

Coronavirus Disease 2019 (COVID-19)

DAILY EPIDEMIOLOGY UPDATE

Updated: April 4, 2020, 11:00 AM EST

Highlights

Canada

- **12, 924 cases including 214 deaths** have been reported in Canada (overall case fatality rate of 1.7%).
- **309,211** people have been tested for COVID-19 in Canada which corresponds to a test rate of 8,226 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 63% of the cases (n=8,178)*.
- **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 (28%) and 60-79 years of age (24%).
 - A small proportion of cases (5%) have been reported among people \leq 19 years of age.
 - 51% of cases were reported among females.
- **Hospitalizations:**
 - Hospitalization data are available for 4,318 (54%) cases for whom we have full case reports. Among these, 653 have been hospitalized, including 196 in ICU.
 - While 31% of the cases are 60 years of age and older, these cases represent the highest proportion of hospitalizations (60%) and ICU admissions (61%).
 - Nine hospitalizations and one admission to ICU were reported in individuals \leq 19 years of age.
- **Exposures:**
 - 91% of newly identified cases (within the last seven days) are related to community transmission.
 - 69% of cases over the duration of the outbreak are related to community transmission.

International

- 205 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 France.

*Data Notes

As of April 4, 2020 11:00 AM ET, detailed data on cases have been received for **8,178 cases** (63% 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 53% of all cases. PHAC does not receive routine updates on patient status.

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

Summary of COVID-19 cases reported in Canada by location, April 4, 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 | 1,174 | 1,174 | 0 | 35 | 53 | 5% | 8,039 | 40,771 |
| AB | 1,075 | 1,075 | 0 | 18 | 107 | 11% | 13,842 | 60,508 |
| SK | 220 | 220 | 0 | 3 | 14 | 7% | 10,425 | 12,244 |
| MB | 182 | 164 | 18 | 2 | 15 | 9% | 8,507 | 11,650 |
| ON | 3,630 | 3,630 | 0 | 94 | 837 | 30% | 4,989 | 72,674 |
| QC | 6,101 | 6,101 | 0 | 61 | 583 | 11% | 10,634 | 90,227 |
| NL | 195 | 195 | 0 | 1 | 12 | 7% | 9,898 | 5,162 |
| NB | 95 | 95 | 0 | 0 | 4 | 4% | 4,306 | 3,345 |
| NS | 207 | 207 | 0 | 0 | 14 | 7% | 10,008 | 9,722 |
| PE | 22 | 22 | 0 | 0 | 0 | 0% | 5,346 | 839 |
| YK | 6 | 6 | 0 | 0 | 0 | 0% | 18,431 | 753 |
| NT | 4 | 4 | 0 | 0 | 0 | 0% | 24,740 | 1,109 |
| NU | 0 | 0 | 0 | 0 | 0 | 0% | 5,338 | 207 |
| Repatriated travellers | 13 | 13 | 0 | 0 | 0 | 0% | | |
| Total | 12,924 | 12,906 | 18 | 214 | 1,639 | 15% | 8,226 | 309,211 |

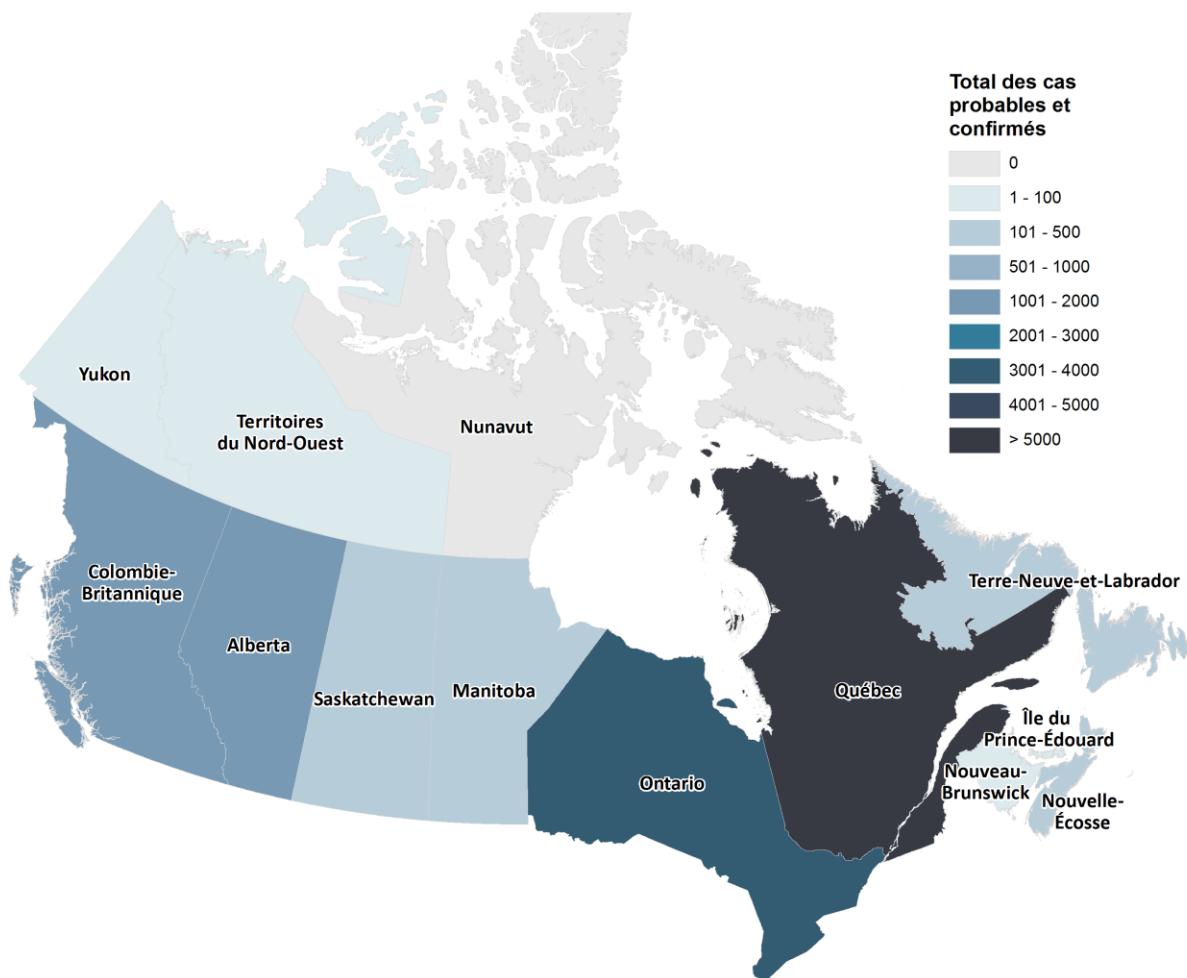
Notes: New cases are those reported since the previous report. Probable cases have tested positive at a provincial laboratory and are awaiting confirmatory testing results from the National Microbiology Laboratory. Laboratory testing numbers may represent an underestimation due to reporting delays and 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 309,211 people have been tested for COVID-19 in Canada. This corresponds to a test rate of 8,226 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 4, 2020, 8:00 AM EST (n=12,537)

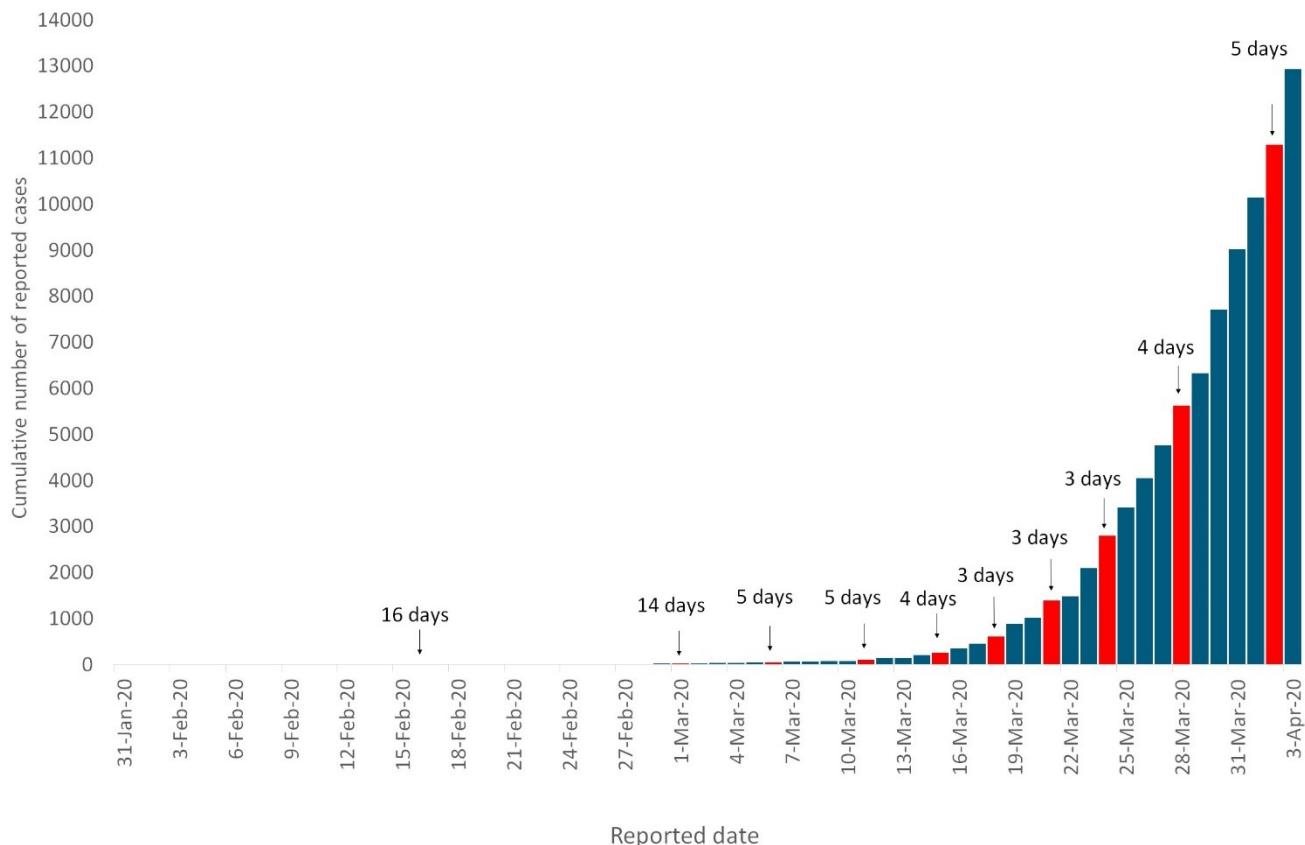


Data source: Surveillance and Risk Assessment, Epidemiology Update. Map Created by NML, Geomatics

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.

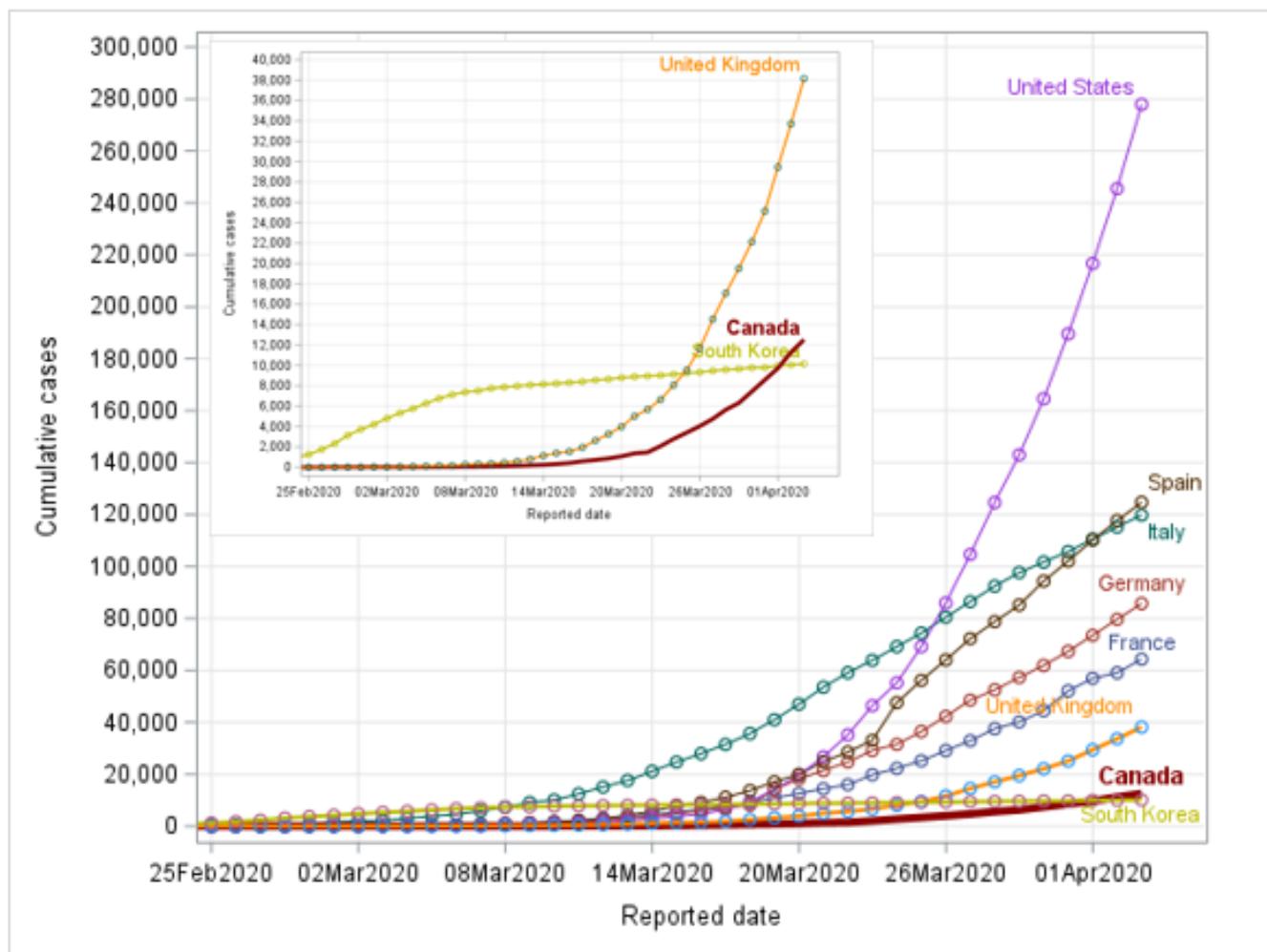
Figure 2. Doubling time of cumulative number of reported COVID-19 cases in Canada by date of report, April 4, 2020, 11:00 AM EST (n=12,924)



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 4, 2020, 11:00 AM EST.



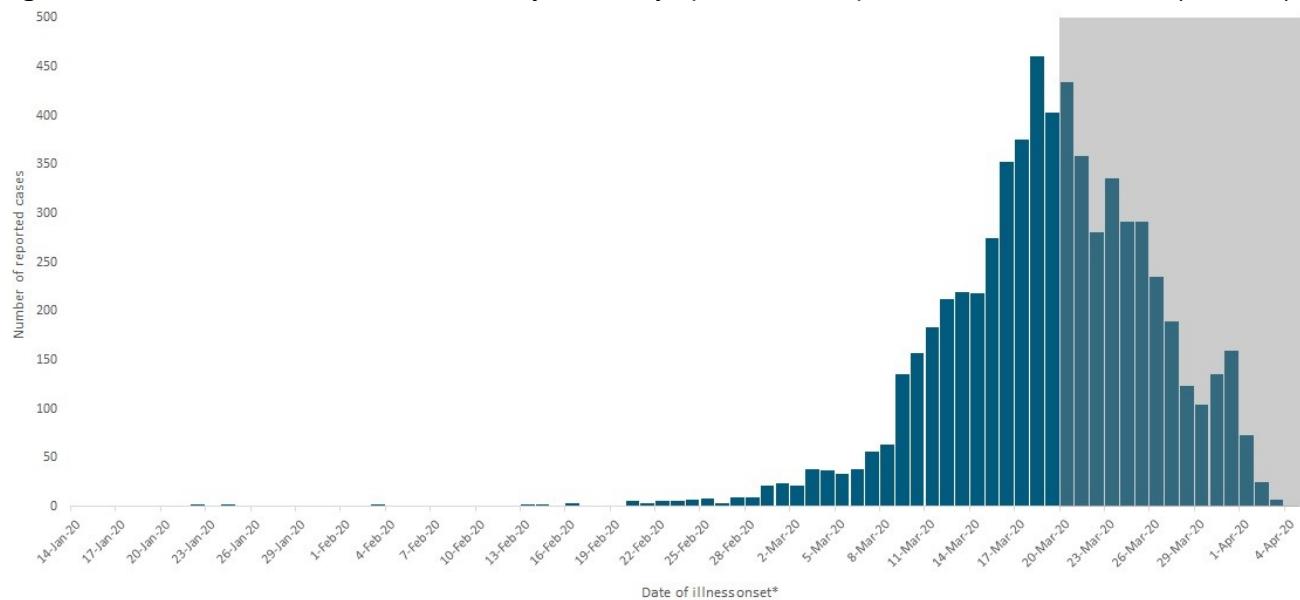
Note: At this time, results from international comparisons should be interpreted with caution. The number of tests conducted and indications for testing by country all have a large influence on total reported case counts. Therefore, the data displayed does not necessarily represent the true size of outbreak 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=8,178).

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 4 2020, 11:00 AM EST (n=6,455)



*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

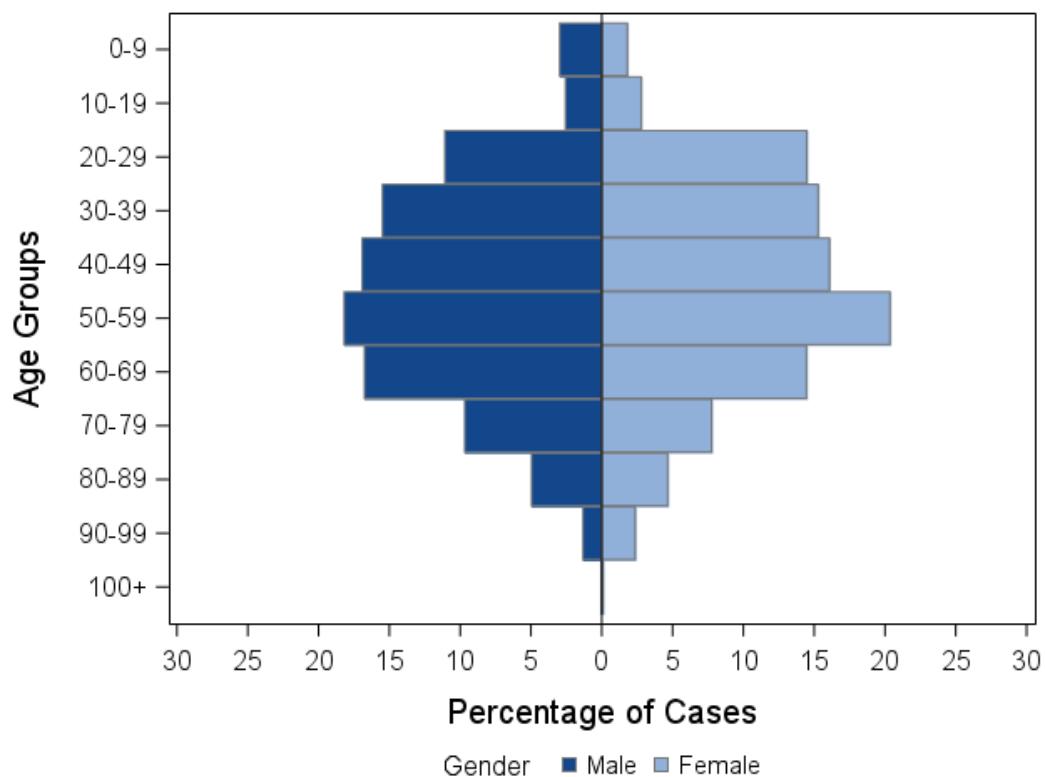
A summary of the demographics of reported cases can be found in **Table 2** and **Figure 5**.

- The highest proportion of cases occurred in individuals 40-59 years of age (36%), followed by those 20-39 years of age (28%) and 60-79 years of age (24%).
- Only 5% of cases have occurred in individuals ≤ 19 years of age.
- 51% of cases were reported among females.

Table 1. Demographic characteristics of COVID-19 cases reported in Canada, April 4, 2020, 11:00 AM EST

| Characteristics | |
|-----------------------|-------------|
| Demographics n=8,178 | |
| Age (in years) | |
| Median | 50 |
| Range | 0-105 |
| Age groups | n=7,810 |
| ≤ 19 | 394 (5%) |
| 20-39 | 2,204 (28%) |
| 40-59 | 2,793 (36%) |
| 60-79 | 1,891 (24%) |
| 80+ | 528 (7%) |
| Gender | N=8,121 |
| Female | 4,180 (51%) |
| Male | 3,941 (49%) |

Figure 5. Age and sex distribution of COVID-19 cases reported in Canada, April 4, 2020, 11:00 AM EST (n=7,772)



Clinical Presentations and outcome

A summary of the clinical presentations of cases can be found in **Table 2**. 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.
- 240 cases have been clinically or radiologically diagnosed with pneumonia. Of those who reported age, 57% are individuals 60 years of age and over, with individuals 60-79 representing 45%.
- The most commonly reported pre-existing health conditions amongst cases were respiratory disease, cardiac disease, and diabetes.
- Thirty seven cases have occurred in pregnant women.

Table 2. Clinical presentation summary of COVID-19 cases reported in Canada, April 4, 2020, 11:00 AM EST

| Clinical Presentations | | | |
|-------------------------|----------------------------|---------|-------|
| Symptoms | | n=3,662 | |
| | Cough | 2,824 | (77%) |
| | Headache | 2,078 | (57%) |
| | General weakness | 2,040 | (56%) |
| Pre-Existing Conditions | | n=3,574 | |
| | Respiratory disease | 426 | (12%) |
| | Cardiac | 375 | (10%) |
| | Diabetes | 295 | (8%) |
| | Other | 705 | (20%) |
| Complications | | n=2,149 | |
| | Pneumonia | 240 | (11%) |
| | Dyspnea | 146 | (7%) |
| | Abnormal lung auscultation | 135 | (6%) |
| | Other | 286 | (13%) |

Hospitalization Status (based on data available for 4,318 (53%) of all cases)

A total of 653 cases have been hospitalized including 196 in ICU (**Table 4** and

Figure 6).

- 60% of hospitalizations and 61% of ICU admissions occurred among individuals ≥ 60 years of age.
 - The highest proportion of hospitalizations (41%) and ICU admissions (50%) being reported among individuals 60-79 years of age.
- Nine hospitalizations and one ICU admission were reported in individuals ≤ 19 years of age*
- Males represented a higher proportion of hospitalizations (58%) and ICU admissions (64%) than females.

*Note: A duplicate hospitalization and ICU admission in individuals ≤ 19 years of age was removed.

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

| Severe Cases | | | | |
|--|--|------------------|-----------------|-------|
| Overall Summary Hospitalizations | | | n=4,318 | |
| Hospitalizations* | | | 653 | (15%) |
| <i>Hospitalizations in ICU</i> | | | 196/653 | (30%) |
| <i>Hospitalizations requiring mechanical ventilation</i> † | | | 79/653 | (12%) |
| Breakdown by: | | Hospitalizations | Admitted to ICU | |
| Age groups | | n=619 | n=185 | |
| ≤ 19** | | 9 (1%) | 1 (1%) | |
| 20-39 | | 57 (9%) | 12 (6%) | |
| 40-59 | | 182 (29%) | 60 (32%) | |
| 60-79 | | 251 (41%) | 92 (50%) | |
| 80+ | | 120 (19%) | 20 (11%) | |
| Gender | | n=649 | n=196 | |
| Female | | 275 (42%) | 70 (36%) | |
| Male | | 374 (58%) | 126 (64%) | |

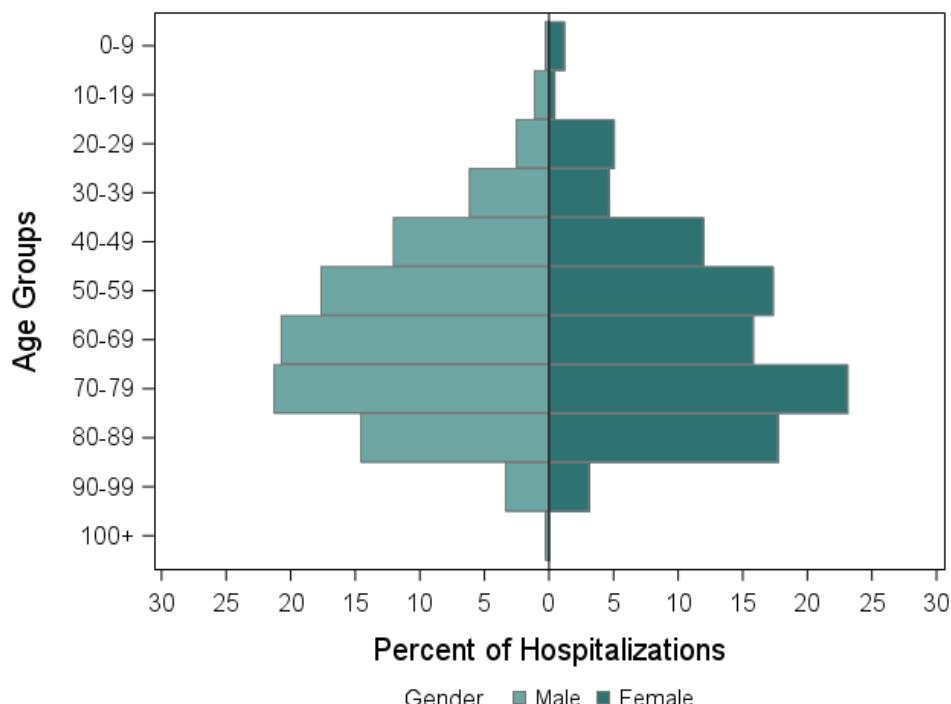
*Hospitalizations include admission to hospital and emergency room

†Patients requiring mechanical ventilation are classified as hospitalized, although ventilation may occur in other settings.

**Note: A duplicate hospitalization and ICU admission in individuals ≤ 19 years of age was removed.

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 4, 2020, 11:00 AM EST (n=617)

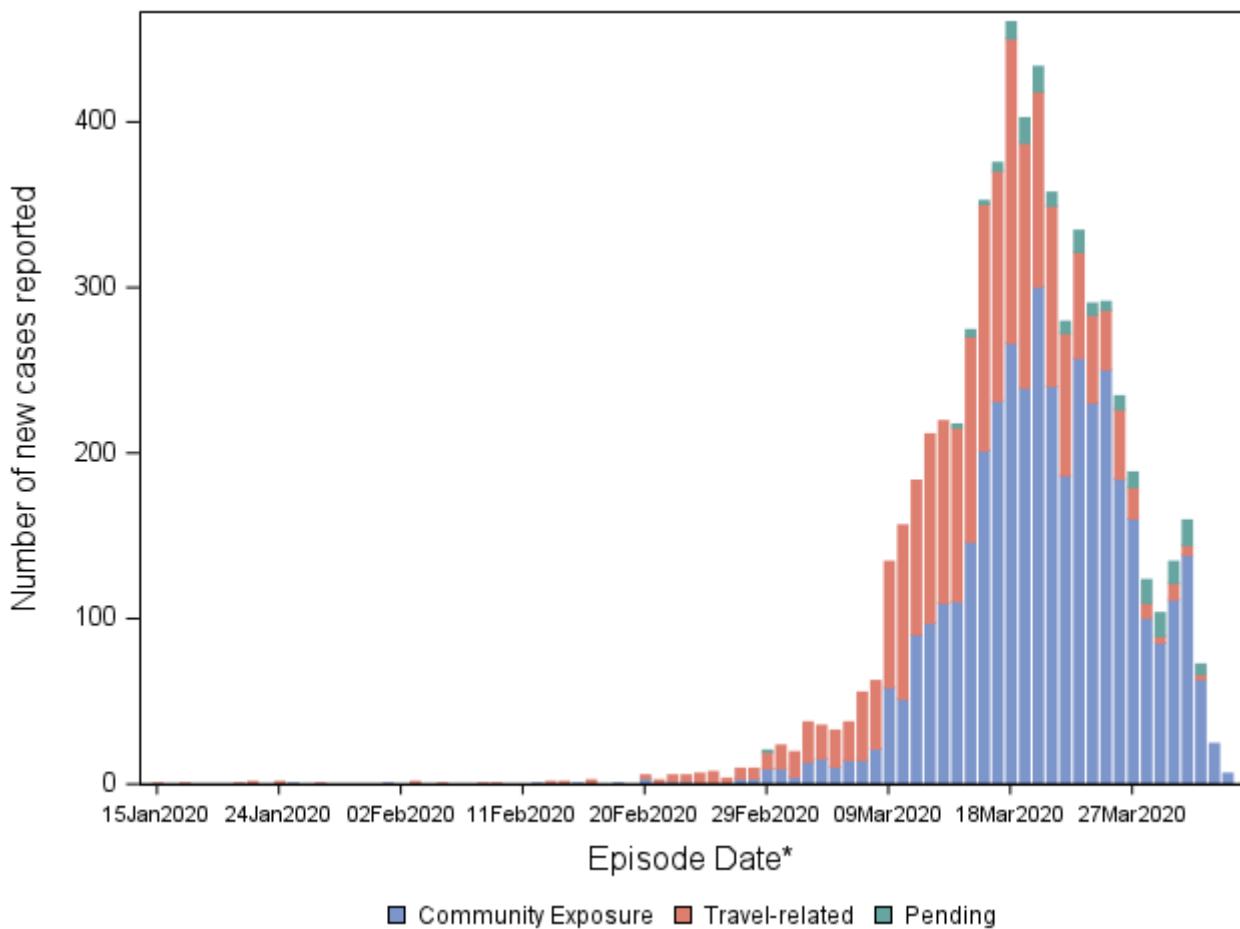


Exposure History

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

- 91% of newly identified cases (within the last seven days) are related to community transmission.
- 69% 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 4, 2020, 11:00 AM EST (n=8,178)



*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.

Table 4. Possible exposure setting of COVID-19 cases reported in Canada, April 4, 2020, 11:00 AM EST.

| Possible Exposure Setting | n=8,178 | |
|---|---------|-----|
| Travel-Related | n=2,353 | 29% |
| History of international travel | 2,059 | 88% |
| Close contact of an international traveller | 294 | 12% |
| Community | n=5,636 | 69% |
| Case exposed in a healthcare facility* | 673 | 12% |
| Close contact with case in a household | 294 | 5% |
| Case lives in a long-term care facility | 92 | 2% |
| Close contact with case in a workplace | 72 | 1% |
| Case attends/works at a school or daycare | 56 | 1% |
| Case has no known exposures | 4,451 | 79% |
| Pending | n=191 | 3% |

*Includes healthcare workers and exposure in health care setting

United States

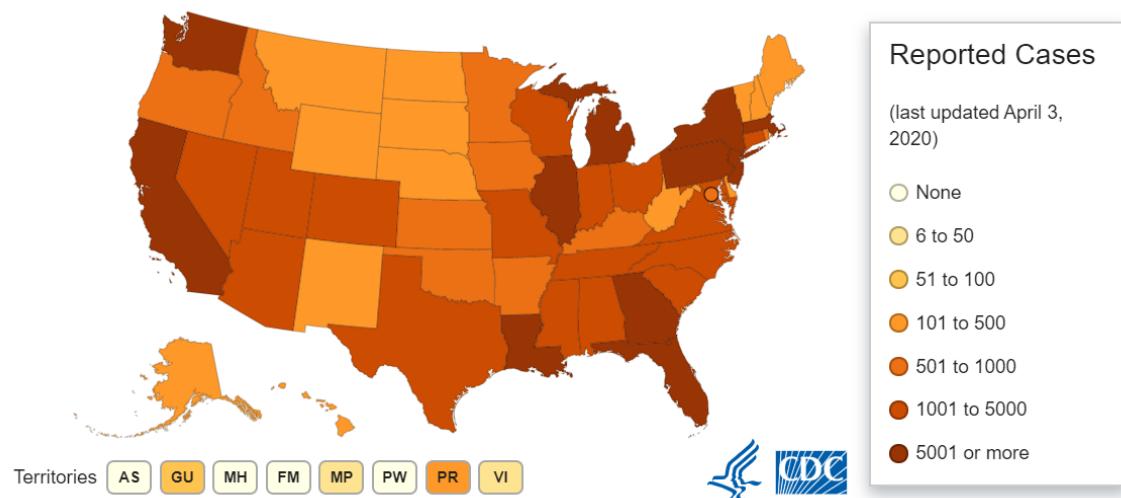
There are 278,458 cases and 7,159 deaths (overall case fatality rate of 2.6%) reported in the United States as of April 4, 2020 at 10:00 AM*.

The [US CDC](#) has information on 239,279 cases (5,443 deaths) reported from 55 jurisdictions (50 states, District of Columbia, Puerto Rico, Guam, Northern Marianas, and US Virgin Islands).

- Exposure details are known for 5,713 cases:
 - Travel-related: 1,388
 - Close contact: 4,325
- [New York State](#) accounts for 38% and [New Jersey](#) accounts for 11% of cases in the US.
- 85% of jurisdictions reporting cases are reporting community transmission.
- As of April 3, 2020, the [US CDC and US public health labs](#) have reported testing 181,542 specimens.

*Information source: Numbers retrieved from Johns Hopkins Coronavirus Resource Center.

Figure 8. States reporting cases of COVID-19, April 4, 2020, 11:00 AM EST



Source: [US CDC website](#)

International

- The United States is now the epicentre of the global pandemic (**Table 6**).
- 205 countries/jurisdictions outside mainland China have reported cases of COVID-19 (**Figure 9**).
 - Five countries (United States, Spain, Italy, Germany, and France) 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.

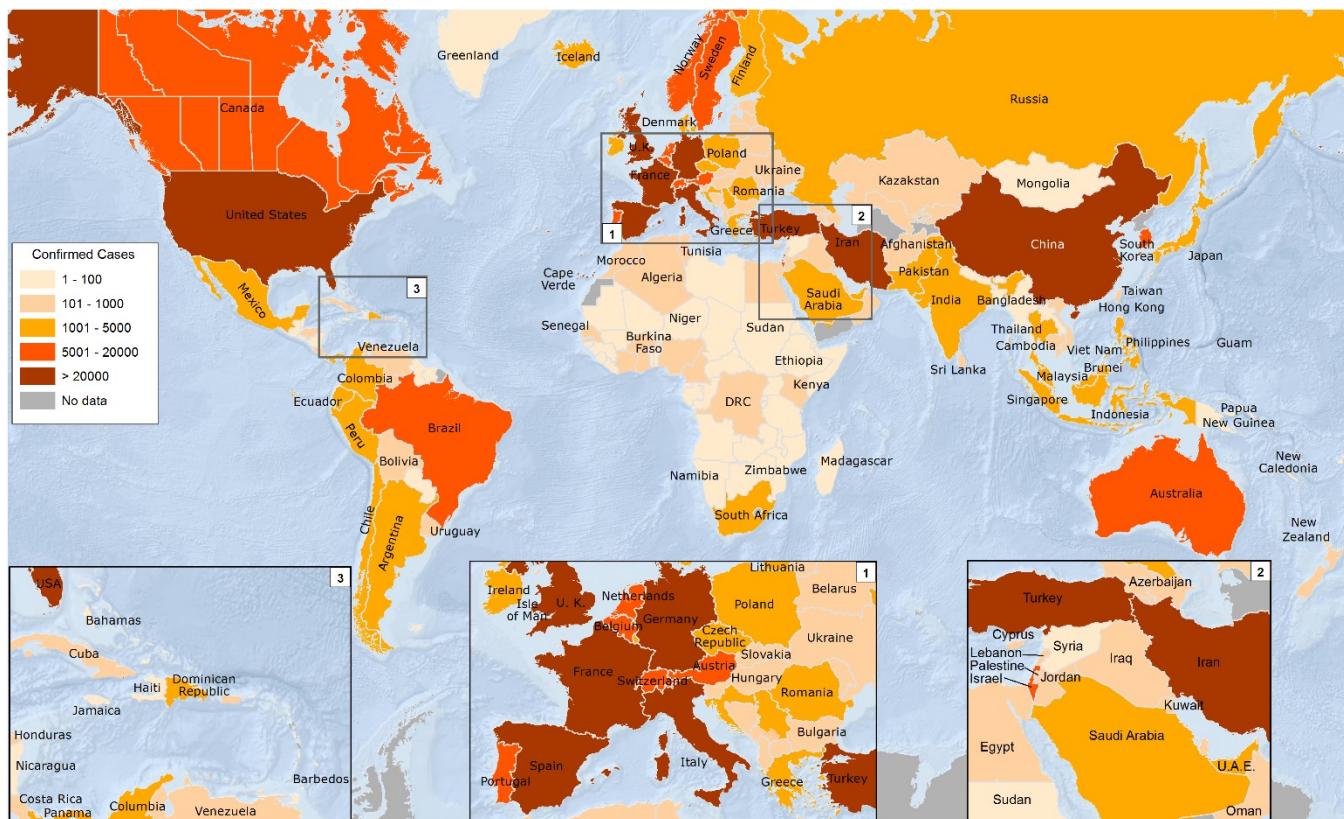
*The ECDC classifies Turkey within Asia

Table 5. Global number* of reported COVID-19 cases, April 4, 2020, 11:00 AM EST.

| Location | Total cases | New cases | Total deaths | New deaths |
|----------|-------------|-----------|--------------|------------|
| Globally | 1,100,466 | 83,830 | 59,384 | 6,658 |
| USA | 277,965 | 32,425 | 7,157 | 1,104 |
| China | 81,639 | 19 | 3,326 | 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 4, 2020, 8:00 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](#).