

Evidence to Support Further Public Health Measures in High Transmission Areas: the need to act now

Advice from the Science Advisory and Modelling Consensus Tables and Public Health Measures Table

Endorsed by Chief Medical Officer of Health

October 8, 2020

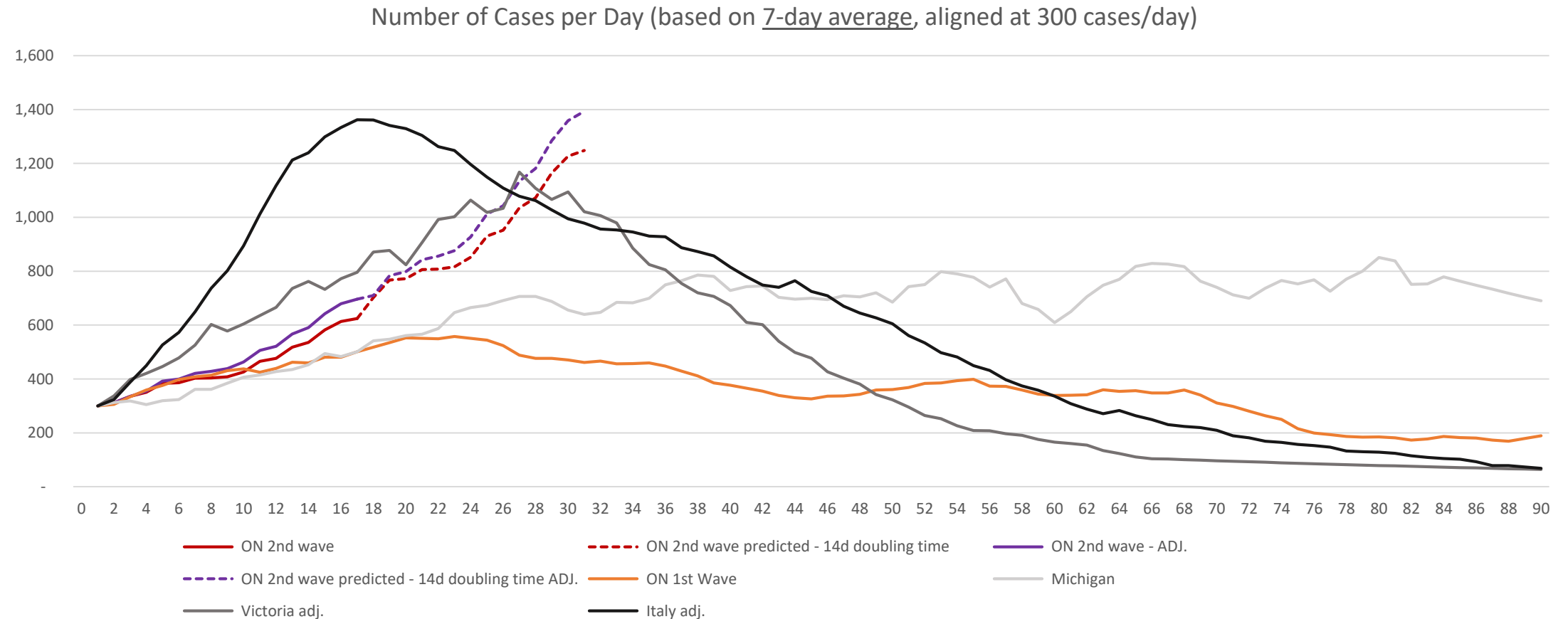
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Recent Ontario trends show an acceleration of the pandemic

- 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

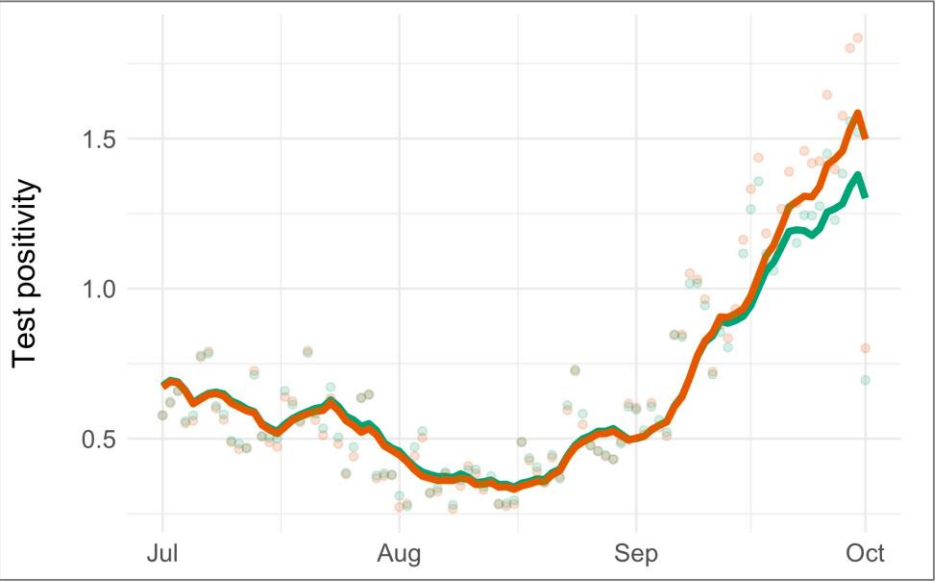


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Prediction based on doubling time for 7-day avg₃
Day 1: Sep 18, 2020

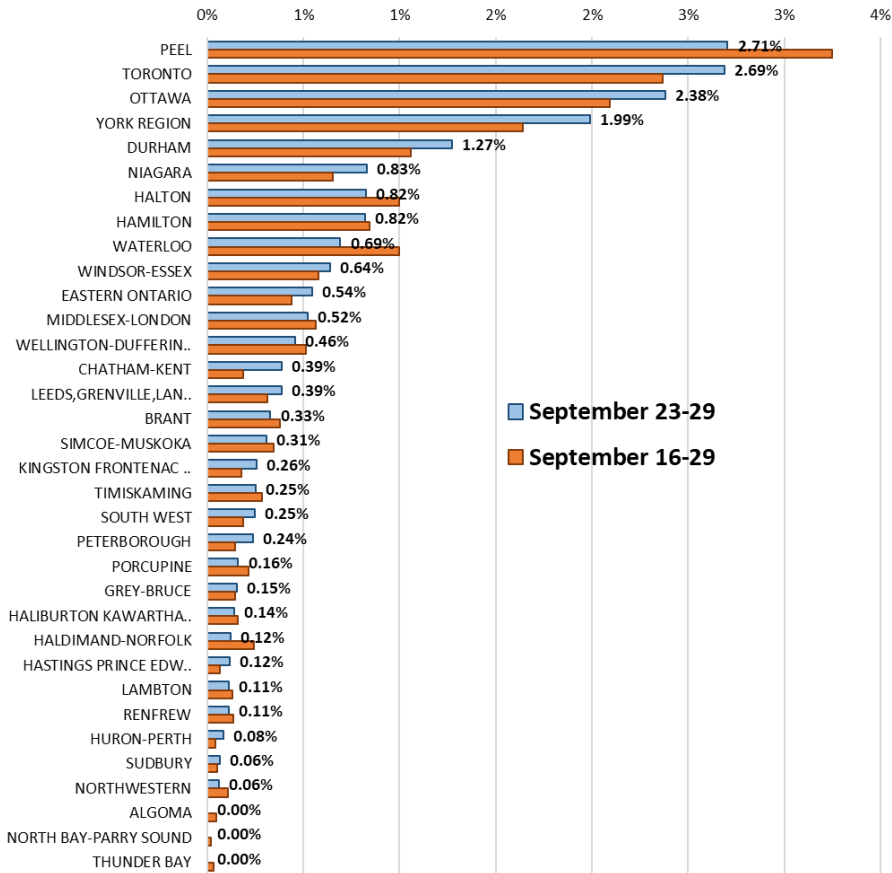
Increasing test positivity, despite high testing volumes, show we are in the second wave – in some communities it is especially concerning

Adjusted percent positive shows substantial recent growth

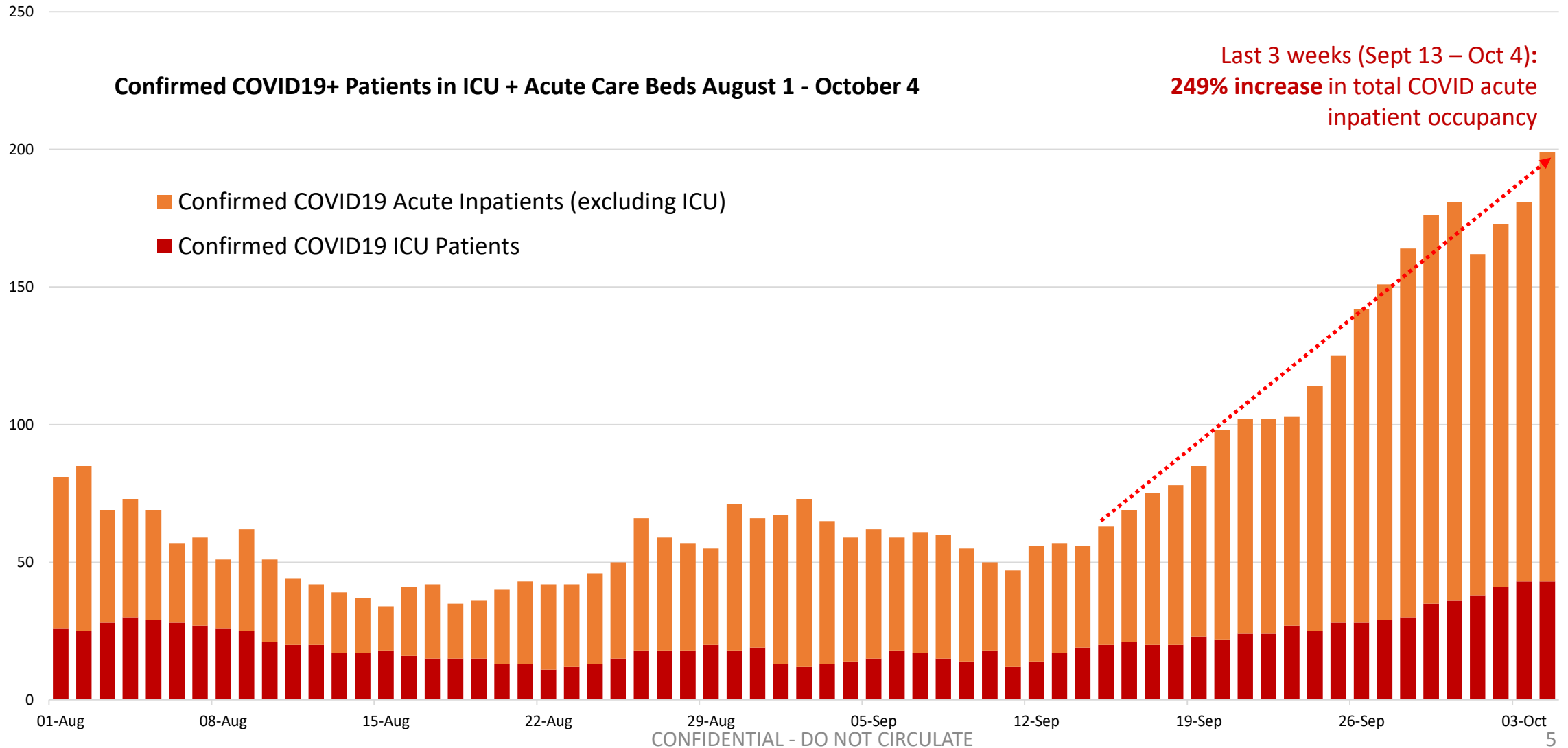


— All ages
— Excluding age <10 years

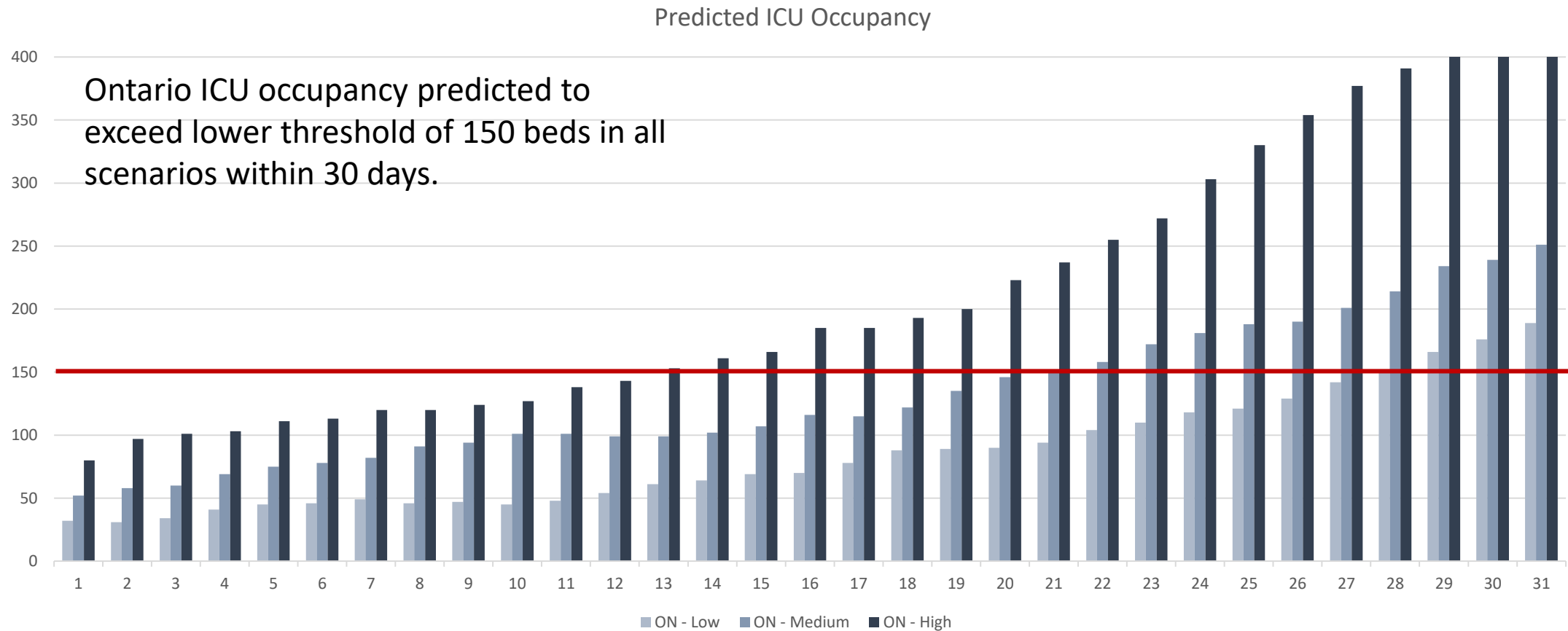
7 day test % Positivity for 12 Public Health Units to September 29



Rising hospitalizations show increasing pressure from spillover

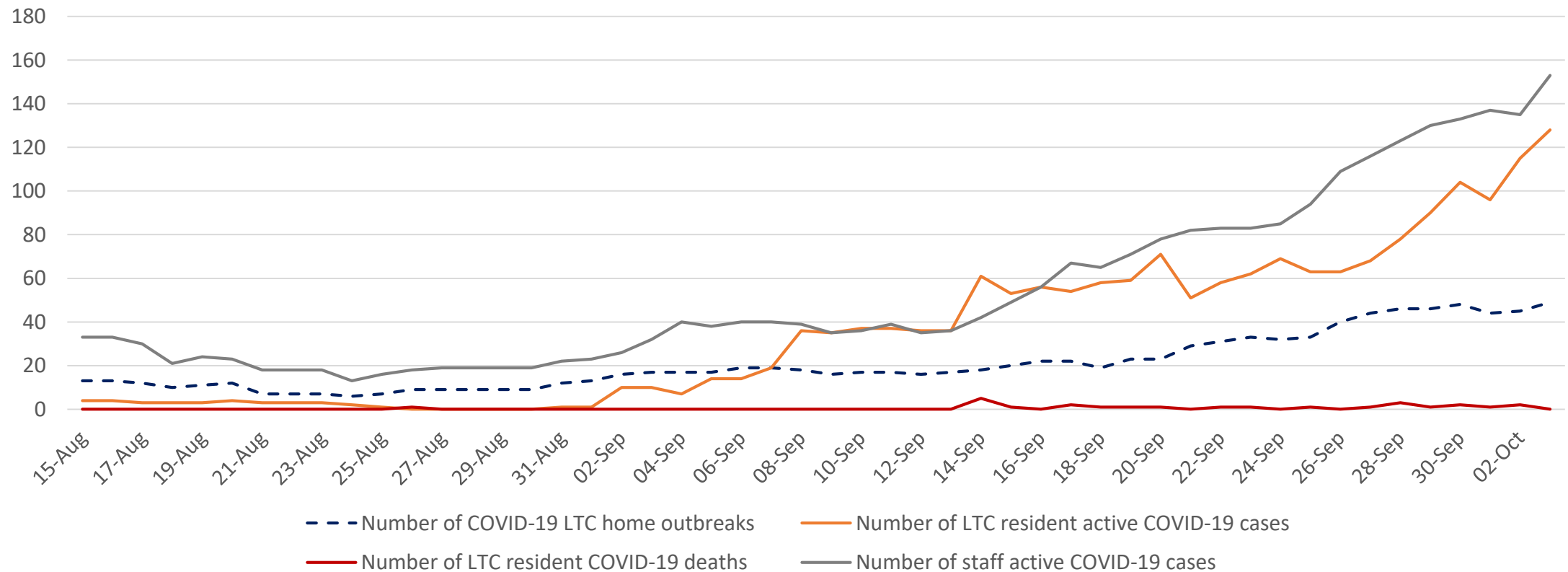


Age spillover will further increase hospitalizations and ICU admissions.

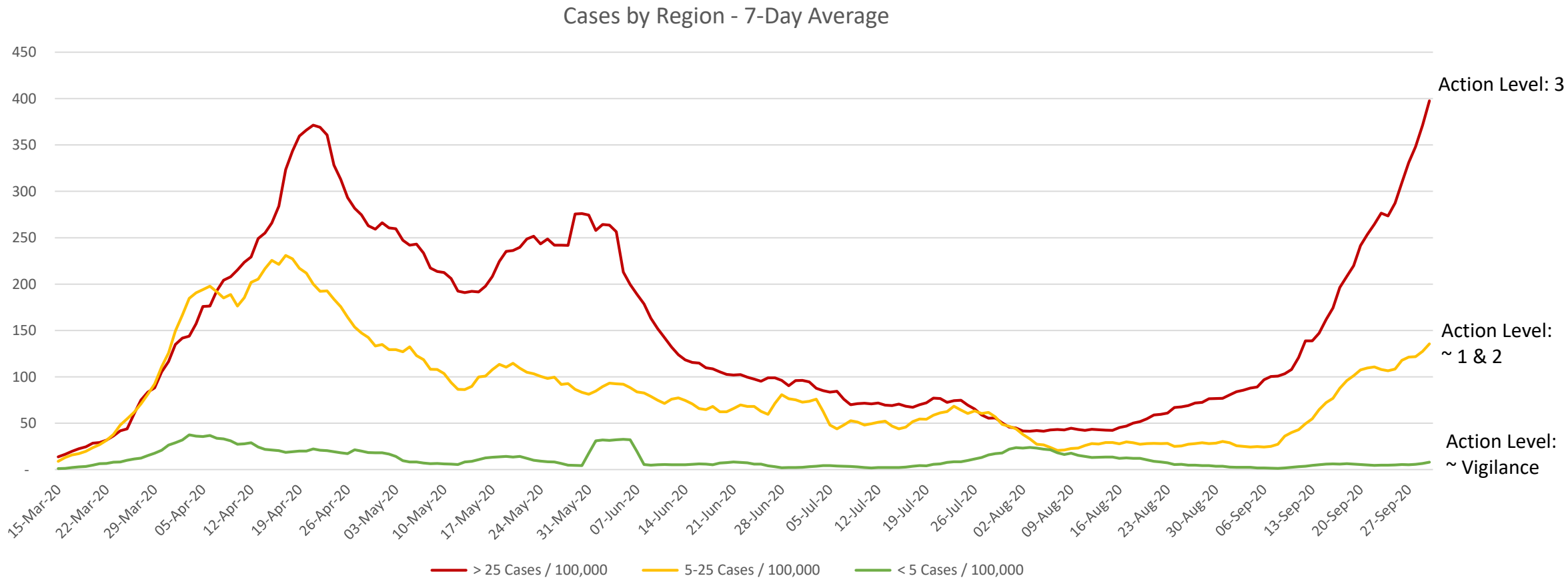


Age spillover will increase further as community outbreaks enter nursing homes and vulnerable congregate settings (~25 deaths since August 15)

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

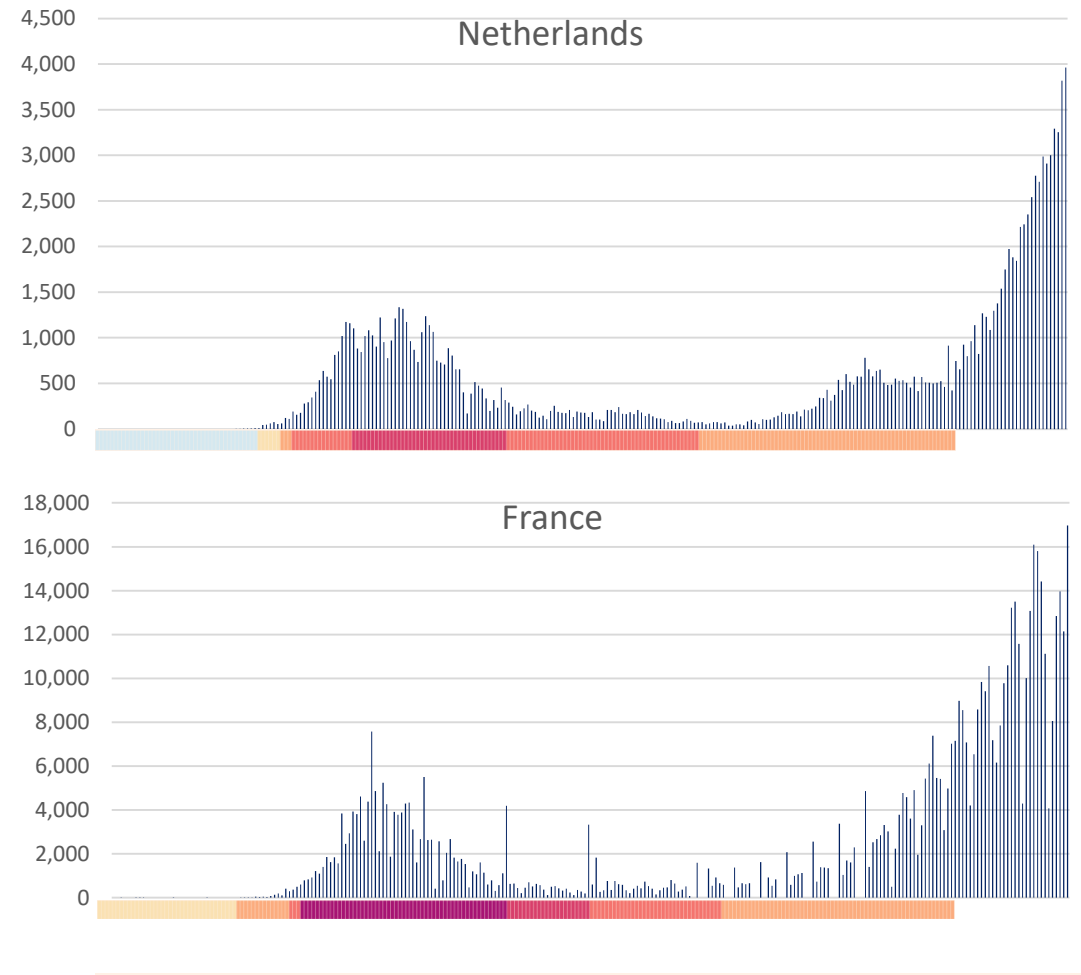
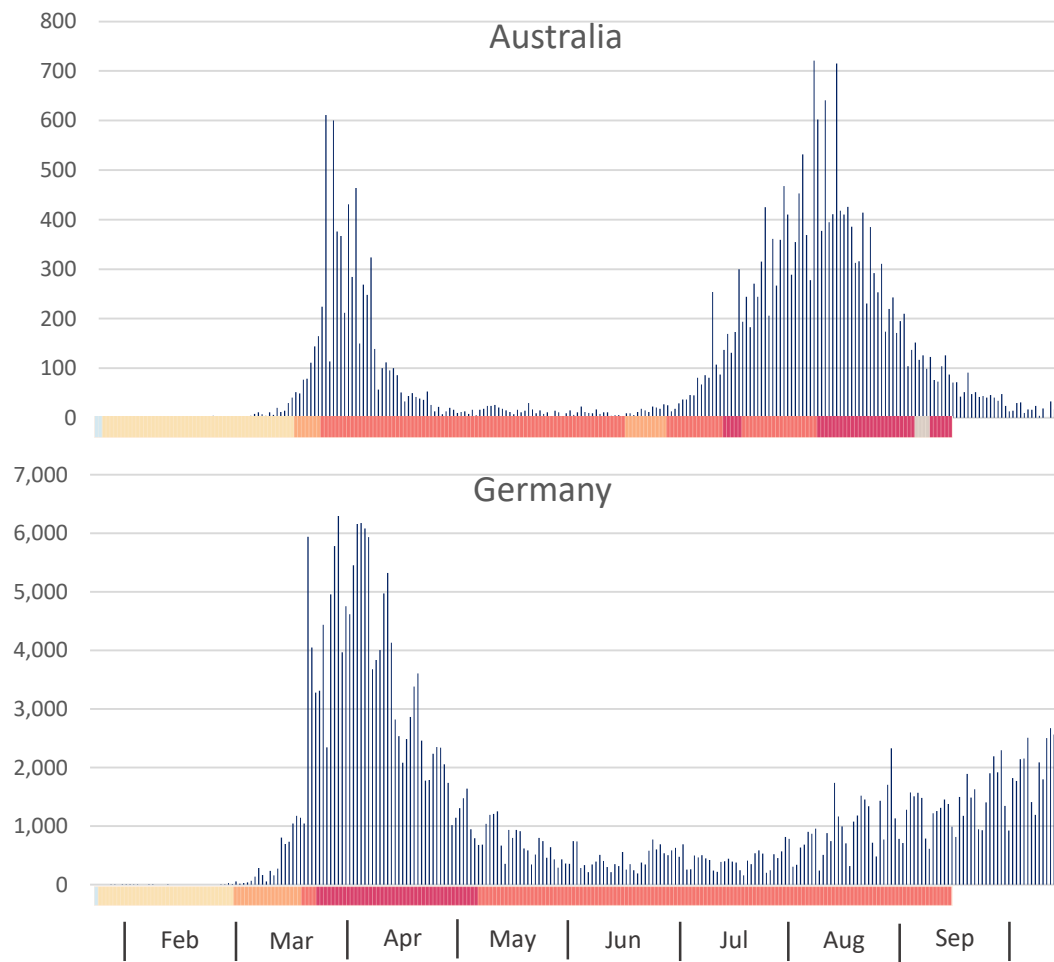
5-25 Cases / 100,000/week: Kingston, Frontenac and Lennox & Addington; Peterborough; Windsor-Essex; Leeds, Grenville & Lanark; Wellington-Dufferin-Guelph; Brant; Simcoe Muskoka; Durham; Middlesex-London; Hamilton; Niagara; Halton; Eastern Ontario; Waterloo; York

<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



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