Update on COVID-19 Projections

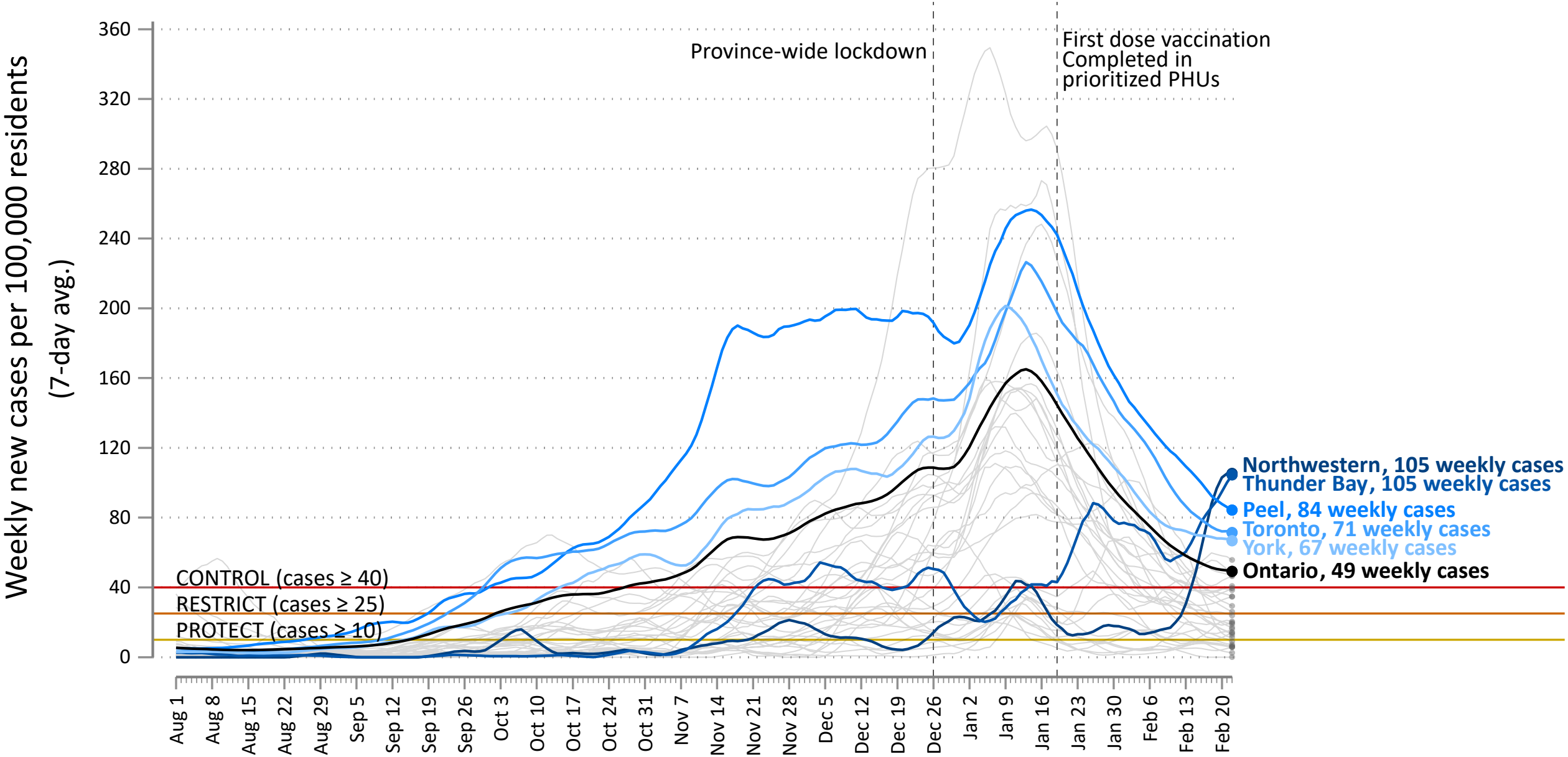
Science Advisory and Modelling Consensus Tables

February 25, 2021

Key Findings

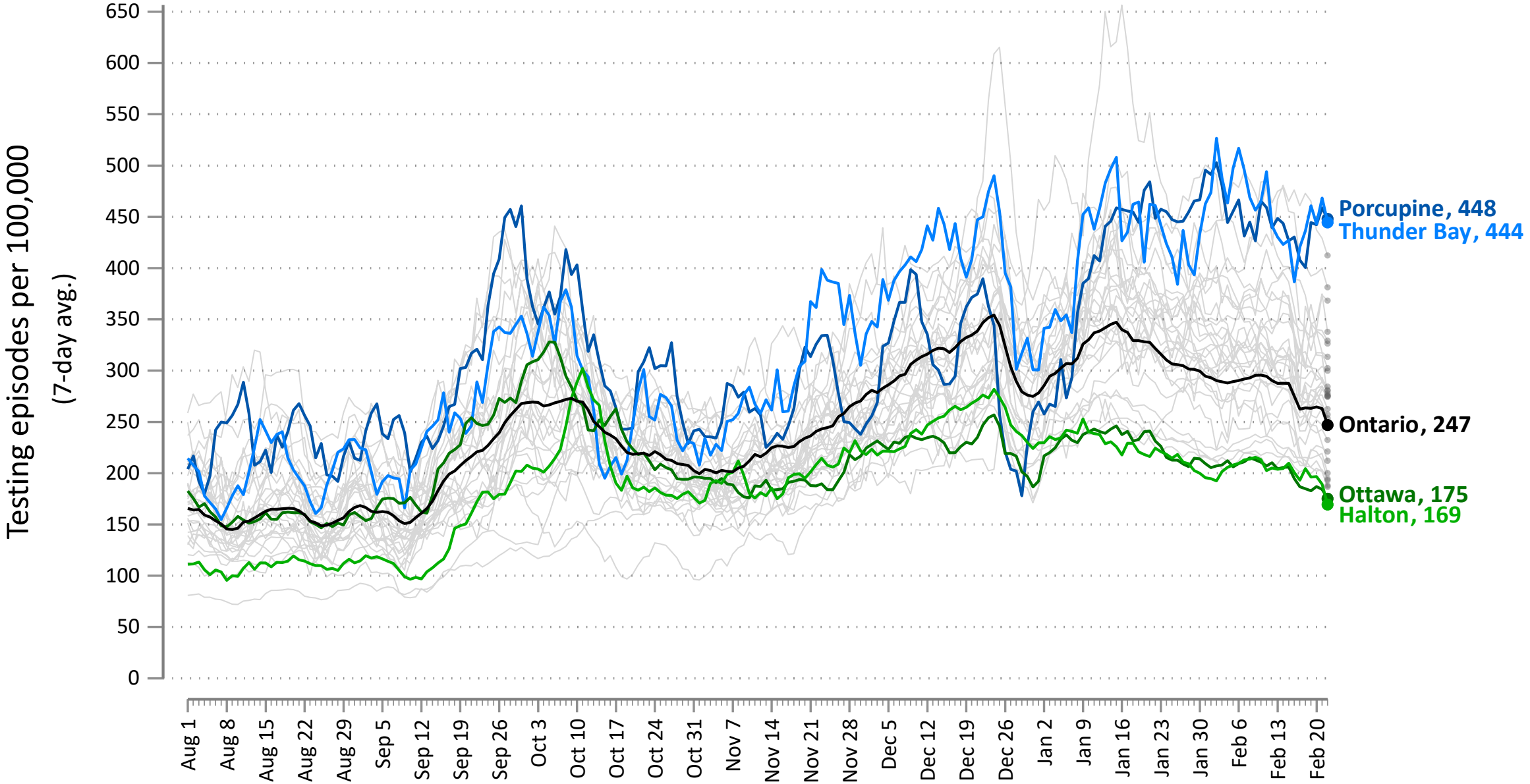
- Declines in cases, hospitalization and ICU occupancy are slowing. Public health measures have decreased transmission and slowed spread of variants of concern.
- Variants of concern such as B.1.1.7 continue to spread across Ontario. Cases, hospitalizations, and ICU admissions will likely soon increase.
- Evidence-based approaches to key public health measures, such as focusing vaccination where it has the biggest impact on deaths and hospitalizations, are key to controlling the impact of the pandemic.
- The next few weeks are critical to understanding the impact of the variants. There is a period of remaining risk before the pandemic likely recedes in the summer.
- We can keep the gains we have made by watching spread very closely and by loosening public health measures only carefully. We must be nimble in applying public health measures to extinguish flare ups quickly.

Total new cases per 100,000 per week across Public Health Units



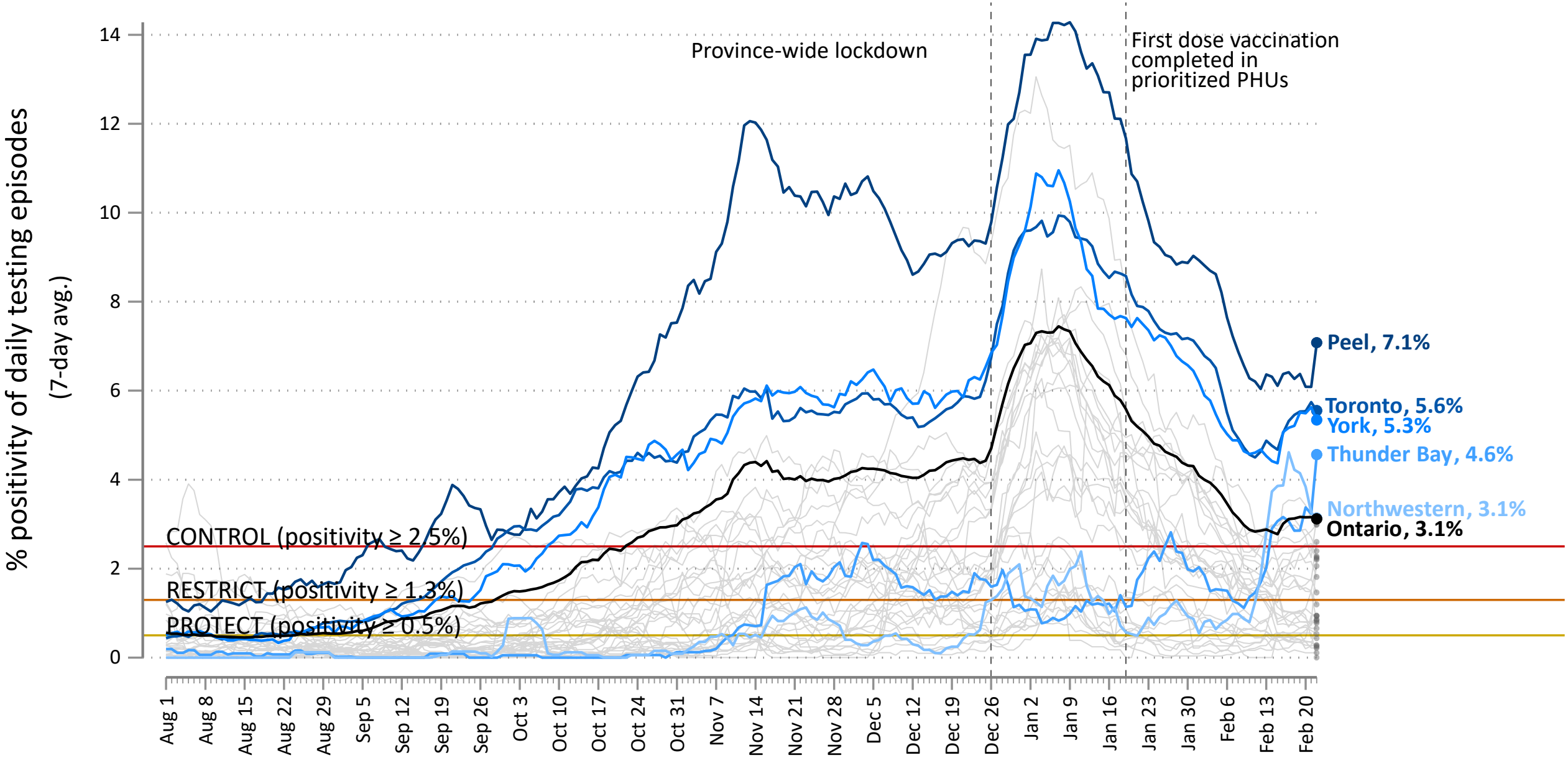
Data source: Case and Contact Management System (CCM), data up to February 22

Testing episodes per 100K across Public Health Units



Data source: Ontario Laboratory Information System (OLIS), data up to February 22

COVID-19 testing % positivity across Public Health Units



Data source: Ontario Laboratory Information System (OLIS), data up to February 22

Case and death rates in long-term care homes continue to improve (20 resident deaths in the last 7 days)

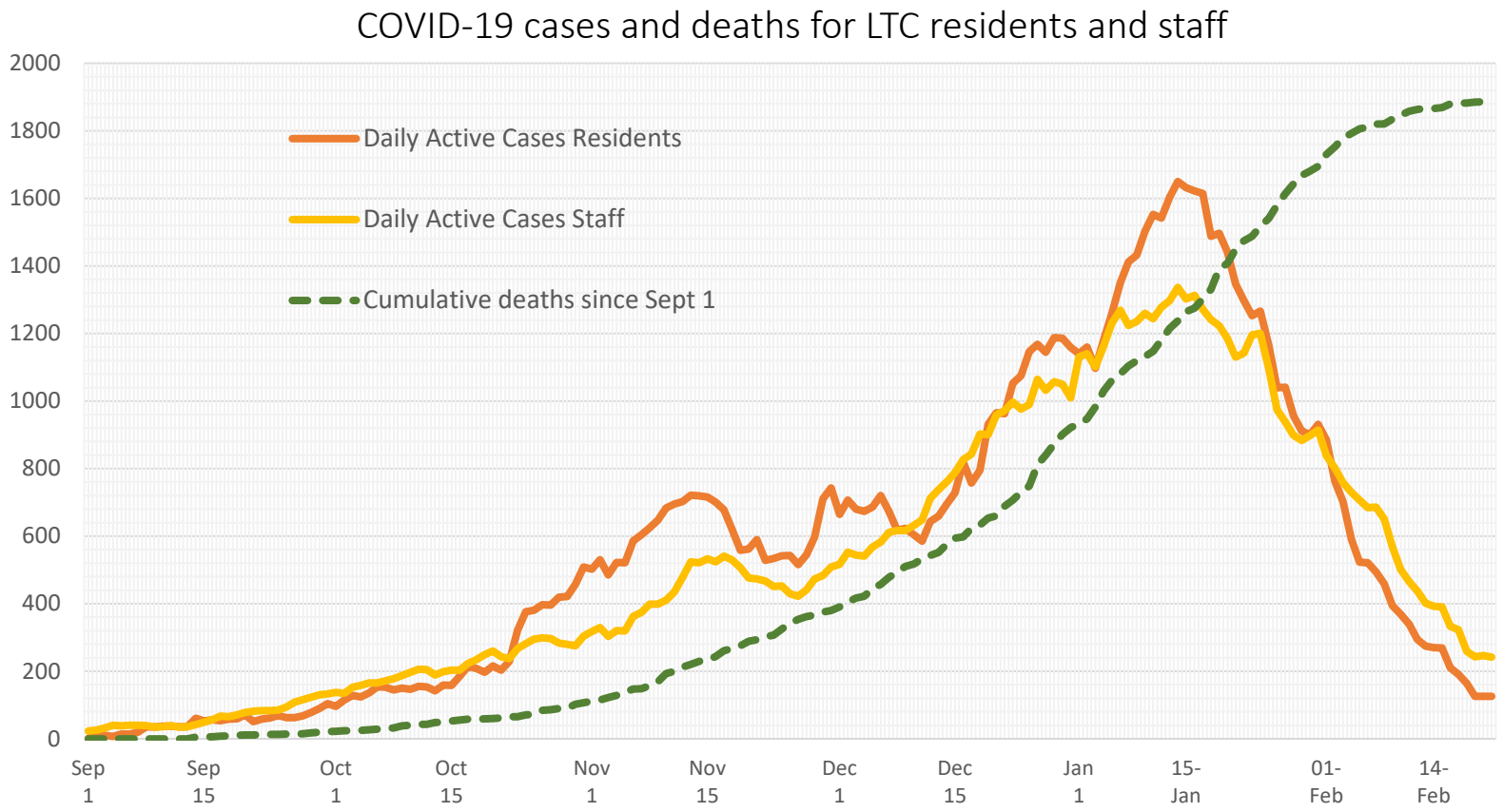
Current status

129 LTC homes have COVID-19 outbreaks (20% of all homes); 46 involve residents (Feb 21).

Outbreaks still occurring across most Public Health Units.

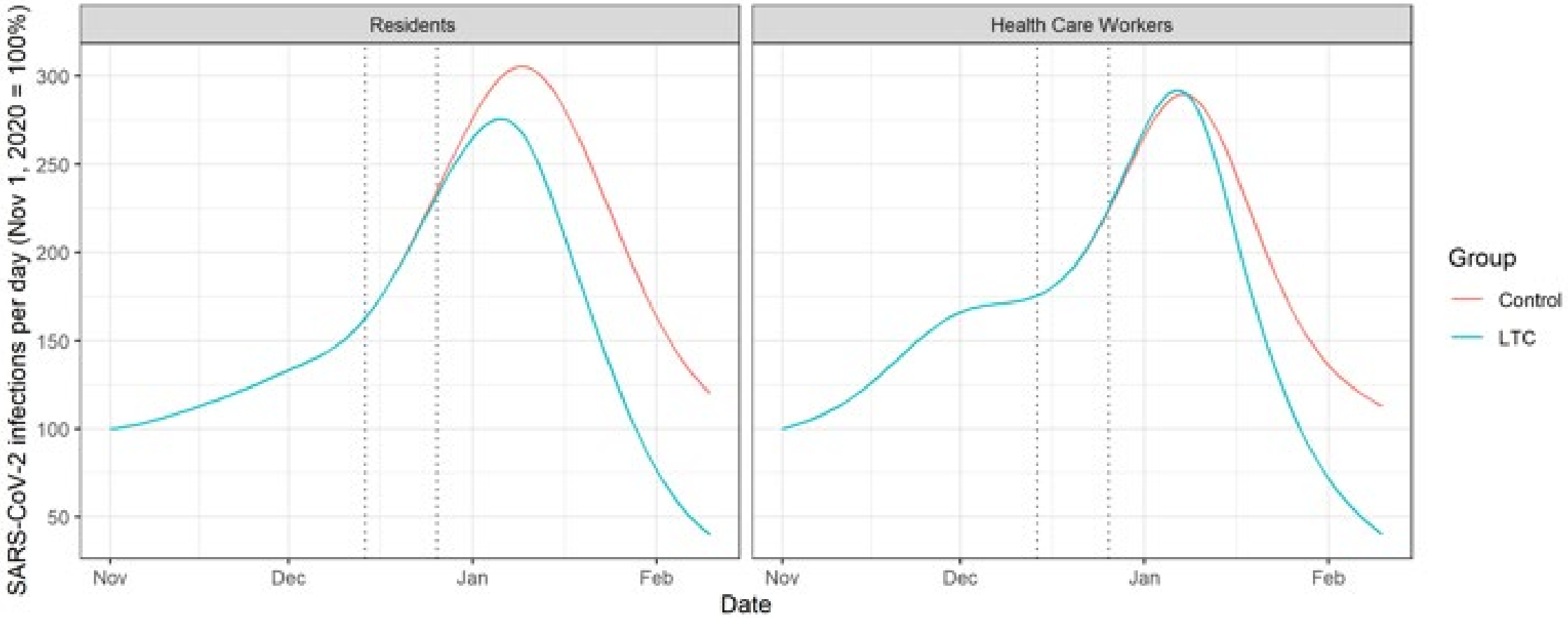
Second wave mortality (1,886 deaths) has now surpassed the first wave (1,848 deaths).

Daily death rates have dropped sharply.

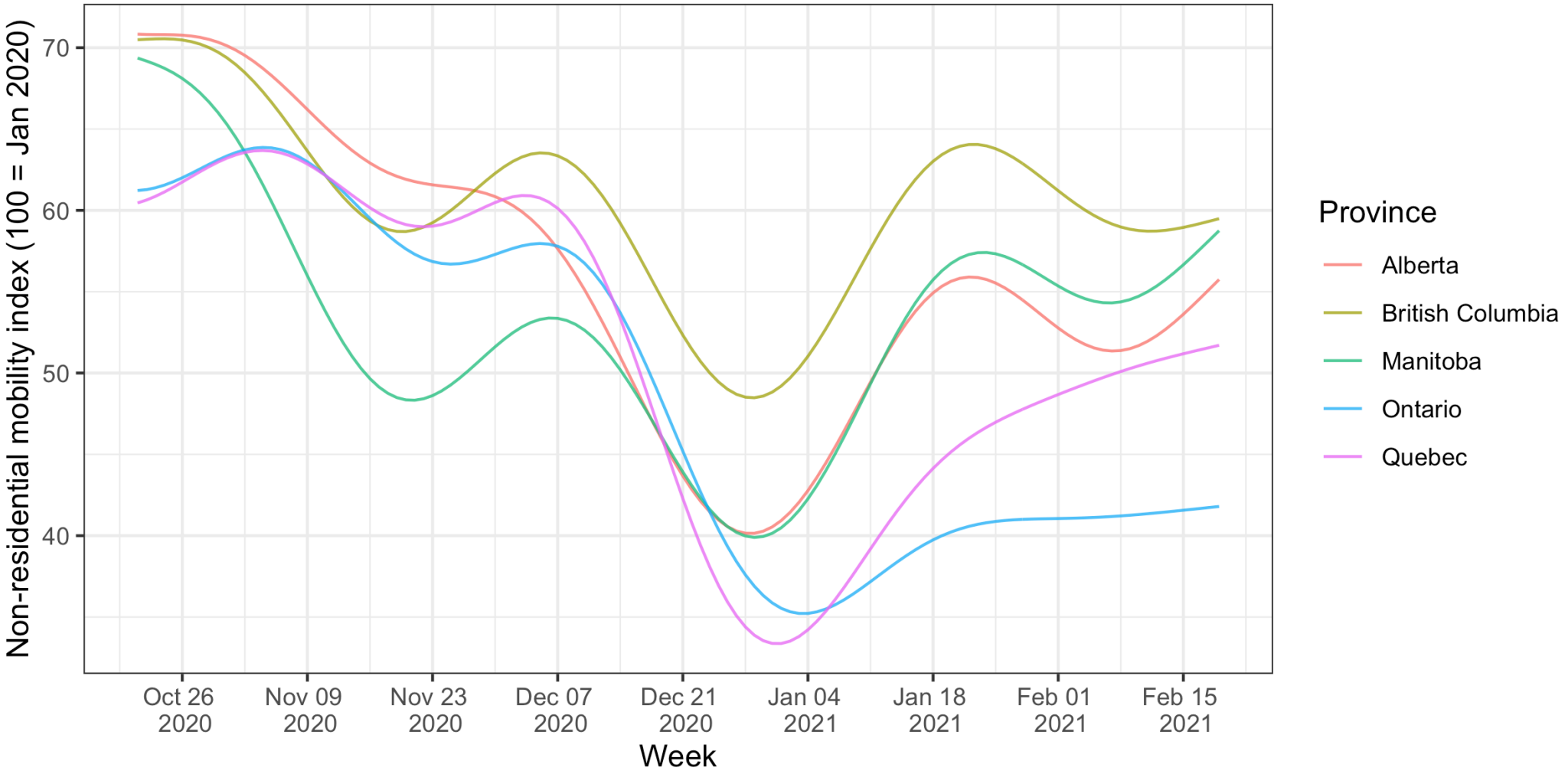


Data Source: Ministry of Long Term Care Tracker, Feb 21st extraction based on data reported up to 3:30 pm Feb 22, 2021. Data are self-reported by the long-term care homes to the Ministry of Long-Term Care. Daily case and death figures may not immediately match the numbers posted by the local public health units (i.e. iPHIS database) due to lags in reporting time.

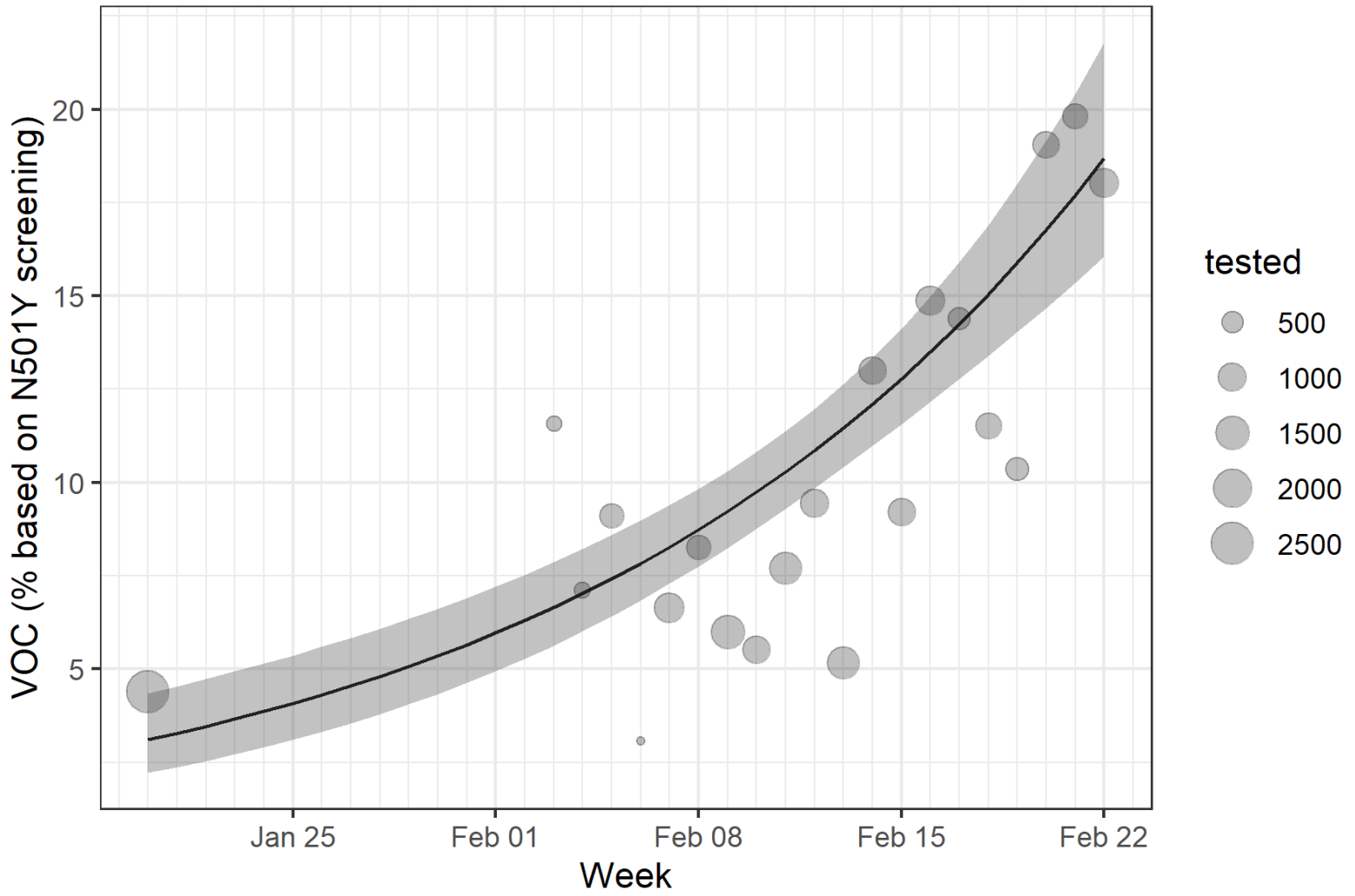
Focused LTC vaccination, together with lockdowns, have rapidly reduced infections and deaths in LTC



A key to disease control, mobility has been flat but new variants will start to increase case numbers

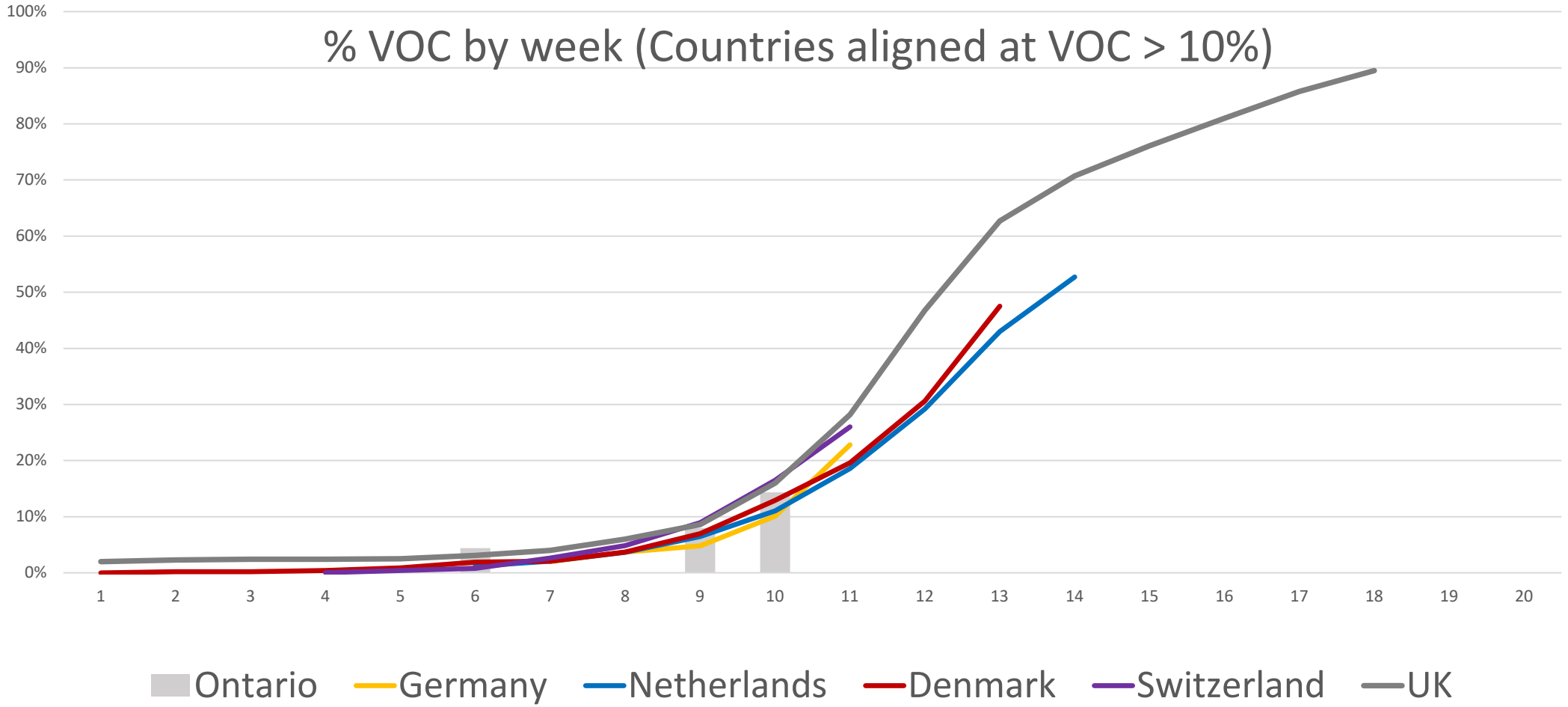


Variants of Concern (VOC) continue to spread quickly in Ontario (likely 40% of cases in second week of March)



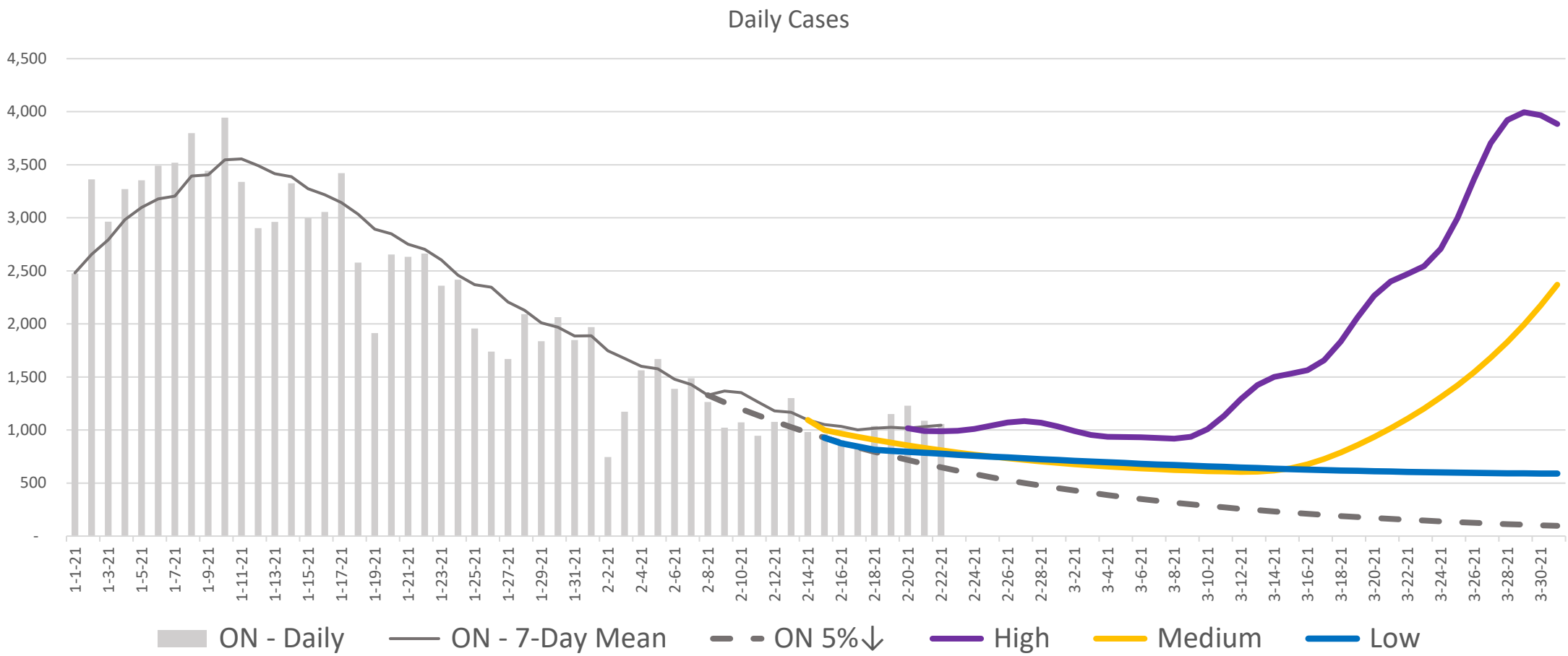
Data: PHO

Weekly growth in Variants of Concern in Ontario matches other countries.



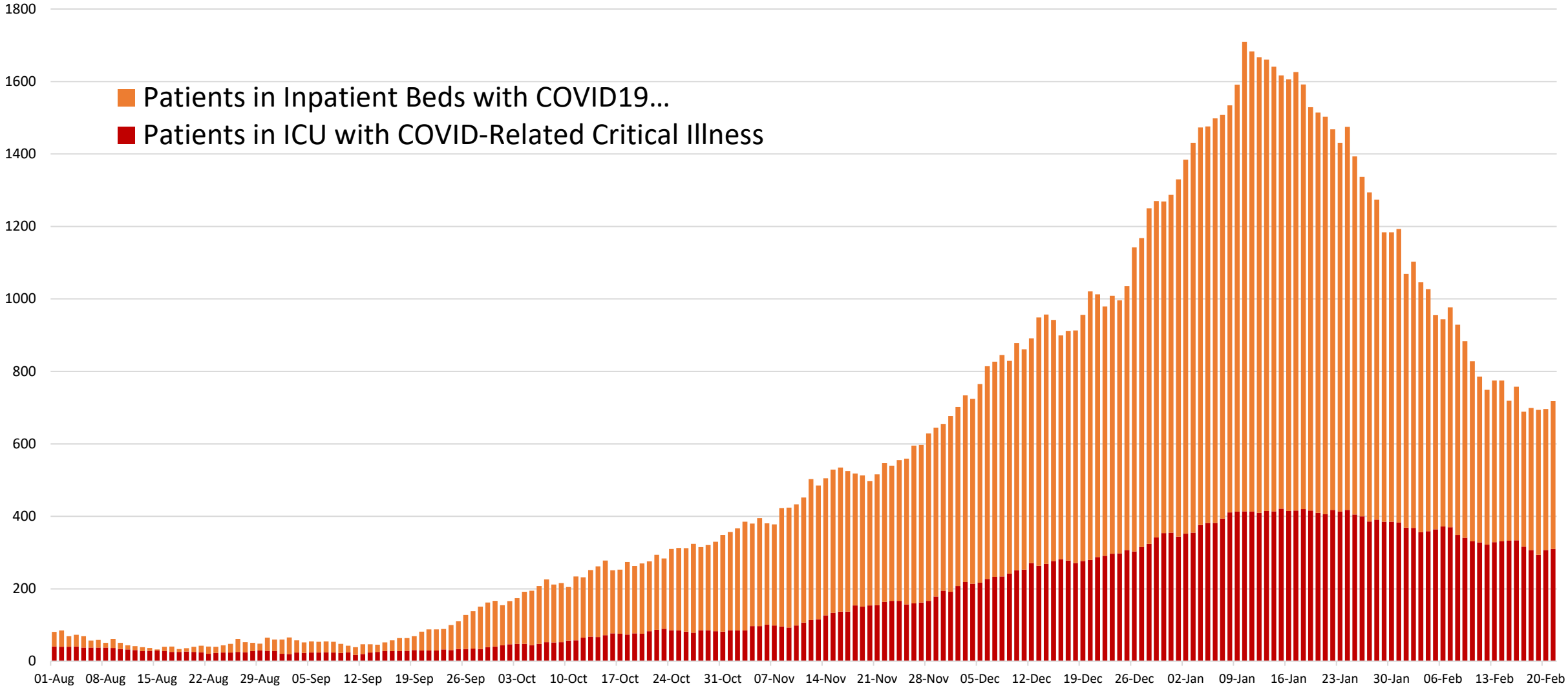
Data: PHO (Ontario), Robert Koch Institute (RKI), Rijksinstituut voor Volksgezondheid en Milieu (RIVM), Danish Covid-19 Consortium, SARS-CoV-2 Variants of Concern in Switzerland, Public Health England

Future case growth depends heavily on our control of the variants of concern.



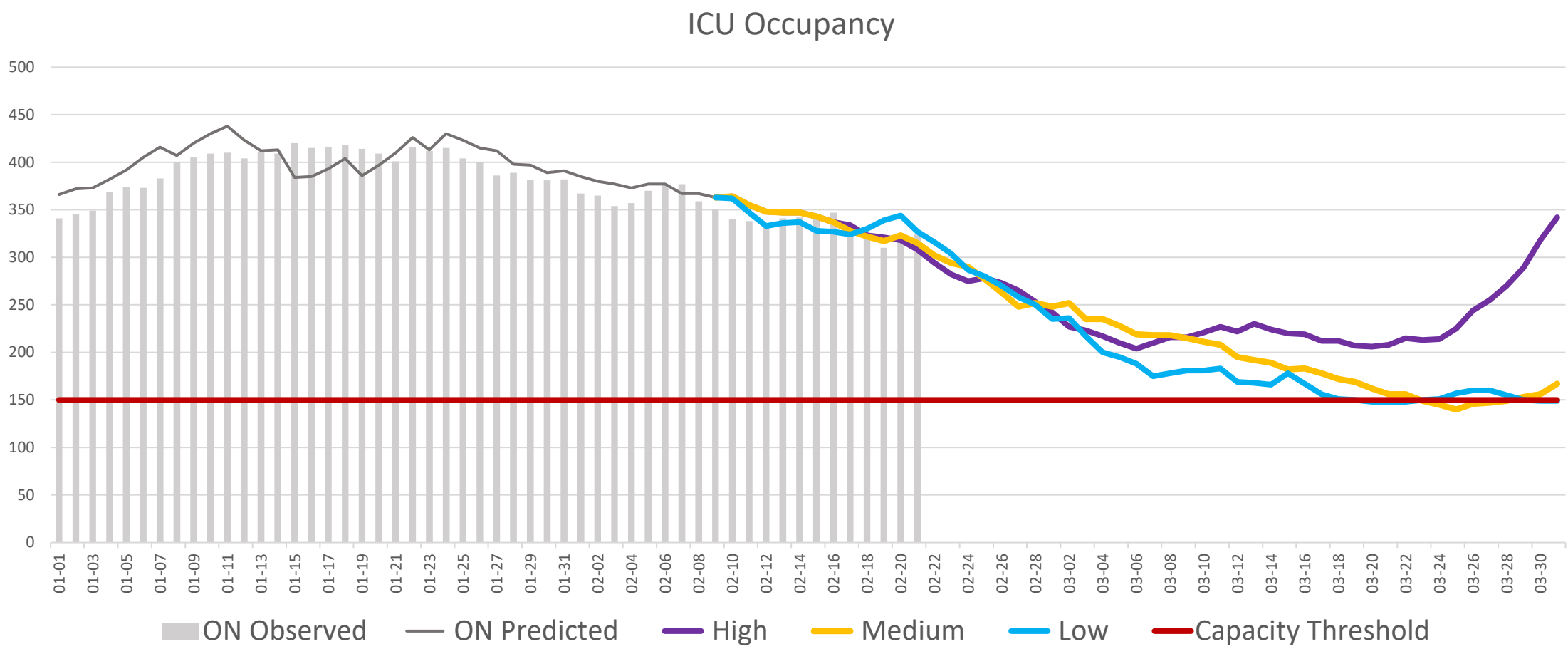
Predictions informed by modeling from COVID-19 ModCollab, McMasterU, PHO, YorkU
Data (Observed Cases): covid-19.ontario.ca

COVID-19 hospitalization and ICU occupancy decreases have started to level off.



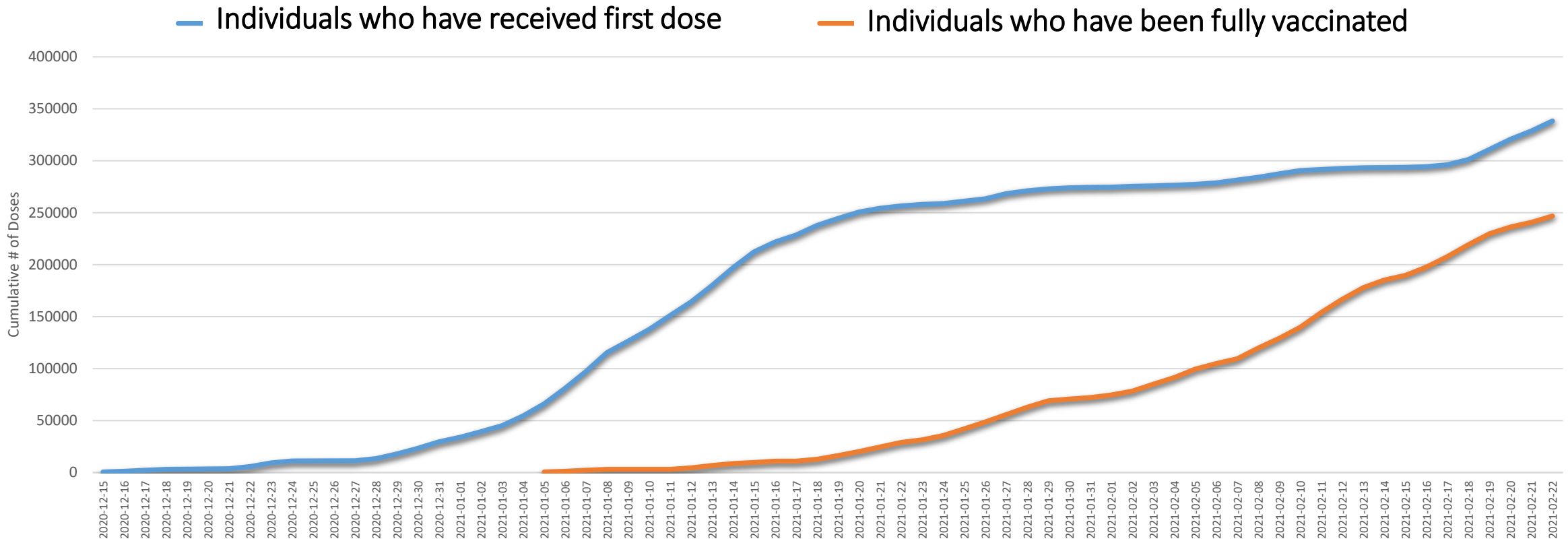
Data Sources: MOH COVID Inpatient Census and Critical Care Information System, data up to February 21

ICU occupancy is likely to remain challenged.



Predictions: COVID-19 ModCollab.
Data (Observed ICU Occupancy): CCSO

More Ontarians are getting vaccinated, focusing coverage on areas where impact is greatest will be important.



- **Reporting in COVax began on December 15, 2020. At this time, only first doses were administered.**
- **Starting the first week of January 2021, second doses began being administered.**

Source: COVax-ON data February 23, 2021 - 10:10 AM

- Data for Time Given between 12/15/2020 to 02/22/2021
- Dose 1 Administered was determined based on the first Time Given for each client.
- Dose 2 Administered was determined based on the last Time Given for each client where there is more than 1 dose administered

The next few months are key to maintaining our gains and a declining pandemic in the summer

- A combination of vaccination and public health measures should help reduce transmission
  - Strong public health measures brought cases down and slowed spread of new variants of concern
  - Vaccination in long-term care has helped bring down deaths and cases
  - Vaccination of older age groups and high-risk communities will drive hospitalizations and deaths down further
- A changing environment for COVID-19 will help decrease transmission
  - Warmer weather will increase time outdoors and decrease time in crowded or closed-in places
  - Increasing vaccination should confer immunity more reliably and safer than historical models (1918 Influenza pandemic) that had to rely on the spread of infection alone
- The major challenge becomes how to protect the health system over the next few months and closely monitor the spread of all types of cases while accelerating vaccination
- We should expect flares in communities and settings where risk factors make people vulnerable

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