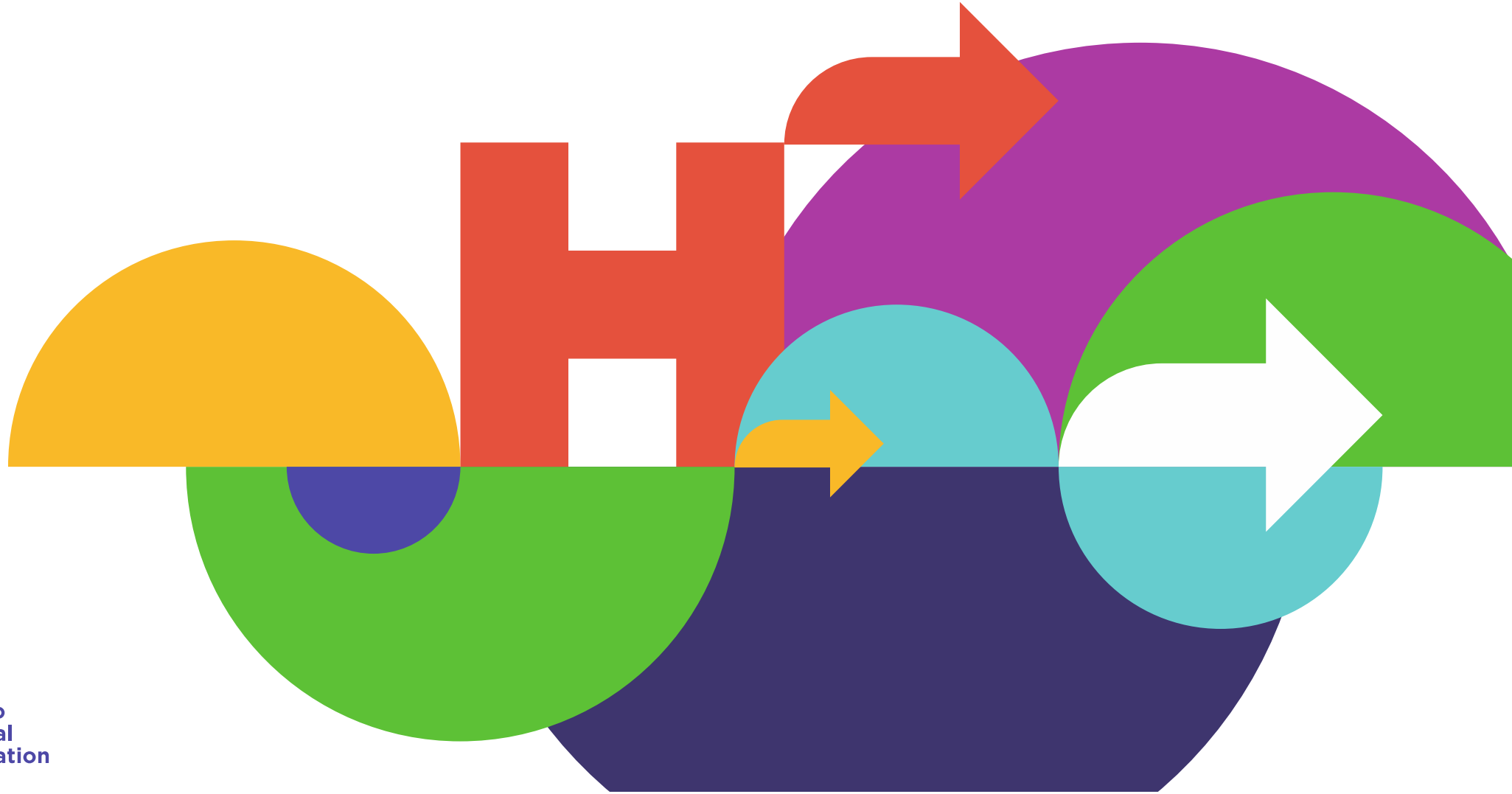
# COVID-19 Hospital Capacity

Friday, January 21, 2022



Ontario Hospital Association

# Hospital Capacity: Critical Care

Data source: Critical Care Information System
All data as of **January 20, 2022**

| Total Funded* ICU Bed Capacity | | | | Critical Care Census** | | | | % ICU occupancy | Funded* ICU Bed Capacity Remaining |
|---|---|---|---|---|---|---|---|---|---|
| 2343 | (Adult) | 1599 | Vented | 1871 | (Adult) | 577 | CRCI | 79.9% (Adult) | 472 (Adult) |
| | | 744 | Non-Vented | | | 1294 | NON-CRCI | | |
| 105 | (Paediatric) | 78 | Vented | 64 | (Paediatric) | 10 | CRCI | 61.0% (Paediatric) | 41 (Paediatric) |
| | | 27 | Non-Vented | | | 54 | NON-CRCI | | |

| Dec 16 Ontario Science Table COVID-19 ICU Occupancy Projections for December 31, 2021 | | |
|---|---|---|
| | Low range | 241-244 |
| | "Circuit breaker" high range | 326 |
| | No intervention high range | 637 |

| | |
|---|---|
| 7-day average CRCI patients in ICU (Adult) | 568 |
| 7-day average New CRCI Admits (Adult) | 64 |
| 7-day average New CRCI Admits (Paediatric) | 1 |

| % Pts in ICU who have CRCI | % vented pts who have CRCI |
|---|---|
| 30.8% (Adult) | 63.1% (Adult) |
| 15.6% (Paediatric) | 40.0% (Paediatric) |

| Region | Adult Funded* beds | Current Adult CRCI census | % Adult pts in ICU who have CRCI | % Adult ICU occupancy | Funded* Adult ICU Bed Capacity Remaining | (+/- change from previous day) |
|---|---|---|---|---|---|---|
| West | 694 | 186 | 31.9% | 84.0% | 111 | ↑ 5 |
| Central | 477 | 157 | 41.3% | 79.7% | 97 | ↓ -6 |
| Toronto | 464 | 81 | 22.5% | 77.6% | 104 | ↓ -7 |
| East | 574 | 120 | 26.9% | 77.7% | 128 | → 0 |
| North | 134 | 33 | 32.4% | 76.1% | 32 | ↑ 4 |

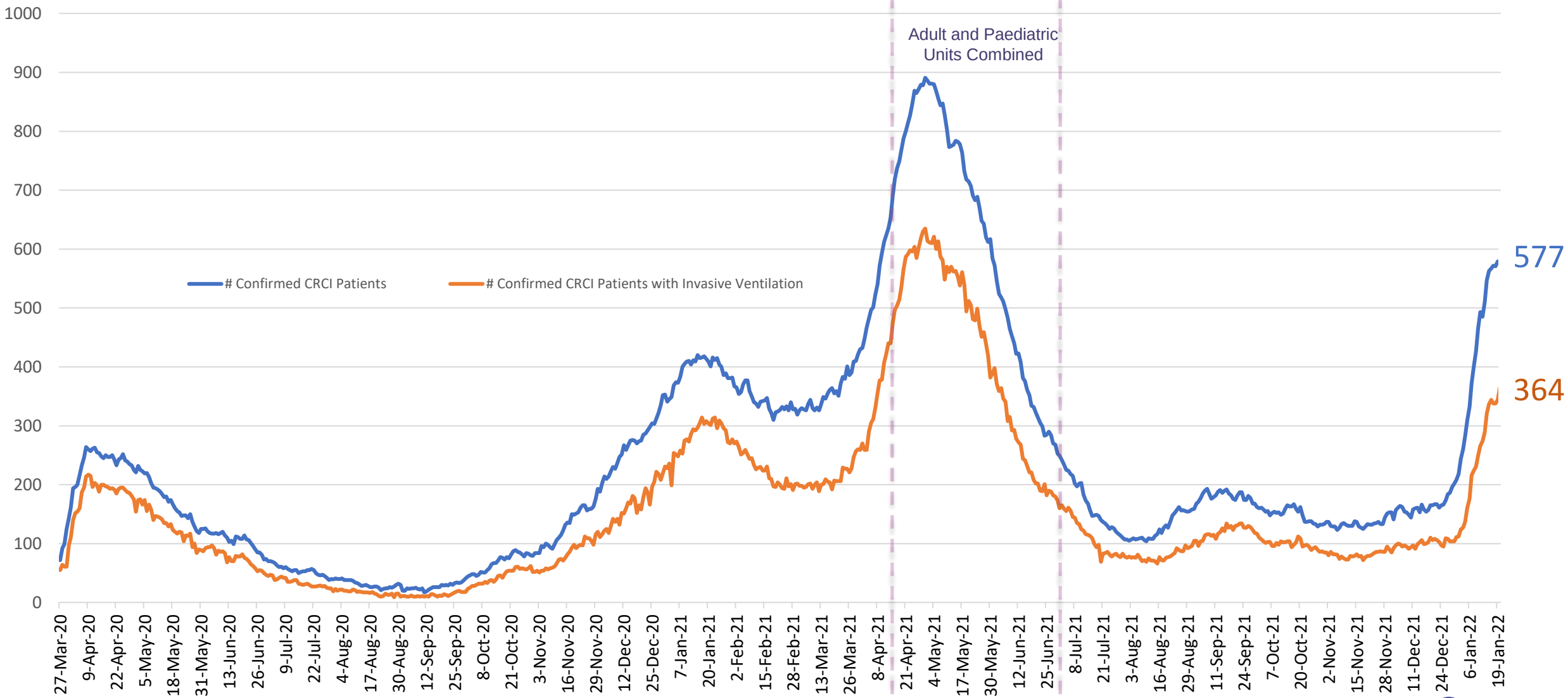
Definition: COVID-19 pts are represented by CRCI (COVID-Related Critical Illness and is defined as: Admission to the ICU because of a clinical syndrome consistent with COVID, AND the patient has had a positive test that is consistent with acute COVID illness).Please note that CCSO data does not currently distinguish those admitted with COVID or for COVID.
*Staffing pressures may reduce funded bed capacity. Please see view the OHA resource page for more details.
**There were **10** paediatric CRCI cases, **4** vented. There were **3** neonatal CRCI cases .

OHA

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

## (Source: Critical Care Services Ontario)

## (Data as of January 20, 2022)

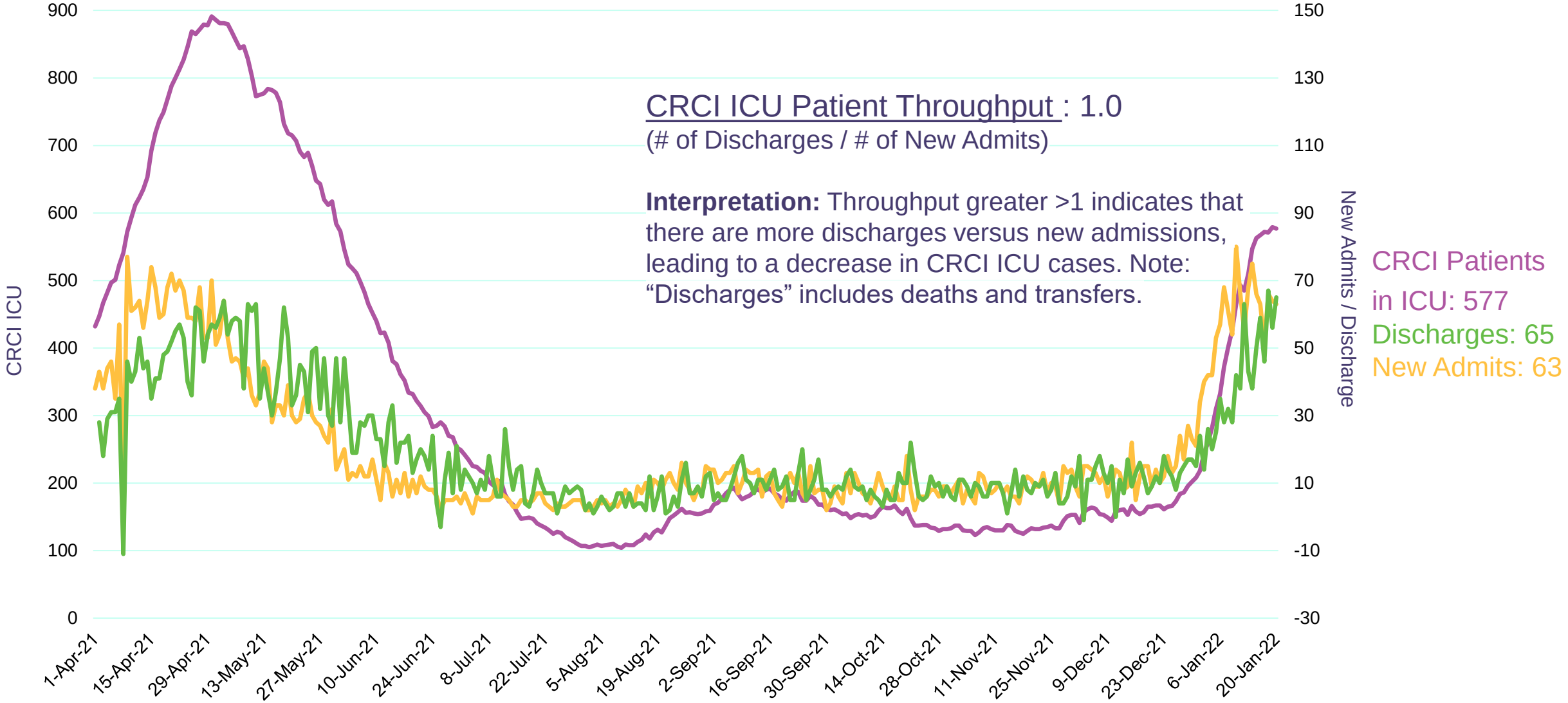



*"COVID-related critical illness (CRCI) Census: Admission to the ICU because of a clinical syndrome consistent with COVID, AND patient has had a positive test that is consistent with acute COVID illness. Please note that CCSO data does not currently distinguish those admitted with COVID or for COVID."*

# CRCI ICU Patient Throughput (starting April 2021 onward) (Data as of January 20, 2022)

Data source: Critical Care Information System

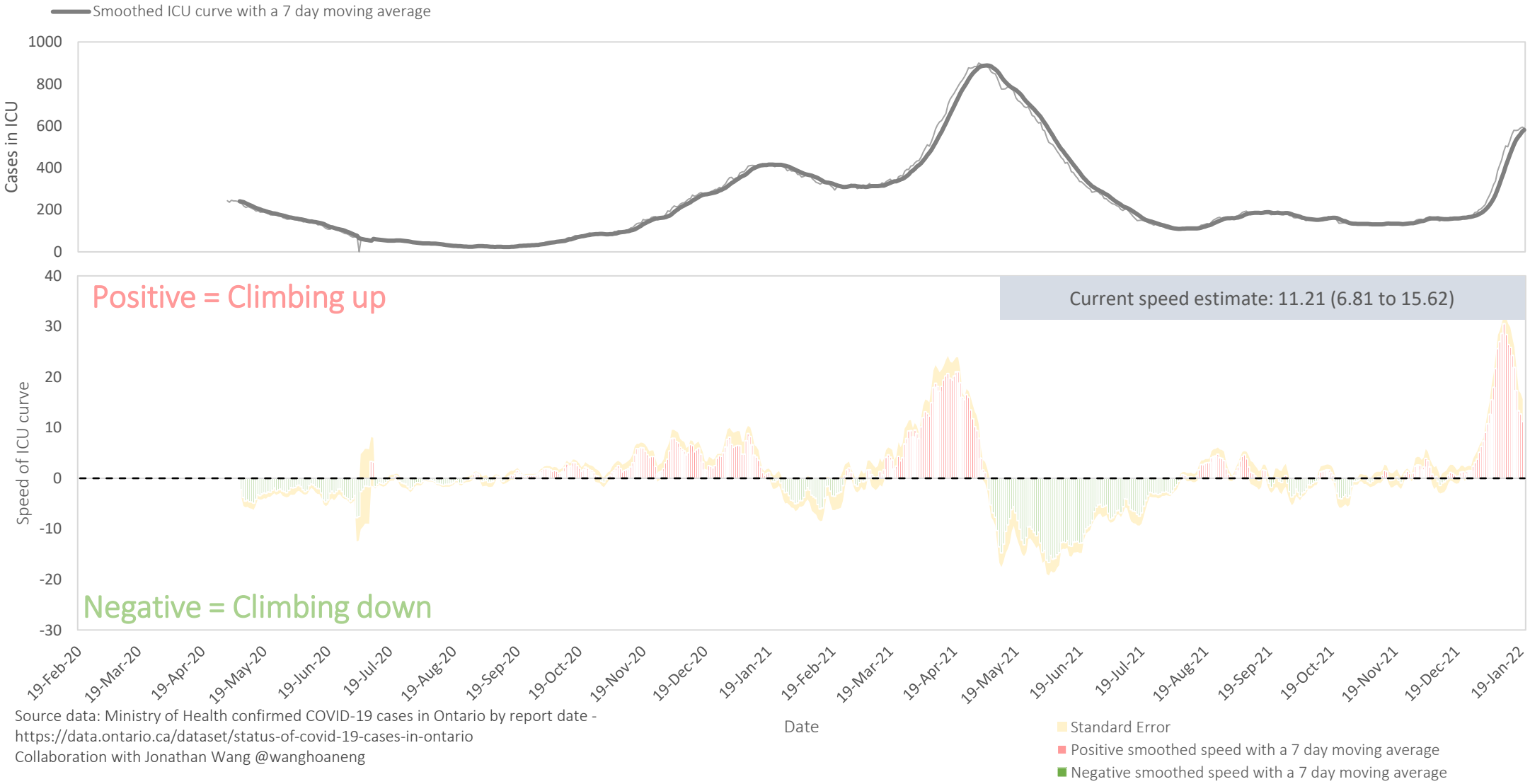





Technical Note: Patient Throughput based on Ontario Health - CCO methodology

# COVID-19 ICU curve and speed of ICU curve: as of January 20, 2022 in Ontario

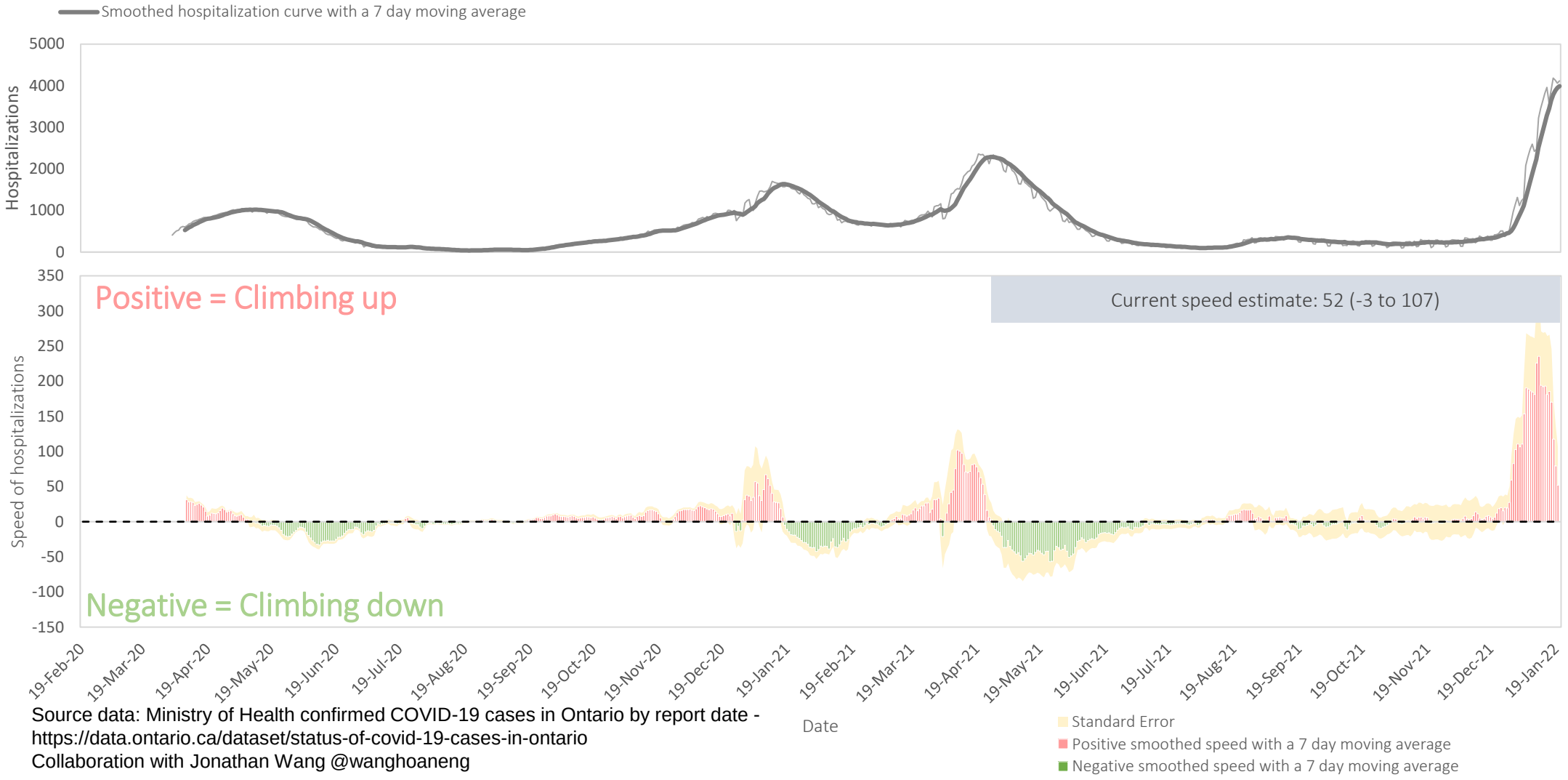
The speed of COVID-19 spread is measured as the slope of the ICU curve. When the **speed > 0**, then the trend of cases in ICU is speeding up. When the **speed < 0**, then trend of cases in ICU is slowing down. When **speed = 0**, then the cases in ICU have plateaued. The goal is to drive cases in ICU 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 20, 2022 in Ontario

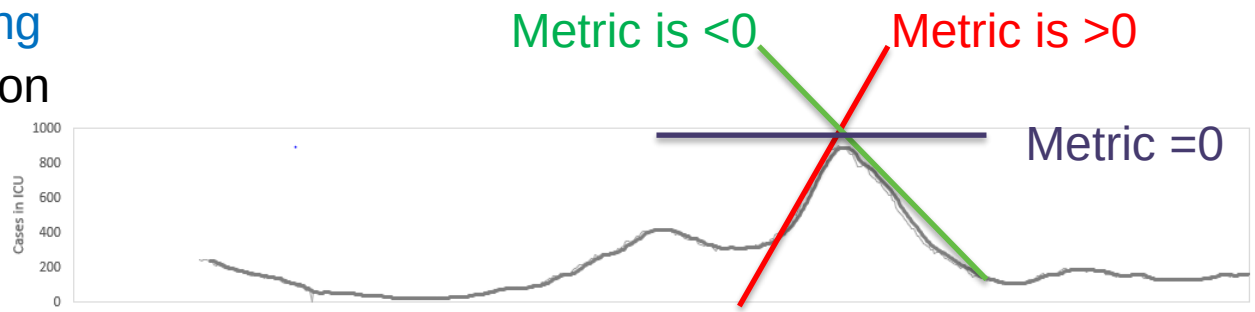
The speed of COVID-19 spread is measured as the slope of the hospitalization curve. When the **speed > 0**, then the trend of hospitalizations is speeding up. When the **speed < 0**, then trend of hospitalizations is slowing down. When **speed = 0**, then the hospitalizations have plateaued. The goal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

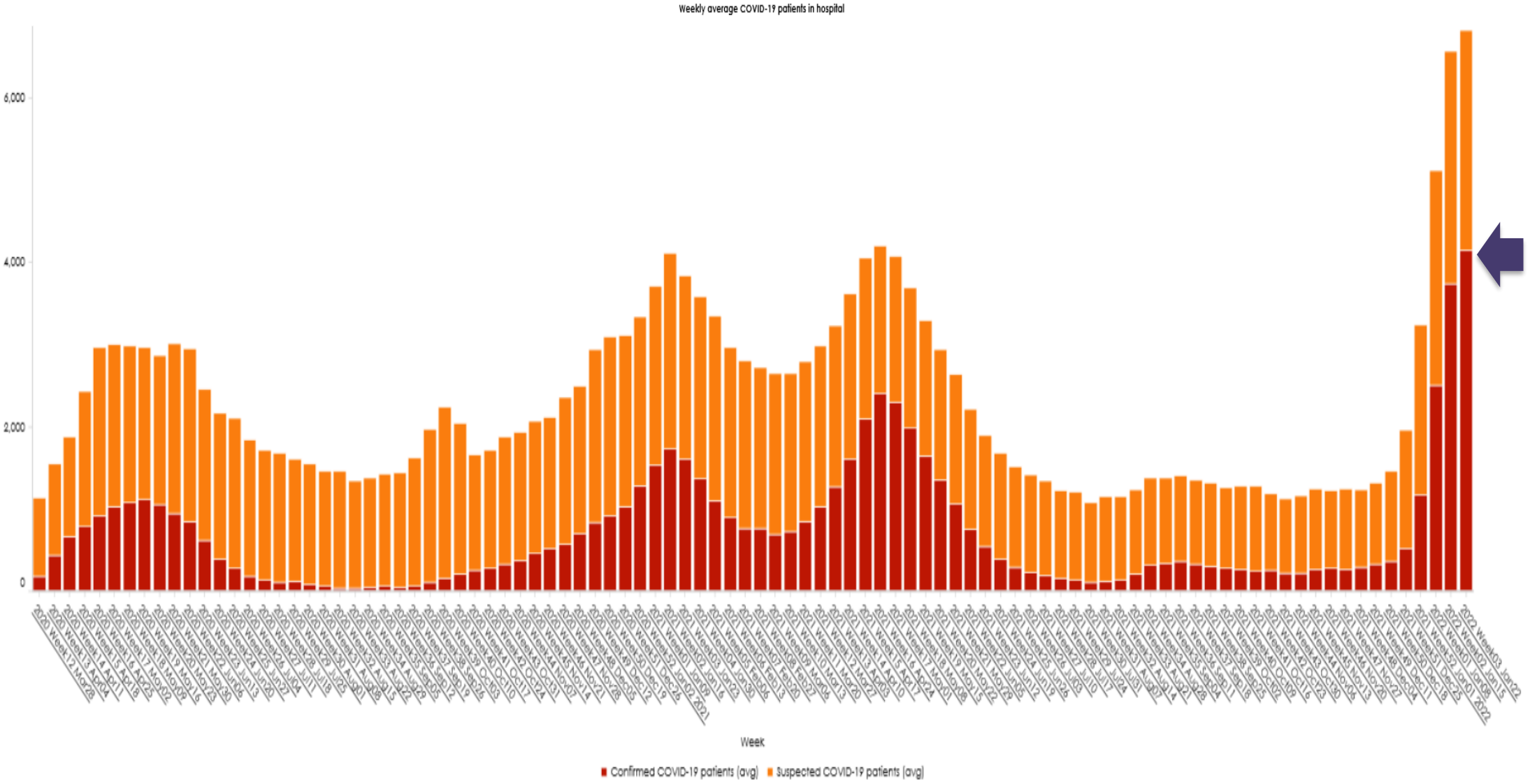
# Interpretation of the “Speed Signal” Graphs

- 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 19, 2022)




4142 confirmed COVID-19 patients (January 19, 2022)
Source: MOH VA Tool

# Hospital Occupancy (Data as of January 19, 2022)

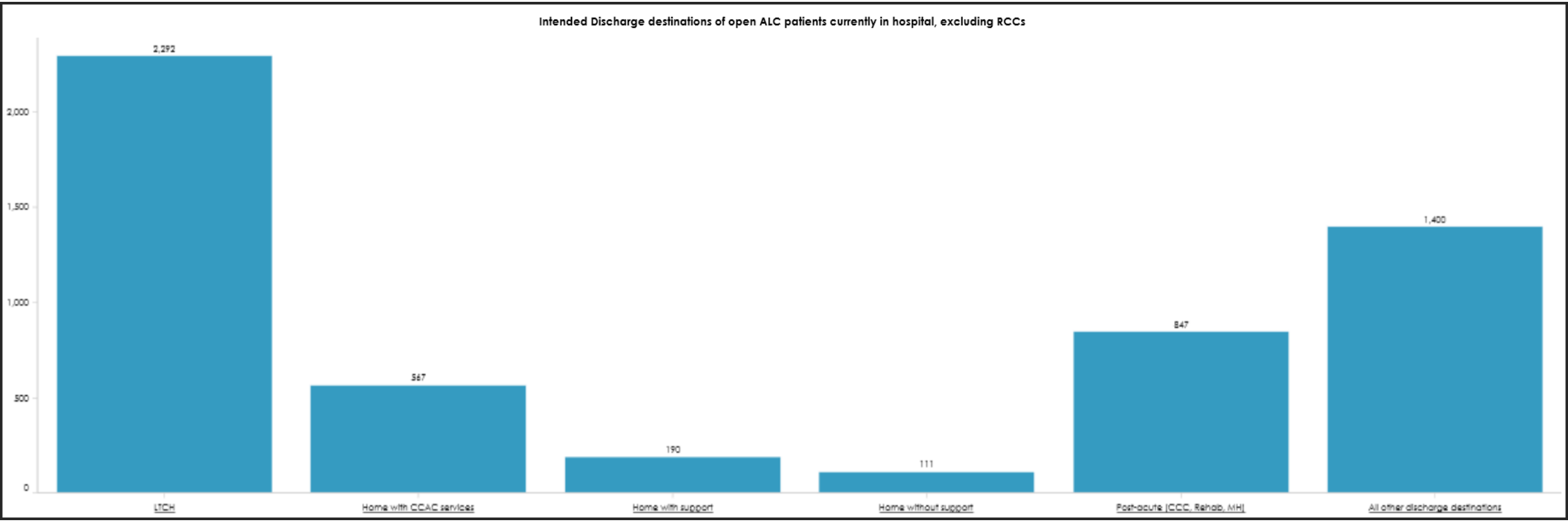
Source: MOH VA Tool



| All Beds (Total) | Acute | Post-acute |
|---|---|---|
| 92.4% | 96.4% | 84.9% |
| +/- from previous day -0.6 | +/- from previous day -1.1 | +/- from previous day 0.2 |
| 2,539 | 780 | 1,717 |
| Availiable beds | Availiable beds | Availiable beds |

| 5,407 | 10.5% | 42.4% |
|---|---|---|
| ALC Open Cases | % waiting for homecare | % waiting for LTC |
| Excludes RCCs | | |

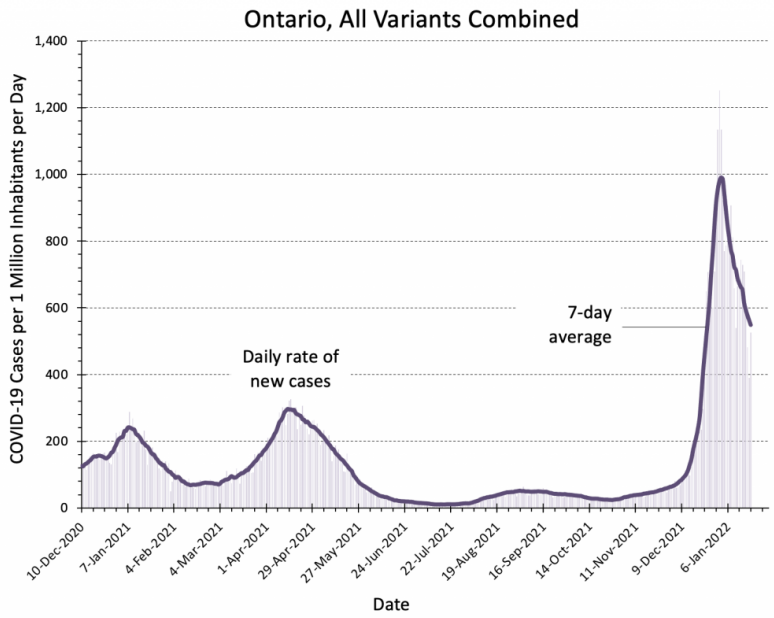
As of January 19, there are **380** ALC patients in RCC beds, approximately 1 out of 2 intended to be discharged to LTCH.



# Highlights: COVID-19 Science Table Ontario Dashboard

| Key Indicators | |
|---|---|
| Effective Reproduction Number R(t) | -* |
| Estimated Number of COVID-19 Cases per Day, on 20-Jan-2022 | 8,087 |
| Change per week | -1,841 |
| Doubling Time (Days) | -* |
| Estimated Percentage Caused by Omicron | 99.1% |
| Test Positivity | 21.7% |
| Change per week | -1.5% |
| COVID-19 Hospital Occupancy, on 20-Jan-2022 | 4,078 |
| Change per week | +429 |
| Doubling Time (Days) | 18.6 |
| COVID-19 ICU Occupancy, on 20-Jan-2022 | 594 |
| Change per week | +94 |
| Doubling Time (Days) | 21.8 |
| Estimated Number of COVID-19 Deaths per Day, on 17-Jan-2022 | 46 |
| Change per week | +16 |
| COVID-19 Cases per 1 Million per Day, on 20-Jan-2022 | 548.9 |
| Among Unvaccinated People | 1,053.2 |
| Among People Vaccinated with at Least 2 Doses | 450.4 |
| Reduction Associated with at Least 2 Vaccine Doses | -57.2% |
| COVID-19 Hospital Occupancy per 1 Million, on 20-Jan-2022 | 276.8 |
| Among Unvaccinated People | 1,066.4 |
| Among People Vaccinated with at Least 2 Doses | 208.1 |
| Reduction Associated with at Least 2 Vaccine Doses | -80.5% |
| COVID-19 ICU Occupancy per 1 Million, on 20-Jan-2022 | 40.3 |
| Among Unvaccinated People | 249.6 |
| Among People Vaccinated with at Least 2 Doses | 23.5 |
| Reduction Associated with at Least 2 Vaccine Doses | -90.6% |
| **COVID-19 Vaccination, on 19-Jan-2022** | |
| Number of People Vaccinated With at Least 1 Dose | 12,385,224 |
| Change per week | +65,775 |
| Percent of People Aged 5+ Vaccinated With at Least 1 Dose | 88.4% |
| Change per week | +0.5% |
| Number of People Vaccinated With at Least 2 Doses | 11,570,076 |
| Change per week | +65,794 |
| Percent of People Aged 5+ Vaccinated With at Least 2 Doses | 82.6% |
| Change per week | +0.5% |
| Number of People Vaccinated With 3 Doses | 5,793,578 |
| Change per week | +619,480 |
| Percent of People Aged 5+ Vaccinated With 3 Doses | 41.4% |
| Change per week | +4.4% |

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




## Current COVID-19 Risk in Ontario by Vaccination Status