COVID-19 Hospital Capacity

Sunday, February 27, 2022
**Hospital Capacity: Critical Care**

All data as of **February 26, 2022**

**Data source:** Critical Care Information System

**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 3 paediatric CRCI cases, 1 vented. There was 1 neonatal CRCI case, none vented.**

<table>
<thead>
<tr>
<th>Region</th>
<th>Adult Funded* beds</th>
<th>Current Adult CRCI census</th>
<th>% Adult pts in ICU who have CRCI</th>
<th>% Adult ICU occupancy</th>
<th>Funded* Adult ICU Bed Capacity Remaining (+/- change from previous day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West</td>
<td>694</td>
<td>85</td>
<td>16.3%</td>
<td>75.2%</td>
<td>172 (-4)</td>
</tr>
<tr>
<td>Central</td>
<td>477</td>
<td>73</td>
<td>20.7%</td>
<td>74.0%</td>
<td>124 (-20)</td>
</tr>
<tr>
<td>Toronto</td>
<td>464</td>
<td>37</td>
<td>12.3%</td>
<td>64.9%</td>
<td>163 (23)</td>
</tr>
<tr>
<td>East</td>
<td>574</td>
<td>61</td>
<td>15.9%</td>
<td>66.7%</td>
<td>191 (16)</td>
</tr>
<tr>
<td>North</td>
<td>134</td>
<td>22</td>
<td>22.2%</td>
<td>73.9%</td>
<td>35 (5)</td>
</tr>
</tbody>
</table>

**Total Funded* ICU Bed Capacity**

<table>
<thead>
<tr>
<th>Region</th>
<th>Adult Funded beds</th>
<th>Vented</th>
<th>Non-Vented</th>
<th>Vented</th>
<th>Non-Vented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult</td>
<td>2343</td>
<td>1599</td>
<td>744</td>
<td>278</td>
<td>1380</td>
</tr>
<tr>
<td>(Paediatric)</td>
<td>105</td>
<td>78</td>
<td>27</td>
<td>3</td>
<td>60</td>
</tr>
</tbody>
</table>

**Critical Care Census**

<table>
<thead>
<tr>
<th>Region</th>
<th>Adult Funded beds</th>
<th>Critical Care Census</th>
<th>% ICU occupancy</th>
<th>Funded* ICU Bed Capacity Remaining</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult</td>
<td>2343</td>
<td>1658</td>
<td>70.8%</td>
<td>685 (Adult)</td>
</tr>
<tr>
<td>(Paediatric)</td>
<td>105</td>
<td>63</td>
<td>60.0%</td>
<td>42 (Paediatric)</td>
</tr>
</tbody>
</table>

**% Pts in ICU who have CRCI**

<table>
<thead>
<tr>
<th>Region</th>
<th>% Adult pts in ICU who have CRCI</th>
<th>% Adult ICU occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult</td>
<td>16.8%</td>
<td>75.2%</td>
</tr>
<tr>
<td>(Paediatric)</td>
<td>4.8%</td>
<td>65.1%</td>
</tr>
</tbody>
</table>

**% vented pts who have CRCI**

<table>
<thead>
<tr>
<th>Region</th>
<th>% vented pts who have CRCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult</td>
<td>65.1%</td>
</tr>
<tr>
<td>(Paediatric)</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

**7-day average New CRCI Admits**

<table>
<thead>
<tr>
<th>Region</th>
<th>Adult Funded beds</th>
<th>7-day average New CRCI Admits (Adult)</th>
<th>7-day average New CRCI Admits (Paediatric)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West</td>
<td>694</td>
<td>297</td>
<td>1</td>
</tr>
<tr>
<td>Central</td>
<td>477</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Toronto</td>
<td>464</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>East</td>
<td>574</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>North</td>
<td>134</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Adult Critical Care Units COVID Related Critical Illness (CRCI) Patients
(Source: Critical Care Services Ontario)
(Data as of February 26, 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 February 26, 2022)

CRCI ICU Patient Throughput: 1.2
(# of Discharges / # of New Admits)

Interpretation: Throughput greater >1 indicates that there are more discharges versus new admissions, leading to a decrease in CRCI ICU cases. Note: “Discharges” includes deaths and transfers.

CRCI Patients in ICU: 278
Discharges: 21
New Admits: 18

Technical Note: Patient Throughput based on Ontario Health - CCO methodology
COVID-19 ICU curve and speed of ICU curve:
as of February 26, 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 **February 26, 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.

Current speed estimate: -27 (-42 to -12)

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 February 24, 2022)

Source: MOH VA Tool
Data extracted on February 27, 2022

1039 confirmed COVID-19 patients (February 24, 2022)
Source: MOH VA Tool
Hospital Occupancy (Data as of February 24, 2022)

As of February 24, there were 355 ALC patients in RCC beds, where approximately 1 out of 2 intended to be discharged to LTCH.

Source: MOH VA Tool
Data extracted on February 27, 2022

Excludes RCCs

4.977 ALC Open Cases Excludes RCCs
10.3% % waiting for hospice
40.5% % waiting for LTC
Current COVID-19 Risk in Ontario by Vaccination Status

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

Ontario, All Variants Combined

Key Indicators for Ontario
- Effective Reproduction Number R(t) Based on COVID-19 Cases: 1.703
- Change per Week: -300
- Halving Time (Days): 29.5
- Estimated Percentage Caused by Omicron: 100.0%
- Estimated Standardized Wastewater Signal, on 21-Feb-2022: 0.35
- Change per Week: 0.10
- Doubling Time (Days): 12.5
- Test Positivity: 10.3%
- Change per Week: +0.0%

COVID-19 Hospital Occupancy, on 25-Feb-2022:
- Change per week: -167
- Halving Time (Days): 20.0

COVID-19 ICU Occupancy, on 25-Feb-2022:
- Change per Week: -45
- Halving Time (Days): 30.1

Estimated Number of COVID-19 Deaths per Day, on 23-Feb-2022:
- Change per Week: +0

COVID-19 Cases per 1 Million per Day, on 26-Feb-2022:
- Among Unvaccinated People: 115.6
- Reduction Associated with at Least 2 Vaccine Doses: -42.1%

COVID-19 Hospital Occupancy per 1 Million, on 25-Feb-2022:
- Among Unvaccinated People: 72.6
- Reduction Associated with at Least 2 Vaccine Doses: -8.4%

COVID-19 ICU Occupancy per 1 Million, on 25-Feb-2022:
- Among Unvaccinated People: 19.3
- Reduction Associated with at Least 2 Vaccine Doses: -16.3%

COVID-19 Vaccination in Ontario, on 25-Feb-2022:
- Number of People Vaccinated With at Least 1 Dose: 12,563,214
- Change per Week: +15,293
- Percent of People Aged 5+ Vaccinated With at Least 1 Dose: 89.7%
- Change per Week: +0.1%
- Number of People Vaccinated With at Least 2 Doses: 11,998,022
- Change per Week: +42,808
- Percent of People Aged 5+ Vaccinated With at Least 2 Doses: 85.6%
- Change per Week: +0.3%
- Number of People Vaccinated With 3 Doses: 6,958,202
- Change per Week: +110,331
- Percent of People Aged 18+ Vaccinated With 3 Doses: 58.1%
- Change per Week: +0.8%