British Columbia (BC) COVID-19 Situation Report

Week 9: February 27- March 05, 2022

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Hospital admissions and deaths are stable; provincial COVID-19 incidence continues to decrease.

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 decreased from 58 per 100K (3,049 cases) in week 8 to 46 per 100K (2,426 cases) in week 9.

Incidence by Health Authority decreased from week 8 to week 9 in all HA except for VCH, which was stable:

- Fraser Health incidence decreased from 33 to 29 per 100K
- Interior Health incidence decreased from 132 to 88 per 100K
- Vancouver Island Health incidence decreased from 69 to 60 per 100K
- Northern Health incidence decreased from 133 to 89 per 100K
- Vancouver Coastal Health incidence increased from 23 to 26 per 100K

Testing of MSP-funded specimens decreased from ~15,600 in week 8 to ~14,700 in week 9. The positivity of MSP-funded specimens decreased from 20.5% in week 8 to 17.5% in week 9.

The per capita testing rates and percent positivity for MSP-only specimens decreased in all HAs from week 8 to week 9. Testing rates and percent positivity decreased in all age groups from week 8 to week 9 as well.

Age-specific incidence rates decreased across all age groups from week 8 to week 9. Incidence rate decreased the most in the 30-39 and 80+ age groups.

The number of hospital admissions decreased from 257 in week 8 to 246 in week 9. In week 9, 60-79 year-olds had the highest number of hospital admissions (90 hospitalizations).

The weekly number of deaths decreased from 44 in week 8 to 29 in week 9.

In week 9, one new care facility outbreak was declared, based on earliest case onset date. 7 of the 29 deaths (24.1%) reported in week 9 were associated with care facility outbreaks.

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, and hospital data (PHSA Provincial COVID19 Monitoring Solution (PCMS)).
- Case data were extracted on March 13, 2022, laboratory data on March 11, 2022, and PCMS hospitalization data on March 13, 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 9, there have been 350,915 cases for a cumulative incidence of 6,659 per 100K (**Table 1, Figure 1**). The provincial incidence by episode date was 46 per 100K (2,426 cases) in week 9, which has decreased from the most recent peak of 407 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 8 to week 9, other than in VCH, where incidence increased slightly from 23 per 100K in week 8 to 26 per 100K in week 9. From week 8 to week 9 incidence rates decreased the most in Northern Health (NH) and Interior Health (IH) from 133 to 89 per 100K and from 132 to 88 per 100K, respectively. In week 9, the highest incidence rate was in NH at 89 per 100K.

Table 1. Episode-based case tallies by Health Authority, BC, Jan 15, 2020 (week 3) – Mar 05, 2022 (week 9) (N= 350,915)

Case tallies by episode date	Health Authority of Residence					Outside Canada	Total
	FH	IH	VIHA	NH	VCH		
Week 9, case counts	567	729	524	273	333	0	2,426
Cumulative case counts	**157,552**	**60,801**	**32,129**	**28,829**	**71,215**	**389**	**350,915**
Week 9, cases per 100K population	29	88	60	89	26	NA	46
Cumulative cases per 100K population	**7,928**	**7,339**	**3,650**	**9,419**	**5,644**	**NA**	**6,659**

Figure 1. Episode-based epidemic curve (bars), surveillance date (line) and Health Authority (HA), BC Sept 13, 2020 (week 38) – Mar 05, 2022 (week 9) (N= 343,068)

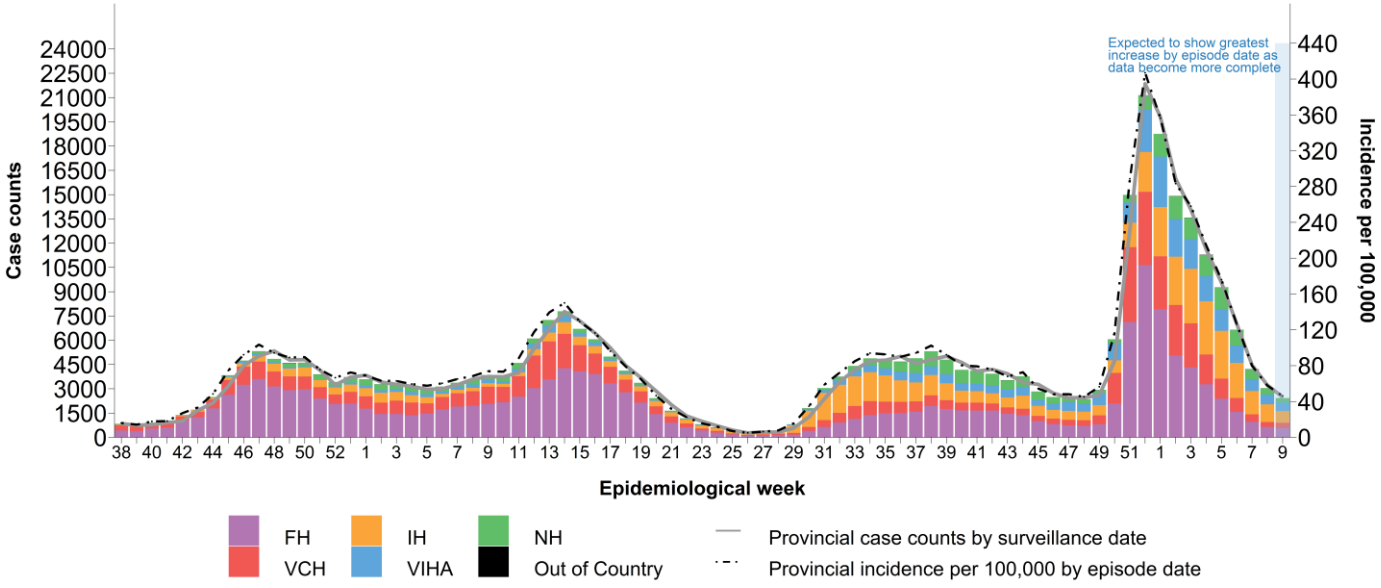
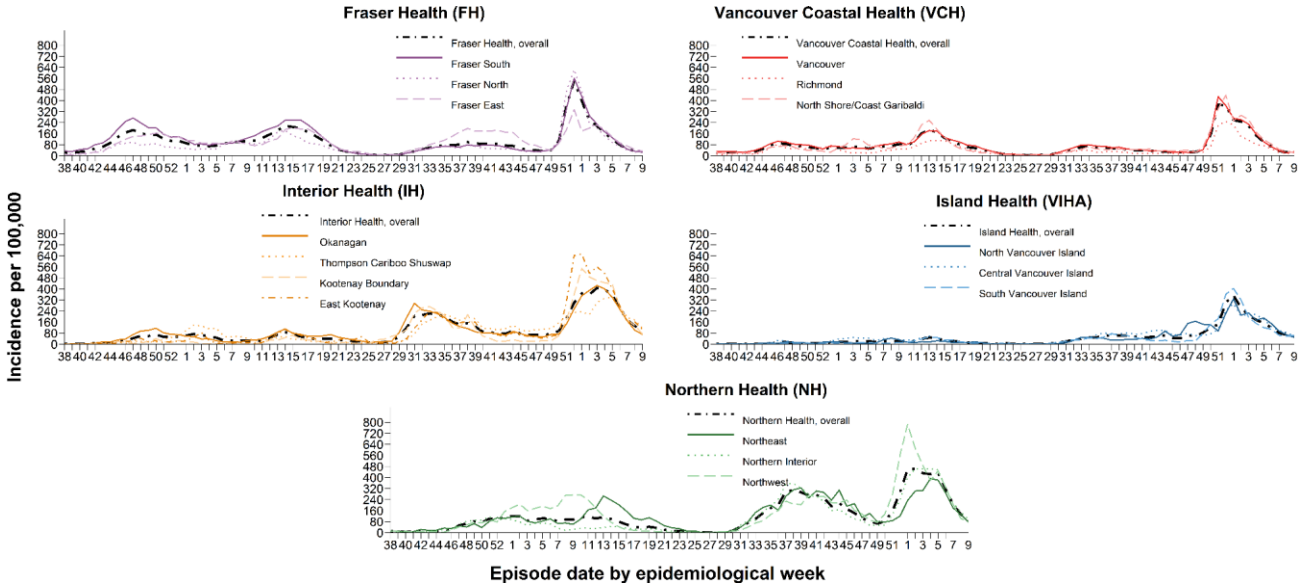


Figure 2. Weekly episode-based incidence rates by HA and health service delivery area (HSDA), BC Sept 13, 2020 (week 38) – Mar 05, 2022 (week 9) (N= 343,068)



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 in **Figure 3**, testing of MSP-funded specimens has continued to decrease from the peak of ~88,900 in week 51 and the positivity of MSP-funded specimens has continued to decrease from the peak of 35.4% in week 4. Between week 8 and week 9, number of MSP-funded specimens decreased from ~15,600 to ~14,700 and percent positivity of MSP-funded specimens decreased from 20.5% to 17.5%.

As shown in **Figure 4**, the per capita testing rates (Panel A) decreased in all HAs from week 8 to week 9. From week 8 to week 9, testing rates decreased the most in IH, from 503 to 436 per 100K. In week 9, NH had the highest testing rate at 471 per 100K.

Percent positivity (Panel B) for MSP-only specimens decreased in all HAs from week 8 to week 9. Percent positivity in week 9 ranged from 14.4% in FH to 31.1% in VIHA.

Figure 3. Number of specimens tested and percent SARS-CoV-2 positive, by collection week, BC Sept 13, 2020 (week 38) – Mar 05, 2022 (week 9)

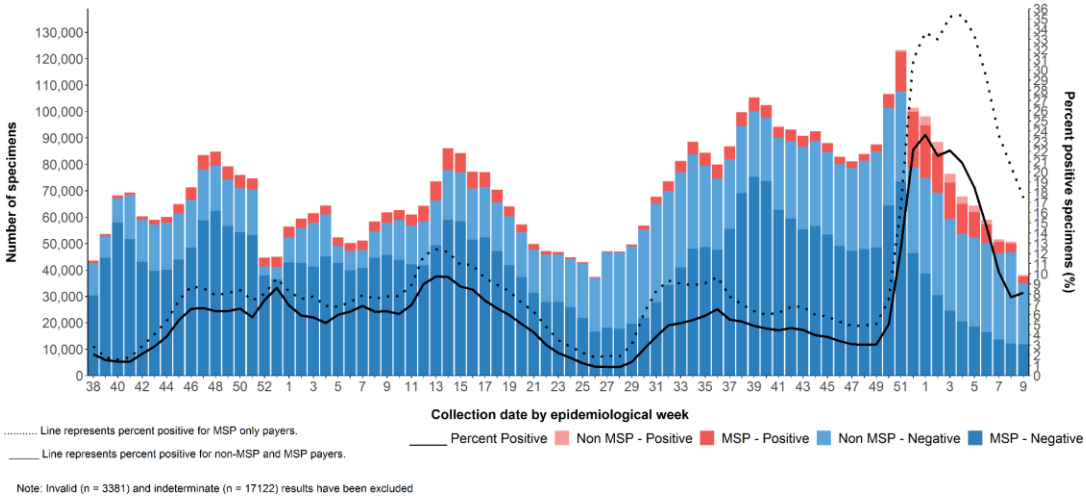
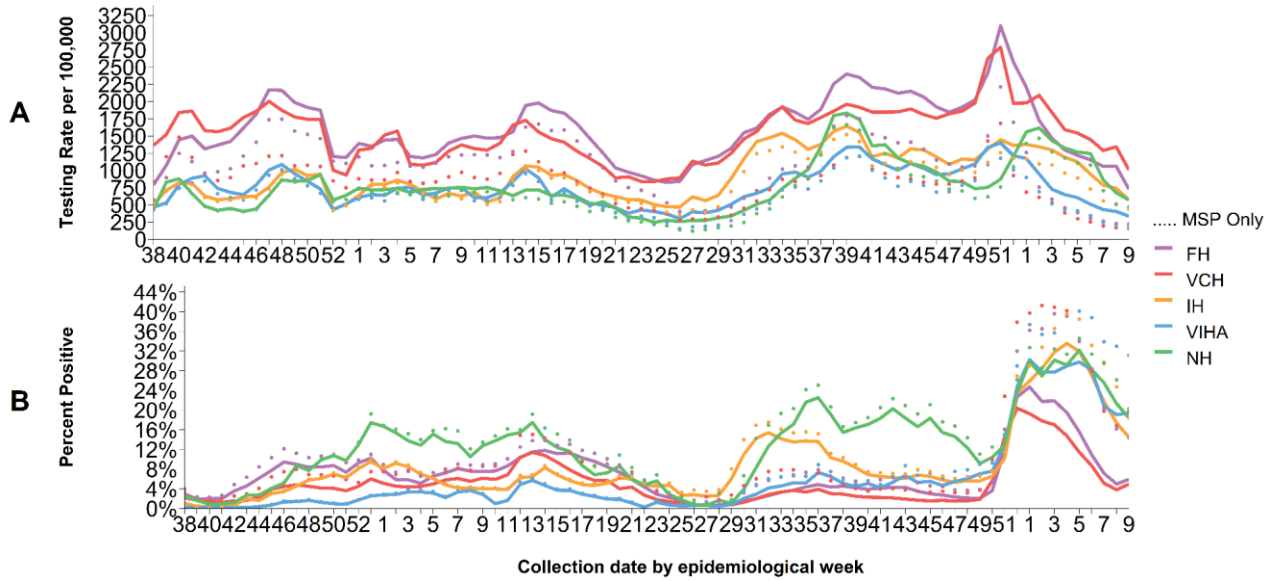


Figure 4. Testing rates and percent SARS-CoV-2 positive by Health Authority and collection week, BC Sept 13, 2020 (week 38) – Mar 05, 2022 (week 9)



Data source: laboratory PLOVER data

C. Age profile – Testing and cases

Testing rates and percent positivity by age group

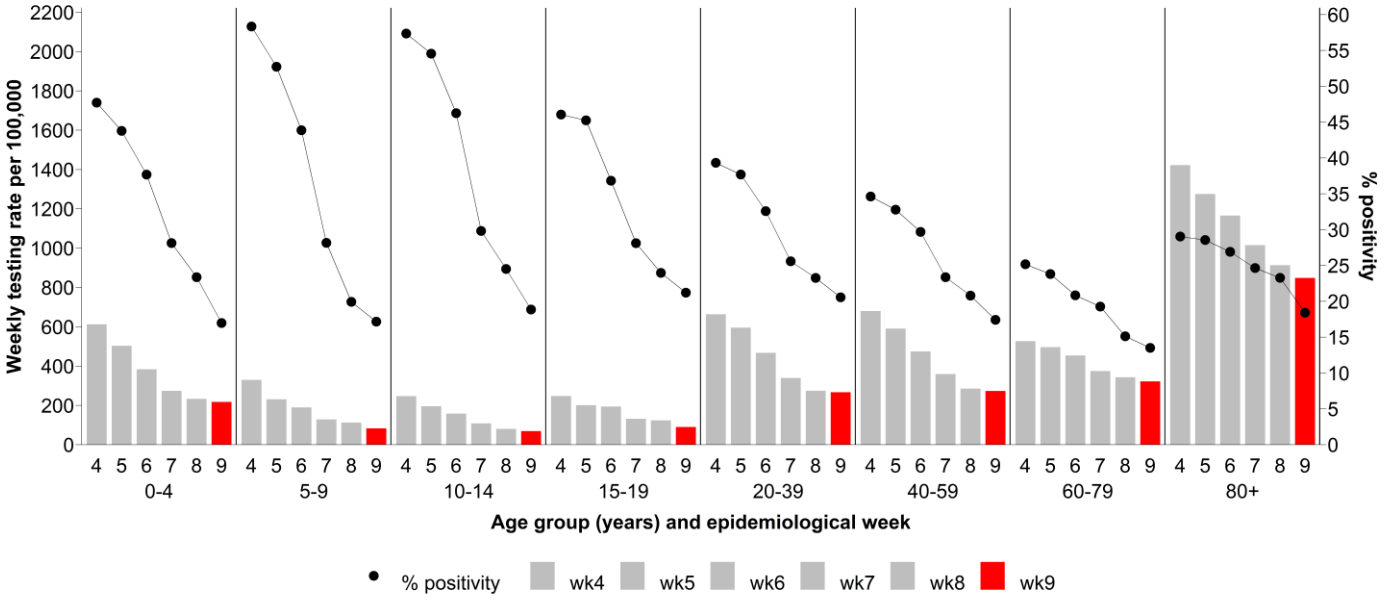
As shown by the bars in **Figure 5**, testing rates decreased in all age groups from week 8 to week 9. Testing rates in week 9 was highest in those aged 80+ at 849 per 100K, which likely reflected the age group prioritized for testing.

As shown by the black dots in **Figure 5**, the percent positivity decreased in all age groups from week 8 to week 9. The highest percent positivity in week 9 was in the 15-19 year-olds at 21.2%.

Case distribution and weekly incidence by age group

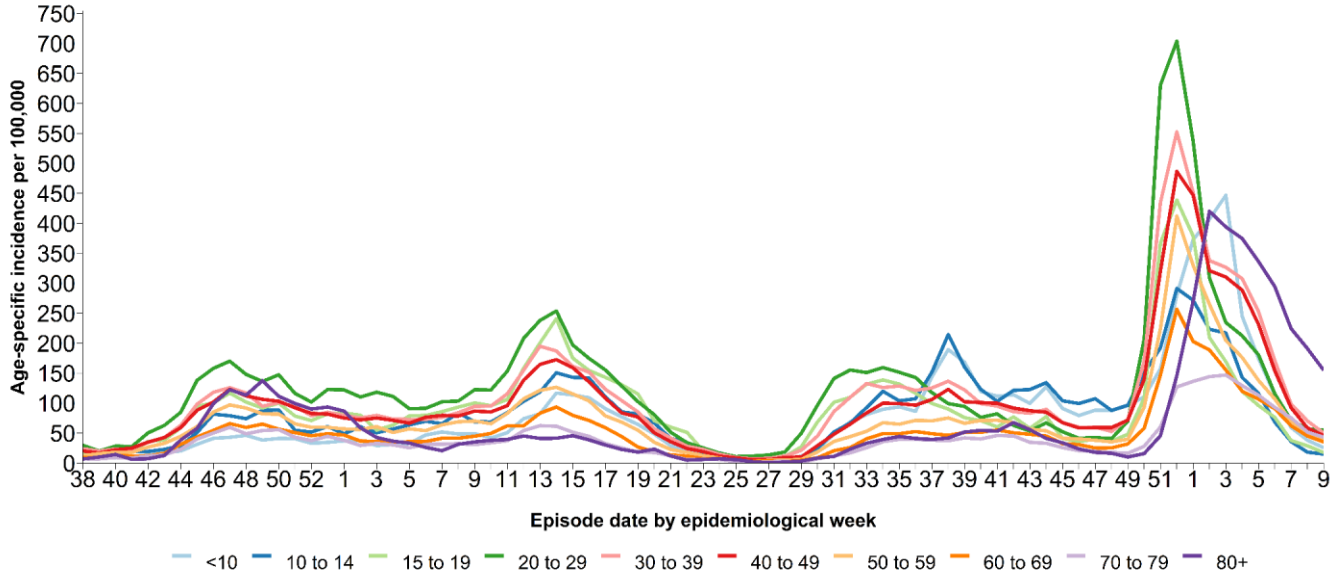
As shown in **Figure 6**, age-specific incidence rates decreased across all age groups from week 8 to week 9. From week 8 to week 9, incidence rates decreased the most in the 30-39 and 80+ age groups from 70 to 50 per 100K and 191 to 155 per 100K, respectively. Age-specific incidences may increase as 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 Jan 29, 2022 (week 4) – Mar 05, 2022 (week 9)



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) – Mar 05, 2022 (week 9) (N= 342,982)



D. Severe outcome counts and epi-curve

The number of hospital admissions decreased slightly from 257 in week 8 to 246 in week 9. In week 9, 60-79 year-olds had the highest number of hospital admissions (90 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 decreased from 44 in week 8 to 29 in week 9 (**Table 2**, **Figure 8**). Detailed information about outcomes by vaccination status can be accessed at BCCDC COVID-19 Regional Surveillance Dashboard.

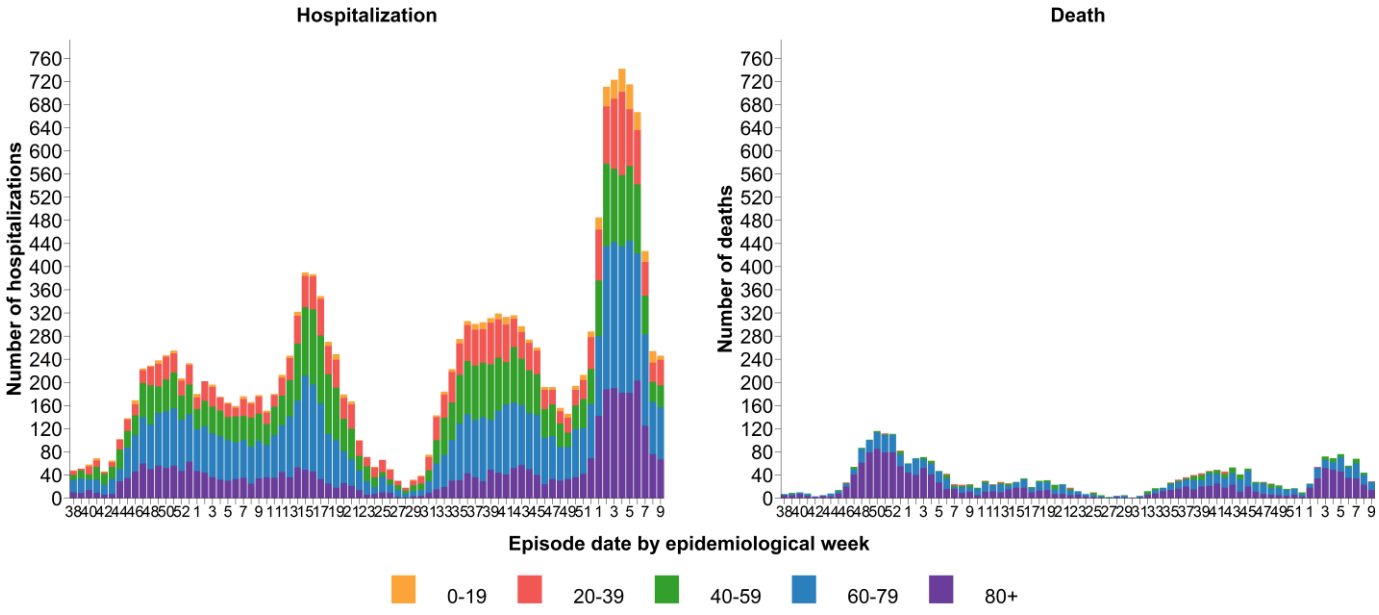
Cumulatively, there have been 26 confirmed cases of Multi-system Inflammatory Syndrome in children and adolescents (MIS-C) in BC since January 1, 2020. There has been one new confirmed case of MIS-C since the last report. The median age of all cases is 9 years old (range from 1 to 16 years old).

Table 2. COVID-19 severe outcomes by episode date, Health Authority of residence, BC Jan 15, 2020 (week 3) – Mar 05, 2022 (week 9)

Severe outcomes by episode date	Health Authority of residence					Residing outside of Canada	Total n/N[a] (%)
	FH	IH	VIHA	NH	VCH		
Week 9, hospitalizations	111	78	33	22	2	0	246
Cumulative hospitalizations[b]	**8,532**	**3,241**	**1,420**	**1,742**	**3,523**	**17**	**18,475/350,915 (5)**
Week 9, ICU admissions	9	11	2	3	0	0	25
Cumulative ICU admissions[b]	**1,401**	**801**	**326**	**403**	**797**	**2**	**3,730/350,915 (1)**
Week 9, deaths	8	5	7	4	5	0	29
Cumulative deaths	**1,321**	**363**	**226**	**318**	**702**	**0**	**2,930/350,915 (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) – Mar 05, 2022 (week 9)



a. Among those with available age information only.
b. Data source: Health Authority case line lists only. Data may be incomplete and subject to change.

E. Age profile, severe outcomes

Table 3 displays the distribution of cases and severe outcomes. In week 8, median age of hospital admissions, ICU admissions and deaths was 63 years, 62 years and 82 years, respectively, based on Health Authority case line lists only (data not shown).

Since week 1 of 2022, there has been a weekly average of 1 death in those <50 years of age, 3 deaths in 50-59 year-olds, 7 deaths in 60-69 year-olds, 10 deaths in the 70-79 year-olds, and 34 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) – Mar 05, 2022 (week 9) (N= 350,810)[a]

Age group (years)	Cases n (%)	Hospitalizations n (%) [b]	ICU n (%)	Deaths n (%)
<10	29,286	345 (1)	28 (<1)	2 (<1)
10-19	35,223	267 (1)	34 (<1)	0 (<1)
20-29	70,449	1,117 (2)	122 (<1)	6 (<1)
30-39	66,884	1,925 (3)	309 (<1)	32 (<1)
40-49	51,790	1,913 (4)	403 (1)	63 (<1)
50-59	41,309	2,624 (6)	741 (2)	165 (<1)
60-69	27,658	3,286 (12)	933 (3)	347 (1)
70-79	14,300	3,375 (24)	821 (6)	634 (4)
80-89	9,207	2,645 (29)	317 (3)	966 (10)
90+	4,704	1,023 (22)	35 (1)	715 (15)
Total	**350,810**	**18,520**	**3,743**	**2,930**
Median age [c]	**35**	**63**	**62**	**82**

a. Among those with available age information only.
b. 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.
c. Median ages calculated are based on Health Authority case line lists only.

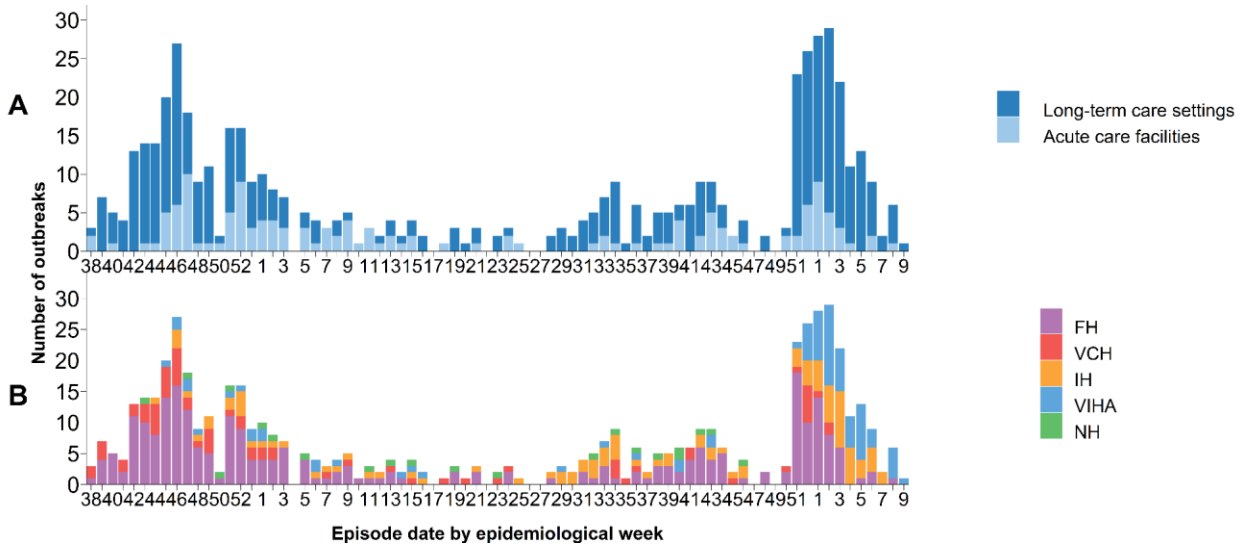
F. Care facility outbreaks

As shown in **Table 4** and **Figure 9**, 602 care facility (acute care and long-term care settings) outbreaks were reported in total in BC to the end of week 9. In week 9, based on earliest case onset date, there was one new outbreak declared. Since week 1 of 2022, the number of new outbreaks have been declining and the majority have been in long-term care settings. 7 of the 29 deaths (24.1%) reported in week 9 were associated with care facility outbreaks. The number of deaths may increase over time as data becomes more complete.

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) – Mar 05, 2022 (week 9) (N=602)

Care facility outbreaks and cases by episode date	Outbreaks	Cases				Deaths			
		Residents	Staff/ other	Unknown	Total	Residents	Staff/ other	Unknown	Total
Week 9, Care Facility Outbreaks	1	110	22	0	132	7	0	0	7
Cumulative, Care Facility Outbreaks	**602**	**7,707**	**3,600**	**7**	**11,314**	**1,371**	**0**	**0**	**1,371**

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) – Mar 05, 2022 (week 9) (N=534)



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.
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. 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 10** and **Figure 11**, viral signal from the wastewater surveillance correlates with COVID-19 case counts.

SARS-CoV-2 viral loads remain low in wastewater from all five wastewater treatment plants tested, in VCH and FH.

Figure 10. Wastewater surveillance, FH

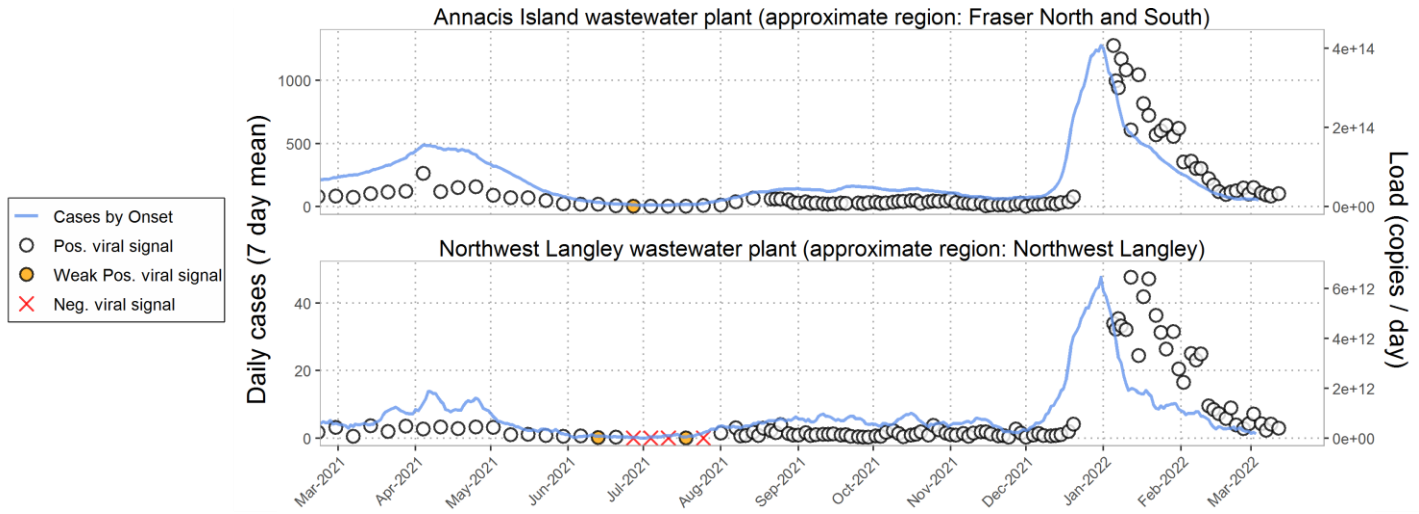
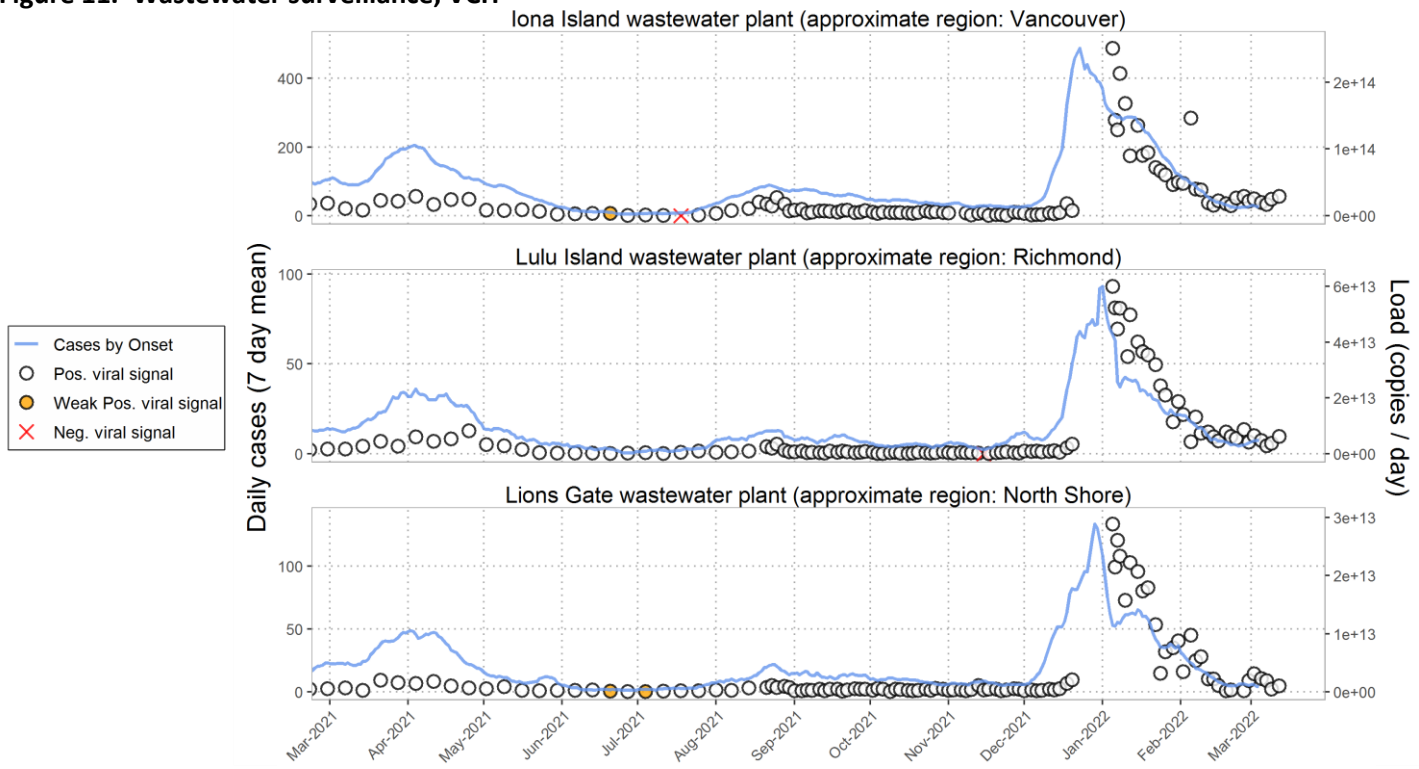


Figure 11. Wastewater surveillance, VCH



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 – 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.