# **COVID-19 NOVEL CORONAVIRUS** *COVID Response Update*





### Weekly COVID Cases Remain Low



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## **MB ICU Occupancy Stabilizes**



This slide demonstrates the impact of COVID-19 and the long stay ICU patients on ICU occupancy.

The graph to the left shows all ICU patients for all health conditions, not only COVID-19.

The blue line reflects ICU occupancy in Manitoba. The red line reflects all Manitobans in ICU, including patients who were sent out of Manitoba for care during the third wave.

At this time, ICU occupancy has been decreasing. However, it's still quite high and the system could be significantly affected if occupancy increased due to a rise in COVID-19 cases.



### **COVID-Related Deaths Remain Low**

Deaths by Week and Age Group 100 -75-Number of Deaths 25-0-2020-07 2021-01 2021-07 Week of Death 80-89 0-9 20-29 40-49 60-69 10-19 30-39 50-59 70-79 90+

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# COVID-19 MODELLING



## Notes on Modelling – Variants of Concern

- This model simulates human behaviour in light of public health measures and vaccines. It accounts for the combination of measures, their timing, and how each individual behaves.
- It also accounts for different strains of the virus and vaccine effectiveness against these strains.
  - Wild COVID-19
  - Alpha (B.1.1.7/UK) variant
  - Gamma (P.1/BR) variant
  - Delta (B.1.617.2/India) variant
- The model has been updated to account for immunizations (Pfizer, Moderna and AstraZeneca), including mixing vaccines.
- The model uses actual data from the province when available.



#### Projected Number of Diagnosed Cases (daily number of new cases)

Information from July 12, 2020 to December 31, 2021. Manitoba data extracted: 2021-08-17.



The actual number of diagnosed cases has been following the Controlled scenario.

Even though immunizations are highly effective and continue to be the only tool to possibly prevent future waves, we must consider that:

- 1. Not enough people have been immunized (about one-third of the population have not received a single dose of the vaccine either by hesitancy, or by not being eligible yet).
- 2. Variants of concern that are also vaccine resistant can emerge.

So while we are currently in the controlled scenario, the projections show that the situation could change quickly.



#### Projected Number of Diagnosed Cases under Different Scenarios (daily number of new cases)



Information from July 12, 2020 to December 31, 2021. Manitoba data extracted: 2021-08-17.



#### **Prevalent Number of ICU Admissions (ICU occupancy)**

Information from July 12, 2020 to December 31, 2021. Manitoba data extracted: 2021-08-17.



The number of patients in ICU (red circles) remain compatible with the **Controlled** scenario.

The black circles show ICU patients who have COVID-19 and are infectious. The red circles show COVID-19-related (infectious and non-infectious) patients in provincial ICUs and the green circles show all COVID-19-related cases in ICU regardless if they are in the province or have been transferred out-of-province for ICU care.

While it is impossible to accurately predict the precise start of a fourth wave of COVID or the start of influenza season, it is reasonable to assume a resurgence of influenza in the fall will overlap in timing with an anticipated Wave 4 of COVID-19.

During the week of Jan. 5, 2020 (before COVID-19), an average of 63 ICU beds a day were occupied by patients for regular use, including influenza, trauma and surgery. However, COVID-19 bed use will be on top of regular use. Current COVID-19 modeling shows that ICU capacity needs could be heavily strained for COVID-19 alone within one month of the start of the fourth wave.

While additional beds can be added through cancelled surgeries and other service adjustments, this has negative effects on individuals seeking care. This graph shows that without higher levels of immunizations and without stricter public health measures, high levels of ICU occupancy could be expected this fall.

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