

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

May 29, 2020 Update

County DHS COVID-19 Predictive Modeling Team:

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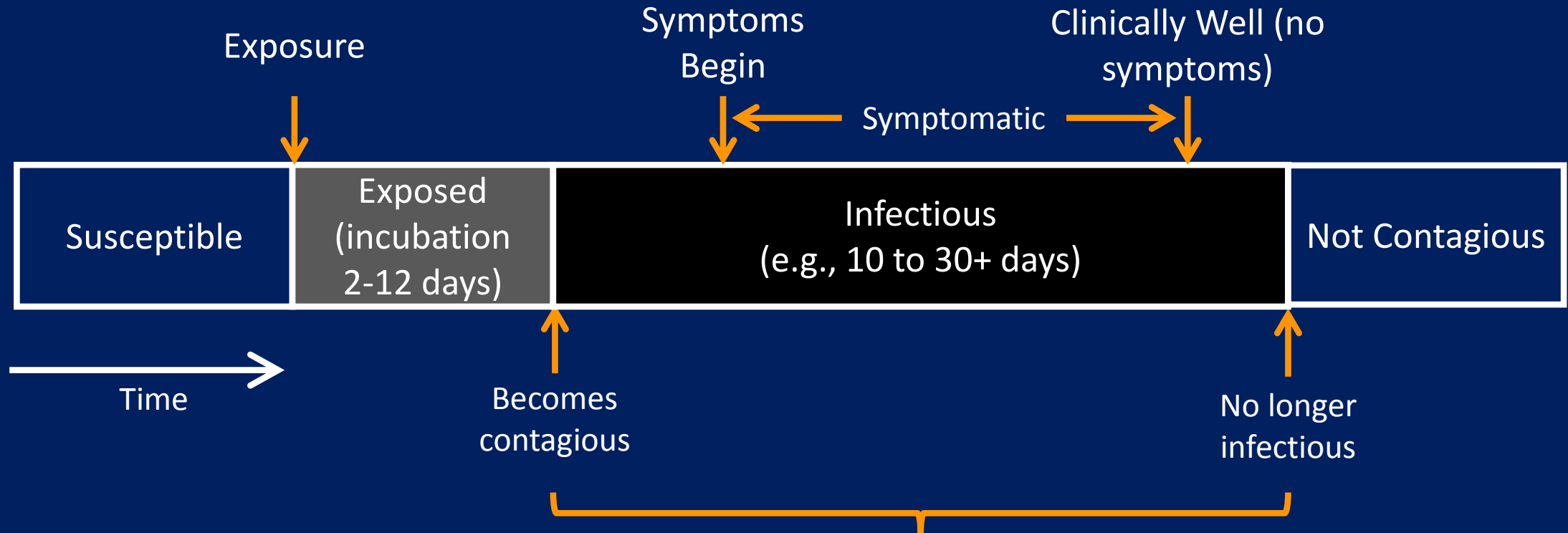
1. Los Angeles County, Department of Health Services
2. Los Angeles County, Department of Public Health
3. Los Angeles County, Office of the Chief Information Officer
4. Berry Consultants, LLC, Austin, TX
5. University of California, Los Angeles



Key Findings of the May 29th Update

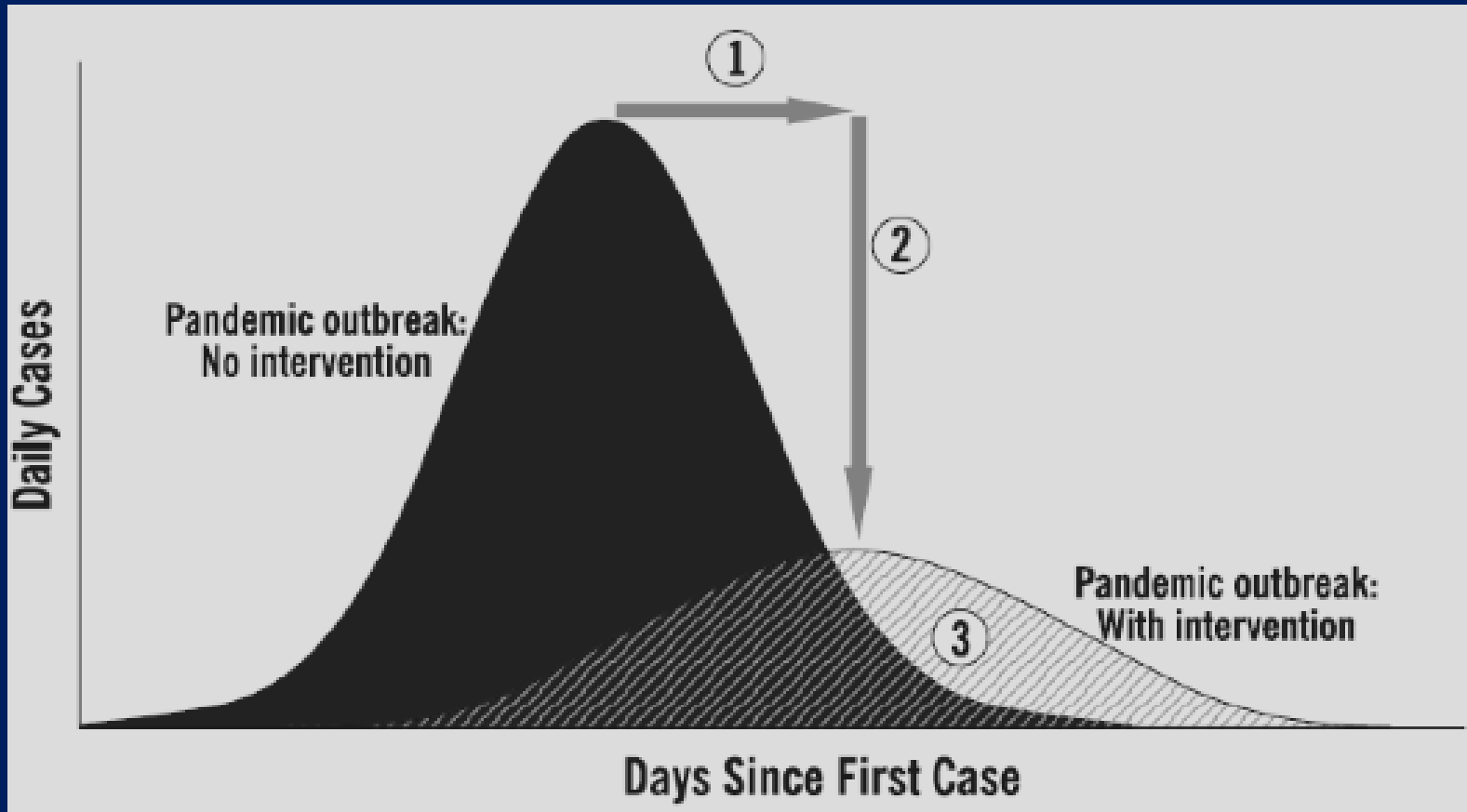
- This update includes data on hospital visits and volume through May 26, 2020.
- The model allows for changes in transmission associated with relaxation of physical distancing requirements. The total number infected during the epidemic, assuming different patterns in future transmission, is determined through December 1, 2020.
- Key findings:
 - The overall volume of hospital-based care for patients with COVID-19 appears generally stable or slightly down trending, within the model uncertainty, consistent with prior predictions;
 - Prior to the relaxation of physical distancing requirements, it appears the effective transmission number, commonly called “R,” was likely less than one. This value would be associated with a decrease in cases over time.
 - It is not yet known what effect the relaxation of physical distancing requirements will have on transmission of COVID-19. If transmission increases, modeling predicts that an increase in patient volume at healthcare facilities would occur after delay of approximately 2-4 weeks.
 - The number of hospital beds, ICU 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, unless there is a marked increase in transmission.

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

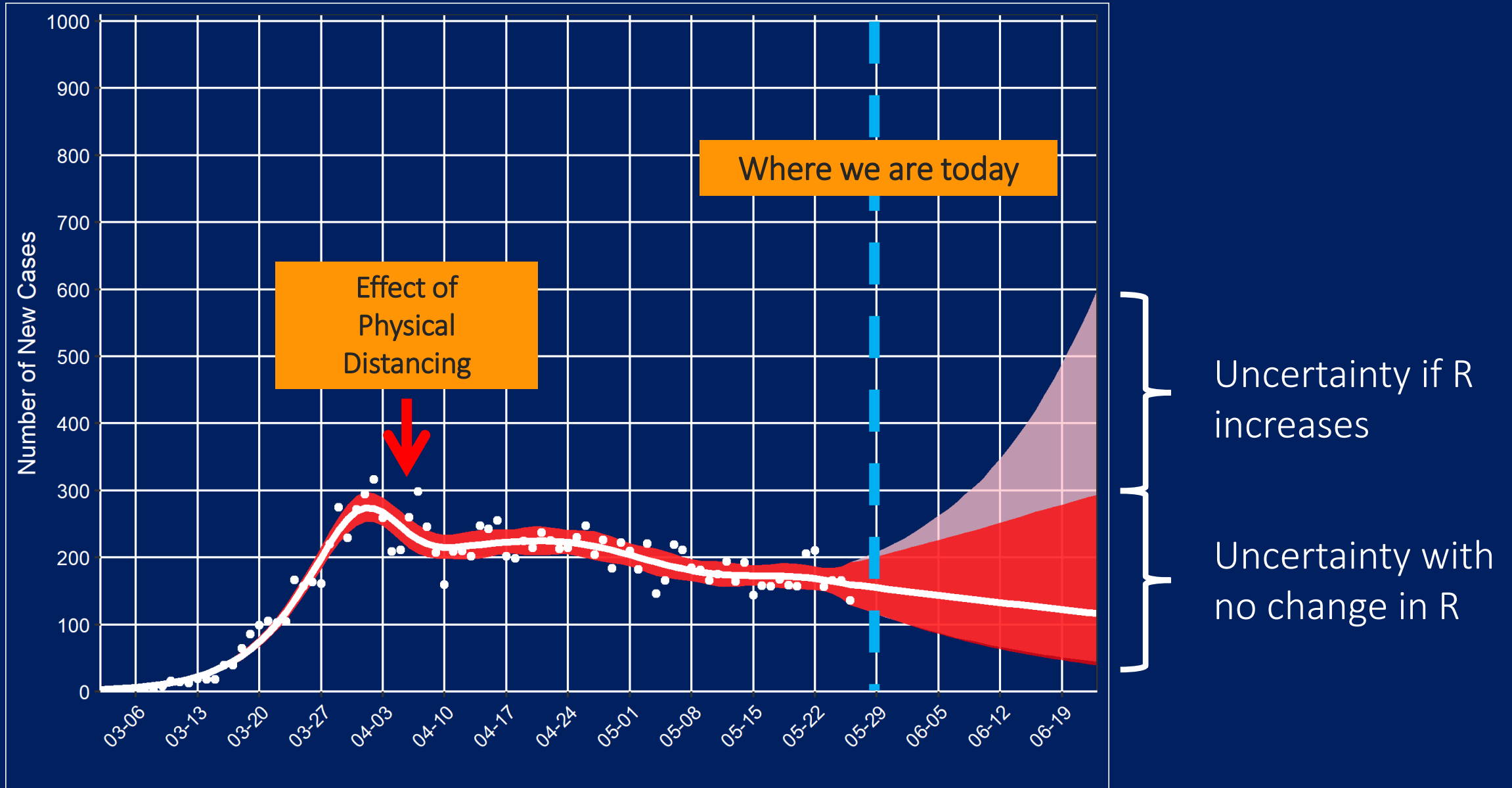


Effects of physical distancing & public health interventions:

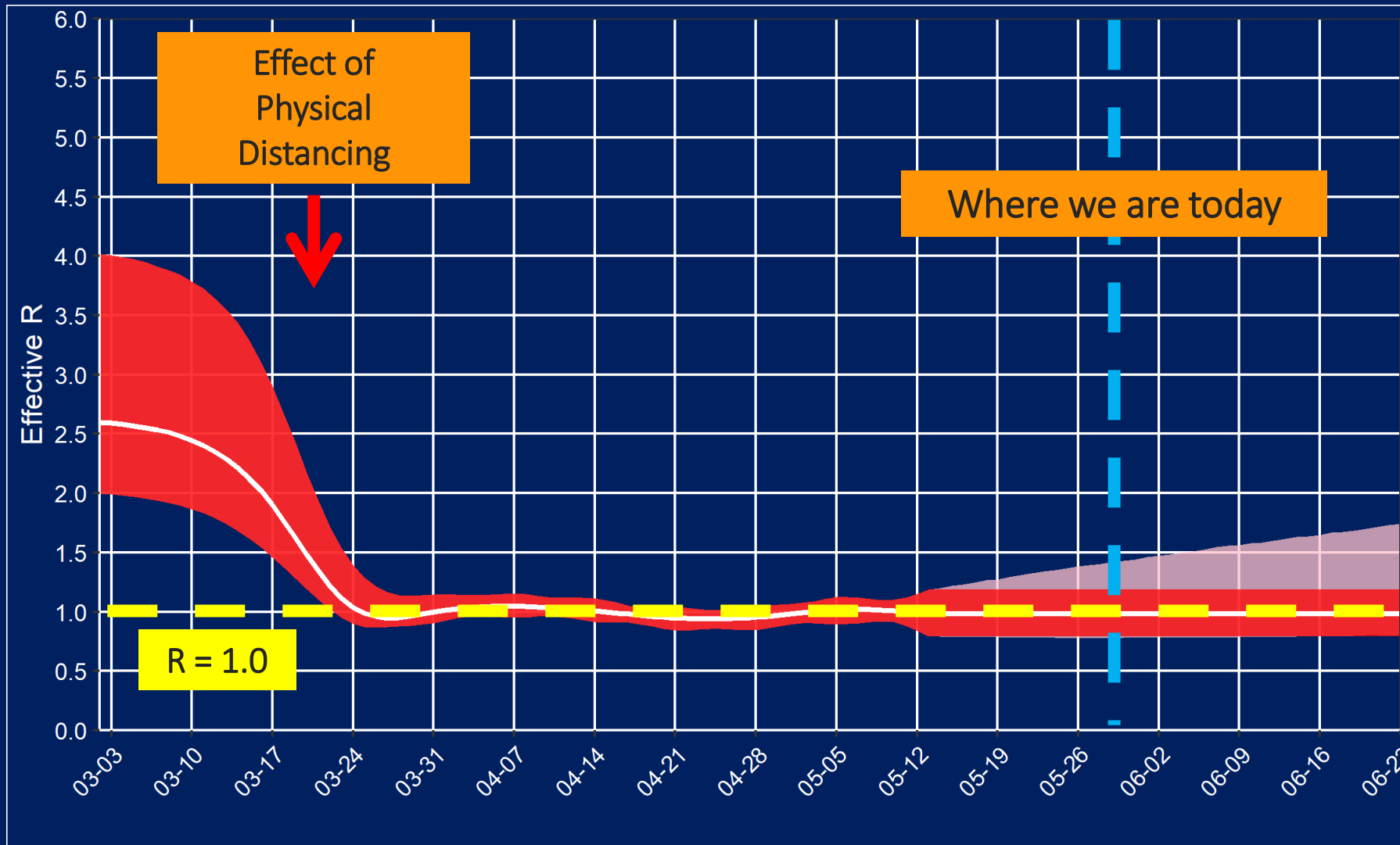
1. Delay peak in demand, increased time to prepare
2. Decrease peak demand, increased ability to surge
3. Decrease total population infected

Source: CDC 2007

Hospital Patient Projections

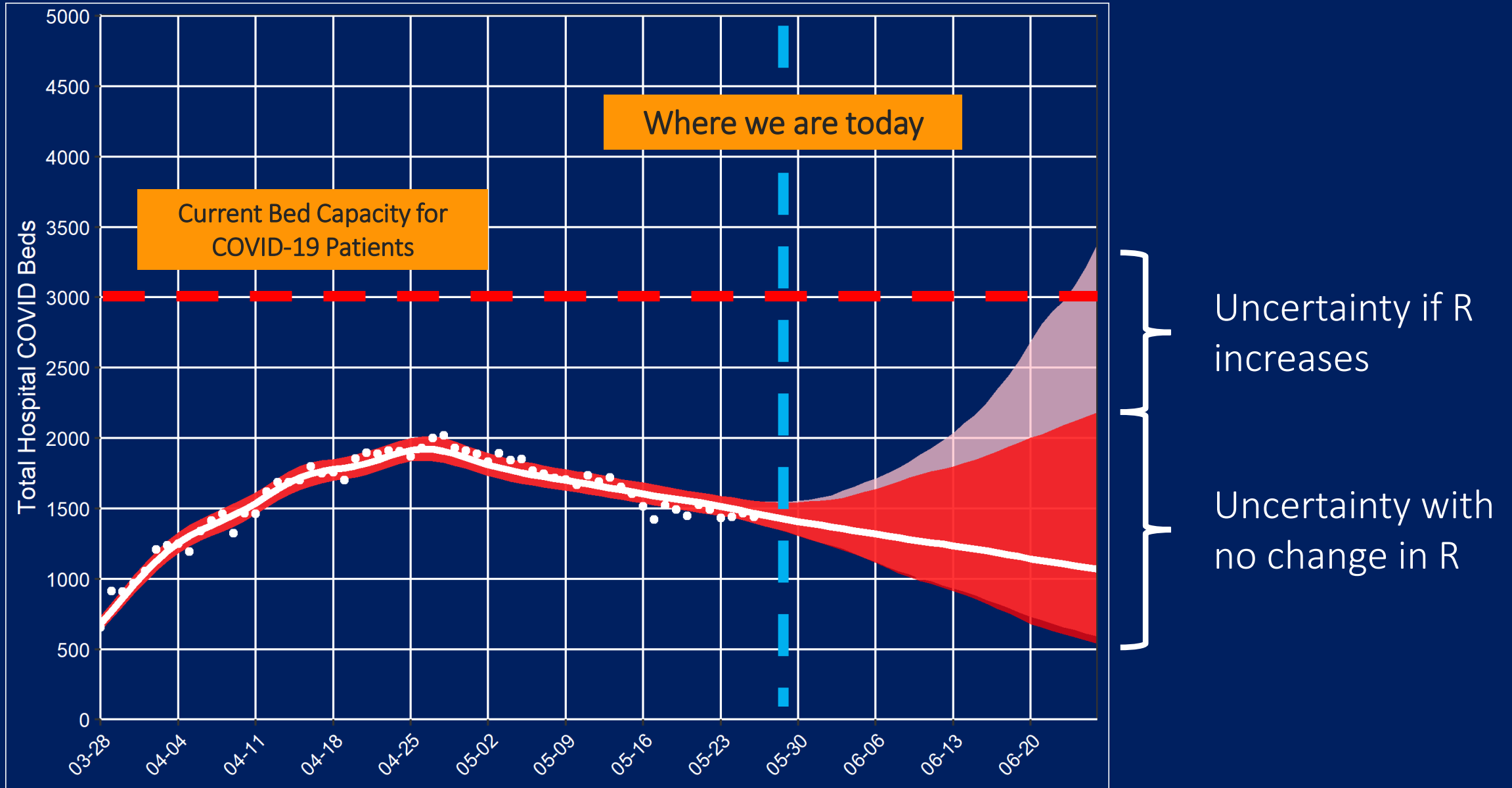


Effective Transmission Number "R"

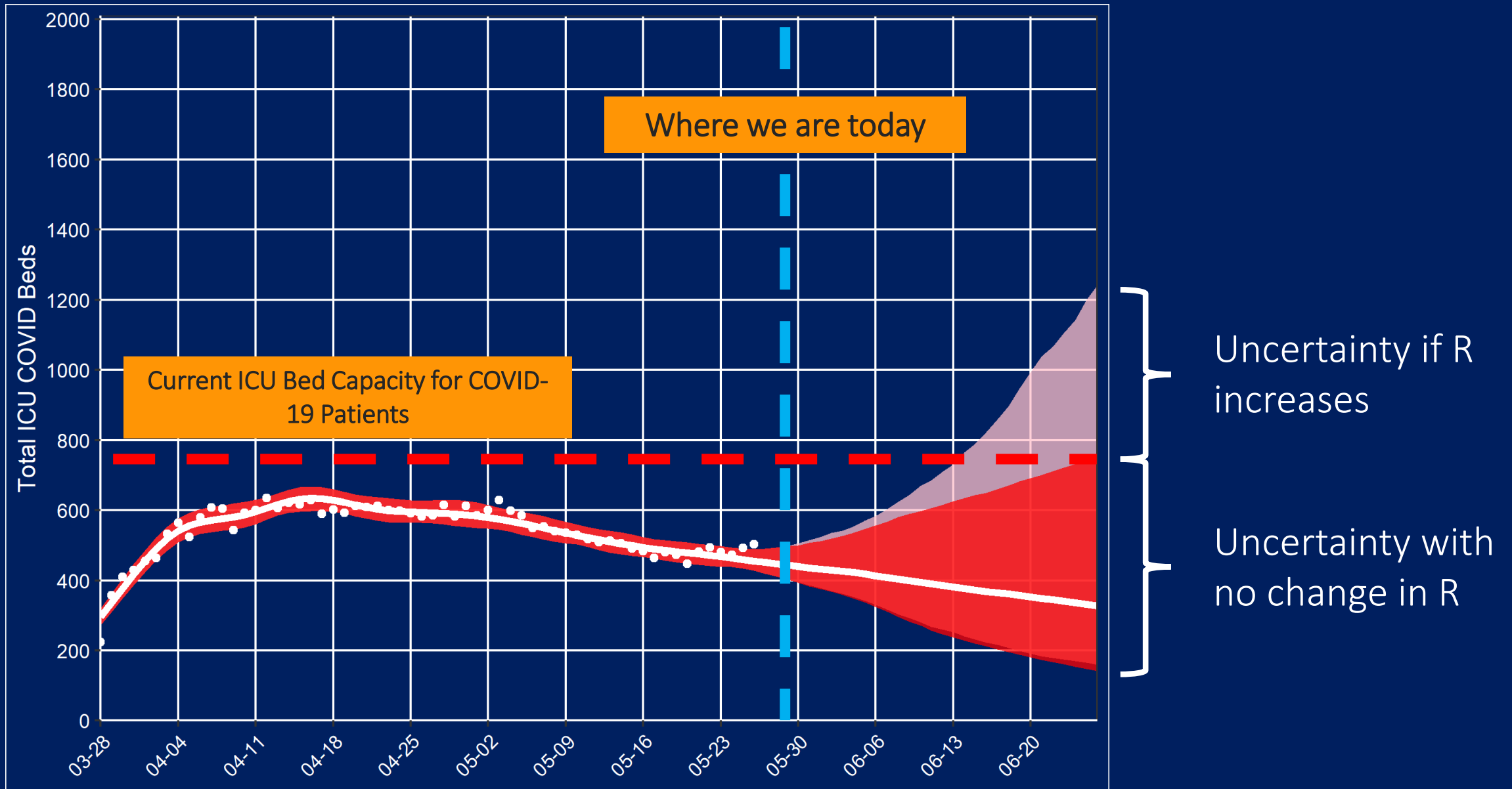


Uncertainty if R is increasing
Uncertainty with no change in R

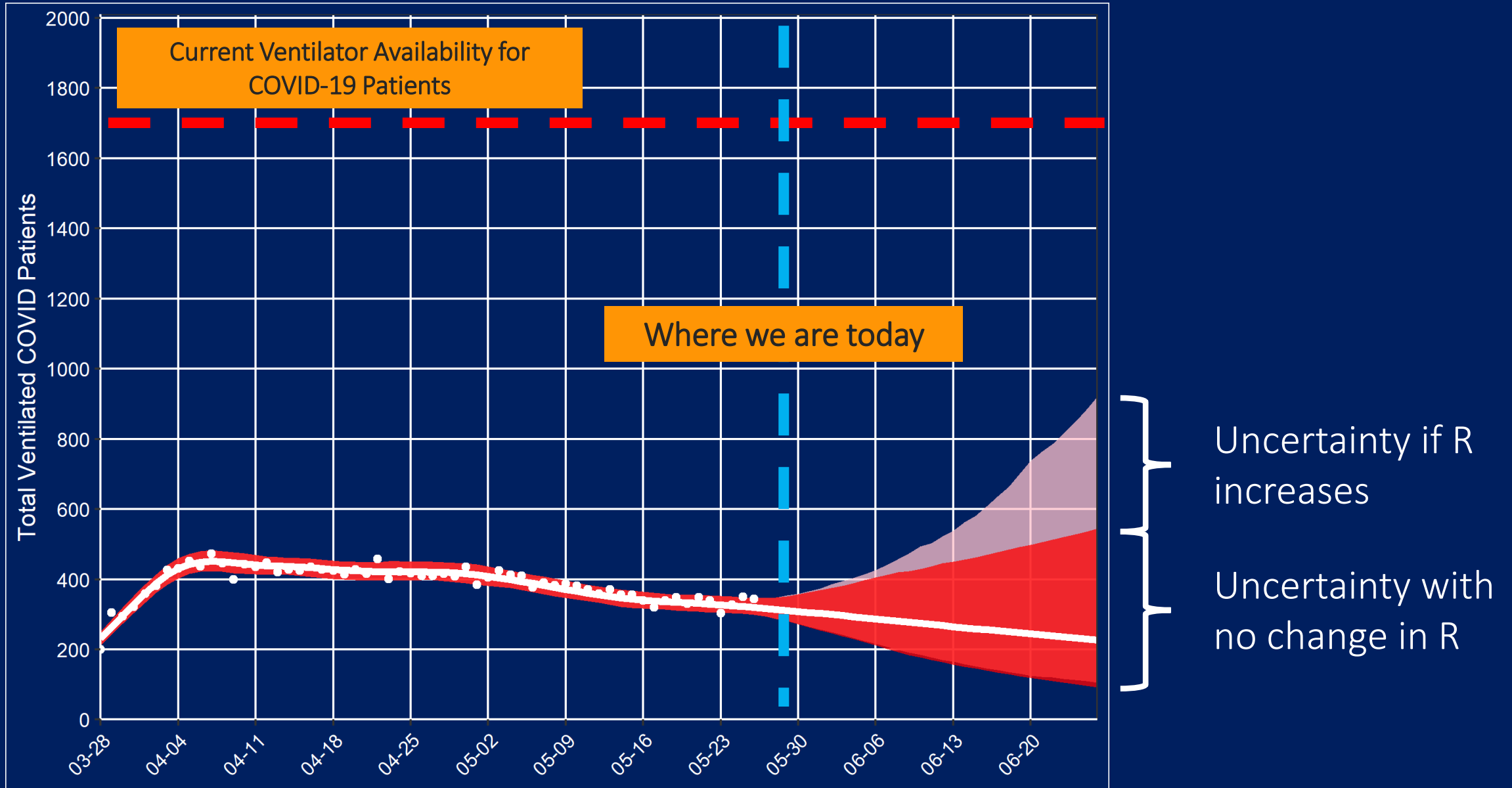
Predictions of Demand in LA County | Hospital Beds



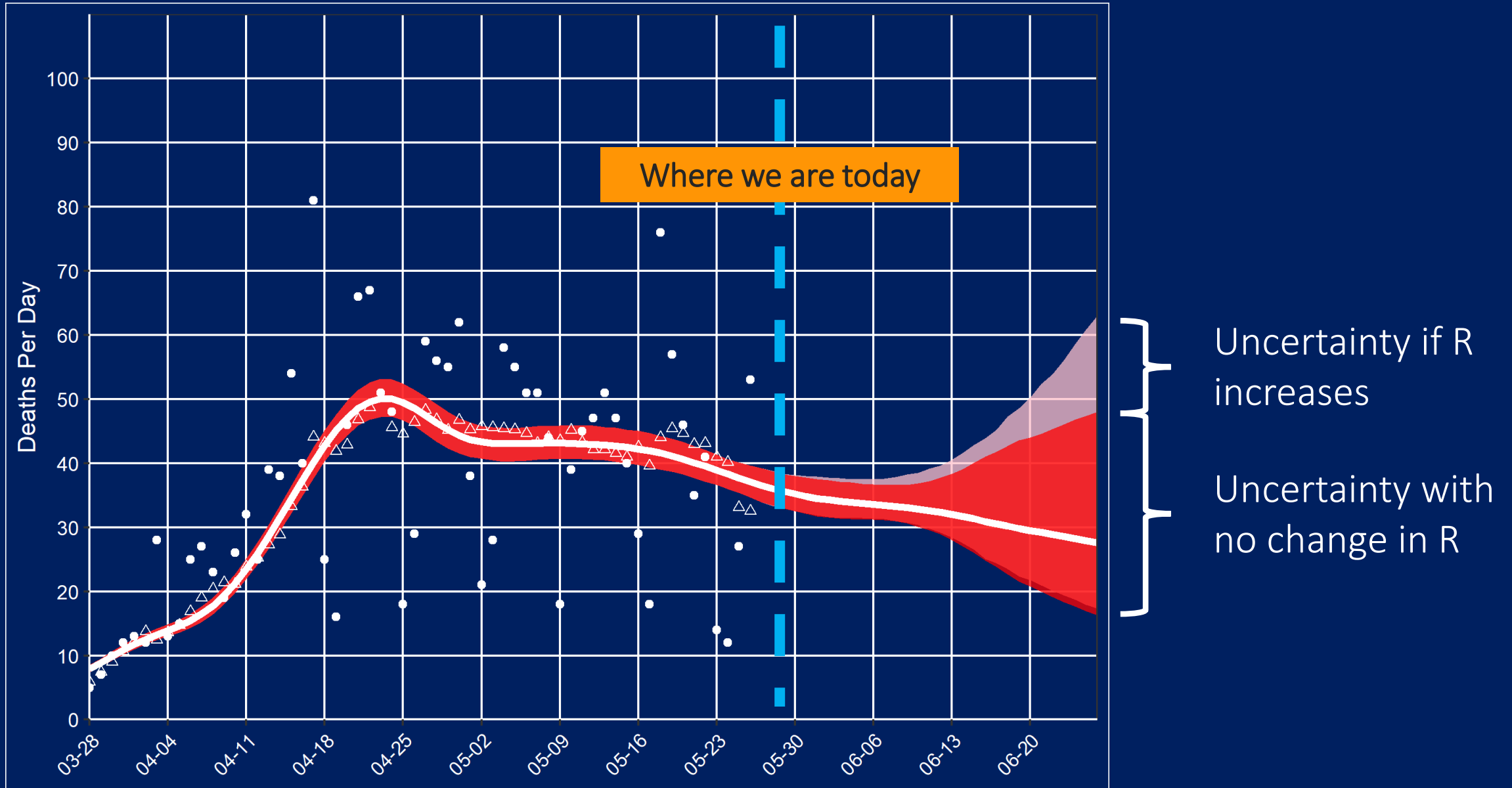
Predictions of Demand in LA County | ICU Beds



Predictions of Demand in LA County | Ventilators

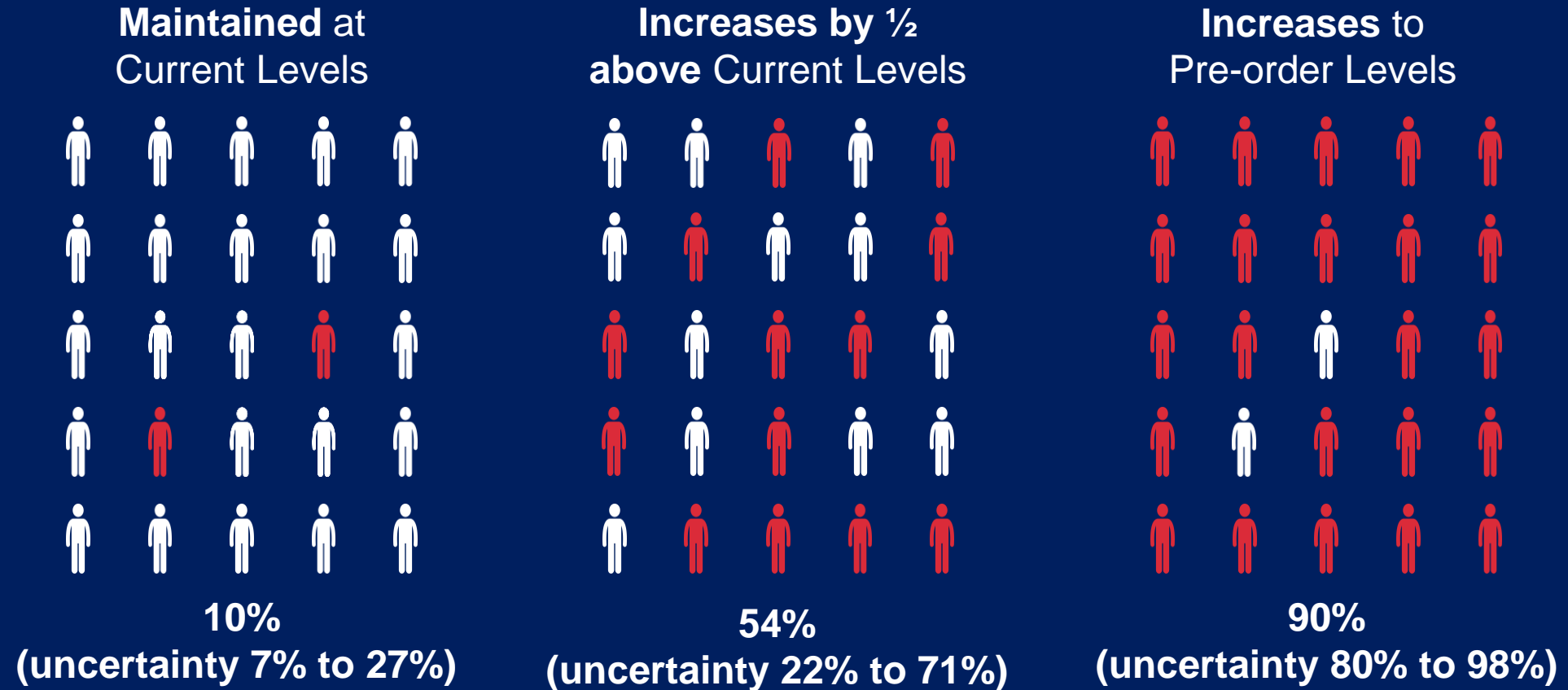


Predictions of Daily Mortality LA County



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)*