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

March 22, 2021 Update

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

Tom Belin, PhD;[1] Andrea Bertozzi, PhD;[1] Nishchal Chaudhary, MS;[2] Todd Graves, PhD;[3]
Jeffrey Guterman, MD, MS;[4] M. Claire Jarashow, PhD, MPH;[5] Roger J. Lewis, MD, PhD [*Team Lead*];[4]
Joe Marion, PhD;[3] Frederic Schoenberg, PhD;[1] Megha Shah, MD, MPH, MS;[5]
Juliana Tolles, MD, MHS;[4] Elizabeth Traub, MPH;[5] Kert Viele, PhD;[3] Fei Wu, PhD[6]

1. University of California, Los Angeles
2. City of Long Beach
3. Berry Consultants, LLC, Austin, TX
4. Los Angeles County, Department of Health Services
5. Los Angeles County, Department of Public Health
6. Los Angeles County, Office of the Chief Information Officer

Health Services
LOS ANGELES COUNTY

Key Findings of the March 22nd Update

- This update includes data on hospitalizations through March 19, 2021.
- The underlying statistical prediction model is unchanged from last week.
- Key findings:
  - The daily number of newly hospitalized patients with COVID-19 across Los Angeles County has continued to decrease, but at an increasingly slow rate. This decrease in the rate of slowing reflects an increasing rate of transmission.
  - Based on recent hospitalization data, reflecting transmission that occurred around the beginning of March, the estimated transmission number ("R") at that time was 0.93 with an uncertainty of 0.85 to 1.04. This is higher than our estimate one week earlier of 0.87 with an uncertainty of 0.80 to 0.94.
  - Because the uncertainty in the estimated transmission number R includes values both below and above 1, it is uncertain if the number of hospitalizations will continue to decrease, be stable, or start to increase.

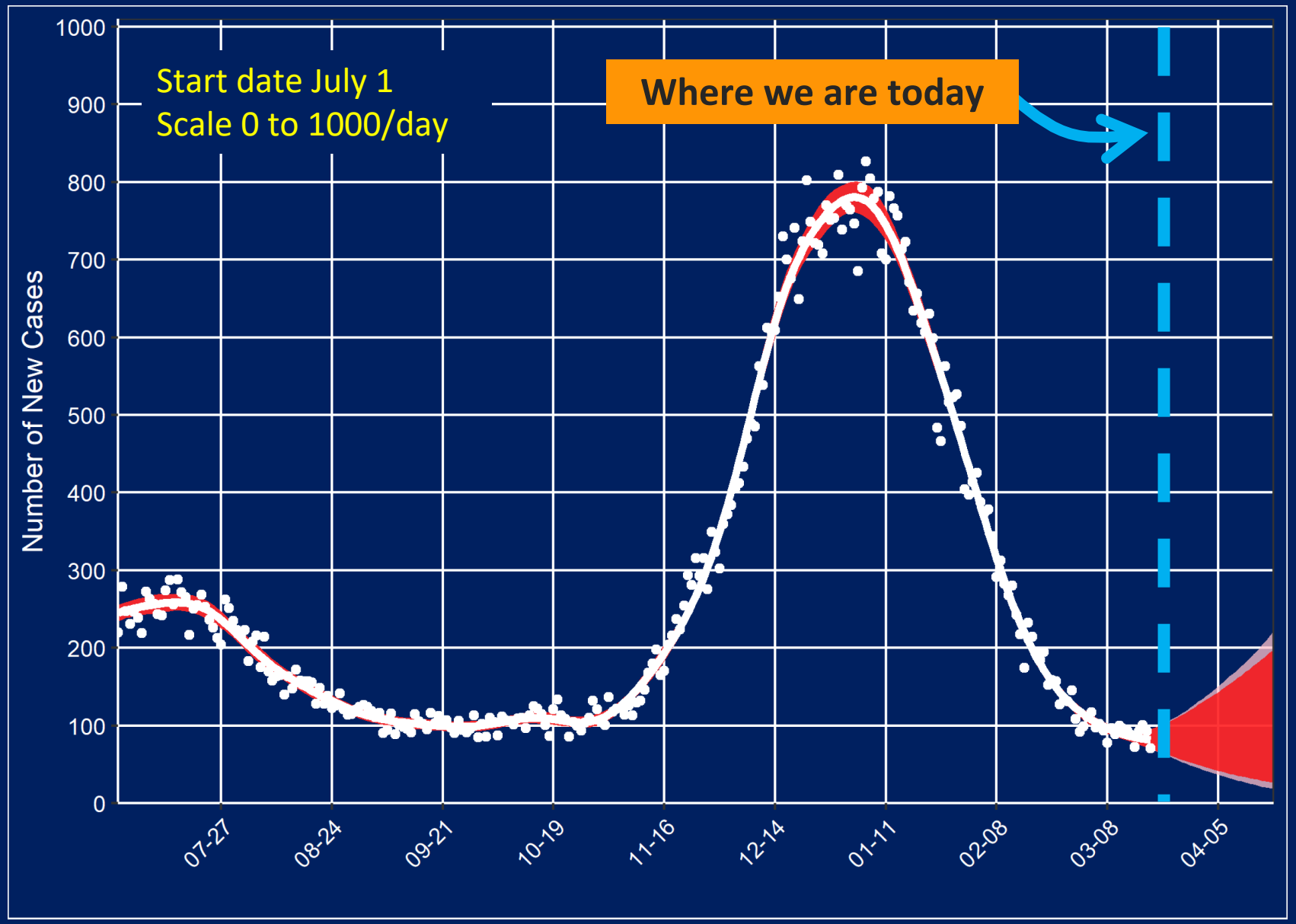
Key Findings of the March 22nd Update (continued)

- Key findings (continued):
  - Based on the pattern in hospitalizations, and the resulting estimate for R, the demand for hospital-based services including hospital beds, ICU beds, and ventilators over the next 4 weeks may continue to decrease, be stable, or start to increase. We expect daily mortality to decrease, be stable, or start to increase over the same time interval.
  - Even if hospitalizations begin to increase, we expect the supply of hospital beds, ICU beds, and ventilators over the next 4 weeks to be adequate.

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 0.12% (uncertainty of 0.07% to 0.20%) of everyone in Los Angeles County is currently infected and infectious to others.
- This would suggest about 1 in 830 (between 1 in 1500 and 1 in 500) Los Angeles County residents are currently infectious to others. One week ago, this estimate was 1 in 940.
- Approximately 3 in every 8 persons in Los Angeles County has been infected with COVID-19 since the beginning of the pandemic.

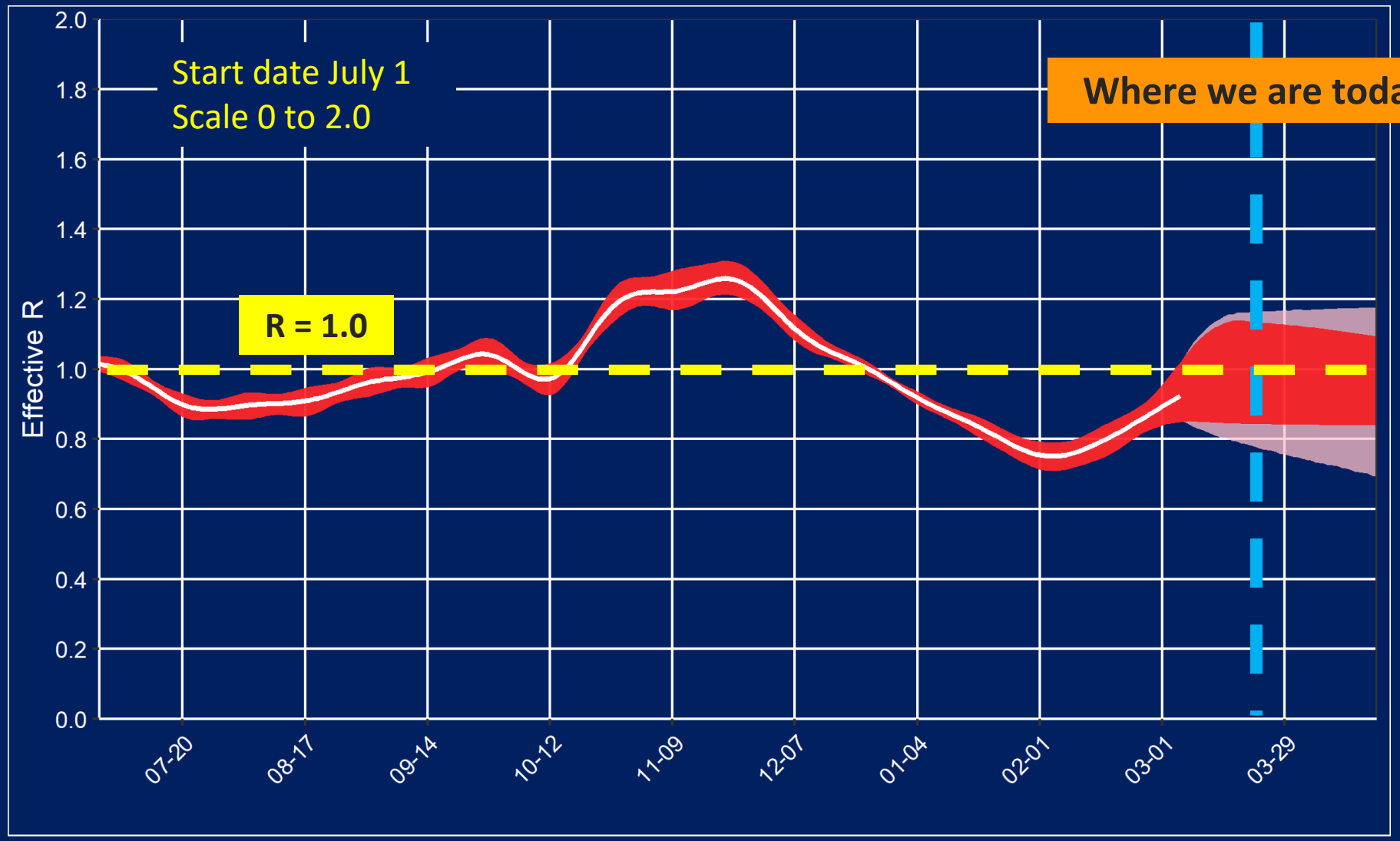
Hospital New Patient Projections



Additional uncertainty if transmission behavior varies

Uncertainty with no recent change in transmission behavior

Effective Transmission Number “R”



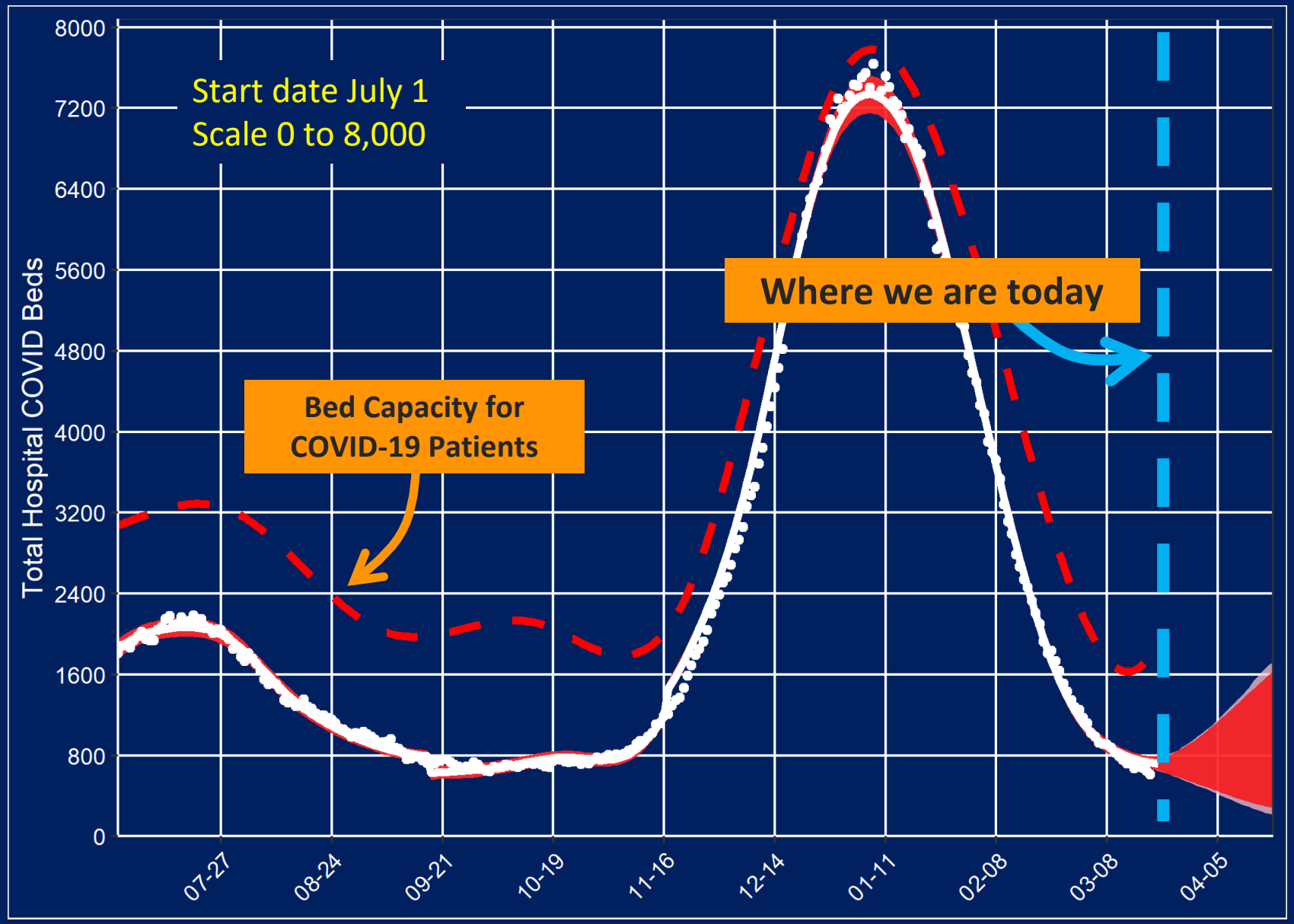
Additional uncertainty if transmission behavior varies

Uncertainty with no recent change in transmission behavior

Additional uncertainty if transmission behavior varies

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



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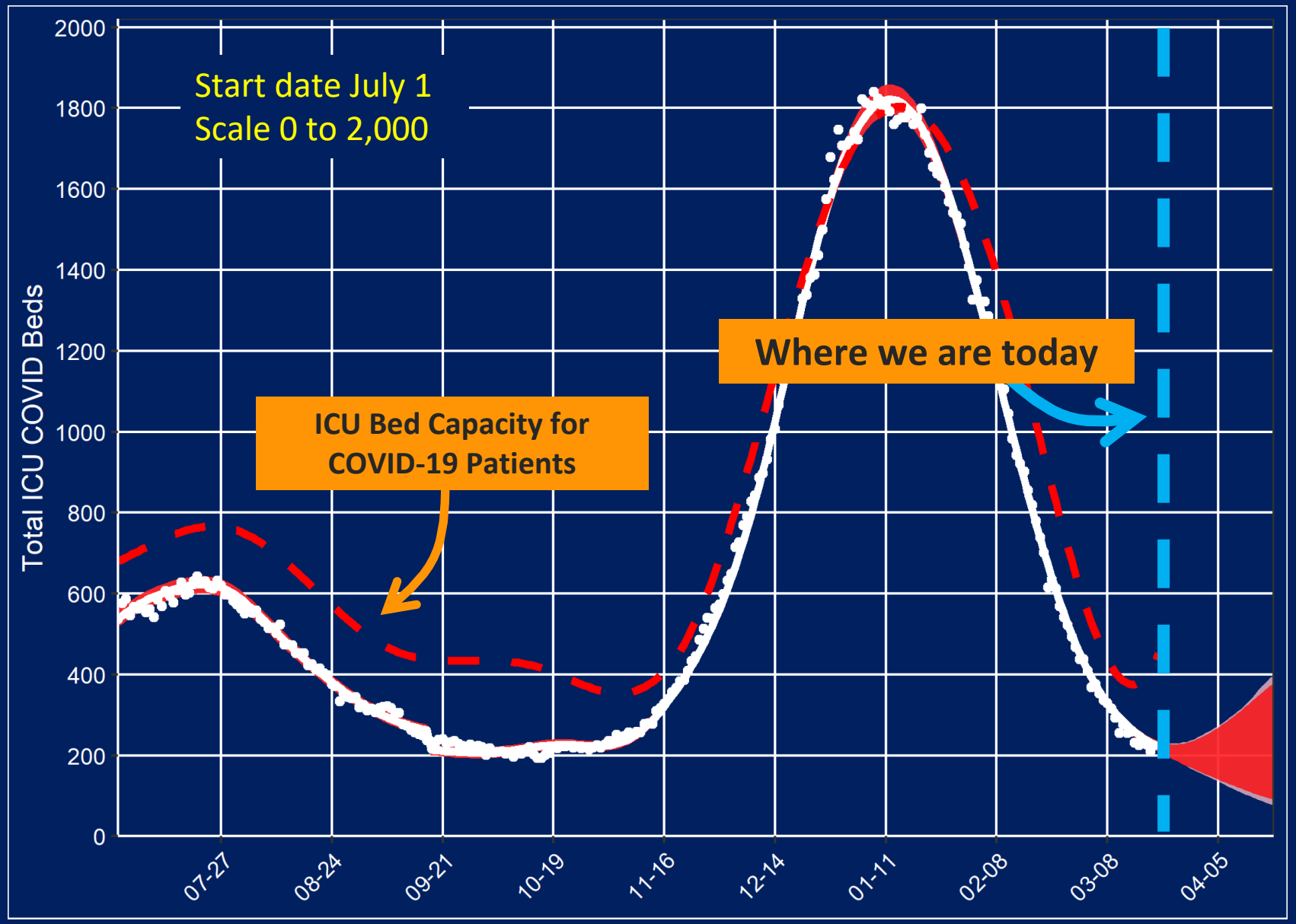
Predictions of ICU Bed Demand



Additional uncertainty if transmission behavior varies

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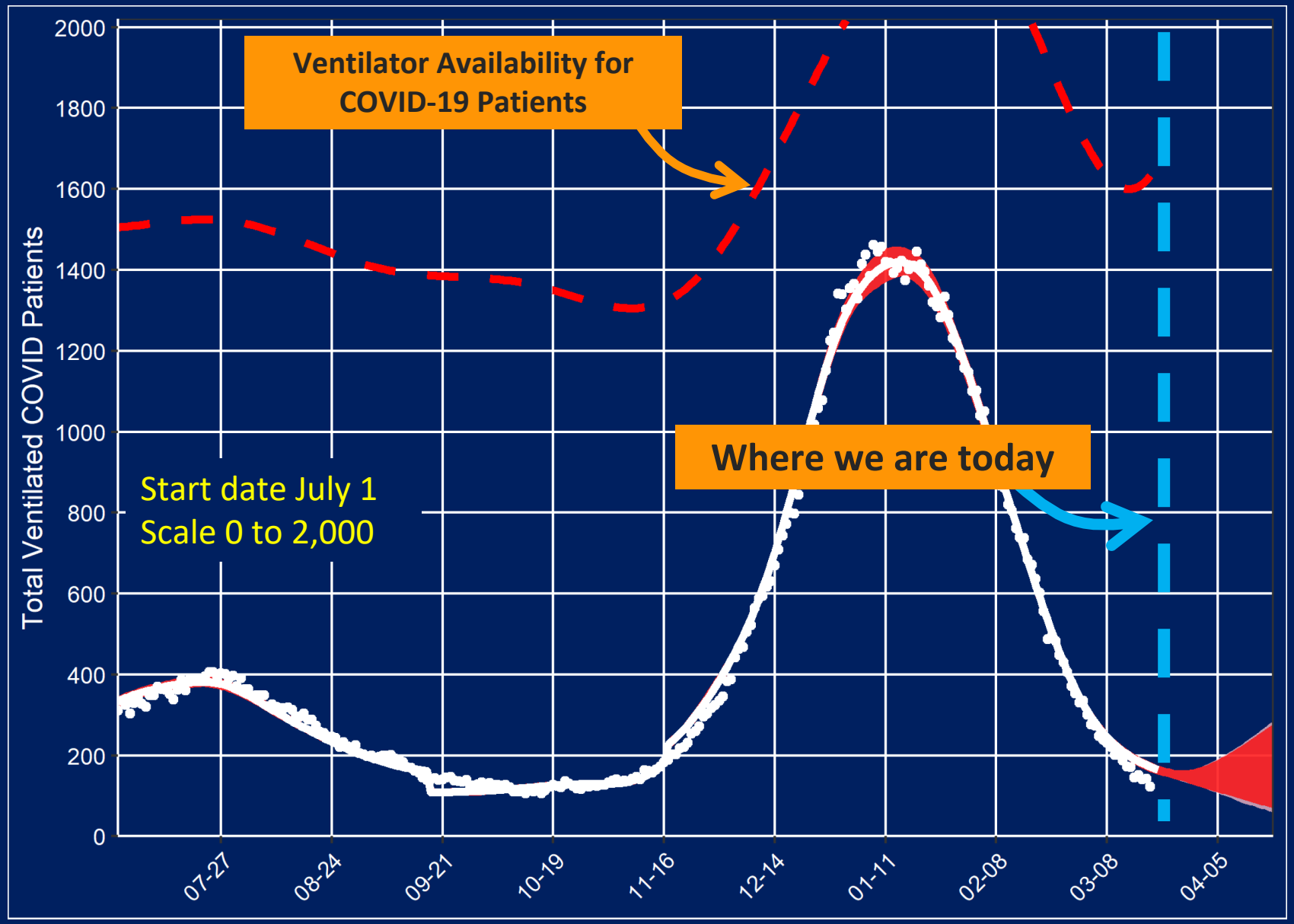
Predictions of Ventilator Demand



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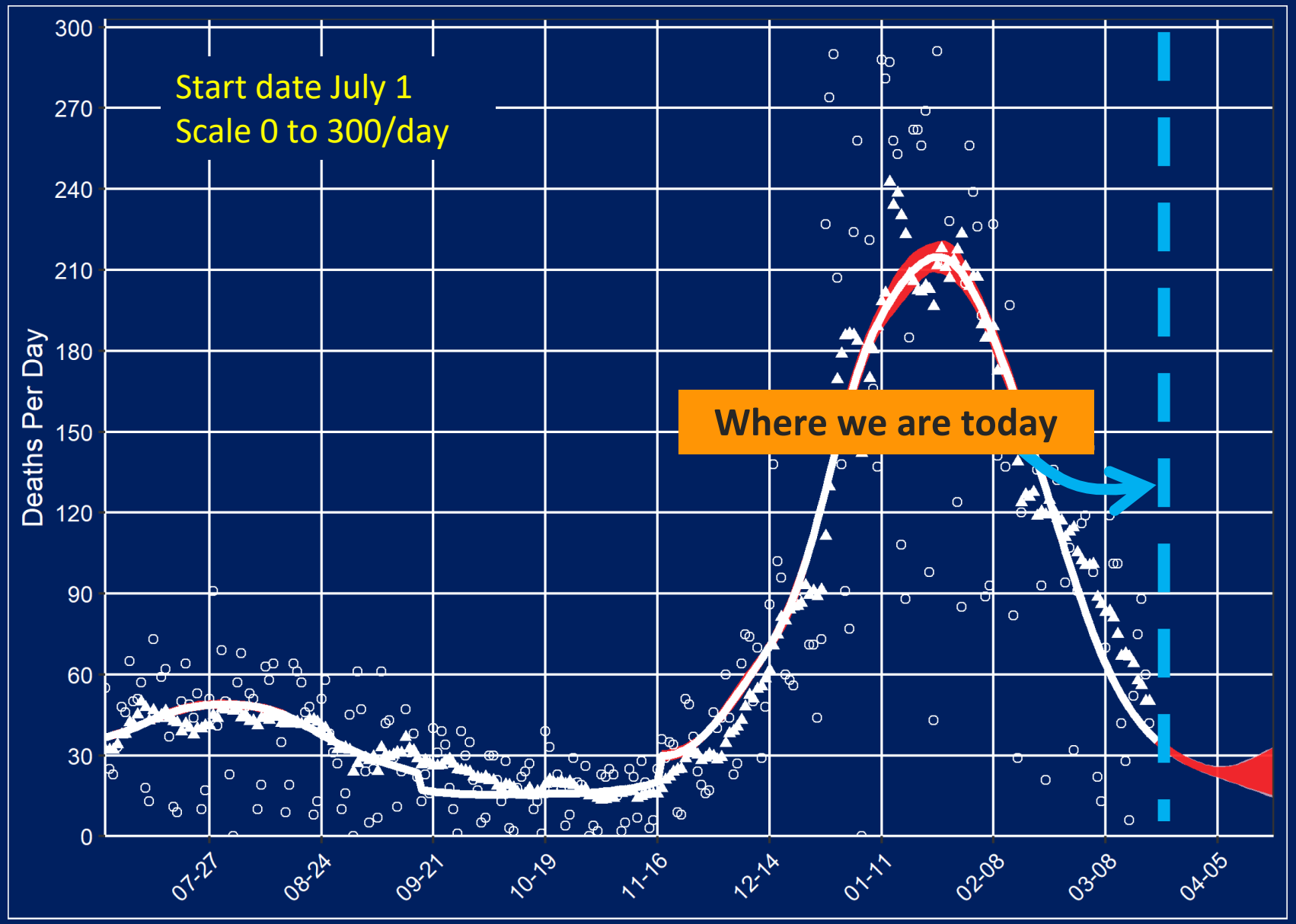
Predictions of Daily Mortality



○ Daily reported deaths

▲ 7-day running average

Additional uncertainty if transmission behavior varies

Uncertainty with no recent change in transmission behavior