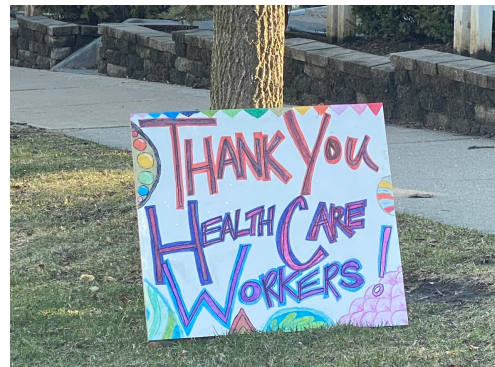
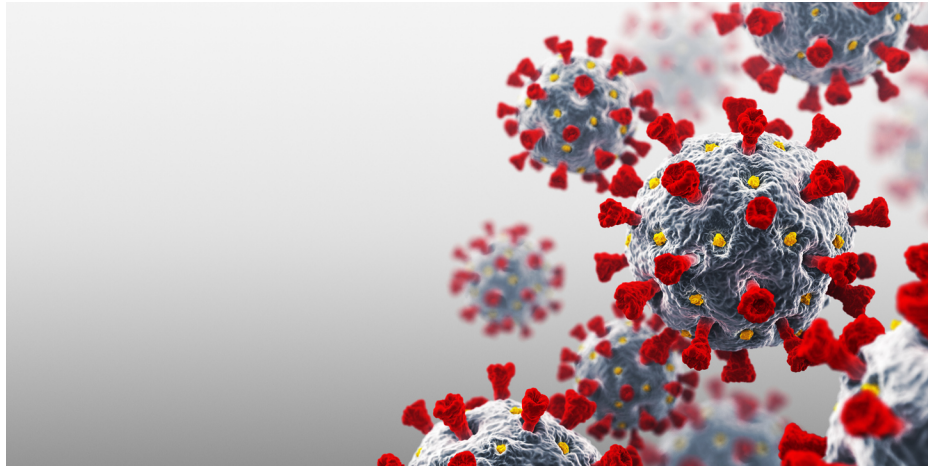
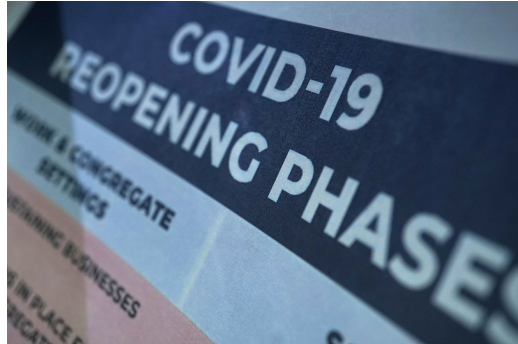




COVID-19 Report

Issue # 123

Sunday, August 2, 2020

- **Testing - losing some ground:**
 - For the first time since the pandemic started, testing volume in the United States started declining this weekend on a week-over-week basis. Nonetheless, the U.S. ranked 17th in the world in tests per capita over the past week
 - The US ranks poorly (95th) in the ratio of tests to new cases identified - implying that the high infection rate isn't necessarily due to doing more tests than other countries
 - States are faring best on this measure are led by Vermont, Maine, Connecticut, New York, New Jersey and Michigan
- **New Daily Infection Rates - continued improvement, although Oklahoma, Tennessee are of concern, followed by Alaska, Missouri and North Dakota:**
 - Thirty-five countries, led by China, saw > 10% increase in their new daily infection rate during the past week (per million, on a trailing 7-day basis); Nineteen countries, including the U.S., saw >5% decline in this rate
 - The new daily infection rate in the US declined again yesterday, continuing a downward trend from its peak on July 19
 - Fifteen states currently have new daily infection rates > 200 per million. Of these,
 - All except Oklahoma and Tennessee have seen this rate decline from its peak
 - Arkansas, Georgia, Mississippi and Missouri, however, are still within 85% of their peak rate
 - Twenty states saw their new daily infection rates increase over the past week:
 - Of these, Oklahoma and Tennessee's rates are >250 per million per day; Alaska, Missouri and North Dakota's are >150
- The eight other states with rates > 250 - Alabama, Arizona, Florida, Georgia, Idaho, Louisiana, Mississippi and Texas - saw these rates decline last week
- Fives states with rates > 150 - Arkansas, California, Iowa, North Carolina and Wisconsin - also saw their rates decline last week
- **Use of Healthcare Resources - stress on the system is easing:**
 - The stress on the US Health care system seems to be easing, as hospital census of COVID-19 patients continued to decline form its July 23 peak
 - ER visits (%) for COVID-19 illness continued to decline, a trend that began on July 8
 - Active cases being managed in the hospital continued to decline; fewer than 2% of active cases are currently hospitalized
 - Of the patients hospitalized, however, an increased % are being managed in the ICU
- **Deaths With Coronavirus - remain a concern, although can we expect some easing within a week or so?**
 - Deaths reported in the US were > 1,000 for the 5th consecutive day
 - During the recent case surge, new deaths appeared to lag new cases by about 21 days (seemingly, longer than expected). If this holds, we could expect to see deaths decline in the next week or two
 - There are now 15 persons recovered from the virus for each death in the U.S.

Testing

United States ranks poorly (95th) in the ratio of tests-to-cases identified; Among the states, Vermont is best, followed by Maine, New York, Connecticut and New Jersey

Tests / New Case

Trailing 7-Day Moving Average, As of August 1

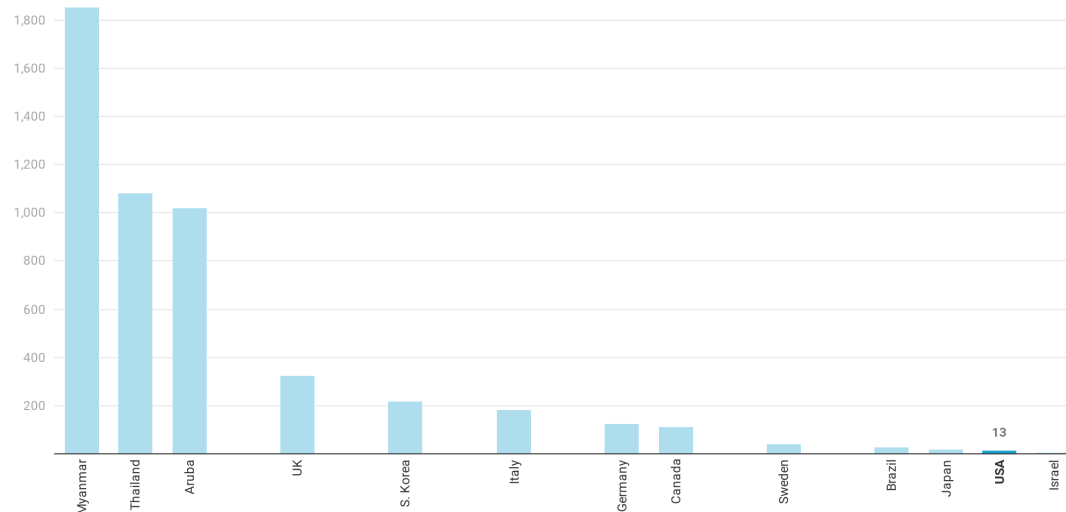


Chart: Health Industry Advisor LLC • Created with Datawrapper

Tests / New Case

Trailing 7-Day Moving Average, As of August 1

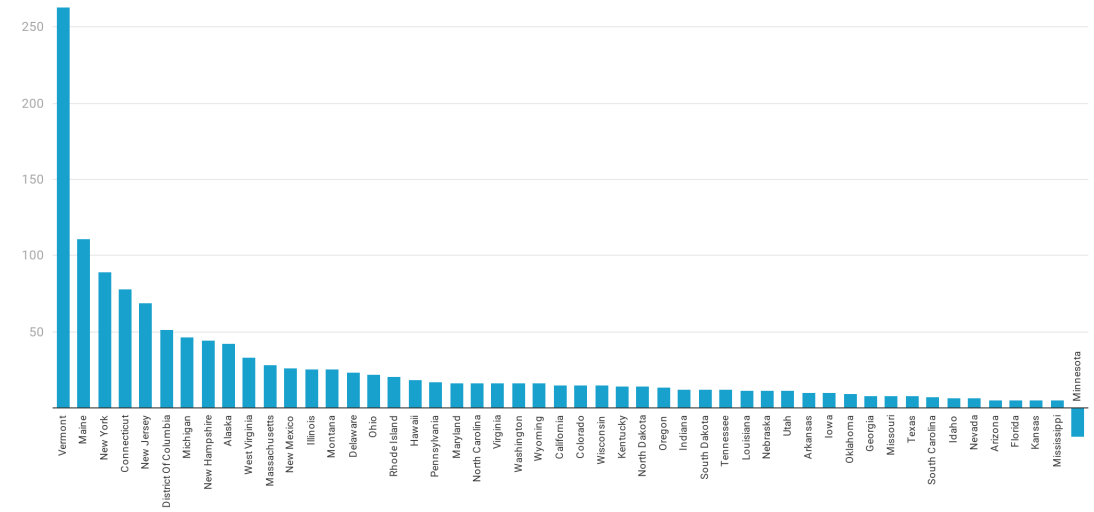


Chart: Health Industry Advisor LLC • Created with Datawrapper

Thirty-five countries*, led by China, saw > 10% increase in the new infection rate; Nineteen countries, including the U.S., saw >5% decline in new infections last week

Week-over-Week Change in New Infections / Million

As of August 1

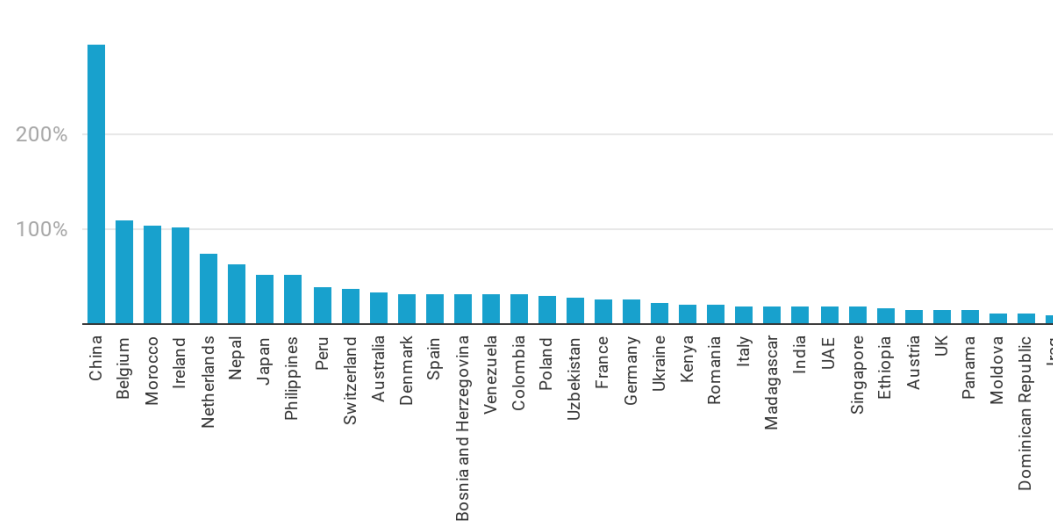


Chart: Health Industry Advisor LLLV • Created with Datawrapper

Week-over-Week Change in New Infections / Million

As of August 1

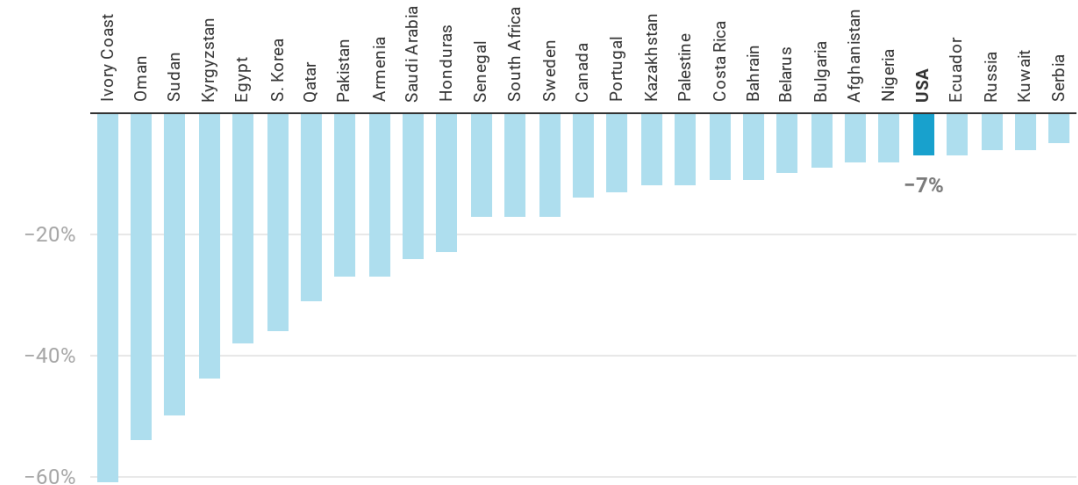
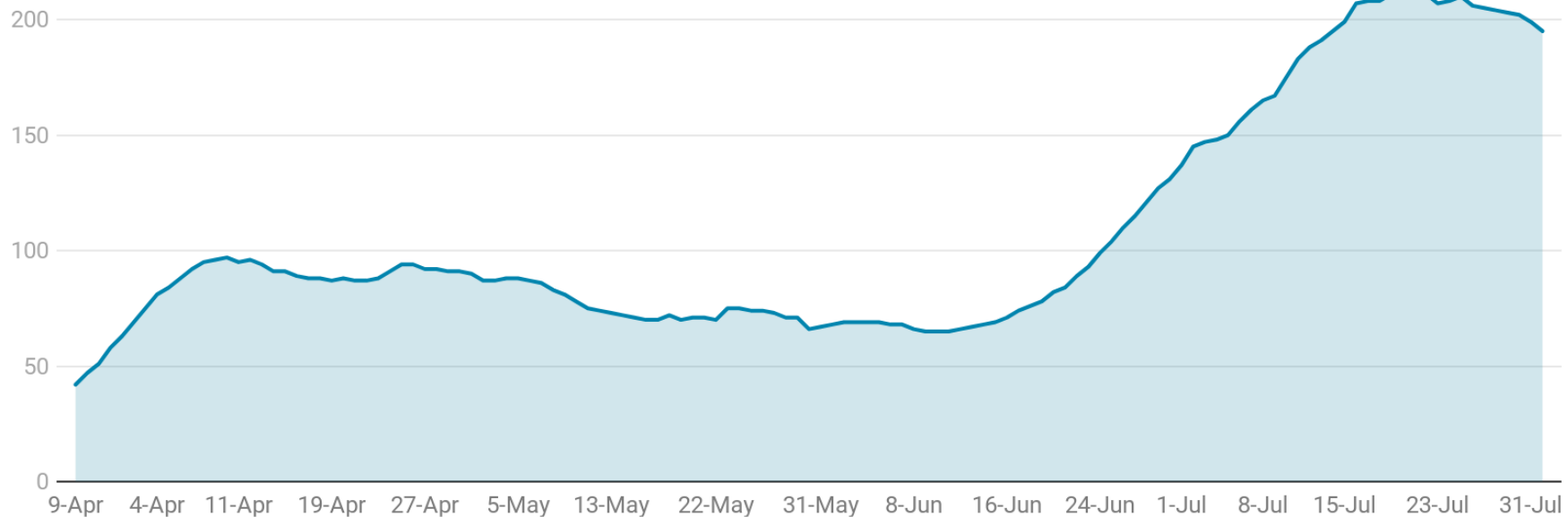


Chart: Health Industry Advisor LLLV • Created with Datawrapper

* -Includes countries with a minimum of 10,000 cases

New Infections Per 1 Million Population - United States

Trailing 7-Day Moving Average, As of August 1



Health Industry Advisor LLC analysis

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

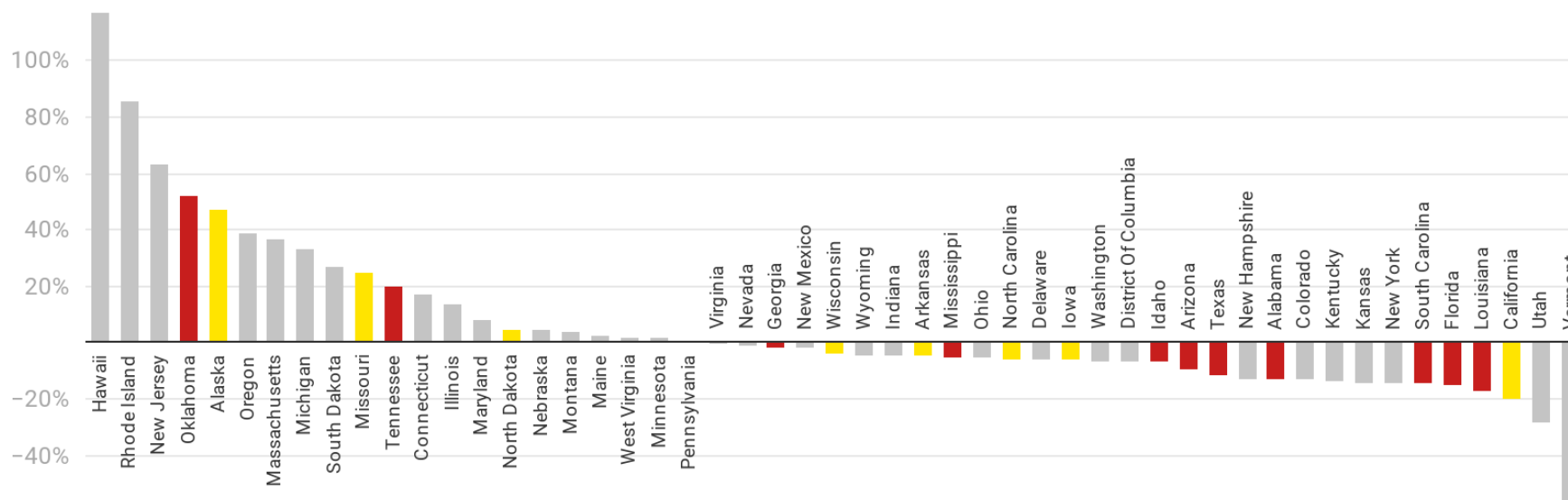
State-By-State

Twenty states saw new infection rates increase last week; Of these, Oklahoma and Tennessee's rates are >250*; Alaska, Missouri and North Dakota's are >150

Week-over-Week Change in New Infections / Million

As of August 1

- >250 new daily infections/ million
- >150 new daily infections/ million
- <150 new daily infections/ million



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

Chart: Health Industry Advisor LLV • Created with Datawrapper

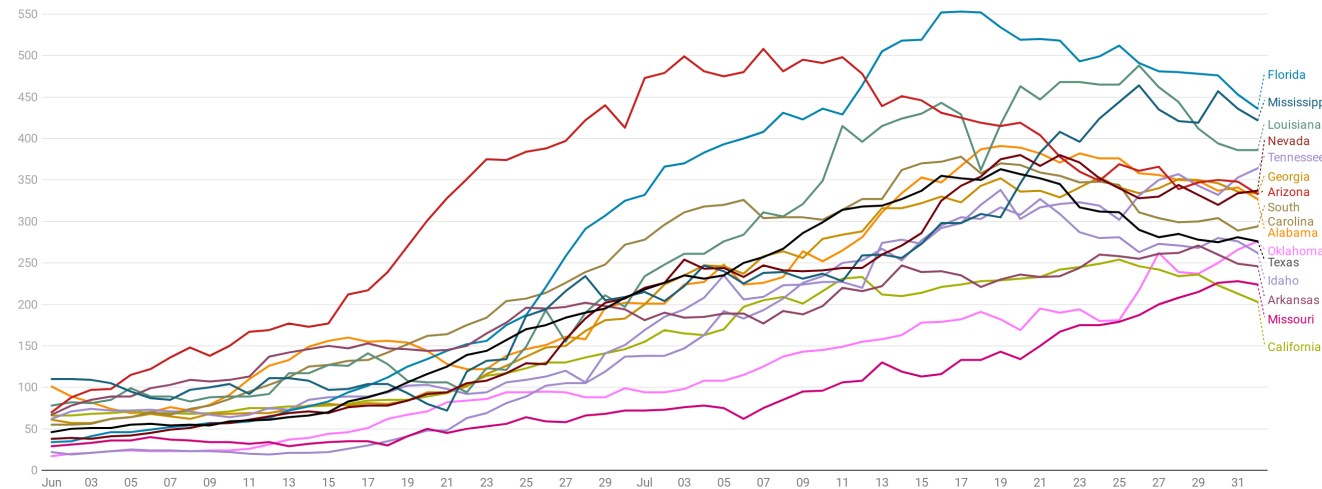
State-By-State

Of the states with the highest current new infection rates, only Tennessee and Oklahoma have yet to peak; Arkansas, Georgia, Mississippi and Missouri, however, are still close to peak (85+%)

Fifteen states have a current new daily infection rate > 200 per million
Rates are declining in thirteen of these fifteen

New Daily Infections / Million Population

Trailing 7-Day Moving Average, As of August 1



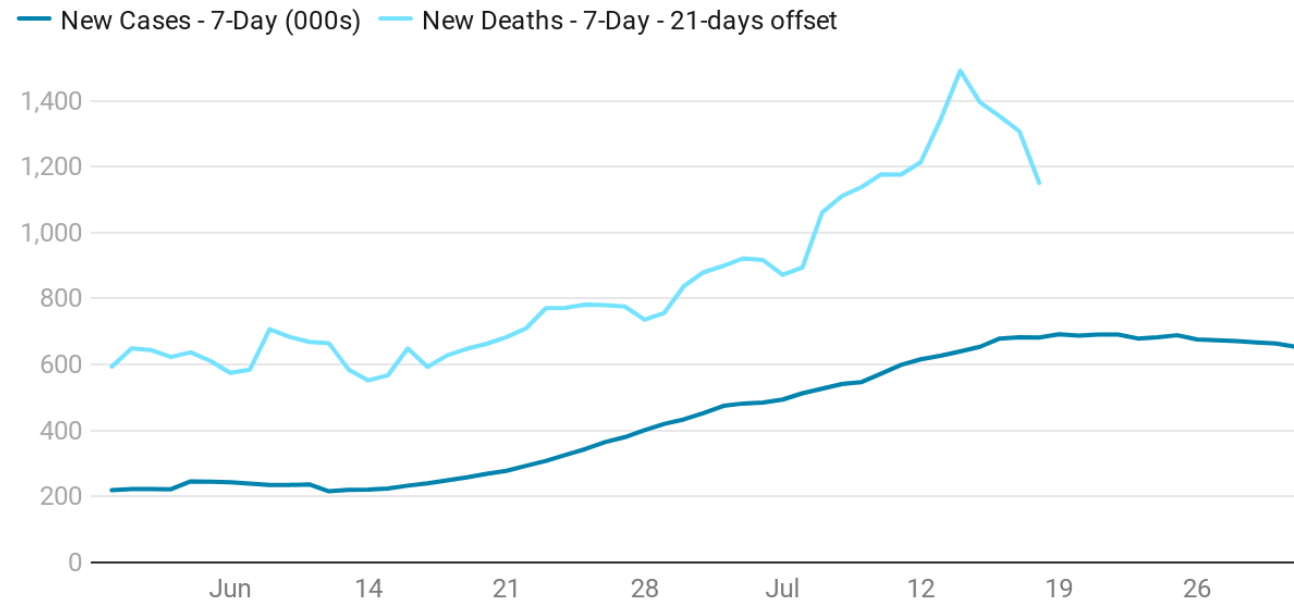
Health Industry Advisor LLC analysis
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

State (In Descending Order By New Infection Rate)	Day Peaked	% of Peak
Florida	July 17	79%
Mississippi	July 26	91%
Louisiana	July 26	79%
Tennessee	Not yet	100%
Nevada	July 20	89%
Georgia	July 24	95%
Arizona	July 7	66%
Alabama	July 19	84%
South Carolina	July 17	78%
Texas	July 19	76%
Oklahoma	Not Yet	100%
Idaho	July 21	80%
Arkansas	July 29	91%
Missouri	August 31	98%
California	July 25	80%

During the June-July case surge, deaths seemed to lag new cases by ~21 days; This suggests that deaths could begin to taper over the upcoming week

New Cases v. New Deaths

Trailing 7-Day Moving Average, Deaths offset 21 Days



Cases x 100

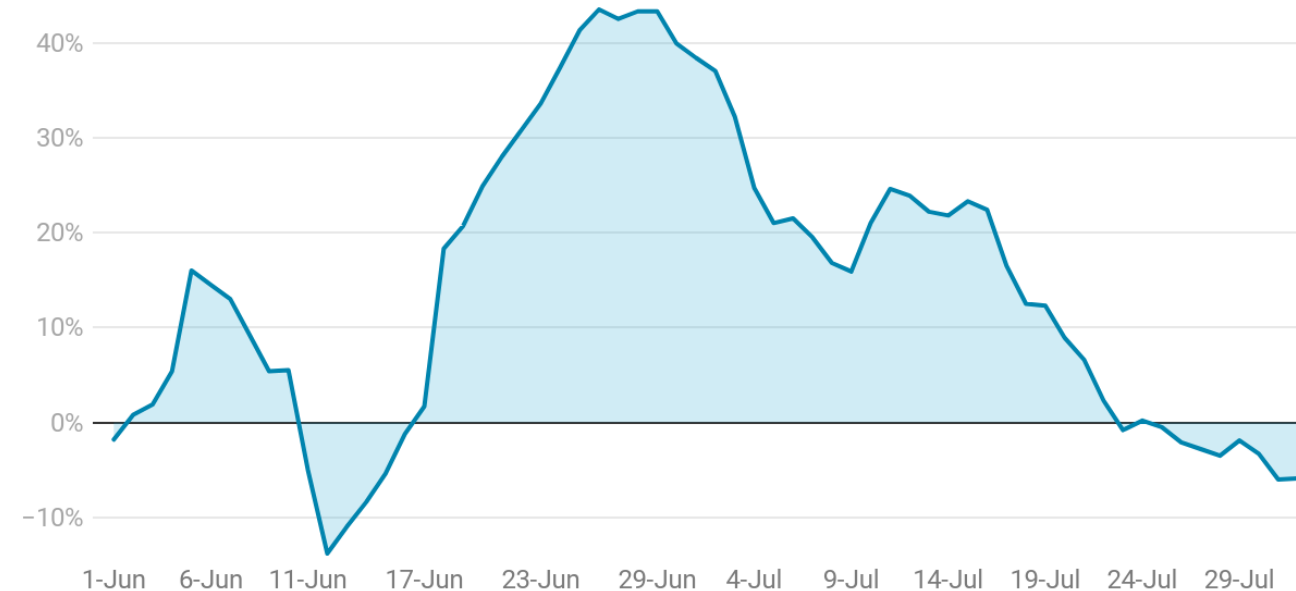
Chart: Health Industry Advisor LLV • Created with Datawrapper

United States

Leading Indicator: After weeks of slower growth, new cases have now declined 5.9% on a week-over-week basis

Week-Over-Week Change In New Cases

United States, As of August 1



Health Industry Advisor LLC analysis

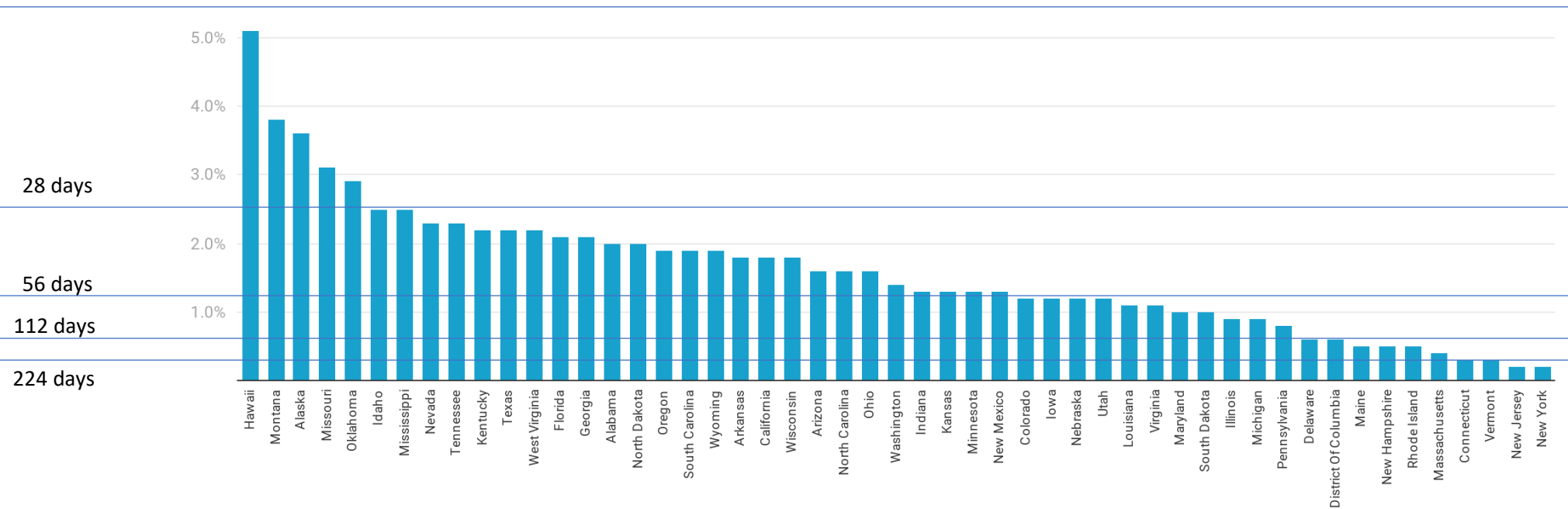
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

At current rates, cases are doubling every 13-14 days in Hawaii; every 390 days in New York; 48 for the United States overall

Growth Rate in Total Cases

Trailing 5-Day Moving Average, As of August 1

14 days to double



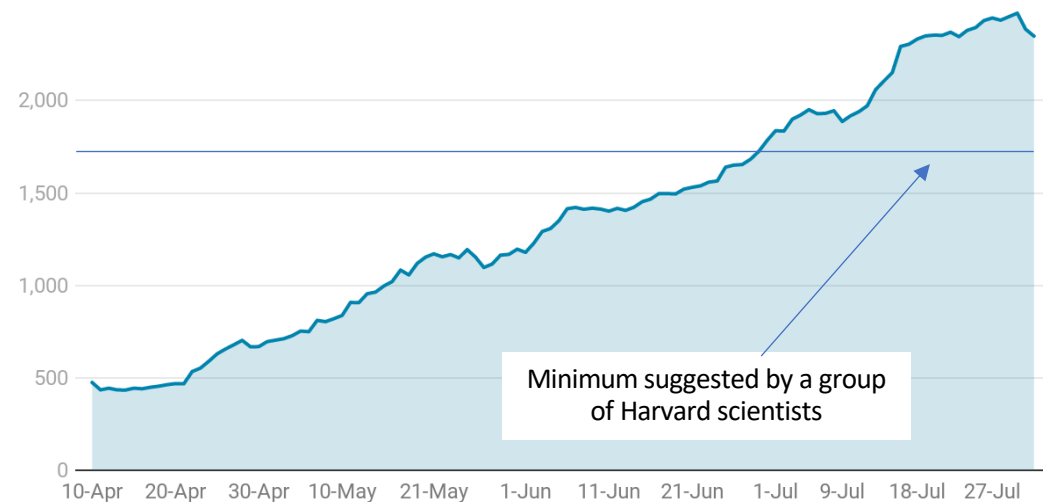
Health Industry Advisor LLC analysis

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

Fewest tests on Friday and Saturday since July 13; volume down 5.5% week-over-week; test-positive rate was better than on Friday; down slightly week-over-week

Daily Tests Per 1 Million - United States

Trailing 7-Day Moving Average, As of August 1

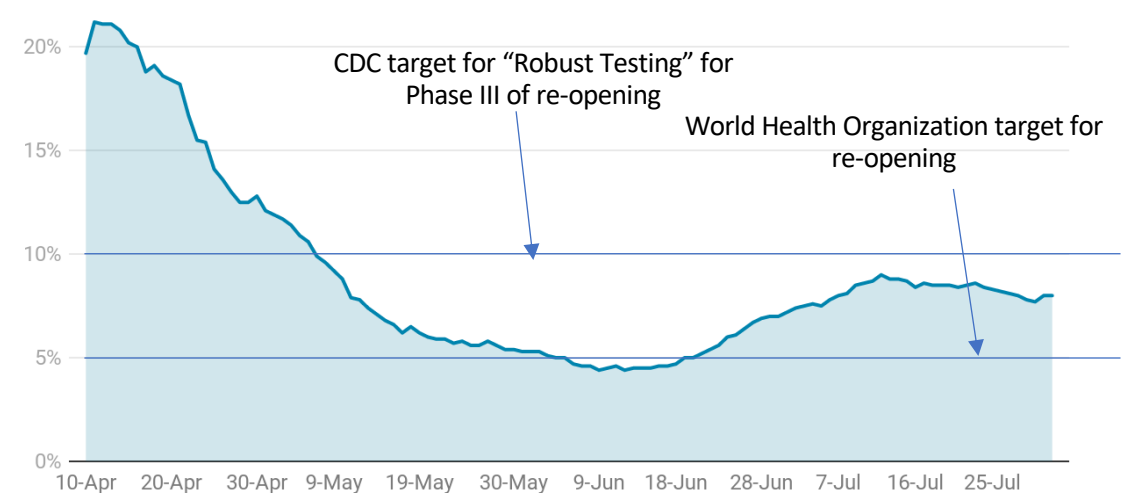


Health Industry Advisor LLC analysis

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 1



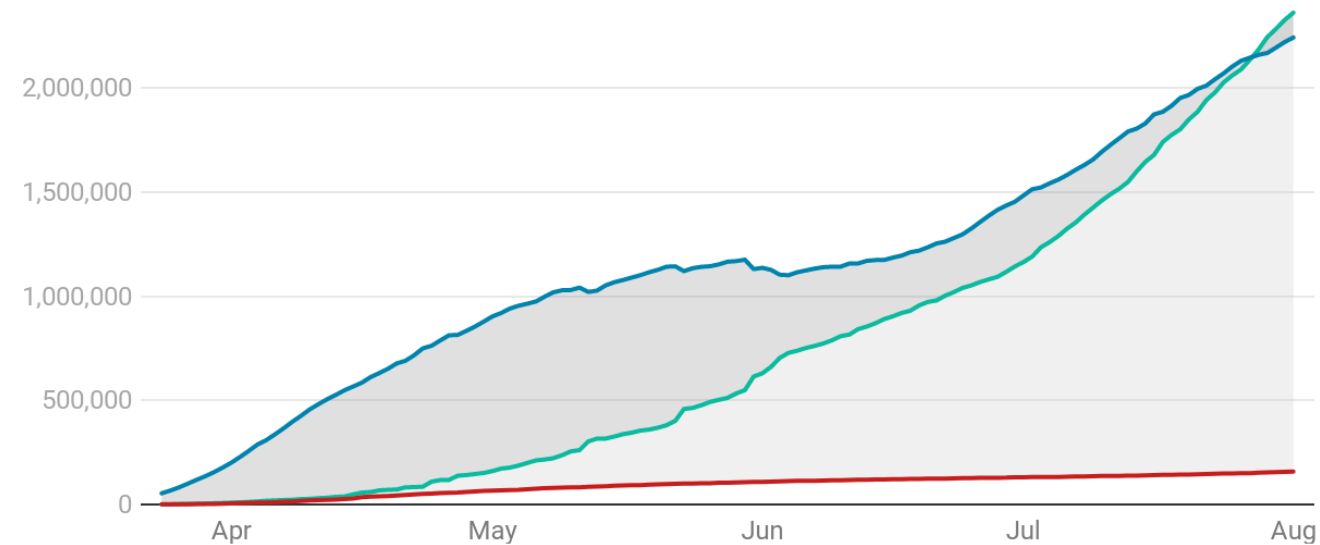
Health Industry Advisor LLC analysis

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

Active Cases v. Recoveries & Deaths

As of August 1

— Active Cases — Recoveries — Deaths



Health Industry Advisor LLC analysis

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

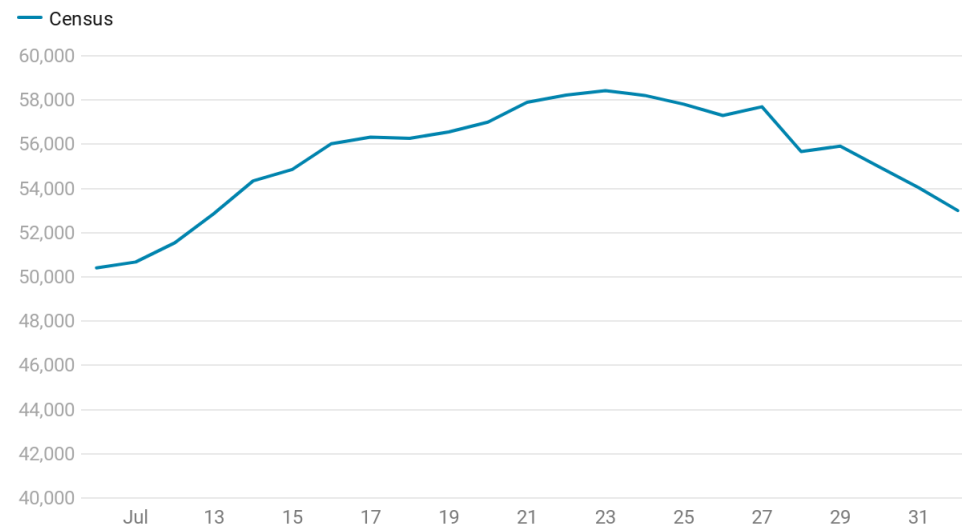
COVID-19 hospital census peaked on July 23; More active cases are being managed outside of the hospital

COVID-19 stress on hospital beds is easing somewhat

As more cases are being managed outside of the hospital

Hospital Census: COVID-19 Patients

As of August 1



Florida data first available on July 10

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

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

Distribution of Active Cases

As of August 1

Non-Hospital
Hospital
ICU

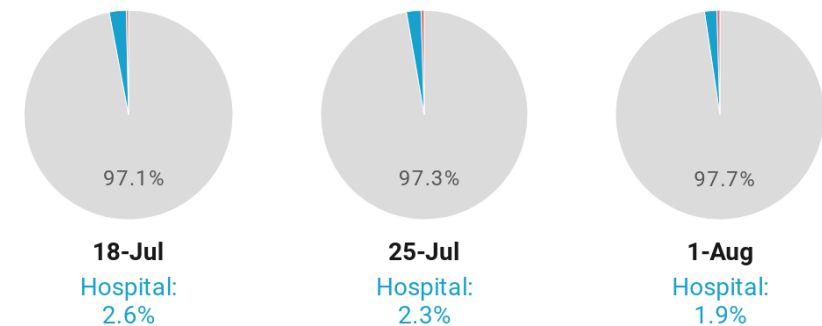


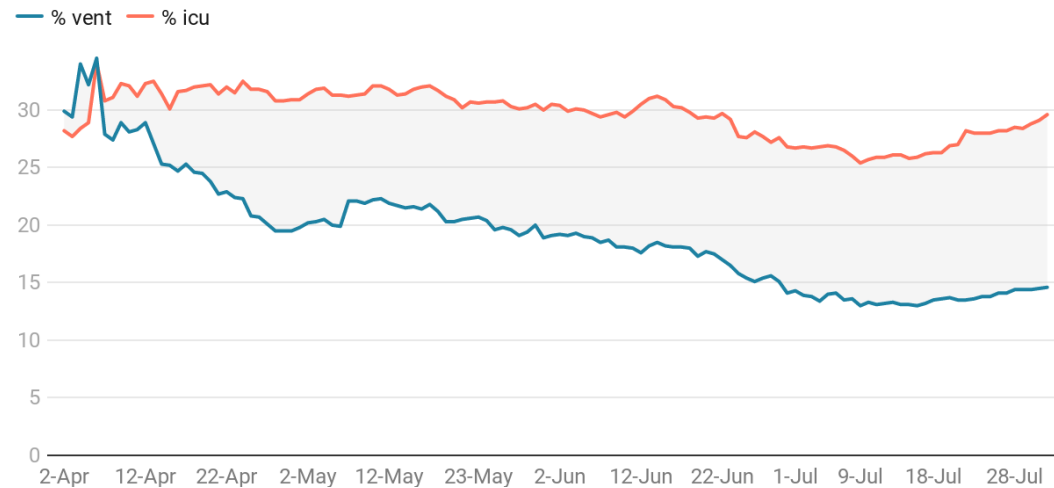
Chart: Health Industry Advisor LLC • Created with Datawrapper

A greater % of patients are in the ICU

Stress on ERs from COVID-19 cases is diminishing

Severity of Hospitalized Patients

% of patients on ventilators and in the ICU, As of August 1

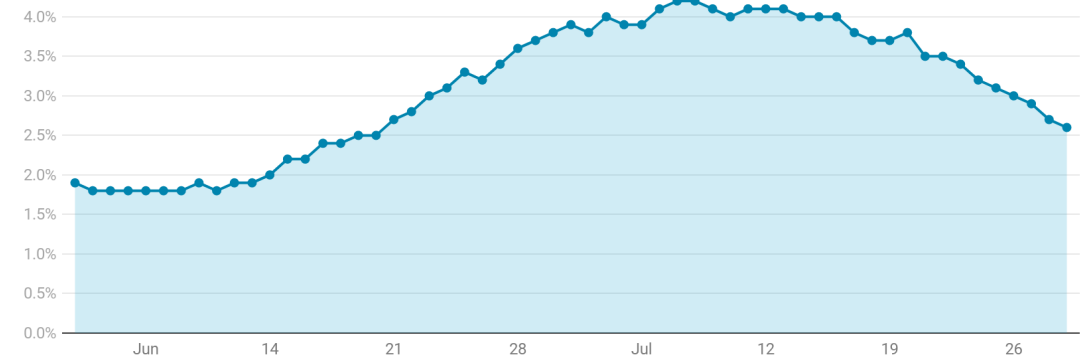


Health Industry Advisor LLC analysis

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 29



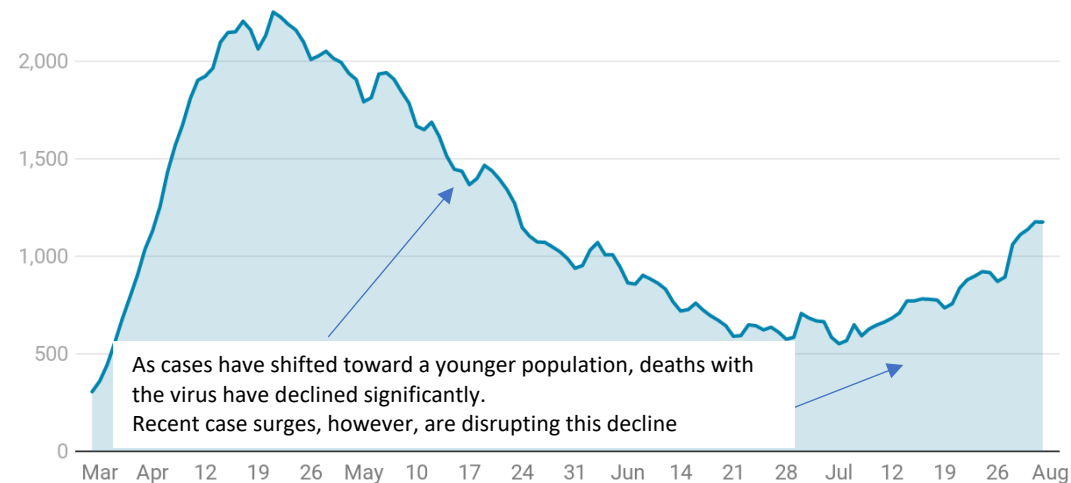
Health Industry Advisor LLC analysis

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

Deaths remain at a relatively high level, compared to last month.
There are 15 recovered persons for every death

Deaths Recorded With Coronavirus in the U.S.

Trailing 7-Day Moving Average, As of August 1

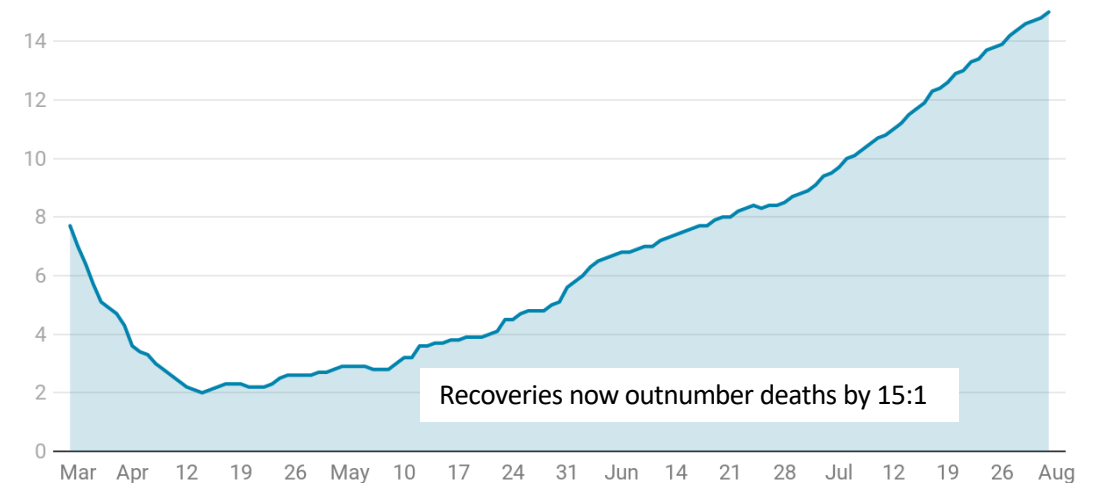


Health Industry Advisor LLC analysis

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

Recoveries: Deaths - United States

As of August 1



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>