Coronavirus Disease 2019 (COVID-19)

DAILY EPIDEMIOLOGY UPDATE

Updated: April 30, 2020, 11:00 AM ET

Highlights

Canada

- **52 056 (+1 683) cases,** including **3 082 (+178) deaths,** have been reported in Canada (overall case fatality rate of 5.9%).

- At least **788 283** people have been tested to date for COVID-19 in Canada, which corresponds to a test rate of **20 971** 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 for **56% (n=29 066) of all reported COVID-19 cases in Canada (N=52 056)**.
    - **Age and gender:**
        - The highest proportion of cases occurred among individuals 40-59 years of age (32%) followed by those 20-39 years of age (26%).
        - Only 5% of cases are individuals ≤ 19 years of age.
        - 55% of cases are female.

    - **Hospitalizations**:
        - Hospitalization data are available for 64% **(n=18 615)** of cases with detailed case information **(n=29 066)**.
            - Among these, 16% (n=3 009) have been hospitalized, of which, 24% (n=725) have been admitted to the ICU.
        - While 36% of the cases with detailed case information were 60 years of age and older, this age group represents the highest proportion of hospitalizations (66%) and ICU admissions (64%).
        - Among individuals aged ≤ 19 years, 18 have been hospitalized and 2 have been admitted to the ICU.
        - Male cases appear to have a somewhat higher risk of hospitalization and ICU admission when compared to female cases.

International

- 209 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 April 30, 2020, 11:00 AM ET, detailed data on cases have been received by the Public Health Agency of Canada (PHAC) for 56% (**n=29 066**) of all reported COVID-19 cases in Canada (**N=52 056**). Limitations of these data:

- Date are preliminary 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.

Data on number of people tested in Canada is provided to PHAC by the National Microbiology Laboratory. 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 April 30, 2020, 11:00 AM ET**, 52 056 (+1 683) cases** of COVID-19**,** including **3 082 (+178) deaths,** have been reported in Canada (overall case fatality rate of 5.9%).

At least **788 283** people have been tested for COVID-19 in Canada (**Table 1**). This corresponds to a test rate of **20 971** 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

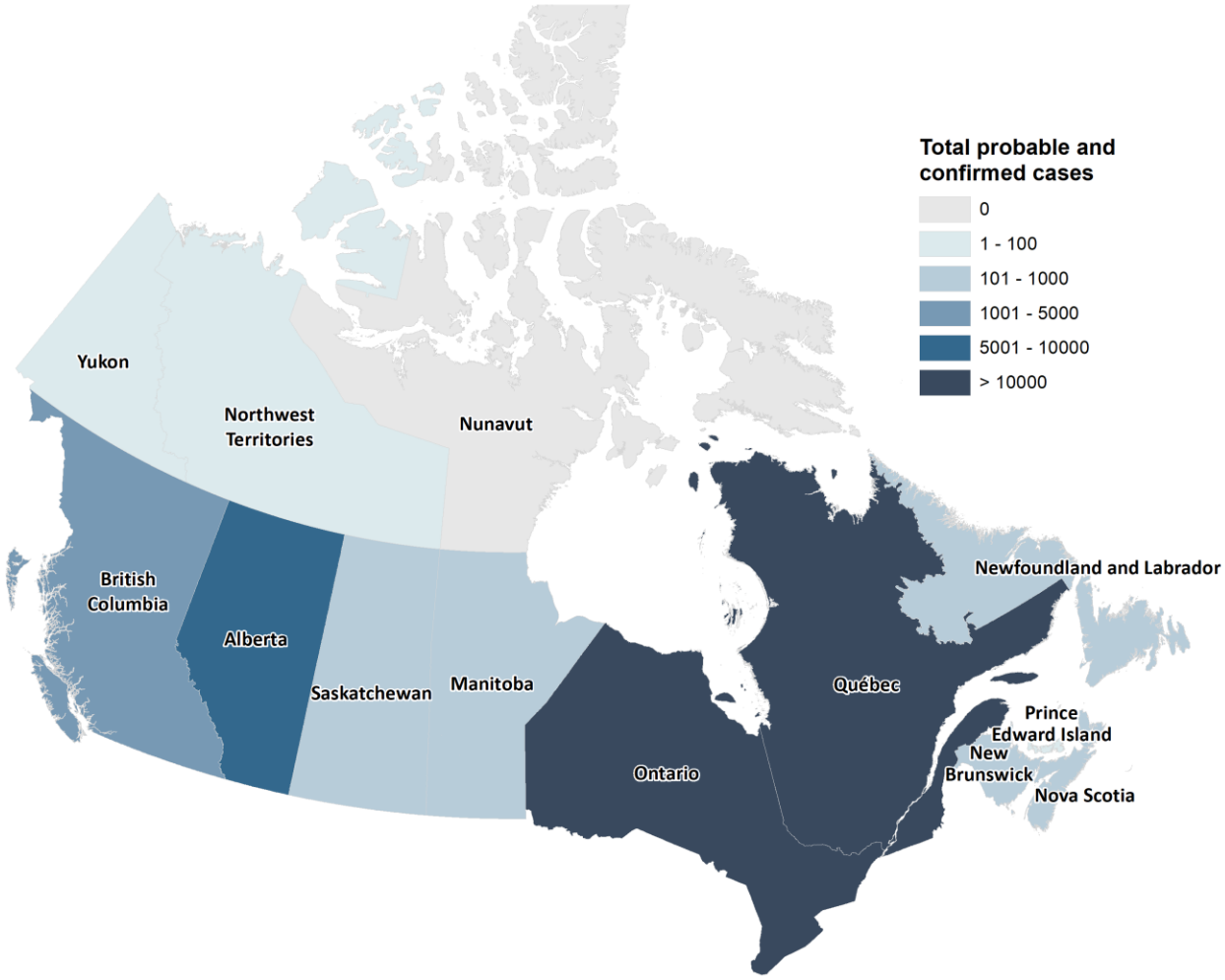
Location	Total Cases	New cases	% Change	Recovered	%Recovered	Total deaths	People tested	People tested per 1, 000, 000 pop'n
BC	2 087	34	2%	1305	63%	109	73 479	14 489
AB	5 165	315	6%	1953	38%	87	136 511	31 229
SK	383	17	5%	291	76%	6	27 786	23 658
MB	273	1	0%	213	78%	6	23 817	17 391
ON	16 187	459	3%	10 205	63%	1 082	255 942	17 571
QC	26 594	837	3%	6 048	23%	1 761	214 047	25 227
NL	258	0	0%	225	87%	3	8 376	16 060
NB	118	0	0%	114	97%	0	13 121	16 891
NS	935	20	2%	529	57%	28	29 421	30 287
PE	27	0	0%	24	89%	0	2 810	17 904
YK	11	0	0%	8	73%	0	973	23 817
NT	5	0	0%	5	100%	0	1 608	35 872
NU	0	0	0%	0	0%	0	392	10 108
Repatriated travellers*	13	0	0%	Unknown	Unknown	0	0	0
Total	52 056	1 683	3%	20 920	40%	3 082	788 283	20 971

** 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=26 594), followed by Ontario (n=16 187), Alberta (n=5 165) and British Columbia (n=2 087).

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



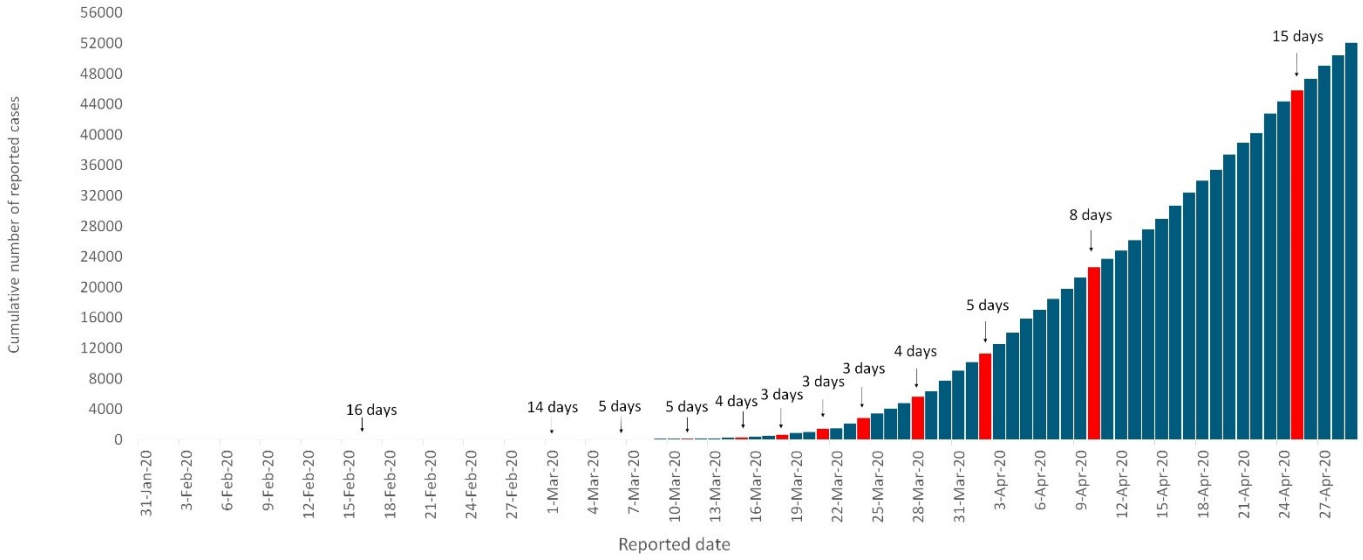
Data source: Surveillance and Risk Assessment Epidemiology Update. Map Created by NML Geomatics

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 the most current doubling time was 15 days (during the period April 11 to 25).

Figure 2. Doubling time of cumulative number of reported COVID-19 cases in Canada by date of report

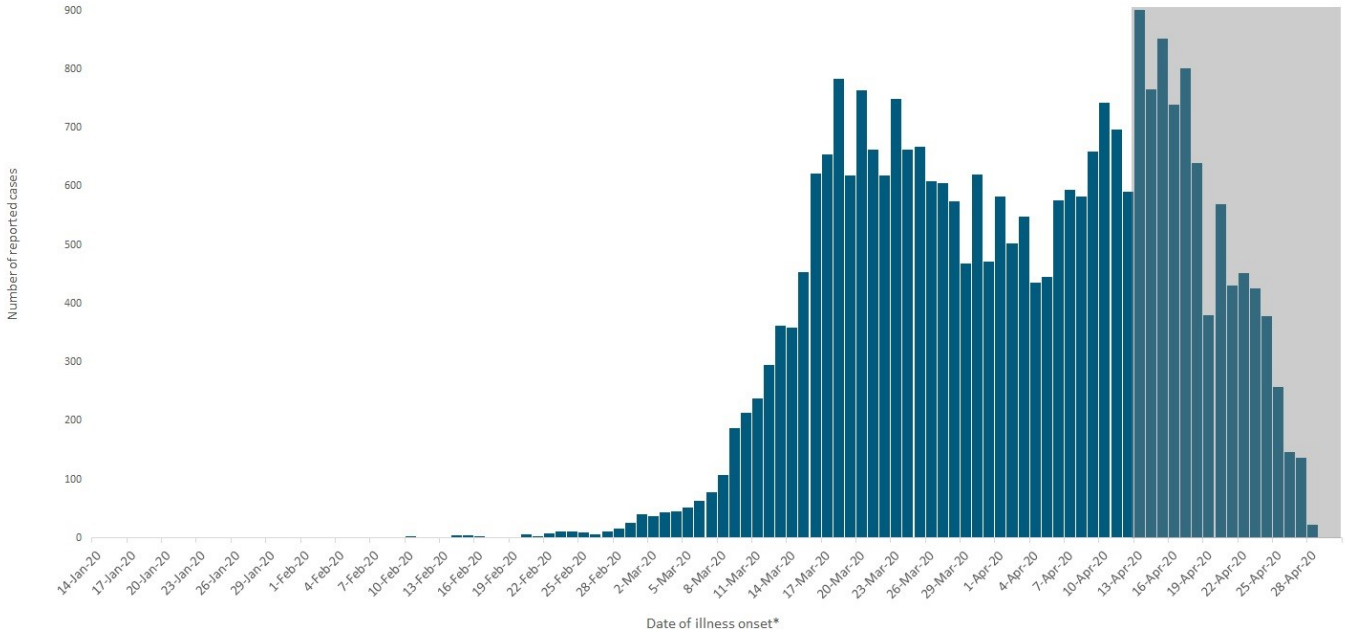


This section of the epidemiology update is based on the detailed case information received by PHAC for (n=29 066) of all reported COVID-19 cases in Canada (N=52 056). The number of cases for which we have information varies by characteristic of interest.

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=27 785)



*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 of reported cases for which we have detailed case information 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=28 532	
≤ 19	1 407	(5%)
20-39	7 302	(26%)
40-59	9 220	(32%)
60-79	5 927	(21%)
80+	4 676	(16%)
Gender	n=28 824	
Female	15 934	(55%)
Male	12 879	(45%)
Other	11	(<1%)

Clinical Presentations and Outcome

A summary of the clinical presentations of reported cases for which we have detailed case information can be found in **Table 3**.

- The date of symptom onset for cases ranged from January 15, 2020, to April 28, 2020.
- The most common symptoms reported are cough, headache, and general weakness.
- 523 cases have been clinically or radiologically diagnosed with pneumonia. Of those diagnosed with pneumonia, 56% are cases aged ≥ 60 years, and 42% 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=7936**	
Cardiac	989	(12%)
Respiratory disease	973	(12%)
Diabetes	739	(9%)
Other	1 518	(19%)
Symptoms	**n=7952**	
Cough	5 911	(74%)
Headache	4 500	(57%)
Weakness	4 404	(55%)
Complications	**n=3930**	
Pneumonia	523	(13%)
Dyspnea	307	(8%)
Abnormal lung auscultation	267	(7%)
Altered mental status	145	(4%)

*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 total detailed case information available for hospitalization (n=18 615), 3 009 cases have been hospitalized, of which 725 have been admitted to the ICU (**Table 4**).

- The highest proportion of reported hospitalizations (66%), ICU admissions (64%), and deaths (95%) have occurred among those aged ≥ 60 years.
- Among individuals ≤ 19 years of age, there were 18 reported hospitalizations and 2 ICU admissions.
- Of reported hospitalized cases (n=3 009), 74% reported having one or more pre-existing conditions.

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

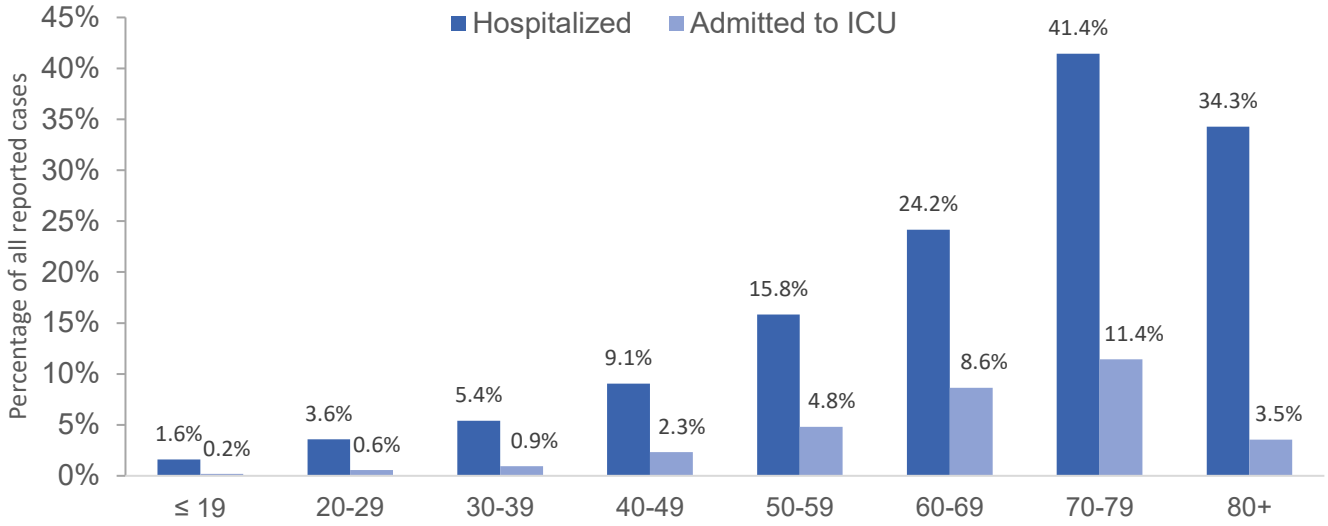
Severe Cases						
Overall Summary Hospitalizations						
Hospitalizations			3009/18615	(16%)		
Hospitalizations in ICU			725/3009	(24%)		
Hospitalizations requiring mechanical ventilation			155/3009	(5%)		
Breakdown by:	**All Hospitalizations**		**Admitted to ICU**		**Deceased**	
Age groups						
≤ 19	18	(1%)	2	(0%)	0	(0%)
20-39	222	(7%)	37	(5%)	11	(1%)
40-59	762	(26%)	219	(31%)	56	(4%)
60-79	1 195	(40%)	375	(53%)	345	(27%)
80+	764	(26%)	79	(11%)	865	(68%)
Total	**2 961**	**(100%)**	**712**	**(100%)**	**1 277**	**(100%)**
Gender						
Female	1 339	(45%)	259	(36%)	655	(52%)
Male	1 659	(55%)	464	(64%)	616	(48%)
Other	1	(<1%)				
Total	**2 999**	**(100%)**	**723**	**(100%)**	**1 271**	**(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.

For all reported COVID-19 cases with detailed case information on hospitalization status and age (n=18 138), 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=6 074), 1 959 (32%) have been hospitalized and 454 (7%) have been admitted to the ICU.

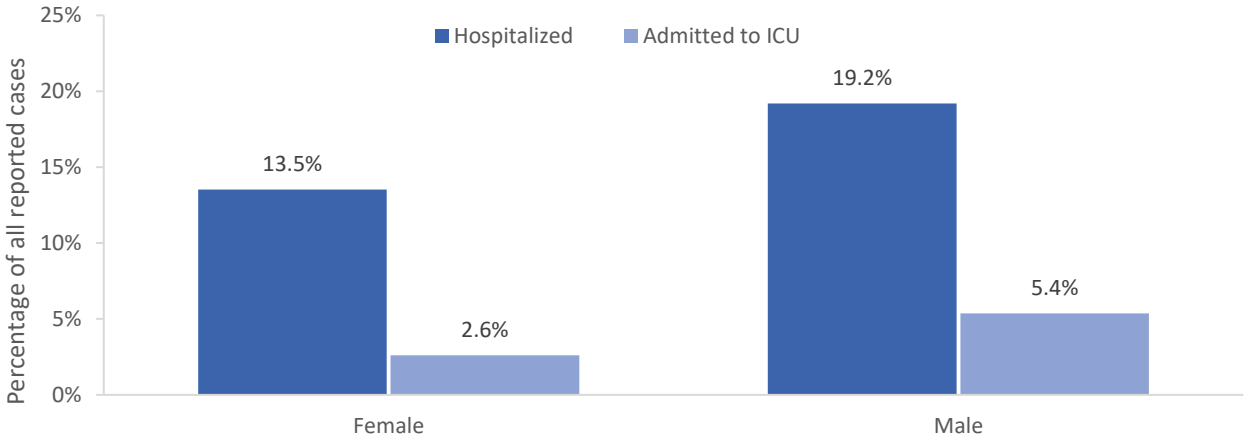
Figure 4. By age group, the percentage of COVID-19 cases with detailed case information that are hospitalized and admitted to ICU in Canada (n=18 138)



For all reported COVID-19 cases with detailed case information on hospitalization status and gender (n=18 543), 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 (2.1 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=18 543)

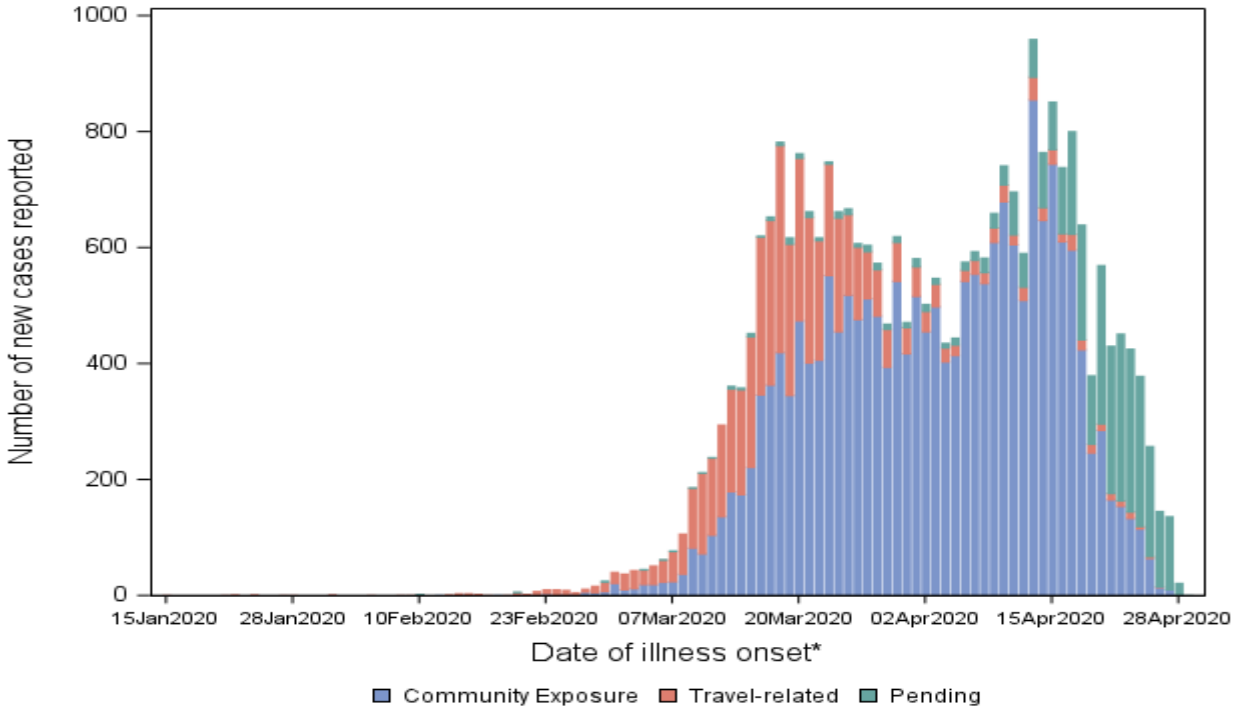


Exposure History

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 overtook travel-related cases on March 15 2020

Figure 6. Number of newly reported COVID-19 cases in Canada by possible exposure category (n=27 785)



*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=29066**	
Travel-Related	**n=5080**	**17%**
History of international travel	4032	79%
Close contact of an international traveller	1048	21%
Community-Related	**n=20708**	**71%**
Case exposed in a healthcare facility*	3810	18%
Case lives in a long-term care facility	459	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	209	1%
Case has no known exposures†	15207	73%
Pending	**n=3278**	**11%**

*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.

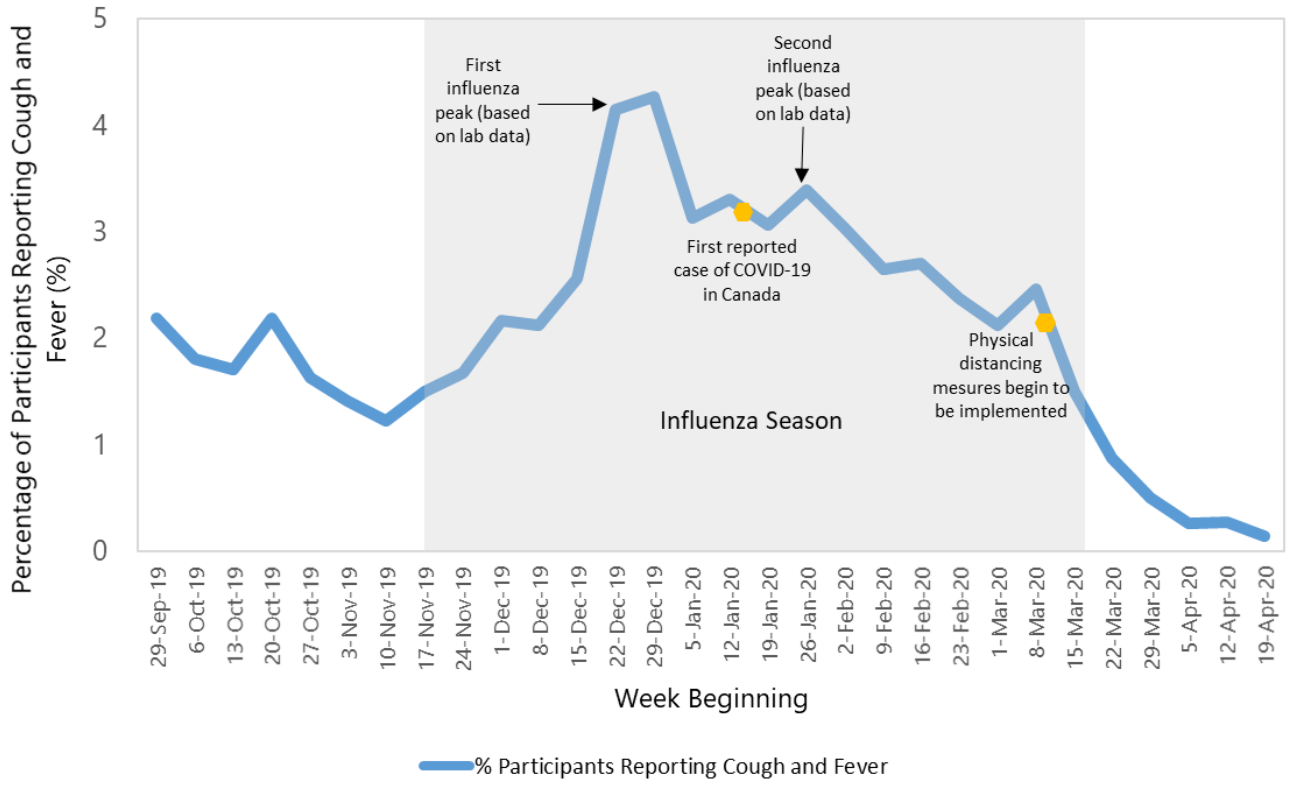
FluWatchers normally track the flu, but with the COVID-19 pandemic, we are shifting our focus to tracking COVID-19 over the spring and summer months. The FluWatchers program relies on Canadian volunteers to report each week.

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 1 040 488 cases and 60 999 deaths (CFR of 5.9%) reported in the United States as of April 30, 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.

- 209 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, April 30, 2020, 8:00 AM ET

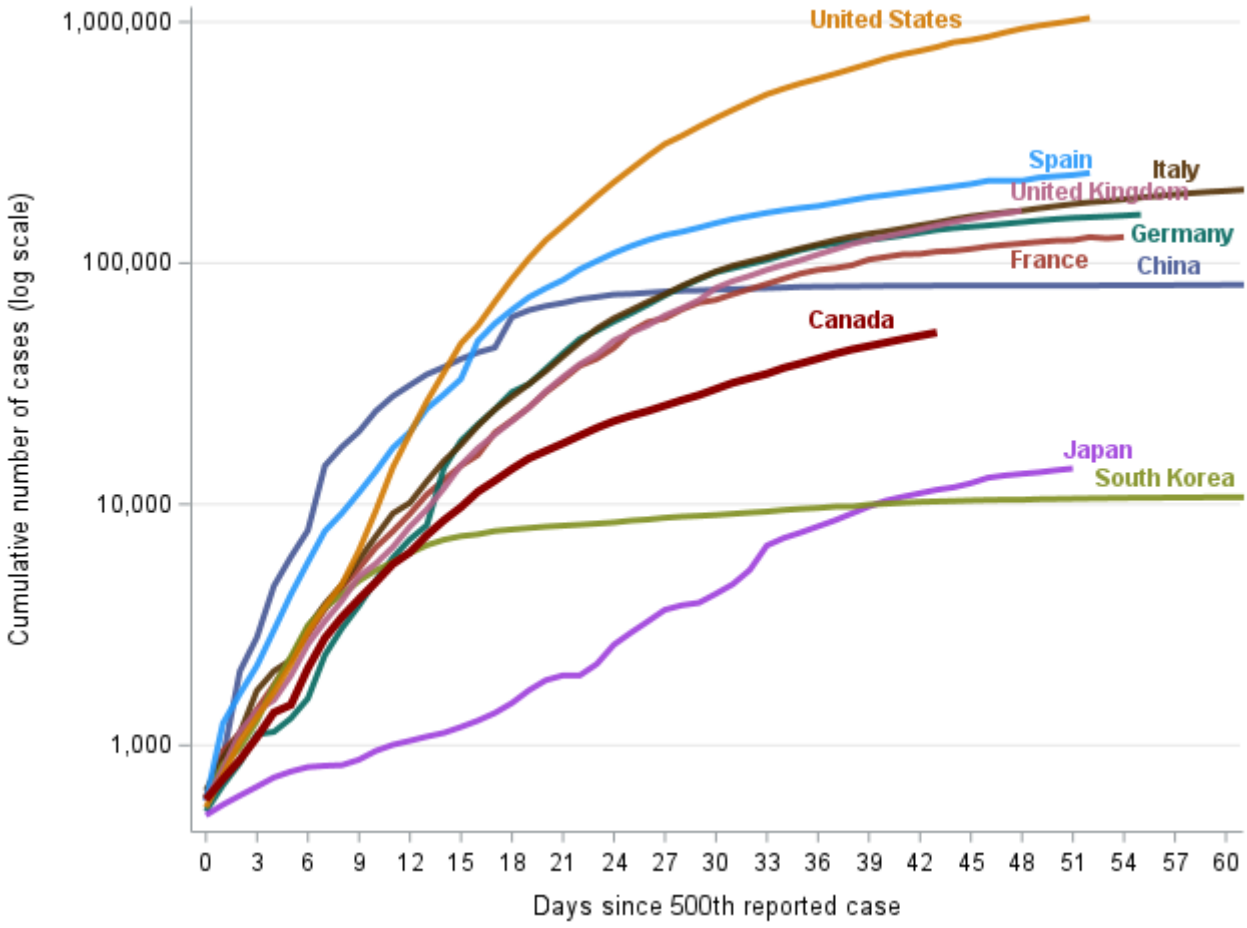
Location	Total cases	New cases	Total deaths	New deaths
Globally	3 155 382	81 635	227 804	11 241
USA	1 040 488	27 905	60 999	2 644
Mainland China	82 862	4	4 633	0

***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.*