

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

June 5, 2020 Update

County DHS COVID-19 Predictive Modeling Team:

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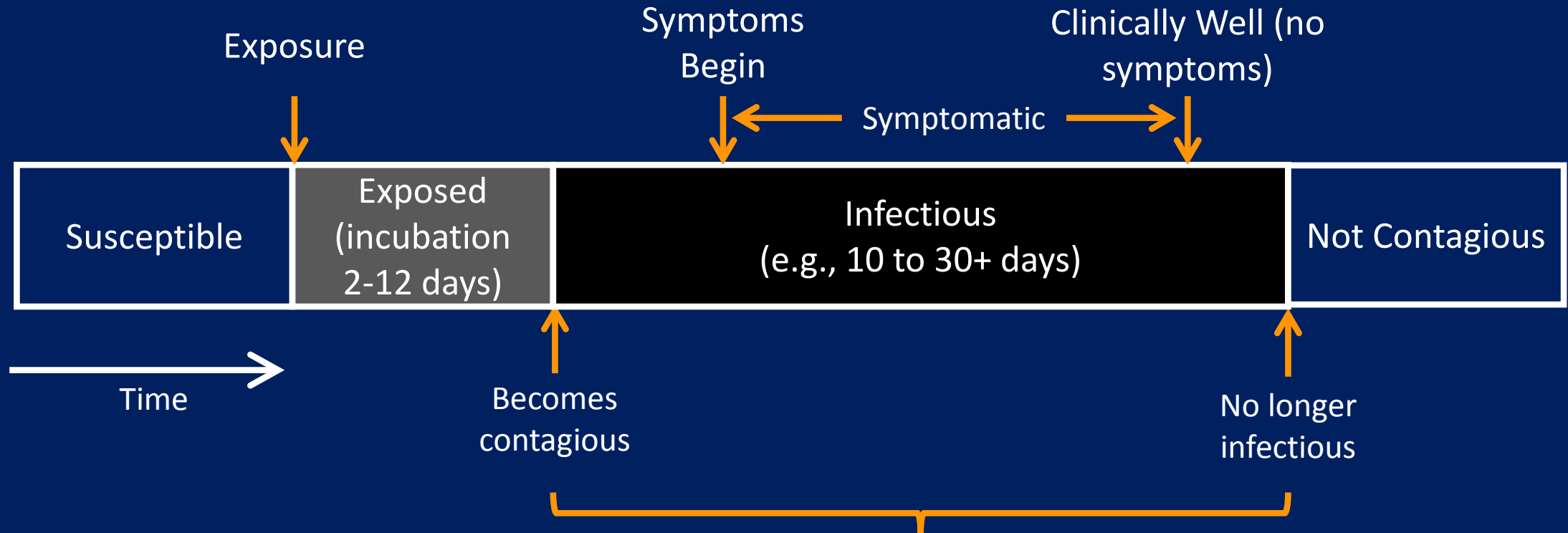
1. Los Angeles County, Department of Health Services
2. Los Angeles County, Department of Public Health
3. Los Angeles County, Office of the Chief Information Officer
4. Berry Consultants, LLC, Austin, TX
5. University of California, Los Angeles



Key Findings of the June 5th Update

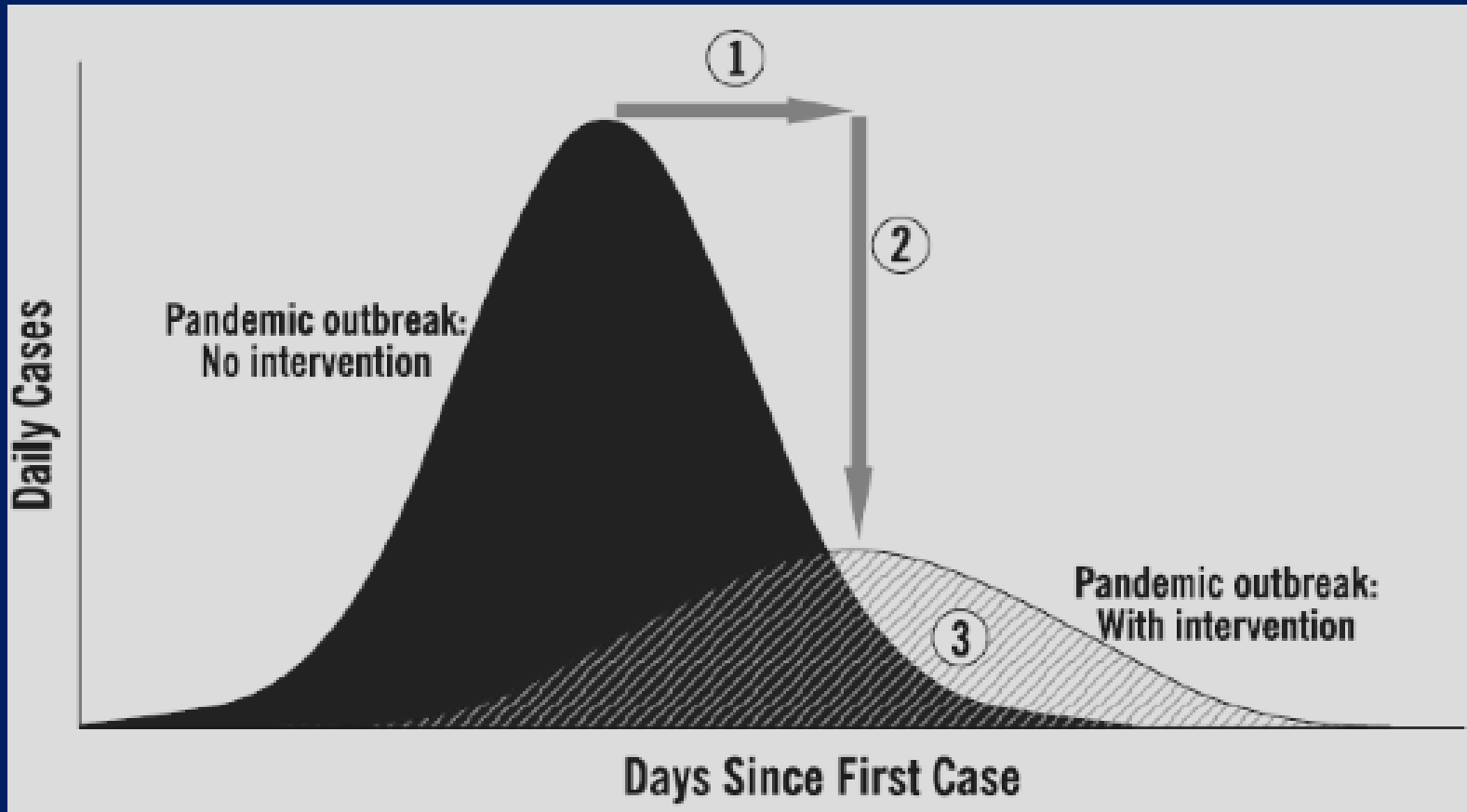
- This update includes data on hospital visits and volume through June 2, 2020.
- The model allows for changes in transmission associated with relaxation of physical distancing requirements. The total number of persons infected during the epidemic, assuming differences in future transmission, is determined 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 be now greater than one and slightly up trending. If transmission has increased, 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 if there are additional increases 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

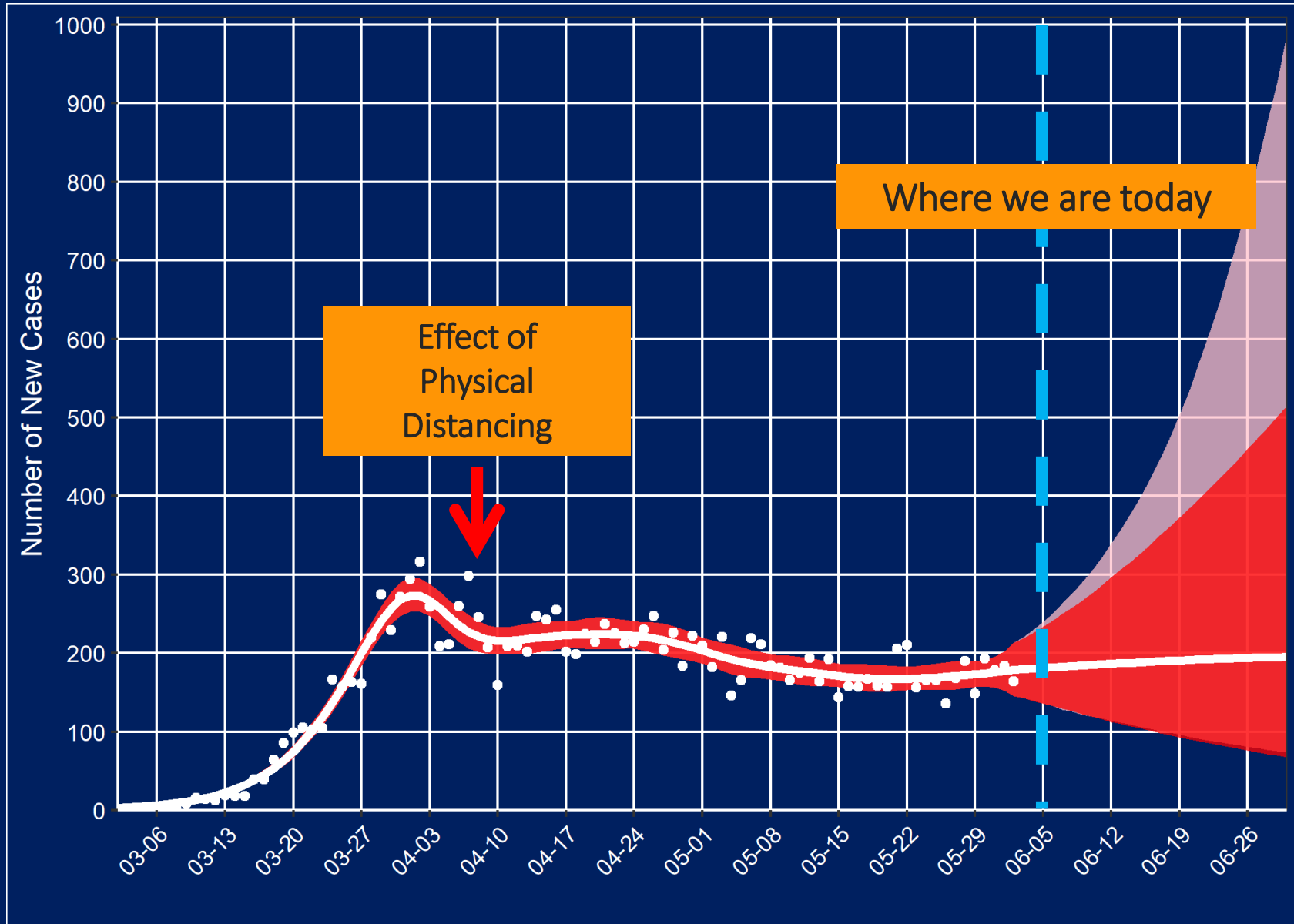


Effects of physical distancing & public health interventions:

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

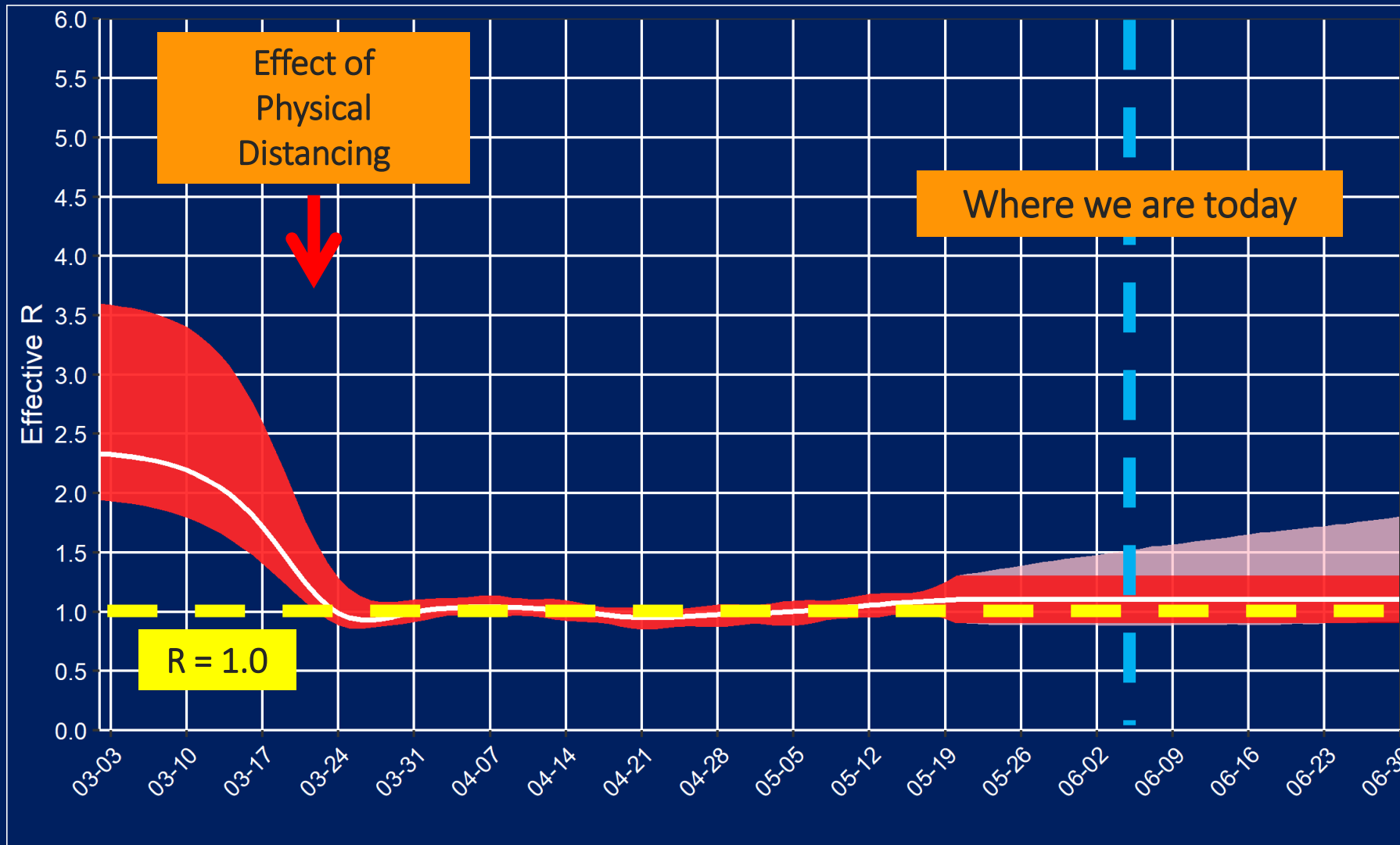
Hospital Patient Projections



Uncertainty if R increases

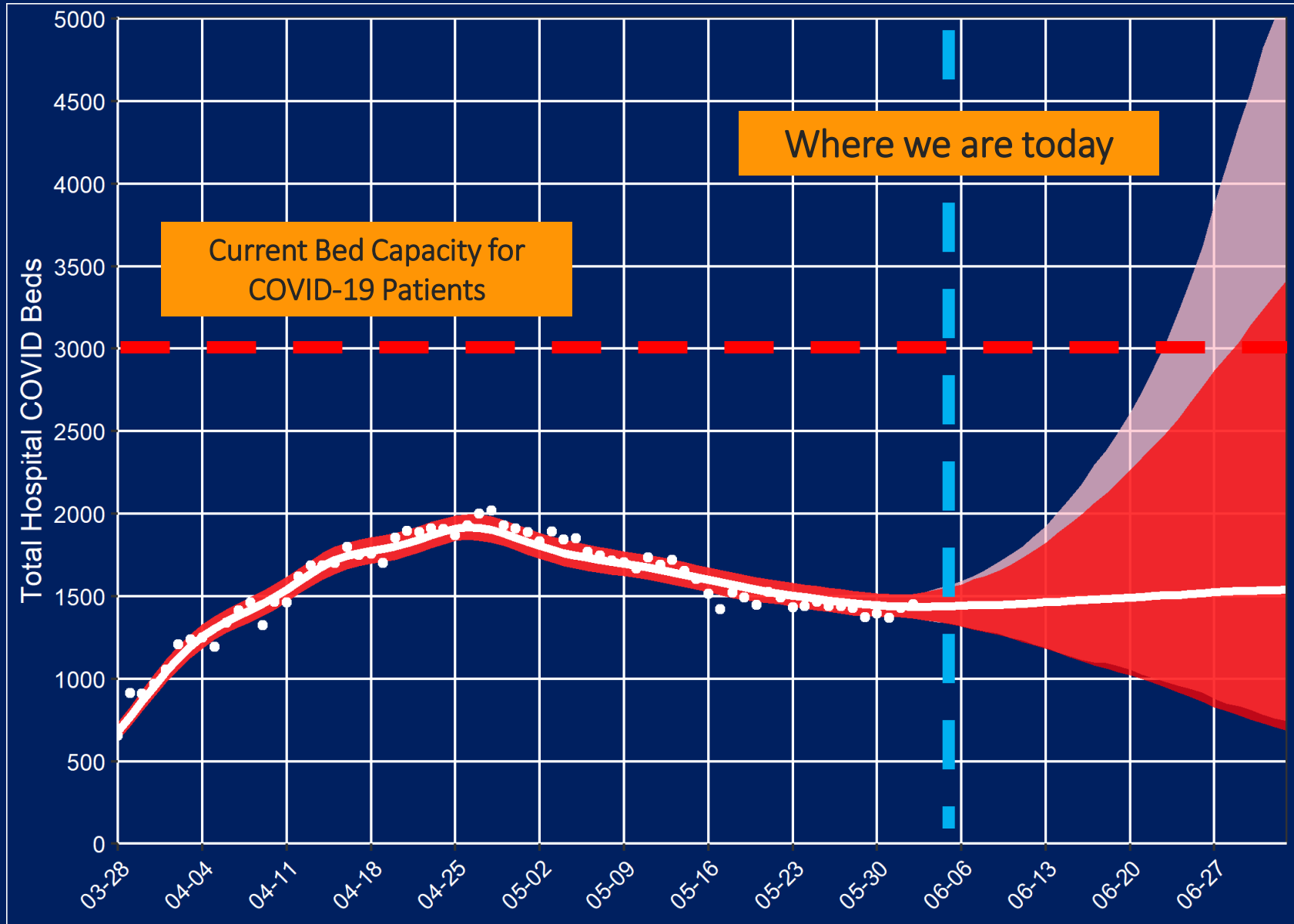
Uncertainty with no change in R

Effective Transmission Number "R"



Uncertainty if R is increasing
Uncertainty with no change in R

Predictions of Demand in LA County | Hospital Beds



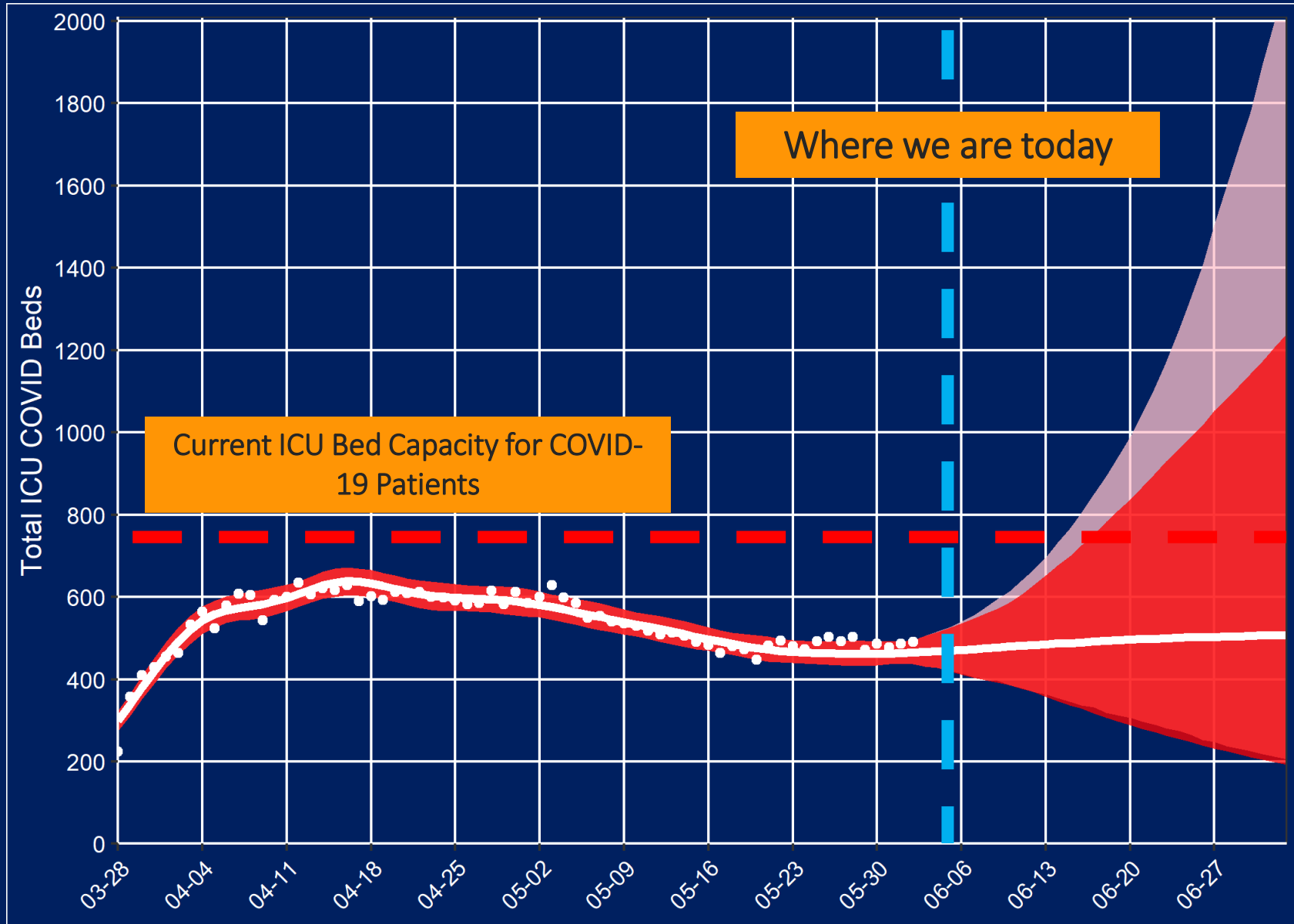
Current Bed Capacity for COVID-19 Patients

Where we are today

Uncertainty if R increases

Uncertainty with no change in R

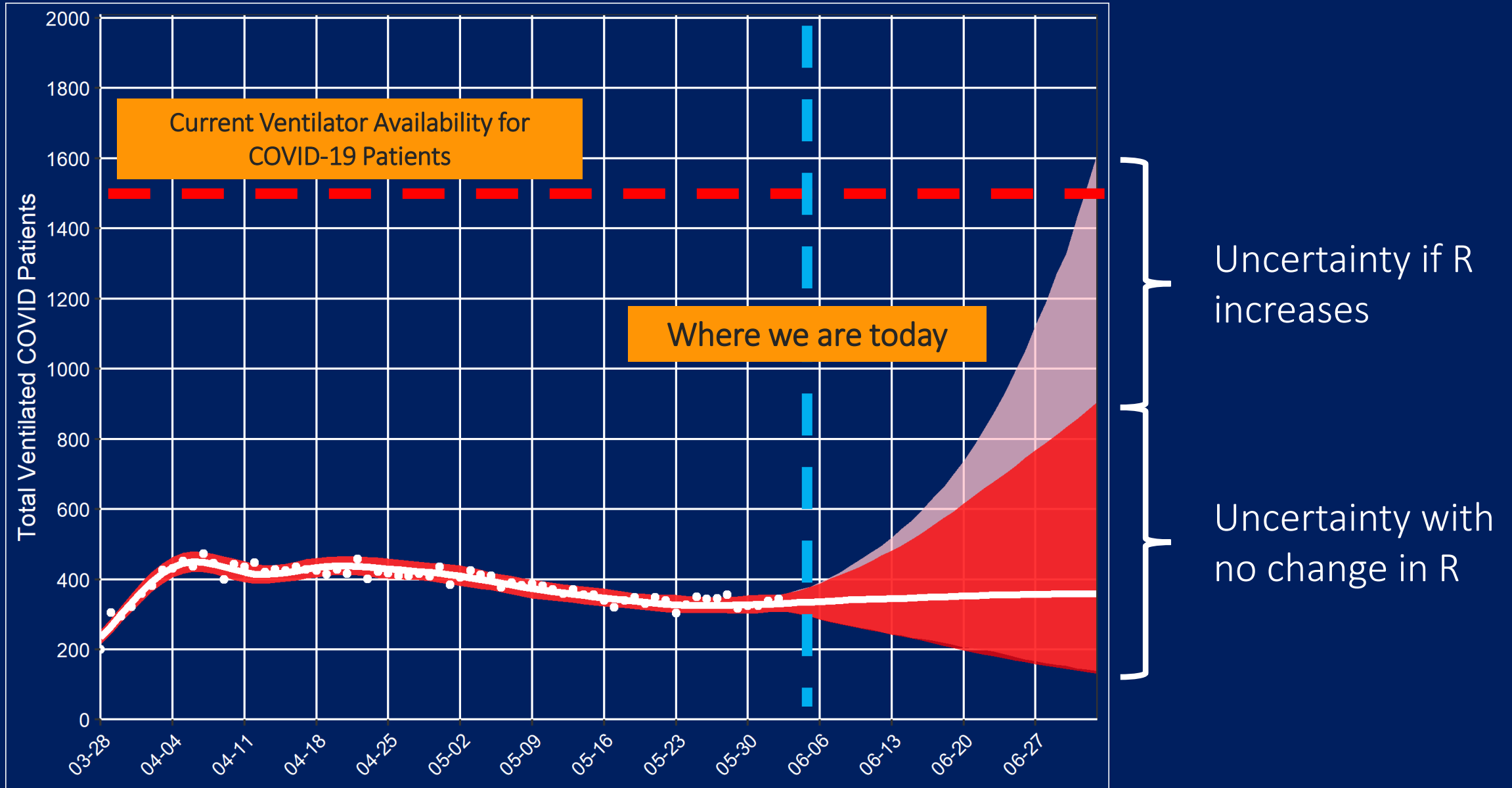
Predictions of Demand in LA County | ICU Beds



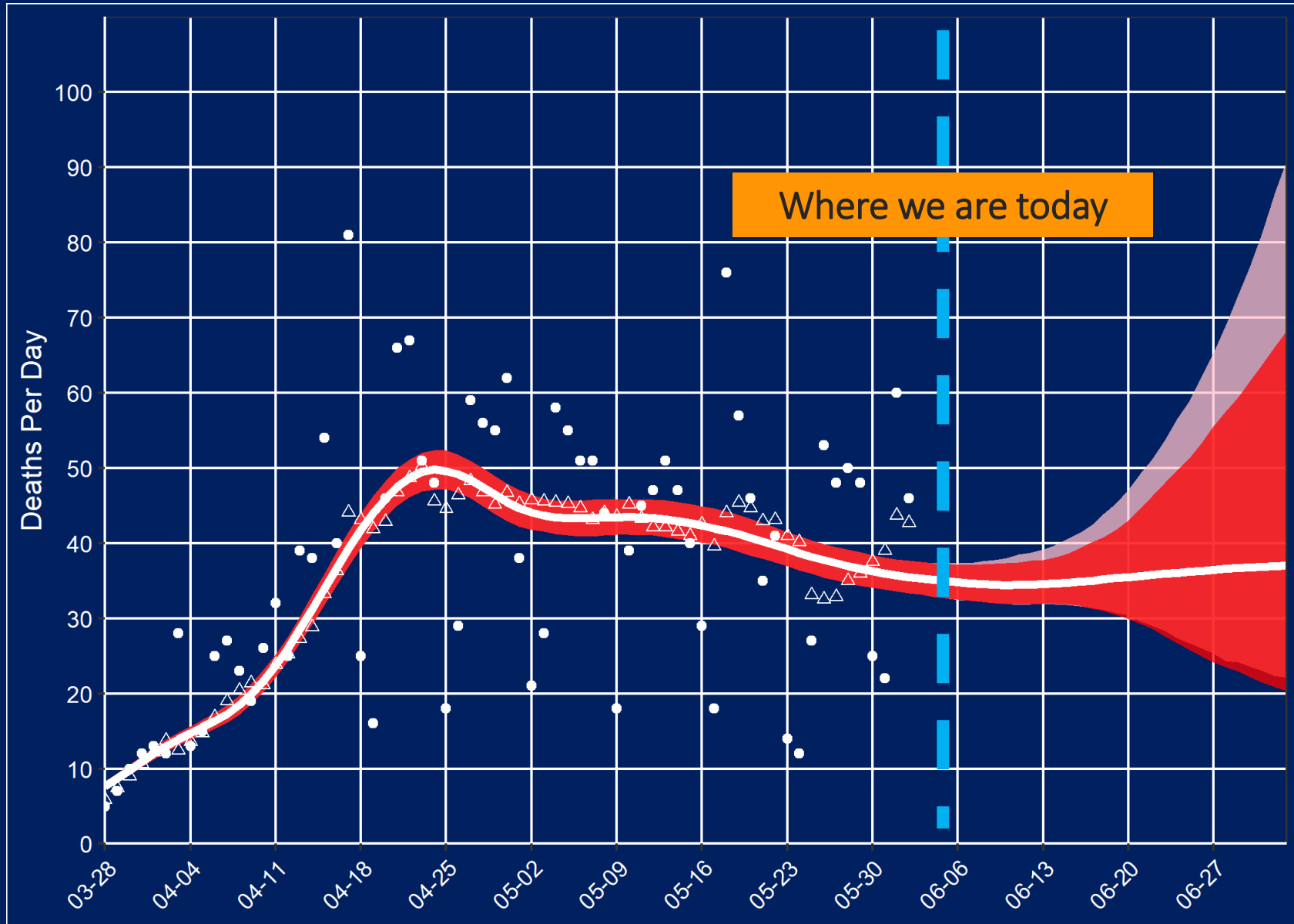
Uncertainty if R increases

Uncertainty with no change in R

Predictions of Demand in LA County | Ventilators



Predictions of Daily Mortality LA County



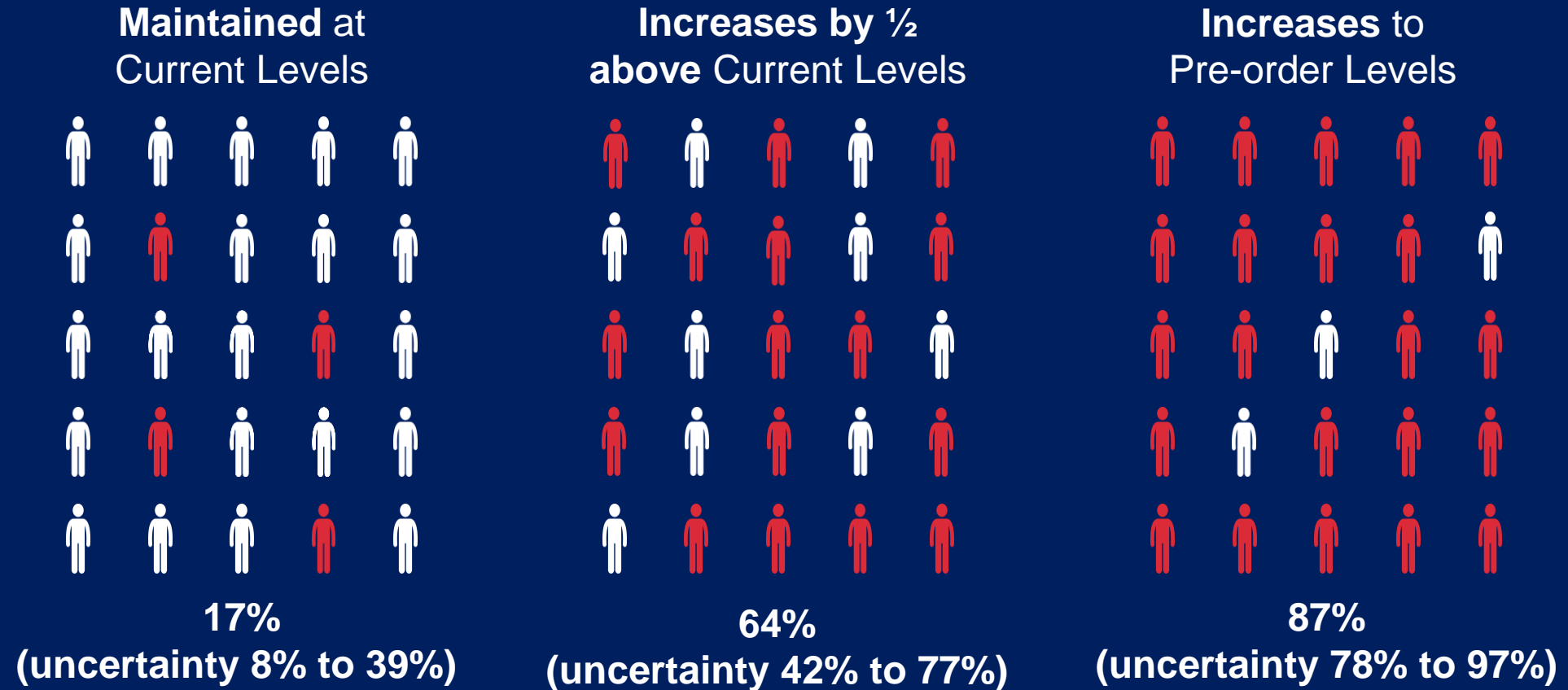
Where we are today

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)*