

British Columbia (BC) COVID-19 Situation Report

Week 4: January 23- January 29, 2022

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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, PHSA Provincial Immunization Registry (PIR), and hospital data (PHSA Provincial COVID19 Monitoring Solution (PCMS)).
- Case data were extracted on February 07, 2022, laboratory data on February 03, 2022, PIR vaccine coverage date on February 03, 2022, and PCMS hospitalization data on February 07, 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 4, there have been 324,880 cases for a cumulative incidence of 6,165 per 100K (Table 1, Figure 1). The provincial incidence by episode date was 209 per 100K (11,034 cases) in week 4, 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 3 to week 4. From week 3 to week 4, incidence rates decreased the most in Vancouver Coastal Health (VCH), Northern Health (NH), and Fraser Health (FH) from 216 per 100K to 144 per 100K, from 426 per 100K to 374 per 100K, and from 217 per 100K to 165 per 100K, respectively. Incidence rates also decreased in Vancouver Island Health (VIHA) from 209 per 100K in week 3 to 177 per 100K in week 4, and in Interior Health (IH) from 406 per 100K in week 3 to 389 per 100K in week 4. These rates may increase as data become more complete.

Table 1. Episode-based case tallies by Health Authority, BC, Jan 15, 2020 (week 3) – Jan 29, 2022 (week 4) (N= 324,880)

Case tallies by episode date	Health Authority of Residence					Outside Canada	Total
	FH	IH	VIHA	NH	VCH		
Week 4, case counts	3,280	3,219	1,555	1,145	1,818	17	11,034
Cumulative case counts	151,408	52,229	27,874	25,006	68,007	356	324,880
Week 4, cases per 100K population	165	389	177	374	144	NA	209
Cumulative cases per 100K population	7,619	6,305	3,167	8,170	5,389	NA	6,165

Figure 1. Episode-based epidemic curve (bars), surveillance date (line) and Health Authority (HA), BC Sept 13, 2020 (week 38) – Jan 29, 2022 (week 4) (N= 317,033)

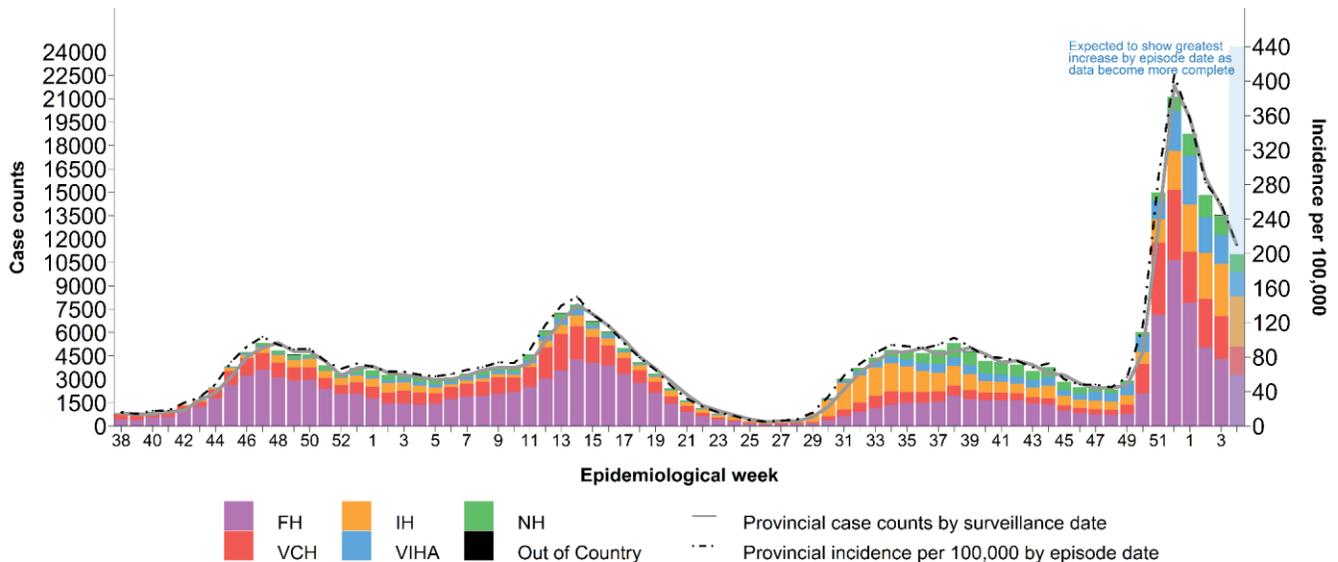
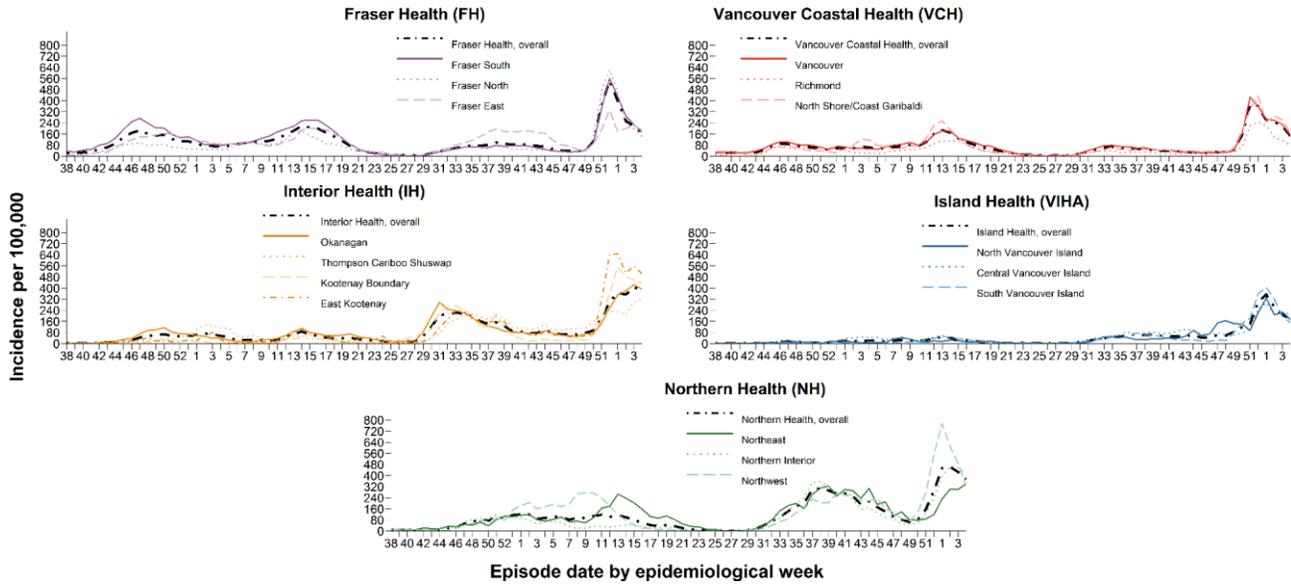


Figure 2. Weekly episode-based incidence rates by HA and health service delivery area (HSDA), BC Sept 13, 2020 (week 38) – Jan 29, 2022 (week 4) (N= 317,033)



B. Test rates and percent positive

[COVID-19 testing guidelines](#) have been updated recently - testing is recommended for people who have symptoms of COVID-19, and testing is clinically indicated (including individuals who are hospitalized, pregnant, moderately to severely immunocompromised, or unvaccinated or with vaccines not up to date) or living/working in settings with others who are at high-risk for severe illness. As shown by the darker-colored bars in [Figure 3](#), testing of MSP-funded specimens has decreased from the peak of ~88,900 in week 51 to ~32,000 in week 4. The positivity of MSP-funded specimens was stable between week 3 (35.5%) and week 4 (35.8%).

As shown in [Figure 4](#), the per capita testing rates (Panel A) decreased in all HAs from week 3 to week 4. From week 3 to week 4, testing rates decreased the most in VCH from 530 per 100K to 383 per 100K and in FH from 582 per 100K to 458 per 100K. In week 4, NH had the highest testing rate at 1,057 per 100K.

Percent positivity (Panel B) for MSP-only specimens increased in VIHA and IH, and remained stable in VCH, FH, and NH from week 3 to week 4. Percent positivity in week 4 ranged from 34.9% in NH to 40.4% in VCH.

Figure 3. Number of specimens tested and percent SARS-CoV-2 positive, by collection week, BC Sept 13, 2020 (week 38) – Jan 29, 2022 (week 4)

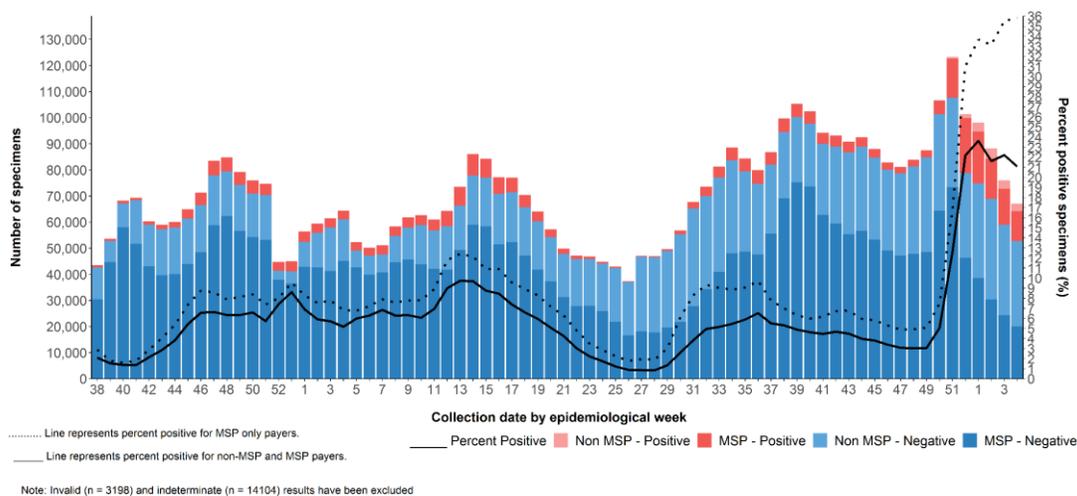
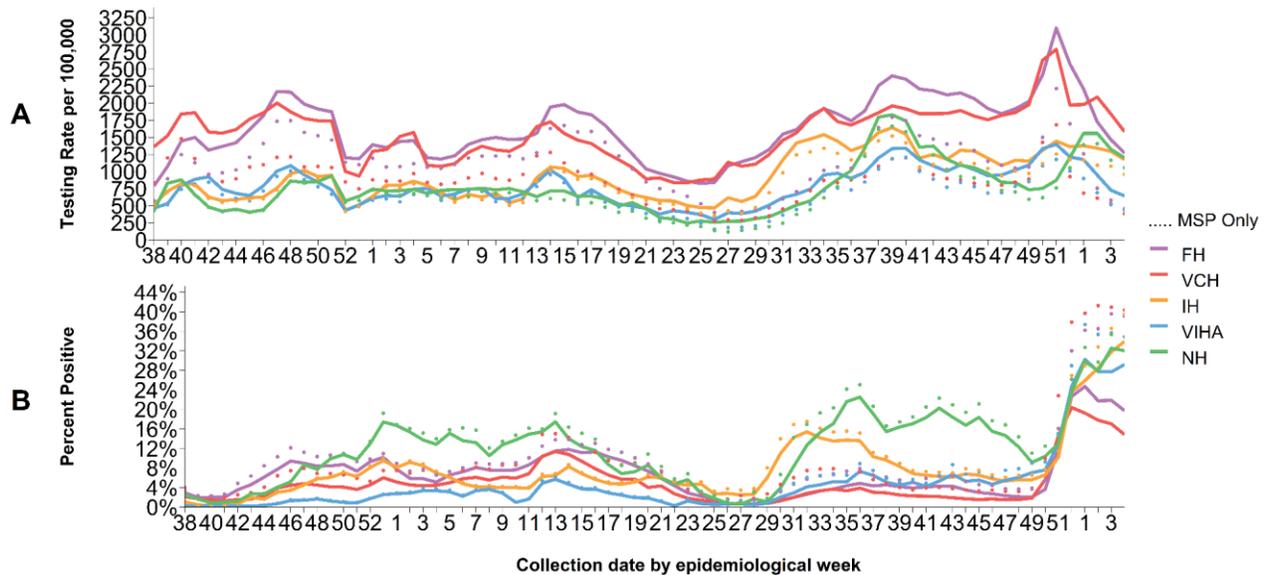


Figure 4. Testing rates and percent SARS-CoV-2 positive by Health Authority and collection week, BC Sept 13, 2020 (week 38) – Jan 29, 2022 (week 4)



Data source: laboratory PLOVER data

C. Age profile – Testing and cases

Testing rates and percent positivity by age group

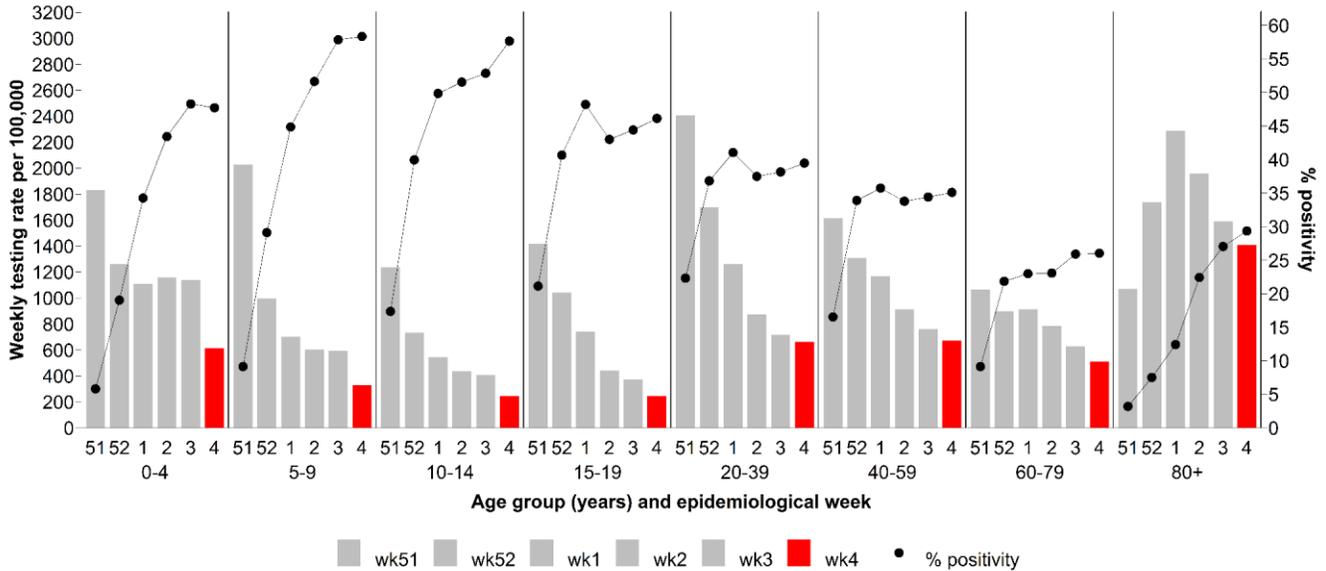
As shown by the bars in [Figure 5](#), testing rates decreased from week 3 to week 4 in all age groups. Testing rate in week 4 was highest in those aged 80+ at 1,407 per 100K.

As shown by the black dots in [Figure 5](#), the percent positivity increased in the 80+ (from 27% to 29.4%) and 10-14 (from 52.9% to 57.7%) age groups and remained relatively stable in other age groups from week 3 to week 4. The highest percent positivity in week 4 was in the 5-9 and 10-14 year-olds at 58.3% and 57.7%, respectively.

Case distribution and weekly incidence by age group

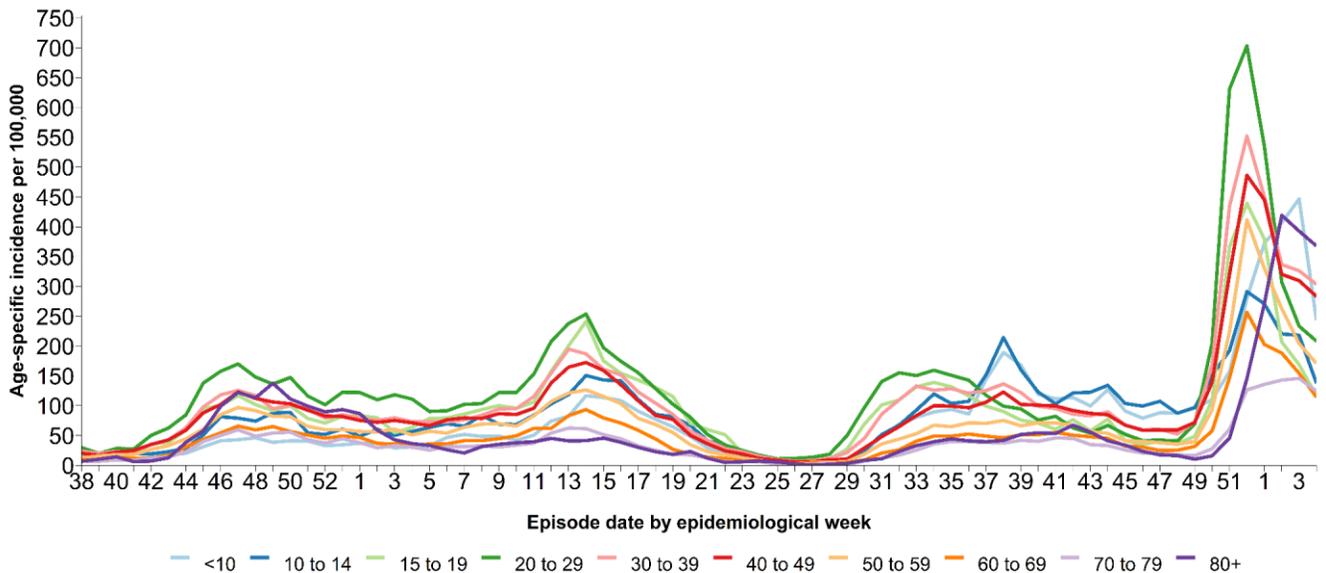
As shown in [Figure 6](#), age-specific incidence rates decreased from week 3 to week 4 across all age groups. Incidence rate decreased the most in the <10 age group from 447 per 100K in week 3 to 243 per 100K in week 4. The decrease in incidence rate in <10 year-olds was likely due to a decrease in testing rate from 851 per 100K in week 3 to 464 per 100K in week 4, while percent positivity remained stable at 52% in this age group (data not shown). 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 Dec 24, 2022 (week 51) – Jan 29, 2022 (week 4)



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) – Jan 29, 2022 (week 4) (N= 316,963)



D. Severe outcome counts and epi-curve

The number of hospital admissions increased slightly from 689 in week 3 to 703 in week 4. In week 4, 60-79 year-olds had the highest number of hospital admissions (244 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 was relatively stable at 68 in week 3 and 62 in week 4. Those aged 80+ accounted for the highest number of deaths in week 4 (43 deaths) (Table 2, Figure 8).

Detailed information about outcomes by vaccination status can be accessed at [BCCDC COVID-19 Regional Surveillance Dashboard](#). Additional analyses on mortality can be found at [BCCDC Mortality Context Application](#).

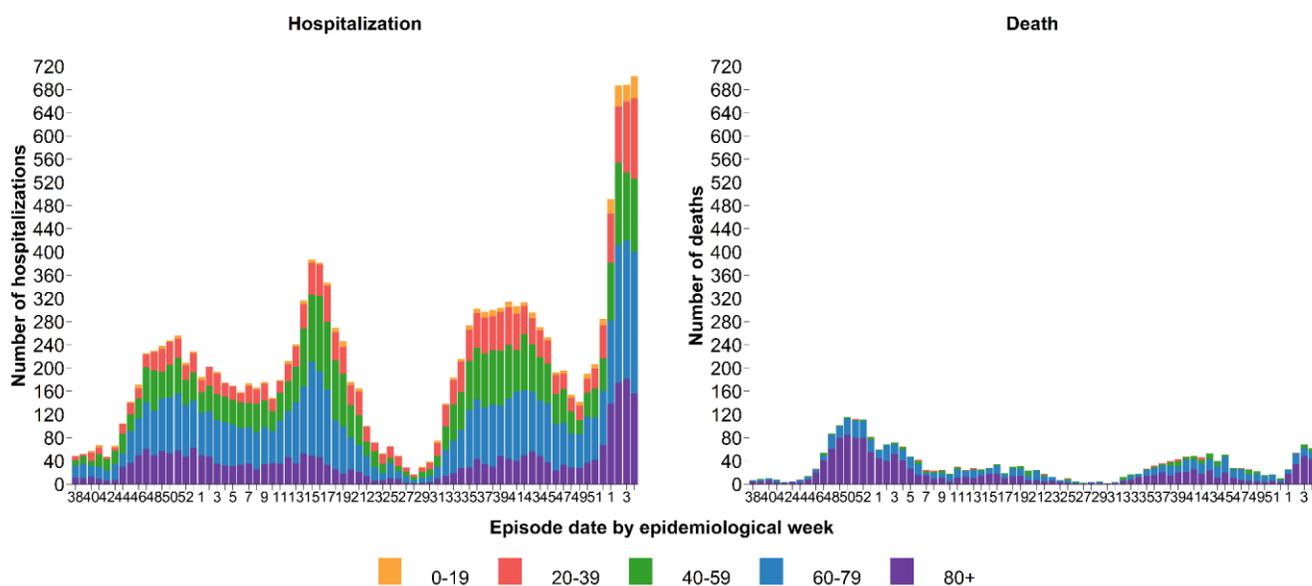
Cumulatively, there have been 23 confirmed cases of [Multi-system Inflammatory Syndrome in children and adolescents \(MIS-C\)](#) in BC since January 1, 2020. There has been no new confirmed cases of MIS-C since the last report. The median age of all cases is 9 years old (range from 1 to 16 years old).

Table 2. COVID-19 severe outcomes by episode date, Health Authority of residence, BC Jan 15, 2020 (week 3) – Jan 29, 2022 (week 4)

Severe outcomes by episode date	Health Authority of residence					Residing outside of Canada	Total n/N ^a (%)
	FH	IH	VIHA	NH	VCH		
Week 4, hospitalizations	355	129	66	26	126	1	703
Cumulative hospitalizations^b	7,613	2,559	1,074	1,513	3,200	16	15,975/324,880 (5)
Week 4, ICU admissions	41	22	9	4	18	0	94
Cumulative ICU admissions^b	1,353	693	283	361	756	2	3,448/324,880 (1)
Week 4, deaths	25	8	9	0	20	0	62
Cumulative deaths	1,236	321	175	284	629	0	2,645/324,880 (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) – Jan 29, 2022 (week 4)



Data source: Health Authority case line list only.

E. Age profile, severe outcomes

Table 3 displays the distribution of cases and severe outcomes. In week 4, median age of hospital admissions, ICU admissions and deaths was 62 years, 62 years and 82 years, respectively, based on Health Authority case line lists only (data not shown).

Since week 1, there has been a weekly average of 1 death in those <50 years of age, 3 deaths in 50-59 year-olds, 5 deaths in 60-69 year-olds, 8 deaths in the 70-79 year-olds, and 36 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) – Jan 29, 2022 (week 4) (N= 324,791)^a

Age group (years)	Cases n (%)	Hospitalizations n (%) ^b	ICU n (%)	Deaths n (%)
<10	27,352	268 (1)	24 (<1)	2 (<1)
10-19	33,893	214 (<1)	33 (<1)	0 (<1)
20-29	66,991	971 (1)	114 (<1)	6 (<1)
30-39	61,825	1,698 (3)	296 (<1)	31 (<1)
40-49	47,859	1,736 (4)	376 (1)	57 (<1)
50-59	38,372	2,388 (6)	695 (2)	151 (<1)
60-69	25,215	2,905 (12)	871 (3)	306 (1)
70-79	12,465	2,878 (23)	749 (6)	573 (5)
80-89	7,307	2,163 (30)	274 (4)	873 (12)
90+	3,512	798 (23)	29 (1)	646 (18)
Total	324,791	16,019	3,461	2,645
Median age^c	35	62	62	82

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

F. Care facility outbreaks

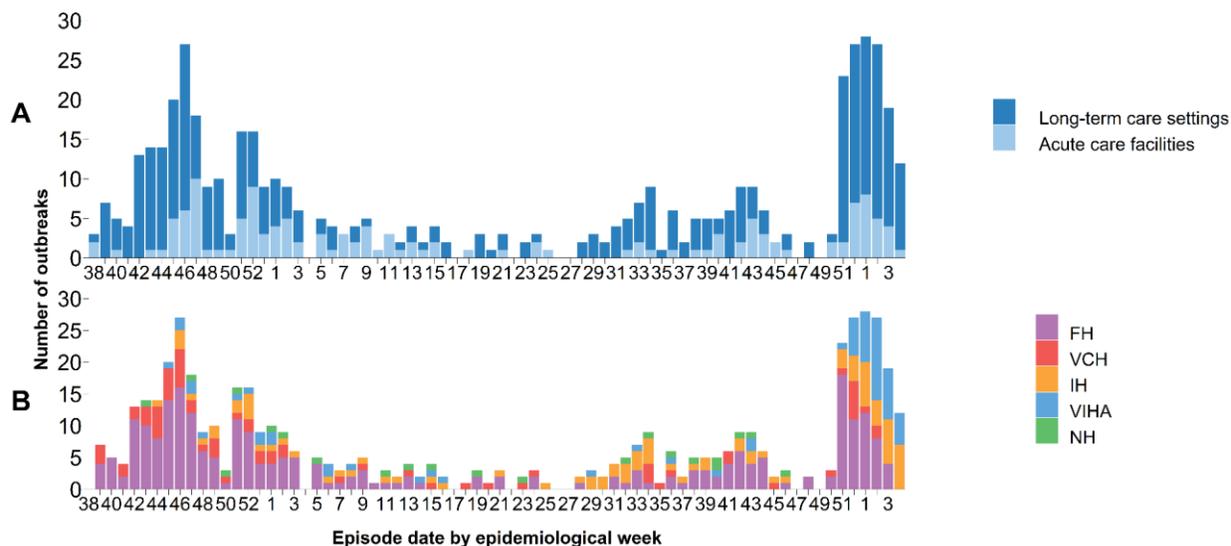
As shown in [Table 4](#) and [Figure 9](#), 566 care facility (acute and long-term care setting) outbreaks were reported in total in BC to the end of week 4. In week 4, 12 new outbreaks were declared, based on earliest case onset date. 19 of the 62 deaths (31%) reported in week 4 were associated with 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) – Jan 29, 2022 (week 4) (N=566)

Care facility outbreaks and cases by episode date	Outbreaks	Cases				Deaths			
		Residents	Staff/other	Unknown	Total	Residents	Staff/other	Unknown	Total
Week 4, Care Facility Outbreaks	12	441	90	0	531	19	0	0	19
Cumulative, Care Facility Outbreaks	566	6,524	3,373	8	9,905	1,301	0	0	1,301

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.

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) – Jan 29, 2022 (week 4) (N=498)



- 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. Modeling

Current R_t estimates for BC are considered unreliable due to recent and ongoing changes in the ascertainment of case counts, including capacity limitations of PCR testing and the use of rapid antigen tests.

H. 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.

Key messages with results through to February 5, 2022

- SARS-CoV-2 viral loads in VCH and FH wastewater remain lower compared to their January peak.

- In three wastewater treatment plants (corresponding to Northwest Langley, Vancouver and Vancouver North Shore) SARS-CoV-2 viral loads have increased on February 5.
- Routine sampling will help to determine whether these increases observed represent sustained trends or possible variability.

Figure 10. Wastewater surveillance, FH

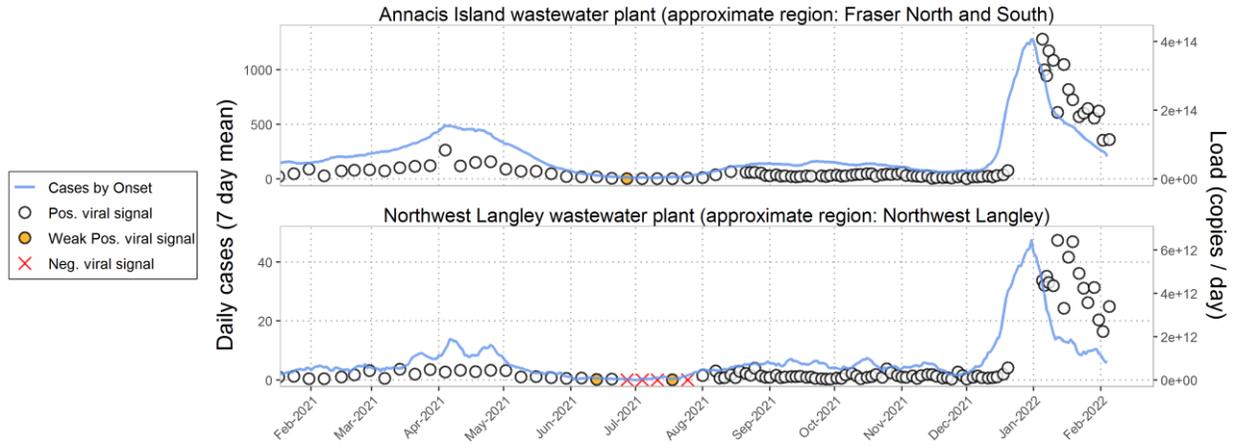
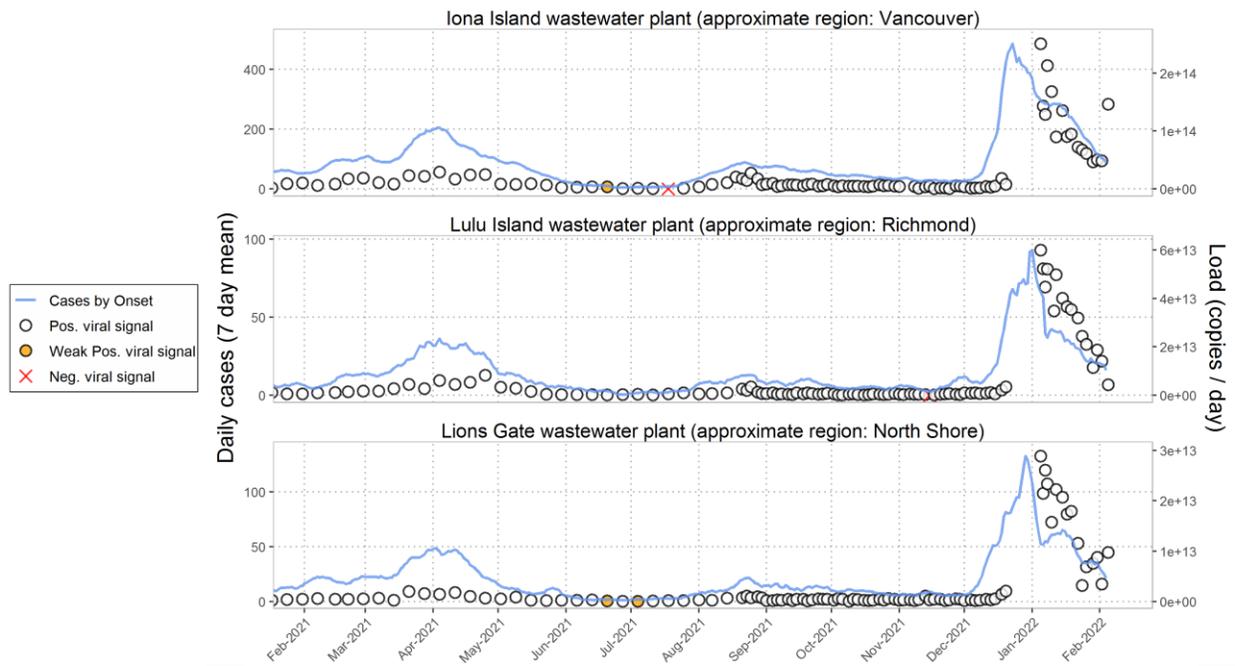


Figure 11. Wastewater surveillance, VCH



I. Additional resources

Variant of concern (VOC) findings are available weekly here: <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/data#variants>

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>

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/

Context to provincial mortality statistics is updated weekly here: <http://www.bccdc.ca/health-professionals/data-reports/mortality-context-app>

J. 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 – Present)

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.