Coronavirus Disease 2019 (COVID-19)

DAILY EPIDEMIOLOGY UPDATE

Updated: April 3, 2020, 11:00 AM EST

Highlights

Canada

- **11,747 cases including 152 deaths** have been reported in Canada (overall case fatality rate of 1.3%).
- **290,570** people have been tested for COVID-19 in Canada which corresponds to a test rate of 7,730 per million population. The percent positivity is 4.4%.
- Data reported in the coming days and weeks will continue to be critical in determining the trajectory of Canada's epidemic.
- Further information on real-time distribution of cases and deaths can be found in the interactive map of COVID-19 in Canada.
- The epidemiological summary is based on more detailed information from case report forms that are available for 65% of the cases (n=7,607)*.
  - **Age and gender:**
    - The highest proportion of cases are being reported among people 40-59 years of age (36%), followed by those 20-39 years of age (29%) and 60-79 years of age (25%).
    - Only a small proportion of cases (5%) have been reported among people ≤ 19 years of age.
    - 51% of cases were reported among females.
  - **Hospitalizations**: Hospitalization data are available for 4,094 (54%) of all cases. Among these, 618 have been hospitalized, including 187 in ICU.
    - While 29% of the cases are 60 years of age and older, these cases represent the highest proportion of hospitalizations (60%) and ICU admissions (59%).
    - Ten hospitalizations and two admissions to ICU were reported in individuals ≤ 19 years of age.
  - **Exposures:**
    - 89% of newly identified cases (within the last seven days) are related to community transmission.
    - 68% of cases over the duration of the outbreak are related to community transmission.

International

- 204 countries/jurisdictions have reported cases of COVID-19.
- The United States is now reporting the highest number of cases, followed by Spain, Italy, Germany, and China.

*Data Notes

As of April 3, 2020 11:00 AM EST, detailed data on cases have been received for 7,607 cases (65% of reported cases). Data on these cases are preliminary and may have missing values.

Provinces and territories may not routinely update detailed data. Data on hospitalization status is unknown for 54% of all cases. As well, PHAC does not receive routine updates on patient status.

Furthermore, testing practices vary by province/territory and have changed over time which can affect case counts.

Laboratory testing numbers may be an underestimate due to reporting delays and may not include additional sentinel surveillance or other testing performed.

Canadian epidemiology

Table 1. Summary of COVID-19 cases reported in Canada by location, April 3, 2020, 11:00 AM EST.

Location	Total Cases	Total Confirmed	Total Probable	Total Deaths	New cases	% change	People tested per 1,000,000	People Tested
BC	1,121	1,121	0	31	55	5%	7,873	39,926
AB	968	968	0	13	97	11%	13,062	57,096
SK	206	206	0	3	13	7%	9,979	11,720
MB	167	152	15	1	40	31%	8,104	11,098
ON	3,255	3,255	0	67	863	36%	4,668	67,998
QC	5,518	5,518	0	36	907	20%	9,849	83,570
NL	183	183	0	1	8	5%	8,954	4,670
NB	91	91	0	0	10	12%	4,037	3,136
NS	193	193	0	0	20	12%	9,058	8,799
PE	22	22	0	0	1	5%	4,161	653
YK	6	6	0	0	0	0%	18,162	742
NT	4	4	0	0	2	100%	21,617	969
NU	0	0	0	0	0	0%	4,977	193
Repatriated travellers	13	13	0	0	0	0%		
Total	11,747	11,732	15	152	2,016	21%	7,730	290,570

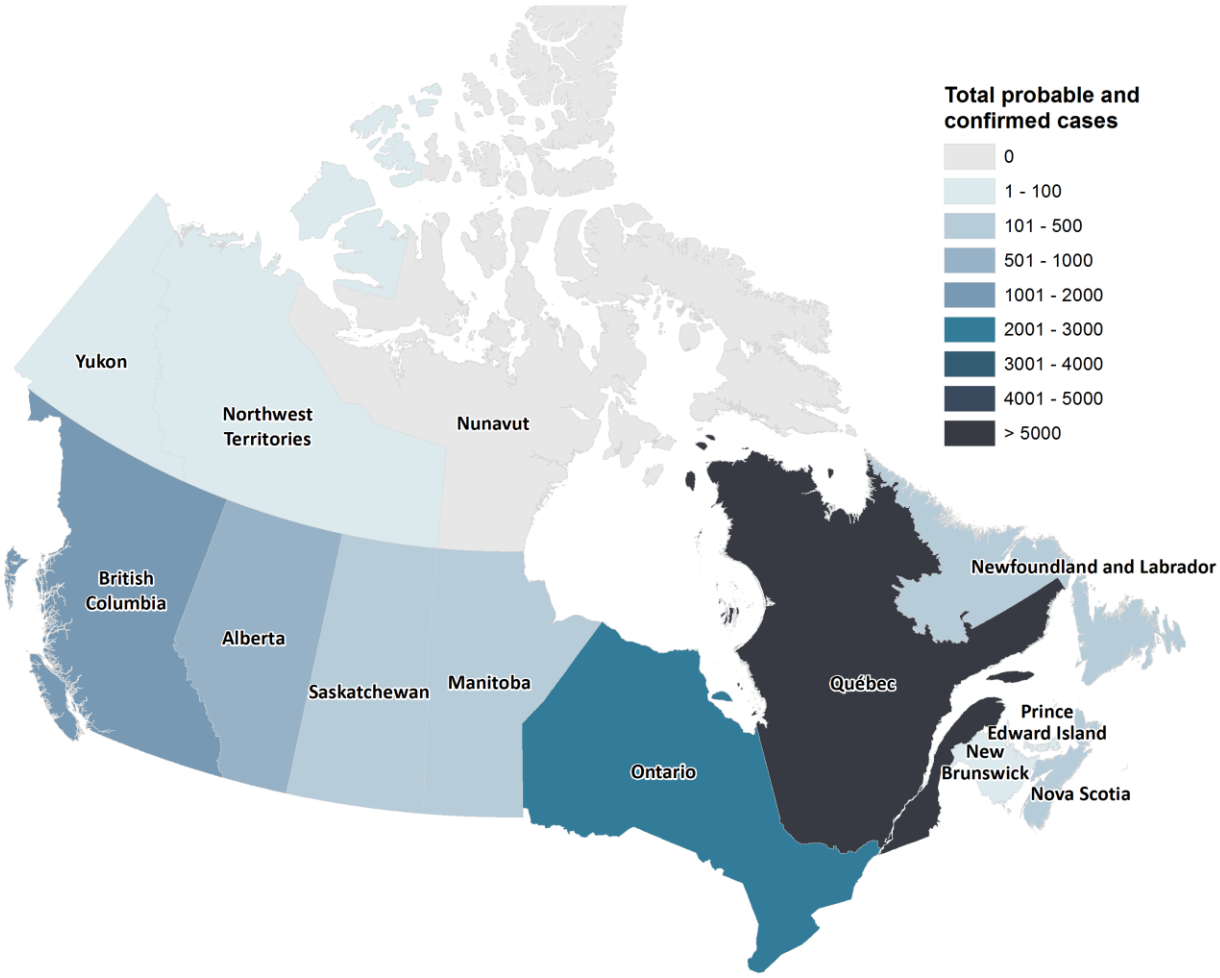
Notes: *New cases are those reported since the previous report. Probable cases have tested positive at a provincial laboratory and are awaiting confirmatory testing results from the National Microbiology Laboratory. Laboratory testing numbers may represent an underestimation due to reporting delays and may not include additional sentinel surveillance or other testing conducted in the P/T. For QC, the significant increase in confirmed cases is explained by the fact that since March 22, 2020, cases tested positive by hospital laboratories are now considered confirmed. They no longer need validation by the Laboratoire de santé publique du Québec (LSPQ).*

A total of 290,570 people have been tested for COVID-19 in Canada. This corresponds to a test rate of 7,730 per million population.

- Testing volumes vary across the country.
- Percent positivity is 4.4%.

Real-time data on the distribution of cases and deaths in Canada can be found in the interactive map of COVID-19.

Figure 1. Map of COVID-19 cases reported in Canada by province/territory, April 3, 2020, 11:00 AM EST (n=11,285)

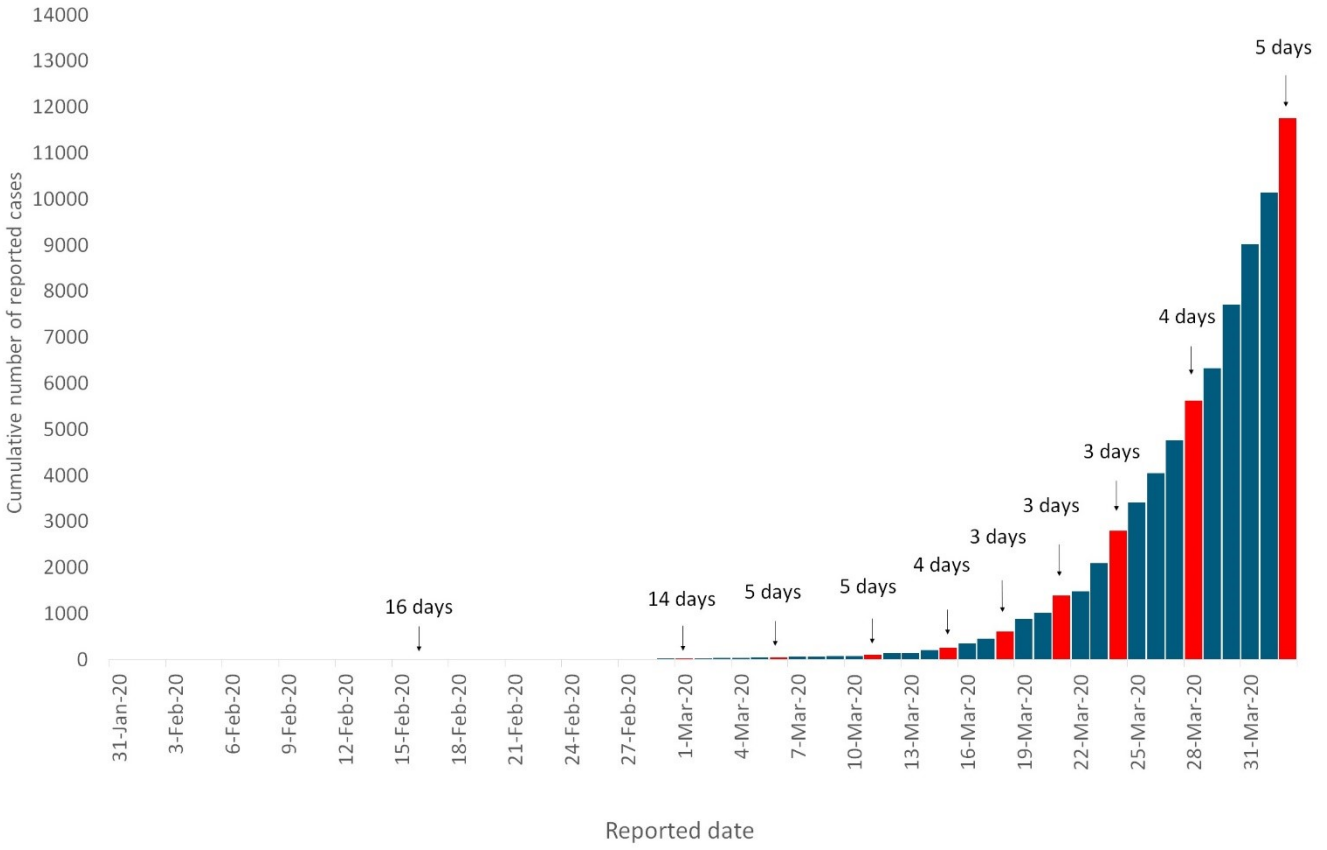


Data source: Surveillance and Risk Assessment, Epidemiology Update. Map Created by NML, Geomatics

The distribution of cumulative number of cases by report date (using publicly available PT data) can be seen in **Figure 2.**

- The epidemic doubling period of COVID-19 cases in Canada, defined as the number of days between doubling of cumulative case counts is marked with red bars.
    - Reported cases double at a rate of every three to five days since March 1.

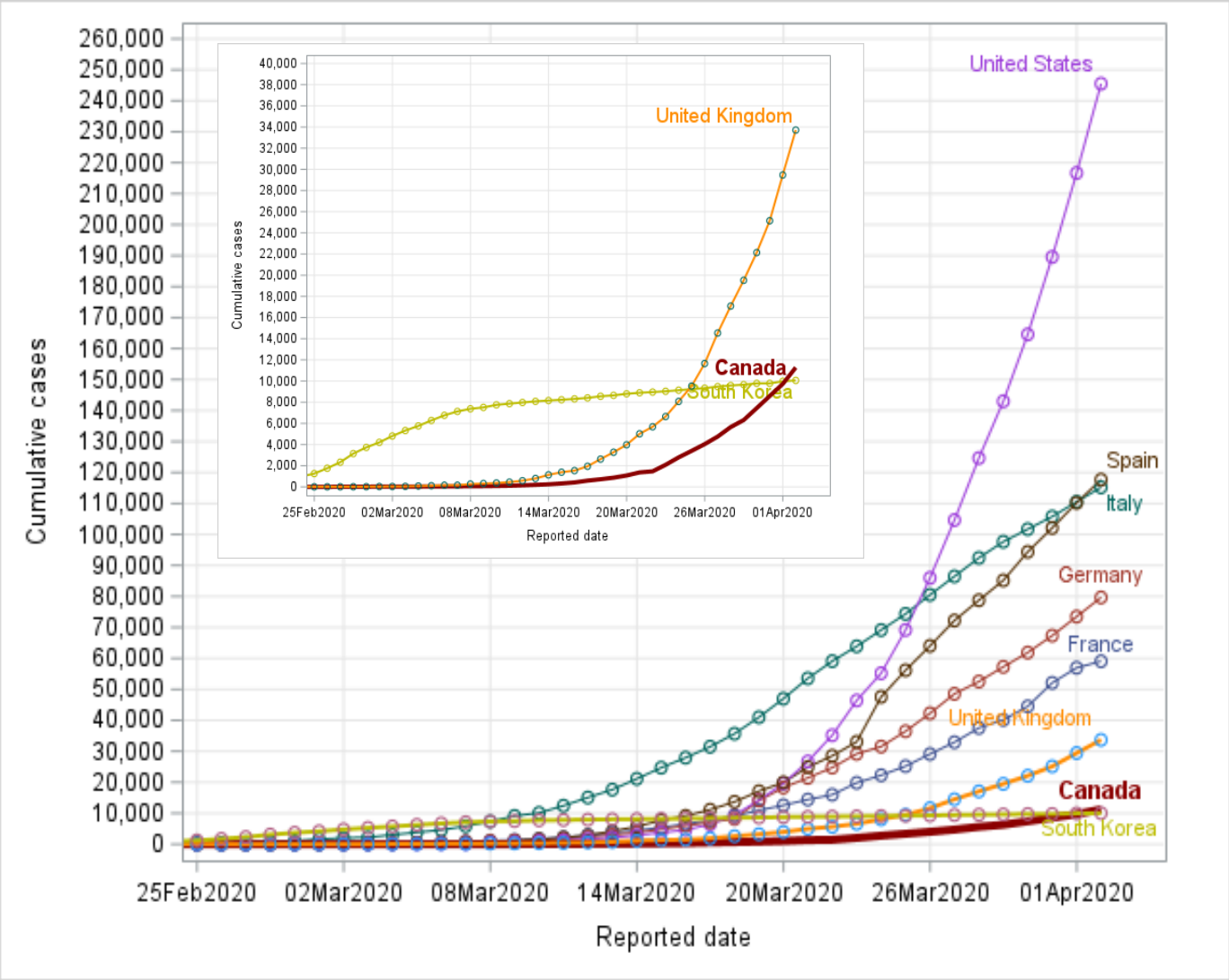
Figure 2. Doubling time of cumulative number of reported COVID-19 cases in Canada by date of report, April 3, 2020, 11:00 AM EST (n=11,747)



A summary of the cumulative cases of COVID-19 in Canada compared to other countries by date of report can be seen in **Figure 3**.

- Data reported in the coming days and weeks will continue to be critical in determining the trajectory of Canada's epidemic.

Figure 3. Cumulative cases of COVID-19 in Canada compared to other countries by date of report, April 3, 2020, 11:00 AM EST.



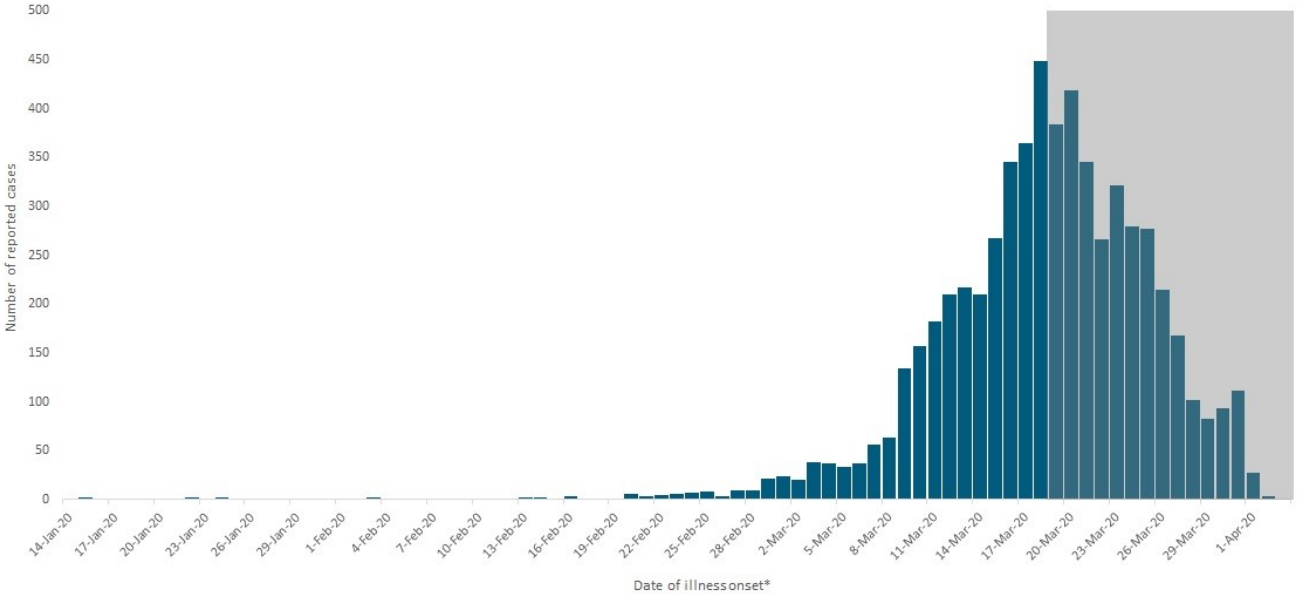
Note: *At this time, results from international comparisons should be interpreted with caution. The number of tests conducted and indications for testing by country all have a large influence on total reported case counts. Therefore, the data displayed does not necessarily represent the true size of outbreak within each country.*

Please note that this section onwards of the epidemiology update is based on limited data from provincial/territorial case report forms (n=7,607).

Temporal Distribution

A summary of the distribution of cases by week of symptom onset can be found in **Figure 4**.

Figure 4. New COVID-19 cases in Canada by date of symptom onset, April 3 2020, 11:00 AM EST (n=6,046)



*Episode date corresponds to the earliest date reported according to the following order: Symptom Onset Date, Specimen Collection Date, Laboratory Testing Date, Date reported to the province/territory or Date reported to PHAC. Cases that do not include any of these date types have been excluded from the curve.

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.

Demographic Distribution

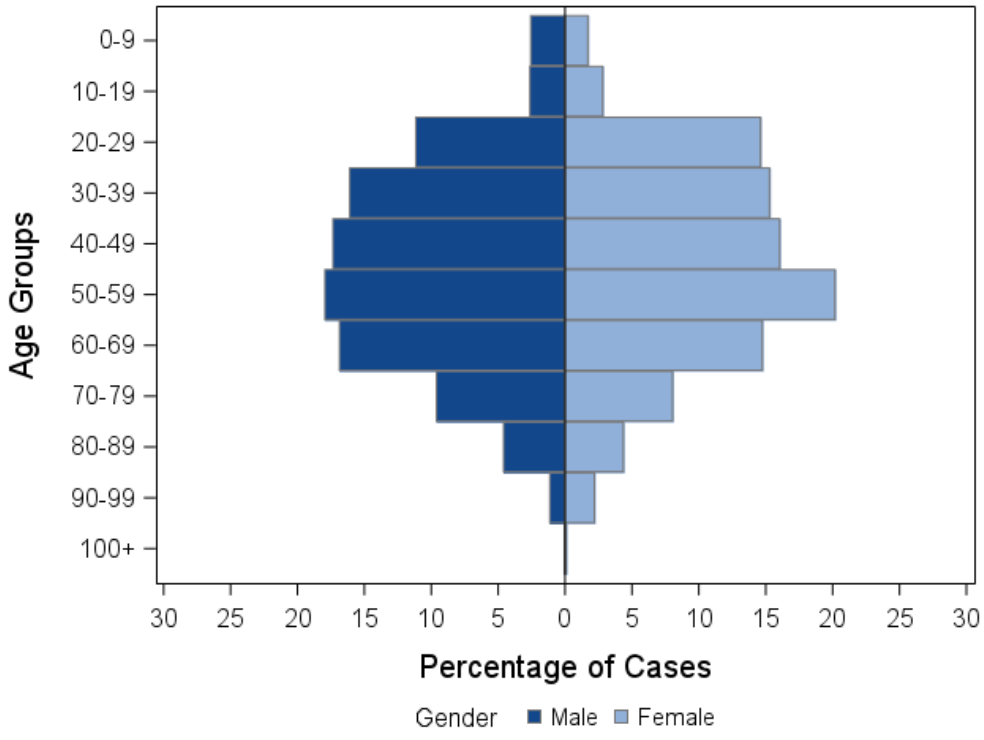
A summary of the demographics of reported cases can be found in **Table 2** and **Figure 5**.

- The highest proportion of cases occurred in individuals 40-59 years of age (36%), followed by those 20-39 years of age (29%) and 60-79 years of age (25%).
- Only 5% of cases have occurred in individuals ≤ 19 years of age.
- 51% of cases were reported among females.

Table 2. Demographic characteristics of COVID-19 cases reported in Canada, April 3, 2020, 11:00 AM EST

Characteristics		
Demographics	n=7,607	
Age (in years)		
Median	49	
Range	0-105	
Age groups	n=7,240	
≤ 19	351	(5%)
20-39	2,071	(29%)
40-59	2,558	(36%)
60-79	1,776	(25%)
80+	454	(6%)
Gender	N=7,551	
Female	3,876	(51%)
Male	3,675	(49%)

Figure 5. Age and sex distribution of COVID-19 cases reported in Canada, April 3, 2020, 11:00 AM EST (n=7,203)



Clinical Presentations and outcome

A summary of the clinical presentations of cases can be found in **Table 3**. The date of symptom onset for cases ranged from January 15, 2020 to April 1, 2020.

- Cough, headache and general weakness are the most common symptoms reported.
- 237 cases have been clinically or radiologically diagnosed with pneumonia. Of those who reported age, 56% are individuals 60 years of age and over, with individuals 60-79 representing 46%.
- The most commonly reported pre-existing health conditions amongst cases were respiratory disease, cardiac disease, and diabetes.
- Thirty six cases have occurred in pregnant women.

Table 3. Clinical presentation summary of COVID-19 cases reported in Canada, April 3, 2020, 11:00 AM EST

Clinical Presentations		
Symptoms	n=3,521	
Cough	2,721	(77%)
Headache	2,000	(57%)
General weakness	1,974	(56%)
Pre-Existing Conditions	n=3,427	
Respiratory disease	403	(12%)
Cardiac	353	(10%)
Diabetes	286	(8%)
Other	678	(20%)
Complications	n=2,096	
Pneumonia	237	(11%)
Dyspenea	141	(7%)
Abnormal lung auscultation	136	(6%)
Other	275	(13%)

Hospitalization Status (based on data available for 4,094 (54%) of all cases)

A total of 618 cases have been hospitalized including 187 in ICU (**Table 4** and **Figure 6**).

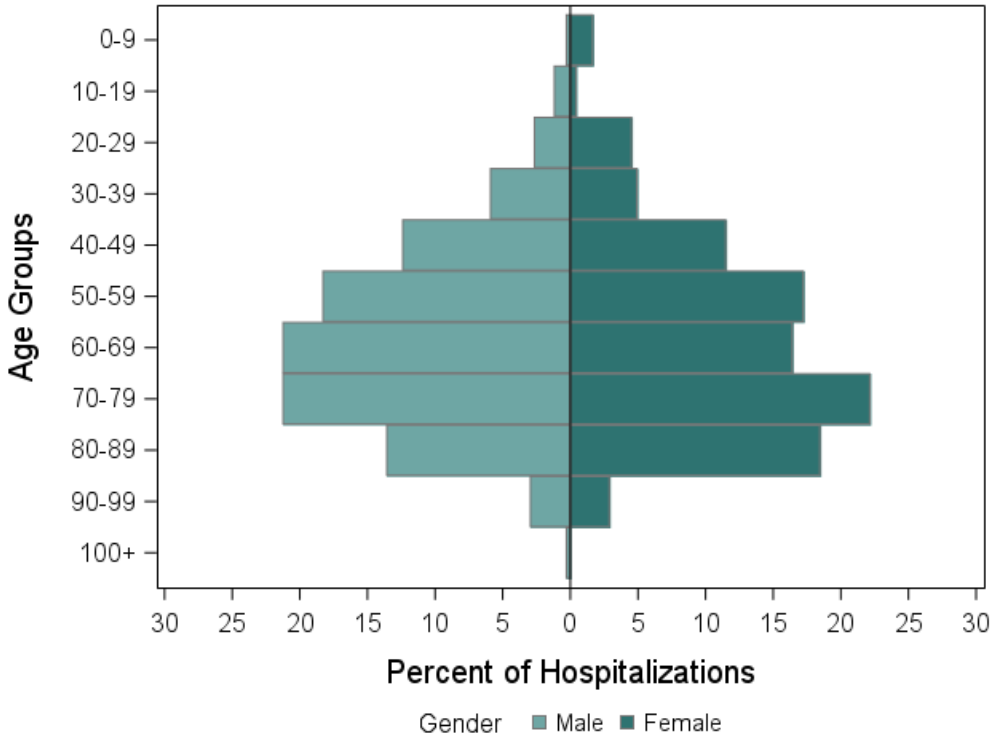
- 60% of hospitalizations and 59% of ICU admissions occurred among individuals ≥ 60 years of age.
    - The highest proportion of hospitalizations (41%) and ICU admissions (49%) being reported among individuals 60-79 years of age.
- Ten hospitalizations and two ICU admission were reported in individuals ≤ 19 years of age
- Males represented a higher proportion of hospitalizations (58%) and ICU admissions (64%) than females.

Table 4. Summary of hospitalized cases of COVID-19 reported in Canada with a submitted case report form, April 3, 2020, 11:00 AM EST

Severe Cases				
Overall Summary Hospitalizations			n=4,094	
Hospitalizations*			618	(15%)
Hospitalizations in ICU			187/618	(30%)
Hospitalizations requiring mechanical ventilation[¥]			76/618	(12%)
Breakdown by:	**Hospitalizations**		**Admitted to ICU**	
Age groups	n=584		n=176	
≤ 19	10	(2%)	2	(1%)
20-39	52	(9%)	12	(7%)
40-59	174	(30%)	56	(32%)
60-79	238	(41%)	88	(50%)
80+	110	(19%)	18	(10%)
Gender	n=615		n=187	
Female	259	(42%)	68	(36%)
Male	356	(58%)	119	(64%)

*Hospitalizations include admission to hospital and emergency room
[¥]Patients requiring mechanical ventilation are classified as hospitalized, although ventilation may occur in other settings.
Note: ICU refers to Intensive Care Unit. PHAC does not receive routine updates on patient status.

Figure 6. Age and sex distribution of hospitalized COVID-19 cases reported in Canada, April 3, 2020, 11:00 AM EST (n=583)



Exposure History

A summary of the exposure history of cases can be found in **Figure 7** and **Table 5**.

- 89% of newly identified cases (within the last seven days) are related to community transmission.
- 68% of cases over the duration of the outbreak are related to community transmission.
- The number of cases related to community transmission overtook travel-related cases on March 15, 2020.

Figure 7. Number of newly reported COVID-19 cases in Canada by possible exposure category, April 3, 2020, 11:00 AM EST (n=7,607)

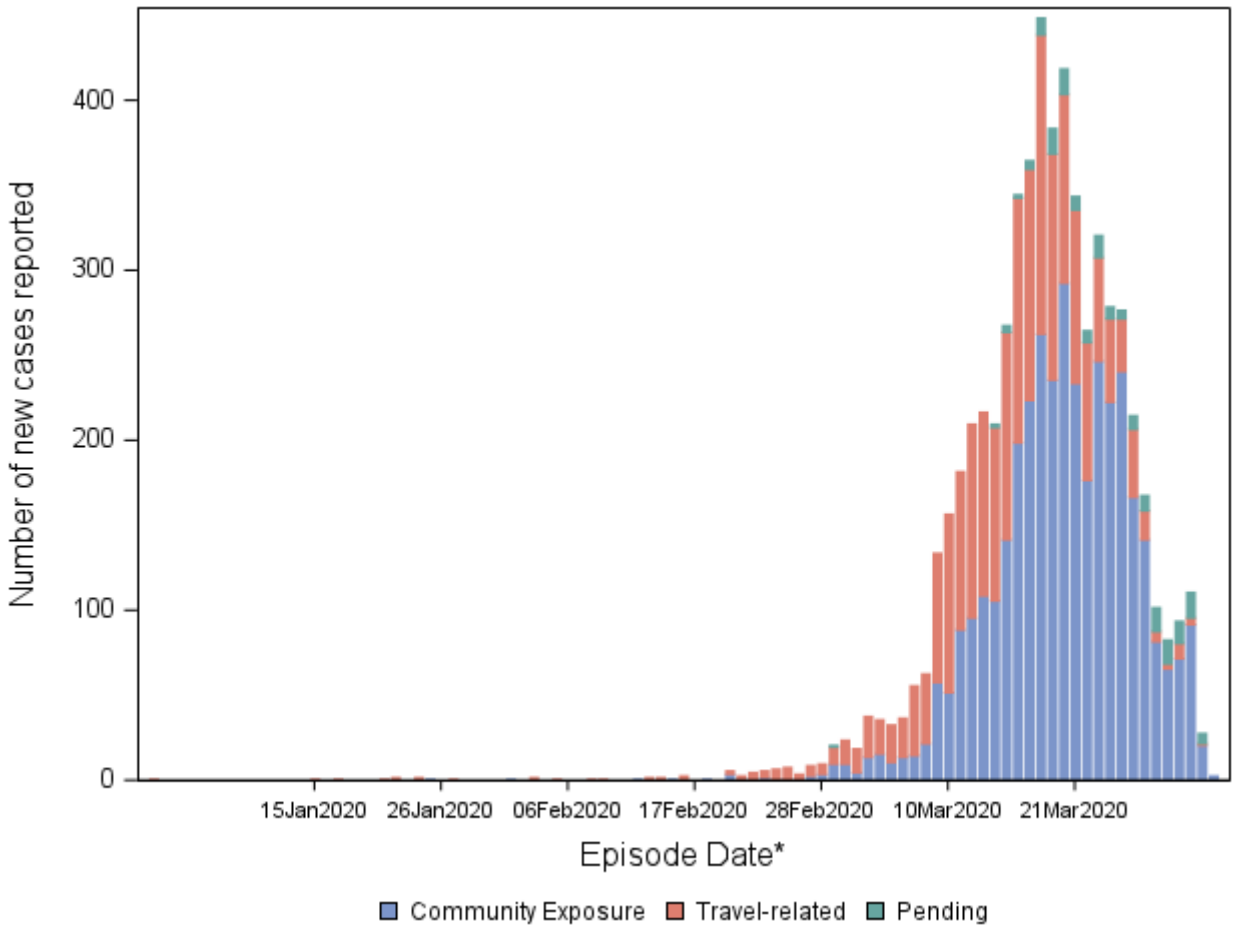


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Table 5. Possible exposure setting of COVID-19 cases reported in Canada, April 3, 2020, 11:00 AM EST.

Possible Exposure Setting	n=7,607	
Travel-Related	n=2,265	30%
History of international travel	1,978	87%
Close contact of an international traveller	287	13%
Community	n=5,151	68%
Case exposed in a healthcare facility*	632	12%
Close contact with case in a household	281	5%
Case lives in a long-term care facility	86	2%
Close contact with case in a workplace	70	1%
Case attends/works at a school or daycare	51	1%
Case has no known exposures	4,031	78%
Pending	n=191	3%

*Includes healthcare workers and exposure in health care setting

United States

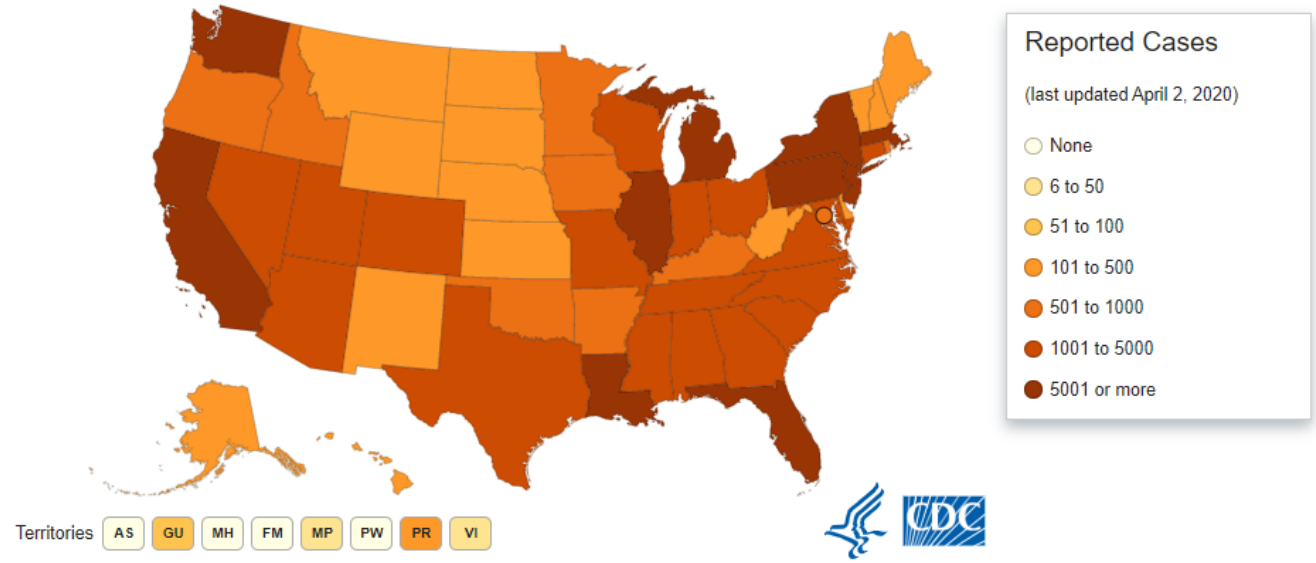
There are 245,540 cases and 6,053 (overall case fatality rate of 2.5%) deaths reported in the United States as of April 3, 2020 at 10:00 AM*.

The US CDC has information on 213,144 cases (4,513 deaths) reported from 55 jurisdictions (50 states, District of Columbia, Puerto Rico, Guam, Northern Marianas, and US Virgin Islands).

- Exposure details are known for 4,389 cases:
  - Travel-related: 1,144
  - Close contact: 3,245
- New York State accounts for 40% of cases in the US; cases in New Jersey are also starting to rise, and the state now comprises 10% of the US case total.
- 85% of jurisdictions reporting cases are reporting community transmission.
- As of April 2, 2020, the US CDC and US public health labs have have reported testing 168,458 specimens.

*Information source: European Center for Disease Prevention and Control.

Figure 8. States reporting cases of COVID-19, April 3, 2020, 11:00 AM EST



Source: US CDC website

International

- The United States is now the epicentre of the global pandemic (**Table 6**).
- 204 countries/jurisdictions outside mainland China have reported cases of COVID-19 (**Figure 9**).
    - Six countries (United States, Spain, Italy, Germany, France, and Iran) make up the majority of international cases outside of mainland China.
    - Iran is reporting the majority of cases in Asia (excluding mainland China), followed by Turkey*, South Korea and Israel.

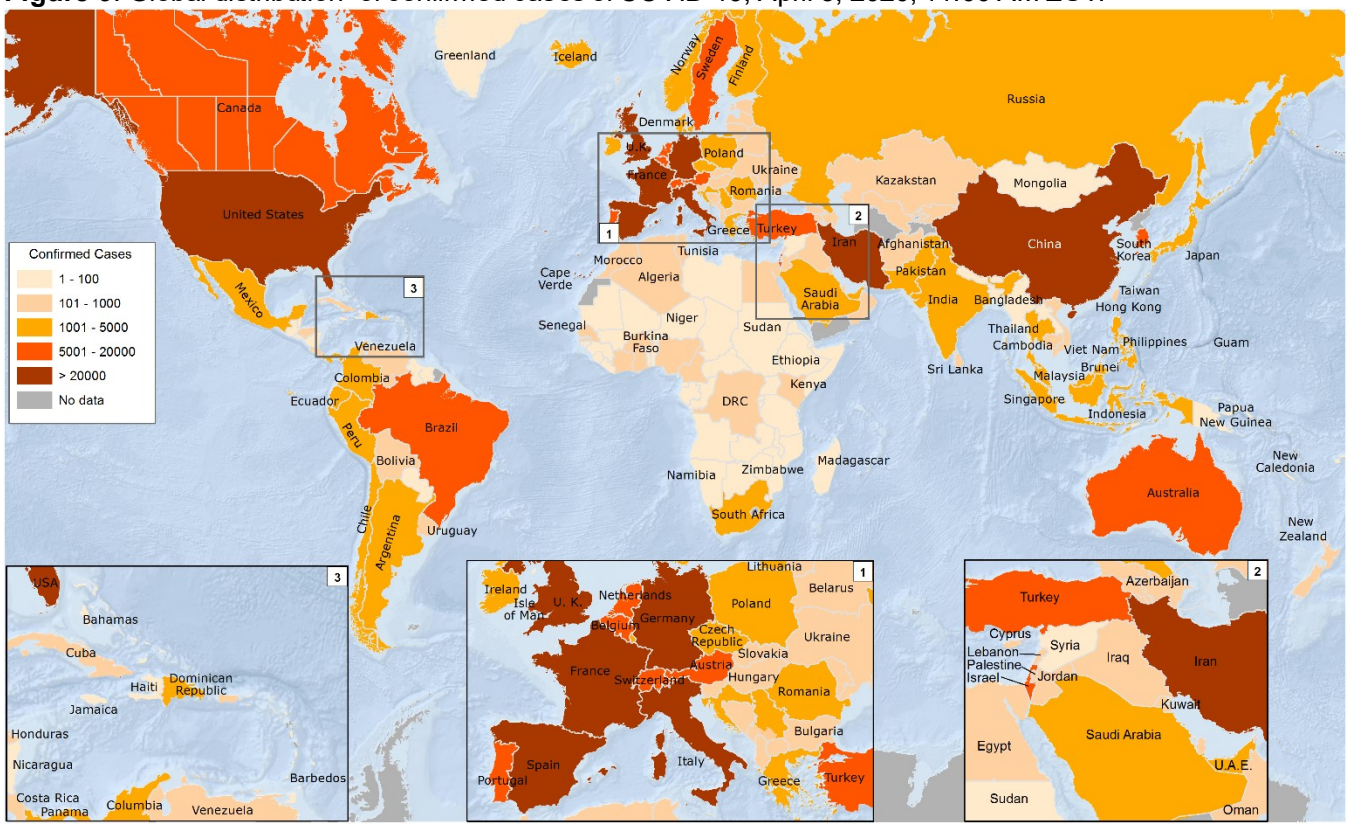
*The ECDC classifies Turkey within Asia

Table 6. Global number* of reported COVID-19 cases, April 3, 2020, 11:00 AM EST.

Location	Total cases	New cases	Total deaths	New deaths
Globally	1,016,636	77,076	52,726	4,753
USA	245,540	28,819	6,053	915
China	81,620	31	3,322	4

***Information Sources:** Hong Kong Centre for Health Protection, Chinese Center for Disease Control and Prevention, Health Commission of Hubei Province, Iran MOH, Spain MOH, Germany MOH, France MOH, Norway MOH, Netherland MOH, Italy MOH, US CDC, and ECDC Situation update.

Figure 9. Global distribution* of confirmed cases of COVID-19, April 3, 2020, 11:00 AM EST.



***Information Sources:** Hong Kong Centre for Health Protection, Chinese Center for Disease Control and Prevention, Health Commission of Hubei Province, Iran MOH, Spain MOH, Germany MOH, France MOH, Norway MOH, Netherland MOH, Italy MOH, US CDC, and ECDC Situation update.

Up-to-date country-specific risk levels may be found on travel health notices.