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

March 1, 2021 Update

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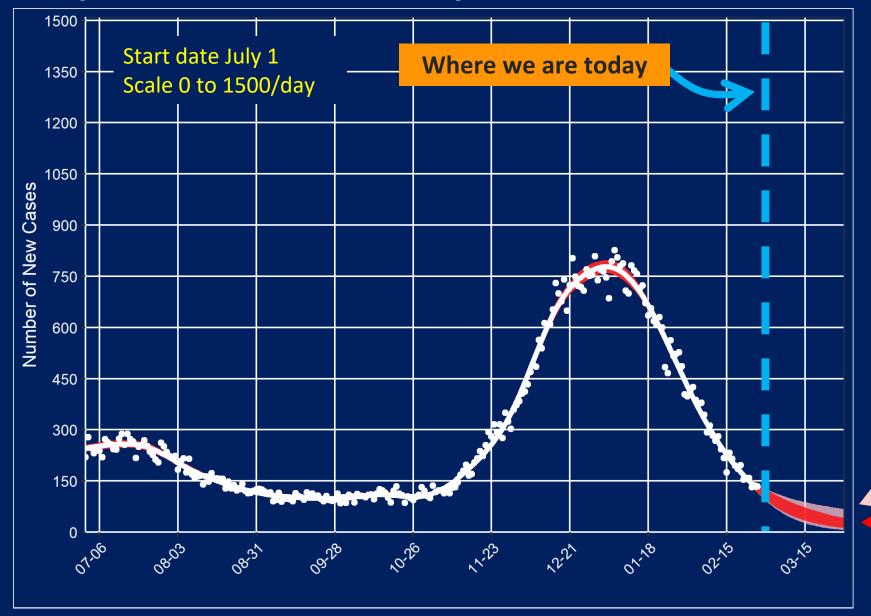
# Key Findings of the March 1st Update

- This update includes data on hospitalizations through February 26, 2021.
- The underlying statistical prediction model is unchanged from last week.
- 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 first half of February, the estimated transmission number ("R") at that time was 0.77 with an uncertainty of 0.72 to 0.82. Our prior estimate for one week earlier was virtually identical at 0.78 with an uncertainty of 0.71 to 0.83.
  - 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?

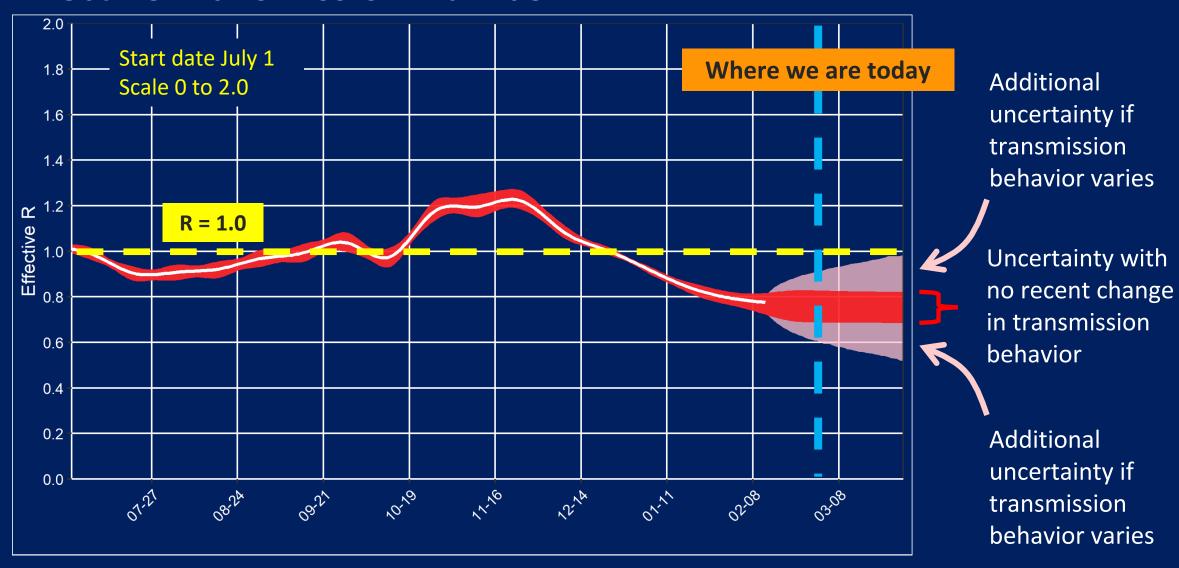
- The DHS team's epidemic model estimates the number of people in Los Angeles County who:
  - Are still susceptible to infection if exposed;
  - Have been exposed and are incubating, but not infectious;
  - Have COVID-19 and are infectious to others, though they may have no symptoms; and
  - Have had COVID-19 and either recovered or died, so they are no longer infectious
- The model suggests that about 0.09% (uncertainty of 0.06% to 0.13%) of everyone in Los Angeles County is <u>currently</u> infected and infectious to others.
- This would suggest about 1 in 1100 (between 1 in 1800 and 1 in 750) Los Angeles County residents are currently infectious to others. One week ago, this estimate was 1 in 730.
- 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**



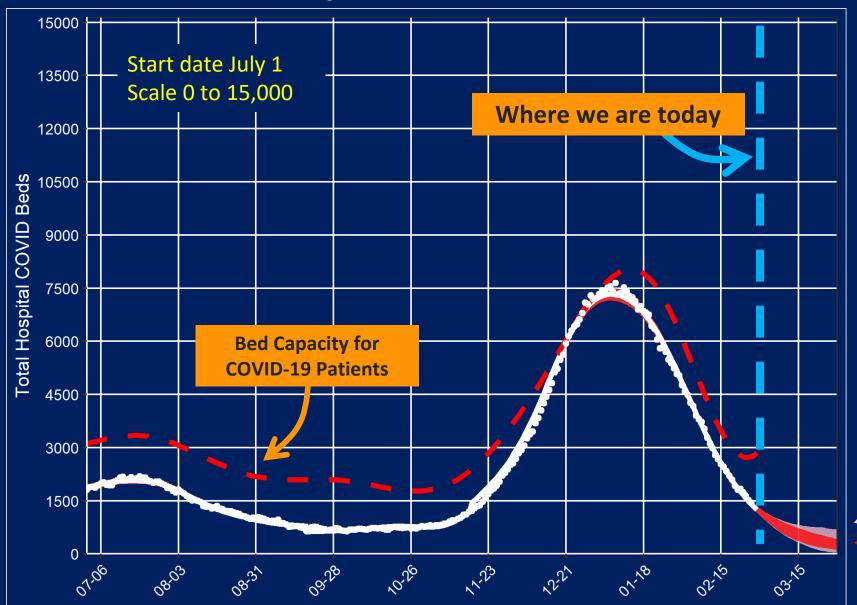
Additional uncertainty if transmission behavior varies

## **Effective Transmission Number "R"**



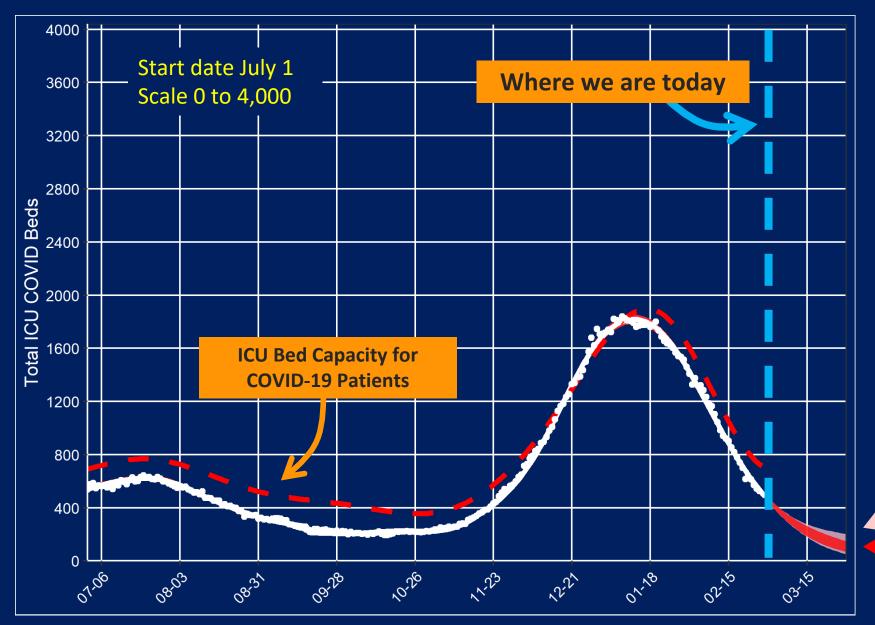
Note: We have adjusted the R that we present to account for the fraction of the population that is presumed to be immune to reinfection. At the beginning of the pandemic, this fraction was essentially zero so this would not have made any difference. But as more people have been infected, and are presumed to have immunity, we are presenting an R that includes this factor.

## **Predictions of Hospital Bed Demand**



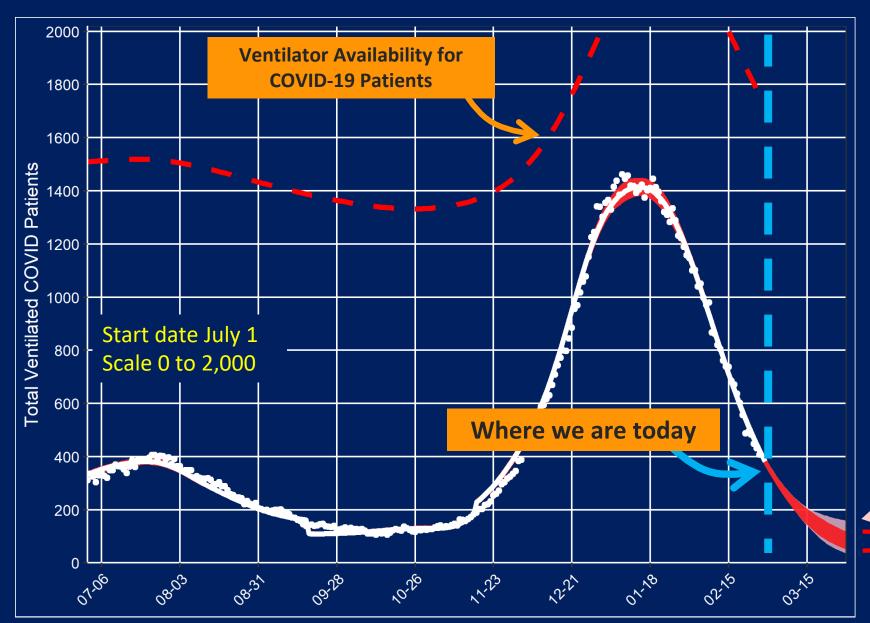
Additional uncertainty if transmission behavior varies

#### **Predictions of ICU Bed Demand**



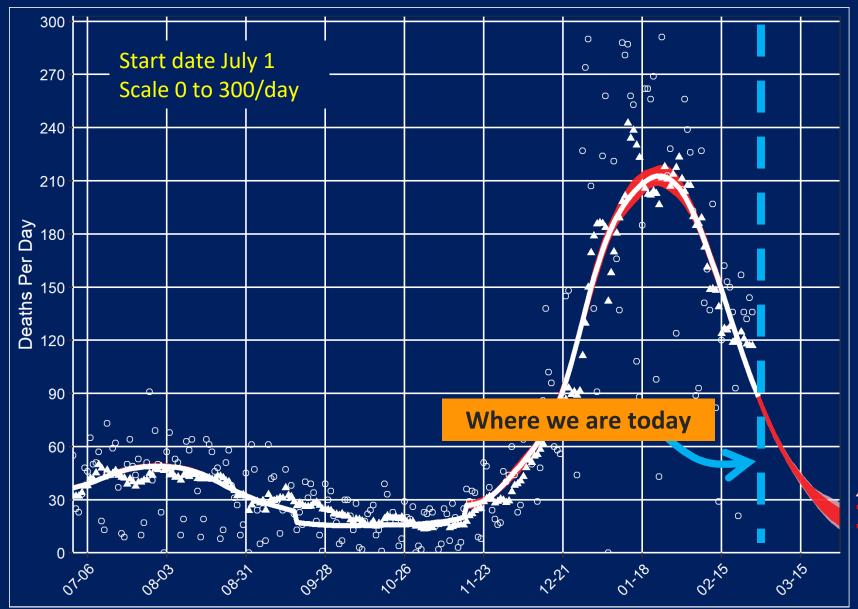
Additional uncertainty if transmission behavior varies

#### **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