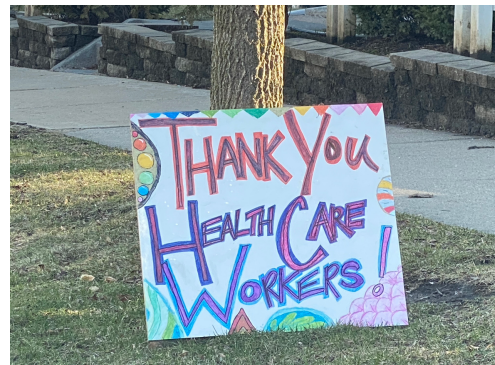
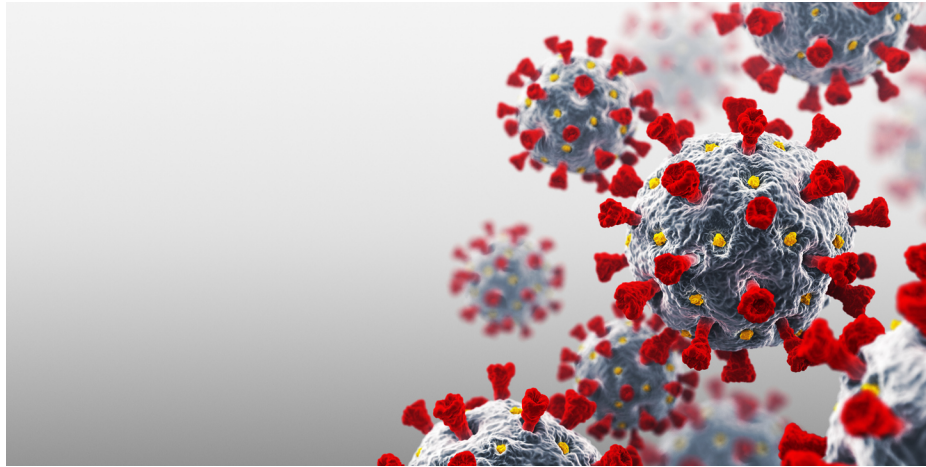
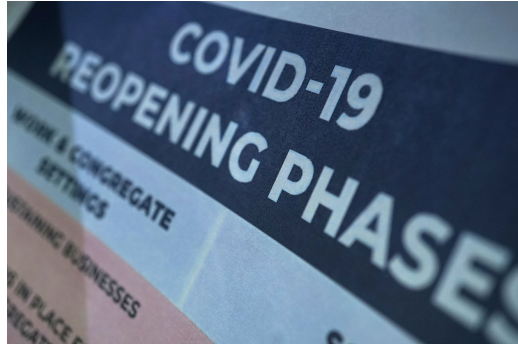




COVID-19 Report

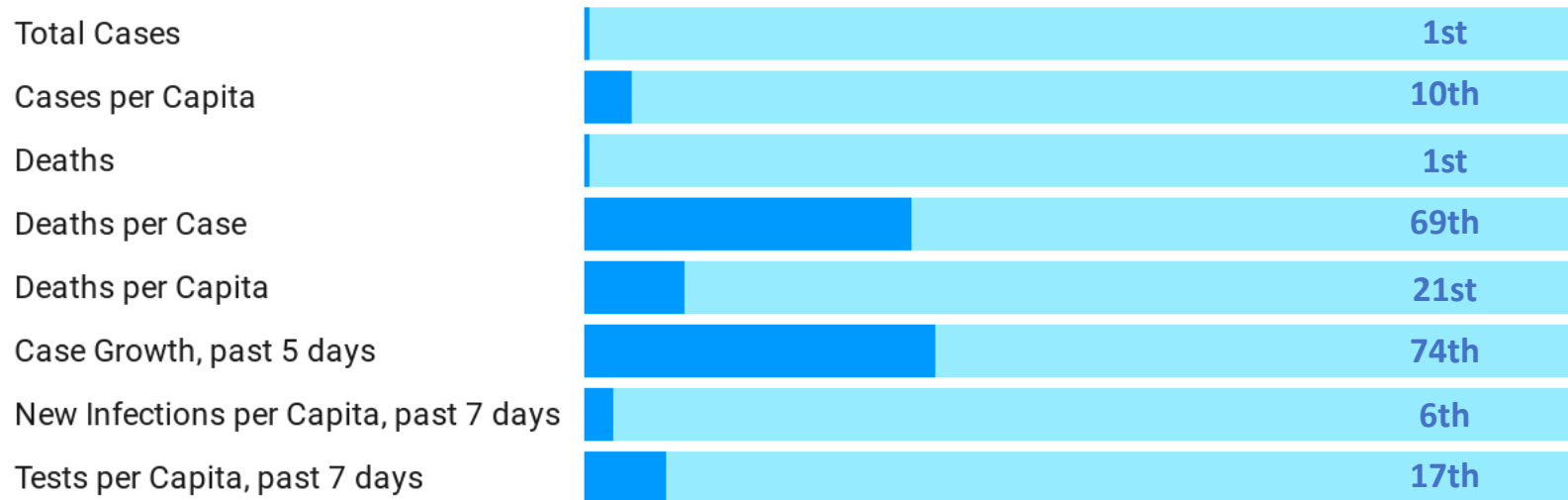
Issue # 117

Monday, July 27, 2020

-
- Test volume on Sunday was the 3rd highest since the pandemic began. On a week-over week basis, testing has increased by 7%; tests for the past 7 days have increased more than 50% since the same period last month
 - The test-positive rate on Sunday was down to 7.2%; for the week it was 8.1%, continuing its steadily decline that began July 17
 - Fewer new cases were reported on Sunday than on any day since July 5; on a week-over-week basis, new cases are down 2.1%
 - The rate of new infections per capita (trailing 7-day moving average) fell to its lowest point since July 15
 - COVID-19 hospital census fell for the 3rd consecutive day; this census is as low as it has been in six days
 - ER visits for COVID-19-like illnesses fell again on Thursday (the latest date for which these data are available), continuing a trend that started on July 7
 - Deaths with coronavirus reported on Sunday were 1/2 the number reported each day during the past week, and the fewest since July 6. There are now 14 recovered persons for each death with the virus
 - Arizona, Florida and Texas continue to see stabilization or improvement in test-positive %, hospital census and infection rates. California's test-positive % and hospital census has stabilized, while its new infection rate retreated yesterday from its prior day peak (by 5%)

U.S. Rankings Among All Countries With Coronavirus Cases

As of July 26



Health Industry Advisor LLC analysis

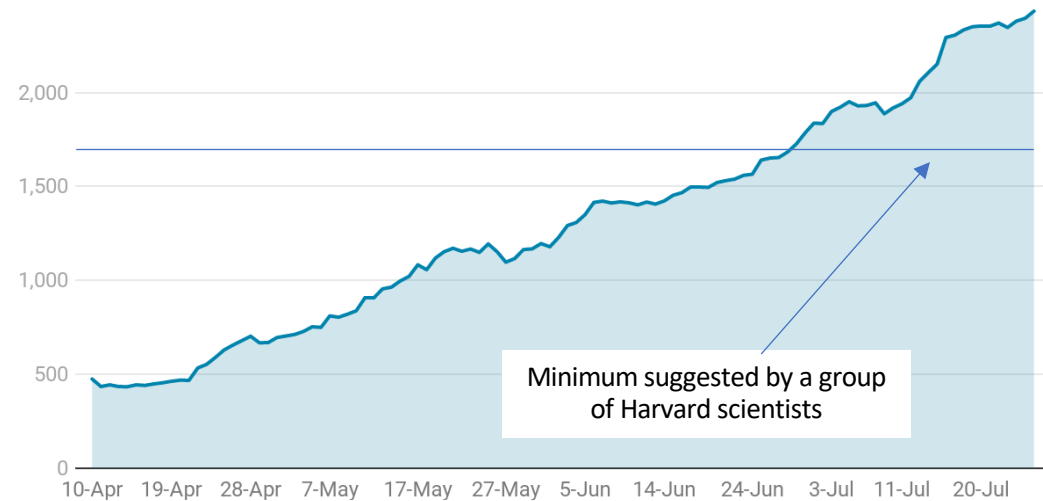
Chart: Health Industry Advisor LLC • Source: various • Created with Datawrapper

213 countries report cases

Testing volume on Sunday was the 3rd highest to-date; test-positive rate continues on a downward trajectory

Daily Tests Per 1 Million - United States

Trailing 7-Day Moving Average, As of July 26

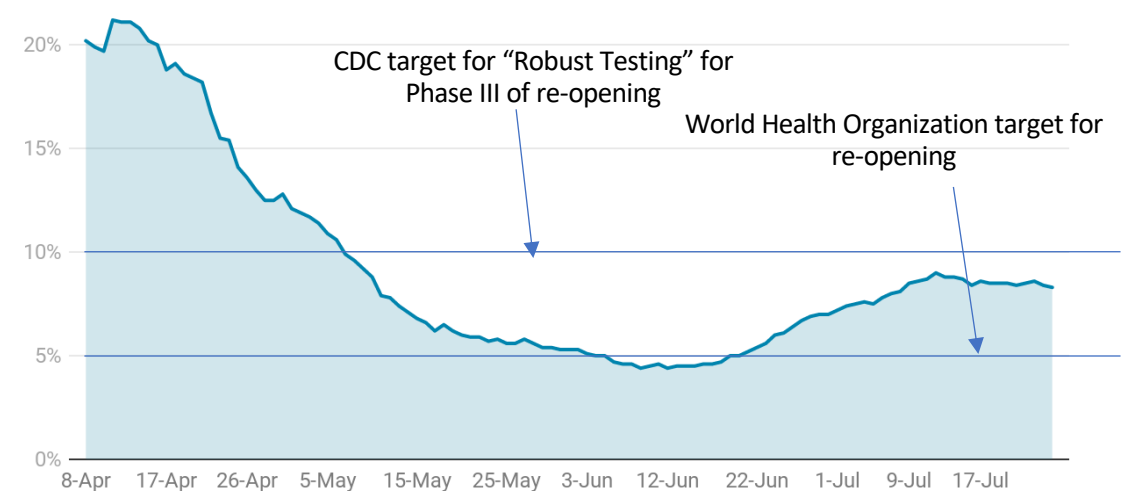


Health Industry Advisor LLC analysis

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 26



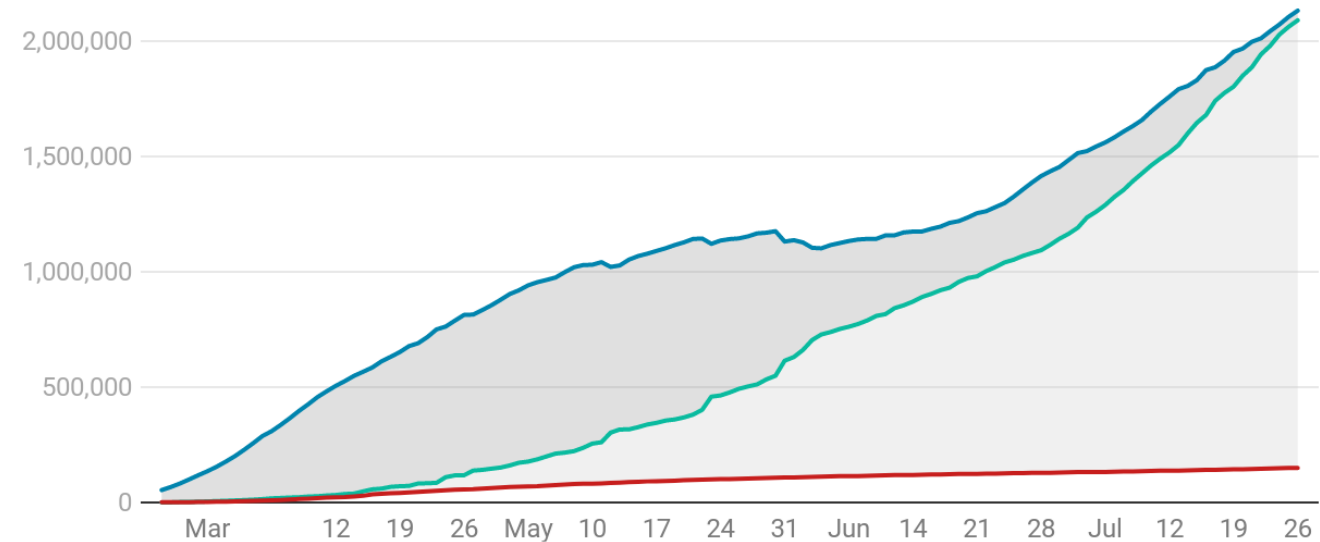
Health Industry Advisor LLC analysis

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

Active Cases v. Recoveries & Deaths

As of July 26

— Active Cases — Recoveries — Deaths



Health Industry Advisor LLC analysis

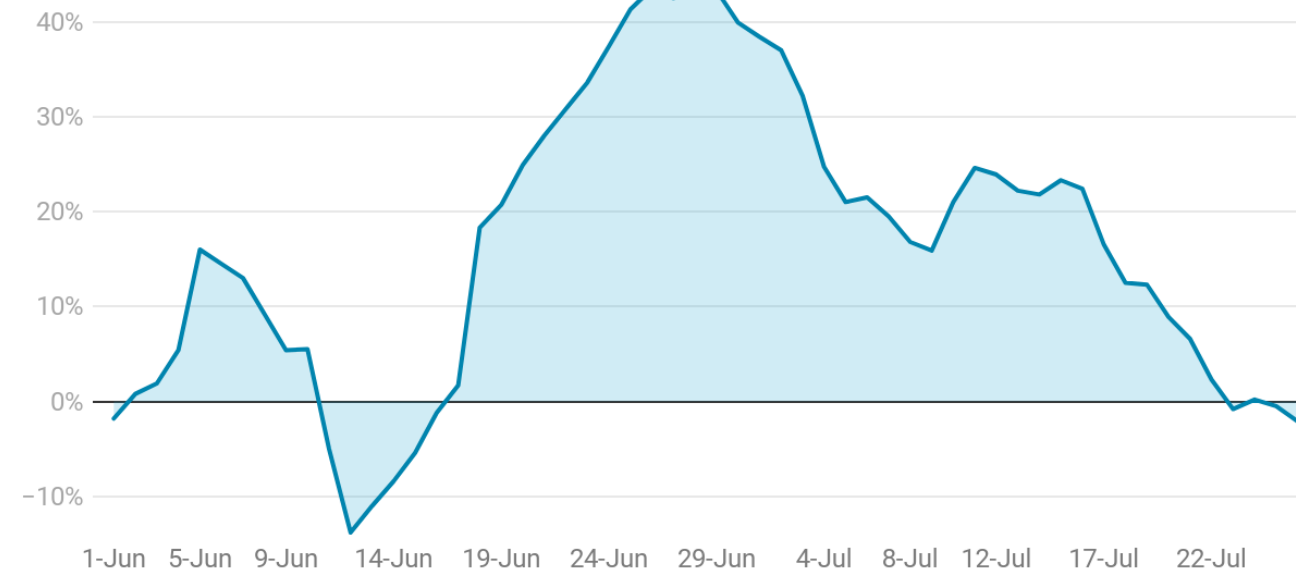
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

United States

Leading Indicator: After weeks of slower growth, new cases have now stabilized on a week-over-week basis . . . and may be declining

Week-Over-Week Change In New Cases

United States, As of July 26



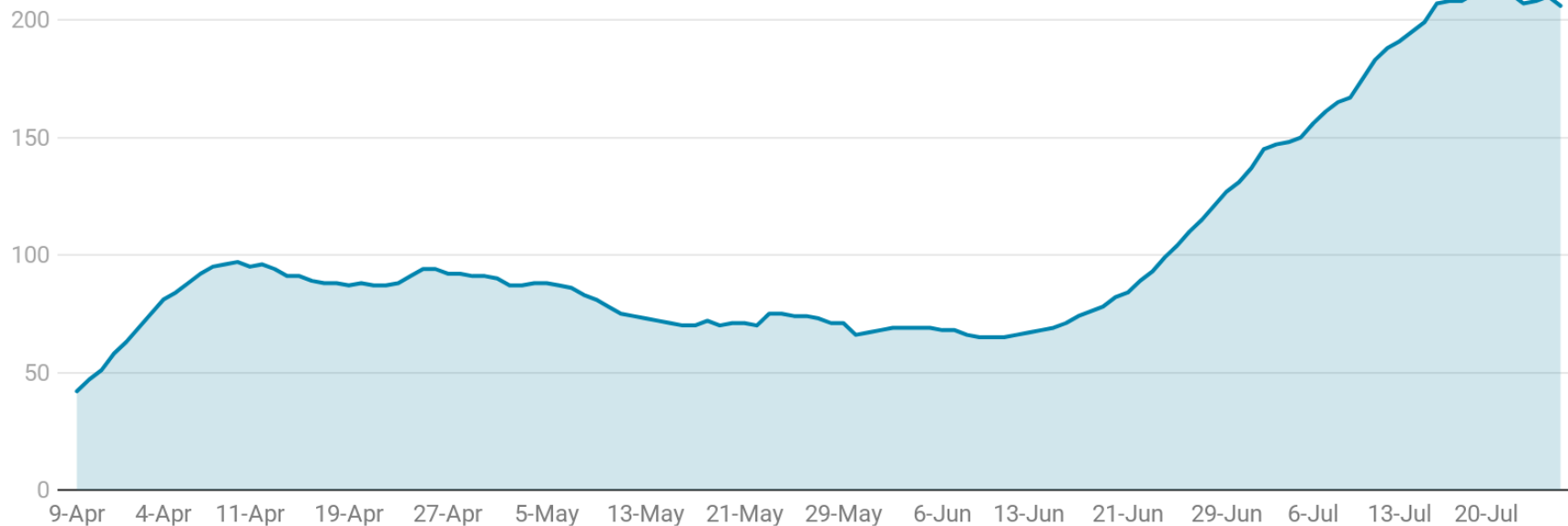
Health Industry Advisor LLC analysis

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

The new daily infection rate has stabilized over the past 10 days, and may be beginning to decline . . . after 5 weeks of accelerated growth

New Infections Per 1 Million Population - United States

Trailing 7-Day Moving Average, As of July 26



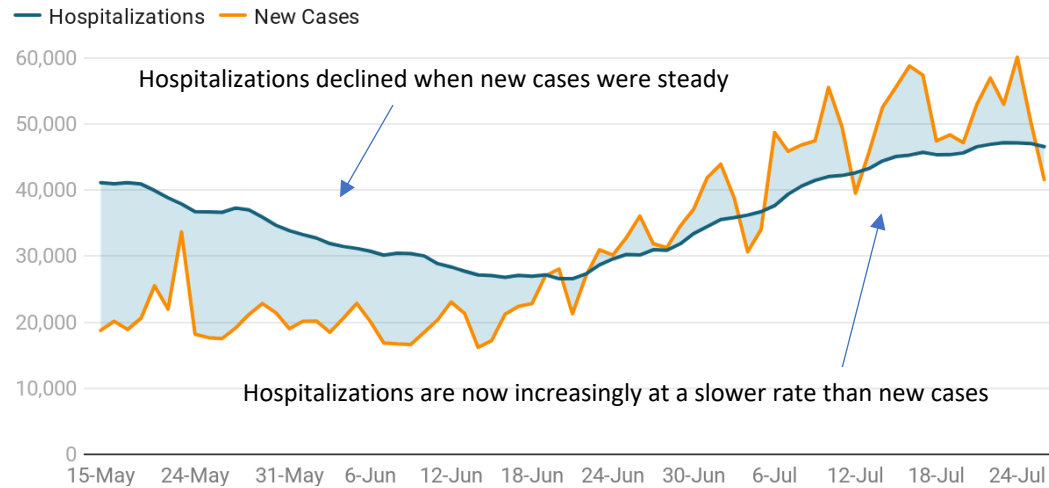
Health Industry Advisor LLC analysis

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

In the past few days, COVID-19 hospital census has declined; Patients in the ICU stabilized; Patients on ventilators increased slightly

Hospitalizations v. New Cases

As of July 26



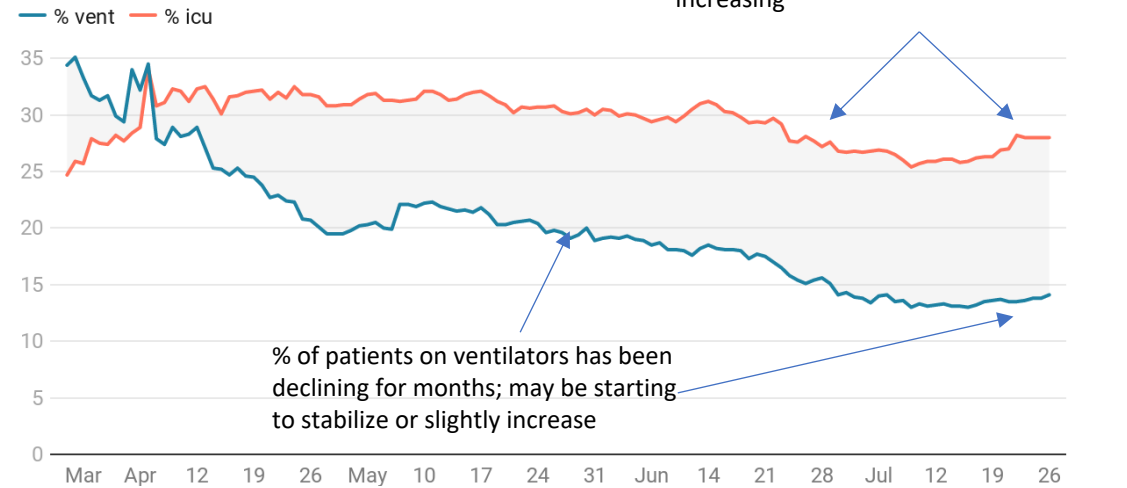
Health Industry Advisor LLC analysis

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 26

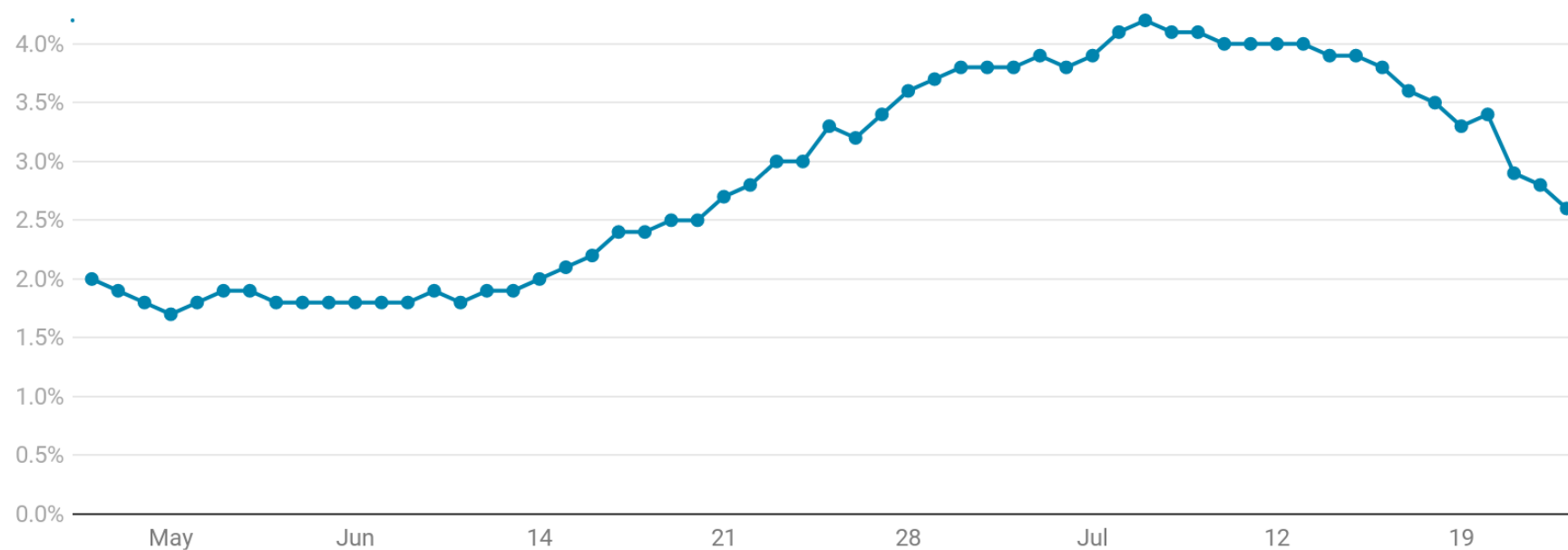


Health Industry Advisor LLC analysis

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

% of Emergency Department Visits for COVID-Like Illness

As of July 23



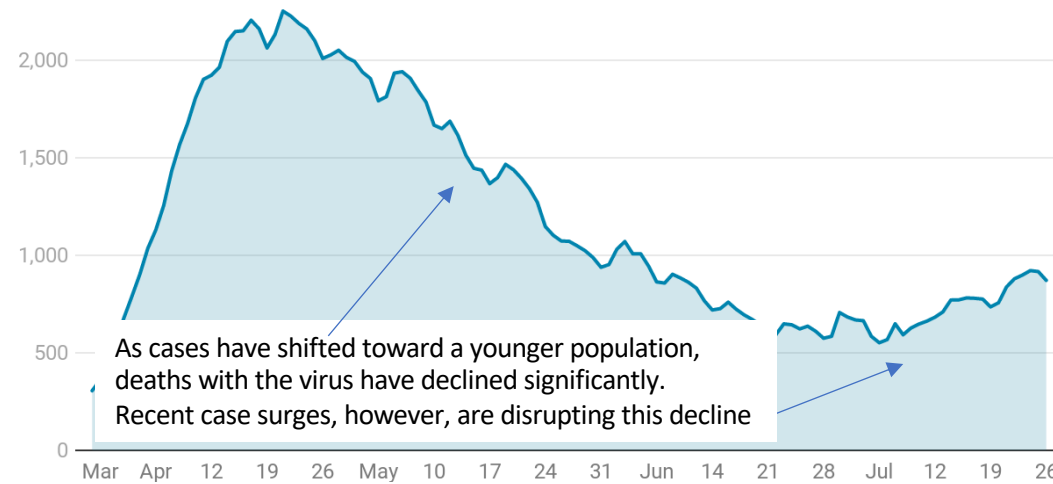
Health Industry Advisor LLC analysis

Chart: Health Industry Advisor LLC • Source: Centers for Disease Control • Created with Datawrapper

Deaths reported on Sunday were < ½ those reported each day last Monday-Friday; Recoveries outnumber deaths by 14:1

Deaths Recorded With Coronavirus in the U.S.

Trailing 7-Day Moving Average, As of July 26

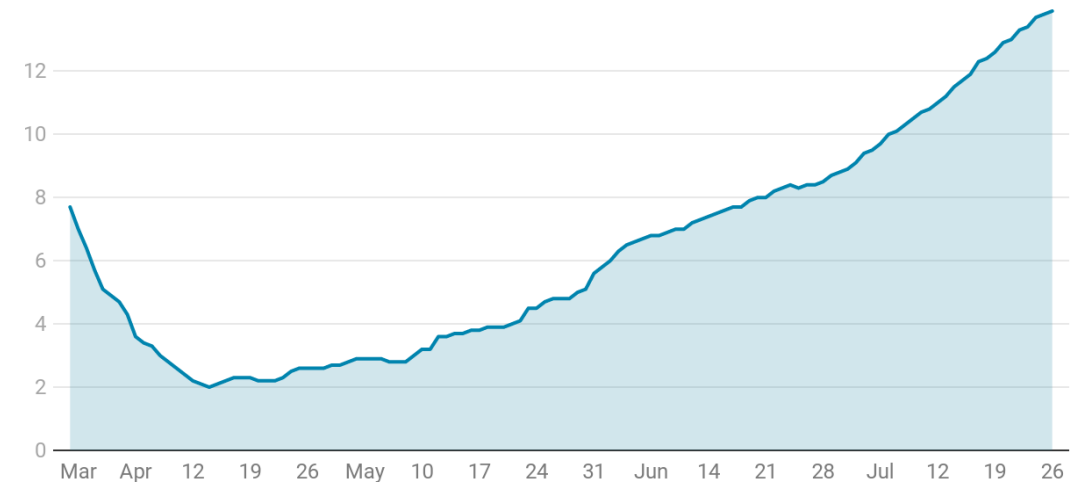


Health Industry Advisor LLC analysis

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

Recoveries: Deaths - United States

As of July 26



Health Industry Advisor LLC analysis

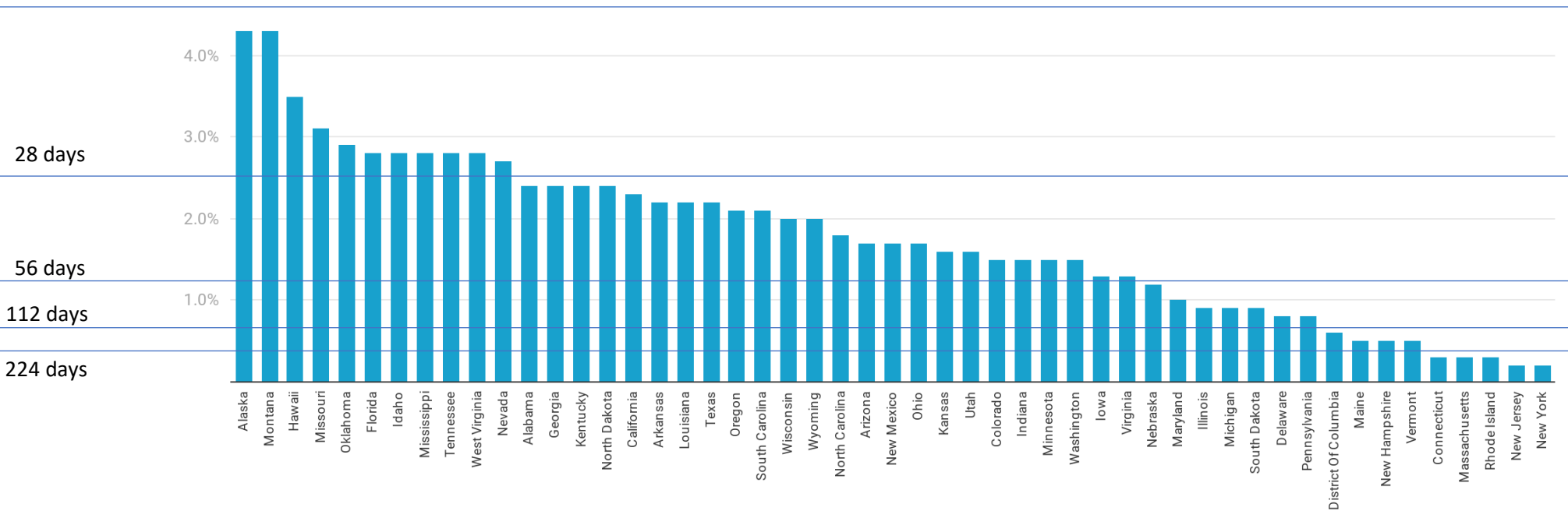
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

At current rates, cases are doubling every 16-17 days in Montana; every 367 days in New York; 42-43 for the United States overall

Growth Rate in Total Cases

Trailing 5-Day Moving Average, As of July 26

14 days to double



Health Industry Advisor LLC analysis

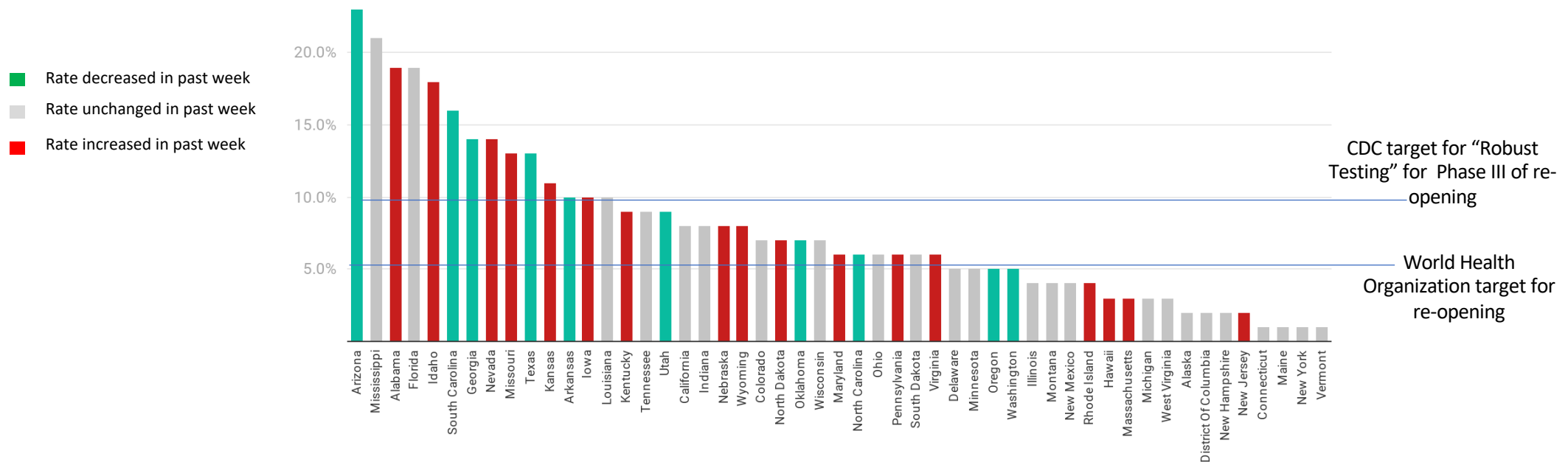
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

State-By-State

Test-Positive rates remain high in at least 11 states - four of these saw their rates increase this week: Alabama, Idaho, Nevada & Missouri

Test-Positive %

Trailing 7-Day Moving Average, As of July 26



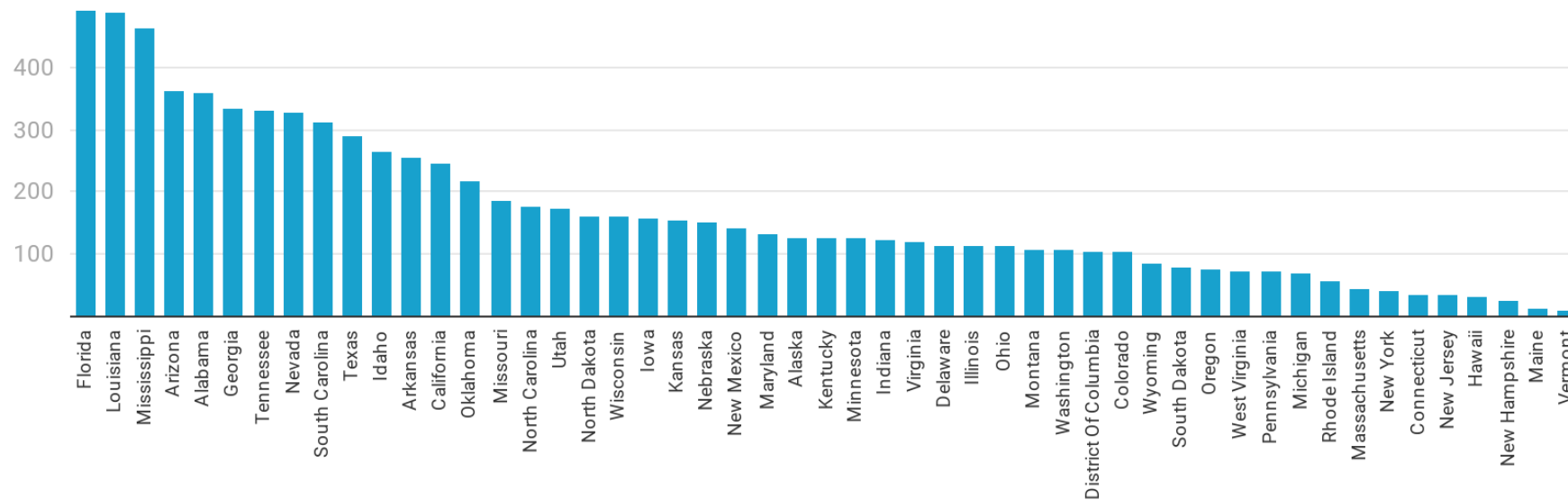
Health Industry Advisor LLC analysis

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

Infection rates still highest in the South, lowest in the Northeast

New Daily Infections / Million Population

Trailing 7-Day Moving Average, As of July 26



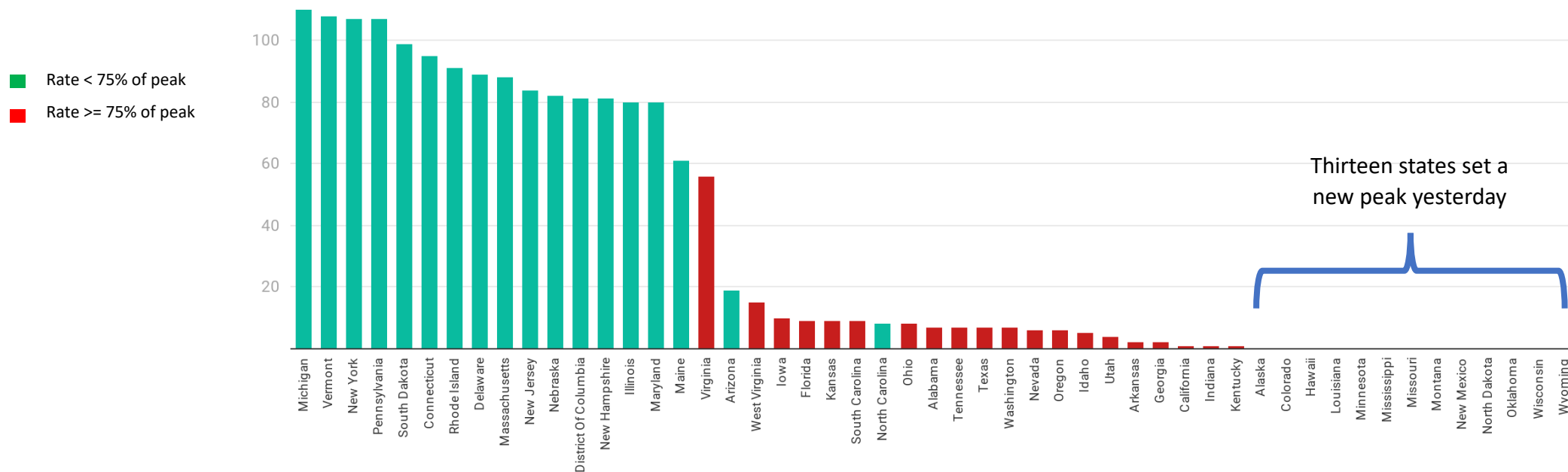
Health Industry Advisor LLC analysis

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

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Days Since Peak New Infection Rate

Trailing 7-Day Moving Average, As of July 26



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 26

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.)	Rank9
USA	4,371,839	(1)	13,202	(10)	149,849	(1)	3.4%	(69)	452.5	(21)	1.6%	(74)	2,533	(17)	204.2	(6)
Brazil	2,419,901	(2)	11,379	(14)	87,052	(2)	3.6%	(62)	409.3	(23)	2.2%	(52)	(0)	(202)	215.0	(5)
India	1,436,019	(3)	1,040	(99)	32,812	(6)	2.3%	(100)	23.8	(197)	3.8%	(20)	258	(102)	32.9	(53)
Russia	812,485	(4)	5,567	(30)	13,269	(11)	1.6%	(126)	90.9	(91)	0.7%	(117)	1,870	(20)	40.1	(48)
South Africa	445,433	(5)	7,504	(20)	6,769	(17)	1.5%	(134)	114.0	(71)	3.1%	(27)	725	(51)	195.2	(7)
Mexico	385,036	(6)	2,984	(59)	43,374	(4)	11.3%	(11)	336.2	(31)	2.0%	(58)	107	(124)	51.1	(42)
Peru	384,797	(7)	11,660	(12)	18,229	(9)	4.7%	(45)	552.4	(15)	1.2%	(90)	721	(52)	135.1	(15)
Chile	345,790	(8)	18,078	(5)	9,112	(14)	2.6%	(89)	476.4	(17)	0.7%	(127)	898	(40)	111.0	(22)
Spain	319,501	(9)	6,833	(22)	28,432	(8)	8.9%	(13)	608.1	(10)	0.4%	(150)	899	(39)	37.2	(49)
UK	299,426	(10)	4,409	(41)	45,752	(3)	15.3%	(4)	673.7	(5)	0.2%	(167)	3,154	(13)	9.7	(95)
Iran	291,172	(11)	3,464	(52)	15,700	(10)	5.4%	(38)	186.8	(55)	0.9%	(109)	303	(95)	29.5	(56)
Pakistan	273,113	(12)	1,235	(93)	5,822	(19)	2.1%	(106)	26.3	(186)	0.5%	(140)	94	(128)	6.2	(110)
Saudi Arabia	266,941	(13)	7,660	(19)	2,733	(29)	1.0%	(152)	78.4	(99)	0.9%	(111)	1,579	(23)	65.7	(33)
Colombia	248,976	(14)	4,890	(37)	8,525	(16)	3.4%	(70)	167.4	(63)	3.4%	(25)	558	(70)	145.0	(11)
Italy	246,118	(15)	4,071	(45)	35,107	(5)	14.3%	(6)	580.7	(11)	0.1%	(179)	763	(47)	4.0	(125)
Turkey	226,100	(16)	2,679	(66)	5,613	(21)	2.5%	(93)	66.5	(107)	0.4%	(147)	505	(75)	10.9	(89)
Bangladesh	223,453	(17)	1,356	(89)	2,928	(28)	1.3%	(144)	17.8	(207)	1.2%	(91)	72	(134)	16.4	(72)
Germany	206,741	(18)	2,467	(70)	9,203	(13)	4.5%	(48)	109.8	(76)	0.3%	(163)	910	(38)	6.6	(106)
France	180,528	(19)	2,765	(63)	30,192	(7)	16.7%	(3)	462.5	(20)	0.4%	(156)	795	(45)	12.8	(82)
Argentina	162,526	(20)	3,594	(51)	2,939	(27)	1.8%	(118)	65.0	(109)	3.6%	(24)	302	(97)	113.0	(21)
Canada	113,911	(21)	3,016	(57)	8,890	(15)	7.8%	(17)	235.4	(43)	0.4%	(152)	1,062	(35)	13.5	(80)
Iraq	110,032	(22)	2,732	(64)	4,362	(26)	4.0%	(55)	108.3	(78)	2.5%	(46)	423	(81)	62.1	(36)
Qatar	109,305	(23)	38,929	(1)	165	(78)	0.2%	(186)	58.8	(121)	0.3%	(157)	1,564	(26)	135.2	(14)
Indonesia	98,778	(24)	361	(142)	4,781	(23)	4.8%	(43)	17.5	(209)	1.9%	(62)	83	(132)	6.4	(108)
Egypt	92,062	(25)	899	(104)	4,606	(25)	5.0%	(39)	45.0	(141)	0.7%	(125)	-	(161)	6.0	(112)
China	83,830	(26)	58	(193)	4,634	(24)	5.5%	(35)	3.2	(318)	0.0%	(186)	-	(161)	0.0	(188)
Kazakhstan	81,720	(27)	4,349	(43)	585	(53)	0.7%	(162)	31.1	(172)	2.2%	(53)	890	(41)	86.5	(25)
Ecuador	80,694	(28)	4,569	(39)	5,515	(22)	6.8%	(21)	312.3	(33)	1.1%	(92)	170	(114)	54.0	(40)
Philippines	80,383	(29)	733	(110)	1,929	(33)	2.4%	(96)	17.6	(208)	2.6%	(44)	205	(110)	16.9	(69)
Sweden	78,997	(30)	7,819	(18)	5,697	(20)	7.2%	(18)	563.9	(14)	0.2%	(171)	980	(36)	24.3	(61)

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

As of July 26

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	78,130	(19)	16,172	(10)	1,473	(24)	1.9%	(29)	300	(19)	2.4%	(14)	1,869	(33)	357.9	(5)
Alaska	2,338	(49)	3,450	(46)	20	(51)	0.9%	(49)	27	(50)	4.3%	(1)	6,689	(1)	126.9	(25)
Arizona	160,041	(8)	22,259	(3)	3,305	(15)	2.1%	(27)	454	(14)	1.7%	(25)	1,592	(39)	360.9	(4)
Arkansas	37,981	(30)	12,798	(21)	401	(37)	1.1%	(47)	133	(38)	2.2%	(17)	2,750	(12)	255.4	(12)
California	453,121	(1)	11,622	(24)	8,453	(4)	1.9%	(30)	214	(28)	2.3%	(16)	3,186	(9)	246.3	(13)
Colorado	43,789	(26)	7,699	(38)	1,794	(19)	4.1%	(13)	312	(17)	1.5%	(30)	1,351	(47)	104.0	(36)
Connecticut	48,776	(24)	13,681	(18)	4,413	(10)	9.0%	(1)	1,238	(3)	0.3%	(47)	3,330	(7)	35.4	(46)
Delaware	14,175	(40)	14,675	(13)	579	(34)	4.1%	(14)	595	(10)	0.8%	(42)	2,494	(18)	113.1	(30)
District Of Columbia	11,717	(41)	16,691	(8)	581	(33)	5.0%	(9)	823	(6)	0.6%	(43)	4,824	(3)	105.1	(35)
Florida	414,511	(3)	19,735	(5)	5,855	(8)	1.4%	(41)	273	(24)	2.8%	(10)	2,553	(17)	490.9	(1)
Georgia	165,188	(7)	15,819	(11)	3,498	(12)	2.1%	(26)	329	(16)	2.4%	(13)	2,336	(21)	334.1	(6)
Hawaii	1,620	(50)	1,189	(51)	26	(49)	1.6%	(39)	18	(51)	3.5%	(3)	950	(51)	30.5	(48)
Idaho	17,827	(38)	10,143	(26)	146	(42)	0.8%	(50)	81	(45)	2.8%	(7)	1,597	(38)	263.4	(11)
Illinois	171,125	(6)	13,626	(19)	7,590	(5)	4.4%	(11)	599	(9)	0.9%	(38)	3,011	(10)	111.8	(31)
Indiana	61,520	(20)	9,265	(29)	2,903	(16)	4.7%	(10)	431	(15)	1.5%	(33)	1,579	(42)	123.1	(28)
Iowa	41,672	(29)	13,377	(20)	828	(29)	2.0%	(28)	262	(25)	1.3%	(34)	1,590	(40)	157.6	(20)
Kansas	25,408	(34)	8,756	(32)	332	(38)	1.3%	(44)	114	(41)	1.6%	(29)	1,403	(46)	154.6	(21)
Kentucky	26,764	(33)	6,061	(42)	700	(31)	2.6%	(24)	157	(34)	2.4%	(15)	1,653	(36)	125.3	(27)
Louisiana	103,734	(12)	23,140	(1)	3,766	(11)	3.6%	(17)	810	(7)	2.2%	(19)	5,038	(2)	487.6	(2)
Maine	3,790	(46)	2,837	(49)	119	(44)	3.1%	(20)	89	(43)	0.5%	(46)	1,900	(31)	13.5	(50)
Maryland	83,054	(17)	13,853	(15)	3,440	(13)	4.1%	(12)	569	(11)	1.0%	(37)	2,334	(22)	132.7	(24)
Massachusetts	115,268	(9)	16,640	(9)	8,529	(3)	7.4%	(5)	1,227	(4)	0.3%	(48)	1,649	(37)	43.2	(44)
Michigan	85,622	(14)	8,678	(34)	6,400	(7)	7.5%	(3)	641	(8)	0.9%	(40)	2,665	(13)	68.6	(42)
Minnesota	50,291	(23)	9,070	(31)	1,614	(20)	3.2%	(19)	286	(22)	1.5%	(32)	2,639	(14)	125.4	(26)
Mississippi	51,097	(22)	17,574	(6)	1,495	(22)	2.9%	(21)	502	(13)	2.8%	(6)	2,161	(25)	464.0	(3)

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

As of July 26

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Indiana	61,520	(20)	9,265	(29)	2,903	(16)	4.7%	(10)	431	(15)	1.5%	(33)	1,579	(42)	123.1	(28)
Iowa	41,672	(29)	13,377	(20)	828	(29)	2.0%	(28)	262	(25)	1.3%	(34)	1,590	(40)	157.6	(20)
Kansas	25,408	(34)	8,756	(32)	332	(38)	1.3%	(44)	114	(41)	1.6%	(29)	1,403	(46)	154.6	(21)
Kentucky	26,764	(33)	6,061	(42)	700	(31)	2.6%	(24)	157	(34)	2.4%	(15)	1,653	(36)	125.3	(27)
Louisiana	103,734	(12)	23,140	(1)	3,766	(11)	3.6%	(17)	810	(7)	2.2%	(19)	5,038	(2)	487.6	(2)
Maine	3,790	(46)	2,837	(49)	119	(44)	3.1%	(20)	89	(43)	0.5%	(46)	1,900	(31)	13.5	(50)
Maryland	83,054	(17)	13,853	(15)	3,440	(13)	4.1%	(12)	569	(11)	1.0%	(37)	2,334	(22)	132.7	(24)
Massachusetts	115,268	(9)	16,640	(9)	8,529	(3)	7.4%	(5)	1,227	(4)	0.3%	(48)	1,649	(37)	43.2	(44)
Michigan	85,622	(14)	8,678	(34)	6,400	(7)	7.5%	(3)	641	(8)	0.9%	(40)	2,665	(13)	68.6	(42)
Minnesota	50,291	(23)	9,070	(31)	1,614	(20)	3.2%	(19)	286	(22)	1.5%	(32)	2,639	(14)	125.4	(26)
Mississippi	51,097	(22)	17,574	(6)	1,495	(22)	2.9%	(21)	502	(13)	2.8%	(6)	2,161	(25)	464.0	(3)

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>