

CANADA COVID-19 WEEKLY EPIDEMIOLOGY REPORT 07 MARCH TO 13 MARCH 2021 (WEEK 10)

Published: 19 March 2021

<p>22 125 (↑12%) New cases reported in the last 7 days^a</p>	<p>221 (↓17%) New deaths reported in the last 7 days^a</p>
<p>3 161 (↑12%) Average number of cases reported daily in the last 7 days^a</p>	<p>32 (↓17%) Average number of deaths reported daily in the last 7 days^a</p>
<p>102 675 (↓2%) Average number of tests performed daily in the last 7 days^b</p>	<p>3.2% (↑0.3) Percentage of positive tests in the last 7 days^b</p>

^aSource: Provincial and Territorial Ministry of Health (MOH) websites as of 13 March 2021

^bSource: National Microbiology Laboratory (NML) data for laboratory analyses as of 13 March 2021

Note: The percentages are calculated based on the difference in the total number of cases, deaths, or tests in the past 7 days compared to the prior 7 days, divided by the number of cases, deaths, or tests in the prior 7 days. The change in the percentage of positive tests is based on the difference in percentage points compared to the previous week.

KEY MESSAGES

- In Canada, there was an average of **3 161 new cases reported daily** during the week of 07 March to 13 March (week 10), representing a **12% increase** compared to the previous week (week 09: 28 February to 06 March).
- **Seven provinces and territories** (Alberta, Saskatchewan, Manitoba, Newfoundland and Labrador, Nova Scotia, Prince Edward Island, and Nunavut) **reported more new resolved cases than new cases during week 10**. British Columbia, Alberta, Manitoba, Ontario, and Québec reported **increases in weekly numbers**, compared to the previous week.
- **Daily rates of cases per 100 000 population have remained stable among all age groups in recent weeks**, following the large decline observed since early January 2021. Among both males and females, case rates remain highest among individuals in the 20 to 39 year age groups.
- **Long-term care facilities and retirement residences** continue to be the most commonly reported outbreak setting in Canada, and account for the greatest proportion of outbreak related cases and deaths.
- During week 10, **an average of 102 675 tests were performed daily** for COVID-19 across Canada. The weekly percentage of tests positive was **3.2%**, an increase from the previous week.
- There was an average of **32 new deaths reported daily** during week 10, representing a **17% decrease** compared to the previous week.
- The number of hospitalizations has decreased since the peak on 12 January 2021, while the number of ICU admissions has remained relatively stable since early January 2021. On 13 March 2021, there were 2 033 cases hospitalized and 538 cases in ICU, representing a **3% decrease in the seven-day moving average of hospitalized cases** and a **2% decrease in the seven-day moving average of ICU admissions** compared to one week prior.
- The overall cumulative hospitalization rate (including ICU admissions) is 130 cases per 100 000 population, with the **highest rates observed in those 80 years of age and older** (969 cases per 100 000 population).
- According to forecasting, between **937 340 to 970 160 cumulative reported cases** and **22 535 to 23 100 cumulative reported deaths** are expected by 28 March 2021.

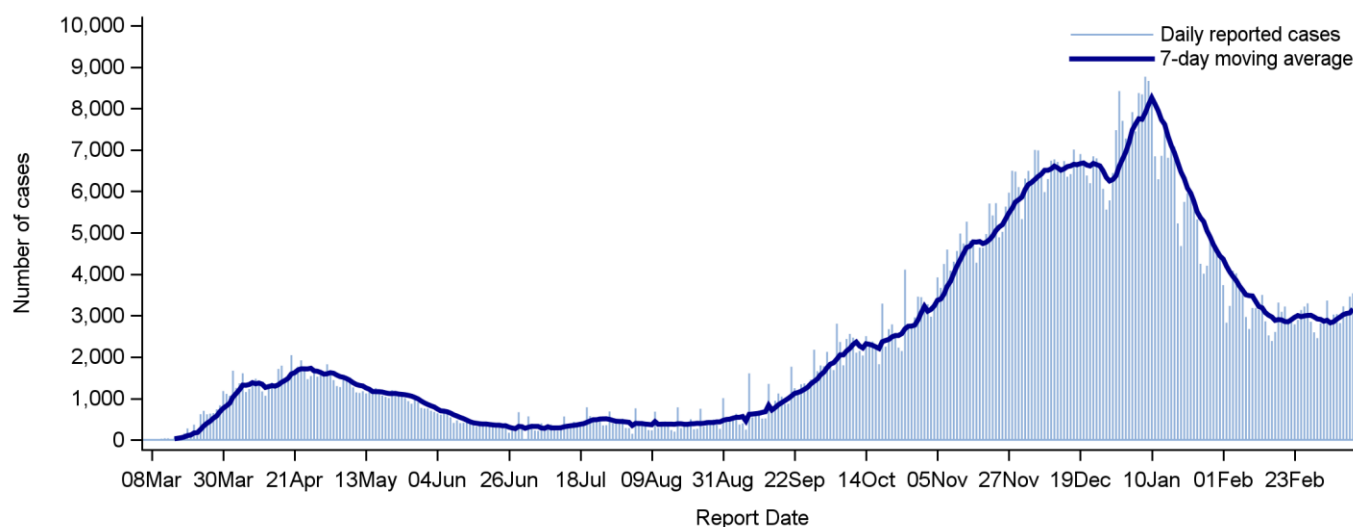


NATIONAL DEMOGRAPHICS AND TRENDS

NATIONAL TRENDS IN CASES

- During week 10, a total of 22 125 cases of COVID-19 were reported in Canada, an average of 3 161 cases per day.
- The number of new cases represents a 12% increase compared to week 09.
- Following a slight decline in early March 2021, cases have steadily increased during week 10, with 3 539 new cases reported on 13 March 2021 (Figure 1).

Figure 1. Daily number of reported COVID-19 cases in Canada (and 7-day moving average), as of 13 March 2021 (N= 906 755)



Source: Provincial and Territorial MOH websites as of 13 March 2021

Note: The 7-day moving average is a trend indicator that captures the arithmetic mean of the daily reported cases over the previous seven days. The moving average helps smooth out day-to-day variability in reporting, filtering out the “noise” of short-term fluctuations. Fluctuations can be attributed to retrospective data, non-reporting on the weekends or provinces or territories reporting cases at a reduced frequency. Spikes in cases may be due to regular reporting variations (e.g. lower reporting on weekends or holidays), or periodic reporting of previous cases by provinces and territories.

Most provinces and territories, with the exception of Yukon and Northwest Territories, reported new cases during week 10 (Table 1):

- The weekly number of new cases decreased in Saskatchewan, Newfoundland and Labrador, New Brunswick, Nova Scotia, Prince Edward Island, and Nunavut, compared to the previous week.
- The weekly number of new cases increased in British Columbia, Alberta, Manitoba, Ontario, and Québec, compared to the previous week.
- Cases in Ontario and Québec increased by 29% and 1%, respectively, compared to the previous week. Together, these provinces accounted for about 65% of the cases reported during week 10.
- Cumulatively, Ontario reported the highest number of cases (n=3 16 359), while Québec has the highest incidence rate at 3 462.8 cases per 100 000 population.



Table 1. Trends of new cases in Canada and by province or territory, as of 13 March 2021

Province/Territory	Total number of cases (as of 13 March) ^a	Average number of cases reported daily (week 10)	Weekly number of cases reported		Percent change (%) ^b	Crude rate per 100 000 population (as of 13 March)
			28 February to 06 March (week 09)	07 March to 13 March (week 10)		
British Columbia	87 422	539	3 743	3 770	1%	1 698.3
Alberta	138 036	357	2 334	2 499	7%	3 121.7
Saskatchewan	30 522	133	1 087	929	-15%	2 589.5
Manitoba	32 699	76	360	530	47%	2 370.8
Ontario	316 359	1 337	7 243	9 362	29%	2 147.1
Québec	296 918	713	4 921	4 994	1%	3 462.8
Newfoundland and Labrador	1 012	1	25	7	-72%	193.8
New Brunswick	1 465	2	23	12	-48%	187.5
Nova Scotia	1 669	2	19	12	-37%	170.4
Prince Edward Island	143	1	12	4	-67%	89.6
Yukon	72	0	0	0	N/A	171.2
Northwest Territories	42	0	0	0	N/A	93.0
Nunavut	383	1	21	6	-71%	973.2
Canada^c	906 755	3 161	19 788	22 125	12%	2 385.9

Source: Provincial and Territorial MOH websites as of 13 March 2021

^a The number of cases includes the total confirmed and probable cases.

^b The percentage is calculated based on the difference in the total number of cases in the past 7 days compared to the prior 7 days divided by the number of cases in the prior 7 days. Note that for provinces/territories with low case counts, an increase or decrease of only a few cases leads to a large percentage change. If the denominator is zero, the percent change cannot be calculated.

^c Includes 13 cases identified in repatriated travelers (Grand Princess Cruise ship travelers) who were under quarantine in Trenton in March 2020.

Age-standardized rates take into account the differences in population size and age structure between provinces and territories to allow for more valid comparisons of COVID-19 spread in Canada.

Table 2 presents age-standardized incidence rates by province or territory during week 10.

- British Columbia reported the highest age-standardized incidence rate (89.3 cases per 100 000 population).
- The second and third highest age-standardized incidence rates were reported by Saskatchewan (76.3 cases per 100 000 population) and Alberta (68.7 cases per 100 000 population).



Table 2. Age-standardized incidence rates by province or territory for week 10

Province/Territory	Age-standardized incidence rate per 100 000 for week 10
British Columbia	89.3
Alberta	68.7
Saskatchewan	76.3
Manitoba	36.4
Ontario	67.4
Québec	58.9
Newfoundland and Labrador	1.3
New Brunswick	N/A*
Nova Scotia	1.2
Prince Edward Island	3.1
Yukon	0.0
Northwest Territories	0.0
Nunavut	13.9
Canada	63.6**

Source: Detailed case information received by PHAC from provinces and territories, standardized to the July 1 2020 post-census population estimate.

*Data were submitted by New Brunswick during week 10, however, work is ongoing to incorporate the data into the national data set. As such, the age-standardized incidence rate has not been provided.

**The age-standardized incidence rate for Canada does not include data from New Brunswick during week 10.

Note: Data are analyzed based on PHAC report date.

Table 3 outlines the total number of new cases, resolved cases, and deaths reported during week 10.

- Seven provinces and territories (Alberta, Saskatchewan, Manitoba, Newfoundland and Labrador, Nova Scotia, Prince Edward Island, and Nunavut) reported more new resolved cases than new cases during that time period.

Table 3. Summary of new COVID-19 cases, resolved cases, and deaths reported in Canada, and by province or territory, during week 10

Province/Territory	New cases	New resolved cases	New deaths
British Columbia	3 770	3 573	18
Alberta	2 499	2 528	24
Saskatchewan	929	1 064	9
Manitoba	530	723	12
Ontario	9 362	7 668	86
Québec	4 994	4 985	70
Newfoundland and Labrador	7	41	0
New Brunswick	12	12	2
Nova Scotia	12	22	0
Prince Edward Island	4	12	0
Yukon	0	0	0
Northwest Territories	0	0	0
Nunavut	6	19	0
Canada	22 125	20 647	221

Source: Provincial and Territorial MOH websites as of 13 March 2021



DEMOGRAPHIC DISTRIBUTION^a

^a Detailed case information received by PHAC from provinces and territories

Note: Data are analyzed based on PHAC report date.

- Cases for which PHAC received detailed individual case-level information for week 10 (n=23 172) ranged in age from less than one year to 105 years of age. The median age was 35 years, similar to what was observed during week 09.
- Table 4 presents a summary of the age and gender distribution of COVID-19 cases reported to PHAC during week 10:
 - Fifty-eight percent (58%) were individuals under 40 years of age.
 - The highest proportions of cases by age group were observed among those aged 0 to 19 (22%) and 20 to 29 (19%).
 - The highest age specific incidence rates were observed among those 20 to 29 years of age and 30 to 39 years of age.

Table 4. Age, gender distribution, and rate of COVID-19 cases reported to PHAC, during week 10

Age groups	Female			Male			Total ^a		
	n	%	Rate ^b	n	%	Rate ^b	n	%	Rate ^b
≤ 19	2 525	22%	63.5	2 754	23%	66.2	5 279	22%	64.9
20-29	2 150	18%	87.2	2 411	20%	90.6	4 561	19%	88.9
30-39	2 057	18%	78.4	2 063	17%	77.3	4 120	17%	77.8
40-49	1 779	15%	72.6	1 722	14%	71.6	3 501	15%	72.1
50-59	1 437	12%	55.0	1 560	13%	60.4	2 997	13%	57.7
60-69	923	8%	38.2	1 002	8%	43.4	1 925	8%	40.7
70-79	450	4%	28.5	456	4%	32.0	906	4%	30.2
80+	394	3%	39.8	272	2%	40.4	666	3%	40.0
Total	11 715	100%	61.3	12 240	100%	64.8	23 955	100%	63.0

^a Cases not identified as male or female were removed from the total due to small numbers.

^b Rates are presented per 100 000 individuals in the given age group based on the 1 July 2020 post-censal population estimate.

Note: Data are analyzed based on date reported to PHAC. Note that there is a period of time (lag time) where it is expected that cases have occurred but have not yet been reported nationally. Therefore, COVID-19 cases reported to PHAC during week 10 may include cases that occurred (based on date of illness onset, or lab related dates) in previous weeks.

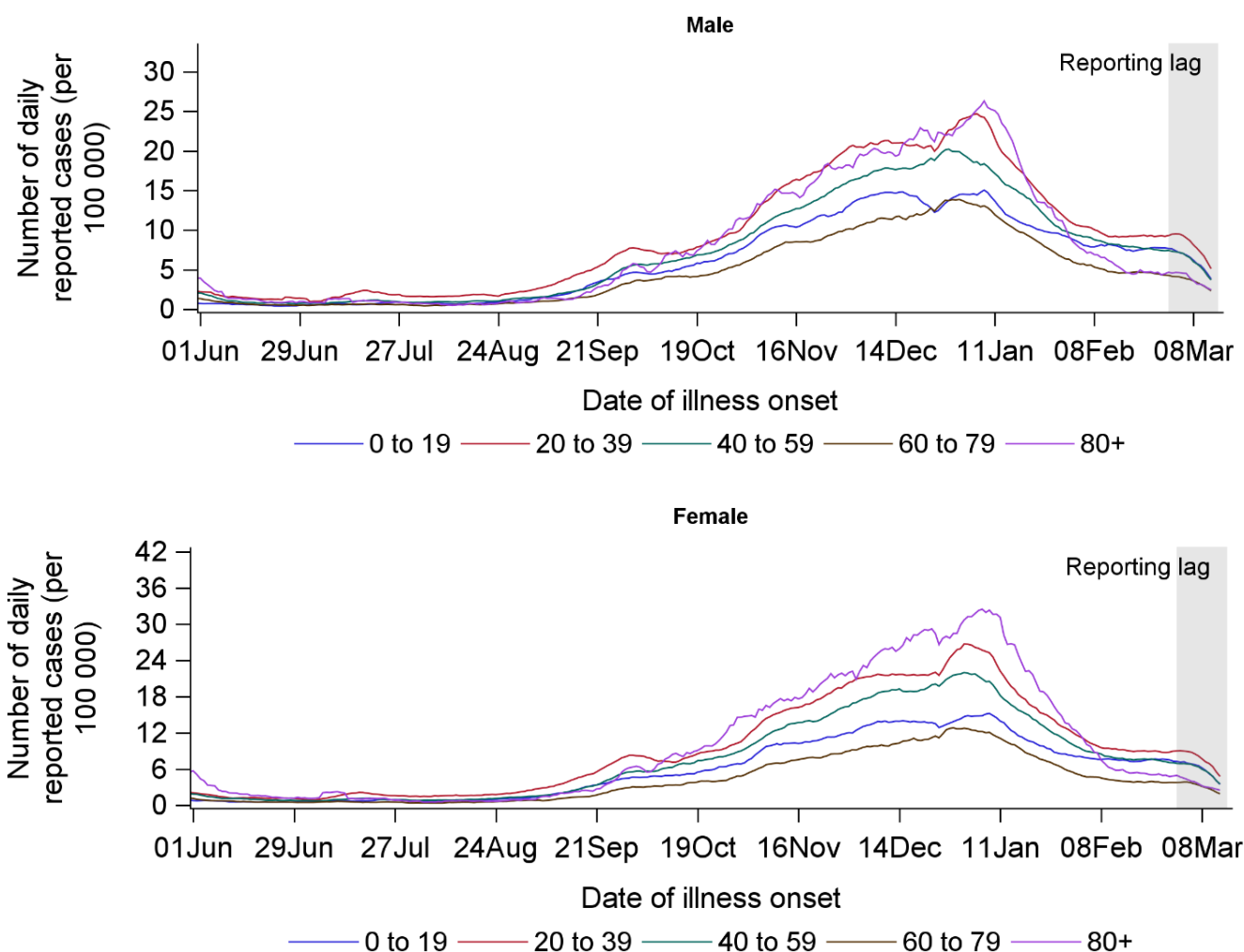
Note: Cases with missing gender or age were excluded. Where available gender data was used; when gender data was unavailable sex data was used. Reliable data on gender diverse respondents are unavailable due to small counts.



Figure 2 presents cases by date of illness onset, stratified by gender and adjusted for population at the national level.

- Daily rates of cases have remained stable among all age groups in recent weeks, following the large decline observed since early January 2021.
- Daily rates of cases are currently highest among individuals in the 20-39 year age group for both genders, surpassing those in the 80 years and older age group on 20 January 2021 for males and 04 February 2021 for females.
- Daily rates of cases among males in the 60 to 79 year age group and 80 years and older age group are similar, with approximately 4.6 daily cases per 100 000 population in late February 2021.
- Females between the ages of 60 to 79 years continue to have the lowest case rates, with approximately 5.0 daily cases per 100 000 population in late February 2021.

Figure 2. Daily rate of cases per 100 000 population, by age and gender, from 1 June 2020 to 13 March 2021



Source: Detailed case information received by PHAC from provinces and territories. Rates are calculated based on the 1 July 2020 post-census population estimate.

Note: The shaded area represents a period of time (lag time) where it is expected that cases have occurred but have not yet been reported nationally. The earliest of the following dates were used as an estimate: Onset date, Specimen Collection Date, Laboratory Testing Date, Date Reported to Province or Territory, or Date Reported to PHAC.

Note: Where available, gender data was used; when gender data was unavailable, sex data was used. Reliable data on gender diverse respondents are unavailable due to small counts.



SYNDROMIC SURVEILLANCE

FLUWATCHERS

FluWatchers is an online health surveillance system that relies on volunteer reports to track the spread of Influenza-like illness (ILI) and symptoms compatible with COVID-19 across Canada. Some of the more commonly reported symptoms of COVID-19 include a new or worsening cough, fever or feeling feverish; therefore, reports of a minimum of cough or fever are being used to track COVID-19 within the FluWatchers system.

During week 10, 12 059 participants reported into the FluWatchers system. A total of 188 participants (1.6%) reported symptoms of cough or fever.

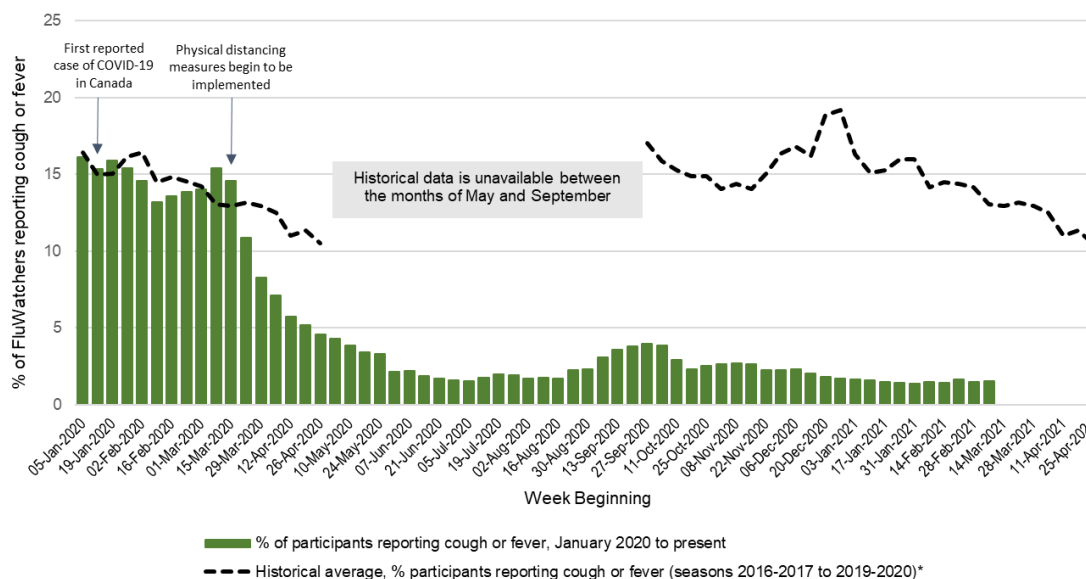
From mid-December 2020 to late-January 2021, FluWatchers activity was on a slow decline, despite increasing COVID-19 activity at the time. In recent weeks, activity due to seasonal respiratory viruses has been low and stable, public health measures have begun to ease, COVID-19 activity has slowly begun to increase and FluWatchers activity has slightly increased as well. Symptoms reports by FluWatchers participants remain below seasonal norms for this time of year.

Among the 188 participants reporting cough or fever:

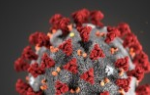
- 77 (41%) sought medical attention;
- 73 (39%) were tested 6 tests were positive for COVID-19 (4 tests had unknown results at the time of reporting)

Syndromic data captured by FluWatchers is sensitive to all circulating respiratory viruses, including COVID-19. The FluWatchers program is measuring total respiratory virus activity in the community. FluWatchers participants are a self-selected subset of the Canadian population that may not be representative of the Canadian population; thus, under representing the true measure of COVID activity in the population.

Figure 3. Percentage of FluWatchers Participants Reporting Cough or Fever (N=12 059 during week 10)



*Historical data is unavailable between the months of May and September. From January 2020 to May 2020, the historical epidemiological curve contains data from seasons 2016-2017 to 2018-2019. From October 2020 onwards, the historical epidemiological curve contains data from seasons 2016-2017 to 2019-2020; however, data from March 8, 2020 to May 2, 2020 are excluded from the historical epidemiological curve.



TRANSMISSION

TEMPORAL DISTRIBUTION BY EXPOSURE CATEGORY^a

^a Detailed case information received by PHAC from provinces and territories

During week 10, exposure and date of illness onset information was available for 13 601 cases. Of these:

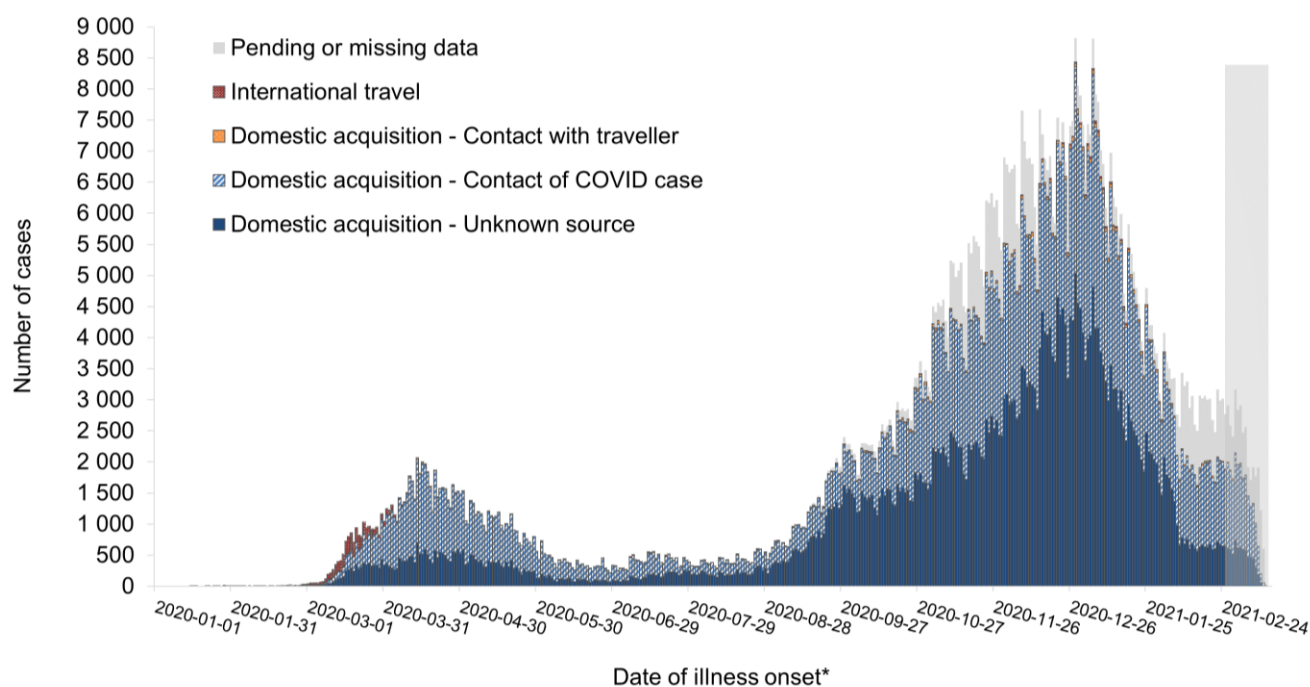
- 8 871 cases (65%) reported exposure in Canada to a known COVID-19 case;
- 4 589 cases (34%) reported exposure in Canada to an unknown source;
- 88 cases (<1%) reported exposure to a traveller; and
- 53 cases (<0.5%) reported having travelled outside of Canada during their exposure period.

Jurisdictions update exposure status on an ongoing basis as case investigations are completed and may result in changes to the percent distributions by exposure type for previous weeks (Figure 4).

Of the 807 107 cases submitted as of 13 March 2021 with information on source of exposure and date of illness onset:

- 372 728 cases (46%) reported exposure in Canada to a known COVID-19 case;
- 419 699 cases (52%) reported exposure in Canada to an unknown source;
- 6 556 cases (<1%) reported exposure to someone who had travelled; and
- 8 124 cases (1%) reported having travelled outside of Canada during their exposure period.

Figure 4. Number of reported COVID-19 cases in Canada, by date of illness onset and exposure category as of 13 March 2021 (n=903 220)



Source: Detailed case information received by PHAC from provinces and territories

* The earliest of the following dates were used as an estimate: Onset date, Specimen Collection Date, Laboratory Testing Date, Date Reported to Province or Territory, or Date Reported to PHAC.

Note: The shaded area represents a period of time (lag time) where it is expected that cases have occurred but have not yet been reported nationally. There is missing information for exposure variables from several provinces and territories.



INTERNATIONAL TRAVEL EXPOSURES^a

^a Detailed case information received by PHAC from provinces and territories

In Canada, the first cases of COVID-19 were attributed to international travel exposures. On 14 March 2020, the Government of Canada published a global Travel Health Notice advising Canadians against non-essential travel and advised Canadians abroad to return to Canada. By 21 March 2020, the Government of Canada prohibited all non-essential travel into Canada by foreign nationals. Since that time, the proportion of COVID-19 cases associated with international travel decreased from 22.3% (n=3 883) of all cases in March 2020 to 0.4% (n=127) in May 2020, and increased slightly over the summer months but has remained low since the fall (Table 5 and Figure 5). Since the spring of 2020, there have been significant efforts to enact border restrictions to reduce COVID-19 import to Canada.

Changes to provincial information systems and variables reported has led to decreased reporting of travel-related exposures to PHAC. As of 13 March 2021, 1.0% of cases with known exposure (n=8 124) have been associated with international travel, of which 56% are male. Since 1 July 2020, the United States, Mexico, and India are the top countries identified by cases that reported international travel during their exposure periods.

Table 5. Number and percentage of COVID-19 cases associated with international travel by month of illness onset^a, as of 13 March 2021

Month	Number of COVID-19 cases associated with international travel	Percentage of COVID-19 cases associated with international travel ^b
January 2020	7	19.4%
February 2020	71	36.8%
March 2020	3 883	22.3%
April 2020	510	1.1%
May 2020	127	0.4%
June 2020	218	1.9%
July 2020	351	2.7%
August 2020	257	1.9%
September 2020	213	0.5%
October 2020	314	0.4%
November 2020	440	0.3%
December 2020	608	0.3%
January 2021	828	0.5%
February 2021	246	0.4%
March 2021	51	0.3%
Total	8 124	1.0%

Source: Detailed case information received by PHAC from provinces and territories

Note: This is an underestimate of the total number of cases among returning travelers as exposure history are not available for all cases and not all jurisdictions have consistently reported exposure history to PHAC throughout the COVID-19 pandemic.

^aThe earliest of the following dates were used as an estimate: Onset date, Specimen Collection Date, Laboratory Testing Date, Date Reported to Province or Territory, or Date Reported to PHAC.

^bOnly includes cases that have information on exposure.

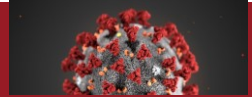
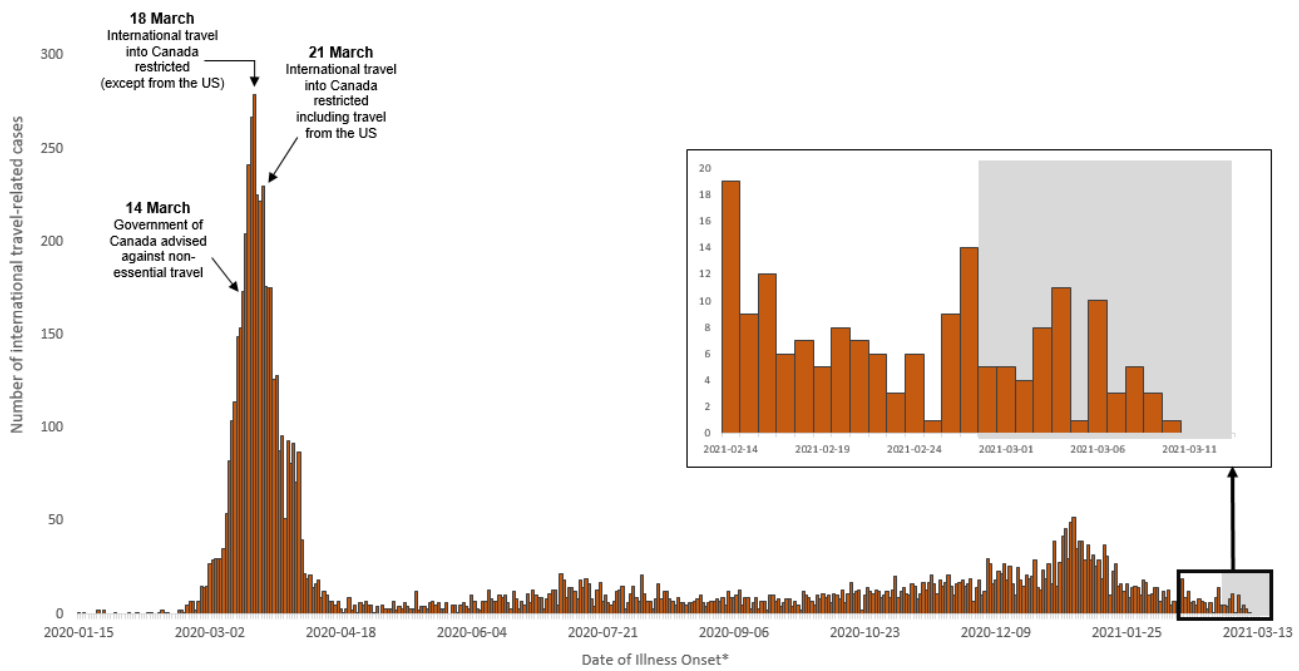


Figure 5. Number of international travel-related COVID-19 cases in Canada, by date of illness onset^a (n= 8 124) as of 13 March 2021



Source: Detailed case information received by PHAC from provinces and territories

* The earliest of the following dates were used as an estimate: Onset date, Specimen Collection Date, Laboratory Testing Date, Date Reported to Province or Territory, or Date Reported to PHAC.

Note: The shaded area represents a period of time (lag time) where it is expected that cases have occurred but have not yet been reported nationally.

Note: This is an underestimate of the total number of cases among returning travellers as exposure history are not available for all cases and not all jurisdictions have consistently reported exposure history to PHAC throughout the COVID-19 pandemic.



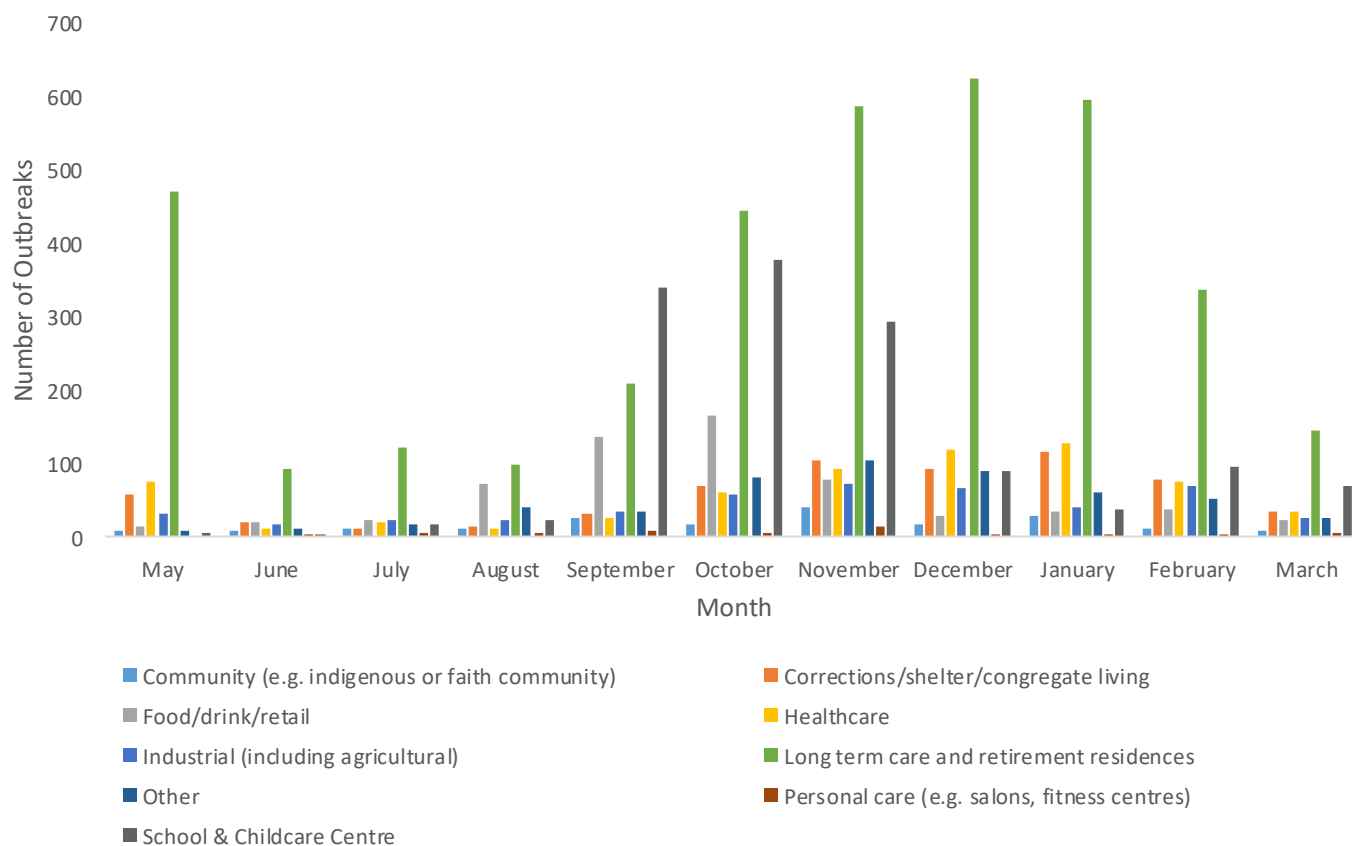
OUTBREAKS

Outbreaks have been a significant source of the spread of COVID-19 in Canada, and point to vulnerabilities in closed and crowded settings.

- Outbreaks have been detected in congregate living, workplace, and agricultural work settings, and namely in long-term care settings, meat processing plants, hospitals, small communities, and among farmworkers.
- Outbreaks continue to be observed in high-risk settings involving closed spaces, crowded places and close contact situations.
- Long-term care facilities and retirement residences continue to be the most commonly reported outbreak setting in Canada, and continue to account for the greatest proportion of outbreak related cases and deaths. This has been a consistent monthly trend with the exception of September, where reports of outbreaks in schools and childcare centres exceeded those in long-term care facilities and retirement residences.

Figure 6 and Table 6 identify common locations of outbreaks, as well as the number of cases and deaths associated with each.

Figure 6. Number of new outbreaks by setting as of 13 March 2021



Source: Publicly reported outbreak data, including Provincial and Territorial websites, as of 13 March 2021

Note: Schools with only one case, or those for which information on number of cases is unknown, have been excluded



Table 6. Total number of COVID-19 outbreaks, cases, and deaths by outbreak setting in Canada as of 13 March 2021^a

Outbreak setting	Total number of outbreaks reported	Total number of cases reported	Total number of reported deaths	Outbreaks Reported in past 7 days
Community ^b	197	10 261	83	3
Corrections/shelter/congregate living	666	11 580	223	12
Food/drink/retail	634	2 161	3	4
Healthcare	700	10 339	780	15
Industrial (including agricultural) ^c	469	10 956	24	8
Long term care and retirement residences	4 252	65 923	12 337	61
Personal Care ^d	47	401	0	1
School & Childcare Centre ^e	1 349	7 429	1	40
Other ^f	525	5 059	6	6

Source: Publicly reported data, including Provincial and Territorial websites, as of 13 March 2021

^aThis is not an all-inclusive list and is subject to change based on current and active outbreak locations reported.

^bCommunity includes population centres, Indigenous communities, Mennonite, Reserves, and small city outbreaks.

^cThe number of outbreaks in Windsor-Essex have been grouped into one cluster; industrial settings include: automotive manufacturing, distribution/processing facilities, worker camps, waste management/recycling, warehouse, etc.

^dPersonal care refers to personal care services, such as hair salons, nail salons, etc.

^eChild and youth care include daycare centres and day camps; excludes any facilities that report only one case.

^fOther groups together outbreaks in settings not listed in the categories above, for example social gatherings, office workplaces, recreational facilities, etc.

Note: These categories include both current and retrospective outbreak data.



LABORATORY-CONFIRMED COVID-19 DETECTION

Starting 01 February 2021, laboratory test indicators are based on the number of laboratory tests performed and the percentage of tests positive. These data replace previous metrics based on unique individuals tested and provide a more accurate measure of test positivity and promote greater standardization in reporting across Canada. The proportion of tests positive is expected to decrease compared with previous person-based methods, as all tests will be included in the calculation, including new tests on the same person over time.

During week 10, a total of 718 728 tests were performed, with an average of 102 675 tests performed daily for COVID-19 across Canada. The weekly percentage of tests positive during week 10 was 3.2%, an increase of 0.3% from the previous week (Table 7).

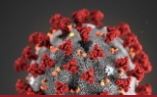
Table 7. Summary of COVID-19 tests performed in Canada, by province or territory, for week 10

Province/Territory	Cumulative number of tests performed as of 13 March 2021	Number of tests performed during week 10	Average # of tests performed daily	Average # of tests performed daily per 1 000 population	Weekly percentage of tests positive ¹
British Columbia	2 046 785	58 190	8 313	1.61	6.6%
Alberta	3 520 180	58 641	8 377	1.89	4.4%
Saskatchewan	609 678	16 477	2 354	2.00	5.8%
Manitoba	557 378	12 699	1 814	1.32	5.3%
Ontario	11 608 655	356 755	50 965	3.46	2.8%
Québec	6 654 604	179 505	25 644	2.99	2.8%
Newfoundland and Labrador	211 856	9 104	1 301	2.49	0.2%
New Brunswick	249 333	5 281	754	0.96	0.3%
Nova Scotia	388 121	17 757	2 537	2.59	0.1%
Prince Edward Island	116 710	3 700	529	3.31	0.03%
Yukon	8 340	86	12	0.29	1.2%
Northwest Territories	15 290	322	46	1.02	0%
Nunavut	7 232	211	30	0.76	0.9%
Canada	25 994 162	718 728	102 675	2.70	3.2%

Source: NML Data for laboratory analyses as of 13 March 2021

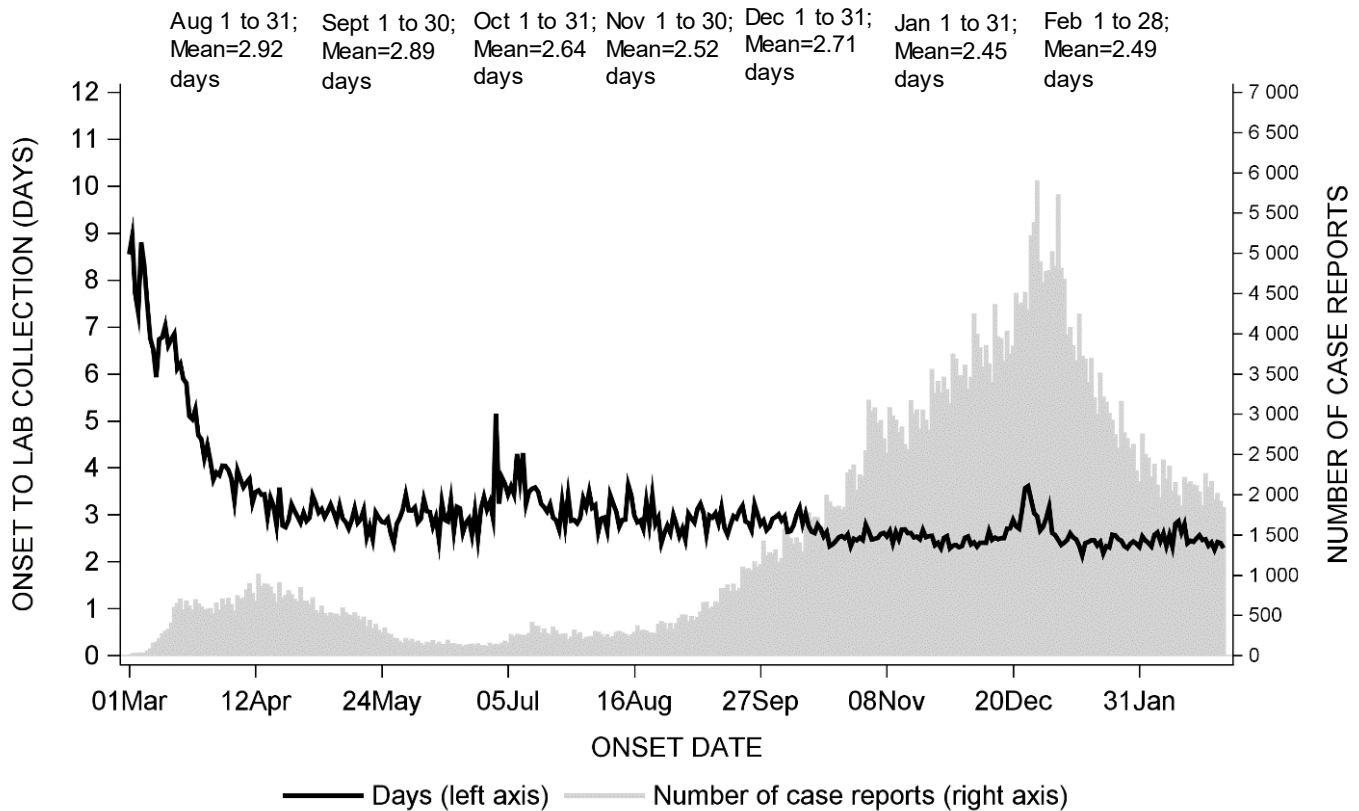
¹ Weekly percentage of tests positive is calculated by dividing the total positive tests in the past 7 days by the total tests performed in the past 7 days

Note: Laboratory testing numbers may be an underestimate due to reporting delays and may not include additional sentinel surveillance or other testing conducted in the province or territory.



The mean time from symptom onset to lab specimen collection has slightly increased to 2.49 days in February 2021. This compares to a mean of 2.45 days in January 2021 (Figure 7).

Figure 7. Onset date to laboratory collection date for cases reported to PHAC as of 13 March 2021



Source: Detailed case information received by PHAC from provinces and territories

Note: Date of symptom onset to date of specimen collection intervals of >15 days are deemed outliers, and not included in this figure.



SEVERITY INDICATORS

HOSPITALIZATIONS, INTENSIVE CARE, AND DEATHS

During week 10, detailed case information on hospitalization status was available for 15 403 cases. Among these cases:

- **623 (4%)** were hospitalized (including ICU admission), of whom:
 - **60 (10%)** were admitted to ICU.

Among the total number of hospitalizations reported in week 10 for which age information was available, 26% (n=158/617) were 80 years and older and 37% (n=241/617) were 60 to 79 years of age (Table 8).

As of 13 March 2021, case information on hospitalization status was available for 639 929 cases, where:

- **49 395 (8%)** were hospitalized (including ICU admission), of whom:
 - **8 693 (18%)** were admitted to ICU.

Since the beginning of the outbreak, the 60 to 79 year age group has accounted for the highest proportion of cases hospitalized and admitted to ICU, followed closely by the 80 years and older age group (see table A5 in annex for cumulative counts).

Table 8. Number of COVID-19 cases hospitalized, and admitted to ICU, overall and by gender and age group, reported to PHAC during week 10^a

Age groups	Hospitalized – non-ICU			Hospitalized – ICU		
	Female	Male	Total	Female	Male	Total
≤ 19	6	7	13	0	1	1
20-39	47	25	72	1	4	5
40-59	41	68	109	5	13	18
60-79	88	121	209	12	20	32
80+	72	82	154	2	2	4
Total	254	303	557	20	40	60

Source: Detailed case information received by PHAC from provinces and territories

^a Data are analyzed based on date reported to PHAC. Note that there is a period of time (lag time) where it is expected that cases have occurred but have not yet been reported nationally. Therefore, COVID-19 cases reported to PHAC during week 10 may include cases that occurred (based on date of illness onset, or lab related dates) in previous weeks.

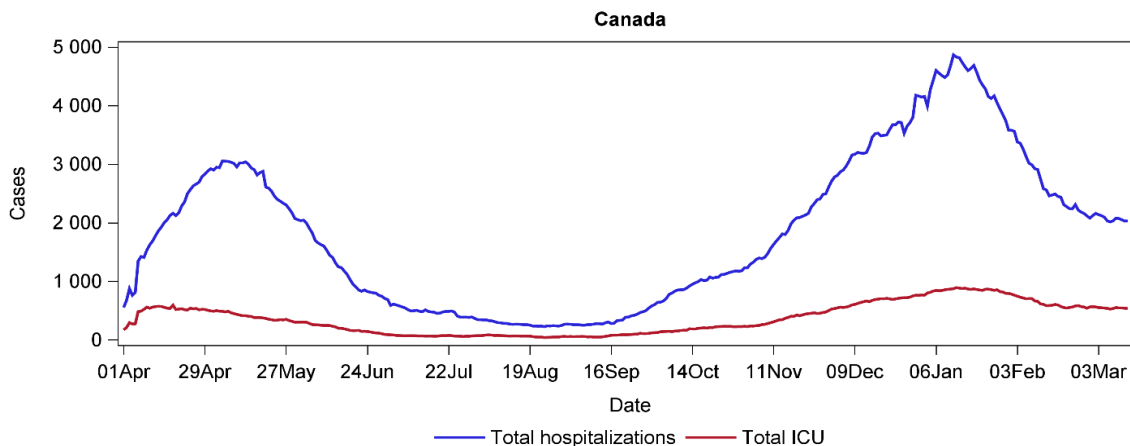
Note: Non-ICU hospitalizations and ICU counts are mutually exclusive. Cases with missing gender, sex or age were excluded. Where available, gender data was used; when gender data was unavailable, sex data was used. Reliable data on gender diverse respondents are unavailable due to small counts.

After a sharp decline in the daily number of cases hospitalized and in ICU in Canada since mid-May 2020, the daily numbers remained low throughout the summer. Since mid-September 2020, an increasing trend in the daily number of hospitalized cases was observed (Figure 8). The number of hospitalizations has decreased since the peak on 12 January 2021, while the number of ICU admissions has remained relatively stable since early January 2021. On 13 March 2021, there were 2 033 cases hospitalized and 538 cases in ICU, representing a 3% decrease in the seven-day moving average of hospitalized cases and a 2% decrease in the seven-day moving average of ICU admissions compared to one week prior.



Based on detailed case information provided to PHAC, the overall cumulative hospitalization rate (including ICU admissions) is 130 cases per 100 000 population, with the highest rates observed in those 80 years of age and older (969 cases per 100 000 population).

Figure 8. Number of COVID-19 cases in hospital and ICU daily in Canada, as of 13 March 2021



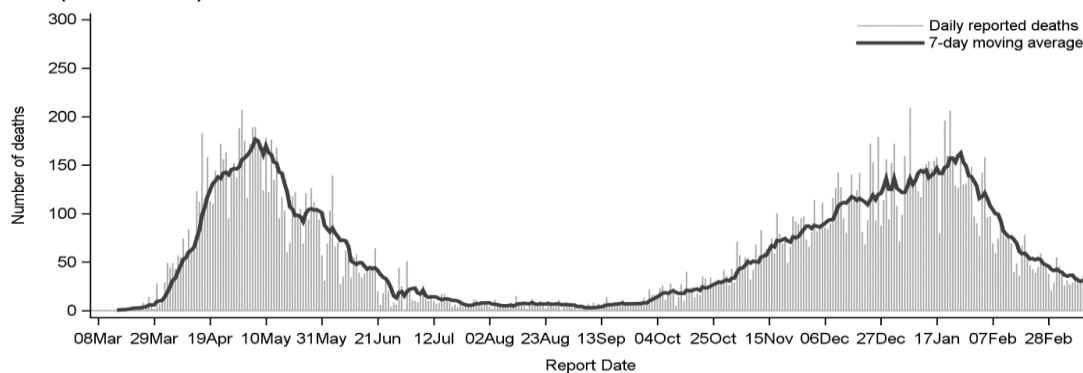
Source: Provincial and Territorial MOH websites as of 13 March 2021

During week 10, there were 221 COVID-19 related deaths reported in Canada.

- This represents a **17% decrease** compared to the previous week.
- This amounts to an average of 32 deaths reported per day, compared to an average of 38 deaths per day during the previous week.
- This decrease in weekly deaths comes after an increasing trend in the number of deaths observed since early October (Figure 9).

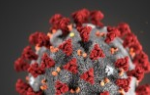
Of the deaths reported during week 10, jurisdictions submitted case-level information to PHAC for 28 deaths, of which 17 (61%) were male and 22 (79%) were aged 60 years and older. To date, deaths are highest among those aged 80 years and older (Table A4 in the annex, cumulative counts).

Figure 9. Daily number of COVID-19 related deaths reported in Canada (and 7-day moving average), as of 13 March 2021 (N=22 438)



Source: Provincial and Territorial MOH websites as of 13 March 2021

Note: The 7-day moving average is a trend indicator that captures the arithmetic mean of the daily reported deaths over the previous seven days. The moving average helps smooth out day-to-day variability in reporting, filtering out the “noise” of short-term fluctuations. Fluctuations can be attributed to retrospective data or provinces or territories reporting cases at a reduced frequency.



CANADIAN ACUTE CARE HOSPITALS

Laboratory-confirmed COVID-19-associated hospitalizations in Canada are monitored through two sentinel hospital-based systems:

1. Canadian Nosocomial Infection Surveillance Program (CNISP) *
2. Serious Outcomes Surveillance Network of the Canadian Immunization Research Network (CIRN-SOS) **

NOTE: * denotes data from CNISP and ** data from CIRN-SOS

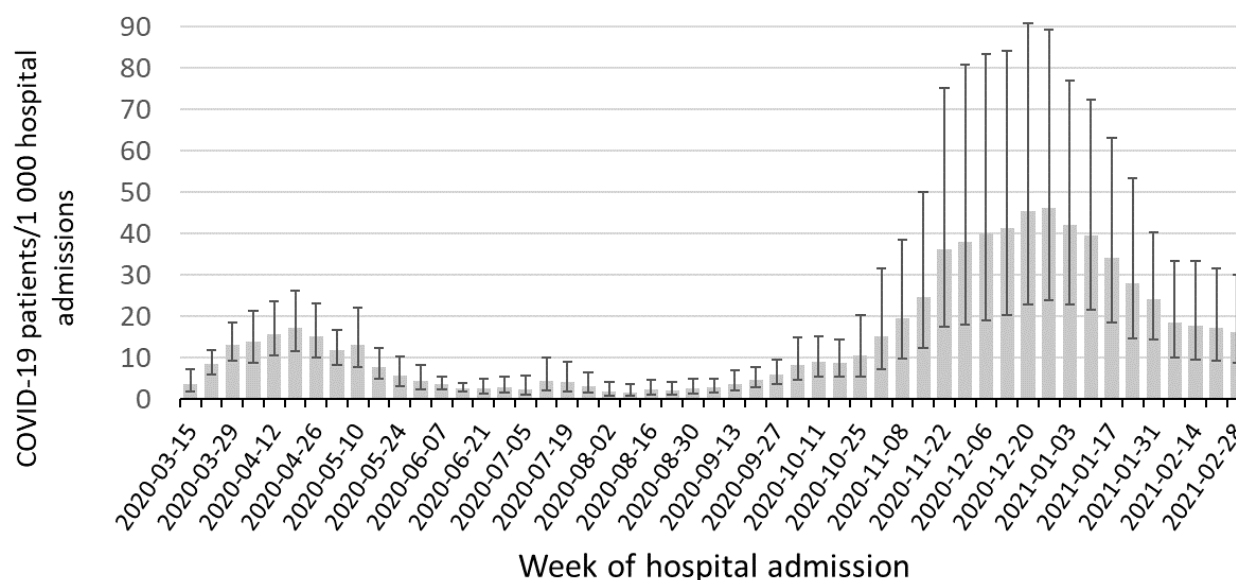
Key Findings *

- Among all patients hospitalized with COVID-19 since March 2020:
 - 19% have been admitted to the ICU (2 809/14 486)
 - 12% required mechanical ventilation (1 766/14 486)
 - <1% received extracorporeal membrane oxygenation (ECMO) (118/14 486)
 - 15% have died (all-cause mortality) (2 208/14 486)
- The median age of patients hospitalized with COVID-19 was 70 years (range 0-104) and 3% are pediatric (<18 years) (493/14 486)
- Males accounted for 53% of hospitalized patients (1 358/2 570)

Hospitalization Rates *

- The weekly rate of new laboratory-confirmed COVID-19 patients per 1 000 hospital admissions remains similar compared to the three previous weeks, estimated at 16.2 the most recent week of 28 February 2021 (Figure 10). The weekly rate peaked the week of 27 December 2020, when it was estimated at 46.3 (Figure 10).

Figure 10. National rates of laboratory-confirmed COVID-19 patients per 1 000 admissions with 95% confidence intervals (n=14 486)*



* Includes data from the 151 hospitals that have participated in all weeks of aggregate data collection and is estimated using 2020 annual data.*

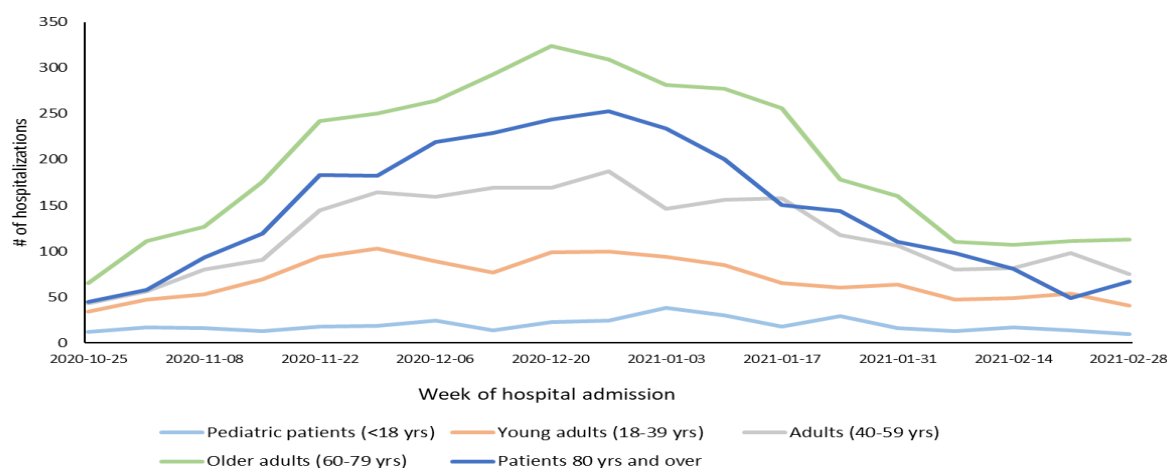


Hospitalization Trends

AGE *

- Since the peak in new hospitalizations observed during the week of 27 December 2020 (n=873), weekly hospitalizations among patients 80 years and older decreased consistently until the most recent week (of 28 February 2021) when 67 hospitalizations were recorded. This is an increase from the 49 hospitalizations among this age group the week prior (of 21 February 2021; Figure 11).
- Older adult patients (60-79 years) have consistently accounted for the greatest number of weekly hospitalized patients (Figure 11).
- Hospitalizations among pediatric patients (<18 years) have fluctuated and remained low (Figure 11).

Figure 11. Weekly number of new laboratory-confirmed COVID-19 patients by age group (n=10 483)*



CLINICAL PROGRESSION **

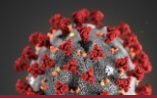
Time from symptom onset to hospital admission:

- For COVID-19 hospitalizations up to the end of August, the median time from symptom onset to hospital admission was 5 days (n=658). Since the end of August, the median time from symptom onset to hospital admission was 4 days (n=1 303).
- Median length of time from symptom onset to hospital admission was shortest at 3 days among patients aged 80+ years (n=663), compared to 4 days among patients aged 16-39 years (n=144), 5 days among patients aged 60-79 years (n=773) and 6 days among patients aged 40-59 years (n=381).

Length of hospital stay:

- For COVID-19 hospitalizations up to the end of August, the median length of hospital stay was 11 days (n=735). Since the end of August, the median length of hospital stay was 8 days (n=882). This difference must be interpreted with caution as missing length of stay data is more common in the latter time period.
- Median length of hospital stay was longest among patients aged 80+ years (median=12 days, n=569) and patients aged 60-79 years (median=11 days, n=635). Values were comparatively lower for patients aged 40-59 years (median=6 days, n=301) and 16-39 years (median=4 days, n=112).

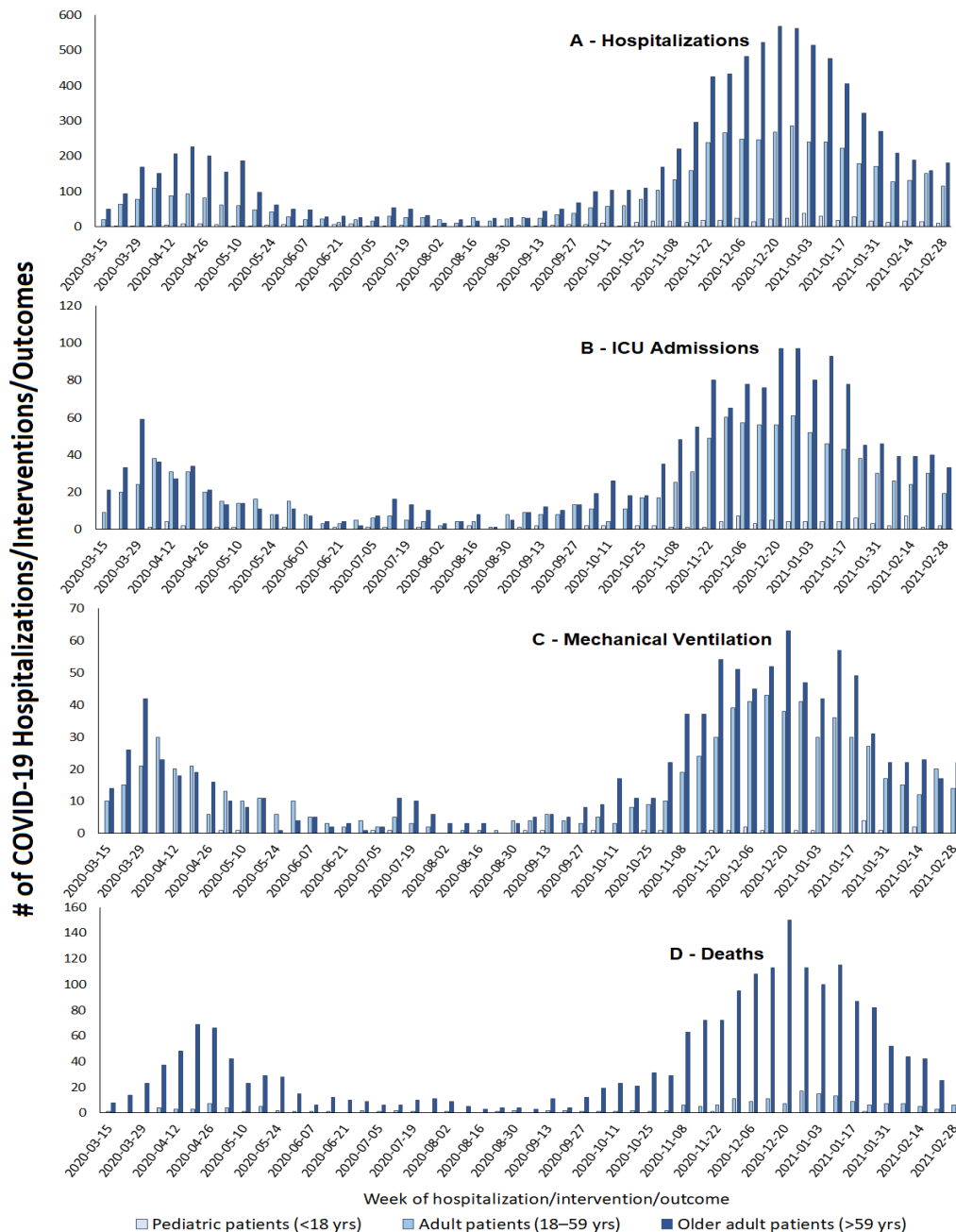
Note: Patients hospitalized before symptom onset were excluded from 'time from symptom onset to hospital admission' calculations. Length of stay is calculated as the time (in days) between date of hospital admission and date of outcome (including discharge, transfer, status change to alternate level of care, and death).



INTERVENTIONS/OUTCOMES *

- The number of new hospitalizations (n=873) and new ICU admissions (n=162) peaked the week of 27 December 2020, while the number of new patients receiving mechanical ventilation (n=101) and new deaths (n=157) peaked the week of 20 December 2020 (Figure 12).
- Since the peak in late December, these weekly indicators have all decreased, with 306 new hospitalizations, 54 new ICU admissions, 36 new patients receiving mechanical ventilation, and 31 new deaths recorded in the most recent week of 28 February 2021 (Figure 12).

Figure 12. Weekly number of new laboratory-confirmed COVID-19 patients that were admitted to hospital (A; n=14 168), ICU (B; n=2 809), required mechanical ventilation (C; n=1 766), and deceased (D; n=2 208), by age group*

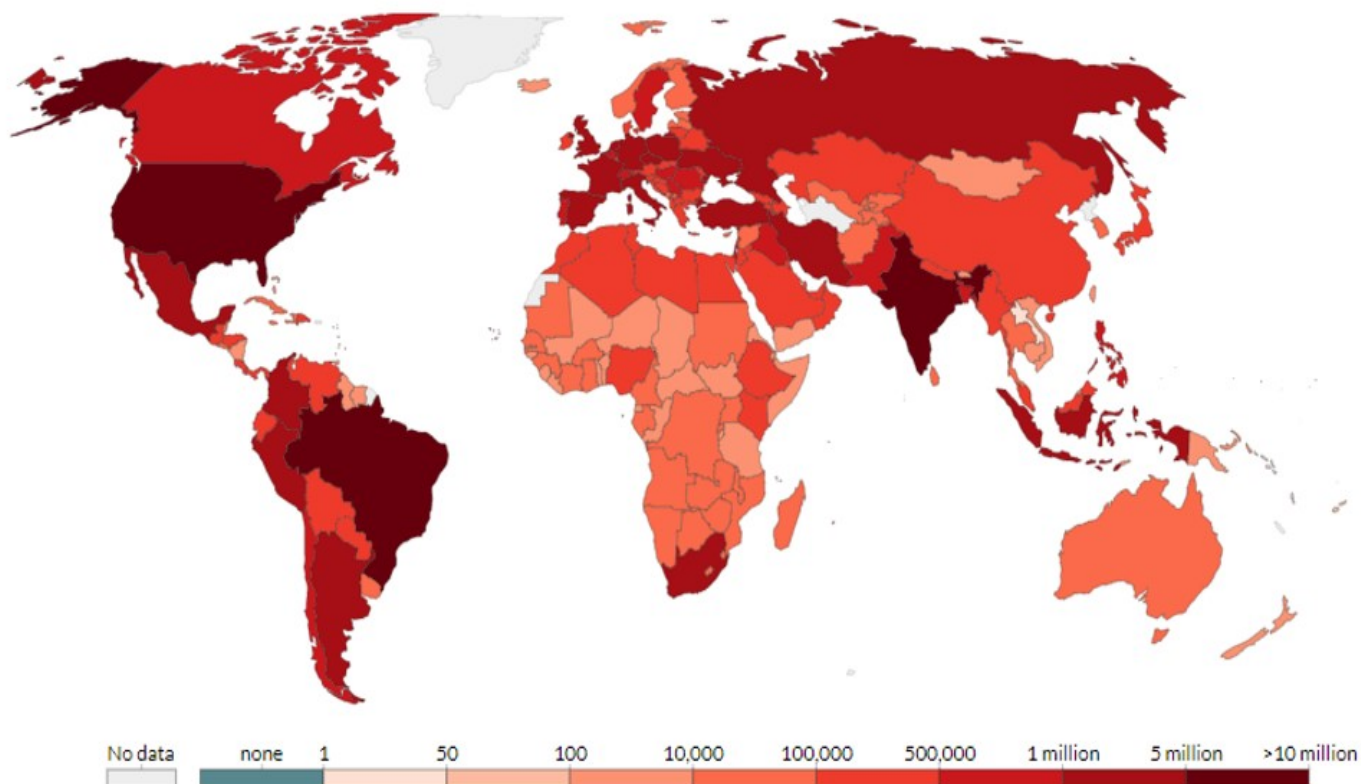




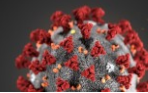
INTERNATIONAL

- As of 13 March 2021, there are over 118 million global cases of COVID-19 with over 2.6 million reported deaths (Figure 13).
- The region of Europe accounts for the highest number of cases reported.
- The following five countries account for the largest proportion of cases reported globally in the past 14 days:
 - Brazil (n=922 326)
 - United States (n=805 419)
 - France (n=309 840)
 - Italy (n=294 013)
 - India (n=262 317)
- Canada's cases account for approximately 0.8% of all cases reported globally since the beginning of the pandemic.

Figure 13. International map of COVID-19 cases as of 13 March 2021 (n=118 686 141)

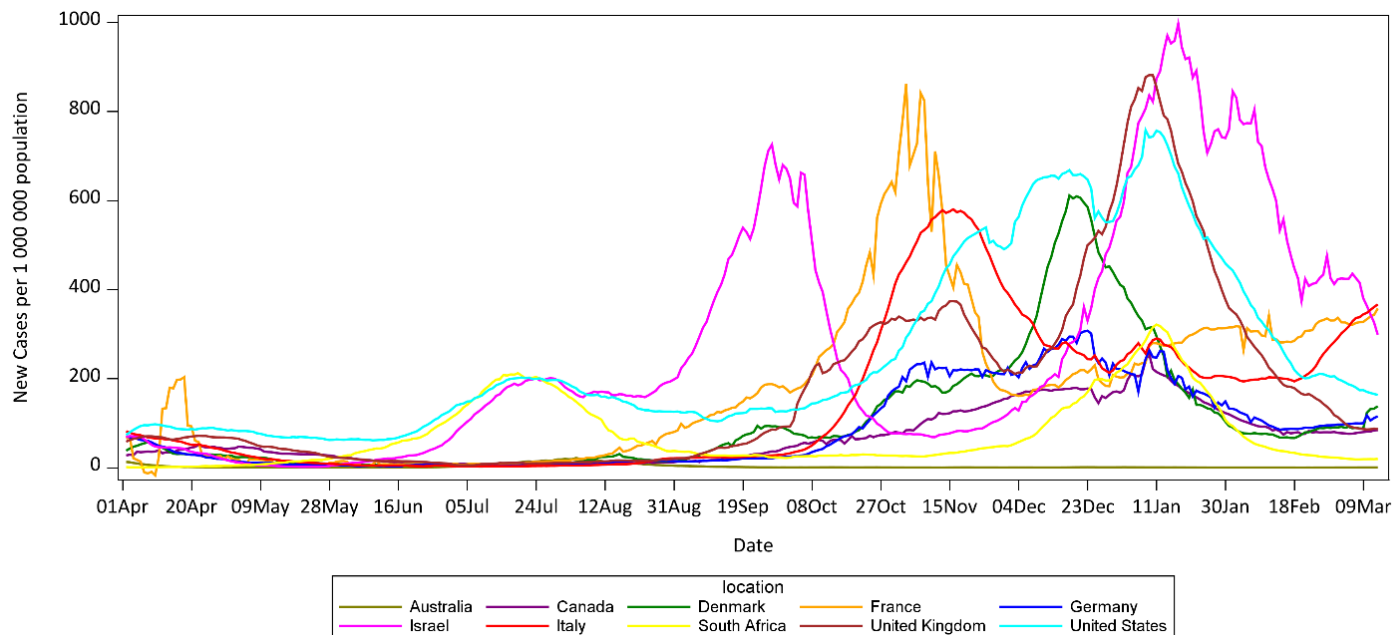


Source: Our World in Data – Coronavirus Pandemic (COVID-19) - <https://ourworldindata.org/coronavirus>



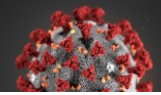
Following a sharp decline in case rates in recent weeks, Israel no longer takes the lead in having the highest number of new cases per 1 000 000 population. As of 13 March 2021, Italy was experiencing the highest number of new cases per population, followed by France and Israel; case rates in these countries are 4.3, 4.2, and 3.5 times higher than Canada, respectively (Figure 14).

Figure 14. Weekly new cases of COVID-19 in Canada compared to other countries as of 13 March 2021 (7-day moving average, population-adjusted)



Source: OurWorldInData, as of 13 March 2021

Up-to-date country-specific risk levels are found on [travel health notices](#). For more information on COVID-19 internationally, please refer to the [World Health Organization’s COVID-19 Situation Report](#).



MODELLING

Estimates of transmission rates in Canada: Effective reproductive rate (R_t)

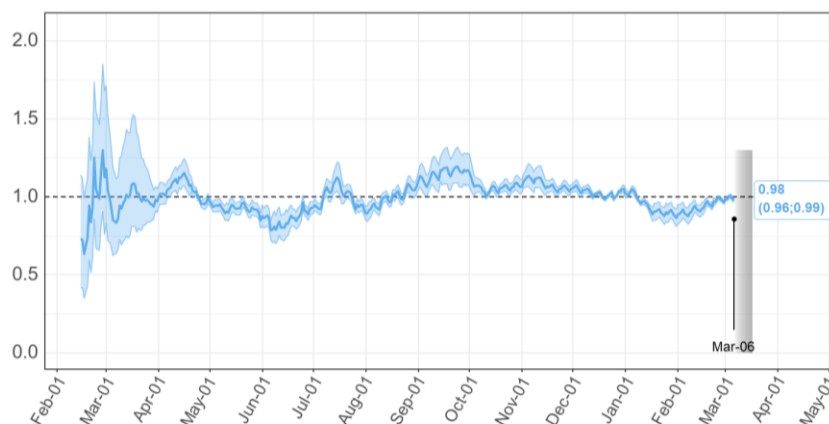
R_t is the time variable reproduction rate, representing the average number of newly infected people for each infected person. If R_t is less than 1 at a particular time (t), then the average number of people infected by one infected person is less than one, so the epidemic is being brought under control. If R_t is greater than 1, the average number of people infected by one infected person is greater than one, and the epidemic is growing. A value of R_t above 1 indicates that there is active community transmission, meaning that the disease will continue to spread in the population. The higher the R_t value, the faster the disease is spreading, which leads to an increase in the incidence of new cases.

However, there are some limitations to consider. As the epidemic continues, the R_t may not capture the current state of the epidemic with low case burden and the value must be interpreted based on the current landscape. The R_t can easily fluctuate when case numbers are low. It is also an average R_t for a population and does not point to local outbreaks driving case counts. Since the method used to calculate R_t is highly sensitive to the reported number of new cases, community outbreaks within specific provinces and territories will cause the estimated R_t value in that respective region to be higher, which may not always accurately depict overall transmission in the province or territory as a whole.

Figure 15 shows the R_t over time.

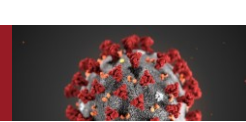
- In 2020, the reproductive rate was hovering under 1 in May and early June, followed by fluctuations in July. In early August, the R_t increased until the end of September when it decreased to just above 1. Between October 2020 and January 2021, the R_t fluctuated just above 1 with a slight increase in early November and early January. Starting in mid-January 2021, the R_t decreased to below 1, indicating that the epidemic was reducing nationally.
- Since early February 2021, the R_t has begun to slowly increase. The national R_t was 0.98 on 06 March 2021, a slight decrease from the previous week.

Figure 15. Reproductive rate in Canada based on date of case report



Source: Calculated from detailed case information received by PHAC from provinces and territories

Note: Fluctuations are attributed to provincial and territorial reporting delays and non-reporting on the weekends



FORECASTING

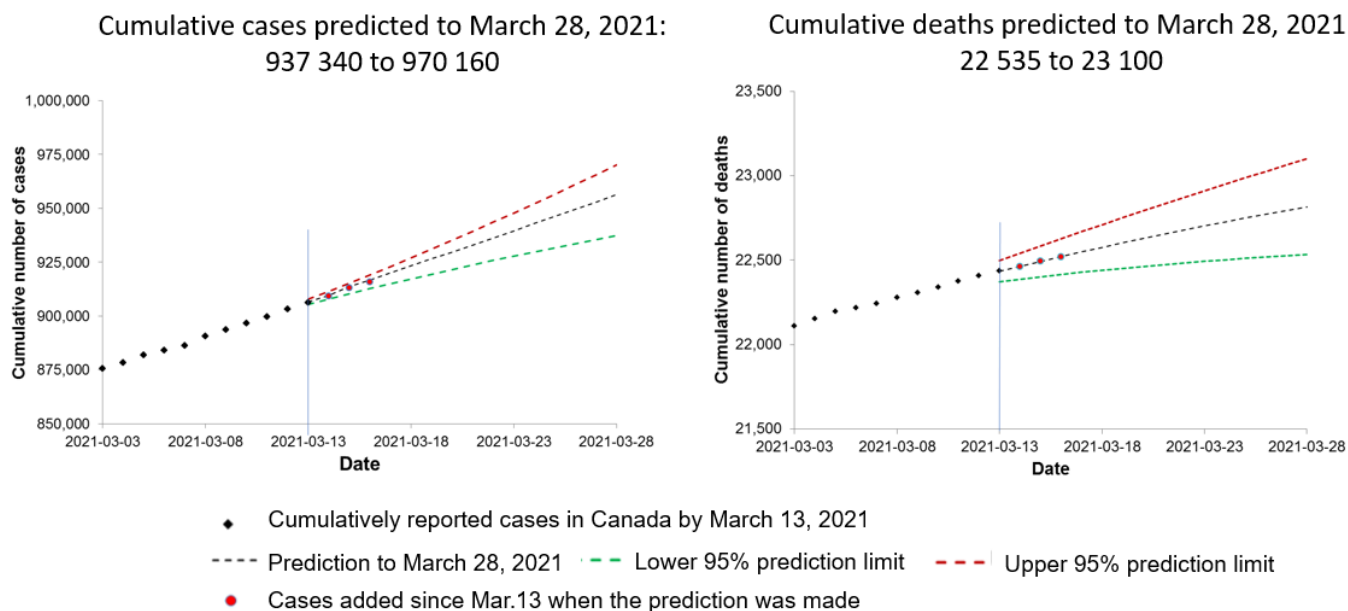
Canada's approach to modelling:

Models cannot predict the course of the COVID-19 pandemic, but can help us understand all possible scenarios, support decisions on public health measures and help the health care sector plan for these scenarios.

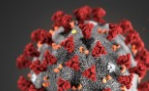
Forecasting models use data to estimate how many new cases can be expected in the coming weeks. Figure 16 below shows the projected number of cases and deaths in Canada, with a 95% prediction interval calculated to 28 March 2021, using available data as of 13 March 2021.

- According to forecasting, between 937 340 to 970 160 cumulative reported cases and 22 535 to 23 100 cumulative numbers of deaths are expected by 28 March 2021.
- The black dots represent actual data (cumulative cases and cumulative deaths) prior to 13 March 2021 and the dashed lines show the predicted trajectories after that date.
- It is important to communicate uncertainties in the predictions. The red and green lines represent the upper and lower limits with 95% confidence, respectively.
- If the added data points since 13 March 2021 stay between the red and green lines, it means both (i) the prediction model is performing as expected; (ii) data generated by the epidemic and reporting mechanisms are as expected.
- If the added data points since 13 March 2021 fall outside these limits, especially above the red line, the model detects unexpected signals that require further epidemiologic investigation.

Figure 16. Projected numbers to 28 March 2021 and 95% prediction intervals based on data reported as of 13 March 2021



For more information, please visit: <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19/epidemiological-economic-research-data/mathematical-modelling.html>



TECHNICAL NOTES

The data in the report are based on information from various sources described below. The information presented for case-based analyses, trend analyses and laboratory analyses are available as of **13 March 2021 at 4 p.m. EDT**.

DATA SOURCES AND DATA CAVEATS

Epidemiological data received by PHAC

Some of the epidemiological data for this report are based on detailed case information received by PHAC from provinces/territories (P/Ts). This information is housed in the PHAC COVID-19 database. Case counts and level of detail in case information submitted to PHAC varies by P/T due to:

- Possible reporting delay between time of case notification to the P/T public health authority and when detailed information is sent/received by PHAC.
- Preliminary data may be limited and data are not complete for all variables.
- Data on cases are updated on an ongoing basis after being received by PHAC and are subject to change.
- Variation in approaches to testing and testing criteria over time within and between P/Ts.
- The lag time from illness onset to PHAC report date is approximately two weeks and data within this period is subject to change.

Note: Missing data for hospitalizations, ICU admissions, and deceased were not included in calculations. Unless calculations were broken down by age and gender, cases with missing values for age and gender were included. P/Ts may define gender differently and some may be referring to biological sex. Case severity is likely underestimated due to underreporting of related variables, as well as events that may have occurred after the completion of public health reporting, and therefore is not captured in the case report forms. Transmission data should be interpreted with caution as information on exposure are missing from several provinces and territories.

Provincial and territorial case counts

P/T information on case counts, resolved cases, and deaths associated with COVID-19 are collected from publicly available P/T websites, generally from the P/T ministry of health. Case definitions may vary by P/T.

- National COVID-19 case definitions are provided by PHAC for the purpose of standardized case classification and reporting. PHAC's national case definitions can be found here: <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/national-case-definition.html>
- Only cases and deaths meeting P/T's definition for case classification are reported. For details on case definitions, please consult each P/T ministry of health website.

Laboratory information

Data on the number of tests conducted in each P/T are received from the National Microbiology Laboratory.

- Laboratory testing numbers may be an underestimate due to reporting delays and may not include additional sentinel surveillance or other testing performed. They are subject to changes as updates are received.



Outbreak data

Reporting delays and gaps in information that are available at the federal level present difficulties in reporting on local outbreaks. To ensure timely information is available, PHAC utilizes web-scraping techniques to gather outbreak data from media and P/T public health agency websites. There are several important limitations to these data:

- A nationally standardized outbreak definition does not yet exist. Cluster definitions vary according to P/T. The methods for defining an outbreak are currently in development and may change over time.
- The data do not represent all outbreaks that have occurred in Canada over the course of the pandemic, but they do provide a summary of clusters reported via non-traditional data sources. Data collection on outbreaks began 12 March 2020.
- Case-level data are generally not available for outbreaks detected via non-traditional data sources. Information presented is at the aggregate level only.

Population data

- Canadian population data from Statistics Canada Population estimates on 1 July 2020 are used for age-standardized and age-specific rate calculations.

International data

International data are retrieved from the European Centre for Disease Prevention and Control (ECDC) Situation update and Our World in Data.

- Given that the pandemic is rapidly evolving and the reporting cycles from government sources are different, the case numbers may not necessarily match what is being reported publicly. Rather, this reflects what is publicly available from the sources listed above.
- International comparisons should be interpreted with caution. Number of tests conducted, indications for testing, and diagnostic capacity by country have a large influence on total number of reported cases. Therefore, the data displayed may not represent the true incidence of disease within each country.

Canadian Acute-Care Hospitalization Data

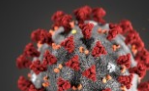
Canadian Nosocomial Infection Surveillance Program (**CNISP**) collects information on hospitalized patients across all age groups (pediatric and adult).

- As of 6 March 2021, CNISP has collected weekly aggregate data on 14 486 patients hospitalized with COVID-19 from 151 hospitals across all 10 provinces and 1 territory.
- As of 10 December 2020, case-level data is available on 2 583 adult and pediatric patients in 53 hospitals across 10 provinces.
- Denominators may be lower depending on variable completeness.

Serious Outcomes Surveillance Network of the Canadian Immunization Research Network (**CIRN-SOS**) collects information on hospitalized adult patients aged 16 years or older.

- As of 11 March 2021, CIRN-SOS has collected case-level data on 2 768 adult patients (≥16 years) hospitalized with COVID-19 across 9 hospital sites in Alberta, Ontario, Québec, and Nova Scotia.
- Denominators may be lower depending on variable completeness.

*** denotes data from CNISP and ** data from CIRN-SOS**



ANNEX

Table A1. Cumulative number of COVID-19 cases, resolved cases, and deaths reported in Canada by province or territory, as of 13 March 2021

Province/Territory	Total cases	Total resolved cases	Total deaths
British Columbia	87 422	80 325	1 401
Alberta	138 036	131 502	1 940
Saskatchewan	30 522	28 648	405
Manitoba	32 699	30 874	916
Ontario	316 359	297 403	7 138
Québec	296 918	279 230	10 535
Newfoundland and Labrador	1 012	949	6
New Brunswick	1 465	1 401	30
Nova Scotia	1 669	1 585	65
Prince Edward Island	143	127	0
Yukon	72	71	1
Northwest Territories	42	41	0
Nunavut	383	374	1
Canada	906 755	852 543	22 438

Source: Provincial and Territorial MOH websites as of 13 March 2021

^a Includes 13 cases identified in repatriated travelers (Grand Princess Cruise ship travelers) who were under quarantine in Trenton in March 2020. Update on their status is not available.

Table A2. Age-standardized incidence rates of COVID-19 cases, by province or territory, as of 13 March 2021

Province/Territory	Cumulative age-standardized incidence rates (per 100 000 population)
British Columbia	1 687.0
Alberta	3 082.2
Saskatchewan	2 586.1
Manitoba	2 368.9
Ontario	2 146.5
Québec	3 446.1
Newfoundland and Labrador	199.5
New Brunswick	71.4
Nova Scotia	171.8
Prince Edward Island	91.8
Yukon	122.4
Northwest Territories	97.7
Nunavut	880.5
Canada	2 378.3

Source: Detailed case information received by PHAC from provinces and territories, standardized to the July 1 2020 post-census population estimate

Note: Data are analyzed based on date reported to PHAC.

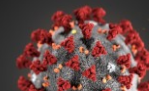


Table A3. Cumulative age and gender distribution of COVID-19 cases reported to PHAC, as of 13 March 2021

Age group	Female			Male			Total ^a		
	n	%	Rate	n	%	Rate	n	%	Rate
≤ 19	74 668	16%	1 876.7	79 394	18%	1 908.1	154 062	17%	1 892.8
20-29	82 728	18%	3 353.6	85 431	19%	3 210.3	168 159	19%	3 279.2
30-39	73 290	16%	2 792.3	70 887	16%	2 657.2	144 177	16%	2 724.2
40-49	69 338	15%	2 831.1	62 521	14%	2 599.4	131 859	15%	2 716.3
50-59	61 715	13%	2 362.5	59 009	13%	2 284.9	120 724	13%	2 323.9
60-69	36 726	8%	1 519.7	39 497	9%	1 709.2	76 223	8%	1 612.3
70-79	22 172	5%	1 402.5	21 660	5%	1 521.1	43 832	5%	1 458.7
80+	40 681	9%	4 106.7	21 349	5%	3 172.0	62 030	7%	3 728.5
Total	461 318	100%	2 412.8	439 748	100%	2 328.5	901 066	100%	2 370.9

Source: Detailed case information received by PHAC from provinces and territories

^a Cases not identified as male or female were removed from the total due to small numbers.

Note: Cases with missing gender, sex or age were excluded. Where available gender data was used; when gender data was unavailable sex data was used. Reliable data on gender diverse respondents are unavailable due to small counts.

Table A4. Cumulative age and gender distribution of COVID-19 deaths reported to PHAC as of 13 March 2021

Age group	Female	Male	Total ^a
≤ 19	1	4	5
20-39	41	70	111
40-59	309	478	787
60-79	2 373	3 639	6 012
80+	8 715	6 708	15 423
Total	11 439	10 899	22 338

Source: Detailed case information received by PHAC from provinces and territories

^a Cases not identified as male or female were removed from the total due to small numbers.

Note: Cases with missing gender, sex or age were excluded. Where available gender data was used; when gender data was unavailable sex data was used. Reliable data on gender diverse respondents are unavailable due to small counts.

Table A5. Cumulative age and gender distribution of cases hospitalized, and admitted to ICU reported to PHAC as of 13 March 2021

Age groups	Hospitalized – non-ICU			Hospitalized – ICU		
	Female	Male	Total	Female	Male	Total
≤ 19	323	335	658	50	63	113
20-39	2 103	1 491	3 594	293	339	632
40-59	3 104	4 244	7 348	815	1 481	2 296
60-79	6 324	7 780	14 104	1 525	2 968	4 493
80+	8 320	6 632	14 952	503	645	1 148
Total	20 174	20 482	40 656	3 186	5 496	8 682

Source: Detailed case information received by PHAC from provinces and territories

^a Cases not identified as male or female were removed from the total due to small numbers.

Note: Cases with missing gender, sex or age were excluded. Where available gender data was used; when gender data was unavailable sex data was used. Reliable data on gender diverse respondents are unavailable due to small counts.