Coronavirus Disease 2019 (COVID-19)

DAILY EPIDEMIOLOGY UPDATE

Updated: May 2, 2020, 11:00 AM ET

Highlights

Canada

- **55 572 (+1 915) cases,** including **3 446 (+223) deaths,** have been reported in Canada (overall case fatality rate of 6.2%).

- At least **862 080** people have been tested to date for COVID-19 in Canada, which corresponds to a test rate of **22 934** per million population.
  - The cumulative percent positivity is 6.9%.
  - The weekly percent positivity from April 20 to April 26 is 8.0%.

- The epidemiological summary is based on detailed case information received by the Public Health Agency of Canada (PHAC), which represents **55% (30 640) of all reported COVID-19 cases in Canada (N=55 572)**.
  - The highest proportion of cases occurred among individuals 40-59 years of age (32%) followed by those 20-39 years of age (26%); 5% of cases are individuals ≤ 19 years of age.
  - 55% of cases are female.

- **Hospitalizations**:
  - Information on whether someone was admitted to hospital is reported for **20 008** cases.
    - Among these, 3 143 (16%) of cases were hospitalized, including 751 (24%) of the hospitalized cases admitted to the ICU.
  - Cases 60 years of age or older represent the highest proportion of hospitalizations (66%) and ICU admissions (63%).
  - Male cases appear to have a somewhat higher risk of hospitalization (1.4 times) and ICU admission (2.0 times) when compared to female cases.

International

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

Methodology

As of May 2, 2020, 11:00 AM ET, detailed data on cases have been received by PHAC for 56% (**n=30 640**) of all reported COVID-19 cases in Canada. Limitations of these data:

- Data are and may have missing values.
- Data may not be routinely updated by province and territories (P/Ts).
- PHAC does not receive routine updates on patient status.

PHAC's National Microbiology Laboratory collects national and PT laboratory testing information. Limitations of these data include:

- Testing practices vary by P/T and have changed over time, which may affect counts.
- Laboratory testing counts may be underestimated due to reporting delays and may not include additional sentinel surveillance or other testing performed.

Canadian epidemiology

As of May 2, 2020, 11:00 AM ET, **55 572 (+1 915) cases** of COVID-19, including **3 446 (+223) deaths,** have been reported in Canada (overall case fatality rate of 6.2%).

At least **862 080** people have been tested for COVID-19 in Canada (**Table 1**). This corresponds to a test rate of **22 934** per million population.

- The cumulative percent positivity is 6.9%.
- The weekly percent positivity from April 20 to April 26 is 8.0%.*
    *The weekly percent positivity will be updated in reports published on Mondays for the previous 7 days.

**Table 1:** Summary of COVID-19 cases reported in Canada by location

Location	Total Cases	New cases	Recovered	% Recovered	Total deaths	People tested	People tested per 1, 000, 000 pop'n
BC	2 145	33	1 357	63%	112	77 904	15 362
AB	5 573	218	2 359	42%	92	145 420	33 267
SK	415	26	297	72%	6	28 847	24 562
MB	279	4	235	84%	6	24 975	18 237
ON	17 119	511	11 390	67%	1 176	300 210	20 610
QC	28 648	1 110	6 700	23%	2 022	224 831	26 498
NL	259	1	230	89%	3	8 716	16 712
NB	118	0	116	98%	0	14 252	18 346
NS	959	12	592	62%	29	30 774	31 680
PE	27	0	24	89%	0	3 086	19 663
YK	11	0	11	100%	0	999	24 453
NT	5	0	5	100%	0	1 645	36 697
NU	1	0	0	0%	0	421	10 856
Repatriated travellers*	13	0	Unknown	Unknown	0	0	0
Total	**55 572**	**1 915**	**23 316**	**42%**	**3 446**	**862 080**	**22 934**

Repatriated travellers refer to the Grand Princess cruise ship travellers who were under quarantine in Trenton. Update on their status is not available.
***Notes:** (1) New cases are those reported since the previous report. (2) Laboratory testing numbers may be underestimated due to reporting delays and may not include additional sentinel surveillance or other testing conducted in the P/T.*

The geographic distribution of cases by province/territory (P/T) are captured in **Figure 1**.
The highest number of cases are reported in Quebec (n=28 648), followed by Ontario (n=17 119), Alberta (n=5 573) and British Columbia (n=2 145).

Figure 1. Map of COVID-19 cases reported in Canada by province/territory
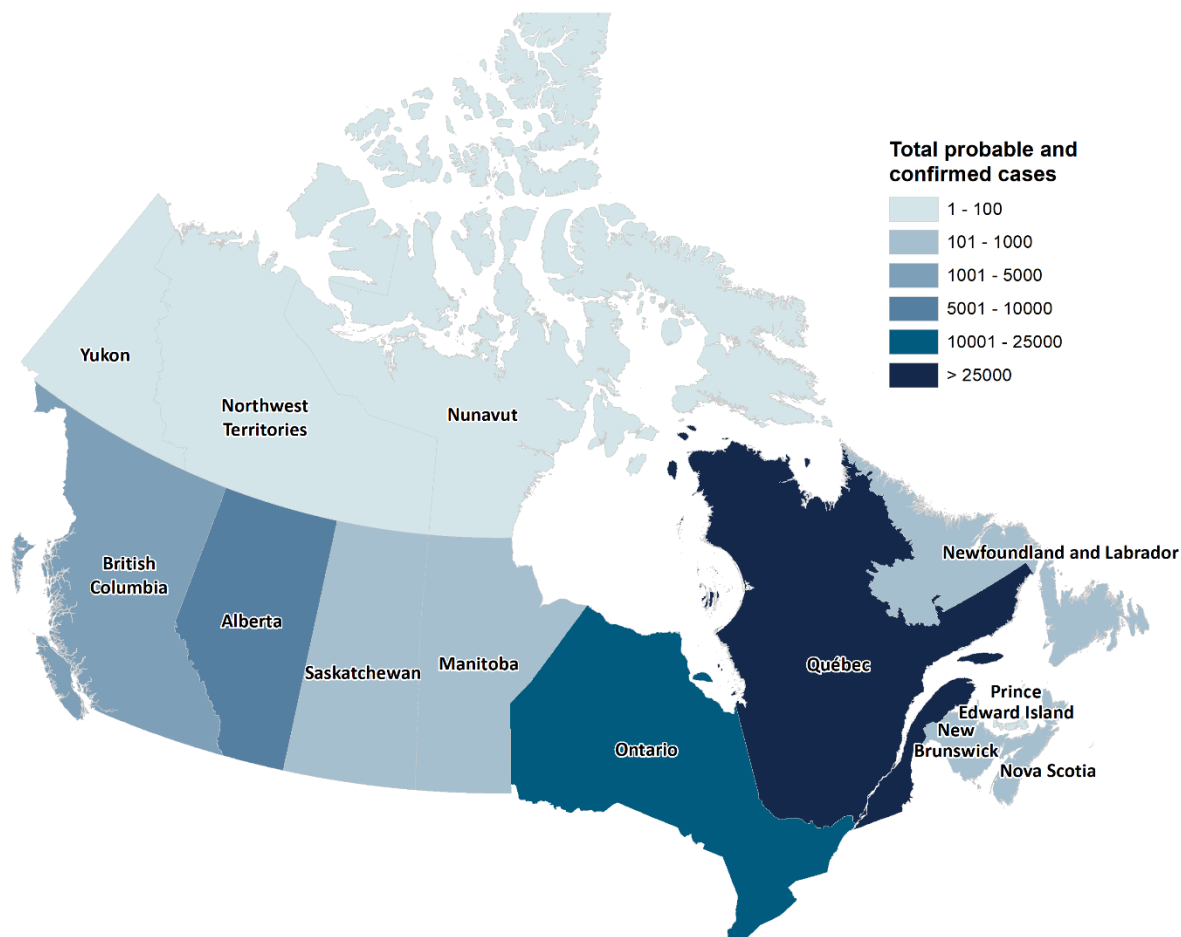

Data source: Surveillance and Risk Assessment Epidemiology Update. Map Created by NML Geomatics

The distribution of cumulative number of cases by report date (using publicly available P/T 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.
- Recently, Canada's rate of growth of COVID-19 cases has decreased and during the period of April 11 to 25th, the doubling time was 15 days.

**Figure 2**. Doubling time of cumulative number of reported COVID-19 cases in Canada by date of report
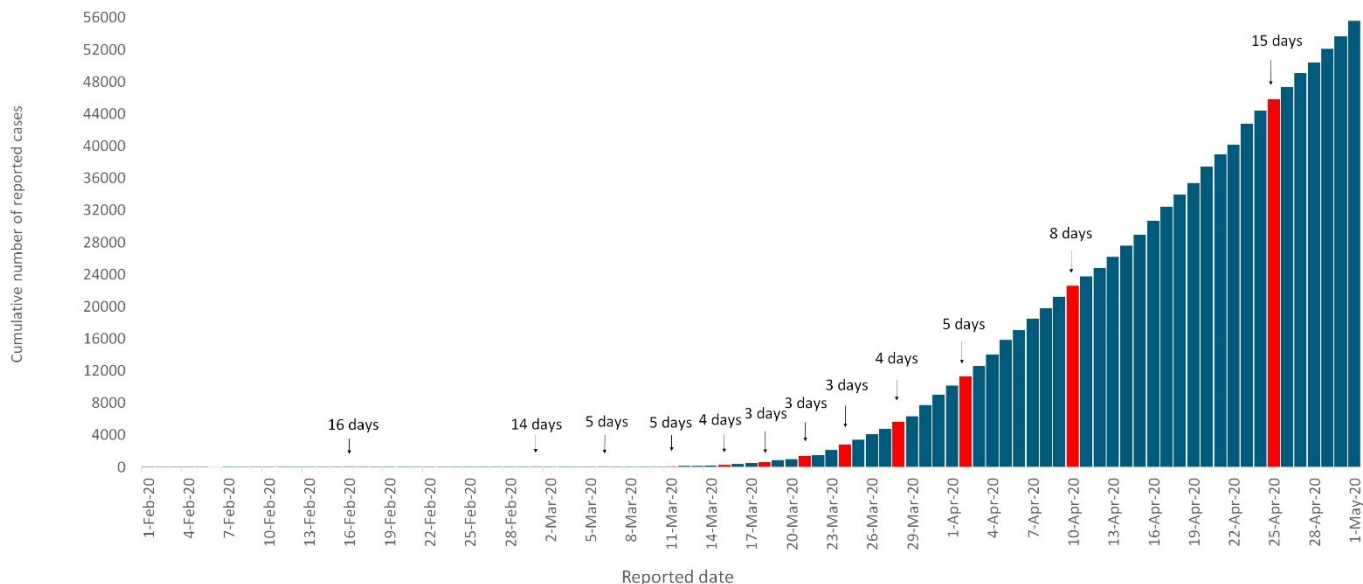
This section of the epidemiology update is based on the detailed case information received by PHAC for 30 640 cases. Not all data fields are complete for all cases.

Temporal Distribution

A summary of the distribution of cases by date of illness onset can be found in **Figure 3**.

Figure 3. New COVID-19 cases in Canada by date of illness onset (n= 29 326)
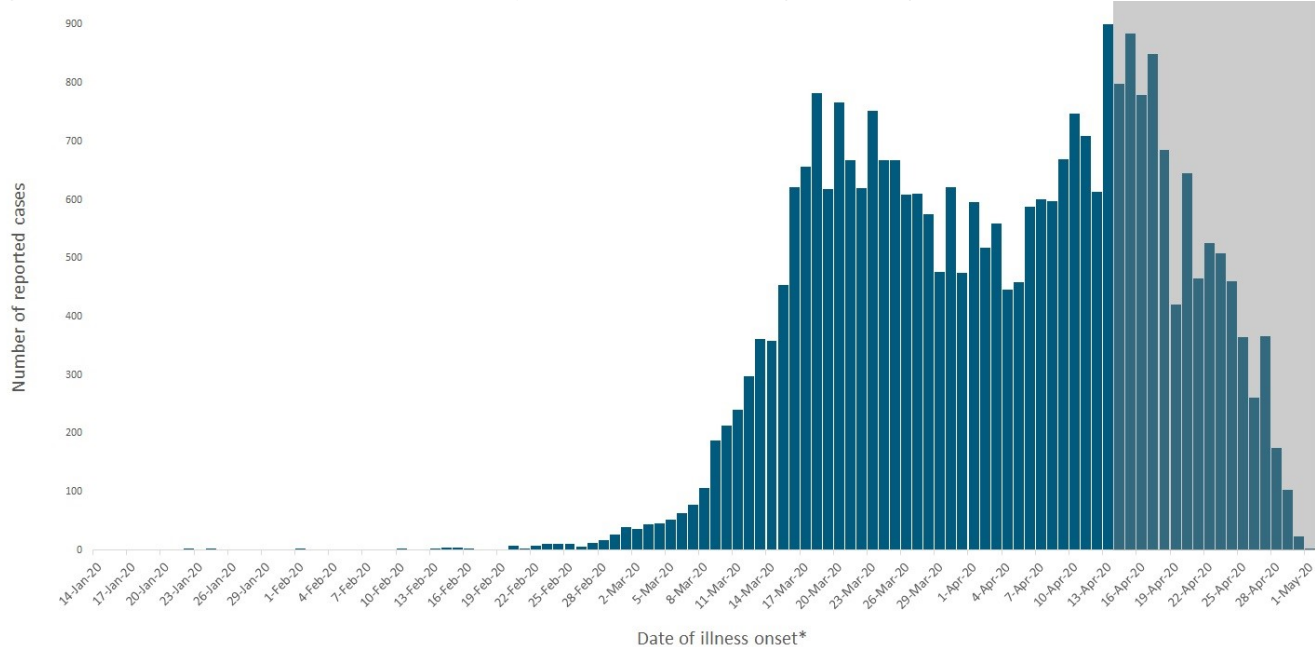
*If date of illness onset was not available the earliest of the following dates was used as an estimate in the following order: Specimen Collection Date, and Laboratory Testing Date.
Note: The shaded area represents a period of time (lag time) where it is expected that cases have occurred but have not yet been reported nationally

Demographic Distribution

A summary of the demographics can be found in **Table 2**.

- The highest proportion of cases are among those aged 40-59 years (32%), followed by those aged 20-39 years (26%); 5% of cases have occurred in individuals ≤ 19 years of age
- 55% of cases were reported among females

Table 2. Demographic characteristics of COVID-19 cases reported in Canada

Characteristics		
Age (in years)		
Median	52	
Range	0-111	
Age groups	n=30 104	
≤ 19	1 531	(5%)
20-39	7 741	(26%)
40-59	9 763	(32%)
60-79	6 175	(21%)
80+	4 894	(16%)
Gender	n=30 389	
Female	16 818	(55%)
Male	13 560	(45%)
Other	11	(<1%)

Clinical Presentations and Outcome

A summary of the clinical presentations can be found in **Table 3**.

- The date of symptom onset for cases ranges from January 15, 2020, to May 1, 2020.
- The most common symptoms reported are cough, headache, and general weakness.
- 535 cases have been clinically or radiologically diagnosed with pneumonia. Of those diagnosed with pneumonia, 56% are cases aged ≥ 60 years, and 41% are aged 60-79 years.
- The most commonly reported pre-existing health conditions were cardiac disease, respiratory disease, and diabetes.

Table 3. Clinical presentation summary of COVID-19 cases reported in Canada

Clinical Presentations*		
Pre-Existing Conditions	**n=8 237**	
Cardiac	1 048	(13%)
Respiratory disease	1 011	(12%)
Diabetes	775	(9%)
Other	1 578	(19%)
Symptoms	**n=8 248**	
Cough	6 102	(74%)
Headache	4 622	(56%)
Weakness	4 520	(55%)
Complications	**n=4 028**	
Pneumonia	535	(13%)
Dyspnea	309	(8%)
Abnormal lung auscultation	268	(7%)
Other	115	(3%)

*The three most commonly reported pre-existing conditions, symptoms, and complications above are not mutually exclusive, and therefore may not sum to 100%.

Case severity

Of the 20 008 cases with hospitalization data reported, 3 143 cases (16%) reported hospitalization, including 751 (24%) admitted to the ICU (**Table 4**).

- Those aged ≥ 60 years have the highest proportion of reported hospitalizations (66%), ICU admissions (63%), and deaths (95%).
- Among cases ≤ 19 years of age, there were 22 reported hospitalizations and 2 ICU admissions.
- Of the 3 143 cases that were hospitalized, 74% reported one or more pre-existing conditions.

**Table 4**. Summary of severe cases of COVID-19 reported in Canada with detailed case information

Case Severity							
Overall Summary Hospitalizations							
Hospitalizations			3 143/ 20 008		(16%)		
Hospitalizations in ICU			751/ 3 143		(24%)		
Hospitalizations requiring mechanical ventilation			158/ 3 143		(5%)		
	All Hospitalizations		**Admitted to ICU**		**Deceased**		
Age groups							
≤ 19	22	(1%)	2	(<1%)	0	(0%)	
20-39	235	(8%)	41	(6%)	11	(1%)	
40-59	794	(26%)	228	(31%)	59	(4%)	
60-79	1 235	(40%)	385	(52%)	371	(27%)	
80+	809	(26%)	82	(11%)	945	(68%)	
Total	**3 095**	**(100%)**	**738**	**(100%)**	**1 386**	**(100%)**	
Gender							
Female	1 405	(45%)	272	(36%)	719	(52%)	
Male	1 726	(55%)	477	(64%)	661	(48%)	
Other	1	(<1%)					
Total	**3 132**	**(100%)**	**749**	**(100%)**	**1 380**	**(100%)**	

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

Of the 19 529 cases with information on hospitalization status and age, the proportion of cases hospitalized and admitted to ICU are described by age group in **Figure 4.**

- Of all COVID-19 cases ≥ 60 years of age that have reported detailed case information (n=6 488), 2 044 (32%) have been hospitalized and 467 (7%) have been admitted to the ICU.

Figure 4. By age group, the percentage of COVID-19 cases with detailed case information that are hospitalized and admitted to ICU in Canada (n= 19 529)
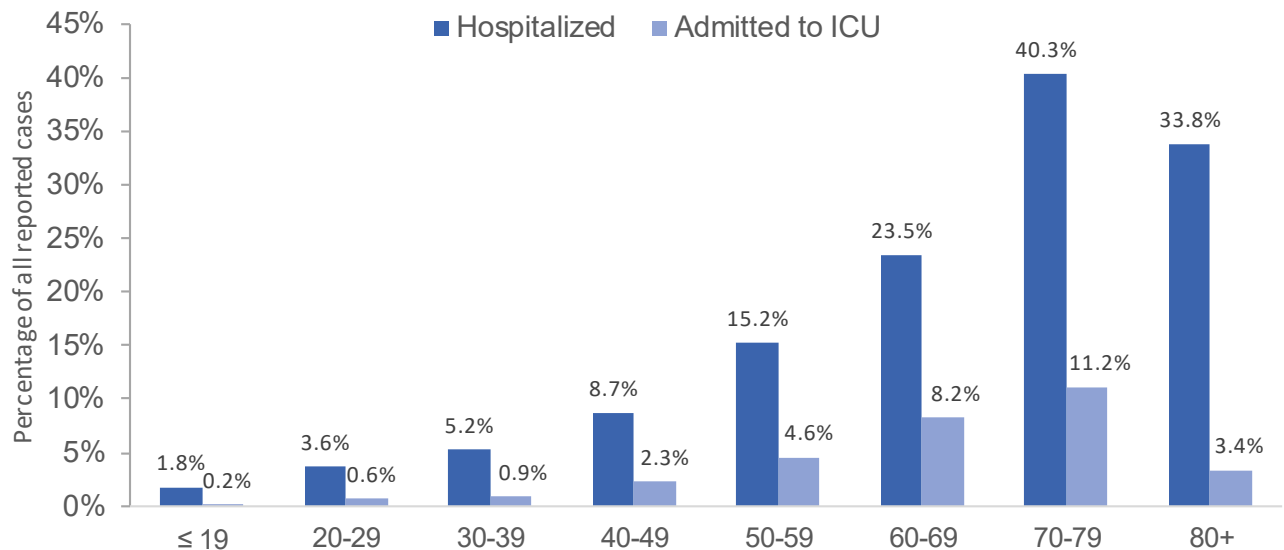

Of the 19 934 cases with information on hospitalization status and gender, the proportion of cases hospitalized and admitted to ICU, are described by gender in **Figure 5.**

- Male cases appear to have a somewhat higher risk of hospitalization (1.4 times), and ICU admission (2.0 times) compared to female cases.*
  *Please note that this information has not been tested for statistical significance and is only based on a portion of all cases.

Figure 5. By gender, the percentage of COVID-19 cases with detailed case information that are hospitalized and admitted to ICU in Canada (n= 19 934)
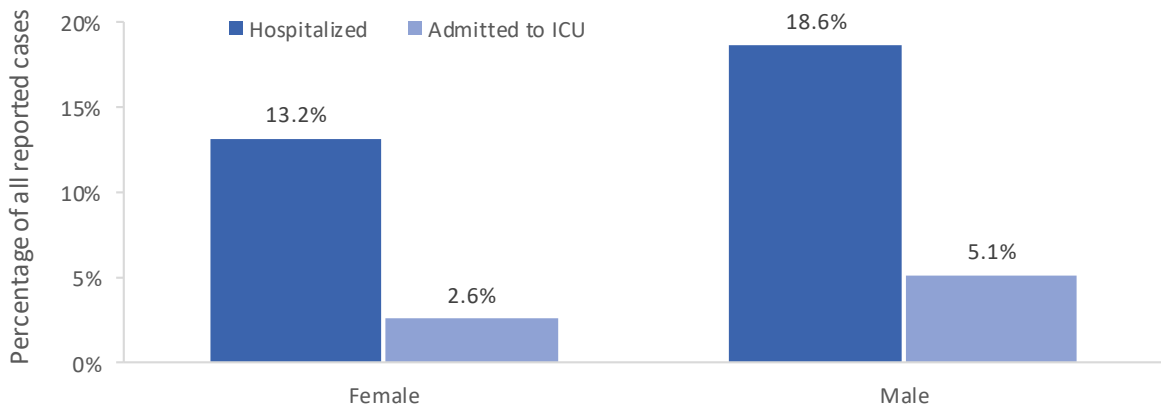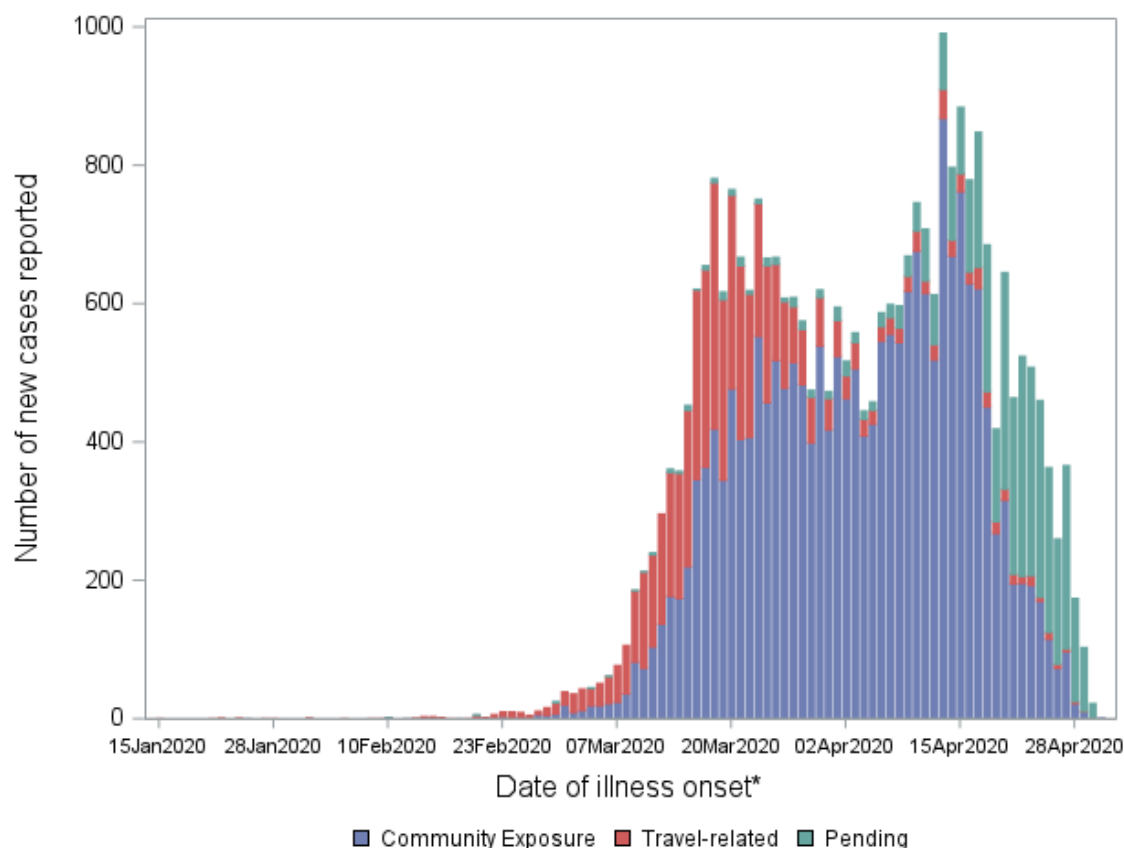
Exposure History

A summary of the exposure history of cases can be found in **Figure 6** and **Table 5.**

- The number of cases related to community transmission surpassed travel-related cases on March 15 2020

Figure 6. Number of newly reported COVID-19 cases in Canada by possible exposure category (n=29 326)

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

Table 5. Possible exposure setting of COVID-19 cases reported in Canada

Possible Exposure Setting	n=30 640	
Travel-Related	**n=5 148**	**17%**
History of international travel	4 048	79%
Close contact of an international traveller	1 100	21%
Community-Related	**n=21 413**	**70%**
Case exposed in a healthcare facility*	4085	19%
Case lives in a long-term care facility	478	2%
Close contact with case in a household	816	4%
Close contact with case in a workplace¥	207	1%
Case attends/works at a school or daycare	205	1%
Case has no known exposures†	15 622	73%
Pending	**n=4 079**	**13%**

*Includes healthcare workers and exposure in health care setting
¥ Excludes healthcare settings
† Includes community transmission where specific setting was not reported as well as cases where no clear exposure setting was reported

FluWatchers

FluWatchers is an online health surveillance system that helps track the spread of flu-like illness across Canada.

FluWatchers normally track the flu, but with the COVID-19 pandemic, we are shifting our focus to tracking COVID-19 over the spring and summer months. The FluWatchers program relies on Canadian volunteers to report each week.

In the week of April 19, 2020, 9 750 participants reported into the FluWatchers program. A total of 15 participants (0.2%) reported cough and fever.

Among the 15 participants reporting cough and fever:
- 9 (60%) sought medical attention
- 3 (20%) were tested
    - 1 test was positive for COVID-19 and 2 test results were negative

Figure 7: Percentage of FluWatchers Participants Reporting Cough and Fever (N=9 750 the week of April 19, 2020)
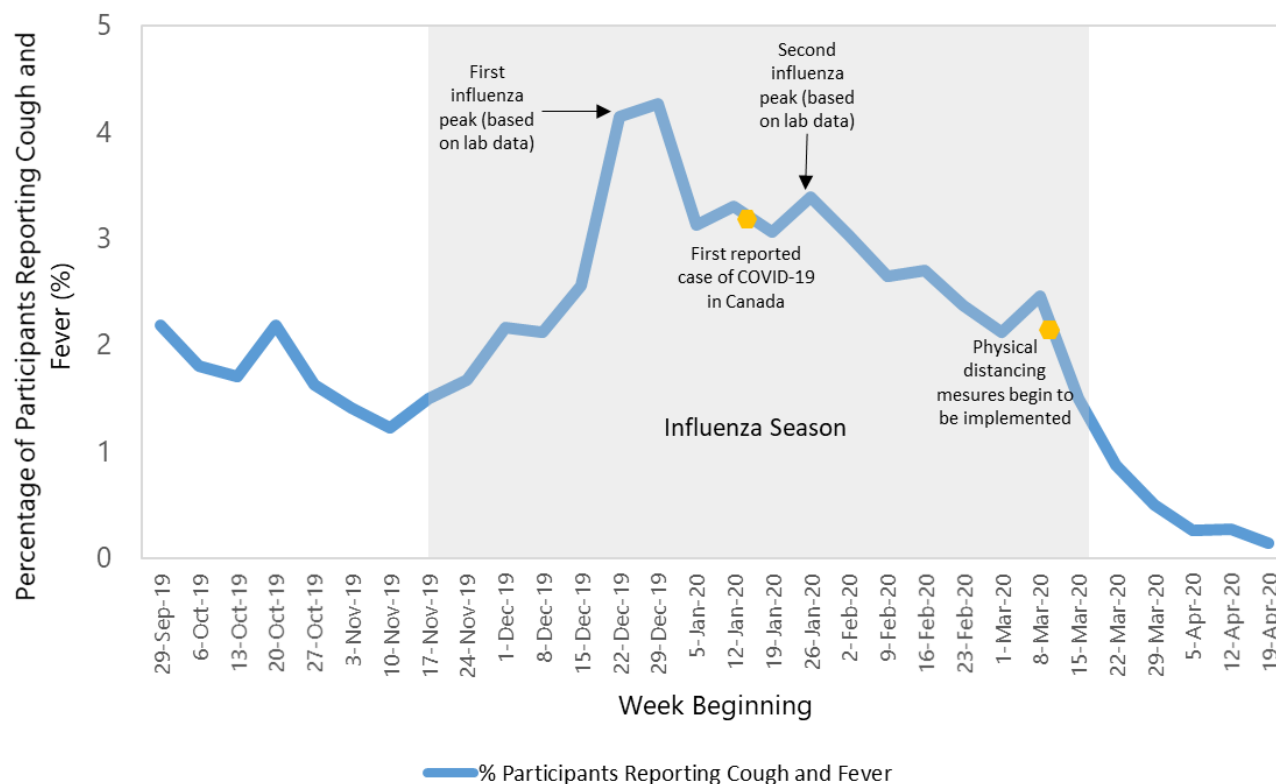
International
- The United States is the epicentre of the global pandemic (**Table 6**).
    - There are 1 104 161 cases and 65 068 deaths (CFR of 5.9%) reported in the United States as of May 2, 2020, at 8:00 AM[*].
    - Further information on the situation in the US can be found on US CDC website and in their weekly COVID-19 surveillance report.

- 210 countries/jurisdictions outside mainland China have reported cases of COVID-19.
- The United States is reporting the highest number of cases, followed by Spain, Italy, the United Kingdom, Germany, and France.
- Up-to-date country-specific risk levels may be found on travel health notices.

**Table 6**. Global number* of reported COVID-19 cases, May 2, 2020, 8:00 AM ET

Location	Total cases	New cases	Total deaths	New deaths
Globally	3 309 357	91 464	238 707	5 650
USA	1 104 161	34 129	65 068	2 049
Mainland China	82 875	1	4 633	0

*Information Sources: ECDC Situation update, Hong Kong Centre for Health Protection, Chinese Center for Disease Control and Prevention, Spain MOH, Germany MOH, France MOH, Italy MOH, and Johns Hopkins Resource Center.

A summary of the cumulative cases of COVID-19 in Canada compared to other countries by date of report can be seen in **Figure 8**.

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

Figure 8. Cumulative cases of COVID-19 in Canada compared to other countries by date of report
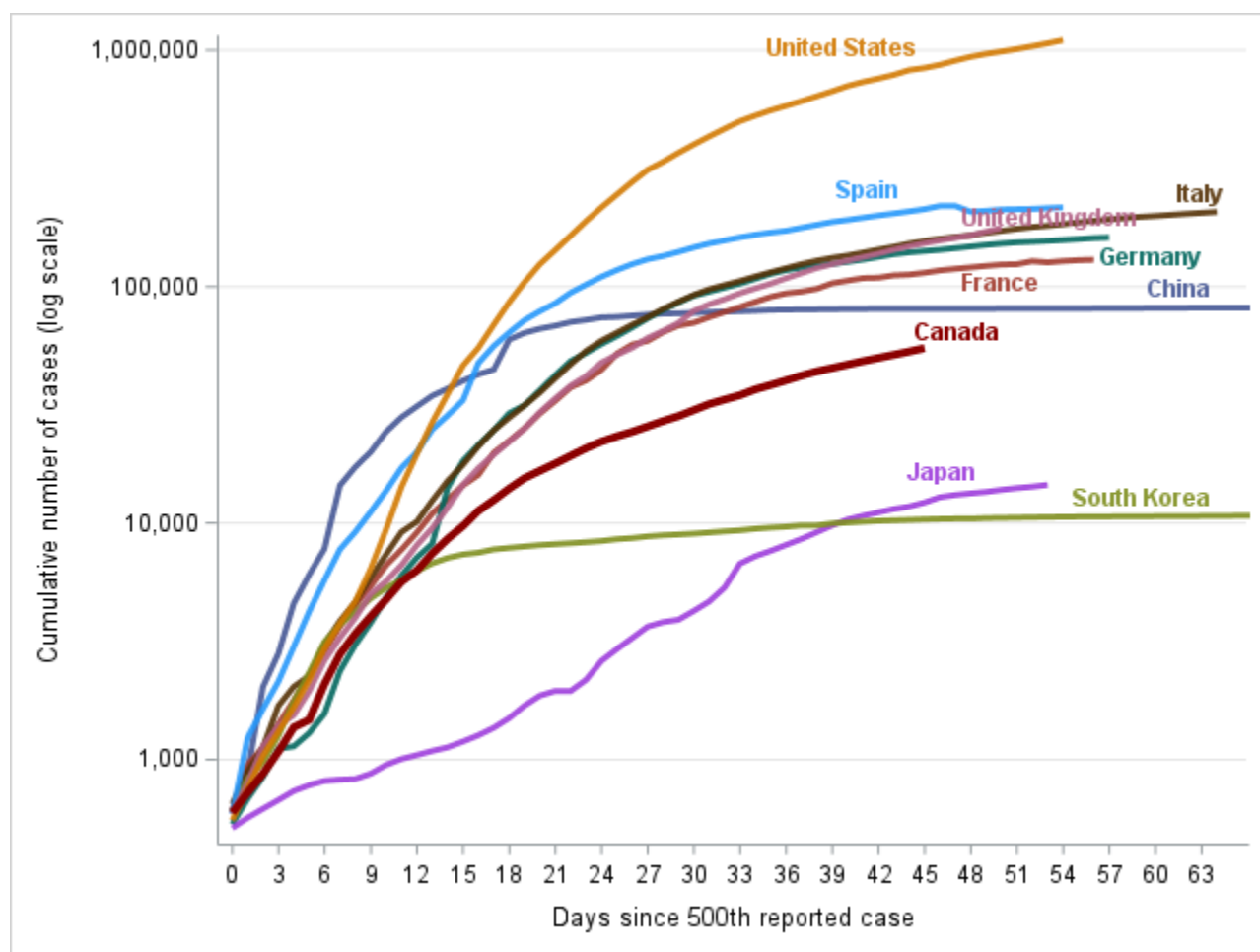
Note: At this time, results from international comparisons should be interpreted with caution. The number of tests conducted and indications for testing by country all have a large influence on total reported case counts. Therefore, the data displayed does not necessarily represent the true size of outbreak within each country.