Update on COVID-19 in Canada: Epidemiology and Modelling

Oct 30th, 2020
Daily case counts of COVID-19 continue to increase nationally

Data as of October 27, 2020
The incidence rate of COVID-19 is varying by province and region

Data as of October 27, 2020
Each new case in Canada is spreading infection to more than one person, keeping the epidemic in a growth pattern.

When $R_t$ is consistently >1, the epidemic is growing.

Since mid-August, Canada’s $R_t$ has remained >1.

Data as of October 27, 2020
Calculations are based on date of case report.
Canada continues to test at a high rate but recent spread has increased the percentage of people testing positive

Data as of October 17, 2020
Over the past two weeks, more health regions are reporting higher rates of COVID-19 infection

Data as of October 27, 2020

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
Incidence of COVID-19 is increasing across all age groups but remains highest among those under 40 years of age.

Data as of October 27, 2020

*First available of illness onset, specimen collection, laboratory test date
Health inequities are shaping the distribution of the pandemic in Canada

Cumulative COVID-19 cases by neighbourhood, Toronto, Jan 21 to Oct 22, 2020
Source: Toronto Public Health

More outbreaks are occurring but they are smaller in size

Data sources: Provincial/territorial websites and public information sources
*Note school outbreaks include only those with at least two cases.

Proportion of outbreaks by setting

Data as of October 27
Hospitalizations have increased following the increase in reported cases

Data as of October 27, 2020
Provinces with recent COVID-19 cases included
Daily number of COVID-19-related deaths, which lag behind infections, is also gradually increasing

Data as of October 27, 2020
The latest short-term forecast suggests a continuation of growth

Cumulative cases predicted to November 8: 251,800 to 262,000

Cumulative deaths predicted to November 8: 10,285 to 10,400

- Cumulatively reported cases in Canada by October 24
- Prediction to November 08
- Lower 95% prediction limit
- Upper 95% prediction limit

Cases added since October 24 when the prediction was made

Extrapolation based on recent trends using a forecasting model (with ranges of uncertainty)
Long-range forecast indicates that a stronger response is needed now to slow the spread of COVID-19

- If we **maintain** our current rate of contacts – the epidemic is forecast to resurge: **Grey line**

- If we **increase** our current rate of contacts by 20% – the epidemic is forecast to resurge faster and stronger: **Orange line**

- If we **decrease** our current rate of contacts by 25% – the epidemic is forecast to come under control in most locations: **Blue line**

Celebrating fall events more safely

• Do your part to slow the spread and prevent new outbreaks
• Limit your contacts and avoid gatherings with those outside your consistent, trusted contacts
• Celebrate creatively with virtual gatherings and physically distanced outdoor activities
• Consistently maintain good public health practices: Stay home if sick, handwashing, physical distancing and wear a mask as appropriate
• Follow guidance from your local public health authorities

Help limit the spread. Download the COVID Alert app.