







## COVID-19 Report

Issue # 104

Tuesday, July 14, 2020



## Today's Highlights

- The United States continues to experience a rapidly-spreading virus: after adding nearly 65,500 new cases on Monday, total cases will likely surpass 3.5 million today
- Florida again experienced the most new cases yesterday, followed by Texas and California. Florida now has the highest new infection rate in the country (per capita, on a trailing 7-day moving average basis)
- Arizona, while still experiencing both a high rate of new infections and a high test-positive rate, is showing signs that it may be turning the corner:
  - the rate of change in daily cases (as a % of total cases)
    peaked back on June 20 (an increasing rate is typically
    evident during the rapid infection spread; a declining rate
    hints that the spread is beginning to slow and occurs prior to
    a decline in new cases)
  - the daily new infection rate (per million, on a 7-day trailing average basis) has fallen by 13.5% from its peak on July 7
  - New daily cases have declined for 3 consecutive days;
     Monday's new cases were less than 1/3 of those on Friday
  - Hospitalizations appear to have stabilized over the past week

- Test-positive rates during the past week remain too high in most states across the South, with Arizona, Florida, Georgia, Mississippi and Texas posing the highest rates. Over the past few days, however, there is an indication that this rate may be stabilizing, if not beginning to decline in Arizona and Florida
- Hospitalizations continue to increase across the country, particularly in California, Florida and Texas;
  - these hospitalizations continue to increase at a slower rate than that for new cases
  - severity of hospitalizations (% in ICU and on ventilators) appears to have declined as cases have surged during the past month; this decline, however, may now be leveling off
- Deaths each day had declined steadily from mid-April to the end of June. The now month-long surge in new cases, however, has begun to level or reverse this decline. Nonetheless, Sunday and Monday were both marked by fewer than 1/2 as many deaths as the prior 5 days

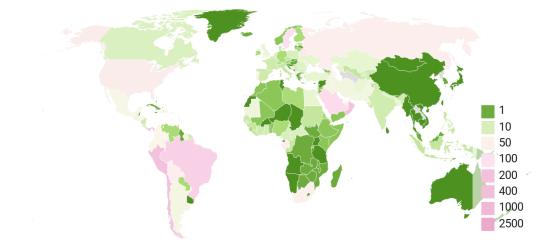


#### Worldwide

# New Infection Rates have intensified in the United States and throughout South America over the past 4 weeks

#### **New Infections / 1 Million Population**

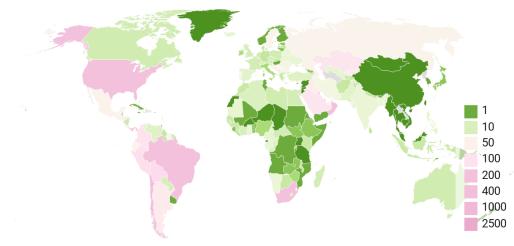
Trailing 7-Day Moving Average, As of June 15



### 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 13



Health Industry Advisor LLC analysis



Situation worsens: Two-thirds the country's population resides in a state we consider of "High" or "Moderately High" concern; Several states are no longer considered "Low" Concern

## Scorecard Scorecard As of July 13 As of July 6 High Concern High Concern Moderately High Concern Moderately High Concern Moderate Concern Moderate Concern Low Concern Low Concern

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

Map: Health Industry Advisor LLC • Created with Datawrapper

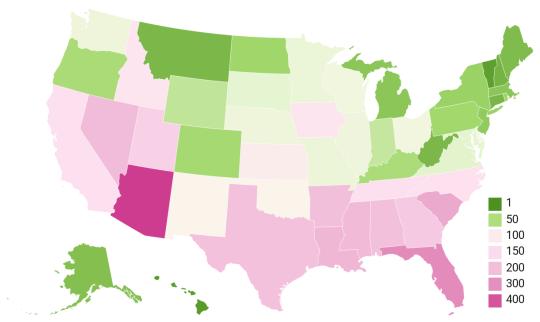
Scoring based on new infection, test-postive, hospitalization and case growth rates Map: Health Industry Advisor LLC • Created with Datawrapper



## The new daily infection rate has increased across the country; is especially high in the South and West

#### **New Infections Per 1 Million Population**

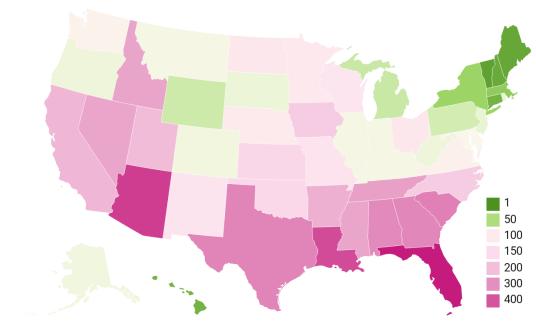
Trailing 7-Day Moving Average, As of June 29



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

#### **New Infections Per 1 Million Population**

Trailing 7-Day Moving Average, As of July 13

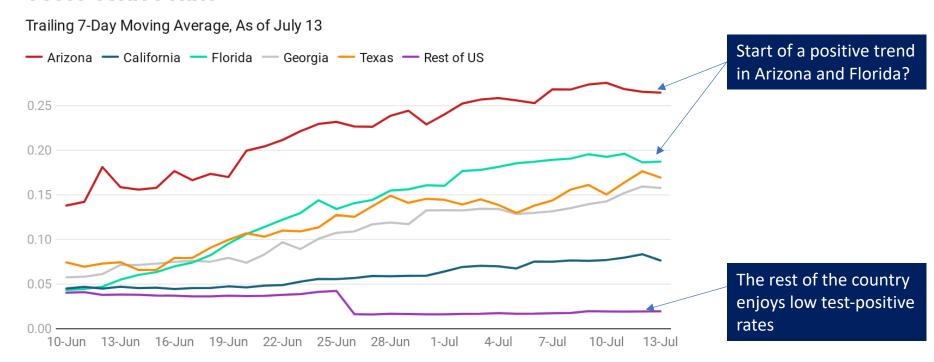


Health Industry Advisor LLC analysis



# Arizona, California, Florida, Georgia and Texas Are we starting to see test-positive rates stabilize in Arizona and Florida? Nonetheless, they remain too high

#### **Test Positive Rate**



Health Industry Advisor LLC analysis

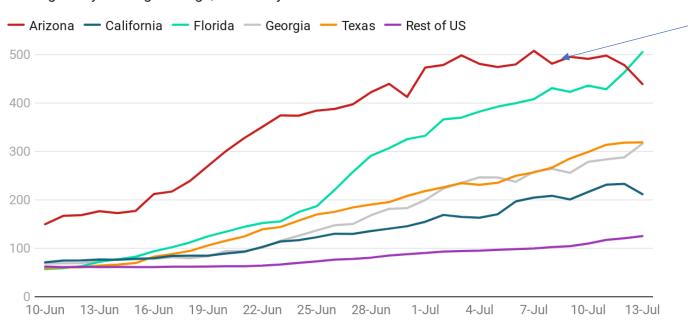


Arizona, California, Florida, Georgia and Texas

Infection rate has declined in Arizona since peaking on July 7; Florida and Georgia set new highs on Monday; Are California and Texas stabilizing?

### **New Daily Infections / 1 Million Population**

Trailing 7-Day Moving Average, As of July 13



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

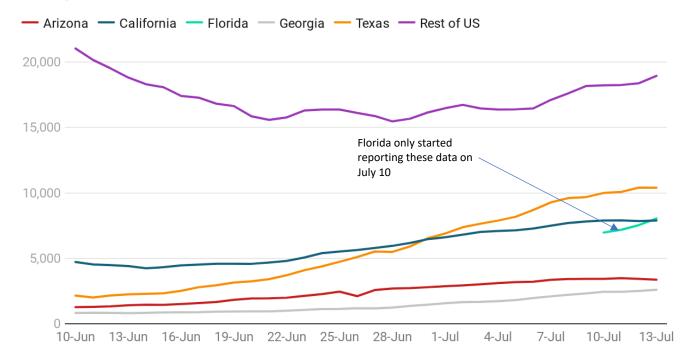
Health Industry Advisor LLC analysis



## Arizona, California, Florida, Georgia and Texas

# Hospital rates rising most in Texas and California; stabilizing in Arizona; demand growing across the country

### **Hospitalized COVID-19 Patients**



Health Industry Advisor LLC analysis, As of July 12



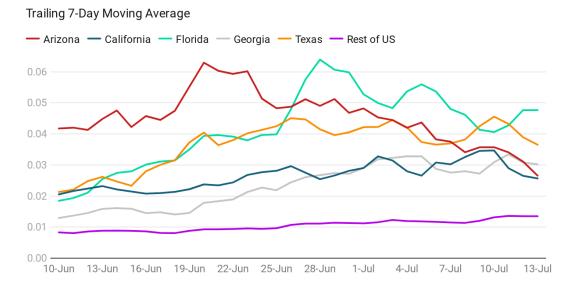
### Arizona, California, Florida, Georgia and Texas

Case growth has been declining in Arizona and Florida for 3-4 weeks and, now, in California and Texas for the past few days

#### Comment:

- The high transmission rate of this virus results in long periods of exponential case growth
- One key to observing this is in the rate of daily case growth on a % of total cases
- A decreasing rate often occurs prior to observing a decline in new daily cases – thus, it can serve as a "leading indicator"
- "Containment" cannot occur until after this rate of daily case growth begins to slow

### **Daily Change % in Total Cases**



#### Health Industry Advisor LLC analysis

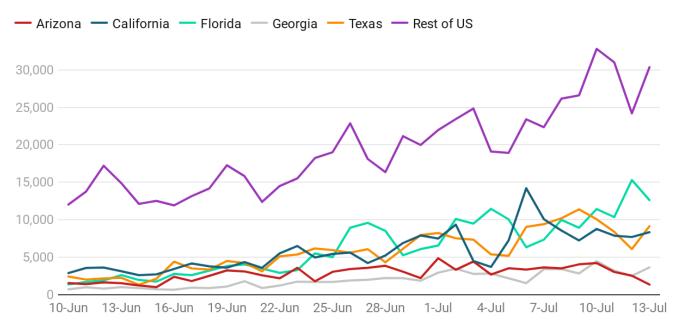


Arizona, California, Florida, Georgia and Texas

A positive trend in new daily cases in Arizona, California and Texas
over the past several days; stable in Georgia; in Florida and the rest
of the country the trend is not encouraging

### **New Daily Cases**

June 10 - July 13



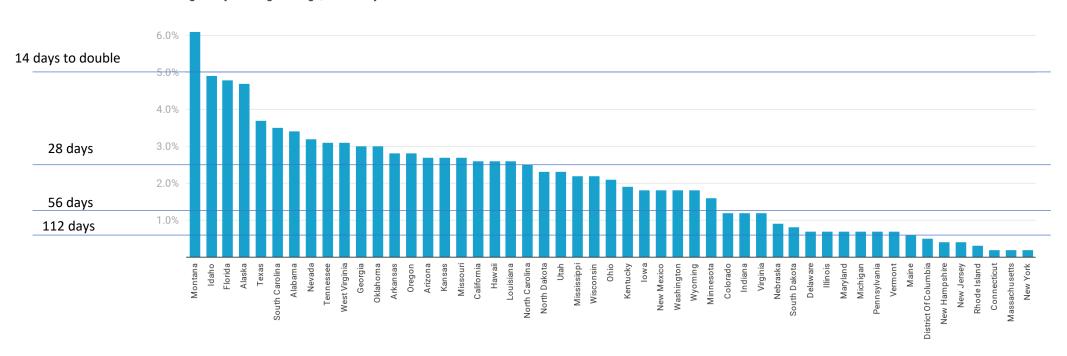
Health Industry Advisor LLC analysis



# At current rates, cases are doubling every 12 days in Montana; every 409 days in New York

#### **Growth Rate in Total Cases**

Trailing 5-Day Moving Average, As of July 13



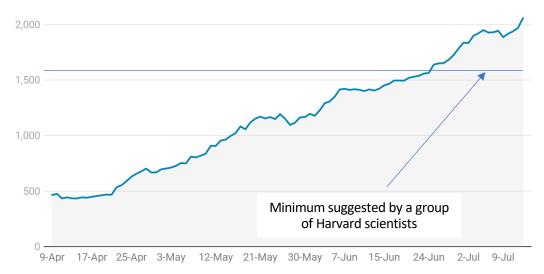
Health Industry Advisor LLC analysis



## 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 13

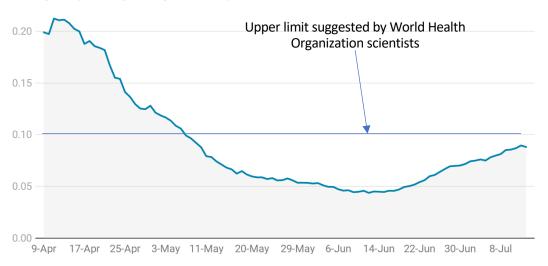


#### Health Industry Advisor LLC analysis

 $\textbf{Chart: Health Industry Advisor LLC} \cdot \textbf{Source: The Atlantic's Covid Tracking Project} \cdot \textbf{Created with Datawrapper}$ 

#### **Test-Positive Rate - United States**

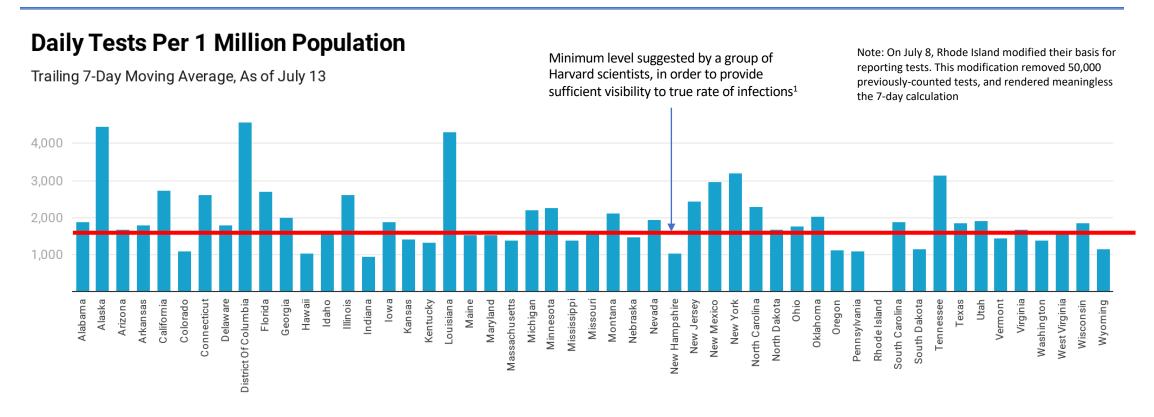
Trailing 7-Day Moving Average, As of July 13



#### Health Industry Advisor LLC analysis



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



Health Industry Advisor LLC analysis

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

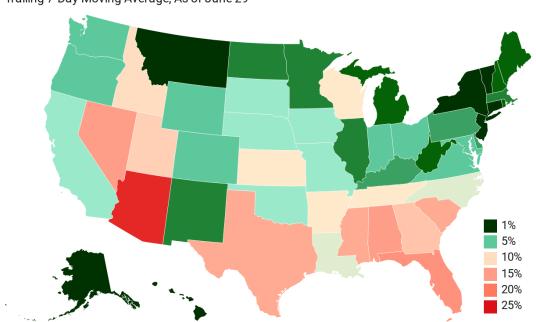
1 – source: (source: https://www.kff.org/coronavirus-policy-watch/what-testing-capacity-do-we-need/



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

#### **Test-Positive Rate**

Trailing 7-Day Moving Average, As of June 29

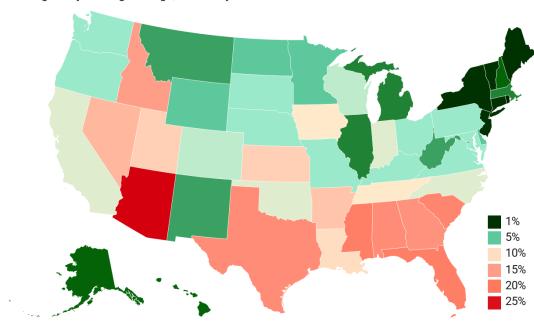


#### Health Industry Advisor LLC analysis

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 13



Health Industry Advisor LLC analysis



# 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 13

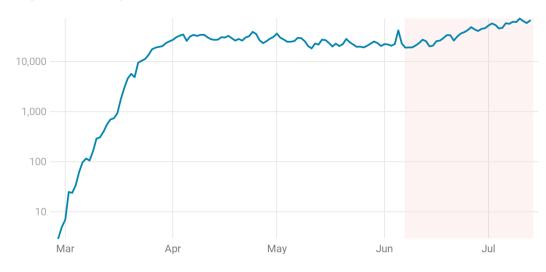


#### Health Industry Advisor LLC analysis

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

#### **New Daily Cases - United States**

Log Scale, As of July 13

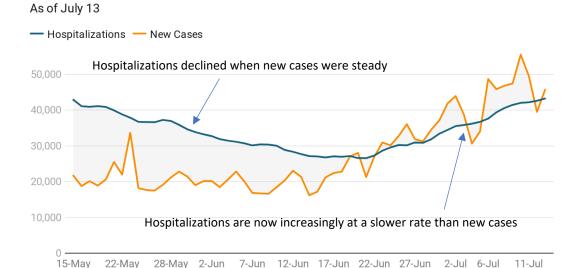


#### Health Industry Advisor LLC analysis



## Cases had been trending to be less severe . . . Are they beginning to stabilize?

#### **Hospitalizations v. New Cases**

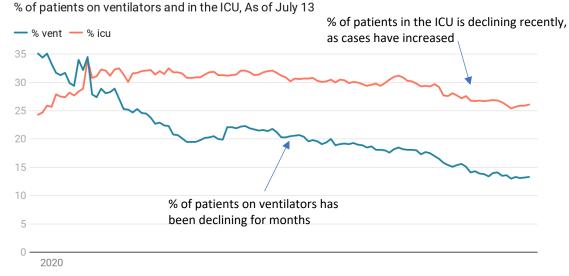


#### Health Industry Advisor LLC analysis

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**



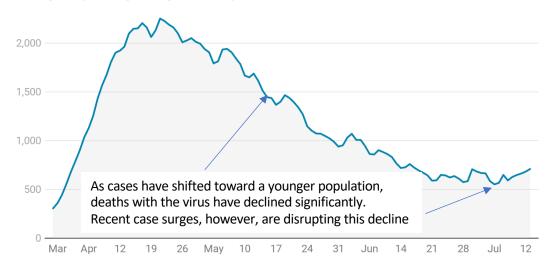
#### Health Industry Advisor LLC analysis



# 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 13

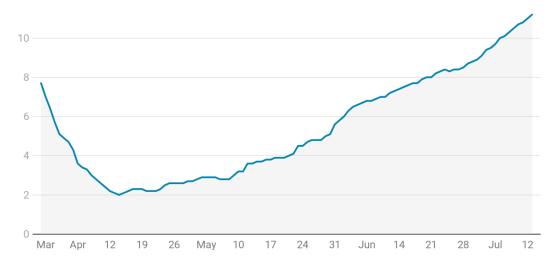


#### Health Industry Advisor LLC analysis

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

#### **Recoveries: Deaths - United States**

As of July 13



#### Health Industry Advisor LLC analysis



Top 30 Countries By Total Cases As of July 13

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	3,479,483	(1)	10,510	(3)	138,247	(1)	4.0%	(16)	417.6	(7)	2.0%	(8)	2,171	(3)	189.3	(2)
Brazil	1,887,959	(2)	8,880	(5)	72,921	(2)	3.9%	(17)	343.0	(10)	1.9%	(9)	834	(14)	176.0	(4)
India	907,645	(3)	657	(28)	23,727	(8)	2.6%	(20)	17.2	(27)	3.4%	(5)	190	(23)	19.4	(17)
Russia	733,699	(4)	5,028	(11)	11,439	(11)	1.6%	(25)	78.4	(18)	0.9%	(17)	1,825	(4)	44.9	(13)
Peru	330,123	(5)	10,008	(4)	12,054	(10)	3.7%	(18)	365.4	(9)	1.1%	(15)	617	(17)	105.8	(6)
Chile	317,657	(6)	16,612	(2)	7,024	(15)	2.2%	(22)	367.3	(8)	0.9%	(16)	835	(13)	142.7	(5)
Spain	303,033	(7)	6,481	(9)	28,406	(7)	9.4%	(6)	607.5	(3)	0.2%	(25)	892	(11)	12.7	(20)
Mexico	299,750	(8)	2,324	(22)	35,006	(4)	11.7%	(5)	271.4	(12)	2.3%	(7)	97	(26)	47.5	(12)
UK	290,133	(9)	4,273	(13)	44,830	(3)	15.5%	(3)	660.2	(2)	0.2%	(26)	3,106	(1)	9.2	(23)
South Africa	287,796	(10)	4,851	(12)	4,172	(22)	1.4%	(26)	70.3	(19)	5.1%	(1)	795	(15)	197.6	(1)
Iran	259,652	(11)	3,090	(16)	13,032	(9)	5.0%	(11)	155.1	(14)	0.9%	(18)	302	(21)	28.2	(15)
Pakistan	251,625	(12)	1,139	(25)	5,266	(19)	2.1%	(23)	23.8	(26)	1.2%	(14)	106	(25)	12.8	(19)
Italy	243,230	(13)	4,023	(14)	34,967	(5)	14.4%	(4)	578.4	(4)	0.1%	(29)	715	(16)	3.3	(29)
Saudi Arabia	235,111	(14)	6,750	(8)	2,243	(27)	1.0%	(28)	64.4	(20)	1.3%	(12)	1,648	(5)	87.8	(8)
Turkey	214,001	(15)	2,536	(20)	5,382	(18)	2.5%	(21)	63.8	(21)	0.5%	(21)	573	(18)	12.1	(21)
Germany	200,436	(16)	2,392	(21)	9,139	(13)	4.6%	(14)	109.1	(15)	0.2%	(28)	856	(12)	4.1	(28)
Bangladesh	186,894	(17)	1,134	(26)	2,391	(26)	1.3%	(27)	14.5	(28)	1.7%	(10)	80	(27)	18.4	(18)
France	172,377	(18)	2,641	(19)	30,029	(6)	17.4%	(1)	460.0	(6)	0.3%	(22)	2,417	(2)	8.8	(24)
Colombia	154,277	(19)	3,031	(17)	5,455	(17)	3.5%	(19)	107.2	(16)	3.7%	(2)	492	(19)	95.4	(7)
Canada	108,155	(20)	2,865	(18)	8,790	(14)	8.1%	(7)	232.8	(13)	0.3%	(23)	1,065	(8)	8.4	(26)
Qatar	104,016	(21)	37,045	(1)	149	(30)	0.1%	(30)	53.1	(22)	0.5%	(20)	1,537	(6)	186.8	(3)
Argentina	103,265	(22)	2,284	(23)	1,903	(28)	1.8%	(24)	42.1	(24)	3.5%	(3)	215	(22)	72.1	(9)
China	83,602	(23)	58	(30)	4,634	(21)	5.5%	(10)	3.2	(30)	0.0%	(30)	=	(29)	0.0	(30)
Egypt	83,001	(24)	811	(27)	3,935	(23)	4.7%	(13)	38.4	(25)	1.2%	(13)	(0)	(30)	9.5	(22)
Iraq	79,735	(25)	1,981	(24)	3,250	(25)	4.1%	(15)	80.8	(17)	3.4%	(4)	302	(20)	62.0	(10)
Indonesia	76,981	(26)	281	(29)	3,656	(24)	4.7%	(12)	13.4	(29)	2.5%	(6)	76	(28)	6.3	(27)
Sweden	75,826	(27)	7,506	(6)	5,536	(16)	7.3%	(9)	548.0	(5)	0.5%	(19)	1,143	(7)	39.1	(14)
Ecuador	68,459	(28)	3,878	(15)	5,063	(20)	7.4%	(8)	286.8	(11)	1.6%	(11)	158	(24)	49.2	(11)
Belarus	65,114	(29)	6,891	(7)	468	(29)	0.7%	(29)	49.5	(23)	0.3%	(24)	1,018	(9)	19.8	(16)
Belgium	62,707	(30)	5,410	(10)	9,782	(12)	15.6%	(2)	843.9	(1)	0.2%	(27)	950	(10)	8.5	(25)



## Statistical Summary (page 1 of 2)

#### As of July 13

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	55,545	(19)	11,328.4	(15)	1,124	(24)	2.0%	(33)	229.2	(24)	3.4%	(7)	1,880	(20)	310.8	(7)
Alaska	1,539	(49)	2,103.8	(48)	17	(51)	1.1%	(48)	23.2	(50)	4.7%	(4)	4,460	(2)	72.8	(36)
Arizona	123,824	(7)	17,011.8	(4)	2,245	(16)	1.8%	(36)	308.4	(15)	2.7%	(17)	1,660	(29)	439.3	(2)
Arkansas	28,939	(30)	9,589.4	(19)	323	(37)	1.1%	(47)	107.0	(40)	2.8%	(14)	1,799	(25)	221.8	(12)
California	336,037	(2)	8,504.6	(25)	7,096	(5)	2.1%	(30)	179.6	(30)	2.6%	(20)	2,715	(7)	211.9	(13)
Colorado	37,242	(24)	6,467.0	(34)	1,727	(18)	4.6%	(12)	299.9	(16)	1.2%	(35)	1,084	(47)	74.0	(35)
Connecticut	47,510	(21)	13,325.7	(8)	4,371	(8)	9.2%	(1)	1,226.0	(3)	0.2%	(51)	2,603	(9)	21.4	(48)
Delaware	12,879	(38)	13,226.0	(9)	517	(34)	4.0%	(17)	530.9	(12)	0.7%	(43)	1,787	(26)	86.0	(28)
District Of Columbia	10,906	(41)	15,453.1	(7)	568	(32)	5.2%	(10)	804.8	(6)	0.5%	(45)	4,569	(1)	79.1	(32)
Florida	282,435	(3)	13,150.1	(10)	4,277	(9)	1.5%	(41)	199.1	(25)	4.8%	(3)	2,698	(8)	505.4	(1)
Georgia	120,569	(8)	11,355.8	(14)	3,026	(14)	2.5%	(26)	285.0	(18)	3.0%	(11)	2,005	(17)	316.3	(6)
Hawaii	1,243	(51)	877.9	(51)	22	(49)	1.8%	(37)	15.5	(51)	2.6%	(19)	1,020	(48)	21.5	(47)
Idaho	11,402	(40)	6,362.5	(35)	102	(44)	0.9%	(50)	56.9	(45)	4.9%	(2)	1,648	(31)	267.1	(9)
Illinois	155,931	(6)	12,305.3	(12)	7,394	(4)	4.7%	(11)	583.5	(9)	0.7%	(40)	2,595	(10)	78.3	(34)
Indiana	52,037	(20)	7,729.5	(30)	2,762	(15)	5.3%	(9)	410.3	(14)	1.2%	(34)	930	(50)	78.6	(33)
Iowa	35,607	(27)	11,285.6	(17)	755	(28)	2.1%	(29)	239.3	(22)	1.8%	(30)	1,868	(21)	176.2	(15)
Kansas	20,241	(34)	6,947.8	(33)	297	(38)	1.5%	(42)	101.9	(41)	2.7%	(16)	1,420	(38)	160.2	(17)
Kentucky	19,653	(35)	4,398.9	(43)	629	(30)	3.2%	(24)	140.8	(34)	1.9%	(27)	1,328	(42)	80.0	(30)
Louisiana	79,827	(12)	17,171.6	(3)	3,428	(10)	4.3%	(16)	737.4	(7)	2.6%	(18)	4,295	(3)	414.9	(3)
Maine	3,558	(46)	2,646.9	(46)	114	(42)	3.2%	(23)	84.8	(43)	0.6%	(44)	1,532	(34)	14.3	(50)
Maryland	73,527	(14)	12,161.9	(13)	3,325	(12)	4.5%	(14)	550.0	(10)	0.7%	(38)	1,526	(35)	85.6	(29)
Massachusetts	111,827	(9)	16,091.4	(6)	8,330	(3)	7.4%	(5)	1,198.6	(4)	0.2%	(49)	1,372	(41)	34.7	(46)
Michigan	77,198	(13)	7,730.0	(29)	6,321	(7)	8.2%	(3)	632.9	(8)	0.7%	(42)	2,204	(14)	56.2	(44)
Minnesota	42,772	(22)	7,584.2	(31)	1,542	(20)	3.6%	(19)	273.4	(19)	1.6%	(32)	2,262	(13)	106.5	(24)
Mississippi	36,680	(26)	12,324.7	(11)	1,250	(22)	3.4%	(21)	420.0	(13)	2.2%	(24)	1,379	(39)	260.3	(10)



## Statistical Summary (page 2 of 2)

As of July 13

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	30,049	(28)	4,896.0	(41)	1,133	(23)	3.8%	(18)	184.6	(29)	2.7%	(15)	1,607	(32)	130.5	(19)
Montana	1,843	(48)	1,724.4	(50)	32	(48)	1.7%	(39)	29.9	(49)	6.1%	(1)	2,108	(15)	79.4	(31)
Nebraska	21,399	(32)	11,062.3	(18)	288	(39)	1.3%	(44)	148.9	(31)	0.9%	(36)	1,471	(36)	99.9	(25)
Nevada	28,515	(31)	9,257.6	(23)	593	(31)	2.1%	(31)	192.5	(26)	3.2%	(8)	1,935	(18)	260.0	(11)
New Hampshire	6,068	(43)	4,462.7	(42)	391	(36)	6.4%	(7)	287.6	(17)	0.4%	(47)	1,012	(49)	16.2	(49)
New Jersey	181,366	(5)	20,419.1	(2)	15,639	(2)	8.6%	(2)	1,760.7	(1)	0.4%	(46)	2,431	(11)	64.0	(41)
New Mexico	15,291	(37)	7,292.4	(32)	548	(33)	3.6%	(20)	261.3	(21)	1.8%	(31)	2,950	(6)	121.5	(20)
New York	428,303	(1)	22,016.7	(1)	32,445	(1)	7.6%	(4)	1,667.8	(2)	0.2%	(50)	3,207	(4)	40.0	(45)
North Carolina	87,729	(11)	8,364.6	(27)	1,551	(19)	1.8%	(38)	147.9	(32)	2.5%	(21)	2,297	(12)	175.6	(16)
North Dakota	4,442	(44)	5,828.9	(37)	87	(46)	2.0%	(34)	114.2	(37)	2.3%	(23)	1,668	(28)	111.2	(22)
Ohio	66,891	(16)	5,722.5	(38)	3,069	(13)	4.6%	(13)	262.6	(20)	2.1%	(26)	1,752	(27)	108.5	(23)
Oklahoma	20,745	(33)	5,242.6	(40)	424	(35)	2.0%	(32)	107.2	(39)	3.0%	(12)	2,008	(16)	158.2	(18)
Oregon	12,438	(39)	2,949.0	(45)	237	(40)	1.9%	(35)	56.2	(46)	2.8%	(13)	1,117	(45)	69.2	(38)
Pennsylvania	100,378	(10)	7,840.8	(28)	6,963	(6)	6.9%	(6)	543.9	(11)	0.7%	(41)	1,095	(46)	57.9	(42)
Rhode Island	17,487	(36)	16,507.1	(5)	984	(25)	5.6%	(8)	928.9	(5)	0.3%	(48)	(10,479)	(51)	66.9	(40)
South Carolina	58,168	(18)	11,297.6	(16)	972	(26)	1.7%	(40)	188.8	(28)	3.5%	(6)	1,866	(22)	327.1	(4)
South Dakota	7,524	(42)	8,505.0	(24)	109	(43)	1.4%	(43)	123.2	(35)	0.8%	(37)	1,142	(43)	67.7	(39)
Tennessee	65,274	(17)	9,552.5	(20)	749	(29)	1.1%	(46)	109.6	(38)	3.1%	(9)	3,122	(5)	274.3	(8)
Texas	274,712	(4)	9,474.2	(21)	3,340	(11)	1.2%	(45)	115.2	(36)	3.7%	(5)	1,854	(24)	318.8	(5)
Utah	30,030	(29)	9,366.9	(22)	216	(41)	0.7%	(51)	67.4	(44)	2.3%	(22)	1,893	(19)	203.2	(14)
Vermont	1,301	(50)	2,085.0	(49)	56	(47)	4.3%	(15)	89.7	(42)	0.7%	(39)	1,426	(37)	11.4	(51)
Virginia	71,642	(15)	8,393.4	(26)	1,968	(17)	2.7%	(25)	230.6	(23)	1.2%	(33)	1,655	(30)	92.7	(26)
Washington	42,741	(23)	5,612.8	(39)	1,438	(21)	3.4%	(22)	188.8	(27)	1.8%	(28)	1,375	(40)	91.1	(27)
West Virginia	4,313	(45)	2,413.3	(47)	97	(45)	2.2%	(27)	54.3	(47)	3.1%	(10)	1,538	(33)	69.6	(37)
Wisconsin	36,942	(25)	6,344.8	(36)	821	(27)	2.2%	(28)	141.0	(33)	2.2%	(25)	1,858	(23)	119.8	(21)
Wyoming	1,904	(47)	3,289.8	(44)	21	(50)	1.1%	(49)	36.3	(48)	1.8%	(29)	1,138	(44)	56.5	(43)
United States	3,479,483		10,511.9		138,247		4.0%		417.6		2.0%		2,059		189.3	



### **Data Sources**

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

- The Atlantic's Covid Tracking Project: <a href="https://covidtracking.com">https://covidtracking.com</a>
- Worldometers.info: https://www.worldometers.info/coronavirus/
- Centers for Disease Control, National, Regional, and State Level Outpatient Illness and Viral Surveillance <a href="https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html">https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html</a>
- Centers for Disease Control, COVID-19 Laboratory-Confirmed Hospitalizations <a href="https://gis.cdc.gov/grasp/COVIDNet/COVID19">https://gis.cdc.gov/grasp/COVIDNet/COVID19</a> 5.html
- Centers for Disease Control, COVID Data Tracker <a href="https://www.cdc.gov/covid-data-tracker/index.html#mobility">https://www.cdc.gov/covid-data-tracker/index.html#mobility</a>
- Institute for Health Metrics and Evaluation, COVID-19 estimate downloads <a href="http://www.healthdata.org/covid/data-downloads">http://www.healthdata.org/covid/data-downloads</a>
- New York Times, Covid-19 data <a href="https://github.com/nytimes/covid-19-data">https://github.com/nytimes/covid-19-data</a>
- COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University https://github.com/CSSEGISandData/COVID-19