British Columbia (BC) COVID-19 Situation Report
Week 13: March 27- April 02, 2022

Data for week 13 (March 27 - April 2, 2022) may differ from the data published in the BCCDC weekly report. Data was extracted on April 11, 2022 for this situation report compared to April 13, 2022 for the latest weekly report.

Table of Contents

Hospital admissions decreasing, deaths stable; provincial COVID-19 incidence rate is increasing but remains low.

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 32 per 100K (1,676 cases) in week 13.

Incidence by Health Authority from week 12 to week 13:

- Fraser Health incidence increased from 15 to 22 per 100K
- Interior Health incidence decreased from 55 to 53 per 100K
- Vancouver Island Health incidence decreased from 44 to 39 per 100K
- Northern Health incidence decreased from 48 to 43 per 100K
- Vancouver Coastal Health incidence increased from 21 to 26 per 100K

Testing of MSP-funded specimens increased slightly from ~10,200 in week 12 to ~10,500 in week 13. The percent positivity of MSP-funded specimens increased from 15.5% in week 12 to 17.5% in week 13.

The per capita testing rates for MSP-funded specimens increased from week 12 to week 13 in all HAs except NH. Percent positivity for MSP-funded specimens increased from week 12 to week 13 in all HAs except VIHA, where it remained stable.

Age-specific incidence rates increased in the <10, 10-14, 30-39, 40-49, 70-79, and 80+ age groups from week 12 to week 13. Incidence rate increased the most in the 80+ year-olds from 117 per 100K in week 12 to 137 per 100K in week 13.

The number of hospital admissions decreased from 226 in week 12 to 206 in week 13. In week 13, 80+ year-olds had the highest number of hospital admissions (75 hospitalizations). The weekly number of deaths increased from 13 deaths in week 12 to 18 in week 13.

In week 13, 1 new care facility outbreak was declared, based on earliest case onset date. None of the 18 deaths reported in week 13 were associated with a care facility outbreak.

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 had any COVID-19 hospitalization 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.
- Critical care admissions (HAU, ICU, and critical care surge beds) include individuals who had any COVID-19 positive critical care admission (regardless of timing) from the PCMS. Episode date for critical care admission is defined by critical care admission date, if unavailable, surveillance date is used. Previously only ICU was presented in this report. Critical Care includes more than ICU, therefore comparisons to previous reports should not be made.
- 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 April 11, 2022, laboratory PLOVER data on April 08, 2022, and Health Authority outbreak files on April 06, 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 13, there have been 357,365 cases for a cumulative incidence of 6,789 per 100K (**Table 1, Figure 1**). The provincial incidence by episode date was 32 per 100K (1,676 cases) in week 13, which has increased since week 12, where incidence by episode date was 29 per 100K. Incidence by episode date may increase as data become more complete in recent weeks.

As shown in **Figure 2**, incidence rates decreased in Vancouver Island Health (VIH) and Northern Health (NH) and stabilized in Interior Health (IH) from week 12 to week 13. From week 12 to week 13, incidence rates increased from 15 per 100K to 22 per 100K and 21 per 100K to 26 per 100K in Fraser Health (FH) and Vancouver Coastal Health (VCH), respectively. In week 13, the highest incidence rate was in IH at 53 per 100K.

Table 1. Episode-based case tallies by Health Authority, BC, Jan 15, 2020 (week 3) – Apr 02, 2022 (week 13) (N= 357,365)

Case tallies by episode date	Health Authority of Residence					Outside Canada	Total
	FH	IH	VIHA	NH	VCH		
Week 13, case counts	432	442	341	130	330	1	1,676
Cumulative case counts	**158,991**	**62,808**	**33,451**	**29,445**	**72,279**	**391**	**357,365**
Week 13, cases per 100K population	22	53	39	42	26	NA	32
Cumulative cases per 100K population	**8,001**	**7,582**	**3,801**	**9,620**	**5,728**	**NA**	**6,789**

Figure 1. Episode-based epidemic curve (bars), surveillance date (line) and Health Authority (HA), BC Sept 13, 2020 (week 38) – Apr 02, 2022 (week 13) (N= 349,518)

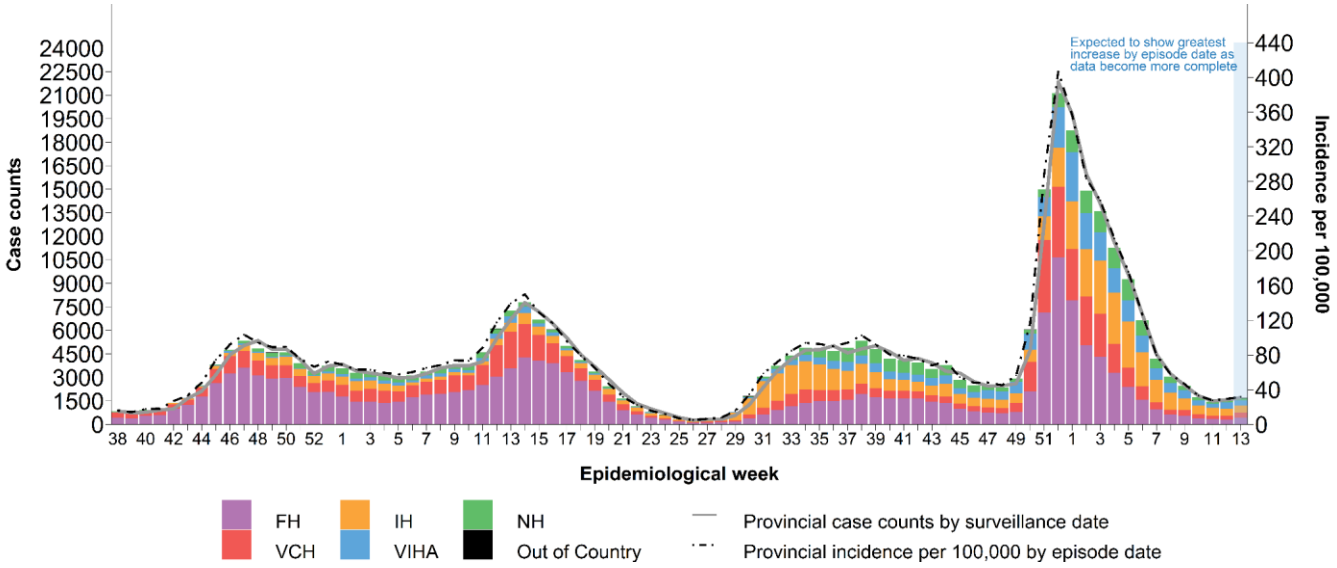
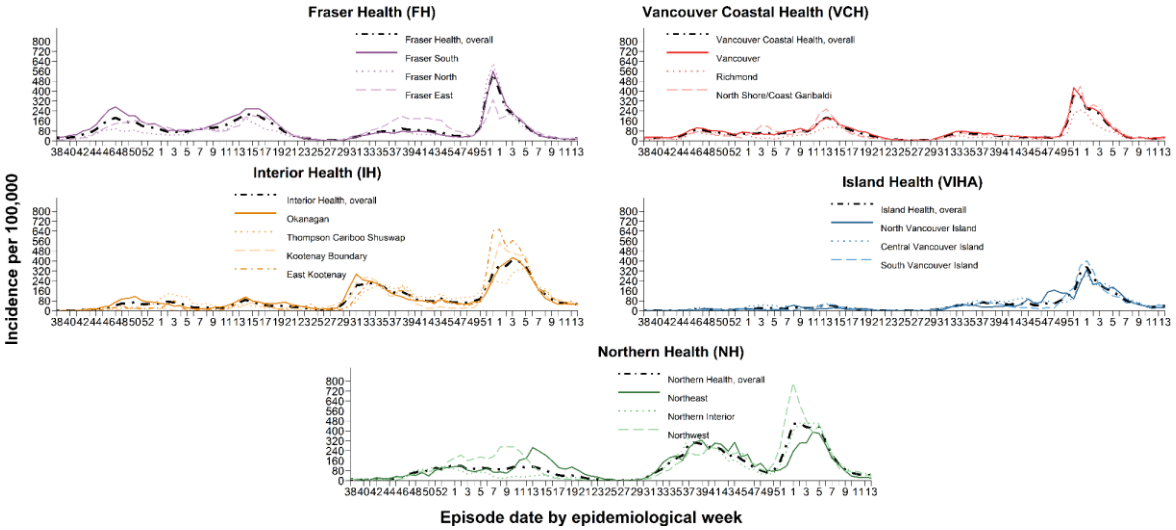


Figure 2. Weekly episode-based incidence rates by HA and health service delivery area (HSDA), BC Sept 13, 2020 (week 38) – Apr 02, 2022 (week 13) (N= 349,518)



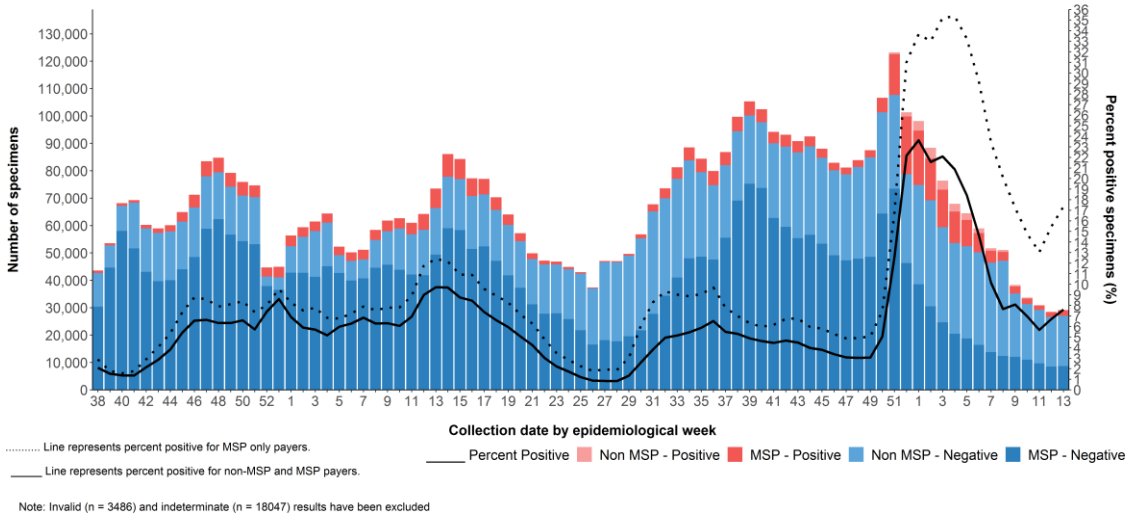
B. Test rates and percent positive

COVID-19 testing guidelines recommend testing 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 and dotted line in **Figure 3**, the number of MSP-funded specimens and the percent positivity of MSP-funded specimens have increased since week 12. Between week 12 and week 13, the number of MSP-funded specimens increased slightly from ~10,200 to ~10,500 while the percent positivity of MSP-funded specimens increased from 15.5% to 17.5%.

As shown by the dotted lines in **Figure 4**, the per capita testing rates for MSP-funded specimens (Panel A) increased from week 12 to week 13 in all HAs except NH, where testing rates decreased from 380 per 100K in week 12 to 281 per 100K in week 13. In week 13, NH had the highest testing rate at 281 per 100K.

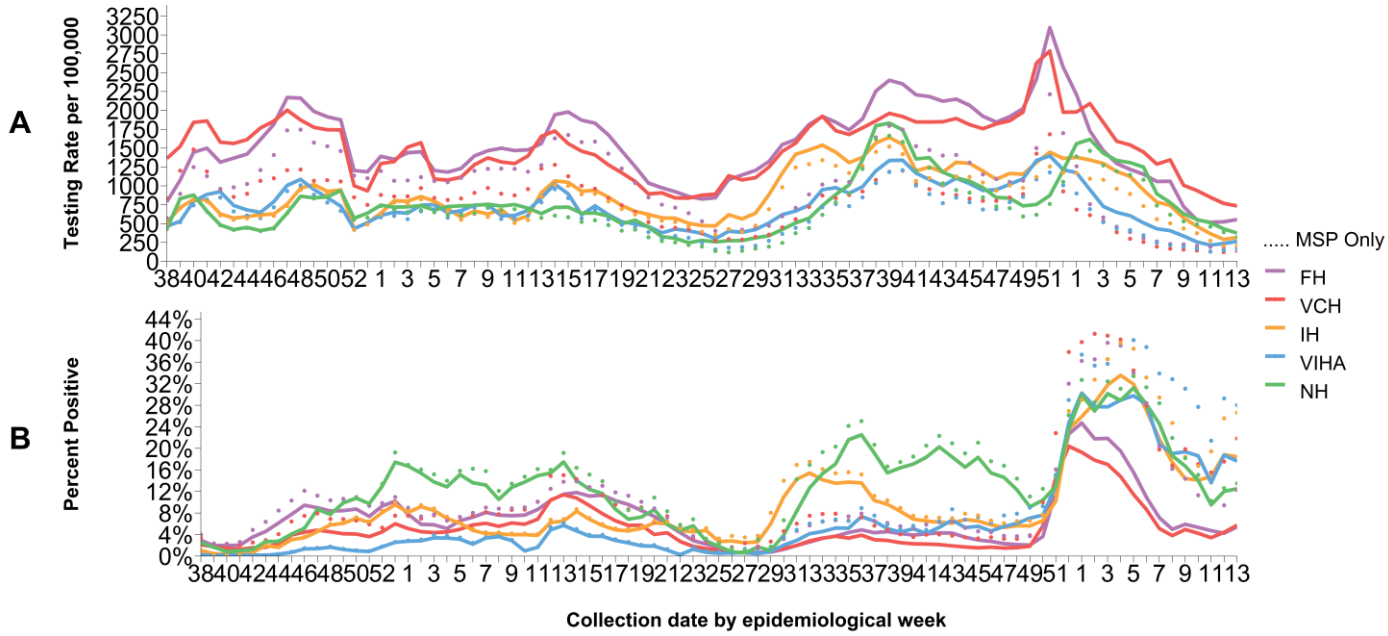
Percent positivity (Panel B) for MSP-funded specimens increased from week 12 to week 13 in all HAs except VIHA, where it remained stable at 29% in week 12 and 28.1% in week 13. Percent positivity increased the most in VCH from 17.6% in week 12 to 21.8% in week 13. In week 13, percent positivity ranged from 12.2% in FH to 28.1% in VIHA.

Figure 3. Number of specimens tested and percent SARS-CoV-2 positive, by collection week, BC Sept 13, 2020 (week 38) – Apr 02, 2022 (week 13)



Note: Invalid (n = 3486) and indeterminate (n = 18047) results have been excluded

Figure 4. Testing rates and percent SARS-CoV-2 positive by Health Authority and collection week, BC Sept 13, 2020 (week 38) – Apr 02, 2022 (week 13)



Data source: Laboratory PLOVER data

C. Age profile – Testing and cases

Testing rates and percent positivity by age group

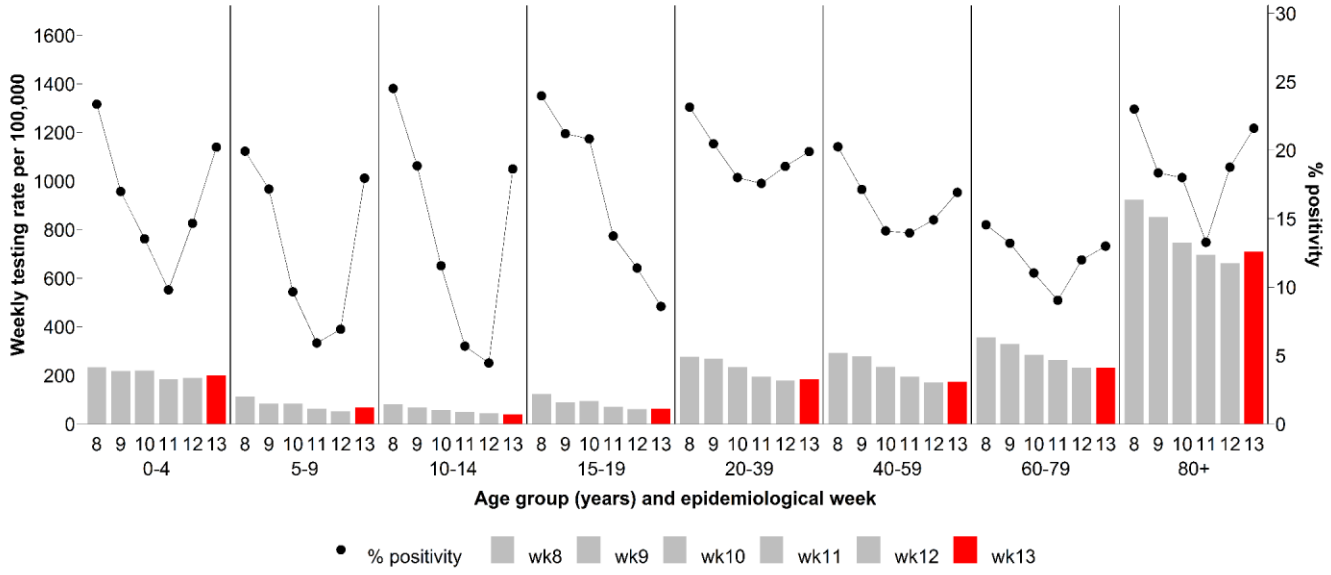
As shown by the bars in **Figure 5**, testing rates increased slightly or stabilized in all age groups from week 12 to week 13. In week 13, testing rate was highest in those aged 80+ at 711 per 100K, which likely reflected the age group prioritized for testing.

As shown by the black dots in **Figure 5**, the percent positivity increased from week 12 to week 13 in all age groups other than the 15-19 age group. Between week 12 and week 13, percent positivity increased the most in the 5-9 and 10-14 year-olds from 6.9% to 18% and 4.5% to 18.6%, respectively. In week 13, 80+ year-olds had the highest percent positivity at 21.6%.

Case distribution and weekly incidence by age group

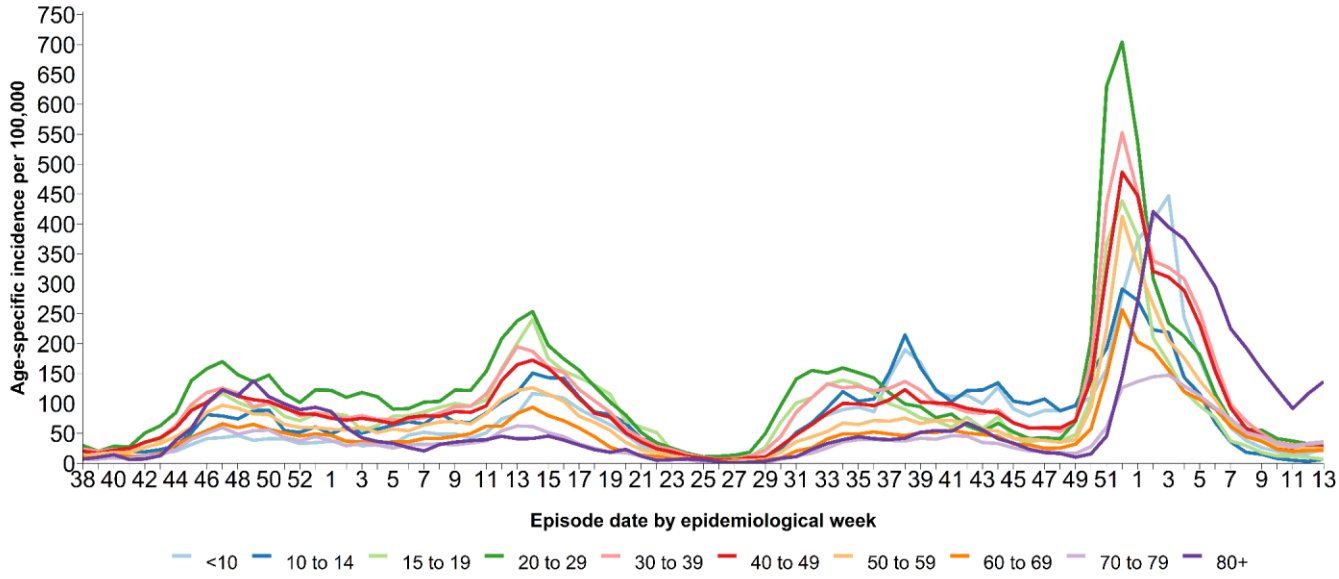
As shown in **Figure 6**, age-specific incidence rates increased in the <10, 10-14, 30-39, 40-49, 70-79, and 80+ age groups from week 12 to week 13. Incidence rate increased the most in the 80+ year-olds from 117 per 100K in week 12 to 137 per 100K in week 13. Age-specific incidences may increase as 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 Feb 26, 2022 (week 8) – Apr 02, 2022 (week 13)



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) – Apr 02, 2022 (week 13) (N= 349,424)



D. Severe outcome counts and epi-curve

The number of hospital admissions decreased from 226 in week 12 to 206 in week 13. In week 13, 80+ year-olds had the highest number of hospital admissions (75 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 13 in week 12 to 18 in week 13 (**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 29 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 1 to 16 years old).

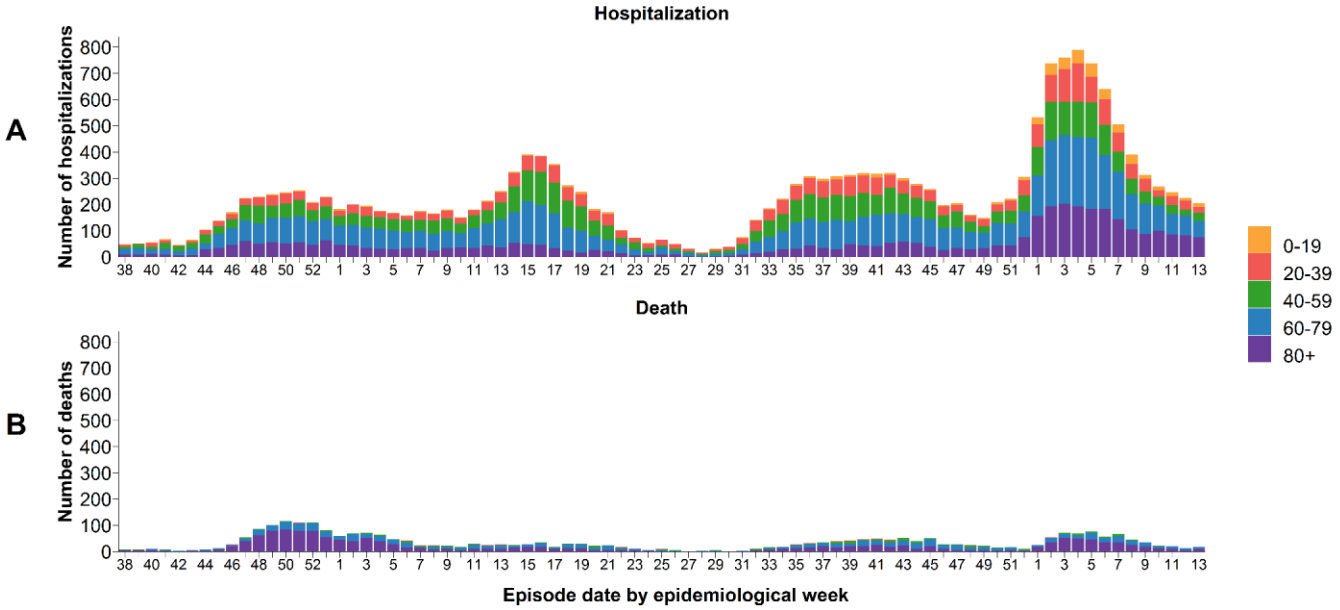
Table 2. COVID-19 severe outcomes by episode date, Health Authority of residence, BC Jan 15, 2020 (week 3) – Apr 02, 2022 (week 13)

Severe outcomes by episode date	Health Authority of residence					Residing outside of Canada	Total n/N[a] (%)
	FH	IH	VIHA	NH	VCH		
Week 13, hospitalizations	79	41	35	12	39	0	206
Cumulative hospitalizations	**9,214**	**3,482**	**1,578**	**1,852**	**3,855**	**17**	**19,998/357,365 (6)**
Week 13, critical care admissions	7	8	4	7	7	0	33
Cumulative critical care admissions *	**2,065**	**859**	**338**	**728**	**967**	**4**	**4,961/357,365 (1)**
Week 13, deaths	2	5	5	4	2	0	18
Cumulative deaths	**1,349**	**371**	**243**	**330**	**718**	**0**	**3,011/357,365 (1)**

a. Cases with unknown outcome are included in the denominators (i.e. assumed not to have the specified severe outcome).

* 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). Critical care admission numbers should not be compared to ICU numbers from previous weeks.

Figure 8. Weekly COVID-19 hospital admissions (A) and deaths (B) by age groups, BC, Sept 13, 2020 (week 38) – Apr 02, 2022 (week 13)



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 13, median age of hospital admissions, ICU admissions and deaths was 63 years, 62 years and 82 years, respectively, based on critical care admissions and on the integrated linelist (data not shown).

From week 9 to week 13, there has been a weekly average of <1 death in those <60 years of age, 2 deaths in 60-69 year-olds, 7 deaths in 70-79 year-olds and 12 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) – Apr 02, 2022 (week 13) (N= 357,250)[a]

Age group (years)	Cases n (%)	Hospitalizations n (%) [b]	Critical care admissions * n (%)	Deaths n (%)
<10	29,627	411 (1)	50 (<1)	2 (<1)
10-19	35,392	302 (1)	42 (<1)	0 (<1)
20-29	71,442	1,192 (2)	168 (<1)	6 (<1)
30-39	67,912	2,059 (3)	384 (1)	31 (<1)
40-49	52,514	2,013 (4)	538 (1)	64 (<1)
50-59	42,063	2,734 (6)	941 (2)	166 (<1)
60-69	28,268	3,514 (12)	1,247 (4)	354 (1)
70-79	14,920	3,638 (24)	1,093 (7)	658 (4)
80-89	9,959	2,967 (30)	436 (4)	993 (10)
90+	5,153	1,158 (22)	61 (1)	737 (14)
Total	**357,250**	**19,988**	**4,960**	**3,011**
Median age	**36**	**63**	**62**	**82**

a. Among those with available age information only.

* 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). Critical care admission numbers should not be compared to ICU numbers from previous weeks.

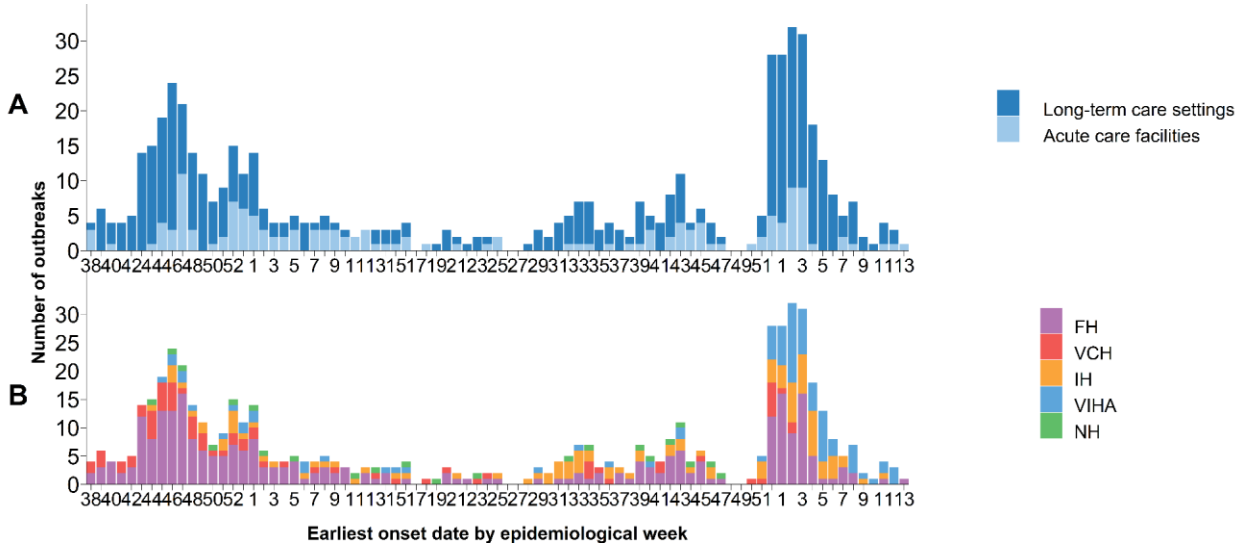
Care facility outbreaks

As shown in Table 4 and Figure 9, 615 care facility (acute care and long-term care settings) outbreaks were reported in total in BC to the end of week 13. In week 13, based on earliest case onset date, 1 new outbreak was declared. Since week 1 of 2022, the number of new outbreaks have generally been declining and the majority of outbreaks have been in long-term care settings. None of the 18 deaths reported in week 13 were associated with a care facility outbreak. The number of deaths may increase over time as data becomes more complete.

Table 4. COVID-19 care facility[a] outbreaks by earliest case onset[b,c], associated cases and deaths by episode date, BC Jan 15, 2020 (week 3) – Apr 02, 2022 (week 13) (N=615)[d,e]

Care facility outbreaks and cases by episode date	Outbreaks	Cases			Deaths		
		Residents	Staff/other	Total	Residents	Staff/other	Total
Week 13, Care Facility Outbreaks	1	10	0	10	0	0	0
Cumulative, Care Facility Outbreaks	**615**	**8,048**	**3,698**	**11,746**	**1,400**	**0**	**1,400**

Figure 9. COVID-19 care facility[a], outbreaks by earliest case onset[b,c], facility type (A) and Health Authority (B), BC Sept 13, 2020 (week 38) – Apr 02, 2022 (week 13) (N=547)[d,e]



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 susepct reinfections.
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.

F. 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. For each sample collected, Metro Vancouver measures the daily wastewater flow (i.e. volume coming into the wastewater treatment plants). Wastewater flows can change with rainfall and snowmelt. To account for possible effects of wastewater volume, SARS-CoV-2 concentrations have been normalized by daily wastewater flow and referred to as viral load to wastewater treatment plant (copies/day). All COVID-19 positive cases are mapped to each sewage catchment. As shown in **Figure 10** and **Figure 11**, SARS-CoV-2 wastewater results are compared to the incidence of community COVID-19 cases.

Key messages with results through to April 9, 2022:

- After a period of stability following decreases from the peak of the Omicron wave, wastewater SARS-CoV-2 viral loads have increased in recent weeks.

Results for Fraser Health:

- SARS-CoV-2 viral loads show an increasing trend in Annacis Island wastewater over the past four weeks.
- SARS-CoV-2 viral loads show an increasing trend in Northwest Langley wastewater over the past three weeks.

Results for Vancouver Coastal Health:

- SARS-CoV-2 viral loads show an increasing trend in Iona Island and Lulu Island wastewater over the past four weeks.
- SARS-CoV-2 viral loads remain elevated in Lions Gate wastewater but viral loads have been variable over recent weeks and do not show a clear trend.

Figure 10. Wastewater surveillance, FH

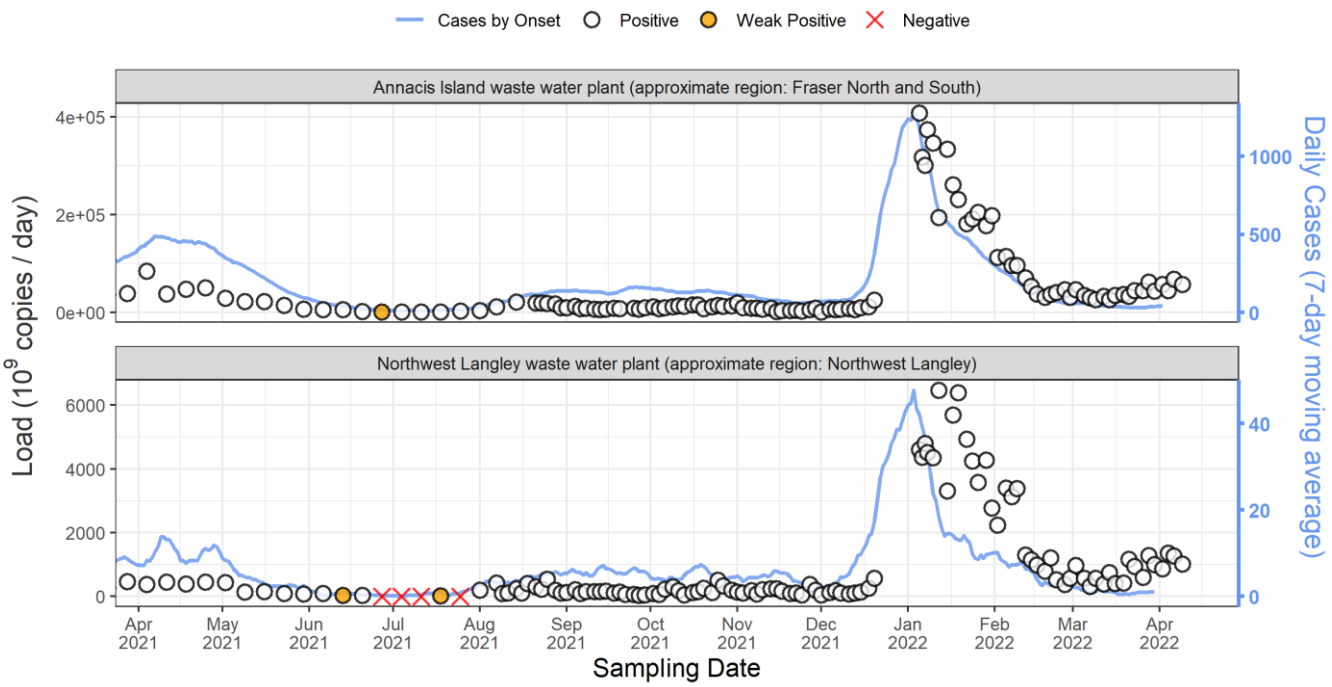
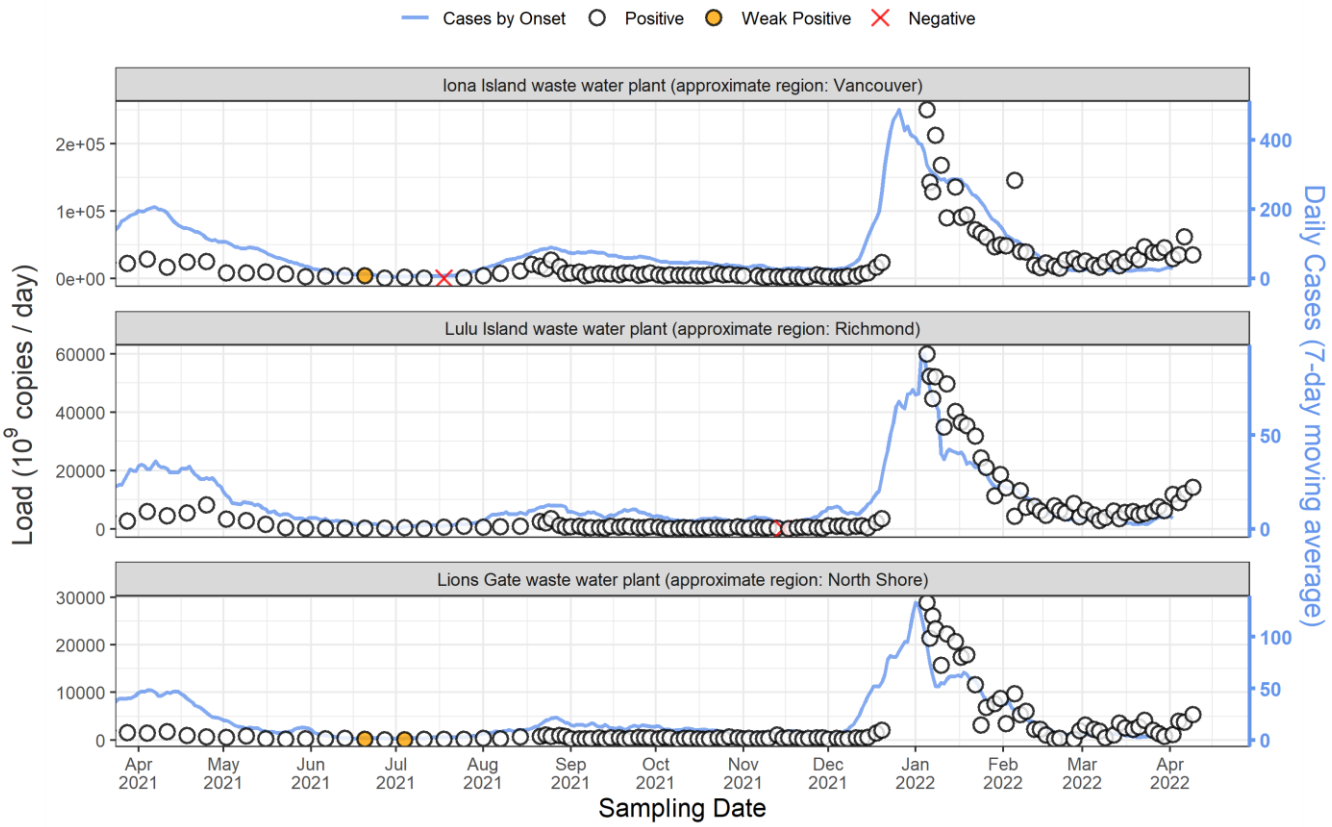


Figure 11. Wastewater surveillance, VCH



G. 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/

H. 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 – 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.