

British Columbia (BC) COVID-19 Situation Report

Week 4: January 24 – January 30, 2021

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Epidemic curve and regional incidence	2	Continued provincial decrease in COVID-19 cases and new hospitalizations, while mortality remains elevated but stable There have been 68,595 COVID-19 cases in BC to the end of week 4 2021 (1,332 per 100K population). In weeks 1 to 4, incidence decreased in NH (125 to 80 per 100K), FH (92 to 65 per 100K) and IH (59 to 47 per 100K), while remaining stable in other health authorities. There continues to be a decrease in incidence in most age groups, most notably in the 80+ year olds (95 to 35 per 100K, in weeks 53 to 4).
Likely sources of infection	3	The number of MSP specimens tested increased slightly in week 4 (~51,000 tests). Since week 53, percent positivity in BC has decreased from 9.5% to 6.4%. Positivity has decreased in NH, FH and IH, remained stable in VCH, and increased in VIHA. In week 4, percent positivity in all age groups was lower than prior weeks in Phase 3c. Positivity was lowest in ages 5-9 years (3.7%), 0-4 years and 80+ years (both 3.9%), and highest in 10-14 year olds (8.1%).
Test rates and % positive	4	The number of hospital admissions has decreased since week 2 from 213 hospitalizations per week to 167 in week 4. Cumulatively, there have been 3,789 cases hospitalized in BC to the end of week 4.
Age profile, testing and cases	5	The number of deaths remains elevated with an average of 64 deaths reported per week in weeks 1 to 4. Of the 64 deaths in week 4, 43 (71%) were associated with care facility settings, and of those, 42 (98%) were adults 70+ years. Cumulatively, there have been 1,219 deaths in BC.
Severe outcome counts	7	The number of care facility outbreaks has been declining since week 46. Cumulatively, there have been 273 care facility outbreaks.
Age profile, severe outcomes	8	COVID-19 variants of concern have been reported in BC. To date, 25 cases have been identified with the B.1.1.7 variant and 15 cases, with the B.1.351 variant.
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BELOW ARE IMPORTANT NOTES relevant to the interpretation of data displayed in this bulletin:

- The weekly tally by surveillance date (defined as laboratory result date, if unavailable, then report date) includes cases with illness onset date in preceding weeks. Analyses based on illness onset date (or episode date) may better represent the timing of epidemic evolution.
- Episode date is defined by dates of illness onset, hospital admission, or death. When those dates are unavailable, laboratory collection is used. If also unavailable, then surveillance date used. Episode-based tallies for recent weeks are expected to increase as case data, in particular onset dates, are more complete.
- Per capita rates/incidences are based on PEOPLE2020 population estimates (n=5,139,568 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.

Table of [pandemic phases](#) defined by implementation or relaxation of population-level mitigation measures in BC:

PRE-PHASE 1	PHASE 1	PHASE 2	PHASE 3A	PHASE 3B	PHASE 3C
Pre-implementation Jan 15 (wk 3) to Mar 13 (wk 11) 2020	Implementation Mar 14 (wk 11) to May 18 (wk 21) 2020	Initial relaxation May 19 (wk 21) to Jun 23 (wk 26) 2020	Further relaxation Jun 24 (wk 26) to Sept 12 (wk 37) 2020	Start of school year Sept 13 (wk 38) to Nov 7 (wk 45) 2020	Re-implementation Nov 8 (wk 46) to Current wk, 2021
From earliest symptom onset date	Initial restrictions	Re-opening of services	Broader re-opening	From first complete epidemiological week of 2020-21 school year	Core bubble interaction only

A. COVID-19 case counts and epidemic curve

Provincially, from week 3 2020 to week 4 2021, there have been 68,595 cases, corresponding to a cumulative incidence of 1,332 per 100K ([Table 1, Figure 1](#)).

As shown in [Figure 1](#), since the peak in week 47 (103 per 100K), there has been a general decline in cases reaching 2,815 (55 per 100K) in week 4. FH contribution has decreased to 45% of cases in week 4.

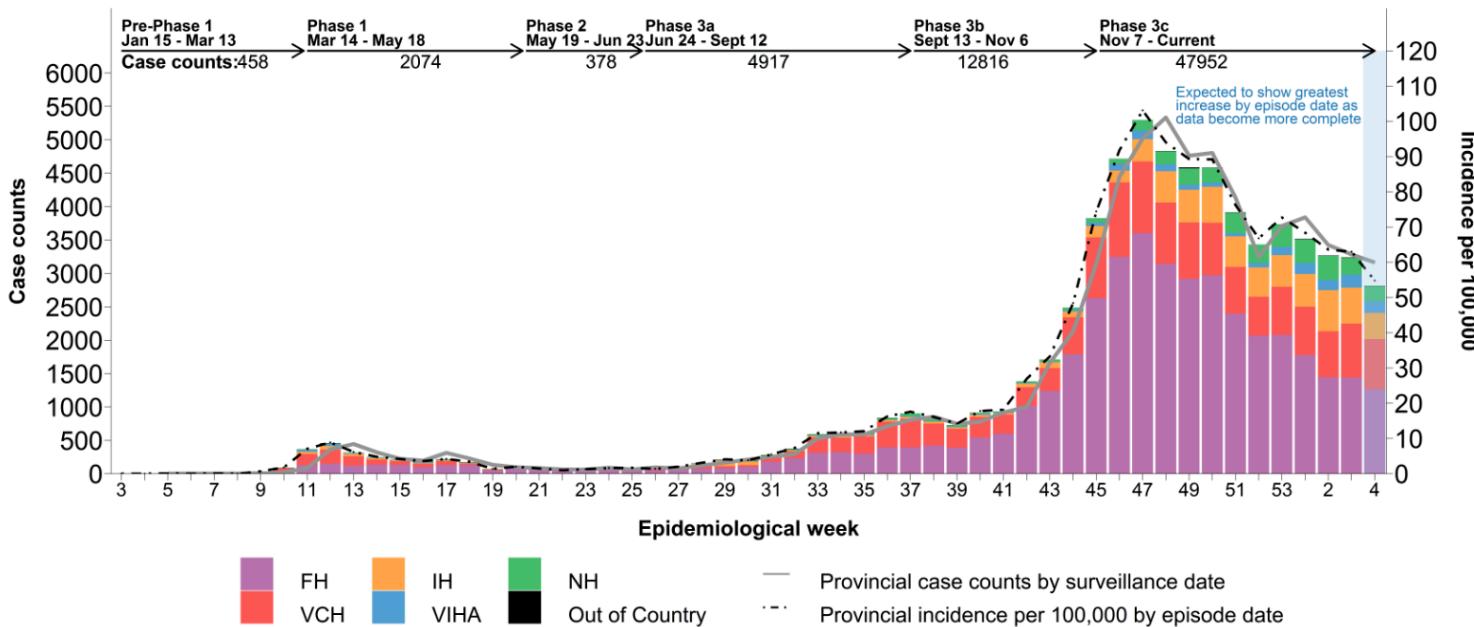
As shown in [Figure 2](#), in recent weeks 1 to 4, incidence in Northern Health (NH; 125 to 80 per 100K), Fraser Health (FH; 92 to 65 per 100K), and Interior Health (IH; 59 to 47 per 100K) showed decreasing trends, while incidence in the remaining health authorities (HAs) was stable. The health service delivery areas (HSDAs) experiencing recent increasing incidence rates are: North Shore/Coast Garibaldi and Central Vancouver Island.

Table 1. Episode-based case tallies by health authority, British Columbia^a
January 15, 2020 (week 3) – January 30, 2021 (week 4) (N= 68,595)

Case tallies by episode date	Health Authority of Residence					Residing Outside Canada	Total
	FH	IH	VIHA	NH	VCH		
Week 4, case counts	1,266	392	173	231	750	3	2,815
Cumulative case counts	40,993	6,399	1,720	3,544	15,802	137	68,595
Week 4, cases per 100K population	65	47	20	80	62	NA	55
Cumulative cases per 100K population	2,114	767	198	1234	1305	NA	1,332

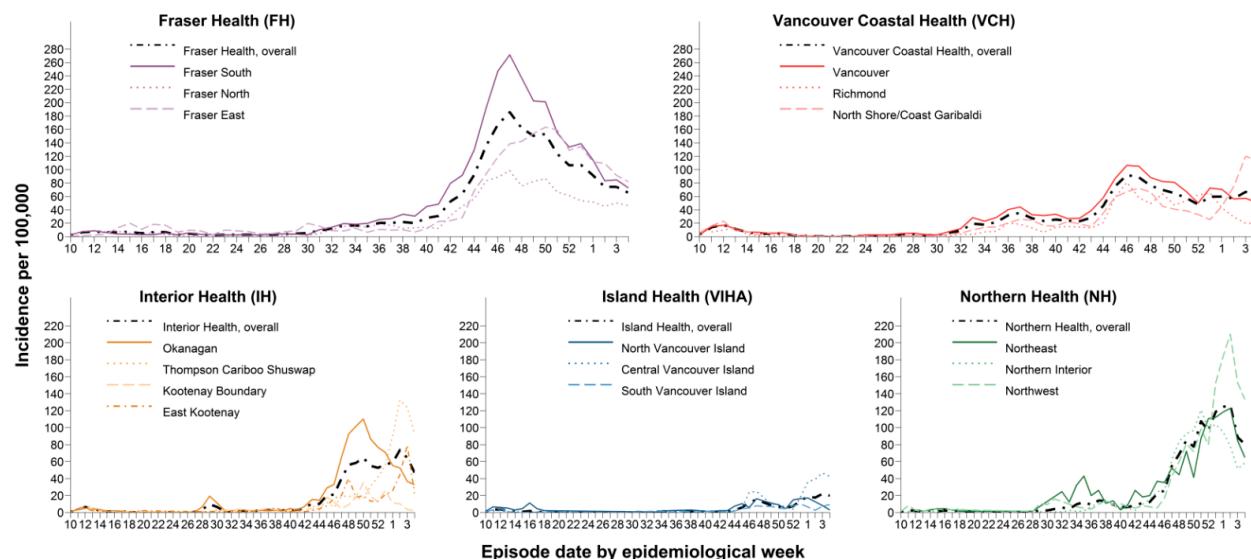
a. Displayed data extracted on February 8, 2021.

Figure 1. Episode-based epidemic curve (bars)^a, surveillance date (line) and health authority (HA), BC
January 15, 2020 (week 3) – January 30, 2021 (week 4) (N=68,595)



a. First onset date of a case in BC was January 15, 2020. Displayed data extracted on February 8, 2021.

Figure 2. Weekly episode-based incidence rates by HA and health service delivery area (HSDA), BC
March 1, 2020 (week 10) – January 30, 2021 (week 4)



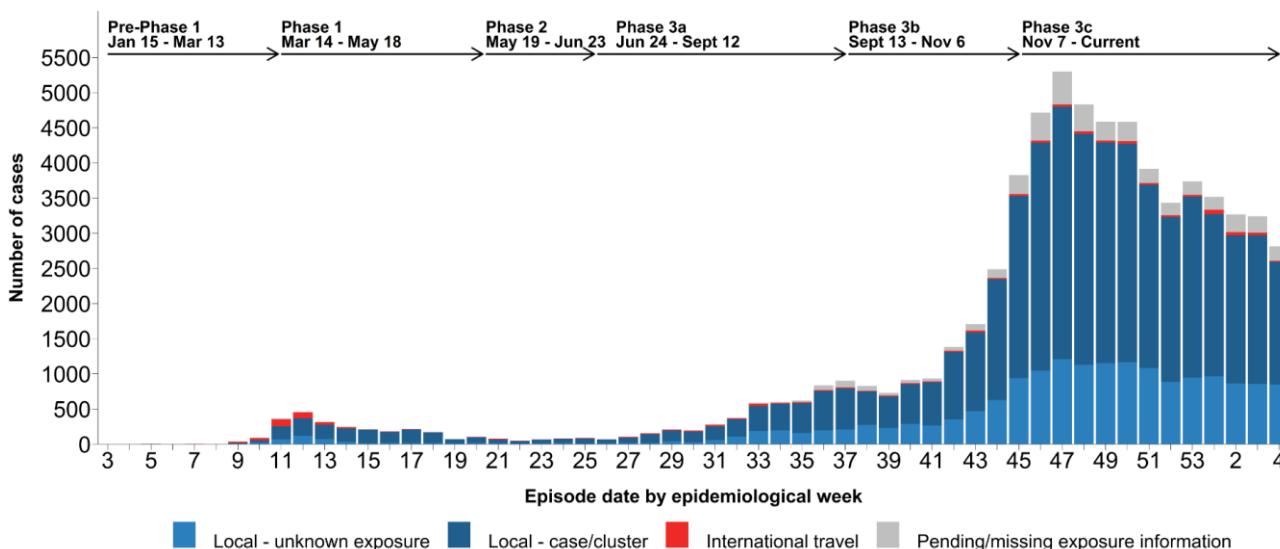
B. Likely sources of infection

As shown in [Table 2](#) and [Figure 3](#), local contact with a known case or cluster has been the most commonly reported source of infection across the pandemic to date.

Table 2. Likely source of COVID-19 infection by episode date, BC
January 15, 2020 (week 3) – January 30, 2021 (week 4)

Likely exposure (row %)	International travel	Local – case/cluster	Local – unknown	Pending/missing
Week 4, Exposures	13 (<1)	1,744 (62)	852 (30)	206 (7)
Cumulative Exposures	1,070 (2)	45,909 (67)	17,358 (25)	4,258 (6)

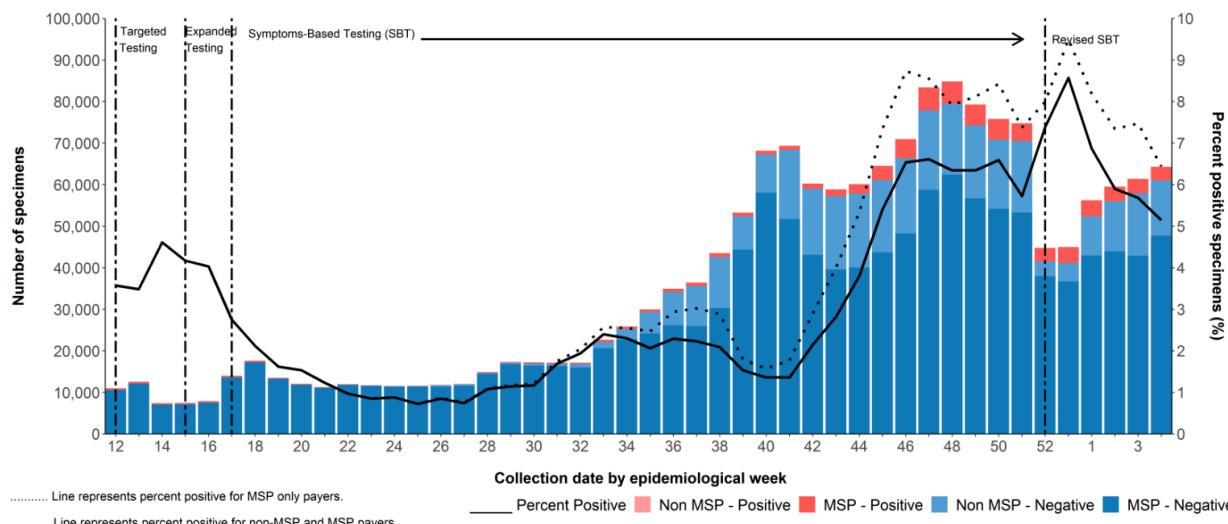
Figure 3. Likely source of COVID-19 infection by episode date, BC
January 15, 2020 (week 3) – January 30, 2021 (week 4)



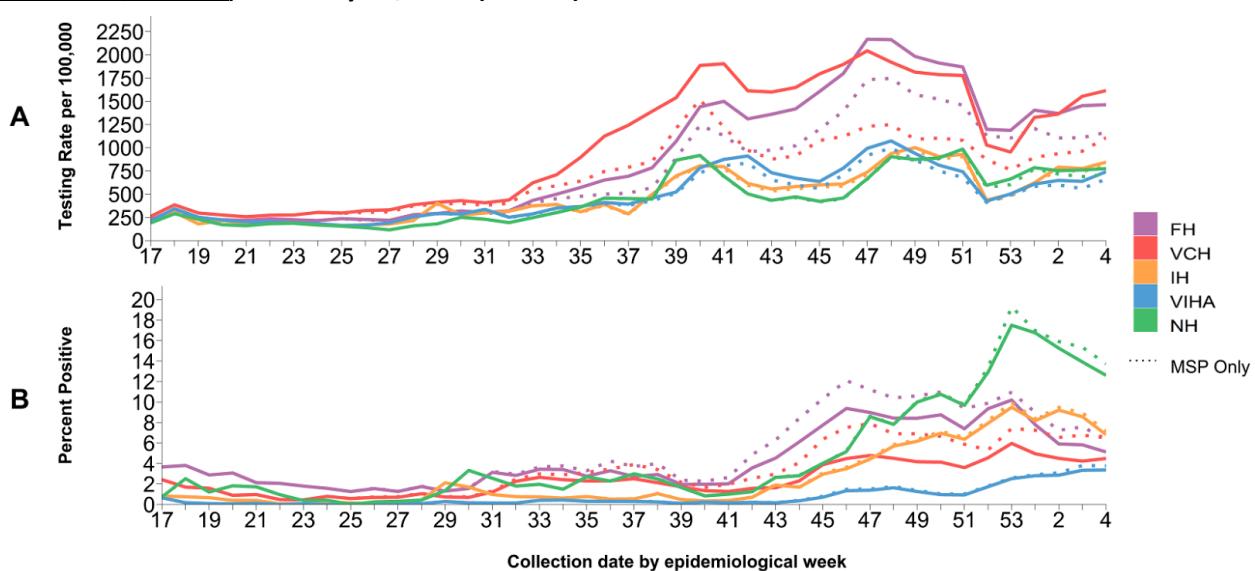
C. Test rates and percent positive

As shown by the bars in [Figure 4](#), the weekly number of MSP only specimens tested has increased from week 53 (~41,000 tests) to week 4 at ~51,000 tests. Concurrently, positivity for MSP-funded specimens decreased from week 53 to week 4 from 9.5% to 6.4%.

As shown in **Panel A** of [Figure 5](#), the per capita testing rate in week 4 remains highest in FH and VCH. As shown in **Panel B**, week 4 percent positivity remains highest in NH at 13.7% followed by IH at 7.1%, VCH at 6.5%, FH at 6.4%, and lowest in VIHA at 3.8%. Since week 53, NH, FH and IH positivity in MSP-funded specimens has decreased (from 19.3%, 11.0% and 9.9%, respectively). In VCH, percent positivity remained relatively stable in the same time period. VIHA percent positivity has been on an upward trend since week 51 when it was at 1.0%.

Figure 4. Number of specimens tested and percent SARS-CoV-2 positive, by collection week, BCMarch 15, 2020 (week 12) – January 30, 2021 (week 4)^{a,b,c}

a. Invalid (n=821) and indeterminate (n=4,359) results have been excluded.

Figure 5. Testing rates and percent SARS-CoV-2 positive by health authority and collection week, BCMarch 15, 2020 (week 12) – January 30, 2021 (week 4)^{b,c}

b. PLOVER extract on Friday, February 5, 2021.

c. Laboratory testing guidelines were updated on Dec 17 (week 51) to include new evidence of COVID-19 symptoms: <https://www.healthlinkbc.ca/covid-19/testing>

D. Age profile – Testing and casesTesting rates and percent positivity by age group

As shown by the coloured bars in [Figure 6](#), compared to prior weeks of Phase 3c, testing rates in week 4 were lower in all age groups except ages 0-9 years where they were approximately the same. The highest testing rates in week 4 were among adults 20-39 years of age, similar to weeks 46-3 of phase 3c.

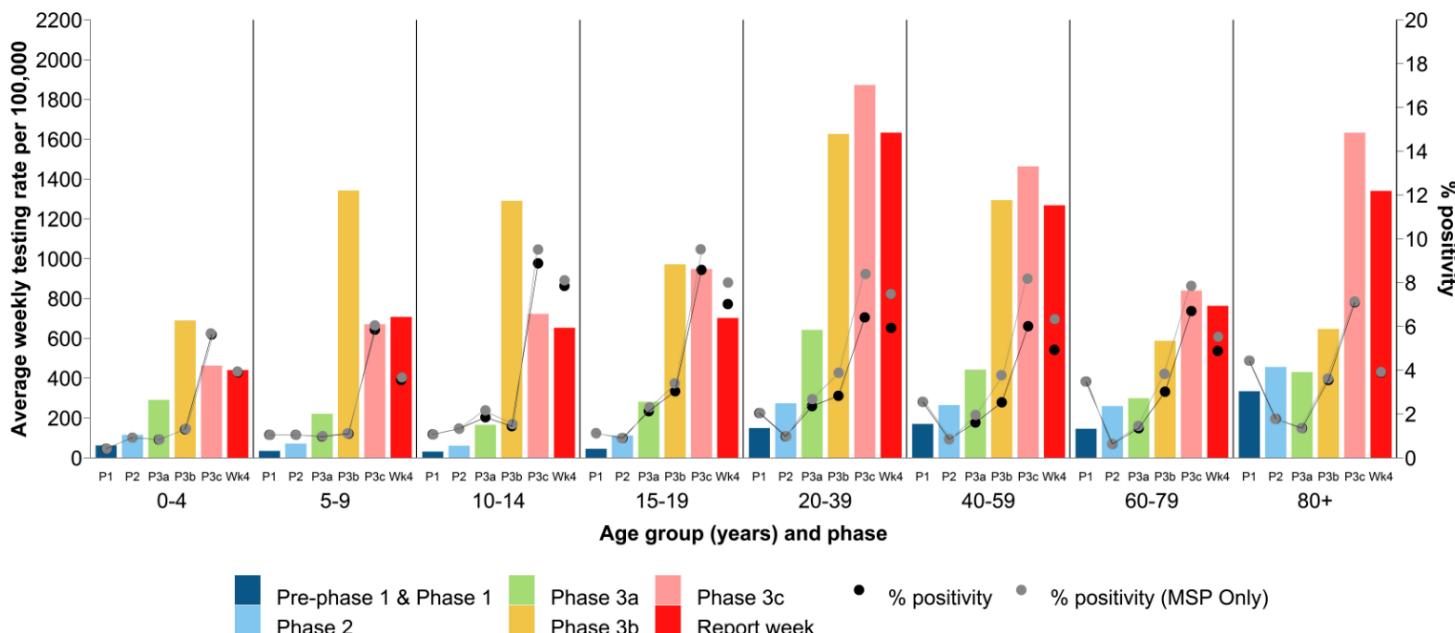
As shown by the grey dots in [Figure 6](#), the percent positivity for MSP only specimens in week 4 is lower in all age groups than prior weeks in Phase 3c. The difference was most notable in the elderly adults ages 80+ where it dropped from 7.1% to 3.9% and in children 5-9 years, from 6.0% to 3.7%. Percent positivity in week 4 was lowest in children 5-9 years (3.7%), followed by the elderly 80+ years and children 0-4 years (both 3.9%) and reaching 5.5% or higher in the remaining age groups (highest in the 10-14 year olds at 8.1%).

Case distribution and weekly incidence by age group

As shown in [Figure 7](#), the percentage contribution decreased in the 60+ year olds, from 20% in week 1 to 15% of all cases in week 4. This was offset by a slight increase in the proportion of cases in the 20-59 year-old group, from 66% in week 1 to 71% in week 4.

As shown in [Figure 8](#), since week 53, there has been a decrease in incidence in all age groups. The most substantial decrease in incidence was in the 80+ year olds, where incidence plummeted from 95 per 100K to 35 per 100K, in week 4. Incidence remained high and relatively stable in the 20-29 year old group at 103 per 100K in week 4. Although much lower, incidence has also stabilised in children 10-14 years of age since week 51.

Figure 6. Average weekly SARS-CoV-2 testing rates and percent positive by known age group and phase^a, BC January 20, 2020 (week 4) – January 30, 2021 (week 4)^b



- a. Phase based on specimen collection date, of which January 20 was the earliest. The average weekly rate by phase is derived as the phase-specific per capita test rate divided by the number of weeks for Pre-Phase 1 + Phase 1 (P1: 17 weeks), Phase 2 (P2: 5 weeks), Phase 3a (P3a: 11.5 weeks), Phase 3b (P3b: 8 weeks), and Phase 3c, excluding the current report week (P3c: 11 weeks). The current report week, although part of Phase 3c, is excluded from Phase 3c as displayed here to enable comparison.
- b. Laboratory extract from PLOVER on February 5, 2021. Testing rates displayed are based on all specimens (MSP and non-MSP).

Figure 7. COVID-19 case distribution by known age group (years) and episode date, BC
March 15, 2020 (week 12) – January 30, 2021 (week 4) (N= 68,059)

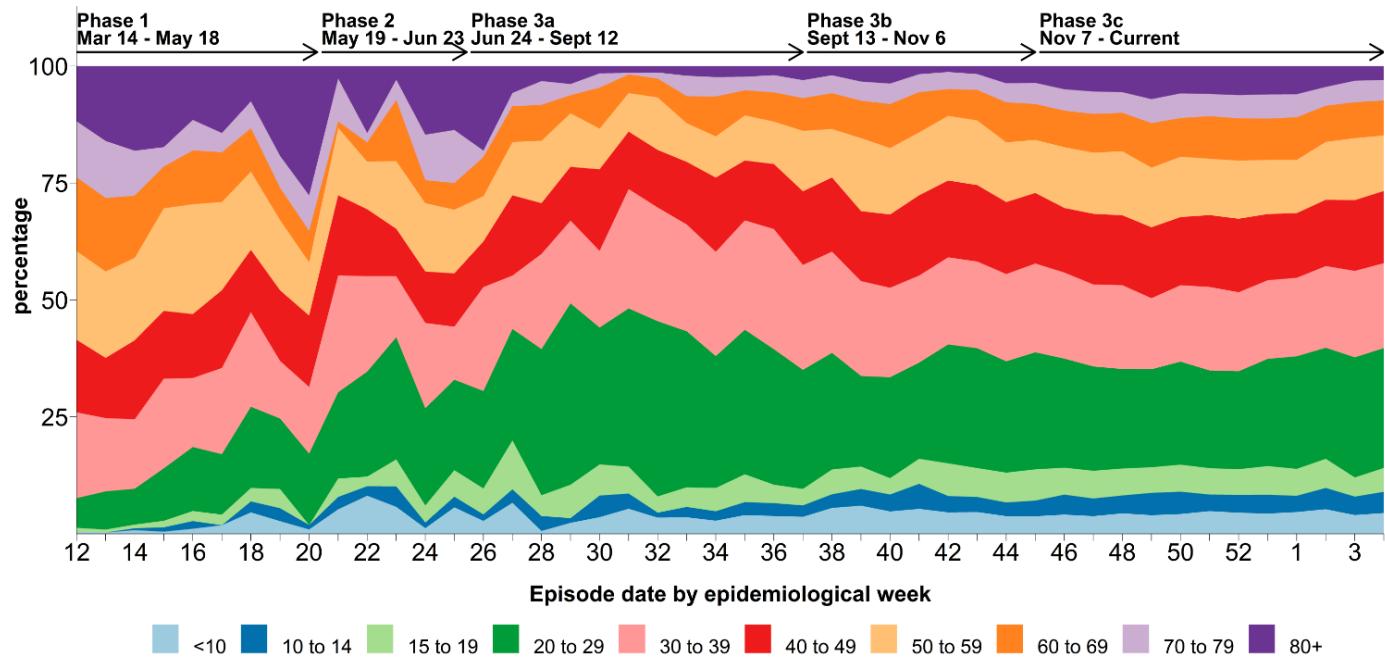
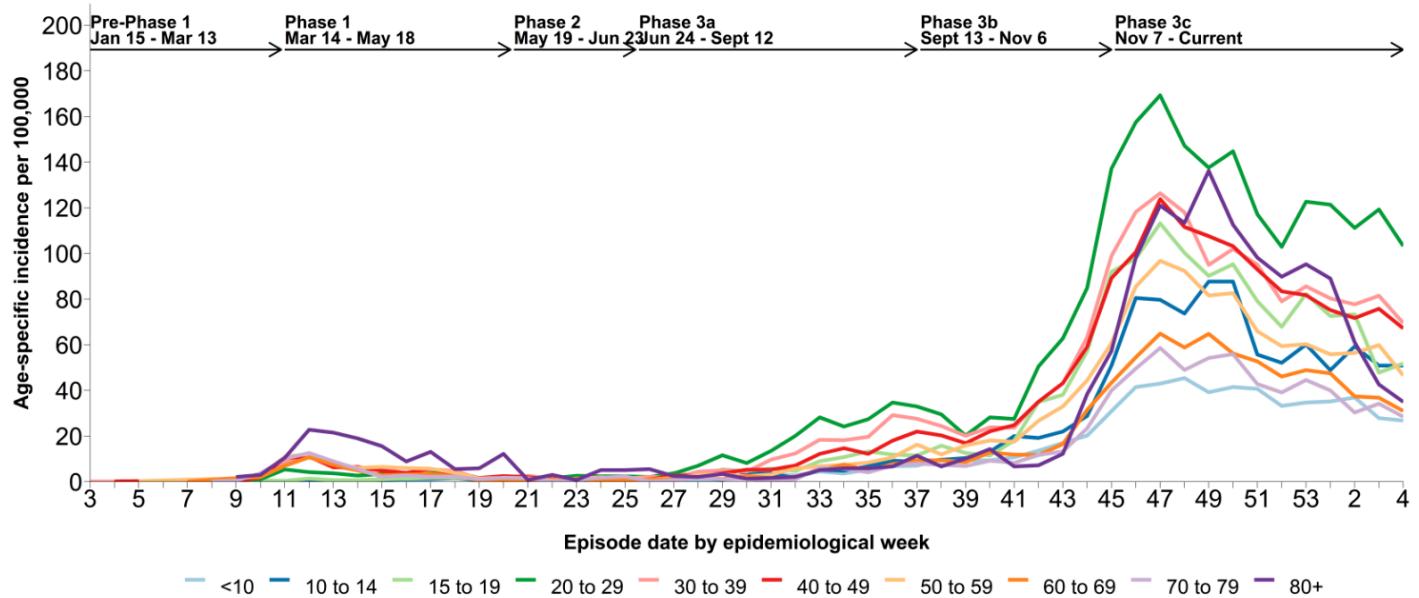


Figure 8. Weekly age-specific COVID-19 incidence per 100K population by epidemiological week, BC
January 15, 2020 (week 3) – January 30, 2021 (week 4) (N= 68,572)



E. Severe outcome counts and epi-curve

The number of hospital admissions has decreased since week 2 from 213 hospitalizations per week to 167 in week 4. The number of deaths remains elevated with an average of 64 deaths reported per week in weeks 1 to 4 ([Table 3](#), [Figure 9](#)).

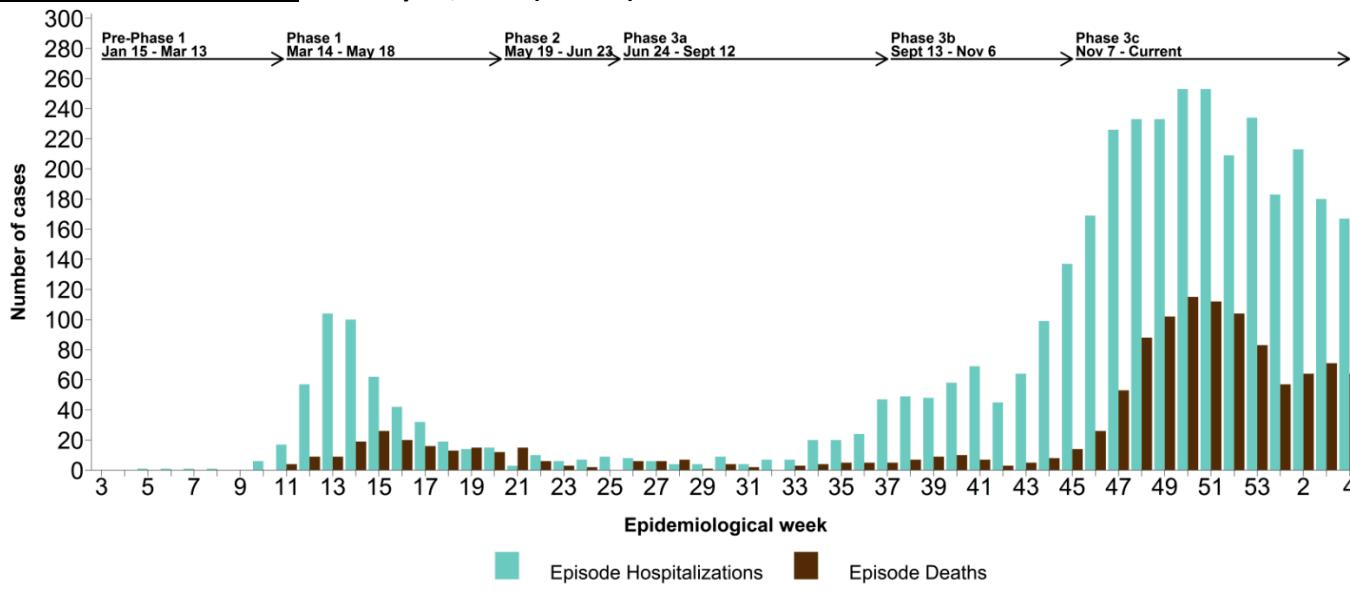
Cumulatively, there have been seven confirmed cases of [Multi-system Inflammatory Syndrome in children and adolescents \(MIS-C\)](#) in BC since January 1, 2020, with no new cases reported since the last report. The median age of these cases is 10 (range 1-15) years.

Table 3. COVID-19 severe outcomes by episode date, health authority of residence, BC
January 15, 2020 (week 3) – January 30, 2021 (week 4)

Severe outcomes by episode date	Health authority of residence					Residing outside of Canada	Total n/N (%)
	FH	IH	VIHA	NH	VCH		
Week 4, hospitalizations	70	30	7	31	29	0	167
Cumulative hospitalizations	2,131	322	96	327	904	9	3,789/68,595 (6)
Week 4, ICU admissions	13	15	1	6	9	0	44
Cumulative ICU admissions	413	94	26	91	270	2	896/68,595 (1)
Week 4, deaths	27	15	1	13	8	0	64
Cumulative deaths	673	78	19	75	374	0	1,219/68,595 (2)

a. Cases with unknown outcome are included in the denominators (i.e. assumed not to have the specified severe outcome).

Figure 9. COVID-19 hospital admissions and deaths by episode date^a, BC
January 15, 2020 (week 3) – January 30, 2021 (week 4)



a. Data are displayed by episode date (i.e. date of hospital admission or date of death, and if those dates are missing, then surveillance date).

F. Age profile, severe outcomes

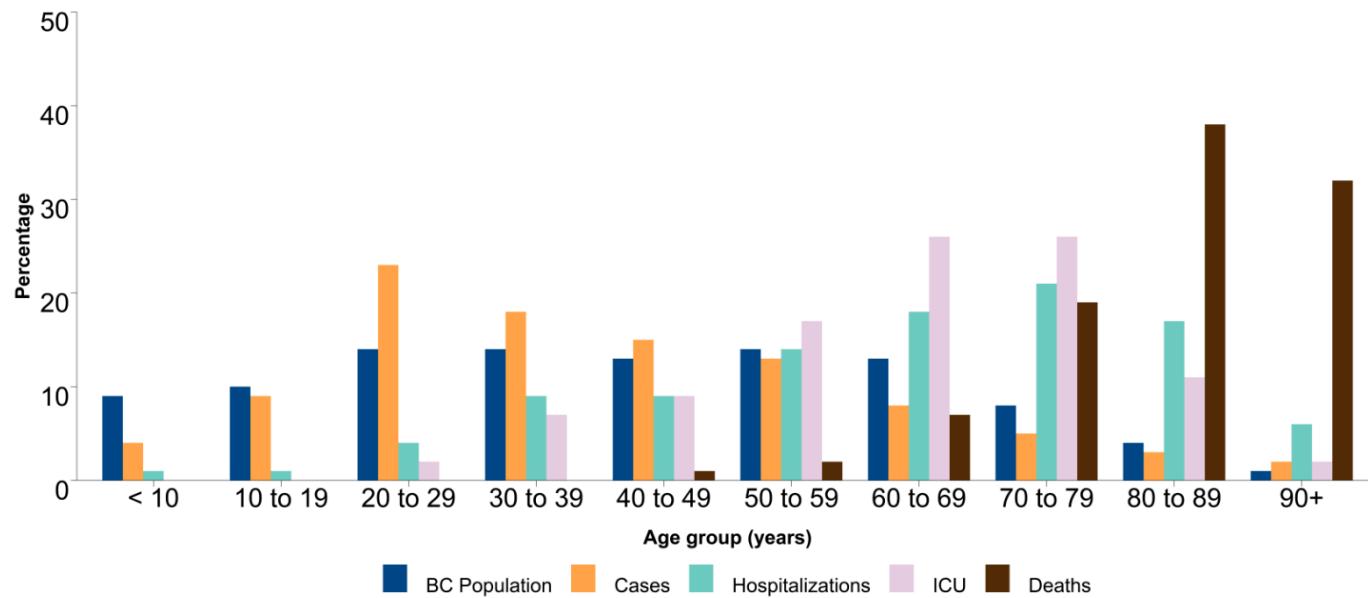
Table 4 and **Figure 10** display the distribution of cases and severe outcomes as well as the BC population for each age group. The distribution has not changed substantially over time. In week 4, median age of hospitalization was 66 years, while median age of death was 86 years.

In week 4, 207/2,814 (7%) cases, 64/167 (42%) hospitalizations, 14/44 (35%) ICU admissions, and 53/64 (90%) deaths were in 70+ year olds (data not shown).

Table 4: Age distribution: COVID-19 cases, hospitalizations, ICU admissions, deaths, and BC population by age group January 15, 2020 (week 3) – January 30, 2021 (week 4) (N=68,572)^a

Age group (years)	Cases n (%)	Hospitalizations n (%)	ICU n (%)	Deaths n (%)	General BC population n (%)
<10	2,883 (4)	37 (1)	2 (<1)	0 (0)	469,351 (9)
10-19	6,310 (9)	30 (1)	3 (<1)	0 (0)	527,805 (10)
20-29	15,744 (23)	169 (4)	20 (2)	0 (0)	697,691 (14)
30-39	12,347 (18)	334 (9)	67 (7)	4 (<1)	735,052 (14)
40-49	10,200 (15)	355 (9)	78 (9)	13 (1)	646,035 (13)
50-59	8,730 (13)	530 (14)	156 (17)	30 (2)	718,272 (14)
60-69	5,668 (8)	683 (18)	229 (26)	88 (7)	673,131 (13)
70-79	3,242 (5)	793 (21)	230 (26)	232 (19)	435,062 (8)
80-89	2,239 (3)	629 (17)	97 (11)	465 (38)	187,443 (4)
90+	1,209 (2)	229 (6)	14 (2)	386 (32)	49,726 (1)
Total	68,572	3,789	896	1,218	5,139,568
Median age	37	66	65	86	41

Figure 10. COVID-19 cases, hospitalizations, ICU admissions and deaths by age group, and BC population January 15, 2020 (week 3) – January 30, 2021 (week 4) (N=68,572)^a



a. Among those with available age information only.

G. Care facility outbreaks

As shown in [Table 5](#) and [Figure 11](#), 273 care facility outbreaks were reported in total in BC to the end of week 4. There has been a decreasing trend in care facility outbreaks since week 46, most notably in long-term care facility outbreaks and outbreaks in FH. This decrease occurred concurrently with the overall decrease in COVID-19 incidence in the province.

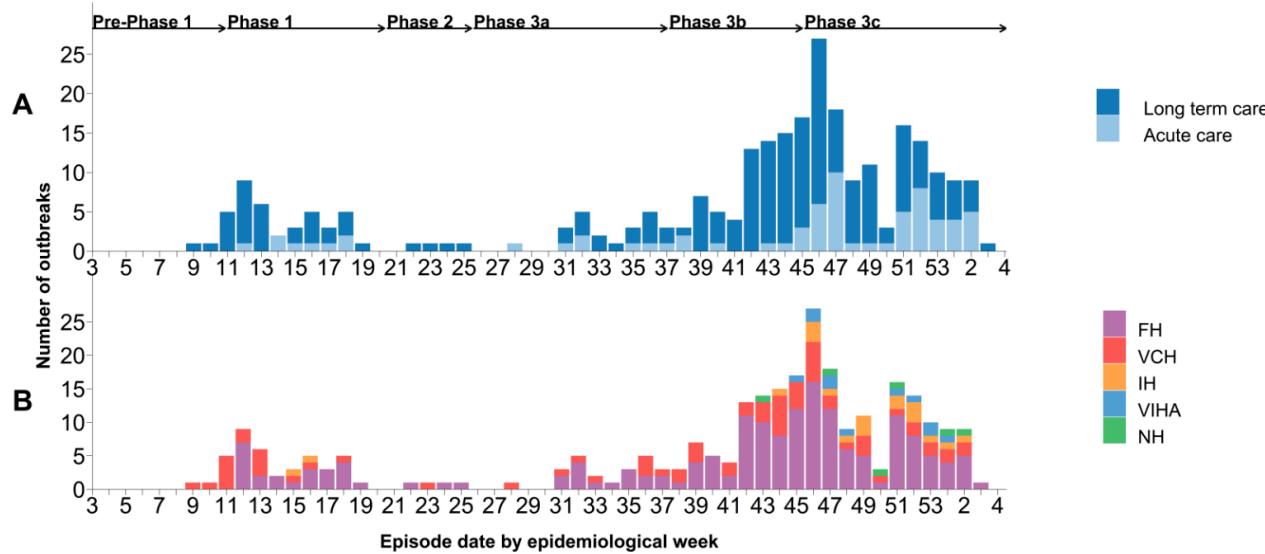
Almost three-quarters of all COVID-19 deaths in BC have been associated with care facility outbreaks (872/1,219; 72%) of these care facility deaths 834 (96%) were 70+ years old. Of the 64 deaths in week 4, 43 (71%) were associated with care facility settings, and of those 43 deaths, 42 (98%) were elderly adults 70+ years (data not shown).

Table 5. COVID-19 care facility^a outbreaks by earliest case onset^b and associated cases and deaths by episode date, BC^c

January 15, 2020 (week 3) – January 30, 2021 (week 4) (N=273)

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	0	61	51	0	112	43	0	0	43
Cumulative, Care Facility Outbreaks	273	3,103	2,088	6	5,197	872	0	0	872

Figure 11. COVID-19 care facility^a outbreaks by earliest case onset^b, facility type (A) and health authority (B), BC^c
January 15, 2020 (week 3) – January 30, 2021 (week 4) (N=273)



- a. Care facility settings include acute care or long-term care settings (defined as long-term care facility or assisted living).
- b. Earliest dates of onset of outbreak cases are subject to change as investigations and data are updated.
- c. As of week 46, VCH and FH no longer declare outbreaks with single staff cases unless there is evidence of transmission within the facility.

H. Emerging respiratory pathogens update

BC has identified 40 cases infected with variants of concern. Of those, 25 were infected with variant B.1.1.7, 14 (56%) of whom reported travel outside of Canada and seven (28%) who reported contact with travelers. Fifteen cases were infected with variant B.1.351, one of whom reported travel outside of Canada. The range of episode dates is from week 51 to week 3.