

British Columbia (BC) COVID-19 Situation Report
Week 42: October 17- October 23, 2021

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Early signs of decrease in COVID-19 provincial incidence; stability in hospital and ICU admissions, and deaths

The provincial incidence by episode date was 66 per 100K, with 3,434 cases in week 42.

Incidence by episode date decreased in all HAs in week 42 compared to prior weeks of Wave 4:

- Since week 38, Fraser Health (from 99 to 77 per 100K).
- Since week 34, Vancouver Coastal (from 69 to 32 per 100K).
- Since week 33, Interior Health (from 223 to 66 per 100K).
- Since week 37, Island Health (from 67 to 42 per 100K).
- Since week 38, Northern Health (from 306 to 207 per 100K).

Age-specific incidences decreased in all age groups from week 41 to 42, except for the 10-19 and the 80+ year-olds that have shown slight increases. Incidence rates in children <10 of age have continued to decline between weeks 38 and 42. The 80+ year-old incidence has been steadily increasing since week 31. Among those who were fully vaccinated, incidence has been relatively stable in all age groups across recent weeks. The highest incidence rate among the unvaccinated in weeks 35 to 42 has been in the 80+ year-olds (1,379 per 100K in week 42).

By week 42, the single-dose vaccination coverage in the eligible 12+ year-olds reached 90% and 85% were fully vaccinated.

Testing of MSP-funded specimens remains high but has decreased since the peak in week 39, from ~80,500K to ~64,000K in week 42. Positivity started to increase slightly in week 41 reaching 6.7% in week 42.

The number of hospital admissions was stable in weeks 36 to 42 at an average of 295 hospitalizations per week. Trends for ICU admission and deaths have also been stable from week 36 to 41. In week 42, ICU admissions increased to 83 and deaths decreased to 43 deaths. The rate of hospital and ICU admissions was higher in unvaccinated as compared to fully vaccinated people in the last year.

By case of earliest onset date, 5 new outbreaks were reported in healthcare settings in week 42.

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= 5,147,712 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 01, 2021, laboratory data on October 29, 2021, PIR vaccine coverage date on October 29, 2021, and PCMS hospitalization data on November 01, 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 42, 2021, there have been 203,401 cases for a cumulative incidence of 3,910 per 100K (Table 1, Figure 1). The provincial incidence by episode date was 66 per 100K (3,434 cases) in week 42, which decreased from the peak of Wave 4 (week 38) at 102 per 100K. Incidence by episode date may increase as data become more complete in recent weeks.

As shown in Figure 2, incidence has decreased in every Health Authority (HA) compared to prior weeks of Wave 4. Incidence in Interior Health (IH) decreased from 223 per 100K in week 33 to 66 per 100K in week 42. From weeks 38 to 42, Northern Health (NH) and Fraser Health (FH) decreased from 306 per 100K to 207 per 100K, and from 99 per 100K to 77 per 100K, respectively. Incidence in Vancouver Coastal Health (VCH) decreased from 69 per 100K in week 34 to 32 per 100K in week 42. Island Health (VIHA) decreased from 67 per 100K in week 37 to 42 per 100K in week 42. These rates may increase as data become more complete.

Table 1. Episode-based case tallies by health authority, BC, Jan 15, 2020 (week 3) – Oct 23, 2021 (week 42) (N= 203,401)

Case tallies by episode date	Health Authority of Residence					Outside Canada	Total
	FH	IH	VIHA	NH	VCH		
Week 42, case counts	1,515	540	360	626	393	0	3,434
Cumulative case counts	103,908	30,427	10,481	15,054	43,234	297	203,401
Week 42, cases per 100K population	77	66	42	207	32	NA	66
Cumulative cases per 100K population	5,309	3,707	1,209	4,976	3,468	NA	3,910

Figure 1. Episode-based epidemic curve (bars), surveillance date (line) and health authority (HA), BC Sept 13, 2020 (week 38) – Oct 23, 2021 (week 42) (N= 195,552)

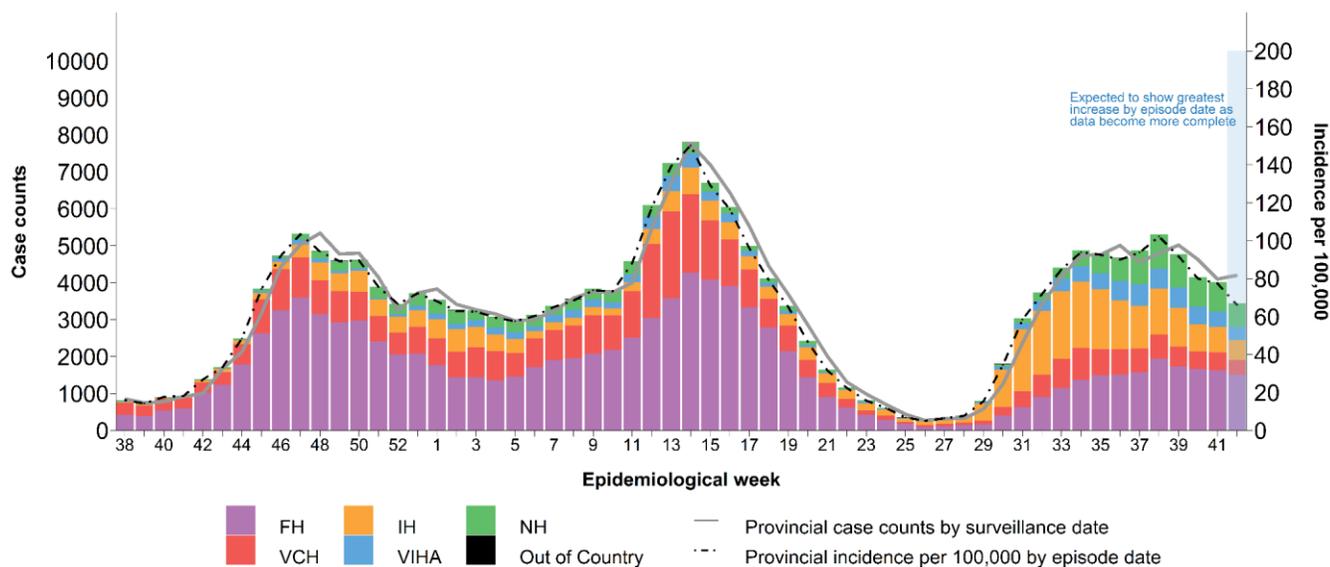
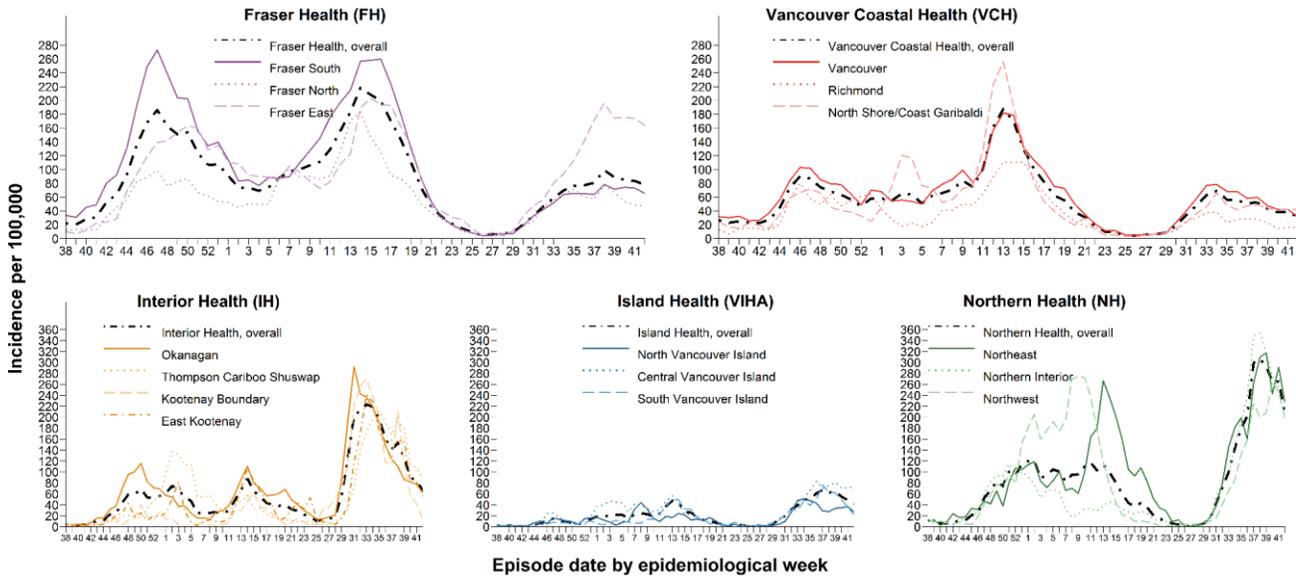


Figure 2. Weekly episode-based incidence rates by HA and health service delivery area (HSDA), BC Sept 13, 2020 (week 38) – Oct 23, 2021 (week 42) (N= 195,552)

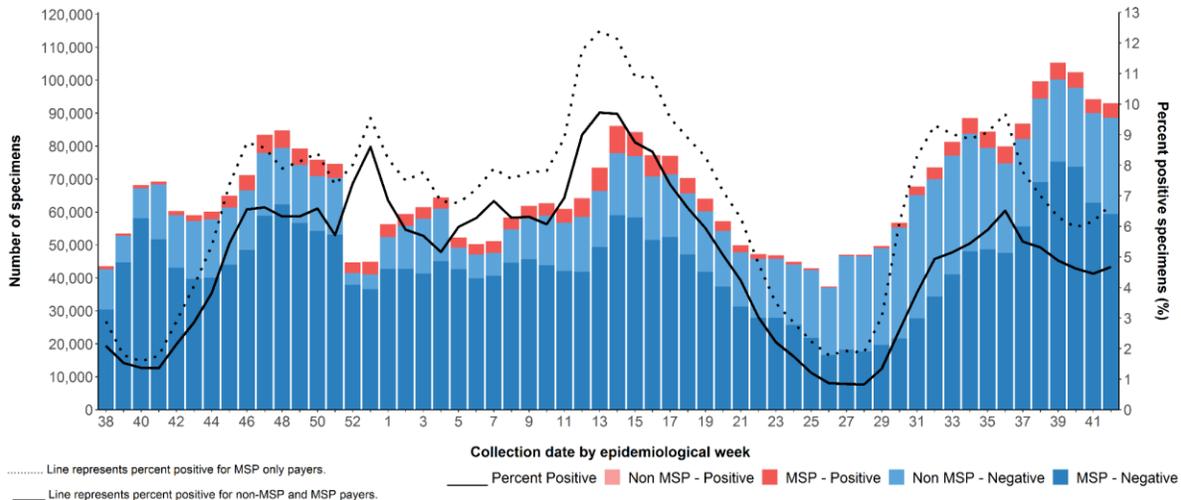


B. Test rates and percent positive

As shown by the darker-colored bars in [Figure 3](#), testing of MSP-funded specimens are elevated but have continued to decrease since the peak in week 39, from ~80,500K to ~64,000K in week 42. The positivity of MSP-funded specimens had decreased from week 36 to week 40, from 9.7% to 6.0%. Positivity then started to increase slightly reaching 6.7% in week 42.

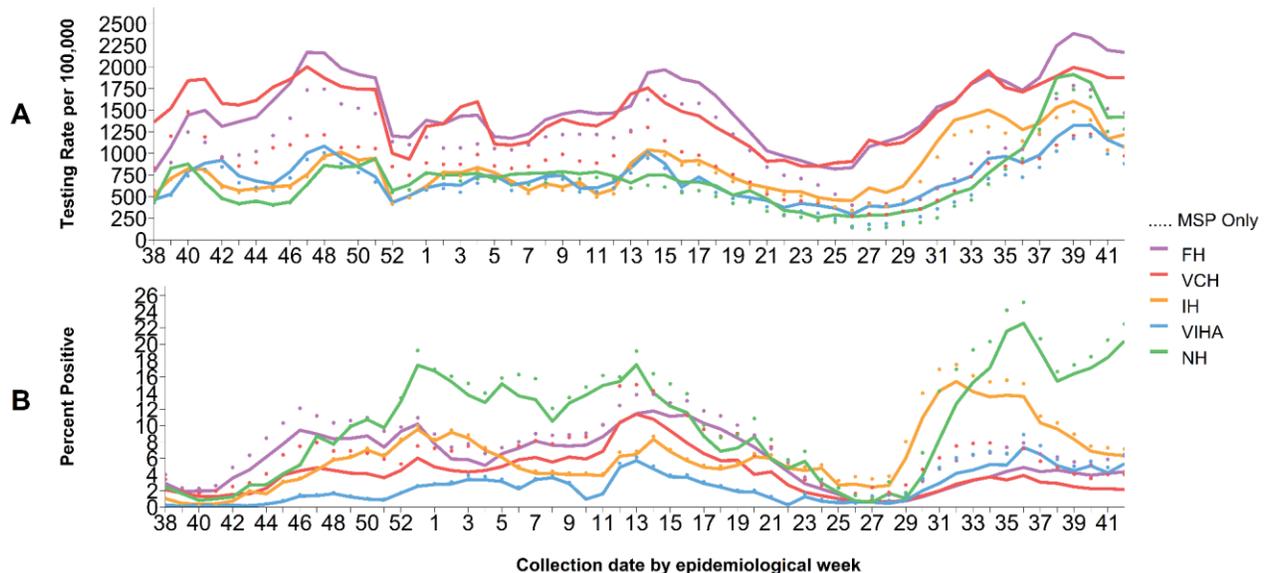
As shown in [Figure 4](#), the per capita testing rates (Panel A) declined or were stable in week 42 in all HAs compared to week 41. MSP testing rates in FHA remained highest at 1,469 per 100K followed by NHA at 1,283 per 100K. Percent positivity (Panel B) for MSP-only specimens was highest in NHA at 22.5%, increasing since week 38 from 16.6%. Percent positivity in FHA increased slightly from weeks 40 to 42, from 5.2% to 6.3%, and in VCH, from 3.5% to 4.0%. VIHA percent positivity also recently increased from week 41 to 42, from 4.9% to 6.5%. IH is the only HA with decreasing percent positivity since week 36 (15.2%) to week 42 (7.3%).

Figure 3. Number of specimens tested and percent SARS-CoV-2 positive, by collection week, BC Sept 13, 2020 (week 38) – Oct 23, 2021 (week 42)



Note: Invalid (n = 2167) and indeterminate (n = 8795) results have been excluded

Figure 4. Testing rates and percent SARS-CoV-2 positive by health authority and collection week, BC Sept 13, 2020 (week 38) – Oct 23, 2021 (week 42)



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](#), the testing rates have stabilized or decreased in all age groups in week 42 compared to week 41 except for the 80+ age group. After reaching the highest weekly testing rate of any age group since the start of the pandemic, testing rates in the 5-9 year olds decreased from 3,933 per 100K in week 39 to 1,990 per 100K in week 42. A decrease was also observed in 10-14 year olds, from 2,902 per 100K to 1,441 per 100K.

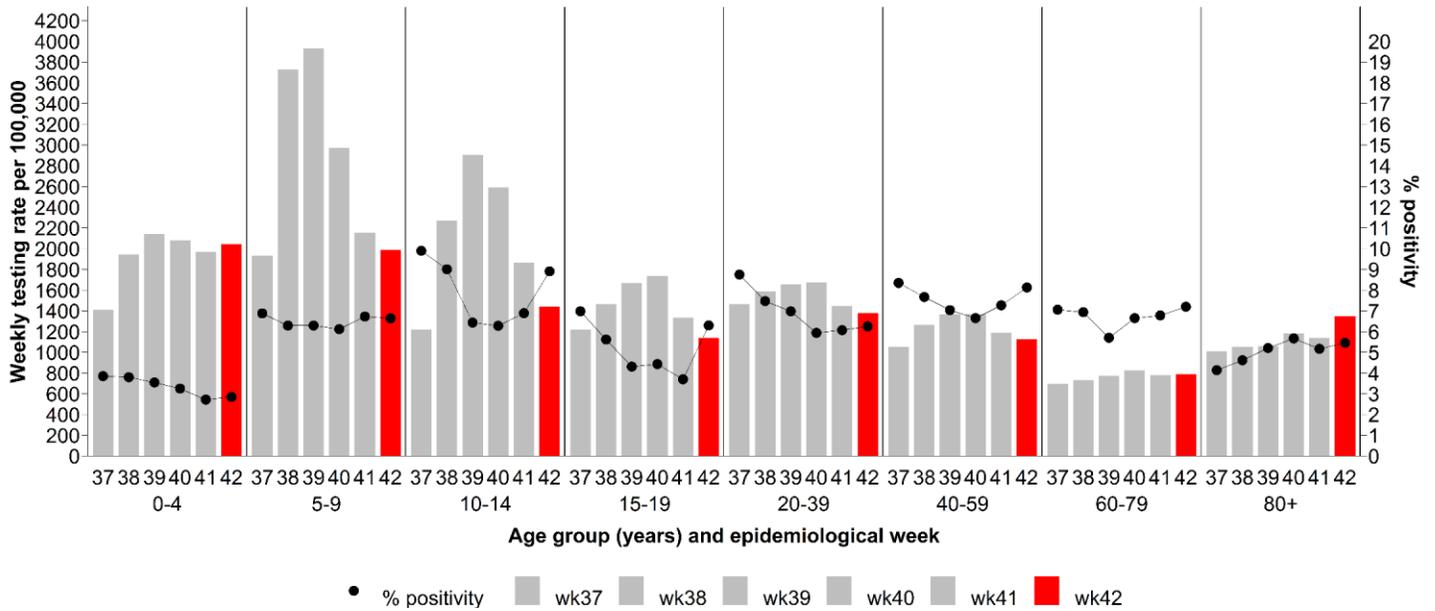
As shown by the black dots in [Figure 5](#), the percent positivity in week 42 has increased or stabilized in all age groups, compared to week 41. The biggest increases were seen in the 10-14 (from 6.9% to 8.9%), 15-19 (from 3.7% to 6.3%), and 40-59-year olds (from 7.3% to 8.1%). The highest percent positivity in week 42 was observed in the 10-14 year-olds.

Case distribution and weekly incidence by age group

As shown in [Figure 6](#), age-specific incidences decreased in all age groups from week 41 to 42, except for the 10-19 and the 80+ year-olds that have shown slight increases. After a steep increase, the incidence rates in children <10 of age have continued to decline between weeks 38 and 42, from 189 to 101 per 100K. The 80+ year-olds have been steadily increasing since week 31, from 11 to 59 per 100K in week 42. 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 41, incidence in the unvaccinated group has decreased in all age groups except for the 12-19 and the 80+ year-olds. The highest incidence rate among the unvaccinated in weeks 35 to 42 has been in people aged 80+ years, with an incidence of 1,379 per 100K in week 42. This is 28 times higher than in fully vaccinated 80+ year-olds for the same week. Among those who are fully vaccinated, incidence has been relatively stable in all age groups across recent weeks. The highest incidence rate among fully vaccinated people was in those aged 40-49 years, at 49.1 per 100,000 in week 42, which is 6 times lower than in unvaccinated people of the same age.

Figure 5. Average weekly SARS-CoV-2 MSP testing rates and MSP percent positive by known age group, BC Sep 18, 2021 (week 37) – Oct 23, 2021 (week 42)



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) – Oct 23, 2021 (week 42) (N= 195,540)

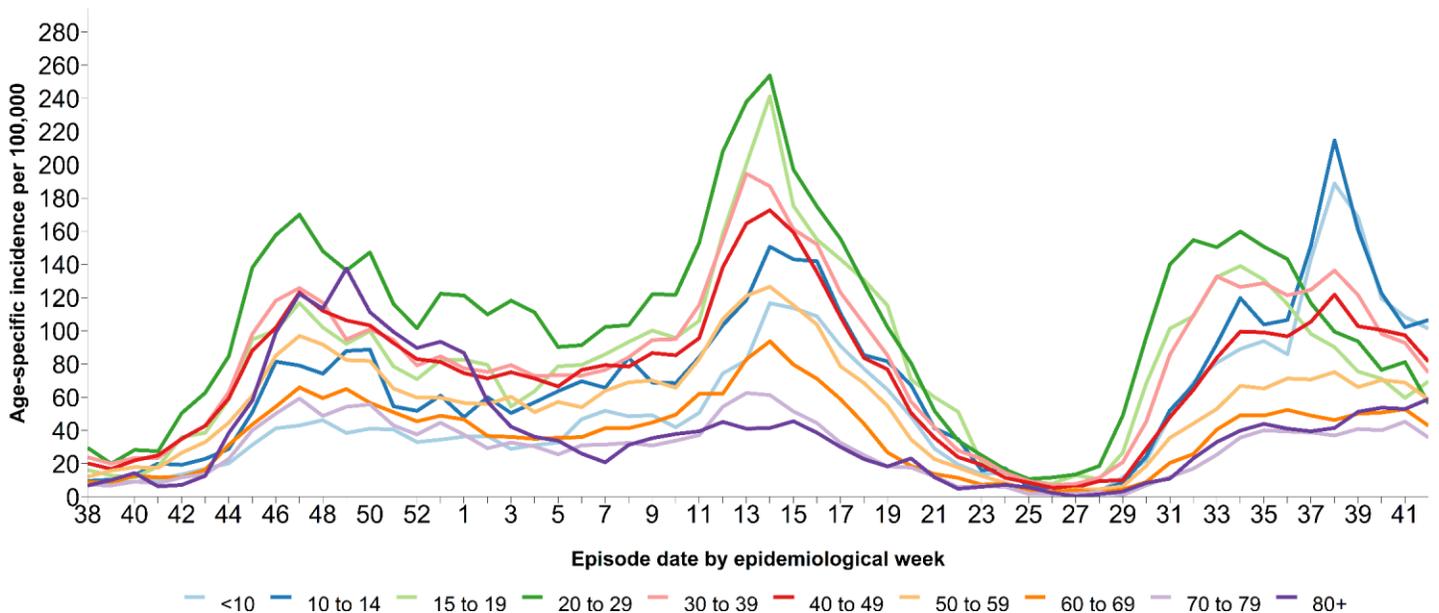
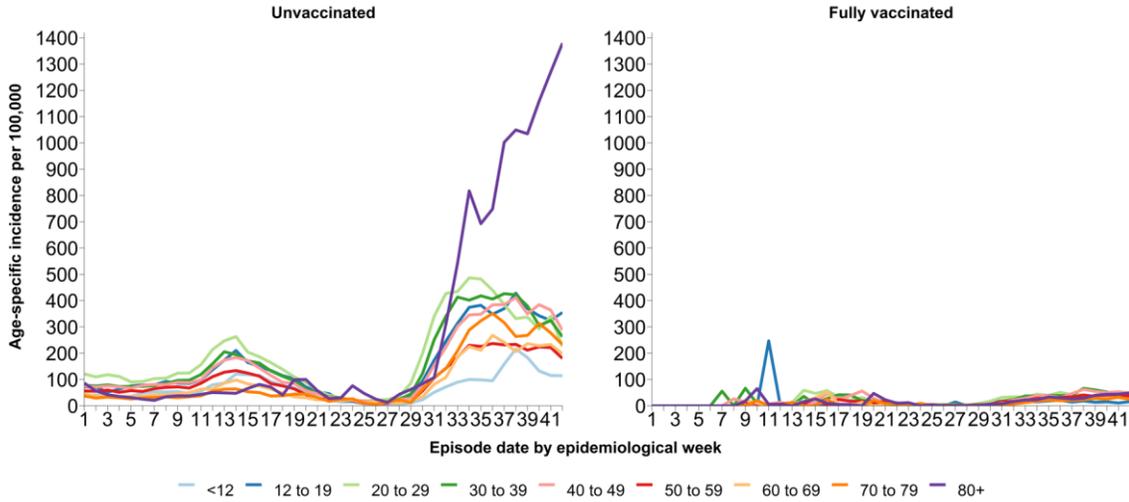


Figure 7. Weekly age-specific COVID-19 incidence per 100K population by epidemiological week, BC Jan 3, 2021 (week 1) – Oct 23, 2021 (week 42) (N= 203,370)



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

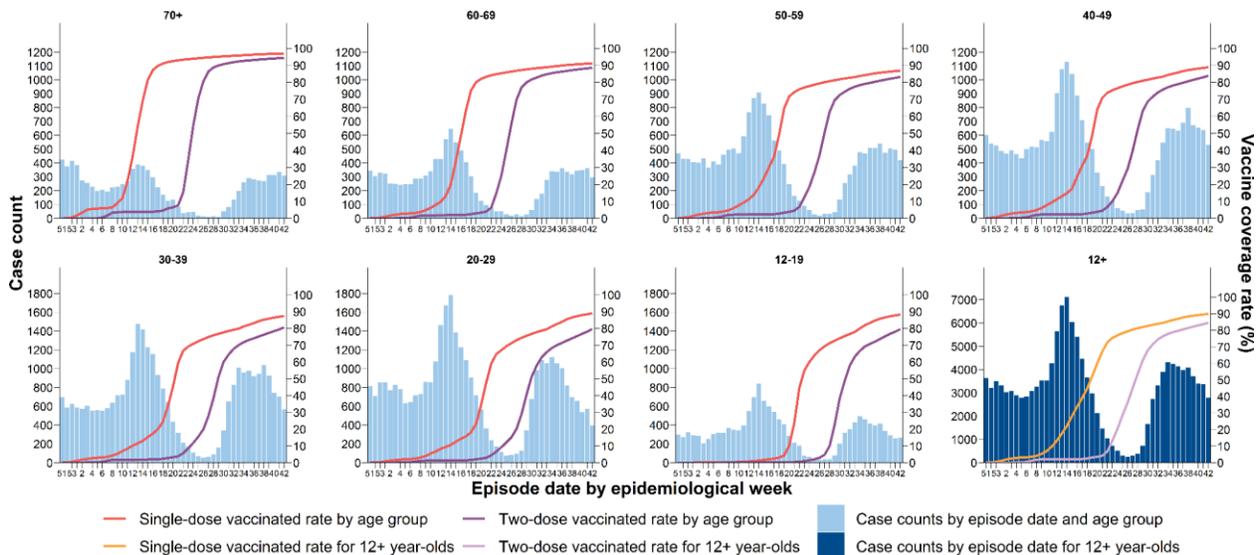
Vaccine coverage and weekly cases by age group

Vaccine roll-out in the community (i.e. individuals not residing in healthcare facilities, not healthcare workers and not clinically extremely vulnerable) was phased by age groups. The 70+ year-olds were eligible between weeks 10 and 14, the 40 to 69 year-olds started in weeks 15-19, the 20 to 39 year-olds started in weeks 19-20, and children 12-19 years of age started in week 20. As vaccination coverage increases, an impact on case counts is expected a few weeks later ([Figure 8](#)).

By week 42, 90% of eligible 12+ year-olds had received a single dose of vaccine and 85% were fully vaccinated.

The single-dose coverage for age groups 50+ years ranged from 87-97%, and two-dose coverage ranged from 83-94%, with 1,024 cases reported for those age groups combined. Single-dose coverage in the 20-49 year-olds was between 87-89% and two-dose coverage ranged between 80-84%, with 1,495 cases reported for those age groups combined. Single-dose coverage in the 12-19 year-olds was 88% and 80% were fully vaccinated, with 263 cases reported for that age group in week 42.

Figure 8. Weekly age-specific single-dose COVID-19 vaccine coverage and case counts by epidemiological week, BC Dec 13, 2020 (week 51) – Oct 23, 2021 (week 42)



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 has been stable in weeks 36 to 42 at an average of 295 hospitalizations per week. ICU admissions have also been relatively stable in weeks 36 to 41, with an average of 69 ICU admissions per week, with a more recent increase in week 42, at 83 ICU admissions ([Table 2, Figure 9](#)). Death counts had been increasing slowly from 31 deaths in week 36 to 48 deaths in week 41. In week 42, deaths slightly decreased (43 deaths).

As shown in [Figure 10](#), the rate of hospital and ICU admission was higher in unvaccinated as compared to fully vaccinated people throughout 2021. In week 42, the hospital admission rate was 19 per 100K among those who were unvaccinated as compared to 2 per 100K among those who were fully vaccinated. The ICU admission rate among unvaccinated people was 6 per 100K, as compared to 0 per 100K among the fully vaccinated.

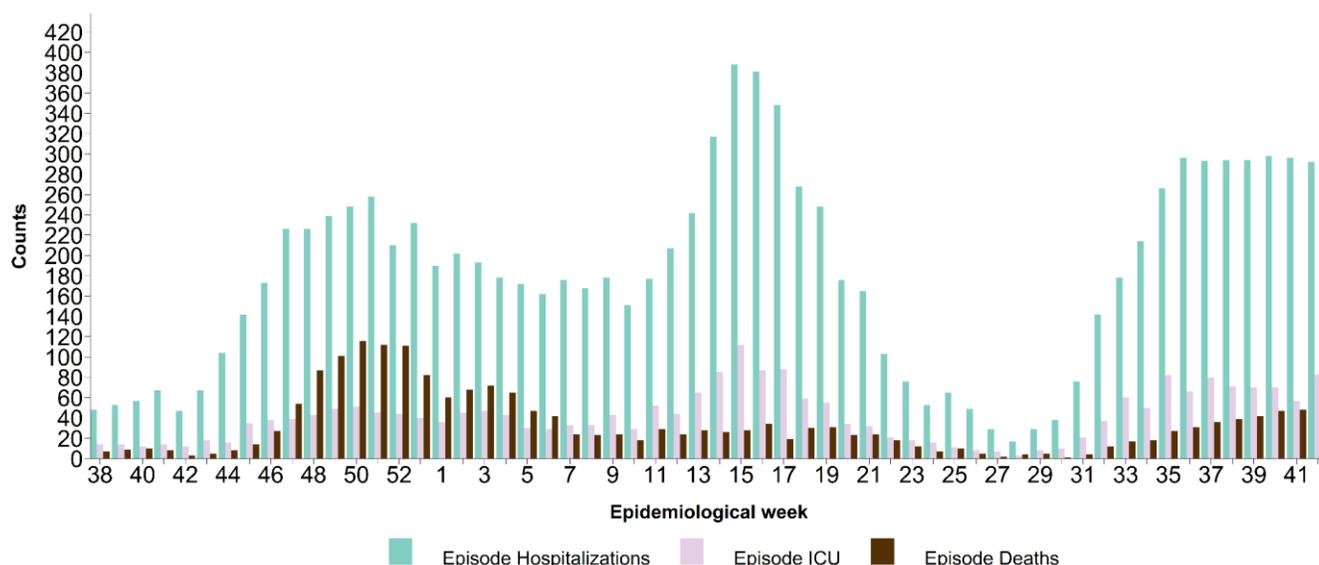
Cumulatively, there have been 19 confirmed cases of [Multi-system Inflammatory Syndrome in children and adolescents \(MIS-C\)](#) in BC since January 1, 2020. There have been no new confirmed cases of MIS-C since the last report. The median age of all cases is 9 (range 1-15) years.

Table 2. COVID-19 severe outcomes by episode date, health authority of residence, BC Jan 15, 2020 (week 3) – Oct 23, 2021 (week 42)

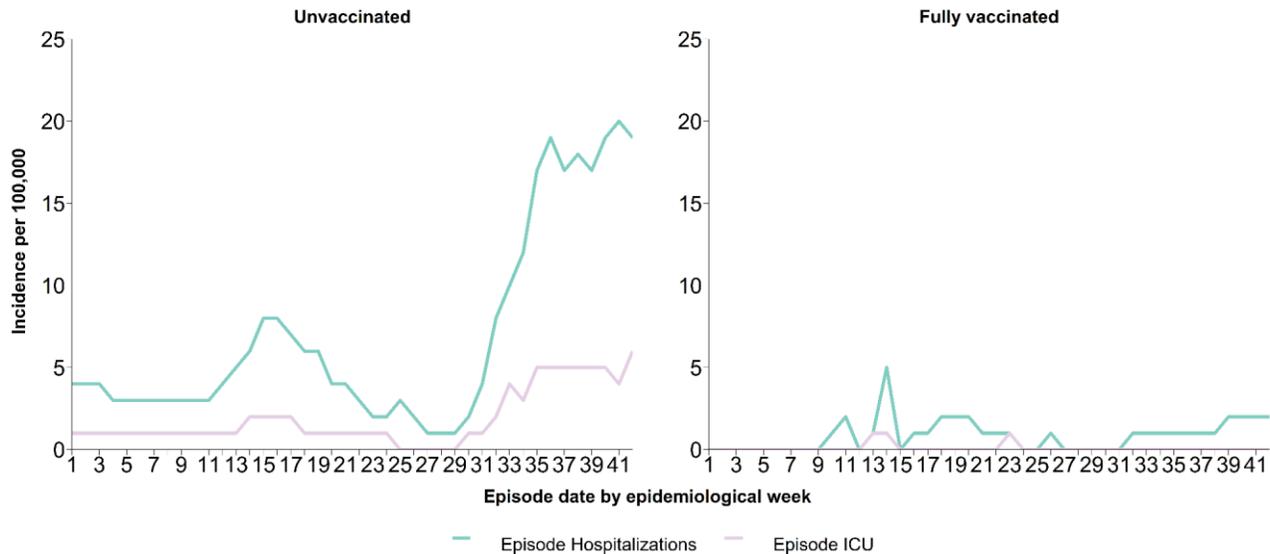
Severe outcomes by episode date	Health authority of residence					Residing outside of Canada	Total n/N ^a (%)
	FH	IH	VIHA	NH	VCH		
Week 42, hospitalizations	122	48	31	61	30	0	292
Cumulative hospitalizations^b	5,433	1,742^c	511	1,162	2,293	14	11,155/203,401 (5)
Week 42, ICU admissions	26	18	9	17	13	0	83
Cumulative ICU admissions^b	1,098	508^c	150	277	614	2	2,649/203,401 (1)
Week 42, deaths	14	7	6	11	5	0	43
Cumulative deaths	1,034	268	89	207	540	0	2,138/203,401 (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
- c. As of October 26th, IH has changed the primary source of COVID-19 hospitalization surveillance data to PHSA’s Provincial COVID-19 Monitoring Solution (PCMS). This change in data source has led to a one-time increase in the number of ever and currently reported COVID-19 hospitalizations. This change is retrospective to the beginning of the pandemic though primarily affects cases reported since August 2021. There has been no change to the overall COVID-19 case counts or to the case management of patients in hospital.

Figure 9. COVID-19 hospital admissions and deaths by episode date, BC, Sept 13, 2020 (week 38) – Oct 23, 2021 (week 42)



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) – Oct 23, 2021 (week 42)

E. Age profile, severe outcomes

Table 3 displays the distribution of cases and severe outcomes. In week 42, median age of hospital admissions, ICU admissions and deaths was 59 years, 60 years and 74 years, respectively, based on health authority case line lists only (data not shown).

Since week 38, there was a weekly average of 4 deaths in age groups <50 years of age, 4 in age groups 50-59 years of age, 6 deaths in the 60-69 year old age group, 10 deaths in the 70-79 year-olds, and 20 deaths in the 80+ year-olds. 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) – Oct 23, 2021 (week 42) (N= 203,370)^{a,d}

Age group (years)	Cases n (%)	Hospitalizations n (%) ^b	ICU n (%)	Deaths n (%)
<10	14,713	152 (1)	16 (<1)	2 (<1)
10-19	22,837	111 (<1)	22 (<1)	0 (<1)
20-29	44,475	661 (1)	88 (<1)	5 (<1)
30-39	38,197	1,214 (3)	244 (1)	28 (<1)
40-49	29,338	1,302 (4)	305 (1)	43 (<1)
50-59	24,006	1,784 (7)	534 (2)	103 (<1)
60-69	15,675	2,081 (13)	659 (4)	224 (1)
70-79	8,040	2,003 (25)	572 (7)	454 (6)
80-89	4,225	1,396 (33)	197 (5)	732 (17)
90+	1,864	472 (25)	20 (1)	547 (29)
Total	203,370	11,176	2,657	2,138
Median age^c	34	61	61	83

- 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.
- Percentages are calculated as the proportion of hospitalizations, ICU admissions, and deaths among all cases in each age group.

F. Care facility outbreaks

As shown in [Table 4](#) and [Figure 11](#), 397 care facility (acute and long-term care setting) outbreaks were reported in total in BC to the end of week 42. In week 42, five new outbreaks were declared based on earliest case onset date. Since week 38, 19 (73%) outbreaks were reported in long-term care settings and 16 (62%) were declared by FH.

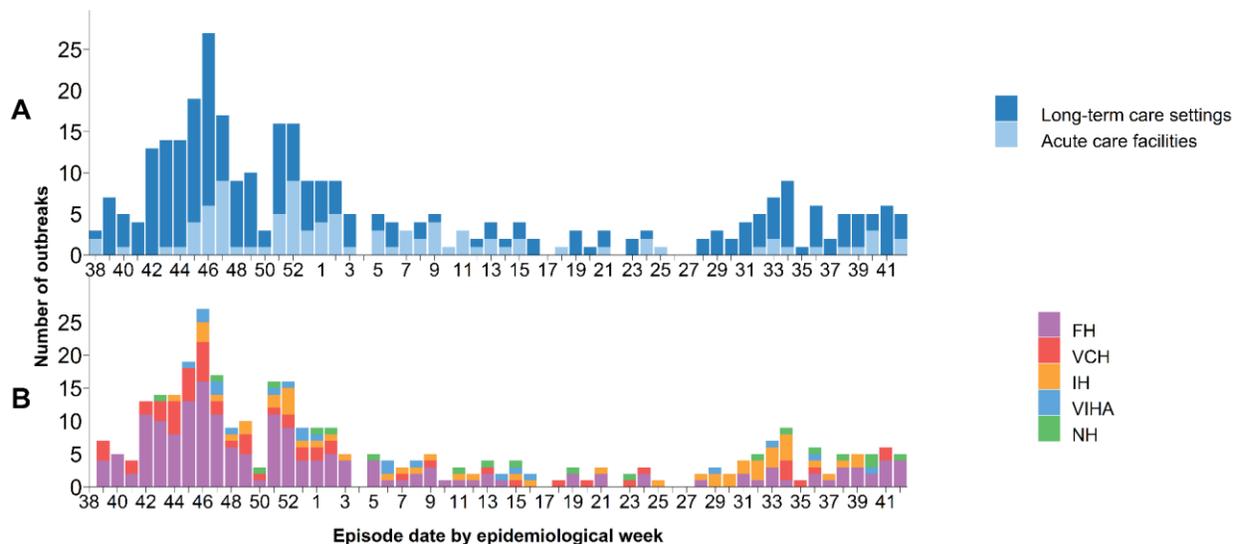
Eight of the 43 (19%) deaths reported in week 42 were associated with an outbreak in a care facility.

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) – Oct 23, 2021 (week 42) (N=397)

Care facility outbreaks and cases by episode date	Outbreaks	Cases				Deaths			
		Residents	Staff/other	Unknown	Total	Residents	Staff/other	Unknown	Total
Week 42, Care Facility Outbreaks	5	62	14	0	76	8	0	0	8
Cumulative, Care Facility Outbreaks	397	4,275	2,571	9	6,855	1,154	0	0	1,154

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) – Oct 23, 2021 (week 42) (N=329)



- 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/