

British Columbia (BC) COVID-19 Situation Report
Week 33: August 14- August 20, 2022

Data for week 33 (August 14 - August 20, 2022) may differ from the data published in the BCCDC weekly report. Data was extracted on August 29, 2022 for this situation report compared to August 31, 2022 for the latest weekly report.

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Testing rates and percent positivity 4	Incidence by Health Authority from week 32 to week 33: <ul style="list-style-type: none"> • Fraser Health incidence decreased from 14 to 11 per 100K • Interior Health incidence decreased from 21 to 19 per 100K • Vancouver Island Health incidence remained stable at 19 and 18 per 100K • Northern Health incidence remained stable at 15 and 14 per 100K • Vancouver Coastal Health incidence decreased from 16 to 12 per 100K
Age profile, testing and cases 5	Testing of MSP-funded specimens decreased from ~4,600 in week 32 to ~4,400 in week 33, and the percent positivity of MSP-funded specimens decreased from 21.4% in week 32 to 19.3% in week 33.
Severe outcomes 6	The per capita testing rates for MSP-funded specimens between week 32 and week 33 decreased or remained stable in all age groups except in 60-79 year-olds, where the testing rates increased from 112 per 100K in week 32 to 115 per 100K in week 33. Percent positivity between week 32 and week 33 decreased or remained stable in all age groups.
Age profile, severe outcomes 7	Age-specific incidence rates between week 32 and week 33 decreased or remained stable in all age groups except 30-39 year-olds where the incidence rate increased from 7 per 100K in week 32 to 9 per 100K in week 33.
Care facility outbreaks 9	The number of people in hospital with a positive COVID-19 test decreased from 232 in week 32 to 184 in week 33. The number of people in critical care increased from 32 in week 32 to 41 in week 33. In week 33, 60+ year-olds had the highest number of people in hospital with a positive COVID-19 test, with 75 hospitalizations in 60-79 year-olds and 72 hospitalizations in 80+ year-olds. In week 33, 60-79 year-olds had the highest number of people in critical care (22 critical care admissions).
Wastewater surveillance 10	The weekly number of deaths from any cause among people testing positive for COVID-19 remained stable at 45 in week 32 and week 33. In week 33, 80+ year-olds had the highest number of deaths from any cause among people testing positive for COVID-19, with 27 deaths in this age group. From week 14 to week 28 where the underlying cause of death (UCD) has been reported for at least 95% of the post-transition deaths, an average of 42% of these deaths were reported to have COVID-19 as their UCD.
Additional resources 11	In week 33, based on earliest symptom onset date, 2 new care facility outbreaks in long-term care were 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-\(novel-coronavirus\)](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.
 - Critical care admissions (HAU, ICU, and critical care surge beds) include individuals who test positive for COVID-19 and are in critical care admission as recorded in 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.
 - Per capita rates/incidences for year 2020 are based on Population Estimates 2020 (n= 5,147,772 for BC overall), for year 2021 are based on PEOPLE 2021 estimates (n= 5,194,137 for BC overall), and for year 2022 is based on PEOPLE 2021 estimates (n= 5,263,772 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 August 29, 2022, laboratory PLOVER data on August 25, 2022, and Health Authority outbreak files on August 24, 2022.
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A. COVID-19 case counts and epidemic curve

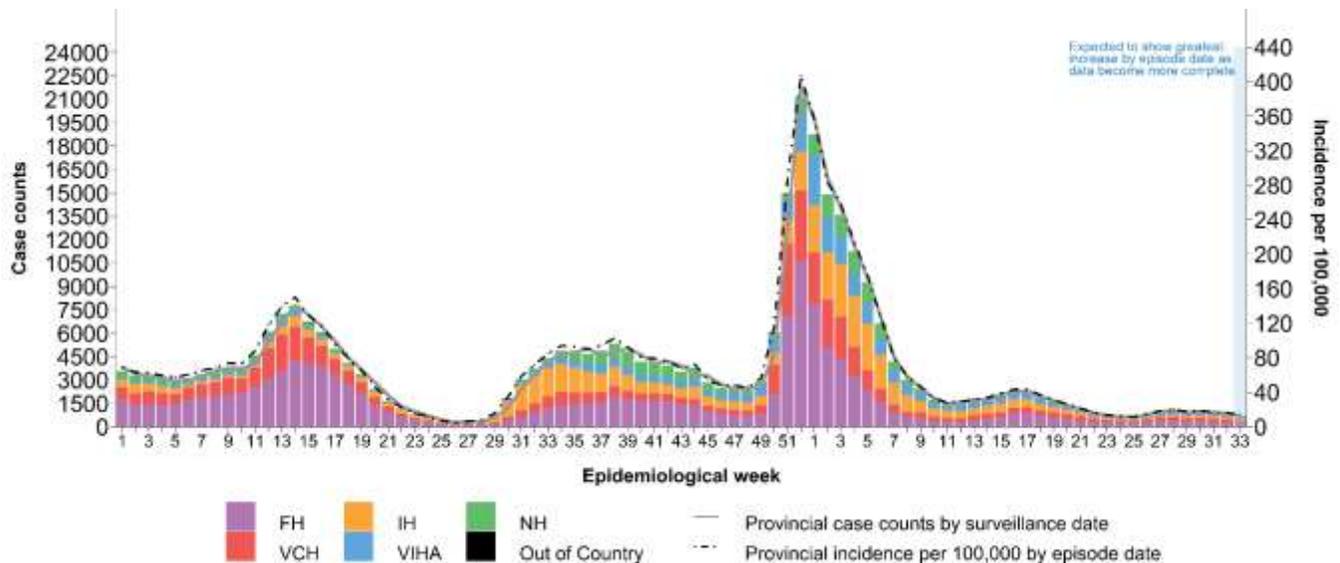
Due to changes in testing strategies in BC in 2022 focusing on targeted higher risk populations, current case counts are an underestimate of the true number of COVID-19 cases in BC. This underestimation has increased compared to the period prior to the emergence of the Omicron variant in BC. Up to week 33, there have been 381,820 cases for a cumulative incidence of 7,254 per 100K (Table 1, Figure 1). The provincial incidence by episode date was 14 per 100K (729 cases) in week 33, which has slightly decreased from 16 per 100K in week 32.

Incidence rates from week 32 to week 33 decreased or remained stable in all HAs. In week 33, the highest incidence rate was in Interior Health (IH) at 19 per 100K. Incidence by episode date may increase as data become more complete in recent weeks.

Table 1. Episode-based case tallies by Health Authority, BC, Jan 15, 2020 (week 3) – Aug 20, 2022 (week 33) (N= 381,820)

Case tallies by episode date	Health Authority of Residence					Outside Canada	Total
	FH	IH	VIHA	NH	VCH		
Week 33, case counts	223	155	157	42	152	0	729
Cumulative case counts	167,657	67,926	37,825	30,839	77,182	391	381,820
Week 33, cases per 100K population	11	19	18	14	12	NA	14
Cumulative cases per 100K population	8,437	8,199	4,297	10,075	6,117	NA	7,254

Figure 1. Episode-based epidemic curve (bars), surveillance date (line) and Health Authority (HA), BC Jan 3, 2021 (week 1) – Aug 20, 2022 (week 33) (N= 325,970)



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 2](#), the number of MSP-funded specimens decreased from ~4,600 in week 32 to ~4,400 in week 33, and the percent positivity of MSP-funded specimens decreased from 21.4% in week 32 to 19.3% in week 33.

As shown by the dotted lines in [Figure 3](#), the per capita testing rates for MSP-funded specimens (Panel A) decreased or remained stable in all HAs except in Northern Health (NH), where it increased from 70 per 100K in week 32 to 73 per 100K in week 33. IH had the highest testing rate at 87 per 100K. The percent positivity (Panel B) for MSP-funded specimens decreased or remained stable in all HAs. In week 33, percent positivity ranged from 17.2% in VCH to 24.2% in VIH.

Figure 2. Number of specimens tested and percent SARS-CoV-2 positive, by collection week, BC Jan 3, 2021 (week 1) – Aug 20, 2022 (week 33)

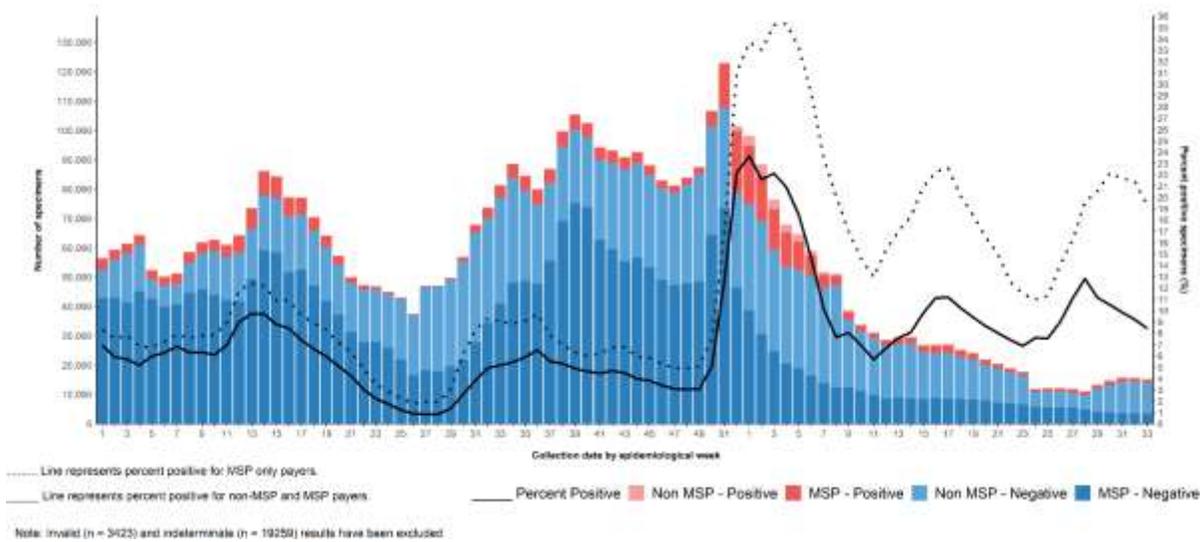
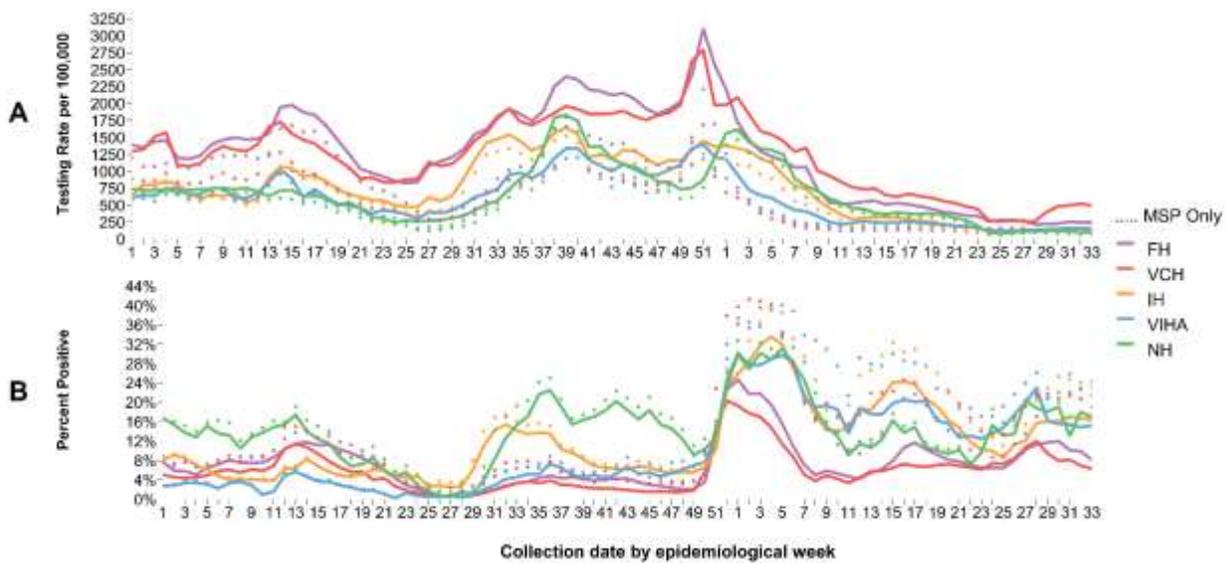


Figure 3. Testing rates and percent SARS-CoV-2 positive by Health Authority and collection week, BC Jan 3, 2021 (week 1) – Aug 20, 2022 (week 33)



Data source: Laboratory PLOVER data

C. Age profile, testing and cases

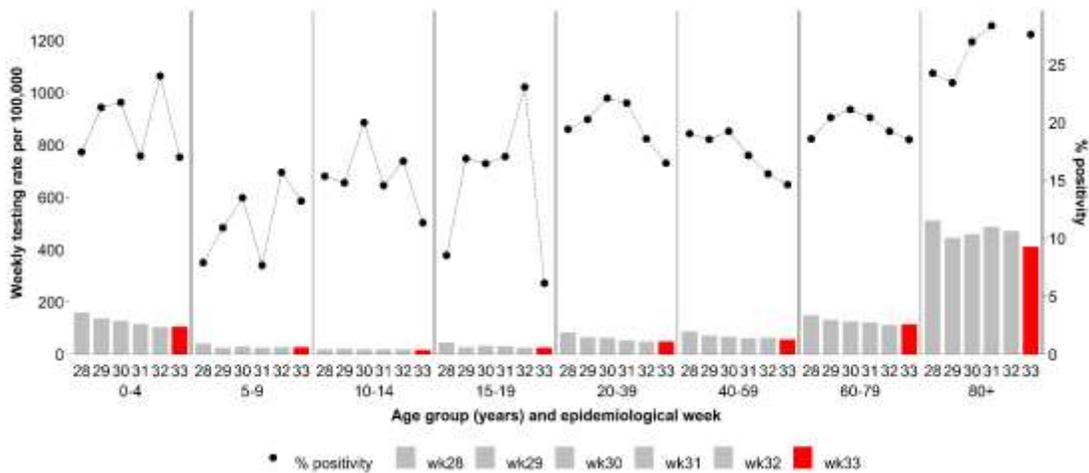
Testing rates and percent positivity by age group

As shown by the bars in [Figure 4](#), the per capita testing rates for MSP-funded specimens between week 32 and week 33 decreased or remained stable in all age groups except in 60-79 year-olds, where the testing rates increased from 112 per 100K in week 32 to 115 per 100K in week 33. As shown by the black dots in [Figure 4](#), percent positivity between week 32 and week 33 decreased or remained stable in all age groups. Percent positivity decreased the most in 15-19 year-olds, where it decreased from 23.1% in week 32 to 6.2% in week 33 (Remarkable fluctuations should be interpreted with caution due to low testing volumes in this age groups). In week 33, percent positivity ranged from 6.2% in 15-19 year-olds to 27.6% in 80+ year-olds.

Case distribution and weekly incidence by age group

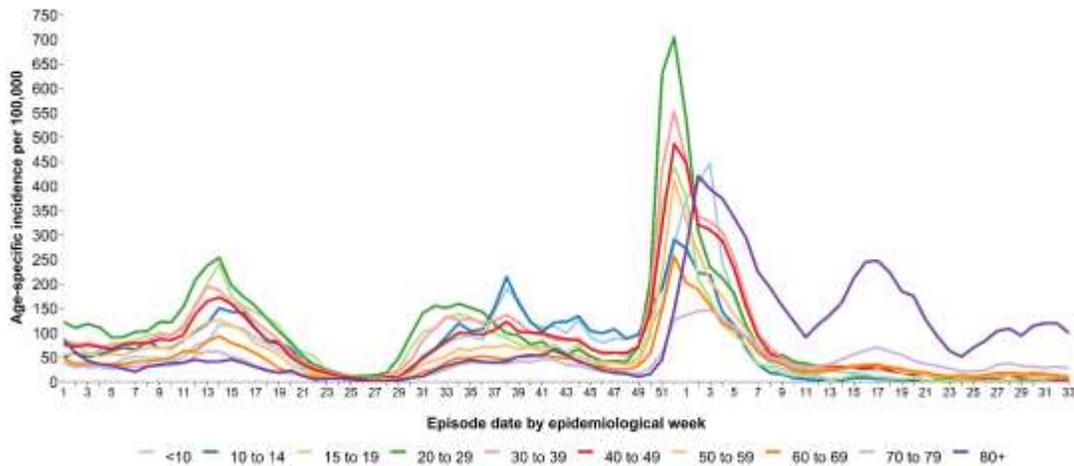
As shown in [Figure 5](#), age-specific incidence rates between week 32 and week 33 decreased or remained stable in all age groups except 30-39 year-olds where the incidence rate increased from 7 per 100K in week 32 to 9 per 100K in week 33. Incidence rates decreased the most in the 80+ age group from 120 per 100K in week 32 to 99 per 100K in week 33.

Figure 4. Average weekly SARS-CoV-2 MSP testing rates and MSP percent positive by known age group, BC Jul 16, 2022 (week 28) – Aug 20, 2022 (week 33)



Data source: Laboratory PLOVER data

Figure 5. Weekly age-specific COVID-19 incidence per 100K population by epidemiological week, BC Jan 3, 2021 (week 1) – Aug 20, 2022 (week 33) (N= 325,878)



D. Severe outcomes

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 232 in week 32 to 184 in week 33. The number of people in critical care increased from 32 in week 32 to 41 in week 33.

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 remained stable at 45 in week 32 and week 33 (Table 2).

Cumulatively, there have been 32 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 May 20, 2022. 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) – Aug 20, 2022 (week 33)

Severe outcomes by episode date	Health Authority of residence					Residing outside of Canada	Total n/N ^a (%)
	FH	IH	VIHA	NH	VCH		
Week 33, hospitalizations	63	26	46	9	40	0	184
Cumulative hospitalizations	12,298	4,488	2,755	2,169	5,425	17	27,152/381,820 (7)
Week 33, critical care admissions ^b	21	7	5	3	5	0	41
Cumulative critical care admissions^b	2,561	1,022	437	805	1,142	4	5,971/381,820 (2)
Week 33, deaths	13	8	12	0	12	0	45
Cumulative deaths, pre-transition (case line list)^c	1,348	367	241	330	716	0	3,002/356,495 (1)
Cumulative deaths, post-transition (automated linkage)^c	378	227	211	44	250	0	1,110/25,325 (4)

- 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. 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.

E. Age profile, severe outcomes

Table 3 displays the distribution of cases and severe outcomes. In week 33, 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 67 years, 63 years, 82 years, and 85 years, respectively.

In week 33, 60+ year-olds had the highest number of people in hospital with a positive COVID-19 test, with 75 hospitalizations in 60-79 year-olds and 72 hospitalizations in 80+ year-olds. In week 33, 60-79 year-olds had the highest number of people in critical care (22 critical care admissions). In week 33, 80+ year-olds had the highest number of deaths from any cause among people testing positive for COVID-19, with 27 deaths in this age group ([Figure 6](#)).

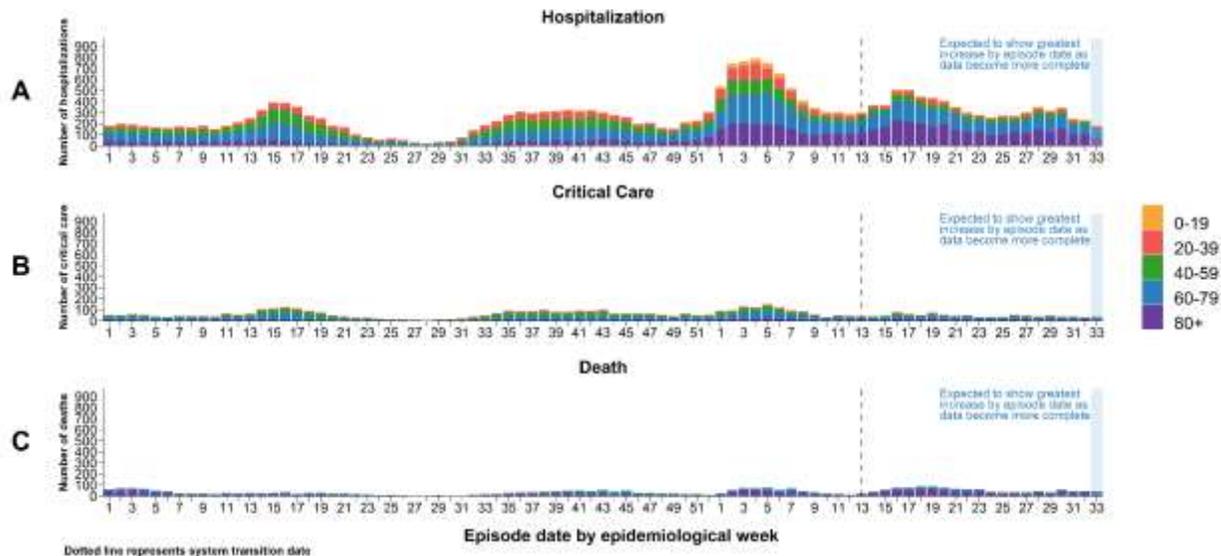
In the past four weeks (from week 30 to week 33), there has been a weekly average of 3 deaths in those <60 years of age, 4 deaths in 60-69 year-olds, 10 deaths in 70-79 year-olds and 31 deaths in the 80+ year-olds (data not shown). The number of deaths may increase over time as data becomes more complete.

Table 3: COVID-19 cases, hospitalizations, critical care admissions, and deaths by age group, BC, Jan 15, 2020 (week 3) – Aug 20, 2022 (week 33) (N= 381,789)^a

Age group (years)	Cases	Hospitalizations n (%)	Critical care admissions ^b n (%)	Pre-transition (case line list) deaths ^c n (%)	Post-transition (automated linkage) deaths ^c		
					UCD as COVID-19 ^d n (%)	UCD as non-COVID-19 ^d n (%)	UCD pending ^d n (%)
<10	31,025	578 (2)	72 (<1)	2 (<1)	2 (<1)	2 (<1)	0 (<1)
10-19	35,859	367 (1)	52 (<1)	0 (<1)	0 (<1)	2 (<1)	0 (<1)
20-29	73,610	1,392 (2)	211 (<1)	6 (<1)	1 (<1)	7 (<1)	1 (<1)
30-39	70,603	2,380 (3)	439 (1)	31 (<1)	1 (<1)	8 (<1)	0 (<1)
40-49	54,495	2,265 (4)	586 (1)	64 (<1)	1 (<1)	8 (<1)	2 (<1)
50-59	44,468	3,225 (7)	1,077 (2)	166 (<1)	4 (<1)	33 (1)	4 (<1)
60-69	31,062	4,486 (14)	1,472 (5)	353 (1)	35 (1)	53 (2)	10 (<1)
70-79	18,655	5,328 (29)	1,359 (7)	655 (4)	87 (2)	132 (3)	24 (1)
80-89	14,304	4,992 (35)	616 (4)	989 (10)	156 (3)	184 (4)	36 (1)
90+	7,708	2,139 (28)	87 (1)	736 (15)	140 (5)	147 (5)	30 (1)
Total	381,789	27,152	5,971	3,002	427	576	107
Median age	36	67	63	82	85	82	83

- 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). 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. 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.

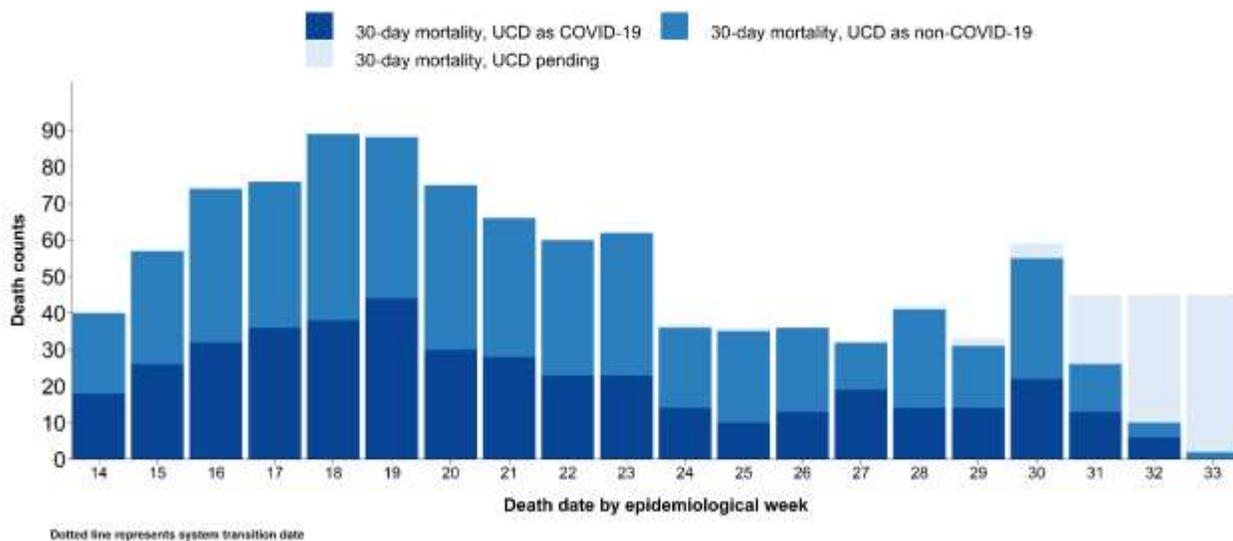
Figure 6. Weekly COVID-19 hospital admissions (A), critical care admissions (B), and deaths (C) by age groups, BC, Jan 3, 2021 (week 1) – Aug 20, 2022 (week 33)^a



a. Among those with available age information only.

Figure 7 displays the number of post-transition deaths (i.e. people who test positive for COVID-19 and died from any cause within 30 days of their first positive lab result date) by UCD as recorded in Vital Statistics from week 14 to week 33 in 2022. From week 14 to week 28 where the UCD has been reported for at least 95% of the post-transition deaths, an average of 42% of these deaths were reported to have COVID-19 as their UCD. Post-transition deaths with complete UCD are expected to increase over time.

Figure 7. Post-transition deaths by underlying cause of death, BC, Apr 03, 2022 (week 14) – Aug 20, 2022 (week 33)^{a,b}



- a. 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.
- b. 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.

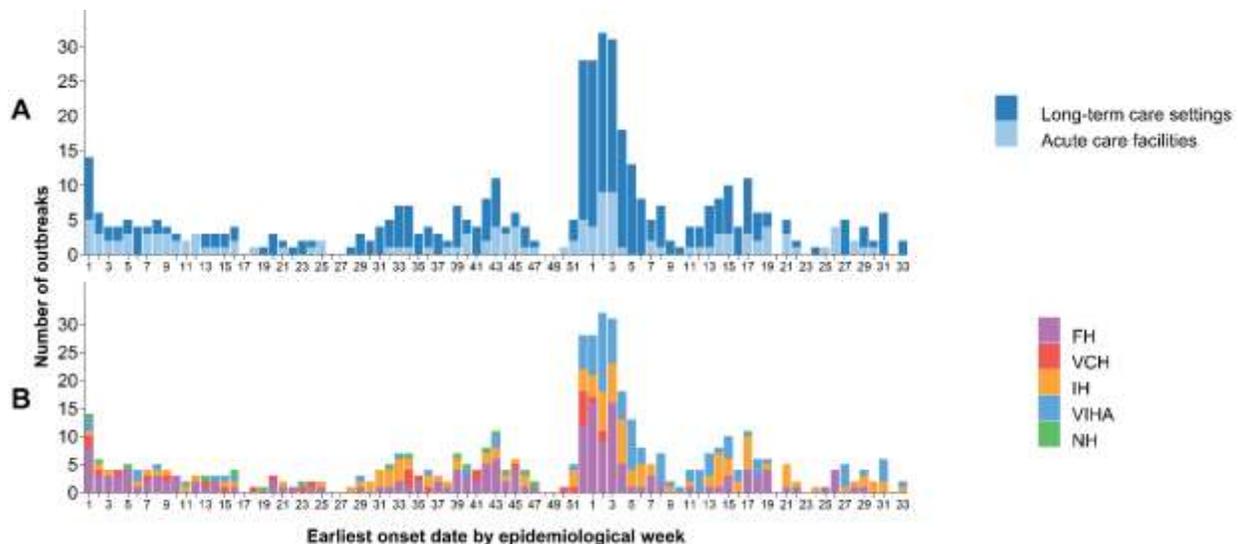
F. Care facility outbreaks

As shown in [Table 4](#) and [Figure 8](#), 701 care facility (acute care and long-term care settings) outbreaks were reported in total in BC to the end of week 33. In week 33, based on earliest symptom onset date (if unavailable, then outbreak declared date is used), 2 new care facility outbreaks were declared, both of which were in long-term care. In the past four weeks (from week 30 to week 33), there has been a weekly average of 3 care facility outbreaks.

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) – Aug 20, 2022 (week 33) (N=701)^{d,e}

Care facility outbreaks and cases by episode date	Outbreaks	Cases			Deaths		
		Residents	Staff/other	Total	Residents	Staff/other	Total
Week 33, Care Facility Outbreaks	2	17	0	17	0	0	0
Cumulative, Care Facility Outbreaks	701	9,936	3,817	13,753	1,457	0	1,457

Figure 8. COVID-19 care facility^a, outbreaks by earliest case onset^{b,c}, facility type (A) and Health Authority (B), BC Jan 3, 2021 (week 1) – Aug 20, 2022 (week 33) (N=450)^{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 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 9](#) and [Figure 10](#). 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 August 27, 2022

- At some wastewater plants, SARS-CoV-2 viral loads may have stabilized or begun to increase after falling from their most recent peak in late-June or early-July in Metro Vancouver wastewater. Additional results in future weeks are required to confirm this trend.
- Over the past week, viral loads at Annacis Island WWTP (Fraser North and South) have decreased by 19%
- Over the four weeks, viral loads at Northwest Langley WWTP (Northwest Langley) have decreased by 62%
- Over the past week, viral loads at Iona Island WWTP (Vancouver) have increased by 1%
- Over the past week, viral loads at Lulu Island WWTP (Richmond) have increased by 24%
- Over the past two weeks, viral loads at Lions Gate WWTP (North Shore) have decreased by 69%

Figure 9. Wastewater surveillance, FH

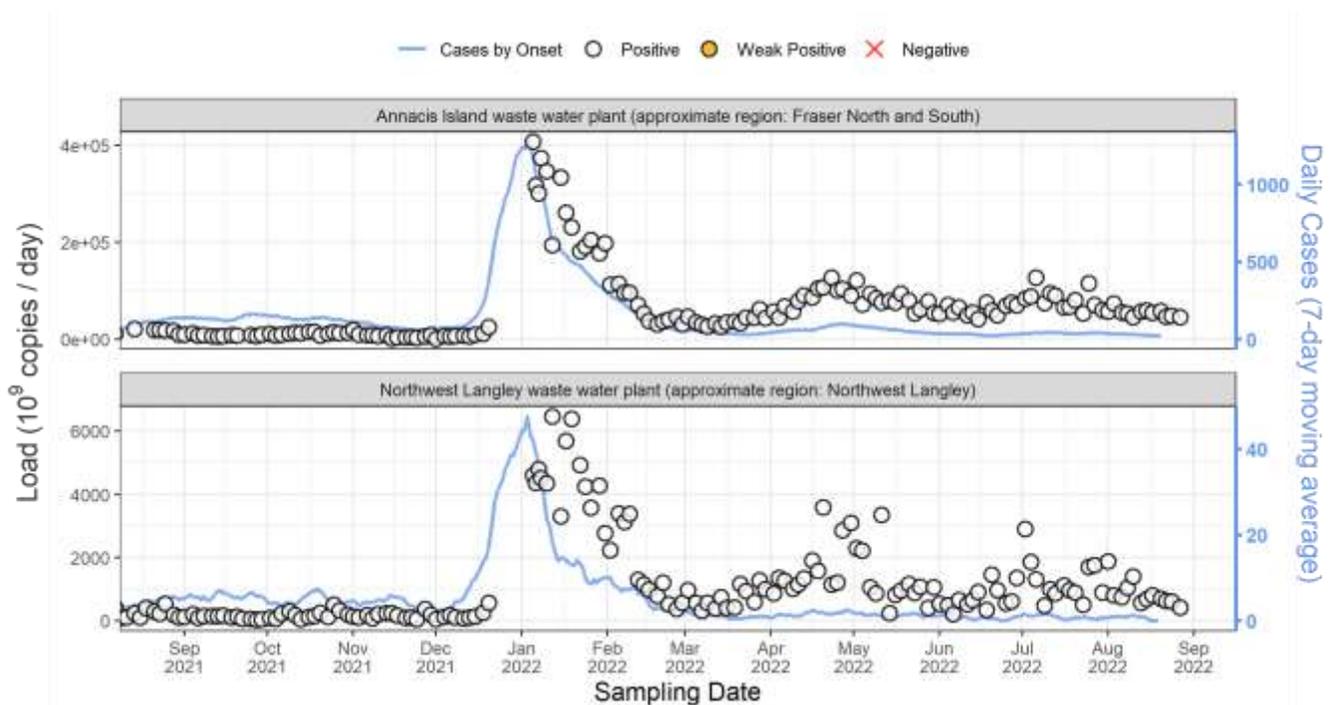
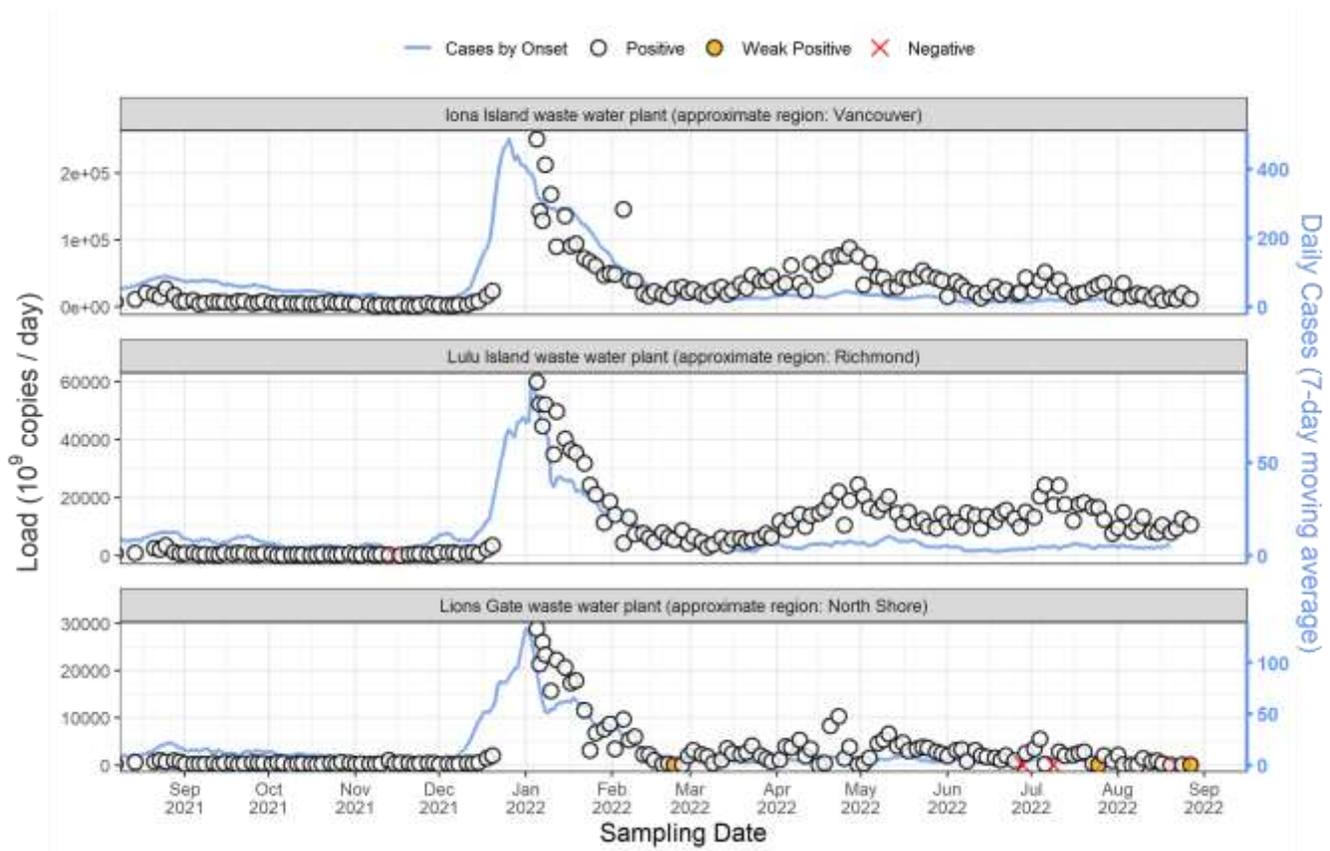


Figure 10. Wastewater surveillance, VCH



H. Additional resources

For COVID-19 vaccination coverage data, visit the COVID-19 Vaccination Coverage 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/

BC’s COVID-19 Immunization Plan is updated regularly here: <https://www2.gov.bc.ca/gov/content/covid-19/vaccine/plan>