South Carolina: COVID-19 Cases Per 100k Residents

cases_per100k

- 900 - 1,000
- 800 - 900
- 500 - 600
- 400 - 500
- 300 - 400
- 200 - 300
- 100 - 200
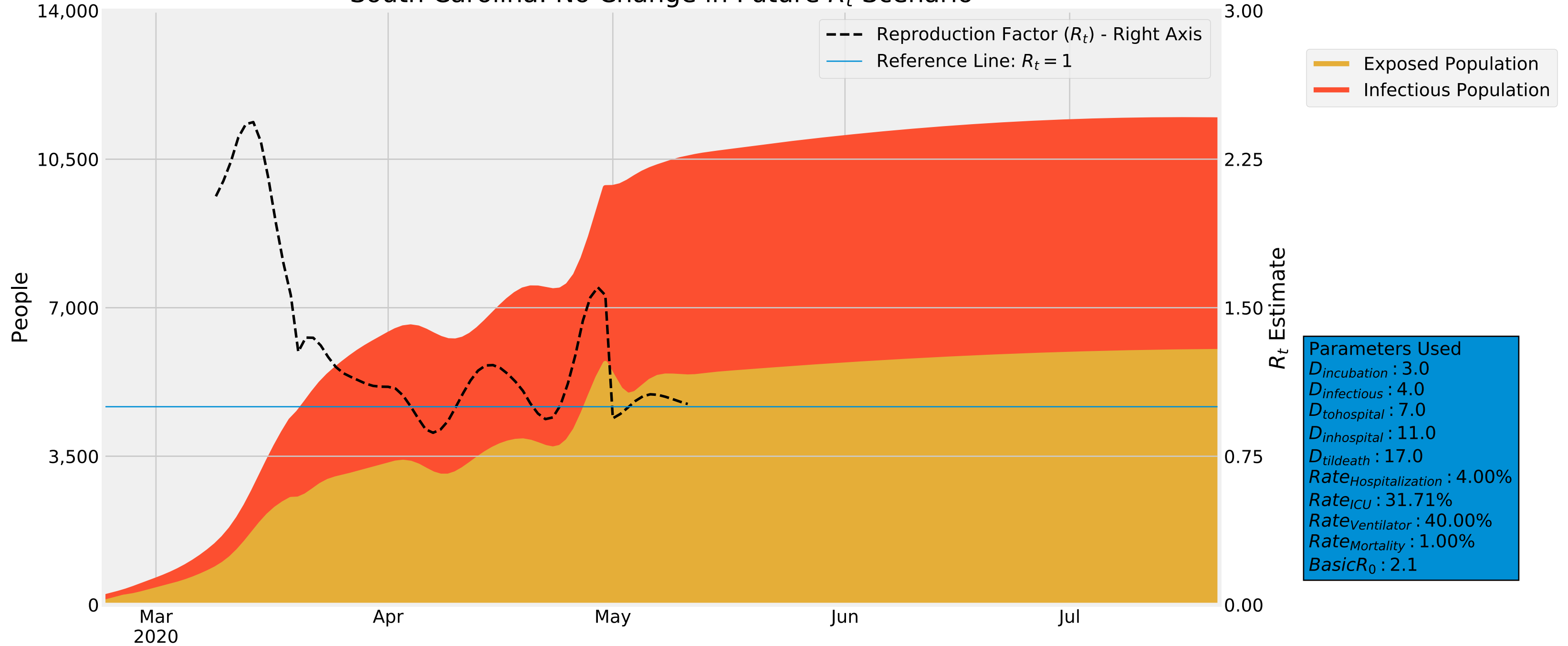- 0 - 100
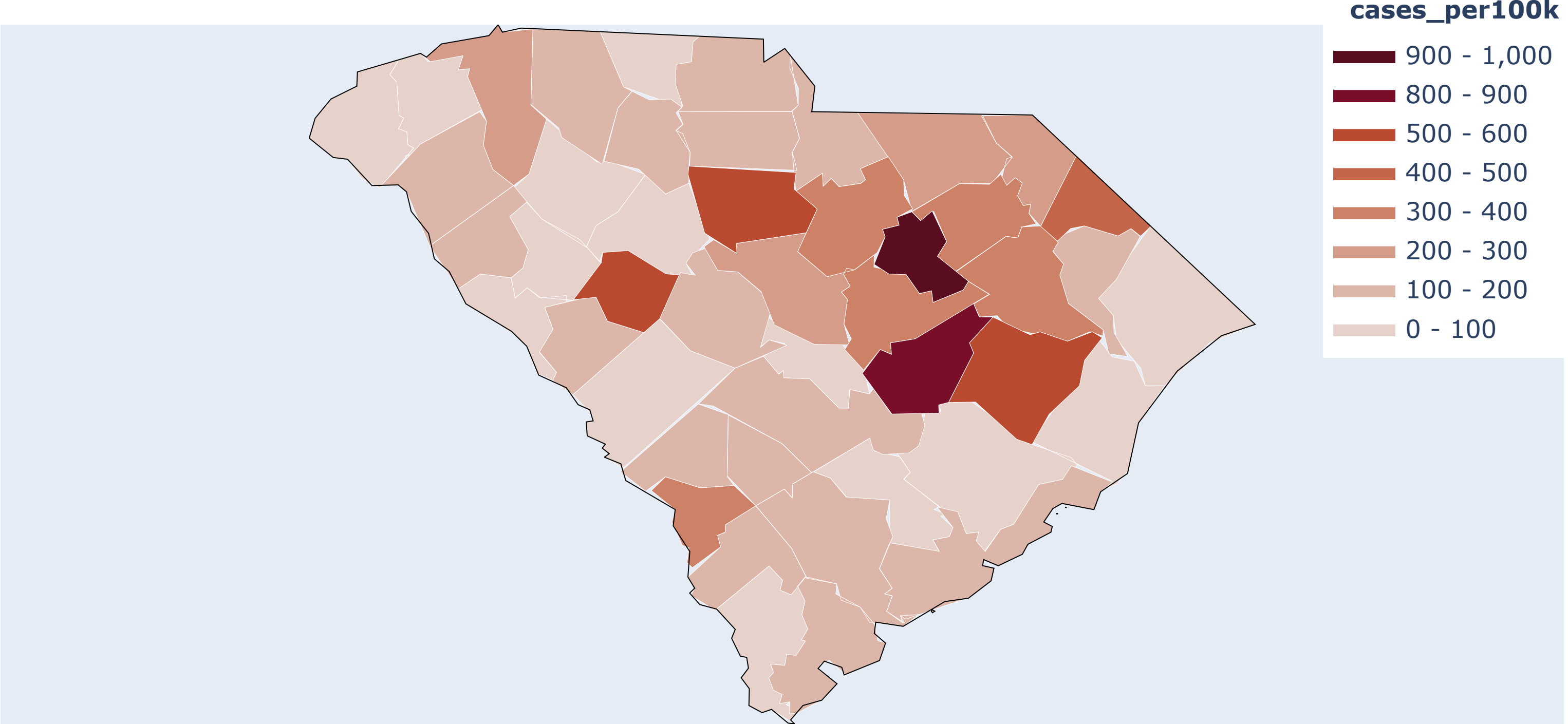
Reproduction Rate (R_t) Estimates
South Carolina: No Change in Future R_t Scenario

Legend:
- rt_deaths_daily
- rt_hosp_admits
- rt_cases_daily
- rt_pos_test_share_daily
- rt_joint_est

Parameters Used
$D_{incubation}$: 3.0
$D_{infectious}$: 4.0
$D_{tohospital}$: 7.0
$D_{inhospital}$: 11.0
$D_{tildeath}$: 17.0
$Rate_{Hospitalization}$: 4.00%
$Rate_{ICU}$: 31.71%
$Rate_{Ventilator}$: 40.00%
$Rate_{Mortality}$: 1.00%
$BasicR_0$: 2.1
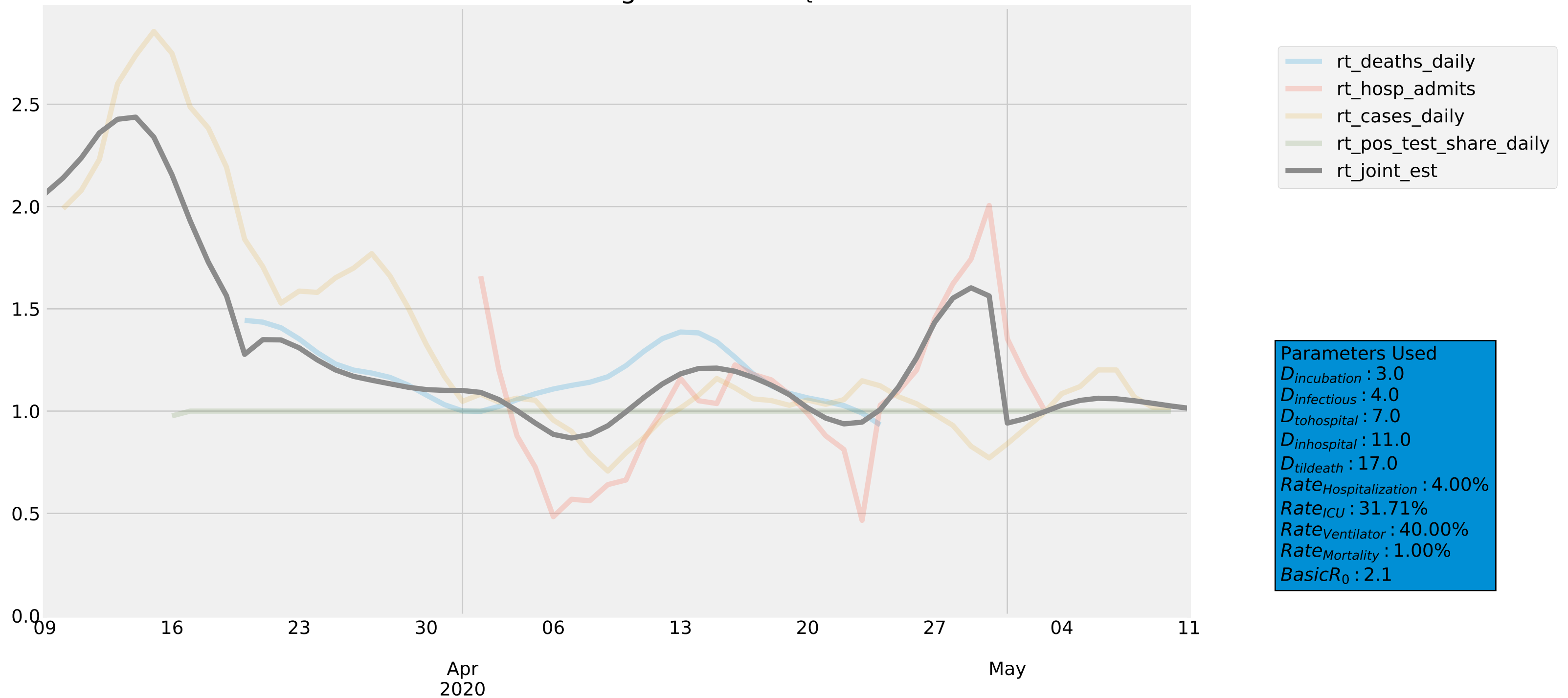
Author: Michael Donnelly (twtr: @donnellymjd)
Chart created on 19 May 2020

Simultaneous Infections Forecast
South Carolina: No Change in Future R_t Scenario

- - - Reproduction Factor (R_t) - Right Axis
——— Reference Line: $R_t = 1$

Exposed Population
Infectious Population

People

R_t Estimate

Parameters Used
$D_{incubation}$: 3.0
$D_{infectious}$: 4.0
$D_{tohospital}$: 7.0
$D_{inhospital}$: 11.0
$D_{tildeath}$: 17.0
$Rate_{Hospitalization}$: 4.00%
$Rate_{ICU}$: 31.71%
$Rate_{Ventilator}$: 40.00%
$Rate_{Mortality}$: 1.00%
$BasicR_0$: 2.1

Author: Michael Donnelly (twtr: @donnellymjd)
Chart created on 19 May 2020

Hospitalization and Deaths Forecast
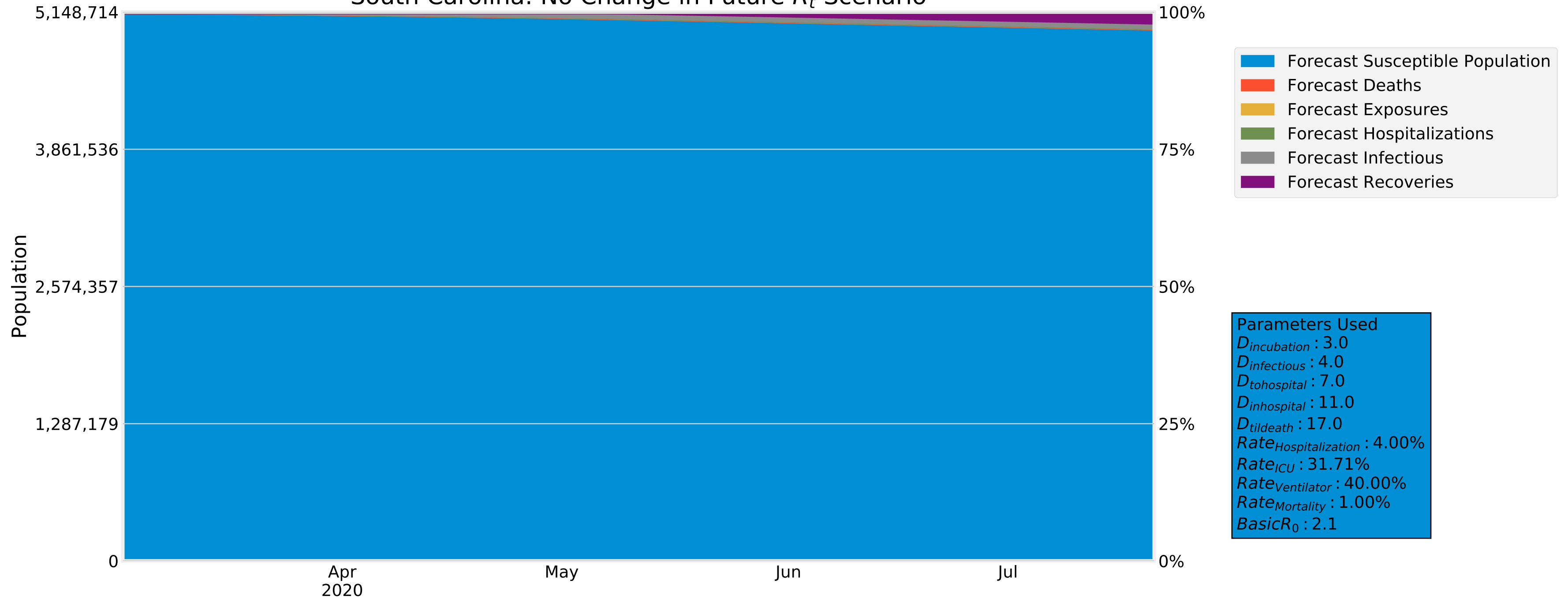## South Carolina: No Change in Future R_t Scenario

Legend:
- Forecast Concurrent Hospitalizations
- Forecast ICU Cases
- Forecast Ventilations
- Forecast Cumulative Deaths
- Reported Total Deaths

Parameters Used
$D_{incubation}$: 3.0
$D_{infectious}$: 4.0
$D_{tohospital}$: 7.0
$D_{inhospital}$: 11.0
$D_{tildeath}$: 17.0
$Rate_{Hospitalization}$: 4.00%
$Rate_{ICU}$: 31.71%
$Rate_{Ventilator}$: 40.00%
$Rate_{Mortality}$: 1.00%
$BasicR_0$: 2.1
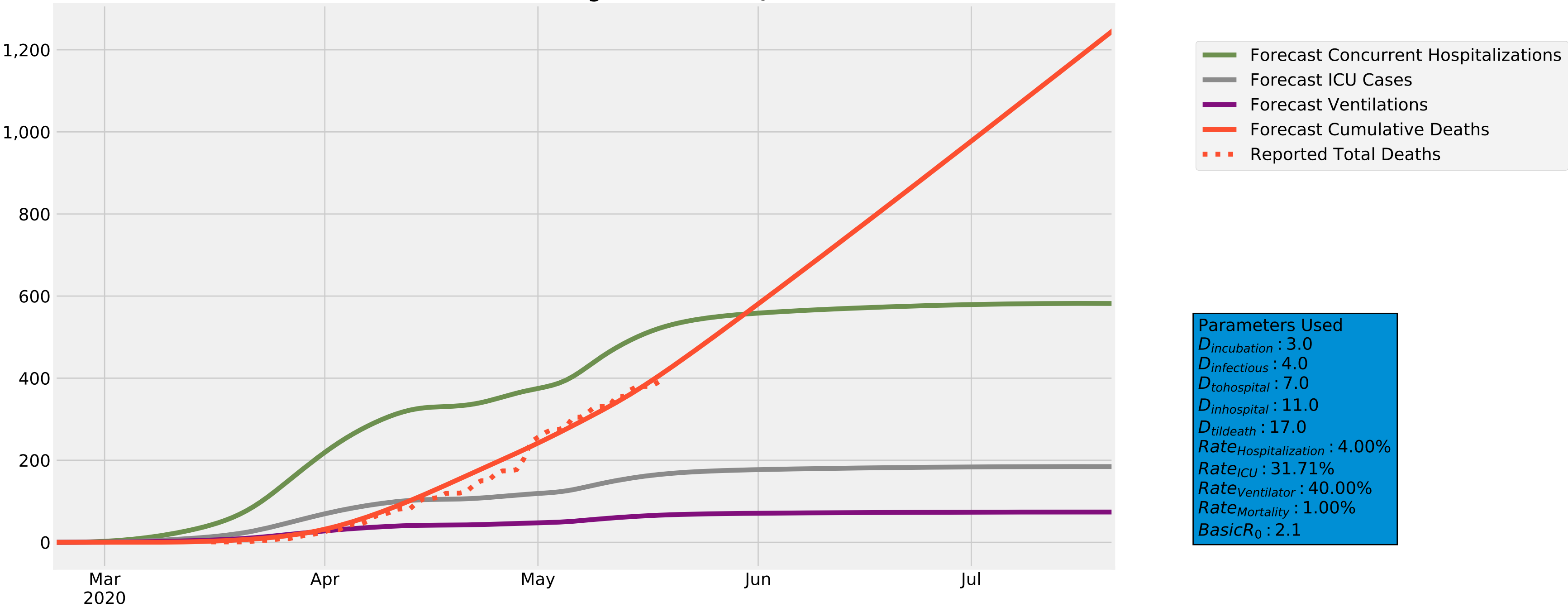
Author: Michael Donnelly (twtr: @donnellymjd)
Chart created on 19 May 2020

Population Overview Forecast
South Carolina: No Change in Future R_t Scenario


Population

Legend:
- Forecast Susceptible Population
- Forecast Deaths
- Forecast Exposures
- Forecast Hospitalizations
- Forecast Infectious
- Forecast Recoveries

Parameters Used

$D_{incubation}$: 3.0
$D_{infectious}$: 4.0
$D_{tohospital}$: 7.0
$D_{inhospital}$: 11.0
$D_{tildeath}$: 17.0
$Rate_{Hospitalization}$: 4.00%
$Rate_{ICU}$: 31.71%
$Rate_{Ventilator}$: 40.00%
$Rate_{Mortality}$: 1.00%
$BasicR_0$: 2.1

Y-axis values (left): 0, 1,287,179, 2,574,357, 3,861,536, 5,148,714

Y-axis values (right): 0%, 25%, 50%, 75%, 100%

X-axis: Apr 2020, May, Jun, Jul

Cumulative Infections Forecast
South Carolina: No Change in Future R_t Scenario

Legend:
- Forecast Cumulative Infections
- Reported Cumulative Infections

Parameters Used
$D_{incubation}$: 3.0
$D_{infectious}$: 4.0
$D_{tohospital}$: 7.0
$D_{inhospital}$: 11.0
$D_{tildeath}$: 17.0
$Rate_{Hospitalization}$: 4.00%
$Rate_{ICU}$: 31.71%
$Rate_{Ventilator}$: 40.00%
$Rate_{Mortality}$: 1.00%
$BasicR_0$: 2.1

Author: Michael Donnelly (twtr: @donnellymjd)
Chart created on 19 May 2020

Daily Exposures Forecast
South Carolina: No Change in Future R_t Scenario
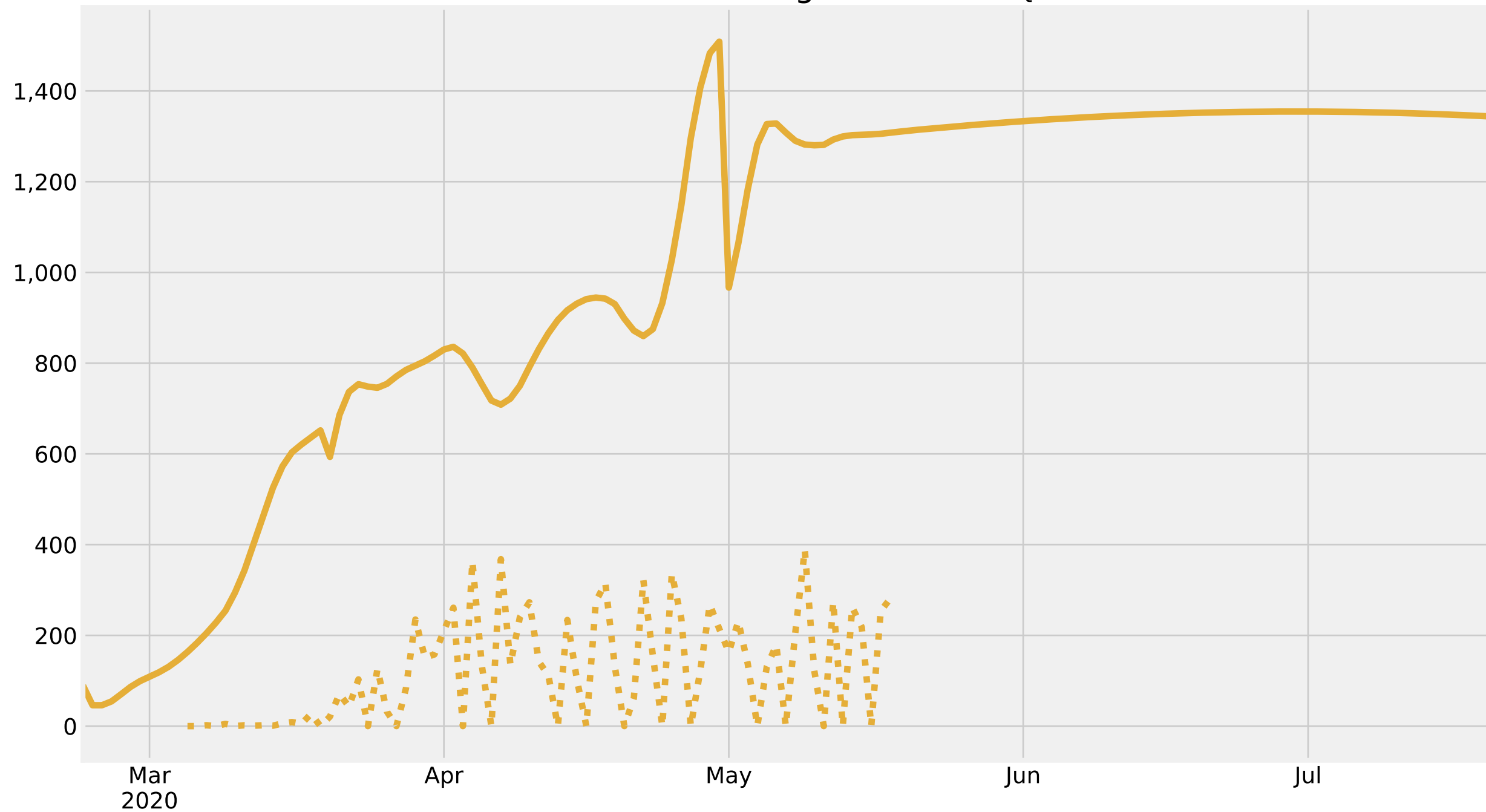
Legend:
— Forecast Daily New Infections (Exposed)
···· Reported Daily New Infections (Exposed)

Parameters Used
$D_{incubation}$: 3.0
$D_{infectious}$: 4.0
$D_{tohospital}$: 7.0
$D_{inhospital}$: 11.0
$D_{tildeath}$: 17.0
$Rate_{Hospitalization}$: 4.00%
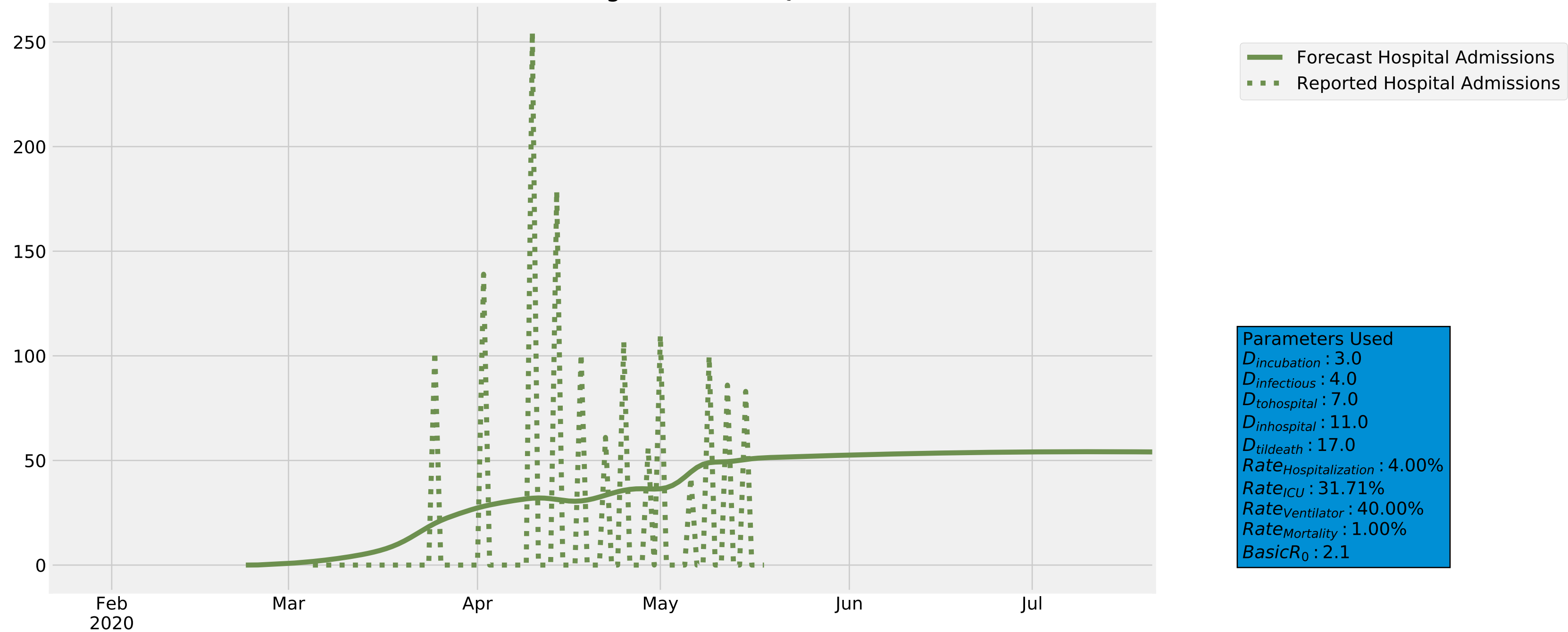$Rate_{ICU}$: 31.71%
$Rate_{Ventilator}$: 40.00%
$Rate_{Mortality}$: 1.00%
$BasicR_0$: 2.1

Author: Michael Donnelly (twtr: @donnellymjd)
Chart created on 19 May 2020

Daily Hospital Admissions Forecast
South Carolina: No Change in Future R_t Scenario

Forecast Hospital Admissions (solid line)
Reported Hospital Admissions (dotted line)

Parameters Used
$D_{incubation}$: 3.0
$D_{infectious}$: 4.0
$D_{tohospital}$: 7.0
$D_{inhospital}$: 11.0
$D_{tildeath}$: 17.0
$Rate_{Hospitalization}$: 4.00%
$Rate_{ICU}$: 31.71%
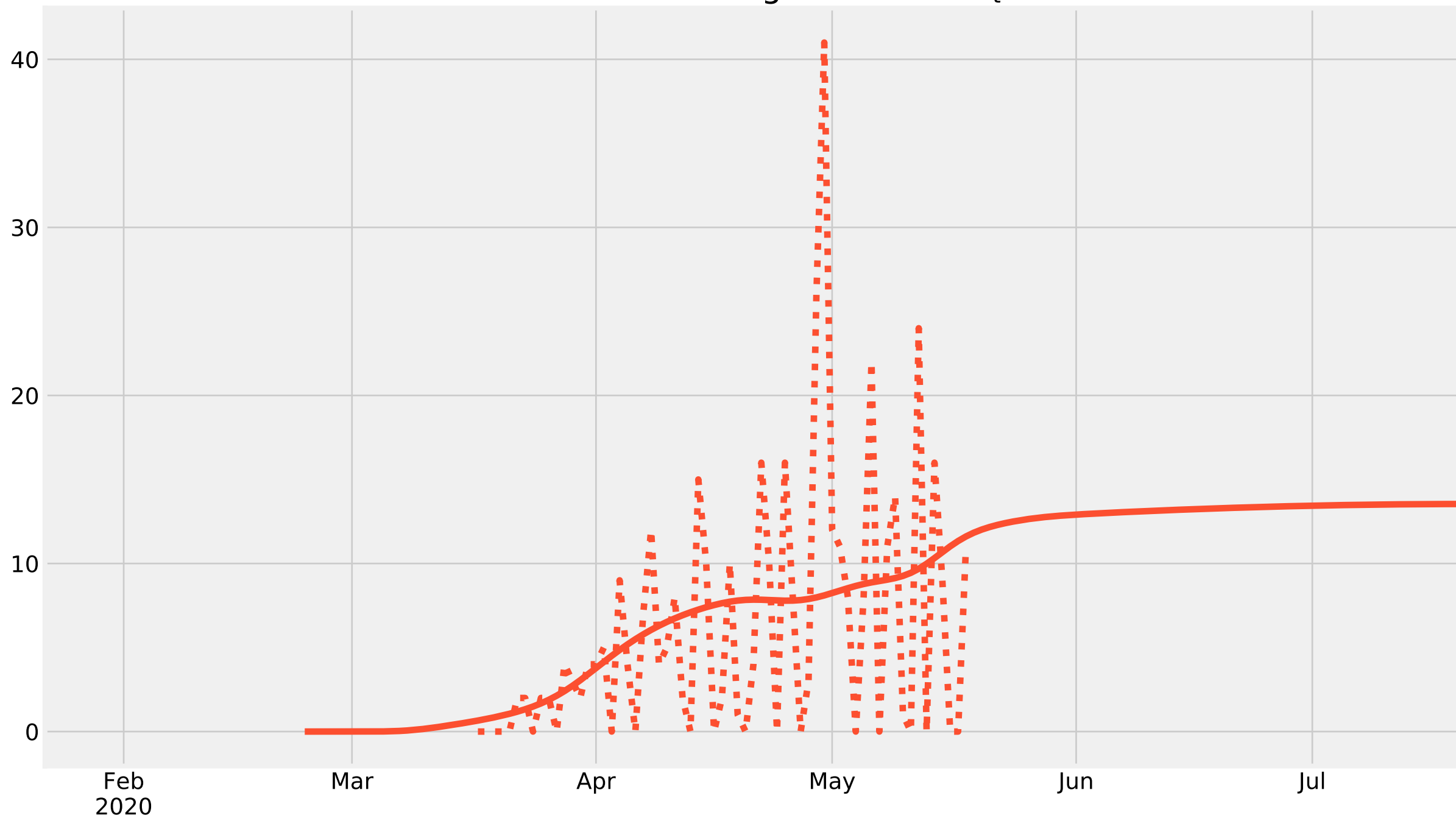$Rate_{Ventilator}$: 40.00%
$Rate_{Mortality}$: 1.00%
$BasicR_0$: 2.1

Author: Michael Donnelly (twtr: @donnellymjd)
Chart created on 19 May 2020

Daily Deaths Forecast
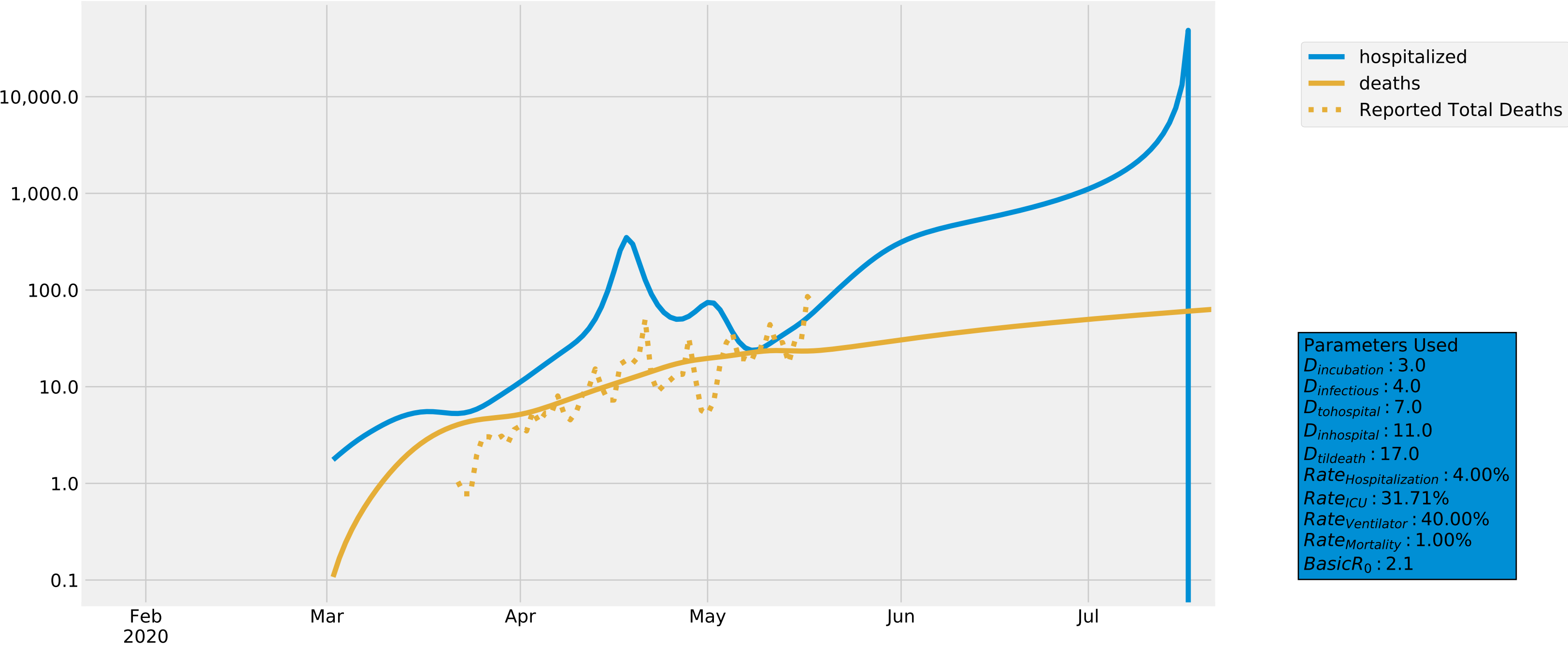South Carolina: No Change in Future R_t Scenario

Forecast Daily Deaths
Reported Daily Deaths

Parameters Used
$D_{incubation}$: 3.0
$D_{infectious}$: 4.0
$D_{tohospital}$: 7.0
$D_{inhospital}$: 11.0
$D_{tildeath}$: 17.0
$Rate_{Hospitalization}$: 4.00%
$Rate_{ICU}$: 31.71%
$Rate_{Ventilator}$: 40.00%
$Rate_{Mortality}$: 1.00%
$BasicR_0$: 2.1

Author: Michael Donnelly (twtr: @donnellymjd)
Chart created on 19 May 2020

Doubling Rate Forecast
South Carolina: No Change in Future R_t Scenario

Legend:
- hospitalized
- deaths
- Reported Total Deaths

Parameters Used
$D_{incubation}$: 3.0
$D_{infectious}$: 4.0
$D_{tohospital}$: 7.0
$D_{inhospital}$: 11.0
$D_{tildeath}$: 17.0
$Rate_{Hospitalization}$: 4.00%
$Rate_{ICU}$: 31.71%
$Rate_{Ventilator}$: 40.00%
$Rate_{Mortality}$: 1.00%
$BasicR_0$: 2.1

Author: Michael Donnelly (twtr: @donnellymjd)
Chart created on 19 May 2020