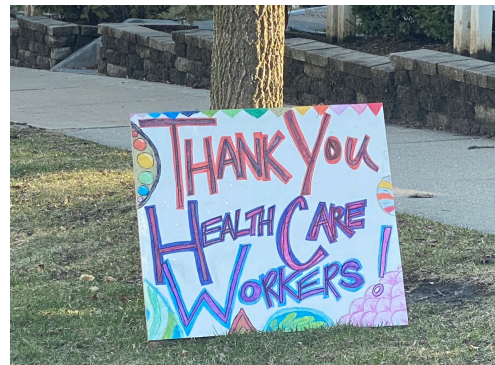
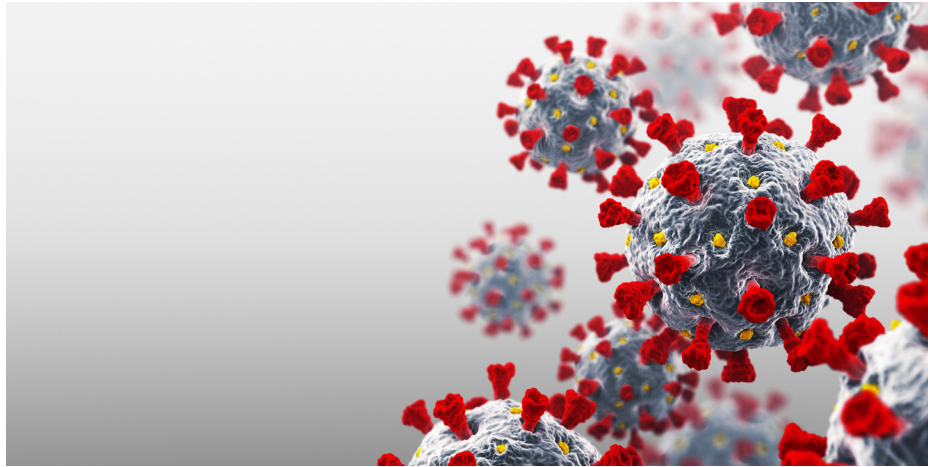
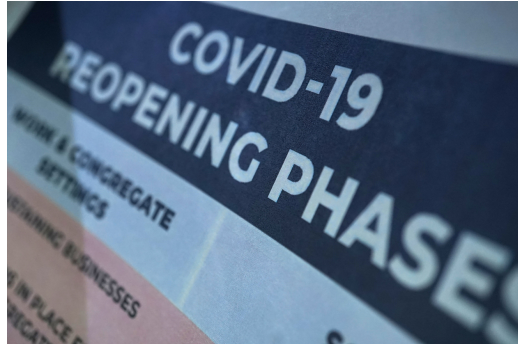




COVID-19 Report

Issue # 149

Saturday, August 29, 2020

- Metro areas with major universities
 - **The metro areas home to the main campuses of Iowa and Iowa State are experiencing the highest new infection rates** among the areas in the scope of this analysis. In each case, **these rates have spiked significantly in the past two weeks**
 - Other metro areas that have **concerning new infection rates include the main campuses for Alabama, Georgia, Kansas, Kansas State, Mississippi, Mississippi, Missouri, North Carolina and Notre Dame**
 - **Metro areas that have encouragingly low new infection rates include the main campuses for Arkansas, Michigan, Michigan State, Penn State, West Virginia, Wisconsin and Virginia**
- Weekly trends in tests, cases, deaths and healthcare resource use
 - **Test volume for the past 7 days was lower than it was for each of the prior six weeks.** The rate of decline this week was tempered, however, from prior weeks. Testing remains above WHO-suggested levels
 - Despite testing fewer people, the **test-positive rate improved for the sixth consecutive week.** (Fewer tests, all else being equal, would favor higher test-positive rates, due to "selection-bias".) This rate remains below the CDC-recommended target for Phase III re-opening but, above the stricter WHO-suggested target
- **New cases and the new daily inception rate per capita fell for the sixth consecutive week.** These rates are as low as they have been since June 26
- **Deaths for the week declined for the second consecutive week and the third time in the past four weeks.** Still, deaths for the week were higher than for each week from May 30-June 5 to July 18-24
- Recoveries from the virus for the week declined for the fourth consecutive week - likely the result of fewer cases in the past several weeks
- Healthcare resource use for COVID-19 - inpatient beds, ventilators and ICUs - declined this past week, continuing trends that go back to mid- to-late July. As an example,
 - **Inpatient days for COVID-19 have declined on 28 of the past 30 days;**
 - **ICU days for COVID-19 patients have declined on 24 of the past 31 days;**
 - **COVID-19 patients on ventilators declined on 18 of the past 22 days**

Back-to-Campus – Impact on Metro Infection Rates

Metro areas home to Iowa and Iowa State have seen large spikes in new infections; Other areas of concern are homes to Alabama, Georgia, Kansas, Kansas State, Mississippi, Mississippi State, Missouri, North Carolina and Notre Dame

Metro areas home to Arkansas, Michigan, Michigan State, Penn State, West Virginia, Wisconsin and Virginia are faring well thus far

New Daily Infections / Million: Metro Areas Encompassing Major Universities

> 300 New Cases / Million, Trailing 7-Day Moving Average

Graphs depict the weekly new infection rate per million for the metro area that includes the named University

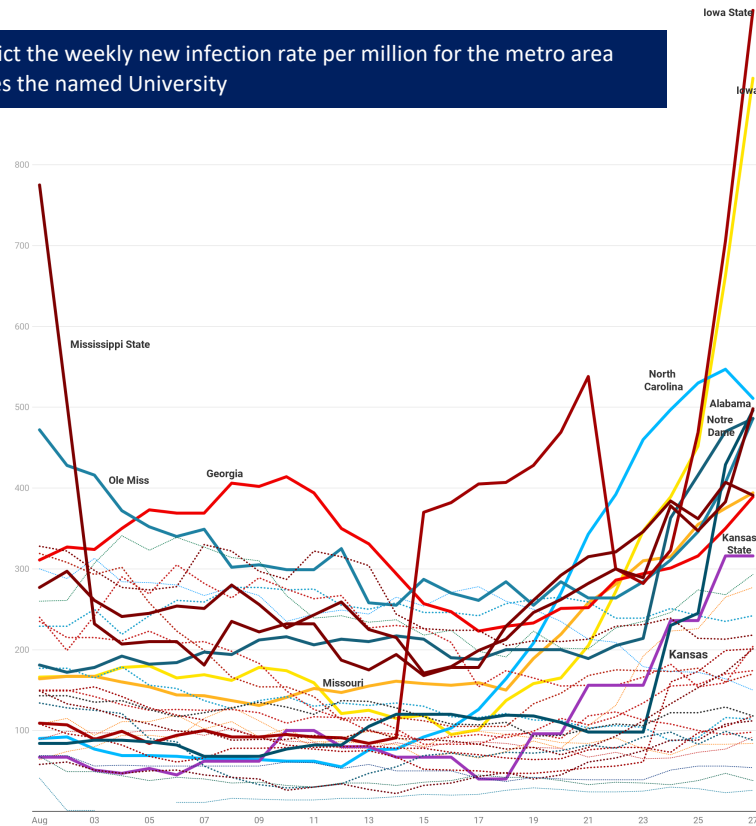


Chart: Health Industry Advisor LLC • Created with Datawrapper

New Daily Infections / Million: Metro Areas Encompassing Major Universities

<100 New Cases / Million, Trailing 7-Day Moving Average

Graphs depict the weekly new infection rate per million for the metro area that includes the named University

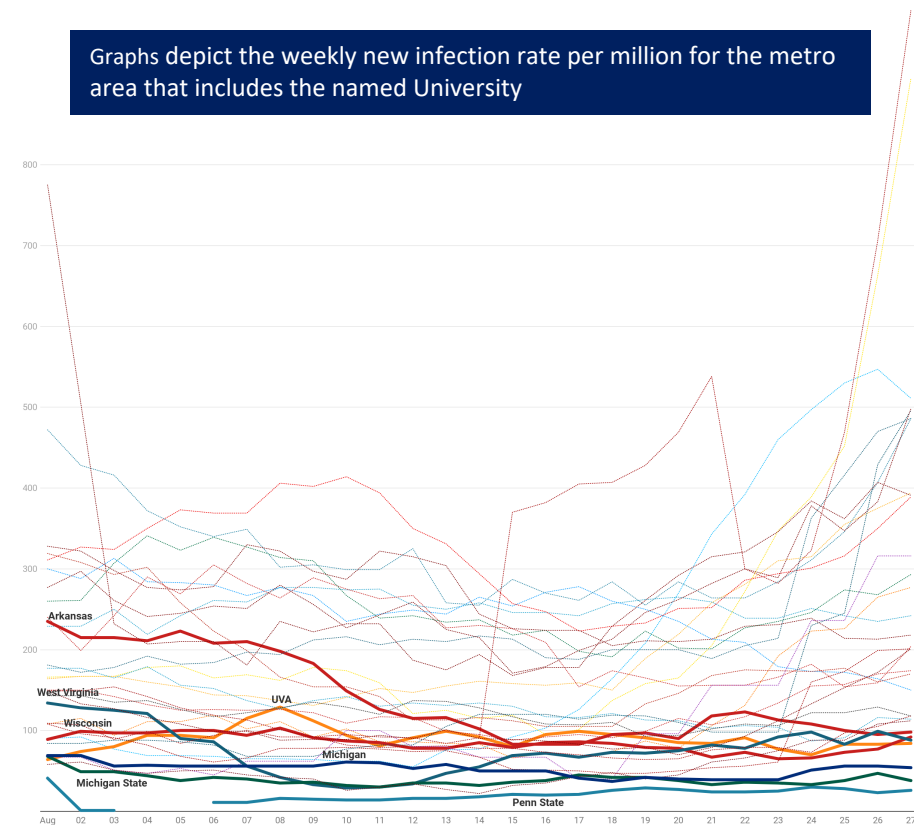


Chart: Health Industry Advisor LLC • Created with Datawrapper

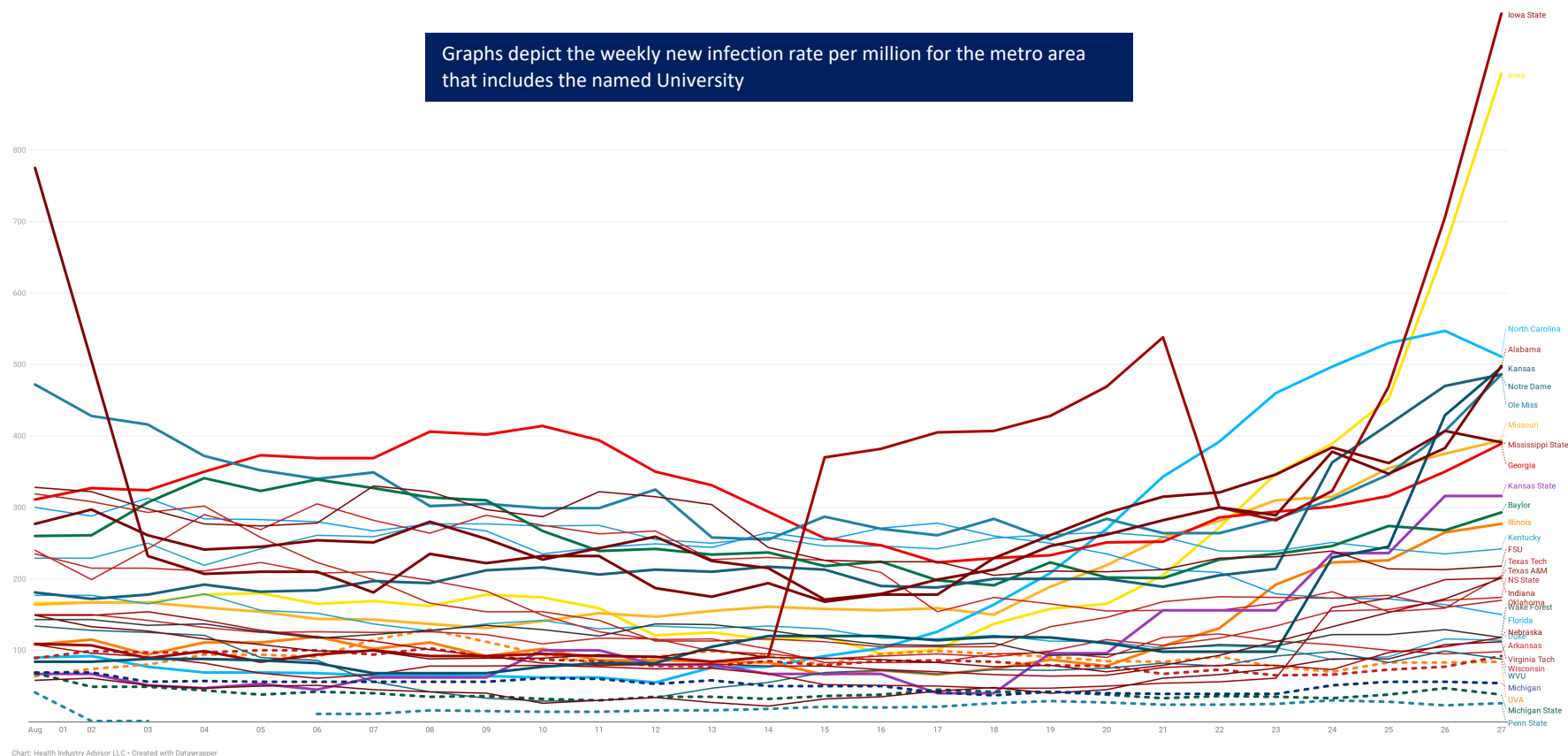
Back-to-Campus – Impact on Metro Infection Rates

We are tracking the new infection rates for 31 metro areas that are home to major universities – and these universities represent a significant share of the local population

New Daily Infections / Million: Metro Areas Encompassing Major Universities

Trailing 7-Day Moving Average

Graphs depict the weekly new infection rate per million for the metro area that includes the named University

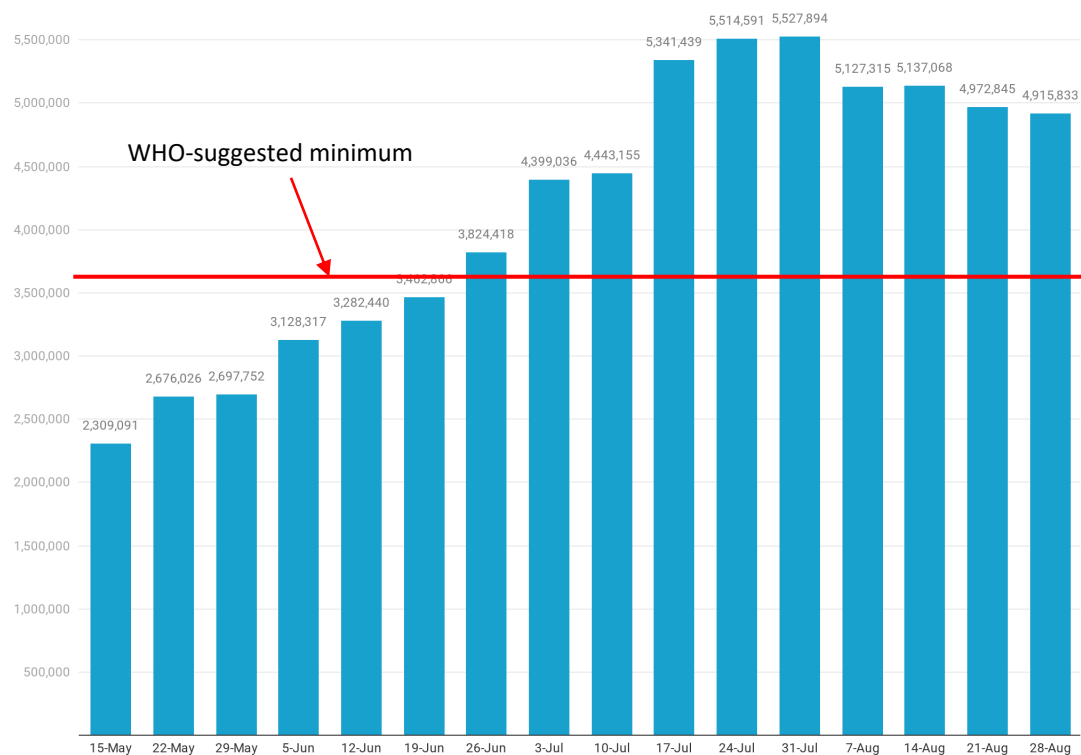


Weekly Summary – Tests

Test volume in August remains below late-July levels yet, ahead of earlier months
Test-positive rate continues to improve; now lowest since mid-June

Weekly Tests - United States

For the 7 days ending on date shown



Weekly Test-Positive% - United States

For the 7 days ending on date shown

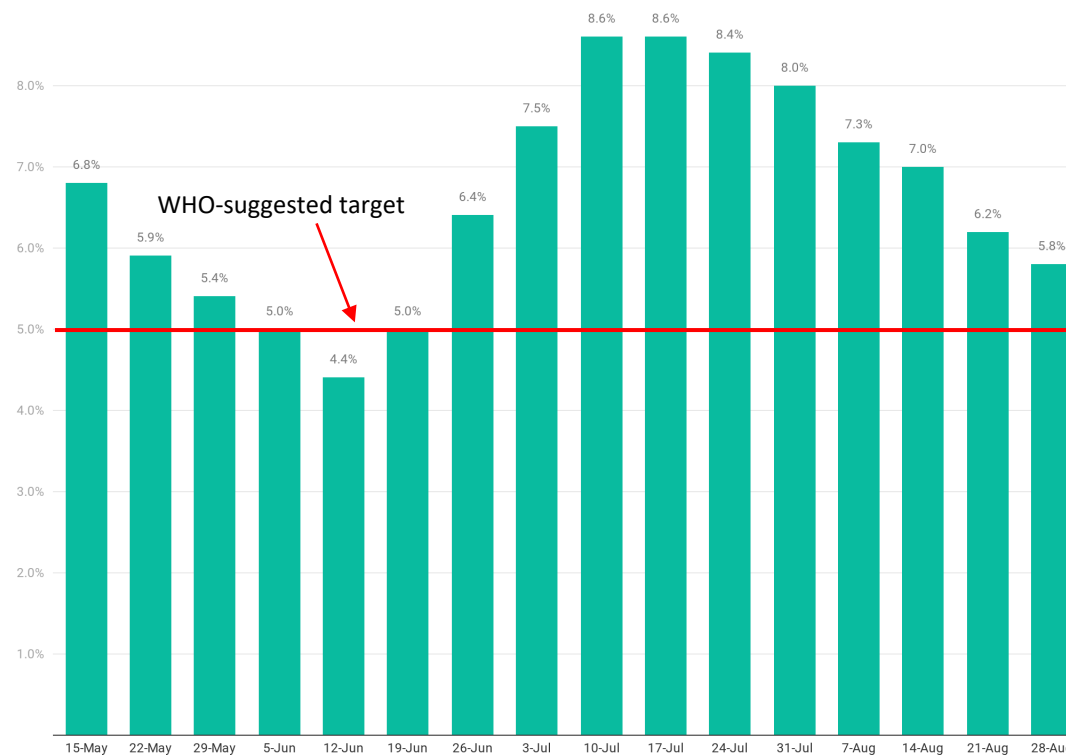


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

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

Special note: Washington state did not report negative test results from August 1-25 then, “caught-up” on August 26. We pro-rated the negative tests reported on August 26 to the period from August 1-25, based on the positive daily tests reported and the test-positive rate for the time period.

Weekly Summary – New Cases (Infections)

New cases have fallen five consecutive weeks

Current infection rate is lower than anytime since late-June

Weekly New Cases - United States

For the 7 days ending on date shown

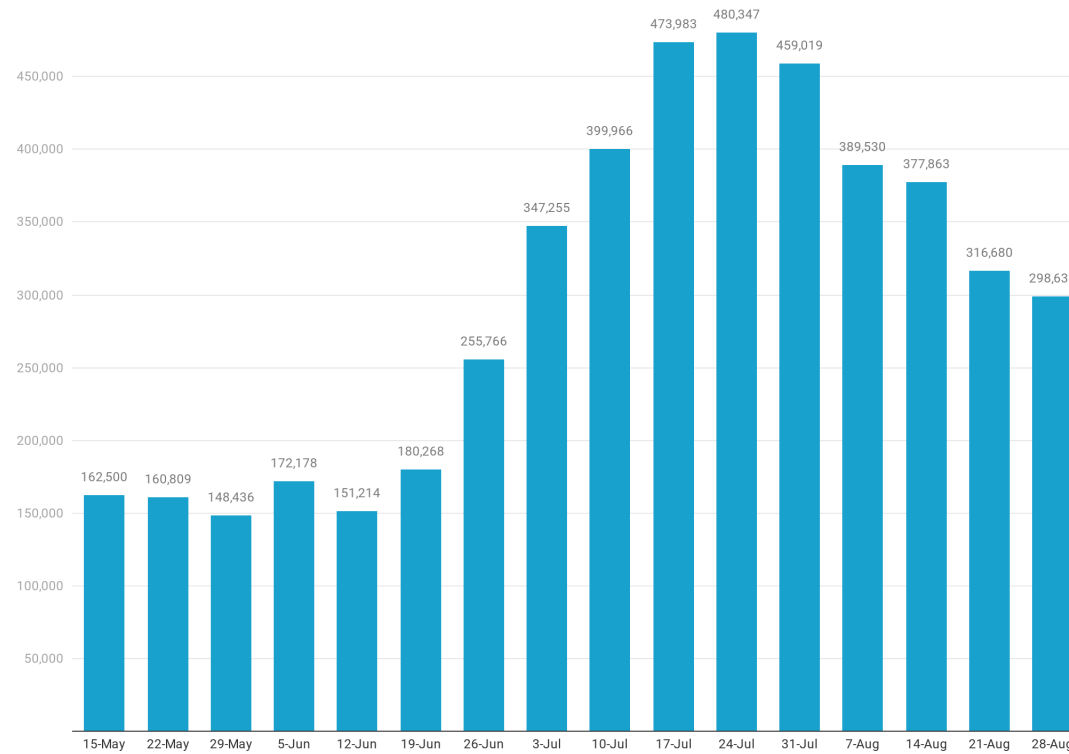


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

New Infections / Million - United States

For the 7 days ending on date shown

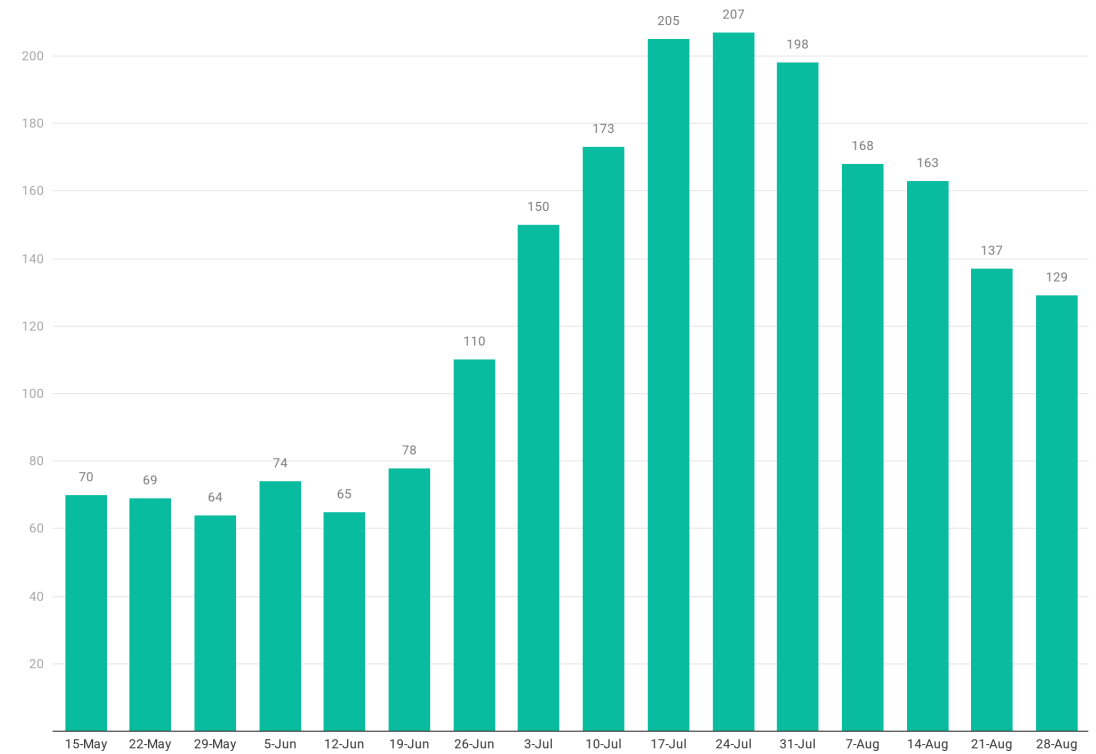


Chart: Health Industry Advisor LLC • Source: Worldometers.info • Created with Datawrapper

Weekly Summary – Deaths and Recoveries

Deaths have been declining throughout August - Fewer deaths this week than anytime since July 18-24

Recoveries slowing – by-product of fewer new cases in past month?

Weekly Deaths - United States

For the 7 days ending on date shown

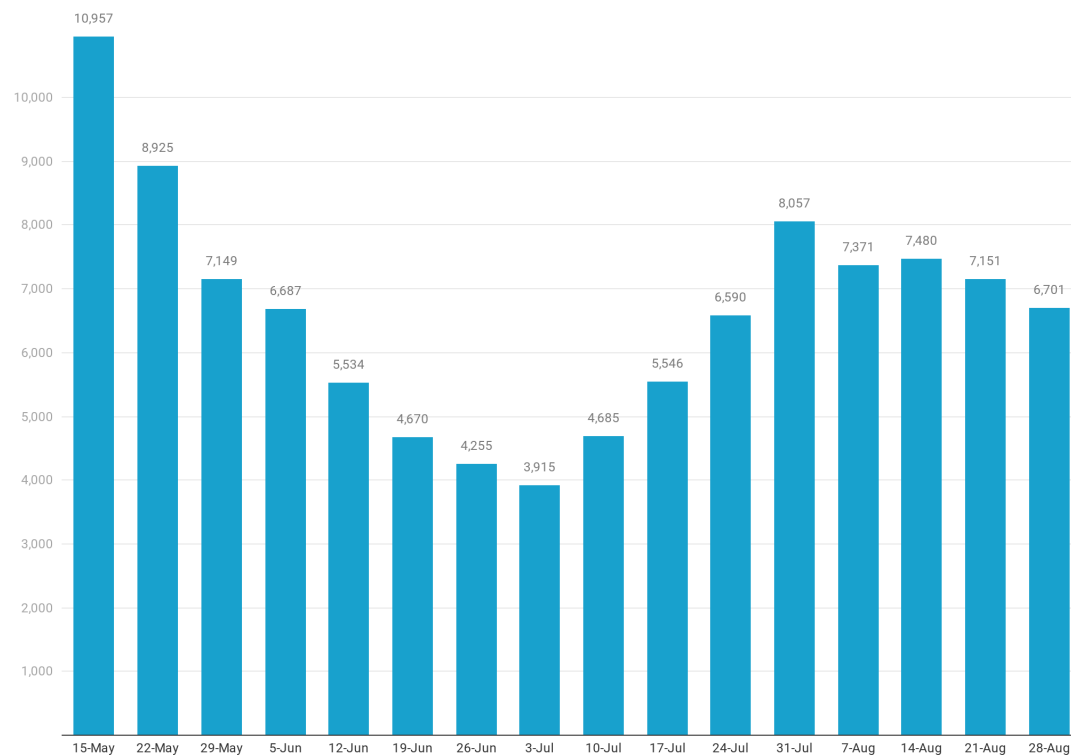


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Weekly Recoveries - United States

For the 7 days ending on date shown

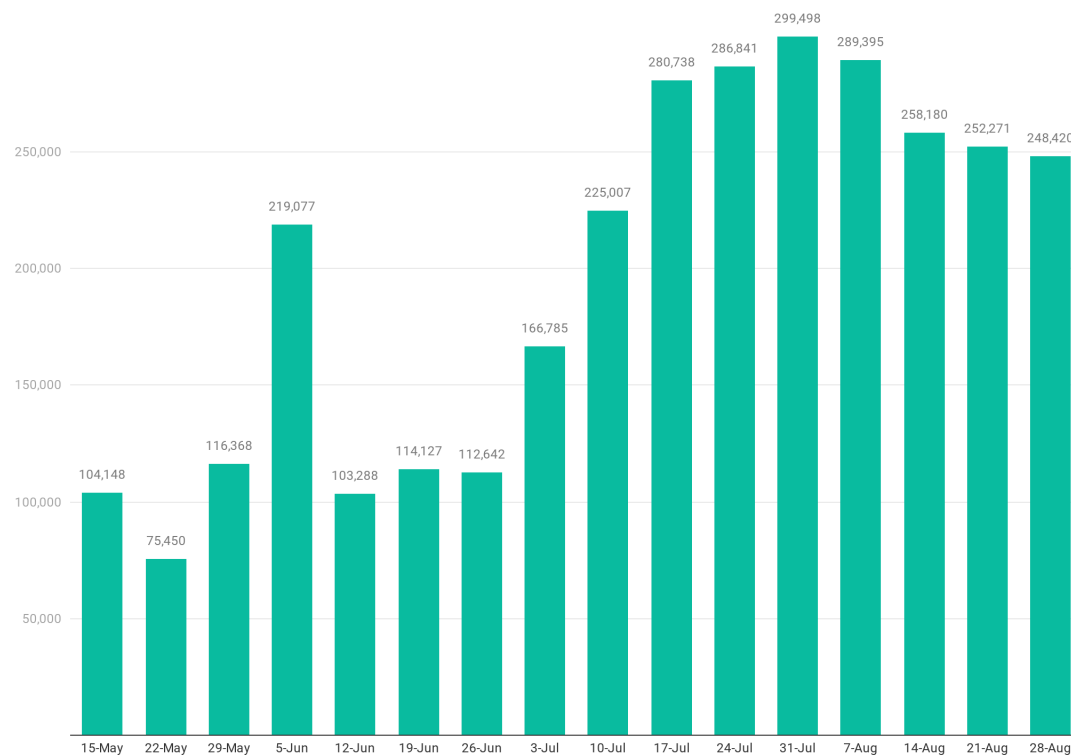
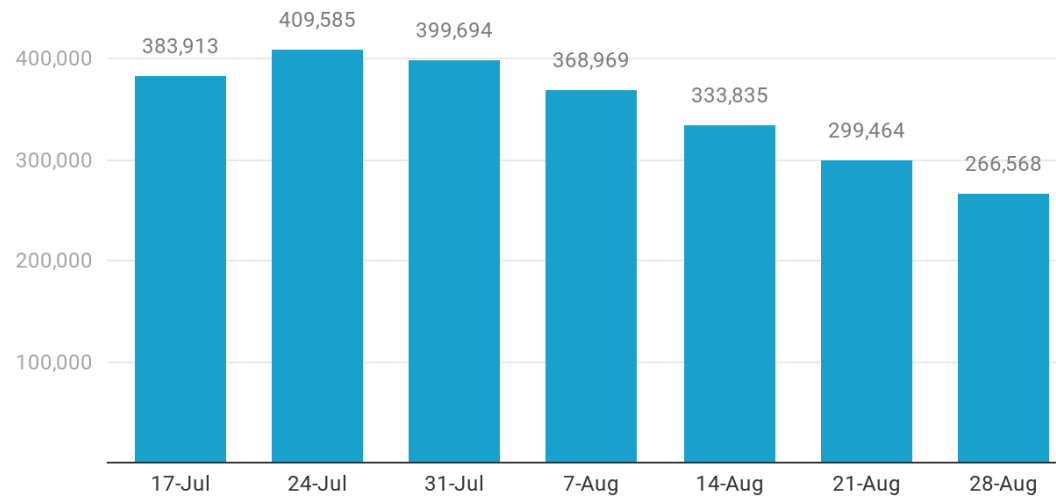


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Demand for inpatient beds, ICU and ventilators continued to decline

Weekly Inpatient Days COVID-19 - United States

For the 7 days ending on date shown

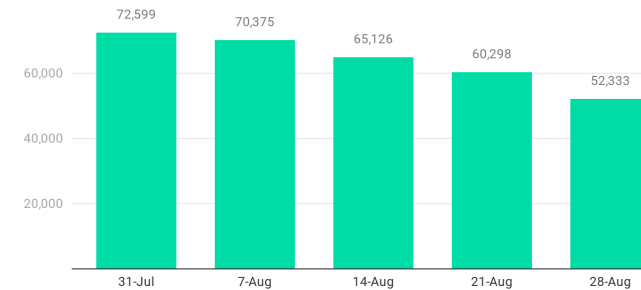


The following states started reporting data on: HI, 7/14; KS, 7/25

Chart: Health Industry Advisor LLC • Source: New York Times • Created with Datawrapper

Weekly ICU Census COVID-19 - United States

For the 7 days ending on date shown



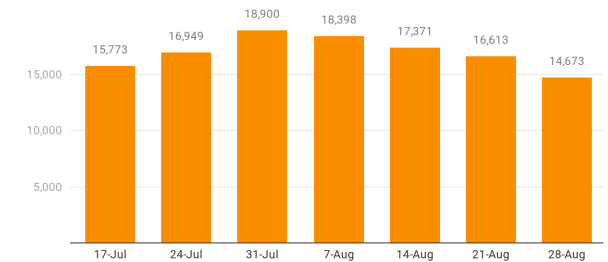
The following states started reporting data on: HI, 7/30; ND, 8/19; SC, 7/28; TN, 8/12. The following states do not report: AL, AK, AR, CO, CT, FL, GA, LA, MO, MT, NE, NH, NM, PA, SD, VT, WA

Chart: Health Industry Advisor LLC • Source: New York Times • Created with Datawrapper

Note: Because fewer states reported these data prior to July 25, we do not go back as far for ICU beds

Ventilator Days COVID-19 - United States

For the 7 days ending on date shown

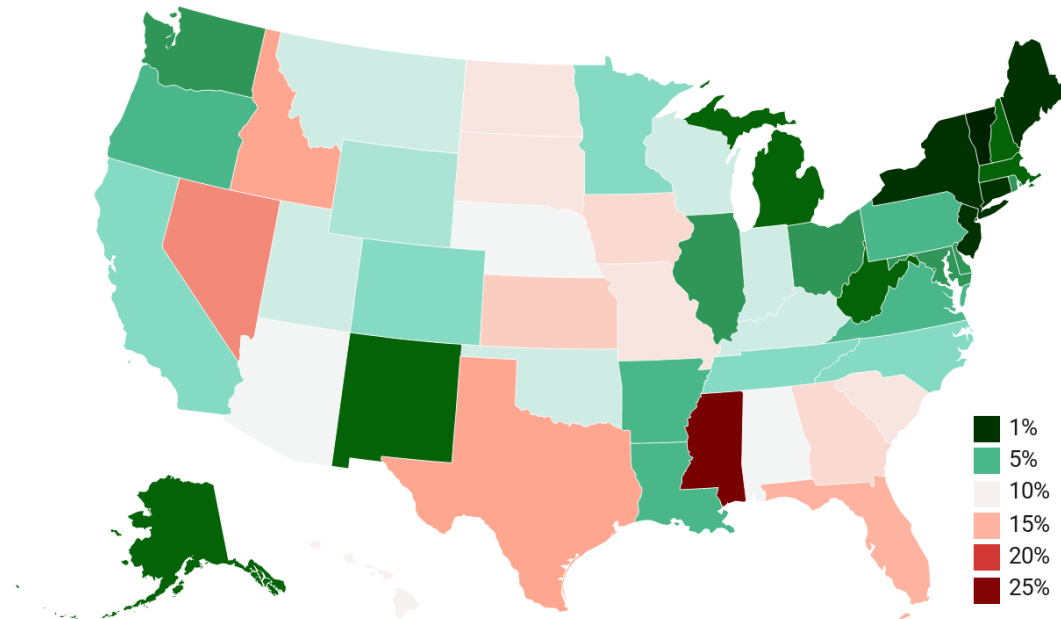


The following states started reporting data: HI, 7/31; KS, 7/16; SC, 7/24; TN, 8/12. The following states do not report: AL, CA, CO, CT, FL, GA, ID, KY, MD, MN, MT, NH, NM, NC, ND, OK, SD, TX, UT, VT, WI, WY

Chart: Health Industry Advisor LLC • Source: New York Times • Created with Datawrapper

Test-Positive Rate

Trailing 7-Day Moving Average, As of August 21

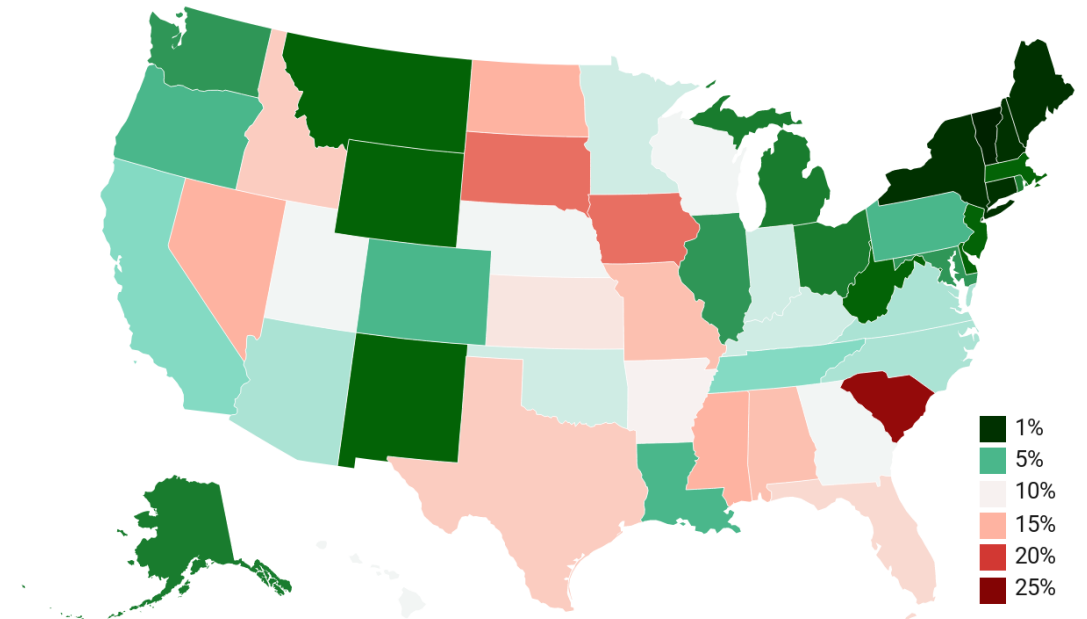


Health Industry Advisor LLC analysis

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 August 28

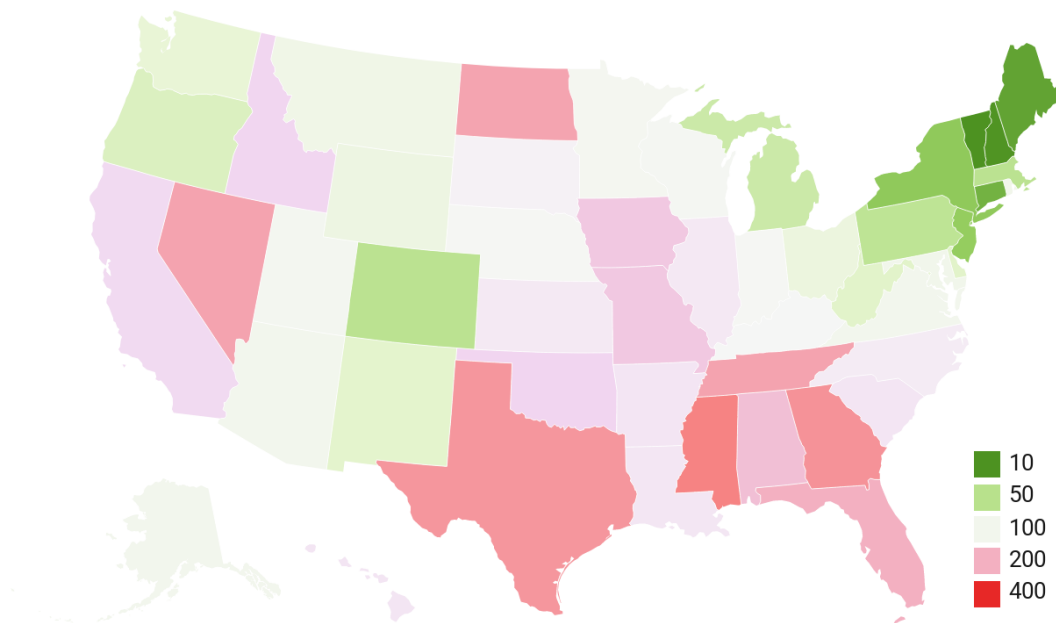


Health Industry Advisor LLC analysis

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

New Daily Infections Per 1 Million Population

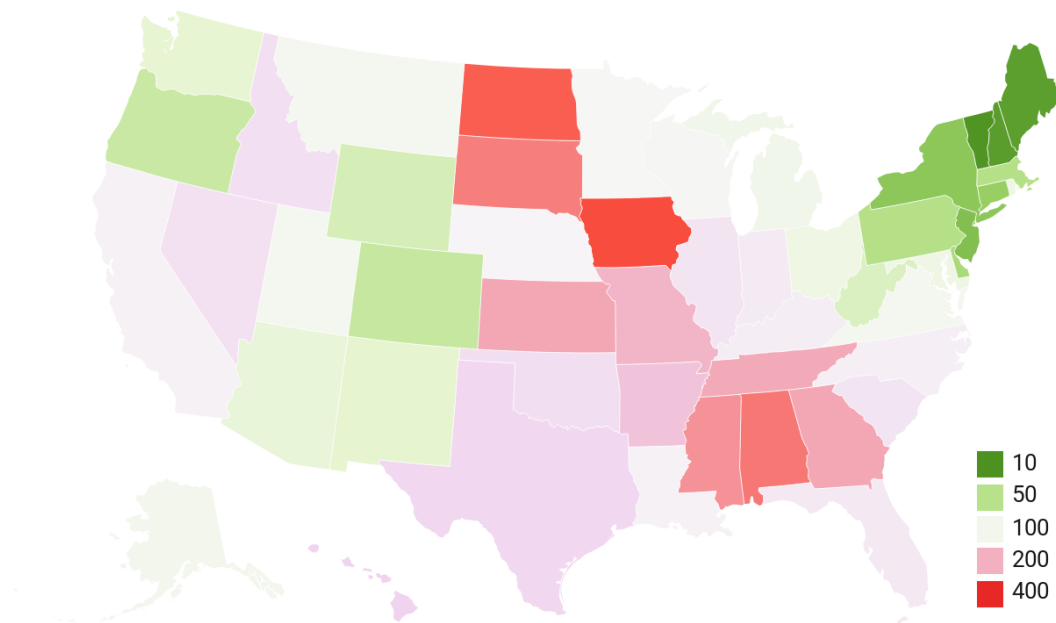
Trailing 7-Day Moving Average, As of August 21



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 August 28



Map: 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>