Projections of Hospital-based Healthcare Demand due to COVID-19 in Los Angeles County

March 8, 2021 Update

Los Angeles County DHS COVID-19 Predictive Modeling Team (alphabetical):

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Key Findings of the March 8th Update

- This update includes data on hospitalizations through March 5, 2021.
- The underlying statistical prediction model is unchanged from last week. The vertical scales on graphics have been changed to better show recent data.
- Key findings:
 - The number of <u>new</u> patients with COVID-19 requiring hospitalization each day across Los Angeles County has continued to decrease.
 - Based on the most recent available hospitalization data, information that reflects transmission that occurred in the second half of February, the estimated transmission number ("R") at that time was 0.79 with an uncertainty of 0.72 to 0.85. Our prior estimate for one week earlier was similar at 0.77 with an uncertainty of 0.72 to 0.82.
 - Based on the pattern in hospitalizations, we expect a decreasing demand for hospital-based services including <u>hospital beds</u>, <u>ICU beds</u>, and <u>ventilators</u> over the next 4 weeks, as well as decreasing daily mortality.

How Many in Los Angeles are Infectious to Others?

- The DHS team's epidemic model estimates the number of people in Los Angeles County who:
 - Are still susceptible to infection if exposed;
 - Have been exposed and are incubating, but not infectious;
 - Have COVID-19 and are infectious to others, though they may have no symptoms; and
 - Have had COVID-19 and either recovered or died, so they are no longer infectious
- The model suggests that about 0.08% (uncertainty of 0.05% to 0.14%) of everyone in Los Angeles County is <u>currently</u> infected and infectious to others.
- This would suggest about 1 in 1200 (between 1 in 2100 and 1 in 730) Los Angeles County residents are currently infectious to others. One week ago, this estimate was 1 in 1100.
- Approximately 3 in every 8 persons in Los Angeles County has been infected with COVID-19 since the beginning of the pandemic.

Hospital New Patient Projections



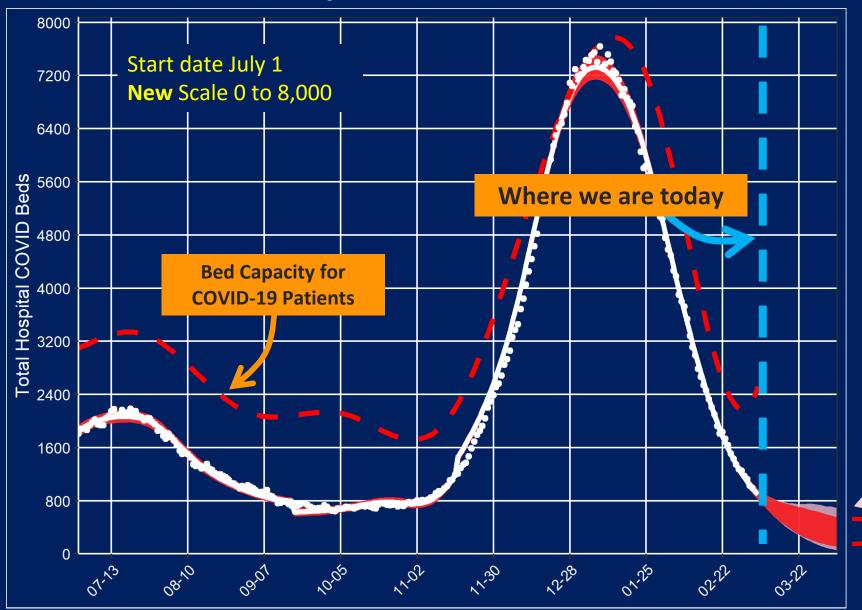
Additional uncertainty if transmission behavior varies

Effective Transmission Number "R"



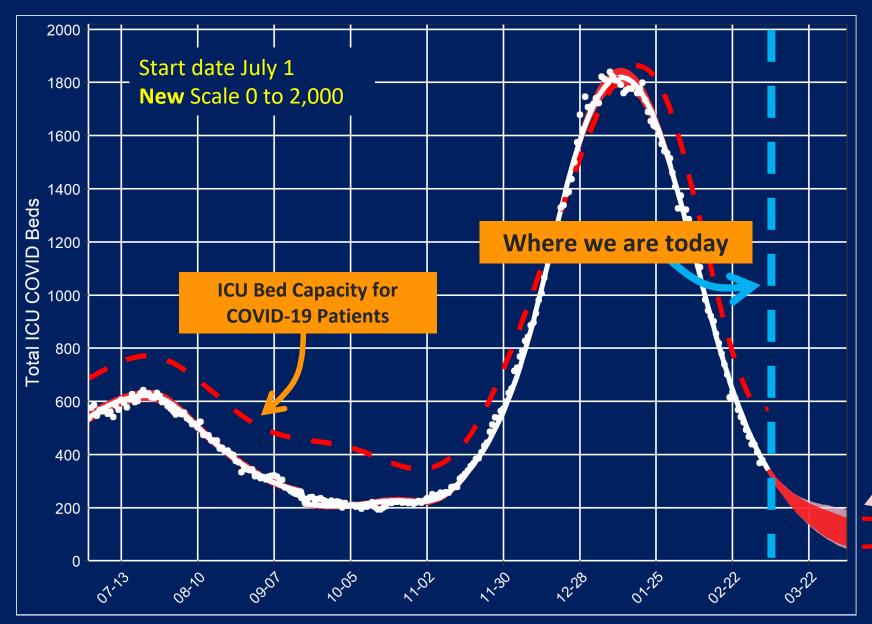
Note: The effective transmission number R is reduced by the partial herd immunity due to persons who have either experienced and recovered from COVID-19 or have been immunized.

Predictions of Hospital Bed Demand



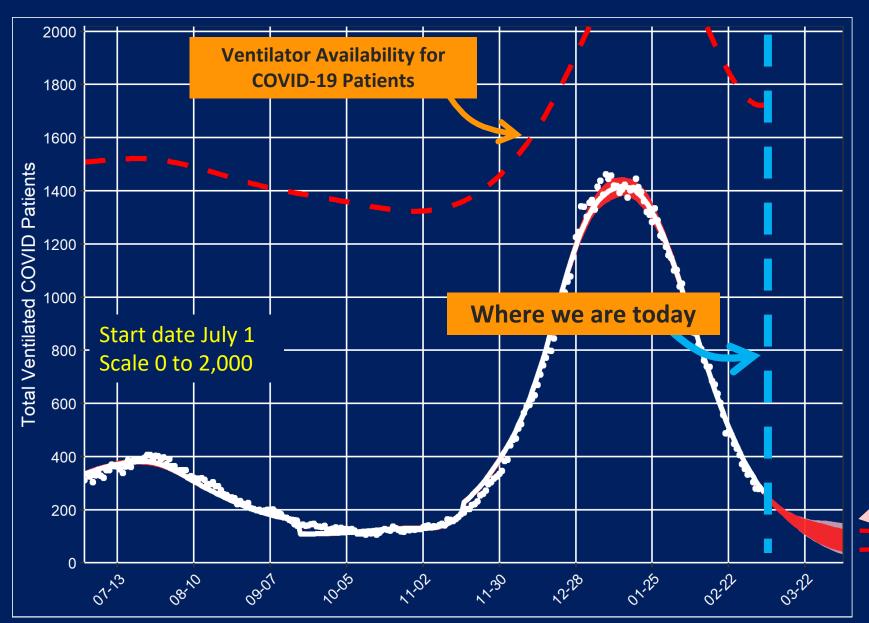
Additional uncertainty if transmission behavior varies

Predictions of ICU Bed Demand



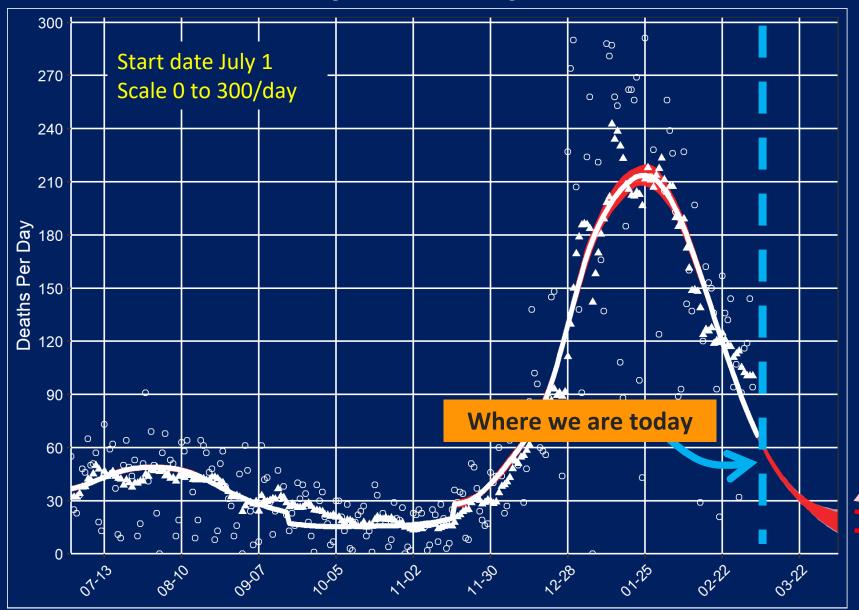
Additional uncertainty if transmission behavior varies

Predictions of Ventilator Demand



Additional uncertainty if transmission behavior varies

Predictions of Daily Mortality



O Daily reported deaths

▲ 7-day running average

Additional uncertainty if transmission behavior varies