Coronavirus Disease 2019 (COVID-19)

DAILY EPIDEMIOLOGY UPDATE

Updated: March 28, 2020, 11:00 AM EST

Highlights

Canada

- **4,757 cases including 55 deaths** have been reported in Canada (overall case fatality rate of 1.16%).

- **184,201** people have been tested for COVID-19 in Canada which corresponds to a test rate of 4,900 per million population.The percent positivity is 2.8%.

- Further **real-time information** on the distribution of cases and deaths in Canada can be found in our dynamic online map or through the University of Saskatchewan covid-19 tracker website.

- The epidemiological summary is based on more detailed information that is available for 59% of the cases (n=2,811)*.
  - **The age distribution has remained the same over the course of the outbreak.**
    - The highest proportion of cases are being reported among people 40-59 years of age (36%), followed by those 20-39 years of age (30%) and 60-79 years of age (25%).
    - Only a small proportion of cases (4%) have been reported among people ≤ 19 years of age.

  - **Hospitalizations**: Hospitalization data are only available for 1,483 (53%) of all cases. Among these, 213 have been hospitalized, including 69 in ICU.
    - While 30% of the cases are 60 years of age and older, these cases represent the highest proportion of hospitalizations (58%) and ICU admissions (59%).
    - Four hospitalizations and one admission to ICU were reported in individuals ≤ 19 years of age.

  - **Exposures:**
    - 90% of newly identified cases (within the last 7 days) are related to community transmission.
    - 65% of cases over the duration of the outbreak are related to community transmission.

International

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

Data Notes*

As of March 27, 2020, case report forms have been received for 2,811 cases (59% of reported cases). Data on these cases are preliminary and may have missing values.

Data may not be routinely updated for key characteristics of interest at this time. Data on hospitalization status is unknown for 53% of all cases. As well, PHAC does not receive routine updates on patient status.

Furthermore, approaches to testing cases varies by province/territory and has changed over time, which can affect key summary statistics.

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, March 28, 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	792	792	0	16	67	9%	6,218	31,536
AB	542	542	0	2	56	12%	8,742	38,215
SK	104	104	0	0	9	9%	6,819	8,009
MB	39	25	14	1	3	8%	4,397	6,022
ON	993	993	0	18	135	16%	2,997	43,651
QC	2,021	2,021	0	18	392	24%	5,432	46,087
NL	102	102	0	0	20	24%	3,656	1,907
NB	45	45	0	0	12	36%	3,234	2,512
NS	90	90	0	0	17	23%	4,619	4,487
PE	11	11	0	0	2	22%	2,689	422
YK	4	4	0	0	1	0%	14,760	603
NT	1	1	0	0	0	0%	13,943	625
NU	0	0	0	0	0	0%	3,223	125
Repatriated travellers	13	13	0	0	0	0%		
Total	**4,757**	**4,743**	**14**	**55**	**714**	**18%**	**4,900**	**184,201**

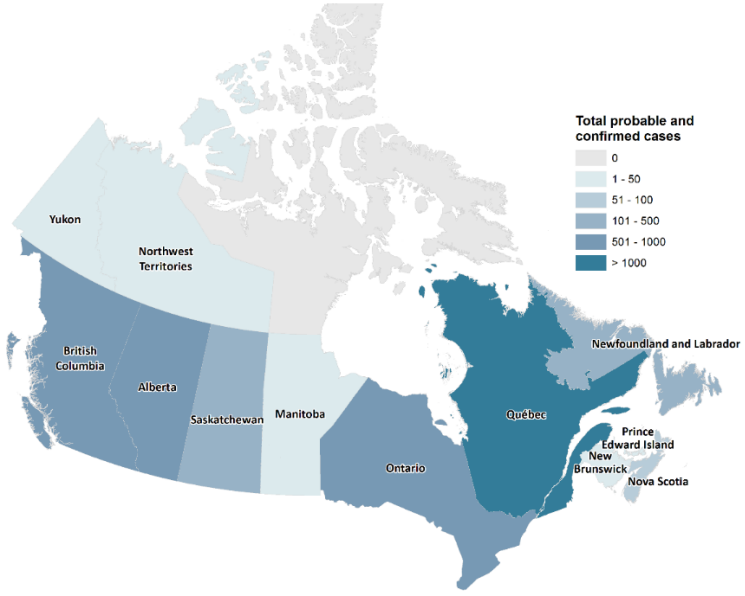
Notes: *New cases are those reported since the previous report. Probable cases have tested positive at a provincial laboratory and are awaiting confirmatory testing results from the National Microbiology Laboratory. Laboratory testing numbers may represent an underestimation due to reporting delays and 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 **184,201** people have been tested for COVID-19 in Canada. This corresponds to a test rate of 4,900 per million population.

- Testing volumes vary across the country.
- Percent positivity is 2.8%

A **map** with real-time data on the distribution of cases in Canada can be found in our dynamic online map.

Figure 1. Map of COVID-19 cases reported in Canada by province, March 28, 2020, 11:00 AM EST.

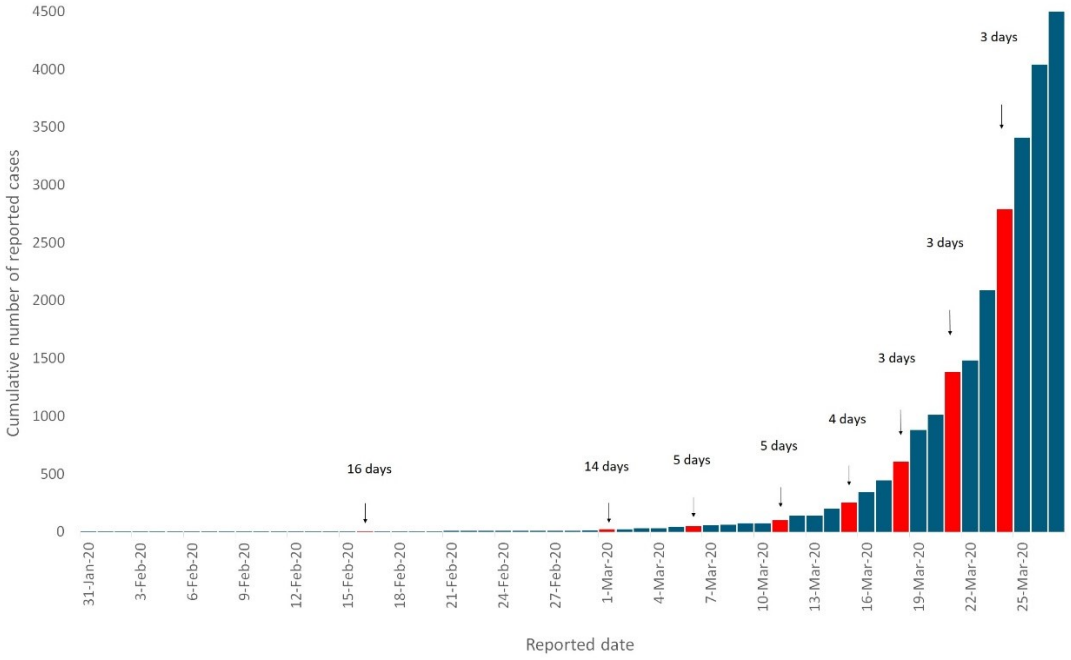


Data source: Surveillance and Risk Assessment, Epidemiology Update. Map Created by NML, Geomatics

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

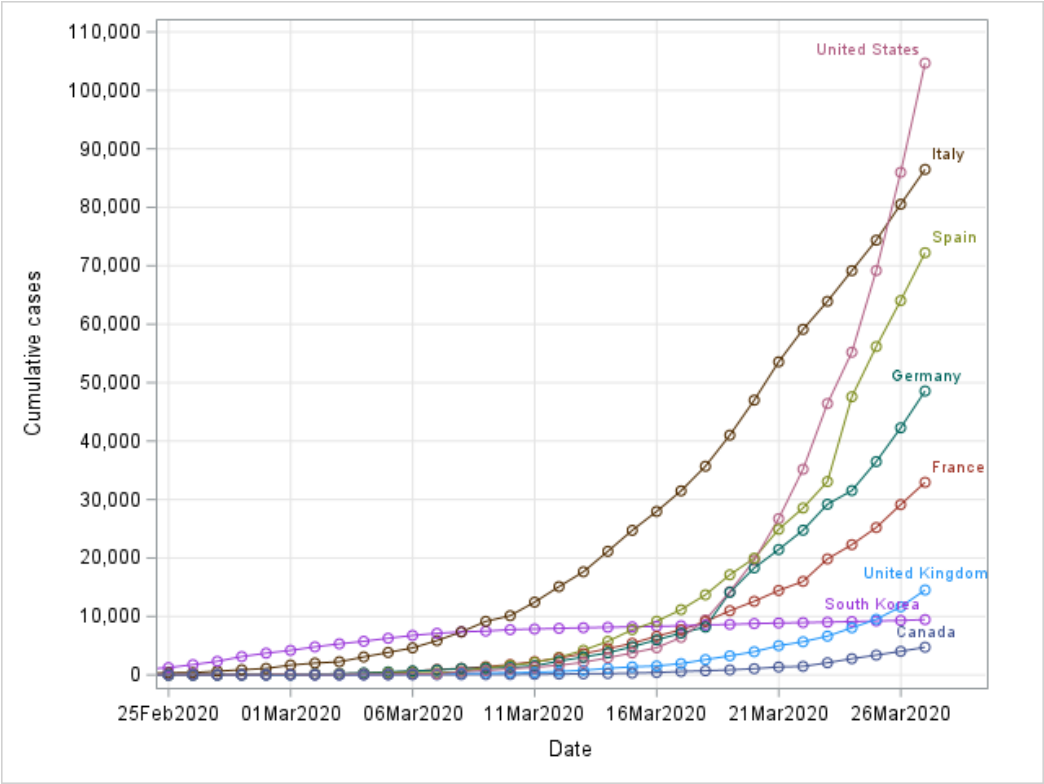
- The epidemic doubling period of COVID-19 cases in Canada, defined as the number of days between doubling of cumulative case counts is marked with red bars.
    - Reported cases double at a rate of every three to five days since March 1.

Figure 2. Doubling time of cumulative number of reported COVID-19 cases in Canada by date of report, March 28, 2020, 11:00 AM EST (n=4,757)



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

Figure 3. Cumulative cases of COVID-19 in Canada compared to other countries by date of report, March 28, 2020, 11:00 AM EST.



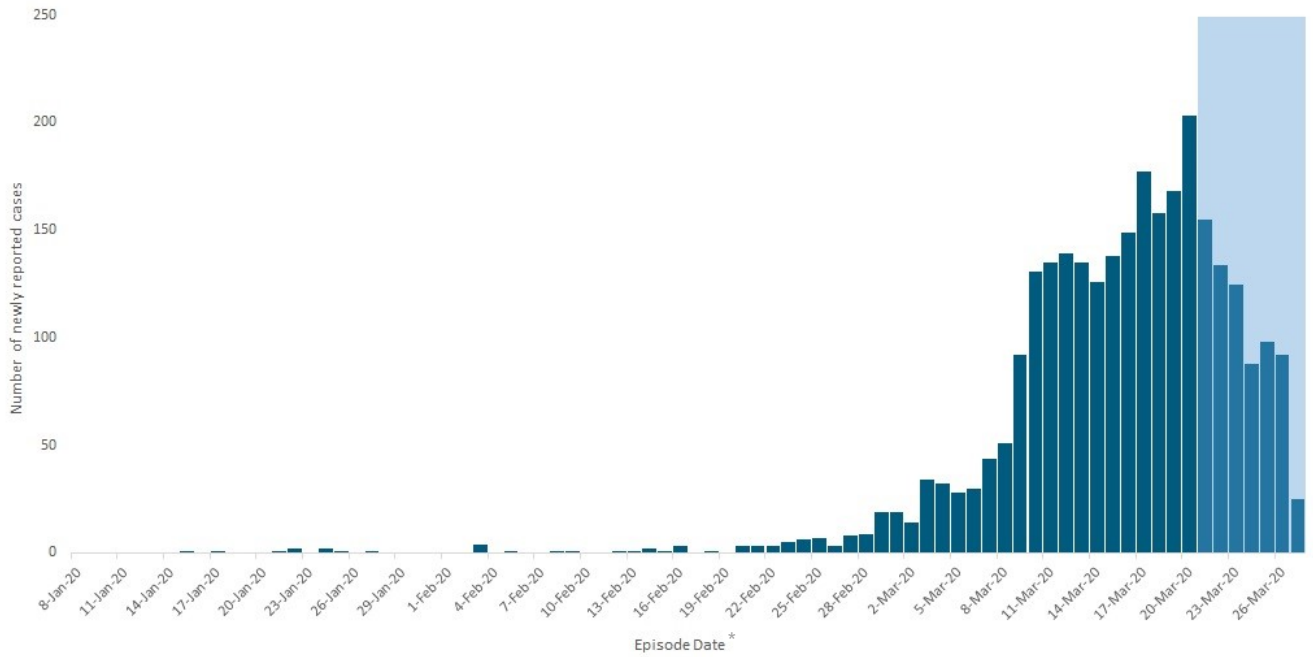
Note: *At this time, results from international comparisons should be interpreted with caution. The number of tests conducted and indications for testing by country all have a large influence on total reported case counts. Therefore, the data displayed does necessarily represent the true size of outbreak within each country.*

Please note that this section onwards of the epidemiology update is based on limited data (n=2,811).

Temporal Distribution

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

Figure 4. New COVID-19 cases in Canada by date of symptom onset, March 28, 2020, 11:00 AM EST (n=2,811)



*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.

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

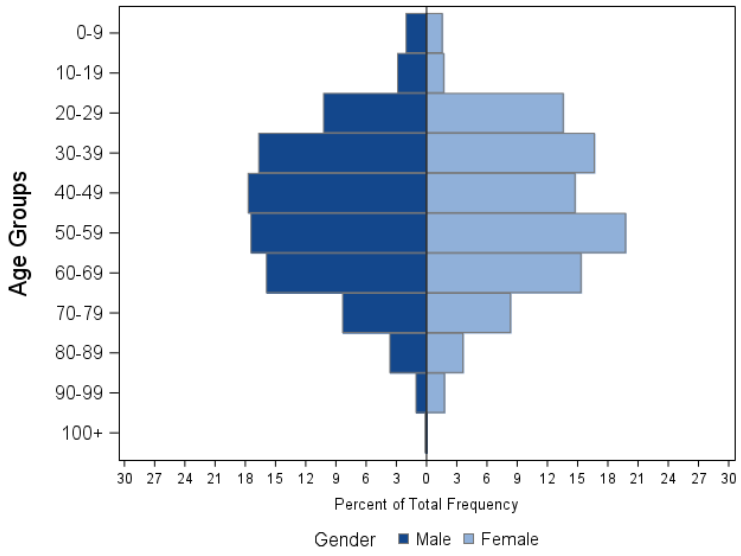
A summary of the demographics of reported cases can be found in **Table 2** and **Figure 2**.

- The highest proportion of cases occurred in individuals 40-59 years of age (36%), followed by those 20-39 years of age (30%) and 60-79 years of age (25%).
- Only 4% of cases have occurred in individuals ≤ 19 years of age.
- The majority of cases occured among males (51%).

Table 2. Demographic characteristics of COVID-19 cases reported in Canada, March 28, 2020, 11:00 AM EST (n=2,811)

Characteristics		
Demographics		n=2,811
Age (in years)		
	Median	49
	Range	0-100
Age groups		n=2,707
	≤ 19	115 (4%)
	20-39	799 (30%)
	40-59	980 (36%)
	60-79	671 (25%)
	80+	142 (5%)
Gender		n=2,785
	Female	1,357 (49%)
	Male	1,428 (51%)

Figure 2. Age and sex distribution of COVID-19 cases reported in Canada, March 28, 2020, 11:00 AM EST (n=2,687)



Clinical Presentations

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 March 25, 2020.

- Cough, chills and headache are the most common symptoms reported.
- 110 cases have been clinically or radiologically diagnosed with pneumonia. Of those, 50% are individuals 60-79 years of age.
- 40% of cases had a pre-existing health condition, among those for which information in available.
    - The most commonly reported pre-existing health conditions amongst cases were respiratory disease, cardiac disease, and diabetes.
- Twelve cases have occurred in pregnant women.

Table 3. Clinical presentation summary of COVID-19 cases reported in Canada, March 28, 2020, 11:00 AM EST (n=1,260)

Clinical Presentation		
Symptoms	n=1,260	
Cough	986	(78%)
Chills	664	(53%)
Headache	667	(53%)
Pre-Existing Conditions	n=1,228	
Respiratory disease	137	(11%)
Cardiac	125	(10%)
Diabetes	99	(8%)
Other	226	(18%)
Complications	n=893	
Pneumonia	110	(12%)
Abnormal lung auscultation	42	(5%)
Dyspenea	44	(5%)
Other	176	(20%)

Hospitalization Status

A total of 213 cases have been hospitalized including 69 in ICU (**Table 4** and

Figure 3).

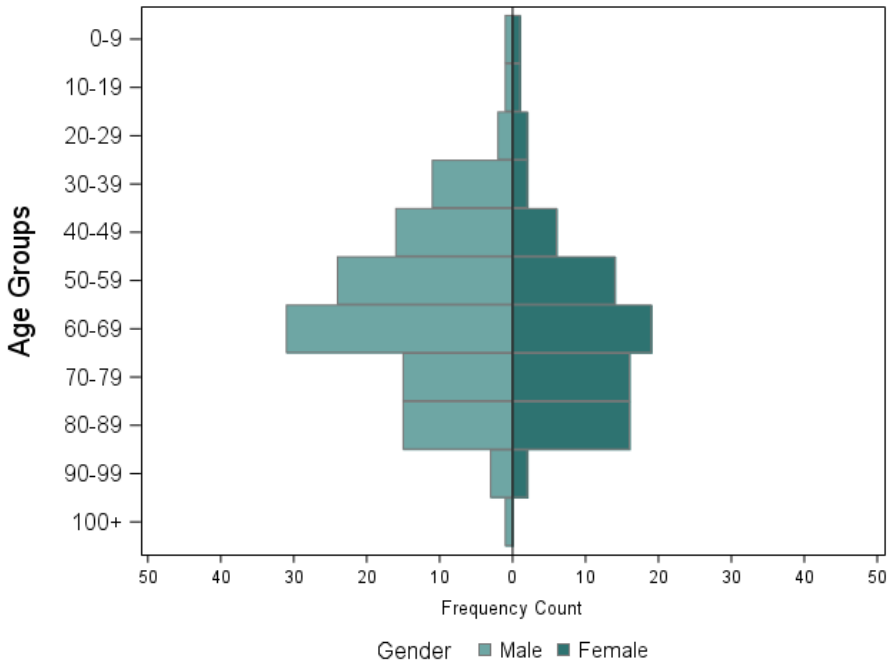
- 58% of hospitalizations and 59% of ICU admissions occurred among individuals ≥ 60 years of age.
    - The highest proportion of hospitalizations (40%) and ICU admissions (46%) being reported among individuals 60-79 years of age.
- Four hospitalizations and one ICU admission were reported in individuals ≤ 19 years of age
- A higher proportion of hospitalizations are being reported among males (61%).
- 64% of the hospitalized cases had pre-existing conditions.

Table 4. Summary of hospitalized cases of COVID-19 reported in Canada with a submitted case report form, March 28, 2020, 11:00 AM EST (n=213)

Severe Cases				
Overall Summary Hospitalizations				
Hospitalizations			213	
Hospitalizations in ICU			69/213	(32%)
Hospitalizations requiring mechanical ventilation			31/213	(15%)
Breakdown by:	**All Hospitalizations**		**Admitted to ICU**	
Age groups	n=201		n=63	
≤ 19	4	(2%)	1	(2%)
20-39	17	(8%)	5	(8%)
40-59	62	(31%)	20	(32%)
60-79	81	(40%)	29	(46%)
80+	37	(18%)	8	(13%)
Gender	n=212		n=69	
Female	83	(39%)	39	(43%)
Male	129	(61%)	69	(57%)

Note: *PHAC does not receive routine updates on patient status.*

Figure 3. Age and sex distribution of hospitalized COVID-19 cases reported in Canada, March 28, 2020, 11:00 AM EST (n=199)

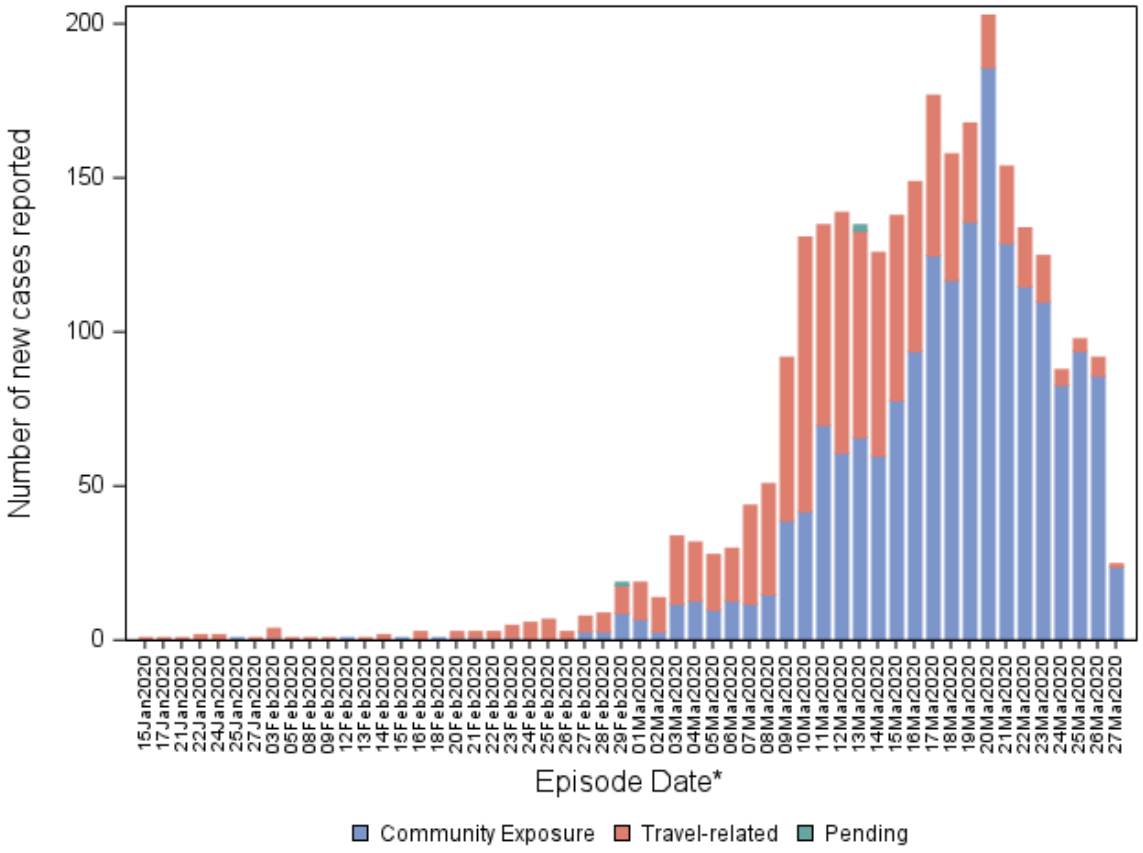


Exposure History

A summary of the exposure history of cases can be found in **Figure 4** and **Table 5**.

- 90% of newly identified cases (within the last seven days) are related to community transmission.
- 65% 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 4. Number of newly reported COVID-19 cases in Canada by probable exposure category, March 28, 2020, 11:00 AM EST.



*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.

Table 5. Possible exposure setting of COVID-19 cases reported in Canada, March 28, 2020, 11:00 AM EST (n=2,811)

Possible Exposure Setting		
Travel-Related	**N=984**	**35%**
History of international travel	886	90%
Close contact of an international traveller	98	10%
Community	**N=1,824**	**65%**
Case lives in a long-term care facility	6	0.3%
Case works in a healthcare facility	237	13%
Case attends/works at a school or daycare	19	1%
Close contact with case in a household	76	4%
Close contact with case in a workplace	17	1%
Case has no known exposures	1,469	81%
Pending	**N=3**	**0%**

United States

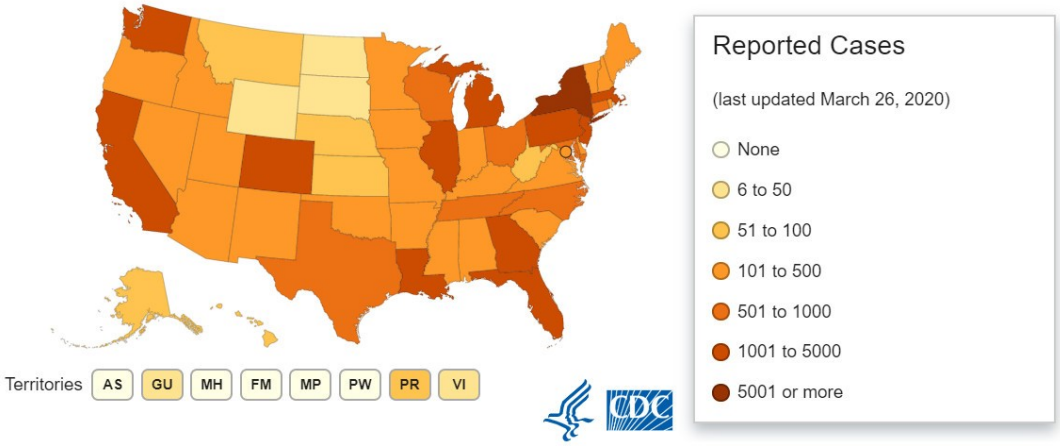
There are 104,686 cases and 1,707 (overall case fatality rate of 1.6%) deaths reported in the United States as of March 28, 2020 at 10:00 AM[¥].

The US CDC has information on 85,356 cases (1,246 deaths) reported from 54 jurisdictions (50 states, District of Columbia, Puerto Rico, Guam and US Virgin Islands).

- Exposure details are known for 2,038 cases:
  - Travel-related: 712
  - Close contact: 1,326
- New York State accounts for 45% of case in the US.
- 85% of jurisdictions reporting cases are reporting community transmission.
- As of March 27, 2020, the US CDC and US public health labs have tested 112,582 specimens.

[¥] Information source: Johns Hopkins Coronavirus Resource Center.

Figure 5. States reporting cases of COVID-19, March 28, 2020 at 10:00 AM EST



Source: US CDC website.

International

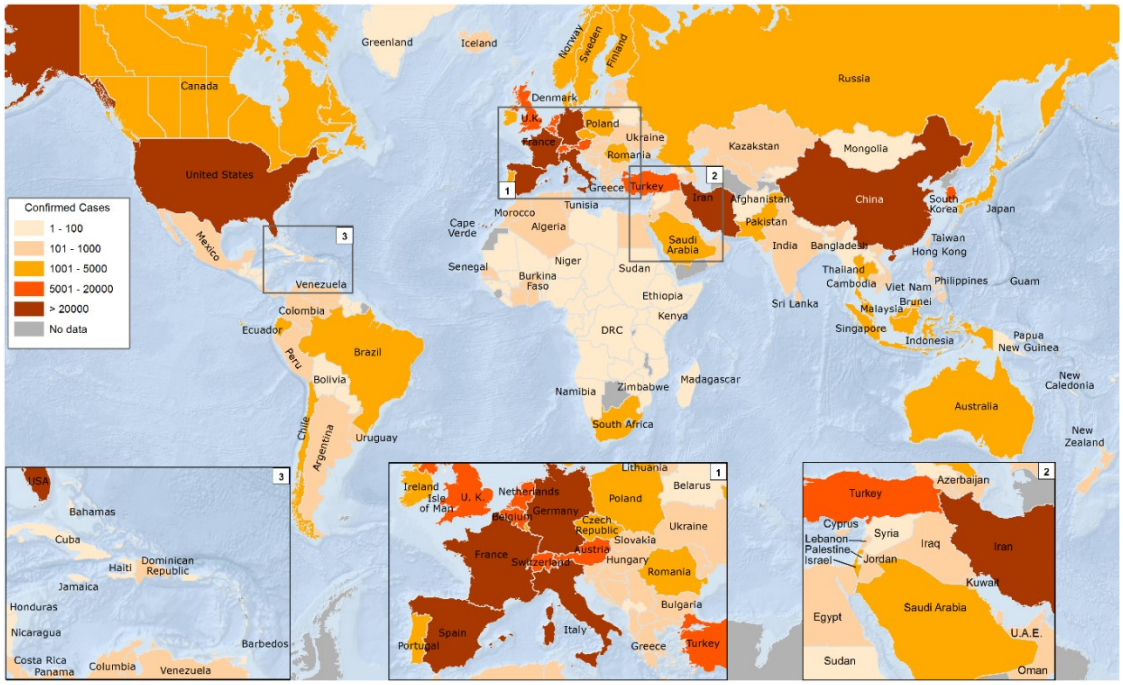
- Europe is the epicentre of the global pandemic.
- The United States is reporting the highest number of cases, followed by Italy. Both counties have surpassed the case counts reported by China.
- 197 countries/jurisdictions outside mainland China have reported cases of COVID-19 (**Figure 6**).
    - **One** new country/jurisdiction has reported cases**: Puerto Rico.**
    - The United States is reporting the most cases, followed by Italy, China, Spain and Germany.
    - Iran is reporting the majority of cases in Asia (excluding mainland China), followed by South Korea and Malaysia.

Table 6. Global number of reported COVID-19 cases, March 28, 2020, 11:00 AM EST.

Location	Total cases	New cases	Total deaths	New deaths
Globally	602,873	67,358	28,829	4,400
USA	104,686	18,690	1,707	406
International	521,655	67,311	25,548	4,396
China	81,996	99	3,299	3

Note: *International case count does not include mainland China.*

Figure 6. Global distribution of confirmed cases of COVID-19, March 28, 2020, 11:00 AM EST.



Information Sources: Johns Hopkins Coronavirus Resource Center, 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.