

Measure	Desired Change	Yesterday in the U.S.
No. of Tests	Increase	Up 4.7% (Cumulative)
Positive Test Rate	Decline	Up slightly to 19.5%
No. of Cases	Plateau	Up 5.2%, rate continues to slow
% of Deaths Per Case	Decline	Up to 5.1%
No. of Deaths / 1M Pop.	Plateau	Up to 105.6 <i>Note below re: change in CDC definition</i>
Recoveries : Deaths	Increase (>1:1)	1.67

Note: the score for tests is shaded red out of concern for the need to significantly ramp-up testing to accommodate the gating requirements of the return to work

We are tracking the 17 countries (and 20 of the top 23) with the most total coronavirus cases (India, Ireland and Peru - 18th, 19th and 22nd in most cases, respectively, recently moved into this top group and, have not yet been included in our dataset). The 20 we are tracking represent 88.0% of all cases in the world. Additionally, we are tracking all fifty U.S. states, the District of Columbia and New York City.

As of April 14th, the Centers for Disease Control (CDC) modified both case and death counts to include both confirmed and probable cases and deaths. New York was most dramatically impacted, as it added 3,778 to both case and death counts, increases of 1.86% and 34.9%, respectively. (This New York adjustment by itself increased the U.S. total death count by 17.1%.)

Because of the materiality of the death count adjustment, analysis of historical patterns are meaningless and are omitted from this report. (If we can locate how NY assigned these adjustment by day, we will update the data and resume producing the historical trends.

Highlights from Thursday include:

- Recoveries were significant again on Thursday at 9,136 – just below Wednesday’s 9,888. These averaged just over 2,000 each day the previous 3 weeks. Given the [World Health Organization](#)’s published guideline of expected recovery time, we continue to anticipate seeing an extended period of accelerating pace of recoveries.
- Virginia appears to have finally broken the exponential case growth trend. This leaves only 5 states that have yet to break this trend: Massachusetts, Nebraska, Rhode Island, South Carolina and South Dakota. Among the countries we are tracking, only Russia has yet to break the trend.

Breaking this trend is a critical early step in containing the virus.

- Yesterday, President Trump and his Task Force released their recommended guidelines to the states for re-opening the country “Opening Up American Again.” These provide 3 “gating” criteria - symptoms, cases and hospitals - for determining when a state should progress through a 3-stage process of re-opening. The guidelines, in part, call for a 14-day downward trajectory in documented cases. We have, and will continue to report on active cases by state, which, if not the precise measure that states will use for the documented case criteria, should be a reasonable proxy.

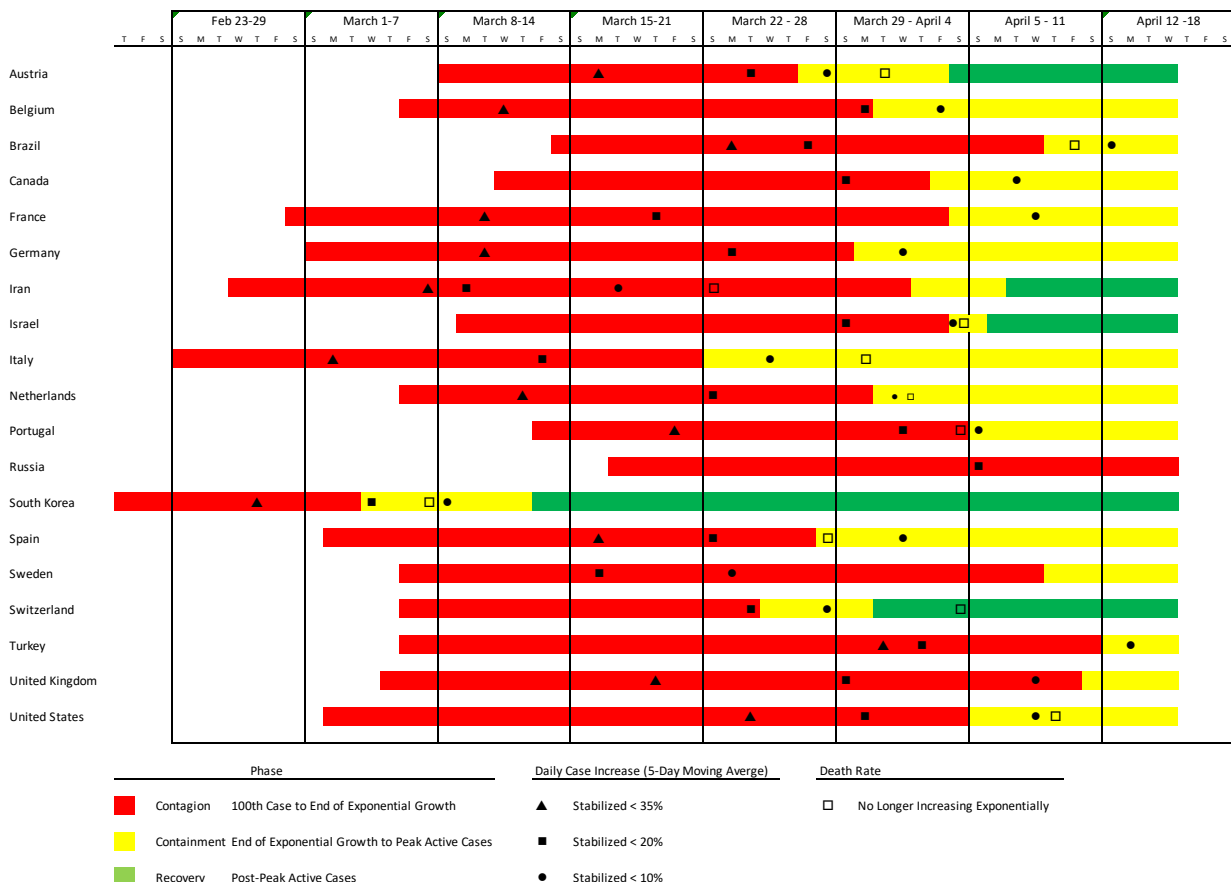
Kansas, Tennessee and Wyoming exceeded their previous peak in active cases yesterday. Seven states still appear to be beyond their peak in ten states: Alaska, Hawaii, Iowa, Montana, Oklahoma and Vermont. In total, 28 states may near or beyond the point where the critical 14-day clock begins.

Virus Progression: Hardest Hit Countries

Hardest-Hit Countries Continue Progressing Toward Containment and Recovery; Only Russia Among These Countries Still Experiencing Exponential Growth

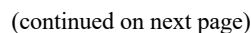
Austria, China (not pictured), Iran, Israel, South Korea and Switzerland are already in Recovery (past peak cases); only Russia is still experiencing exponential case growth.

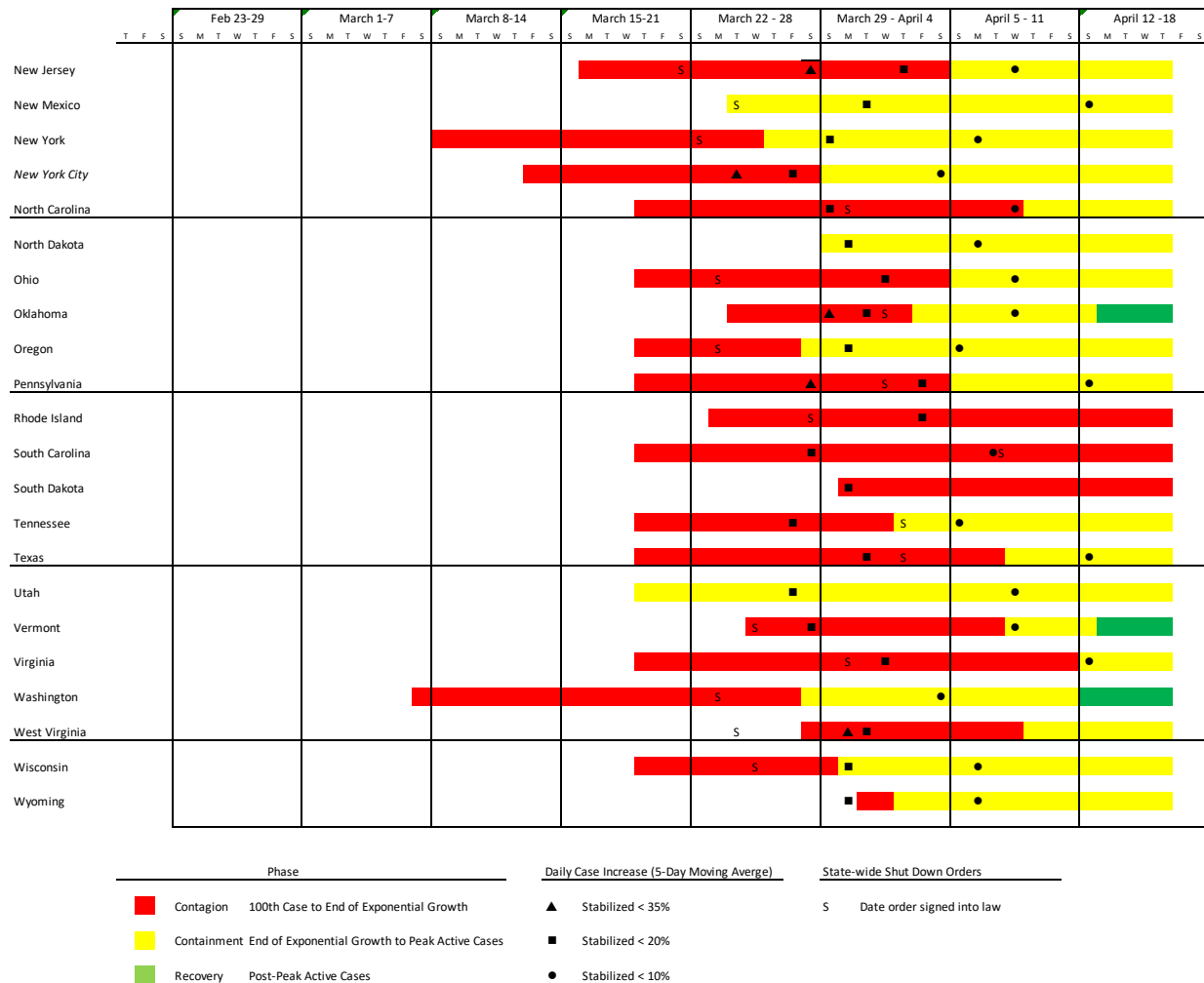
The graphic illustrates in color when the country first recorded 100 total cases (start of the "contagion" phase); when growth stopped following an exponential pattern (start of the "containment" phase); and, when peak total cases were recorded (start of the "recovery" phase). It uses symbols to indicate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



The Majority of U.S. States are in Containment and Well on Their Way Toward Recovery

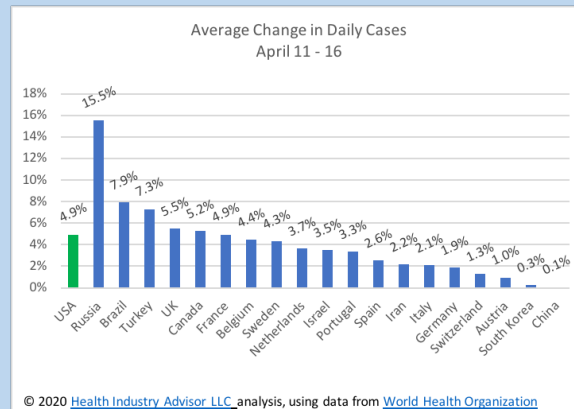
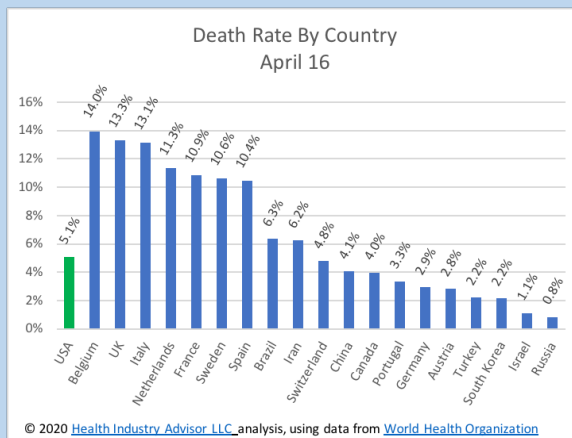
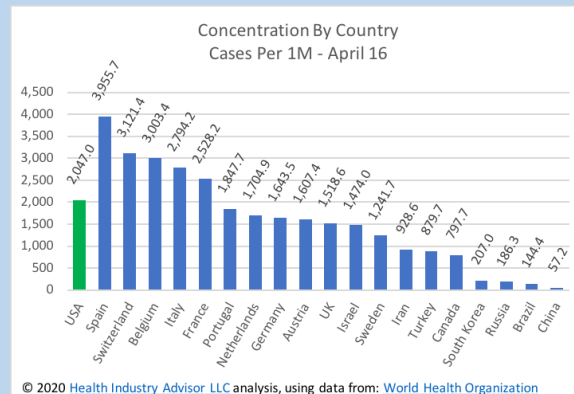
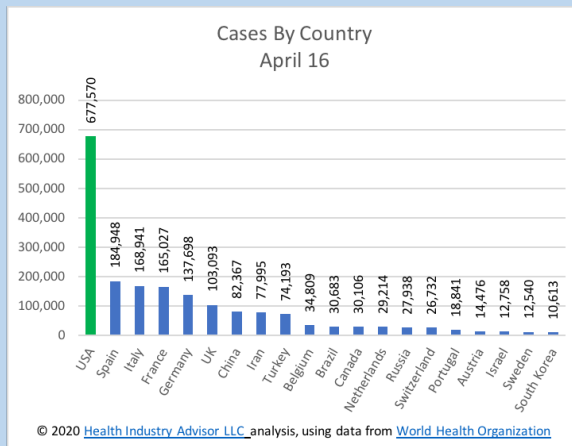
It now appears that Virginia is no longer experiencing exponential case growth (shading changed from red to yellow). Only six states have yet to demonstrably stop the exponential growth in cases.





Global Statistics

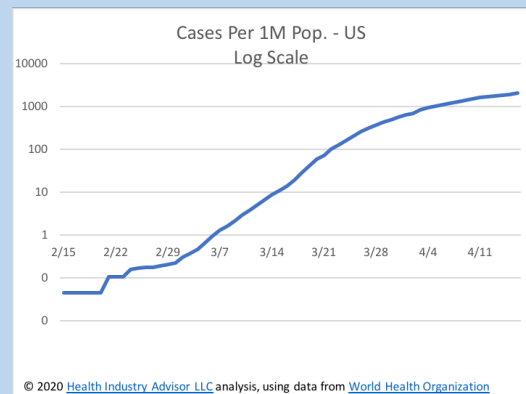
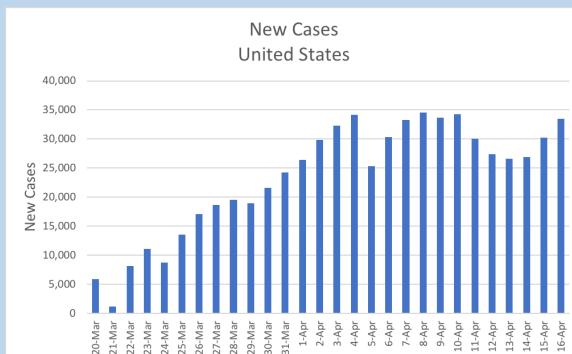
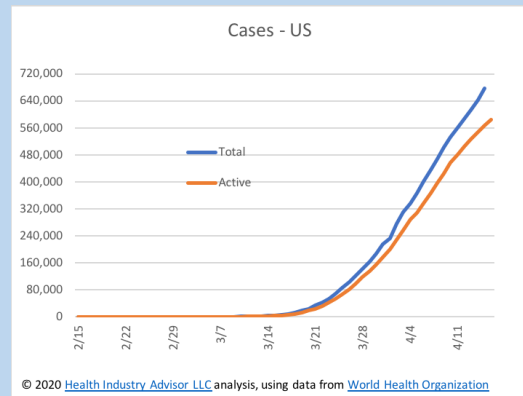
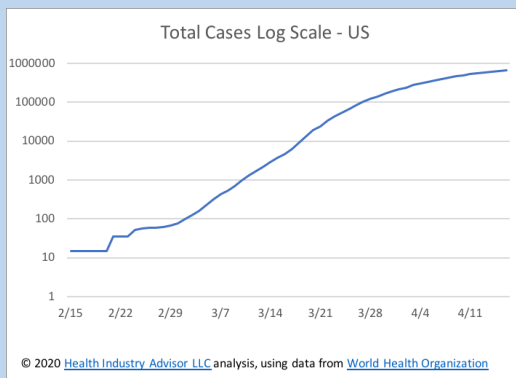
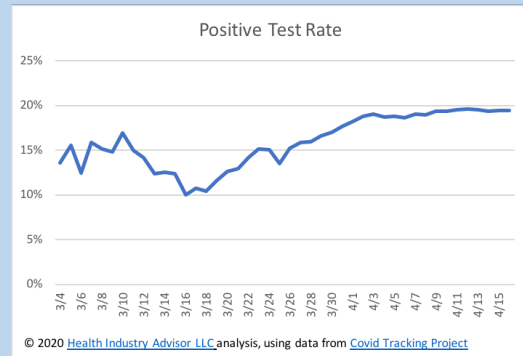
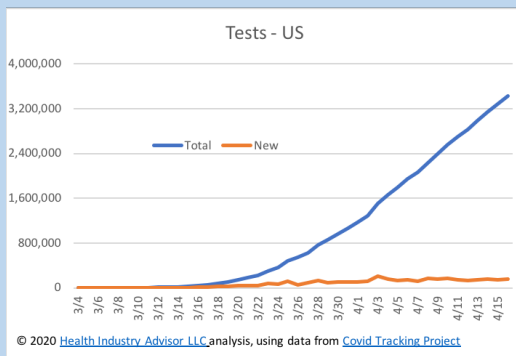
The U.S Far Outpaces the World In Total Cases, is 6th in Cases Per Capita and 10th in Death Rate. Case Growth is Falling In All of the Hardest-Hit Countries, Except Russia



Cases and Death Rates in the U.S.

Case Growth has Begun to Plateau in the U.S.; Deaths Counts Now Included Presumed Cases, Still Appeared to Have Peaked

Cases in the U.S. are no longer growing at an exponential rate; active cases, however, have yet to peak. As infected persons begin to recover, active cases are beginning to separate from total cases.



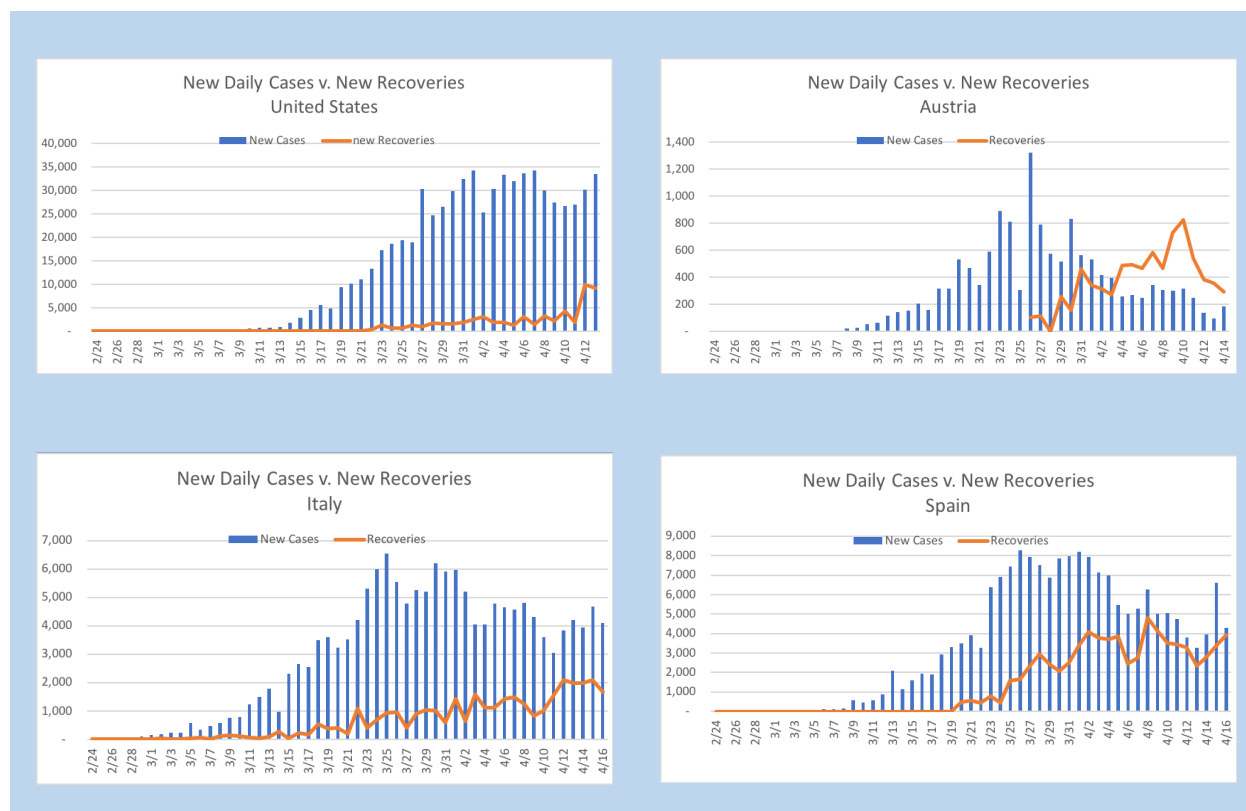
Recovery Rates

Recovery Rates From the Coronavirus Are Showing Signs of Accelerating in the U.S.

Recoveries from the coronavirus were in excess of 9,000 each of the past two days, compared to just over 2,000 each day the preceding 3 weeks.

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. This would suggest that the U.S. should soon see an acceleration in recoveries, although it hasn't become fully apparent yet..

Actual patterns for the United States, Austria, Italy and Spain are shown below.



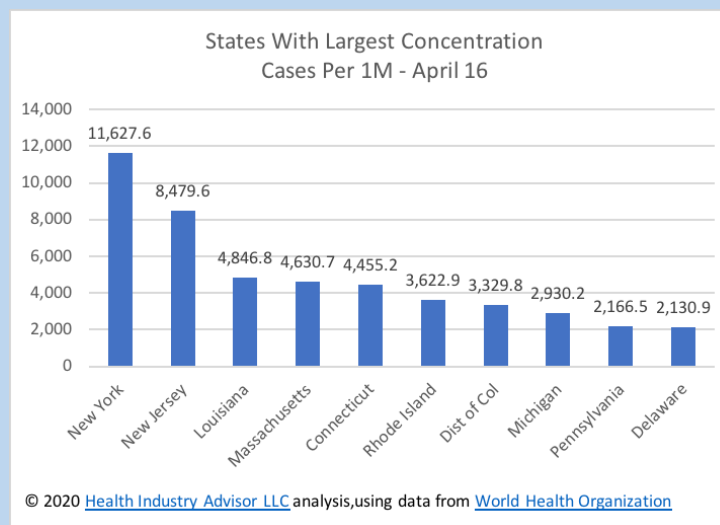
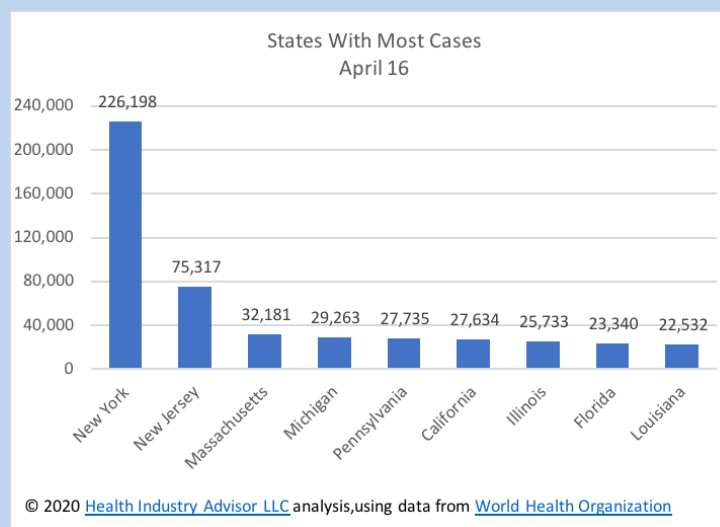
Hardest-Hit States

New York Has Experienced Far More Coronavirus Cases, and More Cases Per Capita Than Any State

New York, which now has more than 225,000 cases, represent 33.4% of all coronavirus cases in the U.S.; the top ten states account 72.3% of all cases.

Cases per capita in New York, New Jersey, Louisiana Massachusetts and Connecticut are greater than any of the hardest-hit countries in the world.

Michigan has the highest death rate (7.2%), followed by New York (7.1%), Connecticut (6.1%), and Oklahoma (both 5.6%).

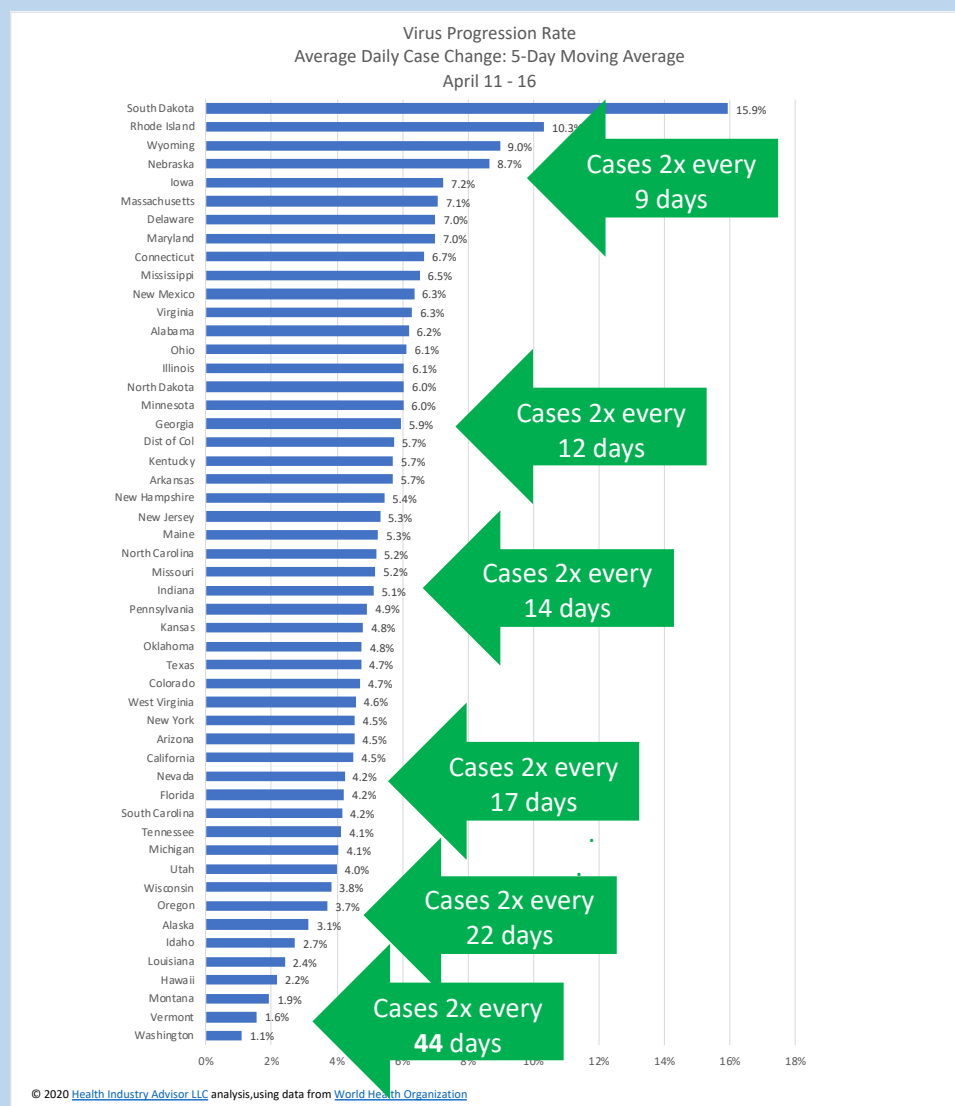


Daily Case Growth Rates By State

Case Growth Rates Continue to Fall Dramatically Across the U.S.

Only South Dakota and Rhode Island continue to show daily case increases (5-day moving average) of > 10%. The rate is so low in Hawaii, Montana, Vermont and Wyoming that it would take a month now for cases to double, in Alaska, Idaho and Louisiana it would take about 3 weeks.

The rate for the U.S. overall is down to 4.9%. At that rate, cases double every 14-15 days.



This table provided statistics and ranking of each of the 50 states and the District of Columbia.

As of April 16

State	Confirmed Cases	Rank	Cases per 1M Population	Rank	Deaths	Rank	Death Rate	Rank	5-day Moving Average Case Growth Rate	Rank	Tests per 1M Population	Rank
Alabama	4,404	(22)	898.2	(23)	137	(25)	3.1%	(28)	6.2%	(13)	7,475	(39)
Alaska	300	(51)	410.1	(48)	9	(47)	3.0%	(31)	3.1%	(45)	11,828	(17)
Arizona	4,234	(23)	581.7	(38)	150	(21)	3.5%	(23)	4.5%	(35)	6,823	(43)
Arkansas	1,620	(37)	536.8	(43)	37	(39)	2.3%	(43)	5.7%	(21)	7,582	(36)
California	27,634	(6)	699.4	(32)	951	(8)	3.4%	(25)	4.5%	(36)	5,814	(48)
Colorado	8,675	(16)	1,506.4	(14)	374	(17)	4.3%	(15)	4.7%	(32)	7,563	(37)
Connecticut	15,884	(12)	4,455.2	(5)	971	(7)	6.1%	(3)	6.7%	(9)	14,832	(13)
Delaware	2,075	(34)	2,130.9	(10)	52	(36)	2.5%	(40)	7.0%	(7)	14,060	(14)
District Of Columbia	2,350	(32)	3,329.8	(7)	81	(32)	3.4%	(24)	5.7%	(19)	17,750	(6)
Florida	23,340	(8)	1,086.7	(20)	668	(10)	2.9%	(32)	4.2%	(38)	10,724	(22)
Georgia	16,368	(11)	1,541.6	(13)	617	(11)	3.8%	(19)	5.9%	(18)	6,598	(46)
Hawaii	541	(47)	382.1	(50)	9	(47)	1.7%	(48)	2.2%	(48)	15,460	(12)
Idaho	1,609	(38)	897.8	(24)	41	(38)	2.5%	(39)	2.7%	(46)	9,123	(29)
Illinois	25,733	(7)	2,030.7	(11)	1,072	(6)	4.2%	(17)	6.1%	(15)	9,561	(27)
Indiana	9,542	(15)	1,417.4	(17)	477	(13)	5.0%	(9)	5.1%	(27)	7,701	(35)
Iowa	2,141	(33)	678.6	(34)	60	(35)	2.8%	(34)	7.2%	(5)	6,600	(45)
Kansas	1,603	(39)	550.2	(41)	80	(33)	5.0%	(10)	4.8%	(29)	5,543	(50)
Kentucky	2,429	(30)	543.7	(42)	129	(28)	5.3%	(5)	5.7%	(20)	6,699	(44)
Louisiana	22,532	(9)	4,846.8	(3)	1,156	(5)	5.1%	(7)	2.4%	(47)	27,143	(2)
Maine	796	(44)	592.2	(37)	27	(42)	3.4%	(26)	5.3%	(24)	11,158	(20)
Maryland	10,784	(14)	1,783.8	(12)	392	(15)	3.6%	(21)	7.0%	(8)	9,802	(25)
Massachusetts	32,181	(3)	4,630.7	(4)	1,245	(4)	3.9%	(18)	7.1%	(6)	20,610	(4)
Michigan	29,263	(4)	2,930.2	(8)	2,093	(3)	7.2%	(1)	4.1%	(41)	9,751	(26)
Minnesota	1,912	(35)	339.0	(51)	94	(31)	4.9%	(11)	6.0%	(17)	7,540	(38)
Mississippi	3,624	(27)	1,217.7	(19)	129	(28)	3.6%	(22)	6.5%	(10)	12,625	(16)
Missouri	5,178	(21)	843.7	(26)	168	(20)	3.2%	(27)	5.2%	(26)	8,281	(31)
Montana	415	(48)	388.3	(49)	7	(50)	1.7%	(47)	1.9%	(49)	9,538	(28)
Nebraska	1,066	(43)	551.1	(40)	24	(43)	2.3%	(45)	8.7%	(4)	6,916	(42)
Nevada	3,321	(28)	1,078.2	(21)	142	(23)	4.2%	(16)	4.2%	(37)	11,805	(18)
New Hampshire	1,211	(42)	890.6	(25)	34	(41)	2.8%	(33)	5.4%	(22)	9,055	(30)
New Jersey	75,317	(2)	8,479.6	(2)	3,518	(2)	4.7%	(12)	5.3%	(23)	17,340	(7)
New Mexico	1,597	(40)	761.6	(30)	44	(37)	2.8%	(36)	6.3%	(11)	16,482	(9)
New York	226,198	(1)	11,627.6	(1)	16,106	(1)	7.1%	(2)	4.5%	(34)	28,064	(1)
North Carolina	5,608	(20)	534.7	(44)	148	(22)	2.6%	(38)	5.2%	(25)	6,983	(41)
North Dakota	393	(50)	515.7	(45)	9	(47)	2.3%	(42)	6.0%	(16)	15,560	(11)
Ohio	8,414	(17)	719.8	(31)	389	(16)	4.6%	(13)	6.1%	(14)	6,429	(47)
Oklahoma	2,357	(31)	595.7	(36)	131	(26)	5.6%	(4)	4.8%	(30)	7,860	(33)
Oregon	1,736	(36)	411.6	(47)	64	(34)	3.7%	(20)	3.7%	(44)	8,170	(32)
Pennsylvania	27,735	(5)	2,166.5	(9)	837	(9)	3.0%	(30)	4.9%	(28)	11,060	(21)
Rhode Island	3,838	(26)	3,622.9	(6)	105	(30)	2.7%	(37)	10.3%	(2)	26,560	(3)
South Carolina	3,931	(24)	763.5	(29)	109	(29)	2.8%	(35)	4.2%	(39)	7,321	(40)
South Dakota	1,311	(41)	1,481.9	(15)	7	(50)	0.5%	(50)	15.9%	(1)	11,407	(19)
Tennessee	6,262	(19)	916.4	(22)	141	(24)	2.3%	(44)	4.1%	(40)	12,787	(15)
Texas	16,638	(10)	573.8	(39)	404	(14)	2.4%	(41)	4.7%	(31)	5,686	(49)
Utah	2,683	(29)	836.9	(27)	21	(44)	0.8%	(49)	4.0%	(42)	16,313	(10)
Vermont	768	(45)	1,230.8	(18)	35	(40)	4.6%	(14)	1.6%	(50)	18,412	(5)
Virginia	6,889	(18)	807.1	(28)	208	(18)	3.0%	(29)	6.3%	(12)	5,520	(51)
Washington	11,034	(13)	1,449.0	(16)	581	(12)	5.3%	(6)	1.1%	(51)	16,842	(8)
West Virginia	739	(46)	413.5	(46)	13	(45)	1.8%	(46)	4.6%	(33)	10,008	(24)
Wisconsin	3,875	(25)	665.5	(35)	197	(19)	5.1%	(8)	3.8%	(43)	7,761	(34)
Wyoming	401	(49)	692.9	(33)	2	(51)	0.5%	(51)	9.0%	(3)	10,534	(23)
United States	677,570		2,063.9		34,617		5.1%		4.9%		10,266	

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, and nyc.gov. Graphics depict data as of the date in the header.

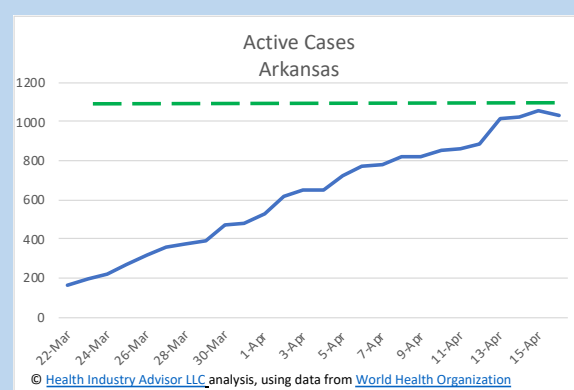
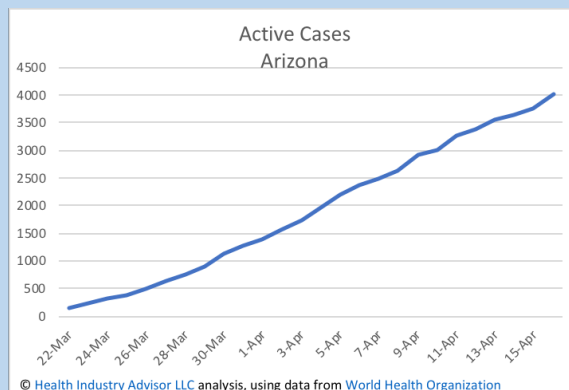
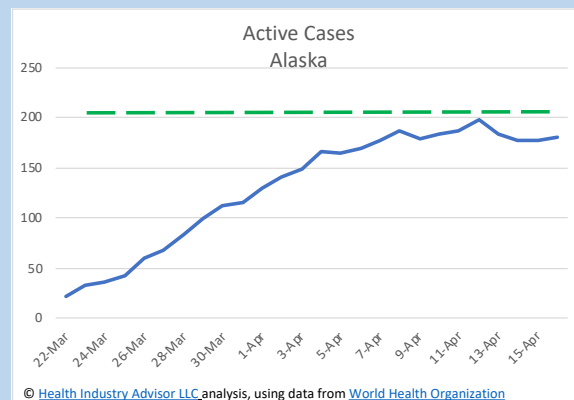
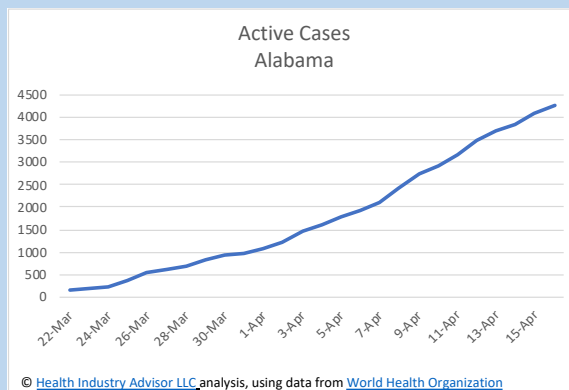
Active Coronavirus Cases in the U.S.

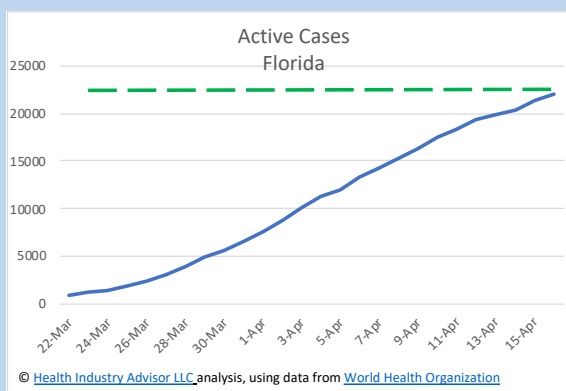
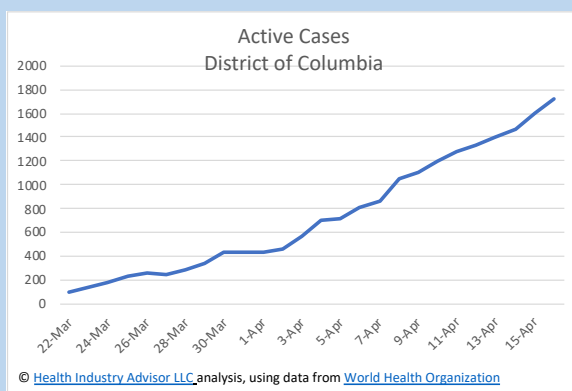
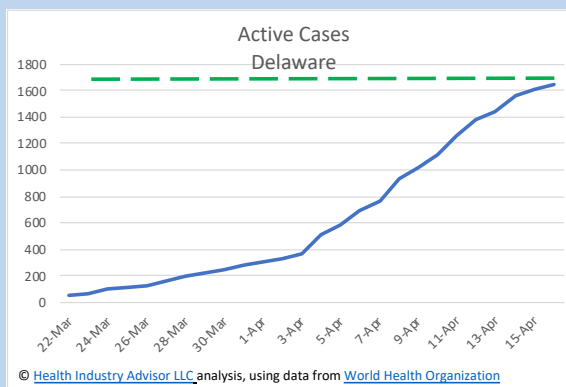
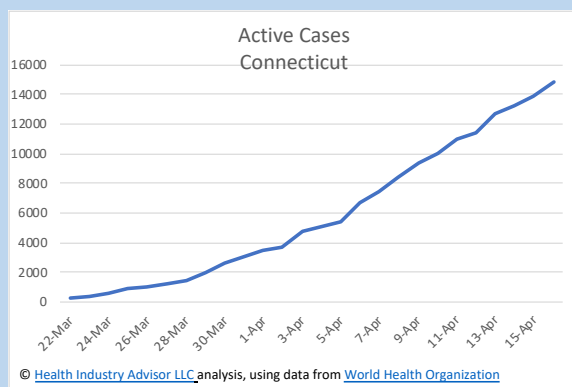
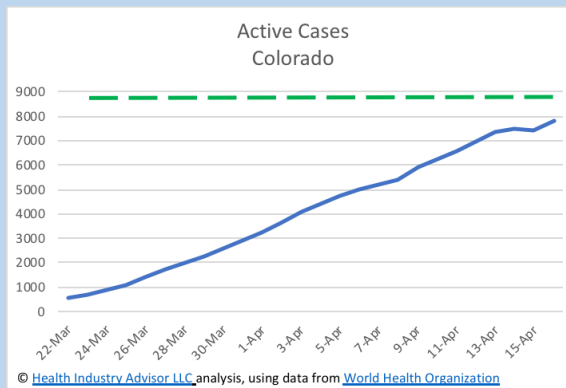
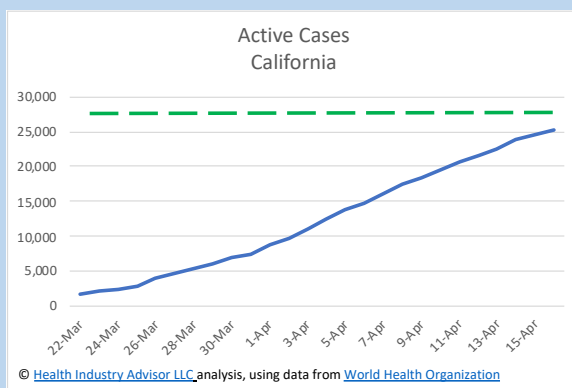
Active Cases are Beginning to Peak in Many States

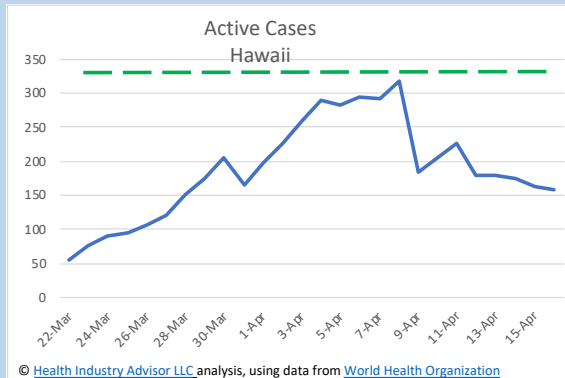
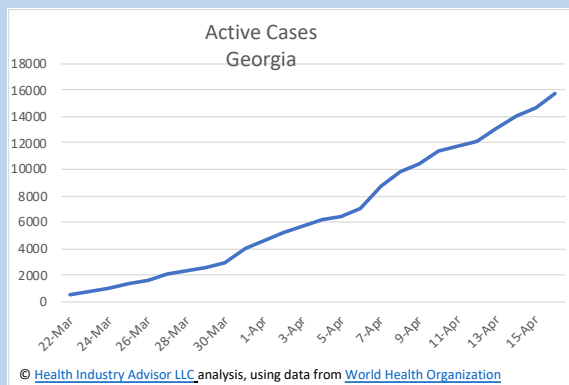
Yesterday, President Trump and his Task Force released their recommended guidelines to the states for re-opening the country "Opening Up American Again." These provide 3 "gating" criteria - symptoms, cases and hospitals - for determining when a state should progress through a 3-stage process of re-opening. The guidelines, in part, call for a 14-day downward trajectory in documented cases. We have, and will continue to report on active cases by state, which, if not the precise measure that states will use for the documented case criteria, should be a reasonable proxy.

Kansas, Tennessee and Wyoming exceeded their previous peak in active cases yesterday. Seven states still appear to be beyond their peak in ten states: Alaska, Hawaii, Iowa, Montana, Oklahoma and Vermont.

Active Case graphs are provided below for each of the 50 states and the District of Columbia. A green dashed line is used to show a past or approaching peak; a red dashed line where an earlier peak has been or is at risk of being surpassed.







Idaho

