Update on COVID-19 in Canada: Epidemiology and Modelling

January 15th, 2021

Canada.ca/coronavirus
Sharp increase in daily COVID-19 case counts nationally, since late December

Data as of January 12, 2021

Note: Less testing over the holiday period likely impacted daily case count, resulting in a brief decrease of the 7-day moving average
High incidence, especially in Quebec and Ontario, continues to drive rapid growth.
More health regions reporting higher rates of COVID-19 infection

Cases per 100,000 population (Dec 30 - Jan 12)

400 and higher
200 to 399
100 to 199
50 to 99
15 to 49
>0 to 14
0

59 of 99 health regions with > 100 cases per 100,000 population over a 14-day period

Note: Map only shows COVID-19 cases where health region had been attributed in source data

Data sources: COVID-19 Canada Open Data Working Group. Epidemiological Data from the COVID-19 Outbreak in Canada

Data as of January 12, 2021
Continued escalation of incidence among high-risk adults aged 80 years and older

Number of reported cases per 100 000 population (7-day moving average)

Date of illness onset*

Data as of January 12, 2021
*First available of illness onset, specimen collection, laboratory test date
Widespread community transmission and increased outbreaks in long-term care facilities*

**Number of outbreaks**

Data as of January 12, 2021; by date outbreak first reported

Note: *Including retirement residences. Data for outbreaks occurring in January have been excluded. Data based on publically reported information. **Underestimated due to reduced reporting in December.
Steady upward trend in hospitalizations in provinces with sustained high infection rates

Number of cases in hospitals per 100,000 population*

Data as of January 12, 2021
* 7-day moving average
COVID-19 related deaths steadily rising and may soon exceed levels seen during the first peak

140 deaths daily on average, past 7 days

Data as of January 12, 2021
Short-term forecast shows continuation of rapid growth

Cumulative cases predicted to January 24, 2021: 752,400 to 796,630
Cumulative deaths predicted to January 24, 2021: 18,570 to 19,630

Extrapolation based on recent trends using a forecasting model (with ranges of uncertainty). Data as of January 12, 2021.
Longer-range forecast shows, overall for Canada, we remain on a rapid growth trajectory

If we **maintain** the current number of people we contact each day – the epidemic will continue to resurge: **Grey line**

If we **increase** the current number of people we contact each day – the epidemic is forecast to resurge faster and stronger: **Orange line**

If we **reduce** the current number of people we contact each day to only essential activities through combined individual precautions and public health measures – the epidemic is forecast to come under control in most locations: **Blue line**

Data as of January 12, 2021


https://www.medrxiv.org/content/10.1101/2020.04.17.20070086v1
Quick, strong and sustained measures are needed to interrupt rapid growth and maintain COVID-19 control

Data as of January 13, 2021
Upcoming months will be very challenging for Canada – we must redouble efforts and hold firm to see our way through

- Reducing COVID-19 activity is urgently needed as rollout of safe and effective COVID-19 vaccines begins
  - protect those at highest risk of severe outcomes.
  - protect critical healthcare and public health capacity from being overwhelmed

- All Canadians are asked to maintain public health practices and follow public health advice, including to:
  - limit outings and activities to just the essentials
  - avoid all non-essential travel outside of Canada
Appendix
Longer range forecast indicates that a stronger response is needed now in several provinces to slow the spread of COVID-19

Data as of January 12, 2021
Projected incidence for the next 3 months (blue line) with 50 and 95% credibility intervals (shaded areas).