

# Update on COVID-19 Projections

Science Advisory and Modelling Consensus Tables

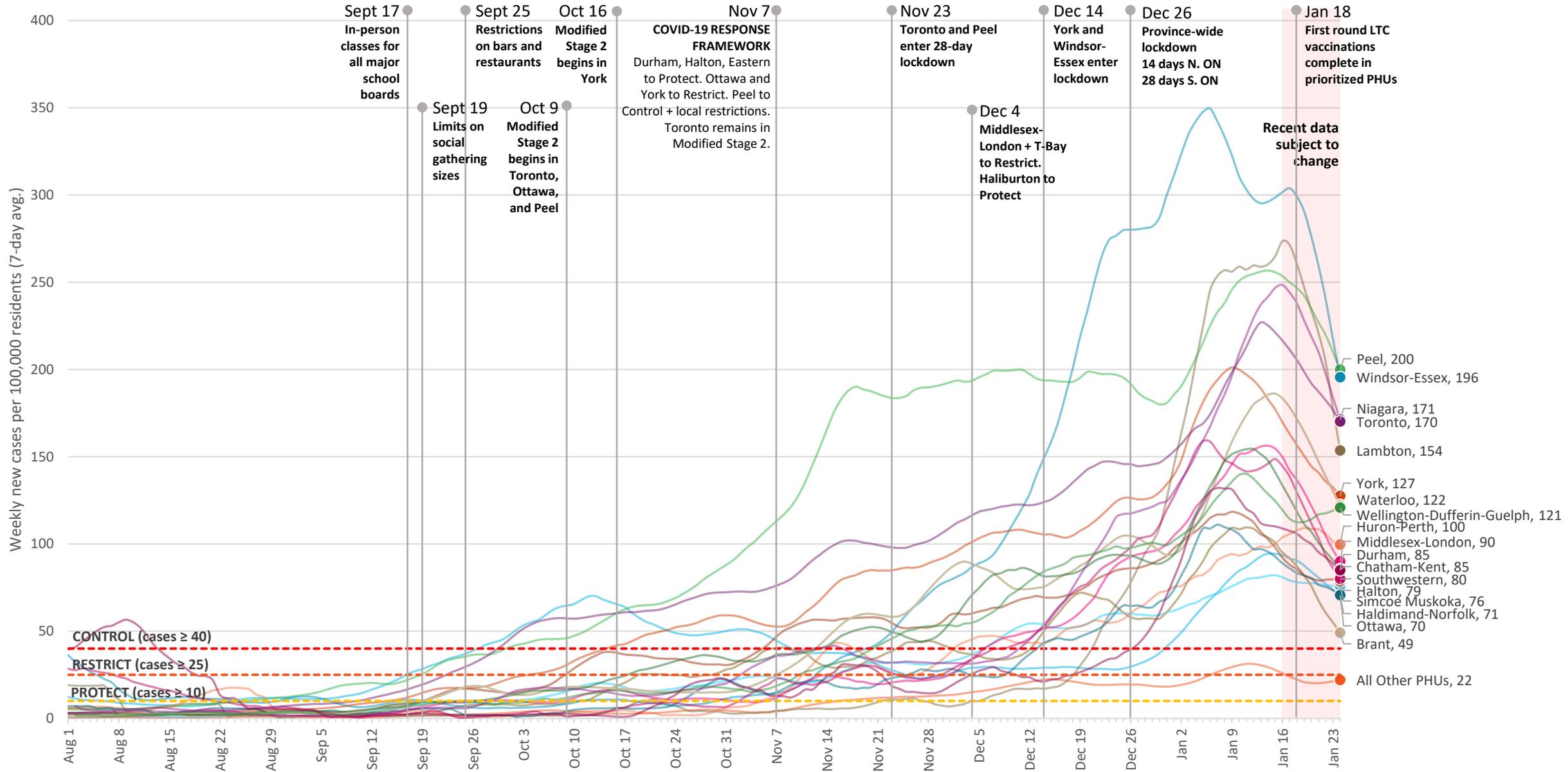
January 28, 2021



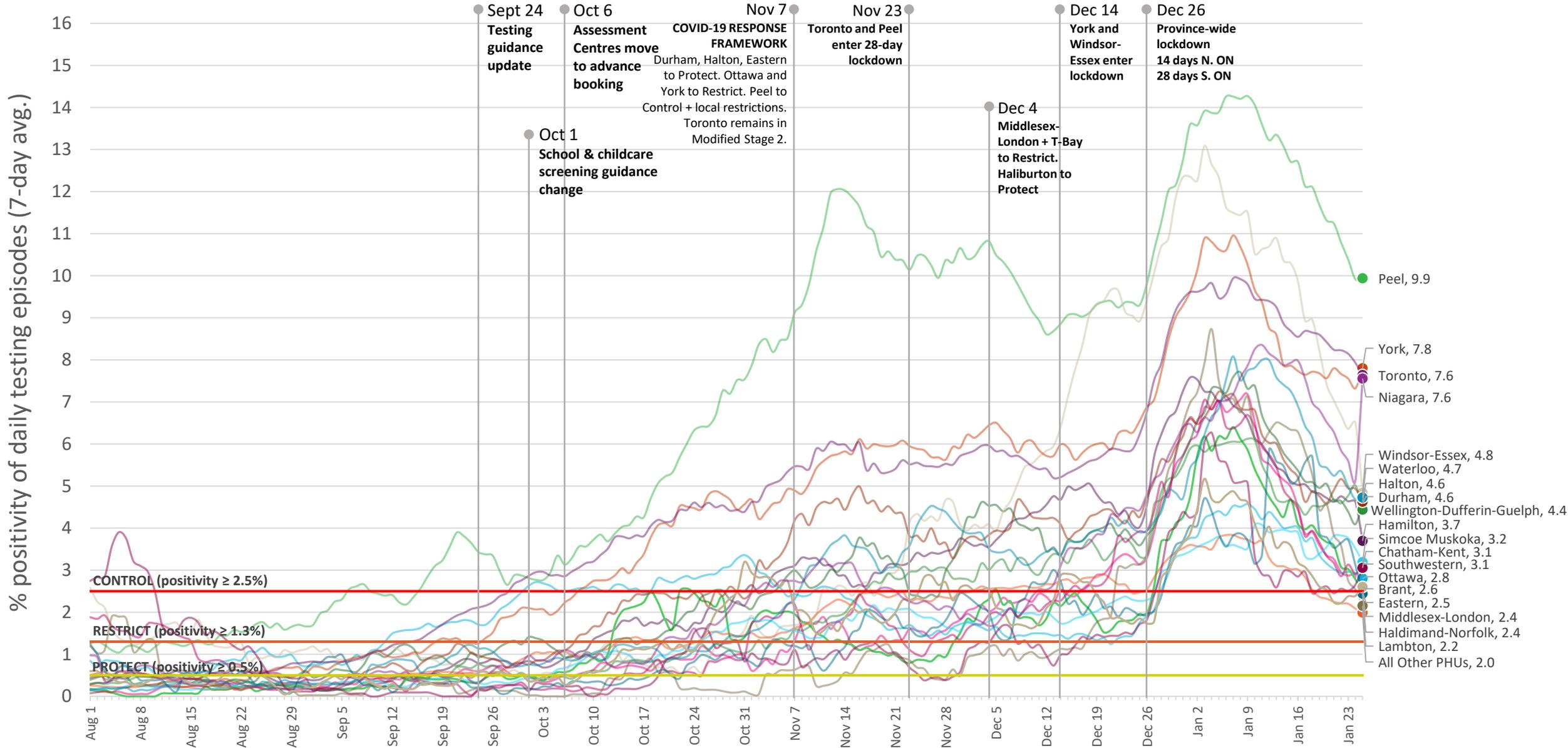
# Key Findings

- Cases and positivity are down across Public Health Units but testing volumes are also slightly down. Sustained high testing volumes will be important to control of the pandemic.
- Cases are declining across long-term care homes but deaths continue to rise (215 in the last seven days). We are still likely to surpass total deaths from the first wave. Interventions to reduce deaths in long-term care will be critical.
- Hospitalizations are declining but strained ICU capacity continues. COVID-19 has an outsized impact on our health system. This access to care deficit continues to grow and will have short and longer-term negative impacts on health.
- There has been some reduction in mobility. But essential work is still strongly associated with risk of infection. Safe workplaces will be important to control COVID-19.
- The new variant of concern (B.1.1.7) is spreading in Ontario and is a significant threat to control of the Pandemic. However, modelling and international examples suggest that maintaining public health interventions will support continued reductions in cases, even with a return to school.

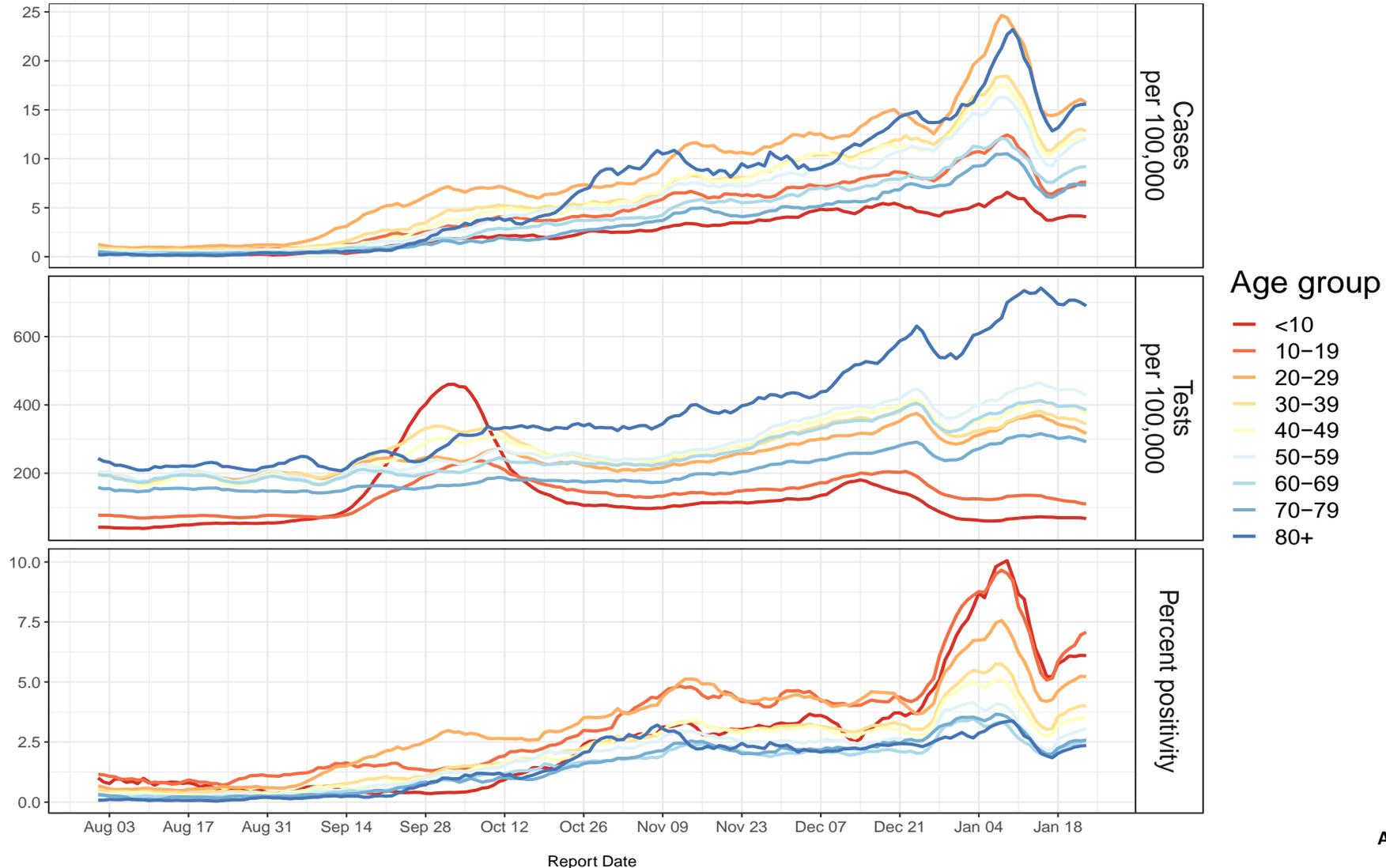
# Total new cases per 100,000 residents per week across PHUs



# COVID-19 testing percent positivity across PHUs



# Cases and percent positivity have declined across most age groups but testing volumes have also fallen.



# Cases are dropping but mortality in long-term care continues to increase (215 resident deaths in the last seven days)

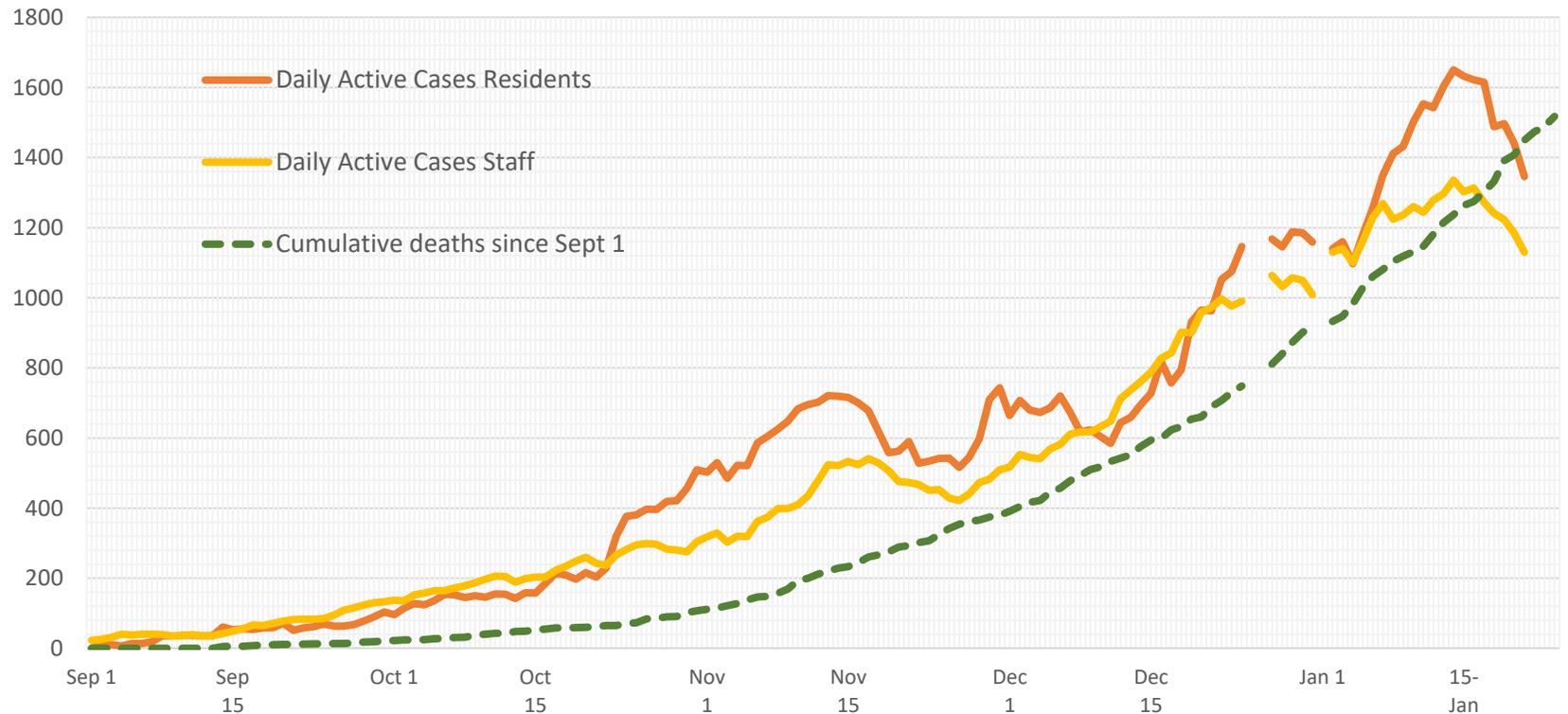
## Current status

**256 LTC homes have COVID-19 outbreaks (41% of all homes), 80 outbreaks involve just one case**

**Since January 1<sup>st</sup> 596 LTC residents have died of COVID-19 and 3 staff deaths have been reported**

**The number of resident cases has been decreasing for the past 10 days (peaked on Jan 14<sup>th</sup>)**

COVID-19 cases and deaths for LTC residents and staff



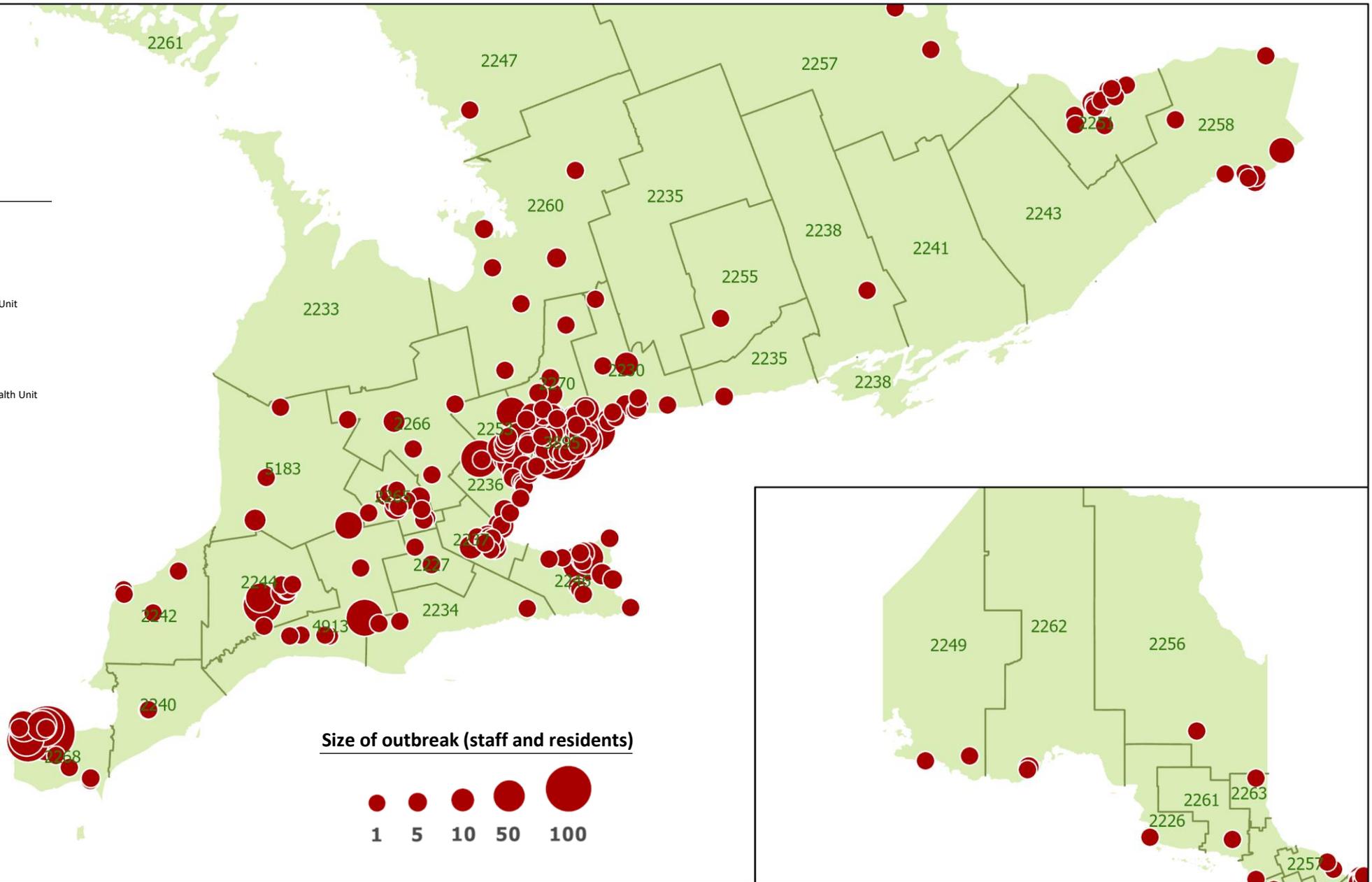
**Data Source:** Ministry of Long Term Care Tracker, Jan 25<sup>th</sup> extraction based on data reported up to 3:30 pm Jan 24<sup>th</sup>, 2021. Data are self-reported by the long-term care homes to the Ministry of Long-Term Care. Daily case and death figures may not immediately match the numbers posted by the local public health units (i.e. iPHIS database) due to lags in reporting time.

# Long-term Care Outbreaks

## January 7, 2021

### Public Health Unit

- 2226 Algoma Public Health Unit
- 2227 Brant County Health Unit
- 2230 Durham Region Health Department
- 2233 Grey Bruce Health Unit
- 2234 Haldimand-Norfolk Health Unit
- 2235 Haliburton, Kawartha, Pine Ridge District Health Unit
- 2236 Halton Region Health Department
- 2237 Hamilton Public Health Services
- 2238 Hastings & Prince Edward Counties Health Unit
- 2240 Chatham-Kent Health Unit
- 2241 Kingston, Frontenac and Lennox & Addington Health Unit
- 2242 Lambton Health Unit
- 2243 Leeds, Grenville & Lanark District Health Unit
- 2244 Middlesex-London Health Unit
- 2246 Niagara Region Public Health Department
- 2247 North Bay Parry Sound District Health Unit
- 2249 Northwestern Health Unit
- 2251 Ottawa Public Health
- 2253 Peel Public Health
- 2255 Peterborough Public Health
- 2256 Porcupine Health Unit
- 2257 Renfrew County & District Health Unit
- 2258 Eastern Ontario Health Unit
- 2260 Simcoe Muskoka District Health Unit
- 2261 Sudbury and District Health Unit
- 2262 Thunder Bay District Health Unit
- 2263 Timiskaming Health Unit
- 2265 Region of Waterloo, Public Health
- 2266 Wellington-Dufferin-Guelph Health Unit
- 2268 Windsor-Essex County Health Unit
- 2270 York Region Public Health
- 3895 Toronto Public Health
- 4913 Southwestern Public Health
- 5183 Huron Perth Health Unit

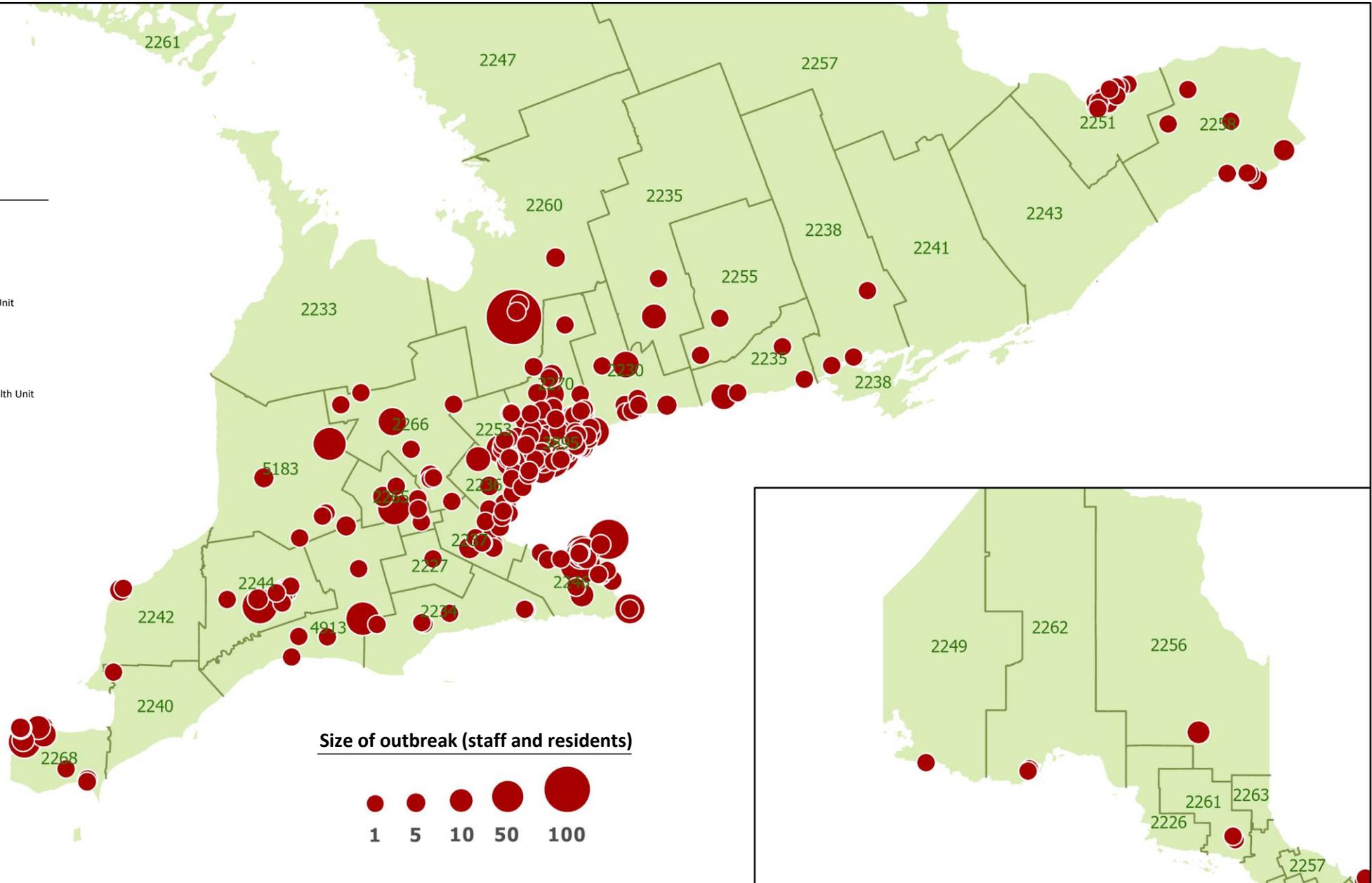


# Long-term Care Outbreaks

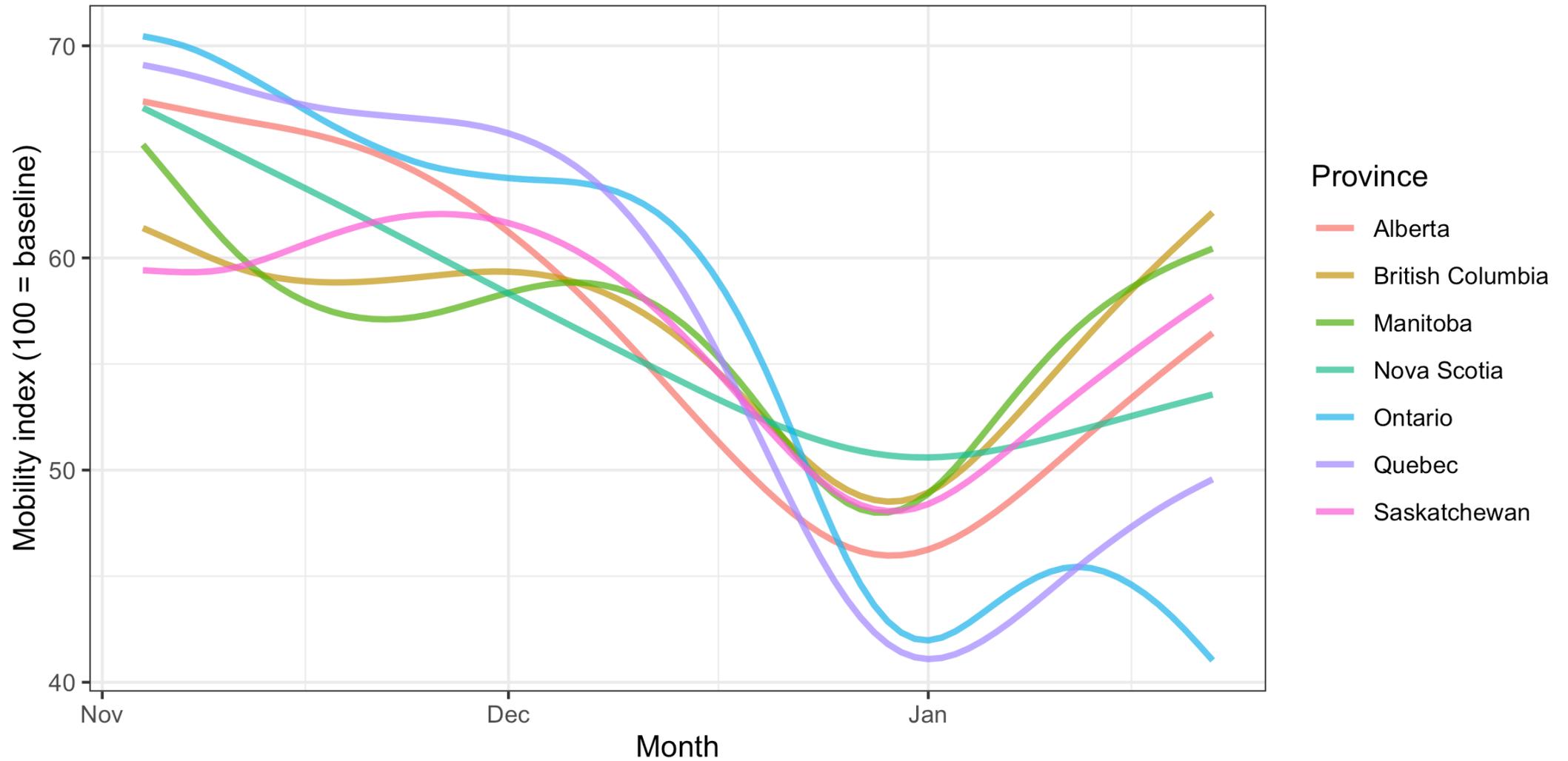
January 24, 2021

## Public Health Unit

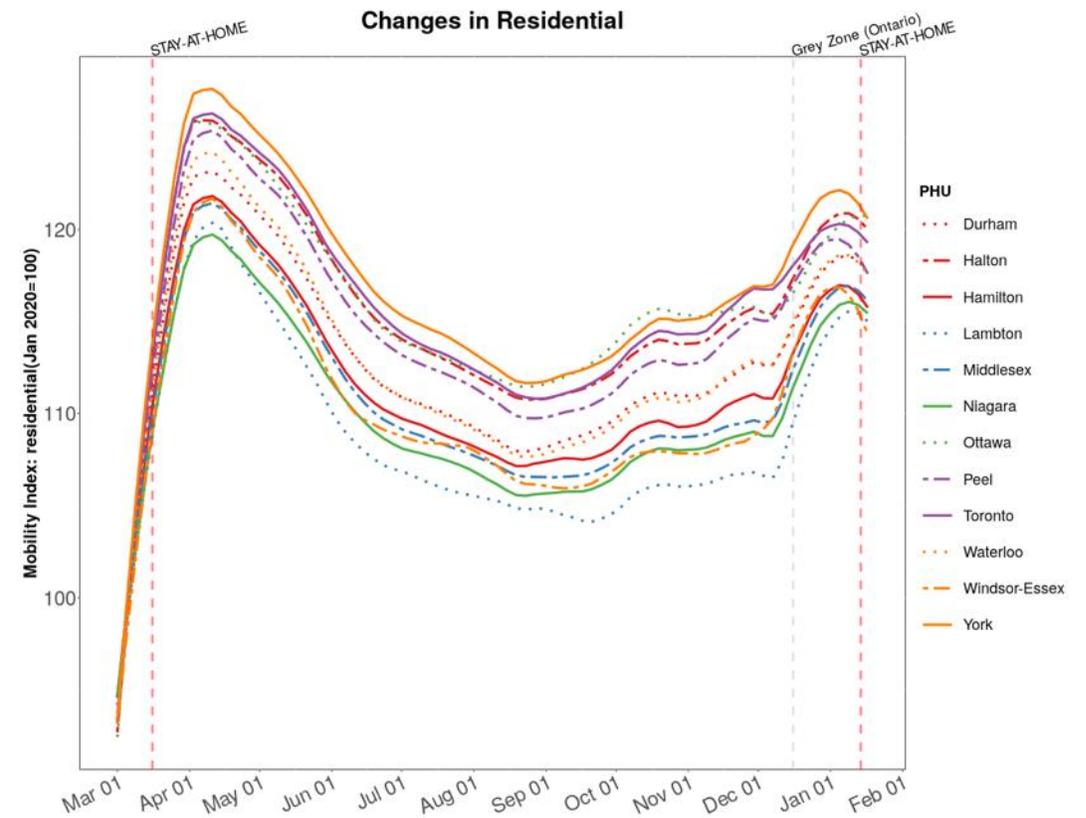
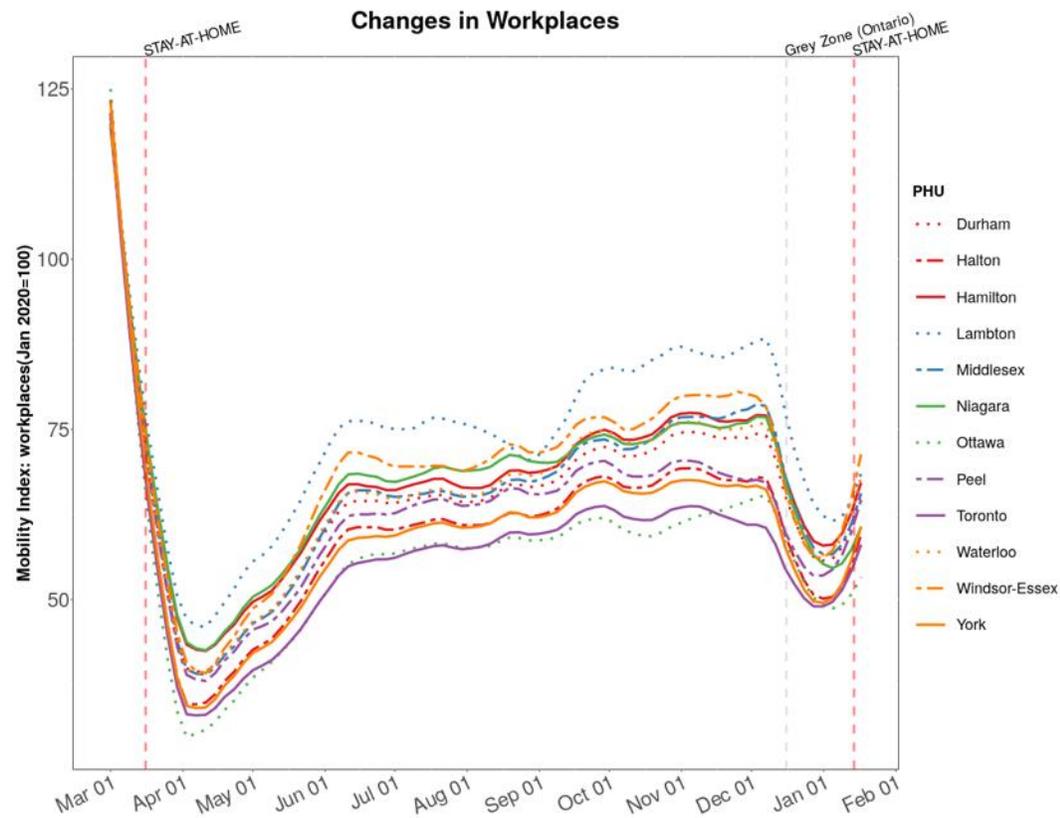
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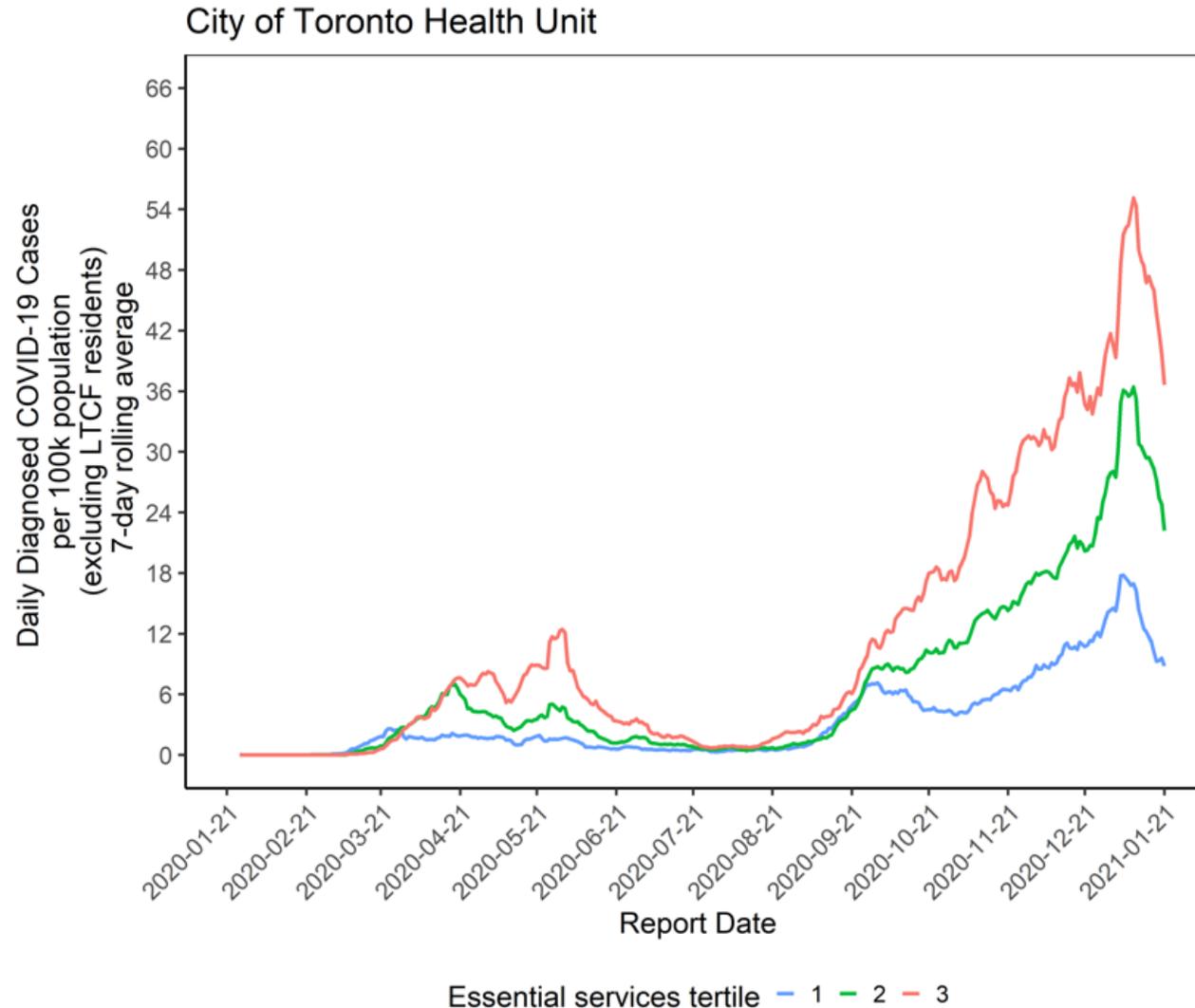
# Stay-at-home order has reduced overall mobility



# Stay-at-home order reduced mobility by a small amount

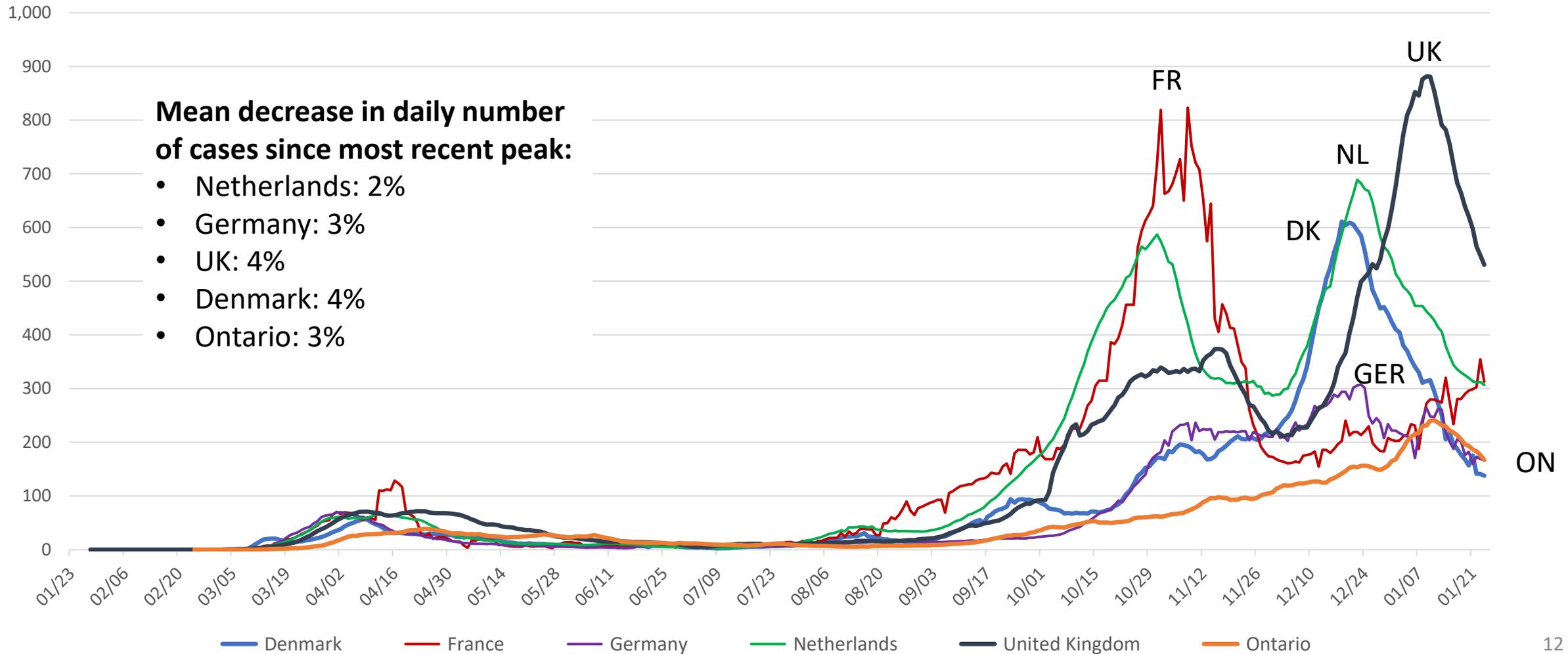


# Communities with highest proportion of essential workers continue to have the highest case numbers

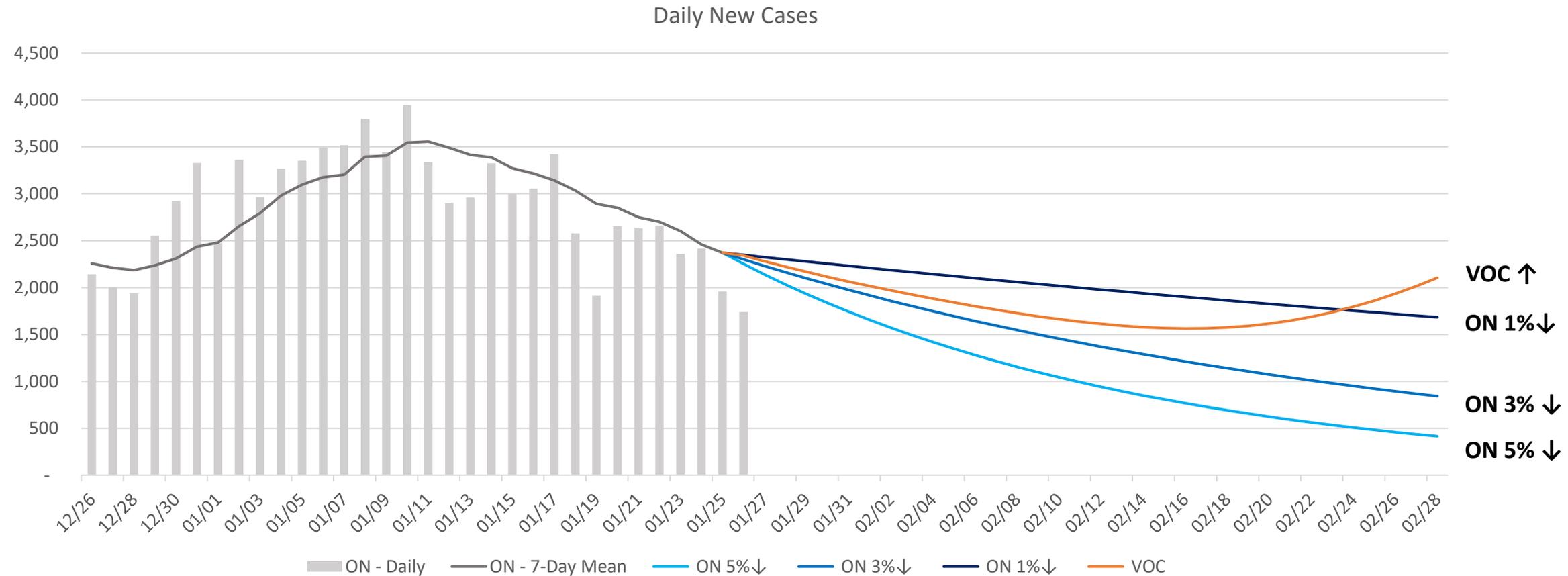


# Countries that have maintained public health measures are seeing declines in cases despite increased B117 prevalence

Daily New Cases per 1 Million People (7-Day Average)

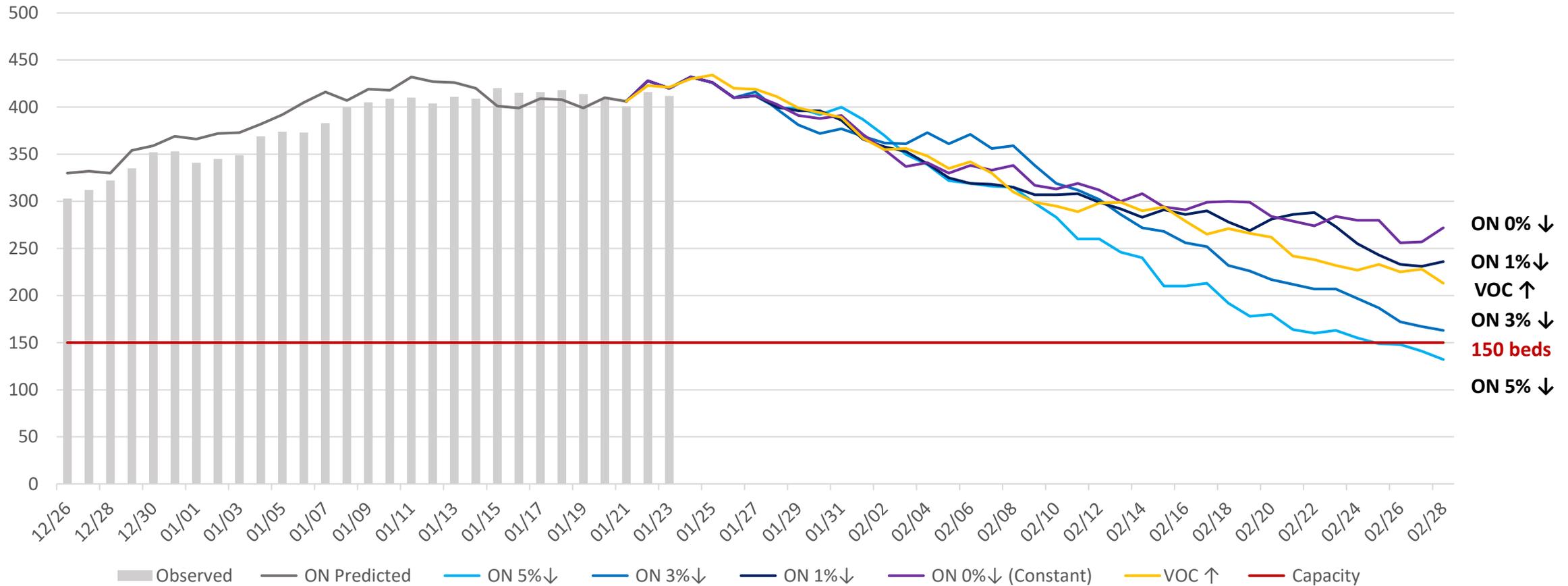


# Cases are decreasing. This is driving decreased hospitalization but not yet decreased ICU occupancy.



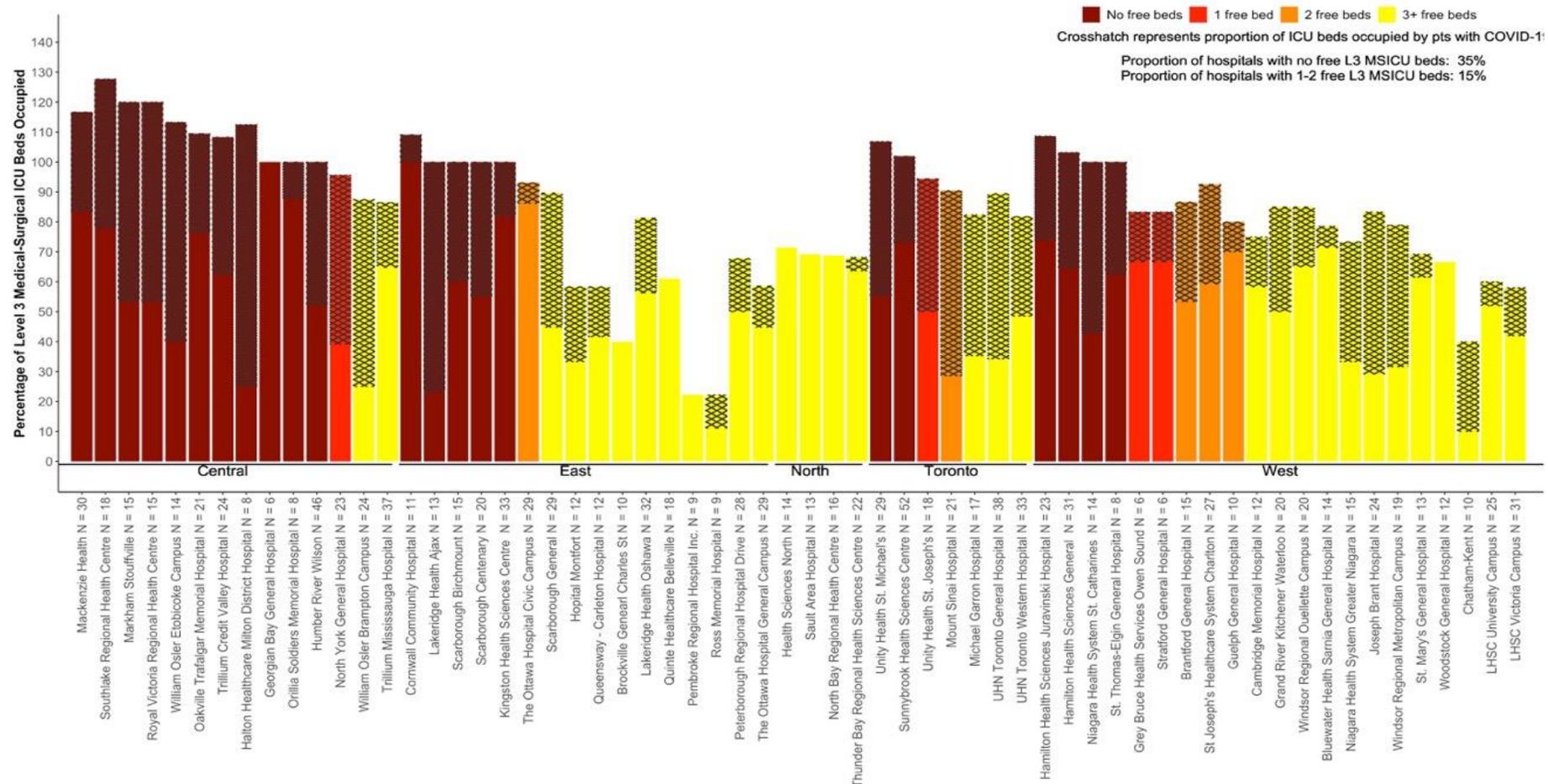
**Predictions** informed by modeling from COVID-19 ModCollab, Fields Institute, McMasterU, PHO, QueensU, YorkU; recent growth in new daily cases; reported case trajectories in peer jurisdictions  
**Data** (Observed Cases): covid-19.ontario.ca

# Projections: COVID-19 ICU occupancy 150-300 beds end of February

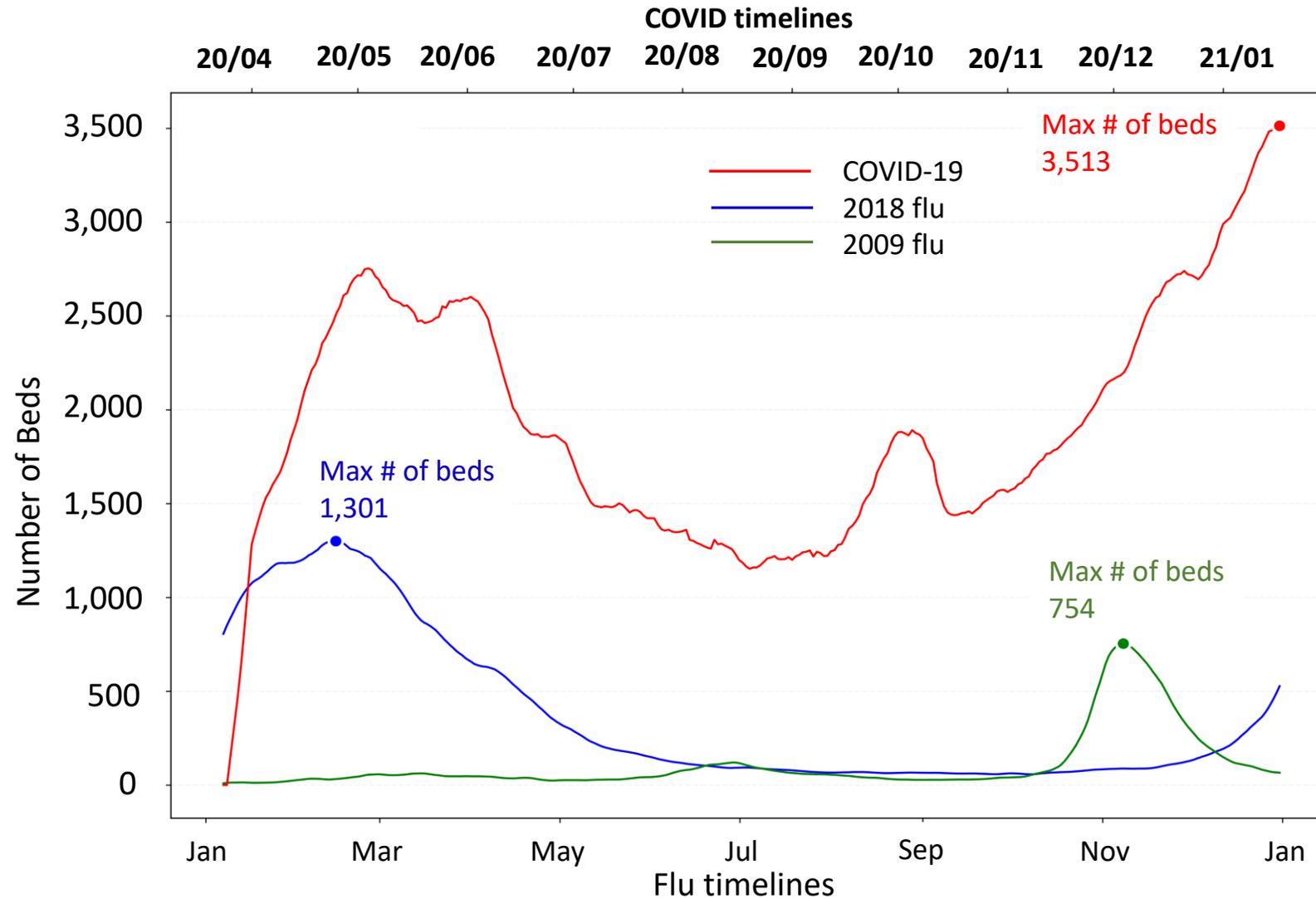


# ICU capacity remains strained in most regions with about half of all hospitals with only 1 or 2 beds free

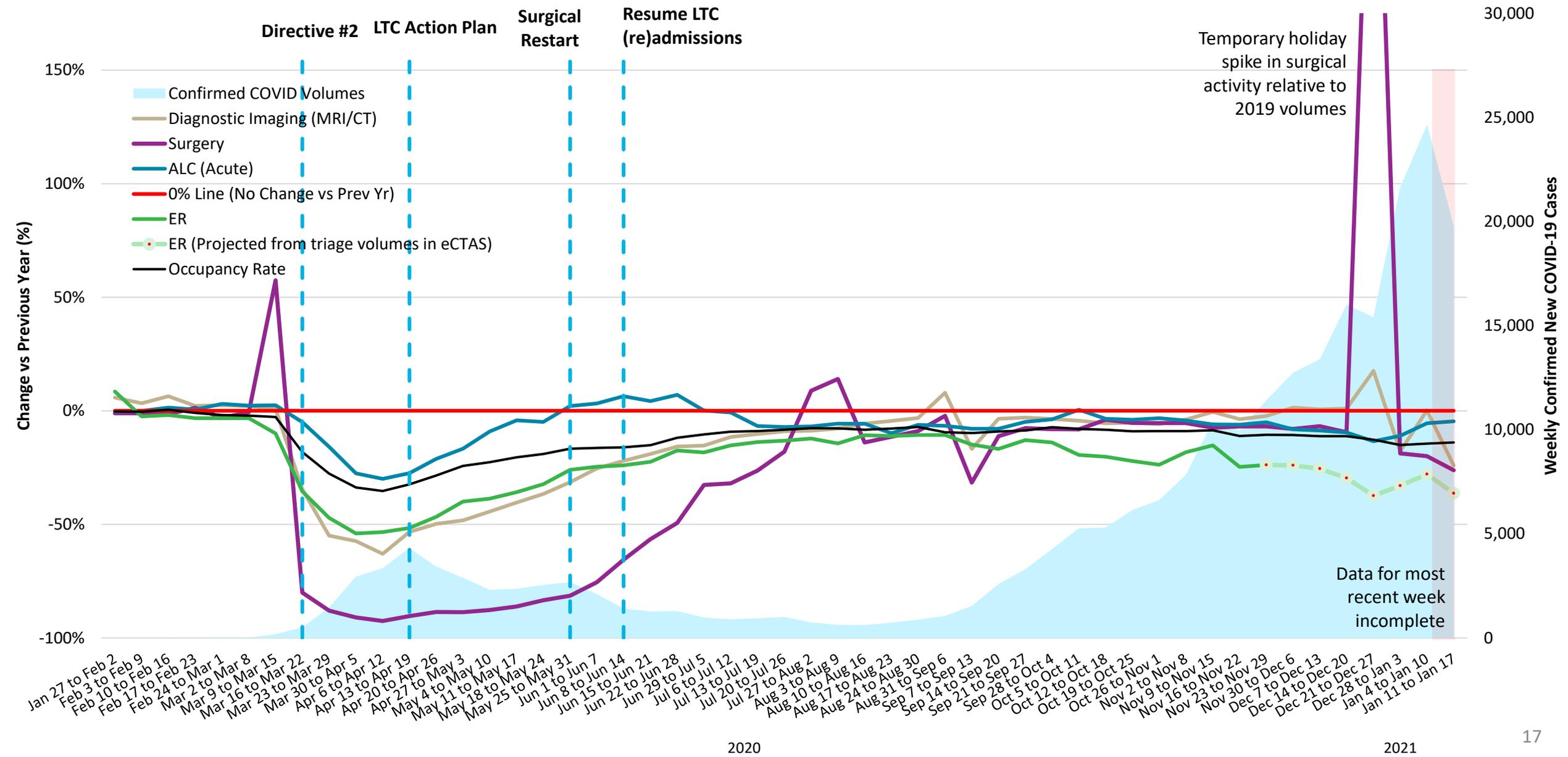
PERCENT OF ONTARIO LEVEL 3 MEDICAL-SURGICAL ICU BEDS OCCUPIED - 24 JANUARY 2021



# COVID-19 creates a high burden on hospitals



# And access to non COVID-19 care continues to decline

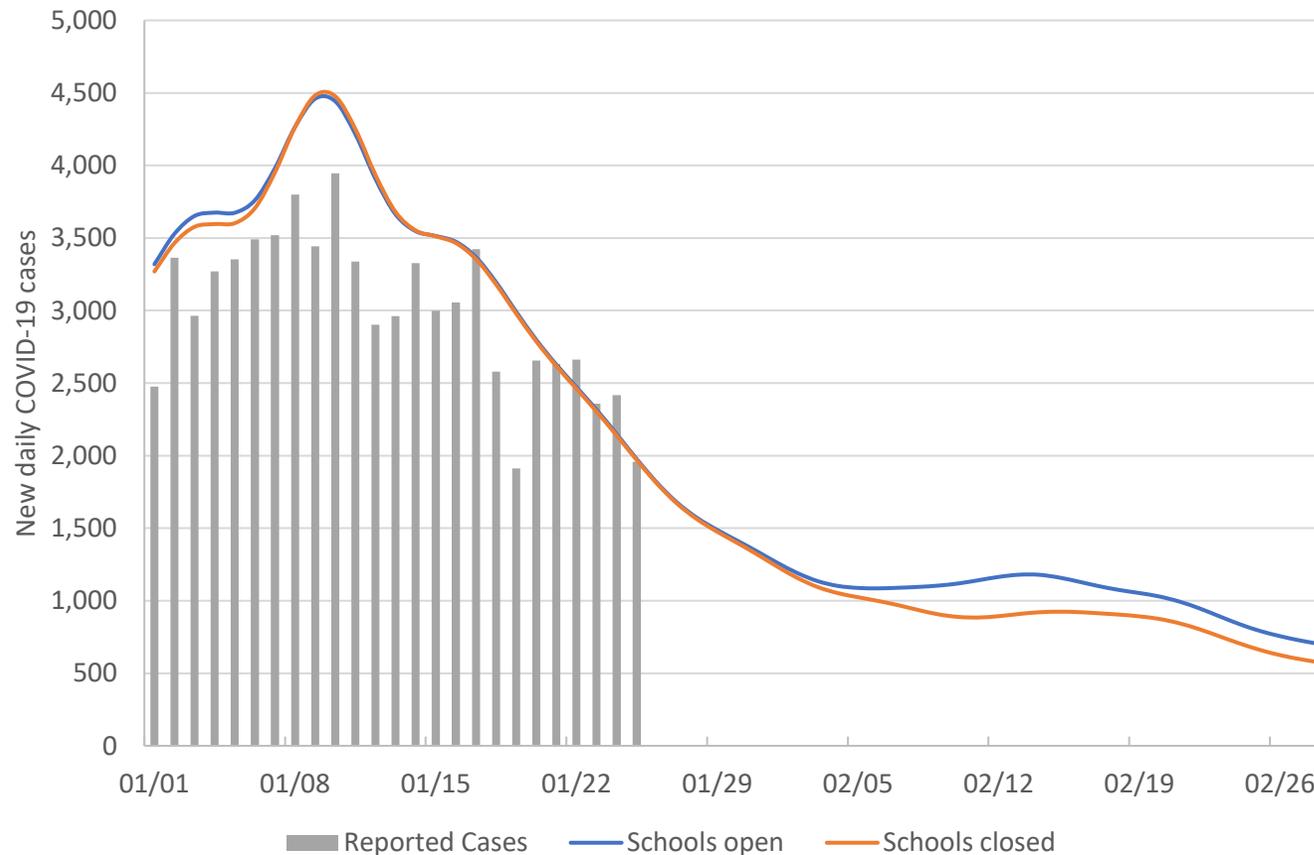


# The Novel SARS-CoV-2 variant B.1.1.7 appears to be much more easily transmitted

- The novel SARS-CoV-2 variant B.1.1.7 emerged in England in November and is spreading in Ontario
- Transmissibility is likely at least 30% higher
  - UK: Transmissibility is 56% higher (95% credible interval 50-74%)
  - UK: Secondary Attack Rate is 36% higher
  - Denmark: Reproduction number (R) is 1.36 compared to other variants (95% CI 1.19; 1.53)
- Current UK evidence summary notes potential for higher mortality *“realistic possibility that infection with VOC B.1.1.7 is associated with an increased risk of death compared to infection with non-VOC viruses”*
- Vaccines likely still effective
- Other variants of concern: B.1.351, P.1 (both with increased transmissibility, increased risk of re-infection)
- Other variants likely to emerge

# With public health measures, cases should decline even with school opening. Infection control will be critical in schools.

**Effect of school operating status with VOC present starting from 1% on 9 Dec, 2020**



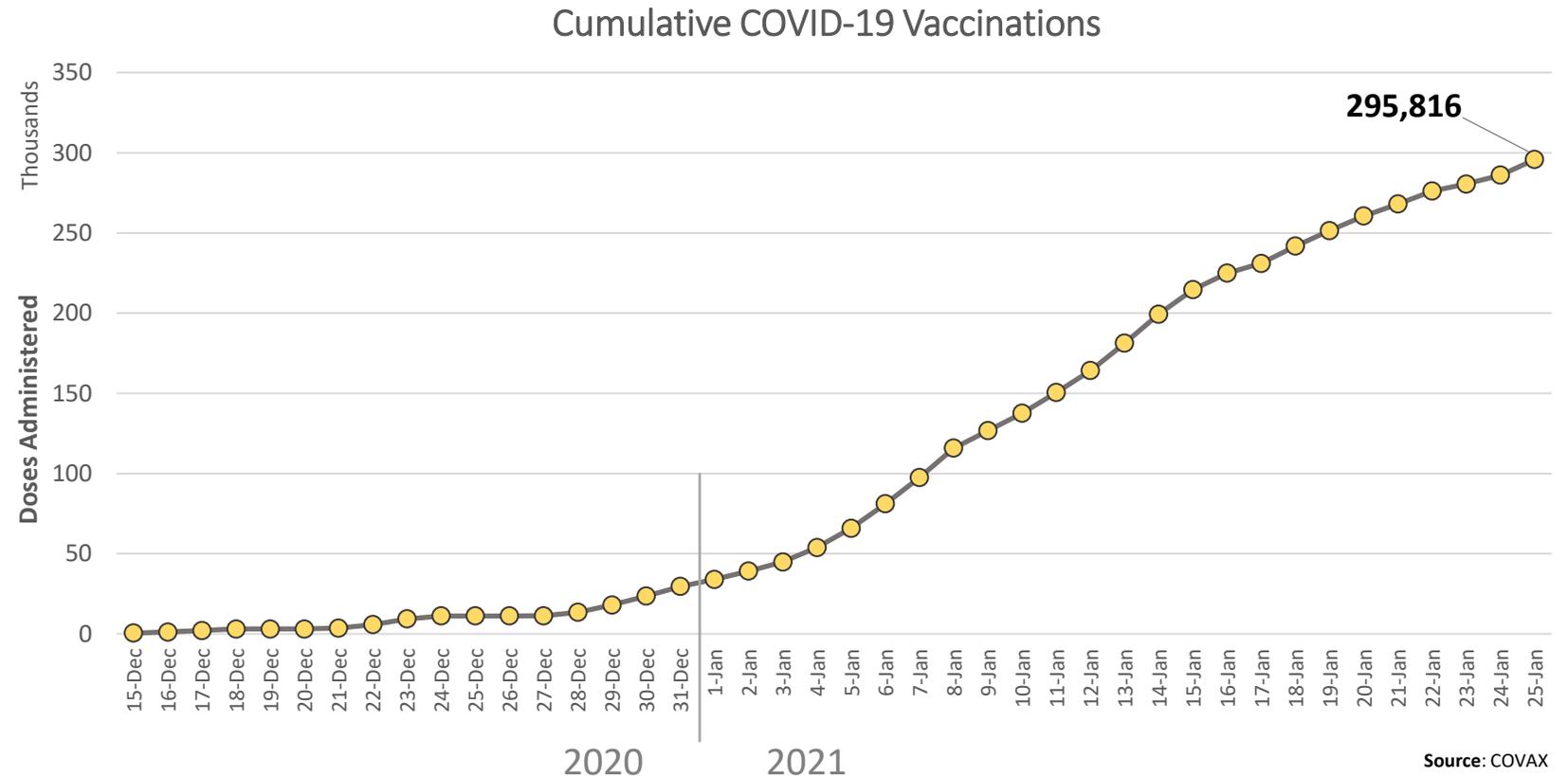
# Cumulative COVID-19 vaccine dose administrations (295,816 doses to January 25<sup>th</sup>, 2021)

## Current status

Since December 15, 2020, 295,816 vaccine doses have been administered in Ontario.

These administrations include Pfizer and Moderna vaccines.

90% of vaccine administrations have been since Jan 1 2021.



Source: COVAX

**Data Source:** COVax. Data extracted 8:00pm nightly (Health Data Branch, MOH). Includes Pfizer and Moderna vaccines. Excludes records where dose administration status is not known.

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