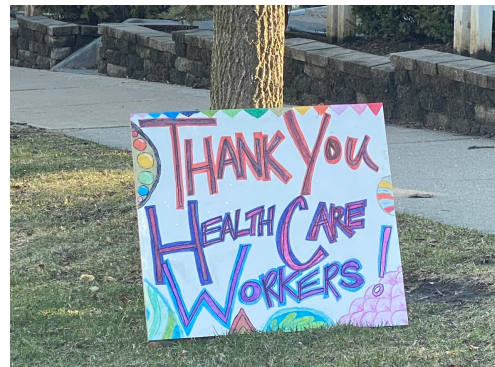
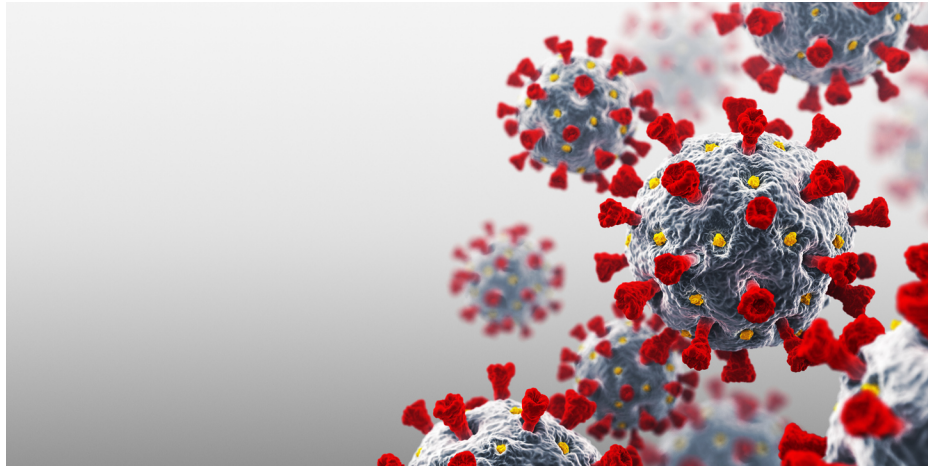
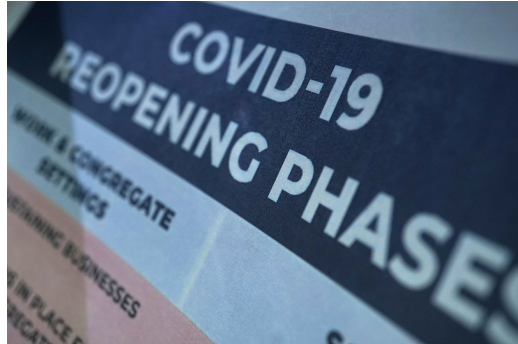




COVID-19 Report

Issue # 150

Monday, August 31, 2020

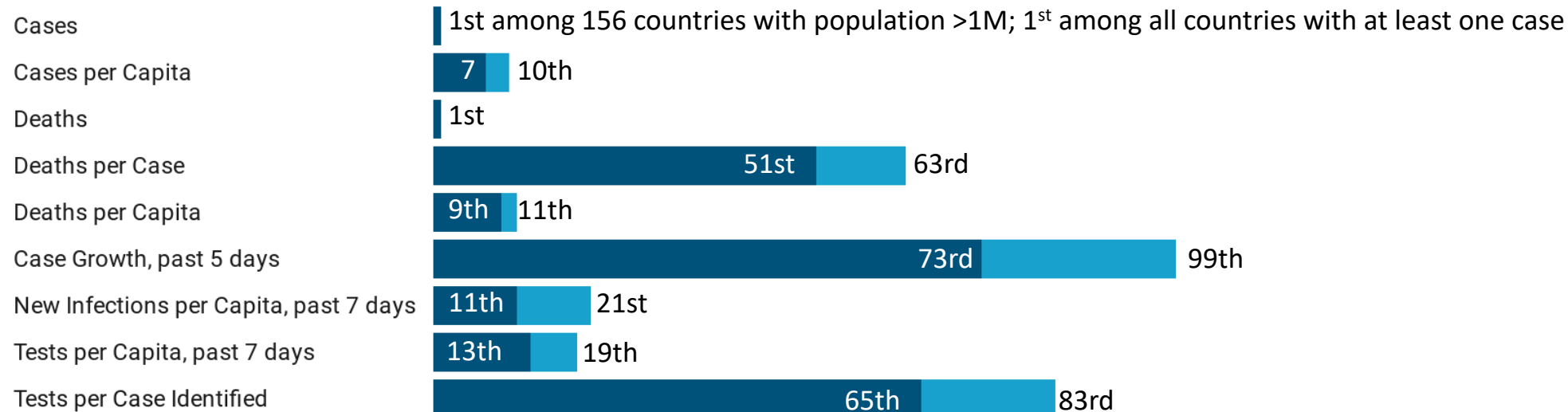
- **The intense virus spread has shifted to the Heartland and Upper Midwest, while infection rates have eased in the Southeast and West**
 - Iowa and the Dakotas have joined Mississippi with the dubious distinction of having the highest current rates of new infections. While Mississippi's rate is declining, however, rates in Iowa and the Dakotas are rising
 - Alabama, Arkansas, Georgia, Kansas, Missouri and Tennessee had the next highest infection rates over the past seven days
- **Overall, the infection rate has plateaued in the United States over the past six days;** this comes after having declined nearly 40% in the prior 5 1/2 weeks
- Internationally, the highest infection rates among mainland countries are found in South America - Argentina, Brazil, Columbia and Peru. **Spain has seen a recent spike in cases and is now among the counties with the highest new infection rates**
- New cases were down 1.4% on a week-over-week basis and have not increased on this basis since July 19-25
- **New cases on the weekend were mostly lower than the prior nine weekends:** On Sunday, they were higher than last Sunday but, lower than the prior eight Sundays. Cases on Saturday were lower than each of the prior nine Saturdays. (These new cases follow a distinct day-of-week pattern: lowest on weekends, then increasing each day-of-week from Monday through Thursday or Friday.)
- **Testing in the United States has returned to favorable trends:**
 - For the past seven days, test volumes was higher than for any time in the past ten days. **On a week-over-week basis, volume was up nearly 16% through yesterday**
 - **Test-positive rates for the past seven days fell again yesterday and were lower than any seven-day period in nearly ten weeks.** Fourteen states, nonetheless, reported test-positive rates > 10% for the past week; Twenty-three states plus the District of Columbia prepared rates of 5% or lower
- **Hospital census for COVID-19 patients declined again on Sunday, marking the 33rd time in the past 38 days that census declined. During this time, this census fell by 40%. ICU census fell too and is down more than 30% since mid-July**
- ER visits for COVID-9 like illnesses continued to trend down - a trend that began in early July. Flu-related visits have yet to pick-up - a typical Fall experience that would increase stress on the healthcare system
- **Deaths have been trending down for the past three weeks, and have averaged under 1,000 per day since August 11-17**

U.S. ranks high in cases, deaths, cases/capita, deaths/capita; lower in deaths/case and case growth rate. Tests/capita is reasonably favorable

United States Ranking

As of August 30

■ 1M+ Pop ■ All



156 Countries with 1M+ Population; All: 215 countries with at least 1 case

Created with Datawrapper

United States

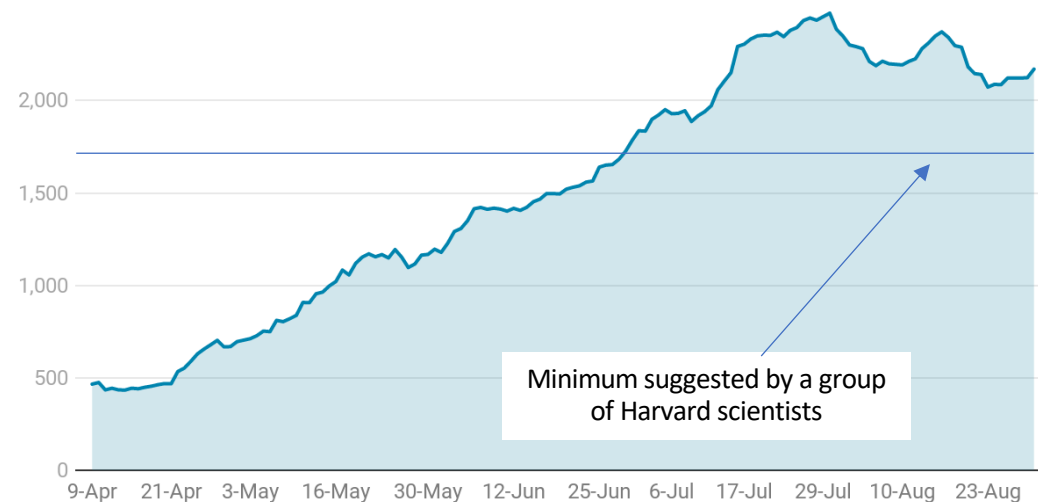
Test volume continued to trend up over the weekend; For the past 7 days, volume was highest since August 14-20

Test-positive yet continued its downward trend; For the past 7 days, rate is the lowest since June 17-23

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 August 30

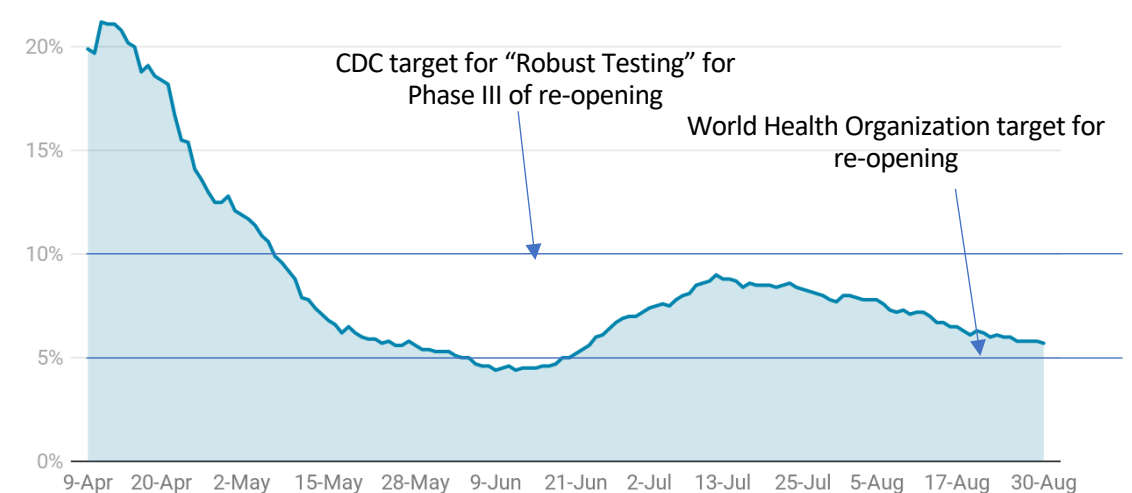


Health Industry Advisor LLC analysis

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 August 30



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

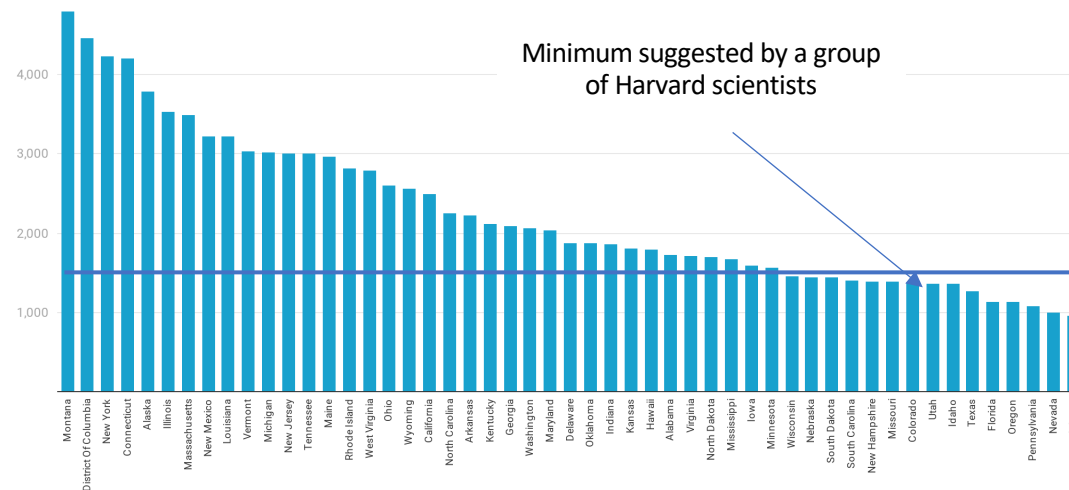
State-By-State

Thirty-five states were above minimum-suggested testing rates for the past week
 Fourteen states have test-positive rates above the CDC-target (10%) for Phase III re-opening; Twenty-three states (and, D.C.) have rates $\leq$ the stricter WHO target (5%)

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 Population

Trailing 7-Day Moving Average, As of August 30

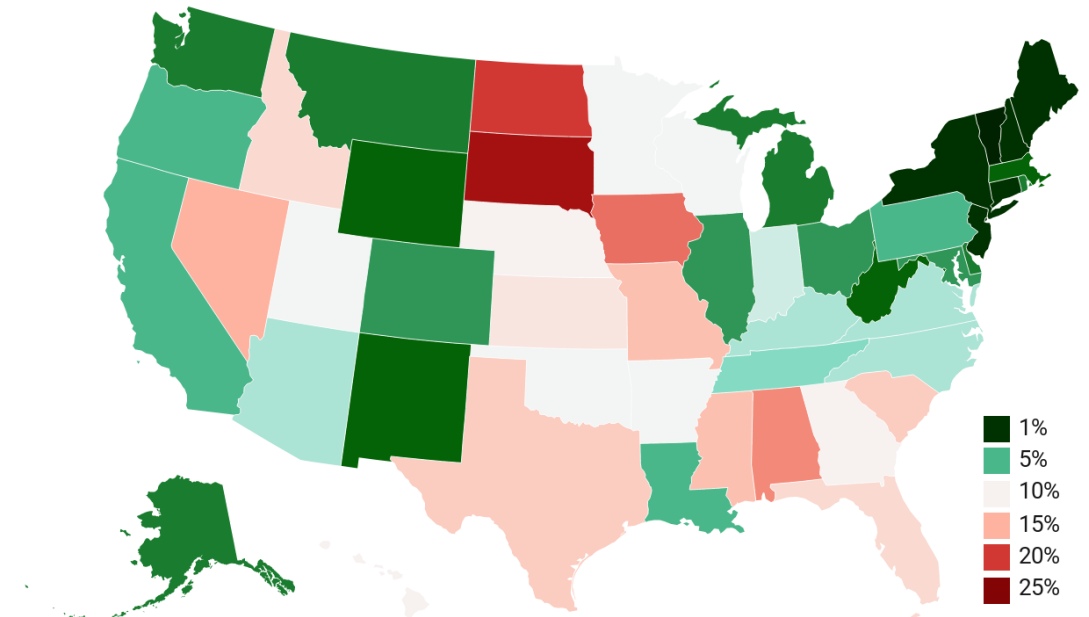


Health Industry Advisor LLC analysis

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

Test-Positive Rate

Trailing 7-Day Moving Average, As of August 30



Health Industry Advisor LLC analysis

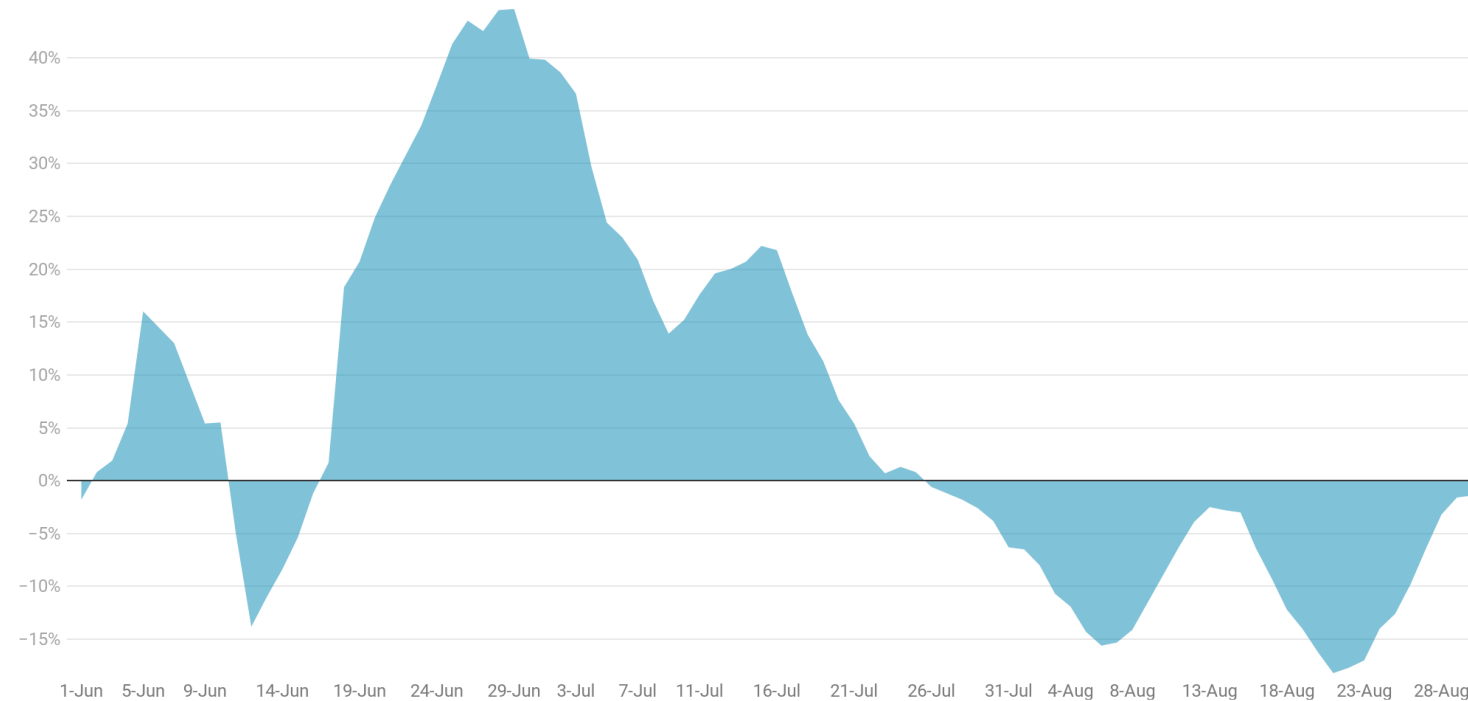
Map: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

United States

Week-over-week, new cases are down 1.4%; new cases haven't increased week-over-week since July 25

Week-Over-Week Change In New Cases

Through August 30

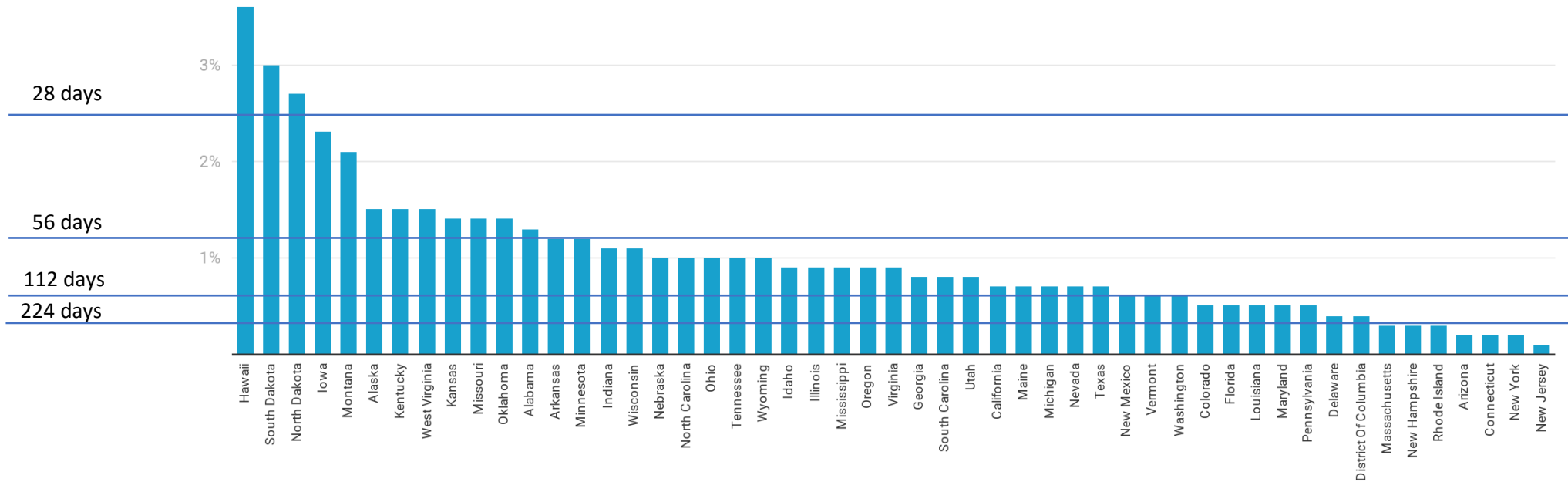


Health Industry Advisor LLC analysis

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

Growth Rate in Total Cases

Trailing 5-Day Moving Average, Through August 30



Health Industry Advisor LLC analysis

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

Thursday's Experience— New Cases & Deaths

New cases on Sunday were higher than last Sunday yet, lower than previous 8 Sundays;

New cases on Saturday were lower than each of the past 9 Saturdays

Fewest deaths reported on Sunday in the past 8 Sundays; Fewest on Saturday in 5 Saturdays

New Daily Cases

Through August 30

Saturdays & Sundays Highlighted

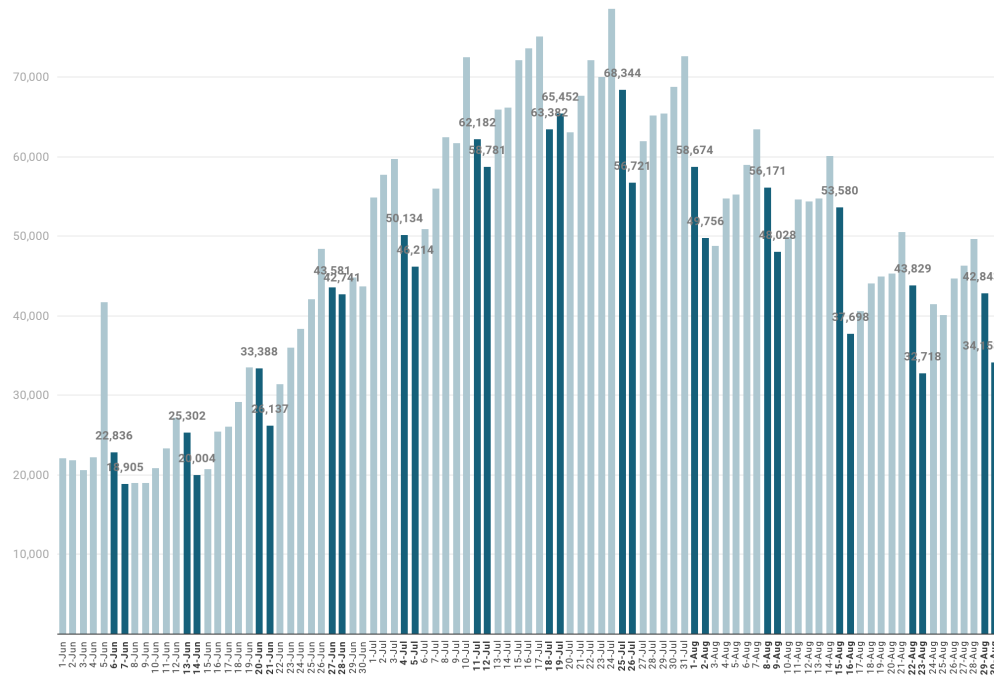


Chart: Health Industry Advisor LLC • Source: eorlometers.info • Created with Datawrapper

Newly Reported Deaths

Through August 30

Saturdays & Sundays Highlighted

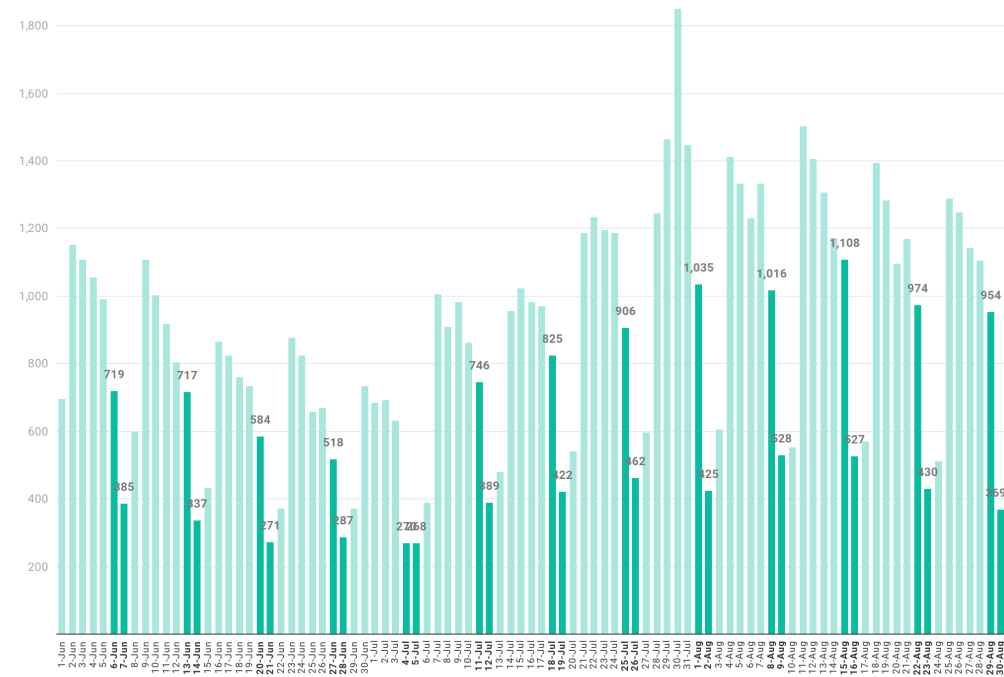


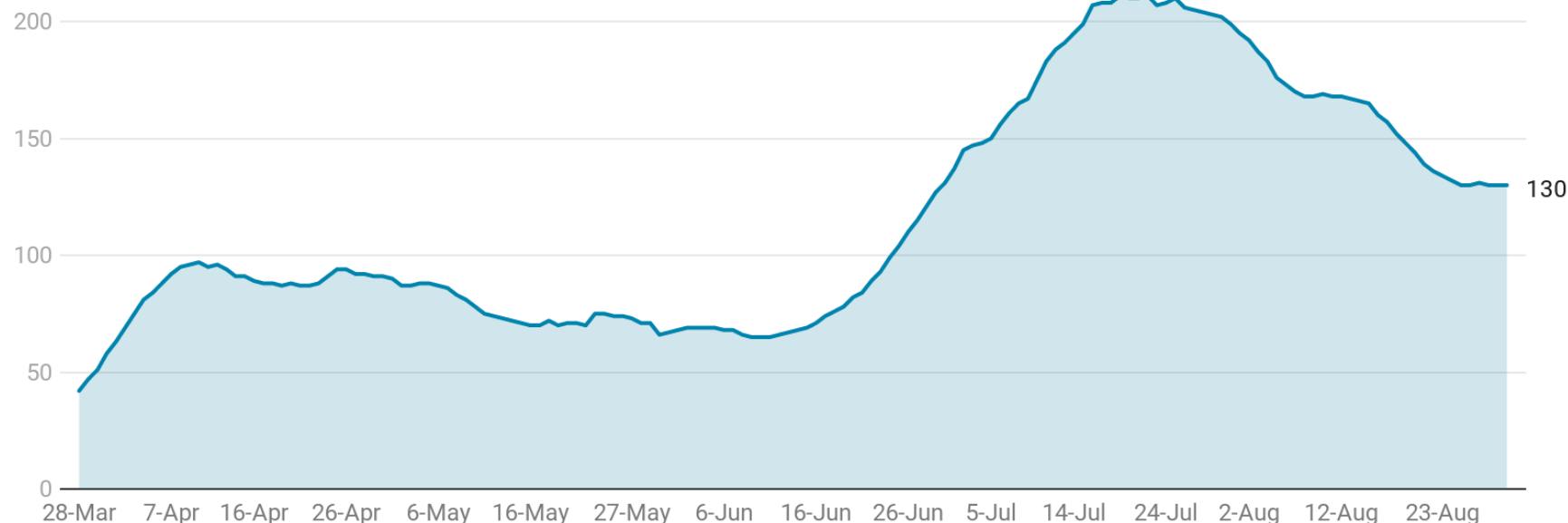
Chart: Health Industry Advisor LLC • Source: eorlometers.info • Created with Datawrapper

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* has been essentially flat for the past 6 days, pausing the gradual decline from July 25 – August 24

New Infections Per 1 Million Population - United States

Trailing 7-Day Moving Average, Through August 30



Health Industry Advisor LLC analysis

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

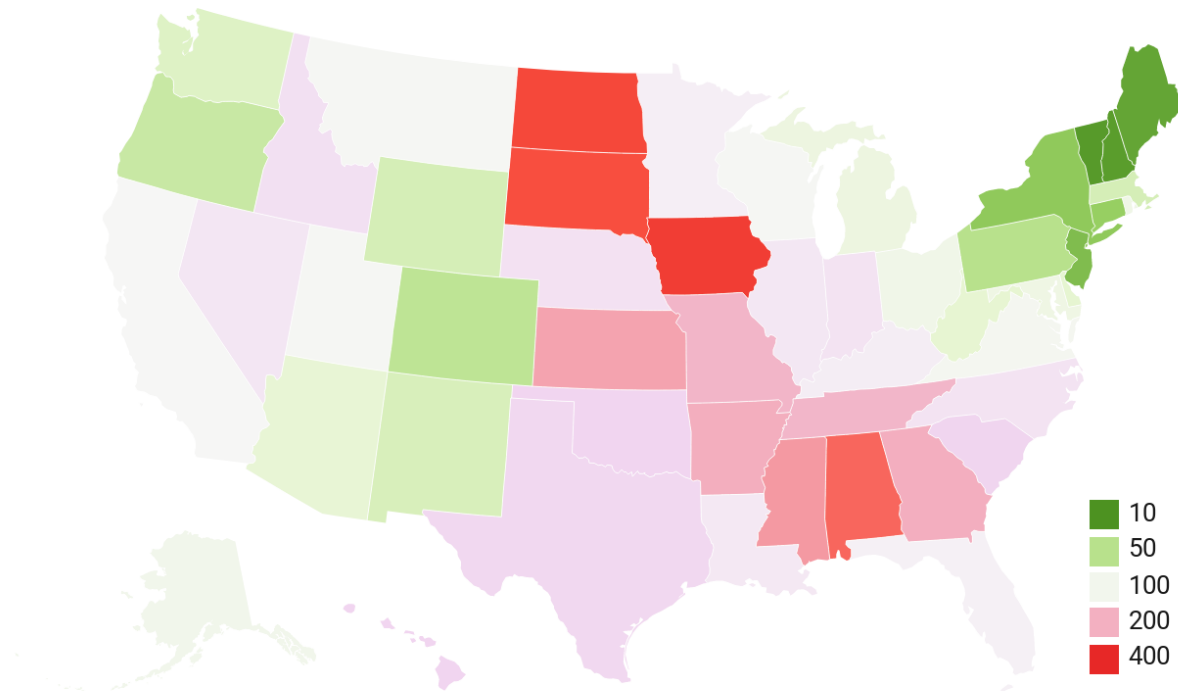
* - per million per day, trailing 7-day moving average

State-By-State – New Infections per Capita

As infection rates have eased across the Southeast and West, the Heartland is now experiencing accelerating infections. Rates are particularly high in Iowa and the Dakotas

New Daily Infections Per 1 Million Population

Trailing 7-Day Moving Average, As of August 30



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

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

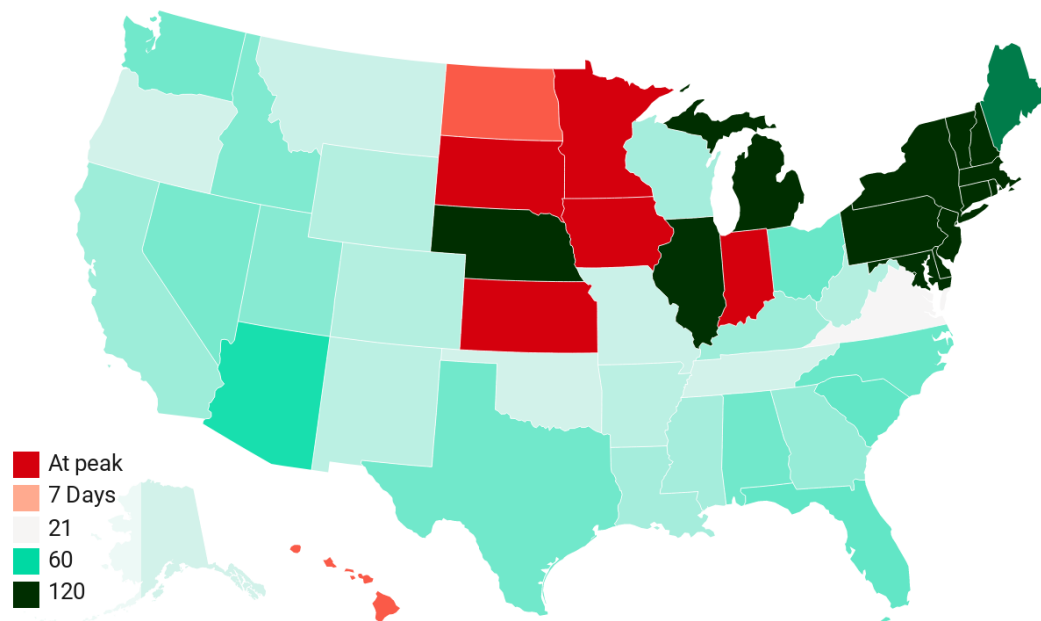
United States

Eight states experienced their peak infection rate in the past 4 weeks; 15 states have gone more than 60 days since setting their peak rate

Nine states are within 10% of their peak rate; 12 states have seen their rates drop by at least 2/3 from peak levels

Days Since Peak New Infections Per Capita

Trailing 7-Day Moving Average, As of August 30



Health Industry Advisor LLC analysis

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

New Daily Infections / Million - Current Rate as % of Peak

Trailing 7-Day Moving Average, As of August 30

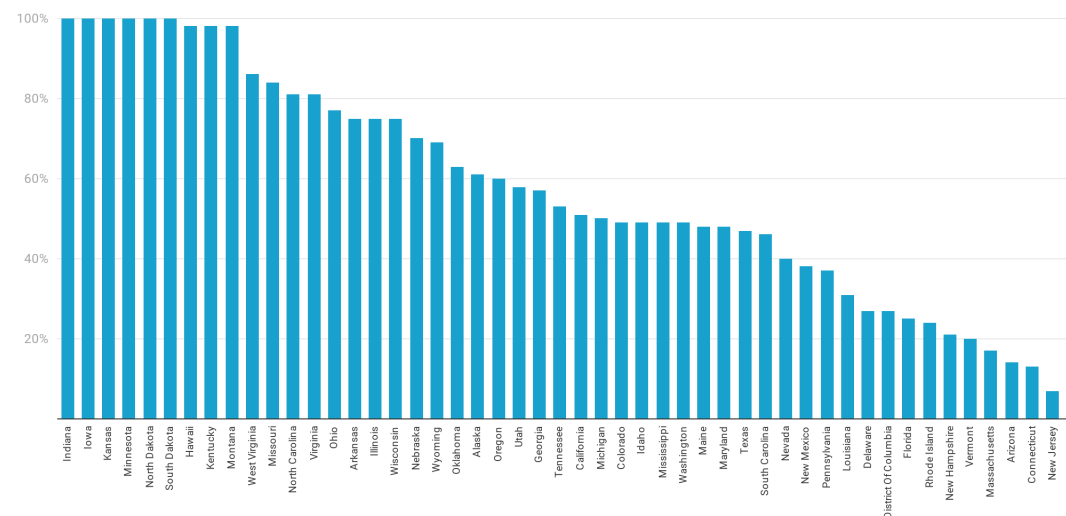
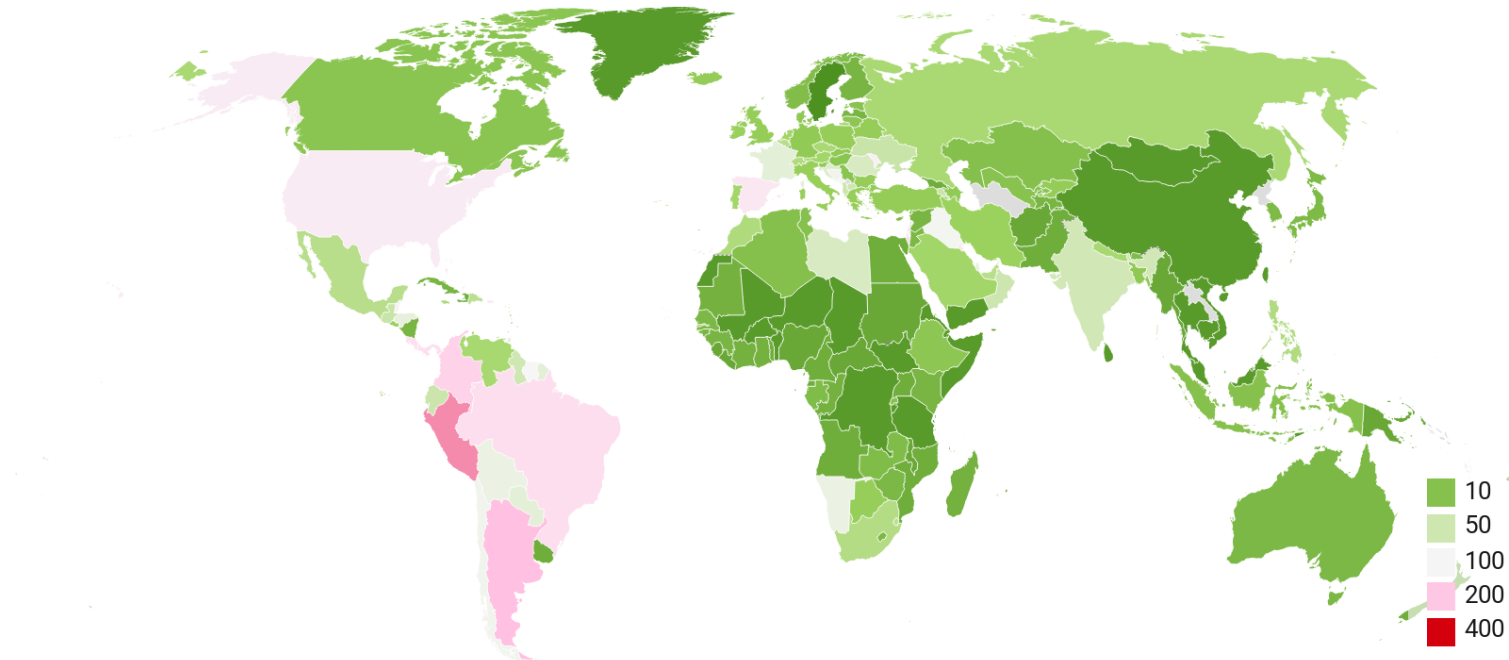


Chart: Health Industry Advisor LLC • Created with Datawrapper

South American countries Argentina, Brazil, Colombia and Peru are high in current New Daily Infection Rates
Spain is increasingly of concern

New Daily Infections / 1 Million Population

Trailing 7-Day Moving Average, As of August 30



Health Industry Advisor LLC analysis

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

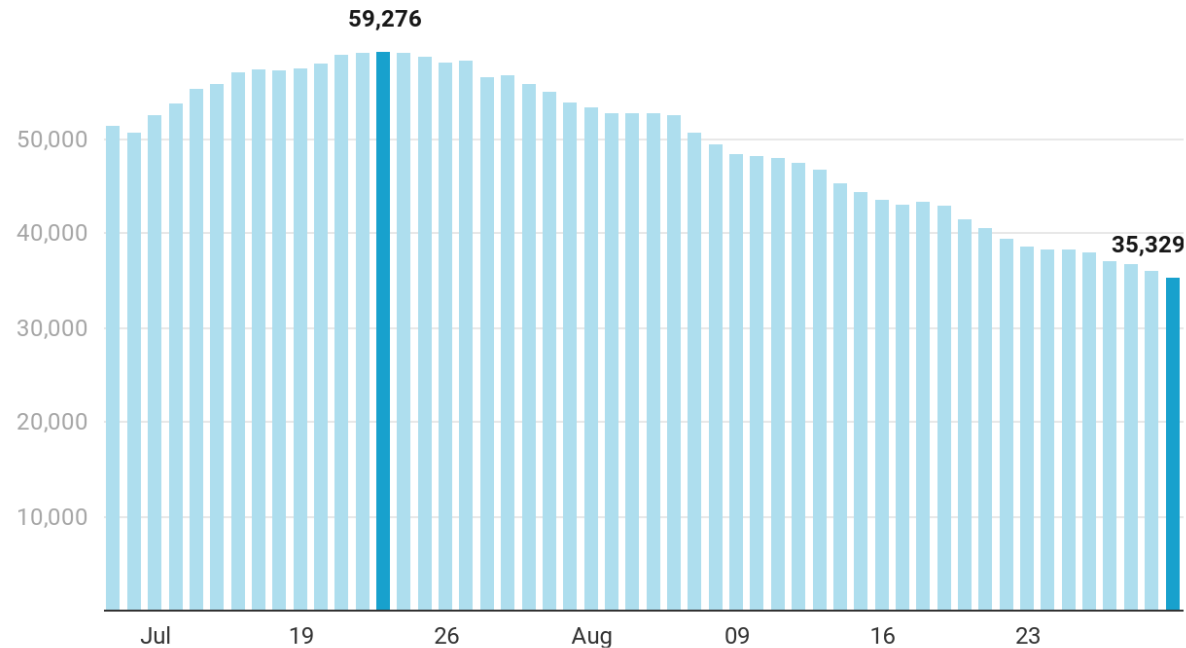
* - per million per day, trailing 7-day moving average

United States

COVID-19 inpatient declined again yesterday, continuing a trend that began more than a month ago; This census has declined on 33 of the past 8 days, dropping 40% during this time

Hospital Census: COVID-19 Patients

As of August 30



Florida data first available on July 10

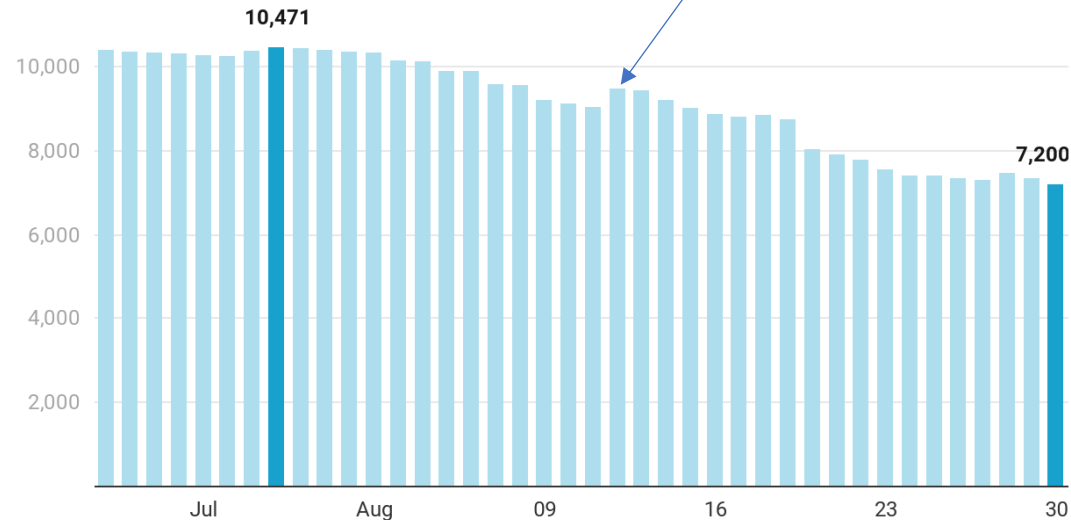
Chart: Health Industry Advisor LLC • Source: the Atlantic's Covid Tracking Project • Created with Datawrapper

Stress on ICU beds and ventilators continues to ease:

Daily ICU census has declined >30% since mid-July

% of inpatients in the ICU or on ventilators are both steady or decreasing . . .even as census declines

COVID-19 ICU Census

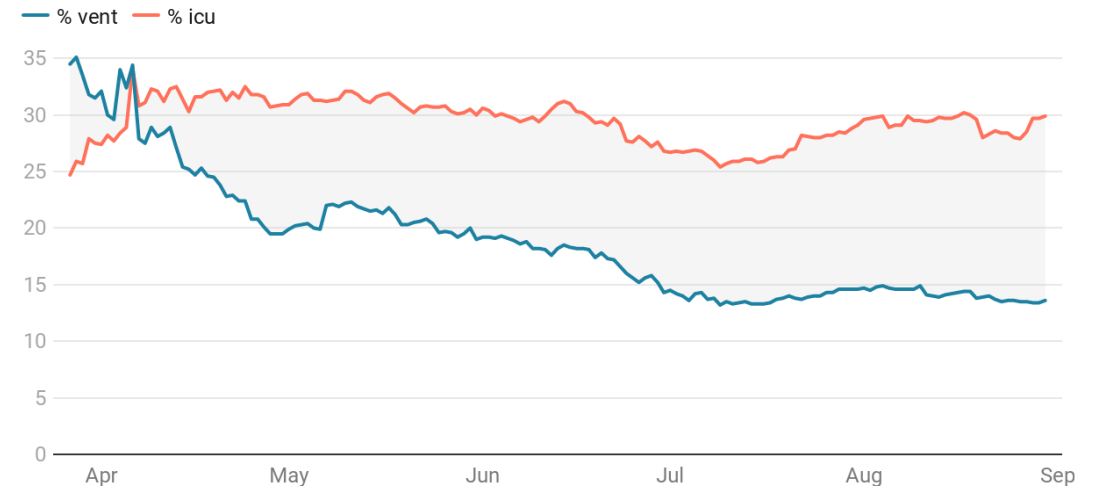


For states reporting these data: AZ, CA, ID, IL, IN, IA, KS, KY, ME, MD, MA, MI, MN, MS, NV, NJ, NY, NC, OH, OK, OR, RI, SC, TX, UT, VA, WI & WY

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

Severity of Hospitalized Patients

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

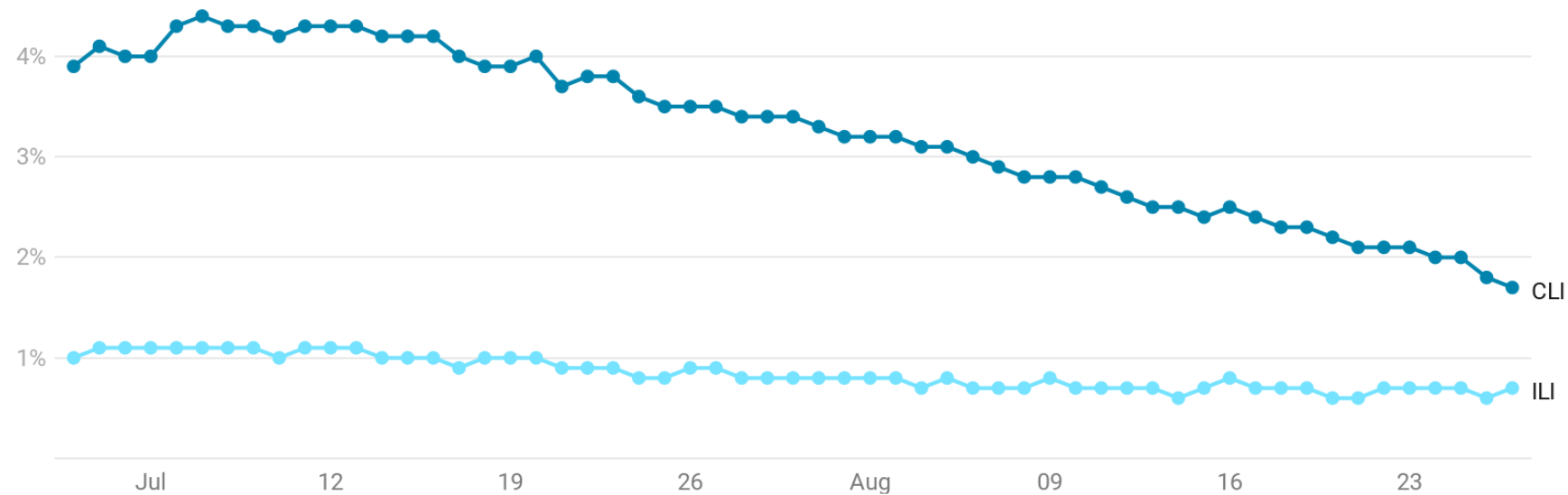


Health Industry Advisor LLC analysis

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

% of Emergency Department Visits for COVID-Like Illness (CLI) and Influenza-Like Illness (ILI)

As of August 27



Health Industry Advisor LLC analysis

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

United States – Deaths with Coronavirus

7-day average deaths have been declining for past three weeks - has averaged fewer than 1,000 per day since August 11-17

Deaths Reported With Coronavirus in the U.S.

Trailing 7-Day Moving Average, As of August 30



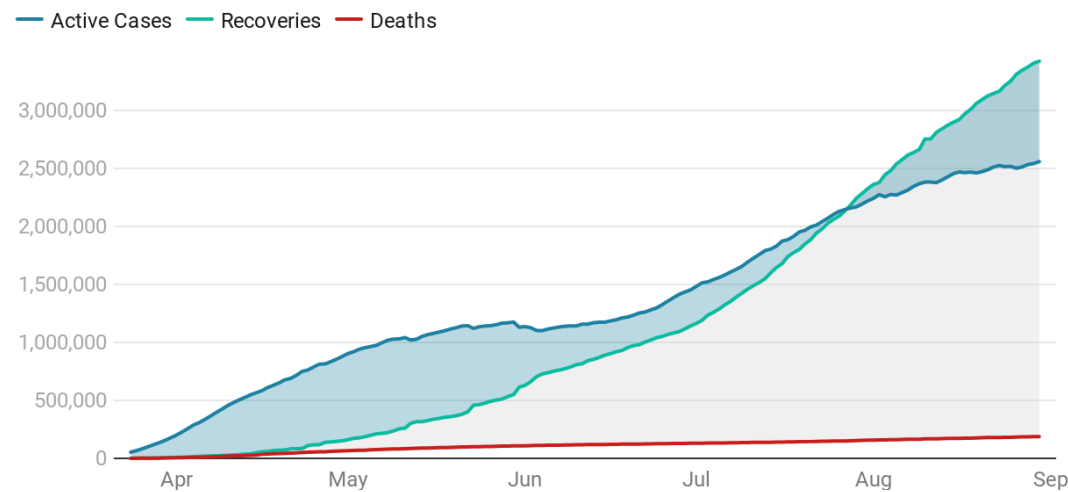
Health Industry Advisor LLC analysis

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

Recoveries continued on a steep upward climb; Active cases nearing a plateau? 35% more recoveries than active cases at this point
> 18 people have recovered from the virus for each death

Active Cases v. Recoveries & Deaths

Through August 30

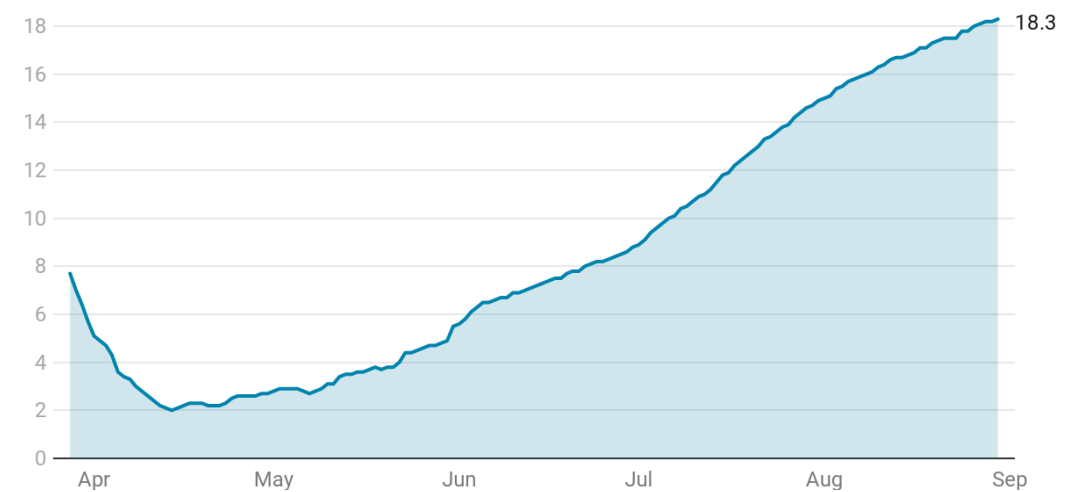


Health Industry Advisor LLC analysis

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

Recoveries: Deaths - United States

As of August 30



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>