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Measure	Desired Change	Yesterday in the U.S.
No. of Tests	Increase	Up 4.7% (Cumulative)
Positive Test Rate	Decline	Up slightly to 19.7% (from 19.5%)
No. of Cases	Plateau	Up 5.1%, rate continues to slow
% of Deaths Per Case	Decline	Steady at 3.9%
No. of Deaths / 1M Pop.	Plateau	Up to 66.8; however, rate no longer exponential
Recoveries : Deaths	Increase (>1:1)	Steady at 1.48

We are tracking the twenty countries with the most confirmed coronavirus cases; these represent 88.8% of all cases in the world. Additionally, we are tracking all fifty U.S. states, the District of Columbia and New York City.

Here is where the U.S. ranks relative the twenty countries with the most confirmed coronavirus cases:

Confirmed Cases	1	Cases per Capita	6
Deaths	1	Death Rate (per case)	9
Tests per Capita	9	Daily Case Growth Trend	6

Highlights from Saturday include:

- Deaths in the U.S. declined yesterday for the second consecutive day. Although still high (1,528) on Sunday, it now appears the death rate may finally have peaked.
- Six states - New York, New Jersey, Michigan, Louisiana, Massachusetts and Pennsylvania - account for 75.9% of the coronavirus-related deaths in the U.S. On an encouraging note, new deaths per day appear to have peaked in each of these states.
- More than 32,000 people have recovered from the virus in the U.S., about 1.5x as many as have died. Given the reported recovery time (2 weeks for mild cases, 3-6 weeks for severe or critical cases, per the World Health Organization), recoveries should accelerate starting soon: We are now about 3 weeks past the date when new confirmed cases first >10,000 per day (they reached their highest level - 34,000 on Friday).
- The daily case growth rate has continued to decline across the U.S. Only 9 states are still showing exponential case growth – Alabama, Maryland, Massachusetts, Mississippi, Nebraska, Rhode Island, South Carolina, South Dakota and Virginia. Only 8 states are experiencing daily case growth (5-day moving average) >10% - Alabama, Delaware, Kentucky, Maryland, Massachusetts, Nebraska, Rhode island and South Dakota.
- Seventeen states appear to be beyond or nearing a peak in active cases – Alaska, Arkansas, Georgia, Hawaii, Idaho, Iowa, Kansas, Maine, Michigan, Missouri, Montana, Nevada, Tennessee, Texas, West Virginia, Washington and Wyoming.
- Active cases have now peaked in 11 of the countries hardest-hit by the virus – Austria, China, France, Germany, Iran, Italy, Portugal, South Korea, Spain and Switzerland. Deaths have peaked in all twenty countries except perhaps, Portugal, Turkey and the United Kingdom.

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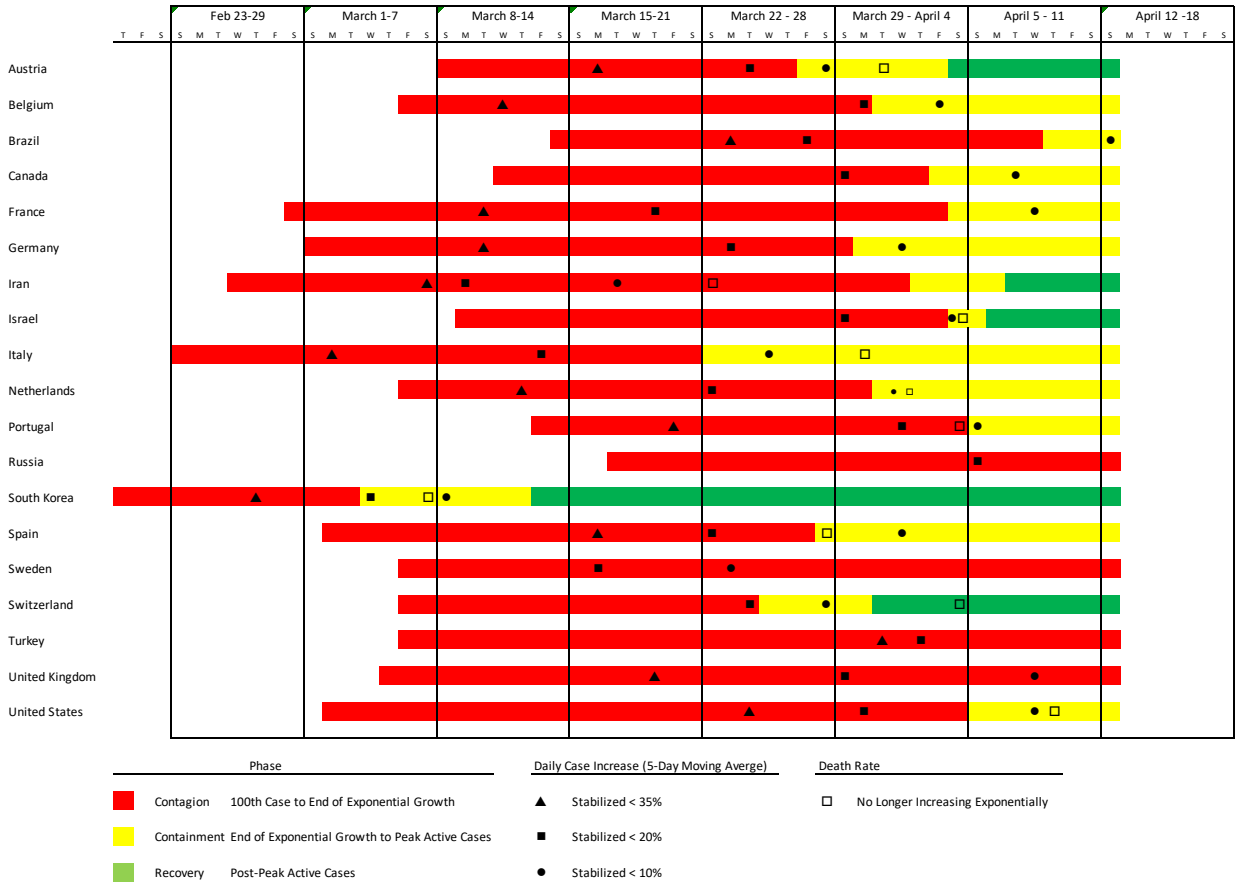
The graphic illustrates in color when the country first recorded 100 total cases (start of the "contagion" phase); when growth stopped following an exponential pattern (start of the "containment" phase); and, when peak total cases were recorded (start of the "recovery" phase). It uses symbols to indicate when average daily case growth rates fell (and were sustained) below certain benchmarks, as well as when deaths stopped growing exponentially.

A similar chart for selected U.S. states, the District of Columbia and New York City is provided on the next two pages.



Information throughout the Dashboard is provided as a courtesy, based on data from the above-named sources. HIA has no responsibility for the accuracy and updating of any data. Sources: worldometers.info; covidtracking.com Graphics depict data as of April 12, 2020.

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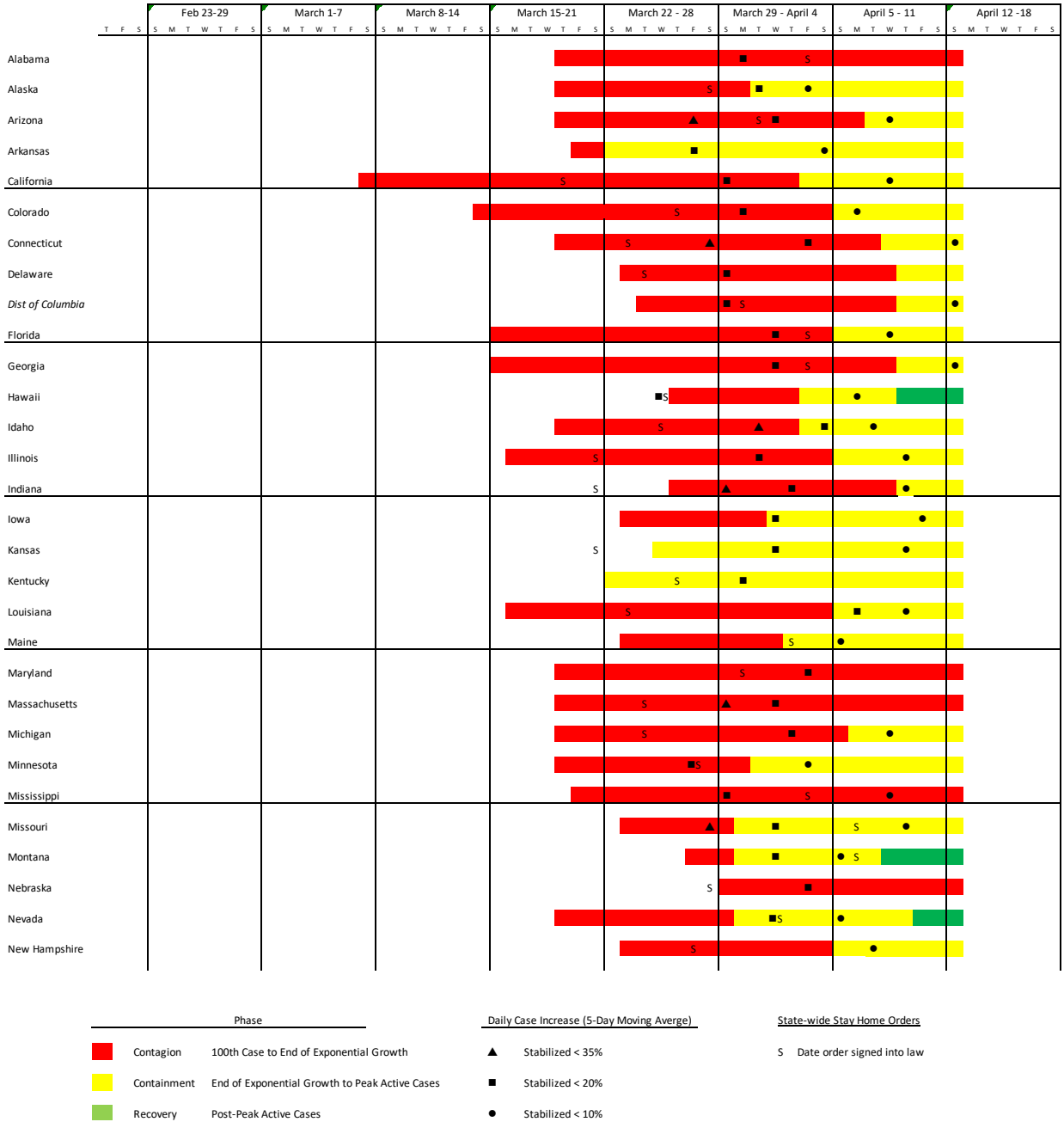
Please note: Due to data limitations, it is more difficult to discern when cases cease to grow exponentially at the State level. Thus, the determination of when to depict the containment phase on the chart below (yellow shading) was made on the basis of the state's timing of posting case growth rates <10%; whether active cases appear to be plateauing; and, a visual interpretation of the state's logarithmic chart of total and new cases. We have added a designation ("S") indicating the date that a state-wide stay home order was executed.



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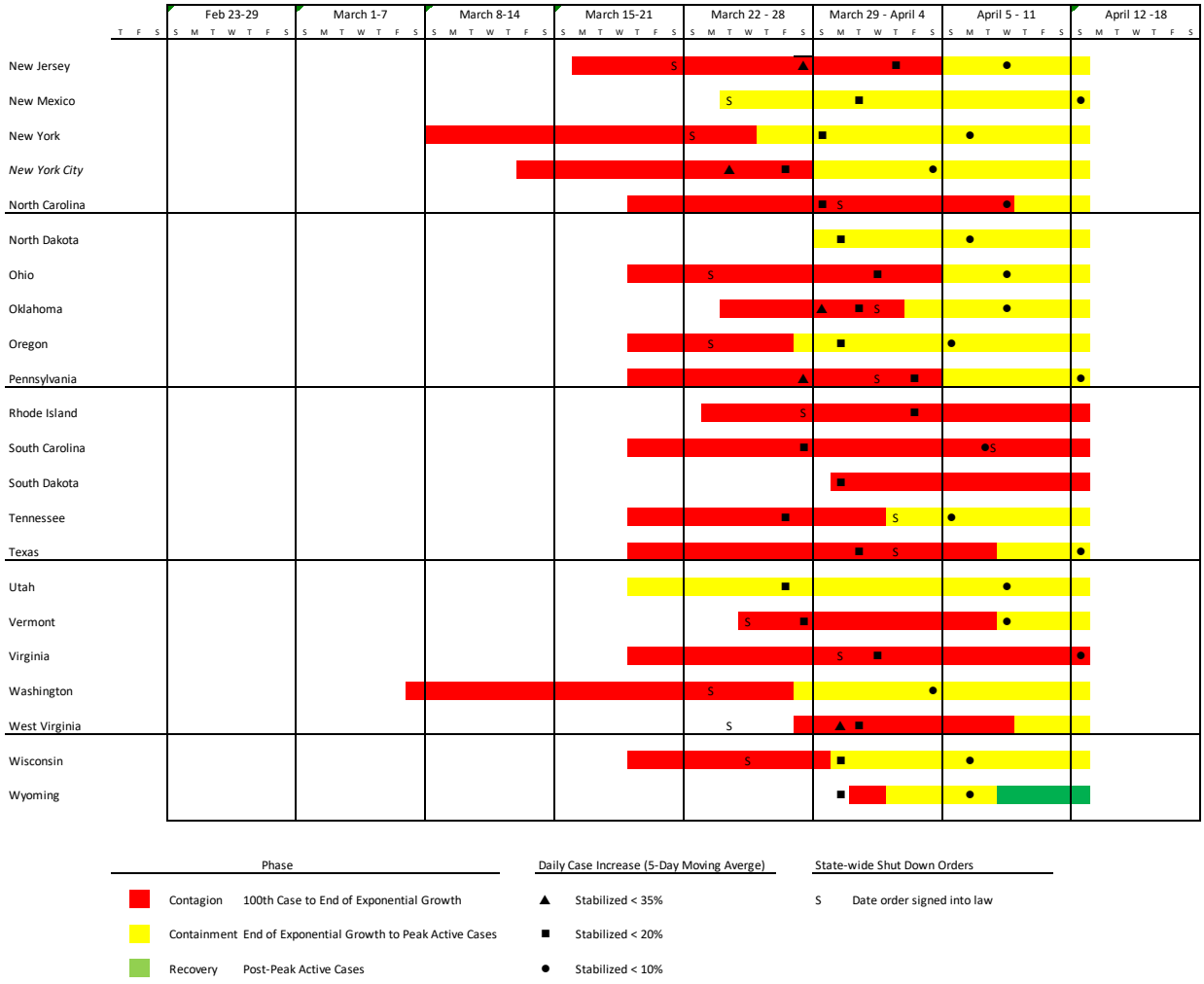

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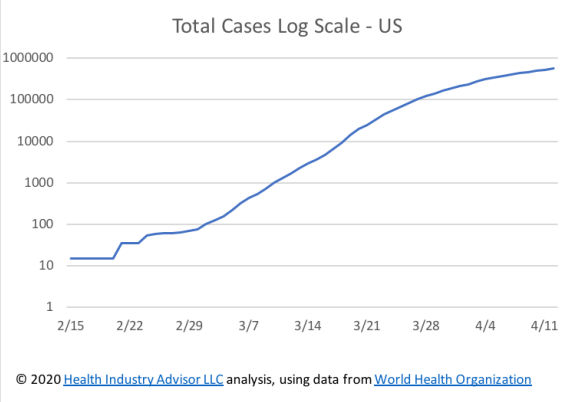
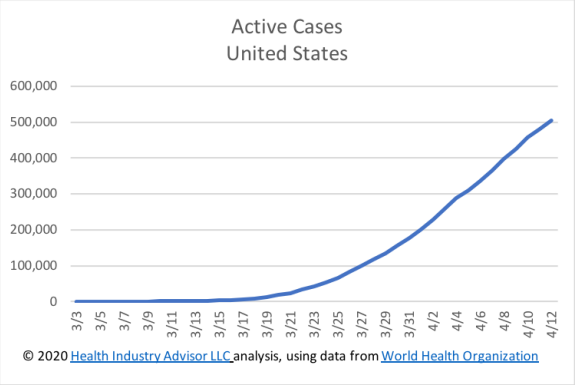
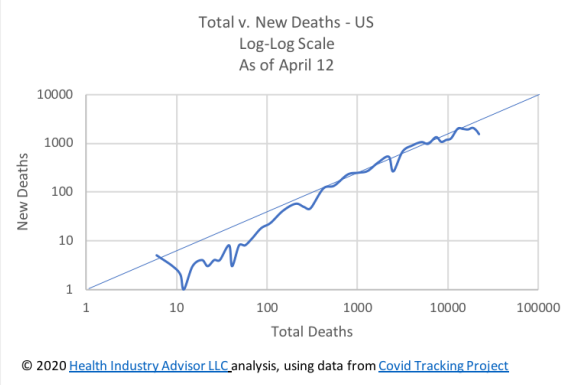
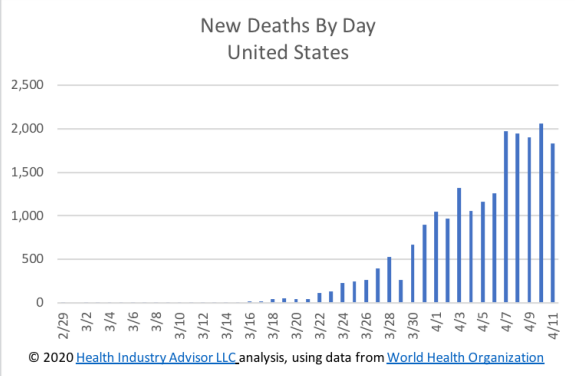
Cases in the U.S. are no longer growing at an expontential rate; active cases, however, have yet to peak. Deaths have ceased to their exponential growth in the past few days, and new daily deaths appear to be declining.









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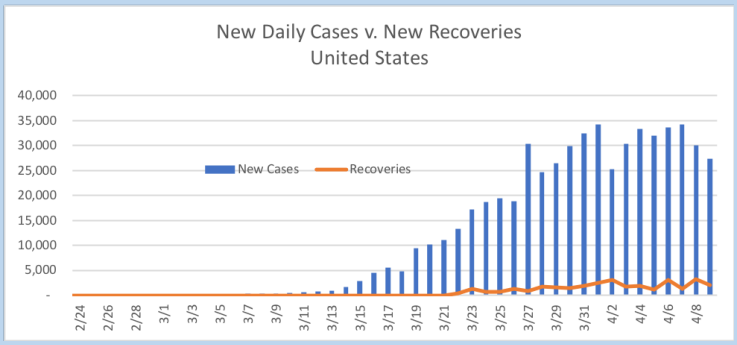
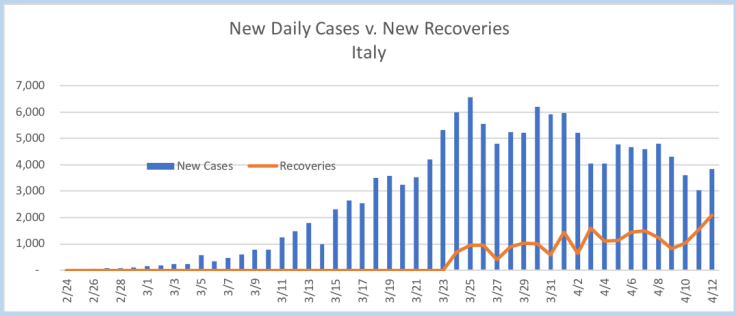
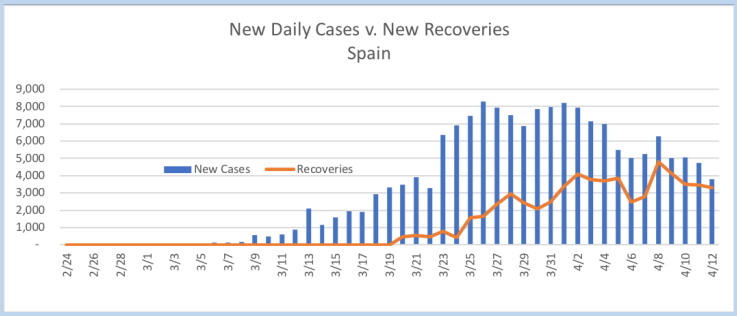
According to a World Health Organization report, recoveries from the coronavirus should occur in about 2 weeks for mild cases, 3-6 weeks for severe or critical cases. Given that we would expect to see a 2-4 week lag between the pattern for new cases and that for new recoveries. Actual patterns for the United States, Italy and Spain are shown below. This would suggest that the U.S. should soon see an acceleration in recoveries.







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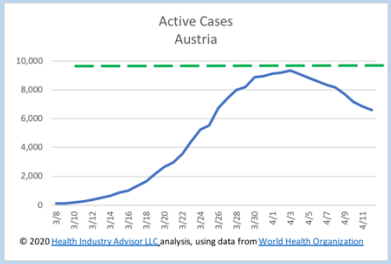
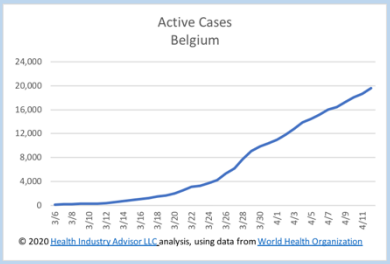
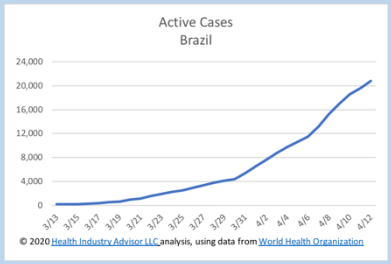
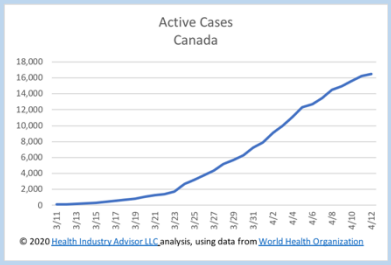
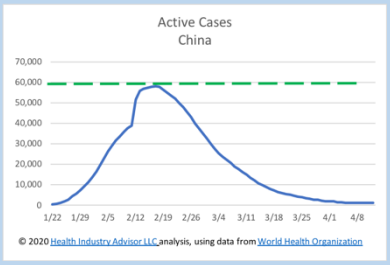
The following graphs show trends in active cases for each of the twenty hardest-hit countries in the world. Countries (except the U.S, which is shown on the previous page). Where appropriate, we indicate with a dashed green line the approximate peak.

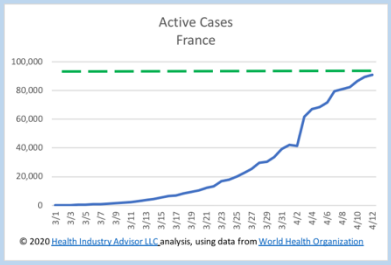


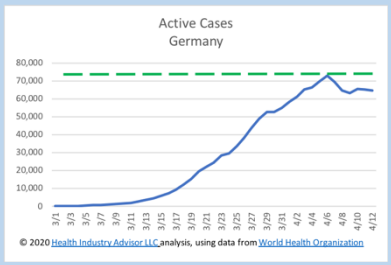


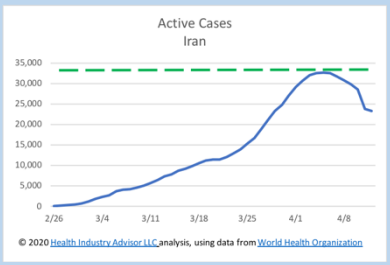


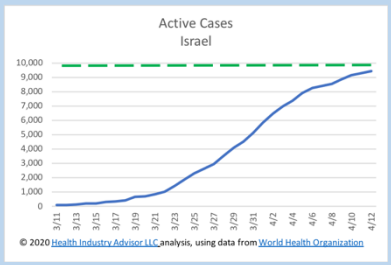












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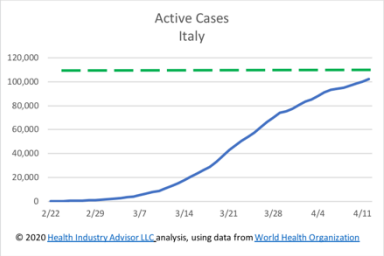

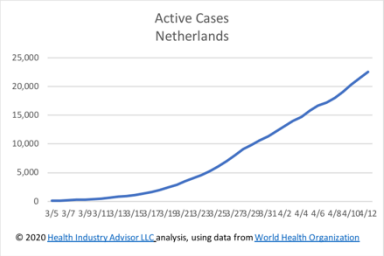

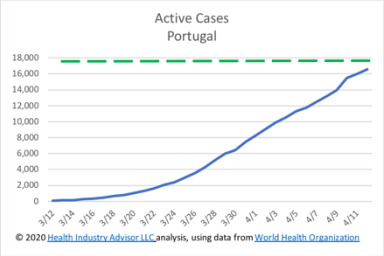

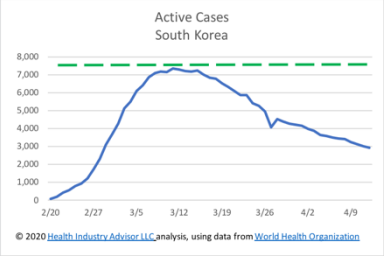

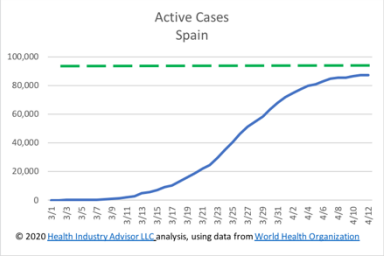

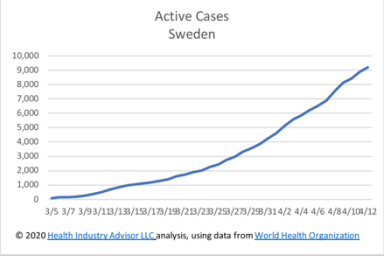

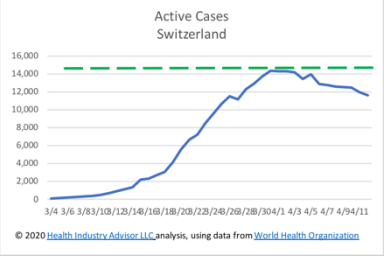

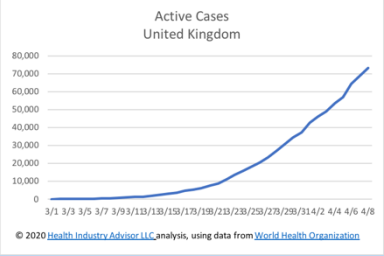

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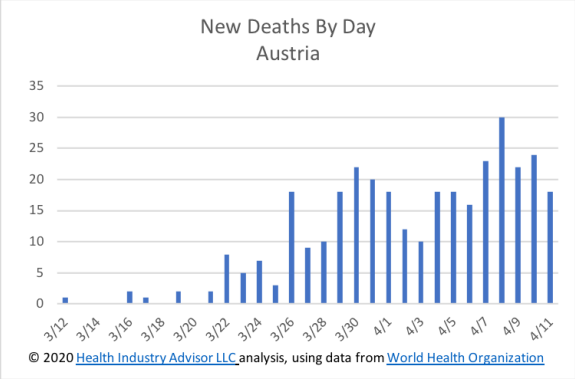
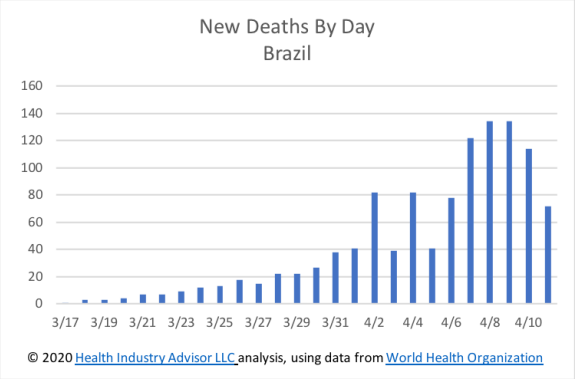
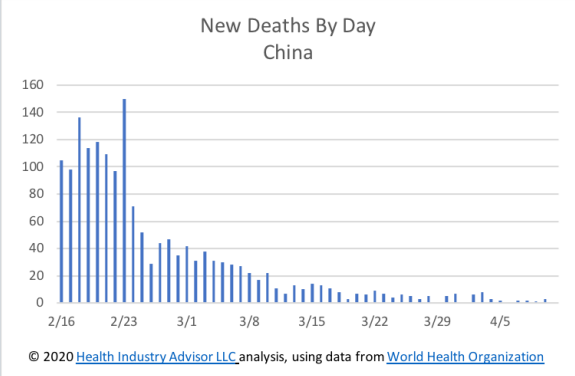
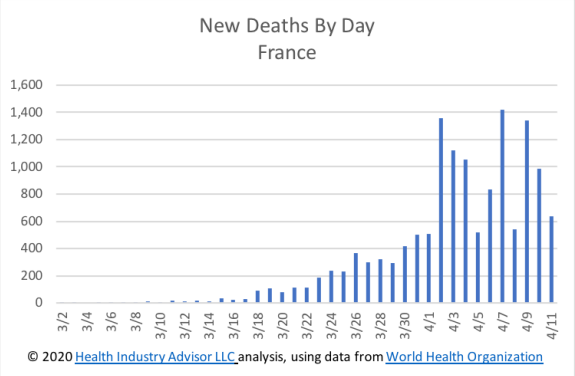
Most of the countries hardest-hit by the coronavirus have countries have broken the trend of exponential growth in deaths, as well as passed a peak ion new deaths per day. following graphs show new deaths by day for these countries:









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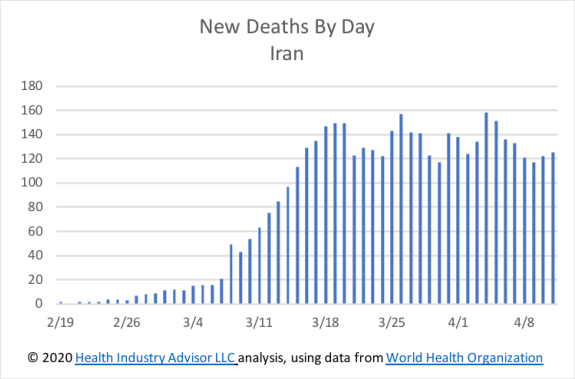

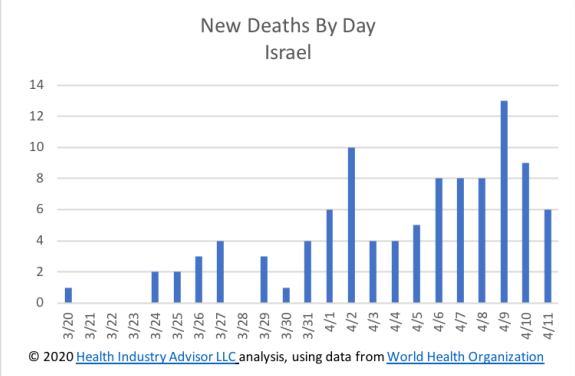

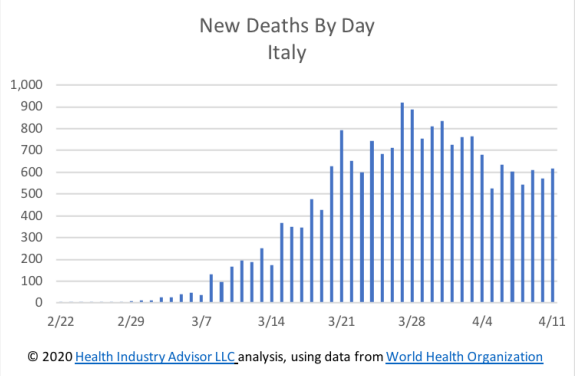

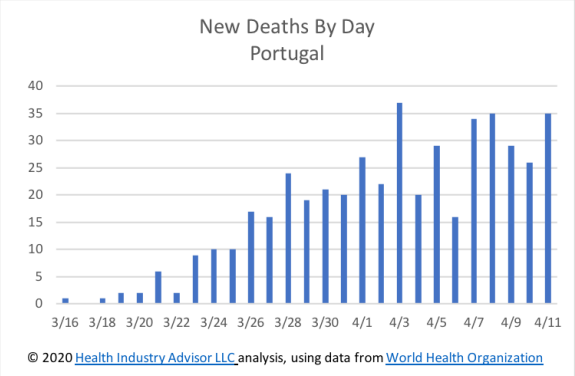

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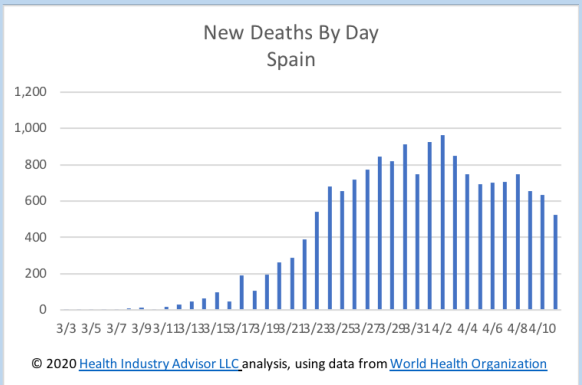

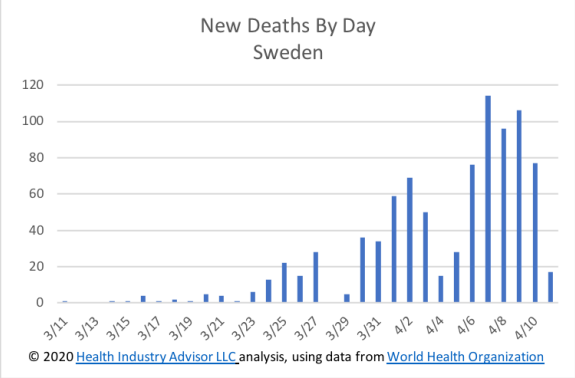

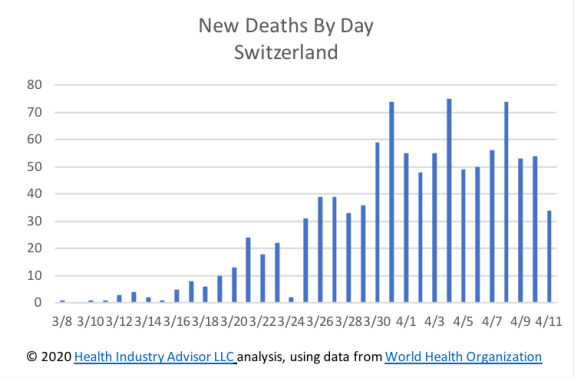

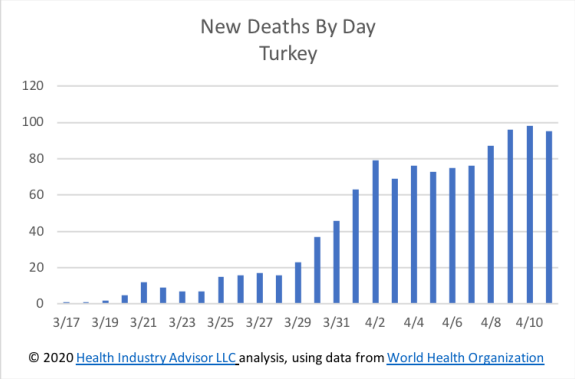

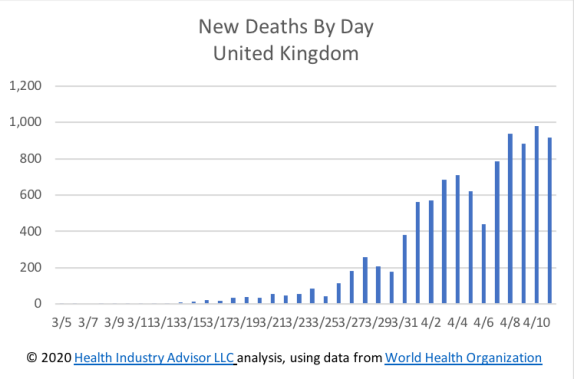

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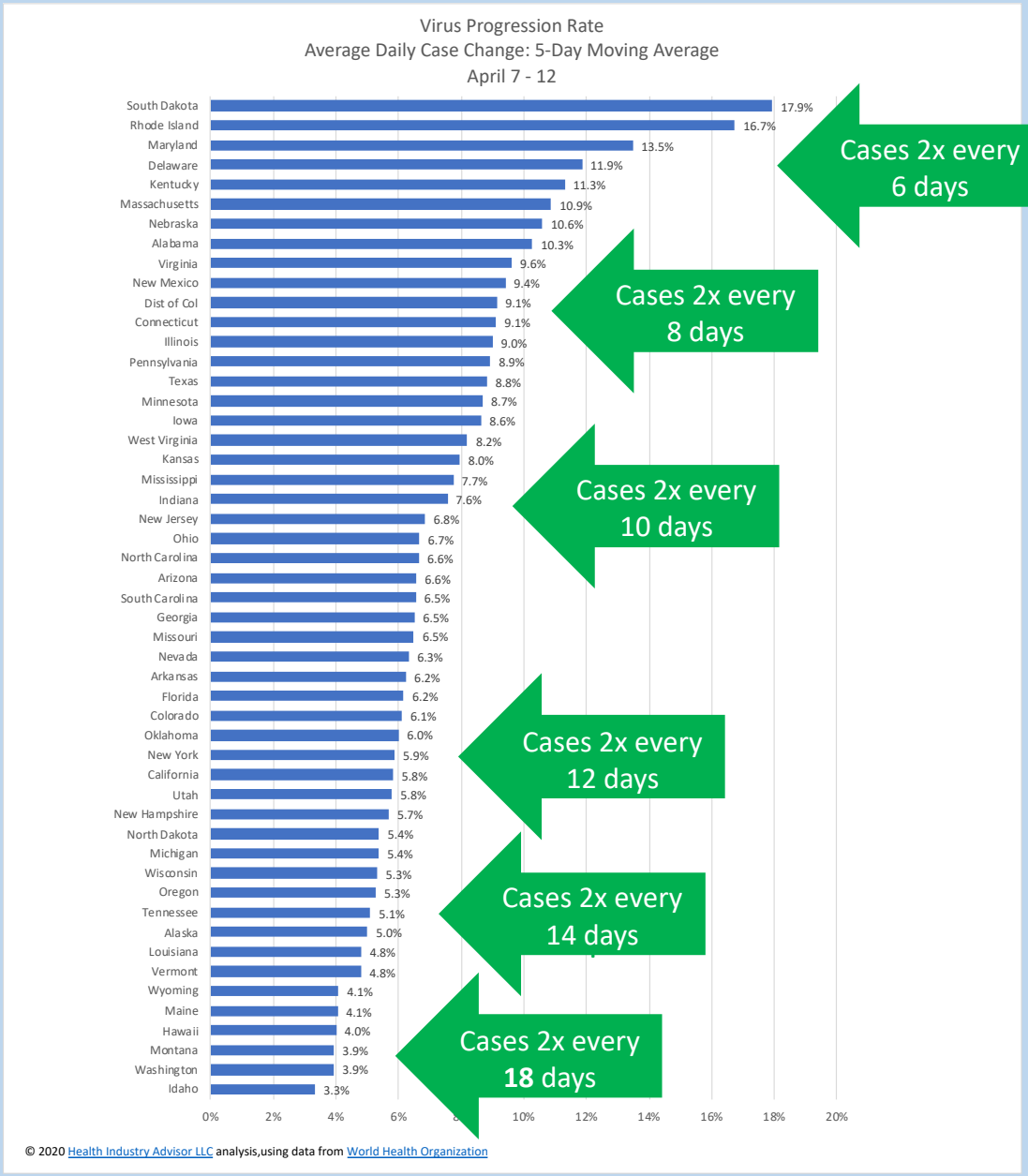
Growth is slowing across the U.S.:



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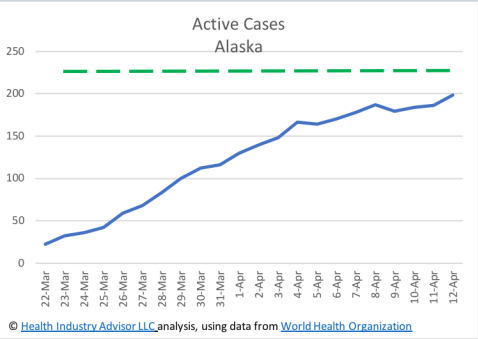
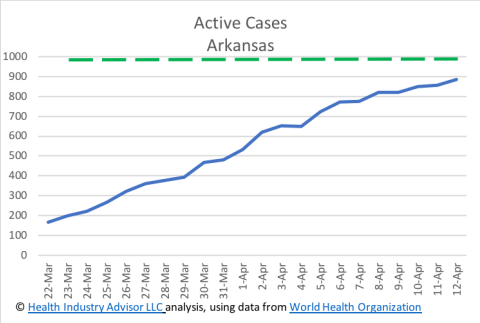
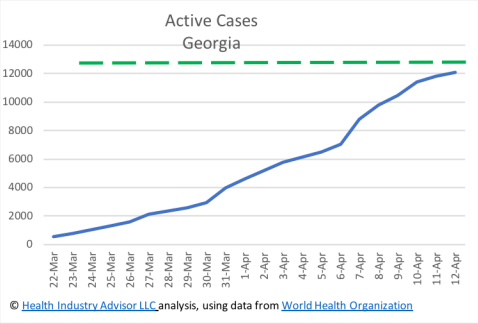
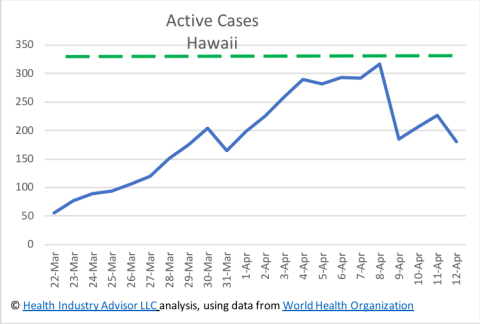
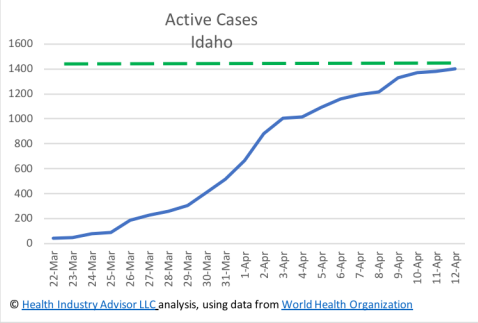
On the next three pages, we provide active cases graphs for the 19 states nearing or past their peak in active cases. Where appropriate, we indicate with a dashed green line the approximate peak. For states - Iowa, Kansas and Texas - in which the peak occurred only one day ago, and wasn't preceded by a slowing in the trend, we elected not to show the dashed green line.

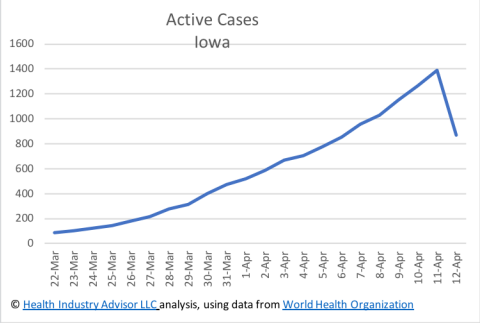












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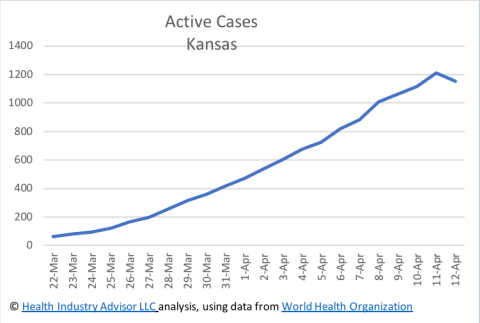

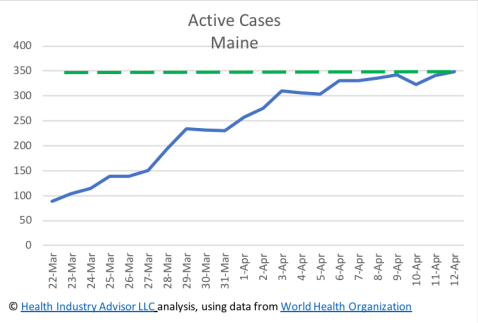

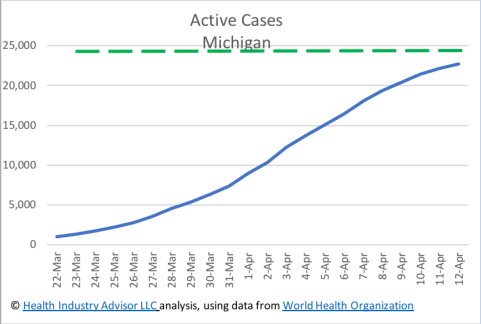

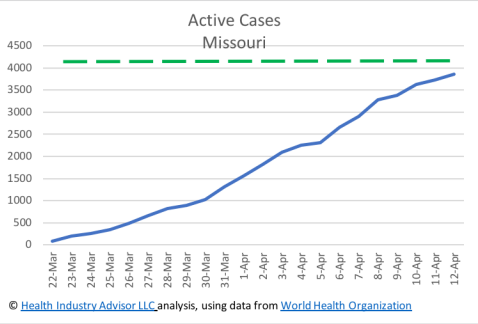

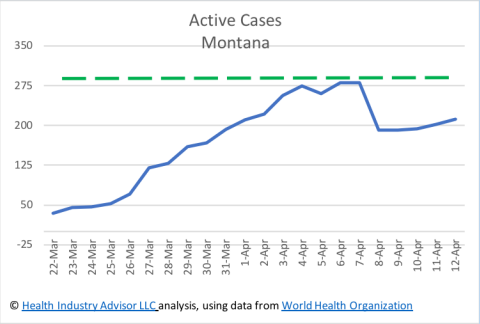

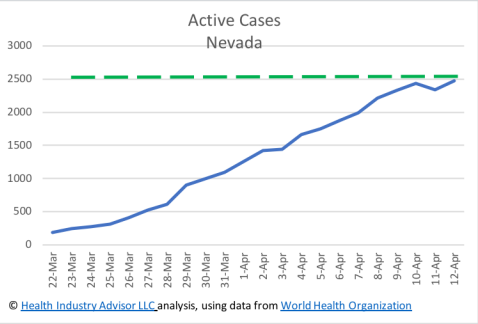

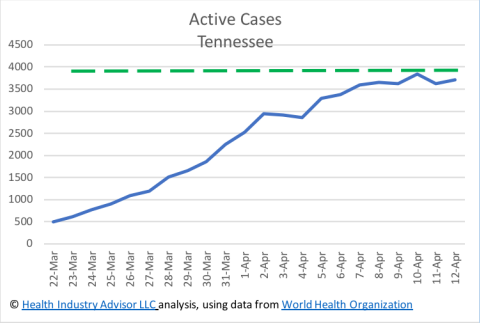

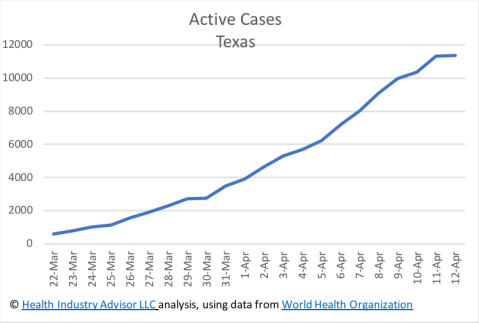

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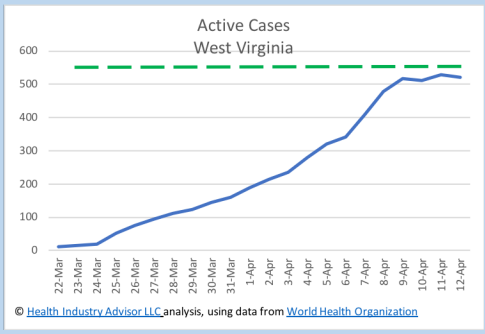

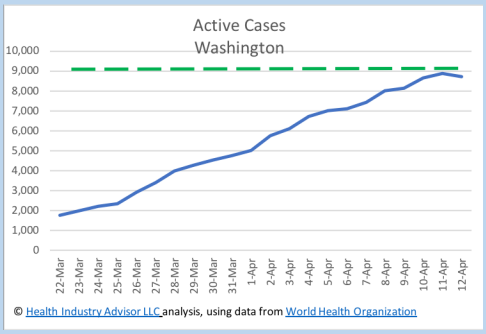

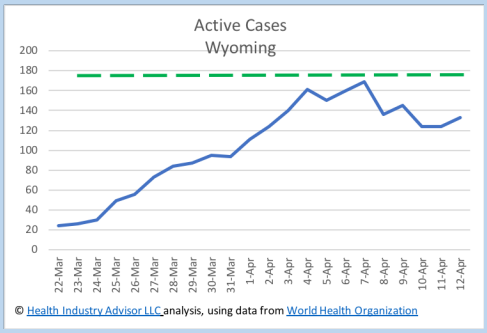

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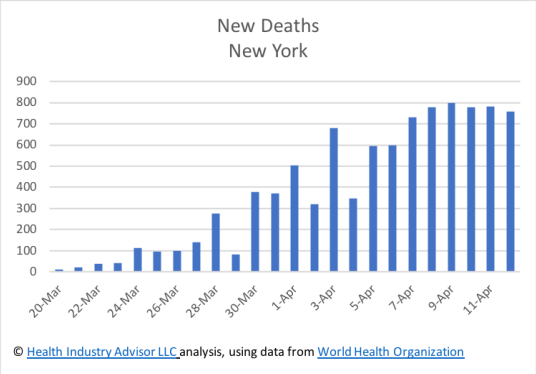
Ultimately, we want to see a decline in the number of new deaths of persons with coronavirus. Six states account for 75.9% of these deaths in the U.S. The following graphs depict the new cases per day for these 6 states, displayed in descending order of number of deaths. Note that the peak seems to have been passed in each state.



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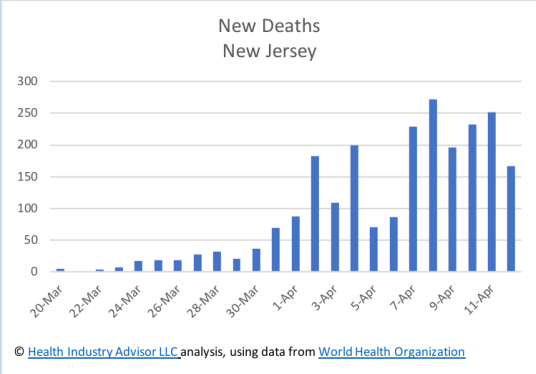

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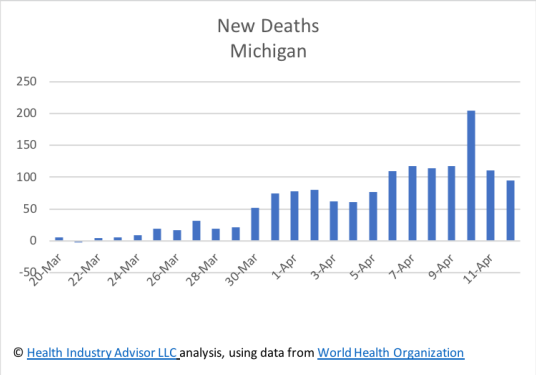

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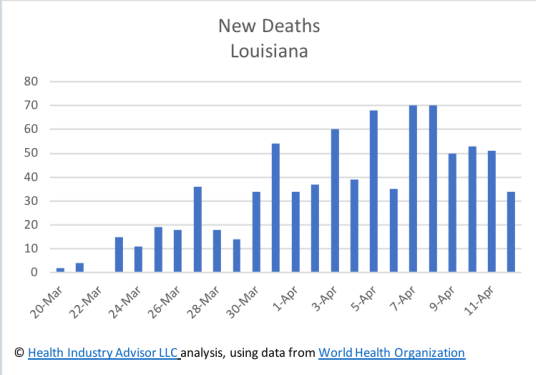

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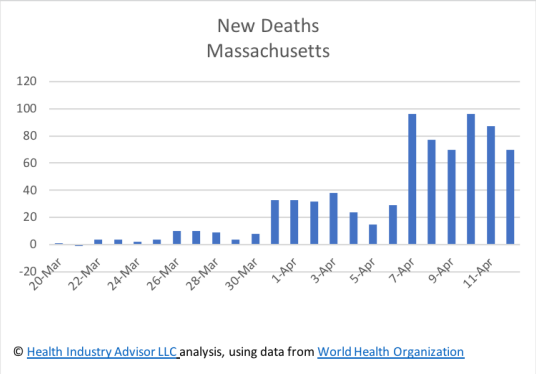

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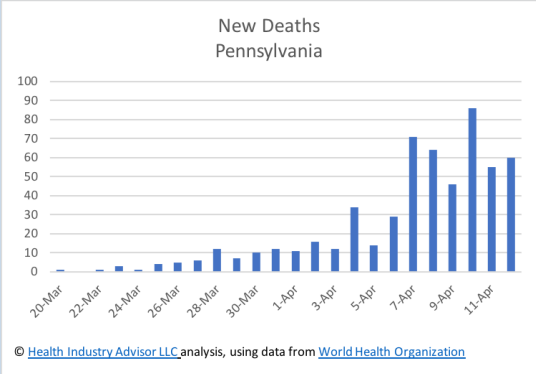

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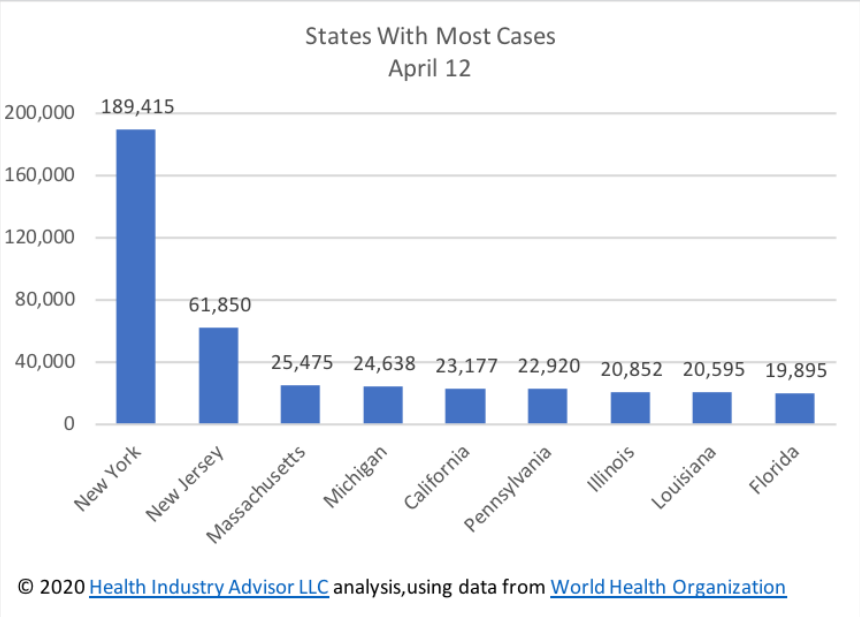

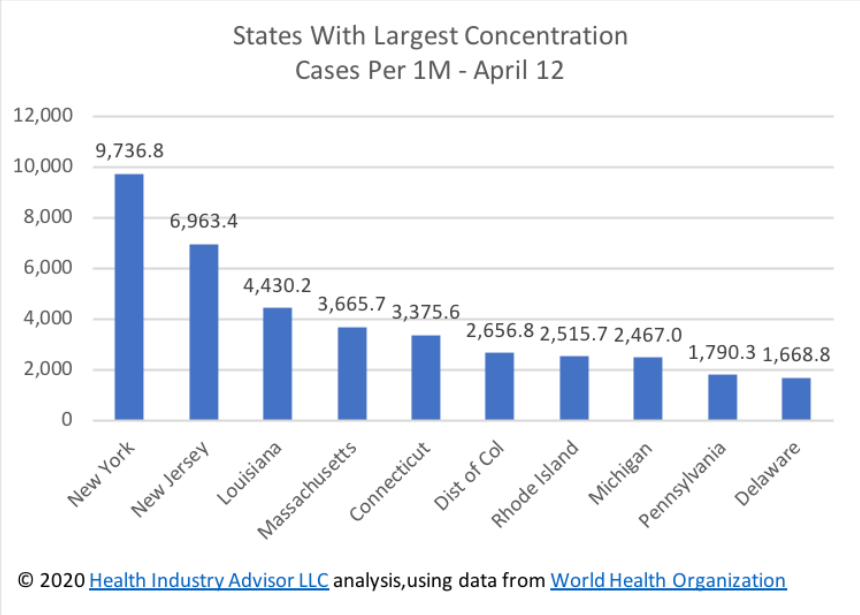

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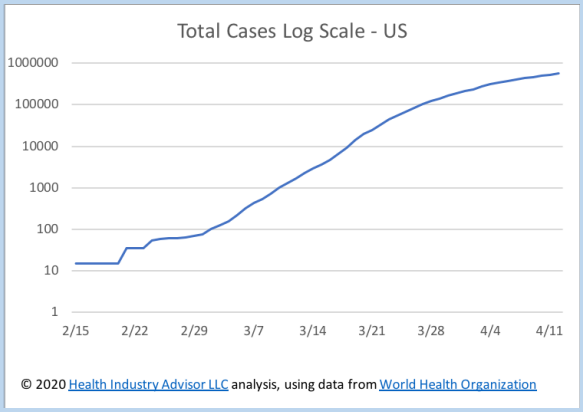

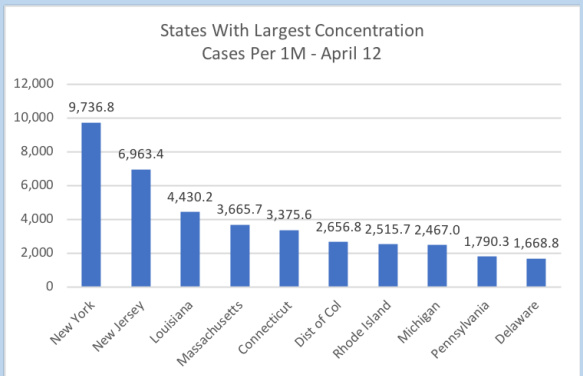

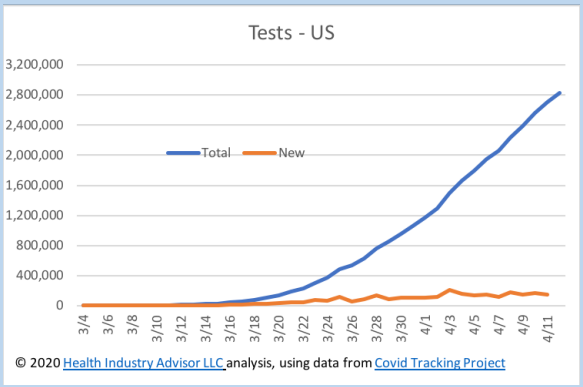

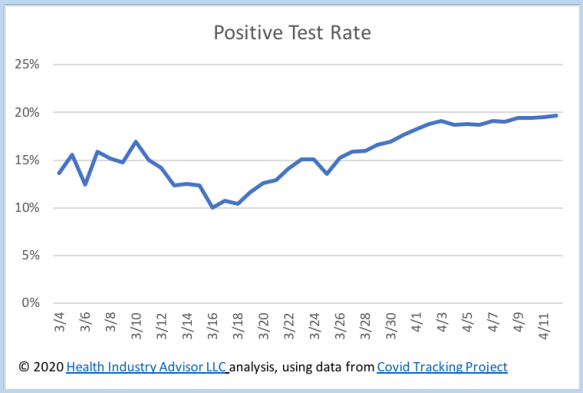

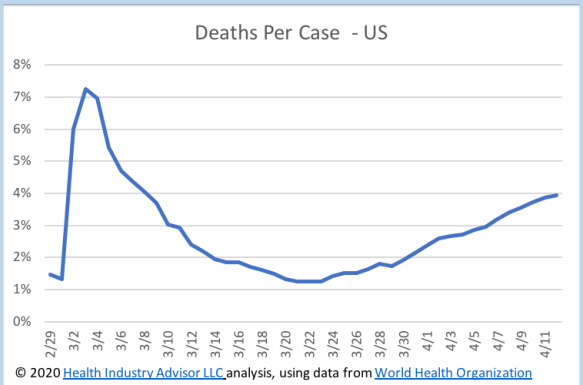

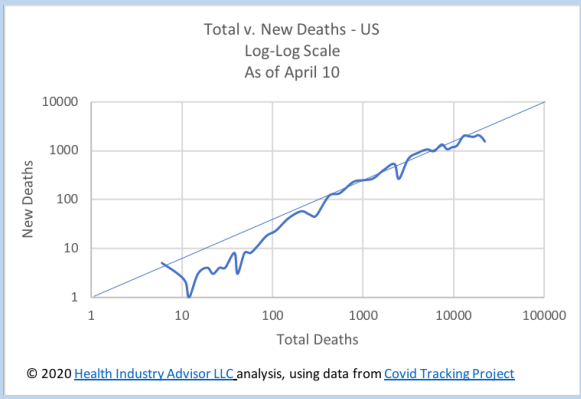

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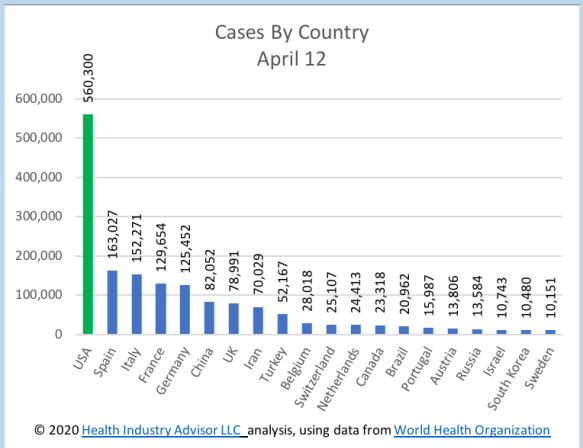

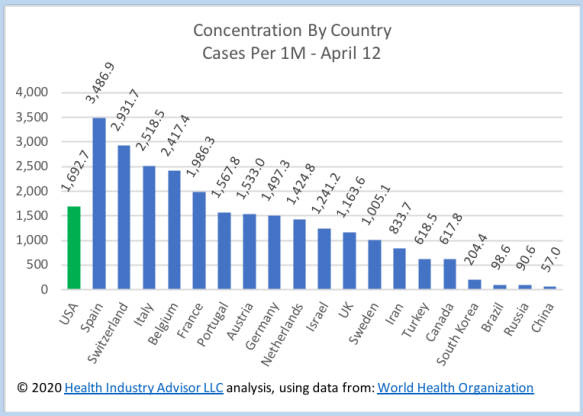

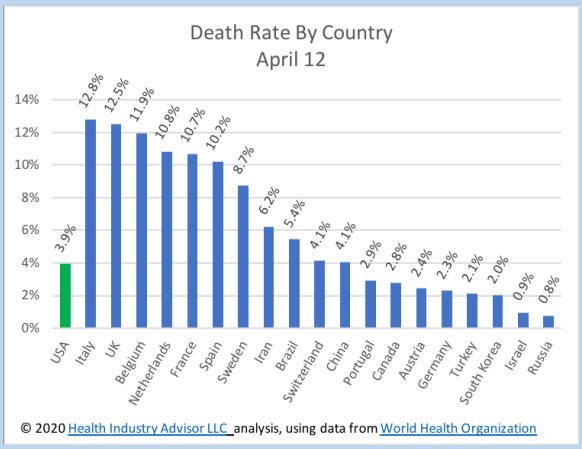

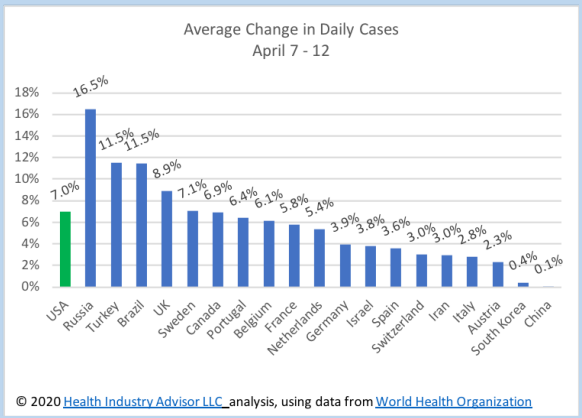

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