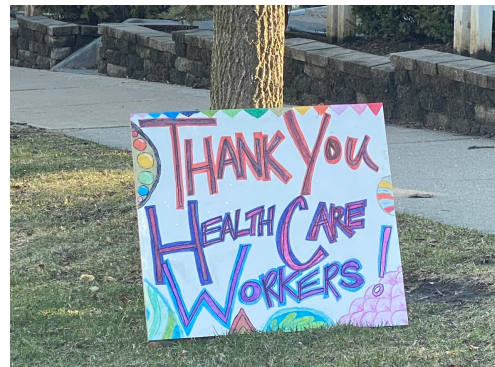
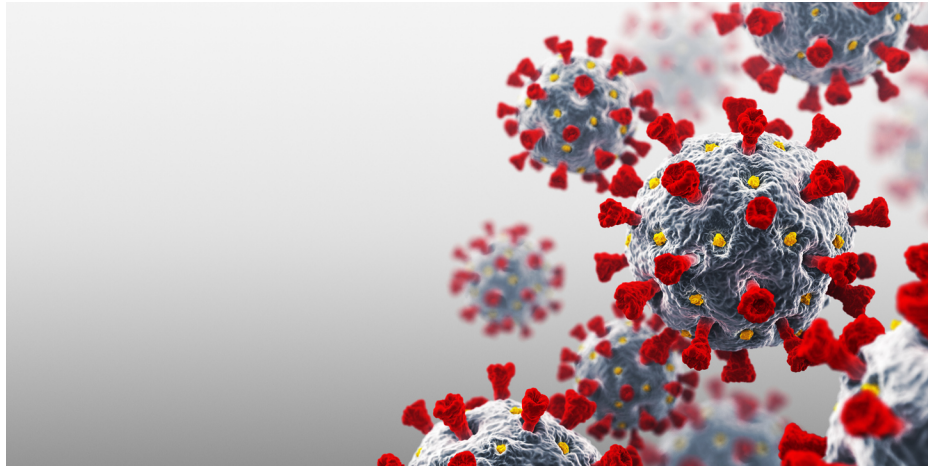
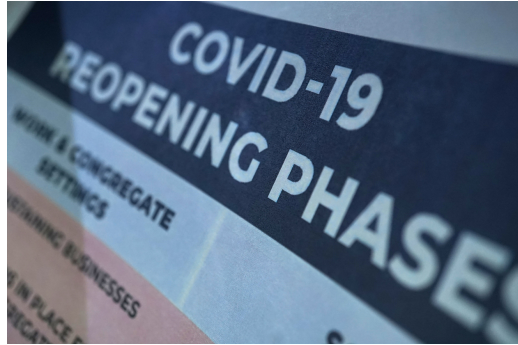




COVID-19 Report

Issue # 159

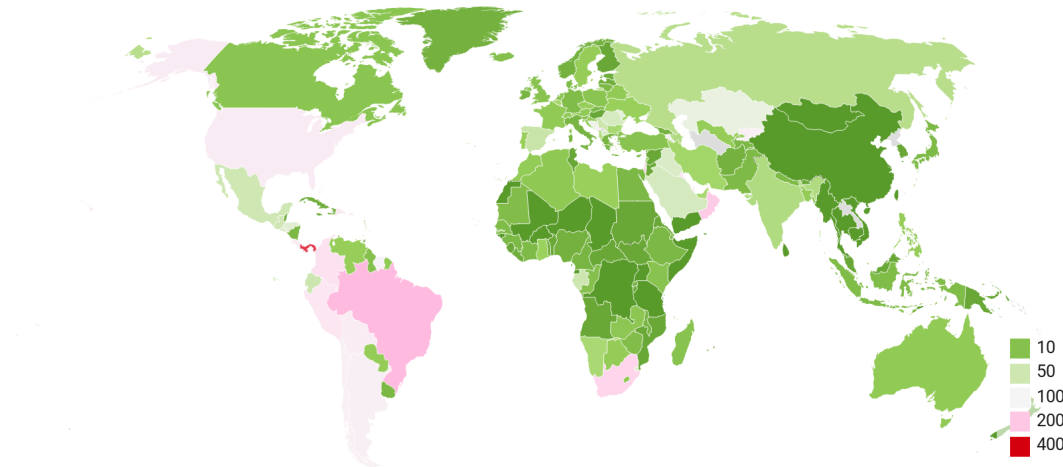
Friday, September 11, 2020

- Worldwide Status With the Coronavirus
 - **Over the past two weeks, infection spread has eased in Brazil, Ecuador, Panama, South Africa and United States; intensified in Argentina, Bahrain, Costa Rica, Israel and Spain**
 - Aruba leads the world in new infections per capita for the past week. Argentina, France, Israel and Spain are among countries that experienced increasing rates past 2 weeks; Brazil, Colombia, Peru and the U.S. experienced declining rates
 - **United States remains high (unfavorable) in rankings of cases, deaths, and tests; low on tests per case identified (also unfavorable). Since late August, however, U.S. has dropped 24 spots in case growth, and 5 spots on new infections per capita (both favorable moves)**
- New Cases and Infection Rates in the U.S.
 - **Week-over-week, new cases are down by 18.4%.** New cases haven't increased week-over-week in more than six weeks
 - New cases on Thursday were lowest on a Thursday in 12 weeks; These new cases were less than ½ peak July levels yet, 60% higher than early-June levels
 - **New infections per capita dropped again yesterday. This rate has dropped 48% since July 22; yet, it is 68% higher than its June 11 low**
 - **Over the past two weeks, infection rates have remained high in the Midwest. These rates have intensified in Missouri, North Dakota, Oklahoma and Wisconsin; Rates have eased throughout the Southeast and West**
- Healthcare Resource Use
 - Stress placed on the U.S. healthcare system by COVID-19 has eased since mid-July; Inpatient and ICU census of COVID-19 patients declined again yesterday
 - However, **the % of ER visits for influenza-like illnesses and Shortness-of-Breath picked up on both Sunday and Monday (most recently available data)**
- Active Cases, Recoveries and Deaths
 - **Newly reported deaths yesterday were the lowest for a Thursday in 12 weeks. These were ~½ the number of deaths reported in mid-July; Yet, 70% more than early-June**
 - Deaths have been declining for past month (7-day average); These are at the lowest rate since July 10 and 1/3 of peak rate recorded on April 21
 - **Recoveries are on a steep upward climb, while active cases are declining; There are now 50% more recoveries than active cases, and ~20 recoveries for every death**

Over the past two weeks, infection spread has eased in Brazil, Ecuador, Panama, South Africa and United States; intensified in Argentina, Bahrain, Costa Rica, Israel and Spain

New Daily Infections / 1 Million Population

Trailing 7-Day Moving Average, As of August 27

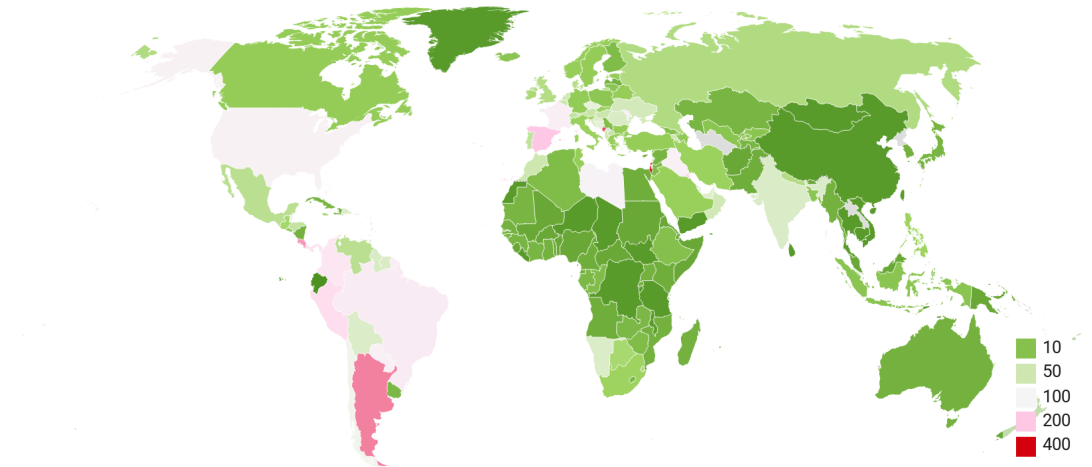


Health Industry Advisor LLC analysis

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

New Daily Infections / 1 Million Population

Trailing 7-Day Moving Average, As of September 10



Health Industry Advisor LLC analysis

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

Worldwide – Highest Current Rates of New Infections per Capita

Aruba leads the world in new infections per capita for the past week

Argentina, France, Israel and Spain are among countries which experienced increasing rates past 2 weeks; Brazil, Colombia, Peru and the U.S. experienced declining rates

New Infections / Million

Trailing 7-Day Moving Average, As of September 10

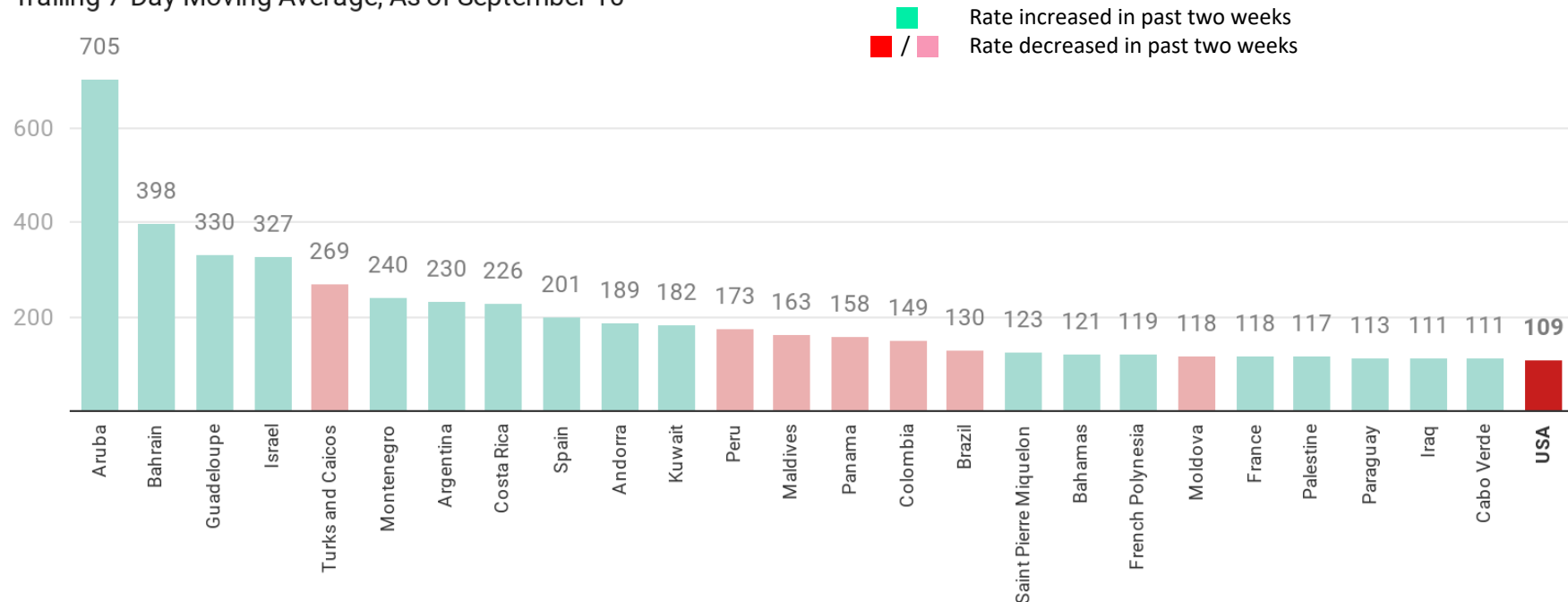


Chart: Health Industry Advisor LLC • Created with Datawrapper

Worldwide – Largest Changes in Rates of New Infections per Capita

Bahrain experienced the largest increase in its rate of new infections per capita in the past two weeks; Israel and Spain are high on this list

Several island nations experienced sharp declines in this rate; Brazil, Peru and the U.S. also experienced declines

Change in New Infections / Million

Trailing 7-Day Moving Average, September 10 v August 27

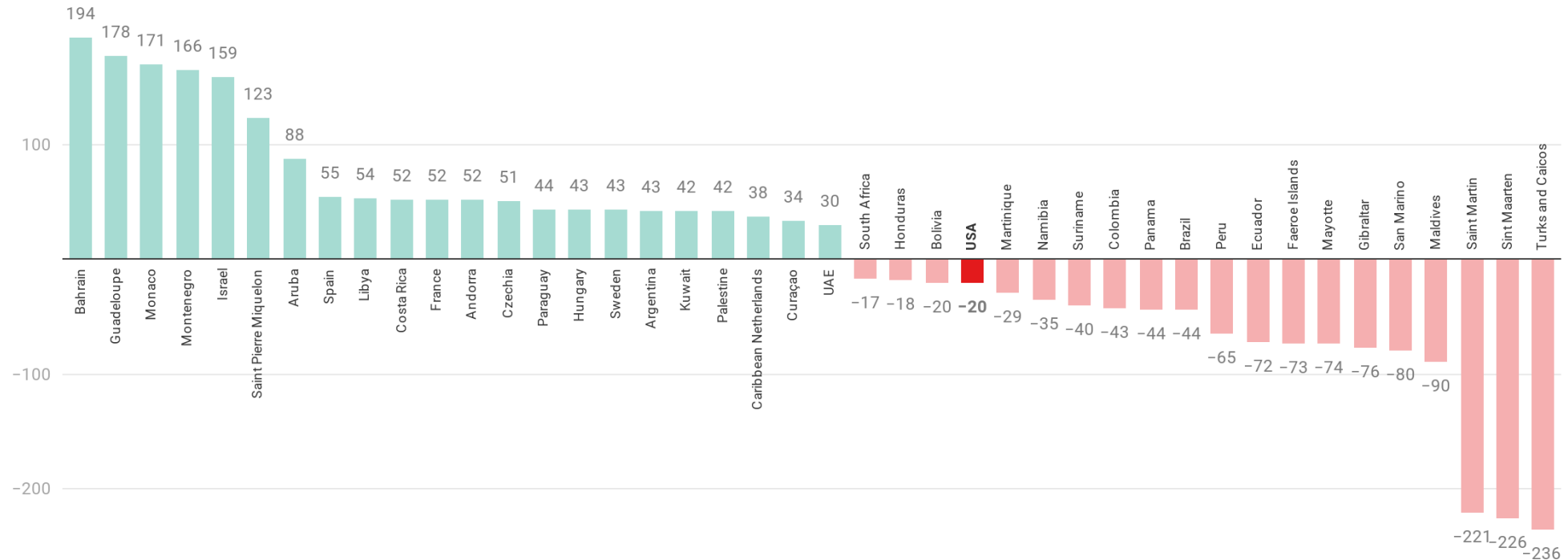
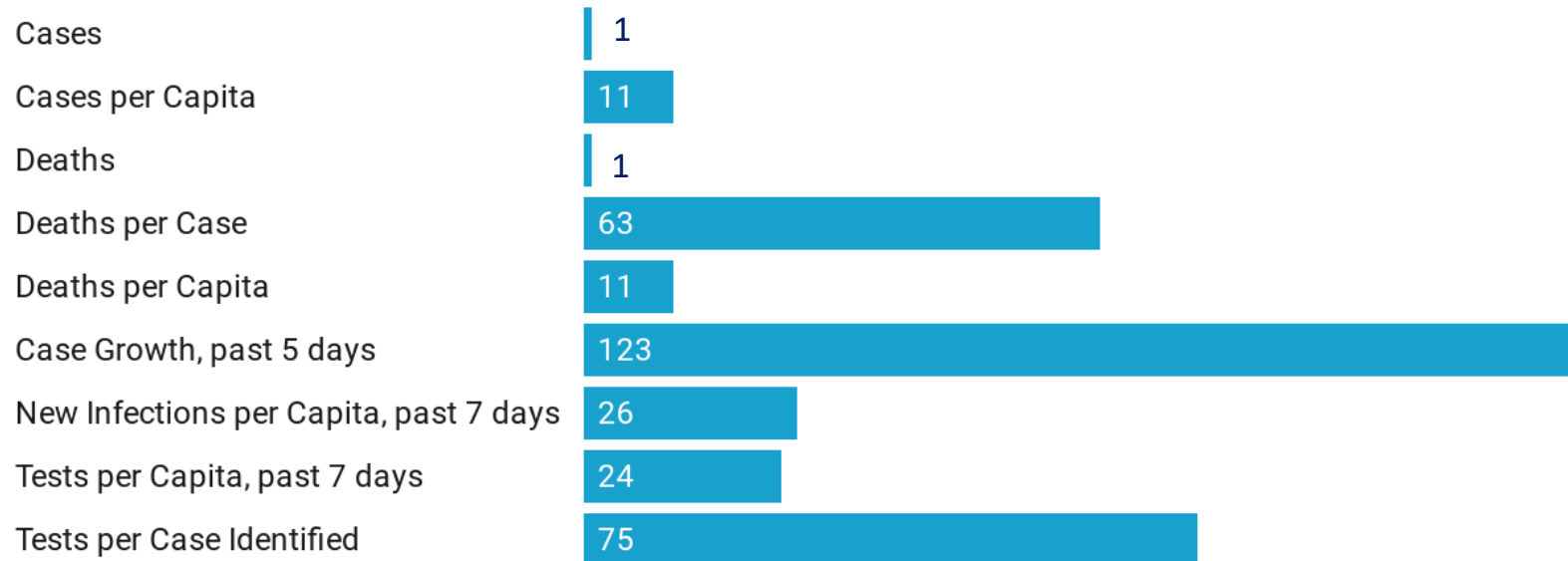


Chart: Health Industry Advisor LLC • Created with Datawrapper

United States remains high (unfavorable) in rankings of cases, deaths, and tests; low on tests per case identified (also unfavorable)
Since late August, however, U.S. has dropped 24 spots in case growth, and 5 spots on new infections per capita (both favorable moves)

United States Ranking

As of September 10



215 countries with at least 1 case

Chart: Health Industry Advisor LLC • Created with Datawrapper

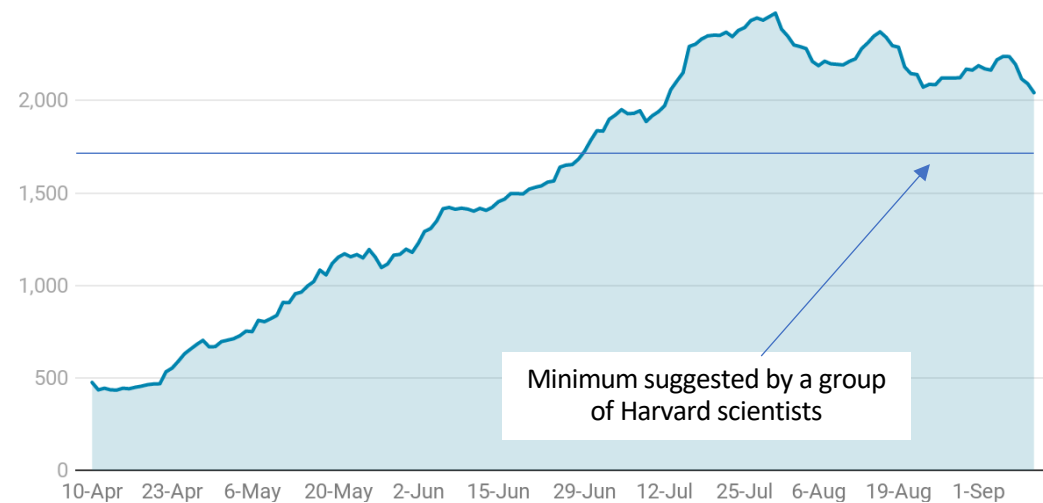
State	Cases per 1M Population	Rank, Cases/1 M	Death Rate	Rank, Death Rate	Deaths per 1 Million Population	Rank, Deaths/1 M	Tests per 1M Population Past 7 days	Rank, Tests/1 M	Test-Positive % (8-Day Moving Average)	Rank Test-Positive%	New Daily Cases Per 1M Population (7-Day M.A.)	Rank, New Cases/1 M	Tests / New Case
Alabama	27,648	(5)	1.7%	(35)	469	(20)	1,159	(42)	16	(3)	183	(6)	6
Alaska	8,229	(43)	0.7%	(51)	57	(51)	2,957	(7)	4	(36)	108	(27)	27
Arizona	28,439	(4)	2.5%	(21)	724	(9)	979	(46)	6	(27)	60	(38)	16
Arkansas	22,136	(14)	1.4%	(39)	311	(30)	2,787	(10)	8	(20)	176	(9)	16
California	19,026	(20)	1.9%	(32)	357	(25)	2,620	(14)	4	(38)	92	(33)	29
Colorado	10,451	(42)	3.3%	(15)	344	(26)	925	(47)	5	(30)	47	(42)	20
Connecticut	15,172	(33)	8.3%	(1)	1,256	(4)	3,656	(4)	1	(48)	35	(47)	103
Delaware	18,964	(21)	3.3%	(14)	630	(13)	1,782	(24)	7	(24)	119	(21)	15
District Of Columbia	20,421	(16)	4.3%	(9)	873	(8)	4,135	(2)	1	(46)	56	(40)	74
Florida	30,484	(2)	1.9%	(31)	574	(17)	882	(48)	13	(8)	118	(22)	7
Georgia	27,231	(6)	2.1%	(25)	584	(15)	1,775	(25)	9	(15)	159	(11)	11
Hawaii	7,269	(45)	0.9%	(49)	66	(50)	3,213	(6)	4	(37)	110	(26)	29
Idaho	19,317	(19)	1.2%	(43)	227	(36)	858	(51)	16	(5)	135	(17)	6
Illinois	20,326	(17)	3.3%	(16)	668	(11)	4,682	(1)	4	(35)	149	(13)	31
Indiana	15,187	(32)	3.3%	(12)	507	(18)	1,297	(37)	9	(17)	114	(24)	11
Iowa	22,910	(12)	1.7%	(36)	383	(23)	1,499	(32)	15	(6)	226	(3)	7
Kansas	16,600	(29)	1.0%	(47)	173	(42)	1,087	(43)	16	(4)	186	(8)	6
Kentucky	12,260	(37)	1.9%	(30)	232	(35)	1,281	(39)	10	(12)	124	(19)	10
Louisiana	33,432	(1)	3.3%	(13)	1,110	(5)	2,871	(9)	5	(29)	147	(14)	20
Maine	3,541	(50)	2.8%	(20)	100	(47)	3,492	(5)	0	(50)	15	(49)	230
Maryland	18,800	(23)	3.4%	(11)	633	(12)	1,562	(30)	6	(26)	96	(31)	16
Massachusetts	17,700	(25)	7.4%	(3)	1,319	(3)	2,152	(18)	2	(45)	41	(46)	52
Michigan	12,101	(38)	5.7%	(6)	690	(10)	2,675	(12)	3	(42)	80	(36)	33
Minnesota	14,584	(34)	2.4%	(23)	343	(27)	1,193	(41)	9	(18)	105	(30)	11
Mississippi	29,677	(3)	3.0%	(19)	892	(7)	1,280	(40)	12	(9)	154	(12)	8

State	Cases per 1M Population	Rank, Cases/1 M	Death Rate	Rank, Death Rate	Deaths per 1 Million Population	Rank, Deaths/1 M	Tests per 1M Population Past 7 days	Rank, Tests/1 M	Test-Positive % (8-Day Moving Average)	Rank Test-Positive%	New Daily Cases Per 1M Population (7-Day M.A.)	Rank, New Cases/1 M	Tests / New Case
Nebraska	19,320	(18)	1.2%	(44)	222	(37)	1,577	(28)	9	(14)	141	(15)	11
Nevada	23,553	(10)	2.0%	(29)	464	(21)	1,023	(45)	11	(11)	108	(28)	9
New Hampshire	5,570	(49)	5.7%	(5)	319	(28)	1,028	(44)	2	(43)	24	(48)	43
New Jersey	22,399	(13)	8.1%	(2)	1,817	(1)	2,954	(8)	1	(47)	6	(50)	523
New Mexico	12,604	(36)	3.1%	(18)	389	(22)	2,190	(17)	2	(44)	42	(45)	52
New York	24,419	(9)	7.0%	(4)	1,702	(2)	3,933	(3)	1	(49)	43	(44)	92
North Carolina	17,200	(27)	1.7%	(37)	285	(33)	2,370	(15)	5	(32)	112	(25)	21
North Dakota	18,953	(22)	1.1%	(46)	210	(39)	1,573	(29)	22	(1)	340	(1)	5
Ohio	11,481	(39)	3.2%	(17)	373	(24)	2,088	(20)	4	(34)	85	(35)	24
Oklahoma	16,800	(28)	1.3%	(41)	221	(38)	2,118	(19)	10	(13)	205	(5)	10
Oregon	6,794	(47)	1.7%	(34)	118	(45)	876	(50)	5	(31)	45	(43)	20
Pennsylvania	11,462	(40)	5.4%	(7)	618	(14)	882	(49)	7	(25)	58	(39)	15
Rhode Island	21,505	(15)	4.7%	(8)	1,007	(6)	2,654	(13)	3	(40)	86	(34)	31
South Carolina	24,587	(8)	2.4%	(24)	578	(16)	1,749	(27)	8	(21)	136	(16)	13
South Dakota	17,800	(24)	1.1%	(45)	200	(41)	1,407	(35)	17	(2)	242	(2)	6
Tennessee	24,621	(7)	1.2%	(42)	291	(32)	2,677	(11)	7	(23)	182	(7)	15
Texas	23,520	(11)	2.1%	(27)	490	(19)	1,467	(34)	8	(19)	128	(18)	11
Utah	17,400	(26)	0.8%	(50)	134	(44)	1,342	(36)	9	(16)	120	(20)	11
Vermont	2,662	(51)	3.5%	(10)	93	(48)	1,471	(33)	0	(51)	5	(51)	268
Virginia	15,292	(31)	2.1%	(28)	317	(29)	1,539	(31)	8	(22)	115	(23)	13
Washington	10,637	(41)	2.5%	(22)	261	(34)	1,907	(22)	3	(41)	54	(41)	35
West Virginia	6,724	(48)	2.1%	(26)	144	(43)	1,814	(23)	5	(28)	94	(32)	19
Wisconsin	14,578	(35)	1.4%	(40)	205	(40)	1,293	(38)	14	(7)	172	(10)	8
Wyoming	7,255	(46)	1.0%	(48)	73	(49)	1,925	(21)	3	(39)	64	(37)	30

Testing refers to tests for active infection, as reported via state health agencies; does not reflect antibody testing for prior infection

Daily Tests Per 1 Million - United States

Trailing 7-Day Moving Average, As of September 10

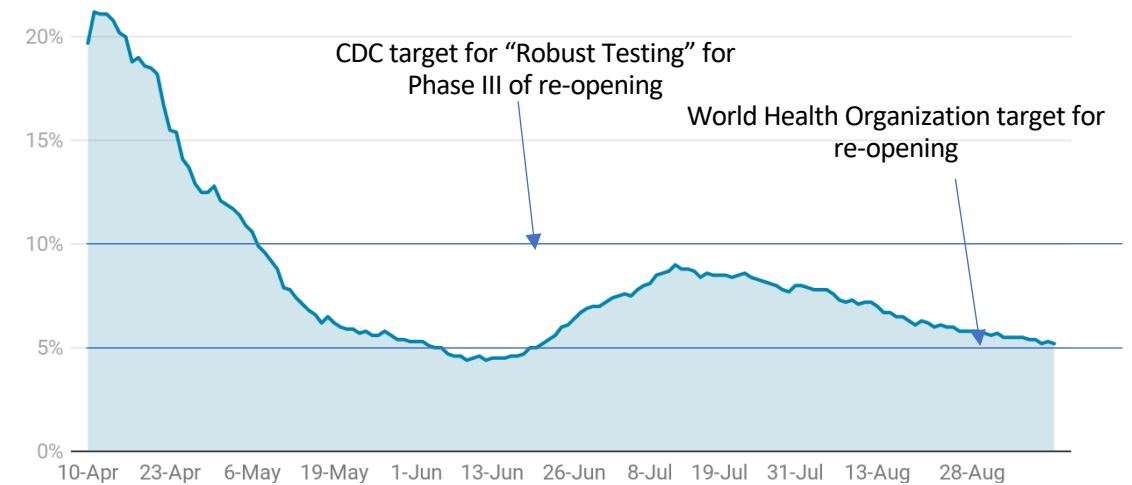


Health Industry Advisor LLC analysis

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 September 10



Health Industry Advisor LLC analysis

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

Note: On August 11, North Carolina made a significant adjustment, removing 220,000 tests from their YTD totals. We manually removed this negative adjustment from the August 11 data to better reflect actual testing for that date

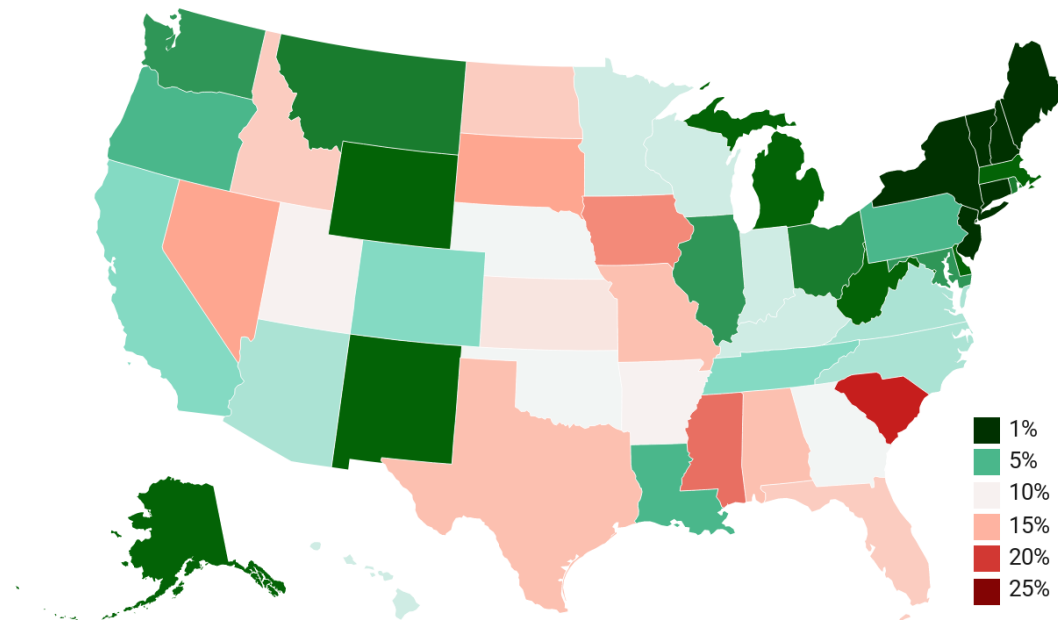
Note: Due to a computer glitch, Washington batch-reported on August 26 all its negative test results from August 1-25. We "smoothed" the data, by applying a constant test-positive rate to estimate the negative tests by day for this period

Eleven states currently have test-positive rates above the CDC-target (10%) for Phase III re-opening; Kansas, North Dakota, South Dakota and Wisconsin's rates have worsened in last two weeks
Rates have improved in California, Minnesota, Mississippi, South Carolina and Texas

Testing refers to tests for active infection, as reported via state health agencies; does not reflect antibody testing for prior infection

Test-Positive Rate

Trailing 7-Day Moving Average, As of August 27

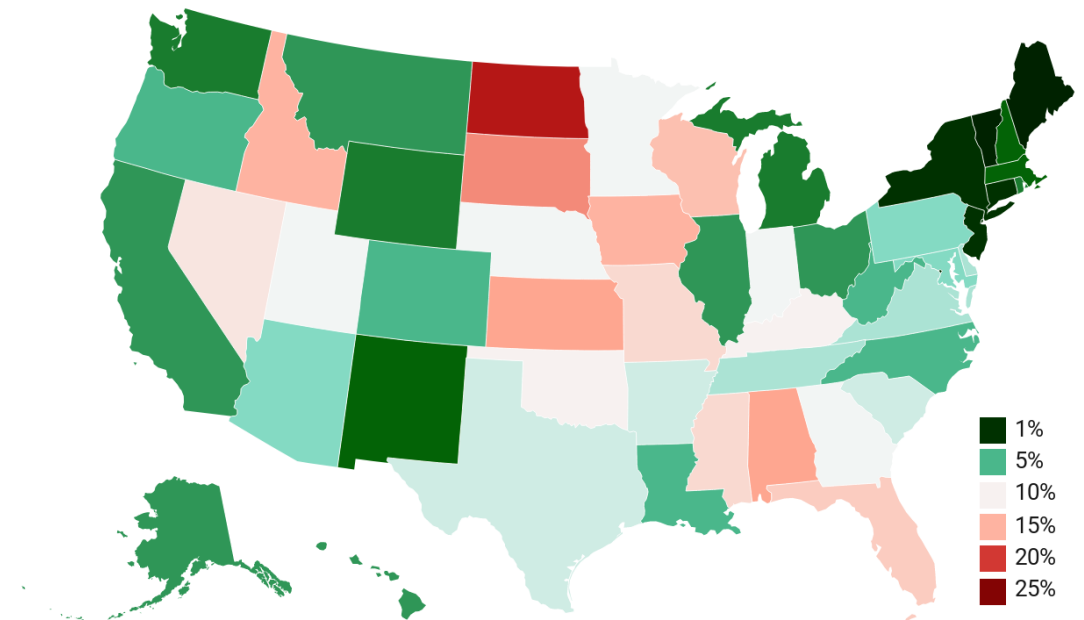


Health Industry Advisor LLC analysis

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 September 10

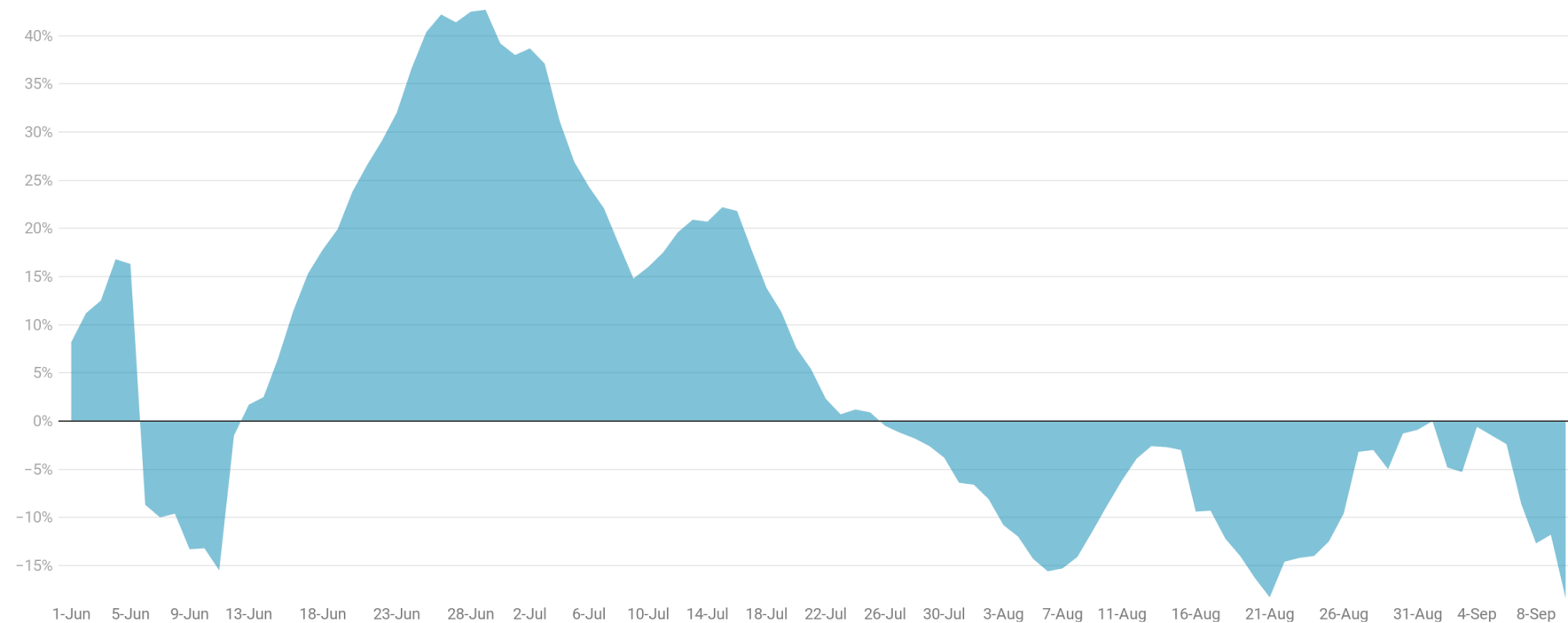


Health Industry Advisor LLC analysis

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

Week-Over-Week Change In New Cases

Through September 10

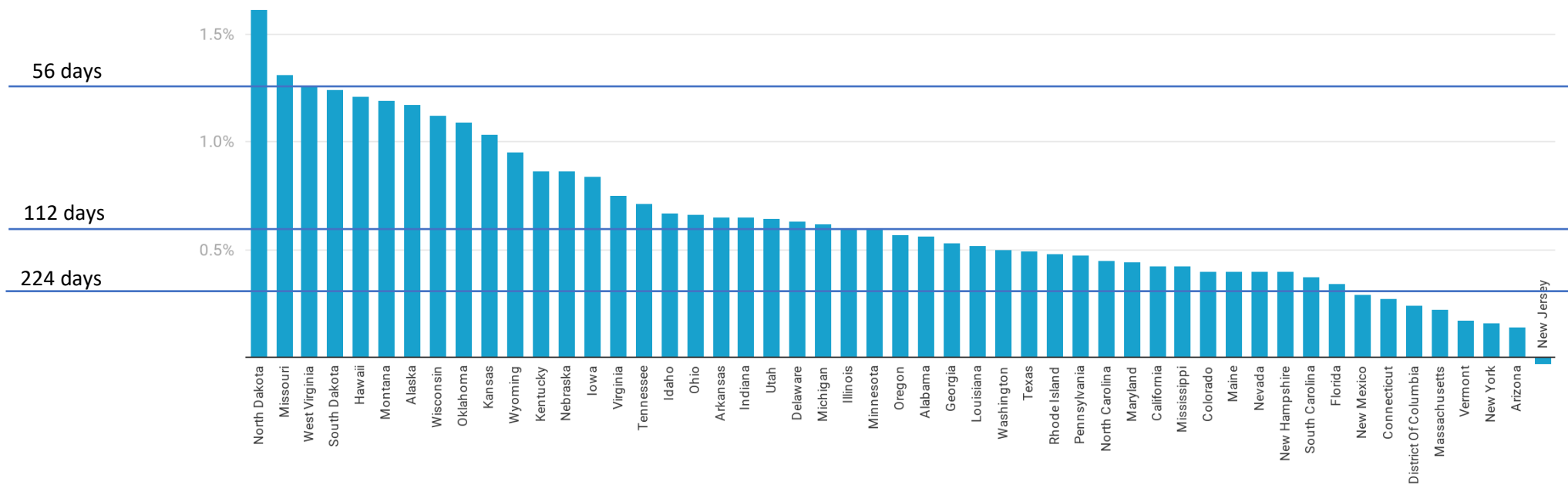


Health Industry Advisor LLC analysis

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

Growth Rate in Total Cases

Trailing 5-Day Moving Average, Through September 10



Health Industry Advisor LLC analysis

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

Thursday's Experience— New Cases

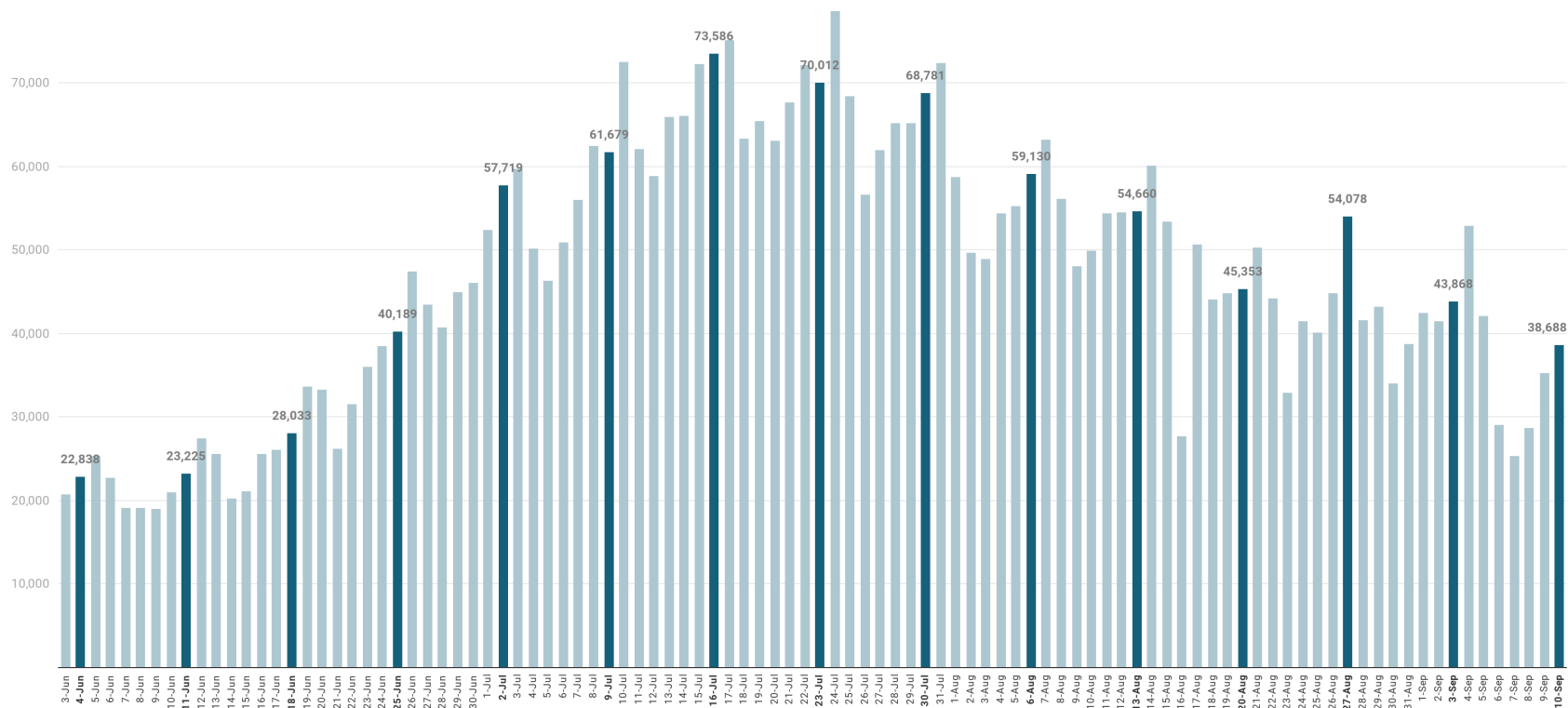
New cases on Thursday were lowest on a Thursday in 12 weeks

New cases were less than ½ peak July levels yet, 60% higher than early-June levels

New Daily Cases

Through September 10

Thursdays Highlighted

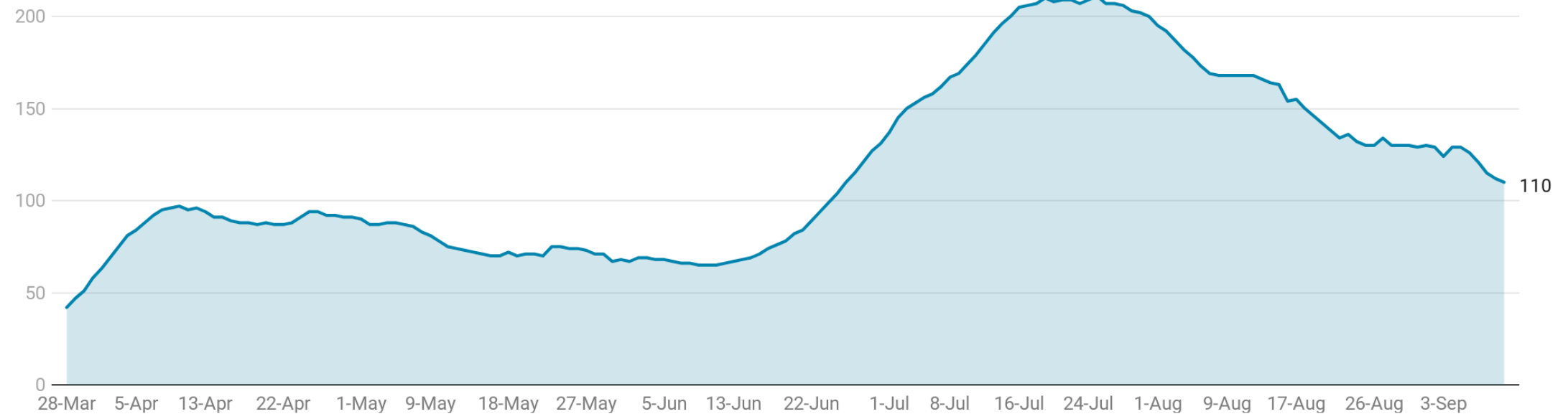


Note the daily pattern: new cases are typically low on Sunday, then increase each day through the week. While we have been noting this for the past few weeks, researchers from MIT, Boston University and Harvard Medical School confirmed this in [a report published by CIDRAP on August 17](#)

New infections per capita* dropped again yesterday, to its lowest point since June 25
Rate has dropped 48% since July 22; yet, 68% higher than June 11 low

New Infections Per 1 Million Population - United States

Trailing 7-Day Moving Average, Through September 10



Health Industry Advisor LLC analysis

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

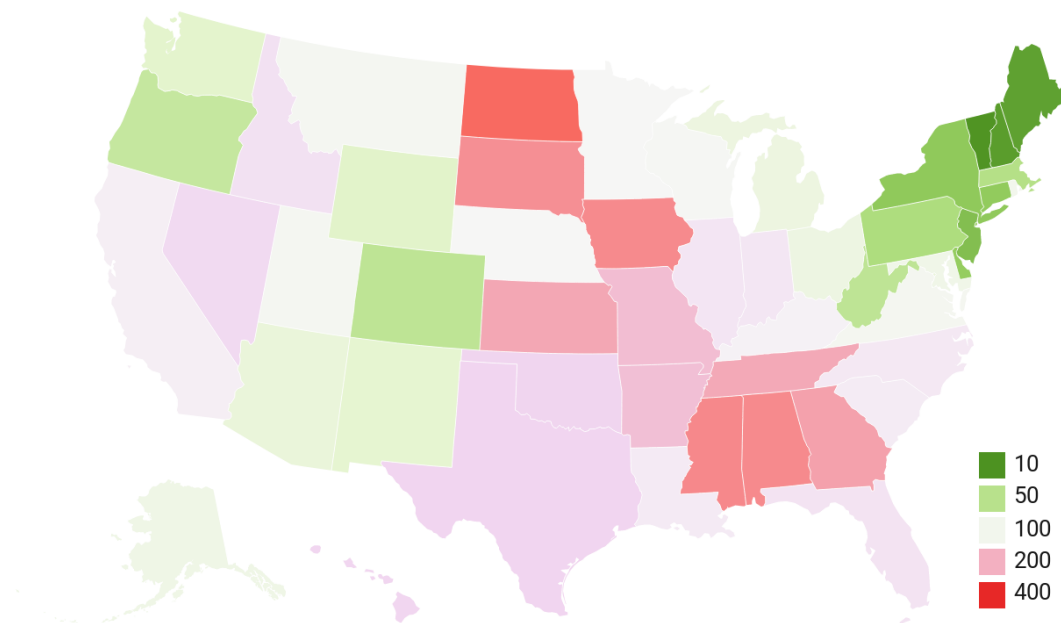
* - per million per day, trailing 7-day moving average

State-By-State - New Infection Rates

Over the past two weeks, infection rates have remained high in the Midwest;
intensified in Missouri, North Dakota, Oklahoma and Wisconsin
Rates have eased throughout the Southeast and West

New Daily Infections Per 1 Million Population

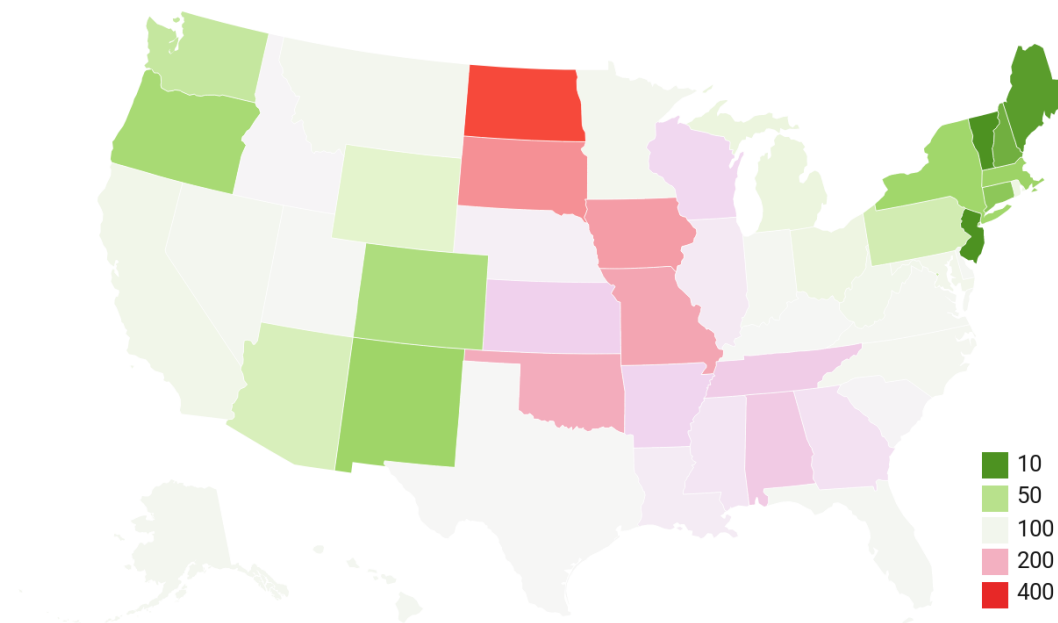
Trailing 7-Day Moving Average, As of August 27



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 September 10



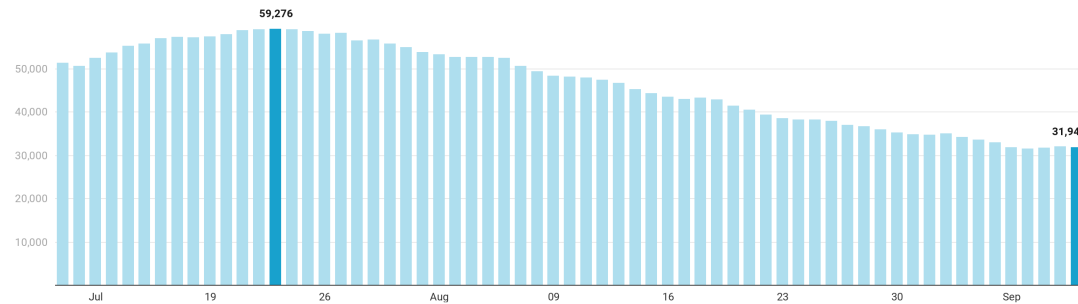
Map: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Healthcare Resource Use – COVID-19

Stress placed on the U.S. healthcare system by COVID-19 has eased since mid-July. However, % of ER visits for influenza-like illnesses and Shortness-of-Breath picked up on both Sunday and Monday.

Hospital Census: COVID-19 Patients

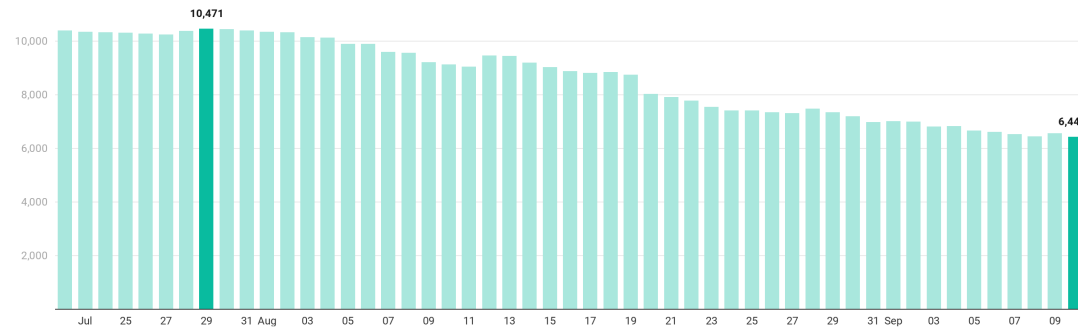
As of September 10



Florida data first available on July 10

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

COVID-19 ICU Census

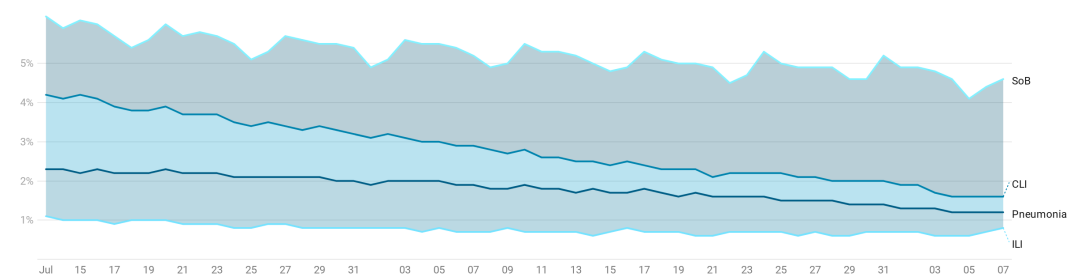


For states reporting these data: AZ, CA, ID, IL, IN, IA, KS, KY, ME, MD, MA, MI, MN, MS, NV, NJ, NY, NC, OH, OK, OR, RI, SC, TX, UT, VA, WI & WY

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

% of Emergency Department Visits for COVID-Like Illness (CLI), Influenza-Like Illness (ILI), Pneumonia & Shortness of Breath (SoB)

As of September 7

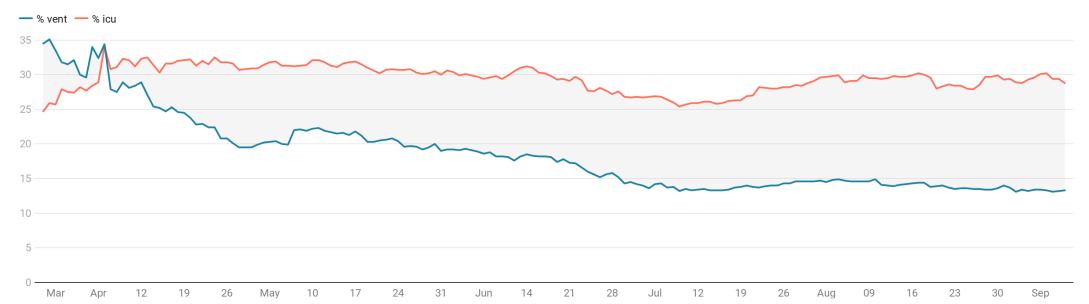


Health Industry Advisor LLC analysis

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

Severity of Hospitalized Patients

% of patients on ventilators and in the ICU, As of September 10



Health Industry Advisor LLC analysis

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

Thursday's Experience – Newly Reported Deaths

Newly reported deaths yesterday were the lowest for a Thursday in 12 weeks
 ~½ deaths reported in mid-July; Yet, 70% more than early-June

New Reported Deaths

Through September 10

Thursdays Highlighted

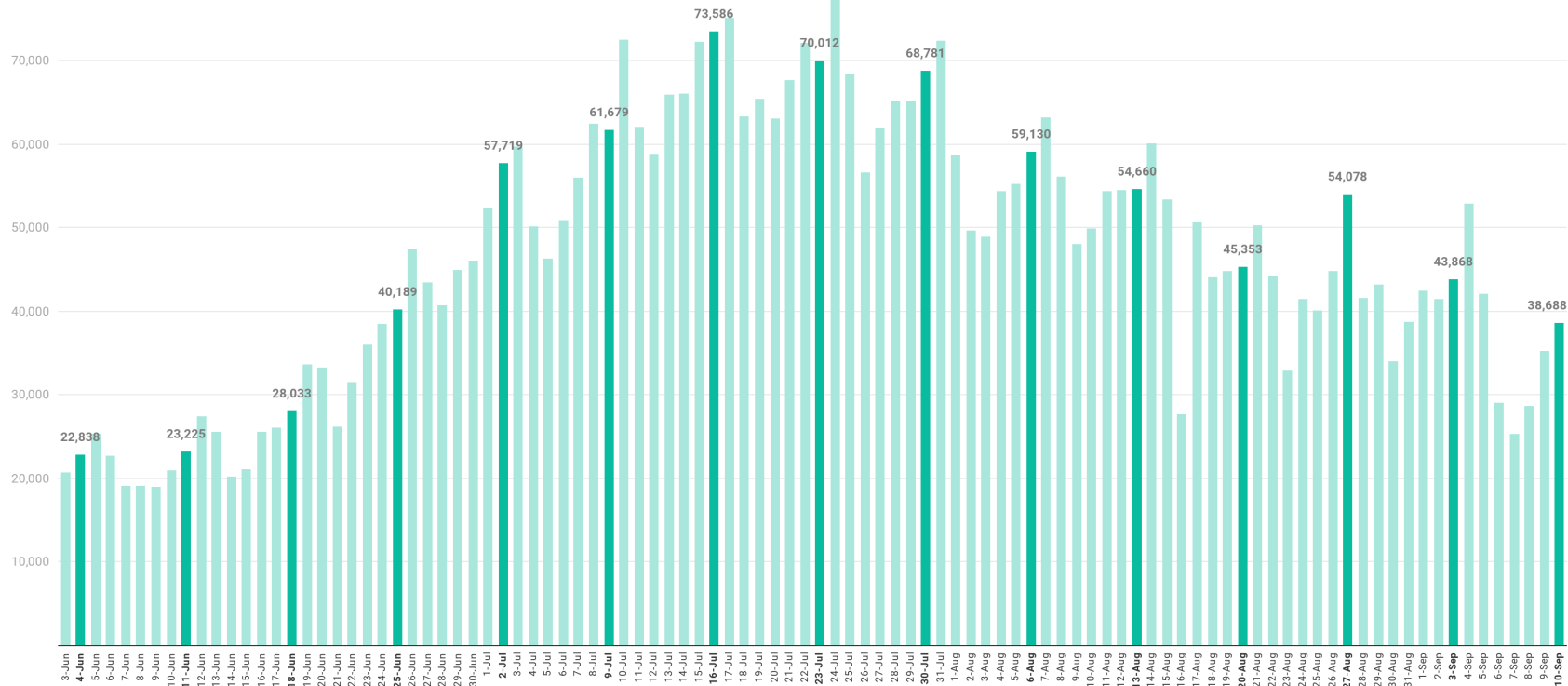
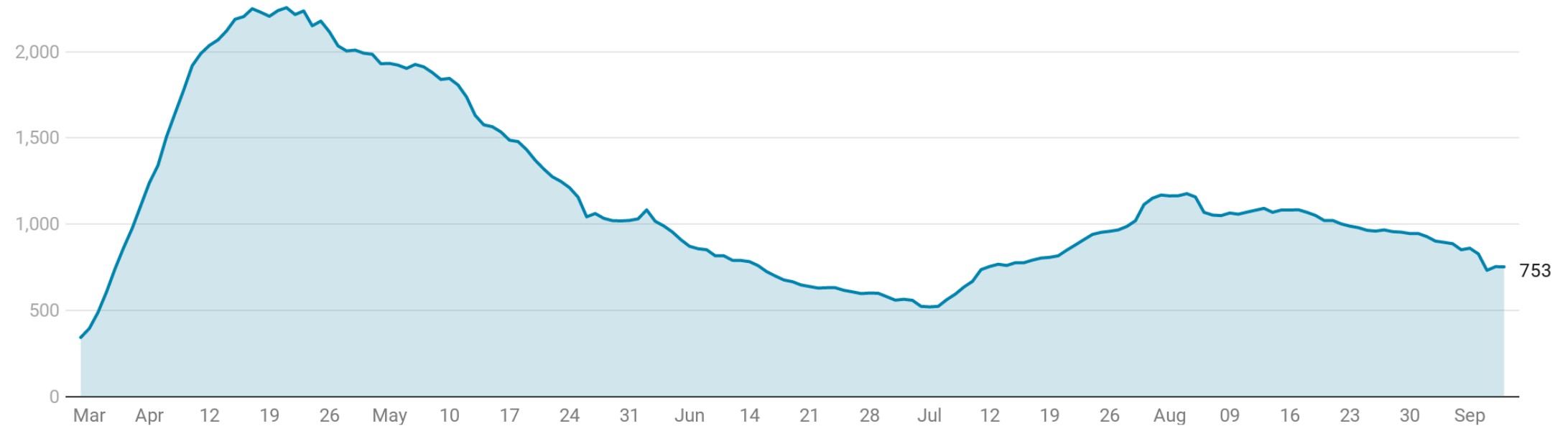


Chart: Health Industry Advisor LLC • Source: eoridometers.info • Created with Datawrapper

Deaths Reported With Coronavirus in the U.S.

Trailing 7-Day Moving Average, As of September 10



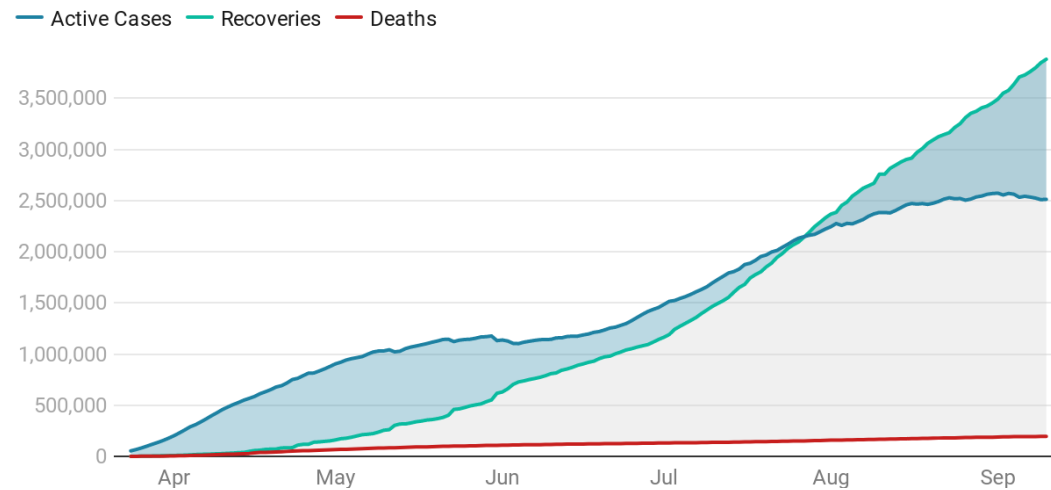
Health Industry Advisor LLC analysis

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

Recoveries are on a steep upward climb, while active cases are declining 50% more recoveries than active cases at this point; ~20 recoveries for every death

Active Cases v. Recoveries & Deaths

Through September 10

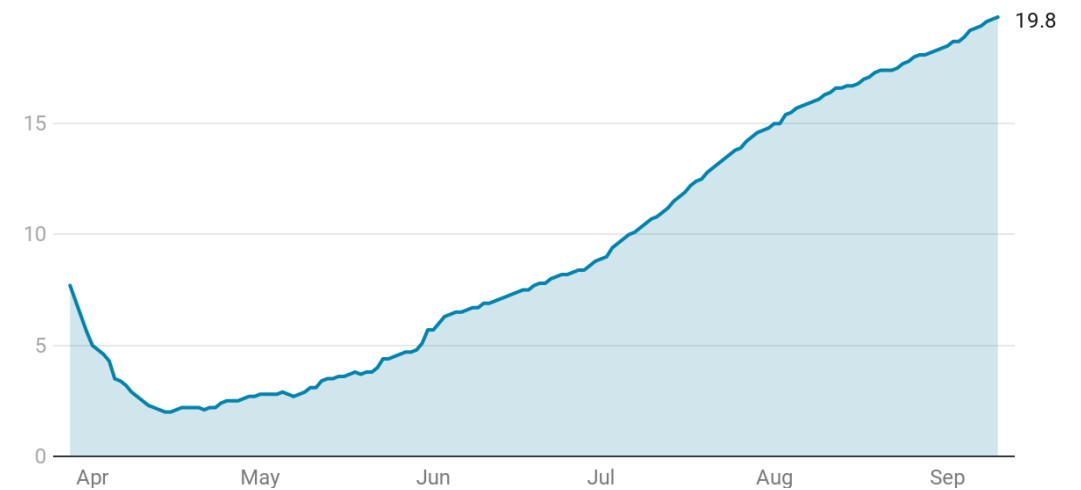


Health Industry Advisor LLC analysis

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

Recoveries: Deaths - United States

As of September 10



Health Industry Advisor LLC analysis

Chart: Health Industry Advisor LLC • Source: worldometers.info • 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>
- COVID-19 Projections Using Machine Learning, <https://covid19-projections.com>