

Corona Virus Science

This blog explains some of the science related to the corona virus (COVID-19) € 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 10, 2020 with Johns Hopkins Data from 6/9/2020.

- Predicted daily deaths on 8/8/2020: 1,232 (yesterday: 944; ~ 74,000 per 2 months)
- Predicted daily cases on 8/8/2020: 22,786 (yesterday: 20,772)
- Total deaths predicted by 8/8/2020: 186,514 (yesterday:173,069 until 8/7)
- Excluding New York & New Jersey: 140,845 (yesterday: 127,193 until 8/7)

Please note that the numbers are distorted by bad reporting and recent reporting changes in Michigan, as explained below.

Summary

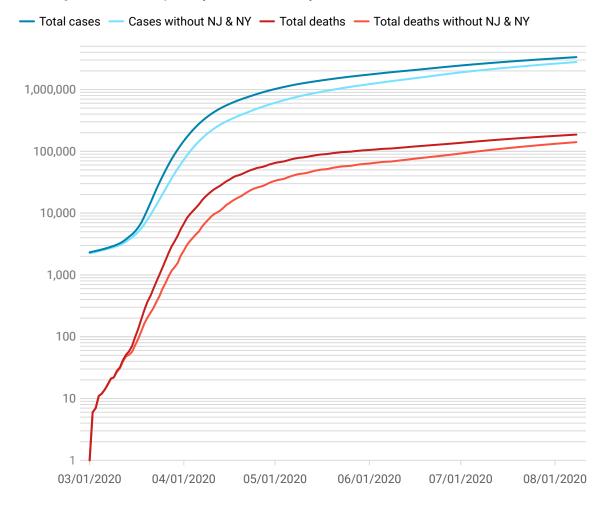
Today's numbers show show relatively large increases over yesterday. These increases appear to be mostly an artifact from recent changes in Michigan's reporting: on 6/5/2020, Michigan started to include "probable" COVID-19 cases, and reported 5,759 new COVID-19 cases, which included all probable cases until that date. Without this "batch addition" for probable cases, Michigan would have reported about 200-300 cases for the day. This had a very large effect on the predicted deaths, since Michigan has an extremely high raw case fatality rate (CFR) about 10%. The high CFR indicates that testing in Michigan has been woefully inadequate, with fewer than 1 in 10 COVID-19 infections being reported as a confirmed case.

Insufficient testing also leads to under-reporting of COVID-19 deaths, and excess death analysis confirms that this can be seen in Michigan. For example, Michigan reported 3,023 deaths for the week ending 4/4/2020, compared to 1,871 deaths in the same week in 2019. Of the 1,152 excess deaths, only 640 were reported as COVID-19 deaths: just 55.6%. For three weeks in April, the total number of weekly deaths in Michigan was at least 50% higher than in 2019, but COVID-19 was listed as a cause of deaths in only two thirds of the excess deaths.

When correcting for the spike in the Michigan data, the predicted number of COVID-19 deaths on 8/8 drops to 829, and the total number of deaths to 168,285.

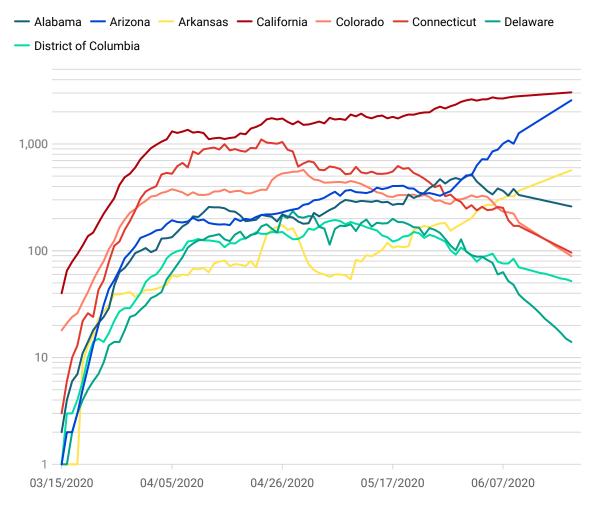
Total projected COVID-19 cases and deaths

Future growth in cases per day limited to 14 days.



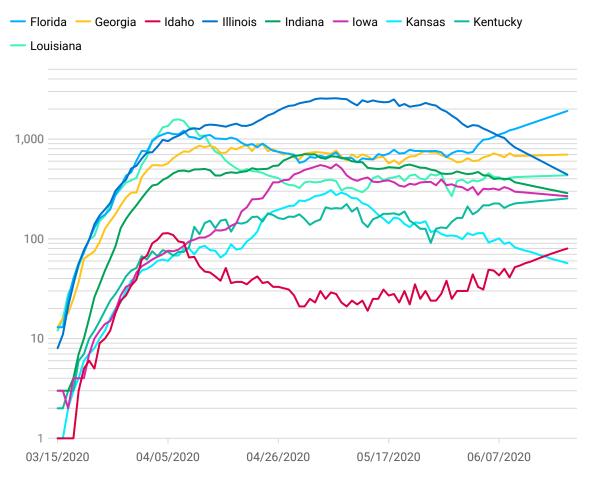
Daily model projections at https://covid19science.blogspot.com/p/covid-19-model-projections.html Chart: covid19science.blogspot.com • Get the data • Created with Datawrapper

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



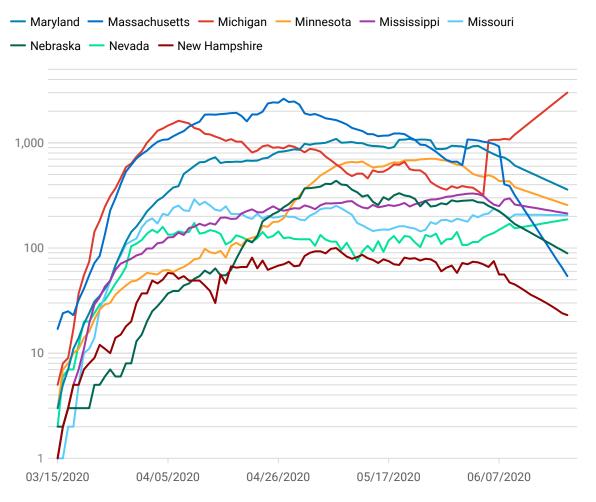
 $\label{logspot} \textit{Daily model projections at https://covid19science.blogspot.com/p/covid-19-model-projections.html} \\ \textit{Chart: covid19science.blogspot.com} \bullet \textit{Get the data} \bullet \textit{Created with Datawrapper} \\ \\$

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



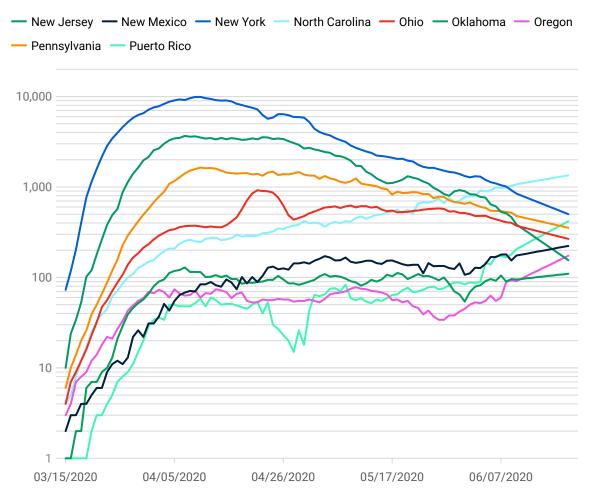
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Actual and projected daily COVID-19 cases by state (MD-NH)



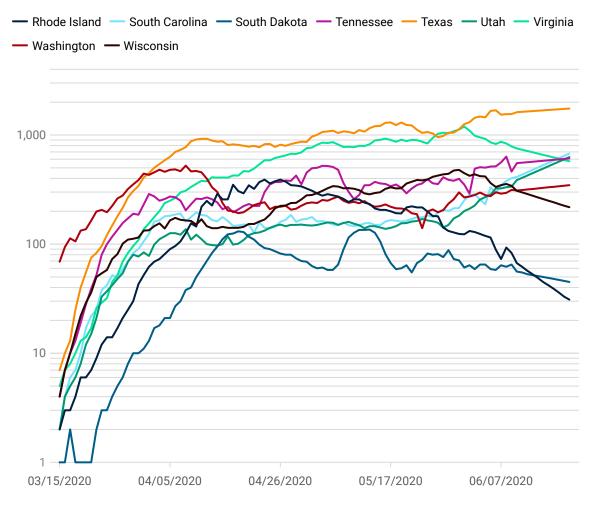
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Actual and projected daily COVID-19 cases by state (NM-PR)



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



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