

"Strategic Guidance in an Era of Unprecedented Change"

Issue #37: April 27

Measure	Desired Change	Yesterday in the U.S.
No. of Tests	Increase	Up 4.9% (Cumulative)
Test-Positivity Rate	Decline	Down to 17.6% (v. 18.0%)
No. of Cases	Plateau	Up only 2.8%
% of Deaths Per Case	Decline	Steady @ 5.6%
No. of Deaths / 1M Pop.	Plateau	Up to 167.4
Recoveries : Deaths	Increase (>1:1)	Down slightly to 2.14 (v. 2.18)

Explanation of shading changes since yesterday: Death rate has plateaued at ~5.6% for past 6 days

We continue to track the 29 countries with the most cases, plus South Korea. These 30 countries represent 91.5% of all cases in the world.

Highlights from Saturday include:

- Reported tests surged again on Sunday, with a most-ever 256,000 tests. This topped the existing record of 245,000 set on Saturday. The test-positive rate on Sunday's tests was only 10.7%. (These compare to an average of 150,000 daily tests from April 13-21, and a cumulative test-positive rate of 17.6%. We need to see a continued acceleration in testing combined with a lower test-positive rate (indicating that testing would be picking up more than the most obvious cases).
- Despite the higher testing numbers on Saturday and Sunday, fewer new cases were reported each day than on Friday, when they reached their peak.
- Reported recoveries were very low on Sunday. States appear to be slow in reporting these, as many report them in weekly batches; many also wait for 4 weeks post-onset before declaring a person to be recovered. Given this cycle, we should expect to see a significant jump in reported recoveries in the next week, corresponding with the large uptick in cases 4 weeks prior to the coming week in New York and for the U.S. in total.
- Deaths were just more than ½ of what they were the day prior. The death rate now seems to have stabilized at ~5.6% (after increasing about a week ago, due to a change in the CDC's guidelines for attributing previous deaths to the virus).
- With several states beginning to ease their individual and business restrictions, good progress has been made in many areas toward "readiness" for these relaxed restrictions. In particular, testing volumes have ramped markedly and, we are moving past peak projected demand for hospital resources in many states. A number of states are reporting lower test-positivity rates, as well as declining infection rates. Still, those improvements are not evident universally across all states.

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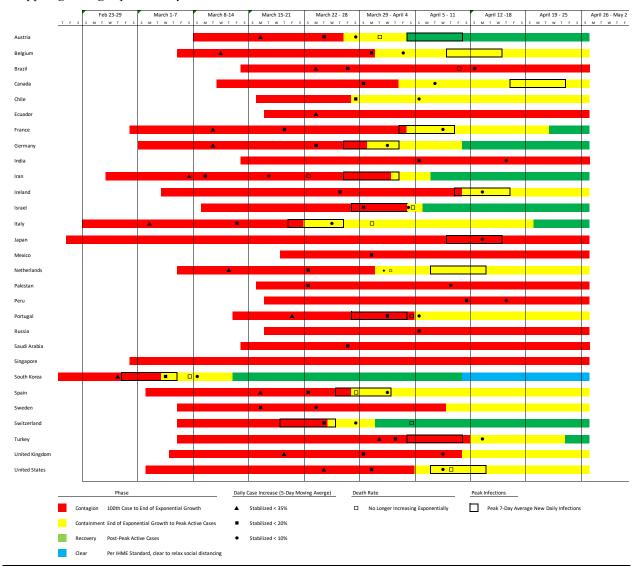
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Virus Progression: Hardest Hit Countries

Nine of the Ten Countries Added to Our Coverage Are Still Experiencing Exponential Case Growth

Ten countries as still experiencing exponential case growth – Brazil, Ecuador, India, Japan, Mexico, Pakistan, Peru, Russia, Saudi Arabia and Singapore. Note that, except for Russia, these countries are in the bottom ½ of the tracked countries in terms of total cases. The exponential growth in these countries suggests that the virus is beginning to spread now in Asia and South America.

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.



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, https://covid19.healthdata.org/united-states-of-america, and nyc.gov. Graphics depict data as of the date in the header.



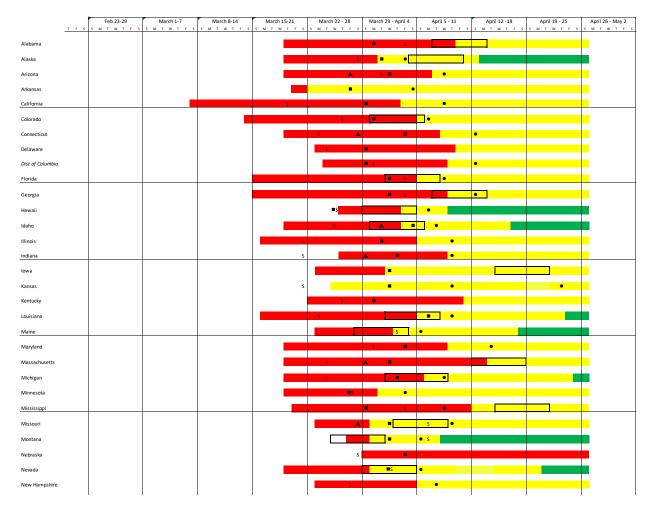
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Virus Progression: US States, District of Columbia and New York City

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

We have added four states to the "Recovery" stage, indicating that active cases have begun to decline from a peak – Louisiana, Michigan, Texas and Wisconsin. Caution should be advised when viewing these numbers, as states tend to report recoveries in batches. Thus, it is possible that active cases will rise again, until the states again report recoveries. We now show fourteen states – Alaska, Hawaii, Idaho, Louisiana, Maine, Michigan, Montana, Nevada, Oklahoma, South Carolina, South Dakota, Texas, Wisconsin and Wyoming - that may be past their peak in Active cases.

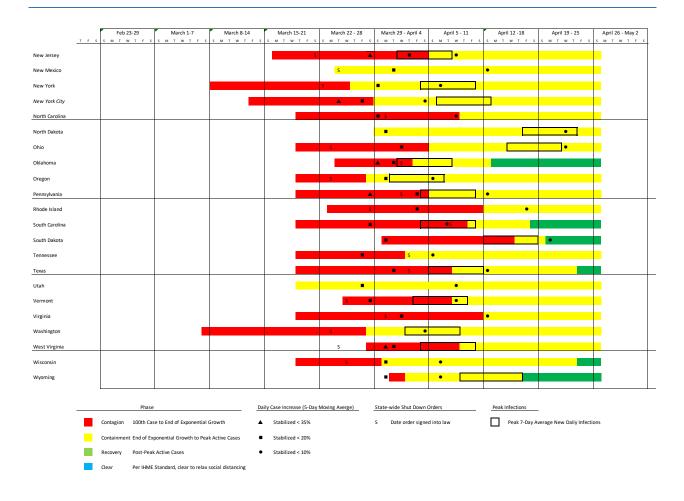


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Country-By-Country Statistics and Rankings

The U.S. Leads the World in Cases and Deaths; Is 5th in New Daily Infections per Capita and 6th in Cases per Capita

This table provided statistics and ranking of each of the countries we are tracking.

As of April 26

Country	Total Cases	Rank	Cases per 1M Population	Rank	Deaths	Rank	Death Rate	Rank	Deaths per 1 Million Population	Rank	5-day Moving Average Case Growth Rate	Rank	Tests per 1M Population	Rank	New Daily Infections Per 1M Population (5-Day M.A.)	Rank
USA	987,160	(1)	2,982	(6)	55,413	(1)	5.6%	(12)	167.4	(10)	3.7%	(13)	16,527	(13)	93.7	(5)
Austria	15,225	(24)	1,691	(15)	542	(23)	3.6%	(18)	60.2	(15)	0.5%	(28)	25,819	(5)	7.6	(24)
Belgium	46,134	(13)	3,981	(2)	7,094	(6)	15.4%	(1)	612.1	(1)	2.4%	(17)	17,062	(12)	94.1	(4)
Brazil	62,859	(11)	296	(24)	4,271	(11)	6.8%	(9)	20.1	(20)	7.8%	(7)	1,373	(25)	16.3	(22)
Canada	46,895	(12)	1,243	(18)	2,560	(13)	5.5%	(15)	67.8	(14)	4.1%	(11)	18,746	(11)	44.8	(11)
Chile	13,331	(28)	697	(21)	189	(28)	1.4%	(26)	9.9	(22)	4.4%	(10)	8,159	(19)	24.2	(18)
China	82,825	(9)	58	(29)	4,632	(9)	5.6%	(13)	3.2	(26)	0.0%	(30)	0	(30)	0.0	(30)
Ecuador	22,719	(19)	1,288	(17)	576	(22)	2.5%	(23)	32.6	(17)	27.9%	(1)	3,203	(24)	107.3	(3)
France	162,100	(4)	2,483	(7)	22,856	(4)	14.1%	(2)	350.2	(4)	0.5%	(27)	7,103	(20)	20.1	(21)
Germany	157,770	(5)	1,883	(12)	5,976	(7)	3.8%	(16)	71.3	(12)	1.3%	(24)	24,738	(8)	20.5	(20)
India	27,890	(16)	20	(30)	881	(19)	3.2%	(19)	0.6	(30)	6.6%	(8)	482	(29)	1.1	(28)
Iran	90,481	(8)	1,077	(19)	5,710	(8)	6.3%	(10)	68.0	(13)	1.4%	(23)	5,016	(23)	14.1	(23)
Ireland	19,262	(20)	3,901	(3)	1,087	(17)	5.6%	(11)	220.1	(7)	3.0%	(15)	25,785	(6)	116.0	(2)
Israel	15,443	(23)	1,784	(14)	201	(27)	1.3%	(27)	23.2	(18)	2.2%	(20)	34,971	(1)	32.2	(17)
Italy	197,675	(3)	3,269	(5)	26,644	(2)	13.5%	(4)	440.7	(3)	1.4%	(22)	29,071	(3)	44.2	(12)
Japan	13,441	(27)	106	(27)	372	(24)	2.8%	(20)	2.9	(27)	0.8%	(25)	1,179	(26)	3.0	(27)
Mexico	13,842	(25)	107	(26)	1,305	(16)	9.4%	(8)	10.1	(21)	9.5%	(4)	525	(28)	7.0	(25)
Netherlands	37,845	(14)	2,209	(11)	4,475	(10)	11.8%	(5)	261.2	(6)	2.2%	(21)	11,319	(15)	43.3	(13)
Pakistan	13,328	(29)	60	(28)	281	(25)	2.1%	(25)	1.3	(29)	6.4%	(9)	682	(27)	3.2	(26)
Peru	27,517	(17)	835	(20)	728	(21)	2.6%	(21)	22.1	(19)	9.6%	(3)	7,059	(21)	51.5	(9)
Portugal	23,864	(18)	2,340	(8)	903	(18)	3.8%	(17)	88.6	(11)	2.2%	(19)	32,414	(2)	51.2	(10)
Russia	80,949	(10)	540	(22)	747	(20)	0.9%	(28)	5.0	(23)	9.6%	(2)	20,690	(10)	36.3	(15)
Saudi Arabia	17,522	(22)	503	(23)	139	(29)	0.8%	(29)	4.0	(25)	7.9%	(5)	11,735	(14)	33.5	(16)
Singapore	13,624	(26)	2,329	(9)	12	(30)	0.1%	(30)	2.1	(28)	7.8%	(6)	5,745	(22)	171.8	(1)
South Korea	10,728	(30)	209	(25)	242	(26)	2.3%	(24)	4.7	(24)	0.1%	(29)	20,815	(9)	0.2	(29)
Spain	226,629	(2)	4,847	(1)	23,190	(3)	10.2%	(7)	496.0	(2)	2.2%	(18)	25,656	(7)	85.4	(6)
Sweden	18,640	(21)	1,846	(13)	2,194	(14)	11.8%	(6)	217.2	(8)	4.0%	(12)	9,357	(18)		(8)
Switzerland	29,061	(15)	3,393	(4)	1,610	(15)	5.5%	(14)	188.0	(9)	0.6%	(26)	28,343	(4)	22.0	(19)
Turkey	110,130	(7)	1,306	(16)	2,805	(12)	2.5%	(22)	33.3	(16)	2.9%	(16)	10,656	(16)		(14)
UK	152,840	(6)	2,251	(10)	20,732	(5)	13.6%	(3)	305.4	(5)	-	(14)	9,867	(17)	-	(7)

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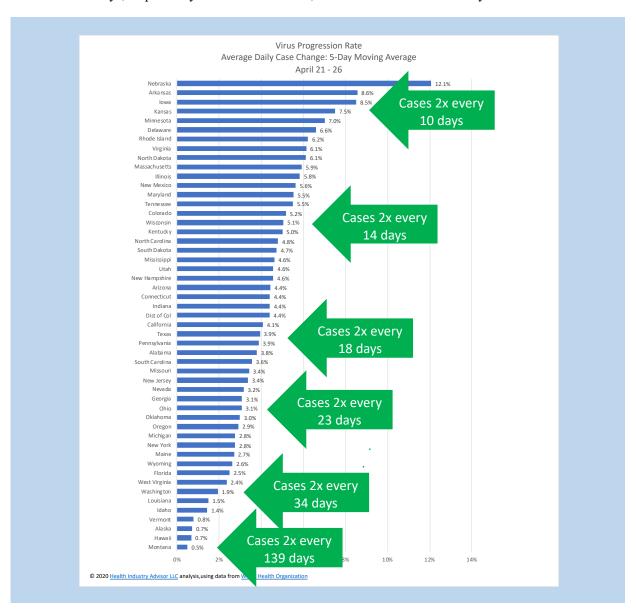
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Daily Case Growth Rates By State

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

Nebraska remains the only state experiencing daily case growth > 10%. It also is the only state still experiencing exponential case growth.

The case growth rate is so low in Montana that it would now take 139 days for cases to double; in Hawaii, 104; in Alaska, 96; and in Vermont, 88 days. In Louisiana and New York – two of the hardest-hit states – it would take 25 and 21 days, respectively. For the U.S overall, it would take about 18-19 days.



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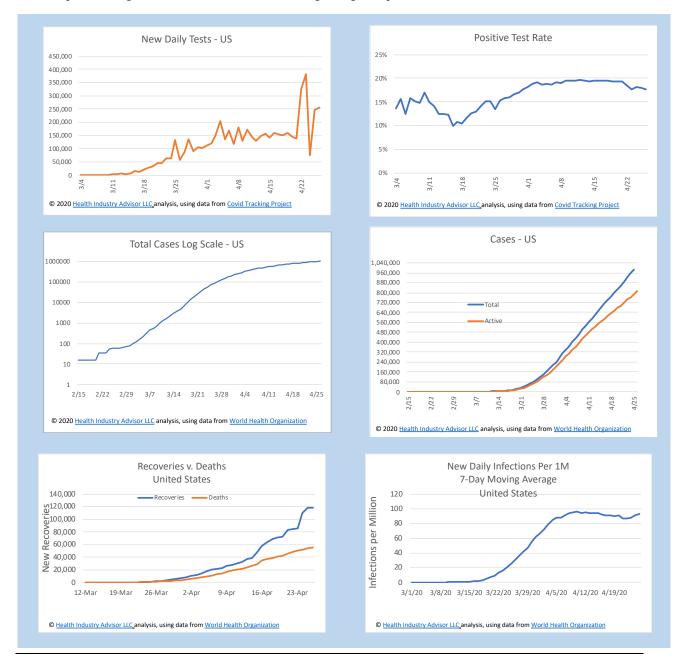
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Cases and Death Rates in the U.S.

Case Growth Has Plateaued in the U.S.; Active Cases Are Continuing to Fall off From Total Cases; As Testing Has Picked Up Pace, New Infections Per Capita Has Increased, However, the Test-Positive Test Rate Has Dropped

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



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Hardest-Hit States

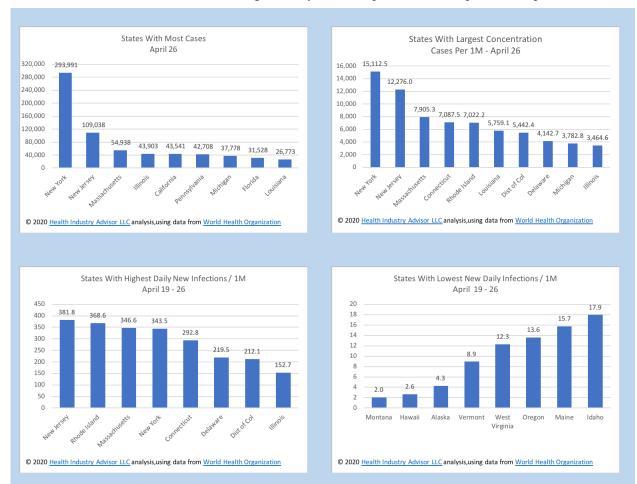
New York Has Experienced Far More Coronavirus Cases, and More Cases Per Capita Than Any State

New York, which now has nearly 290,000 cases, represents just under 30% of all coronavirus cases in the U.S, down from a peak of 48% on March 25. The top ten states account 80.5% of all cases as well as 81.7% of all deaths. New York by itself accounts for 40.2% of the deaths in the U.S.; New York and New Jersey combined, 50.9%.

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

Michigan has the highest death rate (8.8%), followed by New York and Connecticut (7.6%), and Minnesota (6.8%.). Minnesota, however, ranks 46th in cases per capita. Measured in terms of deaths per million in populations, New York is the highest (1,145.0) followed by New Jersey (668.5).

From April 20-26, New Jersey has the highest rate of new daily infections, at 381.8; Rhode Island is 2^{nd} , with 368.6. New York is 4^{th} , at 345.5 which is significantly below its peak of 505.8 experienced April 4-10.



State-By State Statistics and Rankings



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New York Continues To Experience the Most Cases, Cases Per Capita and Deaths

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

As of April 26

State	Total Cases	Rank	Cases per 1M Population	Rank	Deaths	Rank	Death Rate	Rank	Deaths per 1 Million Population	Rank	5-day Moving Average Case Growth Rate	Rank	Tests per 1M Population	Rank	New Daily Cases Per 1M Population (5-Day M.A.)	Rank
Alabama	6,418	(24)	1,308.9	(28)	219	(25)	3.4%	(30)	44.7	(29)	3.8%	(30)	15,135	(26)	44.1	(29)
Alaska	341	(51)	466.1	(49)	9	(50)	2.6%	(41)	12.3	(49)	0.7%	(49)	21,905	(14)	4.3	(49)
Arizona	6,526	(23)	896.6	(40)	275	(21)	4.2%	(22)	37.8	(33)	4.4%	(23)	9,330	(49)	31.3	(38)
Arkansas	3,001	(38)	994.4	(38)	48	(42)	1.6%	(48)	16.6	(45)	8.6%	(2)	13,225	(29)	57.8	(23)
California	43,541	(5)	1,102.0	(33)	1,718	(9)	3.9%	(24)	43.5	(31)	4.1%	(27)	12,623	(32)	43.8	(30)
Colorado	13,441	(17)	2,334.0	(14)	672	(16)	5.0%	(12)	118.1	(14)	5.2%	(15)	11,440	(40)	92.1	(14)
Connecticut	25,269	(10)	7,087.5	(4)	1,924	(5)	7.6%	(2)	539.6	(3)	4.4%	(24)	22,284	(12)	292.8	(5)
Delaware	4,034	(32)	4,142.7	(8)	112	(35)	2.8%	(40)	123.2	(12)	6.6%	(6)	20,273	(18)	219.5	(6)
District Of Columbia	3,841	(33)	5,442.4	(7)	178	(31)	4.6%	(16)	252.2	(7)	4.4%	(26)	26,396	(8)	212.1	(7)
Florida	31,528	(8)	1,467.9	(23)	1,055	(10)	3.3%	(33)	50.0	(22)	2.5%	(43)	16,815	(20)	34.7	(34)
Georgia	23,481	(12)	2,211.6	(16)	916	(11)	3.9%	(25)	86.3	(16)	3.1%	(35)	11,906	(36)	71.6	(20)
Hawaii	606	(48)	428.0	(50)	14	(48)	2.3%	(43)	9.9	(51)	0.7%	(50)	20,567	(16)	2.6	(50)
Idaho	1,897	(42)	1,058.6	(36)	56	(39)	3.0%	(38)	31.2	(37)	1.4%	(47)	11,471	(39)	17.9	(44)
Illinois	43,903	(4)	3,464.6	(10)	1,874	(6)	4.3%	(21)	152.5	(9)	5.8%	(11)	16,765	(21)	152.7	(8)
Indiana	15,012	(15)	2,229.9	(15)	813	(13)	5.4%	(9)	120.8	(13)	4.4%	(25)	12,310	(34)	80.7	(17)
Iowa	5,476	(28)	1,735.6	(19)	112	(35)	2.0%	(44)	37.4	(34)	8.5%	(3)	11,521	(38)	116.5	(10)
Kansas	3,174	(36)	1,089.5	(34)	120	(33)	3.8%	(27)	41.2	(32)	7.5%	(4)	8,663	(51)	65.0	(21)
Kentucky	4,074	(31)	911.9	(39)	205	(28)	5.0%	(11)	46.6	(27)	5.0%	(17)	10,917	(43)	35.6	(33)
Louisiana	26,773	(9)	5,759.1	(6)	1,729	(8)	6.5%	(5)	371.9	(5)	1.5%	(46)	30,460	(5)	87.4	(16)
Maine	1,015	(45)	755.1	(45)	50	(41)	4.9%	(14)	37.2	(35)	2.7%	(41)	13,296	(28)	15.7	(45)
Maryland	18,581	(13)	3,073.4	(12)	910	(12)	4.9%	(15)	150.5	(10)	5.5%	(13)	16,102	(22)	135.9	(9)
Massachusetts	54,938	(3)	7,905.3	(3)	2,730	(4)	5.0%	(13)	417.2	(4)	5.9%	(10)	34,567	(3)	346.6	(3)
Michigan	37,778	(7)	3,782.8	(9)	3,315	(3)	8.8%	(1)	331.9	(6)	2.8%	(39)	15,668	(24)	90.9	(15)
Minnesota	3,602	(34)	638.7	(46)	244	(23)	6.8%	(4)	48.2	(24)	7.0%	(5)	10,672	(44)	31.6	(37)
Mississippi	5,911	(26)	1,986.1	(17)	227	(24)	3.8%	(26)	76.3	(17)	4.6%	(20)	20,339	(17)	78.6	(18)
Missouri	7,029	(22)	1,145.3	(31)	283	(20)	4.0%	(23)	46.1	(28)	3.4%	(32)	11,004	(42)	31.0	(39)
Montana	448	(50)	419.2	(51)	14	(48)	3.1%	(37)	13.1	(46)	0.5%	(51)	12,347	(33)	2.0	(51)
Nebraska	3,028	(37)	1,565.3	(20)	53	(40)	1.8%	(47)	28.9	(39)	12.1%	(1)	11,826	(37)	114.8	(11)
Nevada	4,602	(29)	1,494.1	(22)	206	(27)	4.5%	(18)	66.9	(19)	3.2%	(34)	15,699	(23)	40.7	(31)
New Hampshire	1,864	(43)	1,370.9	(25)	60	(38)	3.2%	(35)	44.1	(30)	4.6%	(22)	13,193	(30)	49.6	(27)
New Jersey	109,038	(2)	12,276.0	(2)	5,938	(2)	5.4%	(8)	668.5	(2)	3.4%	(33)	25,114	(9)	381.8	(1)
New Mexico	2,726	(39)	1,300.1	(29)	93	(36)	3.4%	(31)	47.2	(25)	5.6%	(12)	27,057	(7)	60.0	(22)
New York	293,991	(1)	15,112.5	(1)	22,275	(1)	7.6%	(3)	1,145.0	(1)	2.8%	(40)	41,051	(2)	343.5	(4)
North Carolina	8,994	(20)	857.5	(43)	305	(19)	3.4%	(32)	31.0	(38)	4.8%	(18)	10,624	(45)	32.8	(35)
North Dakota	867	(46)	1,137.7	(32)	17	(46)	2.0%	(45)	22.3	(42)	6.1%	(9)	27,183	(6)	52.9	(26)
Ohio	15,963	(14)	1,365.6	(26)	711	(15)	4.5%	(19)	62.3	(20)	3.1%	(36)	9,945	(47)	53.3	(25)
Oklahoma	3,253	(35)	822.1	(44)	195	(29)	6.0%	(6)	49.3	(23)	3.0%	(37)	13,530	(27)	23.6	(42)
Oregon	2,311	(40)	547.9	(48)	87	(37)	3.8%	(28)	21.6	(43)	2.9%	(38)	11,995	(35)	13.6	(46)
Pennsylvania	42,708	(6)	3,336.0	(11)	1,823	(7)	4.3%	(20)	142.4	(11)	3.9%	(29)	15,526	(25)	111.3	(12)
Rhode Island	7,439	(21)	7,022.2	(5)	215	(26)	2.9%	(39)	213.3	(8)	6.2%	(7)	50,542	(1)	368.6	(2)
South Carolina	5,490	(27)	1,066.3	(35)	174	(32)	3.2%	(36)	33.8	(36)	3.6%	(31)	10,242	(46)	30.9	(40)
South Dakota	2,212	(41)	2,500.4	(13)	10	(49)	0.5%	(51)	12.4	(48)	4.7%	(19)	18,045	(19)	93.2	(13)
Tennessee	9,667	(19)	1,414.7	(24)	181	(30)	1.9%	(46)	26.5	(40)	5.5%	(14)	22,173	(13)	54.3	(24)
Texas Utah	24,981	(11)	861.5	(42)	641 41	(17) (44)	2.6% 1.0%	(42)	22.6 12.8	(41)	3.9% 4.6%	(28)	9,898	(48)	27.9 47.0	(41)
	4,123	(30)	1,286.0	(30)		. ,		(50)		(47)		(21)	31,426	(4)		(28)
Vermont Virginia	851 12,970	(47) (18)	1,363.8 1,519.5	(27) (21)	46 448	(43) (18)	5.4% 3.5%	(10) (29)	73.7 52.5	(18) (21)	0.8% 6.1%	(48)	23,676 9,047	(11) (50)	8.9 74.2	(48) (19)
Washington	13,521	(18)	1,519.5	(18)	738	(14)	5.5%	(29)	98.4	(15)	1.9%	(45)	24,057	(10)	32.5	(36)
West Virginia	1,044	(44)	584.2	(47)	738	(45)	3.3%	(34)	19.0	(44)	2.4%	(45)	21,357	(10)	12.3	(47)
Wisconsin	5,911	(26)	1,015.2	(37)	266	(22)	4.5%	(17)	46.7	(26)	5.1%	(16)	11,274	(41)	38.4	(32)
Wyoming	5,911	(49)	867.4	(41)	7	(51)	1.4%	(49)	12.1	(50)	2.6%	(42)	13,102	(31)	18.8	(43)
vvyorillig	502	(49)	807.4	(41)		(51)	1.4%	(49)	12.1	(50)	2.6%	(42)	13,102	(31)	18.8	(43)

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"Strategic Guidance in an Era of Unprecedented Change"

Issue #37: April 27

State-By-State Readiness For Relaxing Restrictions

What A Difference 11 Days Can Make

11 days can make quite a bit of a difference, as we observe how "ready" each state is for relaxing the restrictions imposed to slow the virus spread.

Yesterday, we introduced a scorecard to provide a snapshot of this readiness. we have incorporated the following measures into to a readiness scorecard, (along with the rationale for the scoring within each measure):

- Tests/Capita indicates testing robustness; grading quintiles based on comparison to: the top 5, top 1/3, top 1/2 and top 2/3 among the countries we track, then all others
 - o Direction whether test volume increased/stayed level, or decreased least week v. prior week
- Test-Positive Rate indicates whether testing is identifying sufficient numbers of non-infected persons; grading based on: comparison to best reported in the world (South Korea, Australia, New Zealand), next group of countries (Canada, Germany, Denmark), then, next 3 levels set to differentiate among states
 - O Direction whether test positive rate increased/stayed level, or decreased least week v. prior week
- New Infections / 1 Million indicates how quickly the virus is spreading; grading based on: rate proposed by IHME for ending social distancing, top ten, top 20, top 25 among the countries we track, then all others
 - Direction whether new infection per capita rate increased/stayed level, or decreased least week v. prior week
- Influenza-Like Illness Using CDC-reported data, indicates whether the state's visits for influenza the past week were above or below CDC baseline for the state's region
 - O Direction whether the % visits for influenza the last 3 weeks increased or decreased the past 3 weeks v. the prior 3 weeks
- Hospital Resources using IHME projections, whether the state is pre- or post- peak projected hospital resource needs due to the virus; and the 5 of peak resources projected to be needed today. Grading based on: current need at <45% of peak, 45-60%, 60-75%, 75-85%, and all others.

The scorecard, as of yesterday is presented on the next page. At the behest of a friend and business colleague, I recreated the scorecard, based on where each state performance was on April 15 - 11 days earlier. This scorecard is presented after the April 26 scorecard.

Note the positive movement, especially in the testing volume and hospital resources categories! In the test-positive and new daily infection categories, its more of a mixed bag. The majority of the states are making positive strides in these areas; several states, however, are seeing higher test-positive rates and/or increases in new infection.

These scorecards are for informational purposes only. The measures and grading used are not based on any scientific standard and should not be considered a substitute for public health considerations or other clinical or economic judgement. States may elect to move faster or slower than the scorecard might otherwise indicate.



"Strategic Guidance in an Era of Unprecedented Change"

Issue #37: April 27

State-By-State Relative "Readiness" For Relaxing Restrictions (DRAFT)
As of: 4/26/2020

This table compares each state, based on measures similar to the gating criteria included in the federal government's *Opening Up America Plan*. This chart is for informational purposes only, and should not be construed as as a substitute for public health considerations, clinical judgement or as a recommendation for taking any specific action.

State	Tests /	' Capita	Test-Positive Rate		New Infectio	ns / 1 Million	Influenza-	Hospital	
State	#	Direction	#	Direction	#	Direction	Baseline	Direction	Resources
Alabama		Ø		Ø		0	0	Ø	
Alaska						Ø		< >	
Arizona		Ø		⊗		8	Ø	②	
Arkansas		Ø		0		⊗	Ø	②	
California		Ø		Ø		8	Ø	>	
Colorado		Ø		Ø		8		Ø	
Connecticut				8		8	8	Ø	
Delaware		0		8		8		Ø	
District Of Columbia		0		0		8	⊗	0	
Florida		0		0		0	(1)	8	
Georgia		0		0		0	8	Ø	
Hawaii		Ø		Ø		Ø	Ø		
Idaho		Ø		Ø		0	8	8	
Illinois		0		0		8	8	0	
Indiana		0		0		8	0	0	
lowa		0		8		0	0	0	
Kansas		0		8		8	8	0	
Kentucky		0		0		8	0	0	
Louisiana	20,000 7	0		8		⊘	8	0	
	29,900.7	0		8		0	Ø	0	
Maine		0		0		8		0	
Maryland				_			8		
Massachusetts	32,641.9	Ø		Ø		8	8	Ø	
Michigan		0		Ø		Ø	Ø	Ø	
Minnesota		Ø		8		8	Ø	Ø	
Mississippi		Ø		8		8	Ø	Ø	
Missouri		Ø		Ø		0	Ø	②	
Montana		Ø				Ø	Ø		
Nebraska		Ø		⊗		0	8	Ø	
Nevada		Ø		8		0	Ø	②	
New Hampshire		Ø		Ø		8	Ø	Ø	
New Jersey		Ø		Ø		8	8	>	
New Mexico		Ø		Ø		8		< >	
New York	39,970.5	Ø		Ø		0	8	②	
North Carolina		>		Ø		8	>	②	
North Dakota	25,391.6	Ø		Ø		8	Ø	②	
Ohio		Ø		Ø		8		Ø	
Oklahoma		Ø		Ø		0	Ø	Ø	
Oregon		<a>		Ø		0	8	<a>	
Pennsylvania		Ø		Ø		0	8		
Rhode Island	48,039.3	Ø		Ø		8	Ø	0	
South Carolina	.,,	0		0		0	8	0	
South Dakota		0		0		0	0	0	
Tennessee		0		0		0	0	0	
Texas		0		0		0	0	0	
Utah	29 127 0	0		0		8	0	0	
Vermont	28,137.0	0		0		⊘	8	0	
		0		0		8	8	0	
Virginia									
Washington		0		8		0	0	Ø	
West Virginia		Ø		Ø		0	Ø	Ø	
Wisconsin		Ø		8		0	8	②	
Wyoming		Ø		8		Ø	Ø	Ø	

Legend and notes are on the second following page.



"Strategic Guidance in an Era of Unprecedented Change"

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As of: 4/15/2020

This table compares each state, based on measures similar to the gating criteria included in the federal government's *Opening Up America Plan*. This chart is for informational purposes only, and should not be construed as as a substitute for public health considerations, clinical judgement or as a recommendation for taking any specific action.

State	Tests /	Tests / Capita		itive Rate	New Infection	ns / 1 Million	Influenza-	Hospital	
State	#	Direction	#	Direction	#	Direction	Baseline	Direction	Resources
Alabama		Ø		Ø		8	8	Ø	
Alaska		Ø		Ø		1	Ø		
Arizona				Ø		1	8	Ø	
Arkansas		0		0		0	Ø	0	
California		Ø		0		(1)	8	Ø	
Colorado		0		8		0	8	0	
Connecticut		0		8		0	8	0	
Delaware		0		0		0	0	0	
District Of Columbia		0		0		0	8	0	
		0		8		0		0	
Florida						_	0		
Georgia		0		8		0	8	0	
Hawaii		Ø		8		Ø	Ø	Ø	
daho				8			8	Ø	
Illinois				8		1	8		
ndiana		Ø		8		()	②	Ø	
owa		Ø		Ø		②	Ø	Ø	
Kansas		Ø		8			8	Ø	
Kentucky		Ø		Ø		1	Ø	Ø	
Louisiana	26,227.9	Ø		8		②	8	Ø	
Maine		Ø		8		(1)	8	Ø	
Maryland		0		0		0	8	0	
Massachusetts		0		Ø		0	8	Ø	
Michigan		0		0		0	0	0	
Minnesota		0		0		0	0	0	
Mississippi		0		0		0	8	0	
Missouri		0		0		0	Ø	0	
Montana		0		8		Ø	0	0	
Nebraska		Ø		Ø		Ø	8	Ø	
Nevada		Ø		8		1	Ø	Ø	
New Hampshire		Ø		⊗		0	0	Ø	
New Jersey		Ø		Ø		8	8	Ø	
New Mexico		Ø		Ø		(1)	Ø	Ø	
New York	27,039.4	Ø		8		8	8	>	
North Carolina		Ø		8		(1)	Ø	Ø	
North Dakota		Ø		0		Ø	8	Ø	
Ohio		Ø		Ø		②	Ø	Ø	
Oklahoma		Ø		8		(1)	8	Ø	
Oregon		Ø		Ø		(1)	8	Ø	
Pennsylvania		Ø		0		0	8	0	
Rhode Island		0		0		0	0	0	
South Carolina		0		0		0	8	0	
South Dakota		0		0		0	Ø	0	
Fennessee		0		0		0	8	0	
геппеssee Гехаs		0		8		0	⊗	0	
Jtah		0		0		<u> </u>	0	0	
/ermont				8			8	Ø	
Virginia				Ø		(1)	8		
Washington		Ø		8			8		
West Virginia		Ø		Ø		1	8		
Visconsin		Ø		8		1	8	Ø	
Wyoming		0		8		0	8	0	



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Legend:

	Tests per Capita	Direction	Test-Positive Rate	Direction	New Daliy Infection Rate	Direction	Baseline	Direction	Hospital Resources
	pe	r 1M	last 7 days v		per	1M	CDC Baseline by	last 3 weeks v	
Time perio	d last 7 days	last 7 days v prior week	last 7 days	prior week	last 7 days	last 7 days v prior week	region	prior 3 weeks	As of 4/26
	> 25,000		<=2%		<10				<45% of Peak
	18-25,000		2-10%		10-50				45-60% of Peak
	12-18,000		10-14%		50-100				60-75% of Peak
	9-12,000		14-18%		100-150				75-85% of peak
	<9,000		>18%		>15				>85% of Peak or Pre-Peak
		Up		Down		Down by 40%	Below Baseline	Down	
						Down by 10%		N/A	
8		Down		Up		Down <10% or Up	Above Baseline	Up	

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Sources:

Influenza guidelines and data from Centers fo Disease Control (https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html), accessed April 25, 2020

 $Test\ data\ from\ Covid\ Tracking\ Project\ (\underline{https://covidtracking.com/}),\ accessed\ March\ 21-April\ 25,\ 2020$

 $Hospital\ resource\ Need\ projections\ from\ Institute\ for\ Health\ Metrics\ and\ Evaluation\ (),\ accessed\ April\ 25,\ 2020$

 $In fection\ rate\ data\ from\ World\ Health\ Organization\ (\underline{worldometer.info}),\ accessed\ March\ 21-April\ 25,\ 2020$

$Articles\, of interest:$

"What does doing enough coronavirus testing look like? Here's a number to watch", Patrick Cain, msn.com, (https://www.msn.com/en-ca/news/canada/what-does-doing-enough-coronavirus-testing-look-like-heres-a-number-to-watch/ar-BB138Hf4?li=AAggXBV), accessed April 24, 2020

"A New Statistic Reveals Why America's COVID-19 Numbers Are Flat", Robinson Meyer and Alexis C. Madrigal, April 16, 2020, The Atlantic, accessed April 24, 2020

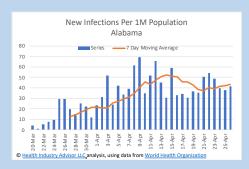


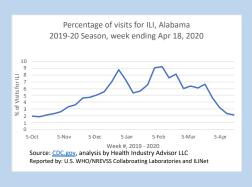
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Alabama

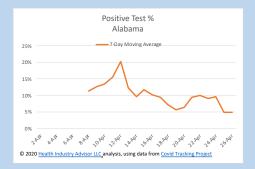
Tests Per Day Alabama 20,000 Series 7 Day, Moving Average 15,000 10,000 5,000 5,000 6 And And And Arthough And Andrew An

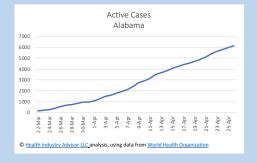




Analysis:

- Testing levels increasing
- Test Positivity rate declining and at a low level
- ▼ New infections trending up
- ▼ Active cases yet to peak
- ▲ Influenza cases declining
- A Hospital resource needs past peak; declining rapidly





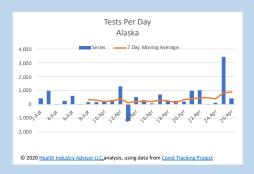


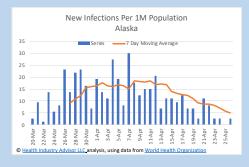


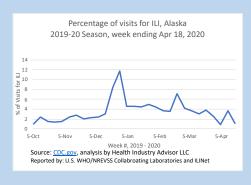
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Alaska



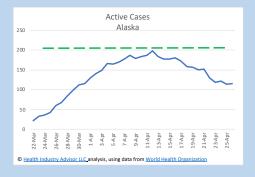


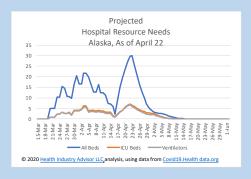


Analysis:

- Testing levels increasing
- Test Positivity rate declining and at a low level
- ▲ New infections trending down
- ▲ Active cases past-peak
- ▲ Influenza cases declining
- A Hospital resource needs past peak; declining rapidly







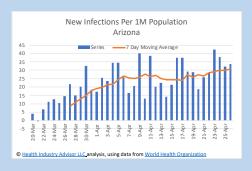


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Arizona

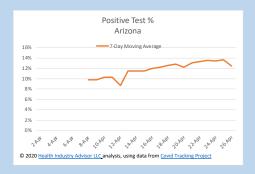
Tests Per Day Arizona 6,000 Series 7. Day Moving Average 5,000 1,000 1,000 7,200 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,00

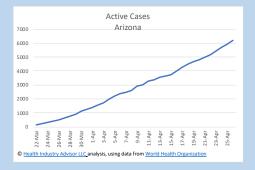




Analysis:

- Testing levels increasing
- Test Positivity rate increasing
- ▼ New infections trending up
- Active cases yet to peak
- ▲ Influenza cases declining
- ▼ Hospital resource needs near peak







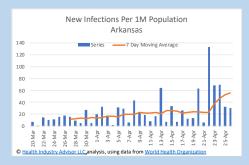


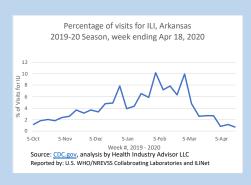
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Arkansas

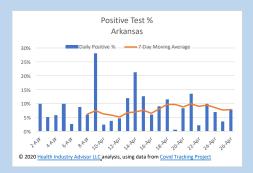
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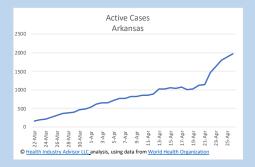


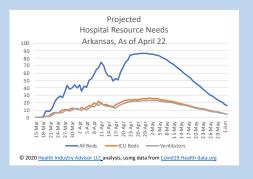


Analysis:

- Testing levels increasing
- ▼ Test-Positivity rate slightly increasing
- ▼ New infections trending up
- Active cases yet to peak
- Influenza cases declining
- ▼ Hospital resource not yet at peak







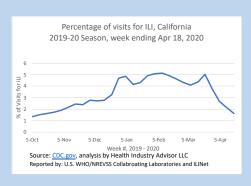


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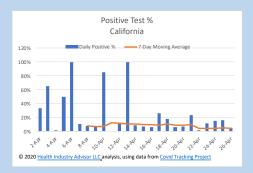
California





Analysis:

- Testing levels increasing
- Test-Positivity rate declining and at a low level
- V New infections trending up
- Active cases yet to peak
- Influenza cases declining
- A Hospital resource needs past peak; declining rapidly







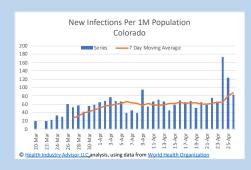


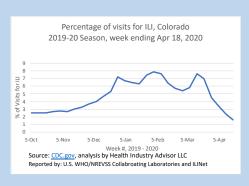
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Colorado

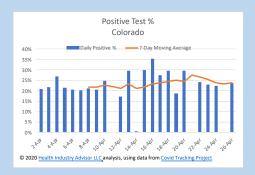
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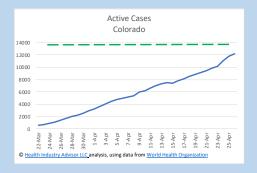


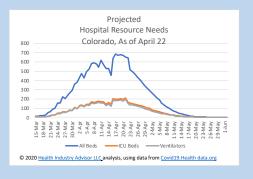


Analysis:

- Testing levels increasing
- Test-Positivity rate is high and increasing
- V New infections trending up
- ▼ Active cases yet to peak
- Influenza cases declining
- A Hospital resource needs past peak; declining rapidly







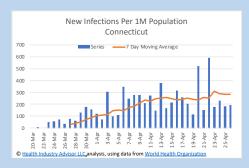


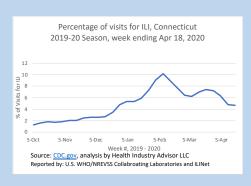
"Strategic Guidance in an Era of Unprecedented Change"

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Connecticut

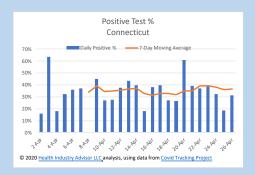
Tests Per Day Connecticut 7,000 Series 7. Day Moving Average 6,000 4,000 3,000 2,000 1,000 0 7,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,875 8,87

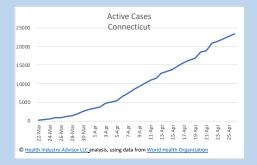


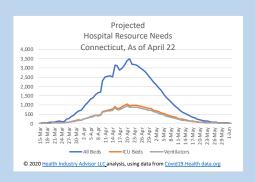


Analysis:

- Testing levels increasing
- Test-Positivity rate high and trending up
- V New infections trending up
- Active cases yet to peak
- Influenza cases declining
- A Hospital resource needs past peak; declining rapidly







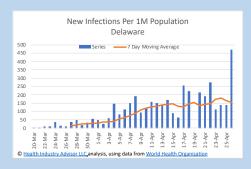


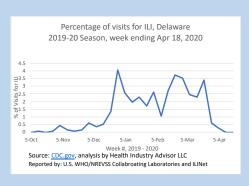
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Delaware

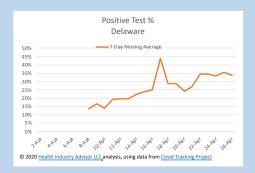
Tests Per Day Delaware 2,000 Series 7 Day Moving Average 1,500 1,500 500 500 -500 And and and and and and analysis, using data from Covid Tracking Project

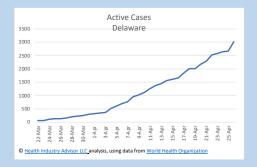


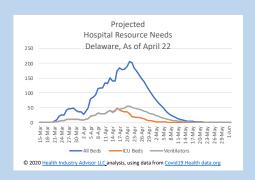


Analysis:

- Testing levels stable or increasing
- ▼ Test-Positivity high and increasing
- New infections trending up
- Active cases yet to peak
- Influenza cases declining
- A Hospital resource needs past peak; declining rapidly





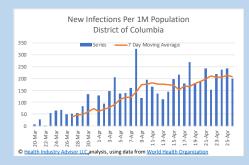


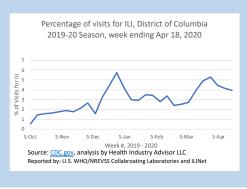


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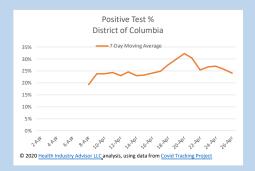
District of Columbia

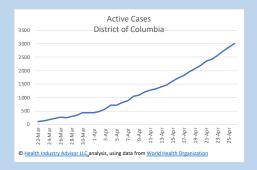


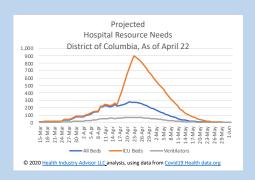


Analysis:

- Testing levels increasing
- ▼ Test-Positivity rate high and increasing
- ▼ New infections trending up
- Active cases yet to peak
- Influenza cases increasing
- ▼ Hospital resource needs near peak; declining rapidly





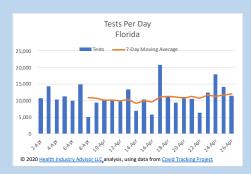


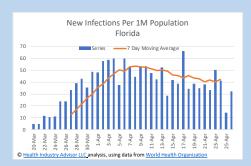


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Florida





ILI information for Florida is not available via the CDC

Analysis:

- ▲ Testing levels increasing
- Test-Positivity rate declining and at a low level
- New infections trending down, albeit slowly
- Active cases yet to peak
- Influenza cases not available
- A Hospital resource needs past peak; declining rapidly

