

British Columbia (BC) COVID-19 Situation Report
Week 16: April 17- April 23, 2022

Data for week 16 (April 17 - April 23, 2022) may differ from the data published in the BCCDC weekly report. Data was extracted on May 02, 2022 for this situation report compared to May 04, 2022 for the latest weekly report.

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Test rates and % positive 4	Incidence by Health Authority from week 15 to week 16: <ul style="list-style-type: none"> • Fraser Health incidence increased from 30 to 42 per 100K • Interior Health incidence decreased from 72 to 70 per 100K • Vancouver Island Health incidence remained stable at 43 per 100K • Northern Health incidence decreased from 49 to 39 per 100K • Vancouver Coastal Health incidence increased from 26 to 30 per 100K
Age profile, testing and cases 5	Testing of MSP-funded specimens increased from ~10,600 in week 15 to ~11,200 in week 16. Percent positivity of MSP-funded specimens increased slightly from 21% in week 15 to 22.6% in week 16.
Severe outcomes 7	The per capita testing rates for MSP-funded specimens increased from week 15 to week 16 in all HAs except NH, where it decreased. The percent positivity for MSP-funded specimens increased from week 15 to week 16 in all FH and VCH, while percent positivity decreased or remained stable in other HAs.
Age profile, severe outcomes 8	Age-specific incidence rates between week 15 and week 16 decreased in the 40-49 age group, remained stable in the 10-14 and 30-39 age groups, and increased in other age groups. Incidence rate increased the most in the 80+ year-olds from 211 per 100K in week 15 to 246 per 100K in week 16.
Care facility outbreaks 9	The number of people in hospital with a positive COVID-19 test increased from 302 in week 15 to 369 in week 16. In week 16, 60+ year-olds had the highest number of people in hospital with a positive COVID-19 test (280 admissions). The weekly number of deaths from any cause among people testing positive for COVID-19 increased slightly from 56 in week 15 to 61 in week 16. In week 16, 60+ year-olds had the highest number of deaths (59 deaths).
Wastewater surveillance 9	In week 16, 1 new care facility outbreak was declared, based on earliest case onset date (if unavailable, then outbreak declared date is used). No deaths were associated with the new care facility outbreak in week 16.
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BELOW ARE IMPORTANT NOTES relevant to the interpretation of cases, hospitalizations, and deaths:

- 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.
- 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.
- 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. Since death registration is recorded before the underlying cause of death is determined, deaths reported after the system transition use a broader definition and will

overestimate deaths due to COVID-19. 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-\(novel-coronavirus\)](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 PHS 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 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, PHS 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 May 02, 2022, laboratory PLOVER data on April 27, 2022, and Health Authority outbreak files on April 27, 2022.
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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 16, there have been 363,439 cases for a cumulative incidence of 6,905 per 100K (Table 1, Figure 1). The provincial incidence by episode date was 43 per 100K (2,280 cases) in week 16, which increased from 39 per 100K (2,032 cases) in week 15. Incidence by episode date may increase as data become more complete in recent weeks.

As shown in Figure 2, incidence rates increased from week 15 to week 16 in Fraser Health (FH) and Vancouver Coastal Health (VCH) from 30 per 100K to 42 per 100K and from 26 per 100K to 30 per 100K, respectively. Incidence rates decreased or remained stable in other HAs. In week 16, the highest incidence rate was in Interior Health (IH) at 70 per 100K.

Table 1. Episode-based case tallies by Health Authority, BC, Jan 15, 2020 (week 3) – Apr 23, 2022 (week 16) (N= 363,439)

Case tallies by episode date	Health Authority of Residence					Outside Canada	Total
	FH	IH	VIHA	NH	VCH		
Week 16, case counts	833	579	376	119	373	0	2,280
Cumulative case counts	160,919	64,503	34,521	29,820	73,285	391	363,439
Week 16, cases per 100K population	42	70	43	39	30	NA	43
Cumulative cases per 100K population	8,098	7,786	3,922	9,742	5,808	NA	6,905

Figure 1. Episode-based epidemic curve (bars), surveillance date (line) and Health Authority (HA), BC Sept 13, 2020 (week 38) – Apr 23, 2022 (week 16) (N= 355,592)

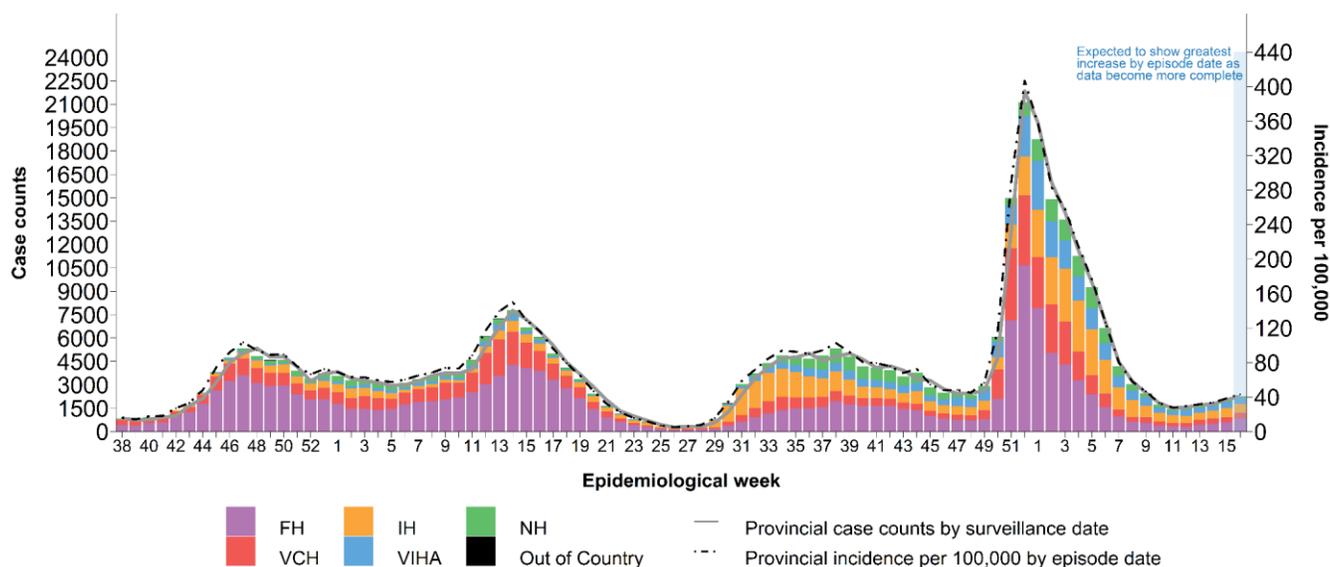
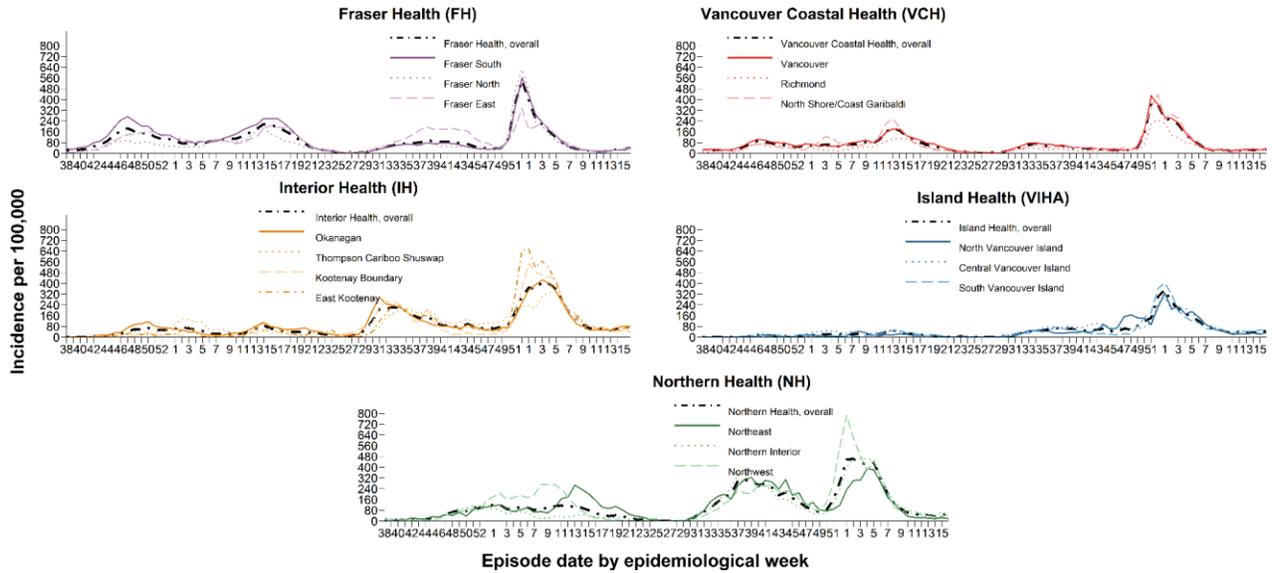


Figure 2. Weekly episode-based incidence rates by HA and health service delivery area (HSDA), BC Sept 13, 2020 (week 38) – Apr 23, 2022 (week 16) (N= 355,592)



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](#), the number of MSP-funded specimens increased from ~10,600 in week 15 to ~11,200 in week 16, and the percent positivity of MSP-funded specimens increased slightly from 21% in week 15 to 22.6% in week 16.

As shown by the dotted lines in [Figure 4](#), the per capita testing rates for MSP-funded specimens (Panel A) increased from week 15 to week 16 in all HAs except NH, where it decreased from 309 per 100K to 291 per 100K. In week 16, NH had the highest testing rate at 291 per 100K.

The percent positivity (Panel B) for MSP-funded specimens increased from week 15 to week 16 in FH and VCH from 16.2% to 20.8% and from 22.2% to 24.7%, respectively. Percent positivity decreased or remained stable in other HAs. In week 16, percent positivity ranged from 17.6% in NH to 30.5% in IH.

Figure 3. Number of specimens tested and percent SARS-CoV-2 positive, by collection week, BC Sept 13, 2020 (week 38) – Apr 23, 2022 (week 16)

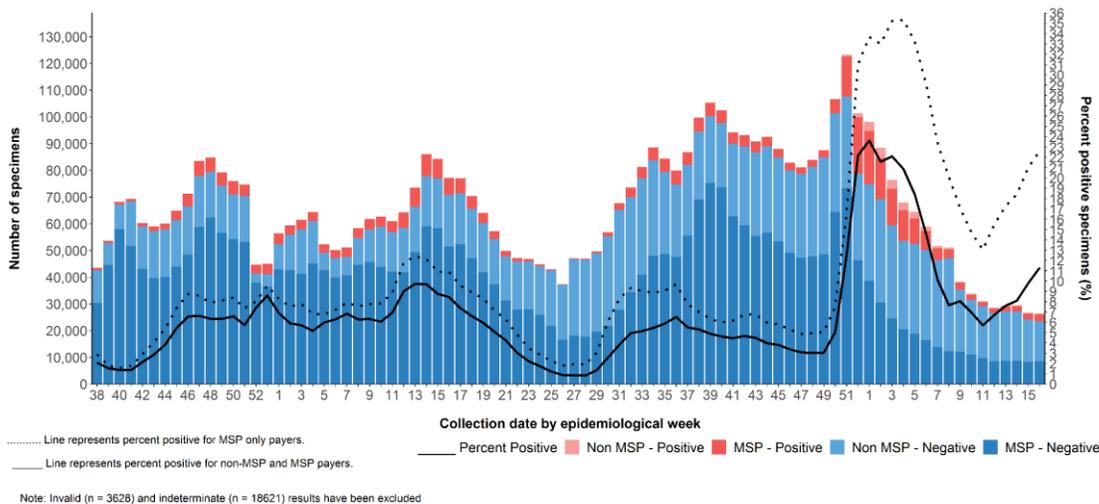
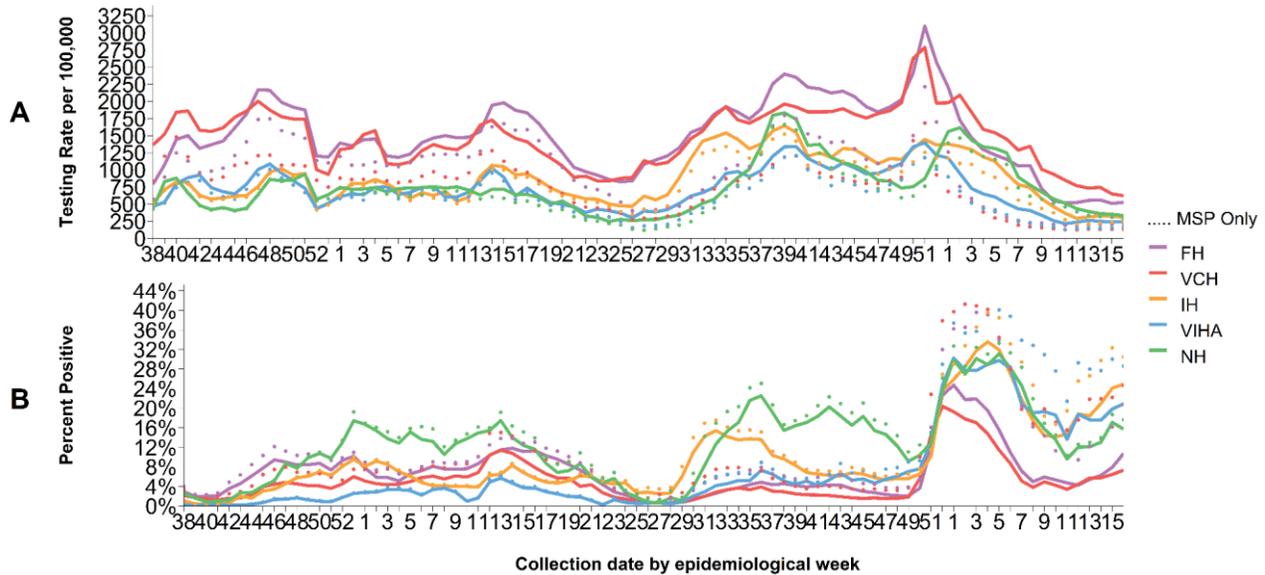


Figure 4. Testing rates and percent SARS-CoV-2 positive by Health Authority and collection week, BC Sept 13, 2020 (week 38) – Apr 23, 2022 (week 16)



Data source: Laboratory PLOVER data

C. Age profile – Testing and cases

Testing rates and percent positivity by age group

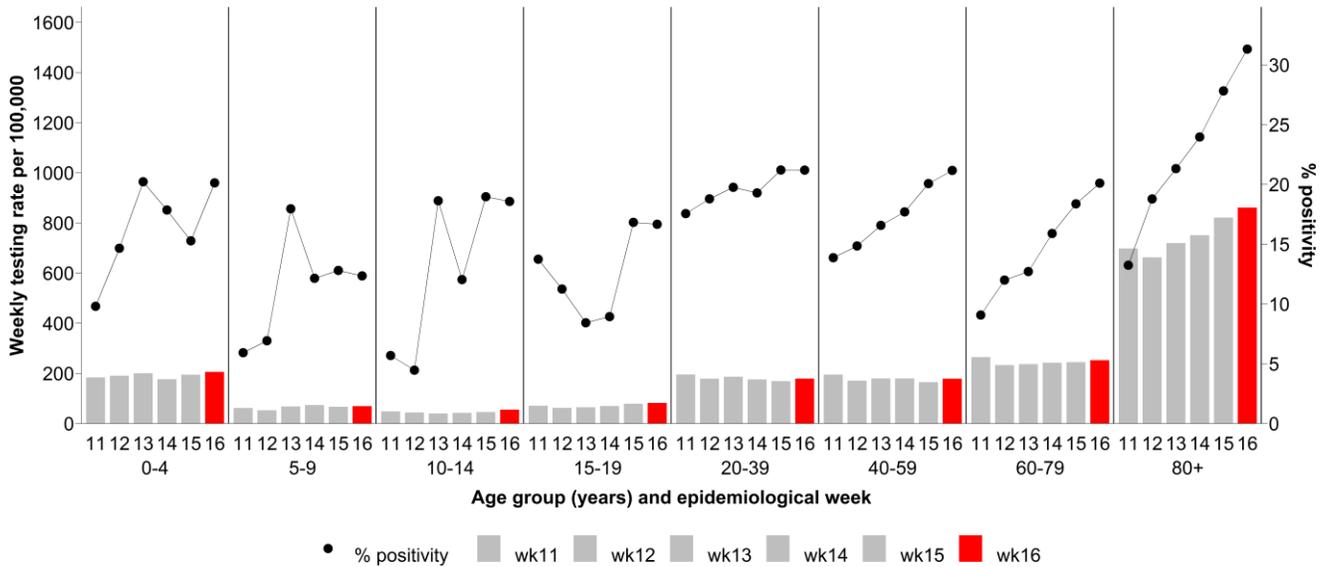
As shown by the bars in [Figure 5](#), testing rates between week 15 and week 16 increased the 80+ age groups, while testing rates remained stable in the other age groups. In week 16, testing rates were highest in those aged 80+ at 861 per 100K.

As shown by the black dots in [Figure 5](#), percent positivity between week 15 and week 16 increased in the 0-4 and 40+ age groups, while percent positivity remained stable in other age groups. Percent positivity ranges from 12.4% in 5-9 year-olds to 31.3% in 80+ year-olds.

Case distribution and weekly incidence by age group

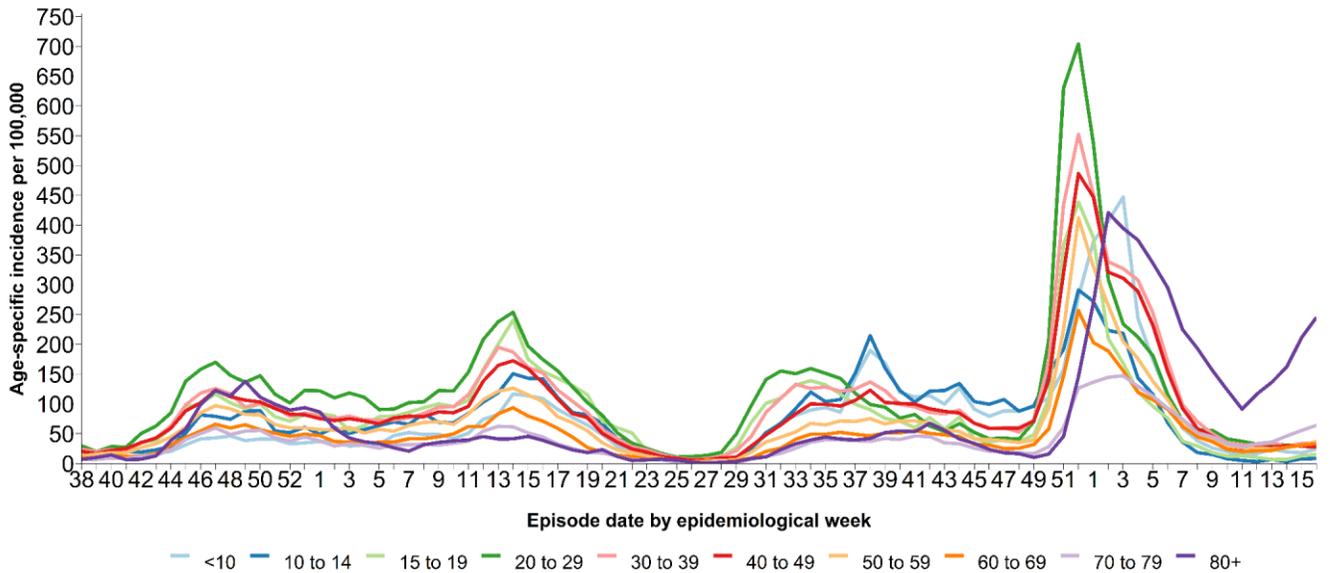
As shown in [Figure 6](#), age-specific incidence rates between week 15 and week 16 decreased in the 40-49 age group and remained stable in the 10-14 and 30-39 age groups. Incidence rates between week 15 and week 16 increased slightly in other age groups except for those aged 70-79 and 80+, where incidence rates increased from 55 per 100K to 64 per 100K and from 211 per 100K to 246 per 100K, respectively. Age-specific incidence 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 Mar 19, 2022 (week 11) – Apr 23, 2022 (week 16)



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 23, 2022 (week 16) (N= 355,498)



D. Severe outcome counts and epi-curve

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 number of people in hospital with a positive COVID-19 test increased from 302 in week 15 to 369 in week 16. In week 16, 60+ year-olds had the highest number of people in hospital with a positive COVID-19 test, with 119 hospitalizations in 60-79 year-olds and 161 hospitalizations in 80+ year-olds.

As of April 2, 2022, death data include people who 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 increased slightly from 56 in week 15 to 61 in week 16. In week 16, 60+ year-olds had the highest number of deaths from any cause among people testing positive for COVID-19, with 16 deaths in 60-79 year-olds and 43 in 80+ year-olds ([Table 2, Figure 8](#)). Detailed information about outcomes by vaccination status can be accessed at [BCCDC COVID-19 Regional Surveillance Dashboard](#).

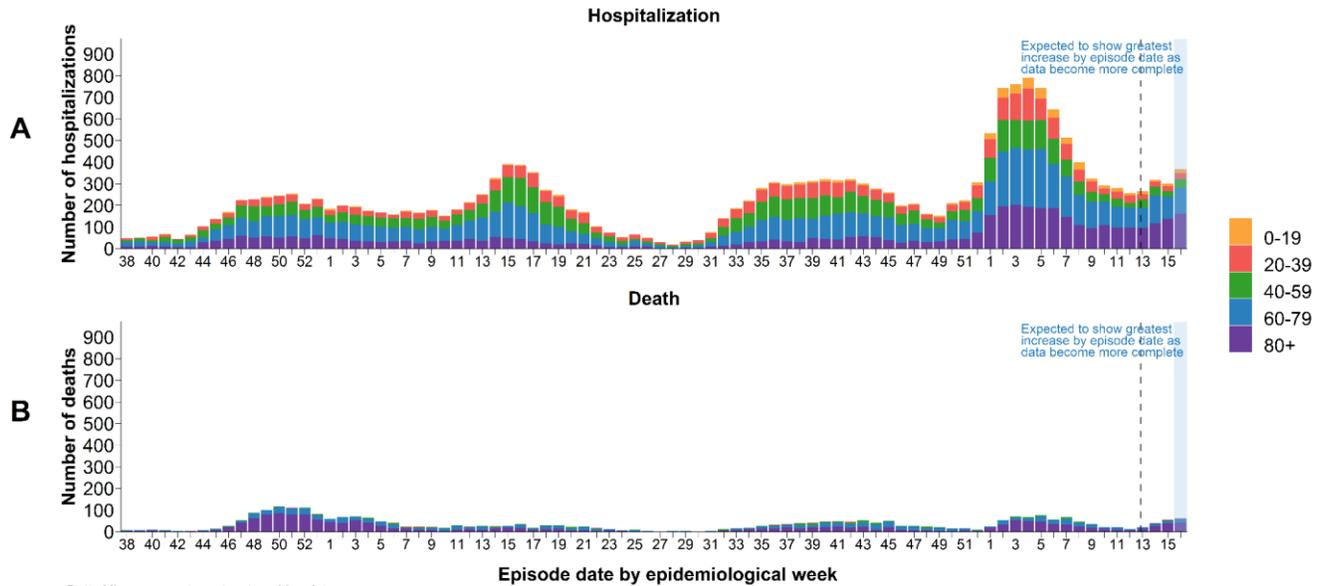
Cumulatively, there have been 31 confirmed cases of [Multi-system Inflammatory Syndrome in children and adolescents \(MIS-C\)](#) in BC since January 1, 2020. There have been no new confirmed cases of MIS-C since the last report. The median age of all cases is 9 years old (range from 4 months old to 16 years old).

**Table 2. COVID-19 severe outcomes by episode date, Health Authority of residence, BC
Jan 15, 2020 (week 3) – Apr 23, 2022 (week 16)**

Severe outcomes by episode date	Health Authority of residence					Residing outside of Canada	Total n/N ^a (%)
	FH	IH	VIHA	NH	VCH		
Week 16, hospitalizations	155	68	66	21	59	0	369
Cumulative hospitalizations	9,737	3,699	1,747	1,911	4,085	17	21,196/363,439 (6)
Week 16, critical care admissions ^b	35	9	6	5	7	0	62
Cumulative critical care admissions^b	2,144	890	349	744	987	4	5,118/363,439 (1)
Week 16, deaths	17	16	13	2	13	0	61
Cumulative deaths, pre-transition (case line list)^c	1,348	367	241	330	716	0	3,002/356,676 (1)
Cumulative deaths, post-transition (automated linkage)^c	46	42	39	6	35	0	168/6,763 (2)

- 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). Number of critical care admissions should not be compared to number of ICU admissions from previous weeks.
- 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. Since death registration is recorded before the underlying cause of death is determined, post-transition deaths use a broader definition and will overestimate deaths due to COVID-19. 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) – Apr 23, 2022 (week 16)^a



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 16, median age of hospital admissions, critical care admissions and deaths was 64 years, 63 years and 82 years, respectively.

In the past four weeks (from week 13 to week 16), there has been a weekly average of 3 deaths in those <60 years of age, 4 deaths in 60-69 year-olds, 7 deaths in 70-79 year-olds and 31 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 23, 2022 (week 16) (N= 363,323)^a

Age group (years)	Cases n (%)	Hospitalizations n (%)	Critical care admissions ^b n (%)	Deaths ^c n (%)
<10	29,913	441 (1)	55 (<1)	2 (<1)
10-19	35,537	313 (1)	43 (<1)	0 (<1)
20-29	72,111	1,227 (2)	176 (<1)	8 (<1)
30-39	68,681	2,110 (3)	391 (1)	34 (<1)
40-49	53,094	2,062 (4)	545 (1)	65 (<1)
50-59	42,742	2,809 (7)	963 (2)	170 (<1)
60-69	28,917	3,678 (13)	1,281 (4)	367 (1)
70-79	15,712	3,928 (25)	1,137 (7)	682 (4)
80-89	10,952	3,305 (30)	463 (4)	1,051 (10)
90+	5,748	1,323 (23)	64 (1)	791 (14)
Total	363,407	21,196	5,118	3,170
Median age	36	64	63	82

- 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. Since death registration is recorded before the underlying cause of death is determined, post-transition deaths use a broader definition and will overestimate deaths due to COVID-19. 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.

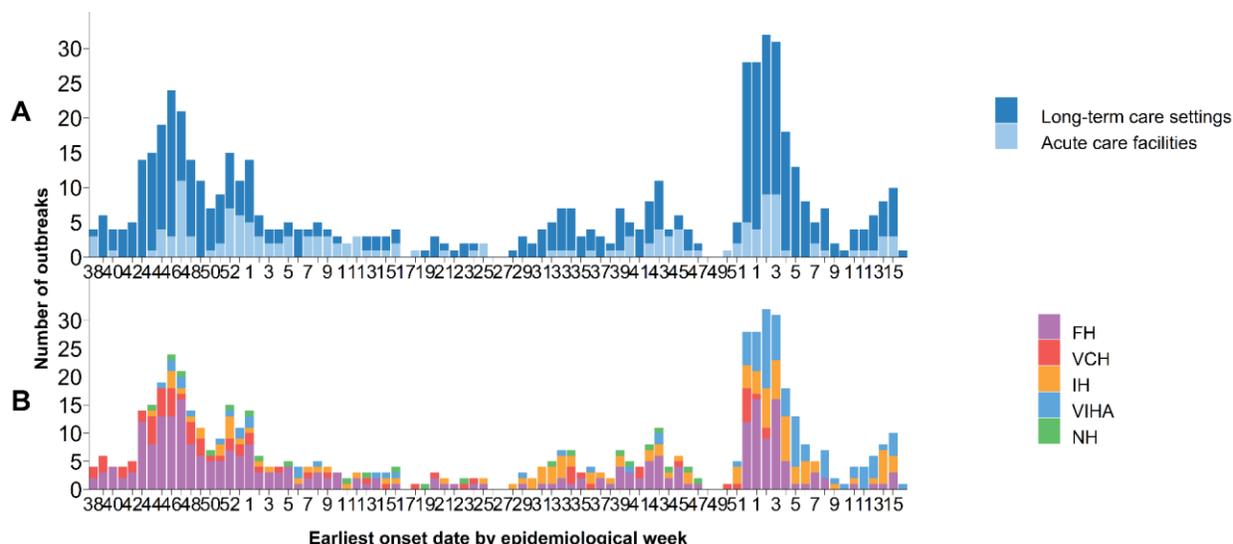
F. Care facility outbreaks

As shown in [Table 4](#) and [Figure 9](#), 640 care facility (acute care and long-term care settings) outbreaks were reported in total in BC to the end of week 16. In week 16, based on earliest case onset date (if unavailable, then outbreak declared date is used), 1 new outbreak in long-term care setting was declared. In the past four weeks (from week 13 to week 16), there has been a weekly average of 6 care facility outbreaks. No deaths were associated with the new care facility outbreak in week 16.

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 23, 2022 (week 16) (N=640)^{d,e}

Care facility outbreaks and cases by episode date	Outbreaks	Cases			Deaths		
		Residents	Staff/other	Total	Residents	Staff/other	Total
Week 16, Care Facility Outbreaks	1	5	0	5	0	0	0
Cumulative, Care Facility Outbreaks	640	8,655	3,737	12,392	1,409	0	1,409

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 23, 2022 (week 16) (N=572)^{d,e}



- 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.
- Earliest dates of onset of outbreak cases are subject to change as investigations and data are updated. If unavailable, outbreak declared date is used.
- 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.
- Cases with unknown role are included in the case count for Staff/other.
- 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 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 30, 2022:

- For the first time in 6 weeks, wastewater loads have been stable or declining at some wastewater treatment plants. Ongoing sampling will indicate if this is an ongoing trend.

- Results for Fraser Health:
 - SARS-CoV-2 viral loads show a decreasing trend in Annacis Island wastewater over the past week.
 - SARS-CoV-2 viral loads show an increasing trend in Northwest Langley wastewater over the past 6 weeks.
- Results for Vancouver Coastal Health:
 - SARS-CoV-2 viral loads show a stable trend in Iona Island over the past week.
 - SARS-CoV-2 viral loads show an increasing trend in Lulu Island over the past week.
 - SARS-CoV-2 viral loads show a decreasing trend Lions Gate wastewater but are still variable.

Figure 10. Wastewater surveillance, FH

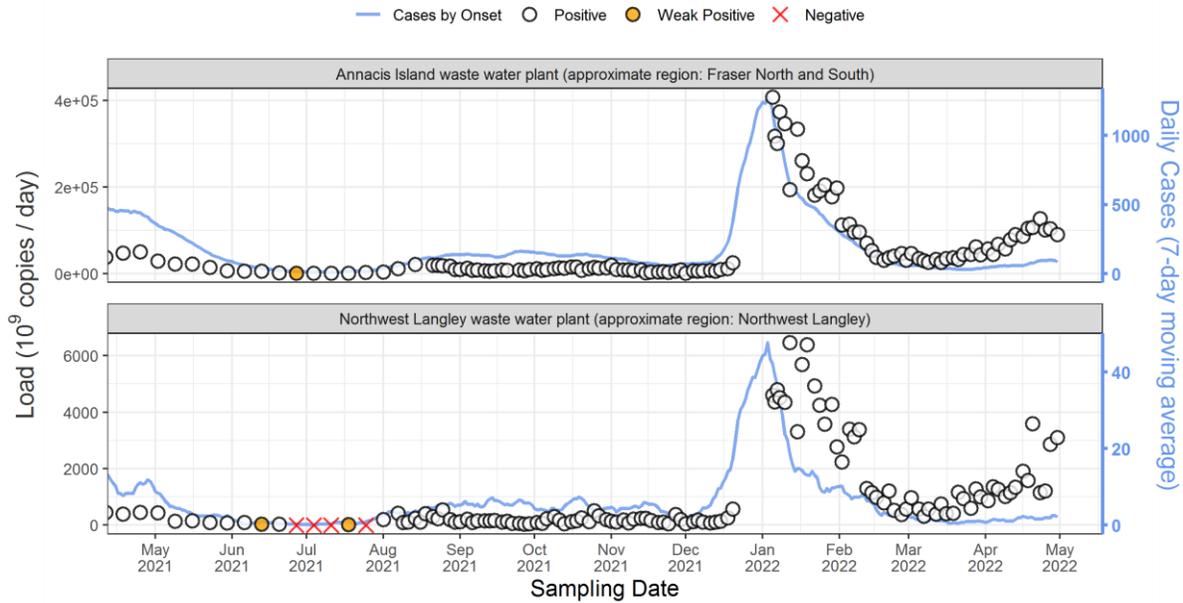
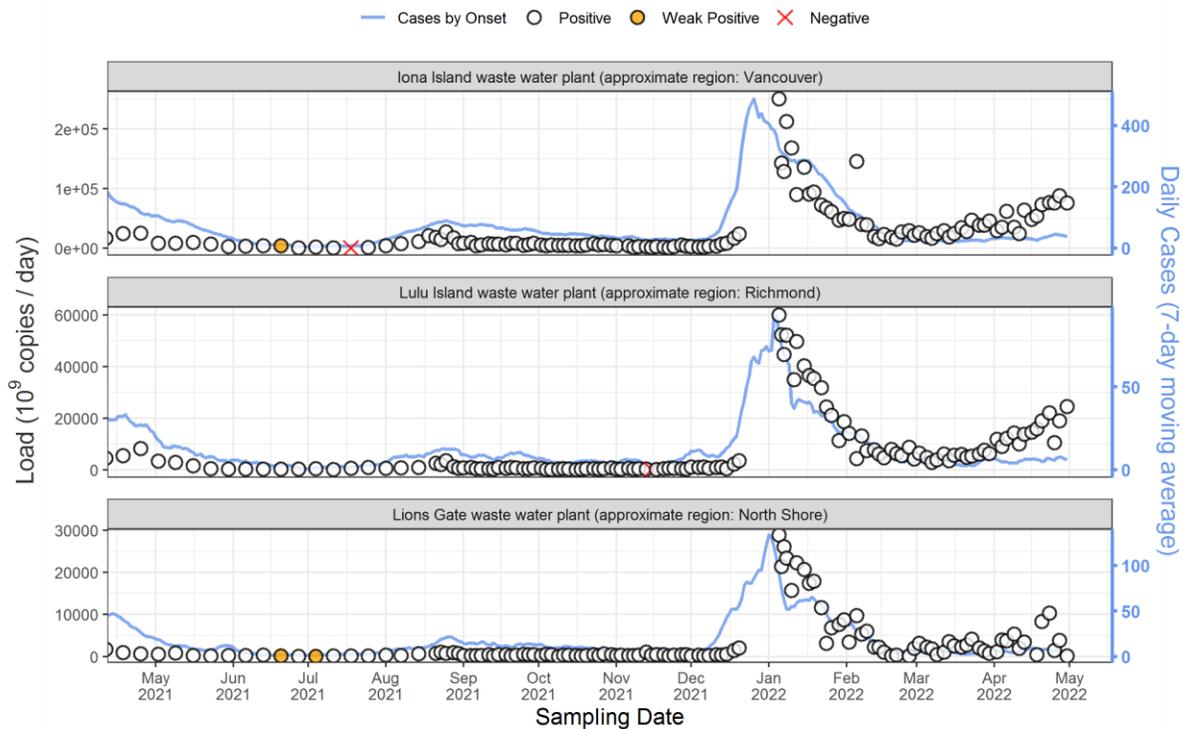


Figure 11. Wastewater surveillance, VCH



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 – 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.