

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

**June 10, 2020 Update**

## County DHS COVID-19 Predictive Modeling Team:

Roger J. Lewis, MD, PhD;<sup>1</sup> Juliana Tolles, MD, MHS;<sup>1</sup> M. Claire Jarashow, PhD, MPH;<sup>2</sup> Fei Wu, PhD;<sup>3</sup> Joe Marion, PhD;<sup>4</sup> Kert Viele, PhD;<sup>4</sup> Todd Graves, PhD;<sup>4</sup> Henry Shin;<sup>1</sup> Frederic Schoenberg, PhD;<sup>5</sup> Andrea Bertozzi, PhD<sup>5</sup>

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

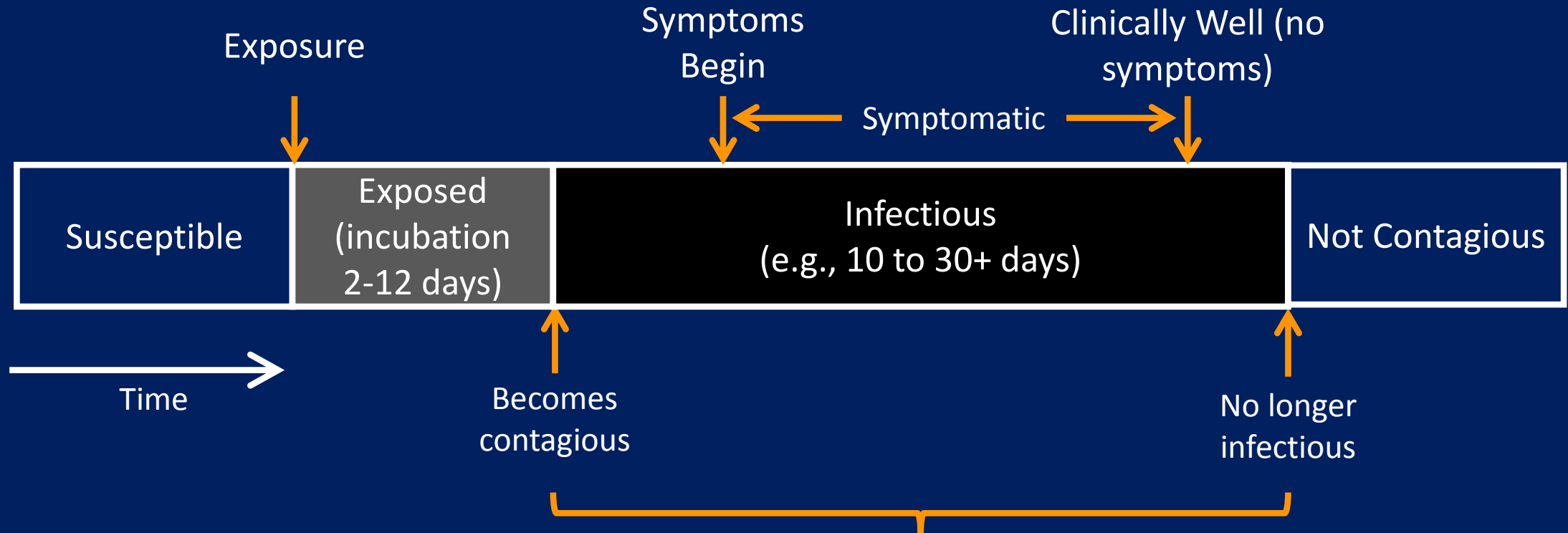


# Key Findings of the June 10<sup>th</sup> Update

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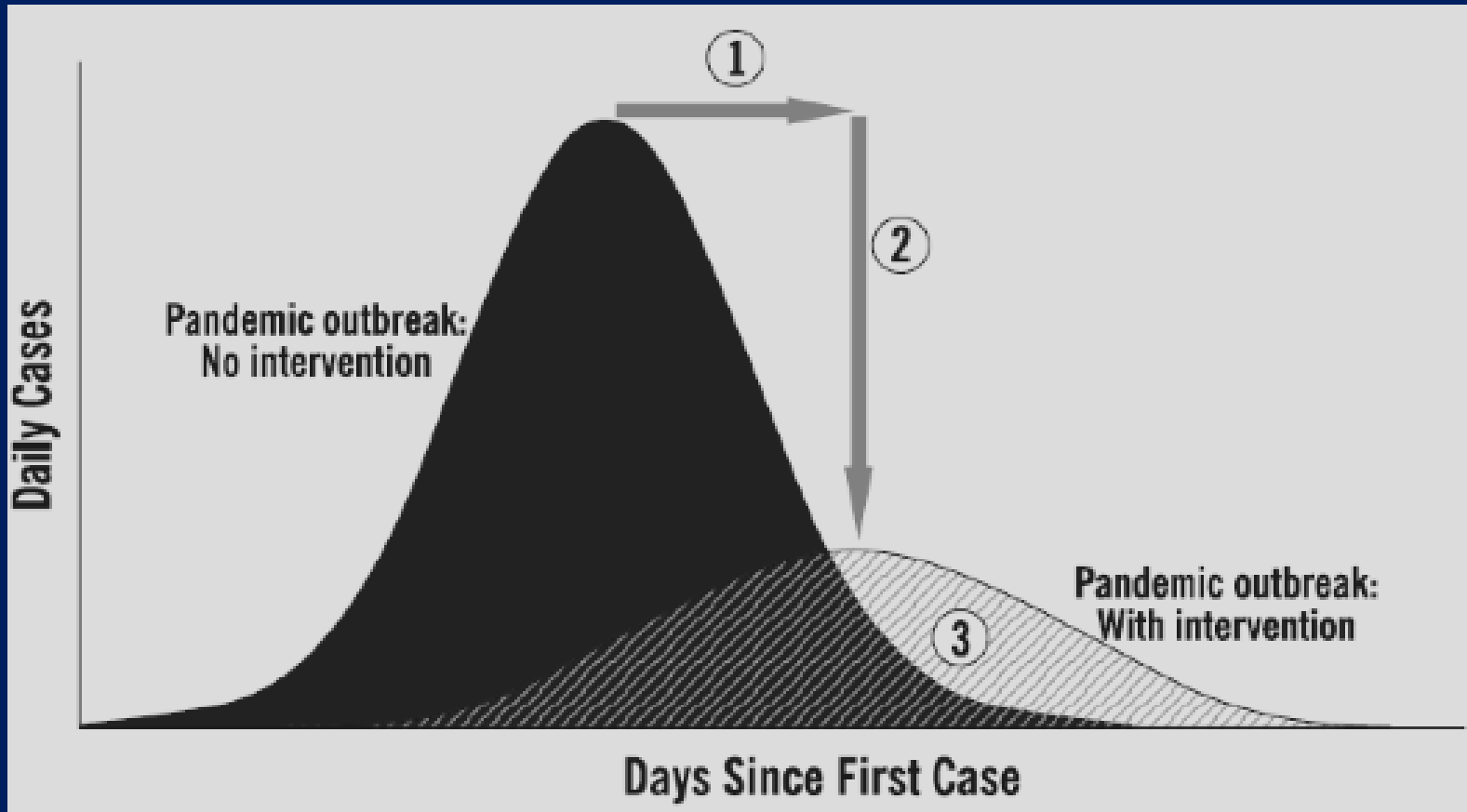
- This update includes data on hospital visits and volume through June 8, 2020.
- The model allows for changes in transmission associated with relaxation of physical distancing requirements. The total number of persons infected during the epidemic, assuming differences in future transmission, is determined through December 1, 2020.
- Key findings:
  - The overall volume of hospital-based care for patients with COVID-19 appears generally stable or slightly up trending. This up trending is within the range of uncertainty of the prior predictions.
  - Prior to the relaxation of physical distancing requirements, it appears the effective transmission number (“R”) was likely less than one and there was a slow decrease in cases over time.
  - While it is not yet known with certainty what effect the relaxation of physical distancing requirements will have on transmission of COVID-19, R appears to now be greater than one and slightly up trending. If transmission has increased, as this suggests, the model predicts a continued increase in hospital patient volume over the next 2-4 weeks.
  - The number of hospital beds and ventilators in Los Angeles County appears adequate to meet the projected need for the care of additional COVID-19 patients over the next 4 weeks. The number of ICU beds may become inadequate in 2 to 4 weeks.

# A Patient's Journey | COVID-19



Goal of physical distancing, public use of cloth face coverings, quarantine, isolation and similar actions is to reduce the number of new susceptible people exposed during this time

# Goal of Public Health Response

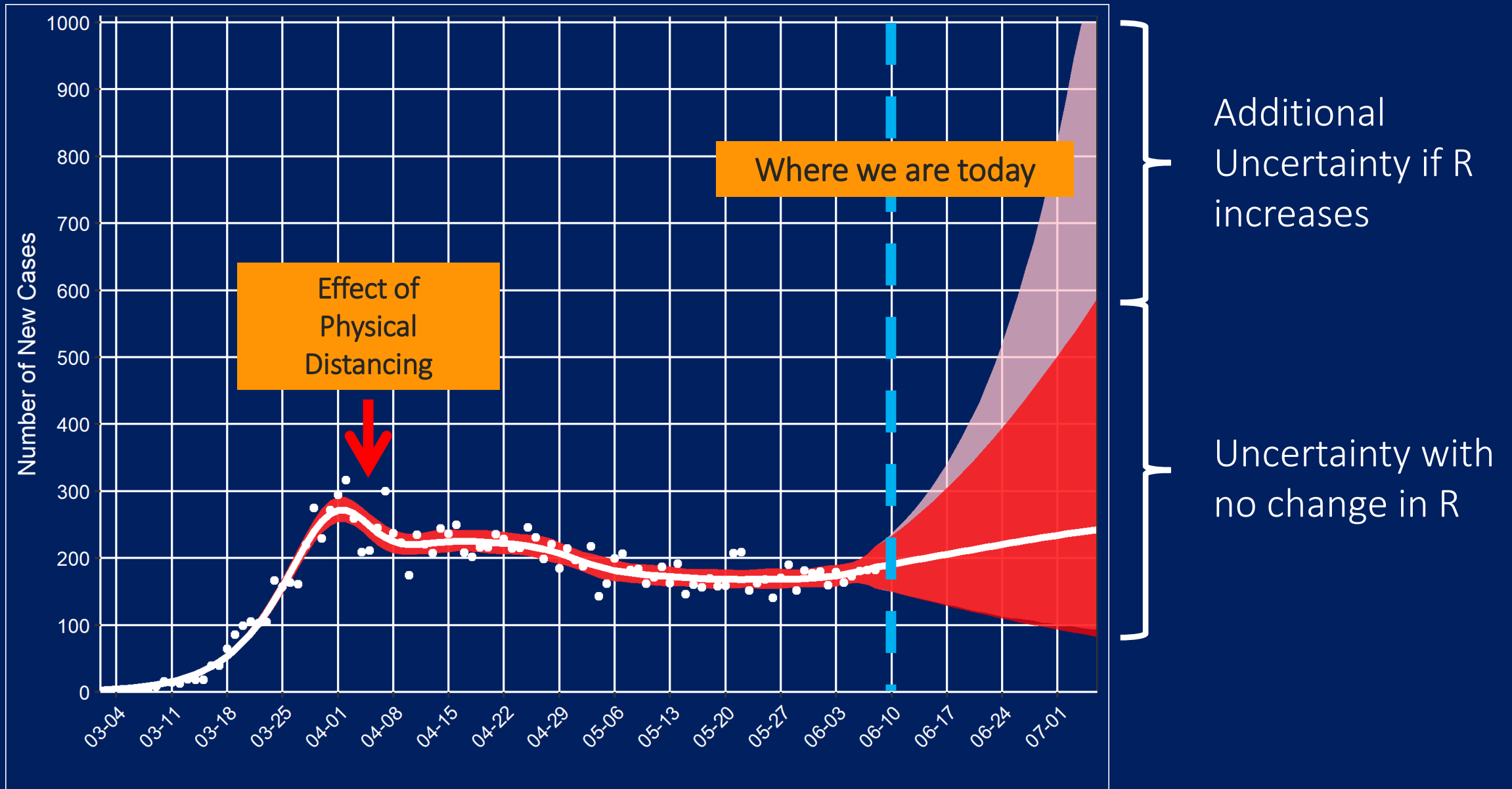


Effects of physical distancing & public health interventions:

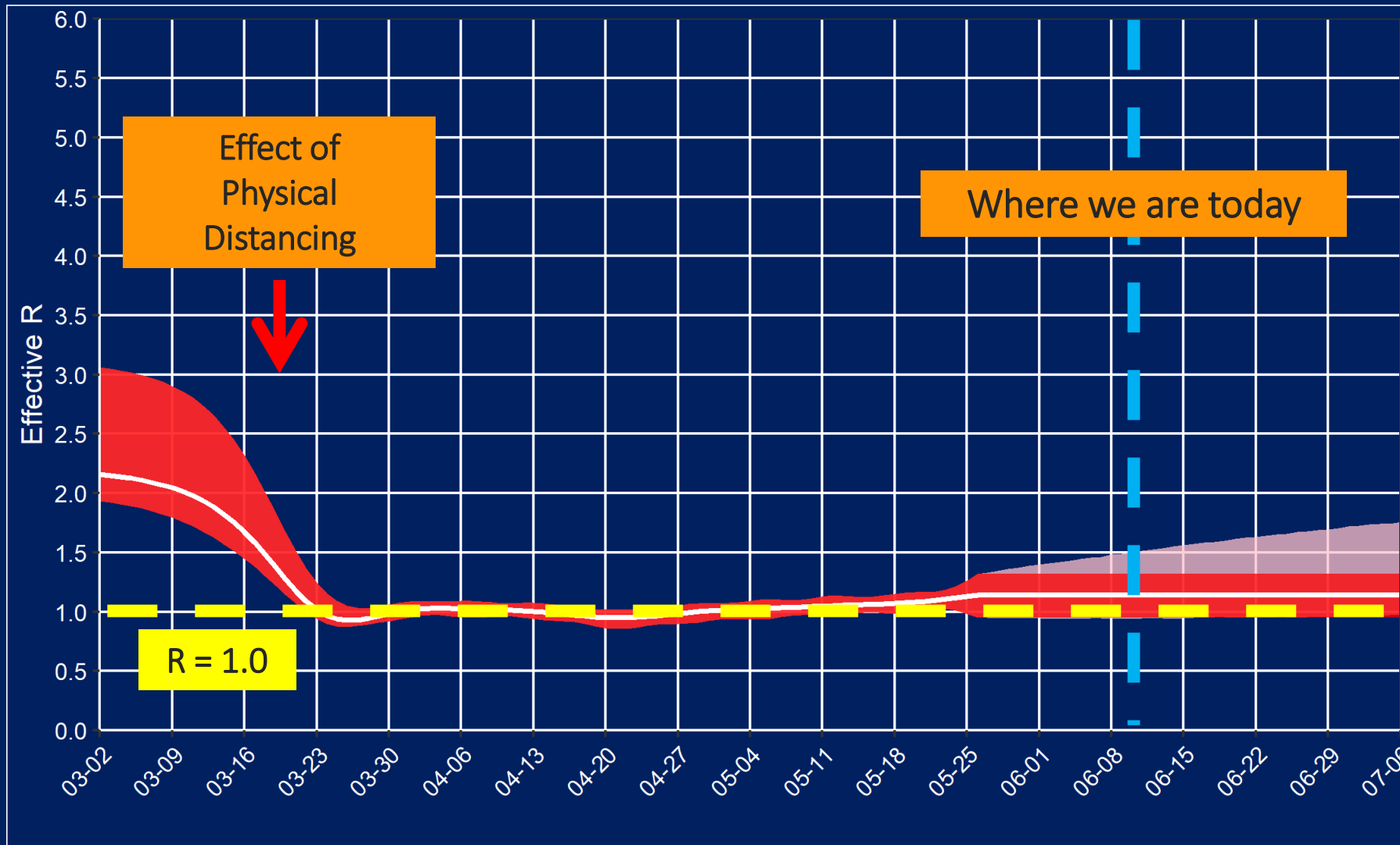
1. Delay peak in demand, increased time to prepare
2. Decrease peak demand, increased ability to surge
3. Decrease total population infected

Source: CDC 2007

# Hospital Patient Projections

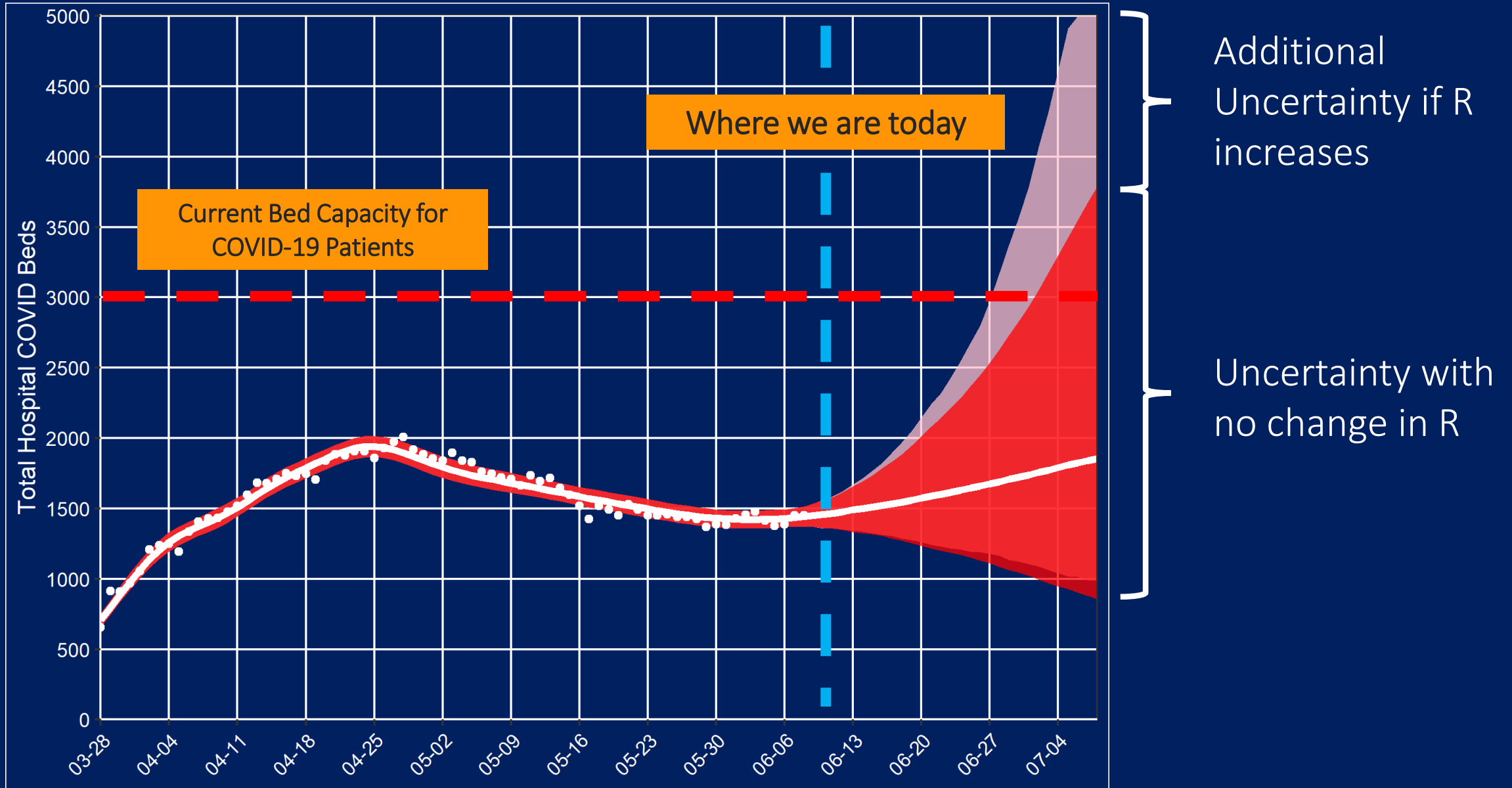


# Effective Transmission Number "R"

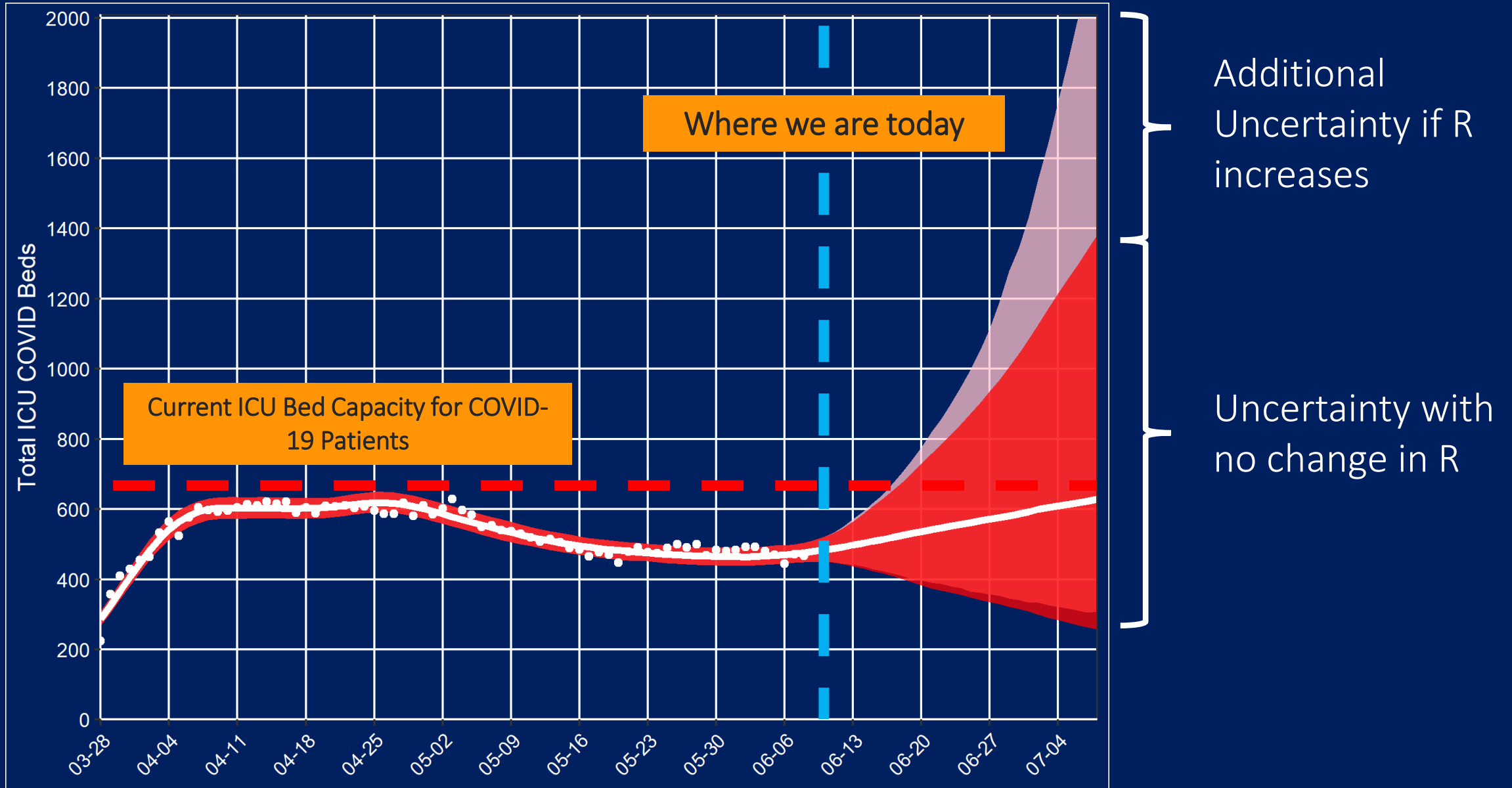


Additional  
Uncertainty if R is  
increasing  
Uncertainty with  
no change in R

# Predictions of Demand in LA County | Hospital Beds

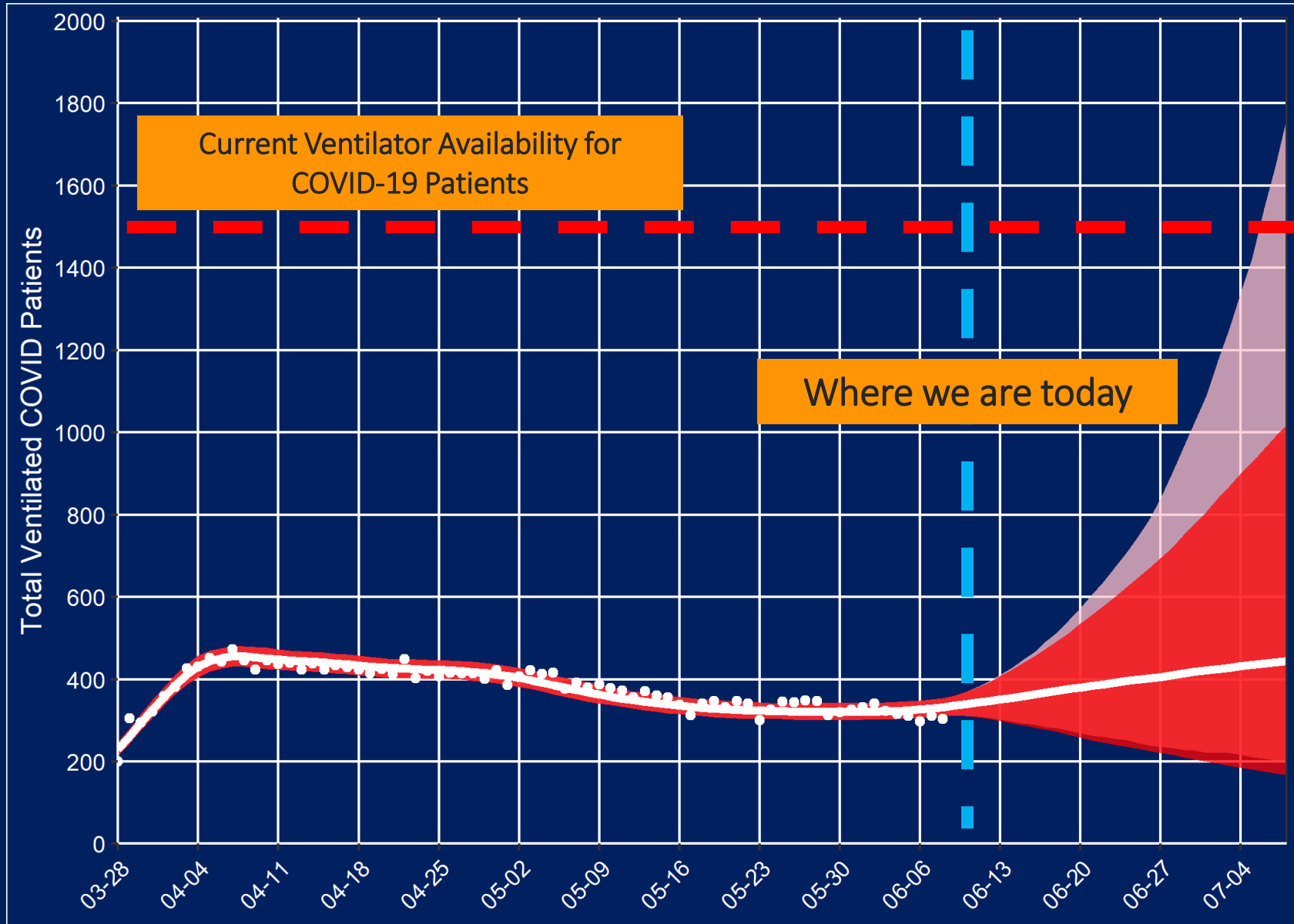


# Predictions of Demand in LA County | ICU Beds





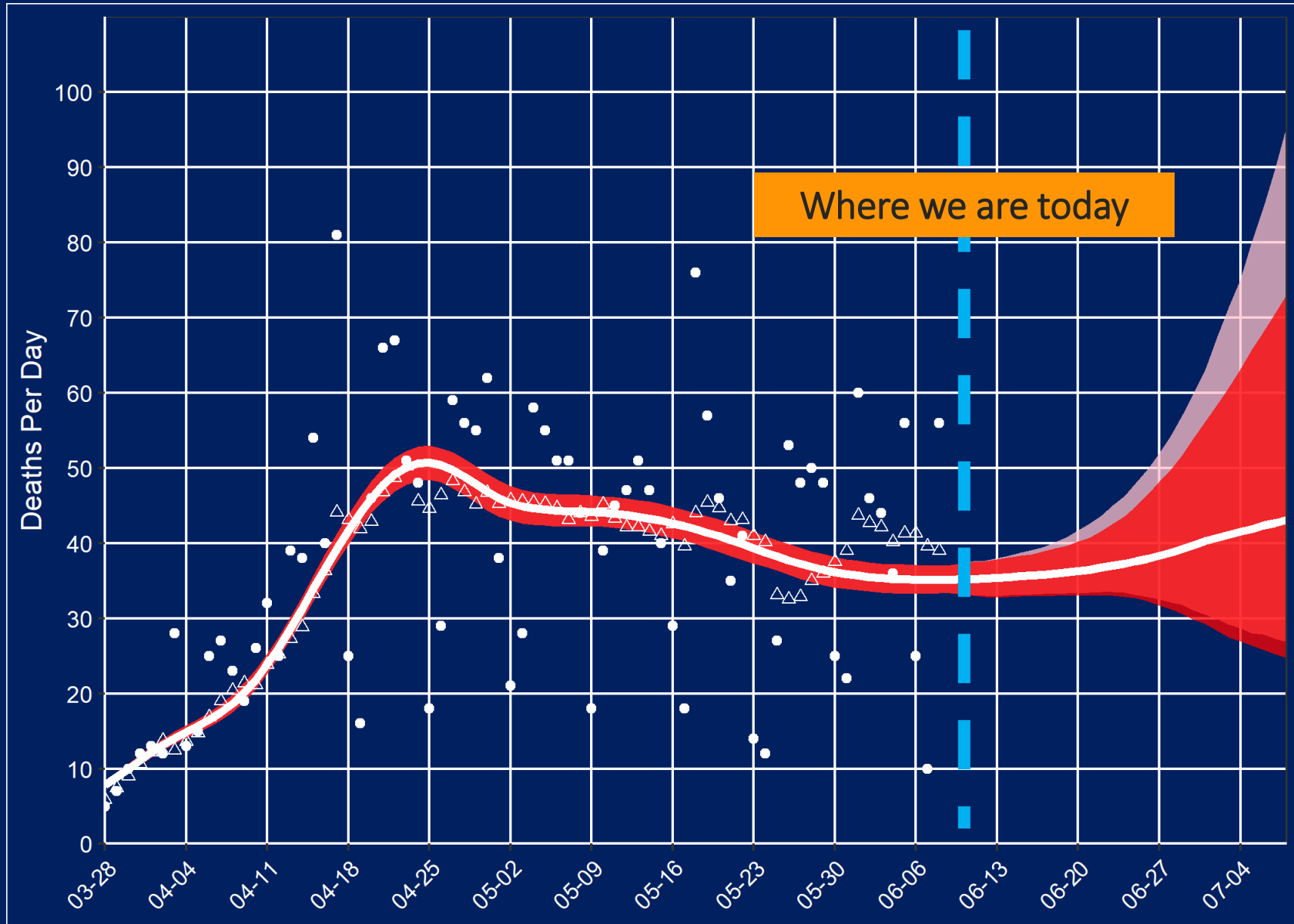
# Predictions of Demand in LA County | Ventilators



Additional  
Uncertainty if R  
increases

Uncertainty with  
no change in R

# Predictions of Daily Mortality LA County

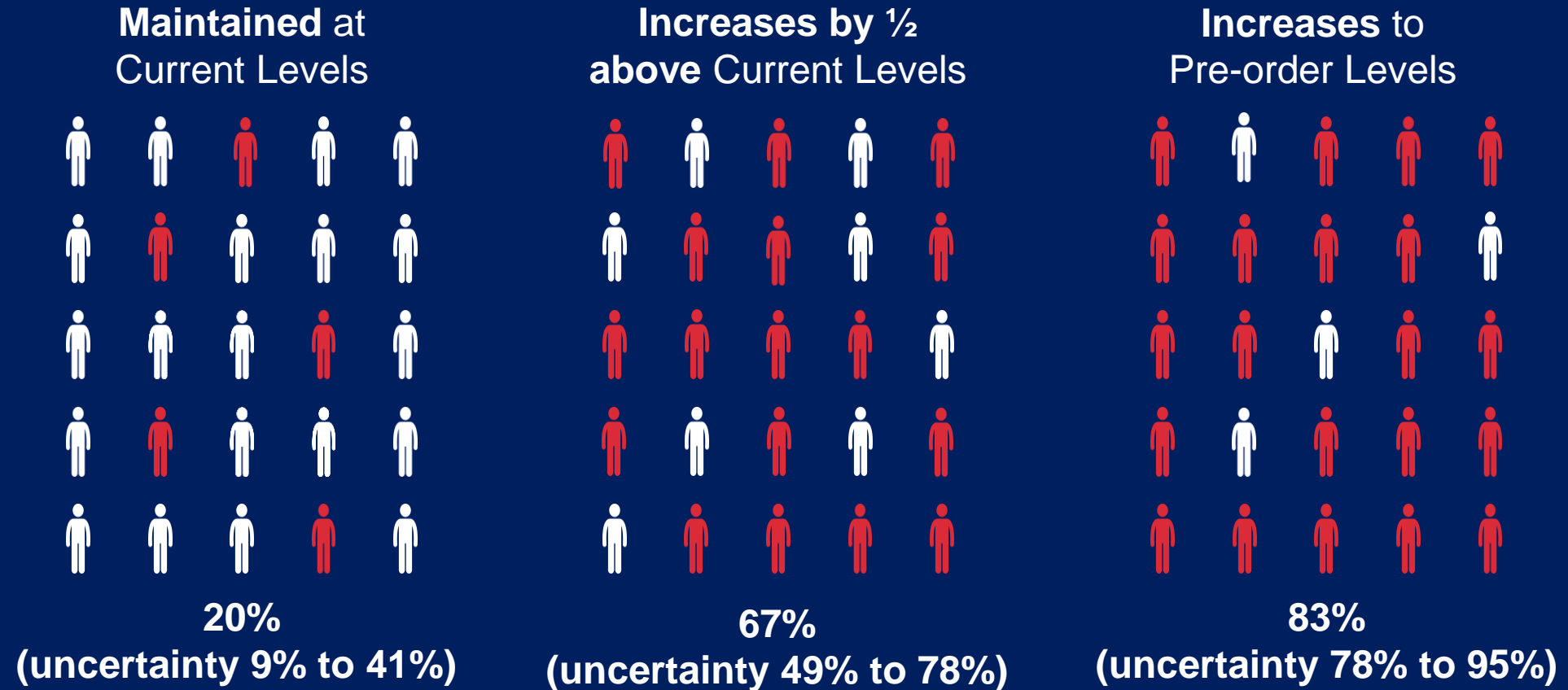


Additional  
Uncertainty if R  
increases

Uncertainty with  
no change in R

# Effect of Behaviors to Control Transmission

If transmission....



... of LA County residents will have been infected by December 1, 2020 \*

*\*(This includes adults and children)*