

British Columbia (BC) COVID-19 Situation Report

Week 35: August 28- September 03, 2022

Data for week 35 (August 28 - September 03, 2022) may differ from the data published in the BCCDC weekly report. Data was extracted on September 12, 2022 for this situation report compared to September 14, 2022 for the latest weekly report.

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Report Summary

Due to changes in testing strategies in BC, 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. The provincial incidence by episode date was 12 per 100K (623 cases) in week 35, which was stable compared to week 34.

Incidence by Health Authority from week 34 to week 35:

- Fraser Health incidence remained stable at 12 per 100K
- Interior Health incidence decreased from 18 to 13 per 100K
- Vancouver Island Health incidence decreased from 12 to 10 per 100K
- Northern Health incidence remained stable at 12 and 11 per 100K
- Vancouver Coastal Health incidence increased from 10 to 13 per 100K

Testing of MSP-funded specimens decreased slightly from ~4,100 in week 34 to ~3,900 in week 35. The percent positivity of MSP-funded specimens remained stable at 18.9% in week 34 and 17.5% in week 35.

The per capita testing rates for MSP-funded specimens between week 34 and week 35 decreased or remained stable in all age groups except in 0-4 year-olds, where the testing rates increased from 81 per 100K in week 34 to 98 per 100K in week 35. Percent positivity between week 34 and week 35 decreased or remained stable in all age groups except 0-4 and 10-14 year-olds.

Age-specific incidence rates between week 34 and week 35 decreased or remained stable in all age groups except <10 year-olds, where the incidence rate increased from 6 per 100K in week 34 to 11 per 100K in week 35.

The number of people in hospital with a positive COVID-19 test decreased from 203 in week 34 to 157 in week 35. In week 35, 60+ year-olds had the highest number of people in hospital with a positive COVID-19 test, with 67 hospitalizations in 60-79 year-olds and 59 hospitalizations in 80+ year-olds. The number of people in critical care decreased from 27 in week 34 to 25 in week 35. In week 35, 60-79 year-olds had the highest number of critical care admissions (11).

The weekly number of deaths from any cause among people testing positive for COVID-19 decreased from 44 in week 34 to 33 in week 35. In week 35, 80+ year-olds had the highest number of deaths from any cause among people testing positive for COVID-19, with 23 deaths in this age group. From week 16 to week 31 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.

In week 35, based on earliest symptom onset date, 6 new care facility outbreaks (5 in acute care and 1 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 September 12, 2022, laboratory PLOVER data on September 08, 2022, and Health Authority outbreak files on September 07, 2022.
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A. COVID-19 case counts and epidemic curve

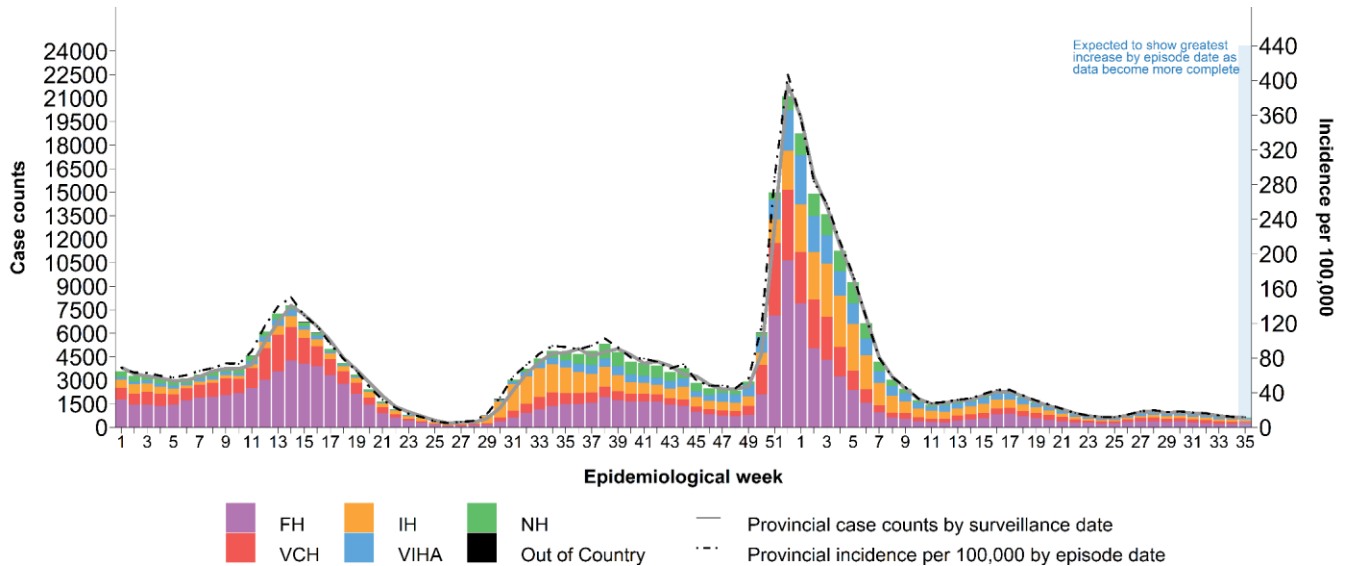
Due to changes in testing strategies in BC in 2022 focusing on targeting higher risk populations, current case counts are an underestimate of the true number of COVID-19 cases in BC. This underestimation has increased compared to the period prior to the emergence of the Omicron variant in BC. Up to week 34 there have been 383,096 cases for a cumulative incidence of 7,278 per 100K (Table 1, Figure 1). The provincial incidence by episode date was 12 per 100K (653 cases) in week 35, which has remained stable since week 34.

Incidence rates from week 34 to week 35 decreased or remained stable in all HAs except Vancouver Coastal Health (VCH). In week 35, the highest incidence rate was in Interior Health (IH) and VCH at 13 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) – Sep 03, 2022 (week 35) (N= 383,096)

Case tallies by episode date	Health Authority of Residence					Outside Canada	Total
	FH	IH	VIHA	NH	VCH		
Week 35, case counts	229	111	88	35	160	0	623
Cumulative case counts	168,121	68,187	38,016	30,911	77,470	391	383,096
Week 35, cases per 100K population	12	13	10	11	13	NA	12
Cumulative cases per 100K population	8,460	8,231	4,319	10,099	6,139	NA	7,278

Figure 1. Episode-based epidemic curve (bars), surveillance date (line) and Health Authority (HA), BC Jan 3, 2021 (week 1) – Sep 03, 2022 (week 35) (N= 327,246)



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 slightly from ~4,100 in week 34 to ~3,900 in week 35. The percent positivity of MSP-funded specimens remained stable at 18.9% in week 34 and 17.5% in week 35.

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 for Fraser Health (FH) where the testing rate increased from 65 per 100K in week 34 to 69 per 100K in week 35. VCH had the highest testing rate at 78 per 100K. The percent positivity (Panel B) for MSP-funded specimens decreased or remained stable in all HAs except VCH, where the percent positivity increased from 15.3% in week 34 to 19.3% in week 35. In week 35, percent positivity ranged from 17.1% in Vancouver Island Health (VIHA) to 19.3% in VCH.

Figure 2. Number of specimens tested and percent SARS-CoV-2 positive, by collection week, BC Jan 3, 2021 (week 1) – Sep 03, 2022 (week 35)

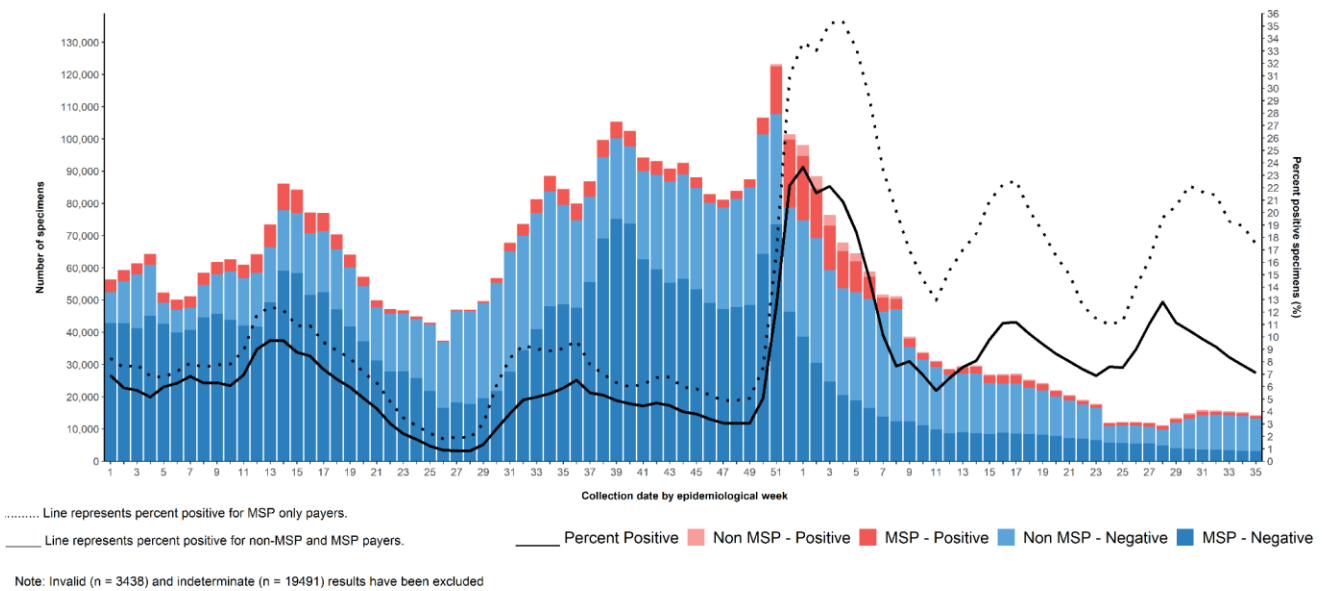
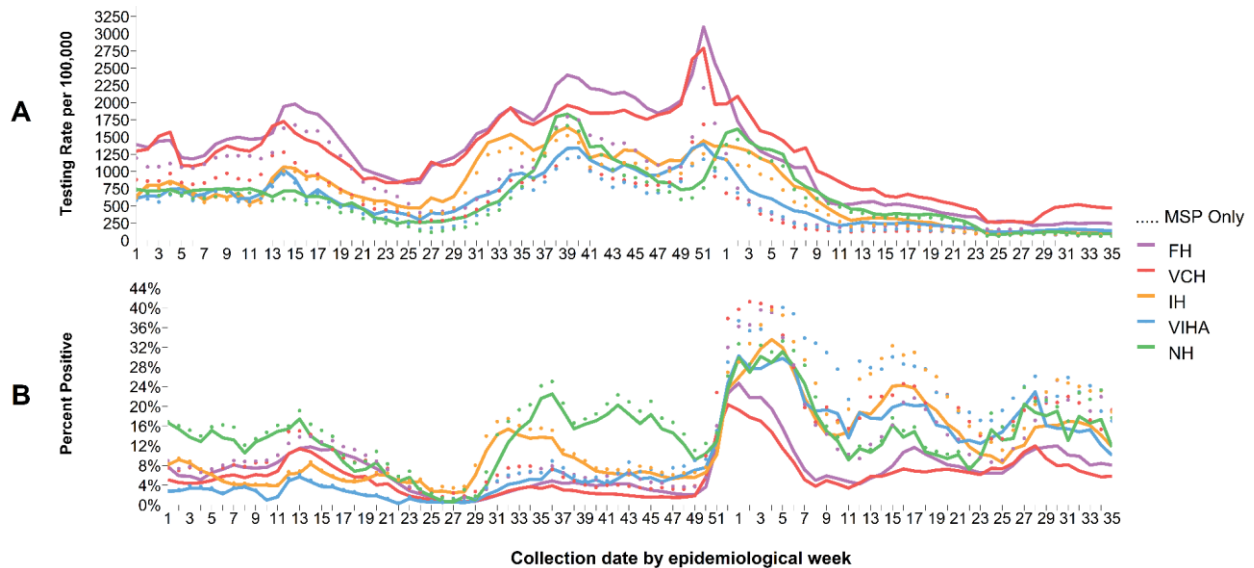


Figure 3. Testing rates and percent SARS-CoV-2 positive by Health Authority and collection week, BC Jan 3, 2021 (week 1) – Sep 03, 2022 (week 35)



C. Age profile, testing and cases

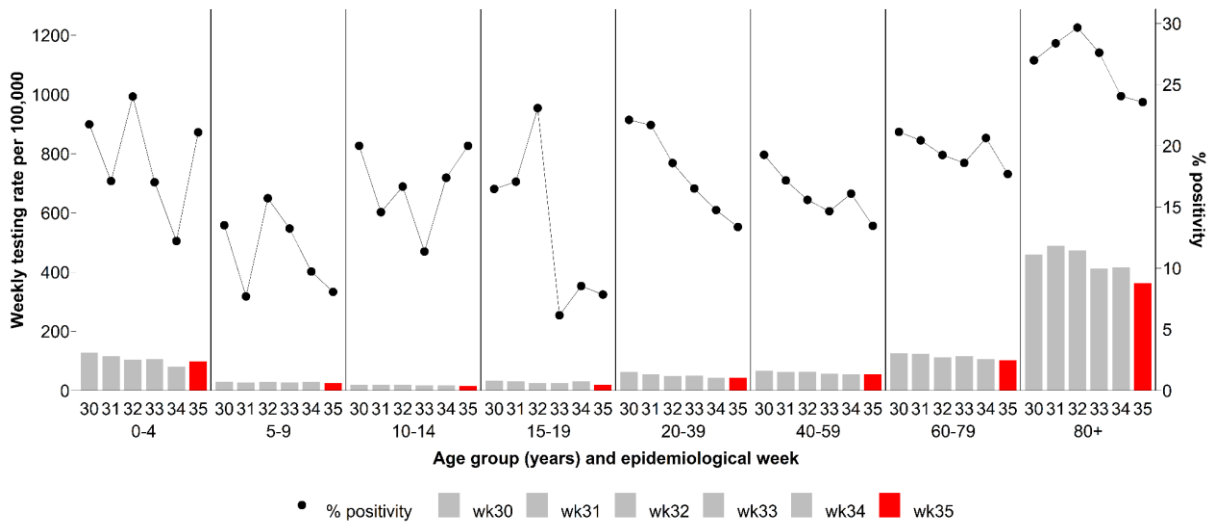
Testing rates and percent positivity by age group

As shown by the bars in **Figure 4**, the per capita testing rates for MSP-funded specimens between week 34 and week 35 decreased or remained stable in all age groups except in 0-4 year-olds, where the testing rates increased from 81 per 100K in week 34 to 98 per 100K in week 35. As shown by the black dots in **Figure 4**, percent positivity between week 34 and week 35 decreased or remained stable in all age groups except 0-4 and 10-14 year-olds. Percent positivity decreased the most in 60-79 year-olds, where it decreased from 20.6% in week 34 to 17.7% in week 35. Percent positivity ranged from 7.8% in 15-19 year-olds to 23.6% in 80+ year-olds in week 35.

Case distribution and weekly incidence by age group

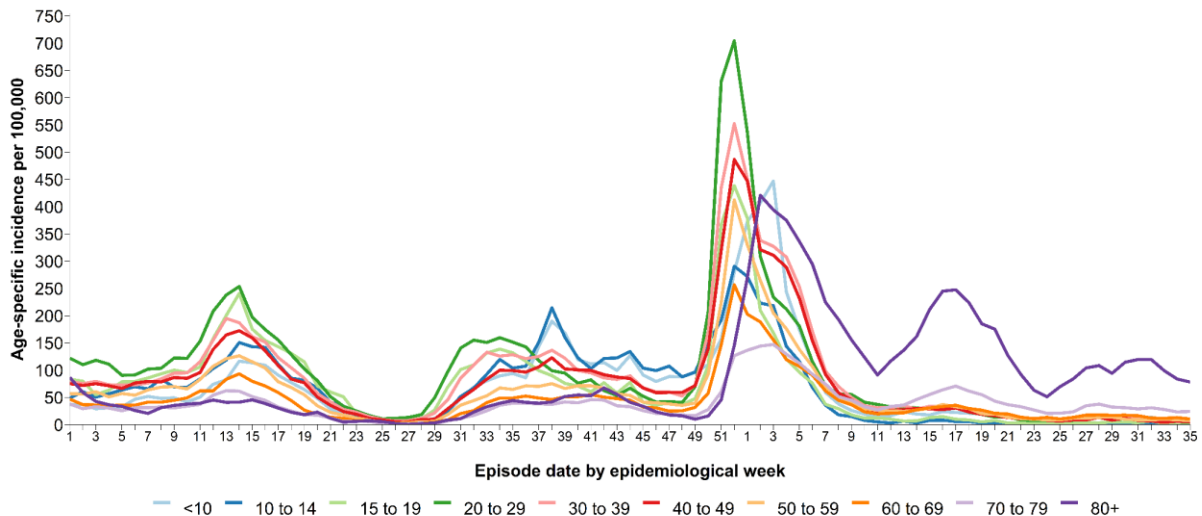
As shown in **Figure 5**, age-specific incidence rates between week 34 and week 35 decreased or remained stable in all age groups except <10 year-olds where the incidence rate increased from 6 per 100K in week 34 to 11 per 100K in week 35. Incidence rates decreased the most in the 80+ age group from 84 per 100K in week 34 to 78 per 100K in week 35.

Figure 4. Average weekly SARS-CoV-2 MSP testing rates and MSP percent positive by known age group, BC Jul 30, 2022 (week 30) – Sep 03, 2022 (week 35)



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) – Sep 03, 2022 (week 35) (N= 327,154)



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 203 in week 34 to 157 in week 35. The number of people in critical care decreased from 27 in week 34 to 25 in week 35.

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 decreased from 44 in week 34 to 33 in week 35 (Table 2).

Cumulatively, there have been 33 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 case 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) – Sep 03, 2022 (week 35)**

Severe outcomes by episode date	Health Authority of residence					Residing outside of Canada	Total n/N ^a (%)
	FH	IH	VIHA	NH	VCH		
Week 35, hospitalizations	48	29	26	11	43	0	157
Cumulative hospitalizations	12,511	4,588	2,827	2,202	5,530	17	27,675/383,096 (7)
Week 35, critical care admissions ^b	11	6	1	2	5	0	25
Cumulative critical care admissions^b	2,595	1,035	442	812	1,154	4	6,042/383,096 (2)
Week 35, deaths	8	8	7	3	7	0	33
Cumulative deaths, pre-transition (case line list)^c	1,348	367	241	330	716	0	3,002/356,475 (1)
Cumulative deaths, post-transition (automated linkage)^c	401	249	230	48	266	0	1,194/26,621 (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 35, 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 35, 60+ year-olds had the highest number of people in hospital with a positive COVID-19 test, with 67 hospitalizations in 60-79 year-olds and 59 hospitalizations in 80+ year-olds. In week 35, 60-79 year-olds had the highest number of people in critical care (11 critical care admissions). In week 35, 80+ year-olds had the highest number of deaths from any cause among people testing positive for COVID-19, with 23 deaths in this age group (**Figure 6**).

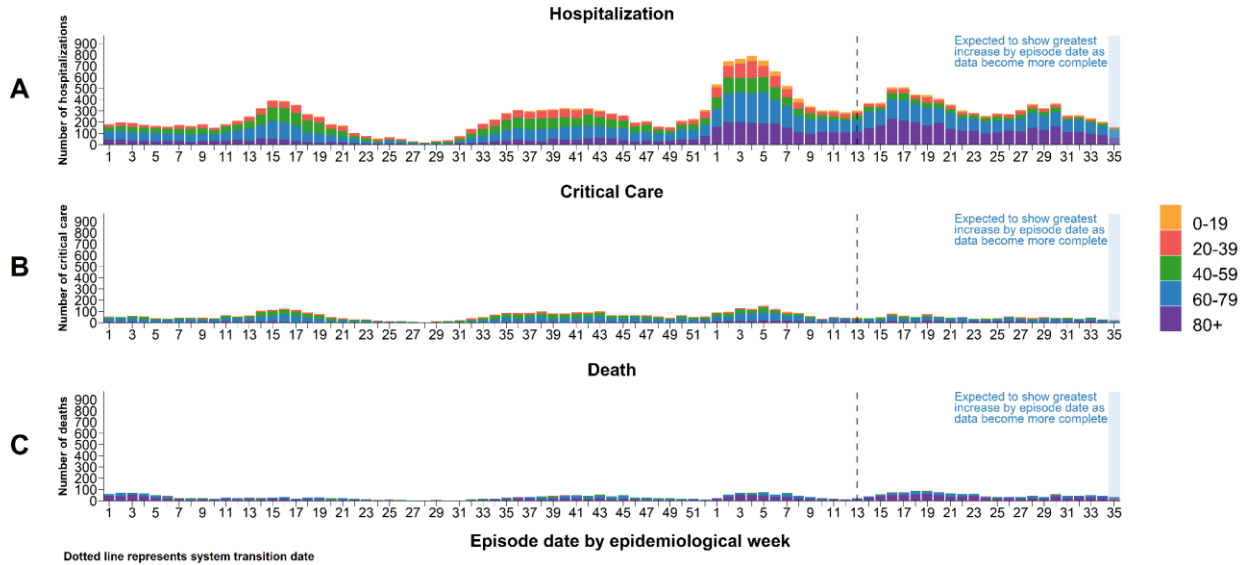
In the past four weeks (from week 32 to week 25), there has been a weekly average of 3 deaths in those <60 years of age, 4 deaths in 60-69 year-olds, 9 deaths in 70-79 year-olds and 29 deaths in the 80+ year-olds (data not shown). The number of deaths may increase over time as data becomes more complete.

Table 3: COVID-19 cases, hospitalizations, critical care admissions, and deaths by age group, BC, Jan 15, 2020 (week 3) – Sep 03, 2022 (week 35) (N= 383,065)^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	31,105	587 (2)	73 (<1)	2 (<1)	2 (<1)	2 (<1)	1 (<1)
10-19	35,885	371 (1)	53 (<1)	0 (<1)	0 (<1)	2 (<1)	0 (<1)
20-29	73,684	1,399 (2)	212 (<1)	6 (<1)	1 (<1)	8 (<1)	0 (<1)
30-39	70,695	2,400 (3)	445 (1)	31 (<1)	1 (<1)	8 (<1)	0 (<1)
40-49	54,574	2,275 (4)	587 (1)	64 (<1)	2 (<1)	9 (<1)	0 (<1)
50-59	44,584	3,260 (7)	1,085 (2)	166 (<1)	5 (<1)	35 (1)	5 (<1)
60-69	31,229	4,572 (15)	1,485 (5)	353 (1)	36 (1)	56 (2)	13 (<1)
70-79	18,883	5,453 (29)	1,381 (7)	655 (4)	94 (2)	139 (3)	26 (1)
80-89	14,578	5,142 (35)	631 (4)	989 (10)	170 (4)	197 (4)	33 (1)
90+	7,848	2,216 (28)	90 (1)	736 (15)	147 (5)	154 (5)	48 (2)
Total	383,065	27,675	6,042	3,002	458	610	126
Median age	37	67	63	82	85	82	86

- 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.

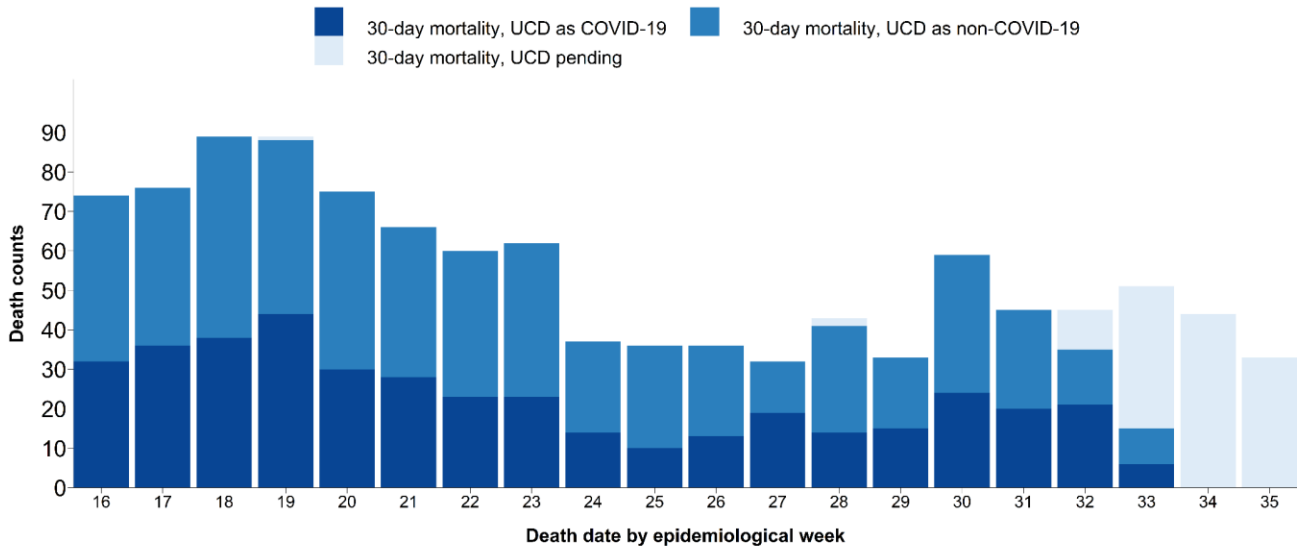
Figure 6. Weekly COVID-19 hospital admissions (A), critical care admissions (B), and deaths (C) by age groups, BC, Jan 3, 2021 (week 1) – Sep 03, 2022 (week 35)^a



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 16 to week 35 in 2022. From week 16 to week 31 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 information are expected to increase over time.

Figure 7. Post-transition deaths by underlying cause of death, BC, Apr 17, 2022 (week 16) – Sep 03, 2022 (week 35)^{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.

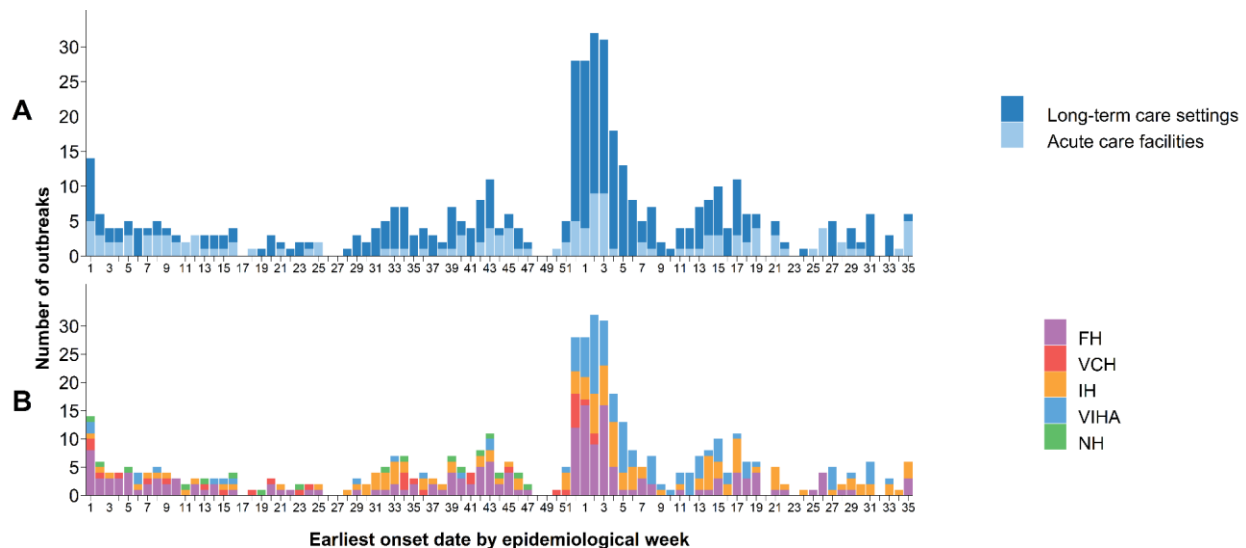
F. Care facility outbreaks

As shown in [Table 4](#) and [Figure 8](#), 709 care facility (acute care and long-term care settings) outbreaks were reported in total in BC to the end of week 35. In week 35, based on earliest symptom onset date (if unavailable, then outbreak declared date is used), 6 new care facility outbreaks (5 in acute care and 1 in long-term care) were declared. In the past four weeks (from week 32 to week 35), 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) – Sep 03, 2022 (week 35) (N=709)^{d,e}

Care facility outbreaks and cases by episode date	Outbreaks	Cases			Deaths		
		Residents	Staff/other	Total	Residents	Staff/other	Total
Week 35, Care Facility Outbreaks	6	55	0	55	0	0	0
Cumulative, Care Facility Outbreaks	709	10,036	3,817	13,853	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) – Sep 03, 2022 (week 35) (N=458)^{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 September 10, 2022:

- While SARS-CoV-2 viral loads have been variable week to week, the overall trend for all sites shows stable viral loads. Recently, data from Lion’s Gate plant are more variable than expected. This may be due to unique features of the plant’s operation, though the exact cause is under review. While under review we have not included trends of these data.
- Over the past week, viral loads at Annacis Island WWTP (Fraser North and South) have increased by 23%
- Over the past week, viral loads at Northwest Langley WWTP (Northwest Langley) have decreased by 40%.
- Over the past week, viral loads at Iona Island WWTP (Vancouver) have decreased by 58%.
- Over the past week, viral loads at Lulu Island WWTP (Richmond) have increased by 18%.

Figure 9. Wastewater surveillance, FH

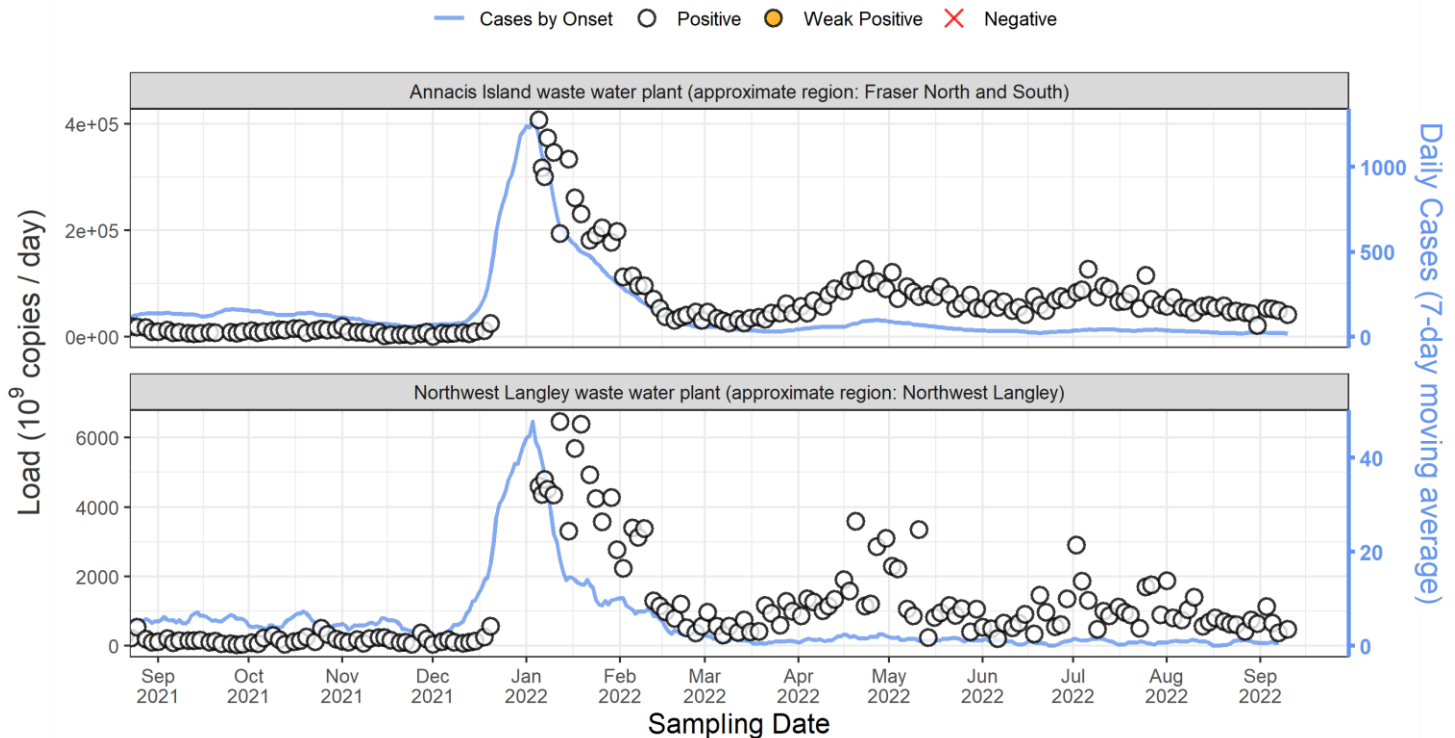
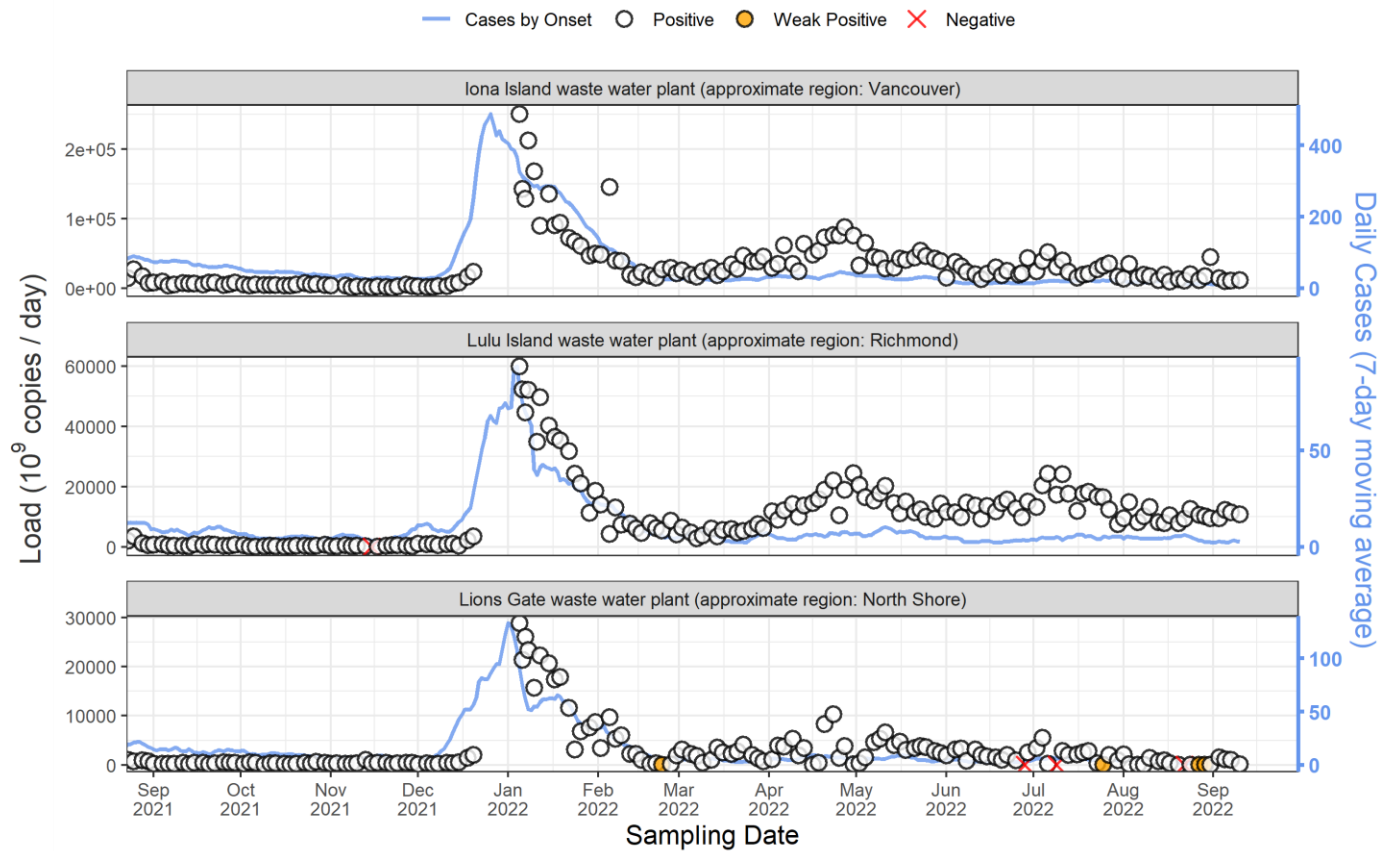


Figure 10. Wastewater surveillance, VCH



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>