	More

Corona Virus Science

This blog explains some of the science related to the corona virus (COVID-19) e
perspective. Most posts contain links to the underlying research.

COVID-19 Model Projections

This page contains graphs with the latest COVID-19 projections for the US from the "Data Trend Model". Previous predictions can be downloaded from Github.

Last model run

June 27, 2020 with Johns Hopkins Data from 6/26/2020.

- **Predicted daily deaths on 8/25/2020: 2,375** (yesterday: 2,205; ~ 143,000 per 2 months)
- **Predicted daily cases on 8/25/2020: 64,522** (yesterday: 60,351)
- **Total deaths predicted by 8/25/2020: 250,431** (yesterday: 241,966 until 8/24)
- **Excluding New York & New Jersey: 200,764** (yesterday: 192,587 until 8/24)
- **Total predicted cases by 8/25/2020:** 6,042,908
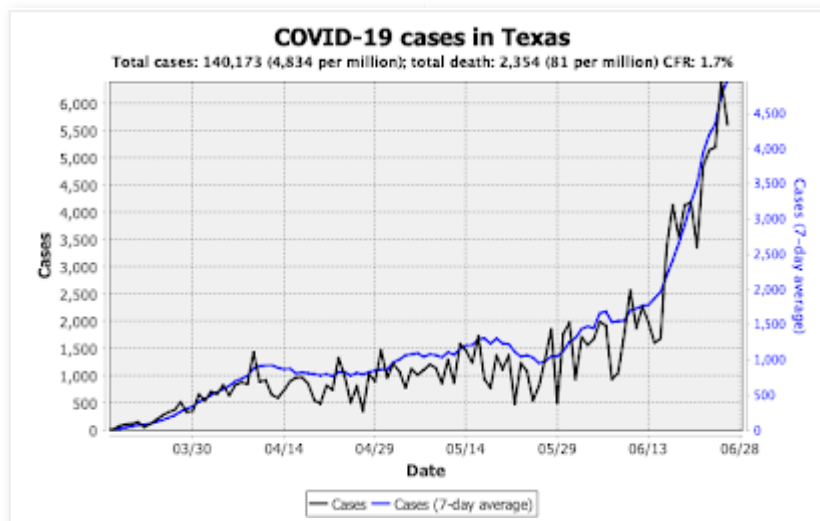
Summary

Once again, today's numbers show a large increase compared to yesterday, after another new record for daily COVID-19 cases in the US yesterday. Three states were responsible for more than 20,000 cases: Florida, with an astonishing new record with 8,942 new cases; and California and Texas, which both reported more than 5,600 cases.

The first graph below now shows daily new cases, rather than total cases as in the past. The daily cases show the current developments better. Note that:

- For actual data, the average of the preceding 7 days is shown. This reduced day-to-day variations, but introduces a delay during rapid growth periods. For example, yesterday's 7-day average was 35,000 cases, but the reported number of new cases was 45,255 cases.
- The model explicitly limits future growth in cases to 14 days, based on the assumption that states where COVID-19 cases start to rise rapidly would quickly initiate strict measures to reduce COVID-19 transmissions. However, this assumption seems overly optimistic now, at least for Florida and Texas. While both states have taken some minor steps like closing bars, these measures are *significantly weaker* that the

restriction enacted in March and April. For example, while Texas had prohibited public gatherings of more than 10 people in March, the currently restrictions allow all gatherings up to 100 people, and larger gatherings with prior approval.
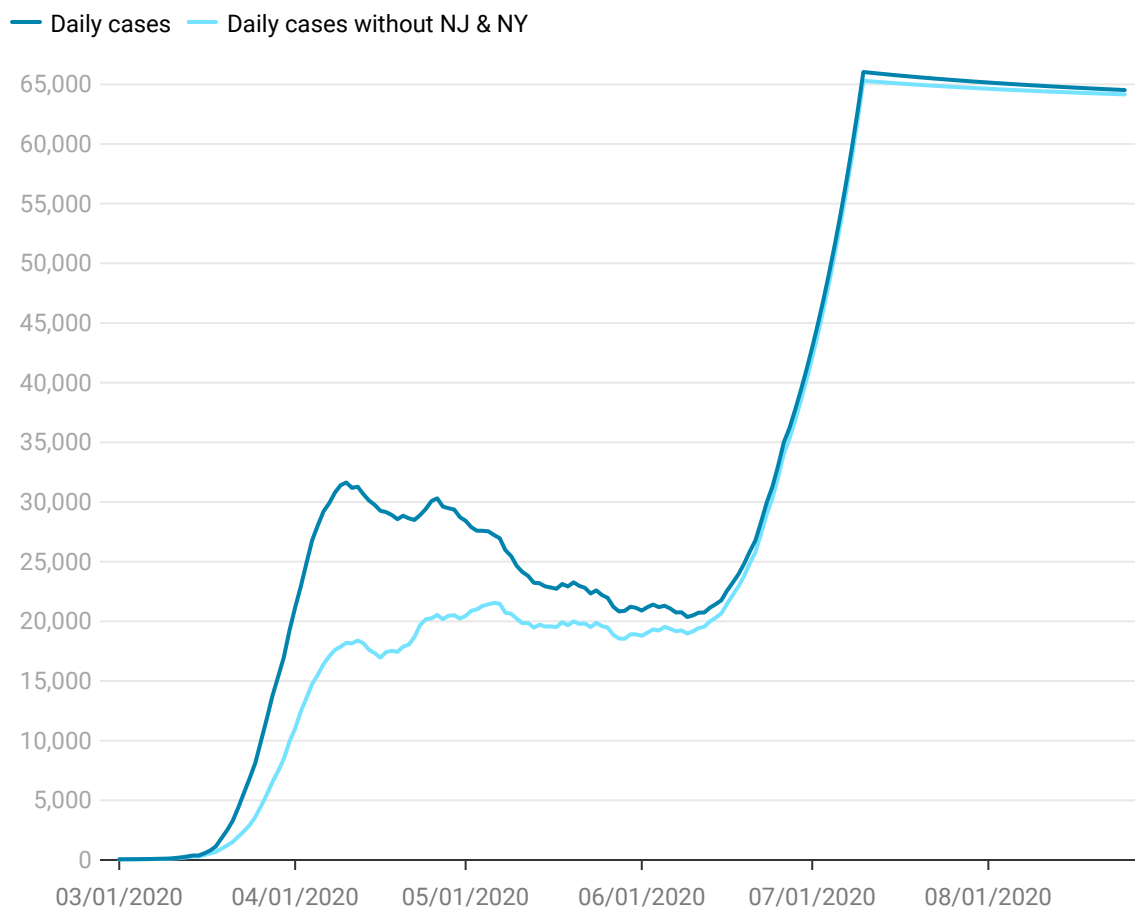
The graph of COVID-19 cases in Texas shows that even the stricter measures had only limited success:

COVID-19 cases in Texas
Total cases: 140,173 (4,834 per million); total death: 2,354 (81 per million) CFR: 1.7%

New daily cases showed a small drop in the middle of April, but mostly stayed steady, or showed gradual increases. In contrast, stricter measures in other states led to 5-fold, 10-fold, and even higher reductions. The new set of minor restrictions is very unlikely to have a major impact on the rapid growth of cases in Florida and Texas.

Daily actual and projected COVID-19 cases

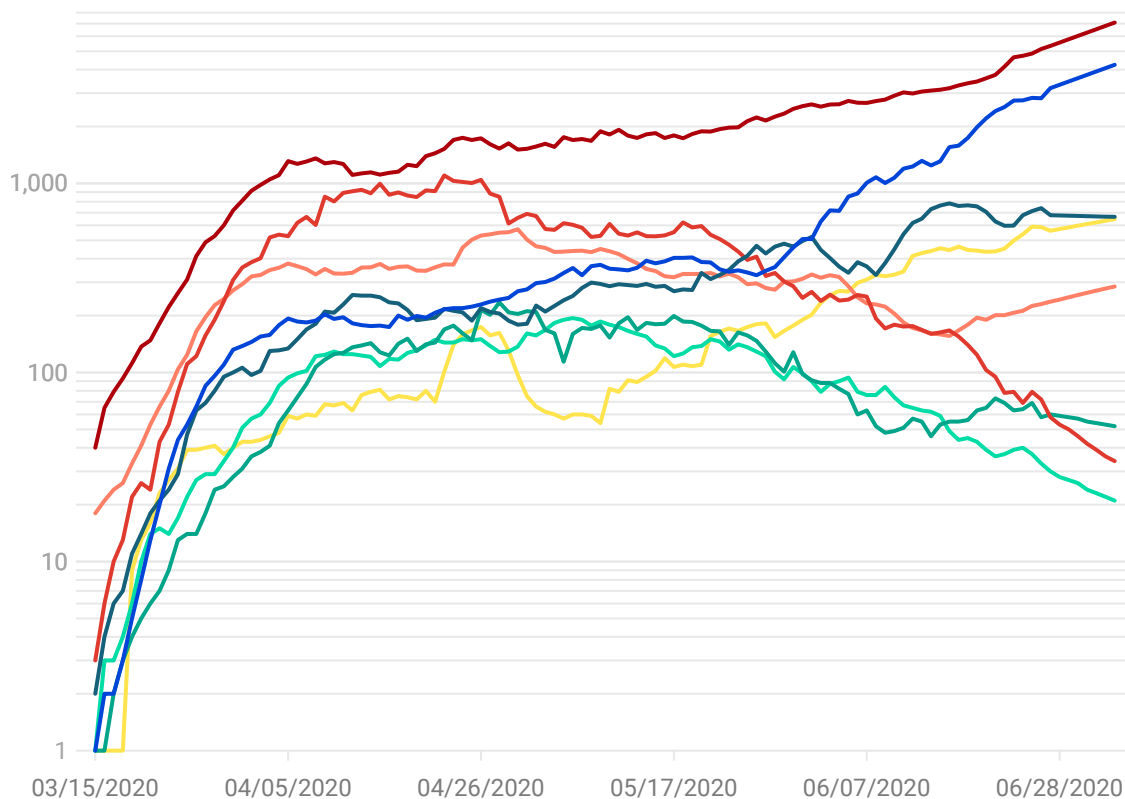Using 7-day averages for actual cases; future growth limited to 14 days.

— Daily cases   — Daily cases without NJ & NY

Daily model projections at https://covid19science.blogspot.com/p/covid-19-model-projections.html

Chart: covid19science.blogspot.com • Get the data • Created with Datawrapper

Actual and projected daily COVID-19 cases by state (AL-DC)

— Alabama — Arizona — Arkansas — California — Colorado — Connecticut — Delaware
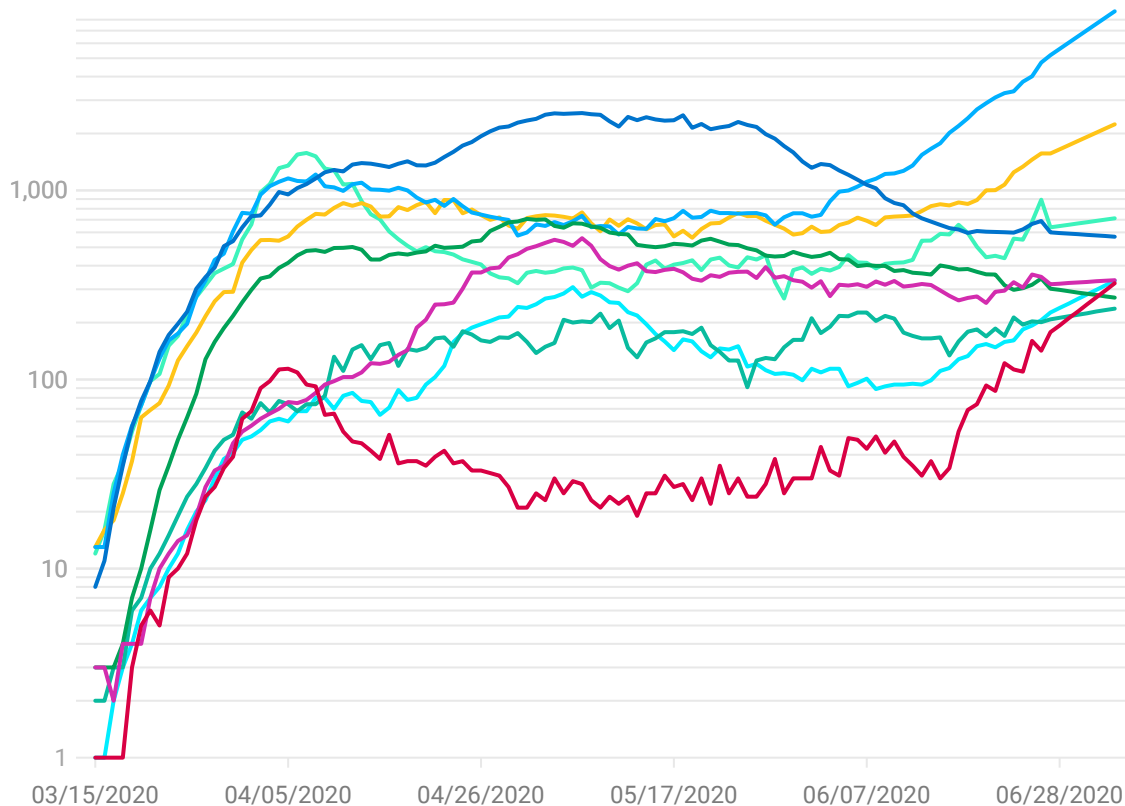— District of Columbia

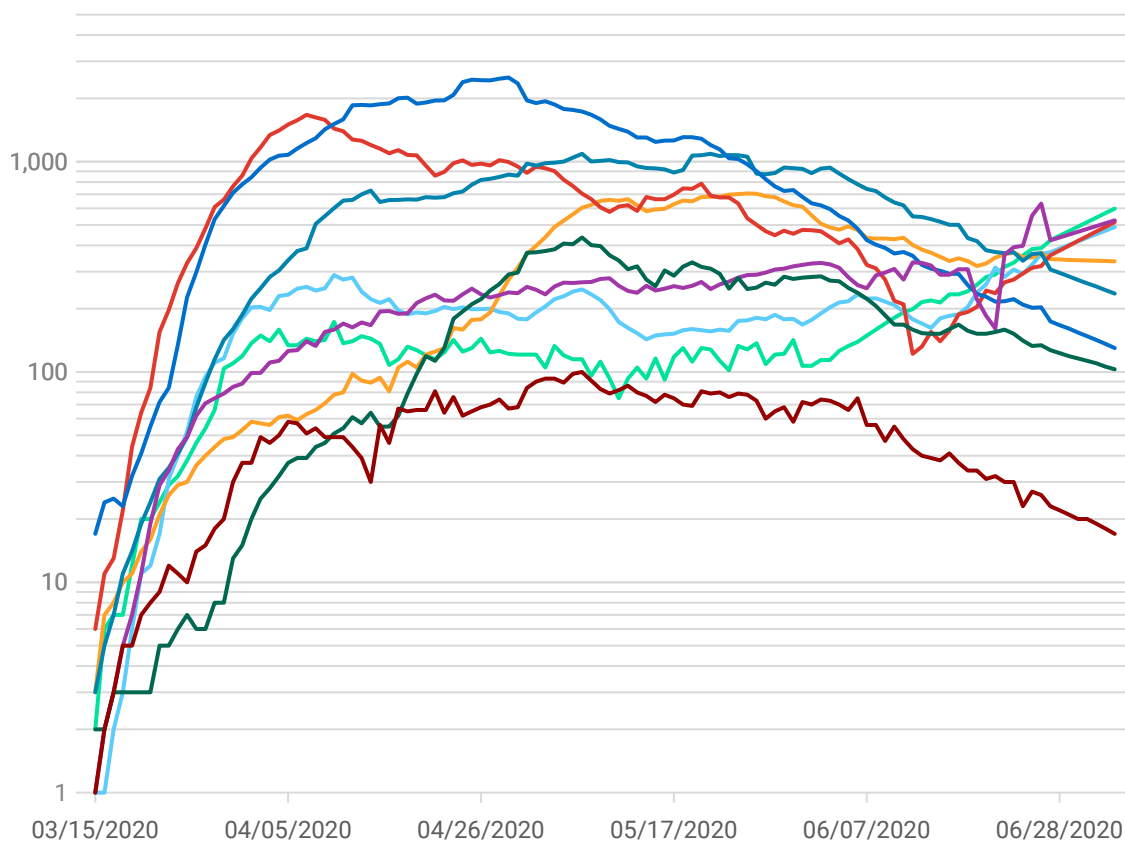*Daily model projections at https://covid19science.blogspot.com/p/covid-19-model-projections.html*

Chart: covid19science.blogspot.com • Get the data • Created with Datawrapper

Actual and projected daily COVID-19 cases by state (FL-LA)

— Florida   — Georgia   — Idaho   — Illinois   — Indiana   — Iowa   — Kansas   — Kentucky

— Louisiana

Daily model projections at https://covid19science.blogspot.com/p/covid-19-model-projections.html

Chart: covid19science.blogspot.com • Get the data • Created with Datawrapper

Actual and projected daily COVID-19 cases by state (MD-NH)

— Maryland   — Massachusetts   — Michigan   — Minnesota   — Mississippi   — Missouri
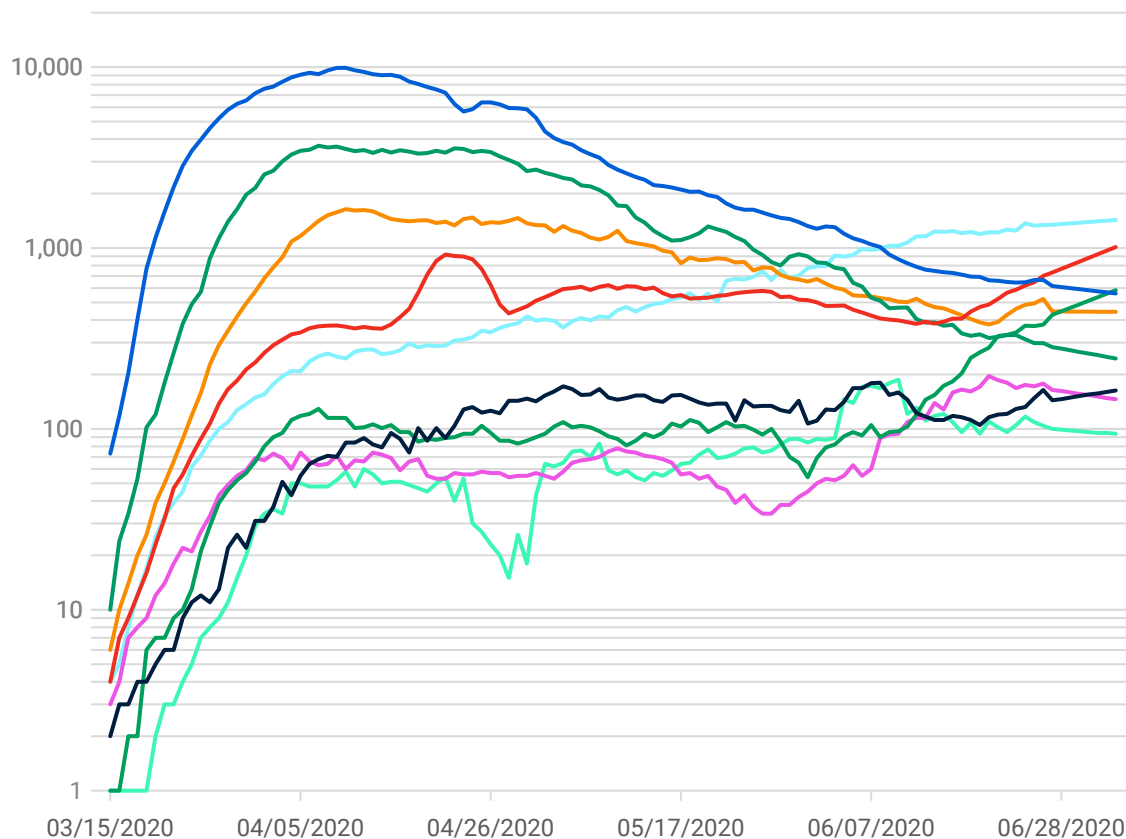— Nebraska   — Nevada   — New Hampshire

Daily model projections at https://covid19science.blogspot.com/p/covid-19-model-projections.html

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Actual and projected daily COVID-19 cases by state (NM-PR)

— New Jersey — New Mexico — New York — North Carolina — Ohio — Oklahoma — Oregon
— Pennsylvania — Puerto Rico

Daily model projections at https://covid19science.blogspot.com/p/covid-19-model-projections.html
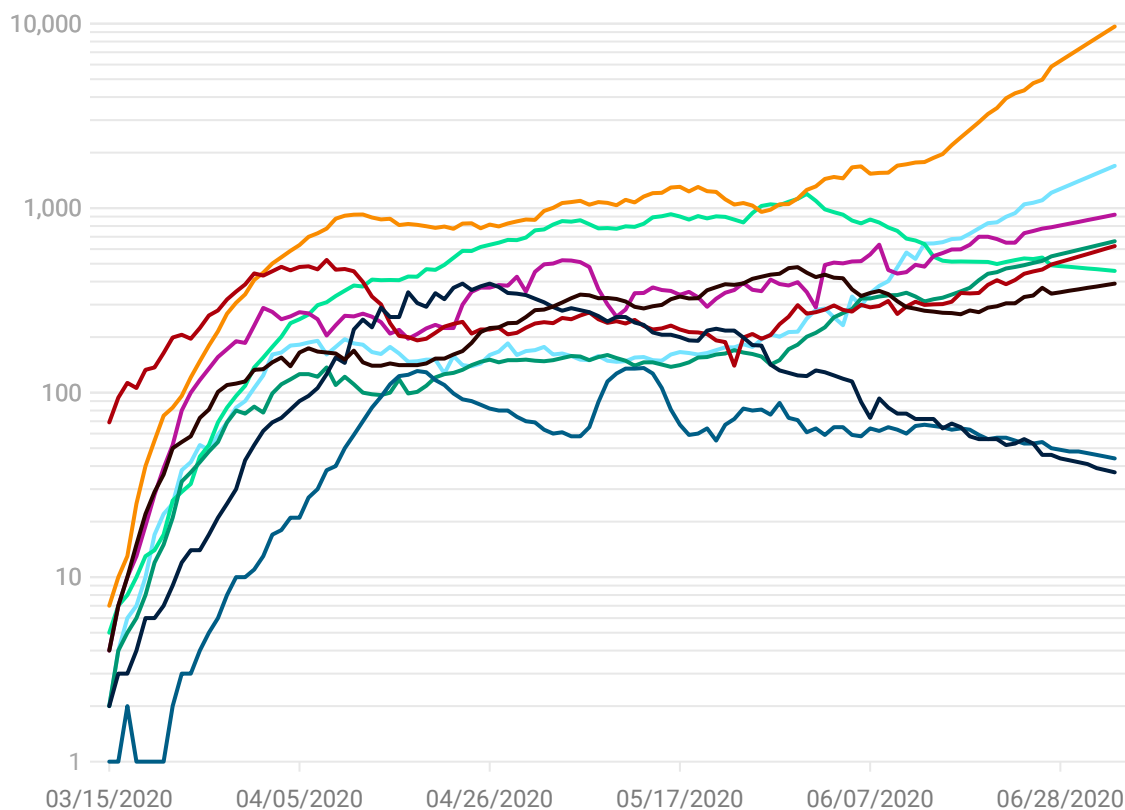
Chart: covid19science.blogspot.com • Get the data • Created with Datawrapper

Actual and projected daily COVID-19 cases by state (RI-WI)

— Rhode Island   — South Carolina   — South Dakota   — Tennessee   — Texas   — Utah   — Virginia
— Washington   — Wisconsin

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