



## WEEKLY EPIDEMIOLOGY UPDATE (15-21 JULY 2020)

Published: 24 July 2020

**3 211 (+829)**  
NEW CASES REPORTED<sup>a</sup>

**64 (-23)**  
NEW DEATHS REPORTED<sup>a</sup>

**4% (-21<sup>b</sup>)**  
PERCENT OF TOTAL CASES ACTIVE<sup>c</sup>

**88% (+21<sup>b</sup>)**  
PERCENT OF TOTAL CASES RECOVERED<sup>a</sup>

**43 617 (+3 885<sup>b</sup>)**  
AVERAGE PEOPLE TESTED PER DAY

**0.9% (+0.1<sup>b</sup>)**  
PERCENT POSITIVE<sup>d</sup>

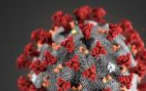
<sup>a</sup> Source: Provincial and Territorial MOH websites as of 21 July. <sup>b</sup> Difference in percentage points. <sup>c</sup> Active cases are calculated based on total cases minus deaths plus recoveries <sup>d</sup> NML data for laboratory analyses are as of 19 July.

### KEY UPDATES

- Nationally, the number of cases reported daily is on the rise over the last two weeks. On average, 459 cases were reported daily from 15 to 21 July compared to 331 cases daily the week prior.
  - From 15 to 21 July 2020, a total of 3 211 cases and 64 deaths were reported in Canada, representing a 38% increase and 26% decrease respectively compared to the seven days prior.
  - There has been an increase in the number of recoveries reported due to Quebec's new methodology for defining recovered cases; as of 17 July, the national recovery rate increased from 67% to 88%.
- Severe illness at this point remains low and stable, despite the increase of cases reporting hospitalizations this week due to delayed provincial reports. Cases in hospitals and ICUs across the country remain stable overall. There have been localised increases in hospitalized cases in some jurisdictions. It is important to keep in mind the delays inherent in these indicators.
- Of the cases reported to PHAC this week, 61% of cases were under the age of 39; 18% of which were hospitalized.
- A new section has been added to the report, which highlights hospitalized patients with COVID-19 exposure history from the Canadian Nosocomial Infection Surveillance Program (CNISP) and the Serious Outcomes Surveillance Network of the Canadian Immunization Research Network (CIRN-SOS).
- As health regions enter stages of re-opening, outbreaks within the last week have been primarily seen in food and drink establishments, mass gatherings and in faith communities.
- The average number of people tested daily over the last week was 43 617 people per day representing the highest 1-week total during the pandemic.

### Forecasts from modelling

- According to forecasting, 116 220 to 121 900 cumulative reported cases and 8 870 to 9 050 cumulative numbers of deaths are expected by 6 August. These forecasts project an increase in the number of daily reported cases, from 460 cases to 475 cases per day during the period from 22 July to 6 August. A reported number of daily deaths are expected to be stable at an average of five to six deaths per day, during the period from 22 July to 6 August.

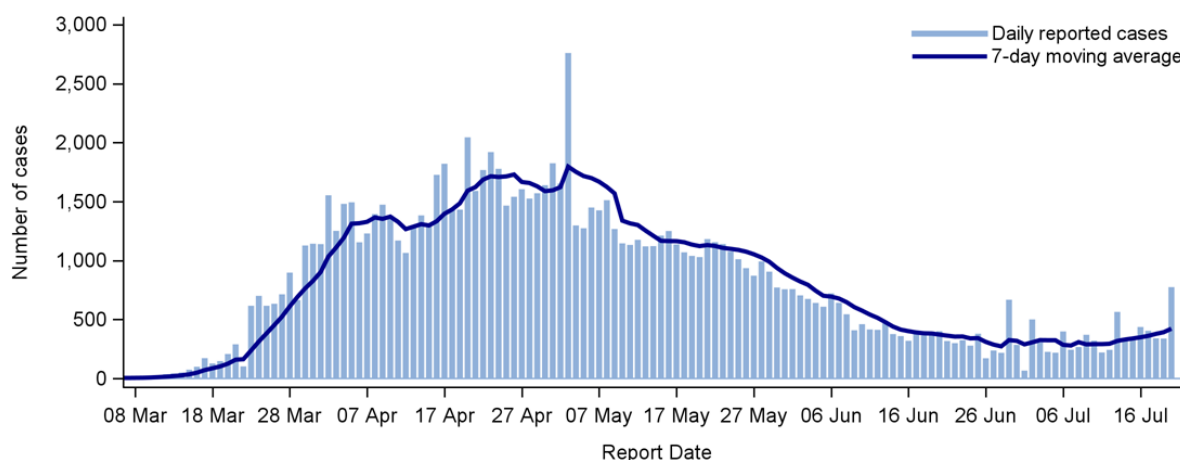


## NATIONAL TRENDS IN CASES AND DEATHS

From 15 to 21 July 2020, a total of 3 211 cases of COVID-19 were reported in Canada.

- The number of new cases represents a **38% increase** compared to the previous week; however, the number of new cases is still lower than what was observed in April and May (Figure 1).

**Figure 1.** Daily number of reported COVID-19 cases in Canada (and 7-day moving average), as of 21 July 2020 (N=111 697)<sup>a</sup>

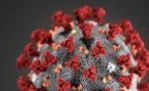


<sup>a</sup> Source: Provincial and Territorial MOH websites as of 21 July

**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. The spike on 4 May is due to the fact that Quebec reported 1 317 cases diagnosed between 2 to 30 of April.

As of 21 July 2020, an increase in the weekly number of new cases was observed nationally (Table 1).

- Quebec and Ontario continue to account for the majority of cases (64%) and deaths (86%) this week. A higher proportion of cases (36%) were reported outside of Ontario and Quebec compared to last week (30%) and reflect areas with community transmission and localized outbreaks
- Increases in the weekly number of new cases per day was observed in British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick and Yukon.
- A decrease in the weekly number of new cases per day was observed in Prince Edward Island.
- Yukon reported two new cases after not reporting any cases since April 2020.
  - The two cases are Yukon residents who contracted COVID-19 while travelling in another province.
- Northwest Territories have not reported a new case since April 2020.
- Nunavut remains to have no reported cases of COVID-19 since the beginning of this pandemic.



**Table 1.** Trends of new cases in Canada and by province or territory, as of 21 July 2020

Province/Territory	Total number of cases (as of 21 July) <sup>a</sup>	Average number of cases reported daily 15 to 21 July	Weekly number of cases reported		Percent change (%) <sup>b</sup>	Crude rate per 100 000 (as of 21 July)
			8 to 14 July	15 to 21 July		
British Columbia	3 328	29	138	200	+45%	65.6
Alberta	9 728	117	476	816	+71%	222.5
Saskatchewan	970	13	70	94	+34%	82.6
Manitoba	366	5	5	36	+620%	26.7
Ontario	37 942	142	890	992	+11%	260.5
Quebec	57 796	152	733	1066	+45%	681.2
Newfoundland and Labrador	263	0	1	1	0%	50.4
New Brunswick	170	0	2	3	+50%	21.9
Nova Scotia	1 067	0	1	1	0%	109.8
Prince Edward Island	36	0	4	0	-100%	22.9
Yukon	13	0	0	2	+200%	31.8
Northwest Territories	5	0	0	0	0%	11.2
Nunavut <sup>c</sup>	0	0	-1	0	-	0.0
<b>Canada<sup>d</sup></b>	<b>111 697</b>	<b>459</b>	<b>2 319</b>	<b>3 211</b>	<b>+38%</b>	<b>297.2</b>

<sup>a</sup>The number of cases includes the total confirmed and probable cases; this includes 11 probable cases from Manitoba. These counts are based on publically available information from the provincial/territorial ministry of health websites.

<sup>b</sup> The percentage is calculated based on the difference in the total number of cases in the past 7 days over the past 7 days prior. Note that for provinces/territories with low case counts, an increase or decrease of only a few cases leads to a large percentage change.

<sup>c</sup> Information as of 17 July 2020 and Nunavut's probable case returned as negative on 13 July 2020.

<sup>d</sup> Includes 13 cases identified in repatriated travellers (Grand Princess Cruise ship travellers) who were under quarantine in Trenton in March 2020.

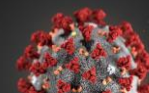
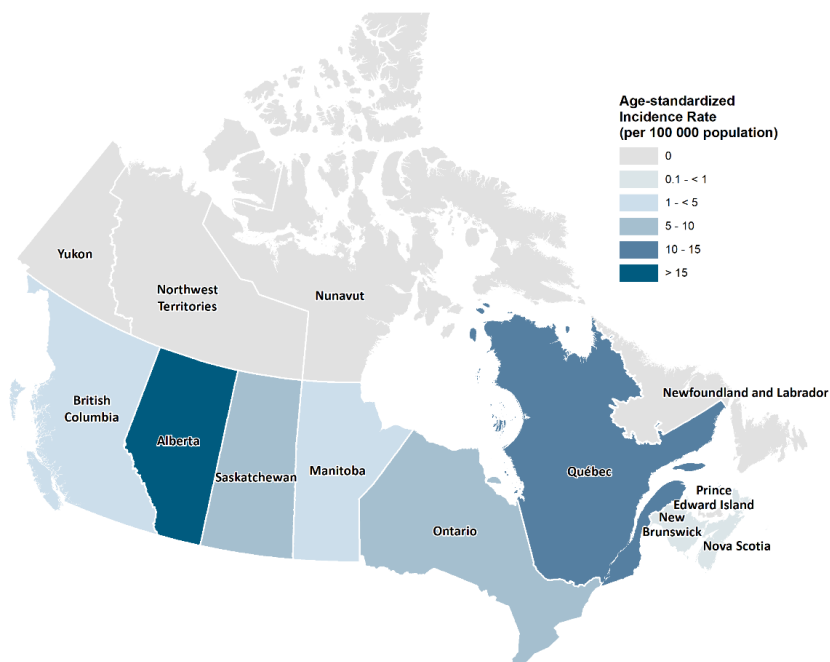


Figure 2 and Table 2 present the age-standardized rate by province or territory for the week of 15 to 21 July 2020.

- Alberta reported the highest cumulative age-standardized incidence rate in Canada, with 33.1 cases per 100 000 population (see table A2 in annex for cumulative counts).

Age-standardized rates take into account the differences in age structure within Canada to allow for a representative picture of the outbreak.

**Figure 2.** COVID-19 age-standardized incidence rate per 100 000 population<sup>a</sup> by province or territory for week 15 to 21 July 2020



Data source: Case report forms submitted to PHAC by provinces and territories. Map from National Microbiology Laboratory (NML) Geomatics  
<sup>a</sup> Standardized to the July 1 2019 postcensal population estimate

**Table 2.** Age-standardized incidence rates by province or territory for week 15 to 21 July 2020

Province/Territory	Age-standardized incidence per 100 000 (15 to 21 July)
British Columbia	3.1
Alberta	33.1
Saskatchewan	6.5
Manitoba	1.8
Ontario	6.4
Quebec	13.4
New Brunswick	0.4
Newfoundland and Labrador	0.0
Nova Scotia	0.1
Prince Edward Island	0.0
Yukon	0.0
Northwest Territories	0.0
Nunavut	0.0

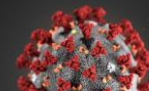


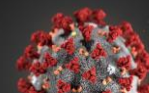
Table 3 summarizes the total new cases, recoveries and deaths for 15 to 21 July 2020:

- This week there was a reported increase in the number of recoveries due to Quebec's new methodology for defining recovered cases: the national recovery rate increased from 67% to 88% as of 17 July.
- Quebec and Prince Edward Island reported more recoveries than new cases.
- British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Newfoundland and Labrador, and Yukon reported more cases than recoveries.

**Table 3.** Summary of COVID-19 cases, recoveries, and deaths reported by province or territory, for week 15 to 21 July 2020<sup>a</sup>

Province/Territory	New cases	New recoveries	New deaths
British Columbia	200	143	0
Alberta	816	315	9
Saskatchewan	94	28	0
Manitoba	36	0	0
Ontario	992	820	30
Quebec	1 066	24 273	25
New Brunswick	1	1	0
Newfoundland and Labrador	3	0	0
Nova Scotia	1	1	0
Prince Edward Island	0	6	0
Yukon	2	0	0
Northwest Territories	0	0	0
Nunavut	0	0	0
<b>Canada</b>	<b>3 211</b>	<b>25 587</b>	<b>64</b>

<sup>a</sup> Source: Provincial and Territorial MOH websites as of 21 July.



## DEMOGRAPHIC DISTRIBUTION<sup>a</sup>

<sup>a</sup> Detailed case information received by PHAC from P/Ts

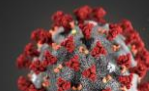
- Cases for whom PHAC received detailed individual case level information between 15 to 21 July (n=3 545) ranged in age from less than one year to 101 years old, with a median age of 33 years.
- The age distribution of these cases continued to be younger compared to previous weeks (Table A3 in the Annex):
  - Those less than 20 years comprise 13% of cases reported in the past week, but only 8% of total cases in the Canadian outbreak. This age group is still under-represented in the overall outbreak, as they represent 22% of the Canadian population.
  - Those aged 20-29 years comprise 30% of the cases reported in the past week, but only 15% of the total cases overall. This age group is now over-represented in recently reported cases, as they comprise just 14% of the Canadian population.
- Compared to the week of 8 to 14 June (median: 34), cases reported 15 to 21 July (median: 33) are younger.
  - The highest incidence rate in age is in both females and males ages 20-29 years (20.8 and 20.1 cases per 100 000 population respectively) followed by males and females ages 30-39 years (14.01 and 11.4 cases per 100 000 population respectively) (Table 4).
- Of the cases reported to PHAC this week, 61% of cases were under the age of 39; 18% of which were hospitalized. Possible explanations for the increase in proportion of cases in younger age groups, include:
  - Younger individuals increasing in-person physical connections, because of return to either workplaces or associated summer activities/holidays (i.e., Canada Day), reduced adherence to physical distancing measures, or isolation fatigue.

**Table 4.** Age and sex distribution and incidence rate per 100 000 population of COVID-19 cases reported to PHAC, by sex, from 15 to 21 July 2020.

Age groups	Female			Male		
	n	%	Rate	n	%	Rate
≤ 19	235	14	5.9	213	12	5.1
20-29	510	30	20.8	532	30	20.1
30-39	294	17	11.4	368	21	14.1
40-49	206	12	8.5	201	11	8.4
50-59	191	11	7.2	189	11	7.2
60-69	129	7	5.5	152	9	6.7
70-79	65	4	4.3	66	4	4.9
80+	97	6	10.0	62	3	9.5
<b>Total</b>	<b>1 727</b>	<b>100</b>	<b>9.1</b>	<b>1 783</b>	<b>100</b>	<b>9.5</b>

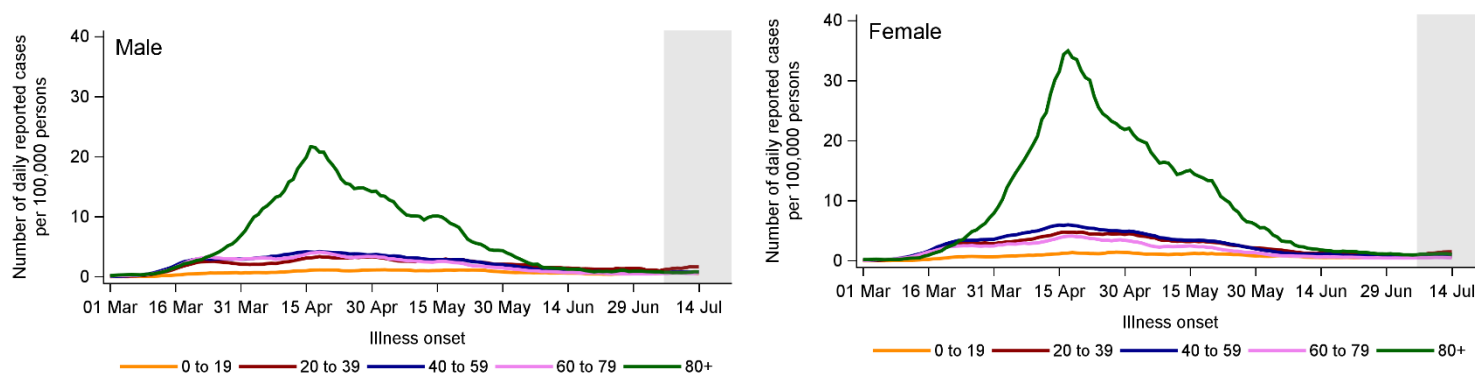
Figure 3 and Figure 4 present cases by illness onset, stratified by sex and adjusted for population at the national level.

- The steepest decline was seen in Canadians over 80 years of age, those most at risk for severe outcomes.



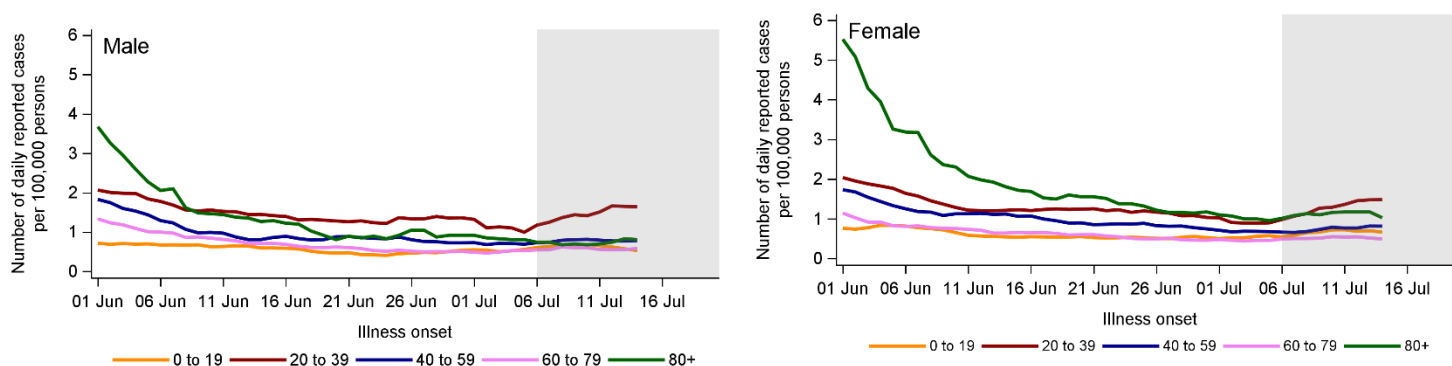
- Since 1 June, a decreasing trend was observed among all age groups, however, there has been a recent increase in cases aged 20 to 39, briefly spiking on 8 July, and then again 15 July.
  - Female cases over the age of 80 had higher reported rates but have notably declined since 1 June.

**Figure 3.** Daily cases (7-day moving average) by age and sex, population adjusted as of 21 July 2020

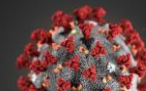


**Note:** The shaded area represents a period of time (lag time) where it is expected that cases have occurred but have not yet been reported nationally. If date of illness onset was not available, the earliest of the following dates was used as an estimate in the following order: Specimen Collection Date and Laboratory Testing Date.

**Figure 4.** Daily cases (7-day moving average) by age and sex, population adjusted from 1 June to 21 July 2020



**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. If date of illness onset was not available, the earliest of the following dates was used as an estimate in the following order: Specimen Collection Date and Laboratory Testing Date.



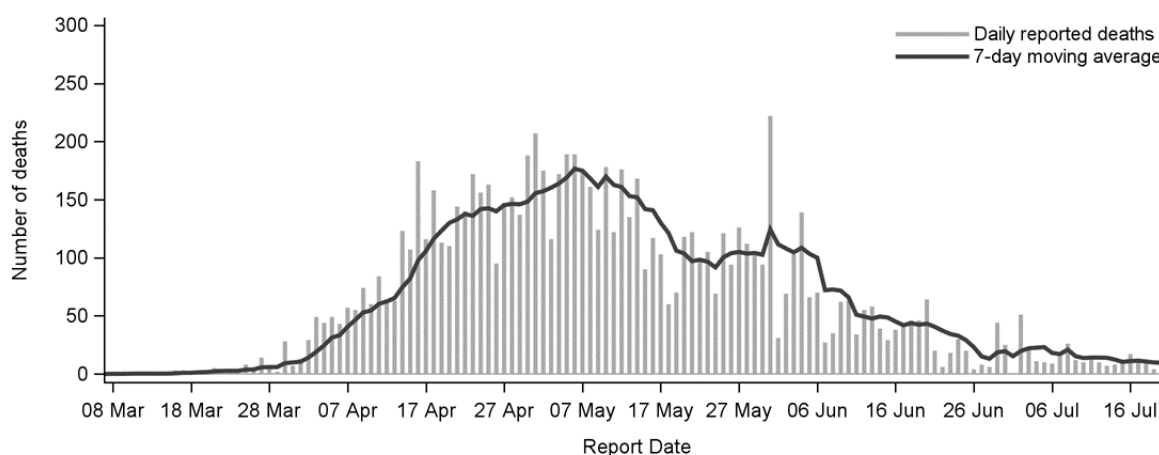
## OUTCOMES AND SEVERITY

From 15 to 21 July 2020, 64 deaths were reported in Canada.

- This represents a **26% decrease** compared to the previous week (8 to 14 July), and a continuation of a downward trend since early May (Figure 5).
- Contrary to the observed increase in weekly cases, there has been an observed decrease in weekly reported deaths.
  - Factors may include reported lag time, laboratory tests capturing milder and younger cases less at risk of adverse outcomes, improved treatment options, or greater knowledge and training for front-line workers.

During the same period, jurisdictions submitted individual level information for 15 deaths to PHAC (Table 5). All cases were over the age of 59, with a median age of 84.5 years, and 67% (n=9) of the cases were female.

**Figure 5.** Daily number of COVID-19 related deaths reported in Canada (and 7-day moving average), as of 21 July 2020 (N=8 862)<sup>a</sup>



<sup>a</sup> Source: Provincial and Territorial MOH websites as of 14 July

**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.

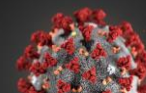
From 15 to 21 July 2020, detailed case information on hospitalization status based on PHAC report date were reported for 3 545 cases. Among these cases:

- **158 (4%)** were hospitalized, of whom:
  - **28 (18%)** were admitted to ICU, and
  - **3 (11%)** required mechanical ventilation.

Detailed case information were reported for 111 555 cases in total; hospitalization status information was available for 75 345 (68%) of cases since the start of the outbreak, where:

- **10 920 (15%)** were hospitalized, of whom:
  - **2 214 (20%)** were admitted to ICU, and
  - **460(5%)** required mechanical ventilation.





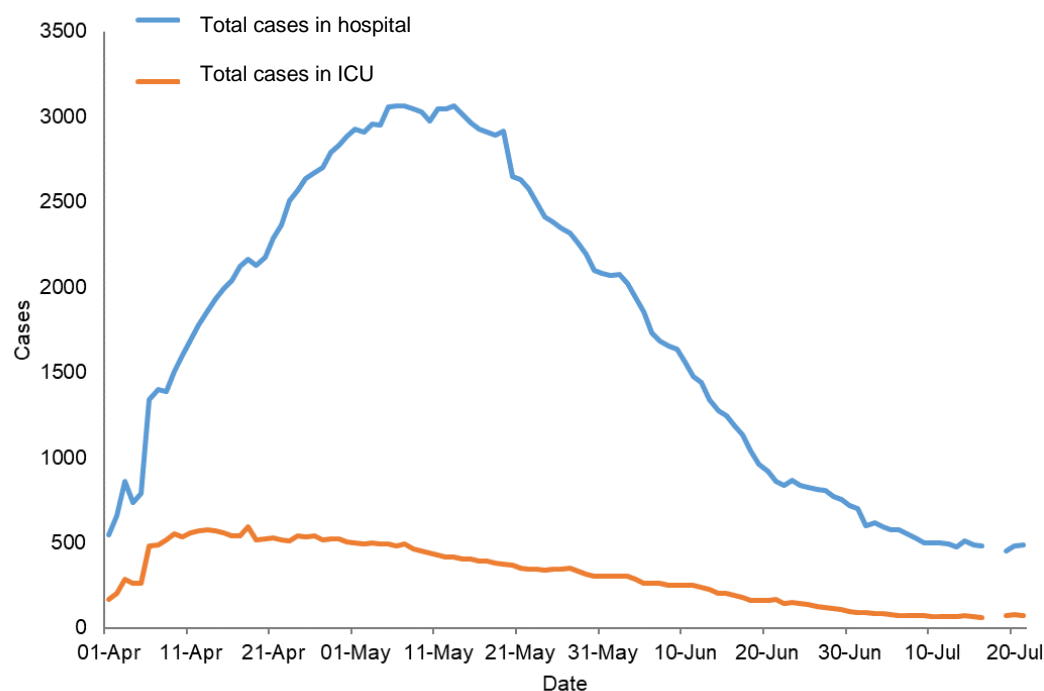
**Table 5.** Number of COVID-19 cases hospitalized, admitted to ICU, and reported as deceased, by sex and age group, reported to PHAC for week 15 to 21 July 2020<sup>a</sup>

Age groups	Hospitalizations		Admitted to ICU		Deceased	
	Female	Male	Female	Male	Female	Male
≤ 19	1	3	0	1	0	0
20-39	19	4	0	1	0	0
40-59	6	10	0	6	1	0
60-79	26	24	1	14	1	2
80+	21	16	1	4	7	4
<b>Total</b>	<b>73</b>	<b>57</b>	<b>2</b>	<b>26</b>	<b>9</b>	<b>6</b>

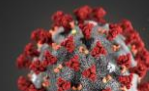
<sup>a</sup> The information presented is based on cases reported to PHAC from 15 to 21 July. These values may change weekly due to updates in disease progression, and disposition.

The overall cumulative hospitalization rate was 23 per 100 000, with the highest rates observed in those 80 years and older (206 per 100 000). There continues to be a downward trend in the number of cases hospitalized and in ICU, across the country (Figure 6).

**Figure 6.** Number of COVID-19 cases in hospital and intensive case units daily in Canada, 21 July 2020<sup>a</sup>



<sup>a</sup> Source: Provincial and Territorial MOH websites as of 21 July



## SURVEILLANCE FOR COVID-19 AMONG PATIENTS HOSPITALIZED IN CANADIAN ACUTE-CARE HOSPITALS

Laboratory-confirmed COVID-19-associated hospitalizations in Canada are monitored through two sentinel hospital-based systems: the Canadian Nosocomial Infection Surveillance Program (CNISP) and the Serious Outcomes Surveillance Network of the Canadian Immunization Research Network (CIRN-SOS).

As of 16 July 2020, CIRN-SOS has collected information on 642 adult (16 years of age and older) patients hospitalized with COVID-19 across eight hospital sites in Ontario, Quebec, and Nova Scotia. As of 22 June 2020, CNISP has collected detailed data on 1 030 adult and pediatric patients hospitalized with COVID-19 in 31 hospitals across nine provinces.

### KEY FINDINGS:

- From both CNISP and CIRN-SOS:
  - Approximately 20% of hospitalized patients have been admitted to the ICU due to COVID-19.
  - Less than 15% of hospitalized patients required mechanical ventilation.
  - Less than 1% of hospitalized patients received extracorporeal membrane oxygenation (ECMO).
  - Overall, all-cause mortality for hospitalized patients was approximately 20%.
    - CNISP reported that of those that died, 82% (161/197) were attributed to COVID-19.
    - CIRN-SOS reported that the median length of hospital stay was 8 days among the 81 patients who died compared to 13 days among the 285 who survived.

### Clinical progression (from CIRN-SOS):

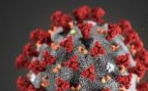
- Among hospitalized patients, median length of hospital stay was 12 days (n=368)
  - Median length of hospital stay was longer among patients admitted to ICU at 20 days (n=89) compared to 9 days (n=279) among patients not admitted to ICU.
- Median time from symptom onset to hospital admission was 5 days (n=524).

### Underlying Medical Conditions:

- 83% of hospitalized patients reported through CNISP had at least one underlying medical condition (722/867).
  - Of those, the most commonly reported medical conditions were:
    - Heart disease (42%), diabetes (25%), lung disease (20%), kidney disease (8%) and cancer (6%)
- 96% of hospitalized adult patients who died during hospital admission reported through CIRN-SOS had at least one underlying medical condition (78/81).
  - Of those, the most commonly reported medical conditions were:
    - Vascular illnesses including hypertension (77%), neuro-muscular disorder (48%), heart illnesses (42%), diabetes (38%) and lung illnesses (35%)

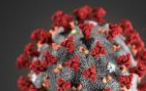
### Source of Acquisition and Exposure Sources:

- CNISP reported the following sources of COVID-19 acquisition (among 1 015 hospitalized patients):
  - 58% (589/1,015) of patients reported community transmission.
  - 33% (336/1 015) of patients acquired COVID-19 through a healthcare exposure other than the



admitting hospital. Of these, 86% (289/336) acquired it in long-term care or retirement homes.

- Nosocomial transmission (acquired within the admitting hospital) remained infrequent (3%, 30/1 015).
- The source of acquisition was unknown for 6% (60/1 015) of patients
- CIRN-SOS reported the following potential sources of exposure in the 14 days prior to illness onset:
  - 27% (63/231) of patients reported having contact with someone COVID-19 positive. Of these, the highest proportion was seen among the younger adults aged from 20-49 years old (41%, 9/22).
  - 15% (34/229) of patients reported attending a gathering of seven or more people.



## TEMPORAL DISTRIBUTION BY EXPOSURE CATEGORY<sup>a</sup>

<sup>a</sup> Detailed case information received by PHAC from P/Ts

Information on exposure is available for 1 287 cases with illness onset in the week of 15 to 21 July. Of these:

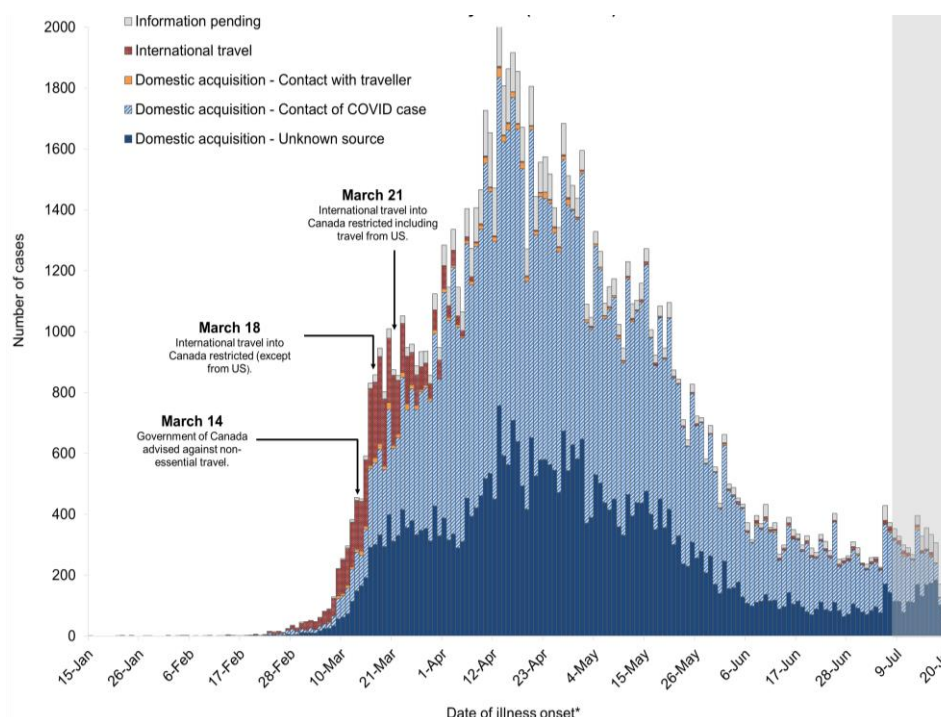
- 20 cases (2%) reported having travelled outside of Canada during the exposure period;
- 286 cases (22%) were due to exposure in Canada to a known COVID-19 case
- 712 cases (55%) were due to exposure in Canada to an unknown source; and
- 263 cases (20%) have information on exposure pending.

Jurisdictions update exposure status on an ongoing basis as case investigations are completed, which may result in information currently pending changing exposure category in the future. Conversely, some cases which have information pending from early in the outbreak may be lost to follow-up, and exposure category may not be identified (Figure 7).

Of the 111 164 cases with information on exposure provided:

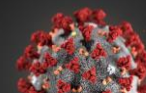
- 4 574 cases (4%) reported having travelled outside of Canada during the exposure period;
- 61 483 cases (55%) reported exposure in Canada to either a known COVID-19 case or to someone who had travelled;
- 39 137 cases (35%) reported exposure in Canada to an unknown source; and
- 5 970 cases (5%) have information on exposure pending.

**Figure 7.** Number of reported COVID-19 cases in Canada, by date of illness onset and exposure category as of 21 July 2020 (n=110 318)



*\*If date of illness onset was not available the earliest of the following dates was used as an estimate in the following order: Specimen Collection Date and Laboratory Testing Date.*

**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.

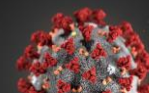


Cumulatively, information on exposure with illness onset indicates that 54% of cases report exposure to a known COVID-19 case.

- From 15 to 21 July, more cases reported exposure to COVID-19 from an unknown source (55%) than a known source (22%) for the first time since mid-March; however, it is important to note the inherent delays in these indicators.
- From 15 to 21 of July, males aged 20-79 reported higher proportions of exposures to a known COVID-19 case.
- Those aged 79 and under have the largest proportion of cases that acquired COVID-19 in Canada from an identified case. In those ages 80 years and older, the largest proportion of cases acquired the infection from Canada from an unknown source (Table 6).

**Table 6.** Proportion of cases reported to PHAC by age group and exposure, as of 21 July

Exposure categories	Age groups				
	0-19	20-39	40-59	60-79	80 or plus
Domestic acquisition - Contact of COVID case	80%	59%	57%	45%	40%
Domestic acquisition - Contact with traveler	2%	1%	1%	0%	0%
Domestic acquisition - Unknown source	14%	32%	33%	41%	49%
Information pending	2%	4%	4%	6%	10%
International travel	2%	4%	4%	7%	1%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



## INTERNATIONAL TRAVEL <sup>a</sup>

<sup>a</sup> Detailed case information received by PHAC from P/Ts

In Canada, the first cases of COVID-19 were attributed to travel-related exposures. As of 21 July, 4% of cases are travel-related exposures, of which 53% are related to travel in males. Of the cases reported to PHAC, 4 574 have been associated with international travel. On 14 March, 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, 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 have decreased from 20.8% (n=3 748) of all cases in March to 0.4% in May (n=106); however travel has increased slightly to 2.5% in July (n=110) (Table 7).

- Since 1 May, the most commonly reported countries of travel included the United States, Mexico, Pakistan, India and Guatemala.

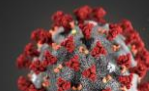
**Table 7.** Number and percentage of COVID-19 cases associated with international travel by month, as of 21 July 2020

Month	Number of COVID-19 cases associated with international travel	Percentage of COVID-19 cases associated with international travel*
January	7	87.5%
February	72	38.9%
March	3748	20.8%
April	326	0.7%
May	106	0.4%
June	182	1.7%
July	127	2.3%
<b>Total</b>	<b>4 574</b>	<b>4.1%</b>

\*Only includes cases that have an onset, specimen collection, or lab test date, as well as information on exposure.

From 15 to 21 July, 20 cases of COVID-19 in Canada associated with international travel were reported to PHAC.

- Of the twenty cases, travel was reported to Indonesia (n= 2), the United States (n=4), Guatemala (n=5), and Mexico (n=9).
- Restrictions of non-essential travel into Canada, continue to aid in the control of imported cases.



## OUTBREAKS

- Outbreaks have been important contributors to the spread of COVID-19 in Canada and point to vulnerabilities in closed and crowded settings. Table 8 identifies common locations of outbreaks identified, as well as the number of cases and deaths associated with each.
- Outbreaks in congregate living, workplace, and agricultural work settings have been detected, namely among long-term care settings, meat processing plants, hospitals, and among farm workers.
- With the gradual reopening of society and activities resuming, outbreaks are becoming linked to social gatherings, particularly in closed settings with close contacts (e.g., retail, personal service, food, and bar settings)
- Outbreaks that have occurred in the last week are primarily seen in food and drink establishments, mass gatherings and in faith communities.

**Table 8.** Total number of COVID-19 outbreaks, cases, and deaths by outbreak setting in Canada as of 22 July 2020<sup>a</sup>

Outbreak setting	Reported number of outbreaks	Reported number of cases	Reported number of deaths
Long-term care and seniors homes	1129	21569	6677
Hospital	143	2009	205
Agricultural work setting (including those with congregate living for workers) <sup>b</sup>	15	1493	4
Shelter	51	505	37
Correctional facility	41	632	4
Other congregate living settings	26	818	5
Meat production/packing facility	16	3060	7
Other industrial settings <sup>c</sup>	15	540	2
Mass gathering <sup>d</sup>	30	471	1
Retail businesses	30	193	1
Food/drink establishments	19	173	0
Rehabilitation facility	7	102	8
Community/Small city/Reserve/Indigenous communities/Rural and remote	39	753	12
Child and youth care <sup>e</sup>	6	46	0

<sup>a</sup>This is not an all inclusive list and is subject to change based on current and active outbreak locations reported.

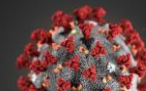
<sup>b</sup>The number of outbreaks in Windsor-Essex have been grouped into one cluster

<sup>c</sup>Other industrial settings include: automotive manufacturing, distribution/processing facilities, worker camps, waste management/recycling, Warehouse, etc.

<sup>d</sup> Mass gatherings are defined as an event which brings together a large number of people; examples of mass gatherings include conferences, funerals, family gatherings, and sporting events

<sup>e</sup>Child and youth care includes daycare centers and day camps.

Note: The following categories have been included for this week's report and includes both current and retrospective data.



## FLUWATCHERS

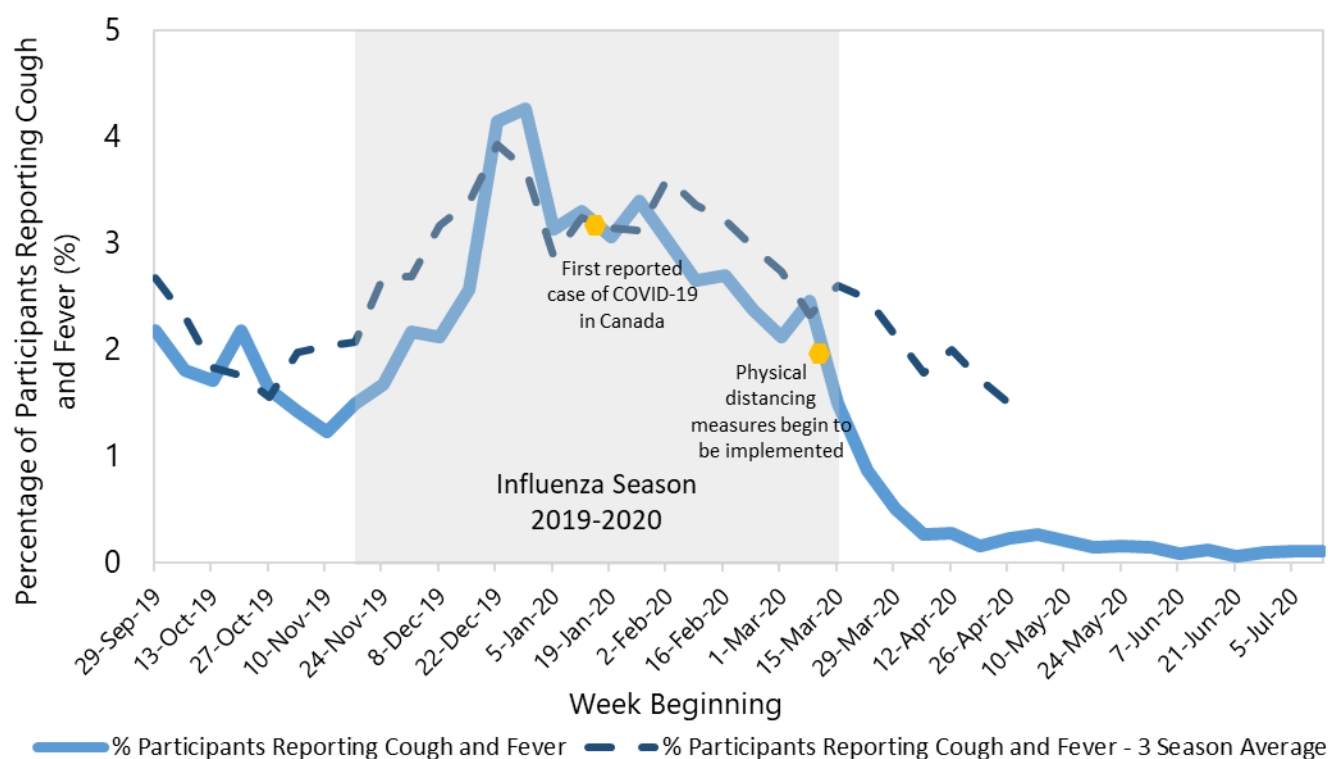
**FluWatchers** is an online health surveillance system that relies on volunteer reports to track spread of flu-like illness (ILI) across Canada. Mild COVID-19 illness presents with symptoms similar to ILI; therefore, FluWatchers is shifting focus to track COVID-19 symptoms over the spring and summer months.

In the week of July 12 to July 18, 2020, 9,927 participants reported into the FluWatchers program. A total of 11 participants (0.1%) reported cough and fever (Figure 8). The participants reporting cough and fever were not restricted to a single jurisdiction. As FluWatchers does not normally collect data during the summer months, this cannot be compared to historical Canadian data. Similar participatory ILI surveillance programs in other countries are also reporting historically low levels. These low levels may be due to a combination of factors, including physical distancing.

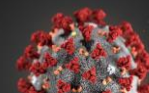
Among the 11 participants reporting cough and fever:

- 8 (73%) sought medical attention;
- 4 (36%) were tested - No tests were positive for COVID-19

**Figure 8.** Percentage of FluWatchers Participants Reporting Cough and Fever (N=9,927 the week of July 12 to July 18 2020)







## LABORATORY TESTING<sup>a</sup>

<sup>a</sup> Source: NML Data for laboratory analyses as of 19 July.

Overall, **3 520 542** people have been tested for COVID-19 in Canada as of 19 July 2020, and the cumulative percent positive to date is **2.9%** (Table 9).

From 13 June to 19 July 2020, **307 663** persons were tested for COVID-19, representing the highest 1-week total during the pandemic. The weekly average percent positivity is **0.9%**. Nationally, Canada's rate of testing increased (+5.3%) from the week before.

- Quebec saw a 34% increase in the number of persons tested (n=66 713), with its weekly percent positivity unchanged from the previous week (1.4%).

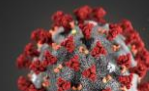
**Table 9.** Summary of COVID-19 testing reported in Canada, by province or territory, between 13 July to 119 July 2020 (N=3 520 542)

Province/Territory	Total number of people tested <sup>a</sup>	Difference from last report	Average # people tested daily	People tested per 1 000 000 pop'n	Weekly Percent positivity
British Columbia	199 519	14 017	2058	0.4	1.2%
Alberta	485 822	38 641	5363	1.2	1.9%
Saskatchewan	71 011	5 941	922	0.8	1.4%
Manitoba	72 334	4 628	327	0.2	0.3%
Ontario	1 805 206	169 087	24 155	1.7	0.5%
Quebec	738 437	66 713	9530	1.1	1.4%
Newfoundland and Labrador	21 976	1 573	225	0.4	0%
New Brunswick	43 077	1 940	277	0.4	0.2%
Nova Scotia	60 915	2 496	357	0.4	<0.1%
Prince Edward Island	16 888	2 366	366	2.3	0.1%
Yukon	1 391	64	9	0.2	0%
Northwest Territories	2 644	125	18	0.4	0%
Nunavut	1 246	72	10	0.3	0%
<b>Total<sup>b</sup></b>	<b>3 520 542</b>	<b>307 663</b>	<b>43 617</b>	<b>1.2</b>	<b>0.9%</b>

<sup>a</sup> For provinces and territories which report the number of tests completed, a formula is used to estimate the number of unique people tested. <sup>b</sup>

Includes 76 repatriated travellers tested.

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



## MODELLING

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

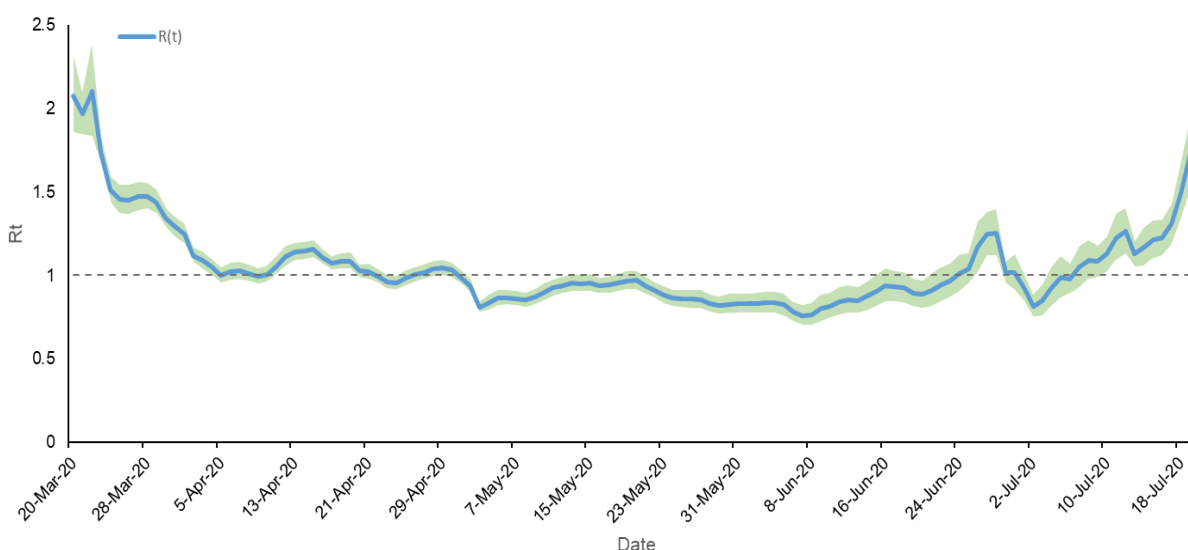
$R_t$  is the time variable reproduction rate, representing the average number of new infected people for each infected person. If  $R_t$  is less than 1 at a particular time ( $t$ ), then the average number of people infected by one infected person is less than one, so the epidemic is being brought 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 into the population. The higher the  $R_t$  value, the faster the disease is spreading, which leads to an increase in incidence of new cases.

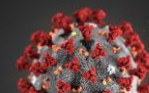
However, as the epidemic continues, the  $R_t$  may not capture the current state of the epidemic with low case burden and the value must be interpreted based on the current landscape. The  $R_t$  can easily fluctuate when case numbers are low. It is also an average  $R_t$  for a population and does not point to local outbreaks driving case counts. Since the method used to calculate  $R_t$  is highly sensitive to the 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/territory as a whole.

Figure 9 shows the  $R_t$  over time:

- Community transmission remains low in most of the country and recent fluctuations in Canada's  $R_t$  reflect a small number of localised outbreaks.

**Figure 9.** Reproductive rate in Canada based on date of case report, 21 July 2020





## FORECASTING

### Canada's approach to modelling:

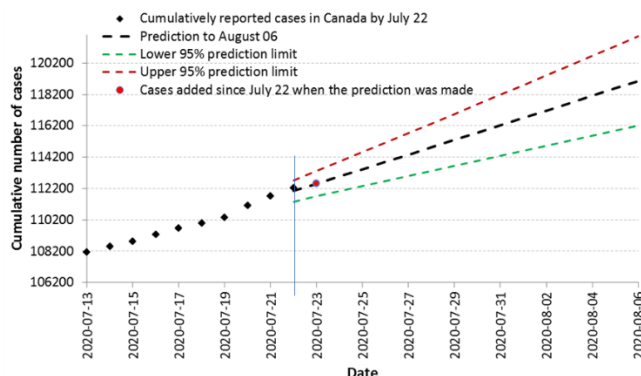
Models cannot predict the course of the COVID-19 pandemic, but can help us understand all possible scenarios, support decisions on public health measures and help the health care sector plan for these scenarios.

**Forecasting models** use data to estimate how many new cases can be expected in the coming week. Figure 10 below shows the projected number of cases and deaths in Canada, with a 95% prediction interval calculated using available data up until 22 July 2020.

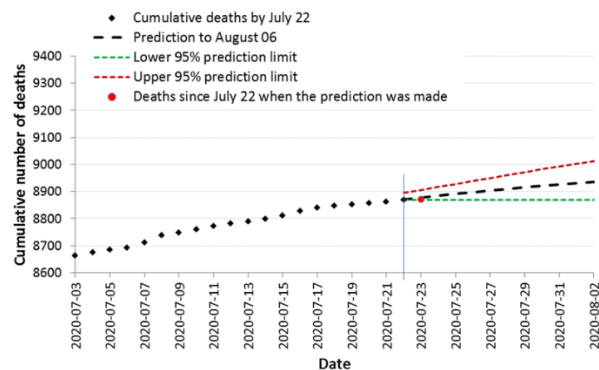
- According to forecasting, 116 220 to 121 900 cumulative reported cases and 8 870 to 9 050 cumulative numbers of deaths are expected by 6 August.
- The increased number of daily reported cases is predicted to be 460 cases to 475 cases per day during the period from 22 July to 6 August. The predicted cumulative deaths suggest a stable small numbers of daily deaths with an average of five to six deaths per day, during the period of 22 July to 6 August.
- The black dots represent data (cumulative cases and for cumulative deaths) prior to 22 July and the dashed lines show the predicted trajectories beyond 22 July. It is important to communicate the underlying uncertainties around modelling. The red and green lines represent the upper and lower limits with 95% confidence. If the forecasts perform well, observed cases should fall between the red and green lines.

**Figure 10.** Projected numbers to 6 August 2020 and 95% prediction intervals based on data as reported by 22 July 2020

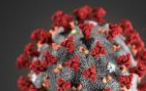
Cumulative cases by 6 August: from 116 220 to 121 900  
based on data by 22 July



Cumulative deaths by 6 August: from 8 870 to 9 050  
based on data by 22 July



For more information, please visit: <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/covid-19-using-data-modelling-inform-public-health-action.html>

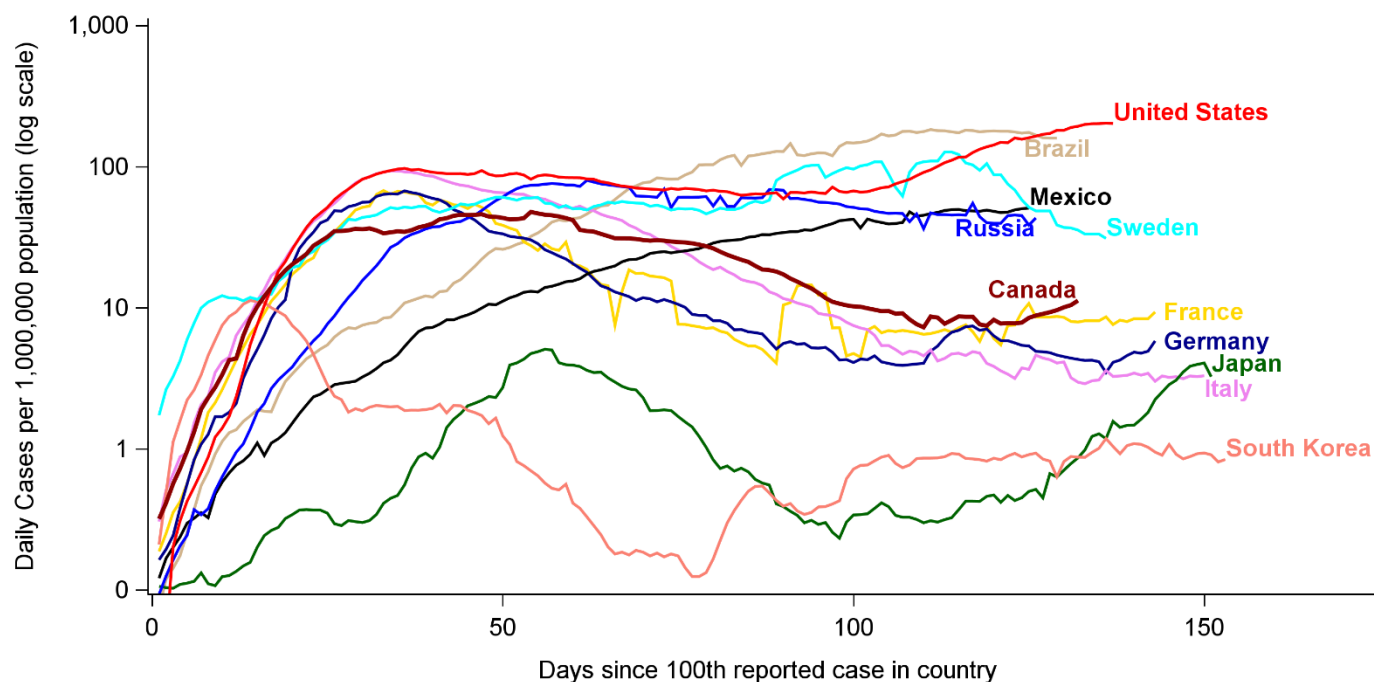


## INTERNATIONAL

- As of 21 July, globally, there are over 14.6 million cases of COVID-19 with over 610 000 reported deaths. Since 15 July, there has been over 200 000 cases reported globally each day.
- The global single day record occurred on 15 July with over 250 000 cases reported.
- The region of the Americas continues to account for the majority of cases globally with the United States and Brazil reporting the largest proportion of cases.
- Canada's daily cases account for less than 0.5% of all cases reported globally.

The 7-day moving average of new daily COVID-19 cases in Canada compared to other countries can be seen in **Figure 11**.

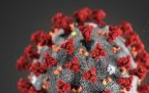
**Figure 11.** Daily new cases of COVID-19 in Canada compared to other countries as of 21 July 2020 (7-day moving average, population adjusted)



Up-to-date country-specific risk levels may be found on [travel health notices](#).

For more information on COVID-19 internationally, please refer to the [World Health Organizations' COVID-19 Situation Report](#).

Further information on geographical distribution of COVID-19 cases, can be found on the [global map](#).



## ANNEX

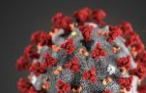
**Table A1.** Number of COVID-19 cases, recoveries, and deaths reported in Canada by province or territory, as of 21 July 2020

Province/Territory	Total cases	Recovered	Total deaths
British Columbia	3 328	2 873	189
Alberta	9 728	8 363	172
Saskatchewan	970	813	15
Manitoba	366	318	7
Ontario	37 942	33 605	2 753
Quebec	57 796	50 298	5 658
Newfoundland and Labrador	263	259	3
New Brunswick	170	163	2
Nova Scotia	1 067	1 003	63
Prince Edward Island	36	33	0
Yukon	13	11	0
Northwest Territories	5	5	0
Nunavut	0	0	0
<b>Canada<sup>a</sup></b>	<b>111 697</b>	<b>97 757</b>	<b>8 862</b>

<sup>a</sup> Includes 13 cases identified in repatriated travellers (Grand Princess Cruise ship travellers) 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 21 July 2020

Province/Territory	Cumulative (per 100 000)	Week 15-21 July (per 100 000)
British Columbia	64.0	3.1
Alberta	220.4	33.1
Saskatchewan	82.5	6.5
Manitoba	26.7	1.8
Ontario	261.8	6.4
Quebec	675.3	13.4
Newfoundland and Labrador	46.6	0.4
New Brunswick	21.9	0.0
Nova Scotia	109.5	0.1
Prince Edward Island	23.4	0.0
Yukon	21.4	0.0
Northwest Territories	10.0	0.0
Nunavut	0.0	0.0



**Table A3.** Age and sex distribution of COVID-19 cases reported to PHAC, as of 21 July 2020

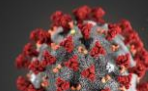
Age groups	Cumulative						Week 15-21 July					
	Female			Male			Female			Male		
	n	%	Rate	n	%	Rate	n	%	Rate	n	%	Rate
≤ 19	4 301	7	108.3	4 172	8	100.4	235	14	5.9	213	12	5.1
20-29	8 630	14	351.5	7 576	15	286.2	510	30	20.8	532	30	20.1
30-39	8 343	14	323.8	7 344	15	281.7	294	17	11.4	368	21	14.1
40-49	9 262	15	381.3	7 433	15	311.2	206	12	8.5	201	11	8.4
50-59	9 117	15	345.4	7 518	15	287.7	191	11	7.2	189	11	7.2
60-69	5 292	9	224.6	5 465	11	242.6	129	7	5.5	152	9	6.7
70-79	4 046	7	267.9	3 934	8	289.1	65	4	4.3	66	4	4.9
80+	12 610	20	1 296.6	5 679	12	870.4	97	6	10.0	62	3	9.5
<b>Total</b>	<b>61 601</b>	<b>100</b>	<b>325.7</b>	<b>49 121</b>	<b>100</b>	<b>263.0</b>	<b>1 727</b>	<b>100</b>	<b>9.1</b>	<b>1 783</b>	<b>100</b>	<b>9.5</b>

**Table A4.** Age and sex distribution of hospitalized COVID-19 cases reported to PHAC as of 21 July 2020

Age group	Cumulative		Week 8-14 June		Week 15-21 July	
	Female	Male	Female	Male	Female	Male
≤ 19	56	45	3	0	1	3
20-39	336	286	9	6	19	4
40-59	705	914	11	12	6	10
60-79	1 374	1 636	21	20	26	24
80+	1 996	1 346	24	13	21	16
<b>Total</b>	<b>4 467</b>	<b>4 227</b>	<b>68</b>	<b>51</b>	<b>73</b>	<b>57</b>

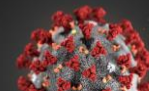
**Table A5.** Age and sex distribution of COVID-19 cases admitted to ICU, reported to PHAC as of 21 July 2020

Age group	Cumulative		Week 8-14 July		Week 15-21 July	
	Female	Male	Female	Male	Female	Male
≤ 19	12	12	0	0	0	1
20-39	86	102	2	2	0	1
40-59	247	435	1	2	0	6
60-79	358	700	3	8	1	14
80+	134	124	1	0	1	4
<b>Total</b>	<b>837</b>	<b>1 373</b>	<b>7</b>	<b>12</b>	<b>2</b>	<b>26</b>



**Table A6.** Age and sex distribution of deceased COVID-19 cases reported to PHAC as of 21 July 2020

Age group	Cumulative		Week 8-14 July		Week 15-21 July	
	Female	Male	Female	Male	Female	Male
≤ 19	1	0	0	0	0	0
20-39	7	17	0	0	0	0
40-59	98	154	0	0	1	0
60-79	902	1330	0	5	1	2
80+	3 782	2 547	5	9	7	4
<b>Total</b>	<b>4 790</b>	<b>4 048</b>	<b>5</b>	<b>14</b>	<b>9</b>	<b>6</b>



## TECHNICAL NOTES

The data in the report are based on information from various sources described below. The information presented for case-based analyses is that available as of **21 July at 8 p.m. EDT**. The information presented for trend analyses is that available as of **21 July at 8 p.m. EDT**. The information presented for laboratory analyses is that available as of **21 July at 8 p.m. EDT**.

### DATA SOURCES AND DATA CAVEATS

#### Provincial and territorial case counts

Provincial and territorial (P/T) information on case counts, recoveries, and deaths associated with COVID-19 are collected from publicly available P/T websites.

- National 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.
- All provinces with the exception of Quebec, report on probable case definitions.

#### Laboratory information

Laboratory data on number of people tested per P/T are received from the National Microbiology Laboratory.

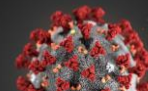
- Laboratory testing numbers may be an underestimate due to reporting delays and may not include additional sentinel surveillance or other testing performed. They are subject to changes as updates are received.
- Some provinces may report the number of tests conducted, and not the number of people tested. In this case, a formula is used to estimate the number of unique people tested.

#### Epidemiological data received by PHAC

Some of the epidemiological data for this report are based on detailed case information received by PHAC from 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 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.





- Missing data for sex, age, hospitalized, ICU admissions, and deceased were not included in calculations. Provinces and territories may define gender differently and some may be referring to biological sex.

Case severity is likely under-estimated due to underreporting of related variables, as well as events that may have occurred after the completion of public health reporting, therefore not captured in the case report forms.

## Outbreak data

Reporting delays and gaps in information that is 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 provincial/territorial public health agency websites. There are several important limitations to these data:

- A national standardized outbreak definition does not exist. Clusters are defined and vary according to P/T.
- 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 March 12 2020.
- Case-level data are generally not available for outbreaks detected via non-traditional data sources. Information presented is at the aggregate level only.
- The methods for defining an outbreak are currently in development and may change over time

## Population data

- Canadian population data from Statistics Canada Population estimates on 1 July 2019 are used for age-standardized rate calculations.

## International data

International data are retrieved from various reputable data sources, mainly the European Centre for Disease Prevention and Control (ECDC) Situation update, Johns Hopkins Resource Center and various country's ministry of health website.

- 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.