Update on COVID-19 Projections

Science Advisory and Modelling Consensus Tables
April 29, 2021
Key Findings

• The efforts of Ontarians are making a difference – cases are cresting at very high level.

• ICU occupancy is at record highs and continues to climb – our system is under incredible pressure.

• Workplace mobility is too high. Limiting essential workplaces and keeping sick workers at home, will help control cases.

• Clearing the surgical backlog will be an enormous challenge.

• Vaccination distribution is more equitable because it is focussing on hotspots. Continuing this progress is essential.

• Ontarians can make outdoor activities safer with distancing and masking when close to those outside their household. Indoor activities pose a significant risk.
Cases are flattening but pockets of growth remain in hotspots

Average weekly cases on:

- **Case growth**
- **Case reduction**

Weekly new cases per 100,000 residents

Data source: CCM
Data note: Data for the most recent day have been censored to account for reporting delays
Dec 26
Province-wide lockdown
14-days for N. Ontario
28-days for S. Ontario

Jan 18
First dose vaccination complete in prioritized PHUs

Apr 3
Province-wide emergency brake

Apr 17
Enhanced public health measures and enforcement

Test positivity rates are still high across Ontario

Data source: Ontario Laboratory Information System (OLIS), data up to April 23
Ontario testing rates are flat

Data source: Ontario Laboratory Information System (OLIS), data up to April 23
Variants, which transmit faster, are responsible for more than 90% of cases. Almost all Variants are B.1.1.7.
Ontarians are respecting the stay-at-home order and are doing their part to help control case growth.
Workplace mobility remains too high. Reducing workplace mobility is key.
Cases are decreasing earlier and faster than projected but will only reach February levels under the best case.

Figure summarizes predictions across 5 models:
- Stay-at-home order 6 weeks starting Apr 8
- Vaccinating 100,000/day

Best case assumptions:
- Effective sick pay
- Short list of essential workplaces
- Lower mobility
- Continued focus on vaccinating high risk communities

Predictions informed by modeling from COVID-19 ModCollab, Fields Institute, McMasterU, PHO, YorkU
Data (Observed Cases): covid-19.ontario.ca
Hospitalizations are flattening but ICU occupancy will continue to rise

**Data Sources:** MOH COVID Inpatient Census and Critical Care Information System
ICU occupancy continues to rise. It will remain above the level necessary to restart surgeries for some time.
Hospitals in hotspots are over capacity with patient transfers at their highest level.
The current surgical backlog presents an enormous challenge.

Cumulative pandemic-related surgical backlog: 257,536 cases

First dose vaccine coverage continues to expand

More than 4.5m doses administered

* Note that this is just Pending Appointments. Anyone that has made an appointment and received a vaccine will be counted under “Individuals with at least one dose”. Data for Appointments reflect 20 PHUs that are captured through the provincial booking system. Appointments made through other systems (e.g., local PHU booking systems, pharmacies, primary care) are not included. Age is based on year of birth. Age <50 includes those age 18-49. Figure for age <50 is shown separately because of the difference in scale of the overall population size.

Data Sources
MOF 2020 Population Projections
COVAX analytical file, extracted, 8:00 pm Apr 26 2021, CPAD, MOH
COVAX Skedulo, extracted 6:00pm Apr 26 2021
Vaccination by neighbourhood risk is improving and remains key to controlling case growth

Figure excludes long-term care vaccination – at least 1 dose as of April 26, 2021

<table>
<thead>
<tr>
<th>Age group</th>
<th>1 = high incidence of COVID-19 infections</th>
<th>Neighbourhood Risk*</th>
<th>10 = low incidence of COVID-19 infections</th>
<th>Overall</th>
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<tbody>
<tr>
<td>80+</td>
<td>69% 72% 75% 78% 79% 81% 82% 83% 85% 85%</td>
<td>79%</td>
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<tr>
<td>75-79</td>
<td>70% 73% 76% 78% 80% 81% 82% 82% 83% 80%</td>
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<tr>
<td>70-74</td>
<td>68% 72% 74% 75% 77% 77% 78% 79% 78% 71%</td>
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<tr>
<td>65-69</td>
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<td>61% 64% 62% 58% 59% 58% 62% 56% 54% 48%</td>
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<tr>
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<tr>
<td>50-54</td>
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<tr>
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<tr>
<td>40-44</td>
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<td>11%</td>
<td></td>
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<td>Overall (16+)</td>
<td>32% 37% 33% 34% 33% 34% 35% 35% 36% 35%</td>
<td>11%</td>
<td></td>
<td>34%</td>
</tr>
</tbody>
</table>

Vaccine coverage (per 100 population)

Source: ICES
Outdoor settings are considerably safer than indoor settings if precautions are taken against new variants.

Example: *Walking in a park with your own household*

Example: *Kids playing on a playground*

*Adapted from: Marr L, Virginia Tech 2021*
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