

# Update on COVID-19 Projections

Science Advisory and Modelling Consensus Tables

November 12, 2020



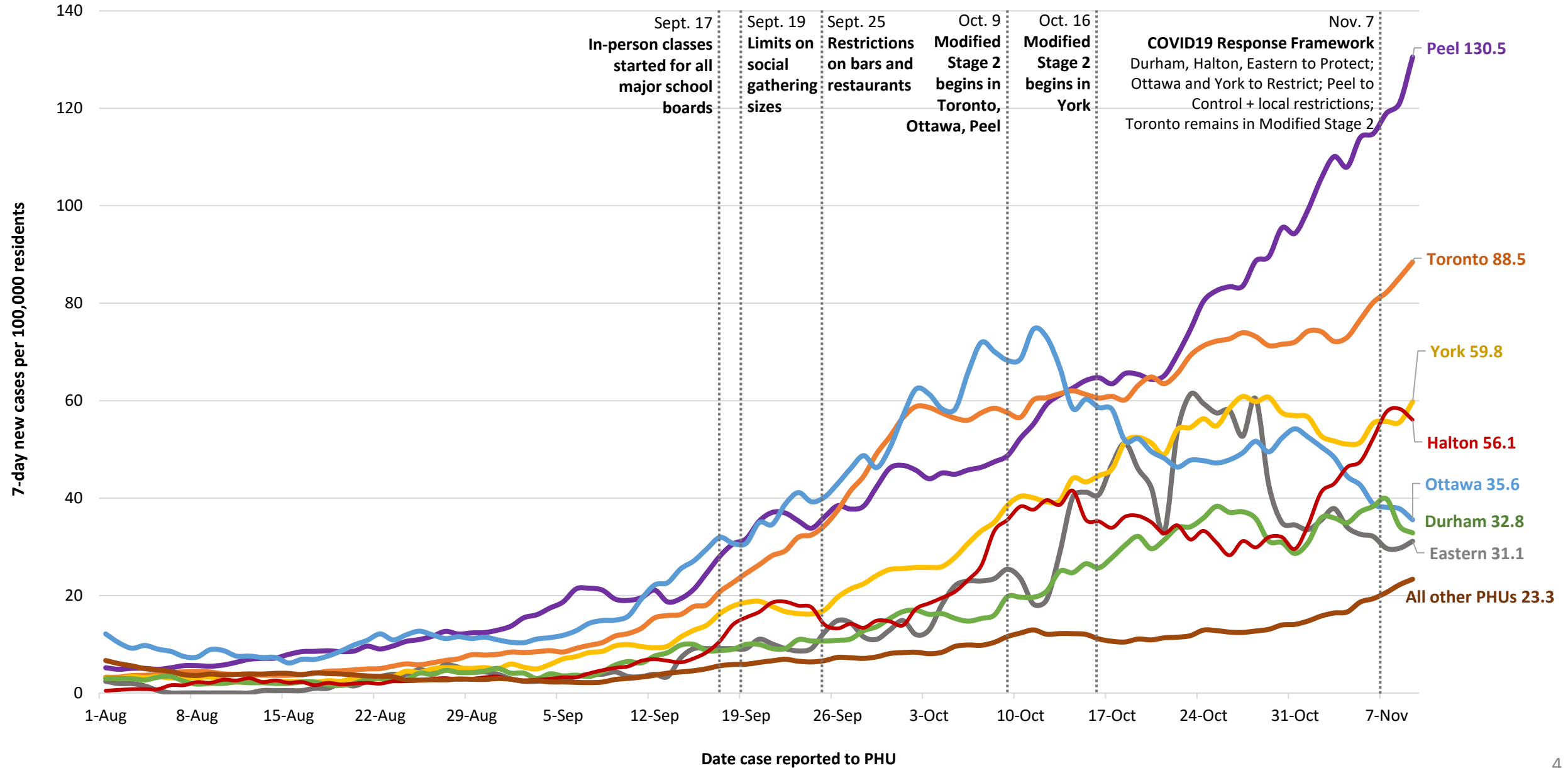
# Purpose

- Share latest trends in Ontario epidemiology, health system indicators
- Provide an update on progress in controlling pandemic

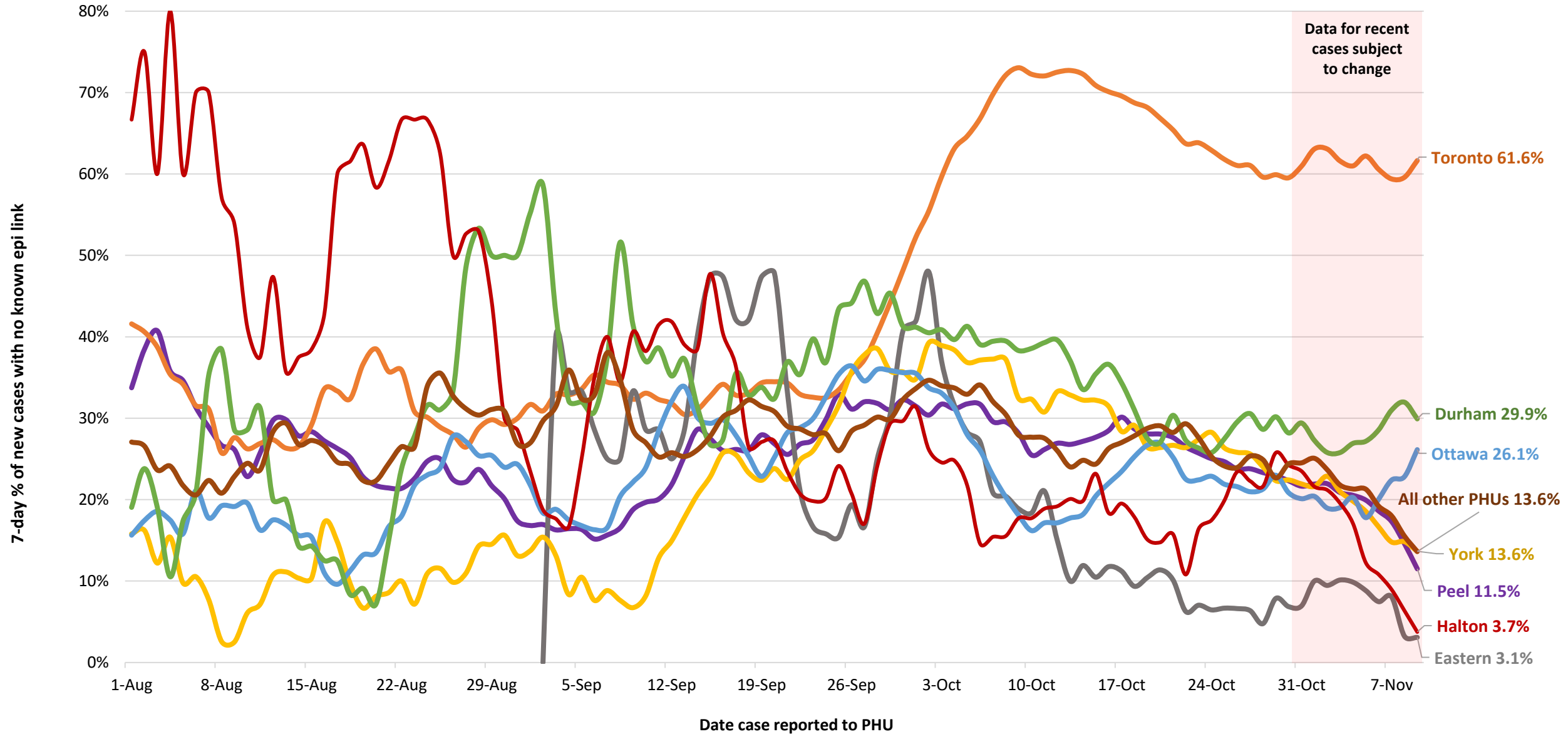
# Key Findings

- Key indicators of the Pandemic continue to worsen but the impact of the Pandemic varies widely across regions
- Other countries have struggled to control spread after allowing strong growth in case numbers in the early Fall
- Long-Term Care Home resident mortality is increasing by more each week
- Outbreaks continue to account for 10% of cases, recent research suggests indoor environments where health protection is difficult account for majority of cases
- At a 5% rate of growth, our case numbers likely exceed several jurisdictions in Europe that are now in some form of lockdown
- ICU occupancy will exceed the 150 bed threshold under any scenario within two weeks. It will exceed 400 beds under the worst scenarios within six weeks.
- Wastewater tracking suggests that the restrictions had some effect in reducing potential growth.

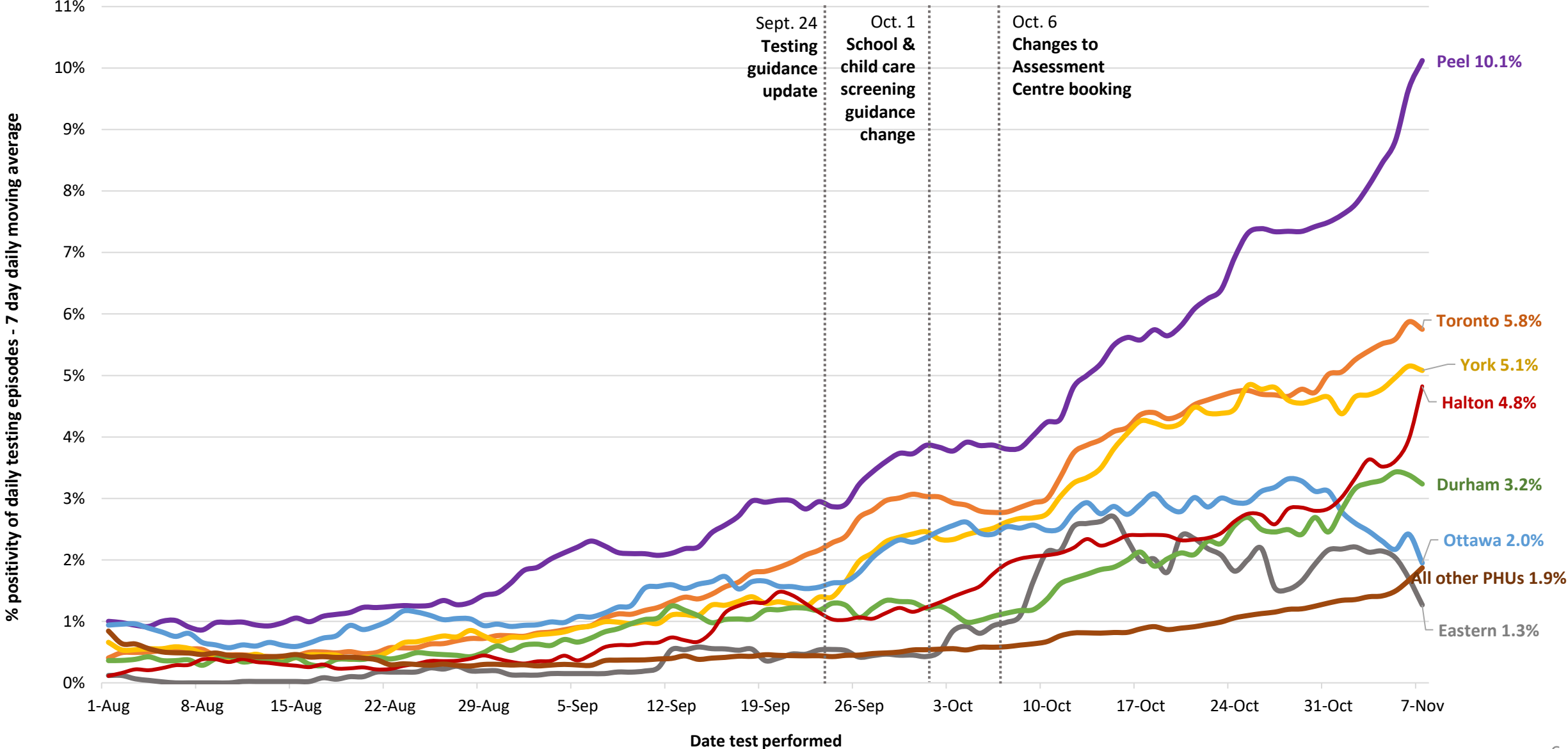
# Total new cases per 100,000 residents per week across PHUs



# New cases with no epidemiological Link across PHUs

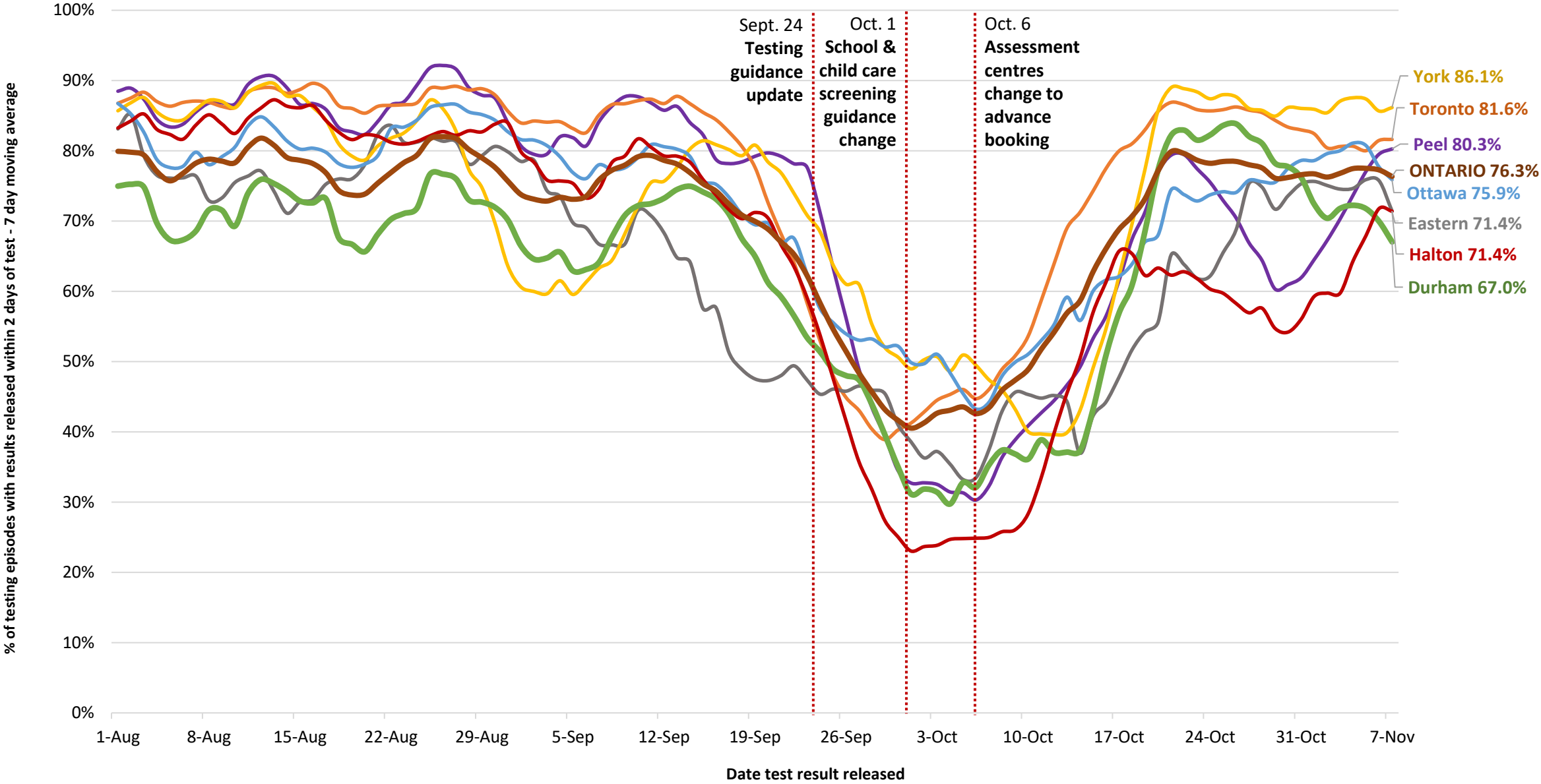


# COVID-19 testing % positivity across PHUs



Data Source: Ontario Laboratory Information System (OLIS), extracted via MOH SAS VA November 10

# Percent of tests processed within 2 days across PHUs



Data Source: Ontario Laboratory Information System (OLIS), extracted via MOH SAS VA November 10

# Weekly % positivity by age group

Month ▲	Apr2020				May2020					Jun2020					Jul2020				Aug2020					Sep2020				Oct2020					No...
Week No ▲	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	
Age group ▼																																	
75+	15.4	16.4	11.0	5.0	4.3	3.4	4.7	5.3	3.2	2.9	1.8	1.0	0.9	0.6	0.6	0.4	0.4	0.3	0.2	0.2	0.3	0.4	0.3	0.5	0.5	1.1	1.3	1.4	1.8	2.3	2.8	3.4	
65to74	12.7	11.4	7.2	5.5	4.4	3.6	4.1	3.8	1.9	1.3	0.9	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.2	0.3	0.3	0.4	0.5	0.5	0.7	1.0	1.2	1.3	1.7	1.9	2.2	2.6	
55to64	12.1	11.4	8.6	6.2	4.8	3.7	4.9	5.7	2.8	2.0	1.0	0.9	0.6	0.6	0.4	0.6	0.5	0.4	0.4	0.3	0.4	0.3	0.5	0.6	0.8	1.1	1.4	1.6	2.3	2.4	2.4	3.0	
45to54	10.5	10.9	8.1	6.2	5.3	4.2	4.6	6.6	3.3	2.2	1.2	1.1	0.7	0.8	0.7	0.7	0.7	0.5	0.5	0.4	0.5	0.5	0.6	0.8	1.0	1.4	1.9	2.7	2.8	3.0	3.8		
35to44	7.1	8.3	7.1	5.7	4.3	3.3	3.9	5.7	3.4	2.3	1.3	1.4	1.0	0.9	0.8	0.7	0.7	0.5	0.5	0.5	0.4	0.5	0.7	0.7	1.0	1.2	1.5	1.7	2.4	2.7	2.9	3.7	
25to34	7.7	8.7	7.4	6.1	5.2	4.0	4.8	6.3	3.7	2.4	1.4	1.5	1.2	1.0	0.9	1.0	0.9	0.6	0.5	0.6	0.6	0.6	0.9	1.3	1.7	2.0	2.5	2.2	2.9	3.2	3.4	4.0	
18to24	10.6	9.2	7.8	6.5	4.1	3.7	4.3	6.3	3.7	2.5	1.4	1.4	1.2	0.9	0.8	0.9	1.1	0.8	0.7	0.5	0.7	0.9	0.8	1.6	2.4	2.8	3.6	2.6	3.5	3.9	4.3	4.6	
14to17	8.3	5.9	7.1	4.8	3.7	3.4	5.0	6.6	2.2	2.9	1.5	1.6	1.4	1.3	1.1	1.4	1.3	1.4	1.2	1.1	0.8	1.3	1.7	1.8	1.7	1.5	1.9	2.1	2.9	4.1	4.1	5.4	
9to13	7.5	5.7	6.2	4.9	5.8	5.0	5.5	6.5	4.3	3.7	3.4	2.4	1.9	1.0	1.5	1.2	1.7	1.3	0.8	1.4	1.0	1.5	1.4	1.4	0.9	0.8	0.8	1.2	1.8	2.8	3.7	4.8	
4to8	2.7	1.9	4.0	2.3	4.1	2.2	3.0	3.4	3.5	3.4	2.1	2.7	1.7	1.2	0.9	1.1	1.2	1.0	1.0	0.7	0.8	0.5	0.9	0.6	0.5	0.3	0.4	1.0	1.5	2.7	2.7	3.7	
0to3	4.6	1.5	1.6	1.5	1.7	1.6	2.2	2.2	1.4	1.1	1.9	1.4	1.3	0.7	1.0	0.8	1.3	0.4	0.5	0.6	0.3	0.6	0.6	0.3	0.4	0.6	0.7	1.3	2.2	2.5	2.2	3.0	
Total	10.7	11.3	8.5	5.7	4.6	3.6	4.5	5.6	3.1	2.3	1.3	1.1	0.9	0.7	0.7	0.7	0.7	0.5	0.5	0.4	0.5	0.5	0.7	0.9	1.2	1.3	1.6	1.8	2.4	2.8	3.0	3.7	

**Notes:**

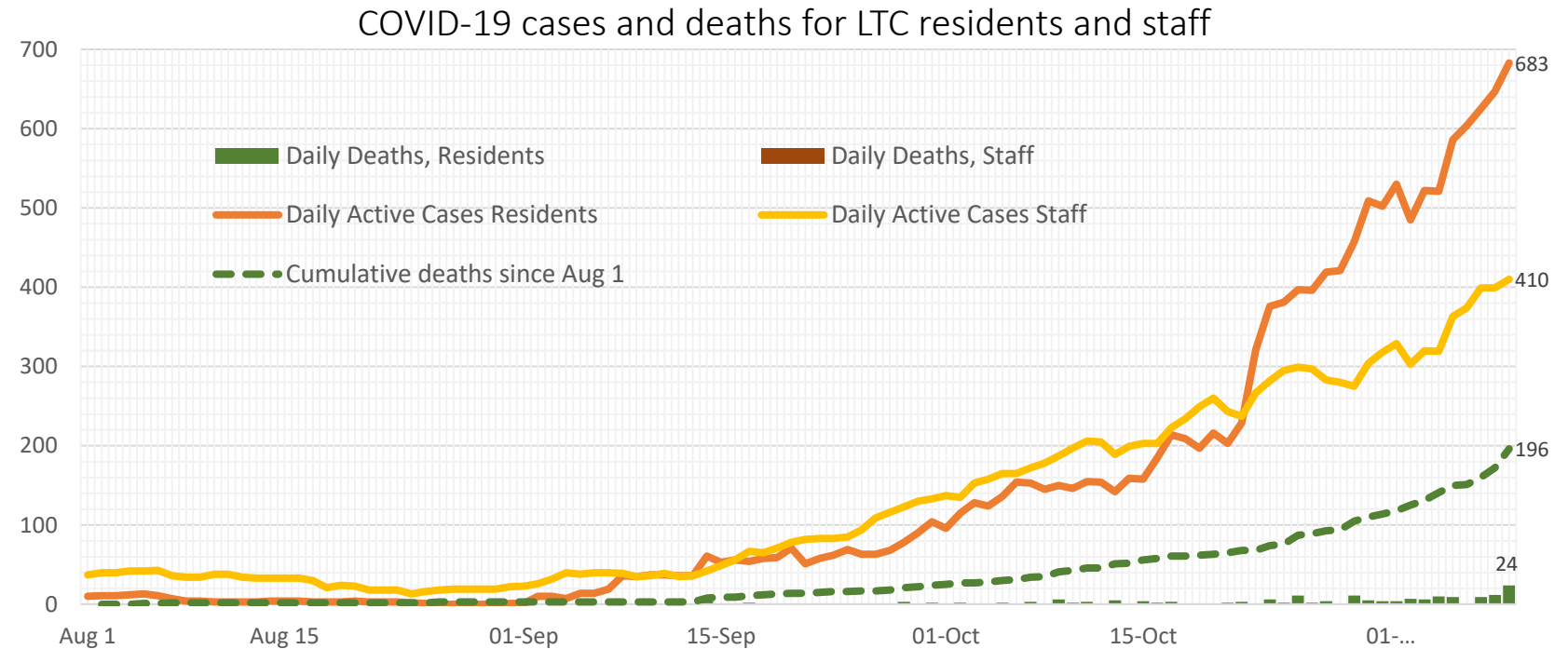
Data Source: Ontario Laboratory Information System (OLIS) as of November 8, 2020 (Includes complete weeks), MOH  
 Weekly % positivity = total number of positive test within the week (based on reported date)/ COVID tests within the week



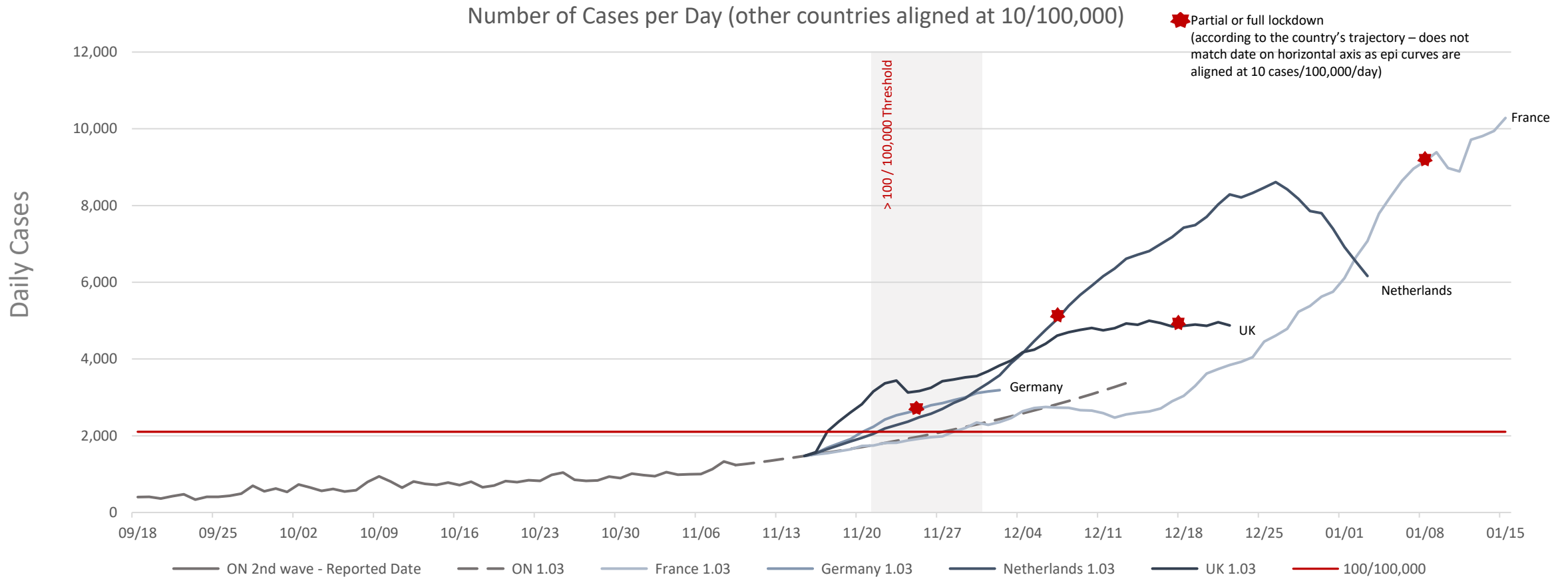
# Cases in LTC continue to accelerate with cumulative mortality up substantially (71 deaths in the past 7 days)

## Current status (Nov 10)

- 93 homes currently in outbreak, 1067 active confirmed cases in these homes
- 683 residents, 410 staff active cases in total
- 2,041 cumulative resident deaths, 8 cumulative staff deaths
- 34 of the 93 homes in outbreak are based on 1 staff case
- There have been 196 resident deaths since Aug 1st, 71 of which have been in the past 7 days
- Nov 10 showed the highest daily count of deaths since Aug 1 (24 deaths)



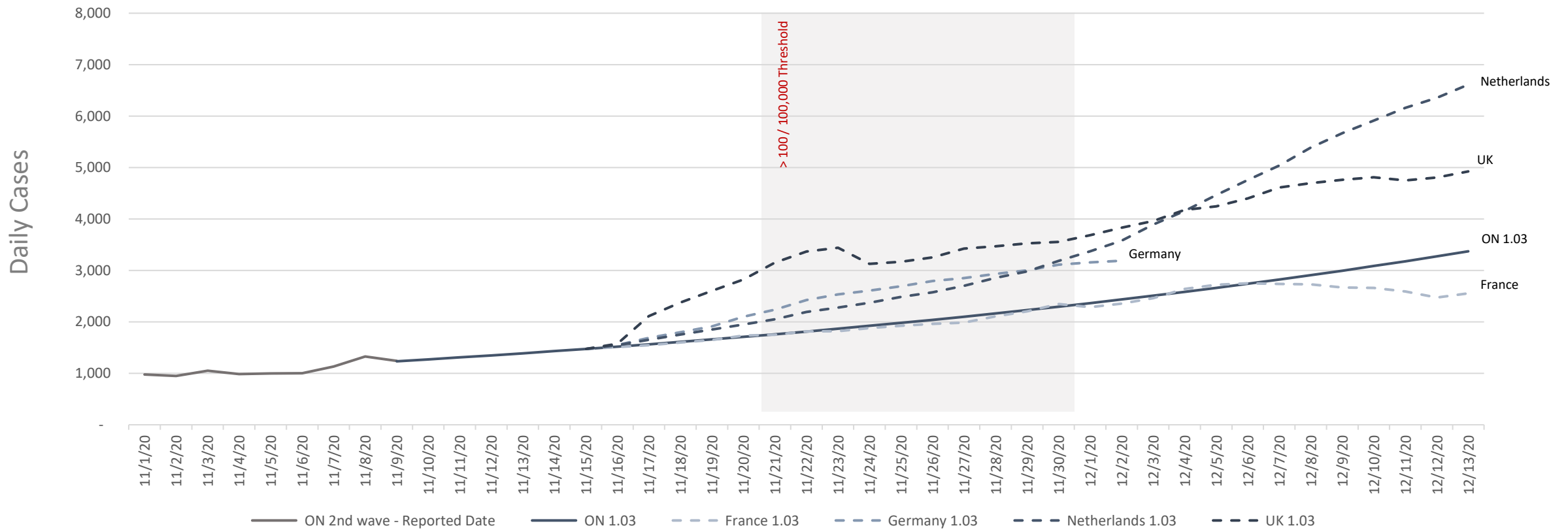
# A number of jurisdictions struggle to control case numbers following public health interventions



Case numbers: [www.ourworldindata.org](http://www.ourworldindata.org); Lockdown info: <https://www.bbc.com/news/explainers-53640249>

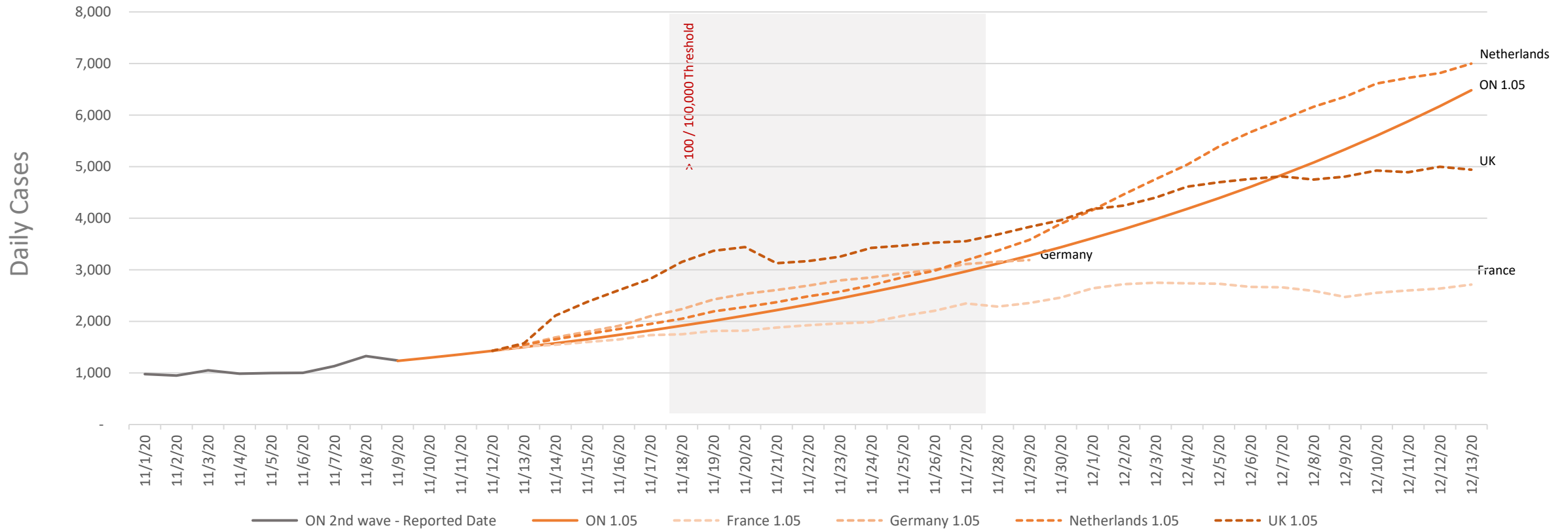
# Projections of cases per day at 3% rate of growth

Number of Cases per Day (other countries aligned at 10/100,000)

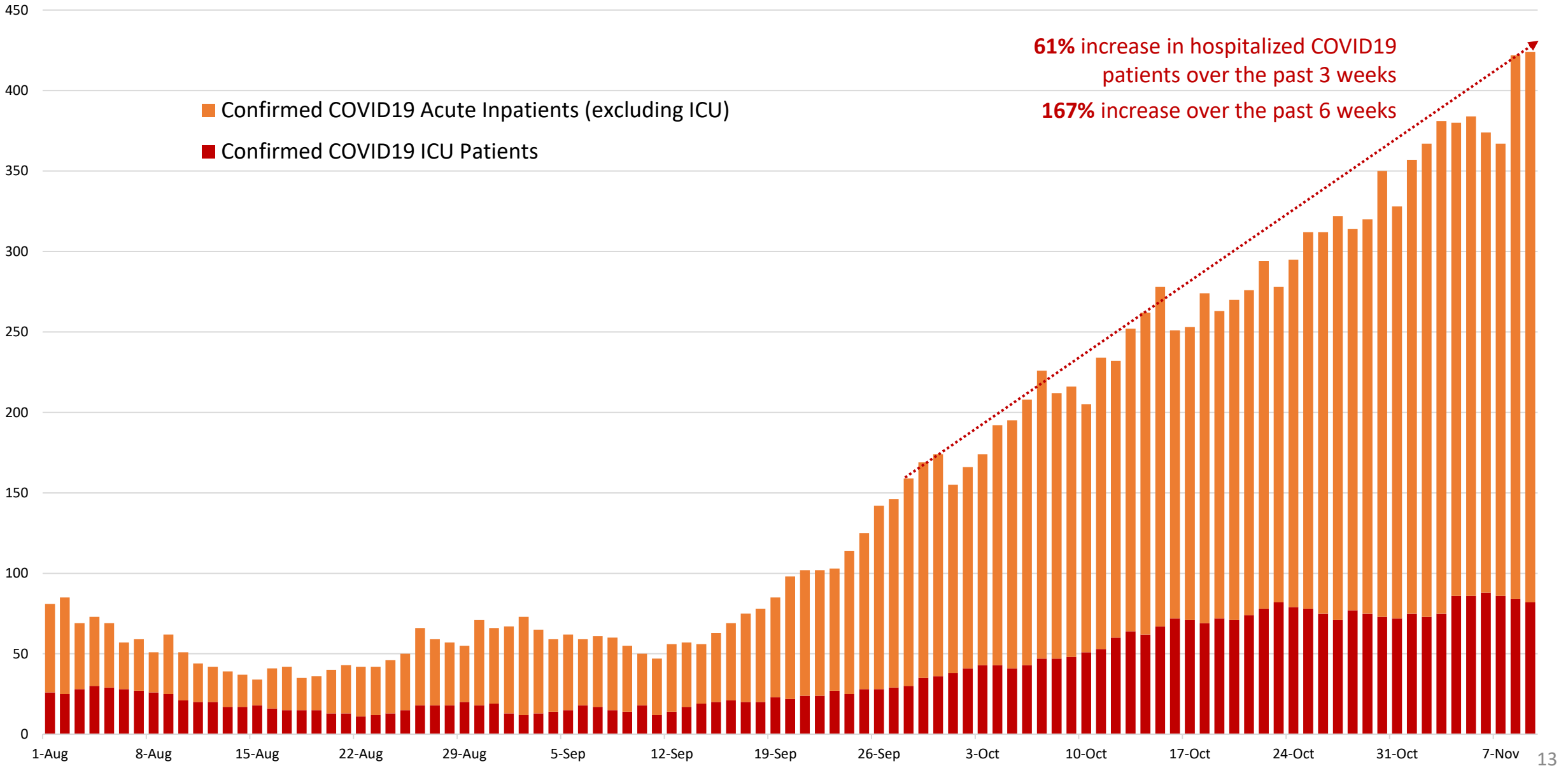


# Projections of cases at 5% rate of growth

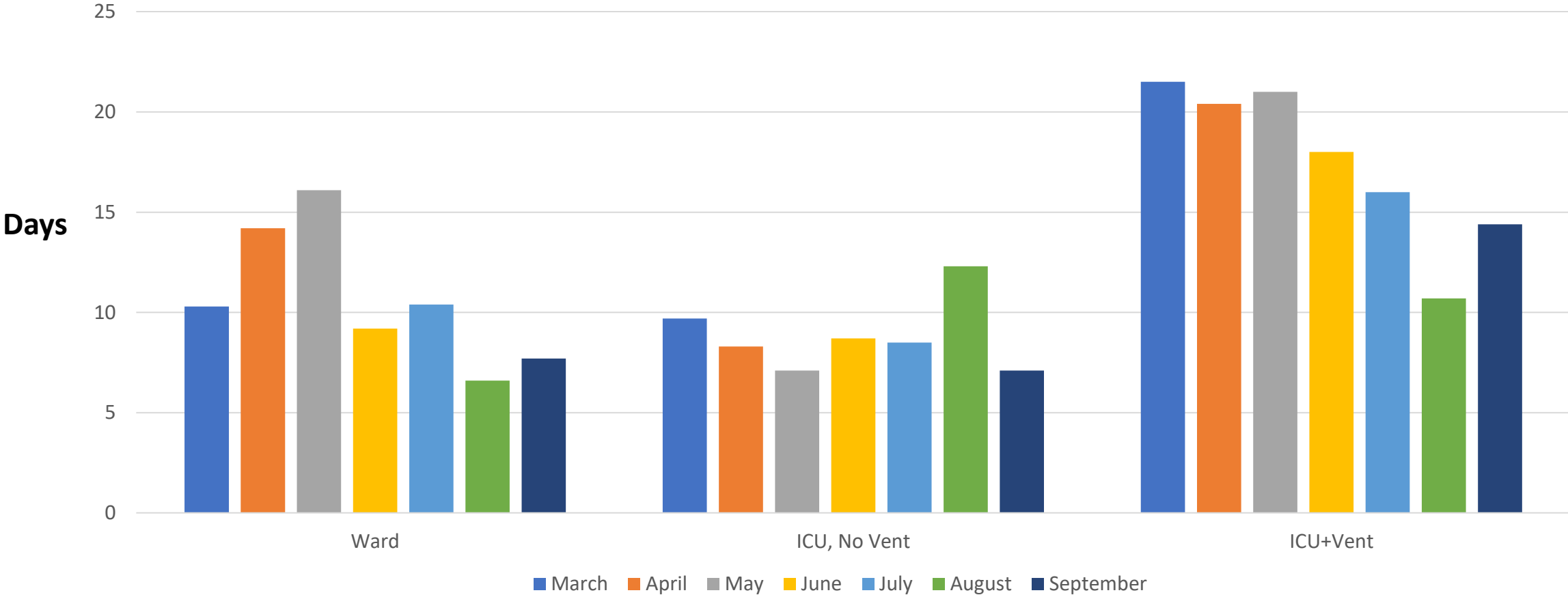
Number of Cases per Day (other countries aligned at 10/100,000)



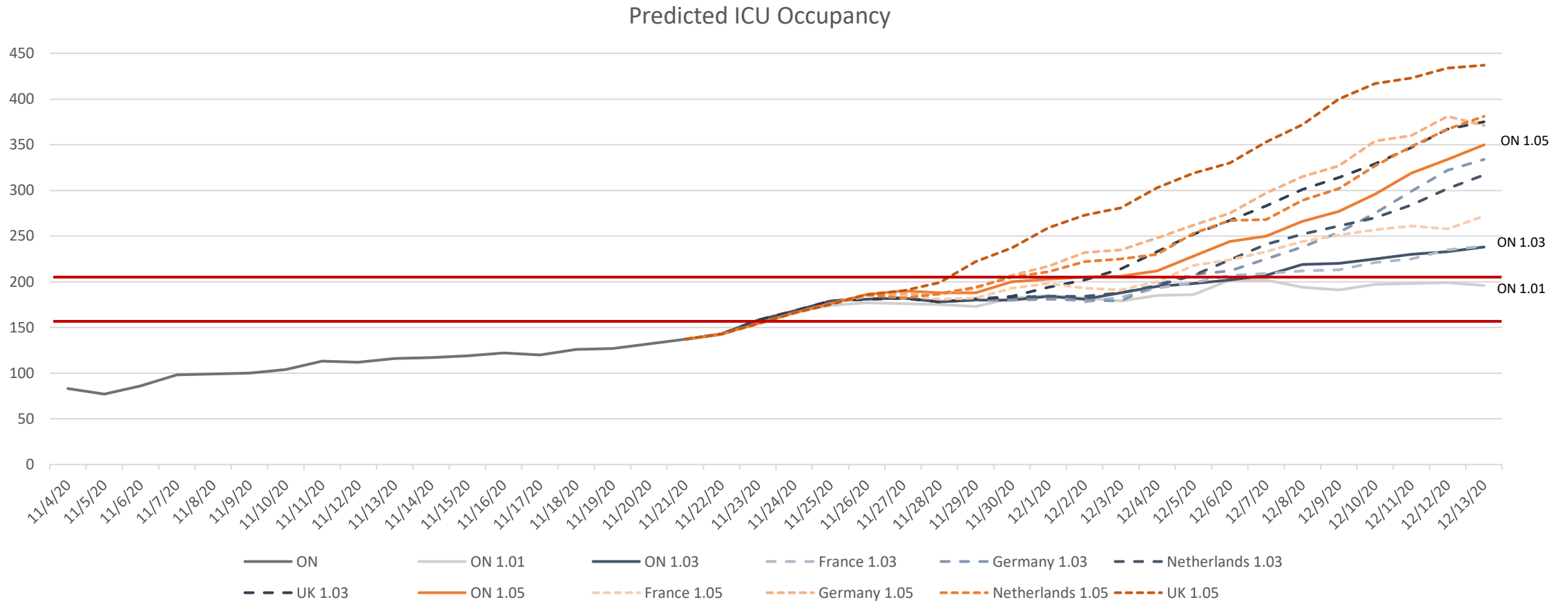
# COVID-19 Hospitalizations continue to rise



# Average length of stay in hospital for COVID-19 has declined

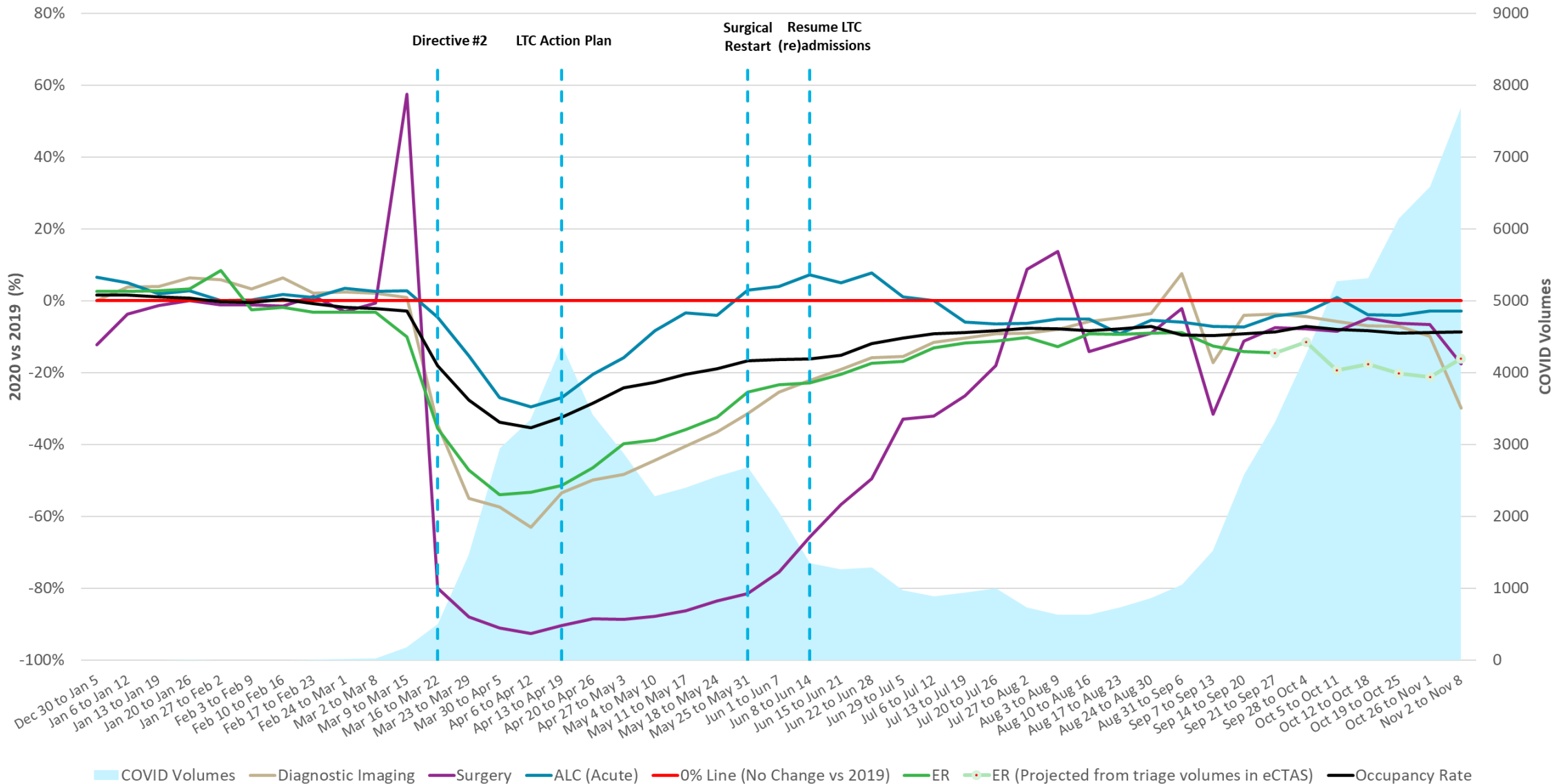


# Projections: ICU Occupancy under all scenarios



# Access to care continues well below 2019 volumes

Weekly Volume Comparison - % Change 2020 vs 2019





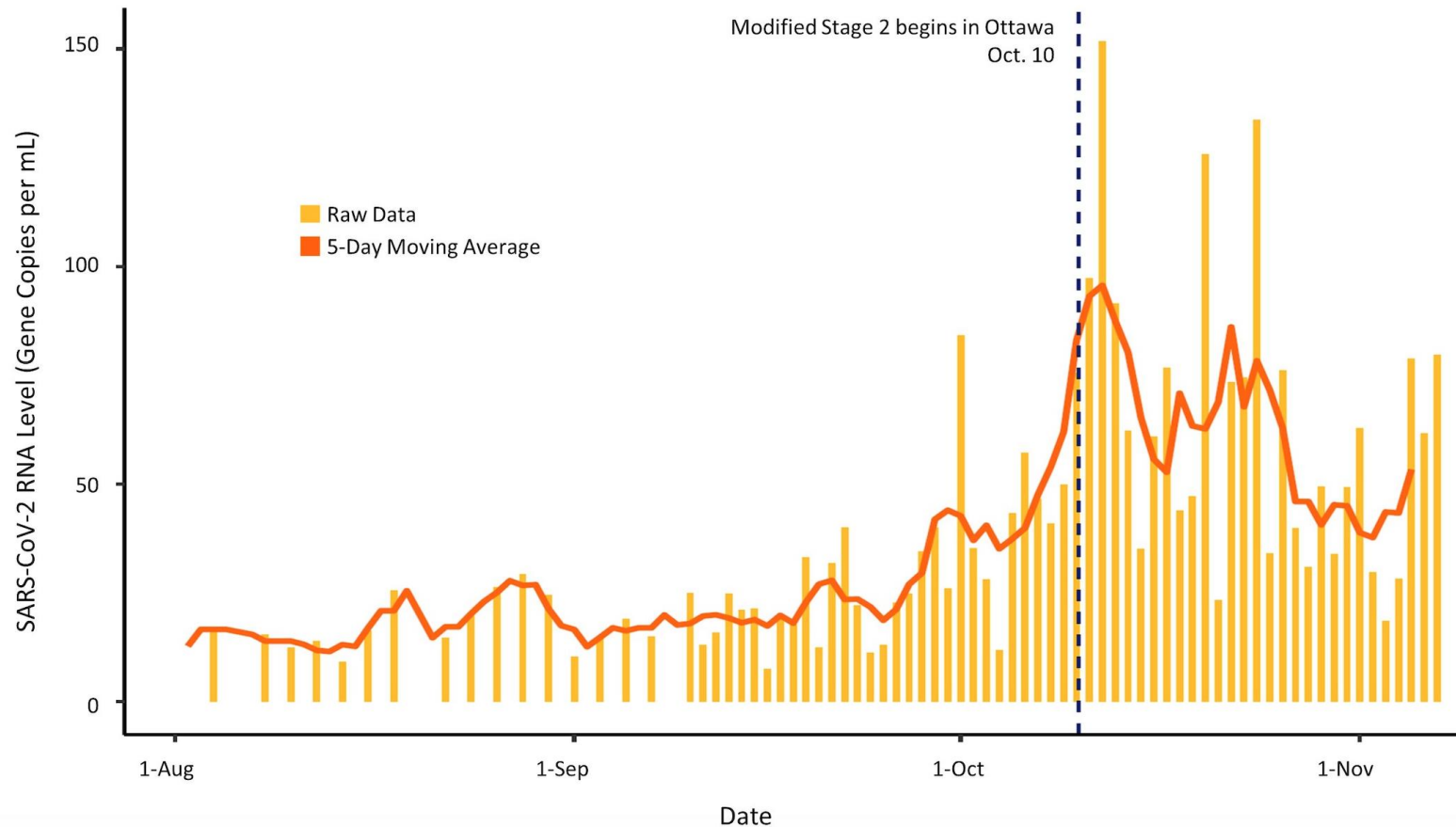
# The Pandemic will have a substantial impact on mental health and mental health care

- Overdose deaths have been a serious public health issue for over a decade. An average of 34 deaths per week occurred in the 3.5 months pre-pandemic. This increased to 46 deaths per week in the first 3.5 months of the pandemic (38% increase).<sup>1</sup> We should not expect this to improve after the pandemic.
- Although the majority of community-based mental health and addictions services remain open with some modifications, access to some services has been limited, particularly residential treatment. We should expect to see long-term consequences of a decline in access or delay in treatment.
- Like other aspects of healthcare access, service volumes are increasing again but are somewhat below 2019 levels building a substantial deficit in access.
- We need to continue to monitor the impact of the pandemic on mental health and addictions and the ability of the system to respond to population needs.

1. Ontario Drug Policy Research Network; Office of the Chief Coroner for Ontario/Ontario Forensic Pathology ; Ontario Agency for Health Protection and Promotion (Public Health Ontario); Centre on Drug Policy Evaluation. Preliminary Patterns in Circumstances Surrounding Opioid-Related Deaths in Ontario during the COVID-19 Pandemic. Toronto, ON: Ontario Drug Policy Research Network; 2020.

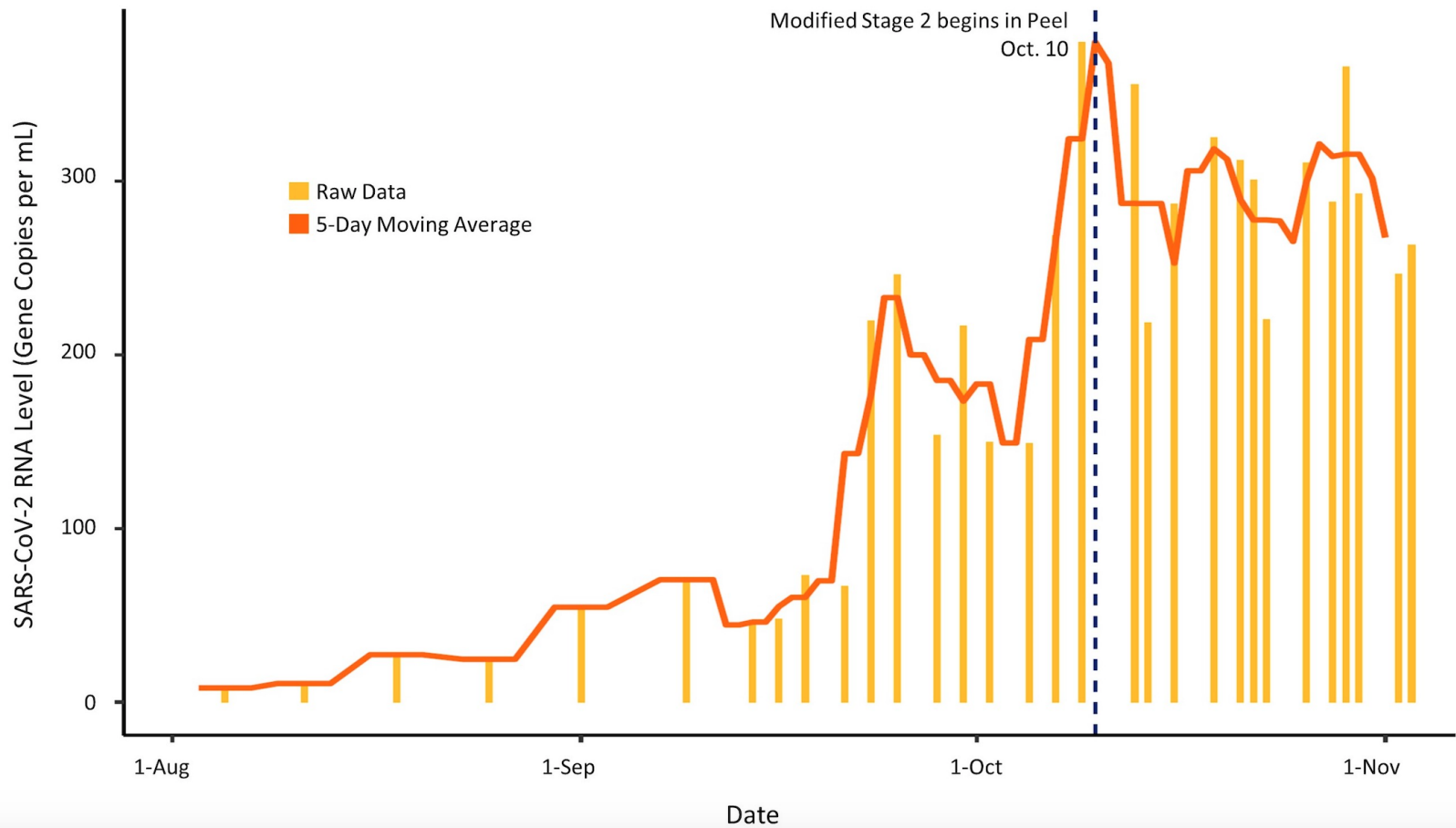
# Wastewater analysis suggests that restrictions can help control spread but may not be sufficient (I)

SARS-CoV-2 RNA Levels Detected in Ottawa's Wastewater  
(Last Measurement on November 7, 2020)



# Wastewater analysis suggests that restrictions can help control spread but may not be sufficient (II)

SARS-CoV-2 RNA Levels Detected in Peel's Wastewater  
(Last Measurement on November 3, 2020)



# Key Findings

- Key indicators of the Pandemic continue to worsen but the impact of the Pandemic varies widely across regions
- Other countries have struggled to control spread after allowing strong growth in case numbers in the early Fall
- Long-Term Care Home resident mortality is increasing by more each week
- Outbreaks continue to account for 10% of cases, recent research suggests indoor environments where health protection is difficult account for majority of cases
- At a 5% rate of growth, our case numbers likely exceed several jurisdictions in Europe that are now in some form of lockdown
- ICU occupancy will exceed the 150 bed threshold under any scenario within two weeks. It will exceed 400 beds under the worst scenarios within six weeks.
- Wastewater tracking suggests that the restrictions had some effect in reducing potential growth.