

# Update on COVID-19 Projections

Science Advisory and Modelling Consensus Tables

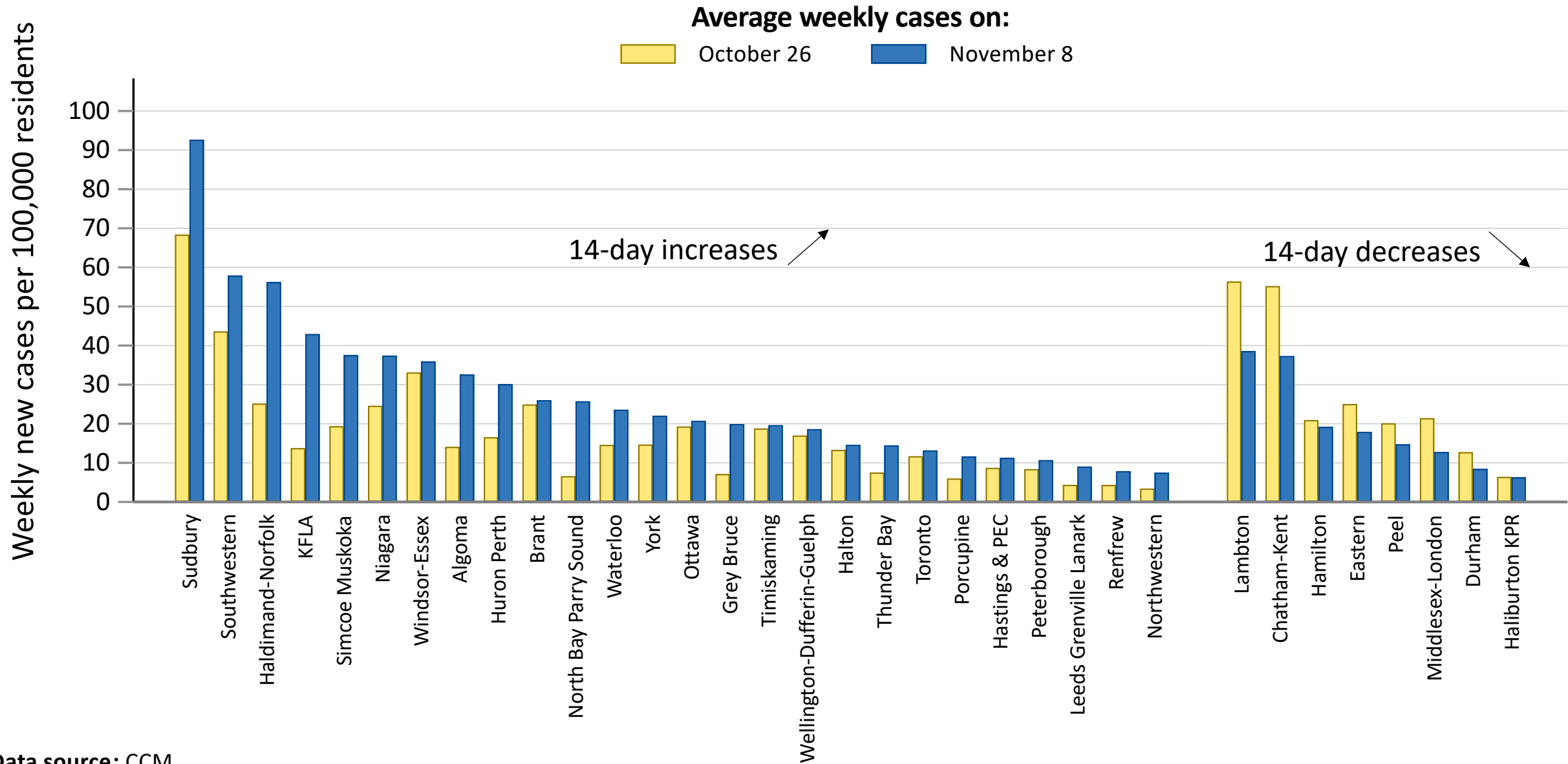
November 12, 2021



# Key Findings

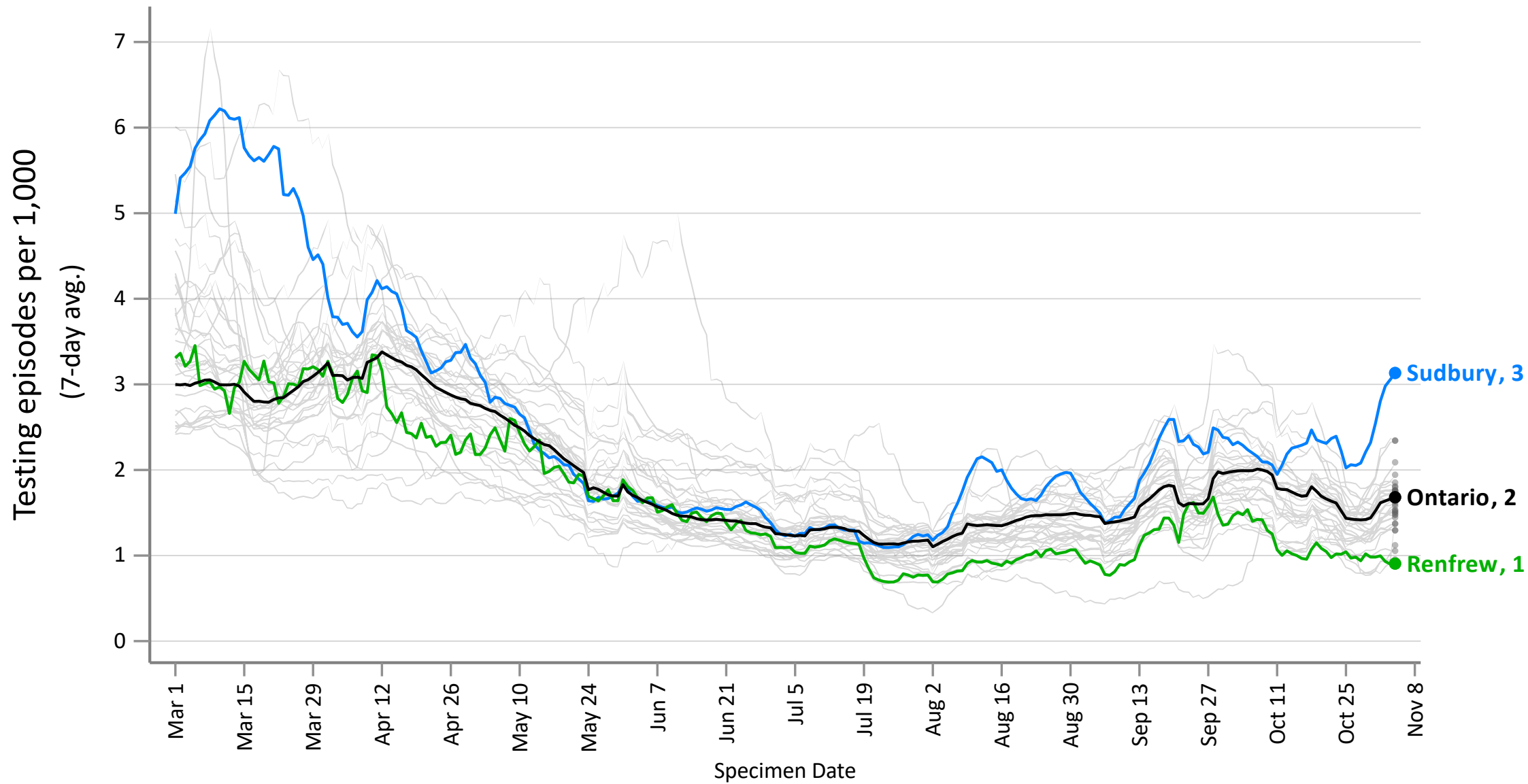
- COVID-19 cases are rising in most Public Health Units. Testing is flat, but positivity is rising in several Public Health Units. This indicates a real rise in cases.
- Hospitalizations and ICU occupancy are stable right now but overall occupancy of ICUs is likely to increase.
- The impact of COVID-19 remains highly inequitable. Those with lower income, essential workers, and minority groups are at highest risk.
- Vaccination remains the most effective protection against COVID-19 infection, hospitalization and long COVID-19, but there are critical gaps in coverage across communities.
- Experience in Europe and across Canada show that cases can rise quickly, with subsequent increases in hospital admissions, ICU occupancy, and deaths.
- A deliberate pause on re-opening is the right decision at this time. Policies that support wearing masks properly indoors and getting fully vaccinated will be helpful.

# Cases are increasing in most public health units



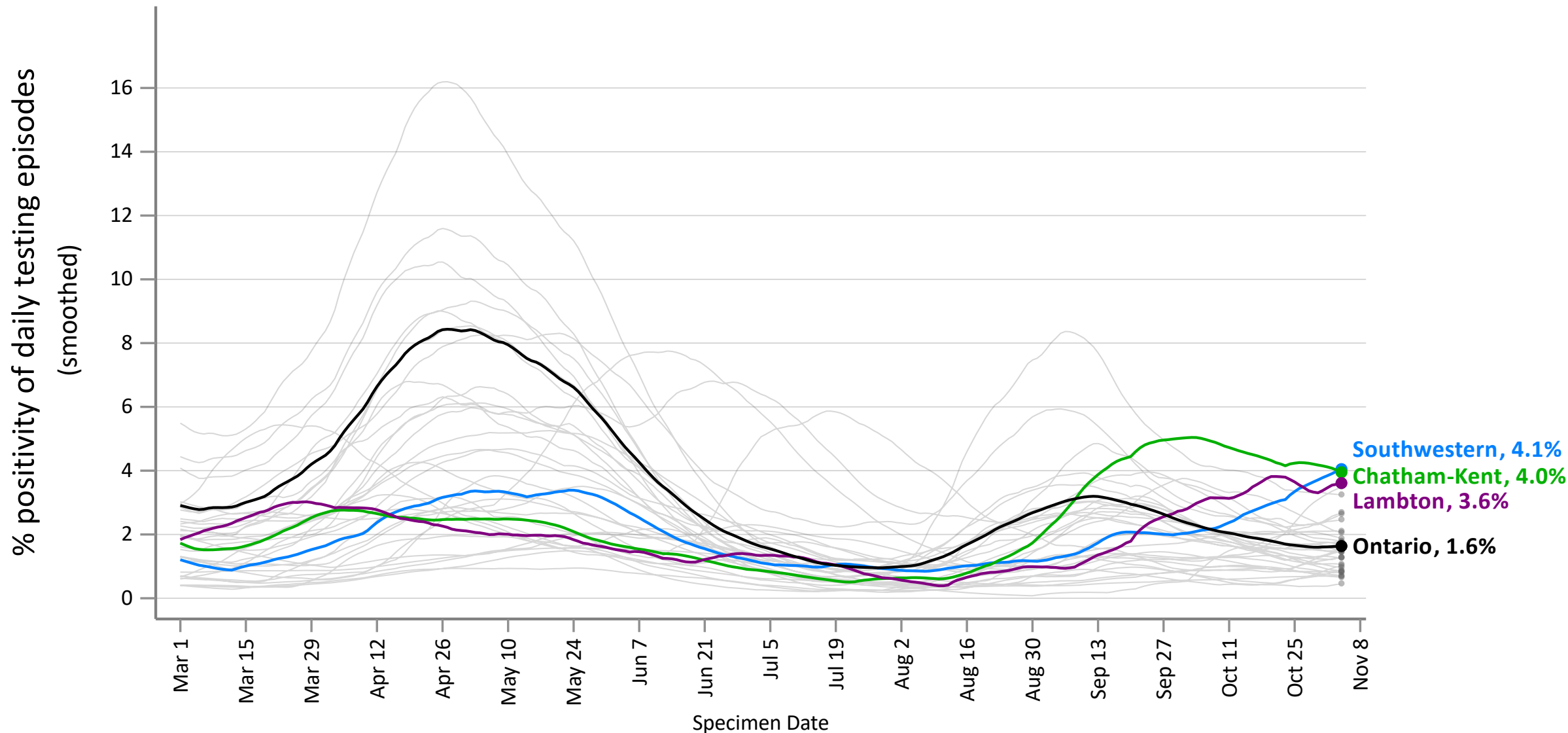
Data source: CCM  
Data note: Data for the most recent day have been censored to account for reporting delays

# Testing rates are flat at the provincial level



Data source: OLIS via SAS VA, data up to November 4

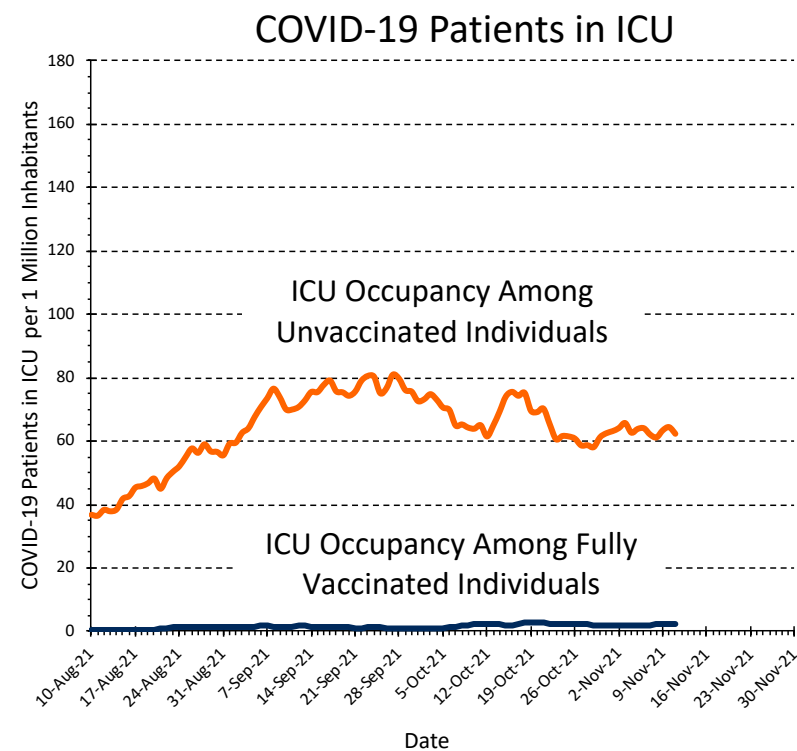
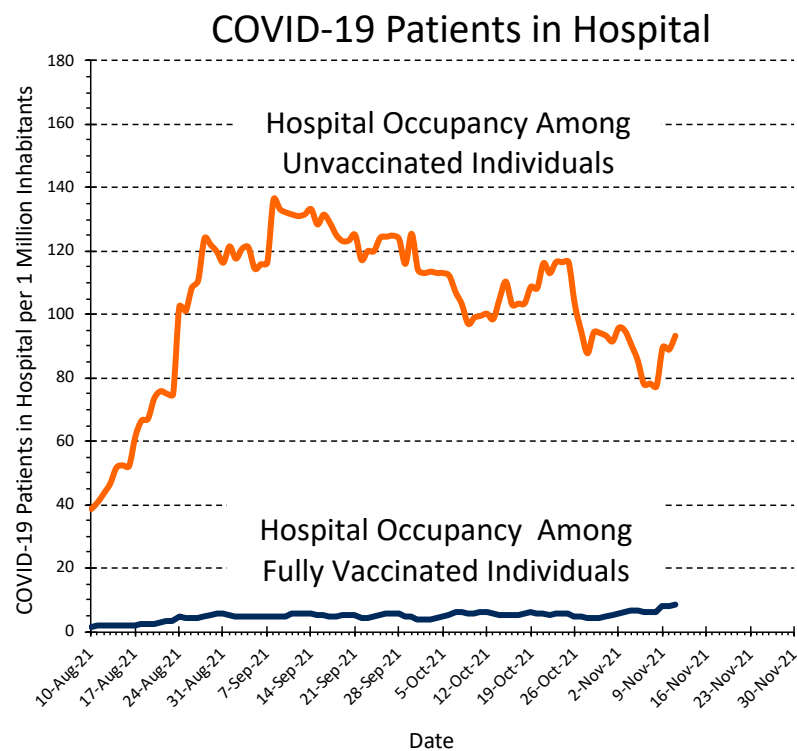
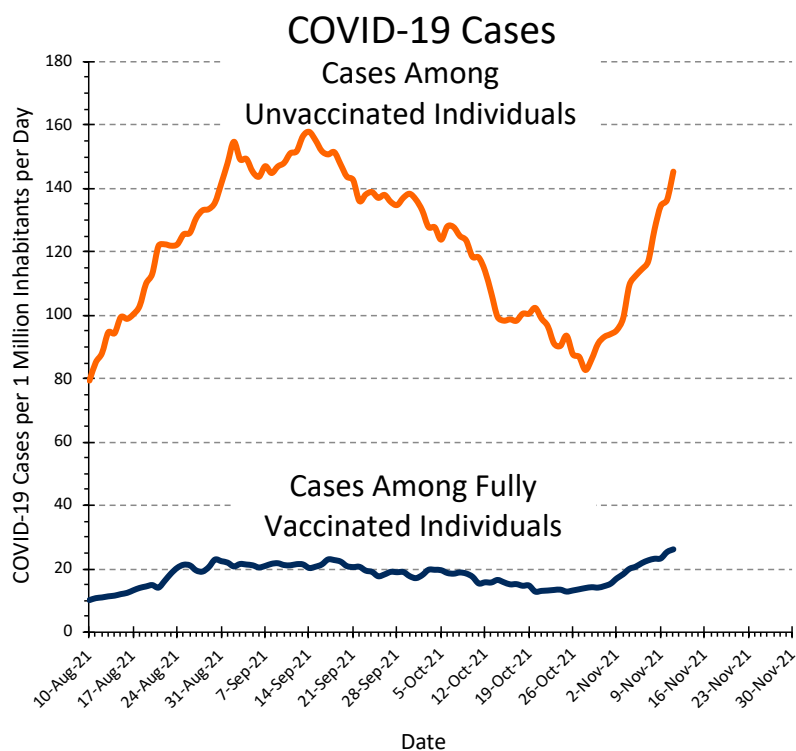
# Test positivity is rising in several Public Health Units



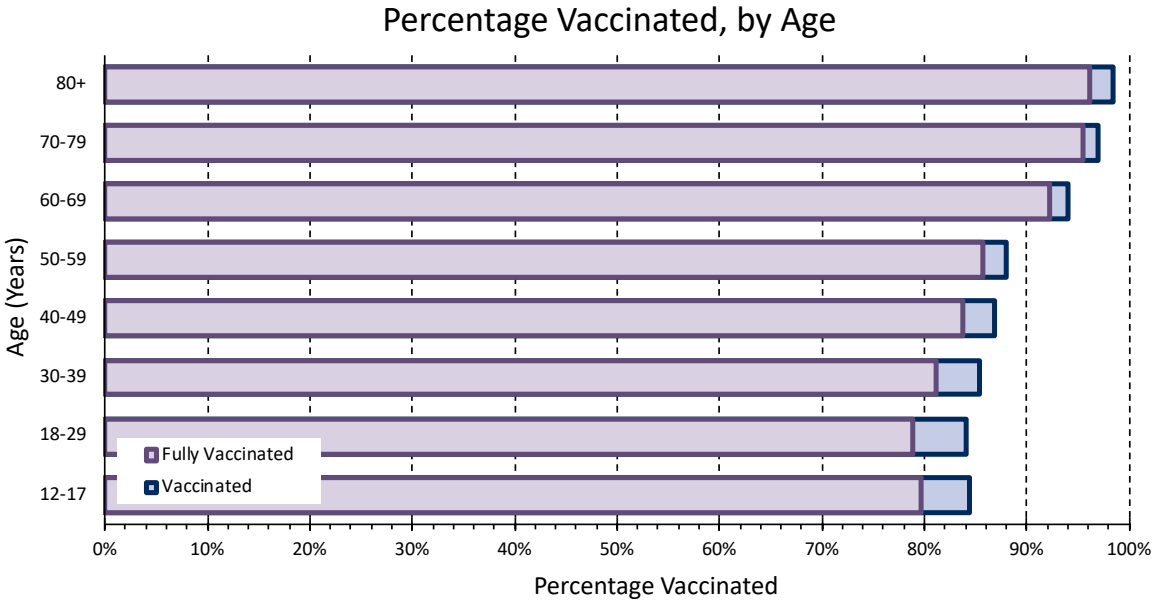
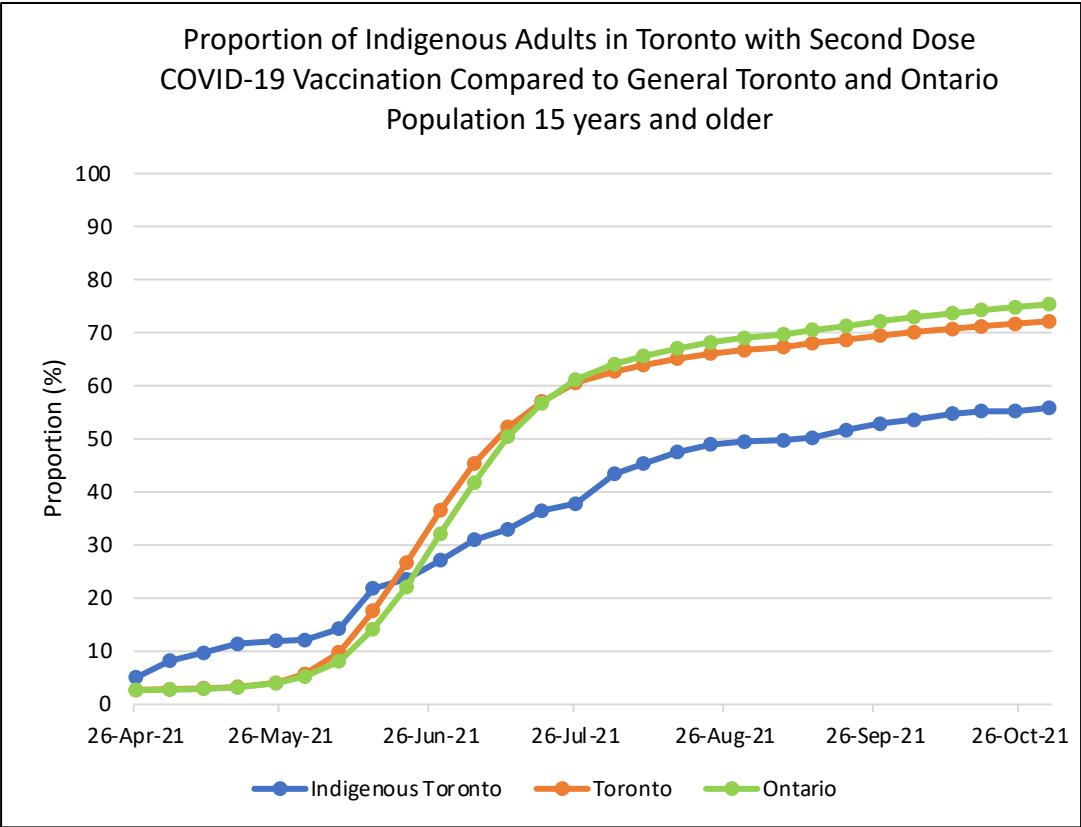
**Data source:** OLIS via SAS VA, data up to November 4  
The most recent 3 days have been removed to account for incomplete data.

# Vaccination continues to be highly effective

Unvaccinated people have a 6-fold higher risk of symptomatic COVID-19 disease, a 11-fold higher risk of being in the hospital and 26-fold higher risk of being in the ICU compared to the fully vaccinated



# Vaccination coverage is increasing slowly but this hides important differences across communities and age groups

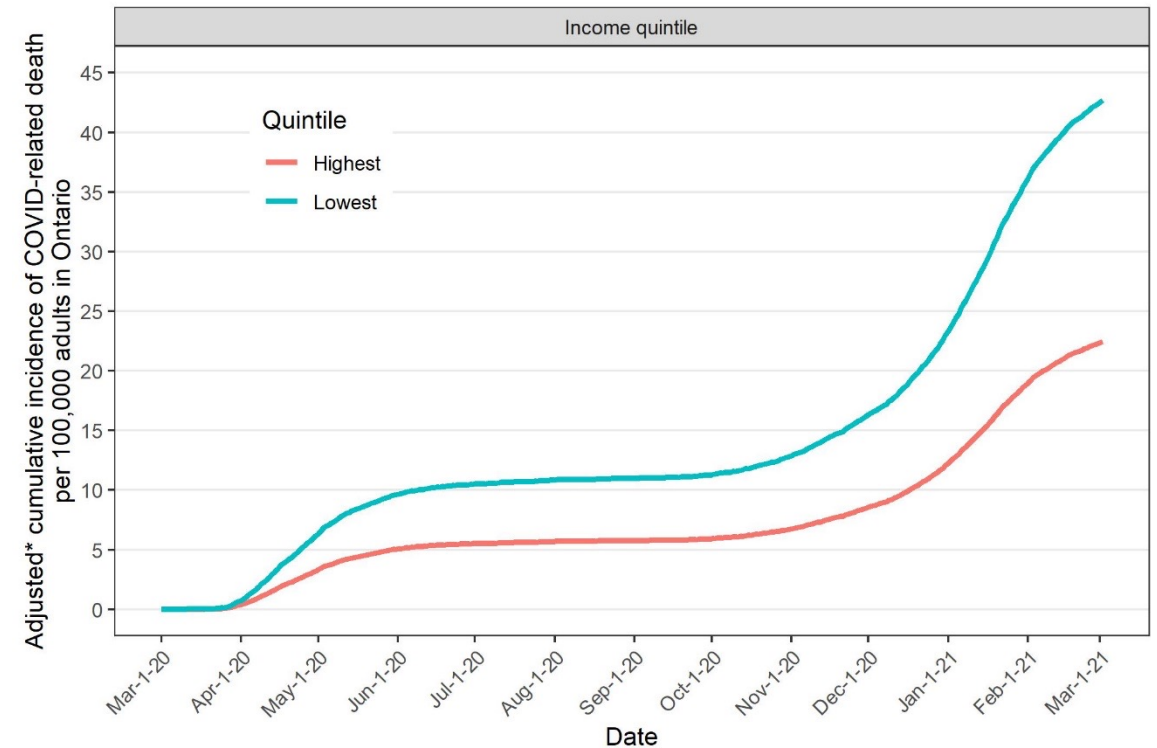


Source: Our Health Counts (OHC) Toronto ICES COVID-19 AHRQ linkage project  
<http://www.welllivinghouse.com/resources/ohc-toronto-ices-covid-19-linkage-project/>

Data: <https://data.ontario.ca/>  
Analysis: Secretariat of the Science Advisory Table (<https://covid19-sciencetable.ca/ontario-dashboard/>)

# Social and structural inequalities determine COVID-19-related mortality, even after accounting for age, sex, and clinical factors

- Available data show people with lower income, essential workers, and visible minorities have experienced the highest risk of COVID-19-related mortality.
- Inequalities in COVID-19-related mortality stemmed from differential exposures, and access to and reach of interventions such as testing and isolation.



\*Adjusted for age, sex, and clinical factors.  
Cases diagnosed up to January 31, 2021

Source: Covid-19 Heterogeneity Research Group



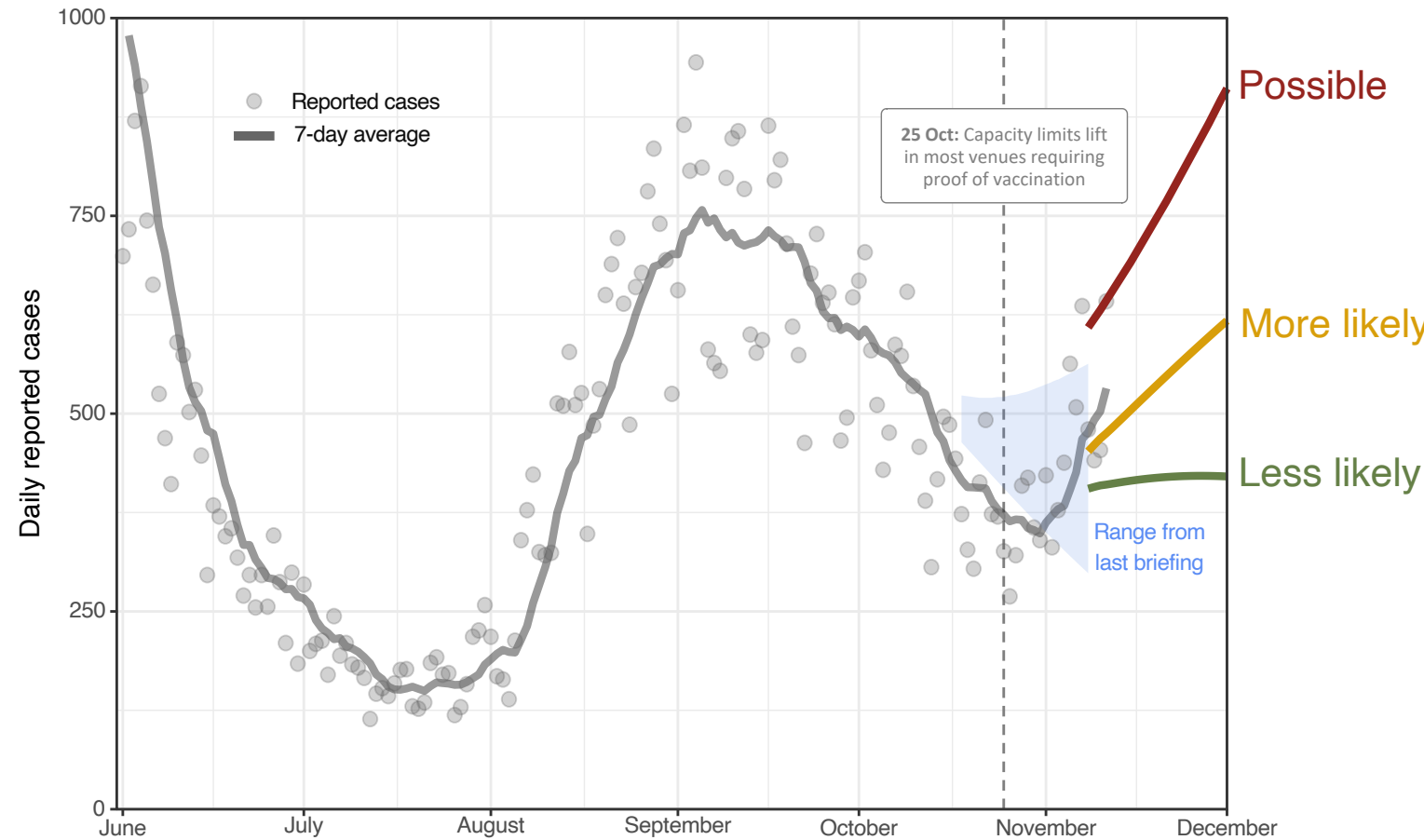
# Ontario's case counts are rising, and the immediate future is uncertain

Figure shows predictions based on a consensus across models from 5 scientific teams.

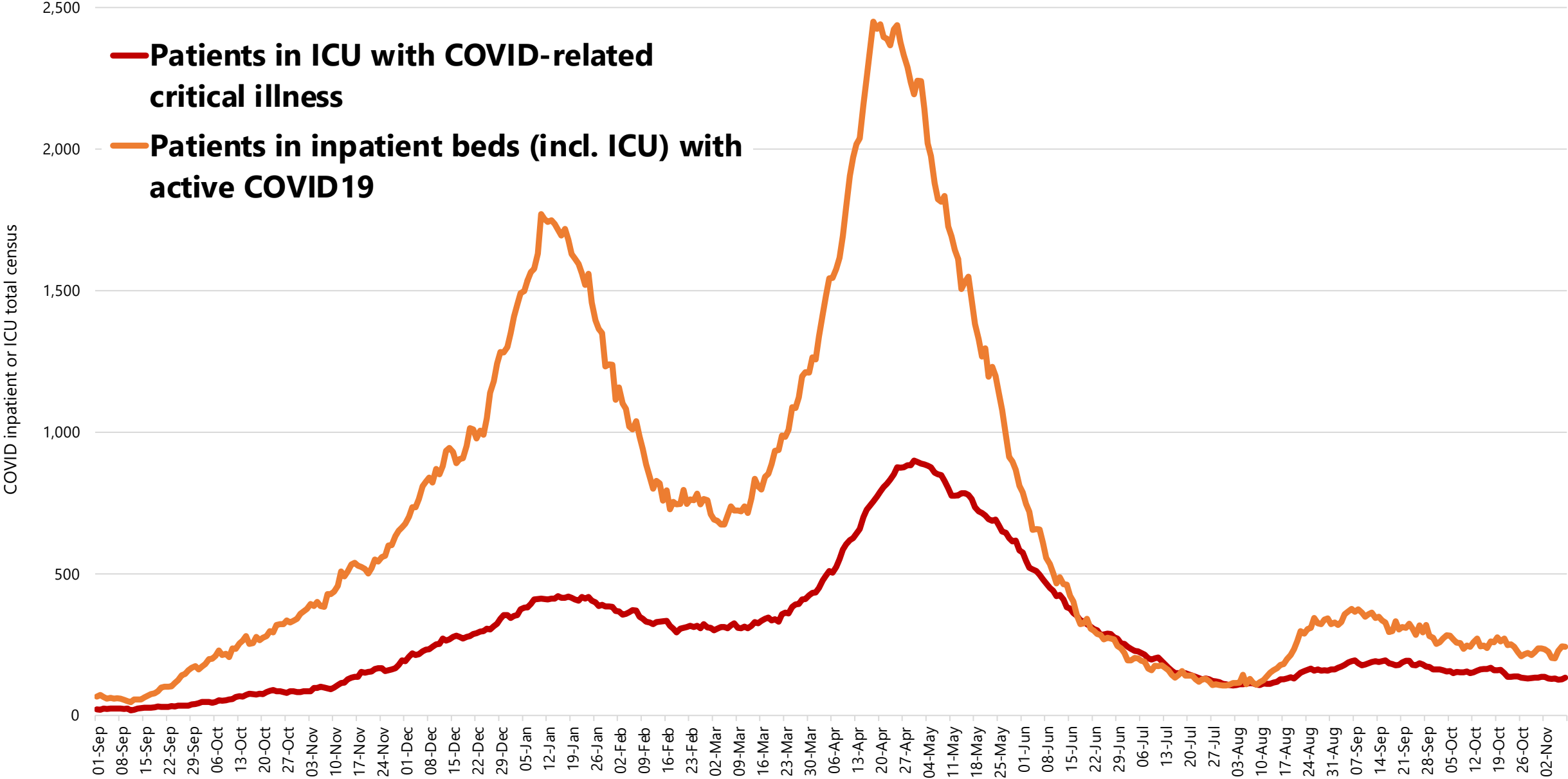
- Current projections include Oct 25 opening but no further opening.
- All scenarios assume continued public health measures.
- Because current surge is very recent, predictions are unstable and may be conservative.

Sources of recent and ongoing increased transmission:

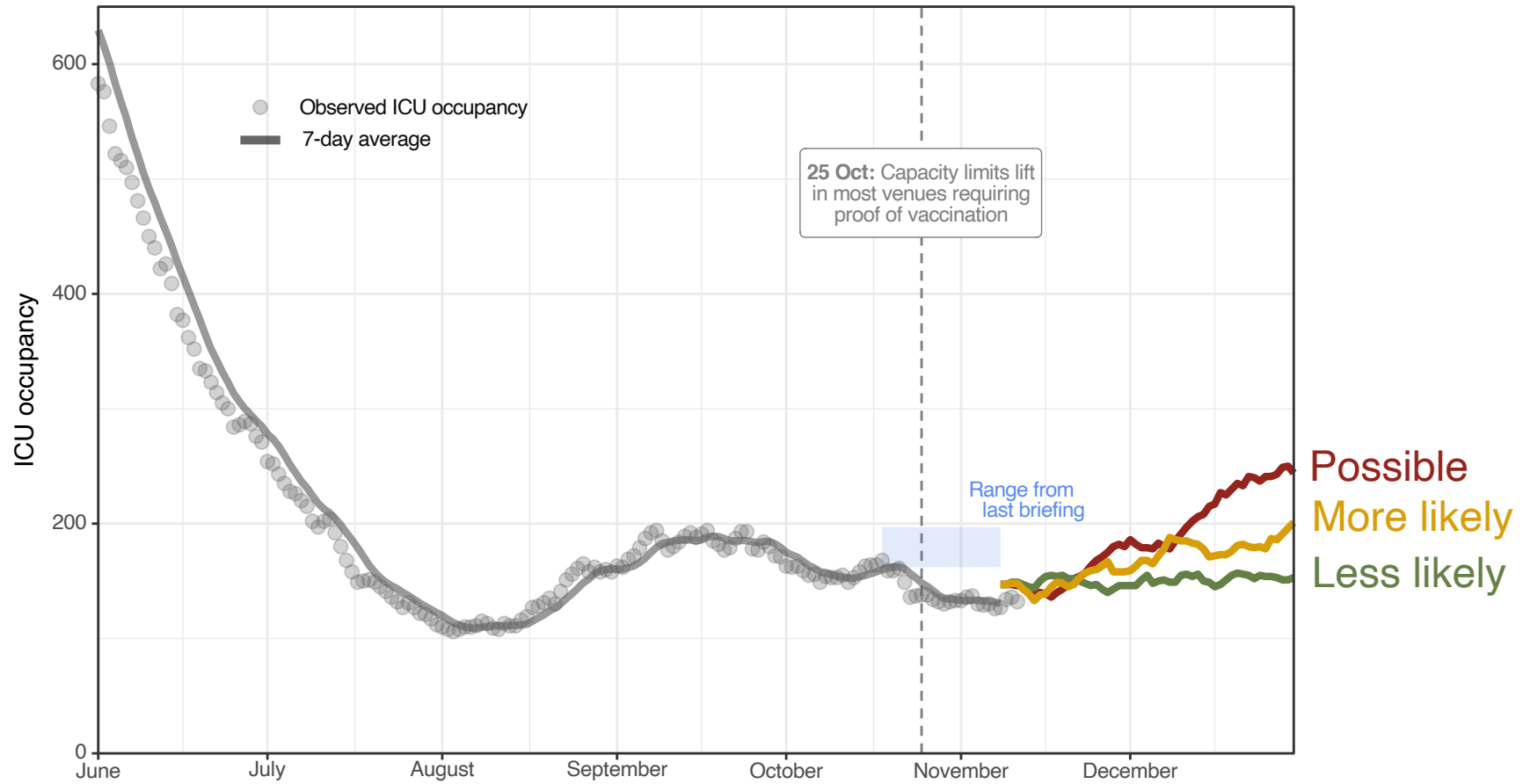
- Colder weather with more time indoors
- Lifting of capacity limits
- Indoor gatherings



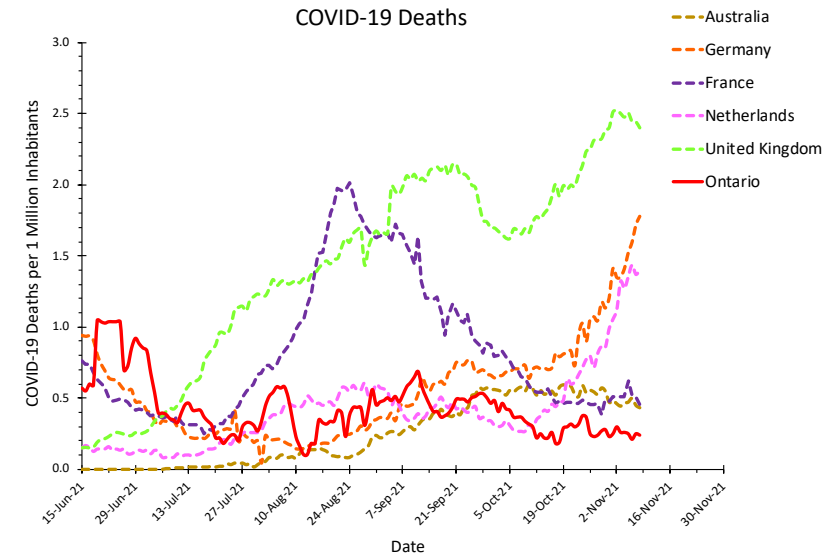
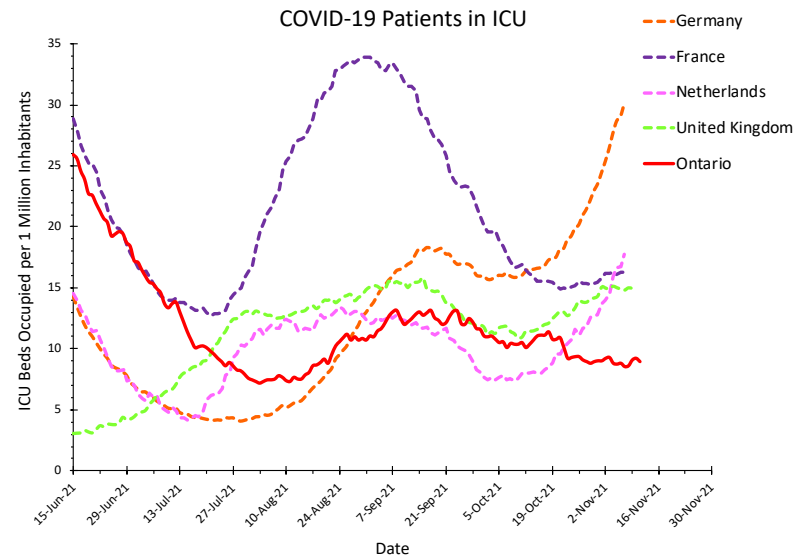
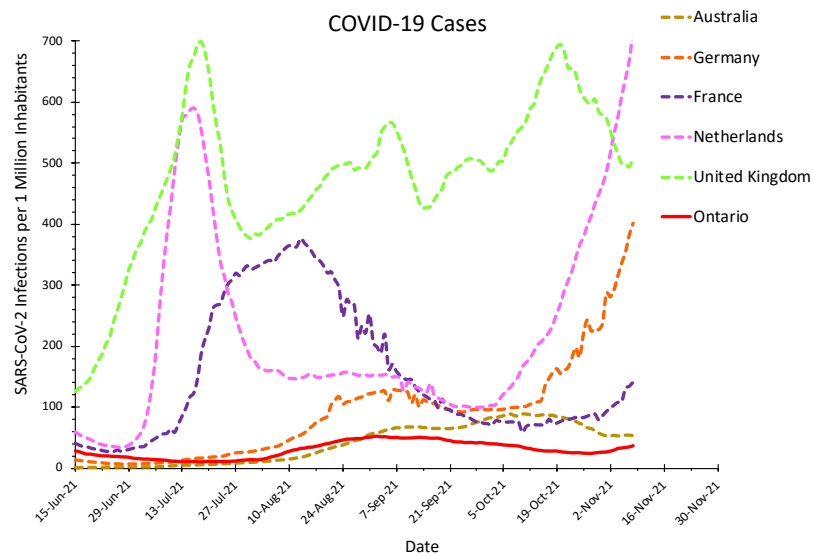
# Hospitalizations and ICU occupancy are currently stable



# ICU occupancy is stable right now but as cases increase, ICU occupancy will also increase



# Rising cases, ICU occupancy and deaths in European peer jurisdictions show potential risk



Ontario Stringency Index (41) similar to Germany (44), Netherlands (41) and UK (41). Australia and France are at  $\geq 60$ .  
Ontario vaccine coverage (76% of population fully vaccinated) higher than peer countries (~68%).

# Key Findings

- COVID-19 cases are rising in most Public Health Units. Testing is flat, but positivity is rising in several Public Health Units. This indicates a real rise in cases.
- Hospitalizations and ICU occupancy are stable right now but overall occupancy of ICUs is likely to increase.
- The impact of COVID-19 remains highly inequitable. Those with lower income, essential workers, and minority groups are at highest risk.
- Vaccination remains the most effective protection against COVID-19 infection, hospitalization and long COVID-19, but there are critical gaps in coverage across communities.
- Experience in Europe and across Canada show that cases can rise quickly, with subsequent increases in hospital admissions, ICU occupancy, and deaths.
- A deliberate pause on re-opening is the right decision at this time. Policies that support wearing masks properly indoors and getting fully vaccinated will be helpful.

# Contributors

- **Covid-19 Heterogeneity Research Group:** Linwei Wang, Andrew Calzavara, Stefan Baral, Janet Smylie, Adrienne Chan, Beate Sander, Peter Juni, Peter Austin, Jeff Kwong, Sharmistha Mishra
- **COVID-19 Modeling Collaborative:** Kali Barrett, Stephen Mac, David Naimark, Aysegul Erman, Yasin Khan, Raphael Ximenes, Sharmistha Mishra, Beate Sander
- **Fields Institute:** Taha Jaffar, Kumar Murty
- **McMasterU:** Irena Papst, Ben Bolker, Jonathan Dushoff, David Earn
- **Modeling Consensus Table:** Isha Berry
- **Our Health Counts Toronto ICES COVID-19 AHRQ linkage project:** Janet Smylie, Stephanie McConkey, Beth Rachlis, Lisa Avery, Graham Mercredi, Cheryllee Bourgeois, Mike Rotondi
- **PHO:** Kevin Brown, Sarah Buchan, Alyssa Parpia
- **Science Advisory Table:** Peter Juni, Karen Born, Nicolas Bodmer, Shujun Yan
- **YorkU:** Jianhong Wu, Michael Glazer, Zack McCarthy

# Content and review by Modelling Consensus and Scientific Advisory Table members and secretariat

Beate Sander,\* Peter Juni, Brian Schwartz,\* Upton Allen, Vanessa Allen, Kali Barrett, Nicolas S. Bodmer, Isaac Bogoch, Karen Born, Kevin Brown, Sarah Buchan, Yoojin Choi, Troy Day, David Earn,\* Gerald Evans, Jennifer Gibson, Anna Greenberg, Anne Hayes,\* Michael Hillmer, Jessica Hopkins, Jeff Kwong, Fiona Kouyoumdjian, Audrey Laporte, John Lavis, Gerald Lebovic, Brian Lewis, Linda Mah, Kamil Malikov, Doug Manuel, Roisin McElroy, Allison McGeer, David McKeown, John McLaughlin, Sharmistha Mishra, Andrew Morris, Samira Mubareka, Christopher Mushquash, Ayodele Odutayo, Menaka Pai, Alyssa Parpia, Samir Patel, Anna Perkhun, Bill Praamsma, Justin Presseau, Fahad Razak, Rob Reid,\* Paula Rochon, Laura Rosella, Michael Schull, Arjumand Siddiqi, Chris Simpson, Arthur Slutsky, Janet Smylie, Robert Steiner, Ashleigh Tuite, Jennifer Walker, Tania Watts, Ashini Weerasinghe, Scott Weese, Xiaolin Wei, Jianhong Wu, Diana Yan, Emre Yurga

\*Chairs of Scientific Advisory, Evidence Synthesis, and Modelling Consensus Tables

For table membership and profiles, please visit the [About](#) and [Partners](#) pages on the Science Advisory Table website.