# Supplement

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# Contents

Specification of the Priors	1
Details on Each Implementation	1
Full Set of Simulation Intervals by State	4
COVID-19 Trends and Impact Survey	5
County Results by Implementation	5
Specification of the Priors	
Details on Each Implementation	

### Empirical Estimates of $\beta$ from the COVID–19 Trends and Impact Survey

2.7% Percentile, 97.5% Percentile, and Median By State

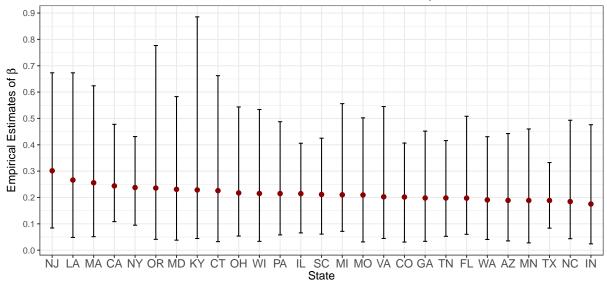


Figure 1: Since  $\beta$  represents the ratio of  $\Pr(\text{test}_+|\text{untested}, S_0)$  to  $\Pr(\text{test}_+|\text{tested})$ , we estimate  $\beta$  from the COVID-19 Trends and Impact Survey as the ratio of the screening test positivity over the overall test positivity. Here, we consider the 2.5% and 97.5% percentiles and mean for each state. Most have a mean near 20.

# Proportion of Simulation Intervals Where Covidestim Median Was Within, Above, or Below the Median P(S<sub>1</sub>|untested) Centered at Emp. Value β Centered at Emp. Value (Spline Smoothed) P(S<sub>1</sub>|untested) and β Centered at Emp. Values (β Spline Smoothed) Covidestim Median: Below Interval In Interval In Interval Above Interval Above Interval

Figure 2: For each implementation, the proportions of simulation intervals where the Covidestim median was below, within, or above the interval are shown, across all states used for the implementation.

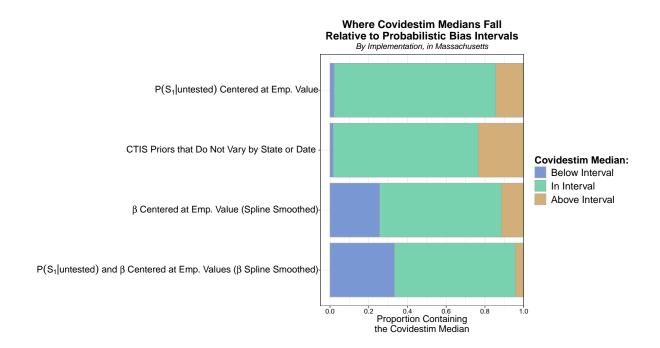
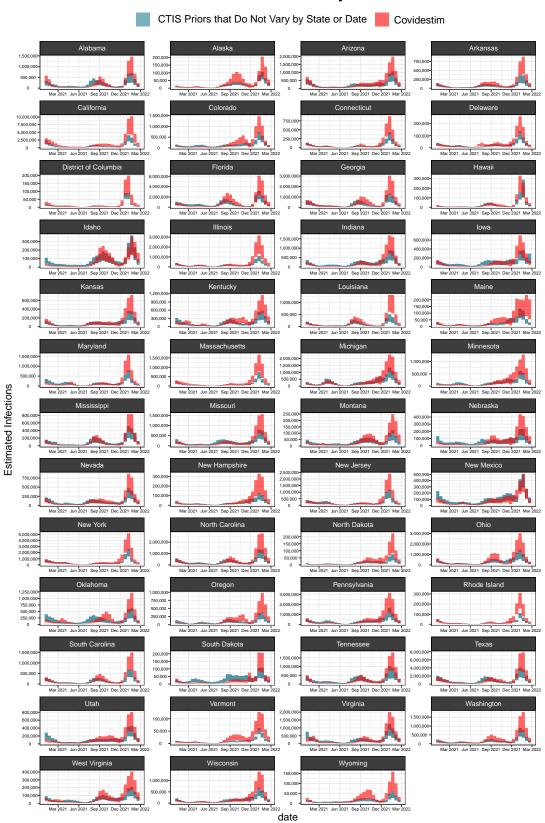


Figure 3: The proportions of simulation intervals where the Covidestim median was below, within, or above the intervals are shown, considering all counties except Dukes/Nantucket, where Covidestim estimates were not produced.

# Full Set of Simulation Intervals by State

### **Estimated Infections by State**



COVID-19 Trends and Impact Survey

County Results by Implementation