

COVID-19 Mortality Rate Trends in Countries and US States

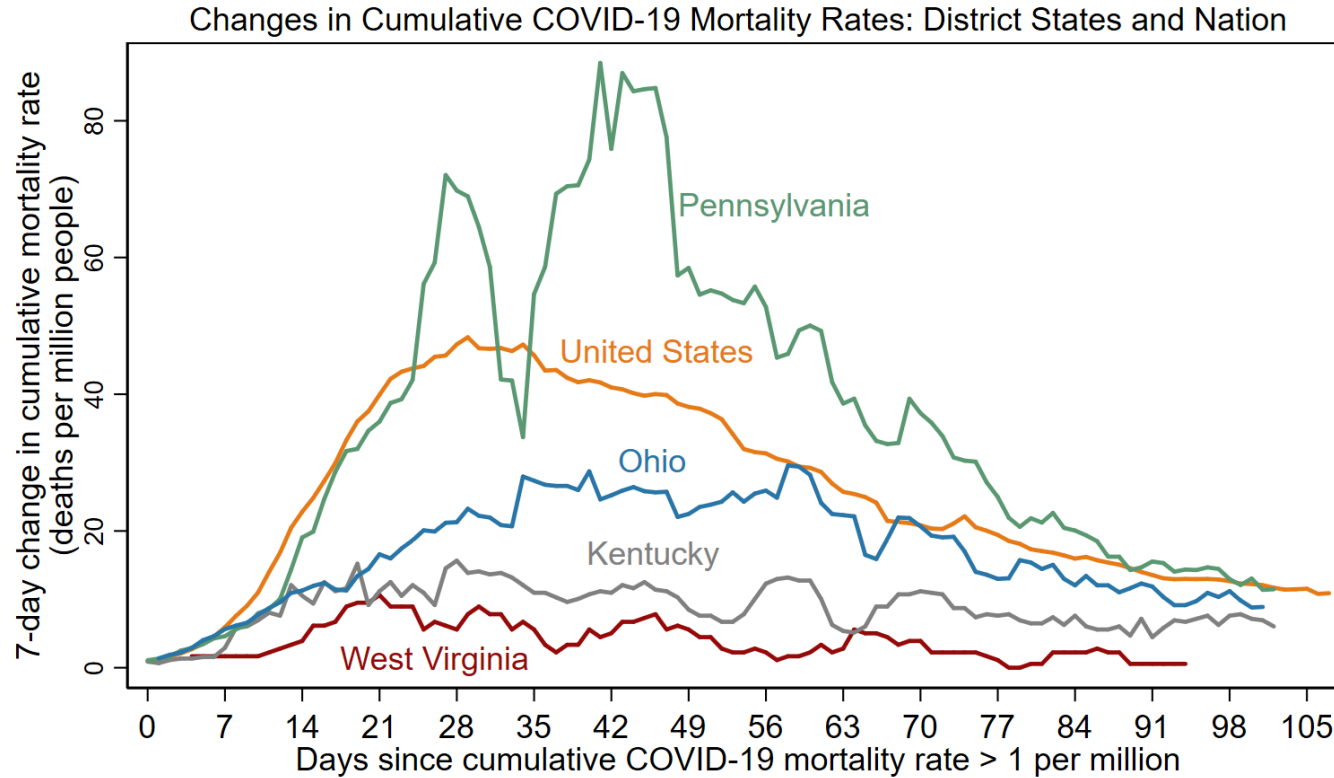
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- The charts in this presentation use the same data sources as the charts in two April 2020 District Data Briefs. Please see these reports for additional details.
 - [Getting to Accuracy: Measuring COVID-19 by Mortality Rates and Percentage Changes](#)
 - [A Speeding Rate Starts to Slow: COVID-19 Mortality Rates by State](#)
- Since those reports were completed, additional evidence shows that COVID-19 deaths have been underreported, both in other countries and in the United States. The following charts present the latest the Center for Systems Science and Engineering at Johns Hopkins University (CSSE) data through July 5, with no attempt to further correct for underreporting.
 - Some large revisions in COVID-19 data have been smoothed. See slide 9 for details.
- The charts have been modified from those in the reports to better convey the current status of the COVID-19 epidemic in the United States.
- All dates in this presentation refer to the year 2020.

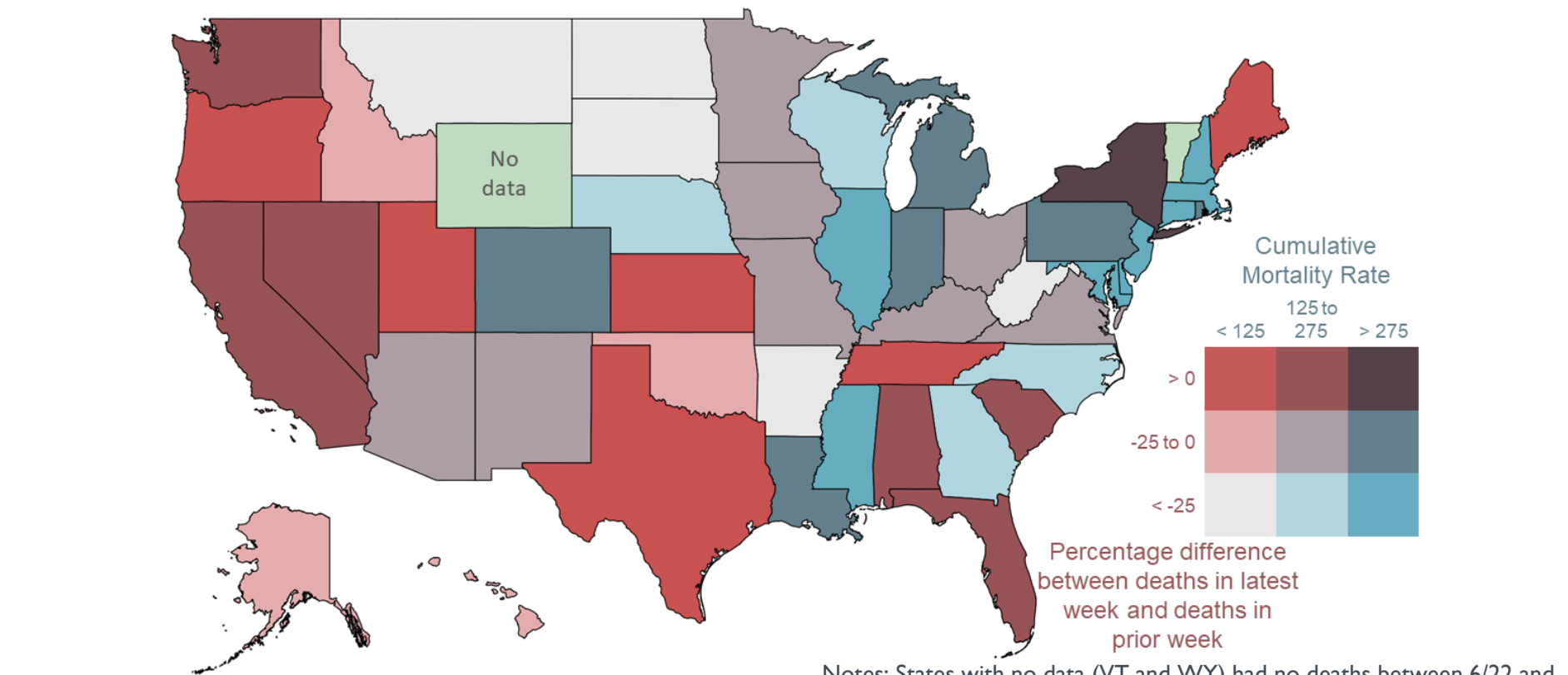
In the week leading up to July 5, the population-adjusted number of COVID-19 deaths per week fell in all four Fourth District states and in the US as a whole.



Note: Data through July 5, 2020.

Sources: FRBC calculations, The Center for Systems Science and Engineering at Johns Hopkins Univ., and Bureau of Economic Analysis.

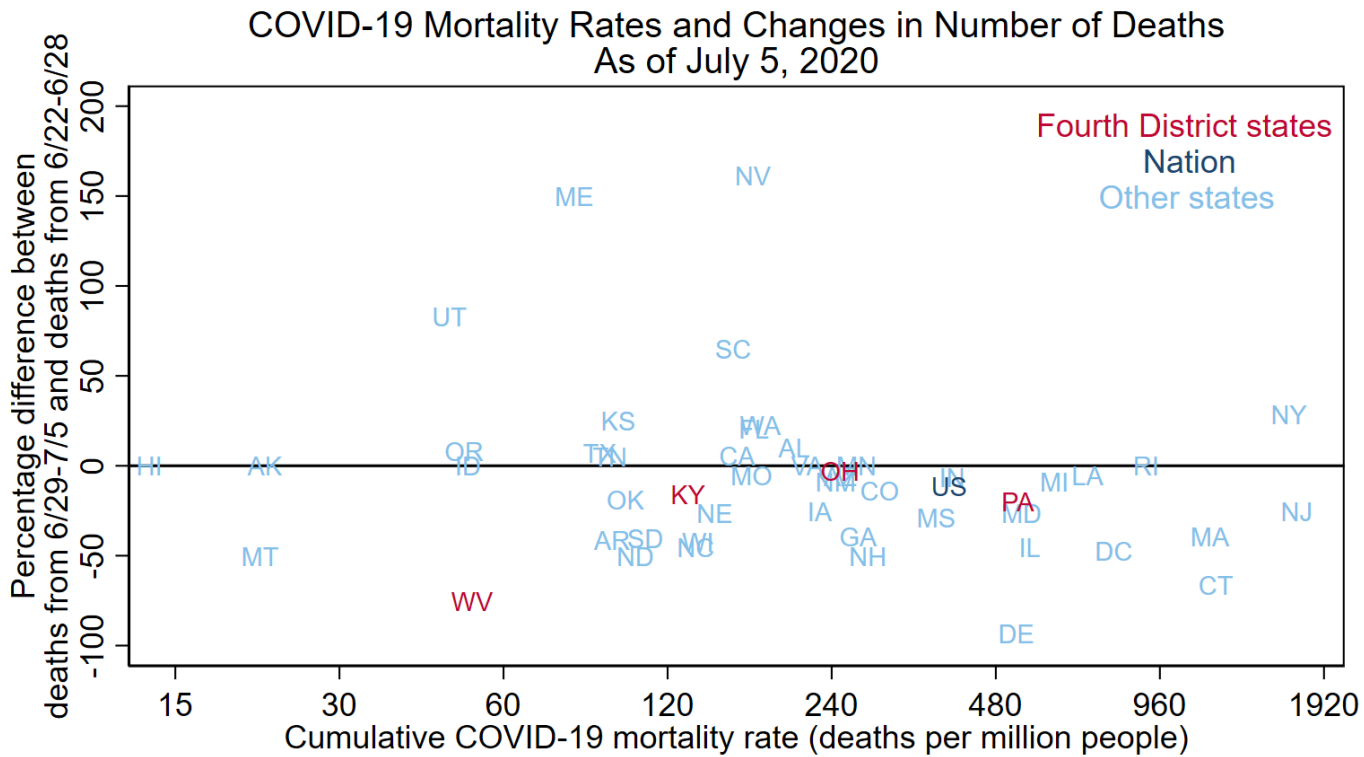
Between June 29 and July 5, the number of COVID-19 deaths per week rose by 25 percent or more in six states (including NY and SC) and by less than 25 percent in seven states (including CA, FL, and TX).



Data for July 5, 2020, accessed on July 6, 2020
“Latest week” is 6/29 to 7/5, “prior week” is 6/22 to 6/28.
Sources: FRBC calculations, CSSE, and BEA

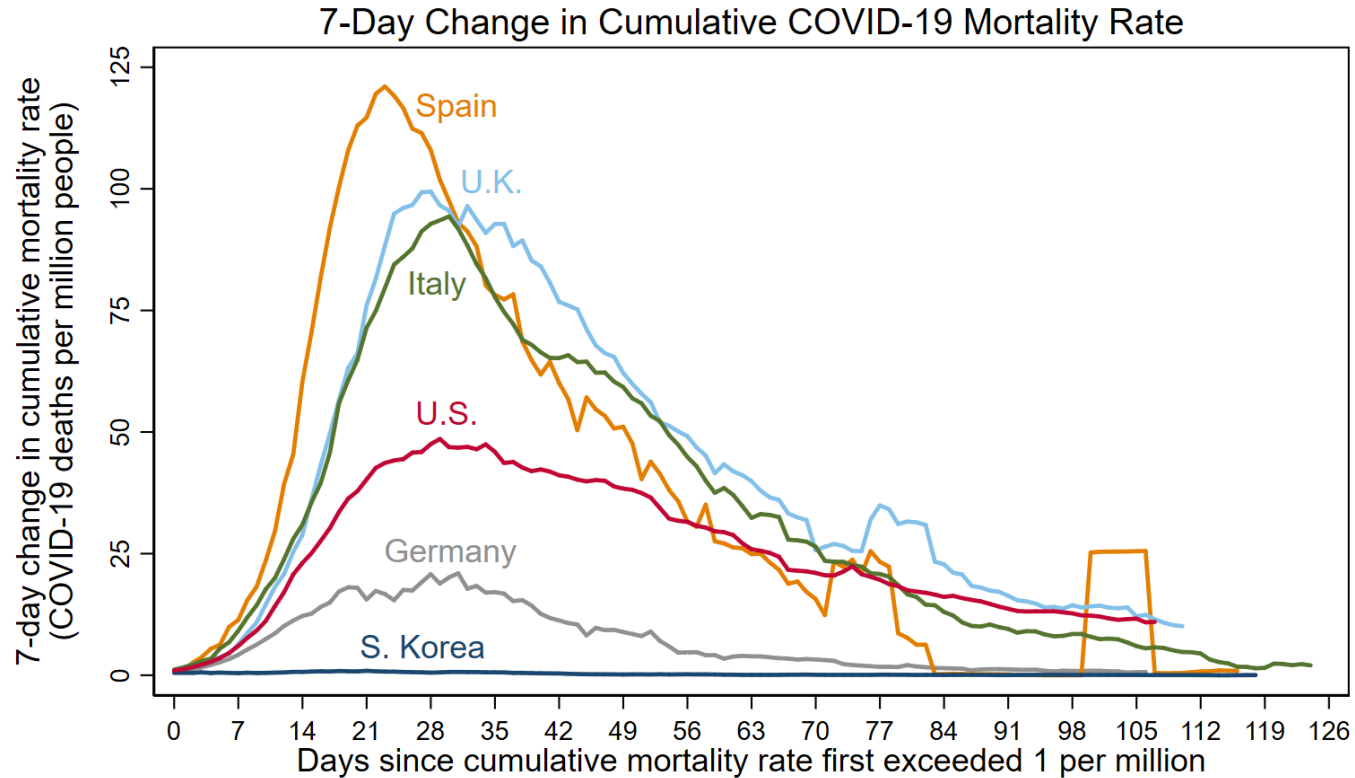
Notes: States with no data (VT and WY) had no deaths between 6/22 and 6/28. The District of Columbia is in the bin with mortality rate > 275 and percentage difference below -25 percent. The color bins on this map are changed with each update to better represent the latest data.

This chart gives similar information to the map, but it is more precise and includes the nation as a whole.



Notes: Horizontal axis has log scale. VT and WY excluded because they had no COVID-19 deaths from 6/22-6/28, 2020.
Sources: FRBC calculations, The Center for Systems Science and Engineering at Johns Hopkins Univ., and Bureau of Economic Analysis.

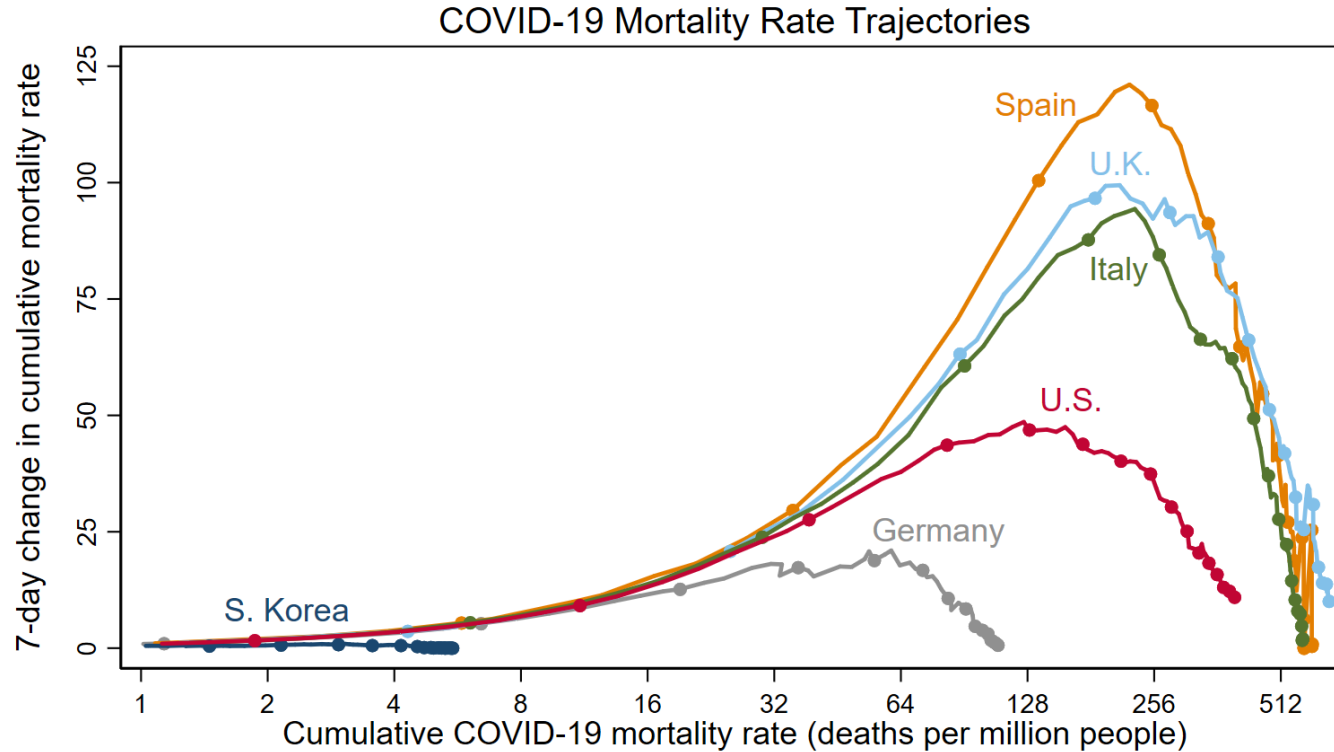
The epidemic curve of the US peaked at a lower weekly change in the cumulative mortality rate than the curves of Italy, Spain, and the UK. However, the decline from the peak has been relatively small in the US.



Notes: 3/22/2020 was first day US rate > 1. Data through 7/5/2020.

Sources: FRBC calculations, The Center for Systems Science and Engineering at Johns Hopkins Univ., and the World Bank

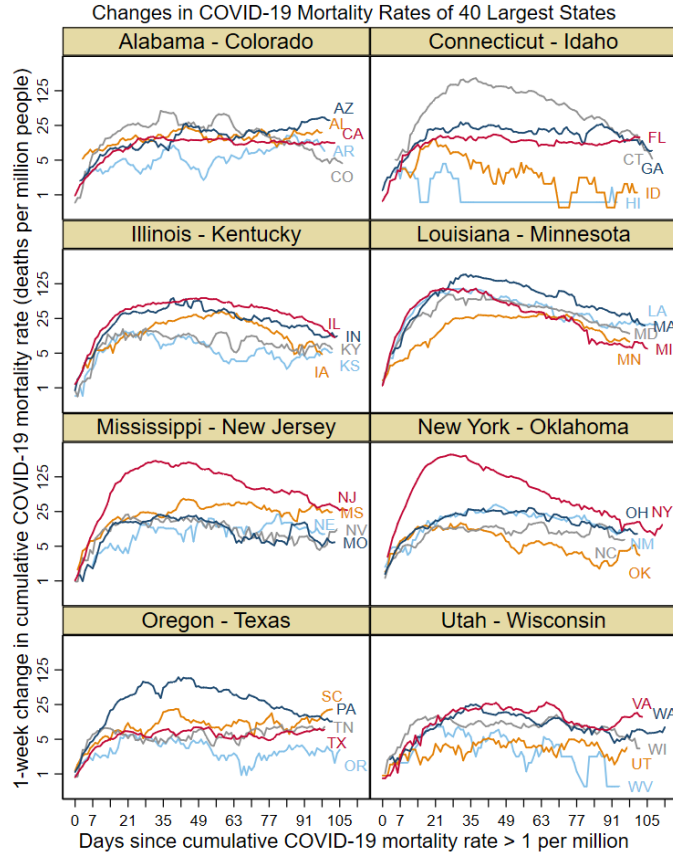
As of July 5, the COVID-19 mortality rate of the US is 397 deaths per million people. This is more than triple that of Germany and more than half those of Spain and UK.



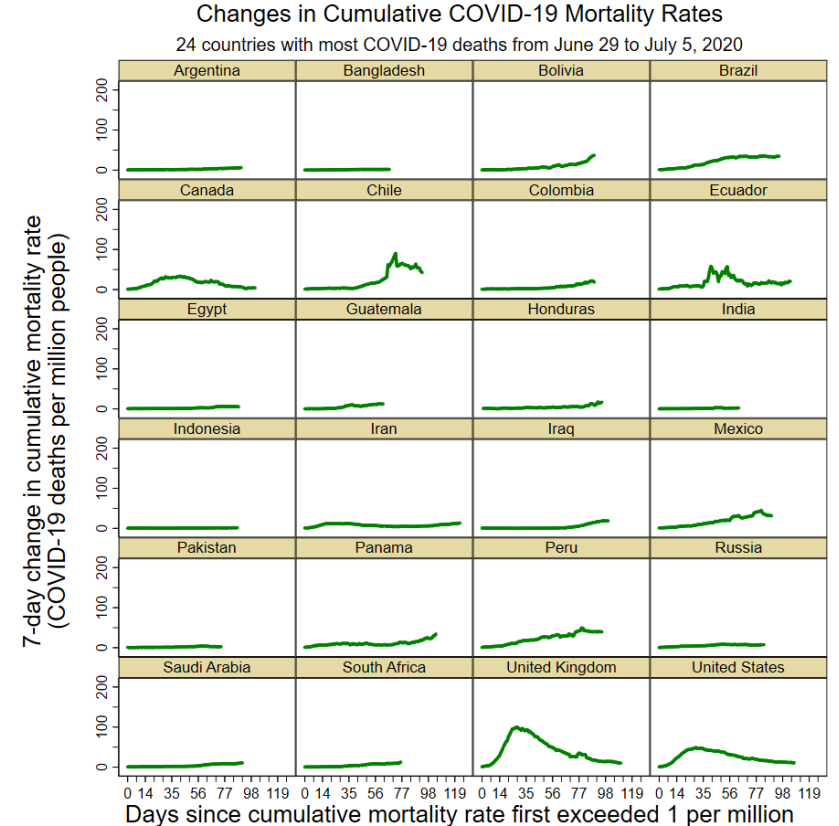
Notes: Horizontal axis has log scale. Excluding days when mortality rate < 1. Dots on Sundays to show time. Data through July 5, 2020.

Sources: FRBC calculations, The Center for Systems Science and Engineering at Johns Hopkins Univ., and the World Bank

These charts show the changes in COVID-19 mortality rates for the 40 largest US states (left) and the 24 countries with the highest number of COVID-19 deaths in the week leading up to July 5 (right).



Notes: Vertical axis uses a log scale. Number of days capped at 112. Data through July 5, 2020.
Sources: FRBC calculations, The Center for Systems Science and Engineering at Johns Hopkins Univ., and Bureau of Economic Analysis.



Notes: Data points excluded if cumulative mortality rate < 1. Data from 1/22-7/5/2020.
Sources: FRBC calculations, The Center for Systems Science and Engineering at Johns Hopkins Univ., and the World Bank

Appendix: Adjustments for data revisions

- Some large revisions to the reported number of COVID-19 deaths cause large single-day jumps.
- I smooth some of these jumps by multiplying daily changes for a period of time by a scaling factor so that the adjusted series meets the post-revision series.
- I have used this approach for the following revisions and periods:
 - Spain revised deaths downward on May 25; data are adjusted from 3/3 to 5/24.
 - New Jersey revised deaths upward on June 25; NJ and US data are adjusted from 3/10 to 6/24.