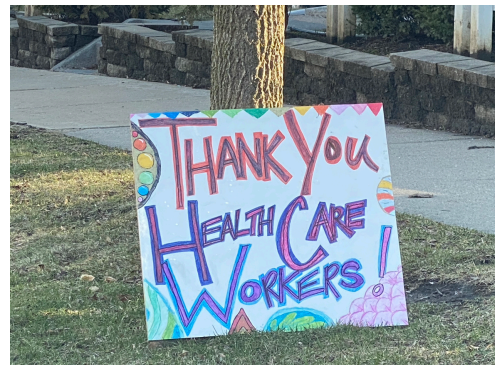
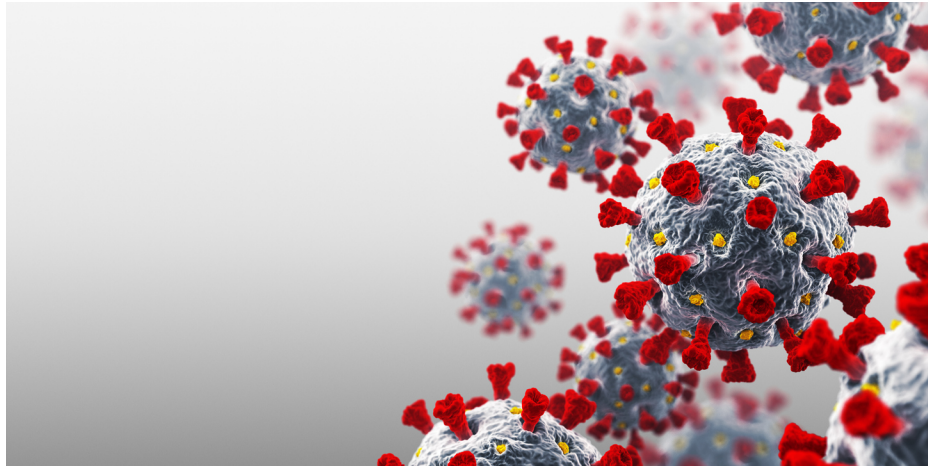
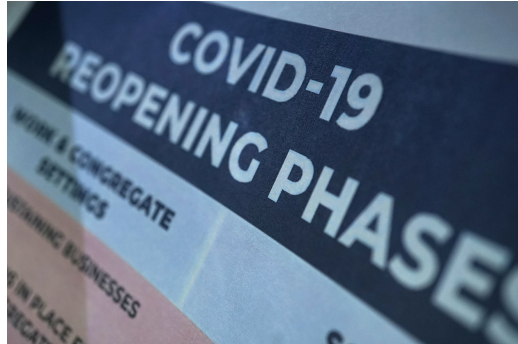




COVID-19 Report

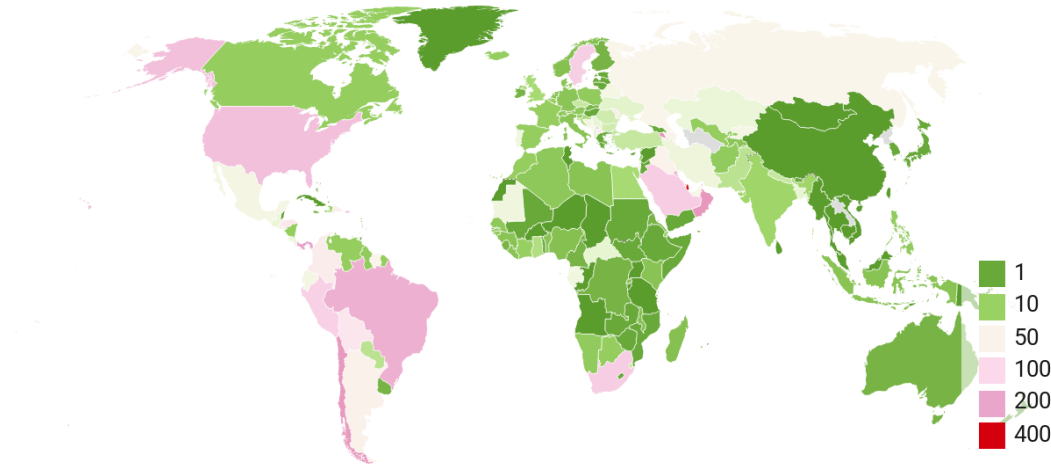
Issue # 121

Friday, July 31, 2020

-
- Fewer new cases were reported on Thursday than on Wednesday and are down 3.3% on a week-over-week basis
 - The test-positive rate was up slightly yesterday; on a week-over-week basis, however, it continues to decline from its recent peak in mid-July
 - The rate of new infections per capita (trailing 7-day moving average) continued its decline from its peak eleven days ago
 - 8 of the 11 states with the highest rates saw their rates decline over the past week
 - In the remaining states, however, all except one saw rates increase during this time
 - Essentially 1/2 of all reported cases to-date are now recovered from the coronavirus
 - Deaths with the coronavirus continue at high levels, at least relative to recent experience
 - Yesterday marked the 3rd consecutive day and 7th in the past ten with more than 1,000 deaths
 - Still, these are far fewer than the average daily deaths reported during April
 - The death rate per case continued to fall; it is now 3.35%
 - Hospital COVID-19 census declined again yesterday; these seemed to have peaked a week ago
 - Only 2% of active cases are currently hospitalized; as of week ago, this was 3.1%
 - Of these hospitalized patients, the % on ventilators held stable yesterday; the % in the ICU was up slightly
 - The % of ER visits for COVID-19 -like illnesses declined again on Monday (latest available data), a trend that began on July 7

New Infections / 1 Million Population

Trailing 7-Day Moving Average, As of June 30

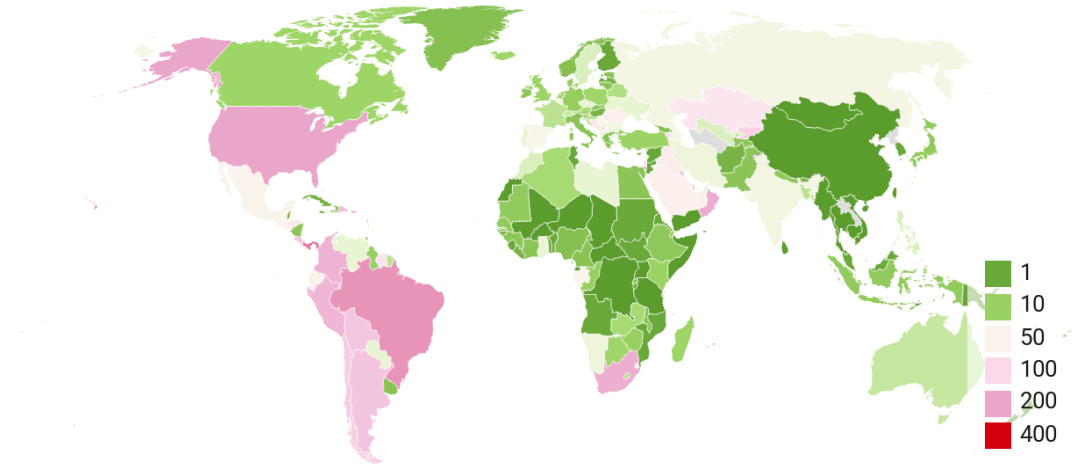


Health Industry Advisor LLC analysis

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

New Infections / 1 Million Population

Trailing 7-Day Moving Average, As of July 30



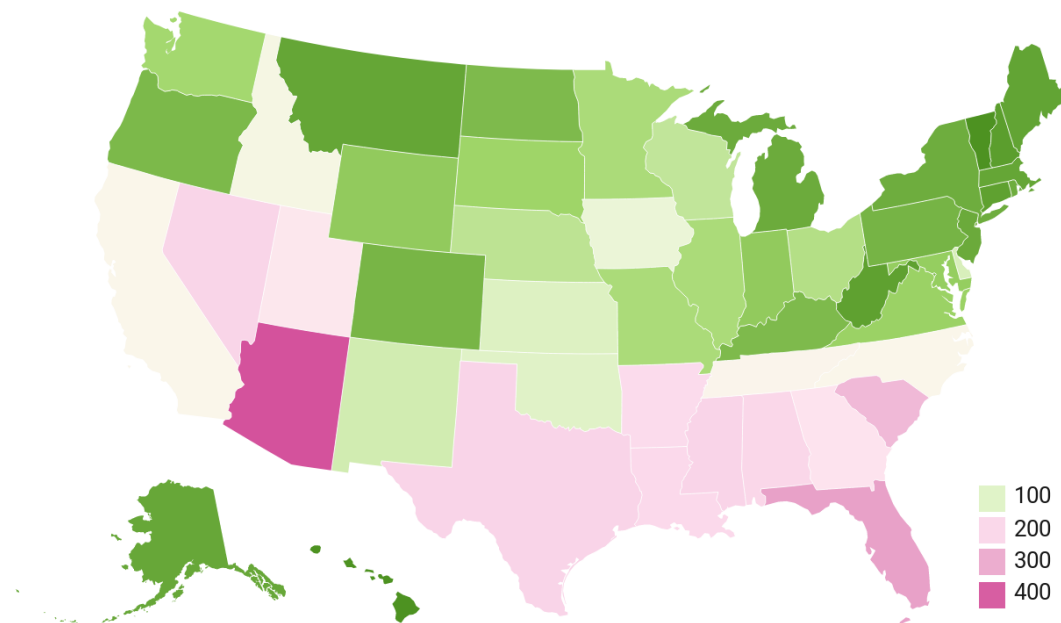
Health Industry Advisor LLC analysis

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

July has proven to be a challenging month for new infections across the country

New Daily Infections Per 1 Million Population

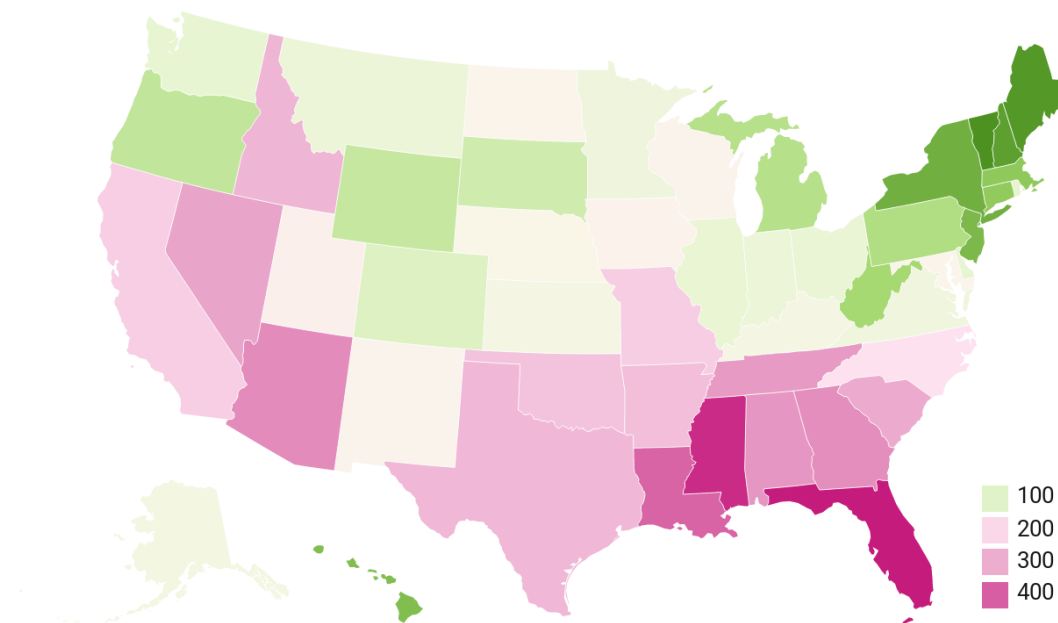
Trailing 7-Day Moving Average, As of June 30



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

New Daily Infections Per 1 Million Population

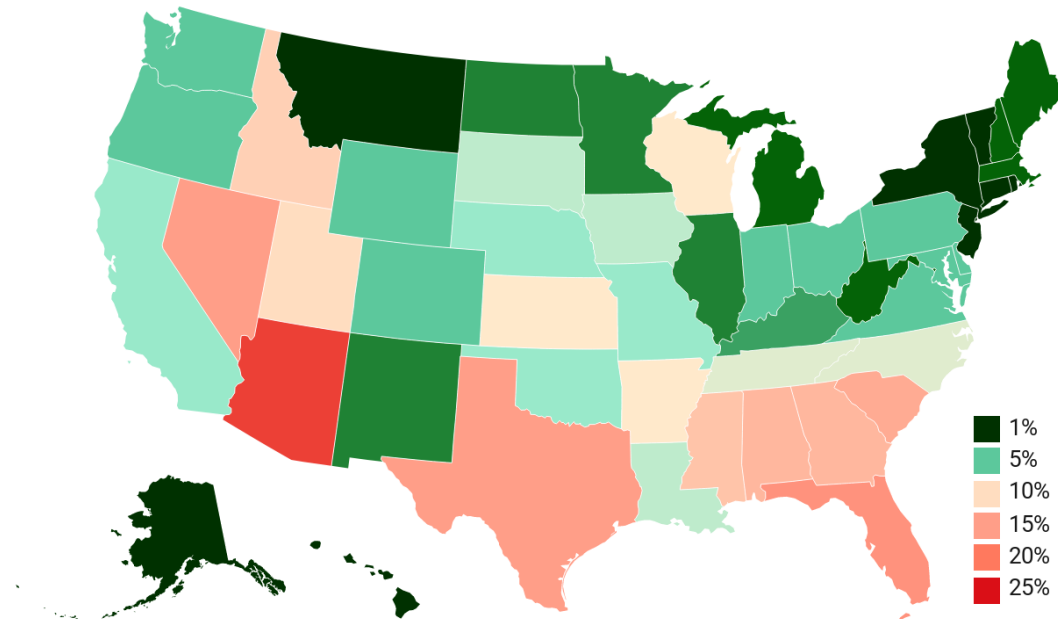
Trailing 7-Day Moving Average, As of July 30



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

Test-Positive Rate

Trailing 7-Day Moving Average, As of June 30

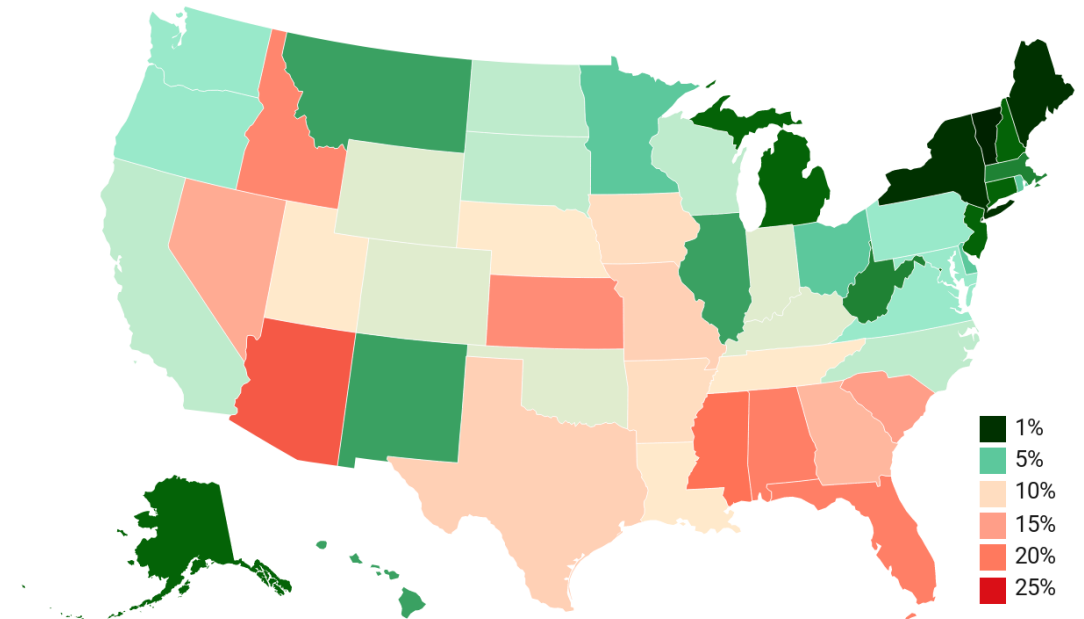


Health Industry Advisor LLC analysis

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

Test-Positive Rate

Trailing 7-Day Moving Average, As of July 30

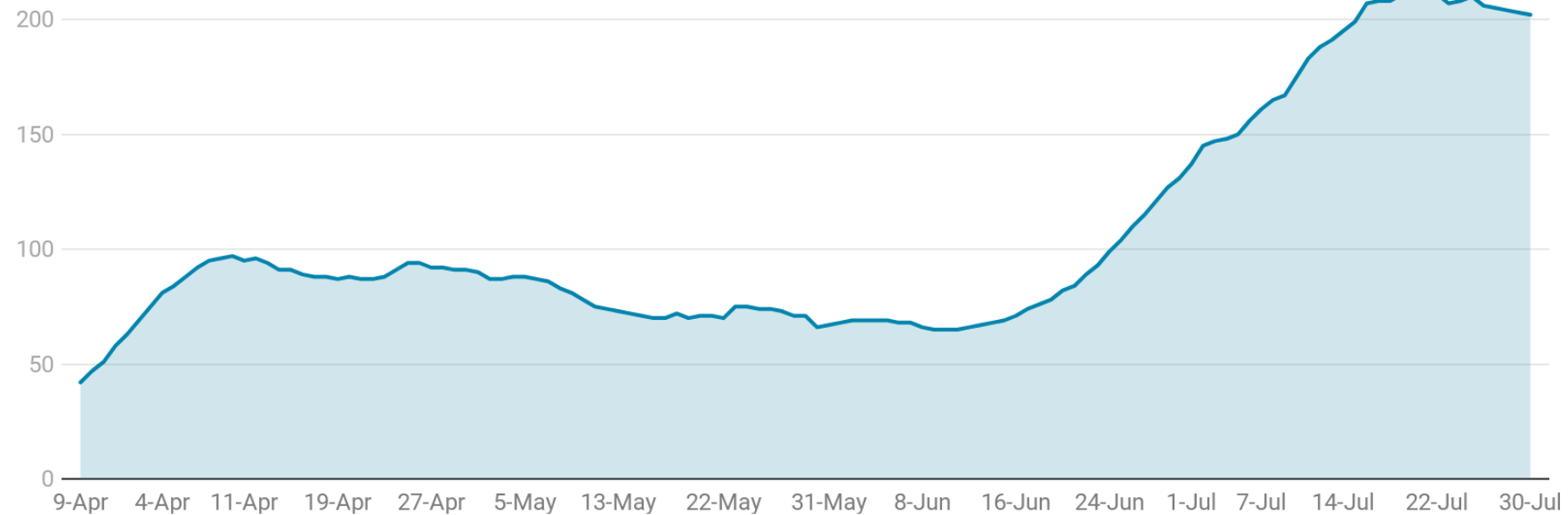


Health Industry Advisor LLC analysis

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

New Infections Per 1 Million Population - United States

Trailing 7-Day Moving Average, As of July 30



Health Industry Advisor LLC analysis

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

New Daily Infections / Million Population

Trailing 7-Day Moving Average

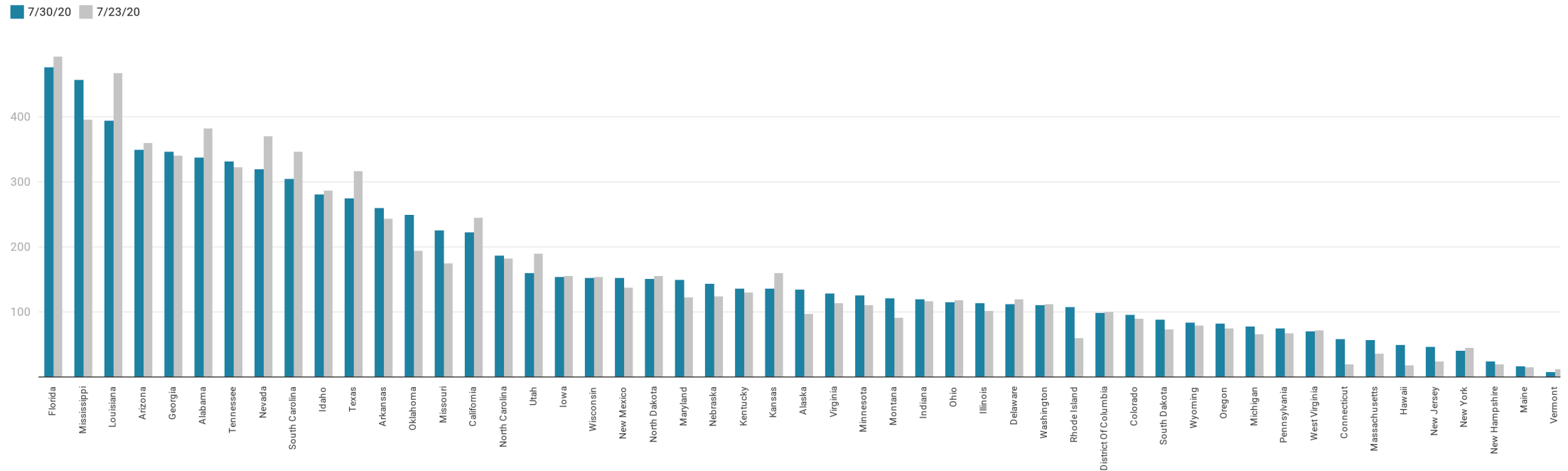
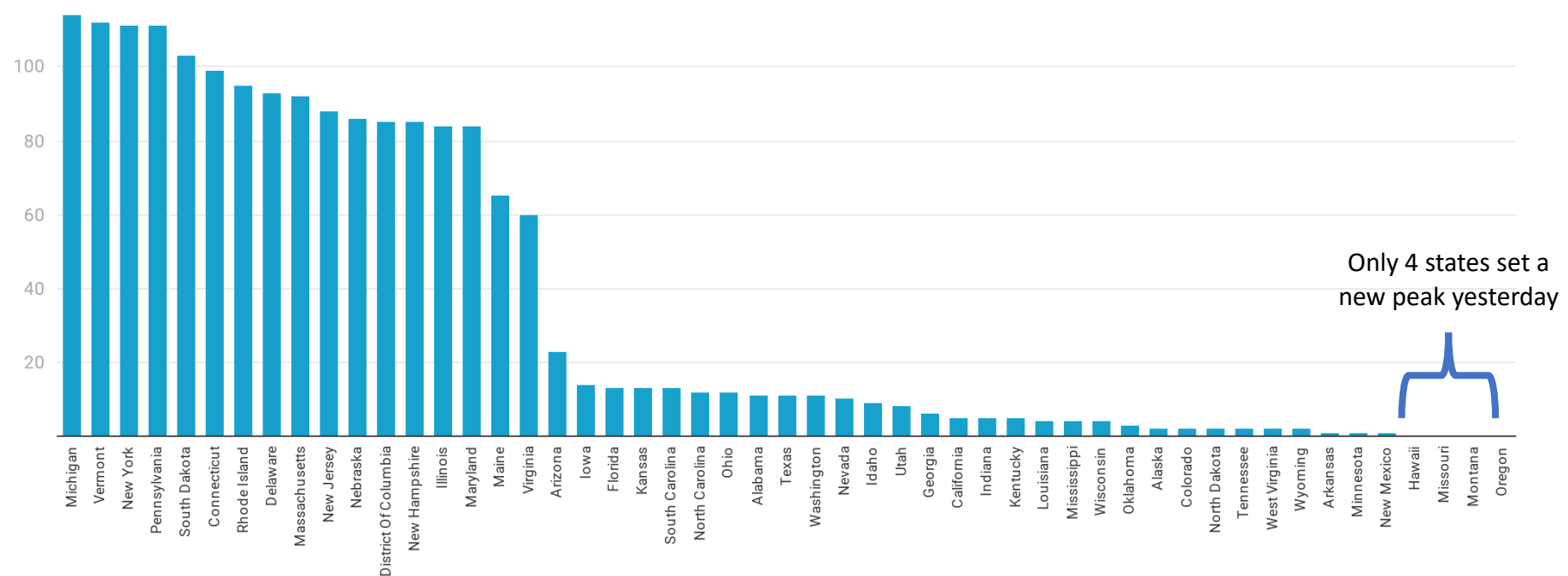


Chart: Health Industry Advisor LLC • Created with Datawrapper

Days Since Peak New Infection Rate

Trailing 7-Day Moving Average, As of July 30



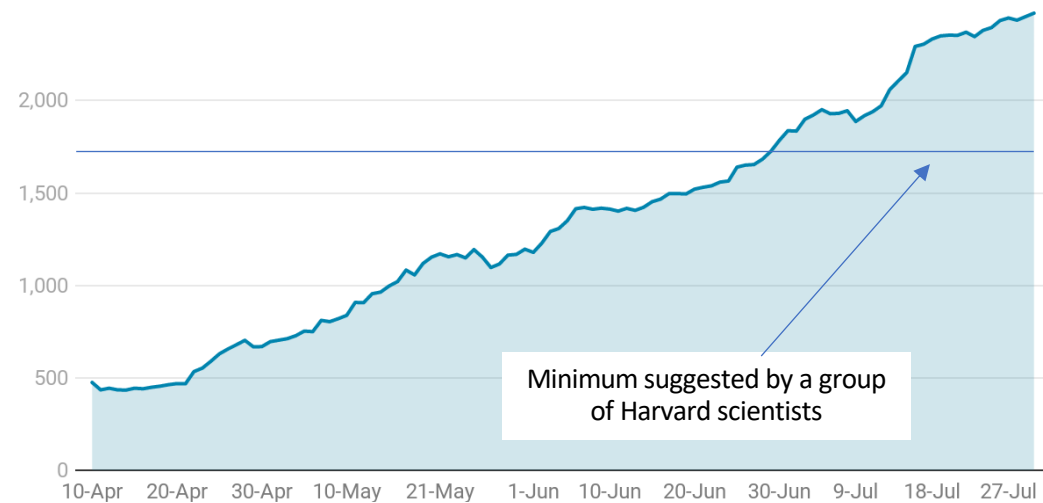
Health Industry Advisor LLC analysis

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

Testing volume continued its ascent and is up 6% week-over-week;
test-positive rate continued to decline from its recent peak on July 14

Daily Tests Per 1 Million - United States

Trailing 7-Day Moving Average, As of July 30

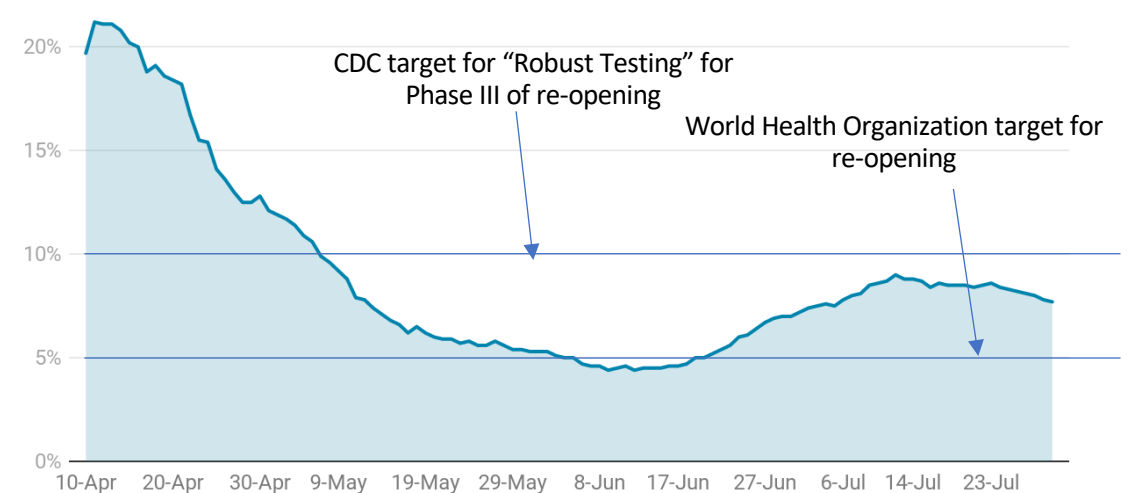


Health Industry Advisor LLC analysis

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 30



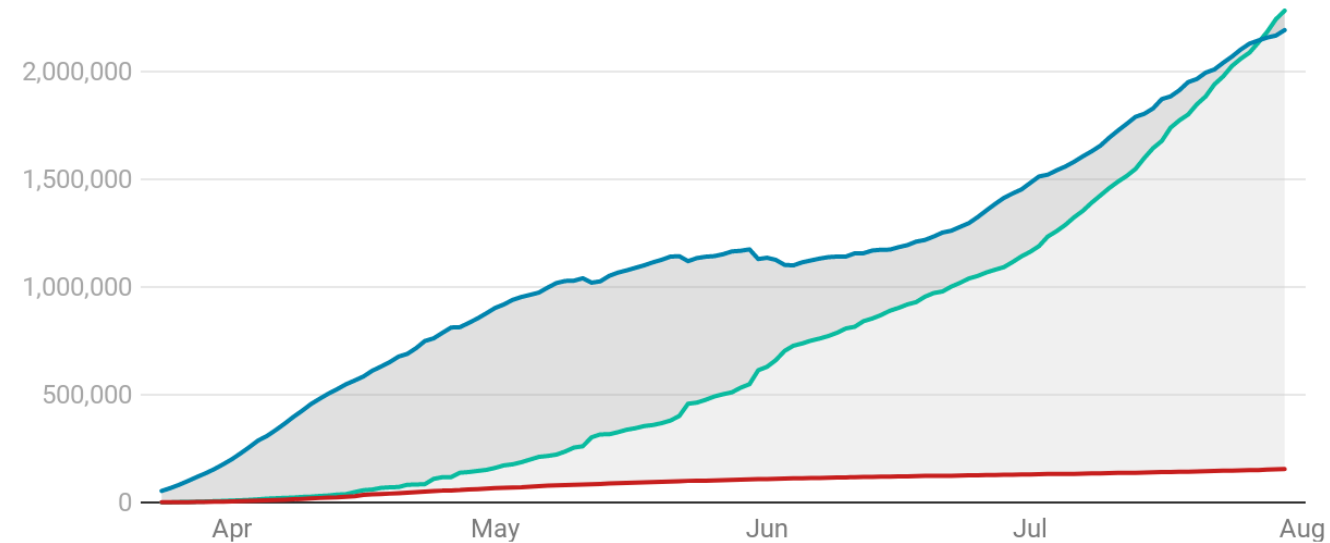
Health Industry Advisor LLC analysis

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

Active Cases v. Recoveries & Deaths

As of July 30

— Active Cases — Recoveries — Deaths



Health Industry Advisor LLC analysis

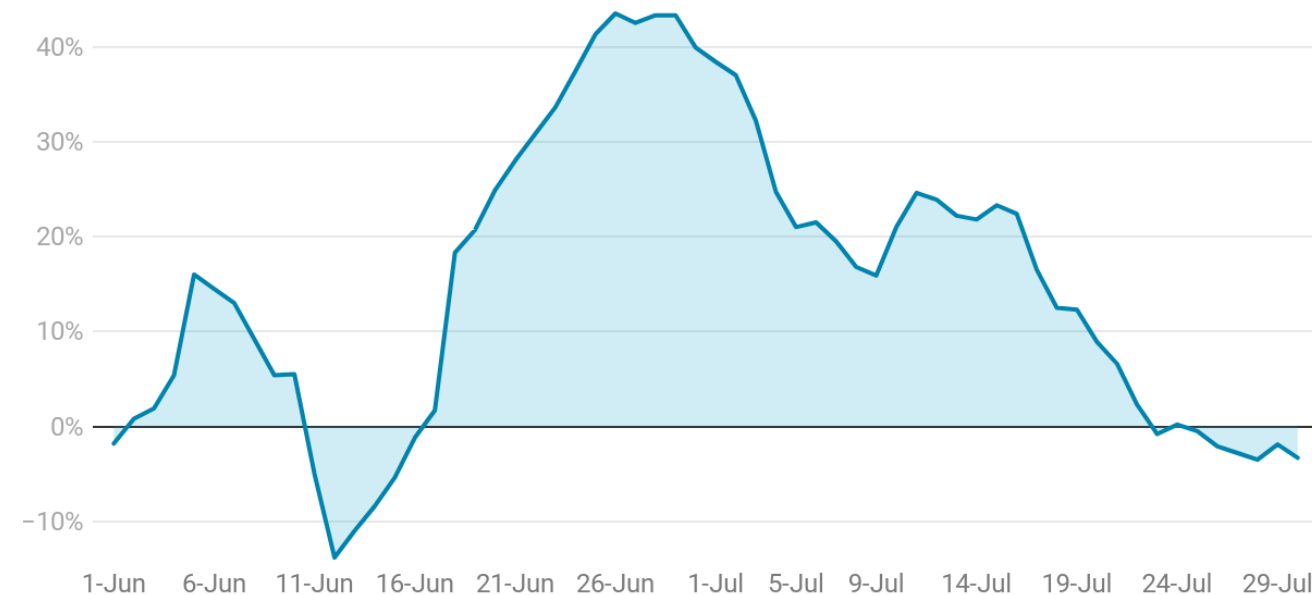
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

United States

Leading Indicator: After weeks of slower growth, new cases have now declined 3.3% on a week-over-week basis

Week-Over-Week Change In New Cases

United States, As of July 30



Health Industry Advisor LLC analysis

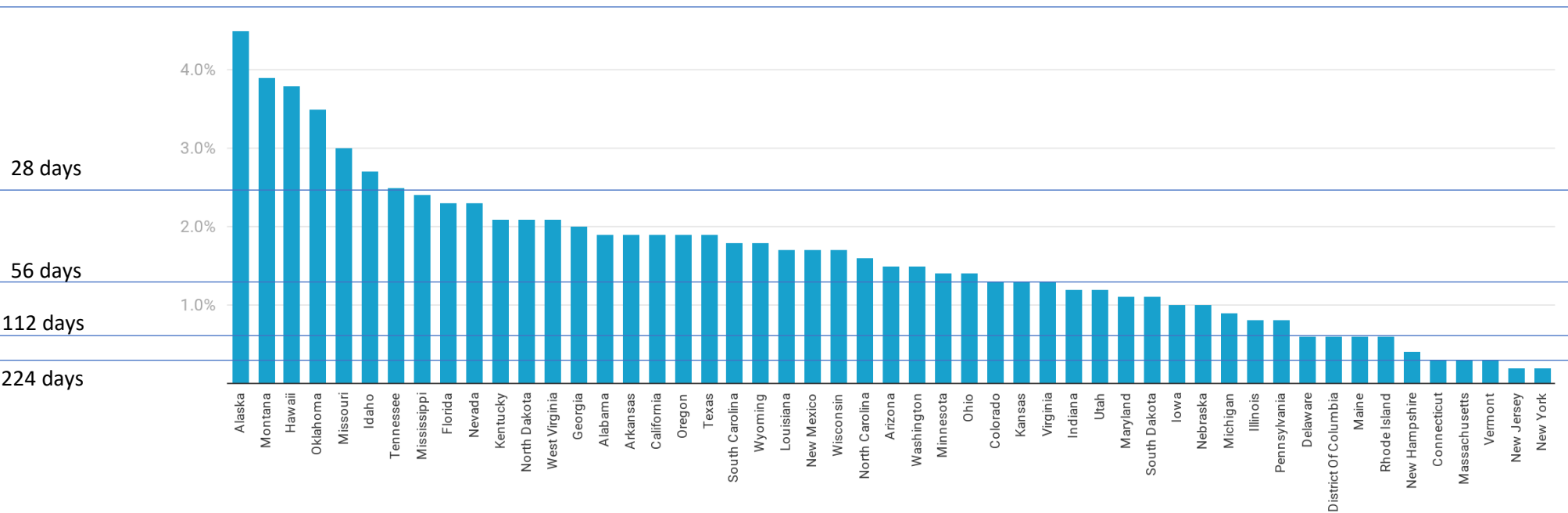
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

At current rates, cases are doubling every 16 days in Alaska; every 421 days in New York; 47-48 for the United States overall

Growth Rate in Total Cases

Trailing 5-Day Moving Average, As of July 30

14 days to double



Health Industry Advisor LLC analysis

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

Over the past week, COVID-19 hospital census has declined; Patients in the ICU and on ventilators are increasing

COVID-19 stress on hospital beds is easing somewhat

Hospital COVID-19 Census v. New Cases

As of July 30

— Hospitalizations — New Cases

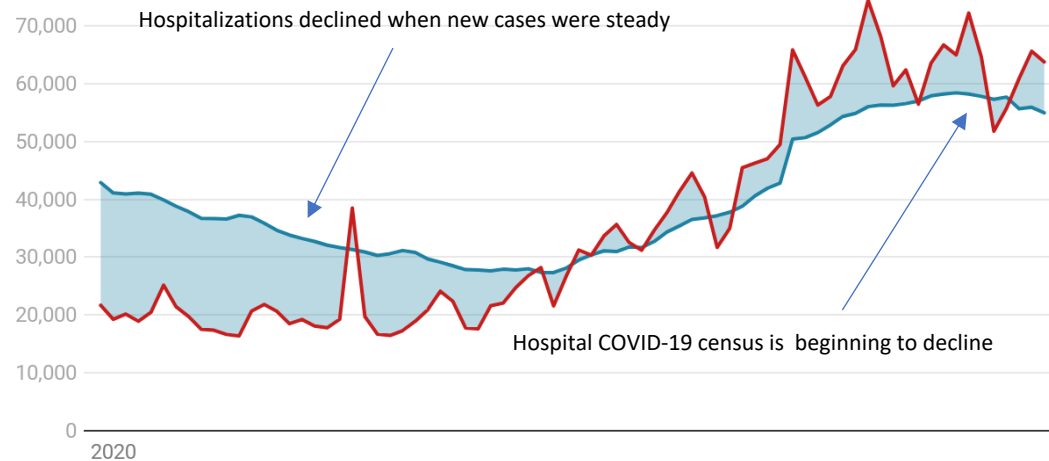


Chart: Health Industry Advisor LLC • Created with Datawrapper

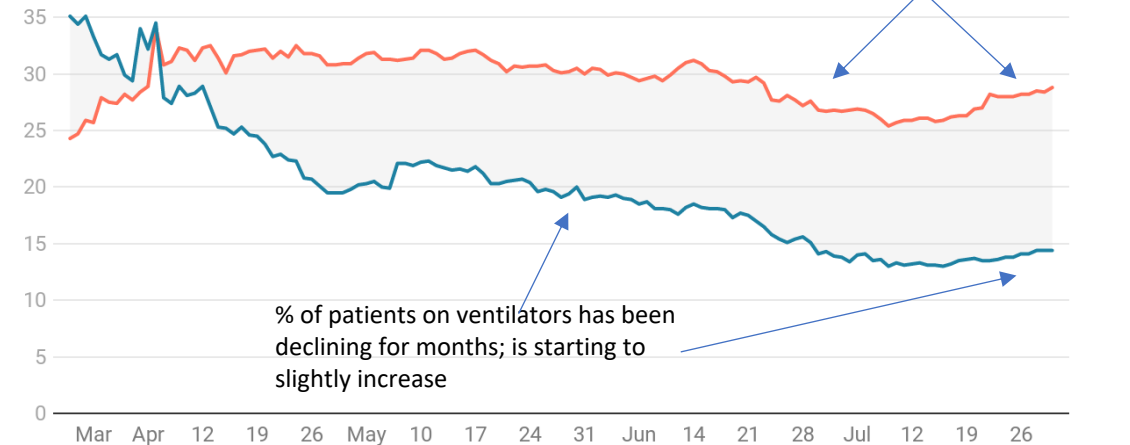
Data excludes Alabama, Alaska, Hawaii, Idaho, Kansas, Nebraska and Tennessee – data either not reported or not consistently reported

Yet, more patients require ICU or ventilator care

Severity of Hospitalized Patients

% of patients on ventilators and in the ICU, As of July 30

— % vent — % icu



Health Industry Advisor LLC analysis

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

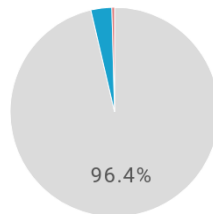
Rate of Hospitalization of Active Cases Has Declined Over the Past Few Weeks, as is the % of ER Visits for COVID-Like Illnesses. Less than 0.5% of cases are in the ICU

The vast majority of cases are being managed outside of the hospital

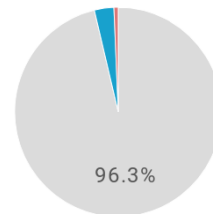
Distribution of Active Cases

As of July 30

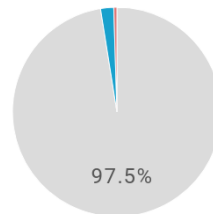
Non-Hospital
Hospital
ICU



16-Jul
Hospital:
3.2%



23-Jul
Hospital:
3.1%



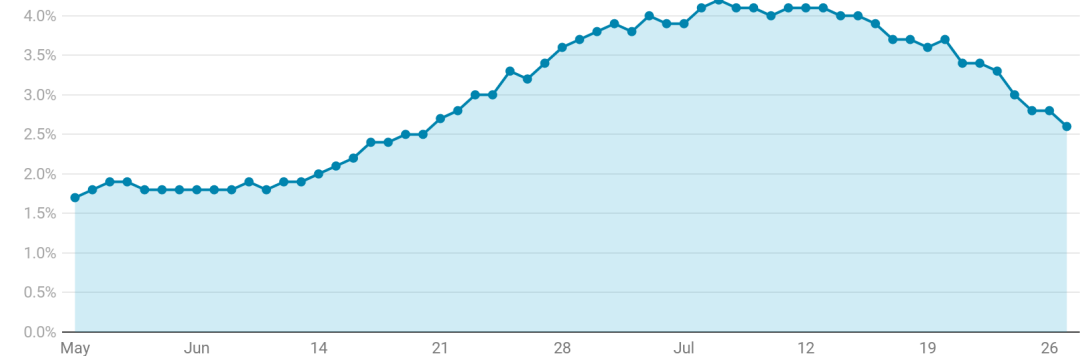
30-Jul
Hospital:
2.0%

Chart: Health Industry Advisor LLC • Created with Datawrapper

Stress on ERs from COVID-19 cases is diminishing

% of Emergency Department Visits for COVID-Like Illness

As of July 27

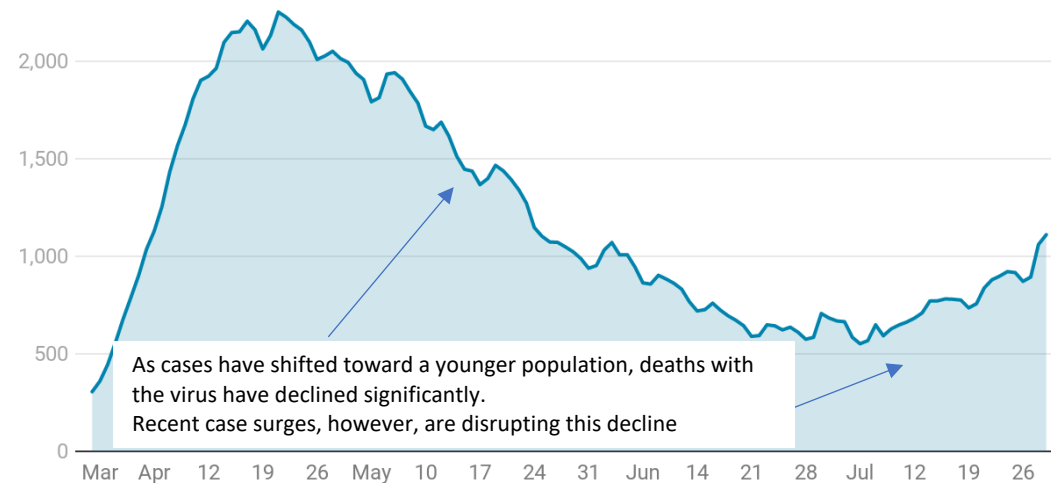


Health Industry Advisor LLC analysis

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

Deaths Recorded With Coronavirus in the U.S.

Trailing 7-Day Moving Average, As of July 30

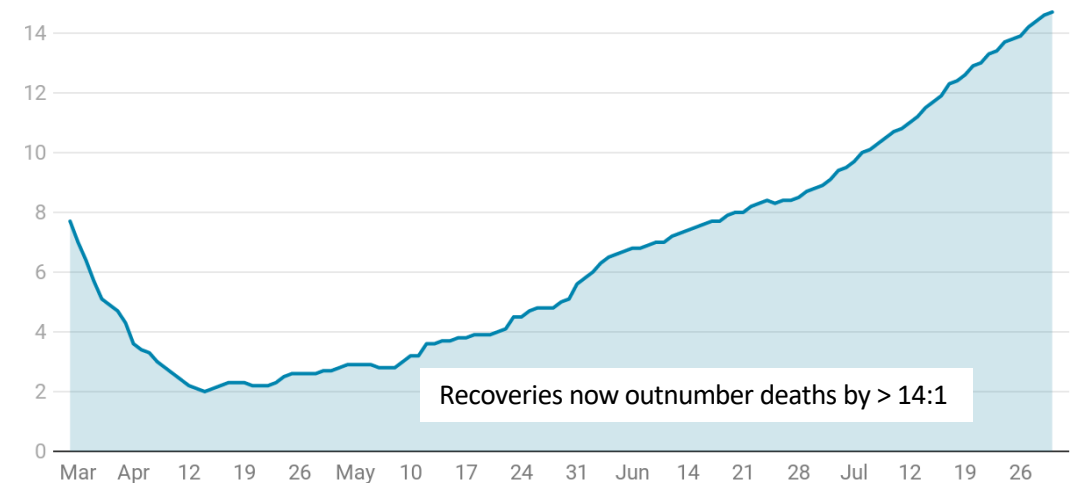


Health Industry Advisor LLC analysis

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

Recoveries: Deaths - United States

As of July 30



Health Industry Advisor LLC analysis

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

Recoveries now represent nearly ½ of all cases; death rate down to 3.35% of all cases

Deaths per Case

As of July 30

— Deaths/case

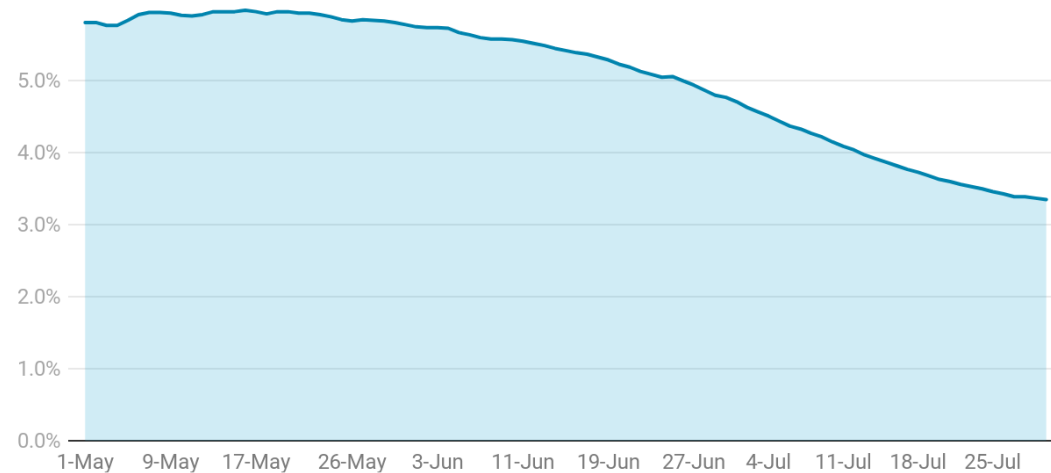


Chart: Health Industry Advisor LLC • Created with Datawrapper

Recovery Rate

Reported Recoveries / Total Cases, As of July 30

— Recovery Rate

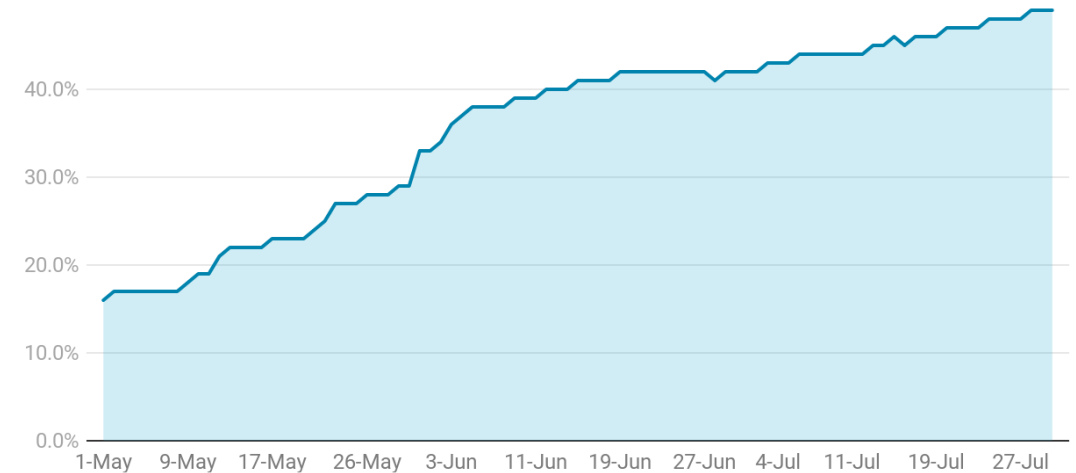


Chart: Health Industry Advisor LLC • Created with Datawrapper

Worldwide Statistical Summary – Countries Ranked 1-30 in Total Cases

Countries, Ranked By Total Cases 1-30

As of July 30

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	4,634,985	(1)	13,996	(10)	155,285	(1)	3.4%	(68)	469	(11)	1.4%	(70)	2,572	(14)	201	(5)
Brazil	2,613,789	(2)	12,290	(13)	91,377	(2)	3.5%	(61)	430	(13)	1.8%	(61)	5,165	(6)	218	(4)
India	1,639,350	(3)	1,187	(97)	35,786	(5)	2.2%	(101)	26	(95)	3.4%	(25)	322	(88)	36	(52)
Russia	834,499	(4)	5,718	(30)	13,802	(11)	1.7%	(129)	95	(48)	0.7%	(115)	1,535	(25)	39	(51)
South Africa	482,169	(5)	8,122	(18)	7,812	(17)	1.6%	(131)	132	(36)	2.1%	(50)	686	(60)	178	(8)
Mexico	408,449	(6)	3,165	(57)	45,361	(4)	11.1%	(11)	352	(17)	1.5%	(66)	101	(127)	51	(44)
Peru	407,492	(7)	12,345	(12)	19,021	(9)	4.7%	(43)	576	(8)	1.4%	(71)	688	(59)	158	(11)
Chile	353,536	(8)	18,481	(5)	9,377	(14)	2.7%	(90)	490	(10)	0.6%	(127)	1,017	(40)	110	(20)
Spain	332,510	(9)	7,112	(23)	28,443	(8)	8.6%	(13)	608	(6)	0.8%	(105)	1,092	(36)	47	(48)
UK	302,301	(10)	4,451	(43)	45,999	(3)	15.2%	(4)	677	(4)	0.2%	(161)	3,709	(10)	11	(98)
Iran	301,530	(11)	3,586	(52)	16,569	(10)	5.5%	(35)	197	(25)	0.9%	(102)	301	(94)	30	(59)
Colombia	286,020	(12)	5,616	(31)	9,810	(13)	3.4%	(64)	44	(77)	3.5%	(21)	607	(65)	167	(9)
Pakistan	277,402	(13)	1,254	(94)	5,924	(19)	2.1%	(105)	170	(29)	0.4%	(142)	99	(128)	5	(120)
Saudi Arabia	274,219	(14)	7,867	(20)	2,842	(29)	1.0%	(153)	56	(68)	0.7%	(113)	1,617	(22)	57	(41)
Italy	247,158	(15)	4,088	(47)	35,132	(6)	14.2%	(6)	581	(7)	0.1%	(177)	797	(49)	4	(127)
Bangladesh	234,889	(16)	1,425	(89)	3,083	(28)	1.3%	(144)	19	(101)	1.2%	(83)	74	(138)	16	(79)
Turkey	229,891	(17)	2,723	(68)	5,674	(21)	2.5%	(94)	67	(60)	0.4%	(141)	520	(69)	11	(96)
Germany	209,653	(18)	2,502	(73)	9,221	(15)	4.4%	(50)	110	(42)	0.3%	(151)	1,000	(41)	8	(104)
France	186,573	(19)	2,858	(66)	30,254	(7)	16.2%	(3)	463	(12)	0.7%	(116)	0	(200)	16	(80)
Argentina	185,373	(20)	4,099	(46)	3,441	(27)	1.9%	(117)	76	(57)	3.2%	(30)	309	(91)	118	(16)

+ Show 10 more

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State-By-State Statistical Summary (page 1 of 3)

States

As of July 30

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	83,782	(19)	17,491	(8)	2	(24)	1.9%	(30)	319	(18)	1.9%	(20)	1,765	(34)	337	(6)
Alaska	2,797	(48)	3,934	(46)	23	(51)	0.8%	(50)	31	(50)	4.2%	(1)	6,942	(1)	134	(26)
Arizona	168,273	(8)	23,465	(2)	4	(13)	2.2%	(26)	498	(14)	1.3%	(30)	1,594	(38)	350	(4)
Arkansas	40,968	(30)	13,837	(21)	442	(36)	1.1%	(46)	146	(37)	1.9%	(16)	2,662	(16)	260	(12)
California	487,478	(1)	12,503	(23)	9	(3)	1.8%	(31)	228	(29)	1.7%	(22)	3,093	(11)	223	(15)
Colorado	45,796	(28)	8,023	(39)	2	(19)	4.0%	(15)	316	(19)	1.1%	(35)	1,346	(45)	96	(37)
Connecticut	49,540	(25)	13,932	(20)	4	(10)	8.9%	(1)	1,243	(3)	0.4%	(47)	3,640	(7)	58	(44)
Delaware	14,602	(40)	15,085	(14)	581	(34)	4.0%	(14)	597	(10)	0.7%	(43)	2,422	(21)	112	(33)
District Of Columbia	11,999	(41)	17,084	(10)	584	(33)	4.9%	(9)	827	(7)	0.6%	(44)	4,245	(4)	98	(36)
Florida	451,423	(2)	21,482	(4)	7	(8)	1.5%	(42)	307	(20)	2.2%	(11)	2,449	(20)	476	(1)
Georgia	178,323	(6)	17,169	(9)	4	(12)	2.1%	(27)	346	(16)	2.0%	(13)	2,751	(14)	346	(5)
Hawaii	1,865	(50)	1,405	(51)	26	(50)	1.4%	(43)	18	(51)	4.2%	(2)	1,049	(50)	50	(46)
Idaho	19,679	(37)	11,298	(26)	177	(42)	0.9%	(49)	99	(42)	2.6%	(6)	1,490	(41)	280	(10)
Illinois	176,366	(7)	14,058	(18)	8	(5)	4.3%	(11)	605	(9)	0.8%	(41)	2,950	(13)	113	(32)
Indiana	64,299	(20)	9,693	(30)	3	(16)	4.6%	(10)	438	(15)	1.2%	(32)	1,476	(43)	120	(30)
Iowa	43,285	(29)	13,960	(19)	857	(29)	2.0%	(28)	272	(25)	1.1%	(33)	1,486	(42)	154	(18)
Kansas	27,051	(34)	9,331	(32)	356	(38)	1.3%	(44)	122	(41)	1.4%	(28)	797	(51)	136	(24)
Kentucky	28,727	(33)	6,577	(42)	731	(31)	2.5%	(24)	164	(34)	1.9%	(19)	1,743	(35)	136	(25)
Louisiana	112,773	(12)	24,626	(1)	4	(11)	3.5%	(17)	845	(6)	2.0%	(12)	4,380	(2)	394	(3)
Maine	3,866	(46)	2,892	(49)	122	(44)	3.2%	(18)	91	(45)	0.5%	(45)	1,821	(33)	16	(50)

Table: Health Industry Advisor LLC • Created with Datawrapper

State-By-State Statistical Summary (page 2 of 3)

States

As of July 30

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
Maryland	86,285	(17)	14,420	(17)	3	(14)	4.0%	(13)	577	(11)	1.0%	(37)	2,479	(18)	150	(22)
Massachusetts	116,684	(10)	16,850	(12)	9	(4)	7.4%	(4)	1,237	(4)	0.3%	(48)	2,037	(30)	57	(45)
Michigan	88,974	(14)	8,990	(35)	6	(9)	7.2%	(5)	645	(8)	1.0%	(38)	3,239	(9)	77	(41)
Minnesota	52,947	(23)	9,520	(31)	2	(21)	3.1%	(20)	290	(24)	1.3%	(29)	2,598	(17)	126	(28)
Mississippi	55,804	(22)	19,347	(6)	2	(22)	2.9%	(21)	541	(13)	2.4%	(8)	2,202	(24)	457	(2)
Missouri	47,652	(26)	8,043	(38)	1	(25)	2.7%	(23)	210	(30)	3.2%	(4)	1,672	(37)	226	(14)
Montana	3,676	(47)	3,569	(48)	55	(48)	1.5%	(40)	51	(48)	3.2%	(5)	2,994	(12)	121	(29)
Nebraska	25,422	(35)	13,320	(22)	328	(39)	1.3%	(45)	170	(33)	1.1%	(34)	1,574	(39)	144	(23)
Nevada	45,806	(27)	15,202	(13)	801	(30)	1.7%	(35)	260	(26)	2.3%	(10)	2,296	(23)	320	(8)
New Hampshire	6,513	(43)	4,813	(43)	415	(37)	6.4%	(6)	305	(21)	0.4%	(46)	1,105	(48)	24	(49)
New Jersey	186,543	(5)	21,051	(5)	16	(2)	8.5%	(2)	1,789	(1)	0.2%	(49)	3,216	(10)	47	(47)
New Mexico	20,136	(36)	9,723	(29)	635	(32)	3.2%	(19)	303	(22)	1.6%	(24)	4,245	(3)	152	(20)
New York	442,060	(3)	22,772	(3)	33	(1)	7.4%	(3)	1,684	(2)	0.2%	(50)	3,319	(8)	40	(48)
North Carolina	118,014	(9)	11,499	(25)	2	(18)	1.6%	(37)	184	(32)	1.6%	(25)	2,741	(15)	186	(16)
North Dakota	6,227	(45)	8,268	(37)	103	(46)	1.7%	(36)	135	(40)	1.9%	(17)	2,071	(27)	151	(21)
Ohio	87,894	(16)	7,669	(40)	3	(15)	3.9%	(16)	295	(23)	1.5%	(27)	2,462	(19)	115	(31)
Oklahoma	34,623	(32)	9,032	(34)	536	(35)	1.5%	(39)	135	(39)	3.5%	(3)	3,677	(6)	250	(13)
Oregon	17,721	(39)	4,299	(45)	316	(40)	1.8%	(34)	75	(46)	2.4%	(9)	1,360	(44)	82	(40)
Pennsylvania	114,984	(11)	9,050	(33)	7	(6)	6.3%	(7)	568	(12)	0.8%	(40)	1,276	(46)	75	(42)
Rhode Island	18,800	(38)	17,888	(7)	1	(27)	5.4%	(8)	951	(5)	0.8%	(42)	2,047	(29)	108	(35)

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State-By-State Statistical Summary (page 3 of 3)

States

As of July 30

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
South Carolina	85,846	(18)	17,009	(11)	2	(20)	1.9%	(29)	324	(17)	1.8%	(21)	2,023	(31)	304	(9)
South Dakota	8,641	(42)	9,817	(28)	129	(43)	1.5%	(41)	146	(38)	0.9%	(39)	1,261	(47)	88	(38)
Tennessee	100,822	(13)	15,055	(15)	1	(26)	1.0%	(47)	151	(36)	2.5%	(7)	3,864	(5)	332	(7)
Texas	424,433	(4)	14,943	(16)	7	(7)	1.6%	(38)	231	(28)	1.9%	(15)	2,192	(25)	275	(11)
Utah	39,194	(31)	12,382	(24)	300	(41)	0.8%	(51)	94	(43)	1.1%	(36)	1,735	(36)	160	(17)
Vermont	1,406	(51)	2,255	(50)	57	(47)	4.1%	(12)	91	(44)	0.2%	(51)	1,534	(40)	7	(51)
Virginia	87,993	(15)	10,416	(27)	2	(17)	2.4%	(25)	251	(27)	1.2%	(31)	2,055	(28)	128	(27)
Washington	56,547	(21)	7,547	(41)	2	(23)	2.8%	(22)	206	(31)	1.5%	(26)	1,935	(32)	111	(34)
West Virginia	6,326	(44)	3,593	(47)	115	(45)	1.8%	(32)	64	(47)	2.0%	(14)	2,111	(26)	70	(43)
Wisconsin	51,049	(24)	8,950	(36)	919	(28)	1.8%	(33)	158	(35)	1.7%	(23)	2,335	(22)	152	(19)
Wyoming	2,628	(49)	4,641	(44)	26	(50)	1.0%	(48)	45	(49)	1.9%	(18)	1,104	(49)	84	(39)
United States	4,634,985		14,003		155		3.4%		469		1.4%		2,473		201	

Table: Health Industry Advisor LLC • Created with Datawrapper

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>