

# Los Angeles County COVID-19 Hospital Demand Modeling Projections



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# About the Effort

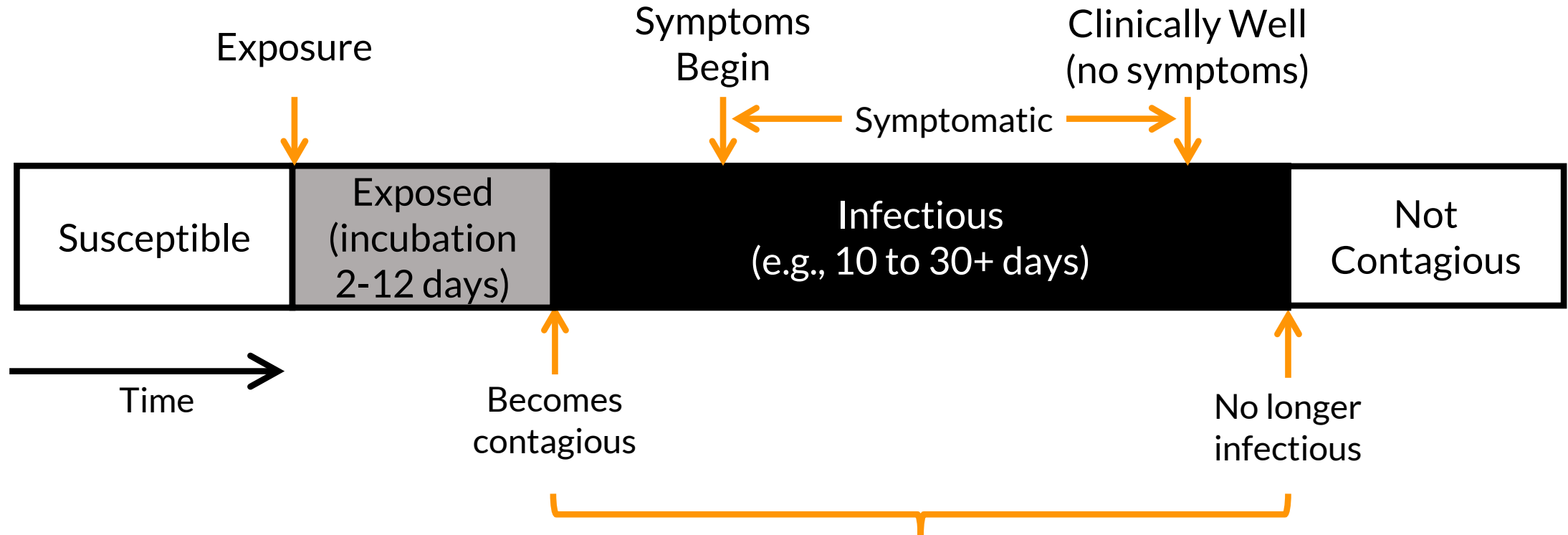
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Los Angeles County DHS, under the guidance of Dr. Ghaly, assembled a multidisciplinary team of clinical, epidemiological, and statistical modeling experts led by Roger J. Lewis, MD, PhD, the Chair of Emergency Medicine at Harbor-UCLA Medical Center in Torrance and an accomplished statistician.

Two-pronged approach: The modeling team was tasked with

- Taking available data and making the **best possible predictions regarding the spread of COVID-19** in Los Angeles County and the associated demand for hospital-based care including hospital beds, intensive care unit (ICU) beds, and ventilators.
- Assessing the **effectiveness of current physical distancing** efforts in slowing the spread of COVID-19 and “flattening the curve.”

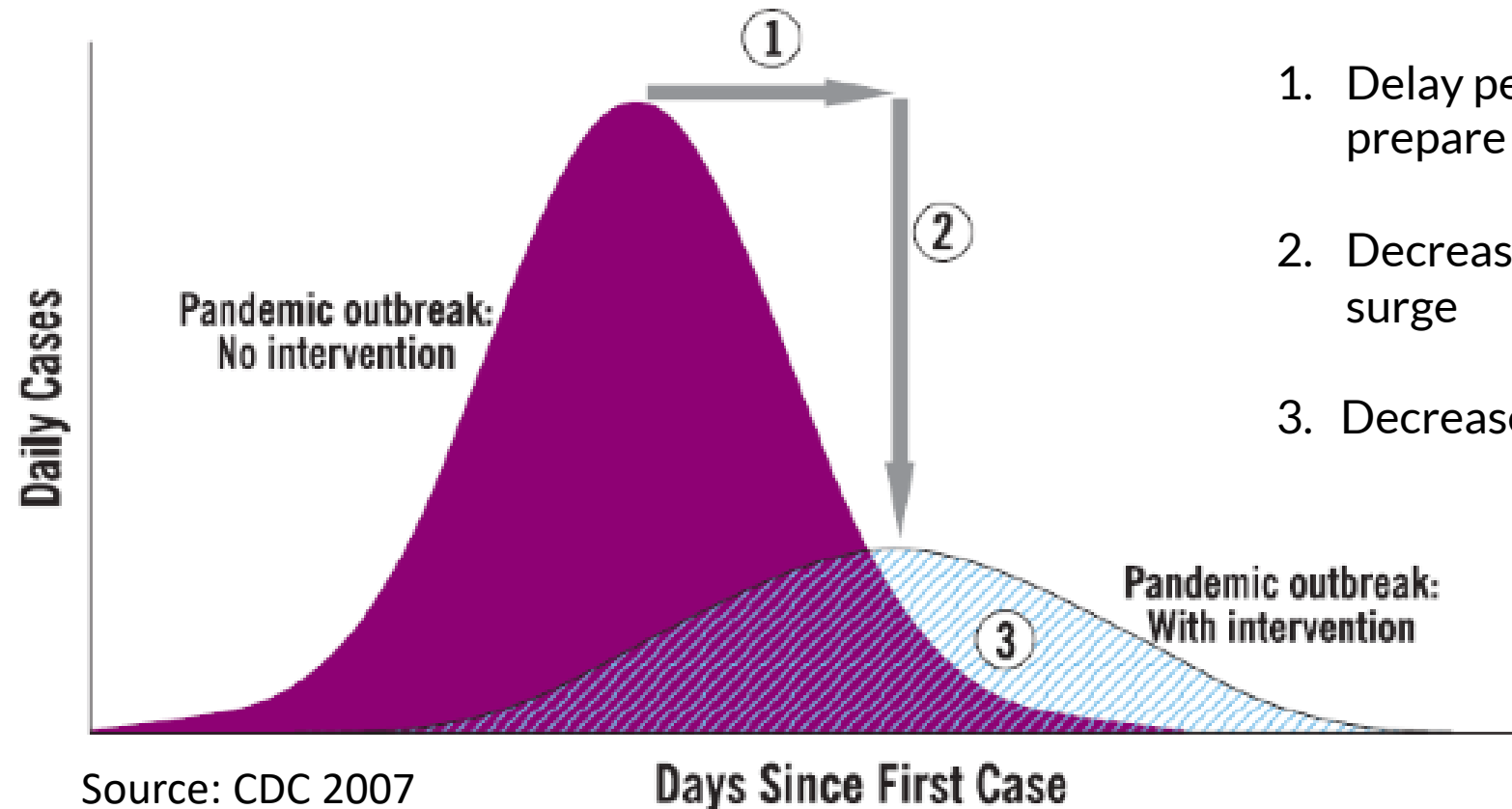
# A Patient's Journey | COVID-19



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

*“Flattening the Curve” with Public Health Interventions*



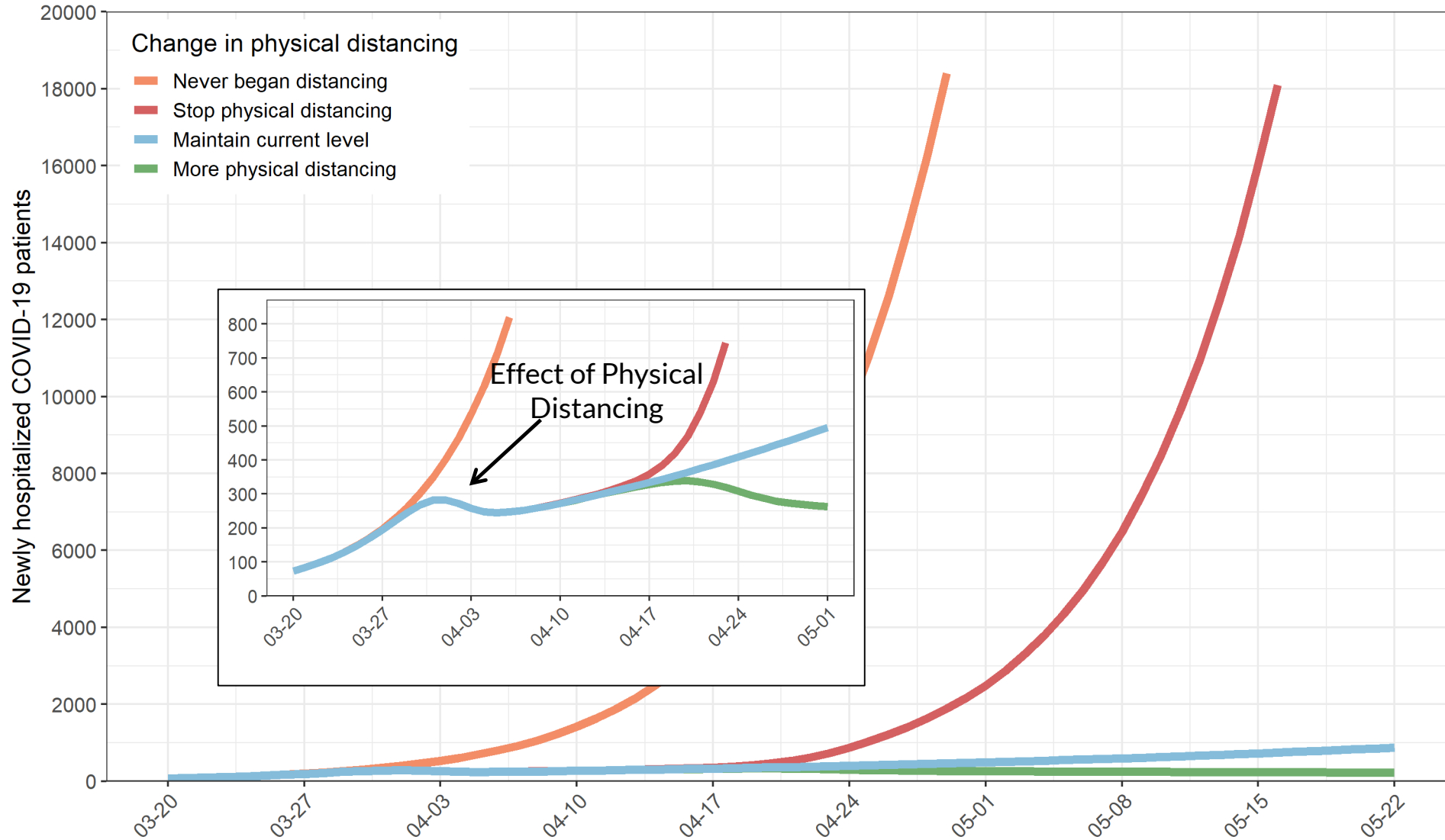
Public health interventions—including physical distancing—have a clear impact:

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

**Physical Distancing is Working.**

# Scenarios: Projected Impact of Physical Distancing on Spread

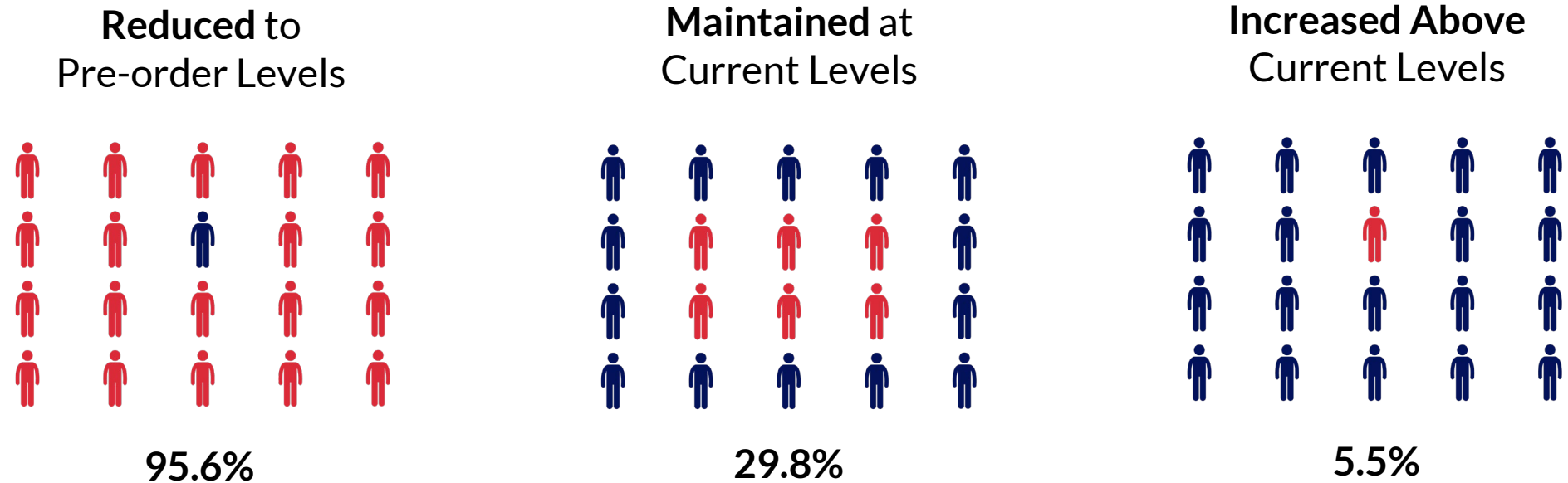
Daily Volume of Patients Requiring Hospitalization



# Summer 2020: Projected Infection in LA County

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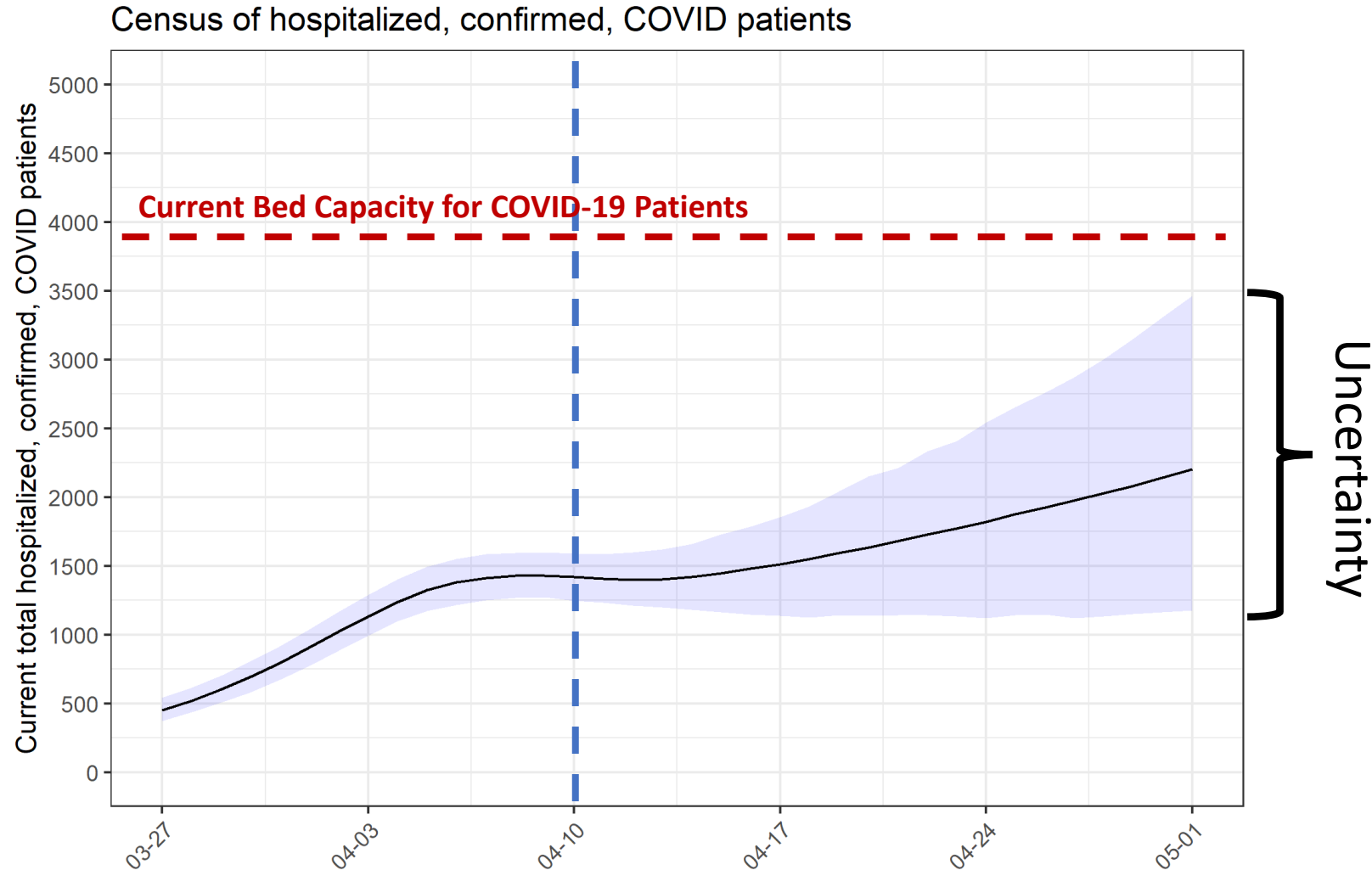
As summer approaches, if physical distancing is....



... of LA County residents will have been infected over the course of the pandemic by August 1<sup>st</sup>, 2020.

# Predictions of Demand in LA County | Hospital System

*If we maintain physical distancing, our hospital system is likely equipped with sufficient hospital beds.*



## ICU Beds

Even assuming the current level of physical distancing is maintained, LA County will need to increase capacity—this is underway.

## Ventilators

Even within the range of uncertainty, LA County projects sufficient availability.



# Physical Distancing is **the best path forward.**

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We know that physical distancing has taken a toll on our entire community—and that some of us are tragically mourning the loss of loved ones.

**There remains substantial risk that the need for hospital-based services will exceed system capacity, possibly by large margins, if there is any reduction in physical distancing behavior.**

- Current data suggests that physical distancing and public health directives have slowed the spread of COVID-19
- It remains likely that current measures are not sufficient to lead to a reduction in illness over time, and therefore more effective measures will be required

**Staying at home and physical distancing will allow our hospital system to do what it needs to do to ensure that those requiring hospital care receive the care they need, and that everyone else is at less risk of exposure so we can get back to normal.**