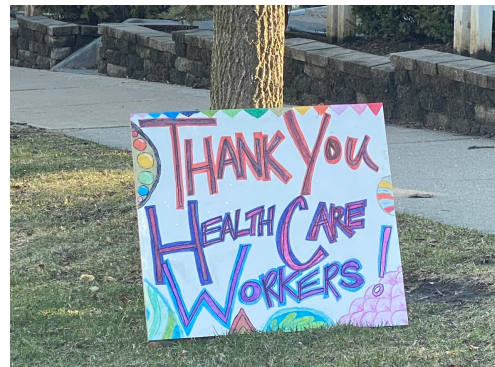
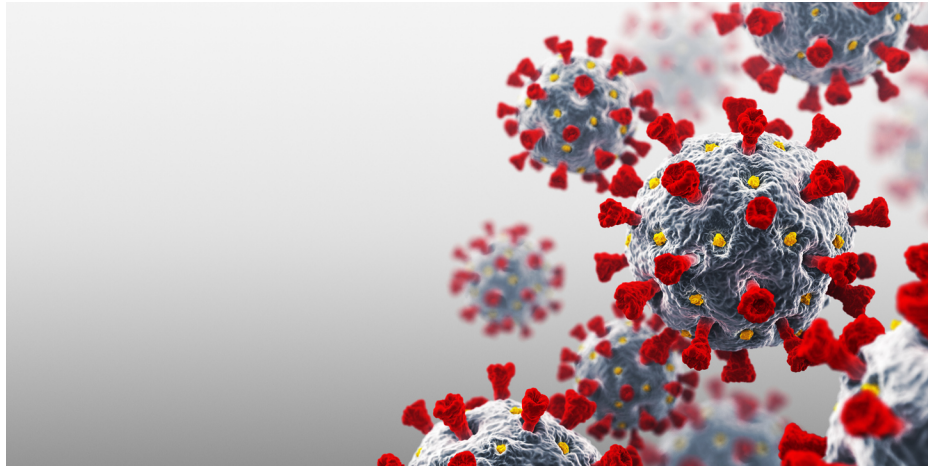
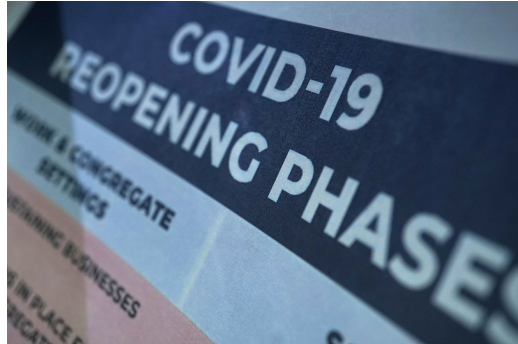




COVID-19 Report

Issue # 103

Monday, July 13, 2020

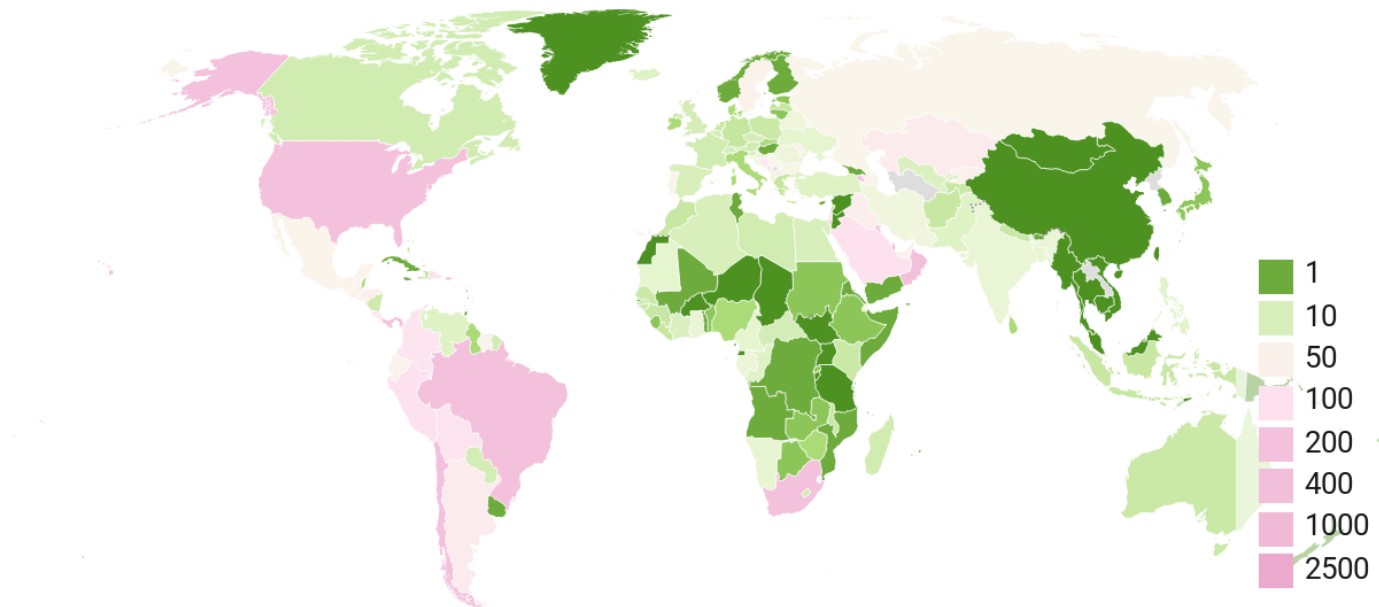
- Starting with the troubling news, which is overshadowing a few positive developments: Florida shattered its single-day record, with 15,300 newly-reported cases. California reported 7,702 new cases and Texas, 6,091. Still, Arizona, California and Texas have been indicating an overall downward trend in new cases for the past several days
- Also troubling, nearly 2/3 of United States residents live in a state we designate as of High or Moderately High concern. These designations are based on rates of new infections, test-positive %, hospitalizations and daily case growth
- Another encouraging sign was a decline in reported deaths with coronavirus in the United States: the 379 reported deaths represent the 3rd consecutive day of fewer deaths than the preceding day. Reported recoveries now outnumber deaths by 11:1; and, the death rate is down to 4.04% of all cases
- Arizona, California, Florida, Georgia and Texas have been bearing the brunt of the surge in new cases during the past month. In each of these states, except California, this has coincided with high and increasing test-positive rates. The rest of the country continues to post low rates. In Arizona and Florida, the states with the highest test-positive rates, we observe hints during the past few days that these rates may be leveling or beginning to recede
- South Africa continued its rise in the rankings of countries with the most cases worldwide, moving to 10th ahead of Iran. Colombia moved to 19th, ahead of Canada

Worldwide

South Africa moves ahead of Iran, now has 10th most cases;
Colombia moves to 19th, ahead of Canada

New Infections / 1 Million Population

Trailing 7-Day Moving Average, As of July 12



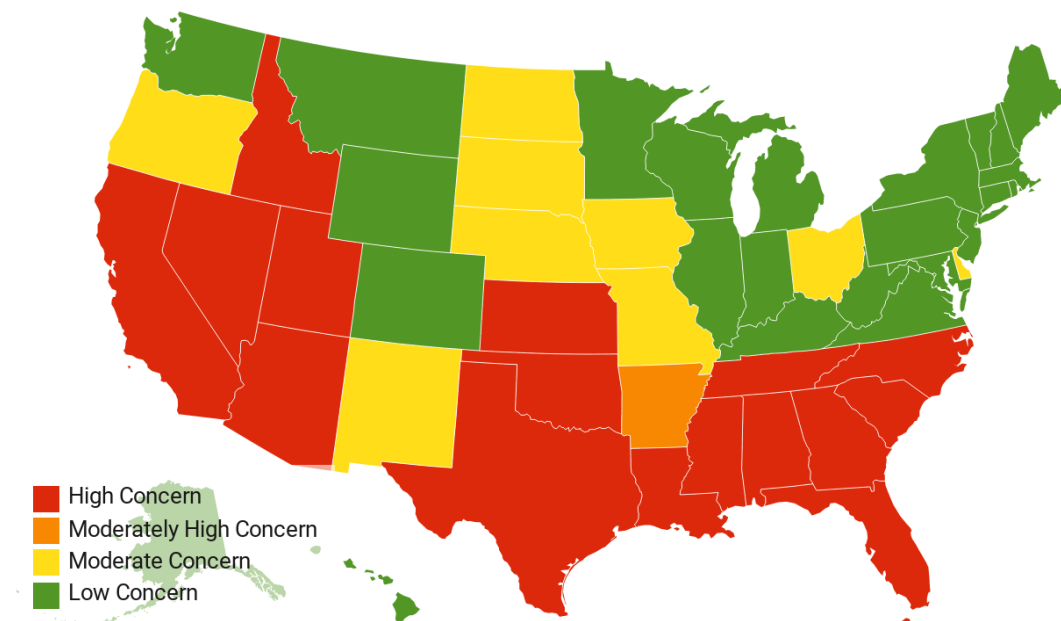
Health Industry Advisor LLC analysis

Map: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Situation worsens: Two-thirds the country's population resides in a state we consider of "High" or "Moderately High" concern

Scorecard

As of July 5

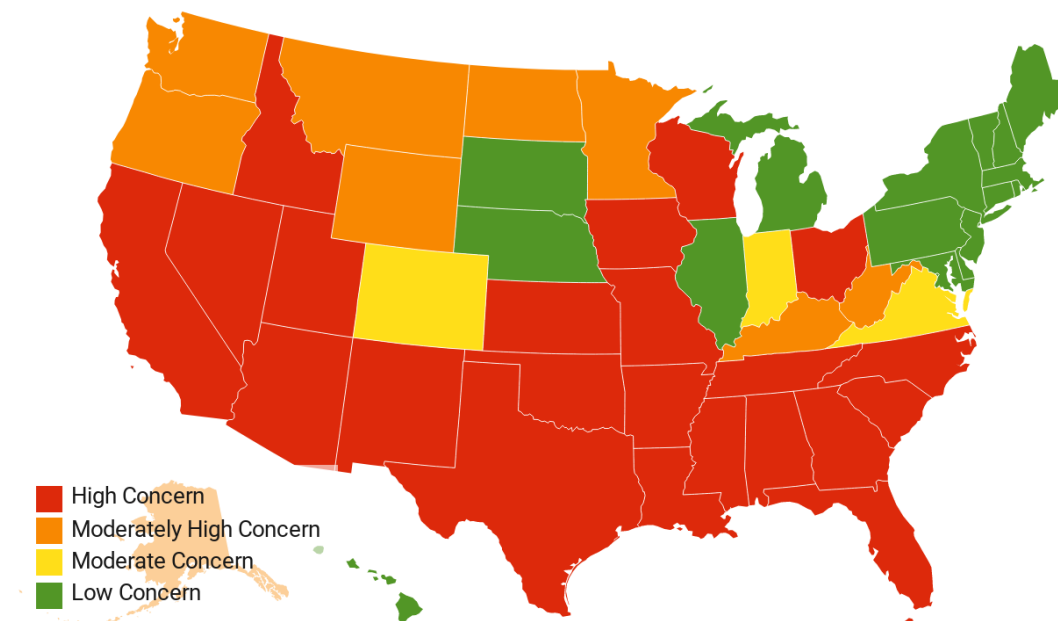


Scoring based on new infection, test-positive, hospitalization and case growth rates

Map: Health Industry Advisor LLC • Created with Datawrapper

Scorecard

As of July 12

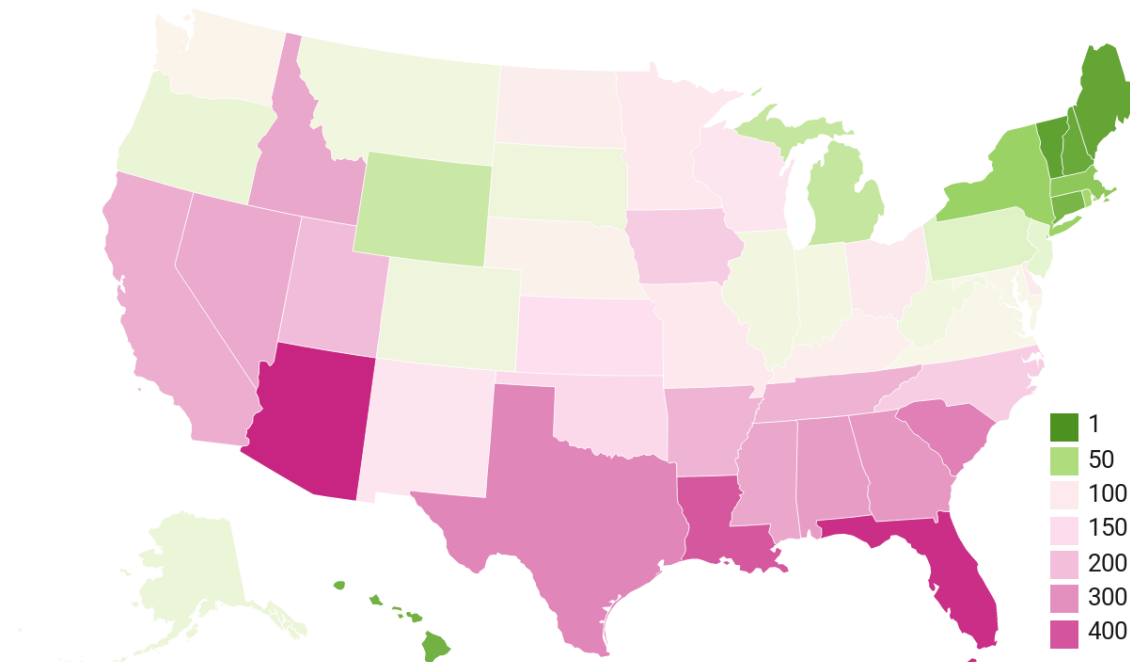


Scoring based on new infection, test-positive, hospitalization and case growth rates

Map: Health Industry Advisor LLC • Created with Datawrapper

New Infections Per 1 Million Population

Trailing 7-Day Moving Average, As of July 12



Health Industry Advisor LLC analysis

Map: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

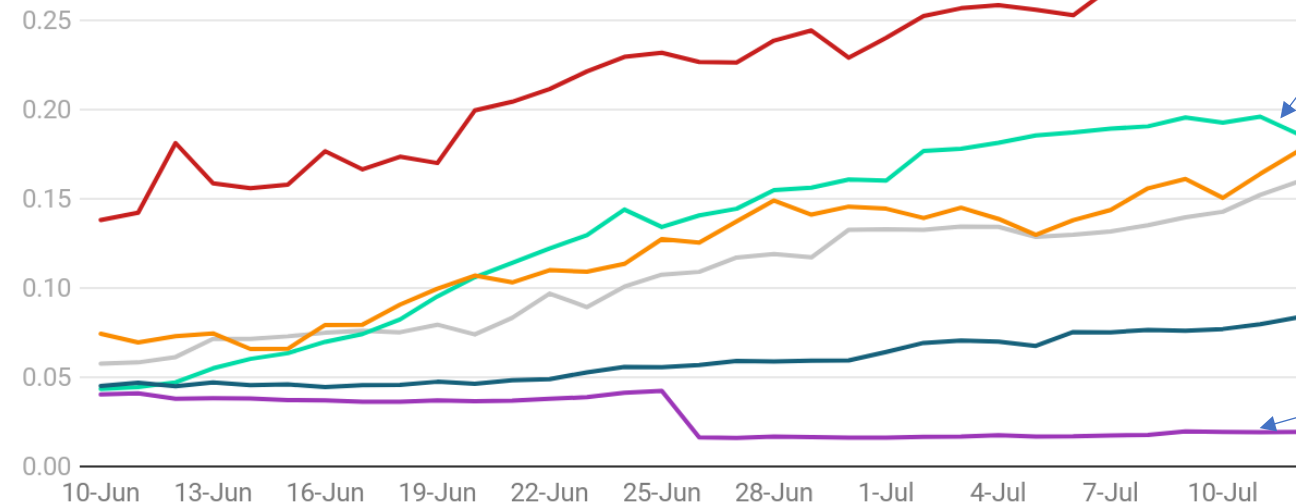
Arizona, California, Florida, Georgia and Texas

Test-positive rates remain high in Arizona, Florida, Georgia and Texas; low, yet increasing in California; low elsewhere

Test Positive Rate

Trailing 7-Day Moving Average, As of July 12

— Arizona — California — Florida — Georgia — Texas — Rest of US



Start of a positive trend in Arizona and Florida?

The rest of the country enjoys low test-positive rates

Health Industry Advisor LLC analysis

Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

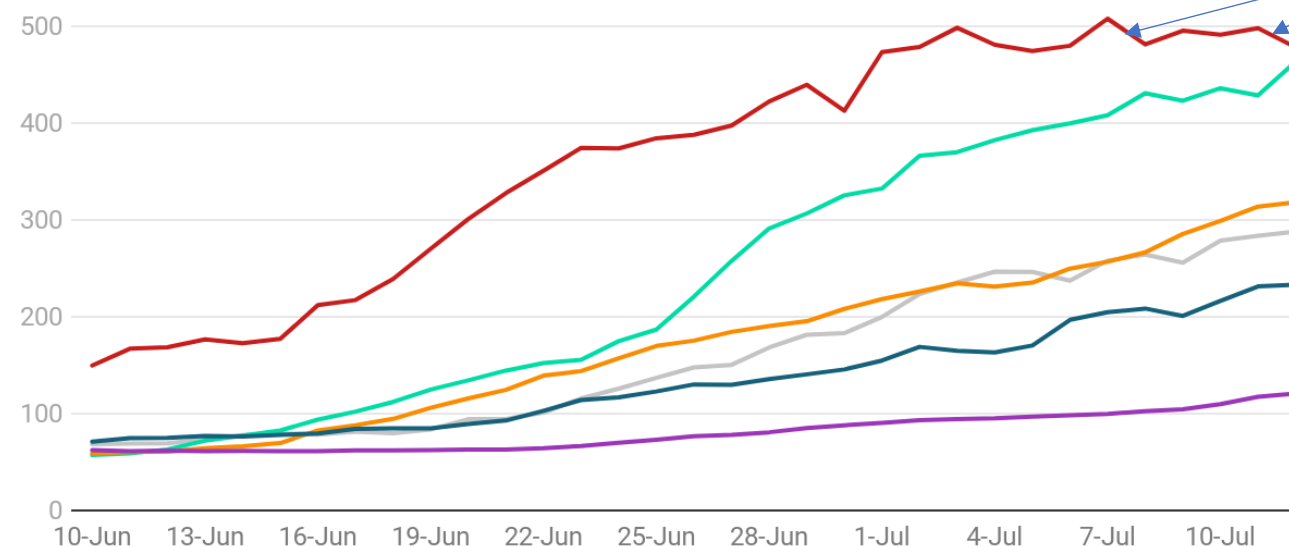
Arizona, California, Florida, Georgia and Texas

Infection rates rising across the country; a possible turning point in Arizona?

New Daily Infections / 1 Million Population

Trailing 7-Day Moving Average, As of July 12

— Arizona — California — Florida — Georgia — Texas — Rest of US



Trend seems to have leveled off and, perhaps, begun to turn downward in Arizona

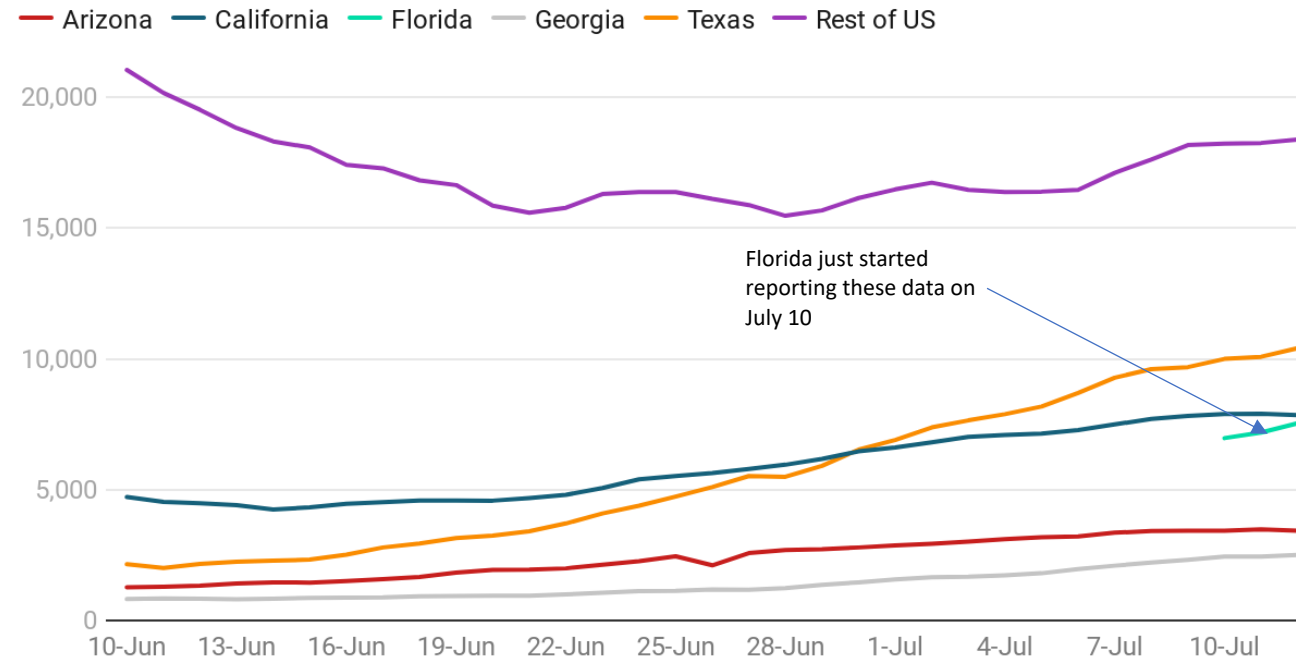
Health Industry Advisor LLC analysis

Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Arizona, California, Florida, Georgia and Texas

Hospital rates rising most in Texas and California; Demand growing outside these states too

Hospitalized COVID-19 Patients



Health Industry Advisor LLC analysis, As of July 12

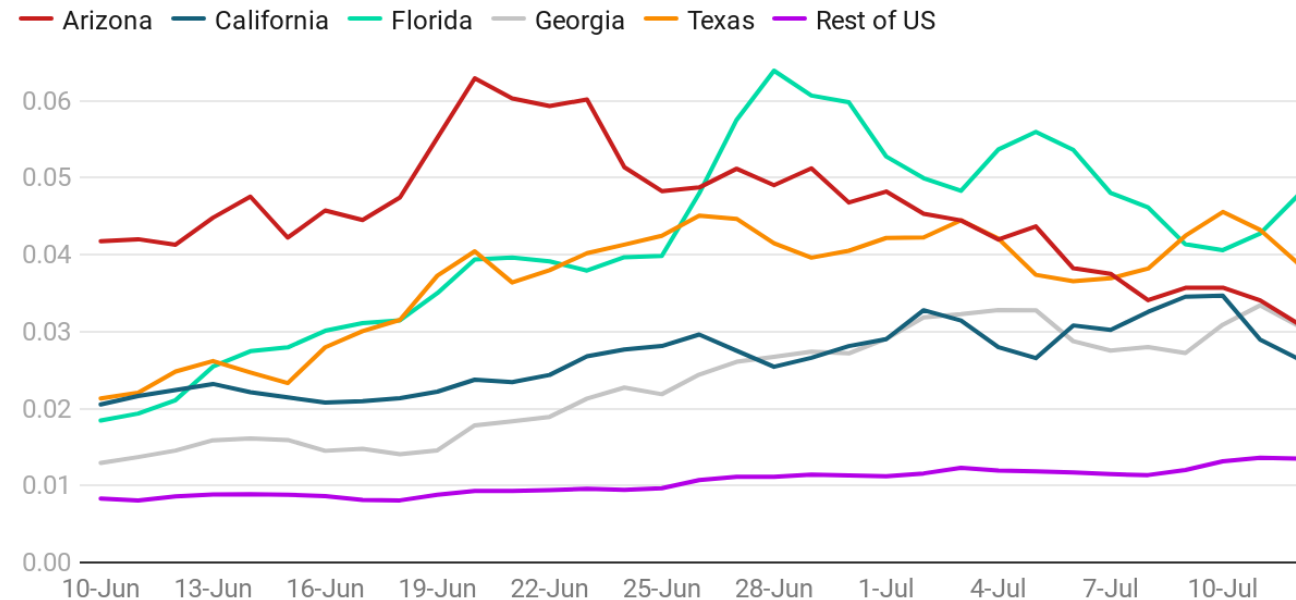
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Arizona, California, Florida, Georgia and Texas

Except for spike in cases yesterday, are the rates of adding new cases declining in these hard-hit states? They remain low across the rest of the country

Daily Change % in Total Cases

Trailing 7-Day Moving Average



Health Industry Advisor LLC analysis

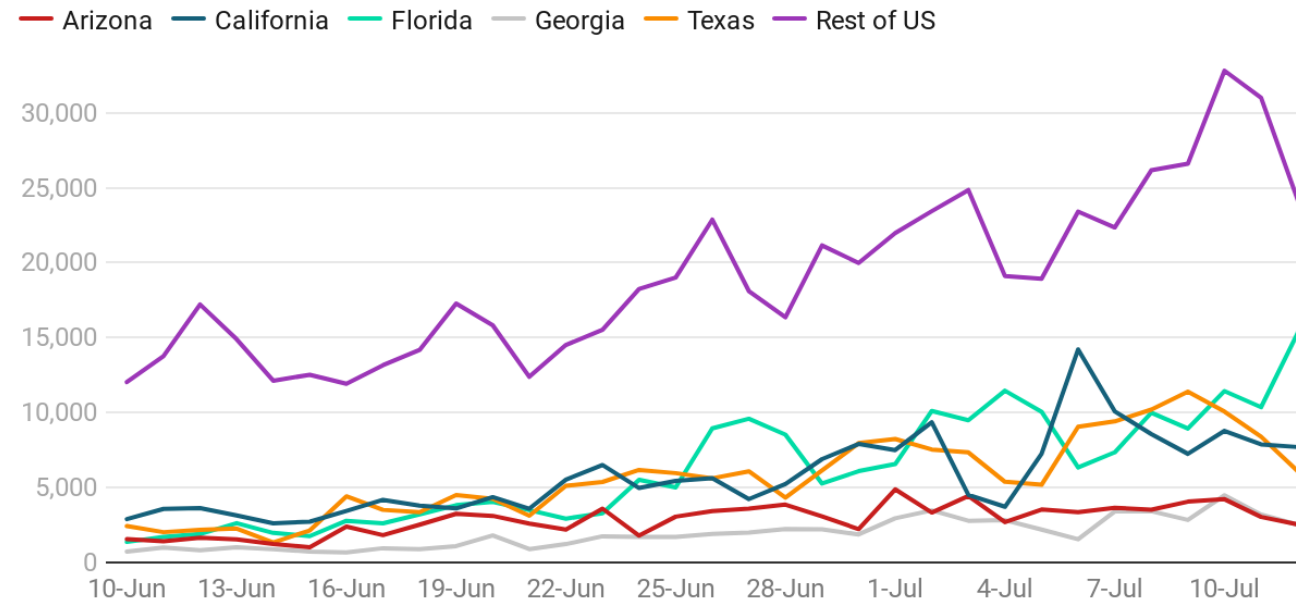
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datavrapper

Arizona, California, Florida, Georgia and Texas

Spike in new cases in Florida overshadows improvements elsewhere the past 2-4 days

New Daily Cases

June 10 - July 12



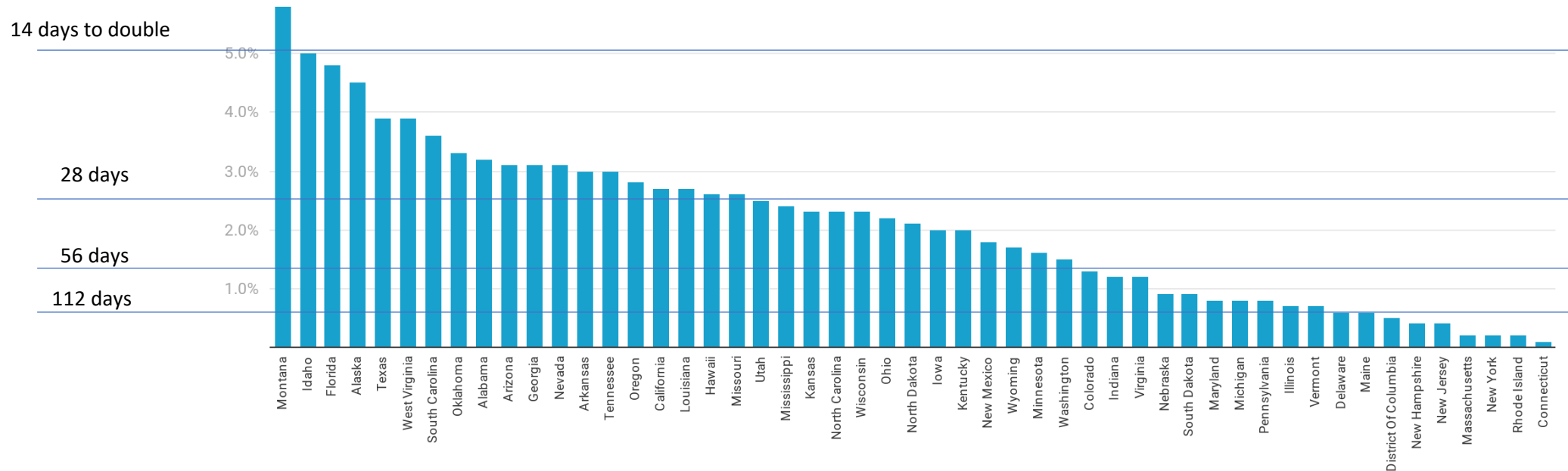
Health Industry Advisor LLC analysis

Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

At current rates, cases are doubling every 14 days in Montana; every 643 days in Connecticut

Growth Rate in Total Cases

Trailing 5-Day Moving Average, As of July 12



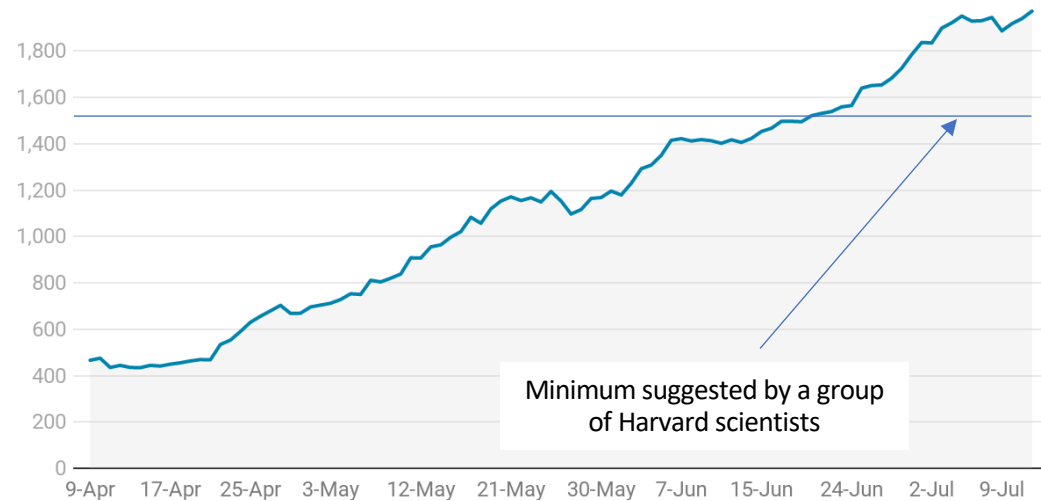
Health Industry Advisor LLC analysis

Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Testing volumes are increasing however, the test-positive rate also has been increasing recently

Daily Tests Per 1 Million - United States

Trailing 7-Day Moving Average, As of July 12

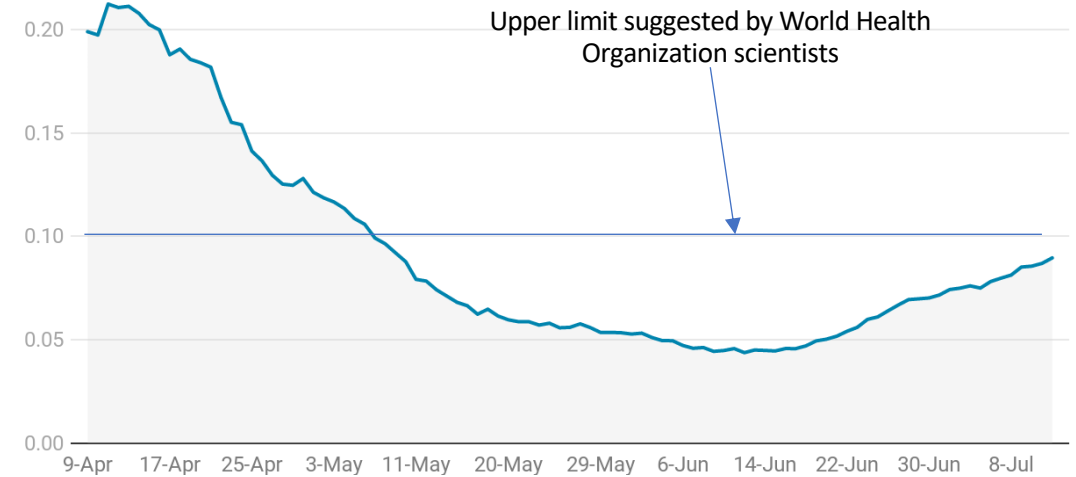


Health Industry Advisor LLC analysis

Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

Test-Positive Rate - United States

Trailing 7-Day Moving Average, As of July 12



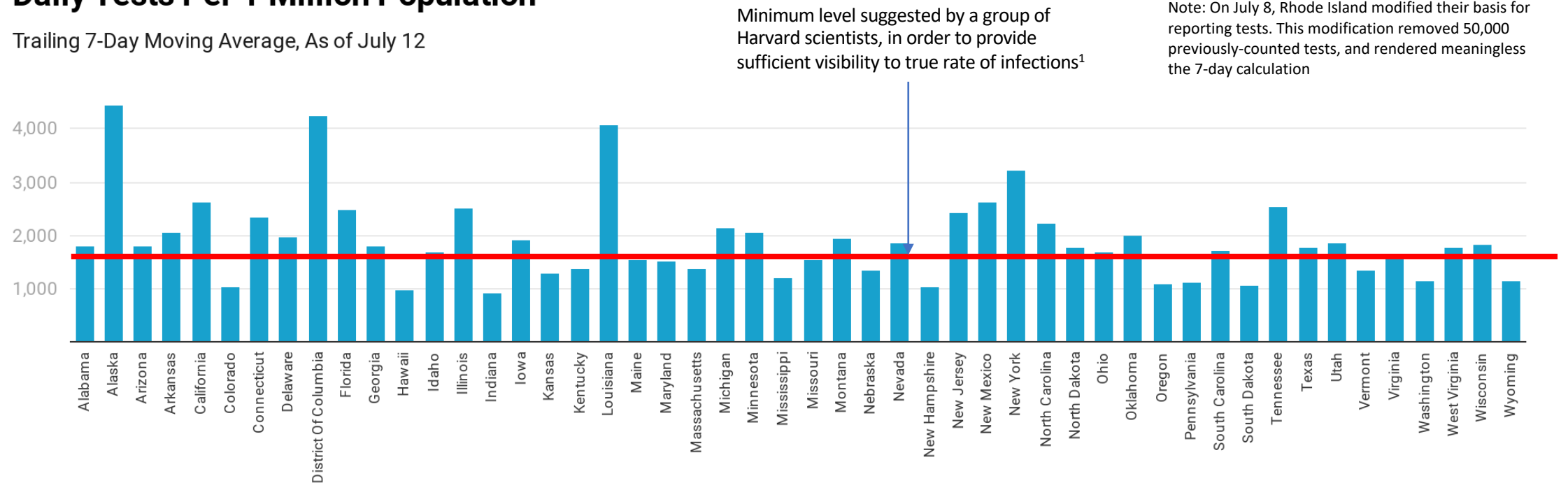
Health Industry Advisor LLC analysis

Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

Not all states are testing at the minimum level suggested by a group of Harvard scientists

Daily Tests Per 1 Million Population

Trailing 7-Day Moving Average, As of July 12



Health Industry Advisor LLC analysis

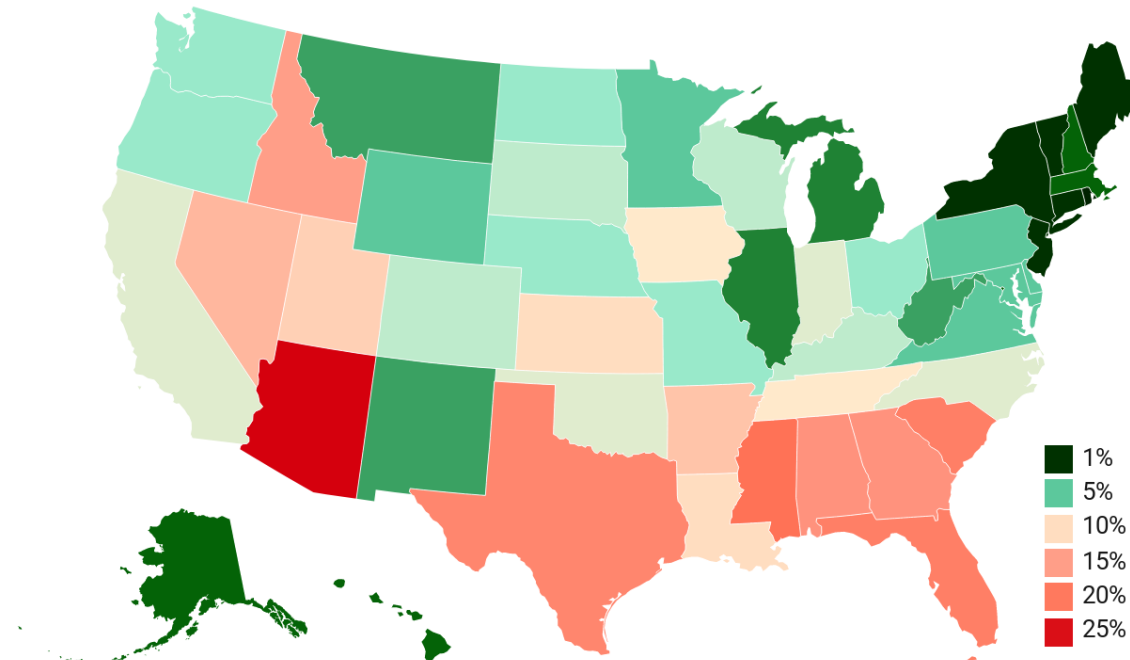
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid tracking Project • Created with Datawrapper

1 — source: (source: <https://www.kff.org/coronavirus-policy-watch/what-testing-capacity-do-we-need/>)

Test-Positive Rates continue to be high and increasing in several states in the South

Test-Positive Rate

Trailing 7-Day Moving Average, As of July 12



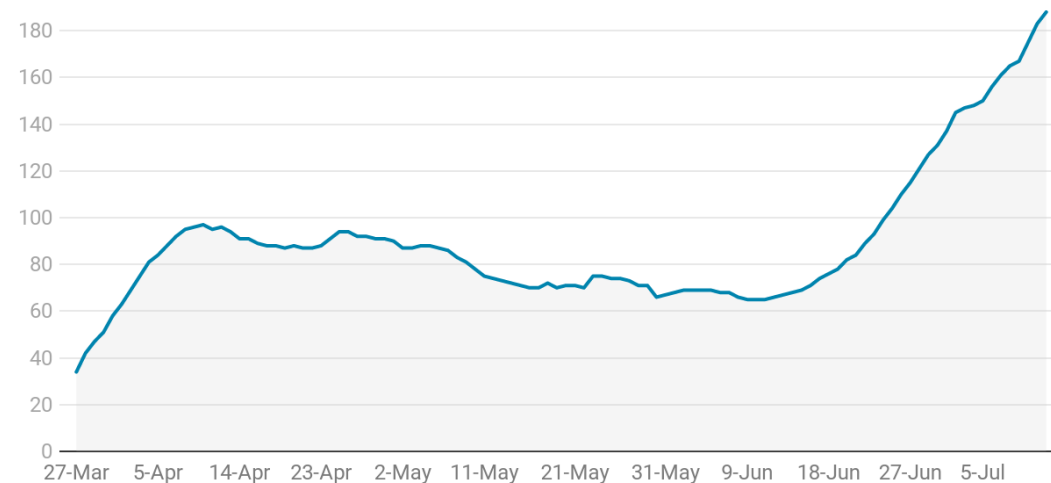
Health Industry Advisor LLC analysis

Map: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

The new infection rate continues to grow . . . New case growth had stabilized but is now increasing

New Infections Per 1 Million Population - United States

Trailing 7-Day Moving Average, As of July 12

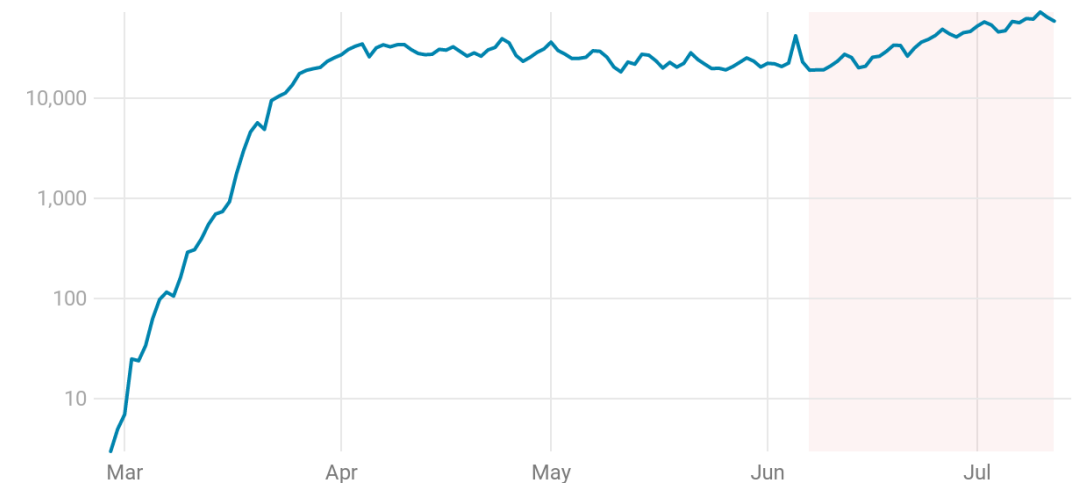


Health Industry Advisor LLC analysis

Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

New Daily Cases - United States

Log Scale, As of July 12



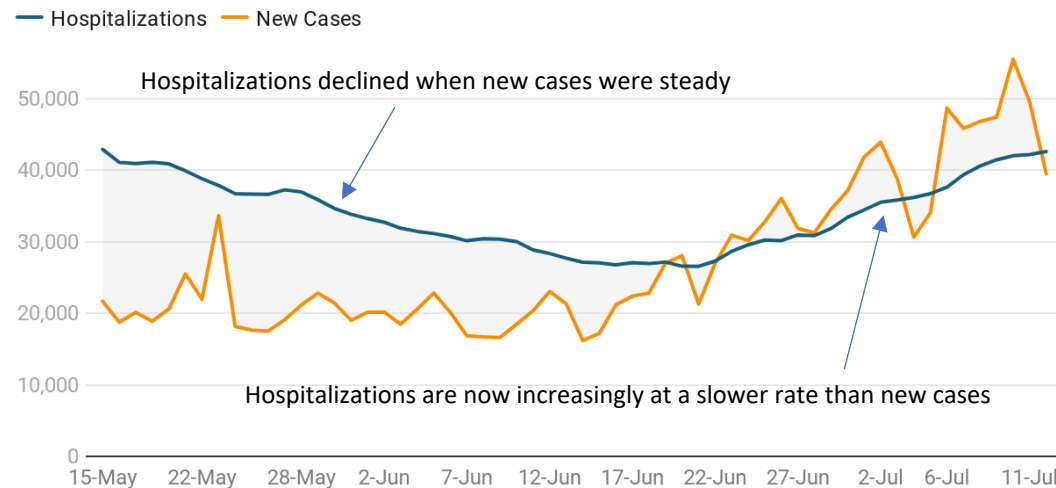
Health Industry Advisor LLC analysis

Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Cases have been trending to be less severe . . . in terms of hospitalization rate, % on ventilators and % in the ICU

Hospitalizations v. New Cases

As of July 12



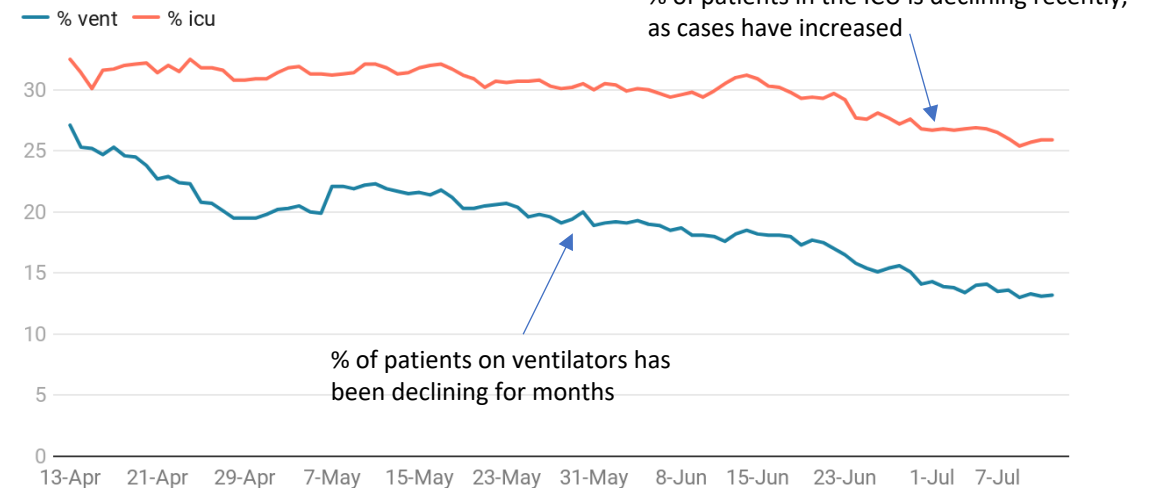
Health Industry Advisor LLC analysis

Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

Data excludes: Alabama, Alaska, Florida, Hawaii, Idaho, Kansas, Nebraska and Tennessee – data either not reported or not consistently reported

Severity of Hospitalized Patients

% of patients on ventilators and in the ICU, As of July 12



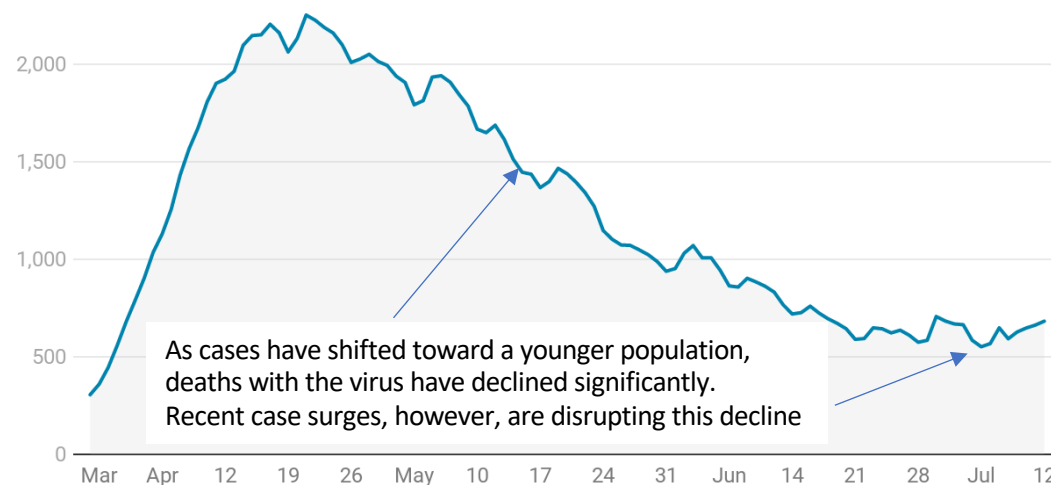
Health Industry Advisor LLC analysis

Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

Deaths had been declining since mid-April but, may be leveling following the recent surge in new cases

Deaths Recorded With Coronavirus in the U.S.

Trailing 7-Day Moving Average, As of July 12

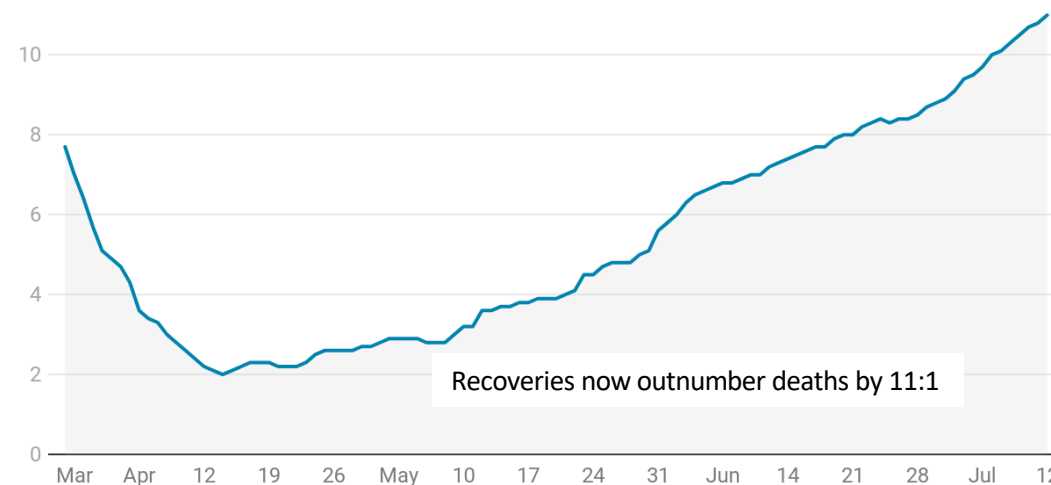


Health Industry Advisor LLC analysis

Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Recoveries: Deaths - United States

As of July 12



Health Industry Advisor LLC analysis

Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Worldwide Statistical Summary

Top 30 Countries By Total Cases
As of July 12

Country	Total Cases	Rank	Cases per 1M Population	Rank2	Deaths	Rank3	Death Rate	Rank4	Deaths per 1 Million Population	Rank5	5-day Moving Average Case Growth Rate	Rank6	Tests per 1M Population - Past 7 Days	Rank7	New Daily Infections Per 1M Population (7-Day M.A.)	Rank8
USA	3,413,995	(1)	10,312	(3)	137,782	(1)	4.0%	(16)	416.2	(7)	2.0%	(9)	2,099	(2)	186.0	(3)
Brazil	1,866,176	(2)	8,778	(5)	72,151	(2)	3.9%	(17)	339.4	(10)	2.2%	(8)	834	(12)	175.8	(4)
India	879,466	(3)	637	(28)	23,187	(8)	2.6%	(20)	16.8	(27)	3.4%	(5)	186	(22)	18.8	(17)
Russia	727,162	(4)	4,983	(11)	11,335	(11)	1.6%	(25)	77.7	(18)	0.9%	(16)	1,920	(3)	44.9	(14)
Peru	326,326	(5)	9,893	(4)	11,870	(10)	3.6%	(18)	359.9	(9)	1.1%	(15)	615	(16)	102.2	(6)
Chile	315,041	(6)	16,476	(2)	6,979	(15)	2.2%	(22)	365.0	(8)	0.9%	(18)	827	(13)	145.8	(5)
Spain	300,988	(7)	6,438	(9)	28,403	(7)	9.4%	(6)	607.5	(3)	0.1%	(28)	873	(10)	10.3	(21)
Mexico	295,268	(8)	2,289	(22)	34,730	(5)	11.8%	(5)	269.3	(12)	2.4%	(7)	98	(25)	47.7	(13)
UK	289,603	(9)	4,265	(13)	44,819	(3)	15.5%	(3)	660.1	(2)	0.2%	(25)	3,121	(1)	8.8	(23)
South Africa	276,242	(10)	4,656	(12)	4,079	(22)	1.5%	(26)	68.8	(19)	5.1%	(1)	780	(14)	191.4	(2)
Iran	257,303	(11)	3,062	(16)	12,829	(9)	5.0%	(11)	152.7	(14)	0.9%	(17)	301	(19)	28.7	(15)
Pakistan	248,872	(12)	1,126	(25)	5,197	(19)	2.1%	(23)	23.5	(26)	1.2%	(14)	106	(24)	13.2	(19)
Italy	243,061	(13)	4,020	(14)	34,954	(4)	14.4%	(4)	578.1	(4)	0.1%	(29)	710	(15)	3.4	(29)
Saudi Arabia	232,259	(14)	6,669	(8)	2,223	(27)	1.0%	(28)	63.8	(20)	1.4%	(12)	1,831	(4)	93.3	(8)
Turkey	212,993	(15)	2,525	(20)	5,363	(17)	2.5%	(21)	63.6	(21)	0.5%	(20)	583	(17)	12.3	(20)
Germany	199,950	(16)	2,386	(21)	9,134	(13)	4.6%	(14)	109.0	(15)	0.2%	(27)	856	(11)	4.1	(28)
Bangladesh	183,795	(17)	1,116	(26)	2,352	(26)	1.3%	(27)	14.3	(28)	1.7%	(10)	82	(26)	18.5	(18)
France	170,752	(18)	2,616	(19)	30,004	(6)	17.6%	(1)	459.6	(6)	0.2%	(24)	(0)	(30)	8.3	(25)
Colombia	150,445	(19)	2,956	(17)	5,307	(18)	3.5%	(19)	104.3	(16)	3.9%	(2)	478	(18)	93.6	(7)
Canada	107,590	(20)	2,850	(18)	8,783	(14)	8.2%	(7)	232.6	(13)	0.3%	(23)	1,027	(7)	7.8	(26)
Qatar	103,598	(21)	36,896	(1)	147	(30)	0.1%	(30)	52.4	(22)	0.5%	(19)	1,590	(5)	193.3	(1)
Argentina	100,166	(22)	2,216	(23)	1,845	(28)	1.8%	(24)	40.8	(24)	3.7%	(3)	211	(21)	70.6	(9)
China	83,594	(23)	58	(30)	4,634	(21)	5.5%	(10)	3.2	(30)	0.0%	(30)	-	(28)	0.0	(30)
Egypt	82,070	(24)	802	(27)	3,858	(23)	4.7%	(13)	37.7	(25)	1.2%	(13)	-	(28)	9.5	(22)
Iraq	77,506	(25)	1,926	(24)	3,150	(25)	4.1%	(15)	78.3	(17)	3.7%	(4)	249	(20)	60.4	(10)
Indonesia	75,699	(26)	277	(29)	3,606	(24)	4.8%	(12)	13.2	(29)	2.7%	(6)	76	(27)	6.2	(27)
Sweden	74,898	(27)	7,415	(6)	5,526	(16)	7.4%	(9)	547.1	(5)	0.4%	(21)	1,143	(6)	49.2	(11)
Ecuador	67,870	(28)	3,845	(15)	5,047	(20)	7.4%	(8)	285.9	(11)	1.4%	(11)	151	(23)	47.8	(12)
Belarus	64,932	(29)	6,872	(7)	464	(29)	0.7%	(29)	49.1	(23)	0.3%	(22)	1,007	(8)	20.8	(16)
Belgium	62,606	(30)	5,401	(10)	9,782	(12)	15.6%	(2)	843.9	(1)	0.2%	(26)	950	(9)	8.6	(24)

State-By-State Statistical Summary (page 1 of 2)

As of July 12

State	Total Cases	Rank	Cases per 1M Population	Rank2	Deaths	Rank3	Death Rate	Rank4	Deaths per 1 Million Population	Rank5	5-day Moving Average Case Growth Rate	Rank6	Tests per 1M Population Past 7 days	Rank7	New Daily Cases Per 1M Population (5-Day M.A.)	Rank8
Alabama	53,587	(19)	10,929.0	(18)	1,121	(23)	2.1%	(32)	228.6	(24)	3.2%	(9)	1,795	(25)	280.7	(7)
Alaska	1,479	(49)	2,021.7	(49)	17	(51)	1.1%	(47)	23.2	(50)	4.5%	(4)	4,441	(1)	66.6	(38)
Arizona	122,467	(7)	16,825.4	(3)	2,237	(16)	1.8%	(36)	307.3	(15)	3.1%	(10)	1,802	(24)	478.5	(1)
Arkansas	28,367	(30)	9,399.8	(19)	321	(37)	1.1%	(48)	106.4	(40)	3.0%	(14)	2,060	(14)	215.5	(13)
California	327,687	(2)	8,293.3	(25)	7,051	(5)	2.2%	(29)	178.5	(30)	2.7%	(17)	2,627	(5)	233.1	(11)
Colorado	36,913	(24)	6,409.9	(34)	1,725	(18)	4.7%	(12)	299.5	(16)	1.3%	(33)	1,036	(47)	70.7	(36)
Connecticut	47,287	(21)	13,263.2	(8)	4,348	(8)	9.2%	(1)	1,219.5	(3)	0.1%	(51)	2,346	(11)	22.8	(47)
Delaware	12,804	(38)	13,149.0	(9)	517	(34)	4.0%	(17)	530.9	(12)	0.6%	(43)	1,976	(17)	99.2	(24)
District Of Columbia	10,847	(41)	15,369.5	(7)	568	(32)	5.2%	(10)	804.8	(6)	0.5%	(45)	4,229	(2)	73.9	(33)
Florida	269,811	(3)	12,562.4	(10)	4,242	(9)	1.6%	(40)	197.5	(25)	4.8%	(3)	2,486	(9)	463.6	(2)
Georgia	116,926	(8)	11,012.7	(15)	3,001	(14)	2.6%	(26)	282.6	(18)	3.1%	(12)	1,806	(23)	288.1	(6)
Hawaii	1,220	(51)	861.7	(51)	19	(50)	1.6%	(41)	13.4	(51)	2.6%	(18)	968	(49)	19.9	(48)
Idaho	10,902	(40)	6,083.5	(36)	102	(44)	0.9%	(50)	56.9	(45)	5.0%	(2)	1,674	(31)	252.6	(9)
Illinois	155,048	(6)	12,235.7	(11)	7,388	(4)	4.8%	(11)	583.0	(9)	0.7%	(41)	2,495	(8)	75.3	(32)
Indiana	51,612	(20)	7,666.4	(30)	2,760	(15)	5.3%	(9)	410.0	(14)	1.2%	(34)	911	(50)	76.5	(31)
Iowa	35,363	(27)	11,208.3	(14)	750	(28)	2.1%	(31)	237.7	(22)	2.0%	(28)	1,899	(19)	176.0	(15)
Kansas	19,161	(35)	6,577.0	(33)	296	(38)	1.5%	(42)	101.6	(41)	2.3%	(22)	1,286	(40)	144.5	(18)
Kentucky	19,389	(34)	4,339.8	(43)	625	(30)	3.2%	(23)	139.9	(34)	2.0%	(27)	1,360	(36)	96.3	(26)
Louisiana	78,122	(12)	16,804.8	(4)	3,421	(10)	4.4%	(15)	735.9	(7)	2.7%	(16)	4,073	(3)	396.3	(3)
Maine	3,539	(46)	2,632.8	(46)	114	(42)	3.2%	(24)	84.8	(43)	0.6%	(44)	1,528	(34)	13.2	(50)
Maryland	73,109	(14)	12,092.8	(13)	3,319	(11)	4.5%	(14)	549.0	(10)	0.8%	(40)	1,499	(35)	82.2	(30)
Massachusetts	111,597	(9)	16,058.3	(6)	8,325	(3)	7.5%	(5)	1,197.9	(4)	0.2%	(48)	1,353	(37)	33.4	(46)
Michigan	76,776	(13)	7,687.7	(29)	6,314	(7)	8.2%	(3)	632.2	(8)	0.8%	(39)	2,136	(13)	54.9	(43)
Minnesota	42,281	(22)	7,497.1	(31)	1,540	(19)	3.6%	(19)	273.1	(19)	1.6%	(31)	2,053	(15)	105.0	(22)
Mississippi	36,287	(26)	12,192.6	(12)	1,249	(22)	3.4%	(21)	419.7	(13)	2.4%	(21)	1,203	(41)	258.6	(8)

State-By-State Statistical Summary (page 2 of 2)

As of July 12

State	Total Cases	Rank	Cases per 1M Population	Rank2	Deaths	Rank3	Death Rate	Rank4	Deaths per 1 Million Population	Rank5	5-day Moving Average Case Growth Rate	Rank6	Tests per 1M Population Past 7 days	Rank7	New Daily Cases Per 1M Population (5-Day M.A.)	Rank8
Missouri	29,079	(29)	4,738.0	(41)	1,117	(24)	3.8%	(18)	182.0	(29)	2.6%	(19)	1,536	(33)	107.9	(21)
Montana	1,758	(48)	1,644.9	(50)	29	(48)	1.6%	(39)	27.1	(49)	5.8%	(1)	1,945	(18)	73.0	(34)
Nebraska	21,172	(32)	10,945.0	(17)	285	(39)	1.3%	(44)	147.3	(31)	0.9%	(36)	1,342	(38)	91.8	(27)
Nevada	27,683	(31)	8,987.5	(23)	593	(31)	2.1%	(30)	192.5	(26)	3.1%	(11)	1,849	(21)	244.2	(10)
New Hampshire	6,054	(43)	4,452.4	(42)	391	(36)	6.5%	(7)	287.6	(17)	0.4%	(47)	1,013	(48)	16.5	(49)
New Jersey	180,915	(5)	20,368.3	(2)	15,609	(2)	8.6%	(2)	1,757.3	(1)	0.4%	(46)	2,428	(10)	63.5	(40)
New Mexico	15,028	(37)	7,167.0	(32)	545	(33)	3.6%	(20)	259.9	(21)	1.8%	(29)	2,621	(6)	120.7	(19)
New York	427,638	(1)	21,982.5	(1)	32,403	(1)	7.6%	(4)	1,665.7	(2)	0.2%	(49)	3,227	(4)	39.4	(45)
North Carolina	85,730	(11)	8,174.0	(27)	1,533	(20)	1.8%	(37)	146.2	(32)	2.3%	(24)	2,217	(12)	173.6	(16)
North Dakota	4,334	(44)	5,687.2	(37)	87	(46)	2.0%	(34)	114.2	(36)	2.1%	(26)	1,753	(28)	97.1	(25)
Ohio	65,628	(16)	5,614.5	(38)	3,063	(13)	4.7%	(13)	262.0	(20)	2.2%	(25)	1,682	(30)	103.1	(23)
Oklahoma	20,235	(33)	5,113.8	(40)	422	(35)	2.1%	(33)	106.6	(39)	3.3%	(8)	2,006	(16)	155.5	(17)
Oregon	12,170	(39)	2,885.4	(45)	234	(40)	1.9%	(35)	55.5	(46)	2.8%	(15)	1,083	(45)	65.7	(39)
Pennsylvania	99,794	(10)	7,795.2	(28)	6,958	(6)	7.0%	(6)	543.5	(11)	0.8%	(38)	1,111	(44)	61.3	(41)
Rhode Island	17,312	(36)	16,341.9	(5)	976	(25)	5.6%	(8)	921.3	(5)	0.2%	(50)	(11,368)	(51)	43.3	(44)
South Carolina	56,648	(18)	11,002.4	(16)	961	(26)	1.7%	(38)	186.6	(28)	3.6%	(7)	1,712	(29)	327.4	(4)
South Dakota	7,499	(42)	8,476.7	(24)	109	(43)	1.5%	(43)	123.2	(35)	0.9%	(37)	1,067	(46)	70.4	(37)
Tennessee	61,960	(17)	9,067.5	(22)	741	(29)	1.2%	(46)	108.4	(38)	3.0%	(13)	2,547	(7)	220.1	(12)
Texas	265,556	(4)	9,158.4	(21)	3,260	(12)	1.2%	(45)	112.4	(37)	3.9%	(6)	1,770	(27)	318.3	(5)
Utah	29,484	(28)	9,196.6	(20)	215	(41)	0.7%	(51)	67.1	(44)	2.5%	(20)	1,860	(20)	201.9	(14)
Vermont	1,296	(50)	2,077.0	(48)	56	(47)	4.3%	(16)	89.7	(42)	0.7%	(42)	1,334	(39)	10.8	(51)
Virginia	70,670	(15)	8,279.5	(26)	1,966	(17)	2.8%	(25)	230.3	(23)	1.2%	(35)	1,585	(32)	82.4	(29)
Washington	41,405	(23)	5,437.4	(39)	1,424	(21)	3.4%	(22)	187.0	(27)	1.5%	(32)	1,148	(42)	88.1	(28)
West Virginia	4,244	(45)	2,374.7	(47)	96	(45)	2.3%	(27)	53.7	(47)	3.9%	(5)	1,776	(26)	72.7	(35)
Wisconsin	36,448	(25)	6,259.9	(35)	821	(27)	2.3%	(28)	141.0	(33)	2.3%	(23)	1,825	(22)	119.5	(20)
Wyoming	1,862	(47)	3,217.2	(44)	21	(49)	1.1%	(49)	36.3	(48)	1.7%	(30)	1,138	(43)	56.3	(42)
United States	3,413,995		10,314.1		137,782		4.0%		416.2		2.0%		1,972		186.0	

The following data sources are accessed on a daily or weekly basis:

- The Atlantic's Covid Tracking Project: <https://covidtracking.com>
- Worldometers.info: <https://www.worldometers.info/coronavirus/>
- Centers for Disease Control, National, Regional, and State Level Outpatient Illness and Viral Surveillance <https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html>
- Centers for Disease Control, COVID-19 Laboratory-Confirmed Hospitalizations https://gis.cdc.gov/grasp/COVIDNet/COVID19_5.html
- Centers for Disease Control, COVID Data Tracker <https://www.cdc.gov/covid-data-tracker/index.html#mobility>
- Institute for Health Metrics and Evaluation, COVID-19 estimate downloads <http://www.healthdata.org/covid/data-downloads>
- New York Times, Covid-19 data <https://github.com/nytimes/covid-19-data>
- COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University <https://github.com/CSSEGISandData/COVID-19>