British Columbia (BC) COVID-19 Situation Report

Week 46: November 14- November 20, 2021

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Provincial COVID-19 incidence steadily declining; hospital and ICU admissions, and deaths declining.

The provincial incidence by episode date was 42 per 100K, with 2,157 cases in week 46.

Incidence by health authority in week 36 has decreased since their respective wave 4 peaks:

- Since week 38, Fraser Health incidence decreased from 99 to 38 per 100K.
- Since week 34, Vancouver Coastal incidence decreased from 69 to 23 per 100K.
- Since week 44, Interior Health incidence decreased from 99 to 58 per 100K.
- Since week 44, Island Health incidence decreased from 62 to 36 per 100K.
- Since week 44, Northern Health incidence decreased from 213 to 112 per 100K.

Age-specific incidences continued to decrease in all age groups from week 45 to 46. After a recent increase in week 44, the incidence rate in children <10 of age declined from 89 per 100K in week 45 to 68 per 100K in week 46. Similarly, the incidence rate in 15-19 year olds declined since week 44, from 78 per 100K to 31 per 100K in week 46. The incidence rate in 80+ age groups has been declining since week 42 from 68 per 100K to 20 per 100K.

As shown in Figure 8, 91% of those eligible for COVID-19 vaccine (i.e. 12+ year-olds) received a single dose of vaccine and 87% received two doses of vaccine by week 46.

Testing of MSP-funded specimens decreased from ~80,500K in week 39 to ~52,000 in week 46. The positivity of MSP-funded specimens decreased from 6.8% in week 43 to 5.3% in week 46.

The number of hospital admissions decreased since week 42; there was an average of 268 hospitalizations per week from weeks 40 to 46. ICU admissions decreased from week 40 to 44 and increased slightly in week 45, before decreasing again in week 46, with an average of 61 ICU admissions per week in week 40-46 (Table 2, Figure 9). The weekly number of deaths has decreased from 49 deaths in week 45 to 27 deaths in week 46.

By case of earliest onset date, one new outbreak was reported in healthcare settings in week 46.

Table of vaccination phases defined by vaccine eligibility of target populations in BC:

Vaccination Phase 1 Dec 2020 to Feb 2021	Vaccination Phase 2 Feb to April 2021	Vaccination Phase 3 April to May 2021	Vaccination Phase 4 May 2021- Present
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.	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.	Target populations include people aged 60-79 years, Indigenous peoples aged 18-64 and people aged 16-74 who are clinically extremely vulnerable.	Target populations include everyone 12+ years.

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 November 29, 2021, laboratory data on November 26, 2021, PIR vaccine coverage date on November 26, 2021, and PCMS hospitalization data on November 29, 2021.
- Some figures are displayed by vaccination status. "Unvaccinated" refers to individuals who did not receive a vaccine or <3 weeks has passed since the first dose was administered. "Vaccinated" refers to fully vaccinated individuals with 2 weeks after receipt of 2nd dose.

A. COVID-19 case counts and epidemic curves

Up to week 46, 2021, there have been 216,279 cases for a cumulative incidence of 4,158 per 100K (**Table 1, Figure 1**). The provincial incidence by episode date was 42 per 100K (2,157 cases) in week 46, which has decreased from 102 per 100K at the peak of Wave 4 (week 38). Incidence by episode date may increase as data become more complete in recent weeks.

As shown in **Figure 2**, incidence decreased in all Health Authorities (HAs) from week 38-46. Incidence has been trending downward since week 38 in FH (from 99 to 38 per 100k) and week 34 in VCH (from 69 to 23 per 100K). Incidence started to decrease in week 44 in NH (From 213 to 112 per 100K), IH (from 99 to 58 per 100K) and VIHA (from 62 to 36 per 100K). These rates may increase as data become more complete.

Table 1. Episode-based case tallies by health authority, BC, Jan 15, 2020 (week 3) – Nov 20, 2021 (week 46) (N= 216,279)

Case tallies by episode date	Health Authority of Residence					Outside Canada	Total
	FH	IH	VIHA	NH	VCH		
Week 46, case counts	744	472	313	340	288	0	2,157
Cumulative case counts	**108,643**	**33,064**	**12,298**	**17,291**	**44,684**	**299**	**216,279**
Week 46, cases per 100K population	38	58	36	112	23	NA	42
Cumulative cases per 100K population	**5,551**	**4,028**	**1,418**	**5,716**	**3,584**	**NA**	**4,158**

Figure 1. Episode-based epidemic curve (bars), surveillance date (line) and health authority (HA), BC Sept 13, 2020 (week 38) – Nov 20, 2021 (week 46) (N= 208,429)

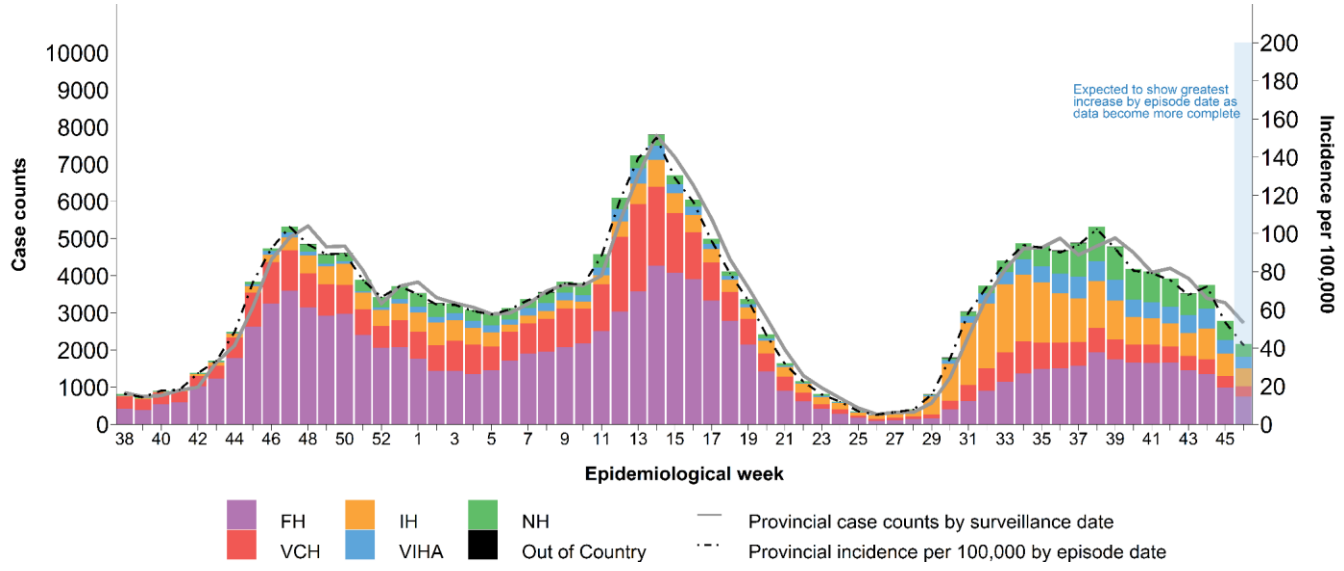
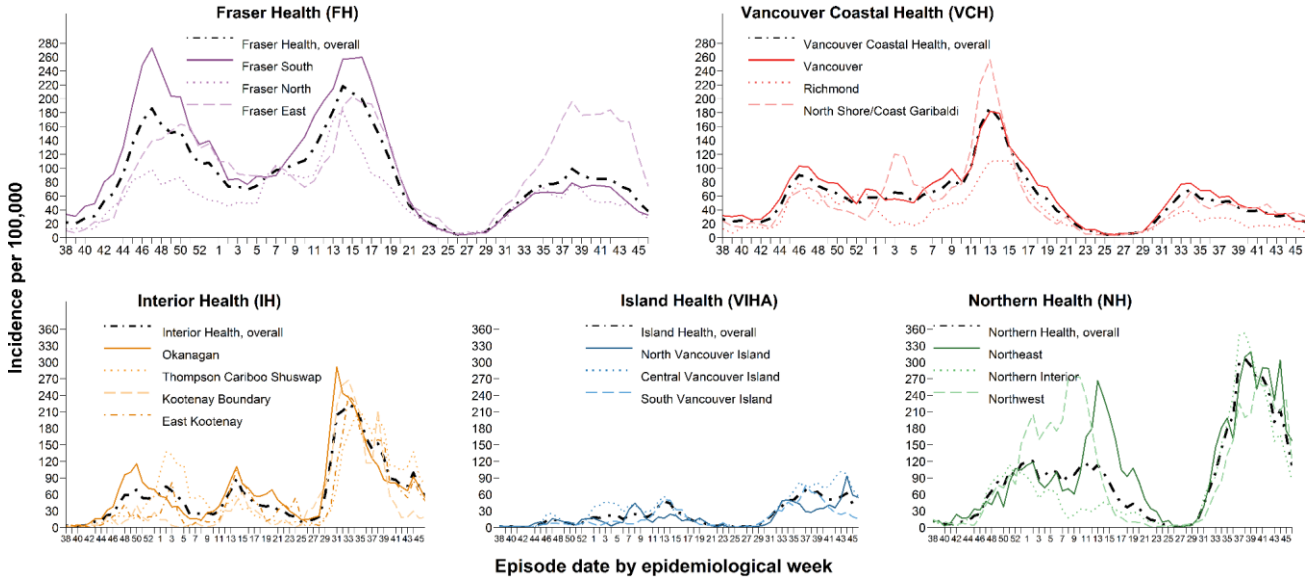


Figure 2. Weekly episode-based incidence rates by HA and health service delivery area (HSDA), BC Sept 13, 2020 (week 38) – Nov 20, 2021 (week 46) (N= 208,429)



B. Test rates and percent positive

As shown by the darker-colored bars in **Figure 3**, testing of MSP-funded specimens decreased from its peak in ~80,500K in week 39 to ~52,000 in week 46. The positivity of MSP-funded specimens decreased from 6.8% in week 43 to 5.3% in week 46.

As shown in **Figure 4,** the per capita testing rates (Panel A) decreased slightly in all HAs from week 45 to week 46. Decreases from week 45 to 46 occurred in: FH (from 1,301 per 100K to 1,147 per 100K), VIHA (from 774 per 100K to 680 per 100K), IH (from 1,092 per 100K to 1,020 per 100K), VCH (from 845 per 100K to 815 per 100K), NH (from 948 per 100K to 875 per 100K). MSP testing rates in FH remained highest at 1,147 per 100K followed by IH at 1,020 per 100K in week 46. Percent positivity (Panel B) for MSP-only specimens deceased slightly in all HAs other than VCH. Between weeks 45 and 46, percent positivity in NHA decreased from 21.2% to 17.2%, in VIHA from 7.2% to 6.2%, in IH from 7.6% to 6.6%, and in FH from 4.6% to 4.4%. In contrast, percent positivity increased slightly in VCH from 3.3% in week 35 to 3.5% in week 36. Percent positivity was highest in NH at 21.2% in week 45.

Figure 3. Number of specimens tested and percent SARS-CoV-2 positive, by collection week, BC Sept 13, 2020 (week 38) – Nov 20, 2021 (week 46)

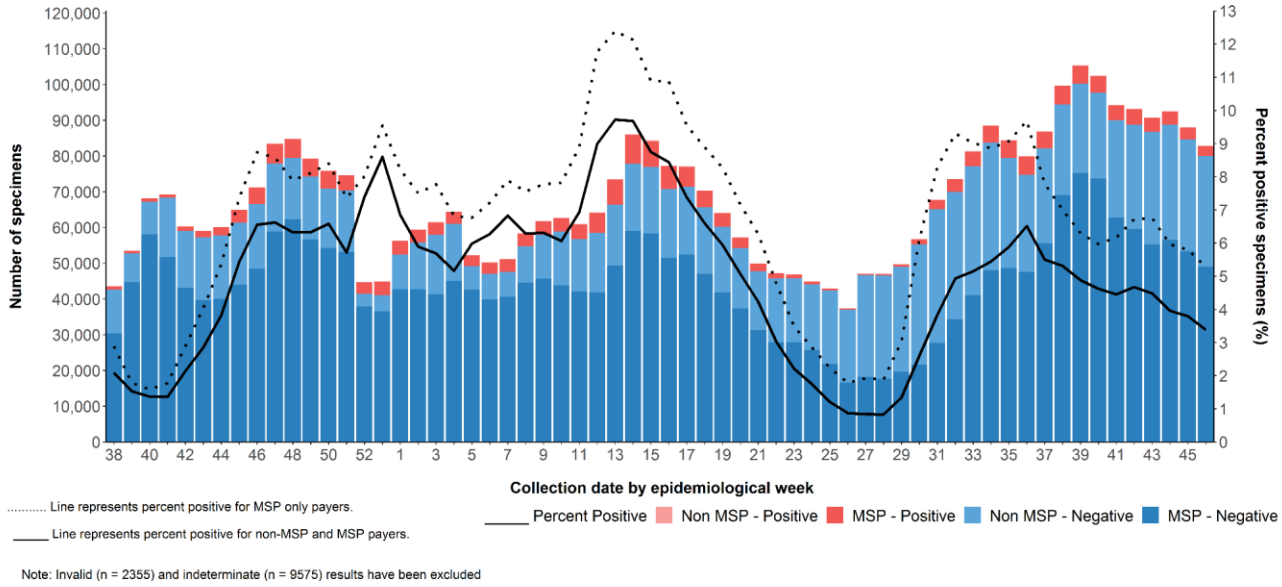
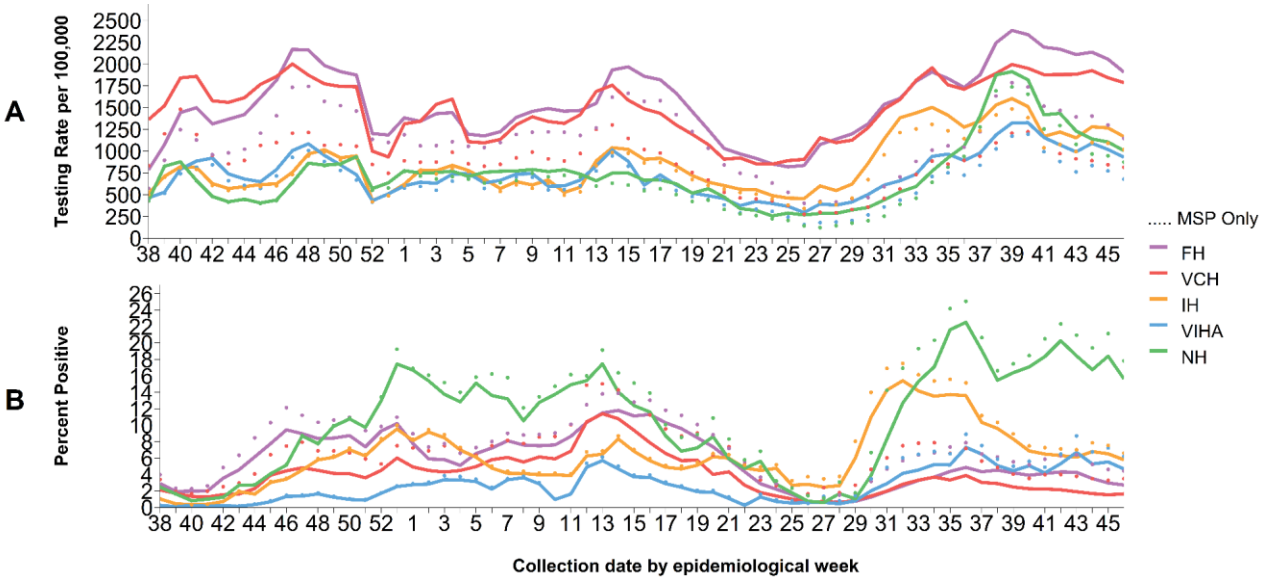


Figure 4. Testing rates and percent SARS-CoV-2 positive by health authority and collection week, BC Sept 13, 2020 (week 38) – Nov 20, 2021 (week 46)



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 have decreased in all age groups from week 45 to 46. Testing rates remain highest in 5-9 and 0-4 year olds at 1,657 per 100K and 1,605 per 100K, respectively.

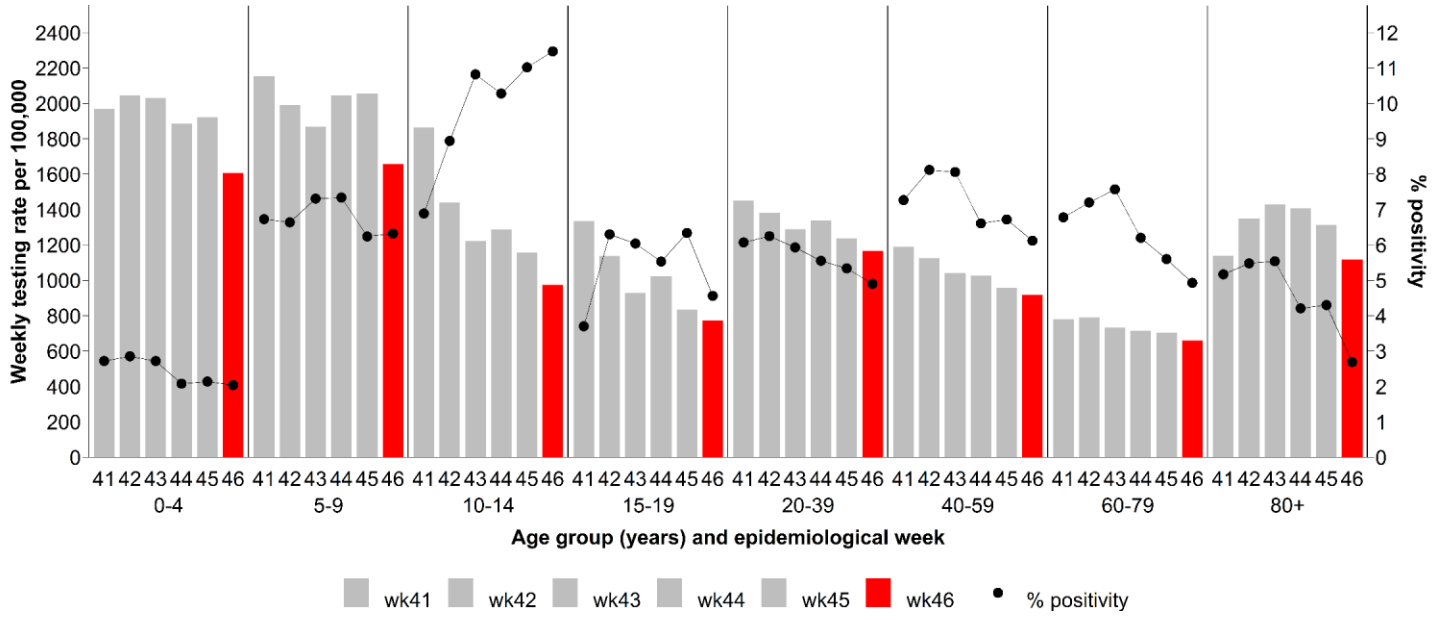
As shown by the black dots in **Figure 5,** the percent positivity in week 46 compared to week 45 stabilized or decreased in most age groups, with the exception of 10-14 year olds, among whom percent positivity continued to increase. Percent positivity for 10-14 year olds increased from 11% to 11.5% from week 45 to week 46. The highest percent positivity in week 45 remains in the 10-14 year-olds at 11.5%.

Case distribution and weekly incidence by age group

As shown in **Figure 6,** age-specific incidences continued to decrease in all age groups from week 45 to 46. After a recent increase in week 44, the incidence rate in children <10 of age declined from 89 per 100K in week 45 to 68 per 100K in week 46. Similarly, the incidence rate in 15-19 year olds declined since week 44, from 78 per 100K to 31 per 100K in week 46. The incidence rate in 80+ age groups has been declining since week 42 from 68 per 100K to 20 per 100K. Age-specific incidences may increase as data become more complete.

As shown in **Figure 7,** incidence is much higher in unvaccinated than in fully vaccinated people in all age groups across time. Compared to week 45, incidence in the unvaccinated group has decreased in all age groups. Those aged 30-39 have the highest incidence rate among the unvaccinated in weeks 46, with an incidence of 168 per 100K in week 46. Among those who are fully vaccinated, incidence has decreased in all age groups, except in those age 12 to 19, where it has stabilized in week 46. The highest incidence rate among fully vaccinated people was in the 30-39 year-olds, at 36 per 100K in week 46, which is 4.5 times lower than in unvaccinated people of the same age for the same week (168 per 100K).

Figure 5. Average weekly SARS-CoV-2 MSP testing rates and MSP percent positive by known age group, BC Oct 16, 2021 (week 41) – Nov 20, 2021 (week 46)



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) – Nov 20, 2021 (week 46) (N= 208,417)

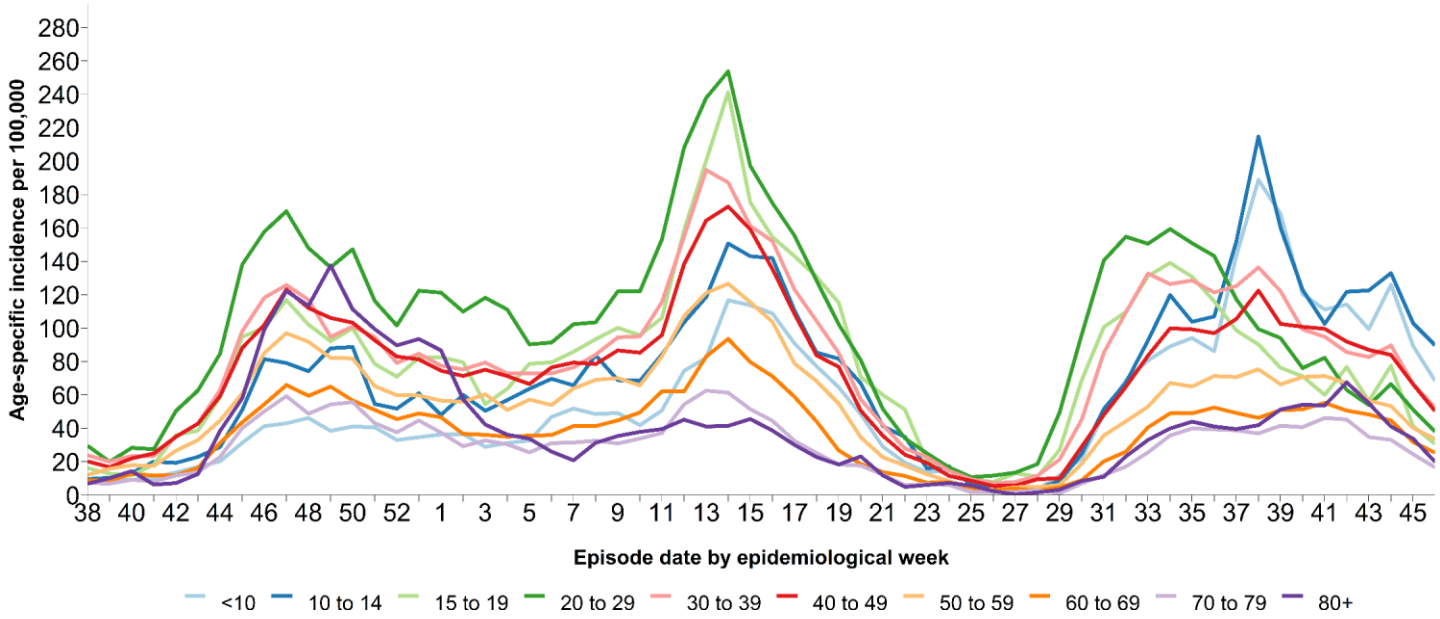
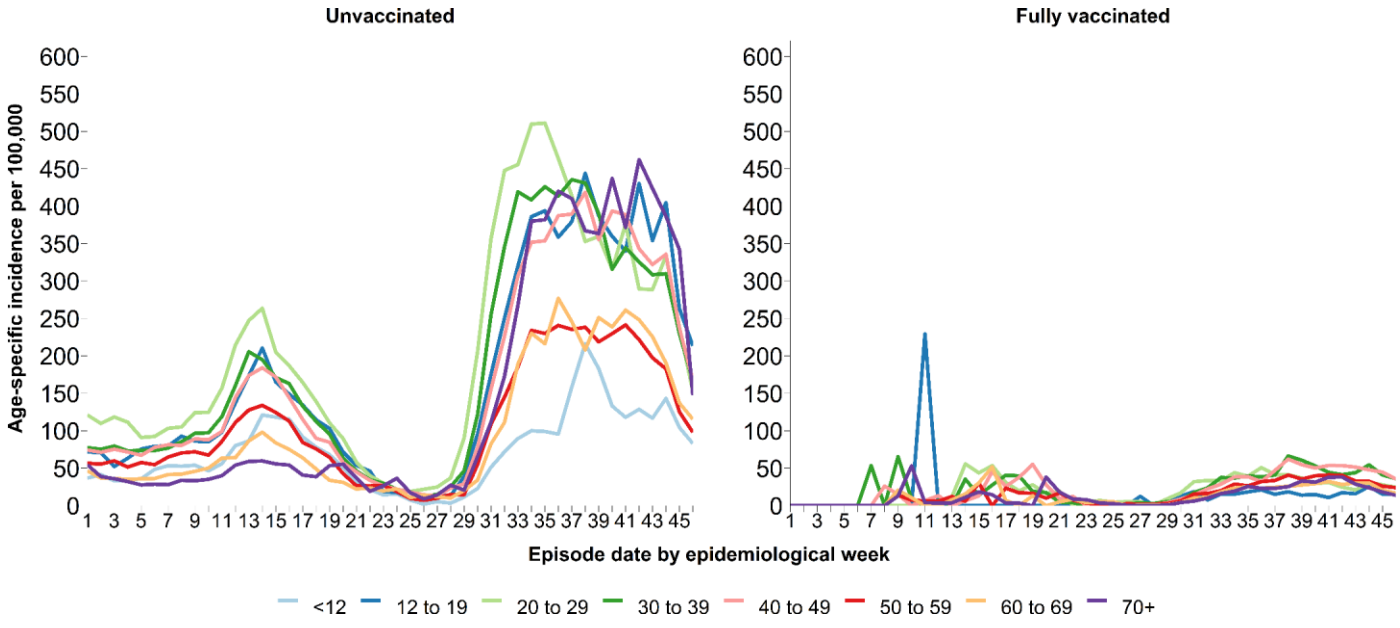


Figure 7. Weekly age-specific COVID-19 incidence per 100K population by epidemiological week and vaccination status, BC
Jan 3, 2021 (week 1) – Nov 20, 2021 (week 46) (N= 216,248)



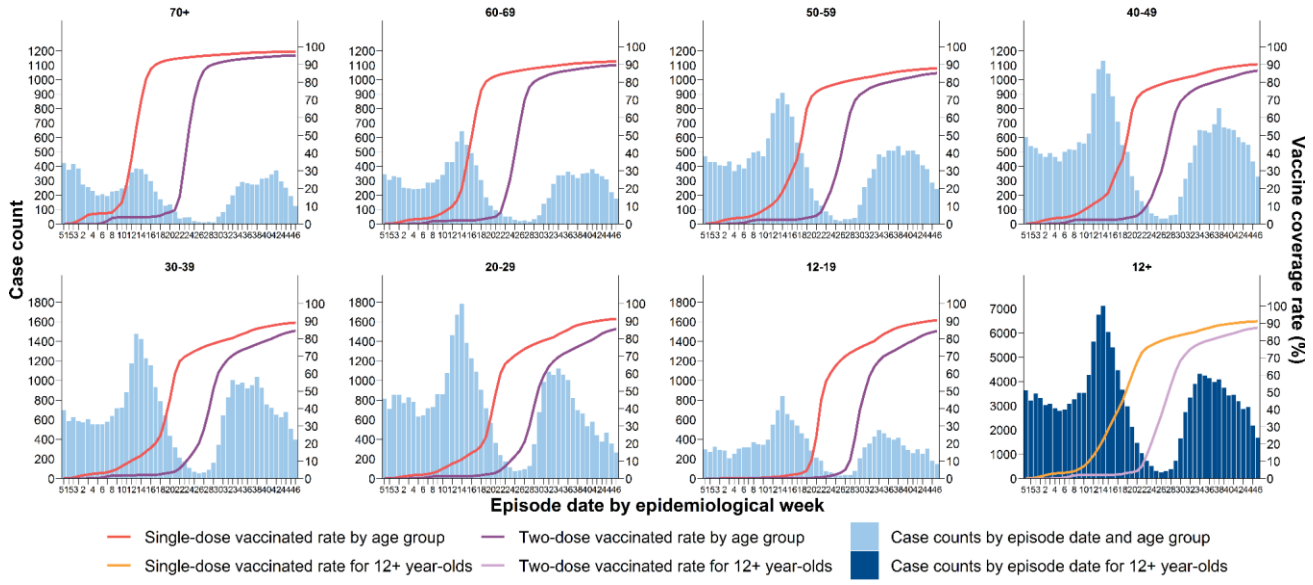
[a] The peak in week 11 among 12 to 19-year-olds was caused by one case among a small number of vaccinated individuals

Vaccine coverage and weekly cases by age group

As shown in **Figure 8**, 91% of those eligible for COVID-19 vaccine (i.e. 12+ year-olds) received a single dose of vaccine and 87% received two doses of vaccine by week 46.

In week 46, the single-dose coverage for those aged 50+ years ranged from 88-97%, and two-dose coverage ranged from 85-95%. There were 542 cases reported for those age groups combined, regardless of vaccination status. Single-dose coverage in the 20-49 year-olds was between 89-91% and two-dose coverage ranged between 85-87%, with 994 cases reported for those age groups combined in week 46. Single-dose coverage in the 12-19 year-olds was 91% and 84% had received two doses, with 149 cases reported for that age group in week 46.

Figure 8. Weekly age-specific single-dose COVID-19 vaccine coverage and case counts by epidemiological week, BC Dec 13, 2020 (week 51) – Nov 20, 2021 (week 46)



Data sources: health authority case line list data and PHSA Provincial Immunization Registry

D. Severe outcome counts and epi-curve

The number of hospital admissions decreased since week 42; there was an average of 268 hospitalizations per week from weeks 40 to 46. ICU admissions decreased from week 40 to 44 and increased slightly in week 45, before decreasing again in week 46, with an average of 61 ICU admissions per week in week 40-46 (**Table 2, Figure 9**). The weekly number of deaths has decreased from 49 deaths in week 45 to 27 deaths in week 46.

As shown in **Figure 10**, the rate of hospital and ICU admission was higher in unvaccinated than in fully vaccinated people throughout 2021. In week 46, the hospital admission rate was 12 per 100K among those who were unvaccinated and 1 per 100K among those who were fully vaccinated. The ICU admission rate among unvaccinated people was 4 per 100K and <1 per 100K among fully vaccinated people.

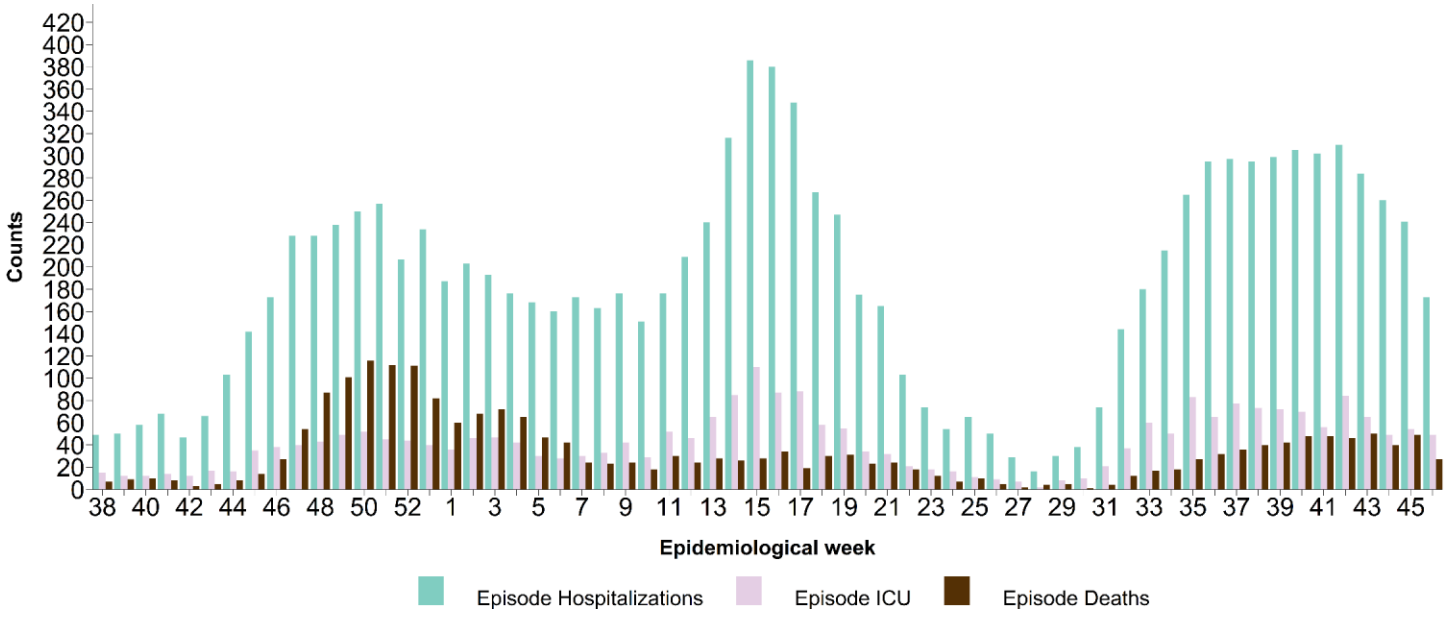
Cumulatively, there have been 19 confirmed cases of Multi-system Inflammatory Syndrome in children and adolescents (MIS-C) in BC since January 1, 2020. There have been no new confirmed cases of MIS-C since the last report. The median age of all cases is 9 (range 1-15) years.

Table 2. COVID-19 severe outcomes by episode date, health authority of residence, BC Jan 15, 2020 (week 3) – Nov 20, 2021 (week 46)

Severe outcomes by episode date	Health authority of residence					Residing outside of Canada	Total n/N[a] (%)
	FH	IH	VIHA	NH	VCH		
Week 46, hospitalizations	67	39	16	27	24	0	173
Cumulative hospitalizations[b]	**5,840**	**1,936**	**641**	**1,308**	**2,387**	**14**	**12,126/216,279 (6)**
Week 46, ICU admissions	15	12	6	9	7	0	49
Cumulative ICU admissions[b]	**1,170**	**555**	**181**	**314**	**638**	**2**	**2,860/216,279 (1)**
Week 46, deaths	9	1	3	7	7	0	27
Cumulative deaths	**1,089**	**287**	**119**	**248**	**568**	**0**	**2,311/216,279 (1)**

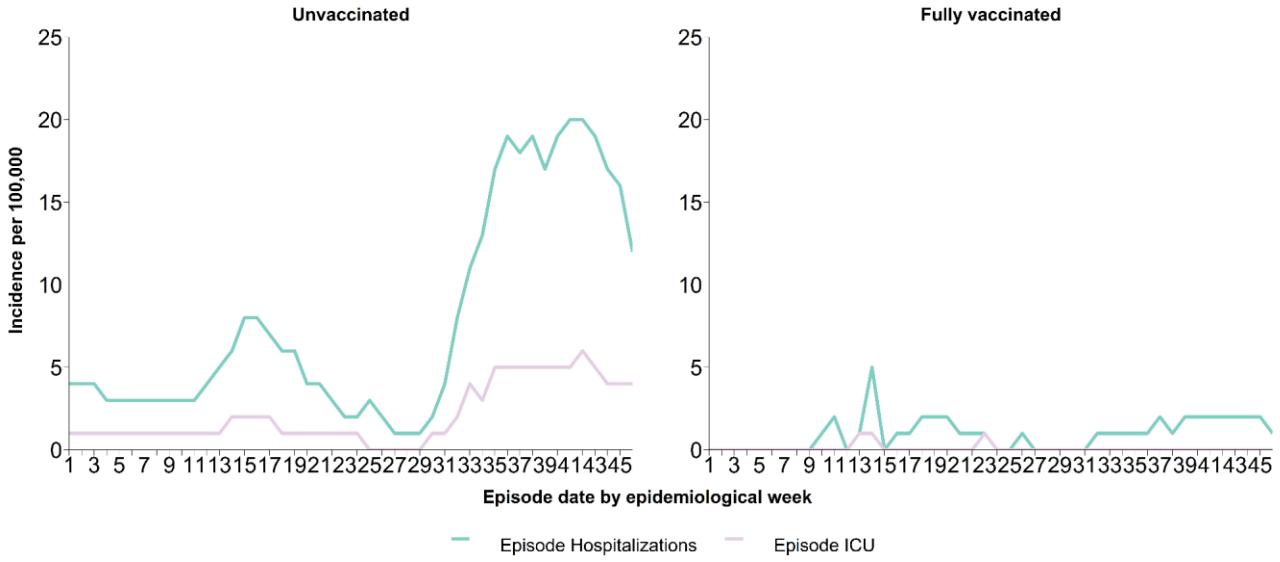
a. Cases with unknown outcome are included in the denominators (i.e. assumed not to have the specified severe outcome).
b. Data source: health authority case line lists only. Data may be incomplete and subject to change

Figure 9. COVID-19 hospital admissions and deaths by episode date, BC, Sept 13, 2020 (week 38) – Nov 20, 2021 (week 46)



Data sources: health authority case line list data and PHSA Provincial Immunization Registry

Figure 10. COVID-19 hospital admissions and deaths incidence per 100K population by episode date and vaccination status, BC, Jan 3, 2021 (week 1) – Nov 20, 2021 (week 46)



E. Age profile, severe outcomes

Table 3 displays the distribution of cases and severe outcomes. In week 46, median age of hospital admissions, ICU admissions and deaths was 61 years, 62 years and 82 years, respectively, based on health authority case line lists only (data not shown).

Since week 40, there was a weekly average of 1 death in age groups <50 years of age, 5 deaths in age group 50-59 years old, 8 deaths in age group 60-69 years old, 11 deaths in the 70-79 year-olds, and 18 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) – Nov 20, 2021 (week 46) (N= 216,248)[a]

Age group (years)	Cases n (%)	Hospitalizations n (%) [b]	ICU n (%)	Deaths n (%)
<10	16,587	148 (1)	11 (<1)	2 (<1)
10-19	24,536	117 (<1)	21 (<1)	0 (<1)
20-29	46,019	714 (2)	91 (<1)	6 (<1)
30-39	40,522	1,306 (3)	262 (1)	28 (<1)
40-49	31,312	1,407 (4)	325 (1)	49 (<1)
50-59	25,408	1,938 (8)	580 (2)	126 (<1)
60-69	16,790	2,274 (14)	723 (4)	258 (2)
70-79	8,592	2,179 (25)	615 (7)	499 (6)
80-89	4,505	1,522 (34)	210 (5)	774 (17)
90+	1,977	521 (26)	22 (1)	569 (29)
Total	**216,248**	**12,126**	**2,860**	**2,311**
Median age [c]	**34**	**61**	**62**	**82**

a. Among those with available age information only.
b. Data sources: health authority case line lists and a subset of PHSA Provincial COVID19 Monitoring Solution (PCMS) data for children <20 years of age. PCMS data were included as of June 8 2021. Due to this change in data source, additional admissions that occurred since the start of the pandemic are now included in age groups 0-9 and 10-19 years.
c. Median ages calculated are based on health authority case line lists only.

F. Care facility outbreaks

As shown in **Table 4** and **Figure 11**, 420 care facility (acute and long-term care setting) outbreaks were reported in total in BC to the end of week 46. In week 46, one new outbreak was declared, based on earliest case onset date. Since week 38, 31 (63%) outbreaks were reported in long-term care settings and 28 (57%) were declared by FH.

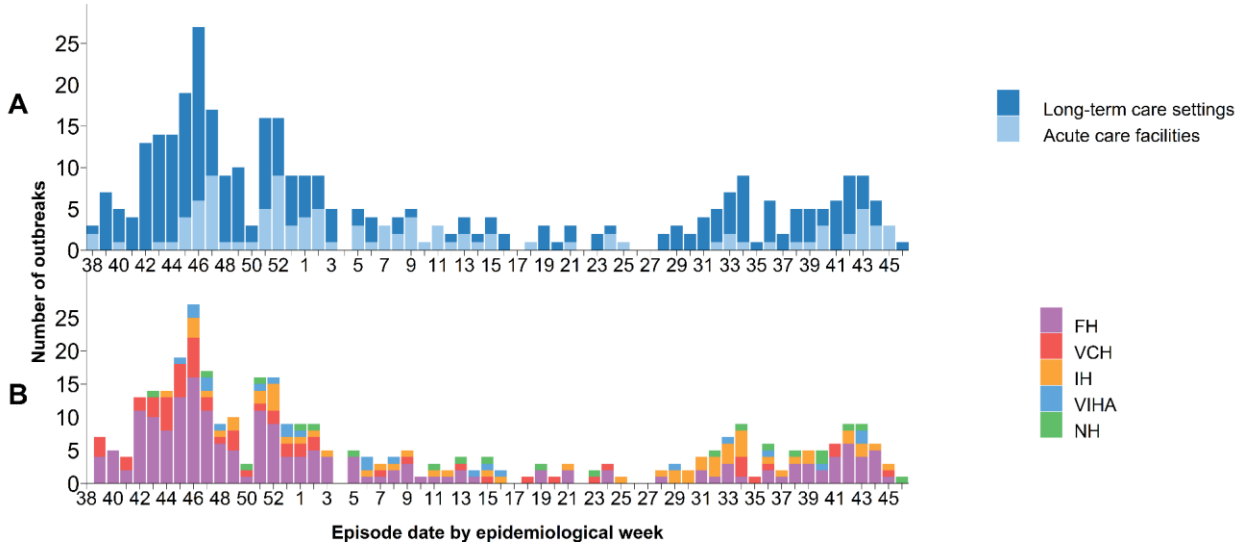
Three of the twenty-seven (11%) deaths reported in week 46 were associated with an outbreak in a care facility.

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) – Nov 20, 2021 (week 46) (N=420)

Care facility outbreaks and cases by episode date	Outbreaks	Cases				Deaths			
		Residents	Staff/ other	Unknown	Total	Residents	Staff/ other	Unknown	Total
Week 46, Care Facility Outbreaks	1	26	6	0	32	6	0	0	6
Cumulative, Care Facility Outbreaks	**420**	**4,505**	**2,654**	**9**	**7,168**	**1,198**	**0**	**0**	**1,198**

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 11. 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) – Nov 20, 2021 (week 46) (N=352)



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. 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 Surveillance Dashboard here: https://public.tableau.com/app/profile/bccdc/viz/BCCDCCOVID-19SurveillanceDashboard/Introduction

For global comparisons and additional epidemiological summaries on cases, severity and testing, visit the BCCDC COVID-19 Epidemiology App here: https://bccdc.shinyapps.io/covid19_global_epi_app/