For maps and geographical distribution of cases and vaccinations, visit the BCCDC COVID-19 Regional Surveillance Dashboard here: http://www.bccdc.ca/health-professionals/data-reports/covid-19-surveillance-dashboard

Variant of concern (VOC) findings are available weekly here: http://www.bccdc.ca/health-info/diseases-conditions/covid-19/data#variants

For local, national, and global comparisons of BC to other jurisdictions on key epidemiological metrics, visit the BCCDC COVID-19 Epidemiology App here: https://bccdc.shinyapps.io/covid19_global_epi_app/

I. Appendix

**Vaccination phases** defined by vaccine eligibility of target populations in BC

**Vaccination Phase 1 (December 2020 – February 2021)**
Target populations include residents, staff and essential visitors to long-term care settings; individuals assessed and awaiting a long-term care placement; health care workers providing care for COVID-19 patients; and remote and isolated Indigenous communities.

**Vaccination Phase 2 (February 2021 – April 2021)**
Target populations include seniors, age ≥80; Indigenous peoples age ≥65 and Indigenous Elders; Indigenous communities; hospital staff, community general practitioners and medical specialists; vulnerable populations in select congregate settings; and staff in community home support and nursing services for seniors.

**Vaccination Phase 3 (April 2021 – May 2021)**
Target populations include people aged 60-79 years, Indigenous peoples aged 18-64 and people aged 16-74 who are clinically extremely vulnerable.

**Vaccination Phase 4 (May 2021 – November 2021)**
Target populations include everyone 12+ years. In September, third dose is available for people who are clinically extremely vulnerable.

**Vaccination Phase 5 (November 2021 – February 2022)**
Target populations include everyone 5+. Children aged 5-11 are eligible at the end of November. Everyone 18 and older will be invited to get a booster dose within 6-8 months of their second dose.

**Vaccination Phase 6 (February 2022 – April 2022)**
Target populations include everyone 5+. Everyone 12 and older will be invited to get a booster dose within 6-8 months of their second dose.

**Vaccination Phase 7 (April 2022 – Present)**
Target populations include everyone 5+. Everyone 12 and older will be invited to get a booster dose within 6-8 months of their second dose. People in long-term care, assisted living, seniors and Indigenous people can get a second booster 6 months after the date of the first booster.