

British Columbia (BC) COVID-19 Situation Report

Week 2: January 09- January 15, 2022

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| Epidemic curve and regional incidence | 2 | Due to changes in testing strategies in BC, case counts in this report likely underestimate 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 275 per 100K (14,464 cases) in week 2. |
| Test rates and % positive | 3 | Incidence by Health Authority decreased from week 1 to week 2: <ul style="list-style-type: none"> Fraser Health incidence decreased from 398 to 252 per 100K Interior Health incidence decreased from 362 to 342 per 100K Vancouver Island Health incidence decreased from 398 to 262 per 100K Northern Health incidence decreased from 453 to 413 per 100K Vancouver Coastal Health incidence decreased from 257 to 242 per 100K |
| Age profile, testing and cases | 4 | Testing of MSP-funded specimens decreased from the peak of ~88,900 in week 1 to ~45,900 in week 2. The positivity of MSP-funded specimens remained stable at 33.3% in week 2. |
| Severe outcomes | 6 | The per capita testing rates decreased in all HAs between week 1 and week 2. Testing rates decreased from week 1 to week 2 in all age groups, except the 0-4 age group. |
| Age profile, severe outcomes | 7 | Age-specific incidences decreased or remained stable from week 1 to week 2 across all age groups, except for the <10 and 80+ age groups. Incidence rates increased in children <10 years old from 371 per 100K in week 1 to 401 per 100K in week 2, and in seniors 80+ years old from 268 per 100K in week 1 to 405 per 100K in week 2. |
| Care facility outbreaks | 8 | The number of hospital admissions increased from 444 in week 1 to 632 in week 2. In week 2, 60-79 year-olds had the highest number of hospital admissions (213 hospitalizations). |
| Modeling | 8 | The weekly number of deaths increased from 25 in week 1 to 48 in week 2. Those aged 80+ accounted for the highest number of deaths in week 2 (27 deaths). |
| Wastewater surveillance | 8 | By case of earliest onset date, 22 new outbreaks were reported in healthcare settings in week 1. 20 deaths reported in week 2 were associated with care facility outbreaks. |
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BELOW ARE IMPORTANT NOTES relevant to the interpretation of data displayed in this bulletin:

- Episode dates are defined by dates of illness onset. When those dates are unavailable, earliest laboratory date is used (collection or result date); if also unavailable, then public health care report date is used. Analyses based on episode date (or illness onset date) may better represent the timing of epidemic evolution. Episode-based tallies for recent weeks are expected to increase as case data, in particular onset dates, are more complete.
- The weekly tally by surveillance date (result date, if unavailable then report date) includes cases with illness onset date in preceding weeks. Episode dates for hospital admission, ICU, and death are defined by admission and death dates. When unavailable, surveillance date is used.
- 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).
- Laboratory data include Medical Service Plan (MSP) funded (e.g. clinical diagnostic tests) and non-MSP funded (e.g. screening tests) specimens.
- Data sources include: Health Authority case line list data, laboratory PLOVER data, PHSA Provincial Immunization Registry (PIR), and hospital data (PHSA Provincial COVID19 Monitoring Solution (PCMS)).
- Case data were extracted on January 24, 2022, laboratory data on January 21, 2022, PIR vaccine coverage date on January 21, 2022, and PCMS hospitalization data on January 24, 2022.

A. COVID-19 case counts and epidemic curves

Due to changes in testing strategies in BC, case counts in this report likely underestimate 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 2, there have been 299,798 cases for a cumulative incidence of 5,689 per 100K (Table 1, Figure 1). The provincial incidence by episode date was 275 per 100K (14,464 cases) in week 2, which has decreased from the most recent peak of 406 per 100K in week 52. Incidence by episode date may increase as data become more complete in recent weeks.

As shown in Figure 2, incidence has decreased in all HAs from week 1 to week 2. Incidence decreased most dramatically in Fraser Health (FH) and Vancouver Island Health (VIHA), from 398 per 100K in week 1 to 252 per 100K in week 2 for FH, and from 354 per 100K in week 1 to 262 per 100K in week 2 in VIHA. Incidence decreased from week 1 to week 2 in Interior Health (IH) (from 362 to 342 per 100K), Northern Health (NH) (from 453 to 413 per 100K), and Vancouver Coastal Health (VCH) (from 257 to 242 per 100K). These rates may increase as data become more complete.

Table 1. Episode-based case tallies by Health Authority, BC, Jan 15, 2020 (week 3) – Jan 15, 2022 (week 2) (N= 299,789)

| Case tallies by episode date | Health Authority of Residence | | | | | Outside Canada | Total |
|---------------------------------------------|-------------------------------|---------------|---------------|---------------|---------------|----------------|----------------|
| | FH | IH | VIHA | NH | VCH | | |
| Week 2, case counts | 5,000 | 2,830 | 2,309 | 1,263 | 3,050 | 12 | 14,464 |
| Cumulative case counts | 143,746 | 45,479 | 24,467 | 22,397 | 63,365 | 335 | 299,789 |
| Week 2, cases per 100K population | 252 | 342 | 262 | 413 | 242 | NA | 275 |
| Cumulative cases per 100K population | 7,234 | 5,490 | 2,780 | 7,317 | 5,022 | NA | 5,689 |

Figure 1. Episode-based epidemic curve (bars), surveillance date (line) and Health Authority (HA), BC Sept 13, 2020 (week 38) – Jan 15, 2022 (week 2) (N= 291,942)

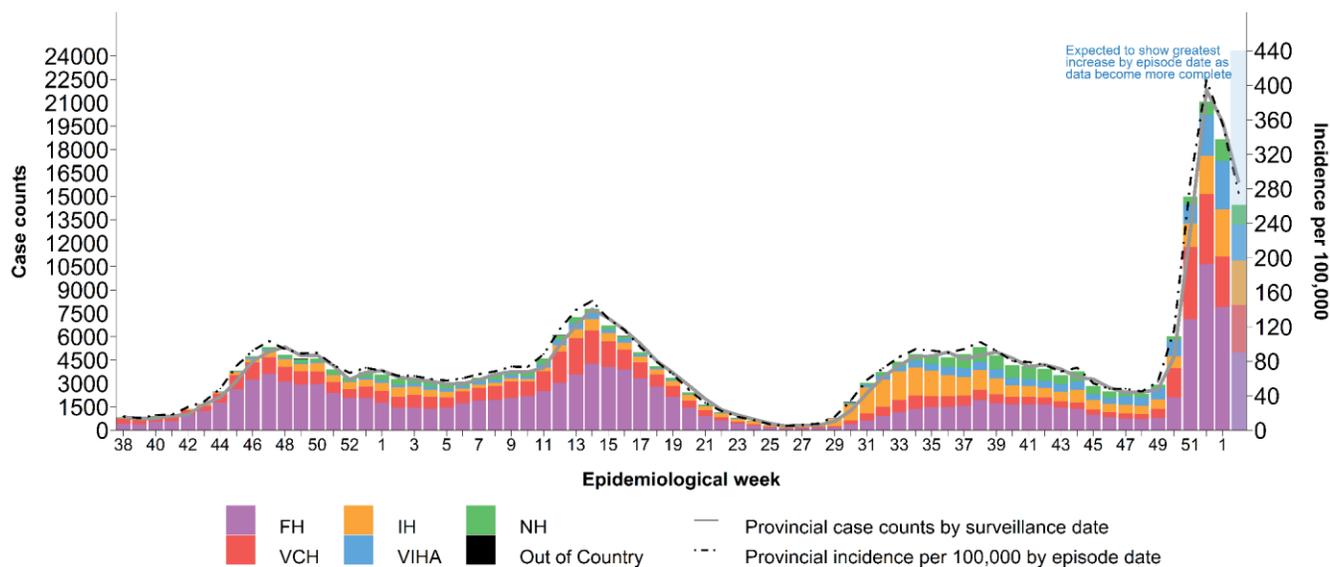
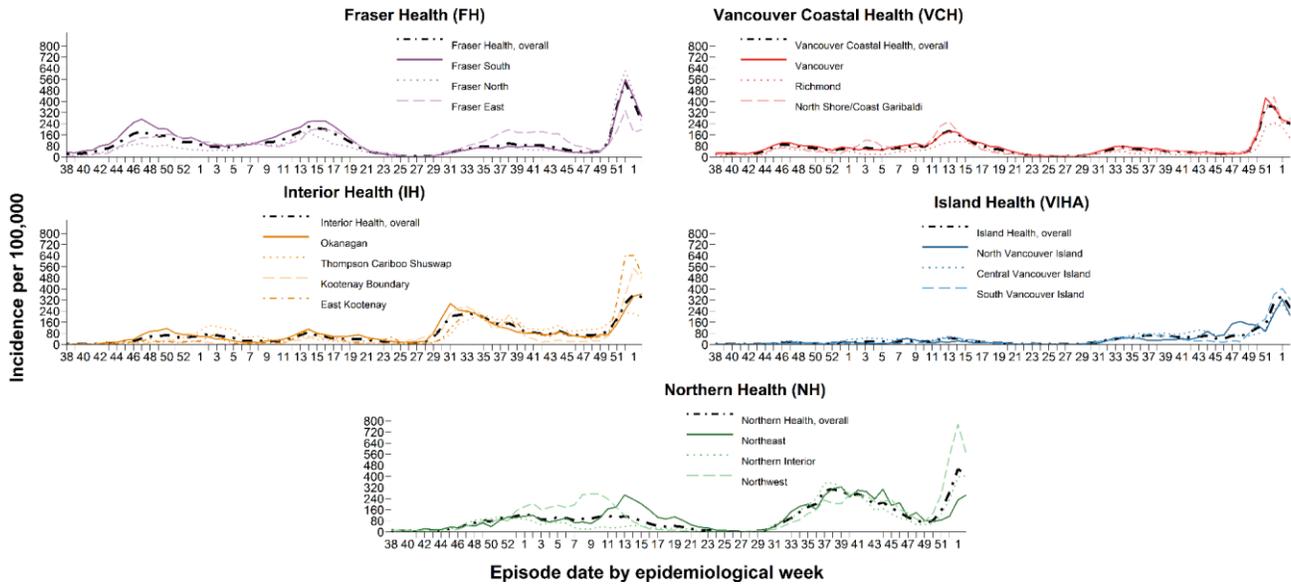


Figure 2. Weekly episode-based incidence rates by HA and health service delivery area (HSDA), BC Sept 13, 2020 (week 38) – Jan 15, 2022 (week 2) (N= 291,942)



B. Test rates and percent positive

[COVID-19 testing guidelines](#) have been updated recently - testing is recommended for people who have COVID-19 symptoms, and are at risk of more severe disease or live/work in high-risk settings. As shown by the darker-colored bars in [Figure 3](#), testing of MSP-funded specimens has decreased from the peak of ~88,900 in week 51 to ~45,900 in week 2. The positivity of MSP-funded specimens remained stable between week 1 (33.7%) and week 2 (33.3%).

As shown in [Figure 4](#), the per capita testing rates (Panel A) decreased in all HAs from week 1 to week 2. Testing rates decreased the most in FH and VIHA, from 1,263 per 100K in week 1 to 766 per 100K in week 2 in FH, and from 899 per 100K in week 1 to 690 per 100K in week 2 in VIHA. In week 2, NH had the highest testing rate at 1,331 per 100K.

Percent positivity (Panel B) for MSP-only specimens decreased in VIHA and NH, increased in VCH and IH, and remained stable in FH from week 1 to week 2. Percent positivity in week 2 ranged from 31.4% in NH to 41.3% in VCH.

Figure 3. Number of specimens tested and percent SARS-CoV-2 positive, by collection week, BC Sept 13, 2020 (week 38) – Jan 15, 2022 (week 2)

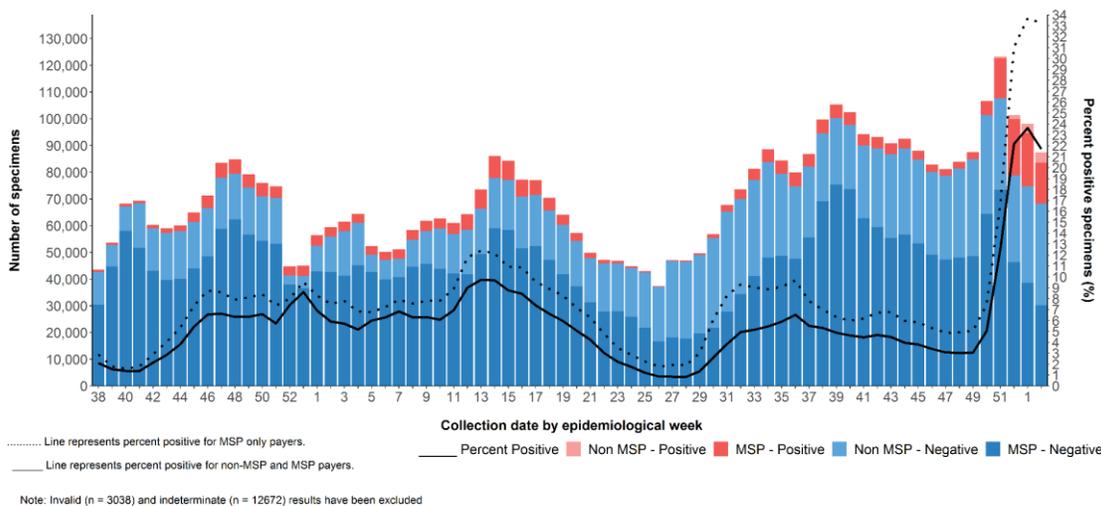
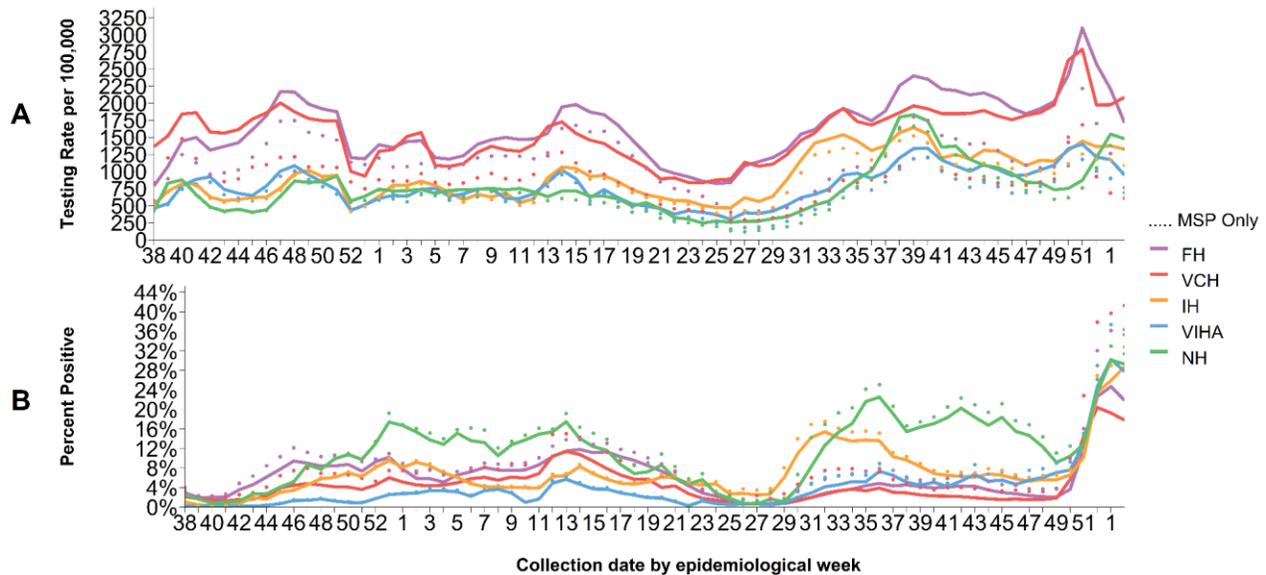


Figure 4. Testing rates and percent SARS-CoV-2 positive by Health Authority and collection week, BC Sept 13, 2020 (week 38) – Jan 15, 2022 (week 2)



Data source: laboratory PLOVER data

C. Age profile – Testing and cases

Testing rates and percent positivity by age group

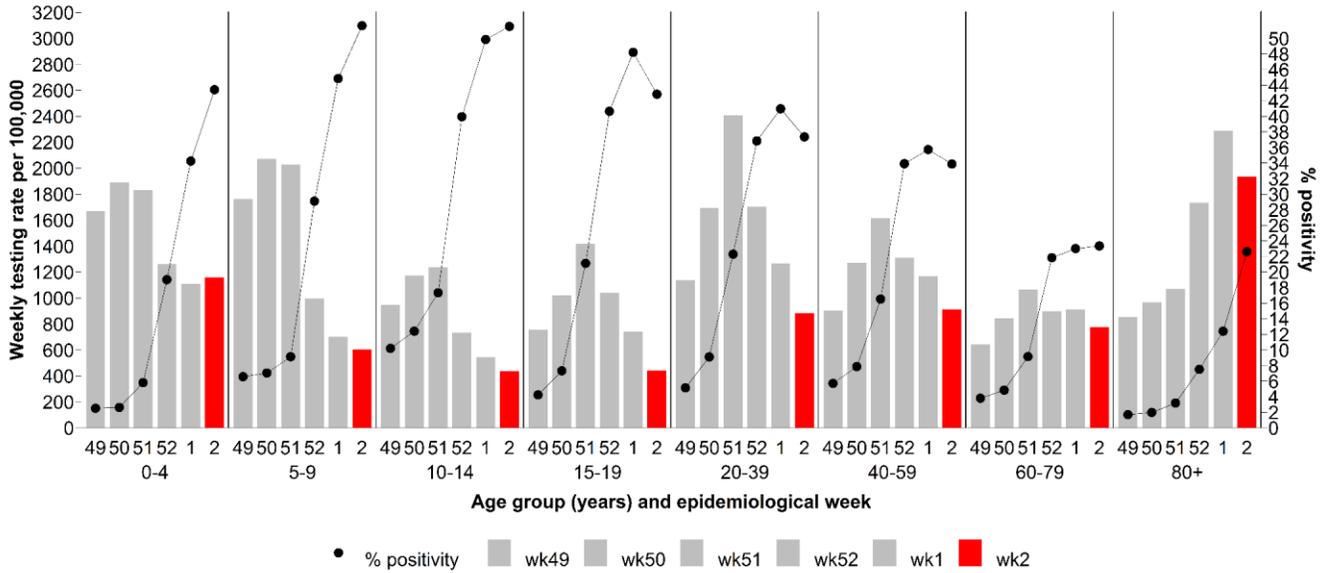
As shown by the bars in [Figure 5](#), testing rates decreased from week 1 to week 2 in all age groups, except the 0-4 age group where the testing rate increased slightly from 1,109 per 100K to 1,158 per 100K. Testing rate in week 2 was highest in those aged 80+ at 1,937 per 100K.

As shown by the black dots in [Figure 5](#), the percent positivity decreased in the 15-19, 20-39, and 40-59 age groups, increased in the 0-4, 5-9, 10-14, and 80+ age groups, and remained stable in the 60-79 year-olds from week 1 to week 2. The highest percent positivity in week 2 was in the 5-9 and 10-14 year-olds at 51.6% and 51.5%, respectively.

Case distribution and weekly incidence by age group

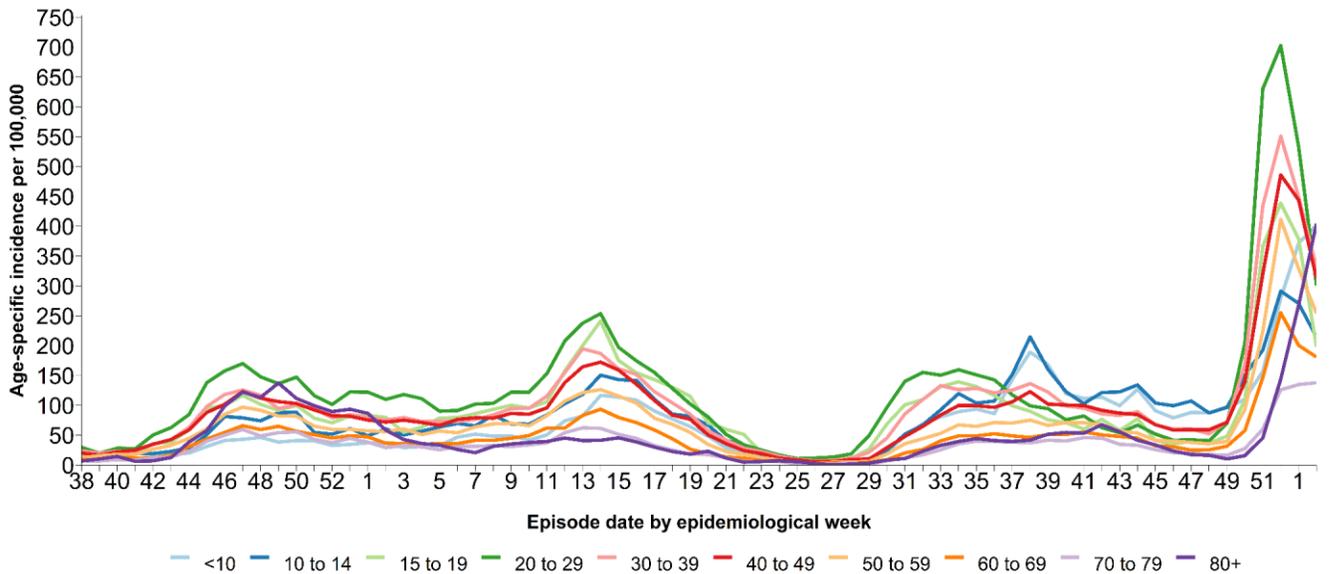
As shown in [Figure 6](#), age-specific incidence rates decreased or remained stable from week 1 to week 2 across all age groups, except for the <10 and 80+ age groups. Incidence rates increased in children <10 years old from 371 per 100K in week 1 to 401 per 100K in week 2, and in seniors 80+ years old from 268 per 100K in week 1 to 405 per 100K in week 2. Age-specific incidences may increase as data become more complete. Detailed information about age-specific incidence by vaccination status can be accessed at [BCCDC COVID-19 Regional Surveillance Dashboard](#).

Figure 5. Average weekly SARS-CoV-2 MSP testing rates and MSP percent positive by known age group, BC Dec 10, 2022 (week 49) – Jan 15, 2022 (week 2)



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) – Jan 15, 2022 (week 2) (N= 291,890)



D. Severe outcome counts and epi-curve

The number of hospital admissions increased from 444 in week 1 to 632 in week 2. In week 2, 60-79 year-olds had the highest number of hospital admissions (213 hospitalizations). Hospital data include admissions for people diagnosed with COVID-19 through hospital SARS-COV-2 screening practices, and will overestimate the number of people who are hospitalized specifically due to severe symptoms of COVID-19 infection. The weekly number of deaths increased from 25 in week 1 to 48 in week 2. Those aged 80+ accounted for the highest number of deaths in week 2 (27 deaths) ([Table 2, Figure 8](#)). Detailed information about outcomes by vaccination status can be accessed at [BCCDC COVID-19 Regional Surveillance Dashboard](#).

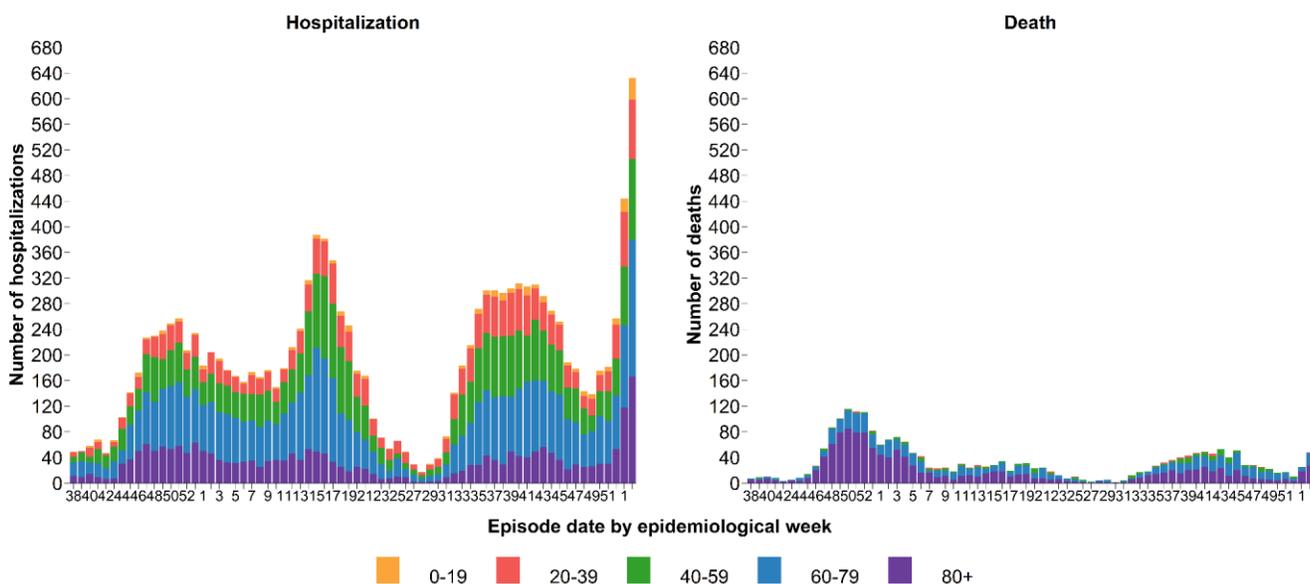
Cumulatively, there have been 23 confirmed cases of [Multi-system Inflammatory Syndrome in children and adolescents \(MIS-C\)](#) in BC since January 1, 2020. There has been one new confirmed case of MIS-C since the last report. The median age of all cases is 9 years old (range from 1 to 16 years old).

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

| Severe outcomes by episode date | Health Authority of residence | | | | | Residing outside of Canada | Total n/N ^a (%) |
|------------------------------------------------|-------------------------------|--------------|------------|--------------|--------------|----------------------------|----------------------------|
| | FH | IH | VIHA | NH | VCH | | |
| Week 2, hospitalizations | 322 | 94 | 41 | 19 | 156 | 0 | 632 |
| Cumulative hospitalizations^b | 6,869 | 2,272 | 886 | 1,460 | 2,860 | 14 | 14,361/299,789 (5) |
| Week 2, ICU admissions | 29 | 10 | 9 | 6 | 24 | 0 | 78 |
| Cumulative ICU admissions^b | 1,274 | 651 | 257 | 349 | 710 | 2 | 3,243/299,789 (1) |
| Week 2, deaths | 26 | 4 | 7 | 1 | 10 | 0 | 48 |
| Cumulative deaths | 1,172 | 306 | 157 | 281 | 593 | 0 | 2,509/299,789 (1) |

- a. Cases with unknown outcome are included in the denominators (i.e. assumed not to have the specified severe outcome).
- b. Data source: Health Authority case line lists only. Data may be incomplete and subject to change

Figure 8. Weekly COVID-19 hospital admissions and deaths by age groups, BC, Sept 13, 2020 (week 38) – Jan 15, 2022 (week 2)



Data sources: Health Authority case line list data and PHSA Provincial Immunization Registry

E. Age profile, severe outcomes

Table 3 displays the distribution of cases and severe outcomes. In week 2, median age of hospital admissions, ICU admissions and deaths was 62 years, 62 years and 82 years, respectively, based on Health Authority case line lists only (data not shown).

Since week 49, there has been a weekly average of 1 death in those <50 years of age, 1 death in 50-59 year-olds, 3 deaths in 60-69 year-olds, 8 deaths in the 70-79 year-olds, and 11 deaths in the 80+ year-olds (data not shown). The number of deaths may increase over time as data becomes more complete.

Table 3: Age distribution: COVID-19 cases, hospitalizations, ICU admissions, deaths, and BC population by age group Jan 15, 2020 (week 3) – Jan 15, 2022 (week 2) (N= 299,718)^a

| Age group (years) | Cases n (%) | Hospitalizations n (%) ^b | ICU n (%) | Deaths n (%) |
|-------------------------------|----------------|-------------------------------------|--------------|--------------|
| <10 | 24,097 | 220 (<1) | 18 (<1) | 2 (<1) |
| 10-19 | 32,224 | 182 (<1) | 31 (<1) | 0 (<1) |
| 20-29 | 63,818 | 865 (1) | 108 (<1) | 6 (<1) |
| 30-39 | 56,854 | 1,527 (3) | 283 (<1) | 31 (<1) |
| 40-49 | 43,852 | 1,619 (4) | 361 (1) | 54 (<1) |
| 50-59 | 35,647 | 2,222 (6) | 656 (2) | 141 (<1) |
| 60-69 | 23,252 | 2,634 (11) | 816 (4) | 296 (1) |
| 70-79 | 11,146 | 2,586 (23) | 703 (6) | 558 (5) |
| 80-89 | 6,079 | 1,874 (31) | 250 (4) | 817 (13) |
| 90+ | 2,749 | 670 (24) | 26 (1) | 604 (22) |
| Total | 299,718 | 14,361 | 3,243 | 2,509 |
| Median age^c | 34 | 62 | 62 | 82 |

- Among those with available age information only.
- Data sources: Health Authority case line lists and a subset of PHSA Provincial COVID19 Monitoring Solution (PCMS) data for children <20 years of age. PCMS data were included as of June 8 2021. Due to this change in data source, additional admissions that occurred since the start of the pandemic are now included in age groups 0-9 and 10-19 years.
- Median ages calculated are based on Health Authority case line lists only.

F. Care facility outbreaks

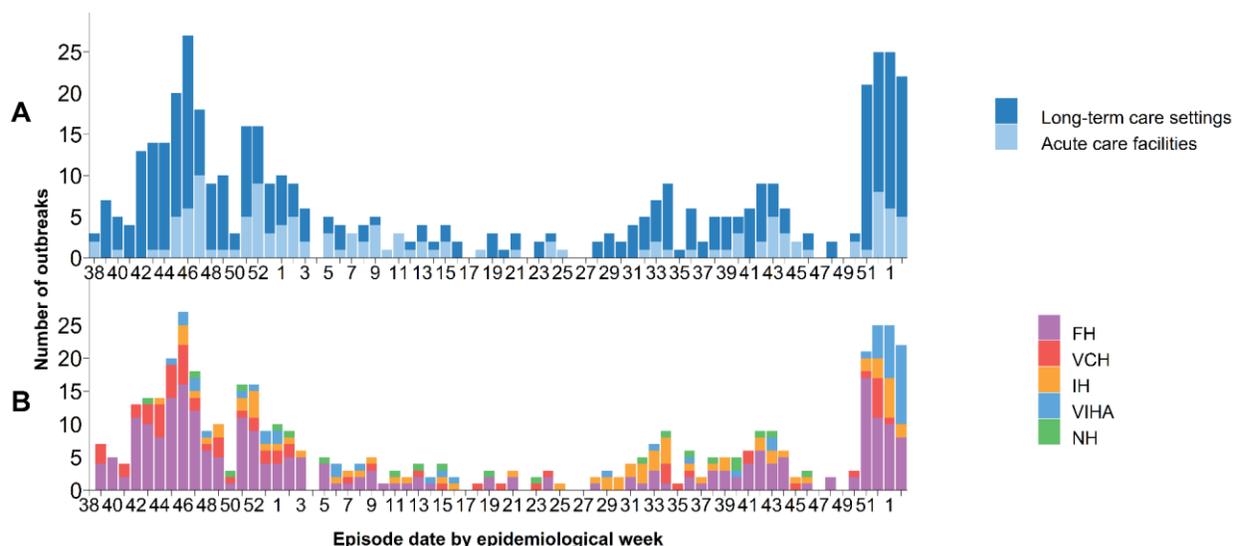
As shown in [Table 4](#) and [Figure 9](#), 523 care facility (acute and long-term care setting) outbreaks were reported in total in BC to the end of week 2. In week 2, 22 new outbreaks were declared, based on earliest case onset date. 20 of the 48 deaths reported in week 2 were associated with care facility outbreaks.

Table 4. COVID-19 care facility^{a,b} outbreaks by earliest case onset^{a,c}, associated cases and deaths by episode date, BC^d Jan 15, 2020 (week 3) – Jan 15, 2022 (week 2) (N=523)

| Care facility outbreaks and cases by episode date | Outbreaks | Cases | | | | Deaths | | | |
|---------------------------------------------------|------------|--------------|--------------|----------|--------------|--------------|-------------|----------|--------------|
| | | Residents | Staff/other | Unknown | Total | Residents | Staff/other | Unknown | Total |
| Week 2, Care Facility Outbreaks | 22 | 399 | 103 | 0 | 502 | 20 | 0 | 0 | 20 |
| Cumulative, Care Facility Outbreaks | 523 | 5,508 | 3,124 | 8 | 8,640 | 1,247 | 0 | 0 | 1,247 |

a. New outbreaks reported since the last report with an earliest case onset date prior to the current reporting week will be included in the cumulative care facility outbreak total.

Figure 9. COVID-19 care facility^b outbreaks by earliest case onset^c, facility type (A) and Health Authority (B), BC^d Sept 13, 2020 (week 38) – Jan 15, 2022 (week 2) (N=455)



b. Care facility settings include acute care or long-term care settings (defined as long-term care facility or assisted living).
 c. Earliest dates of onset of outbreak cases are subject to change as investigations and data are updated.
 d. As of week 46, VCH and FH no longer declare outbreaks with single staff cases unless there is evidence of transmission within the facility.

G. Modeling

Current Rt estimates for BC are considered unreliable due to recent and ongoing changes in the ascertainment of case counts, including capacity limitations of PCR testing and the use of rapid antigen tests.

H. Wastewater surveillance

The BCCDC and Metro Vancouver have been testing for SARS-CoV-2 in wastewater at five wastewater treatment plants (representing 50% of BC's population) since May 2020, in order to assess whether COVID-19 virus is present and how it might be changing over time. To account for possible effects of wastewater volume, SARS-CoV-2 concentrations have been normalized by daily wastewater flow. As shown in [Figure 11](#) and [Figure 12](#), viral signal from the wastewater surveillance correlates with COVID-19 case counts.

Results through to January 22, 2022 show:

- SARS-CoV-2 viral loads remain elevated in wastewater in VCH and FH in comparison to concentrations prior to the Omicron wave.
- Viral loads have declined from their peak in early January in four out of the five wastewater treatment plants tested. The exception is Northwest Langley, where peak viral loads were detected last week.
- Weaker correlations between wastewater data and daily cases are observed, likely related to changes to diagnostic testing guidelines.

Figure 11. Wastewater surveillance, FH

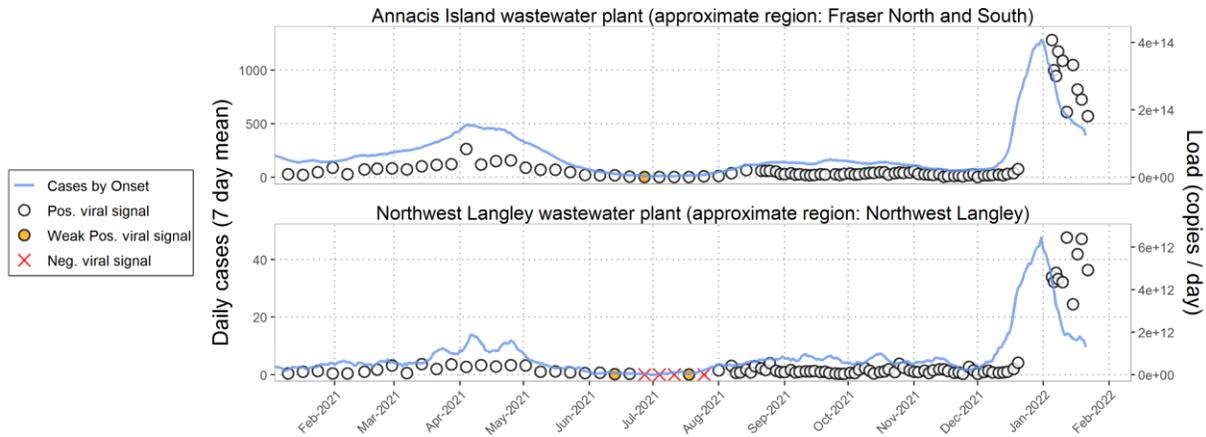
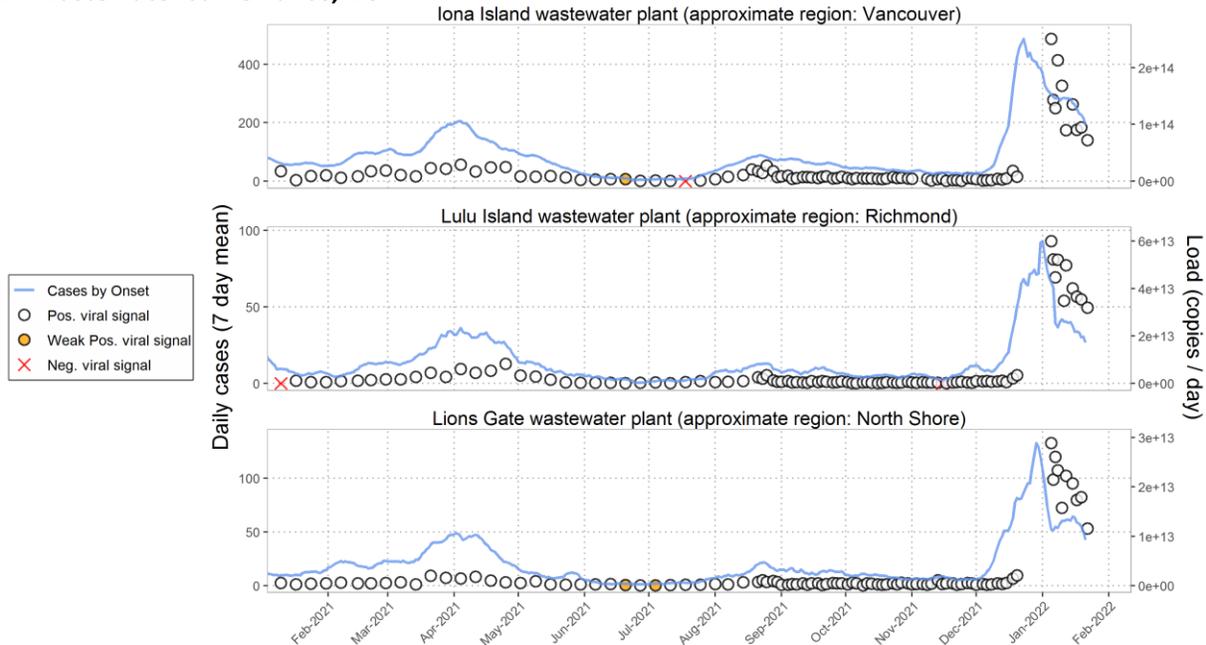


Figure 12. Wastewater surveillance, VCH



I. Additional resources

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

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>

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/

J. 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 – Present)

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.