

COVID-19 Hospital Capacity

Friday, January 7, 2022



Hospital Capacity: Critical Care

Data source: Critical Care Information System
All data as of **January 6, 2022**

Total Funded* ICU Bed Capacity				Critical Care Census**				% ICU occupancy		Funded* ICU Bed Capacity Remaining	
2343	(Adult)	1599	Vented	1792	(Adult)	332	CRCI	76.5%	(Adult)	551	(Adult)
		744	Non-Vented			1460	NON-CRCI				
93	(Paediatric)	77	Vented	65	(Paediatric)	4	CRCI	69.9%	(Paediatric)	28	(Paediatric)
		16	Non-Vented			61	NON-CRCI				

Dec 16 Ontario Science Table COVID-19 ICU Occupancy Projections for December 31, 2021	Low range	241-244	7-day average CRCI patients in ICU (Adult)	265	% pts in ICU with CRCI	% of CRCI pts on vents
	"Circuit breaker" high range	326	7-day average New CRCI Admits (Adult)	41	18.5% (Adult)	53.0% (Adult)
	No intervention high range	637	7-day average New CRCI Admits (Paediatric)	1	6.2% (Paediatric)	0.0% (Paediatric)

Region	Adult Funded* beds	Current Adult CRCI census	% Adult pts in ICU with CRCI	% Adult ICU occupancy	Funded* Adult ICU Bed Capacity Remaining	(+/- change from previous day)	
West	694	135	23.6%	82.3%	123	↑	9
Central	477	90	24.9%	75.7%	116	↓	-12
Toronto	464	37	11.1%	71.8%	131	↑	2
East	574	59	14.4%	71.6%	163	↑	11
North	134	11	9.5%	86.6%	18	↑	1

Definition: COVID-19 pts are represented by CRCI (COVID-Related Critical Illness and is defined as: Admission to the ICU because of a clinical syndrome consistent with COVID, AND the patient has had a positive test that is consistent with acute COVID illness)

*Staffing pressures may reduce funded bed capacity. Please see view the [OHA resource page](#) for more details.

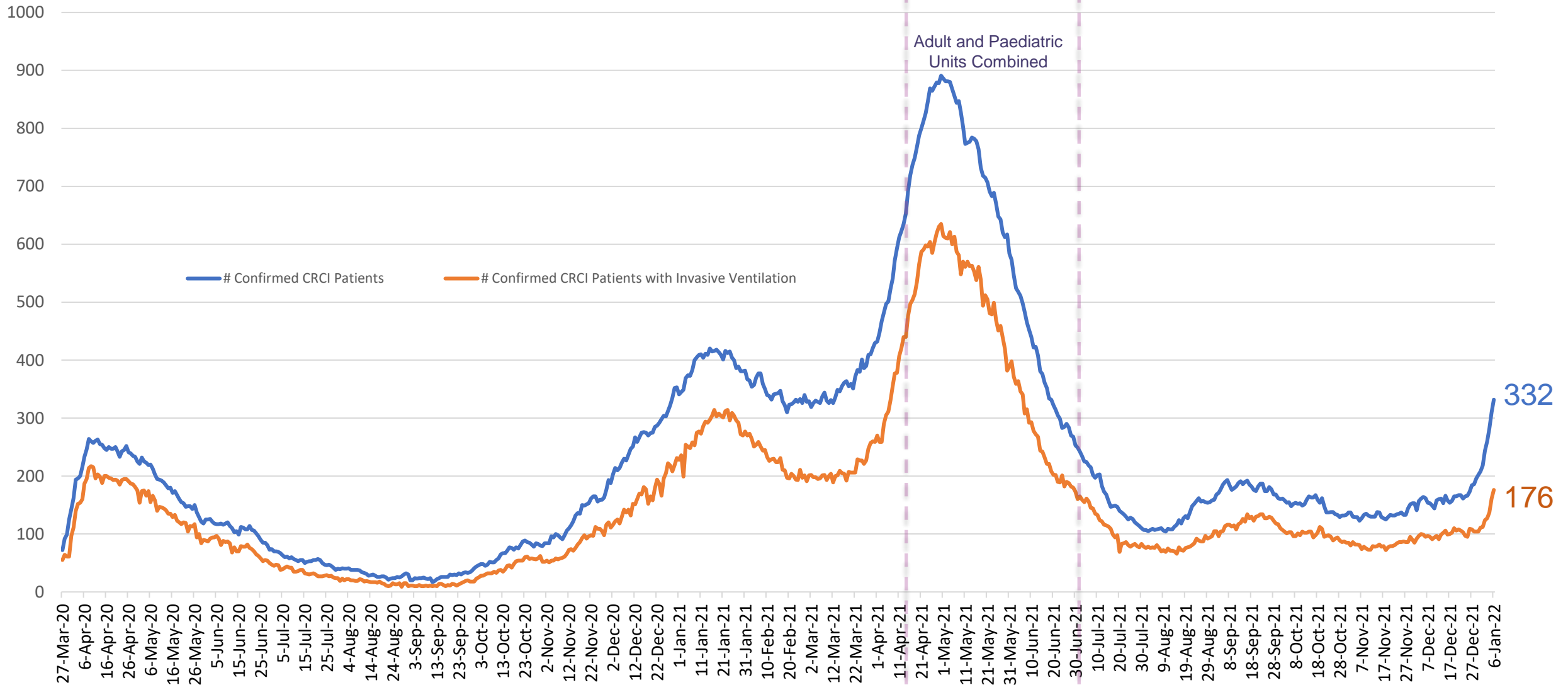
**There were 4 paediatric CRCI cases, 0 vented. There were no neonatal CRCI cases.



Adult Critical Care Units COVID Related Critical Illness (CRCI) Patients

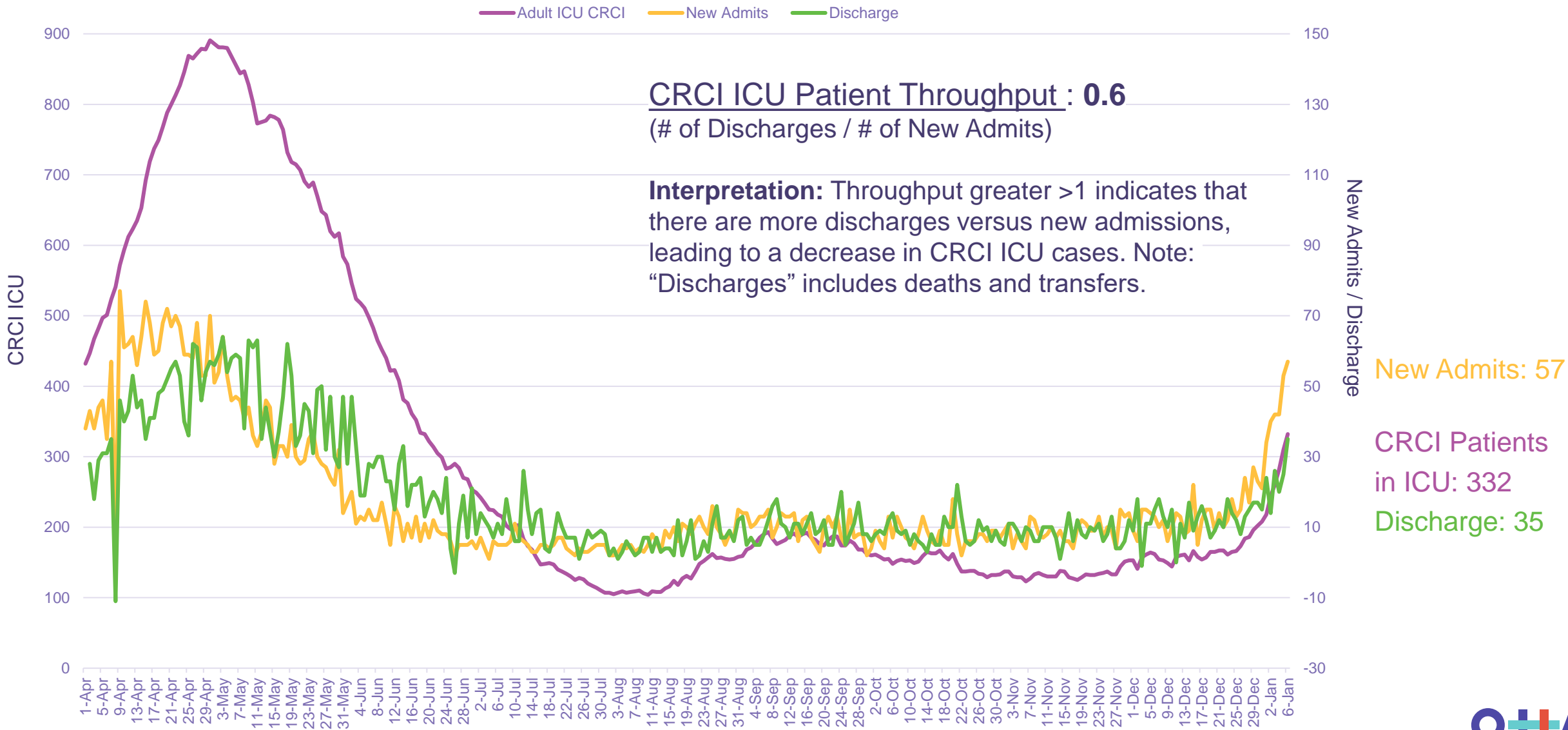
(Source: Critical Care Services Ontario)

(Data as of **January 6, 2022**)



CRCI ICU Patient Throughput (starting April 2021 onward)

(Data as of **January 6, 2022**)

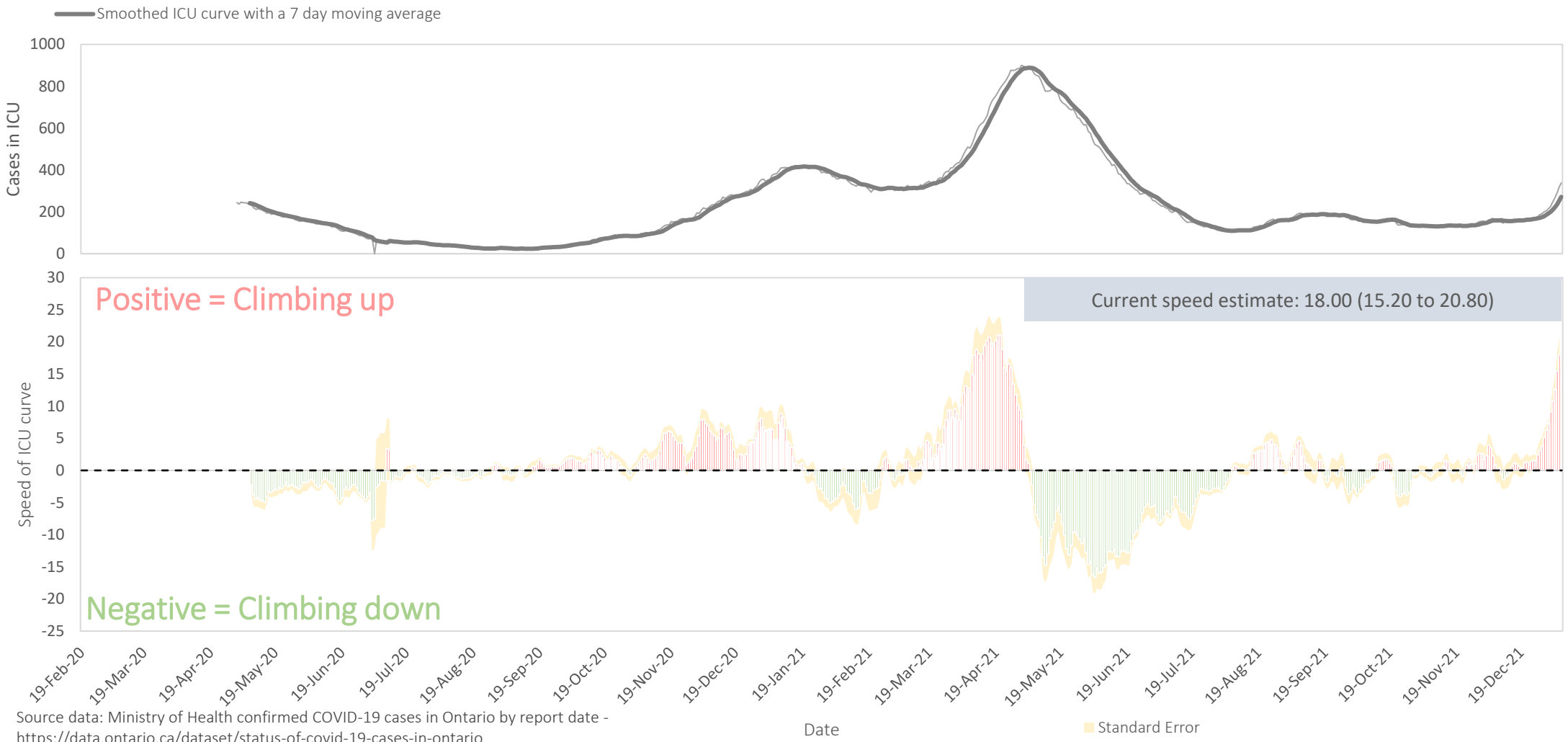


Technical Note: Patient Throughput based on [Ontario Health - CCO methodology](#)



COVID-19 ICU curve and speed of ICU curve: as of **January 6, 2022** in Ontario

The speed of COVID-19 spread is measured as the slope of the ICU curve. When the **speed > 0**, then the trend of cases in ICU is speeding up. When the **speed < 0**, then trend of cases in ICU is slowing down. When **speed = 0**, then the cases in ICU have plateaued. The goal is to drive cases in ICU down to zero.

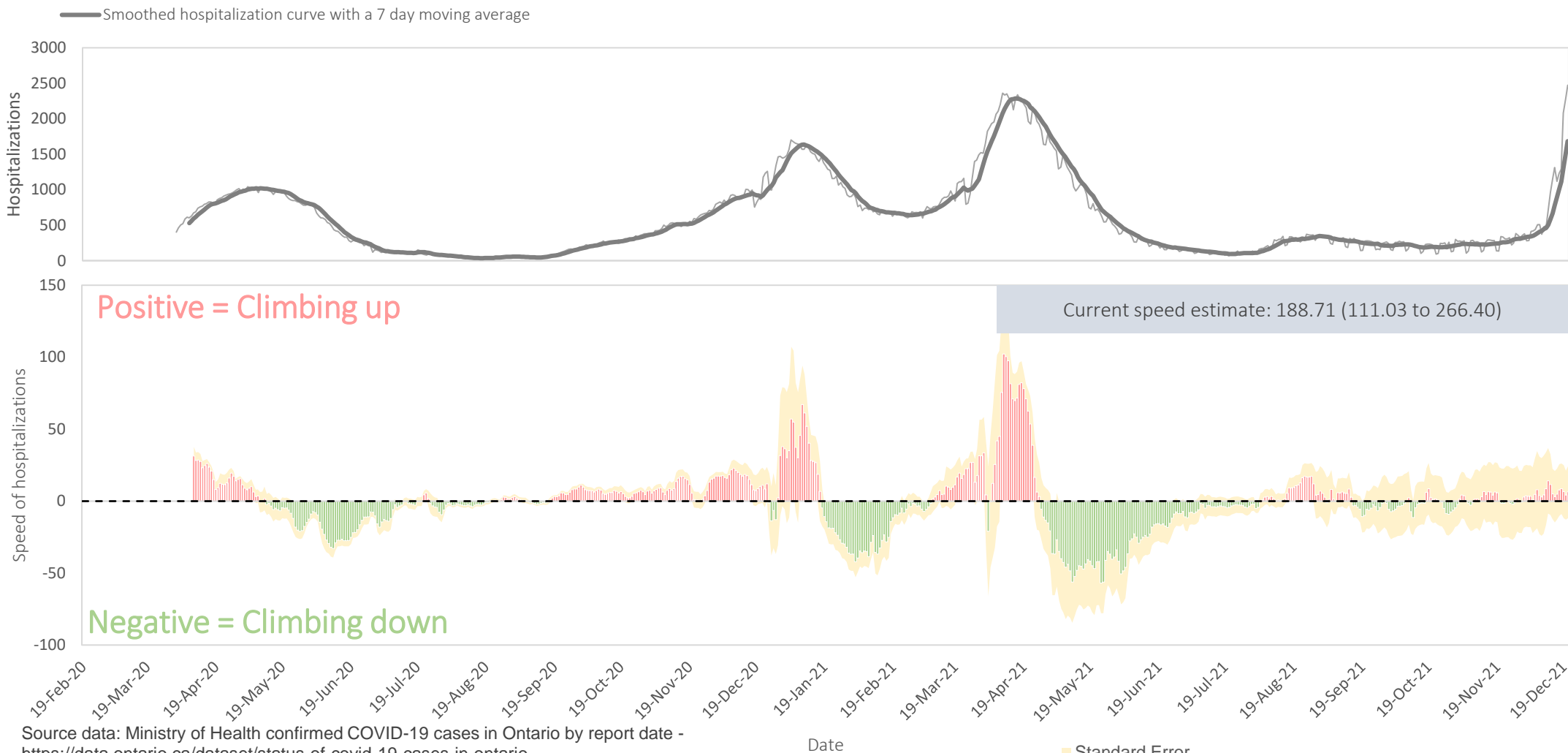


Source data: Ministry of Health confirmed COVID-19 cases in Ontario by report date - <https://data.ontario.ca/dataset/status-of-covid-19-cases-in-ontario>
 Collaboration with Jonathan Wang @wanghoaneng



COVID-19 hospitalizations curve and speed of hospitalizations: as of **January 6, 2022** in Ontario

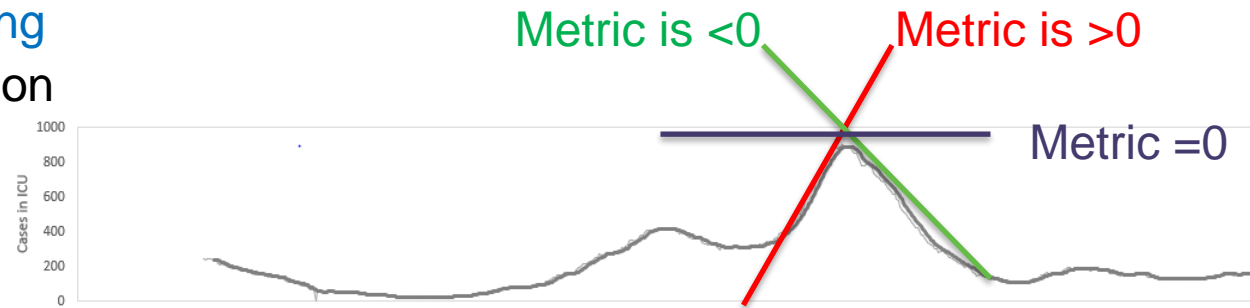
The speed of COVID-19 spread is measured as the slope of the hospitalization curve. When the **speed > 0**, then the trend of hospitalizations is speeding up. When the **speed < 0**, then trend of hospitalizations is slowing down. When **speed = 0**, then the hospitalizations have plateaued. The goal is to drive hospitalizations down to zero.



Source data: Ministry of Health confirmed COVID-19 cases in Ontario by report date - <https://data.ontario.ca/dataset/status-of-covid-19-cases-in-ontario>
Collaboration with Jonathan Wang @wanghoaneng

Interpretation of the “Speed Signal” Graphs

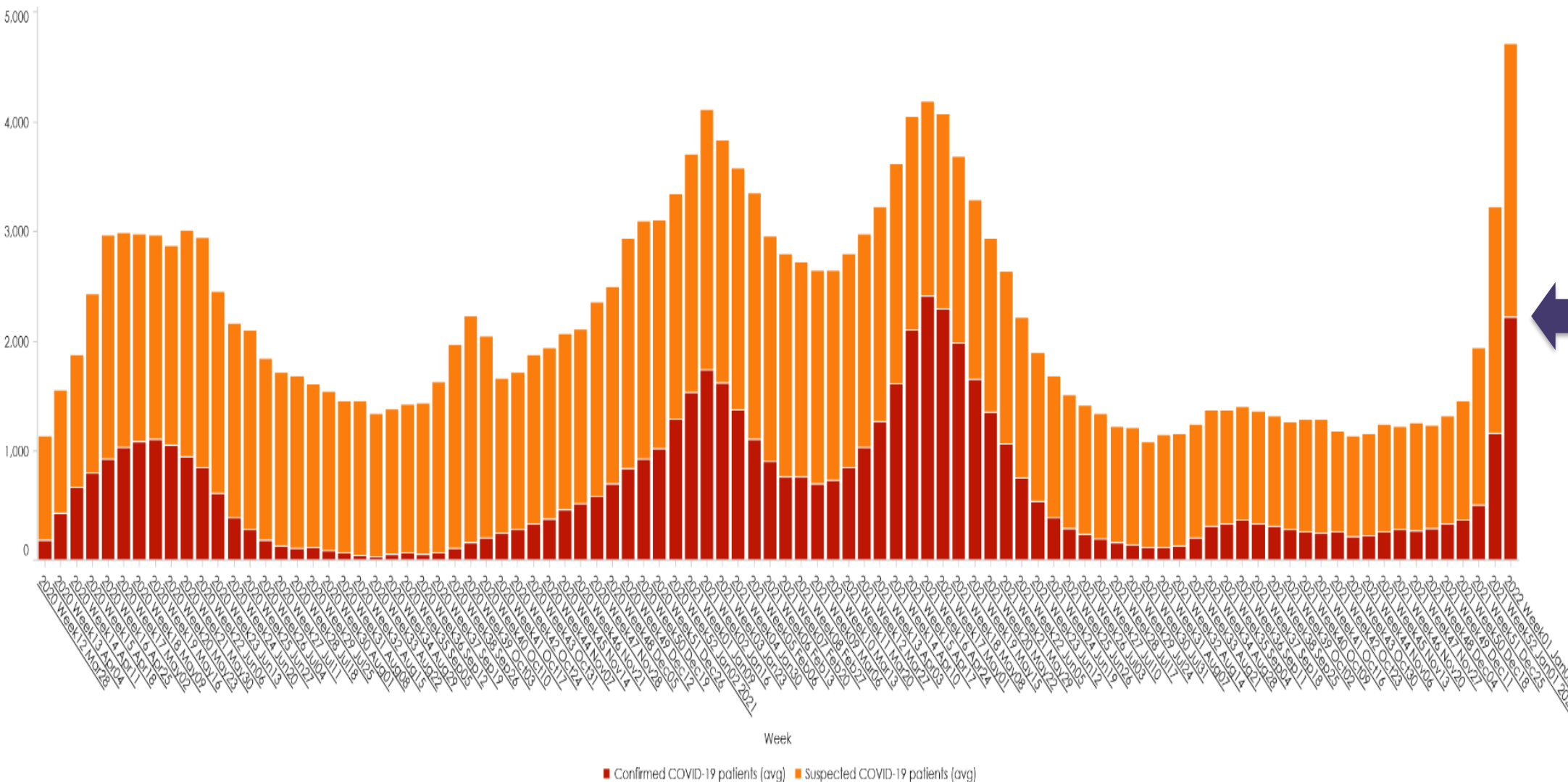
- The “speed signal” metric, developed by [Jonathan Wang](#) - [Twitter: @wanghoaneng in 2020](#), is a simple calculation method with intuitive explanatory power for rates and spread.
- The speed signal can be considered as the number of hospitalization or ICU cases per day that can be expected if the current 7-day trend continues.
- The directionality (positive or negative) of the metric provides insight into the rate of increase of cases per day.
- This metric only provides information on the slope of the hospitalization/ICU curve and should be read in conjunction with the hospitalization or ICU case curve (i.e., zero slope does not mean there are no more daily cases, just that the rate of change in cases per day is zero over a 7-day period).
- The red bars in the graph show rates increasing and the green bars show rates decreasing.



- The speed of COVID-19 spread is measured as the slope of the hospitalization/ICU curve.
- When the **speed metric is > 0**, then the trend of hospitalizations/ICU cases is speeding up.
- When the **speed metric < 0**, then the trend of hospitalizations/ICU cases is slowing down.
- When **speed = 0**, then the hospitalizations/ICU cases have plateaued.
- The goal is to drive COVID-19 hospitalizations and ICU cases down to zero.

Weekly average COVID-19 patients in hospital (Data as of January 5, 2022)

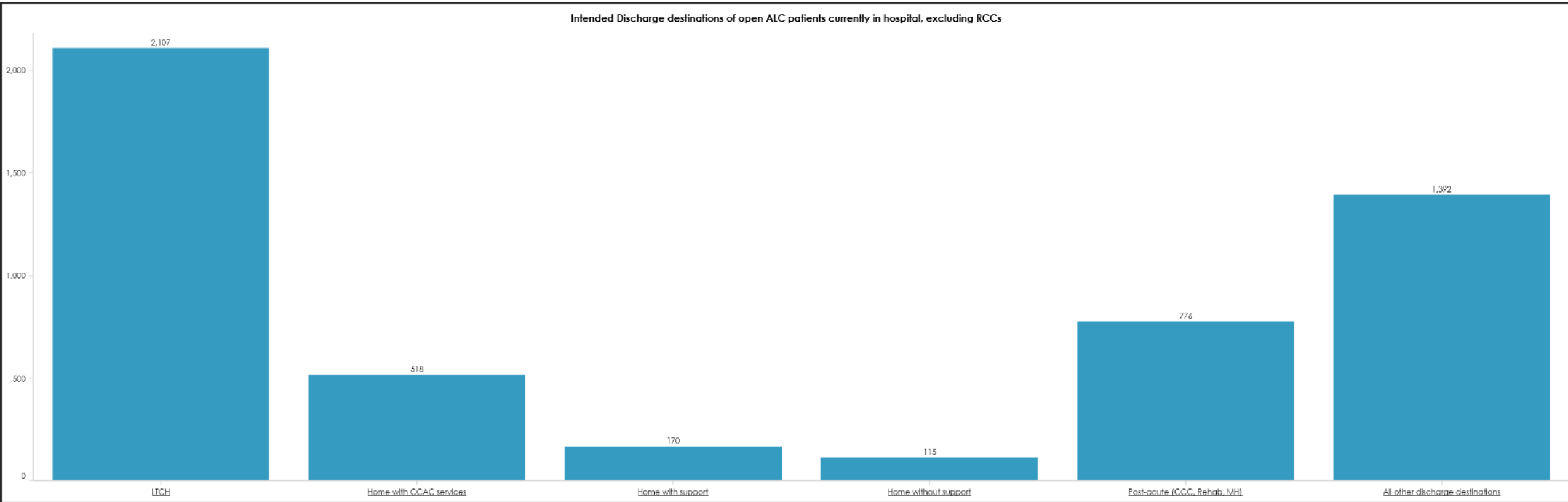
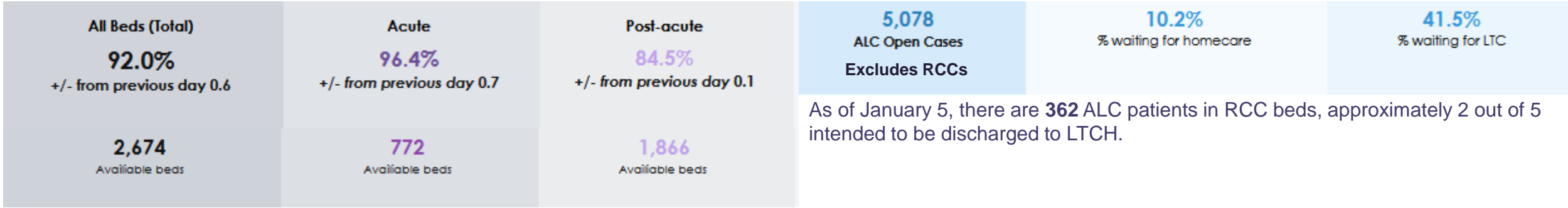
Weekly average COVID-19 patients in hospital



2497 confirmed COVID-19 patients (January 5, 2022)
Source: MOH VA Tool



Hospital Occupancy (Data as of **January 5, 2022**)

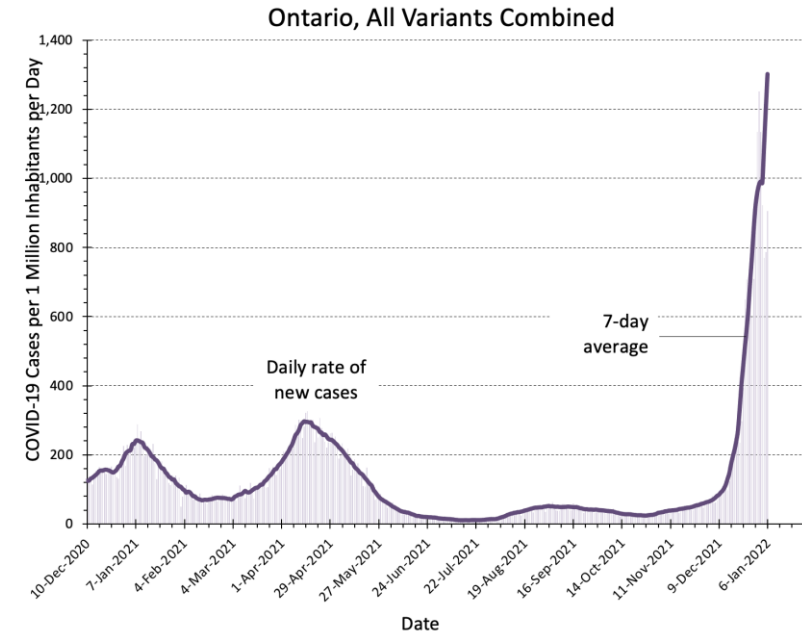


Highlights: COVID-19 Science Table Ontario Dashboard

Key Indicators

Effective Reproduction Number R(t)	_*
Estimated Number of COVID-19 Cases per Day, on 06-Jan-2022	19,183
Change per week	+5,703
Doubling Time (Days)	_*
Estimated Percentage Caused by Omicron	96.5%
Test Positivity	30.0%
Change per week	+1.0%
COVID-19 Hospital Occupancy, on 06-Jan-2022	2,291
Change per week	+1312
COVID-19 ICU Occupancy, on 06-Jan-2022	319
Change per week	+119
COVID-19 Deaths per Day, on 03-Jan-2022	13
Change per week	+8
COVID-19 Cases per 1 Million per Day, on 06-Jan-2022	1,301.9
Among Unvaccinated People	1,588.0
Among People Vaccinated with at Least 2 Doses	1,252.8
Reduction Associated with at Least 2 Vaccine Doses	-21.1%
COVID-19 Hospital Occupancy per 1 Million, on 06-Jan-2022	155.5
Among Unvaccinated People	576.8
Among People Vaccinated with at Least 2 Doses	116.7
Reduction Associated with at Least 2 Vaccine Doses	-79.8%
COVID-19 ICU Occupancy per 1 Million, on 06-Jan-2022	21.7
Among Unvaccinated People	148.2
Among People Vaccinated with at Least 2 Doses	9.9
Reduction Associated with at Least 2 Vaccine Doses	-93.3%
COVID-19 Vaccination, on 10-Jan-2022	
Number of People Vaccinated With at Least 1 Dose	12,249,723
Change per week	+19,544
Percent of People Aged 5+ Vaccinated With at Least 1 Dose	87.4%
Change per week	+0.1%
Number of People Vaccinated With at Least 2 Doses	11,445,183
Change per week	+17,391
Percent of People Aged 5+ Vaccinated With at Least 2 Doses	81.7%
Change per week	+0.1%
Number of People Vaccinated With 3 Doses	4,232,672
Change per week	+337,605
Percent of People Aged 5+ Vaccinated With 3 Doses	30.2%
Change per week	+2.4%

Estimated Rate of COVID-19 Cases per 1 Million Inhabitants per Day in Ontario



Current COVID-19 Risk in Ontario by Vaccination Status

