

# Evidence to Support Further Public Health Measures in High Transmission Areas: the Need to Act Now

Advice from the Ontario COVID-19 Science Advisory Table, the Modelling Consensus Table, and the Public Health Measures Table

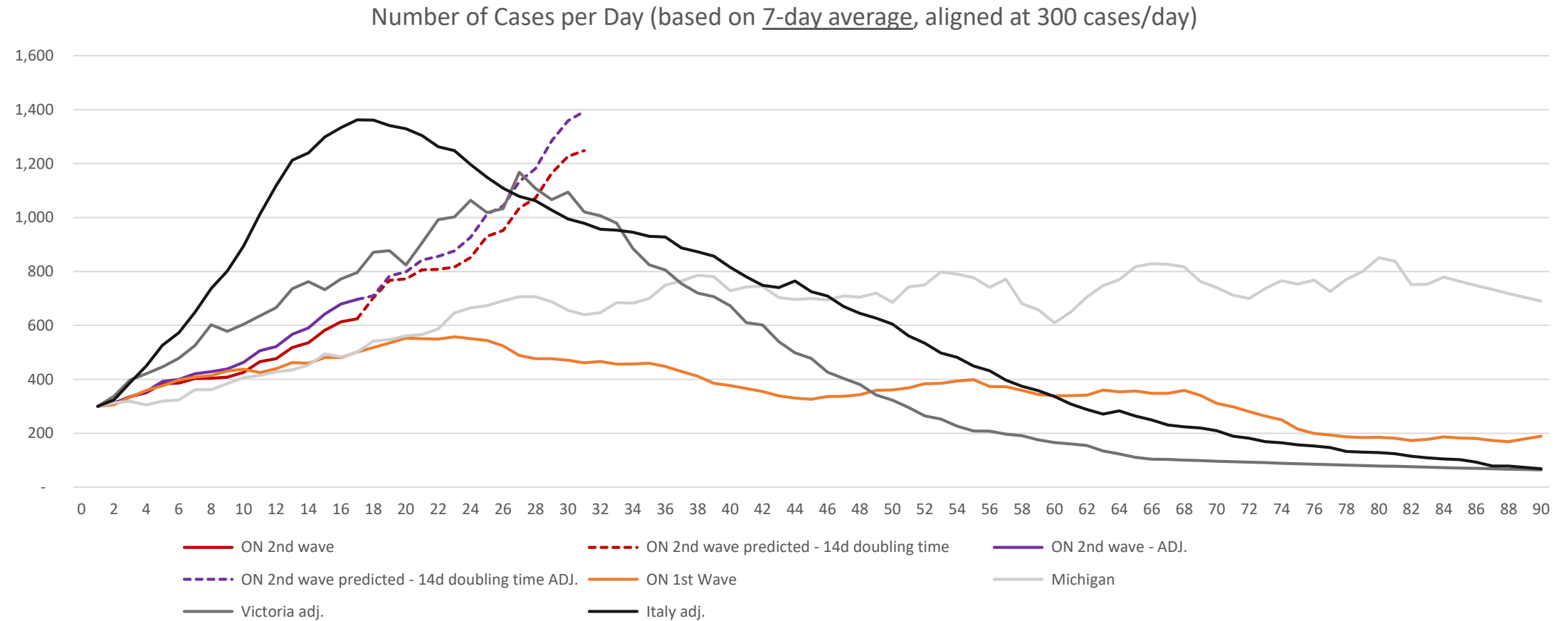
Endorsed by the Chief Medical Officer of Health  
October 8, 2020



# Recent Ontario trends show an acceleration of the pandemic

- Both leading (cases) and lagging (hospitalizations) indicators going in the wrong direction
- Seven consecutive week-over-week **increases in new infections** per population, with especially steep increases in hotspot areas (Ottawa, Toronto, Peel)
  - Cases per 100,000 increasing far beyond the “Action Level 3” threshold of >25/100K, particularly in Toronto (58.7) and Ottawa (61.9)
- The percentage of **people testing positive is rising quickly** on a provincial level, with some regions far above 3% positivity, the international benchmark
- Increase in test positivity beyond 20-29 year old age group indicating broader **spread to older population**
- There is an **increasing number of outbreaks** overall, with more vulnerable populations affected (e.g., long-term care homes, retirement homes)
- **Increasing hospitalizations** and ICU cases
  - 250% increase in COVID inpatient occupancy over past 3 weeks, including ICU
  - Ontario ICU occupancy predicted to exceed threshold of 150 beds within 30 days, even in best case scenario

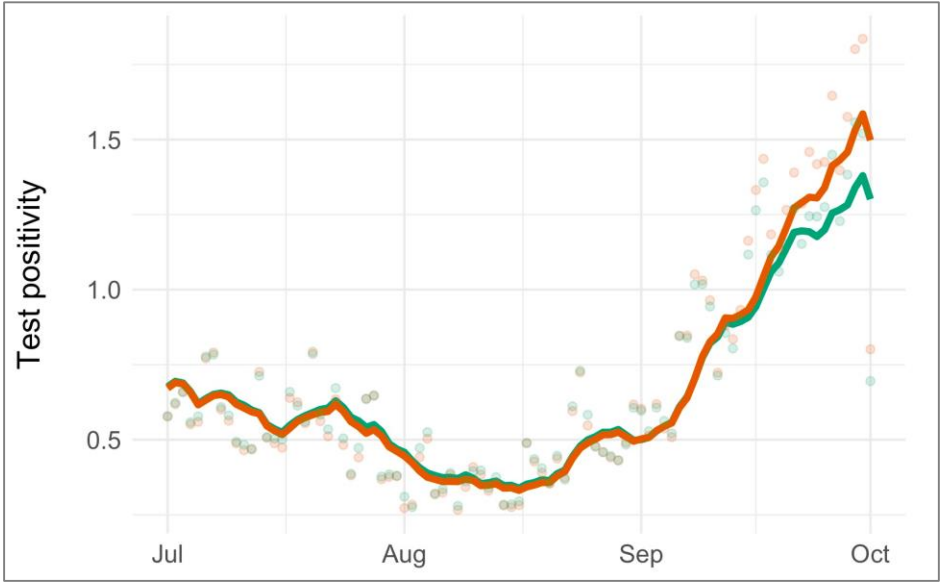
# Ontario case trends suggests **exponential growth**, following the Victoria State (Melbourne) trajectory



Prediction based on doubling time for 7-day avg<sub>3</sub>  
Day 1: Sep 18, 2020

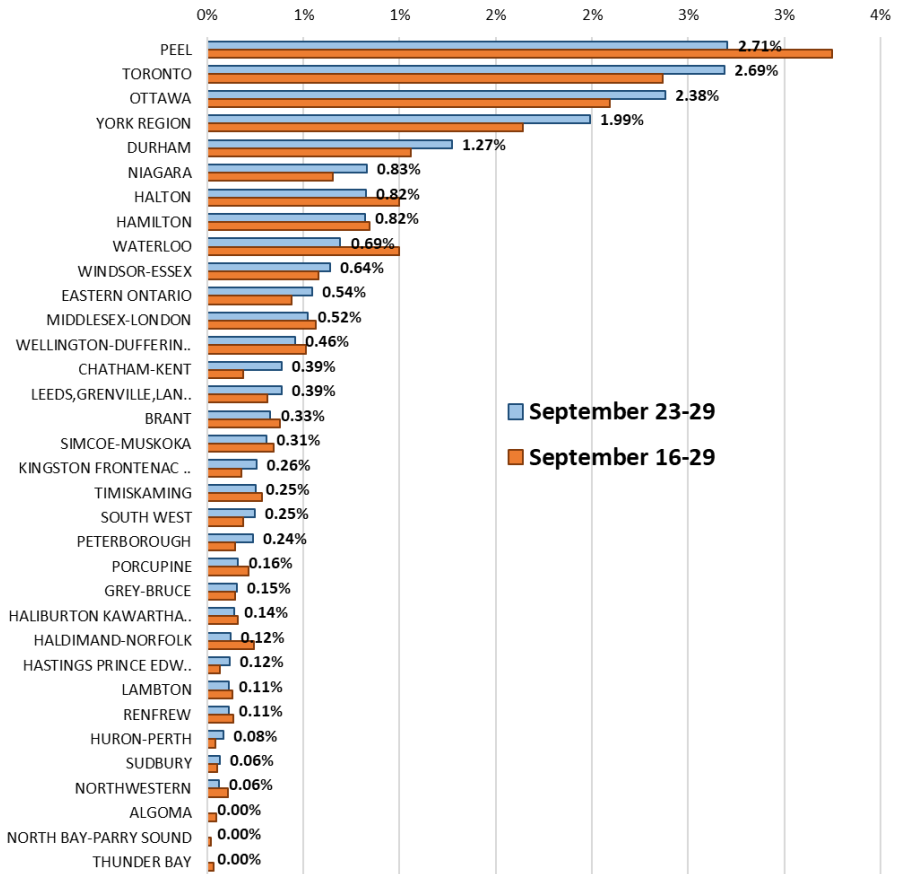
# Increasing test positivity, despite high testing volumes, show we are in the second wave – in some communities it is especially concerning

Adjusted percent positive shows substantial recent growth

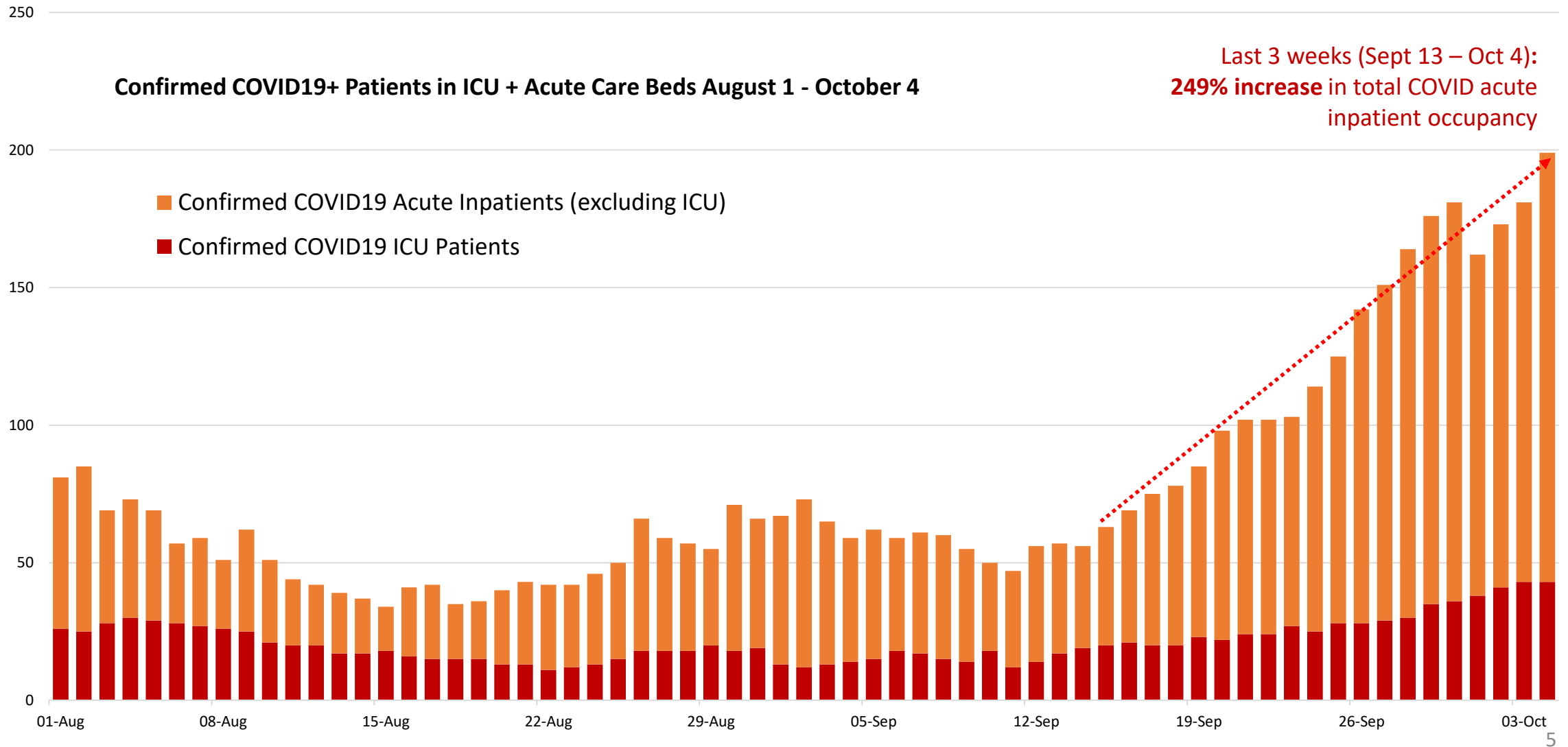


— All ages  
— Excluding age <10 years

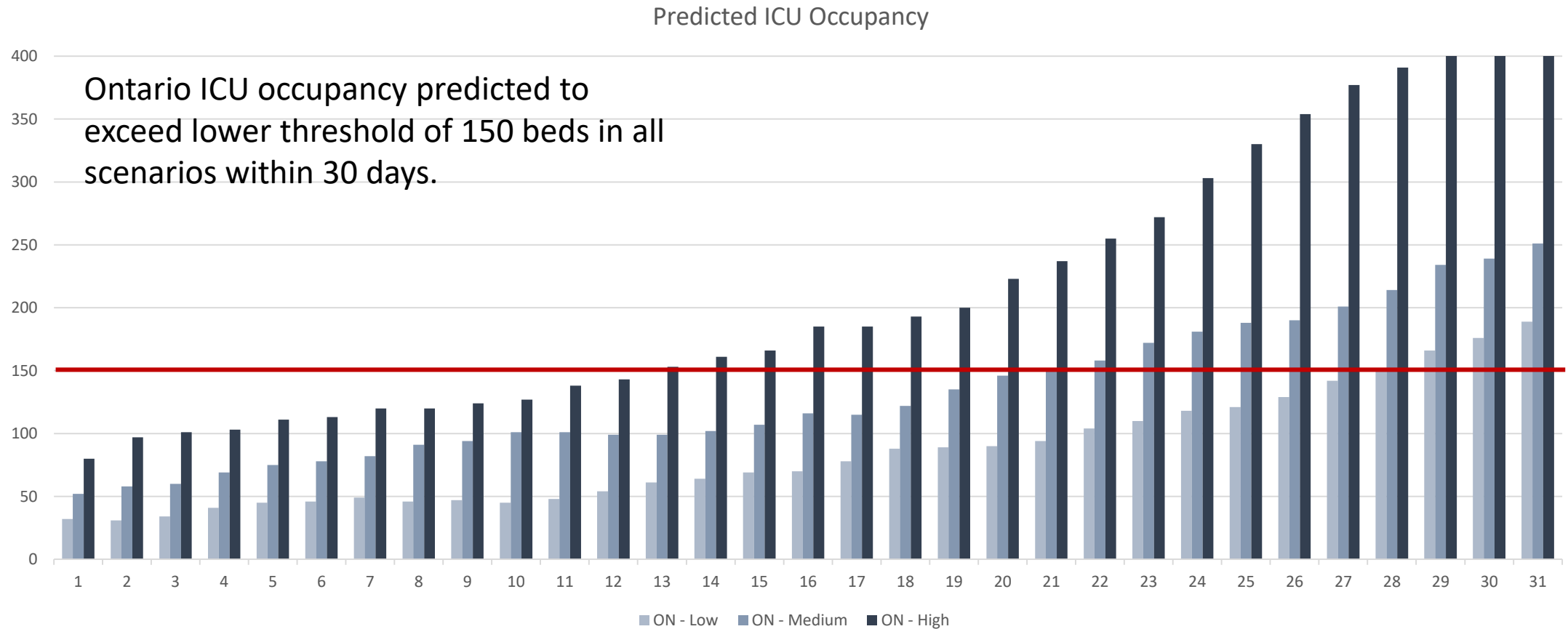
7 day test % Positivity for 12 Public Health Units to September 29



# Rising hospitalizations show increasing pressure from spillover

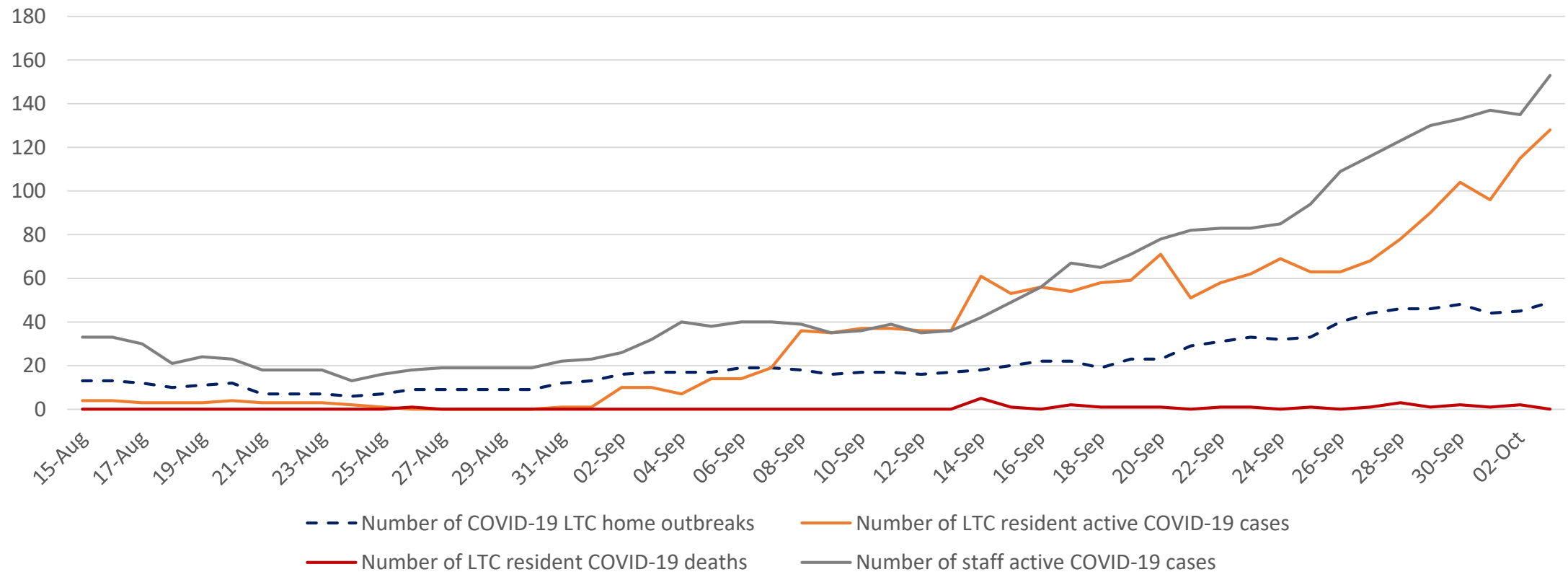


# Age spillover will further increase hospitalizations and ICU admissions.

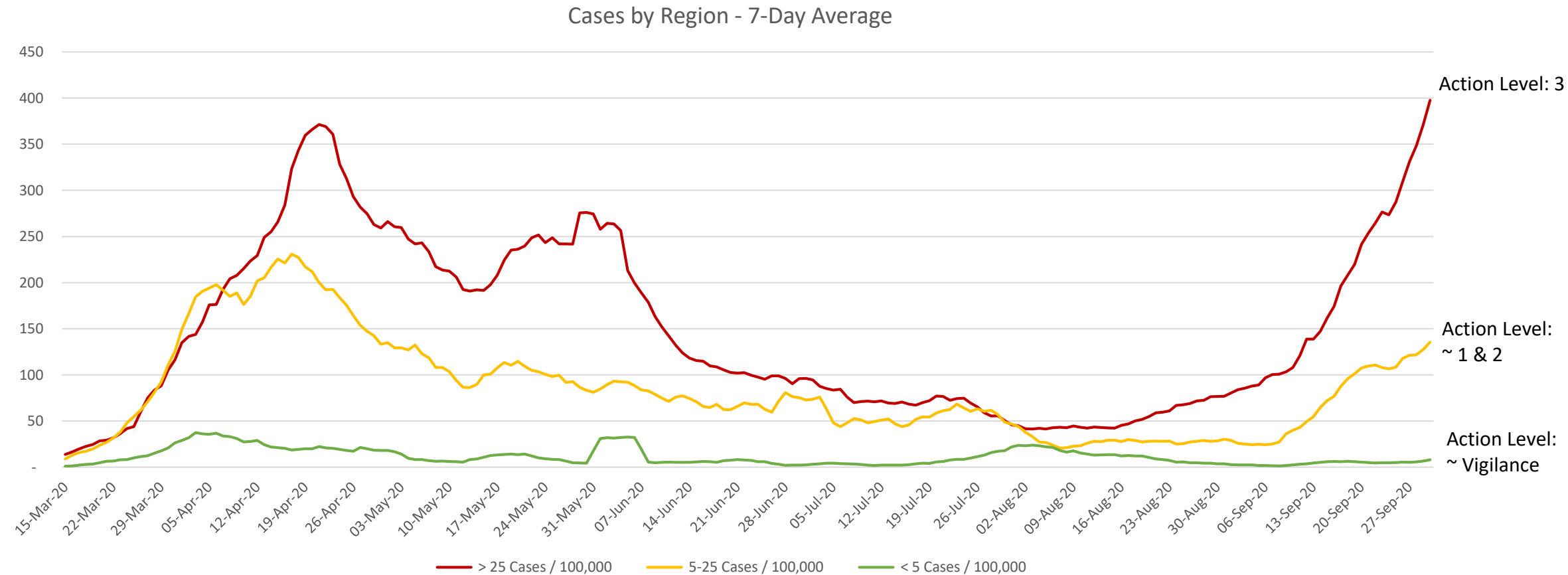


# Age spillover will increase further as community outbreaks enter nursing homes and vulnerable congregate settings (~25 deaths since August 15)

COVID-19 in Ontario Long-Term Care Homes (Aug 15-Oct 3, 2020)



# Clustering PHUs by number of cases shows Ontario is experiencing multiple smaller epidemics with surges at different levels of crisis



**>25 Cases/100,000/week:** Peel; Toronto; Ottawa

**5-25 Cases / 100,000/week:** Kingston, Frontenac and Lennox & Addington; Peterborough; Windsor-Essex; Leeds, Grenville & Lanark; Wellington-Dufferin-Guelph; Brant; Simcoe Muskoka; Durham; Middlesex-London; Hamilton; Niagara; Halton; Eastern Ontario; Waterloo; York

**<5 Cases/100,000/week:** All other Public Health Units



# Key Findings: case growth and spillover will critically hinder health system response capacity

- Growing case numbers *and* percent positivity indicate need for more testing but case backlog will grow
  - Health care workers will take longer to clear to return to work
  - Patient transfers from hospitals to long-term care will take longer to clear
  - Testing backlog will delay response to long-term care home and other congregate setting outbreaks
- Growing case numbers with clear surges in specific communities indicate increased risk of long-term care home outbreaks and deaths despite increased IPAC measures
- Growing case numbers and the number of contacts for each case mean that public health capacity for case management and contact tracing may be overwhelmed
- Case growth and spillover will increase mortality due to COVID-19 infection with potential for long-term health system burden from COVID-19 “long-haulers”

All jurisdictions show a surge followed by increasing public health interventions - earlier intervention slows growth faster and allows earlier relaxation

