

British Columbia (BC) COVID-19 Situation Report
Week 42: October 11 – October 17, 2020

This bulletin provides weekly data and refers to [pandemic phases](#) defined by population-level changes specified in the **table* below**. Note also that unlike other summaries based on report date, this bulletin mainly adopts episode date defined by dates of illness onset, hospital admission, or death. Only when these dates are unknown, report date is used.

Table of Contents		Elevated COVID-19 incidence during second provincial wave
Case counts and epi-curve	2	To the end of week 42, there have been 11,875 COVID-19 cases, 894 hospitalizations, and 253 deaths in BC. Of all COVID-19 associated deaths, 85% were adults 70+ years.
Test rates and % positive	3	To date during this current second wave, incidence has peaked in week 37 (18 per 100,000), remaining elevated through weeks 38-41 (avg. 16 per 100,000) and the current report week 42 (15 per 100,000). Increasing trend is most evident in Fraser Health Authority, whereas recent activity levels appear more stable in other regions. In week 42, there were 37 hospitalizations and 3 deaths, lower than week 41 (54 and 6).
Age profile, testing and cases	4	The number of SARS-CoV-2 tests in BC steadily increased from >20,000 in week 33 to >65,000 in weeks 40 and 41, falling just below 60,000 in week 42. Conversely, percent positivity showed general decline from week 33 (2.40%) to week 41 (1.36%), increasing above 2.0% in week 42 (2.13%). Percent positivity varied regionally, being highest in Fraser Health Authority and lowest in Vancouver Island Health Authority.
Severe outcome counts	6	Compared to Phase 3a, testing of children surged with the start of the new school year in Phase 3b. In week 42, testing rates decreased in children <15 years old but increased in all other age groups. Percent positivity in week 42 was <2% in children <15 years but >2% in other age groups, being highest in 15-19 and 80+ year olds (>2.5%).
Age profile, severe outcomes	7	Adults 20-39 years old comprised fewer of the cases in week 42 (42%) and Phase 3b (42%) than Phase 3a (53%). Adults 40-69 years comprised a slightly greater share in week 42 (35%) and Phase 3b (37%) than Phase 3a (30%).
Likely sources of infection	8	Although the number of care facility outbreaks prior to Phase 3a is equal to that from Phase 3a onwards (each 48), the number of associated cases among residents (386 vs. 151) and staff/visitors (231 vs. 163) is lower.
Care facility outbreaks	9	
Clinical indicators	10	

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

PRE-PHASE 1 Before implementation January 15 (wk 3) to March 13 (wk 11), 2020	PHASE 1 Implementation March 14 (wk 11) to May 18 (wk 21), 2020	PHASE 2 Initial relaxation May 19 (wk 21) to June 23 (wk 26), 2020	PHASE 3a Further relaxation June 24 (wk 26) to Sept 12 (wk 37), 2020	PHASE 3b Start of school year Sept 13 (wk 38) to Current (wk 42), 2020
From earliest onset date	From start of March break Additionally: <ul style="list-style-type: none"> ○ Mass gatherings >50 banned (Mar 16) ○ Traveller self-isolation required (Mar 17) ○ Service restrictions (Mar 18) ○ US/Canada border closure (Mar 20) 	Re-opening of services Additionally: <ul style="list-style-type: none"> ○ Gradual/part-time return to school of K-12 students for 2019-20 school year (Jun 1) 	Broader re-opening Additionally: <ul style="list-style-type: none"> ○ Re-opening non-essential travel in BC, hotels, TV/film ○ Return to in-class learning for 2020-21 school year, partial week (Thurs, Sept 10) 	From first complete epidemiological week of 2020-21 school year

A. COVID-19 case counts and epidemic curve

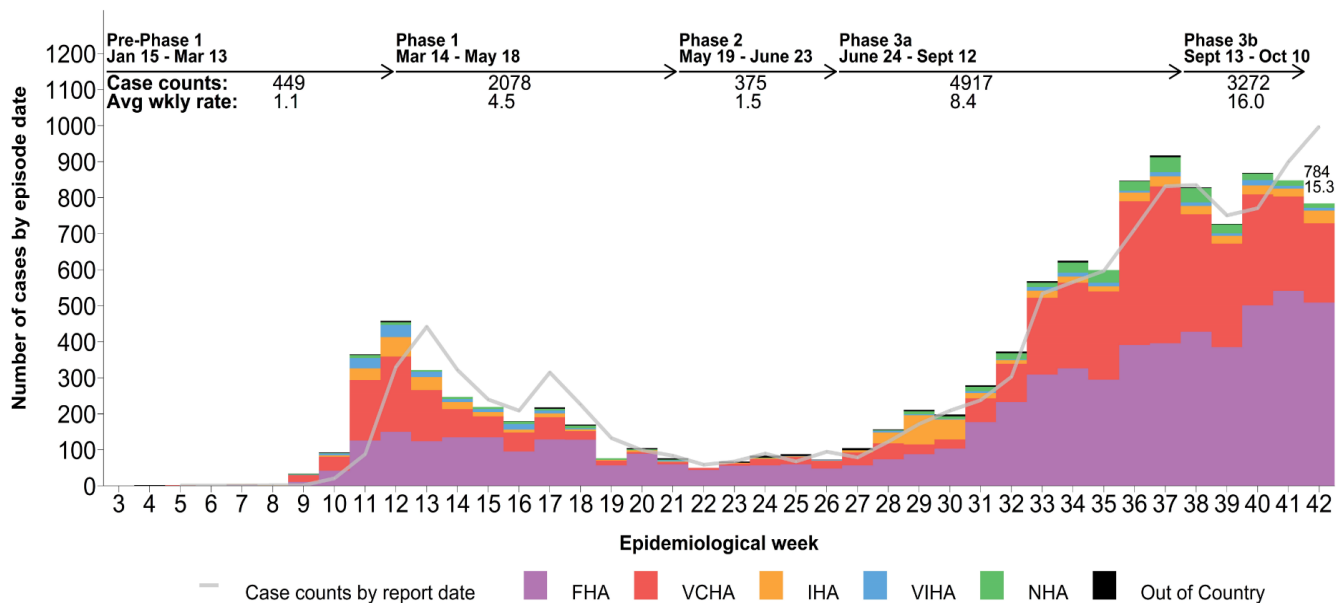
There were 998 COVID-19 cases reported in week 42, which is higher than recent prior weeks. The weekly tally of cases by report date, however, includes cases whose illness onset was in prior weeks.

Based instead upon episode date (i.e. illness onset date and only if that is unknown, then report date) the number of cases and weekly incidence to date during this second wave peaked in week 37 of Phase 3a (917 cases, 17.9 per 100,000). During subsequent weeks 38-41 of Phase 3b there were minor fluctuations but case counts remained elevated provincially with an average weekly incidence of 16.0 per 100,000. Increasing trend is evident in Fraser Health Authority, whereas recent activity levels appear more stable in other regions. Weekly tallies will change as data, notably onset dates, become more complete; this is especially relevant to consider for the current report week 42 (784 cases, incidence 15.3 per 100,000 provincially as of data extraction).

Table 1. Case tallies by episode date^a and health authority of residence^b, British Columbia January 15, 2020 (week 3) – October 17, 2020 (week 42)^c

Health authority of residence:	FHA	IHA	VIHA	NHA	VCHA	Outside Canada	Total n/N (%)
Week 42, case counts	509	35	8	12	220	0	784
Week 42, incidence per 100,000^d	26.5	4.4	0.9	4.0	17.7	NA	15.3
Cumulative counts, weeks 3^c to 42	6,365	626	246	364	4,186	88	11,875
Laboratory-diagnosed	6,275	594	241	334	4,132	87	11,663 (98)
Epidemiologically-linked	90	32	5	30	54	1	212 (2)
Active	1,081	39	12	12	331	5	1,480 (12)
Discontinued isolation	5,130	585	228	349	3,727	82	10,101 (85)
Deceased	117	2	6	3	125	0	253 (2)
Cumulative incidence per 100,000^d	331.8	78.1	28.9	121.3	337.6	NA	230.6

Figure 1. Epidemic curve by episode date (coloured bars)^a, report date (line) and health authority^b, British Columbia January 15, 2020 (week 3) – October 17, 2020 (week 42) (N=11,875)^{c,d}



The average weekly rate by phase in Figure 1 is derived as the incidence divided by the number of weeks for Pre-Phase 1 (8 weeks), Phase 1 (9 weeks), Phase 2 (5 weeks), Phase 3a (11.5 weeks), and Phase 3b, excluding the current report week (4 weeks). The current report week, although part of Phase 3b, is excluded from derivations across prior weeks of Phase 3b to enable comparison, as displayed.

- a. Episode date is the illness onset date, or if onset date remains unknown, then the date the case was reported to the health authority.
- b. FHA=Fraser Health Authority; IHA=Interior Health Authority; VIHA=Vancouver Island Health Authority; NHA=Northern Health Authority; VCHA=Vancouver Coastal Health Authority
- c. First onset date of a case in BC was January 15, 2020. Data presented were extracted after noon on Thursday, October 22, 2020.
- d. All per capita rates/incidences and BC population estimates in the current report are based on PEOPLE2019-2020 population estimates (n= 5,110,523).

B. Test rates and percent positive

As shown by the bars in **Figure 2**, the number of respiratory specimens tested for SARS-CoV-2 in BC steadily increased from just over 20,000 tests in week 33 to more than 65,000 tests in each of weeks 40 and 41, falling to just below 60,000 tests in week 42. Conversely, the percent of specimens that tested positive (line in **Figure 2**) showed general decline from week 33 (2.40%) to week 41 (1.36%), increasing above 2.0% again in week 42 (2.13%). As shown in **Figure 3**, the increase in percent positivity in week 42 in BC was greatest in Fraser Health Authority where it rose to above 3.5%, whereas in all other health authorities, percent positivity remained below 2.0% and was lowest in Interior Health Authority and Vancouver Island Health Authority (each below 1.0%).

Figure 2. Number of specimens tested and percent SARS-CoV-2 positive, by collection week, British Columbia March 15, 2020 (week 12) – October 17, 2020 (week 42)^a

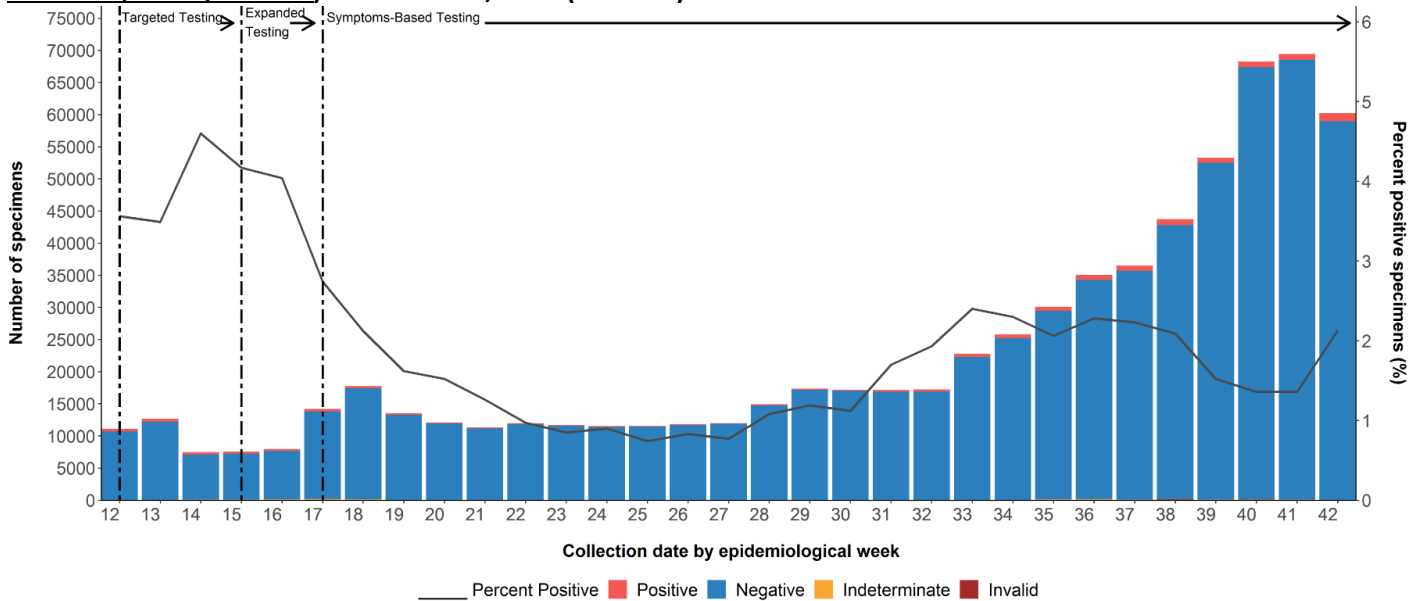
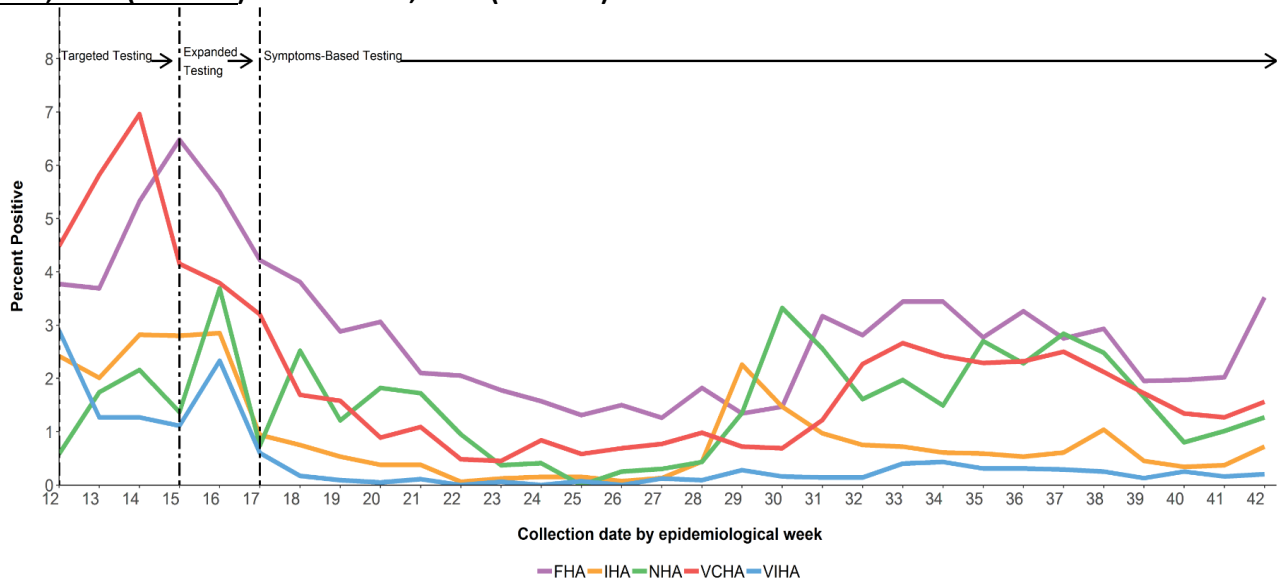


Figure 3. Percent SARS-CoV-2 positive, by health authority and collection week, British Columbia March 15, 2020 (week 12) – October 17, 2020 (week 42)^a



a. PLOVER extract on October 22, 2020 reflecting all clinical diagnostic laboratories in BC. Laboratory testing criteria: <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/testing/phases-of-covid-19-testing-in-bc>

b. FHA=Fraser Health Authority; IHA=Interior Health Authority; VIHA=Vancouver Island Health Authority; NHA=Northern Health Authority; VCHA=Vancouver Coastal Health Authority

C. Age profile – Testing and cases

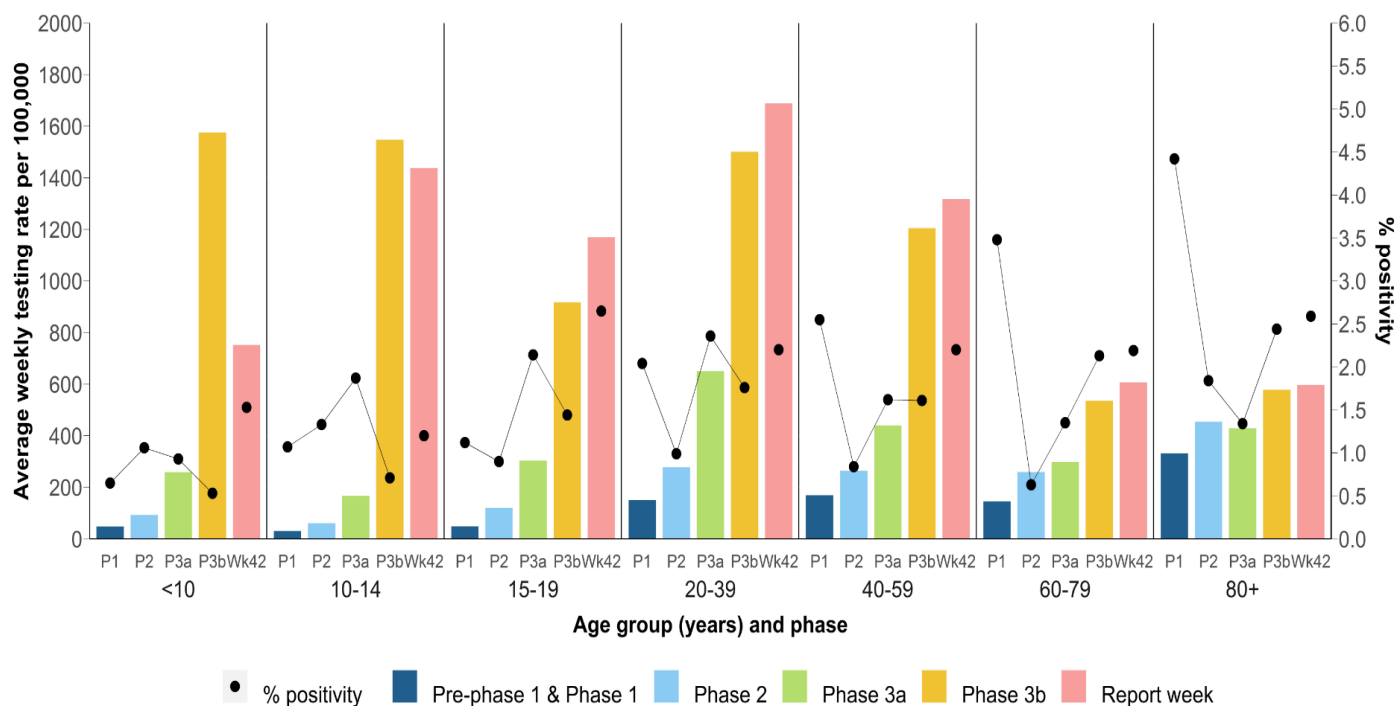
As shown by the coloured bars in **Figure 4**, the average weekly testing rate surged in Phase 3b compared to Phase 3a, notably among children <15 years old following the start of the 2020-21 school year. Compared to average testing rates in weeks 38-41 of Phase 3b, testing rates in week 42 decreased among children <15 years old whereas it increased in teens 15-19 years old and in adult age groups. The highest test rates in week 42 were among adults 20-39 years old.

As shown by the dots in **Figure 4**, the percent of respiratory specimens tested that were found to be SARS-CoV-2 positive (i.e. percent positivity) increased for all age groups in week 42 compared to weeks 38-41 of Phase 3b, most notably among children <10 and 15-19 years old (~1% increase each). Overall, the percent positivity in week 42 was less than 2.0% in children <15 years old but exceeded 2.0% in all other age groups, being highest in children 15-19 years (2.65%) and elderly adults 80+ years (2.59%).

Children 15-19 years old contributed slightly more in week 42 (7%) than across weeks 38-41 (5%) or in Phase 3a (5%). Whereas in Phase 3a, adults 20-39 years comprised more than half (53%) of all cases, they contributed less in weeks 38-41 (42%) and current report week 42 (42%) of Phase 3b (**Figure 5** and **Figure 6**). Conversely, adults 40-69 years comprised a greater share of cases across weeks 38-41 (37%) and in week 42 (35%) of Phase 3b compared to Phase 3a (30%).

Median age of cases across the pandemic is 37 years: 52 years in Pre-/Phase 1; 40 years in Phase 2; 33 years in Phase 3a; 37 years for Phase 3b (excluding week 42) and 34 years in week 42 (not shown).

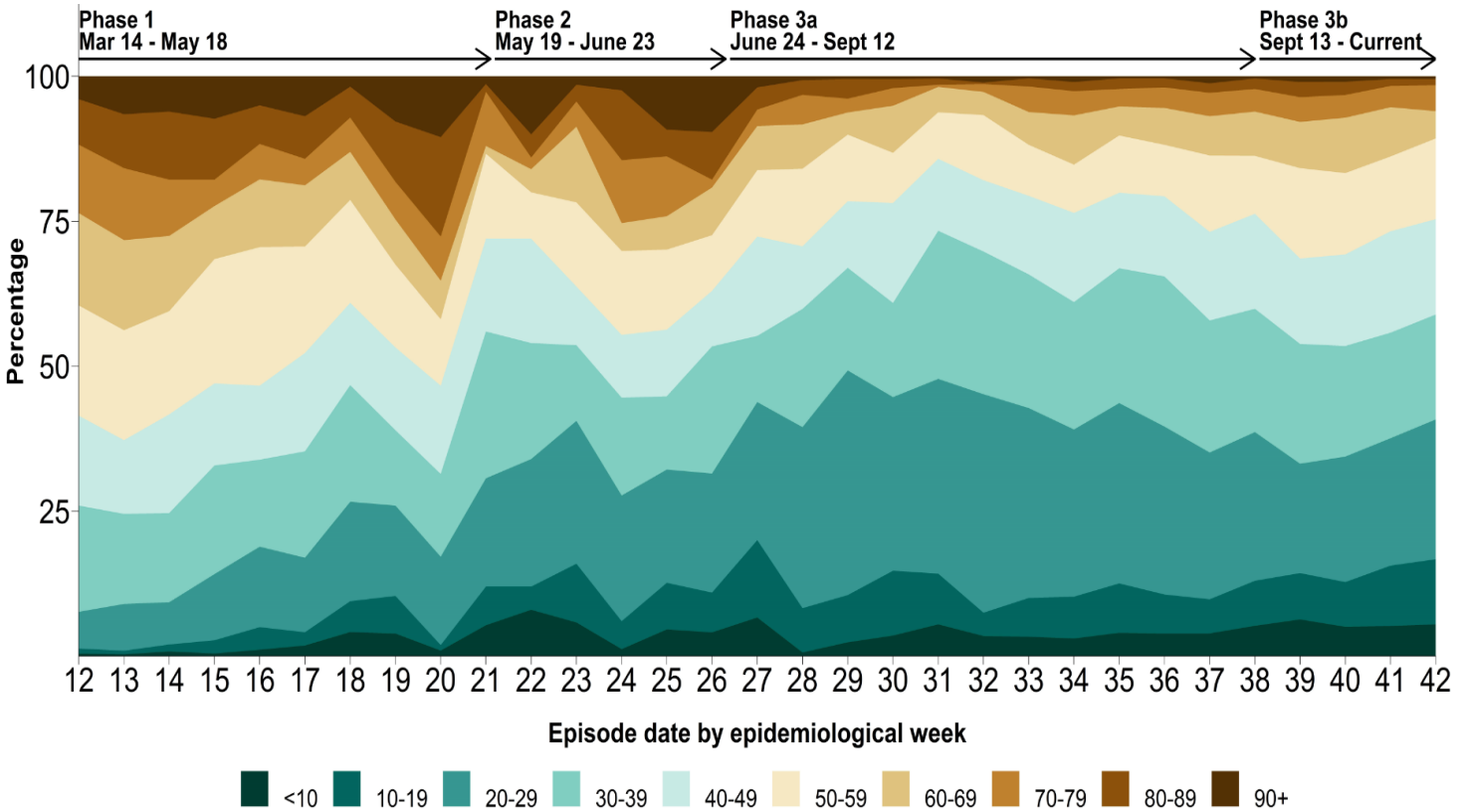
Figure 4. Average weekly SARS-CoV-2 testing rates and percent positive by age group and phase^a, British Columbia January 20, 2020 (week 4) – October 17, 2020 (week 42)^b



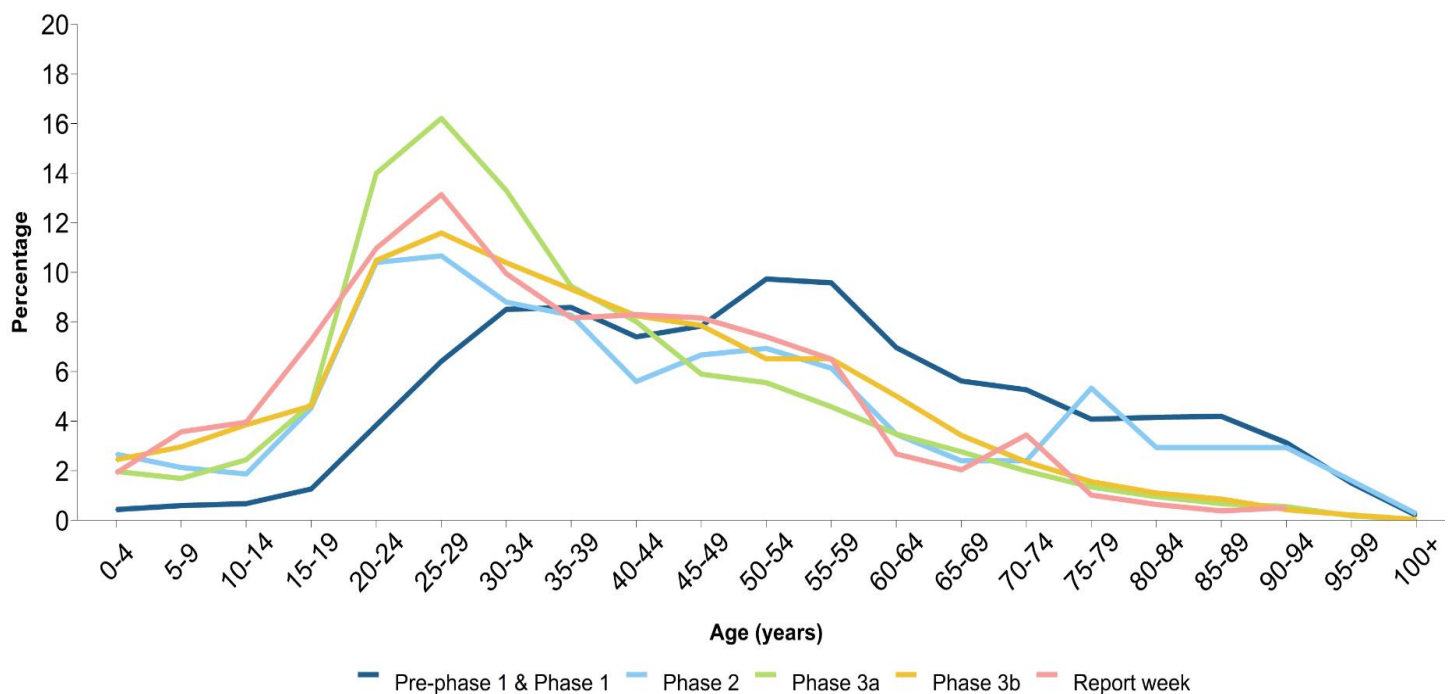
a. Phase based on specimen collection date, of which January 20 was the earliest. The average weekly rate by phase is derived as the phase-specific per capita test rate divided by the number of weeks for Pre-Phase 1 + Phase 1 (P1: 17 weeks), Phase 2 (P2: 5 weeks), Phase 3a (P3a: 11.5 weeks), and Phase 3b, excluding the current report week (P3b: 4 weeks). The current report week, although part of Phase 3b, is excluded from derivations across prior weeks of Phase 3b to enable comparison, as displayed.

b. PLOVER extract on October 22, 2020 reflecting all diagnostic laboratories in BC. Laboratory testing criteria: <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/testing/phases-of-covid-19-testing-in-bc>.

**Figure 5. COVID-19 case distribution by known age group (years) and episode date, British Columbia
March 15, 2020 (week 12) – October 17, 2020 (week 42) (N= 11,349)**



**Figure 6. COVID-19 case distribution by known age group (years) and pandemic phase^a, British Columbia
January 15, 2020 (week 3) – October 17, 2020 (week 42) (N=11,850)**



a. The current report week, although part of Phase 3b, is excluded from derivations across prior weeks of Phase 3b to enable comparison, as displayed.

D. Severe outcome counts and epi-curve

More than two-thirds of COVID-19 cases in BC accrued after broad re-opening of services in Phase 3a (8,973/11,875; 76%). However, as shown in **Table 2 and Figure 7**, about 60% of hospitalizations (522/894; 58%), and two-thirds of ICU admissions (183/282; 65%) and deaths (172/253; 68%) accrued before Phase 3a.

In week 42, compared to week 41, there were fewer hospitalizations (37 vs. 54) and deaths (3 vs. 6). In week 42, one of three deaths was 60-69 years old and two were 80+ years old. Overall, males comprised 5,967/11,838 (50%) cases, 522/892 (59%) hospitalizations, 176/282 (62%) ICU admissions, and 147/253 (58%) deaths with known sex to date (not shown).

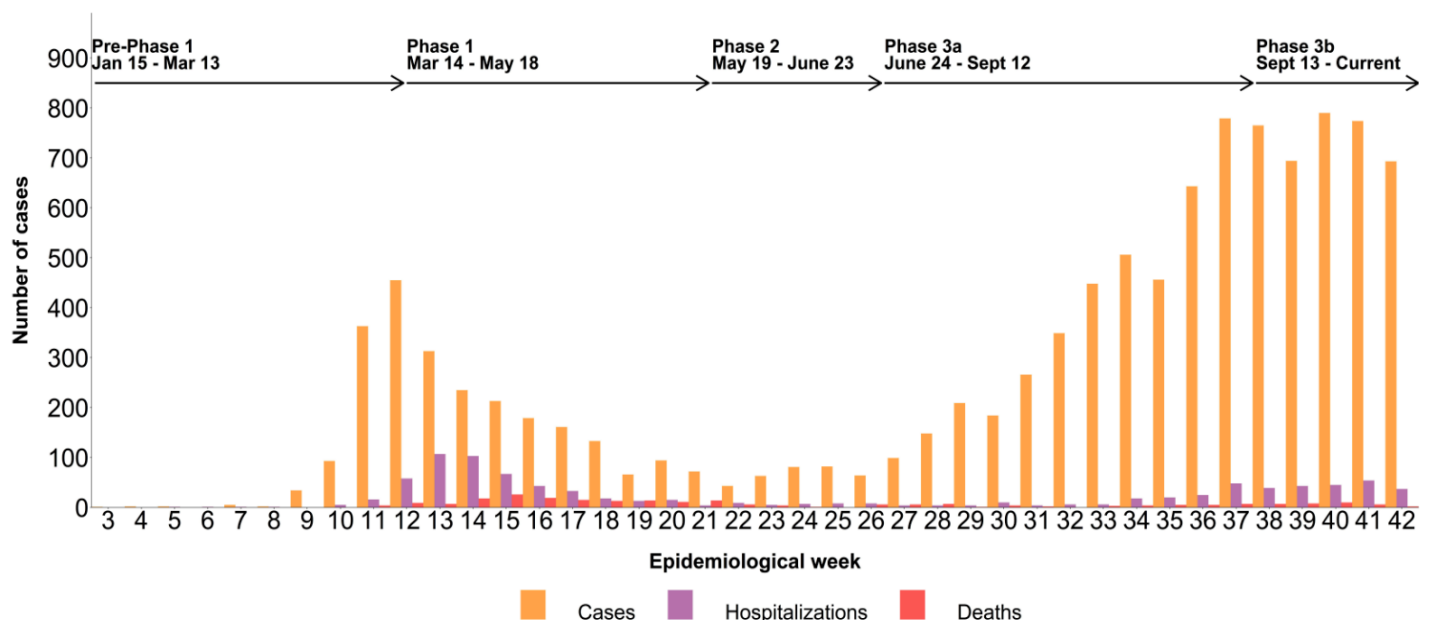
Table 2. COVID-19 severe outcomes by episode date^a, health authority of residence, and phase, British Columbia January 15, 2020 (week 3) – October 17, 2020 (week 42)

Health authority of residence:	FHA	IHA	VIHA	NHA	VCHA	Outside Canada	Total n/N (%)
Ever Hospitalized	474	45	26	31	312	6	894/11,875 cases (8)^b
Pre-Phase 1 & Phase 1 (17 weeks)	245	29	25	12	174	2	487/894 (54)
Phase 2 (5 weeks)	26	1	0	2	5	1	35/894 (4)
Phase 3a (11.5 weeks)	97	5	0	10	40	2	154/894 (17)
Phase 3b (4 weeks, excluding week 42)	84	7	0	7	82	1	181/894 (20)
Week 42	22	3	1	0	11	0	37/894 (4)
Ever ICU	129	16	9	15	111	2	282/11,875 cases (2)^b
Pre-Phase 1 & Phase 1 (17 weeks)	76	13	9	7	67	1	173/282 (61)
Phase 2 (5 weeks)	7	0	0	1	2	0	10/282 (4)
Phase 3a (11.5 weeks)	26	1	0	7	15	1	50/282 (18)
Phase 3b (4 weeks, excluding week 42)	13	0	0	0	26	0	39/282 (14)
Week 42	7	2	0	0	1	0	10/282 (4)
Deaths	117	2	6	3	125	0	253/11,875 cases (2)^b
Pre-Phase 1 & Phase 1 (17 weeks)	55	2	5	0	83	0	145/253 (57)
Phase 2 (5 weeks)	22	0	0	0	5	0	27/253 (11)
Phase 3a (11.5 weeks)	20	0	0	1	25	0	46/253 (18)
Phase 3b (4 weeks, excluding week 42)	18	0	1	2	11	0	32/253 (13)
Week 42	2	0	0	0	1	0	3/253 (1)

a. Episode date defined by date of case illness onset, hospital admission or death; only when these dates are unknown is report date used.

b. Outcomes with unknown status are included in the denominators (i.e. assumed not to have the specified severe outcome).

Figure 7. COVID-19 cases (n=10,559), hospitalization admissions (n= 890), and deaths (n= 244)^a, British Columbia January 15, 2020 (week 3) – October 17, 2020 (week 42)



a. By epidemiological week corresponding to cases with known onset date; hospitalizations with known admission date; and deaths with known death date.

E. Age profile, severe outcomes

As shown in **Table 3 and Figure 8**, elderly adults 70+ years comprise 10% of COVID-19 cases, generally commensurate with their share of the general population of BC (14%), but they are greatly over-represented among severe outcomes including hospitalizations (42%), ICU admissions (39%), and deaths (85%).

Adults 40-59 years comprise 28% of COVID-19 cases, 25% of hospitalizations, and 28% of ICU admissions, commensurate with their share of the BC population (27%), but they are under-represented among COVID-19 deaths (5%).

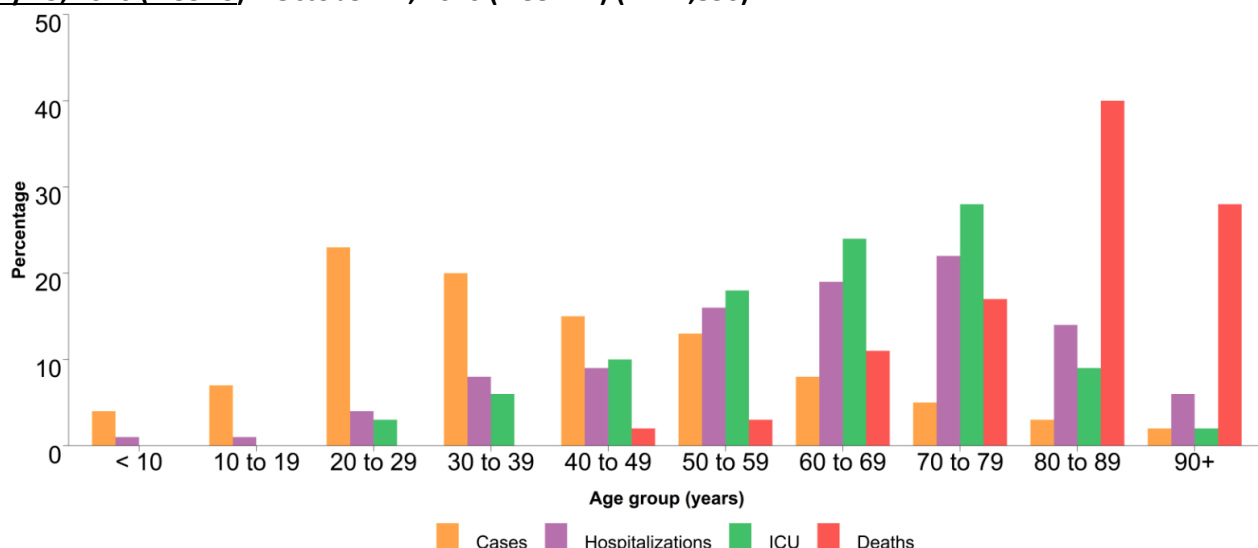
Adults 20-39 years comprise a greater share of COVID-19 cases (43%) than their share of the BC population (27%), but are under-represented among COVID-19 hospitalizations (12%), ICU admissions (9%) and deaths (0%).

Children <20 years are under-represented overall among COVID-19 cases (11%) as well as severe outcomes (2% or less), relative to their share of the BC general population (19%).

Table 3. Age distribution^a: COVID-19 cases, hospitalizations, ICU admissions, deaths and British Columbia population January 15, 2020 (week 3) – October 17, 2020 (week 42)

Age group (years)	Cases n (%)	Hospitalizations n (%)	ICU n (%)	Deaths n (%)	General BC population ^b n (%)
<10	444 (4)	9 (1)	0 (0)	0 (0)	468,280 (9)
10-19	789 (7)	5 (1)	0 (0)	0 (0)	507,197 (10)
20-29	2,734 (23)	32 (4)	8 (3)	0 (0)	684,681 (13)
30-39	2,401 (20)	73 (8)	18 (6)	0 (0)	730,523 (14)
40-49	1,771 (15)	82 (9)	27 (10)	4 (2)	647,790 (13)
50-59	1,570 (13)	140 (16)	52 (18)	7 (3)	721,355 (14)
60-69	960 (8)	171 (19)	68 (24)	27 (11)	675,632 (13)
70-79	592 (5)	200 (22)	79 (28)	42 (17)	436,179 (9)
80-89	385 (3)	128 (14)	25 (9)	101 (40)	188,010 (4)
90+	204 (2)	53 (6)	5 (2)	72 (28)	50,876 (1)
Total	11,850	893	282	253	5,110,523
Median age	37	65	65	85	41

Figure 8. COVID-19 cases, hospitalizations, ICU admissions and deaths by age group, British Columbia January 15, 2020 (week 3) – October 17, 2020 (week 42) (N=11,850)^a



a. Among those with available age information only.
 b. Based on PEOPLE2019-2020 population estimates.

F. Likely sources of infection

As shown in **Table 4** and **Figure 9**, local contact with a known case or cluster has most often been considered the source of infection across all pandemic phases to date.

Prior to Phase 1, international travel was also a frequently cited source of SARS-CoV-2 infection in part reflecting high risk testing that targeted returning travelers. However, travel-related restrictions introduced in Phase 1 limited that contribution thereafter with clusters, such as in care facility settings, becoming a more prominent source.

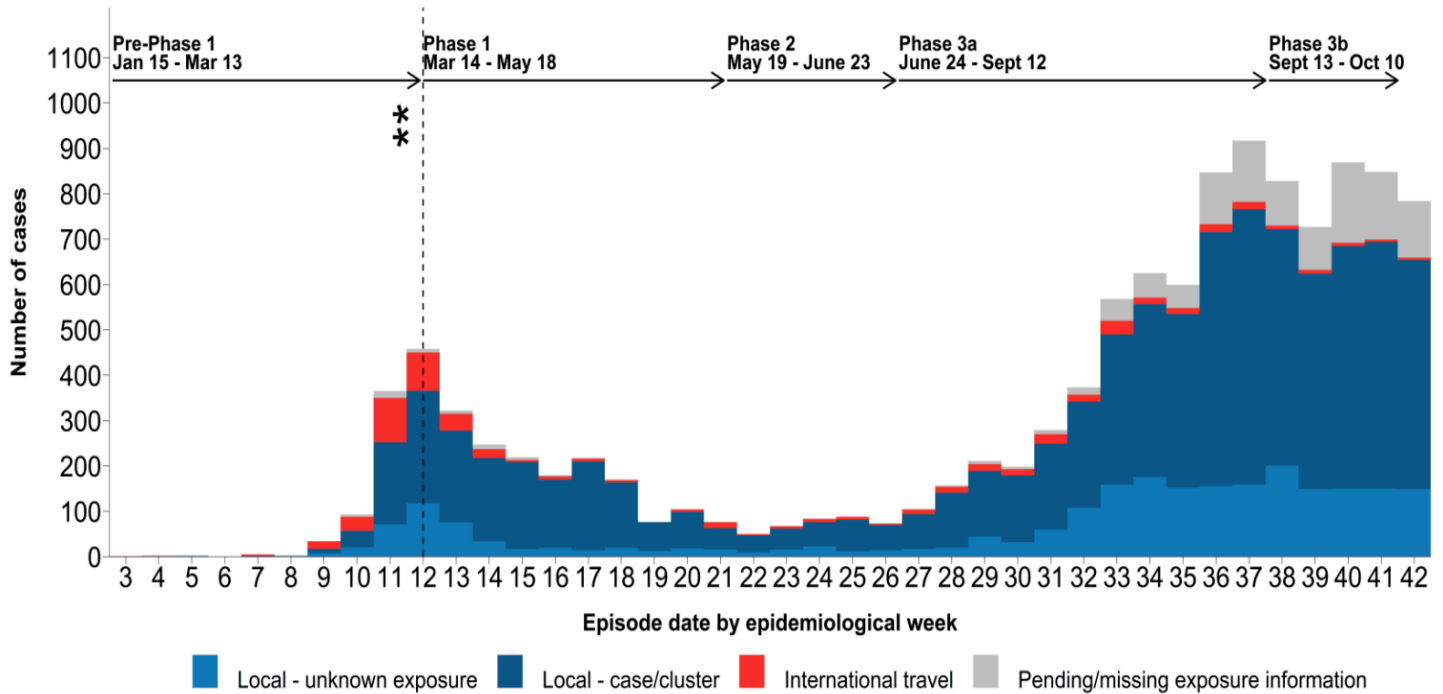
Since week 33 of Phase 3a more cases have cited unknown local exposure or that information remained pending or missing. International travel has been cited less often since Phase 3b and these patterns have generally been maintained through week 42.

Table 4. Likely source of COVID-19 infection by pandemic phase^a of episode date, British Columbia January 15, 2020 (week 3) – October 17, 2020 (week 42)

Phase n (row %)	International travel	Local – case/cluster	Local - unknown	Pending/missing
Pre-Phase 1	135 (30)	206 (46)	93 (21)	15 (3)
Phase 1	188 (9)	1,498 (72)	347 (17)	45 (2)
Phase 2	30 (8)	261 (70)	82 (22)	2 (1)
Phase 3a	180 (4)	3,206 (65)	1,088 (22)	443 (9)
Phase 3b ^a	28 (1)	2,075 (63)	650 (20)	519 (16)
Week 42	5 (1)	505 (64)	149 (19)	125 (16)
Total	566 (5)	7,751 (65)	2,409 (20)	1,149 (10)

a. The current report week, although part of Phase 3b, is excluded from derivations across prior weeks of Phase 3b to enable comparison, as displayed.

Figure 9. Likely source of COVID-19 infection by episode date, British Columbia January 15, 2020 (week 3) – October 17, 2020 (week 42)



** March 16: Travel related restrictions introduced.

G. Care facility outbreaks

As shown in **Table 5 and Figure 10** although the number of care facility outbreaks before Phase 3a (48) equals that of Phase 3a onwards (48), the number of associated cases is less among both residents (386 vs. 151) and staff or visitors (231 vs. 163). Of 4,056 cases in total in BC with episode date in Phase 3b (inclusive of week 42), 133 (3%) have been associated with care facility outbreaks, a proportion similar to Phase 3a overall (184/4,917; 4%), but lower than before Phase 3a (613/2902; 21%).

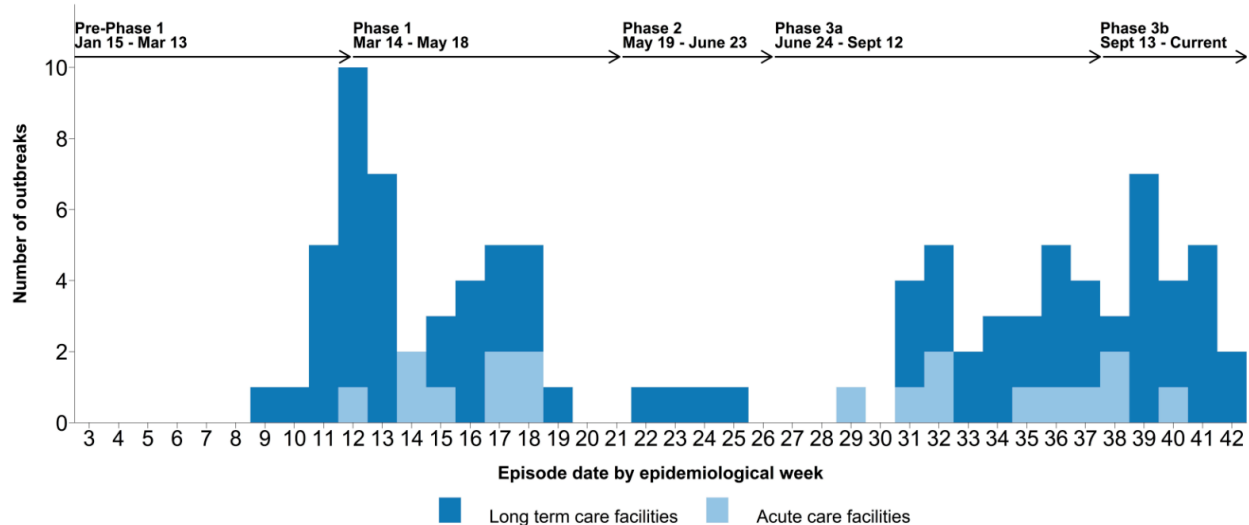
More than two-thirds of all COVID-19 deaths in BC have been associated with care facility outbreaks (176/253; 70%) and of those, more than two-thirds occurred before Phase 3a (120/176; 68%).

There were 5 new care facility outbreaks reported in week 42 (four of which were reported by Fraser Health Authority), with 3 of these outbreaks having earliest onset date in preceding weeks. Two of the 3 deaths in week 42 involved elderly adults 80+ years in a care facility setting.

Table 5. COVID-19 care facility^a outbreaks^b and associated cases and deaths by phase^{c,d}, British Columbia January 15, 2020 (week 3) – October 17, 2020 (week 42) (N=96)^e

COVID-19 care facility outbreaks, cases, and deaths, by phase of episode date							
	Care facility Outbreaks ^a	Cases ^b			Deaths ^b		
		Residents	Staff/other	Total	Residents	Staff/other	Total
Total	96	535	394	930	176	0	176
Pre-/Phase One (17 weeks)	44	331	213	544	96	0	96
Phase 2 (5 weeks)	4	51	18	69	24	0	24
Phase 3a (11.5 weeks)	27	91	93	184	39	0	39
Phase 3b ^d (4 weeks)	19	57	66	124	15	0	15
Week 42	2	5	4	9	2	0	2
Active outbreaks ^e	18	-	-	-	-	-	-
Outbreaks declared over ^e	78	--	-	-	-	-	-

Figure 10. COVID-19 care facility^a outbreaks^b by week of earliest case onset^f, British Columbia January 15, 2020 (week 3) – October 17, 2020 (week 42) (N=96)^e



- a. Long term care facilities include: group homes (community living), independent living, assisted living, and other residential facilities.
- b. Care facility (acute/long-term care/independent living) outbreaks have at least one lab-confirmed COVID-19 staff or resident.
- c. Phase allocation for cases according to symptom onset date and for deaths by death date, or if unavailable, then date case was reported to health authority.
- d. The current report week, although part of Phase 3b, is excluded from derivations across prior weeks of Phase 3b to enable comparison, as displayed.
- e. As of October 17, 2020
- f. Earliest date of onset of outbreak cases are subject to change as investigations and data are updated.

H. Clinical indicators

HealthLink calls (**Figure 11**) related to COVID-19 have shown an overall increasing trend from about week 28 stabilizing from week 39 to 41 at >13,000 calls per week but decreasing in week 42 to just over 10,000 calls.

BC Medical Services Plan (MSP) general practitioner claims (**Figure 12**) related to COVID-19 (including telehealth) showed slight increase from week 37 reaching >5,000 visits in week 40 but decreasing thereafter to 2750 visits in week 42.

Figure 11. HealthLink BC calls related to COVID-19, British Columbia
March 1, 2020 (week 10) – October 17, 2020 (week 42)

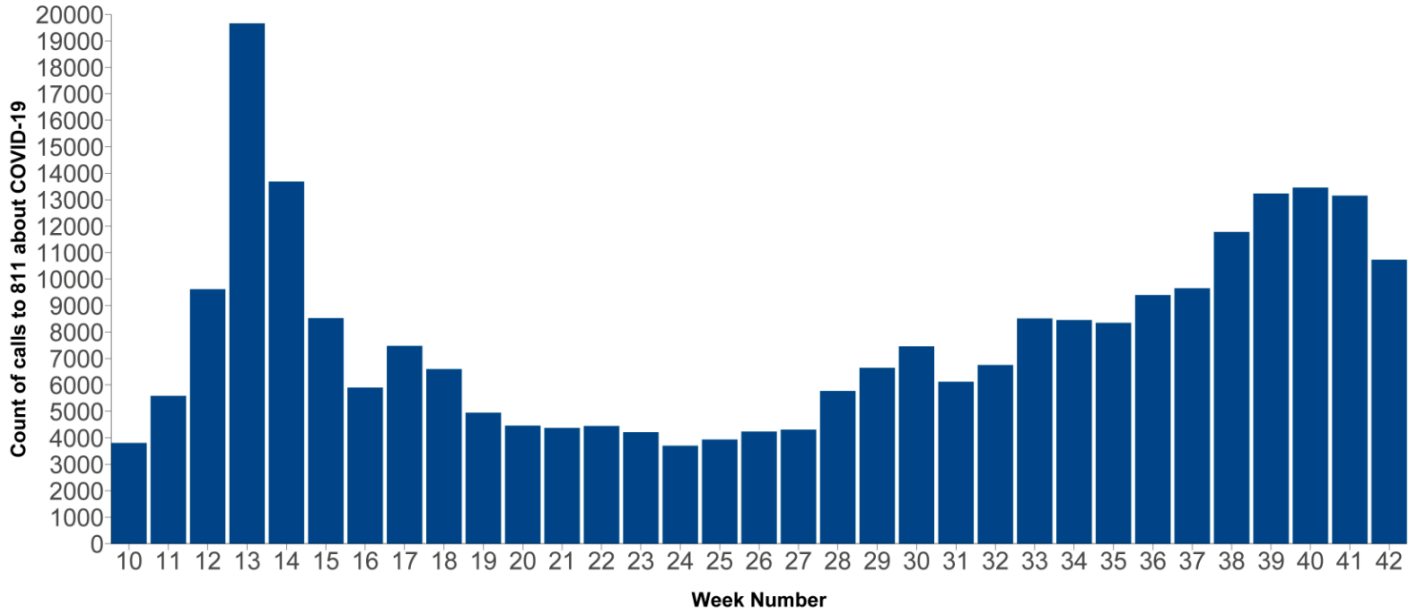


Figure 12. Medical Service Plan (MSP) claims (including telehealth) for COVID-19, British Columbia
March 1, 2020 (week 10) – October 17, 2020 (week 42)

