



Public Health
Agency of Canada

Agence de la santé
publique du Canada

Canada

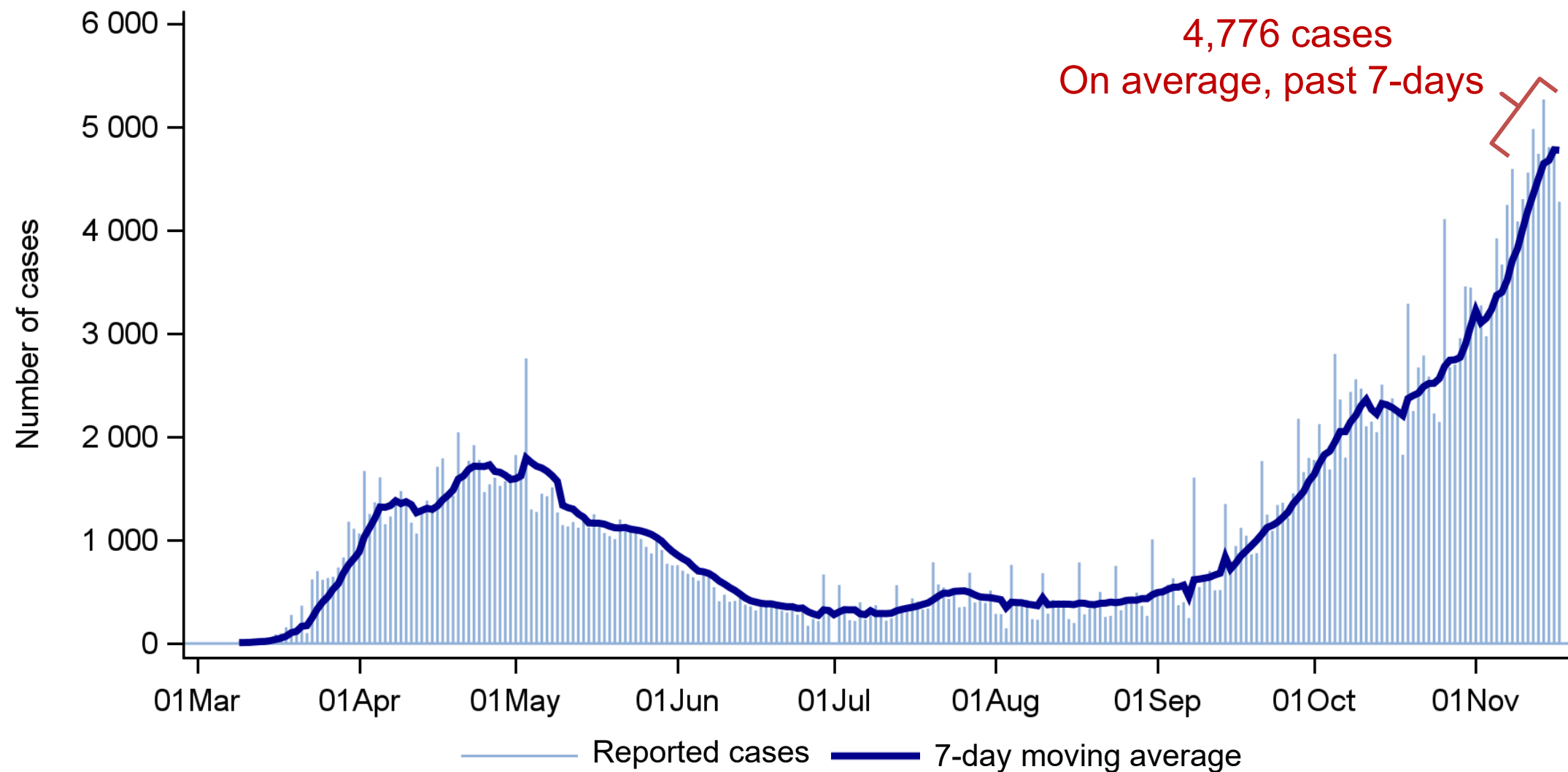
Update on COVID-19 in Canada: Epidemiology and Modelling

November 20th, 2020

PROTECTING AND EMPOWERING CANADIANS
TO IMPROVE THEIR HEALTH

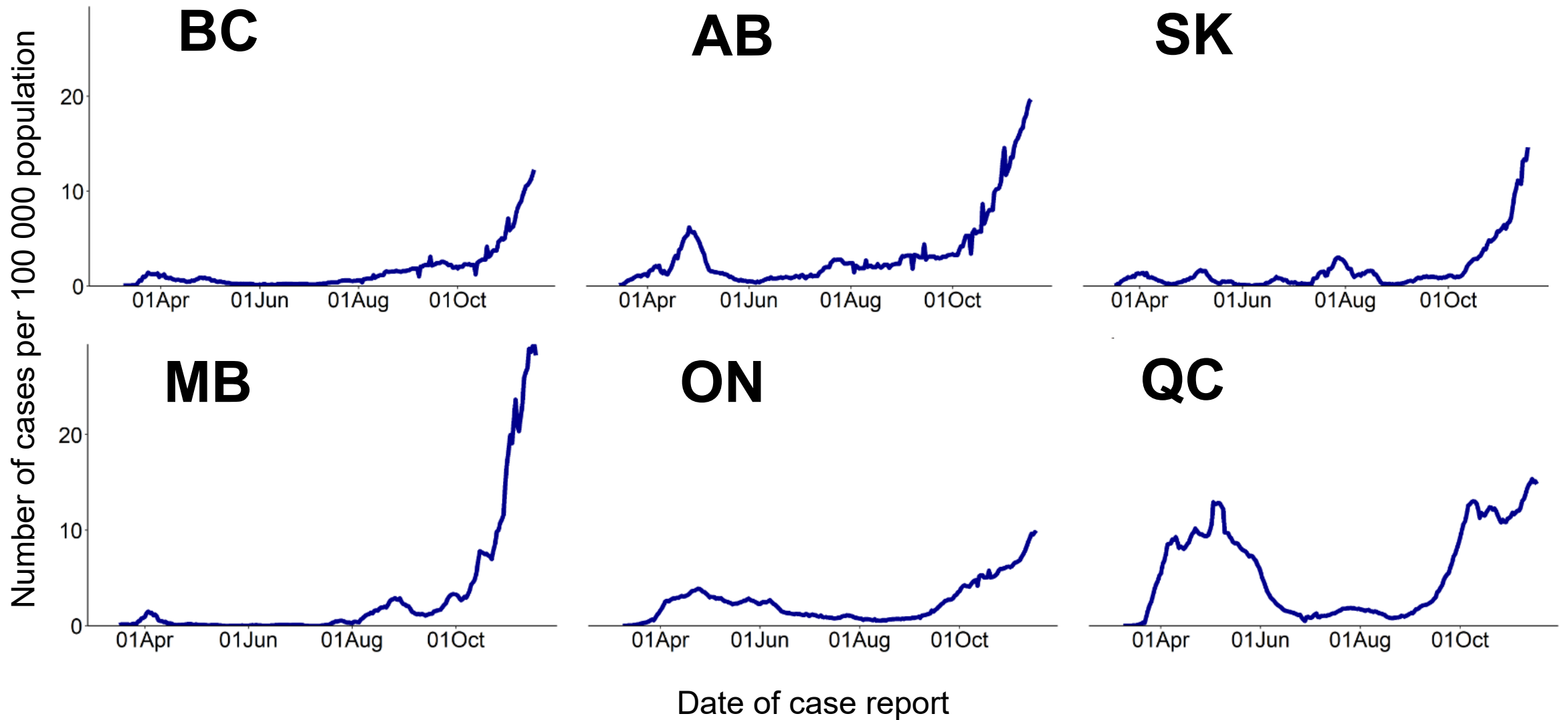


National daily case counts of COVID-19 increasing significantly



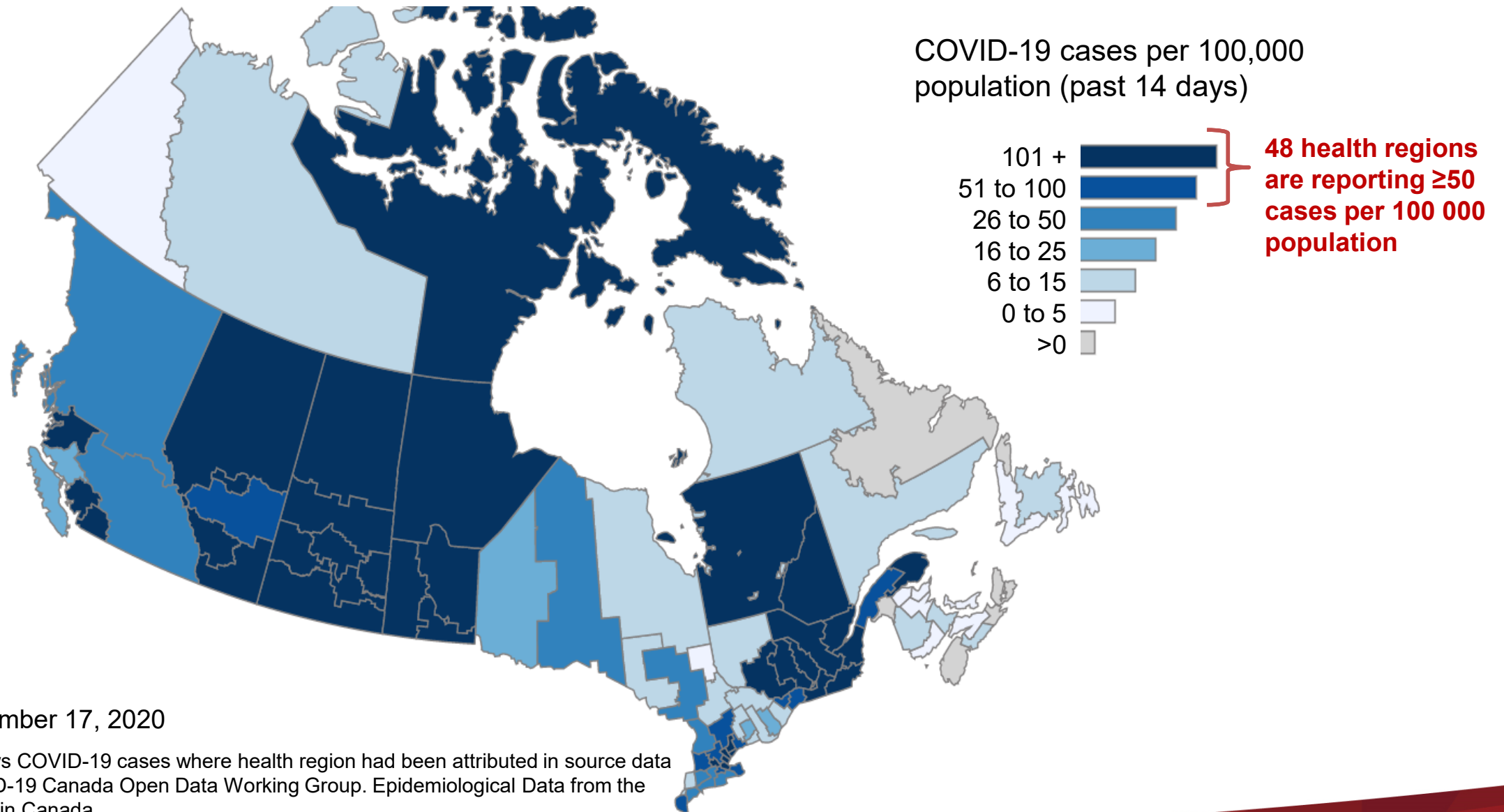
Data as of November 17, 2020

Rapid growth is occurring in several provinces



Data as of November 17, 2020

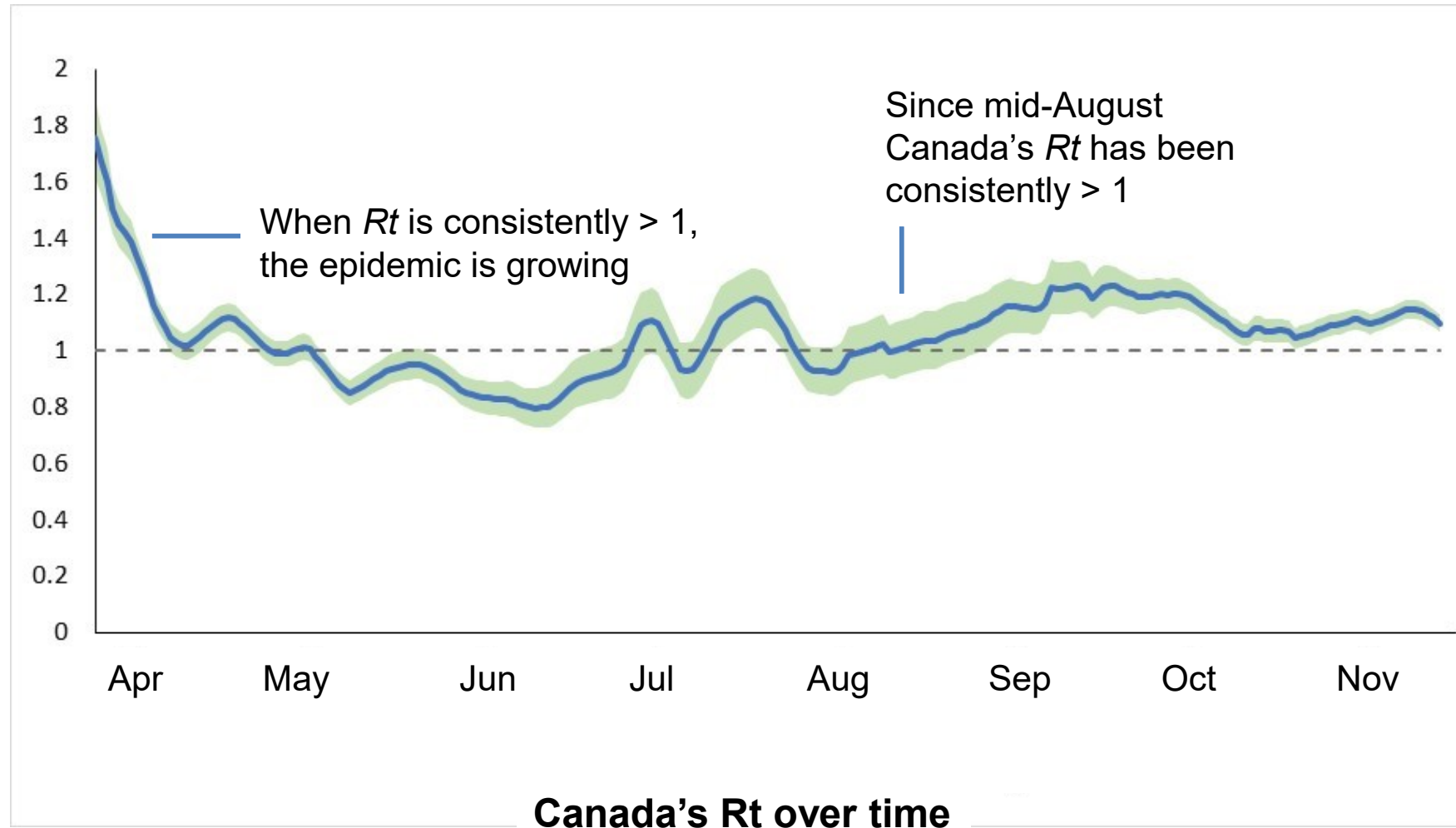
More health regions are reporting higher rates of COVID-19 infection



Data as of November 17, 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

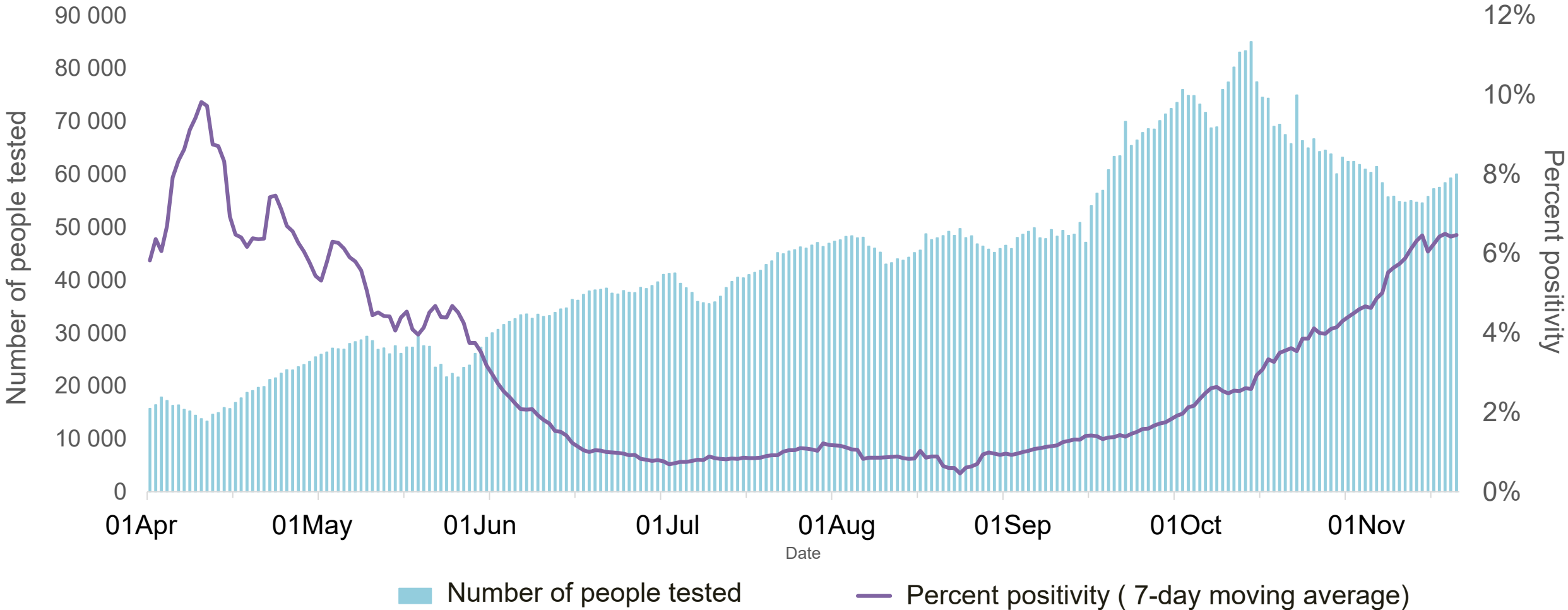
Each new case in Canada is spreading infection to more than one person, keeping the epidemic in a growth pattern



Data as of November 14, 2020

Calculations are based on date of case report

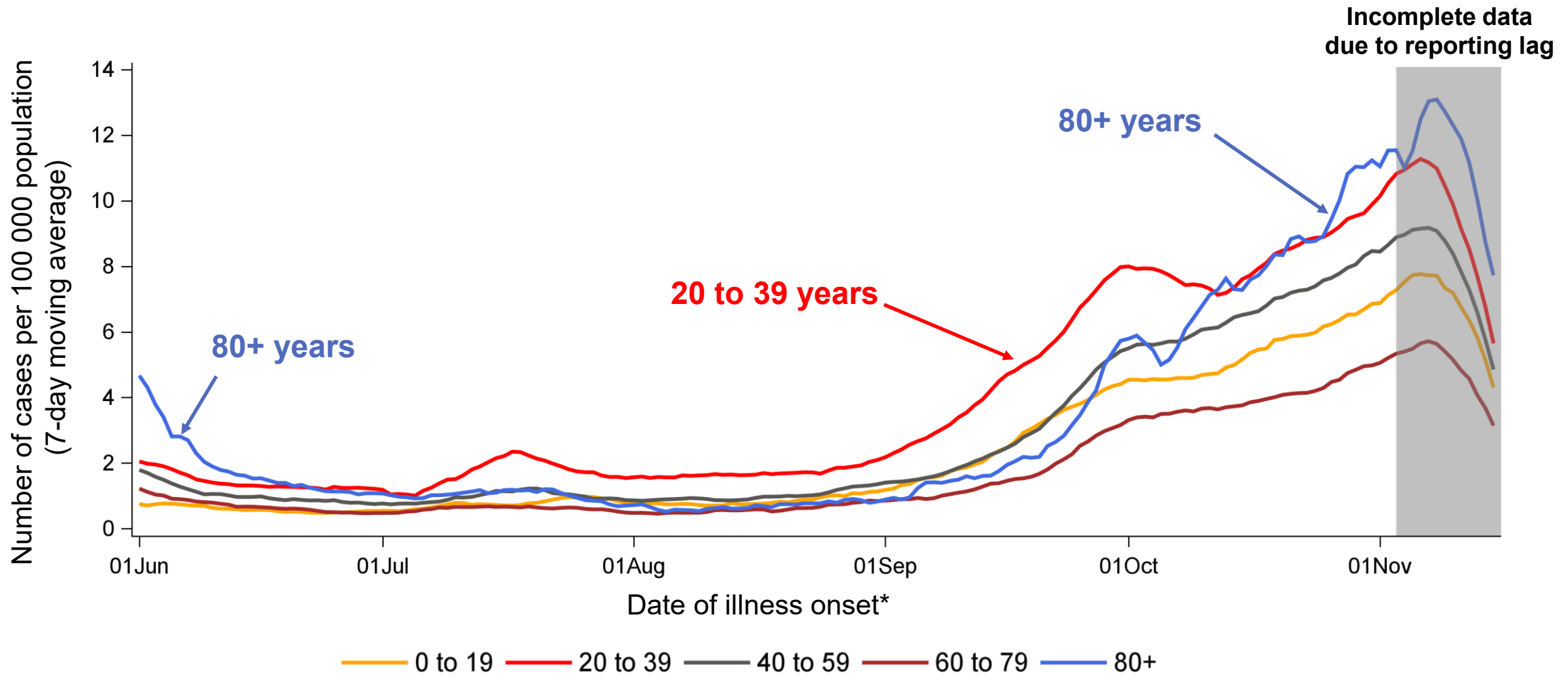
The percentage of people testing positive is increasing nationally



Data as of November 16, 2020

National metrics do not capture lab testing data for AB post Nov. 5th due to non-reporting.

Escalating incidence among high-risk adults, aged 80 years and older



Data as of November 17, 2020

*First available of illness onset, specimen collection, laboratory test date

Number and size of outbreaks are increasing in a variety of settings

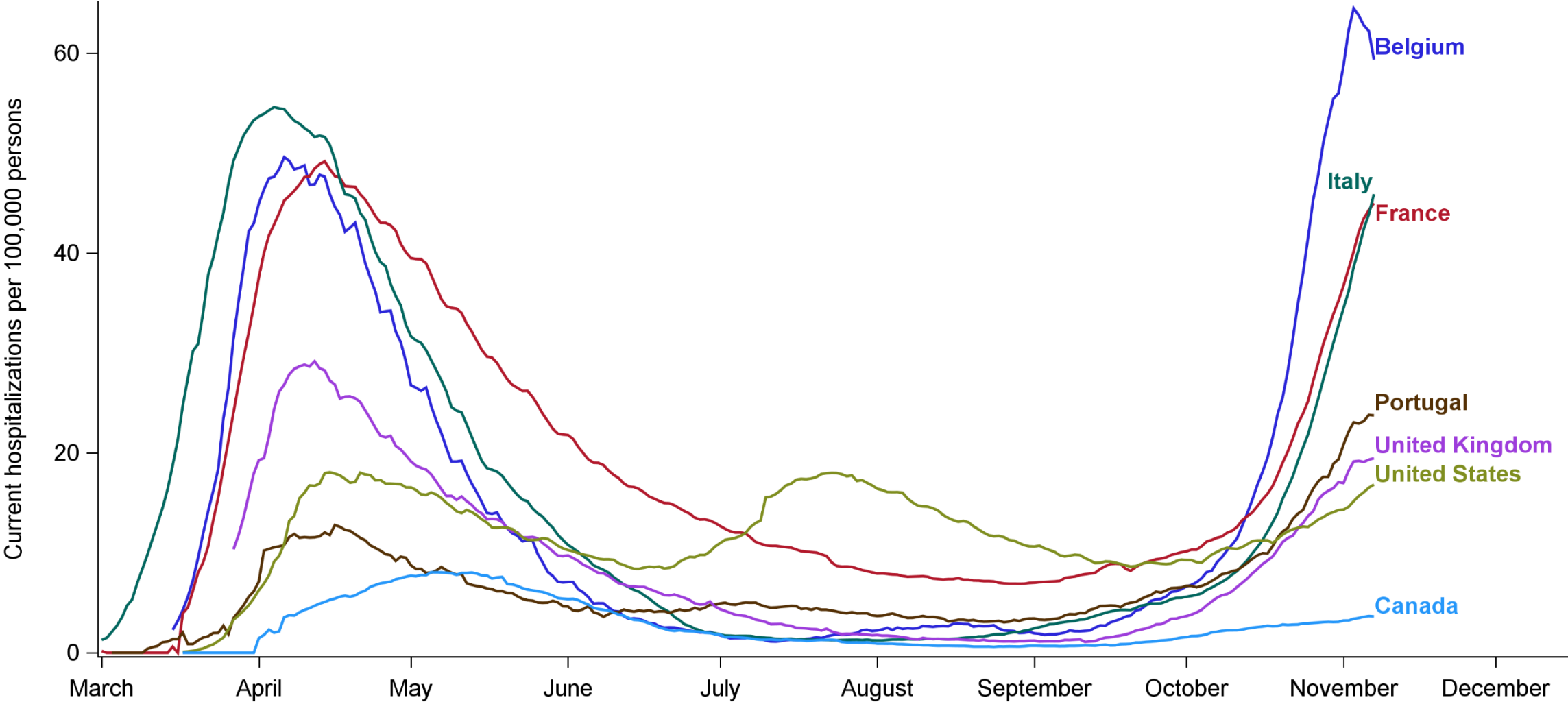
- More and larger outbreaks (>50 individuals) affecting long-term care homes and healthcare settings
- Outbreaks in long-term care homes put elderly residents at risk of life-threatening illness
- Outbreaks in health care settings affect patients and health care professionals alike and put a strain on health system capacity
- Indigenous communities are now seeing rapidly rising case numbers
- Outbreaks are also being reported in schools and linked to social gatherings

Hospitalizations have increased following the increase in reported cases



Data as of November 17, 2020

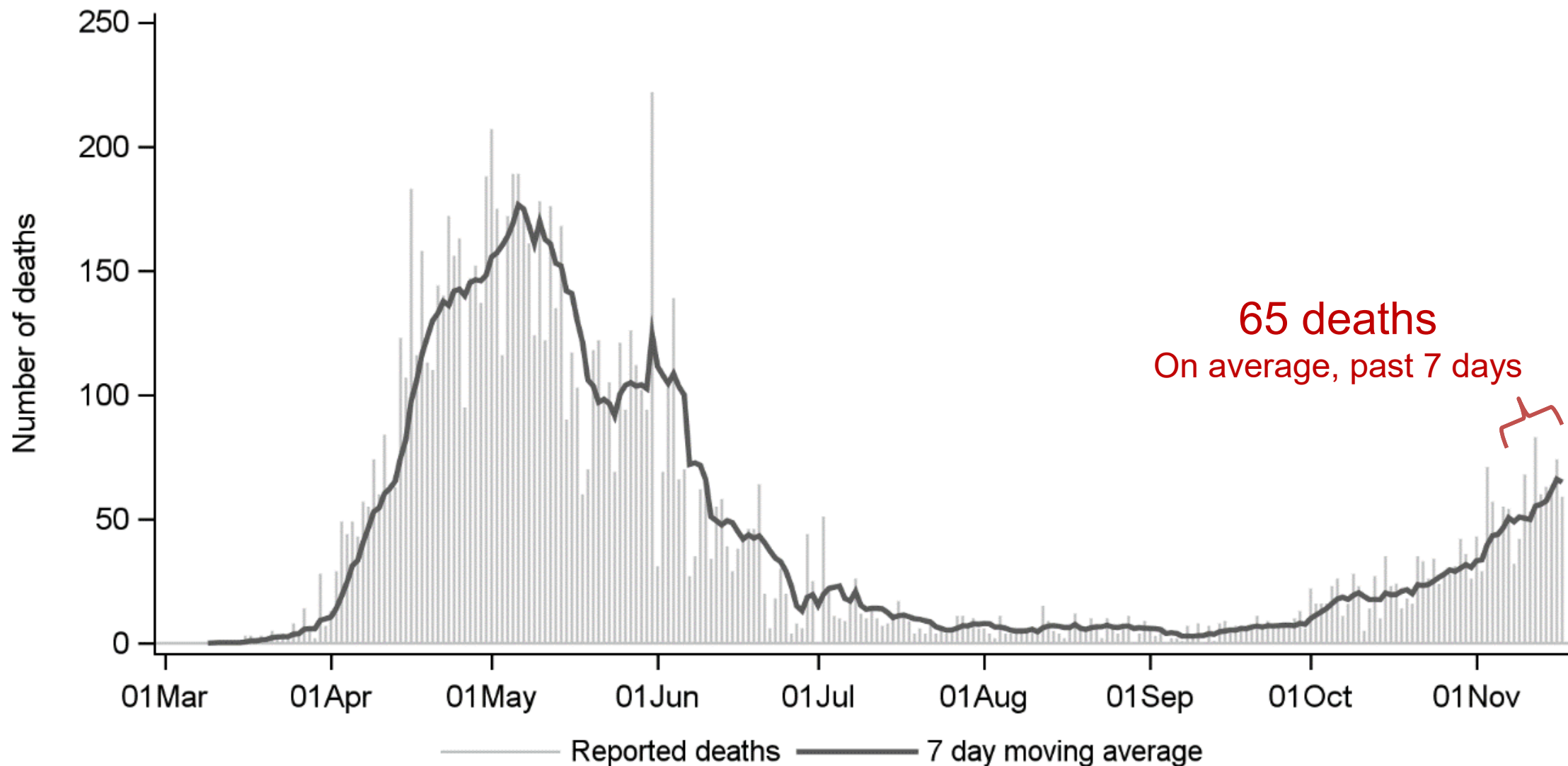
Experience of other countries warns of a surge in hospitalizations following disease resurgence



Data as of November 7, 2020

Data sources: European Center for Disease Control and Prevention (ECDC) – COVID Tracking Project

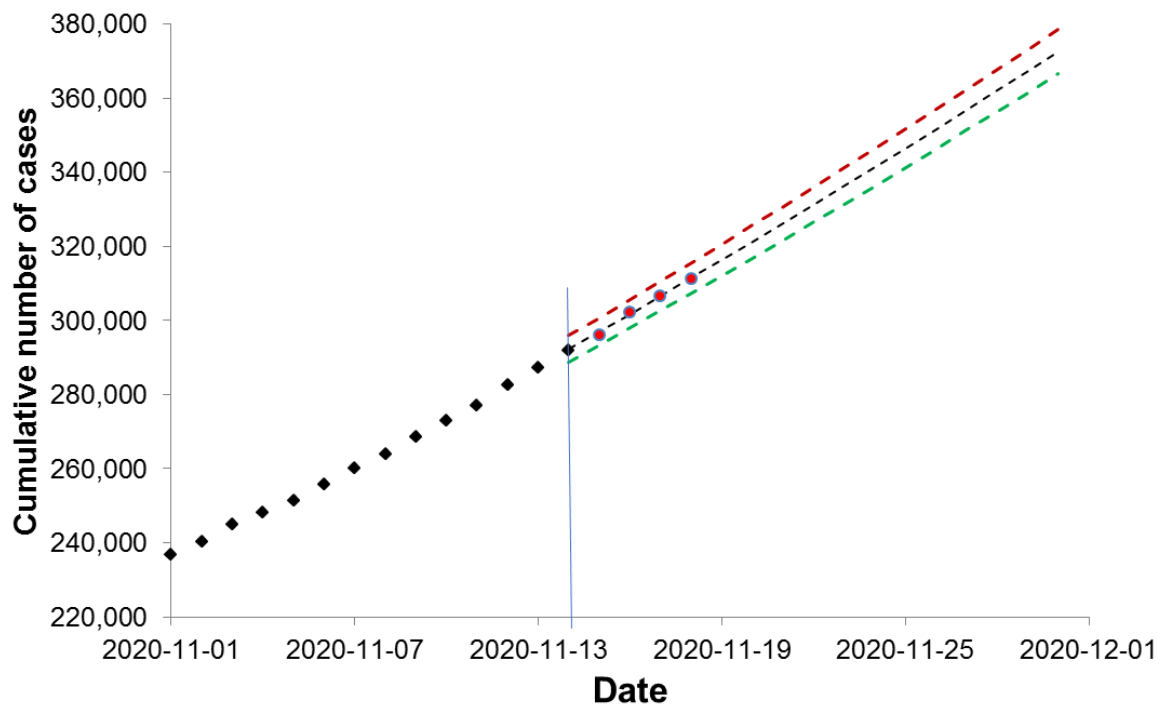
Increasing number of COVID-19-related deaths following weeks of increased disease activity in Canada



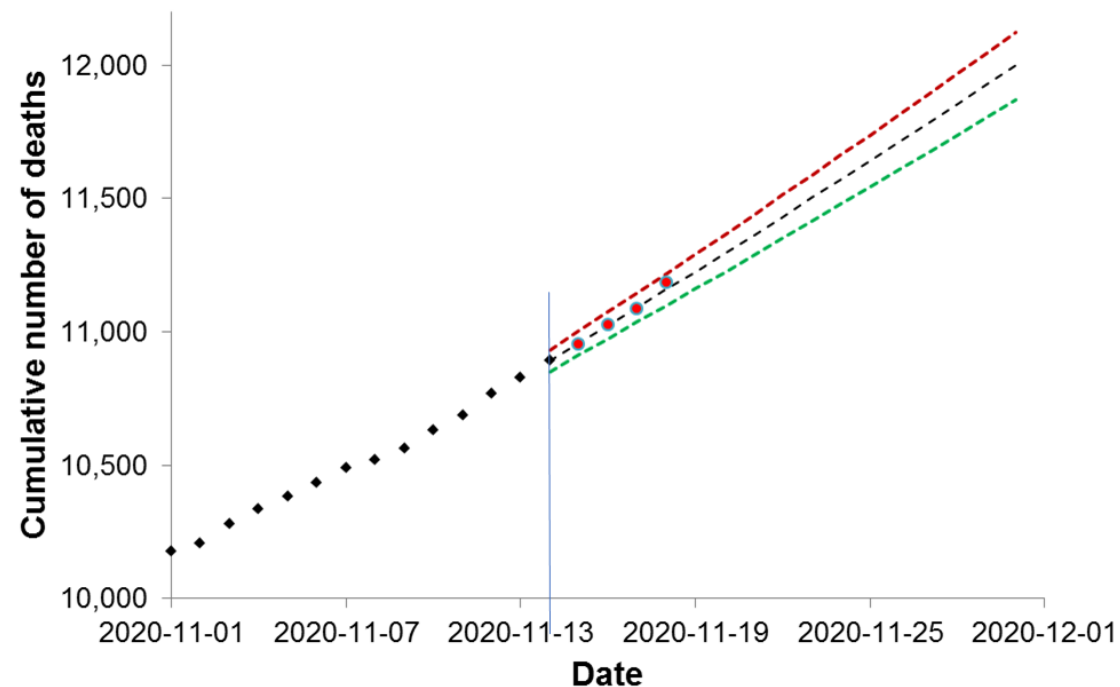
Data as of November 17, 2020

Short-term forecast indicates continuation of rapid growth

**Cumulative cases predicted to November 30:
366,500 to 378,600**



**Cumulative deaths predicted to November 30:
11,870 to 12,120**

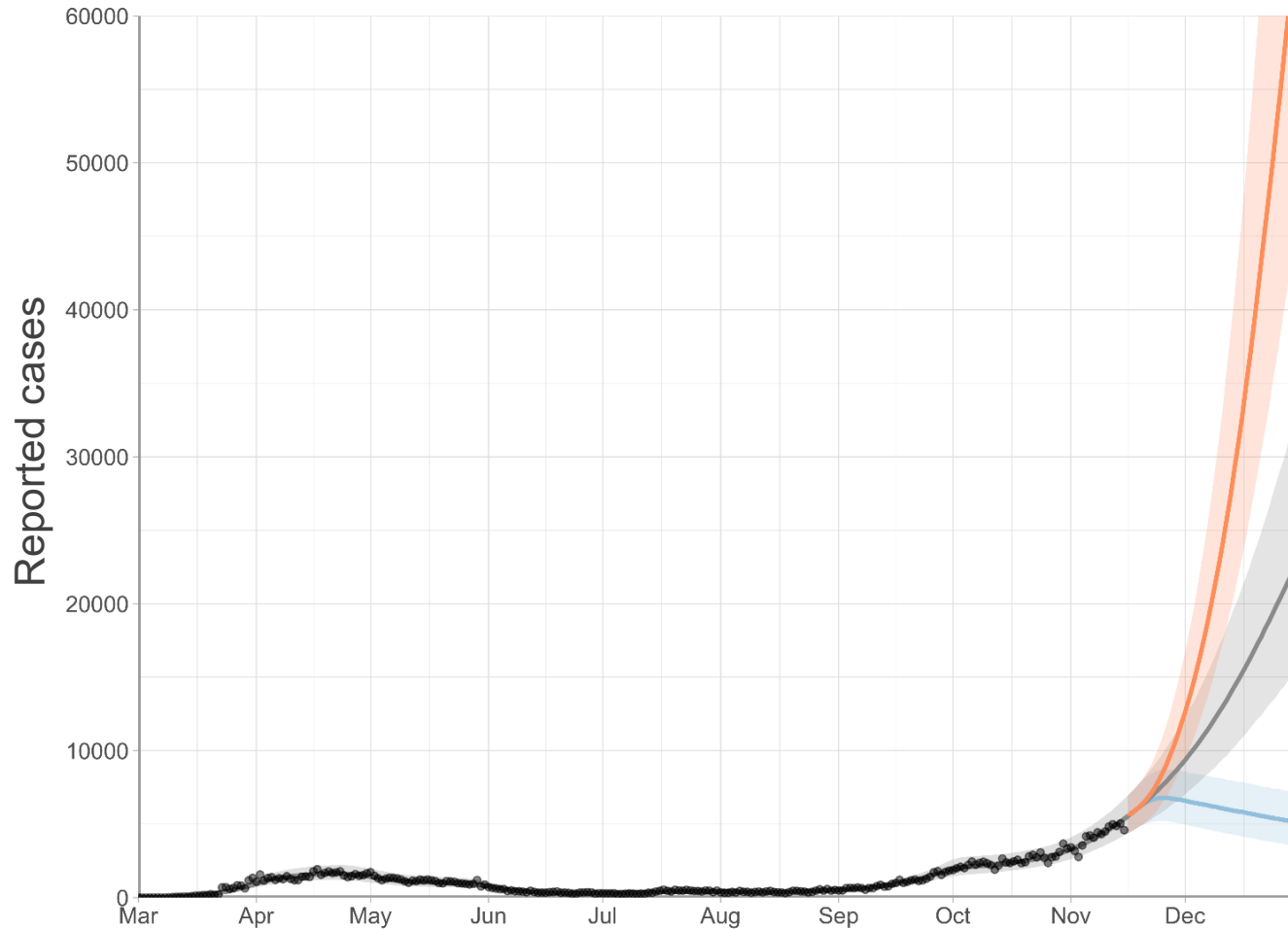


◆ Cumulatively reported cases in Canada by November 14 ---- Prediction to November 30

--- Lower 95% prediction limit --- Upper 95% prediction limit ● Cases added since November 14 when the prediction was made

Extrapolation based on recent trends using a forecasting model (with ranges of uncertainty)

Longer-range forecast indicates that a stronger response is needed now to slow the spread of COVID-19



Methods: Anderson SC, Edwards AM, Yerlanov M, Mulberry N, Stockdale J, Iyaniwura SA, Falcao RC, Otterstatter MC, Irvine MA, Janjua NZ, Coombs D, Colijn C. 2020. Estimating the impact of COVID-19 control measures using a Bayesian model of physical distancing. <https://www.medrxiv.org/content/10.1101/2020.04.17.20070086v1>



- 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**

Slow the spread of COVID-19 throughout the holiday season

- Every effort you can make as an individual matters
- Strictly and consistently maintain personal protective practices
- Follow the advice of local health authorities
- Limit errands and outings to the essential
- Keep in-person activities to household members whenever possible
- Plan ahead for safer holidays and get creative

**Help limit the spread.
Download the COVID
Alert app.**



APPENDIX

Longer-range forecast indicates that a stronger response is needed now to slow the spread of COVID-19

