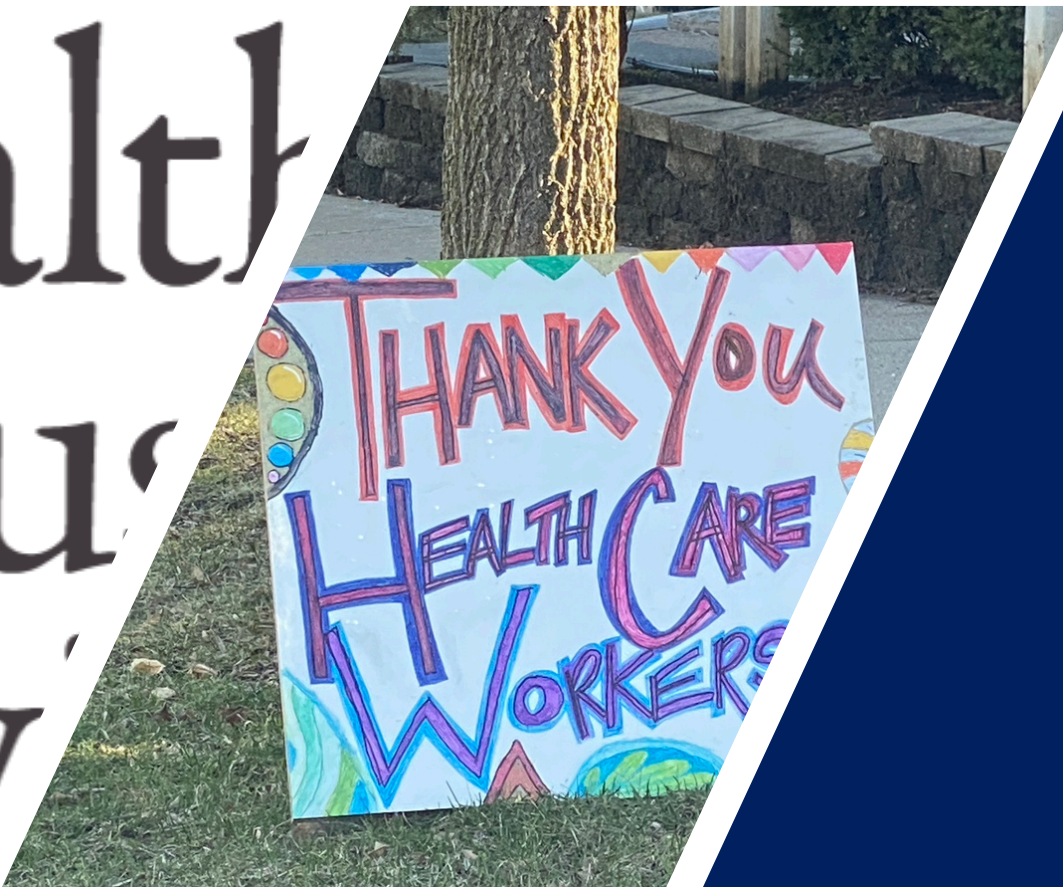




Health
Industry
Adv



Issue # 178

Monday, October 5, 2020

COVID-19 Report

Highlights

- **New cases were up 6.2% on a week-over-week basis; This increase was driven by higher-than-normal new cases on the weekend. These cases were higher than any weekend since August 15-16**
- **On a same-day, prior-week basis, new cases have increased on six of the past eight days**
- With the increased new cases this weekend, the 7-day rate of new infections per capita has returned to where it last was during the third week of August; This rate, however, was still 36% lower than its July peak
 - In comparison, new cases worldwide have increased 64% since the beginning of July
- North Dakota, South Dakota and Wisconsin continued to experience the highest rates of 7-day new infection per capita; Nebraska, Oklahoma and Utah also experienced high 7-day rates
- **Seven of the ten largest states experienced 7-day new infection rates below the national average; An eighth, North Carolina, was only marginally above the national average**
- **There was a strong correlation between 7-day test-positive %'s and 7-day new infections rates:**
 - Idaho, North Dakota, South Dakota and Wisconsin had the highest 7-day test-positive rates and high 7-day new infection rates
 - Maine, New Hampshire, New Jersey and Vermont experienced the lowest 7-day test-positive % and the lowest 7-day new daily infection rates
- In addition to experiencing the highest 7-day rates of new infection, North Dakota, South Dakota and Wisconsin also experienced significant week-over-week increases in this rate; Other states that experienced significant increases week-over-week: Alaska, Idaho, Montana and Wyoming. In all, **thirty-seven states experienced a week-over-week increase in new daily infection rates**
- **The 7-day average test volume set a new high yesterday - the third time a new high was set in the past week**
- **The test-positive rate on Sunday was 4.4%; the 7-day average dropped to 5%**
- **The 7-day average deaths increased over the weekend yet, remain lower than any period from the beginning of July to September 29**
- While there were more deaths reported this past weekend than on each of the prior two weekends, they were still lower than for any other weekend since Independence Day
- Despite this weekend's experience, **there were fewer deaths than the same-day, prior-week on nine of the past fourteen days**
- **Inpatient census of COVID-19 patients is of concern: this census has now increased on a same-day, prior-week basis eleven consecutive days**
- **ICU census has not shown the same pattern: This census, on a same-day, prior-week basis, has declined three consecutive days and ten of the past fourteen days**
- **Ventilator days, on a same-day, prior-week basis, have declined twelve of the past fourteen days**
- ER visits for covid-9-like illnesses, as a % of all ER visits, continued to decline; Visits for flu-related symptoms have not yet increased

After leveling in August,
new daily cases
worldwide* increased
since

New daily cases are up
14% since the beginning
of September

64% since the beginning
of July

Now averaging nearly
300k new cases each day

* - 7-day moving average basis

New Daily Cases Worldwide

7-Day Moving Average

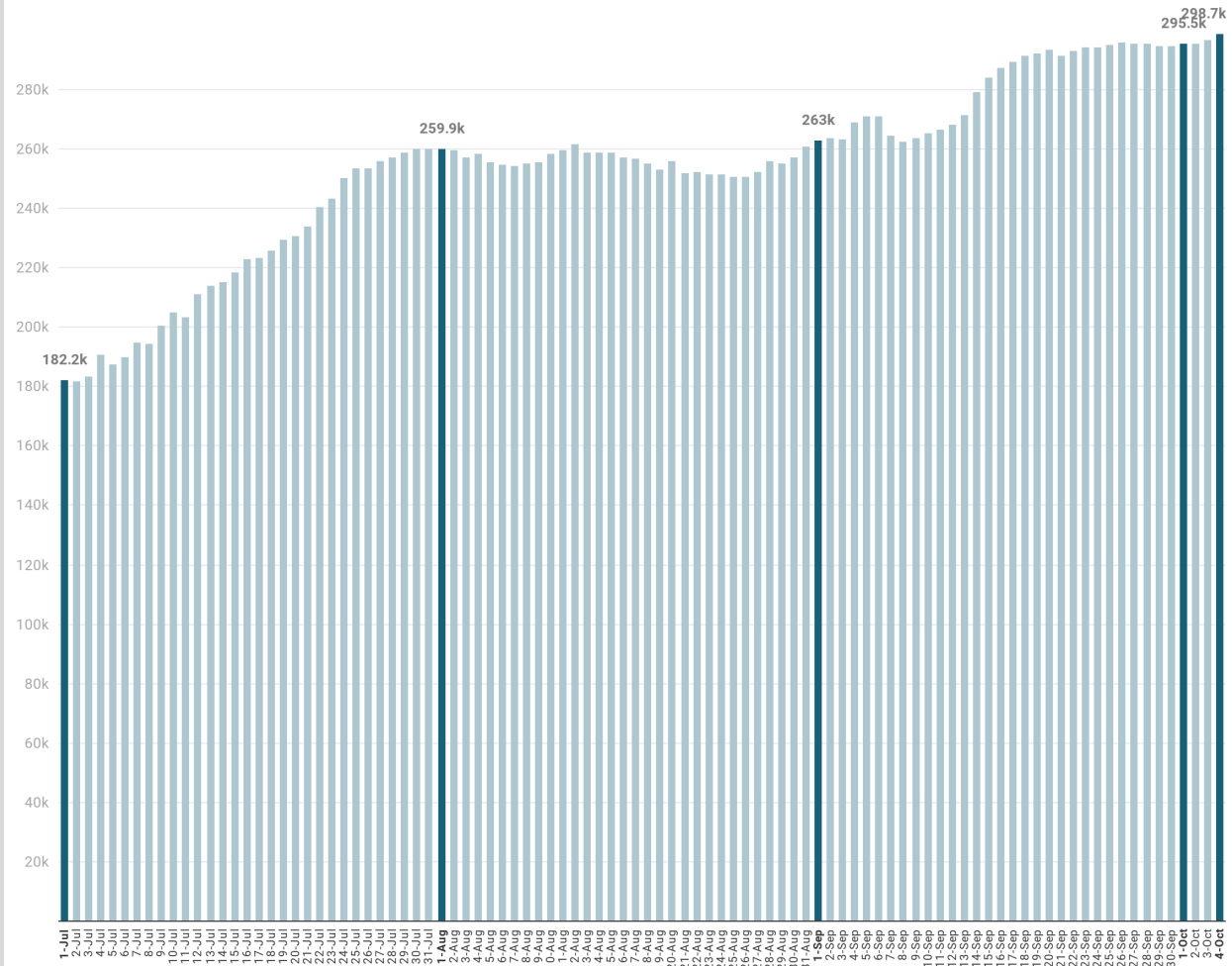


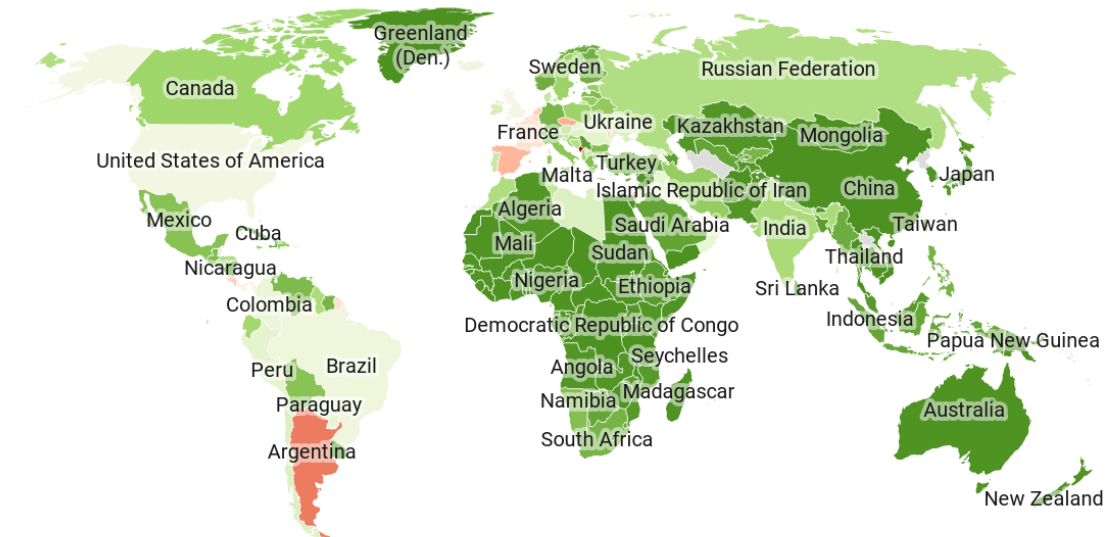
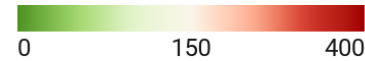
Chart: Health Industry Advisor LLC • Created with Datawrapper

While many countries are experiencing relatively low infection rates*, Israel, Bahrain, Argentina, Czech Republic and Spain experienced the highest rates among large countries during the past week

* - 7-day moving average basis

New Infections / Million

7-Day Moving Average, As of October 4



Map: Health Industry advisor LLC • Created with Datawrapper

Twenty-five countries currently have new infection rates/1M* > 130

Island nations are seeing some of the highest new daily infection rates per capita, with Aruba, Bahamas, Bahrain, Caribbean Netherlands, Guadeloupe, Gibraltar, and St. Barth, each >200

Argentina, Czechia, Costa Rica, Israel, Netherlands and Spain lead large countries, with rates > 200

* - 7-day moving average basis

New Daily Infections / Million

7-day Moving Average, As of October 4

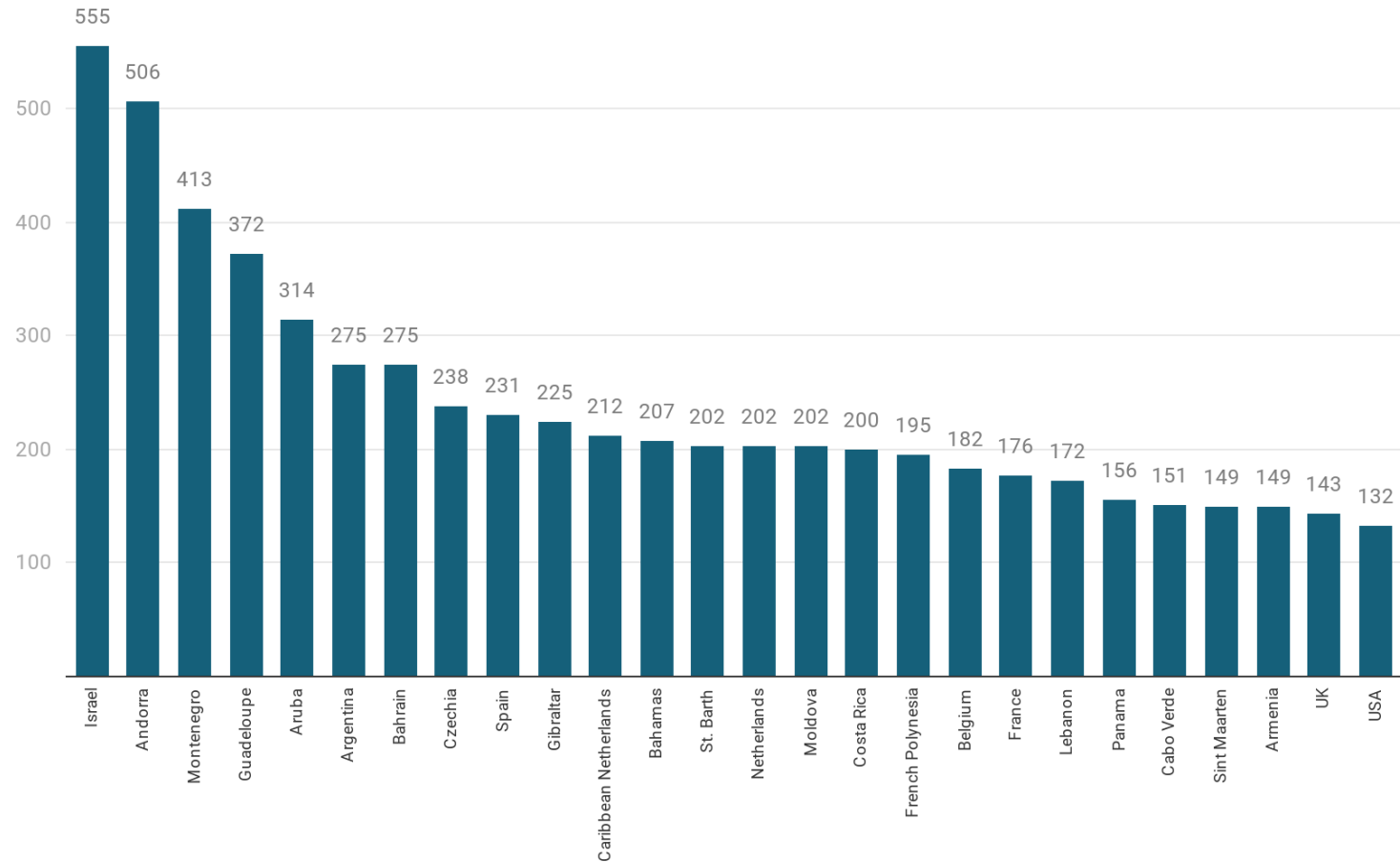


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Over the past two weeks, Caribbean Netherlands, Guadeloupe and St. Barth experienced the largest increase in new infections per capita*

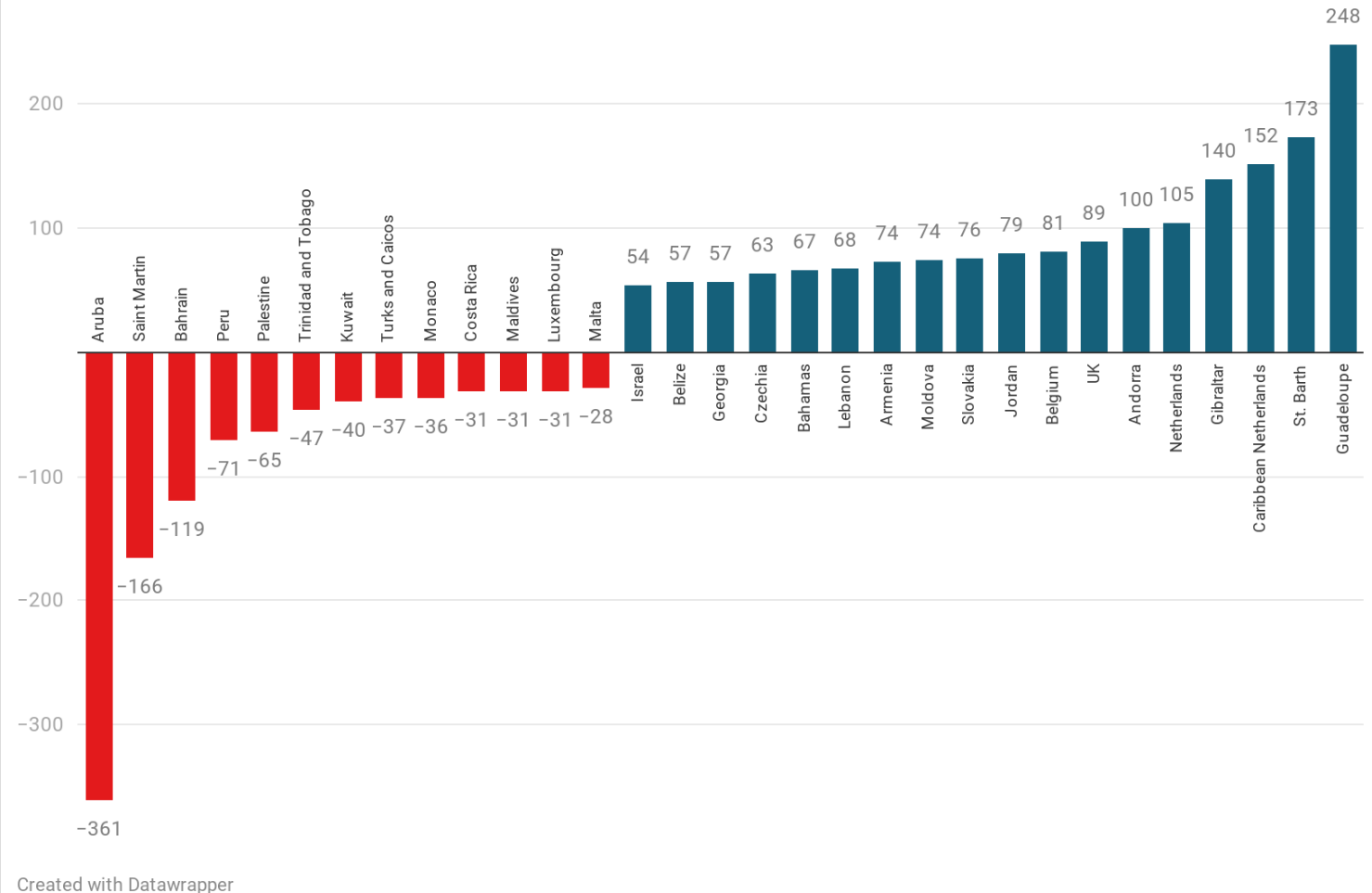
European countries Belgium, Netherlands and the United Kingdom also experienced large increases in this rate

Aruba, Bahrain and Saint Martin experienced the largest decline in this rate

* - 7-day moving average basis

Largest Increases & Declines in New Daily Infections / Million

7- Day Moving Average, September 30-October 4 v. September 14-20

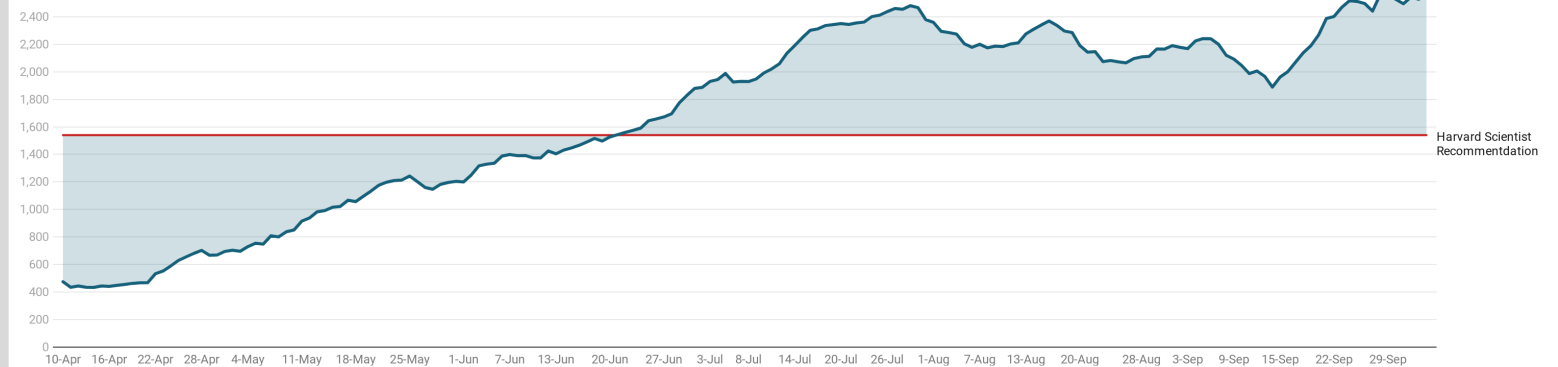


The 7-day average testing volume established a new high yesterday – the third time in the past week; Tests increased 6% week-over-week

Yesterday's test-positive rate was 4.4%; the 7-day average test-positive rate met the WHO guideline of 5%

Daily Tests Per 1 Million - United States

Trailing 7-Day Moving Average, As of October 4

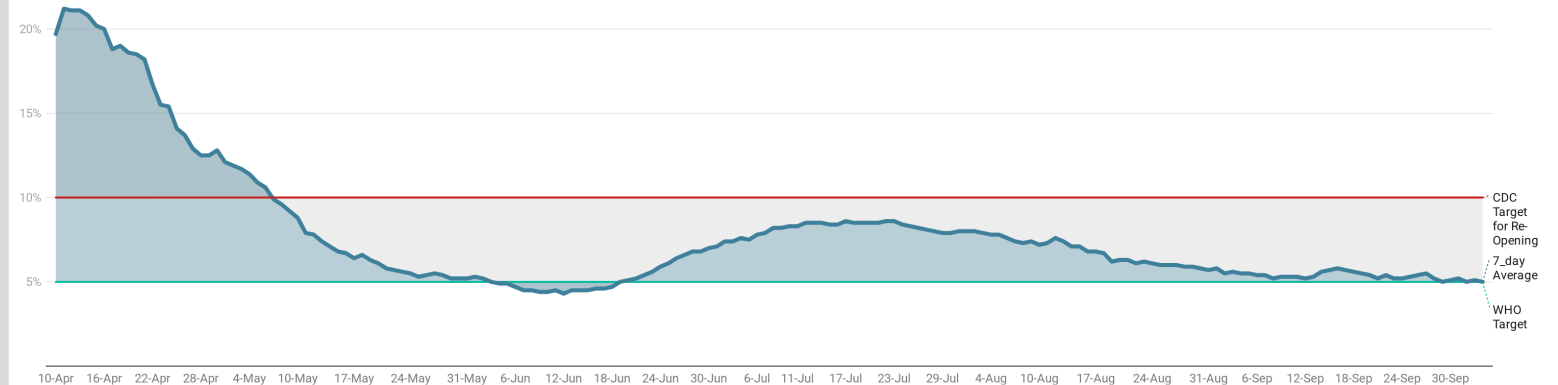


Health Industry Advisor LLC analysis

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 October 4



Health Industry Advisor LLC analysis

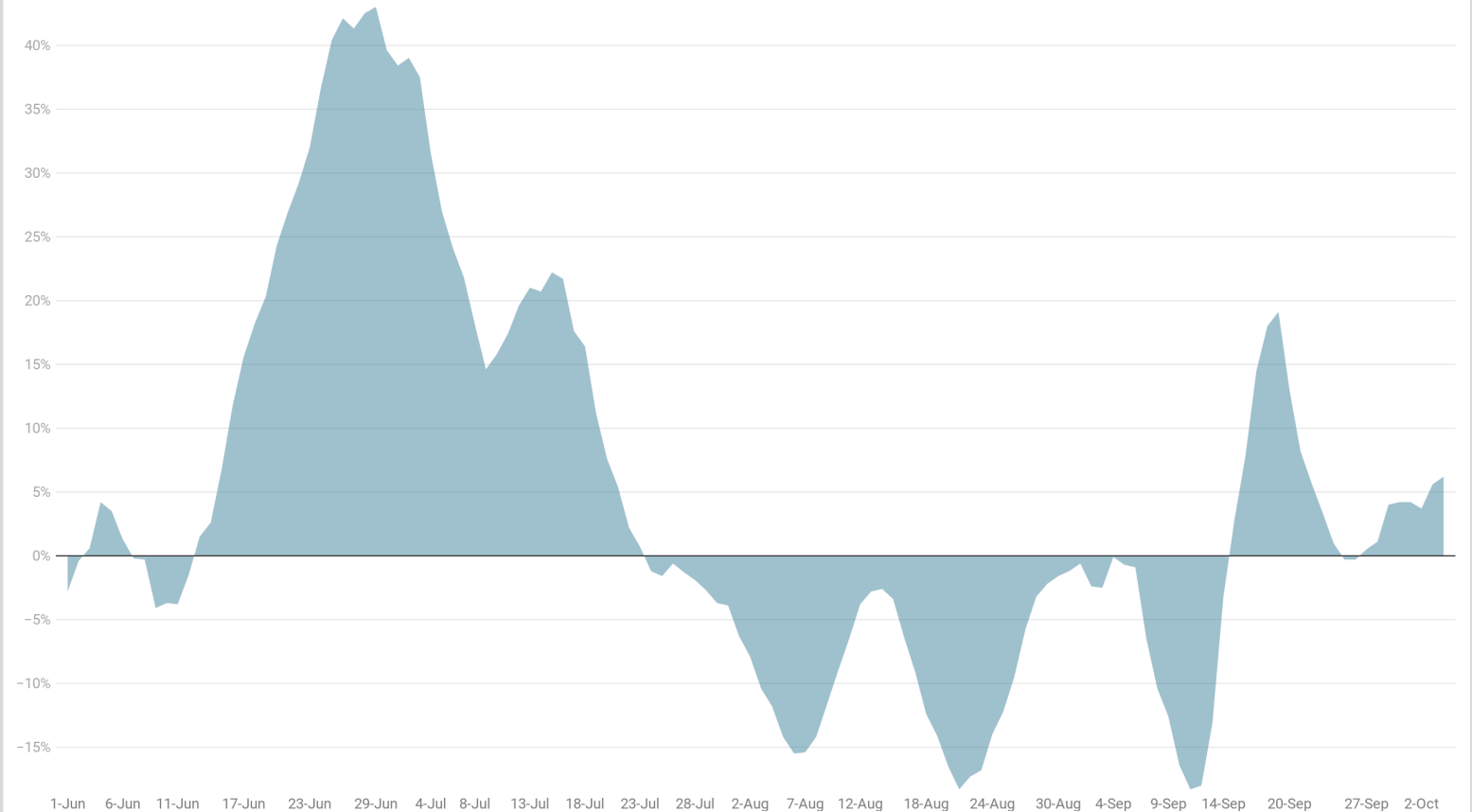
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

Following a seven-week period of decline, new cases began increasing on a week-over-week basis on September 15

Yesterday, this rate was up 6.2% on a week-over-week basis

Week-Over-Week Change In New Cases

Through October 4



Health Industry Advisor LLC analysis

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

New cases on the weekend were sharply higher than the prior weekend and the highest since August 15-16

New Daily Cases

Through October 4

Saturdays & Sundays Highlighted

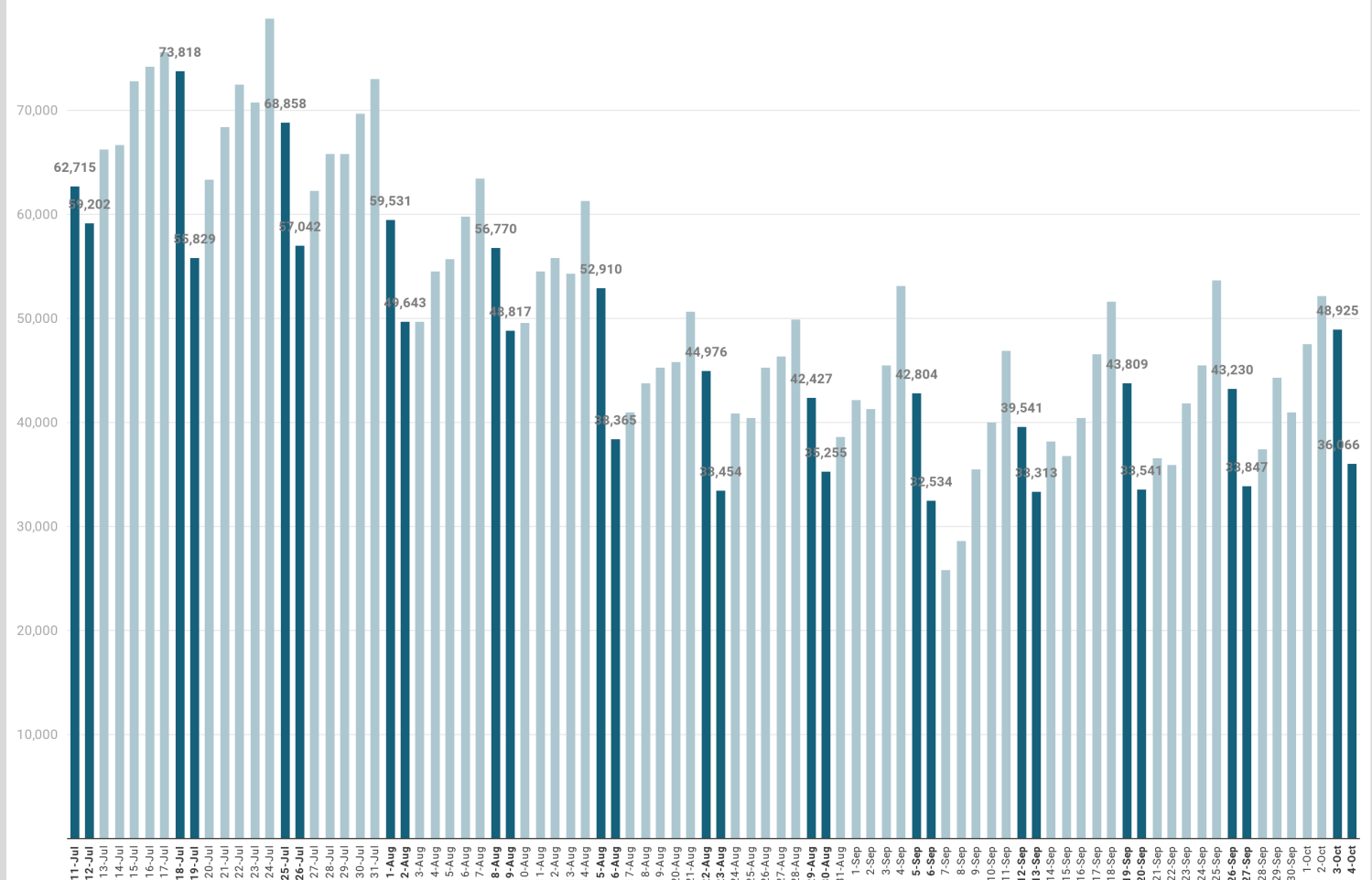


Chart: Health Industry Advisor LLC • Source: eorlometers.info • Created with Datawrapper

New cases beginning to show signs of moving upward

New cases on the weekend were higher than the prior weekend

New cases were higher than for same-day, previous week on six of the past eight days

Amplitude of increases is greater than decreases

Change In New Cases - United States

Compared to Same Day, Prior Week

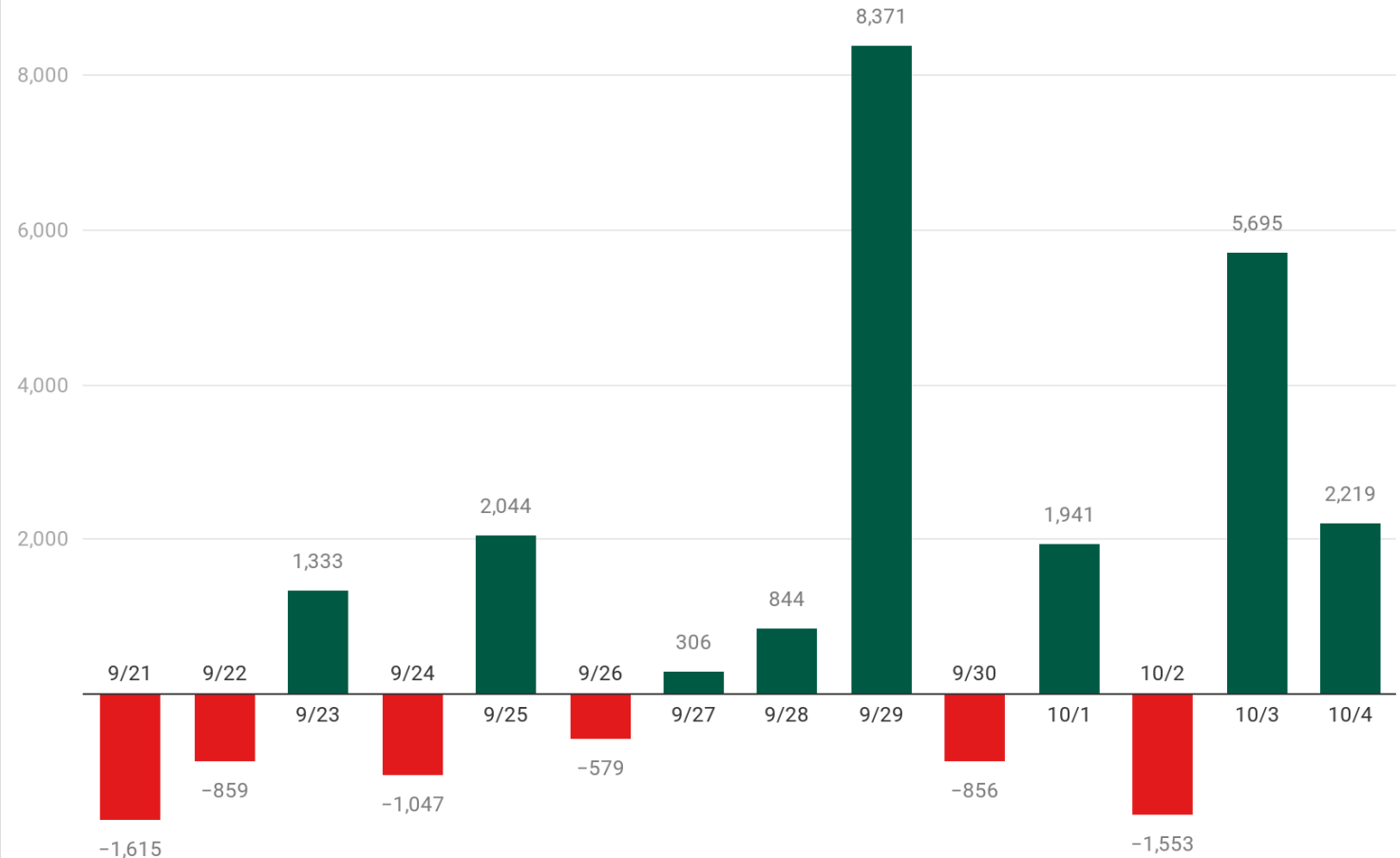


Chart: Health Industry Advisor LLC • Source: Worldometers.info • Created with Datawrapper

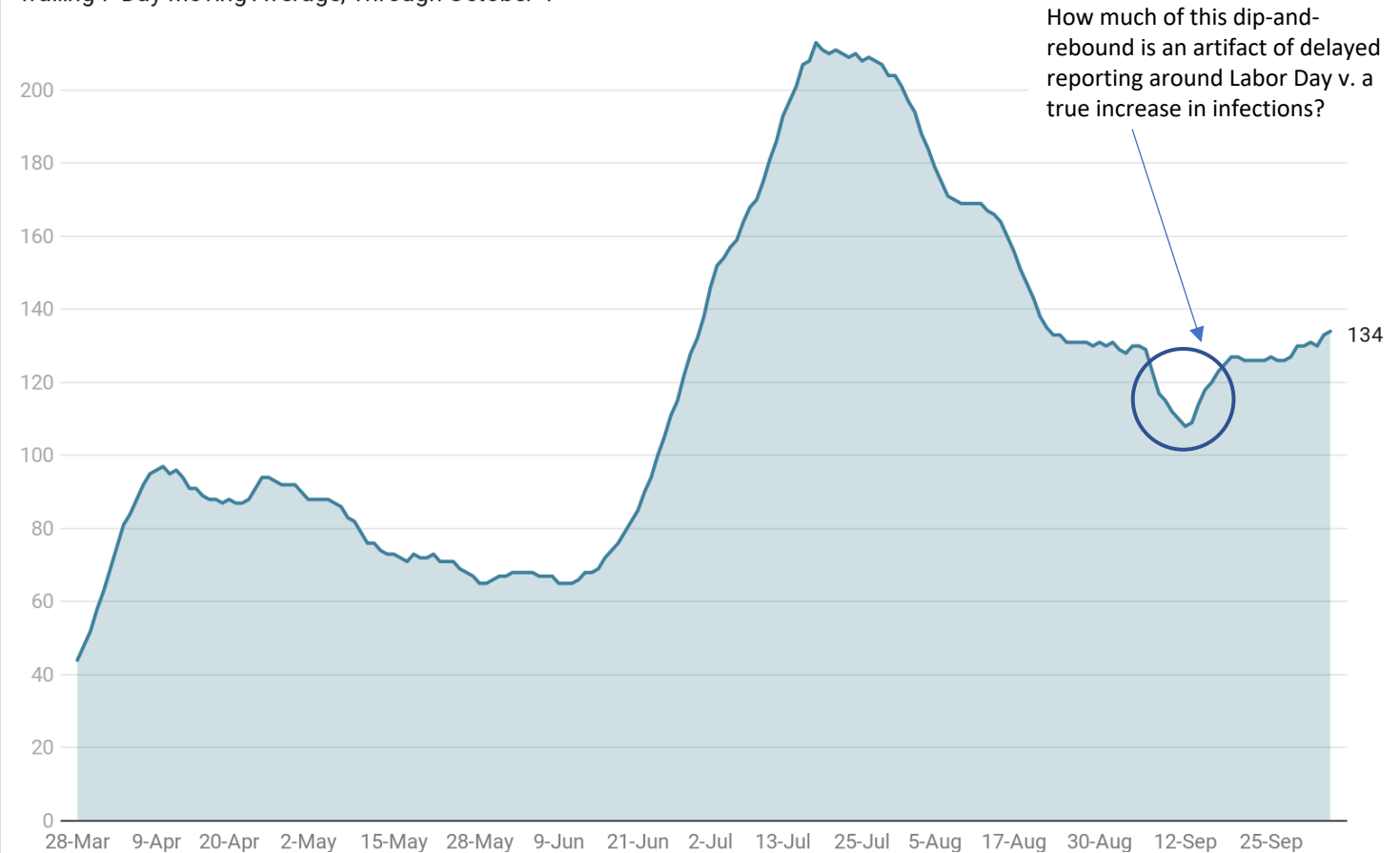
A relatively higher number of new cases over the weekend has increased the rate of new infections per capita* in the U.S.

This rate is now back to where it was during the third week of August

* - 7-day moving average basis

New Infections Per 1 Million Population - United States

Trailing 7-Day Moving Average, Through October 4



Health Industry Advisor LLC analysis

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

North and South Dakota and Wisconsin continue to experience the highest rates of new infections per capita*

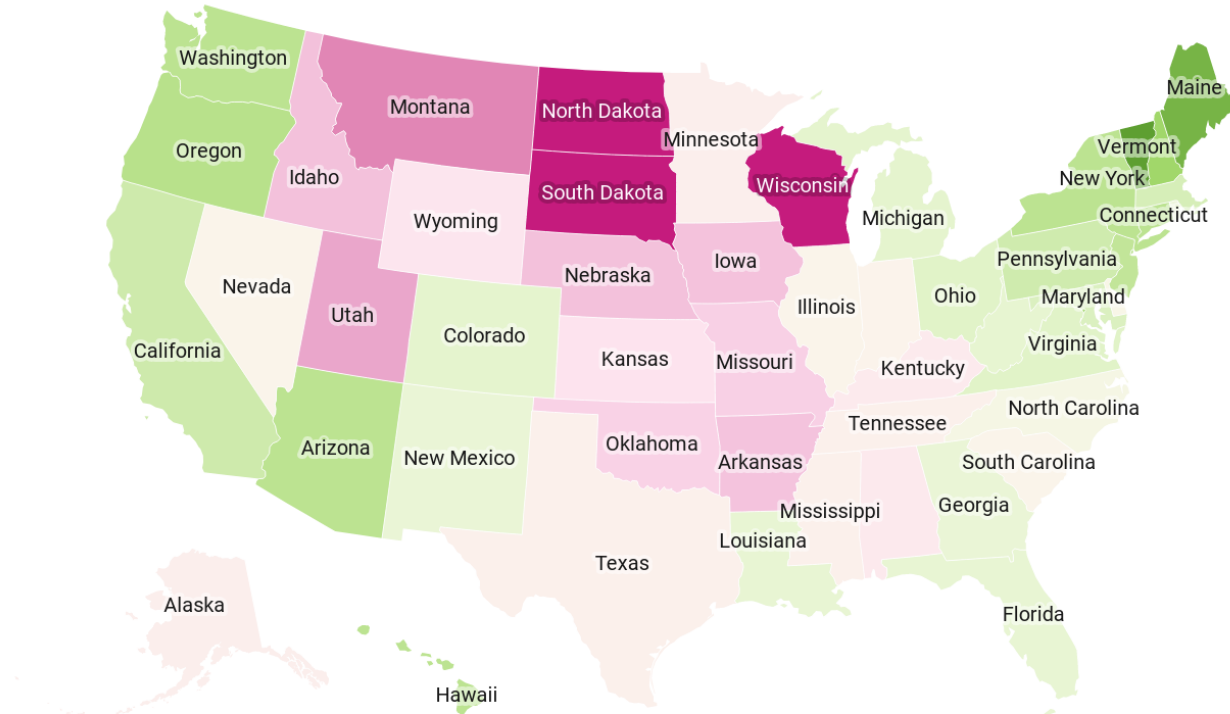
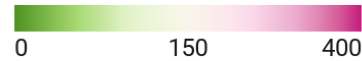
Arkansas, Idaho, Iowa, Missouri, Montana, Nebraska, Oklahoma and Utah also are of concern

Notably, seven of the ten largest states experienced rates below the national average (and, North Carolina was just above this average)

* - 7-day moving average basis

New Infections / Million

7-Day Moving Average, As of October 4



Map: Health Industry Advisor LLC • Created with Datawrapper

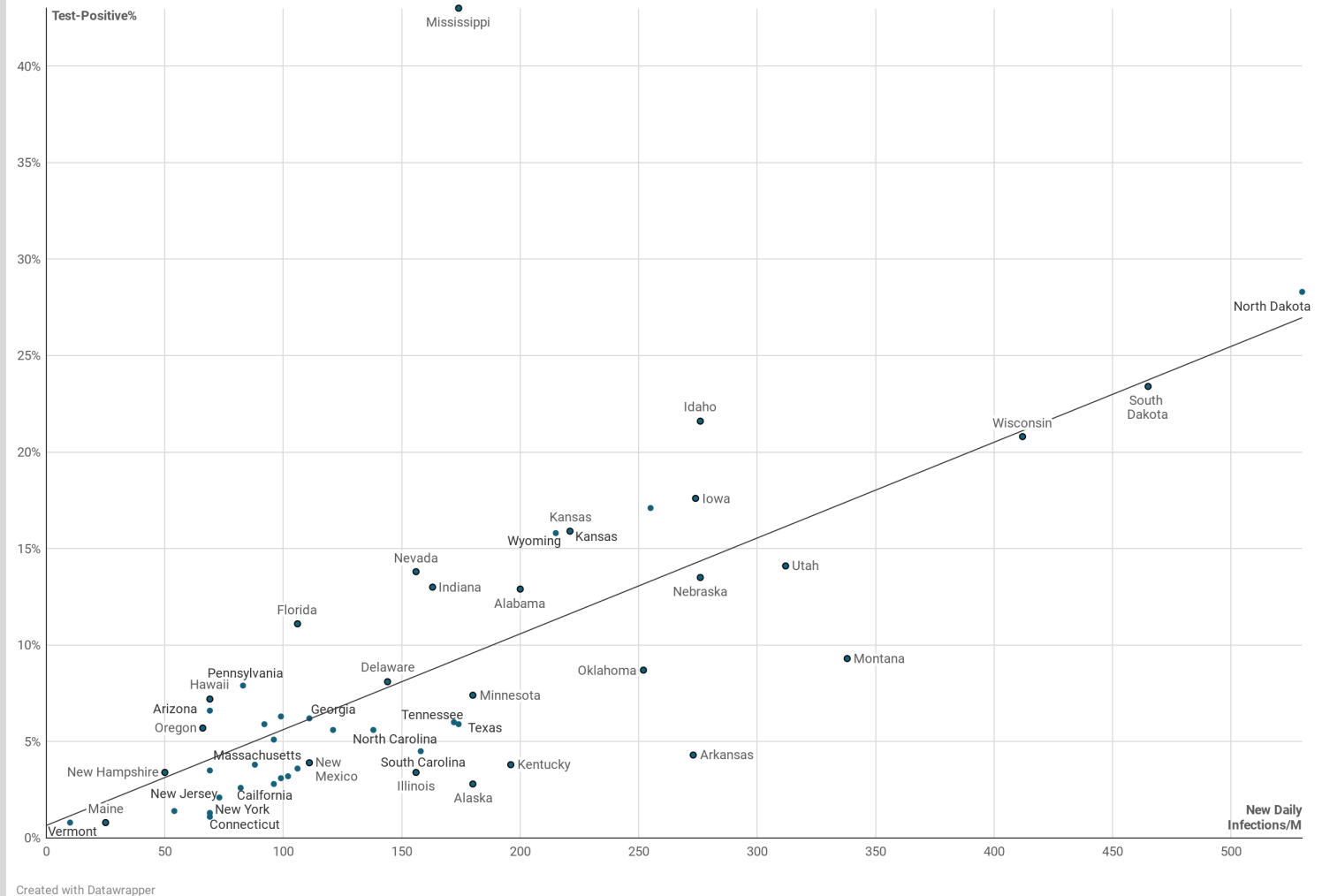
Strong correlation between test-positive % and new daily infection rates

Idaho, North and South Dakota and Wisconsin, with the highest 7-day test-positive % rates, also experienced among the highest 7-day new daily infection rates

Maine, New Hampshire, New Jersey and Vermont experienced the lowest test-positive % and new daily infection rates

New Infection Per Capita v. Test-Positive %

7-Day Moving Averages, As of October 4



North Dakota, South Dakota and Wisconsin already had the highest rates of new infections per capita* from September 21-27 and yet, each experienced increases in this rate from September 28-October 4

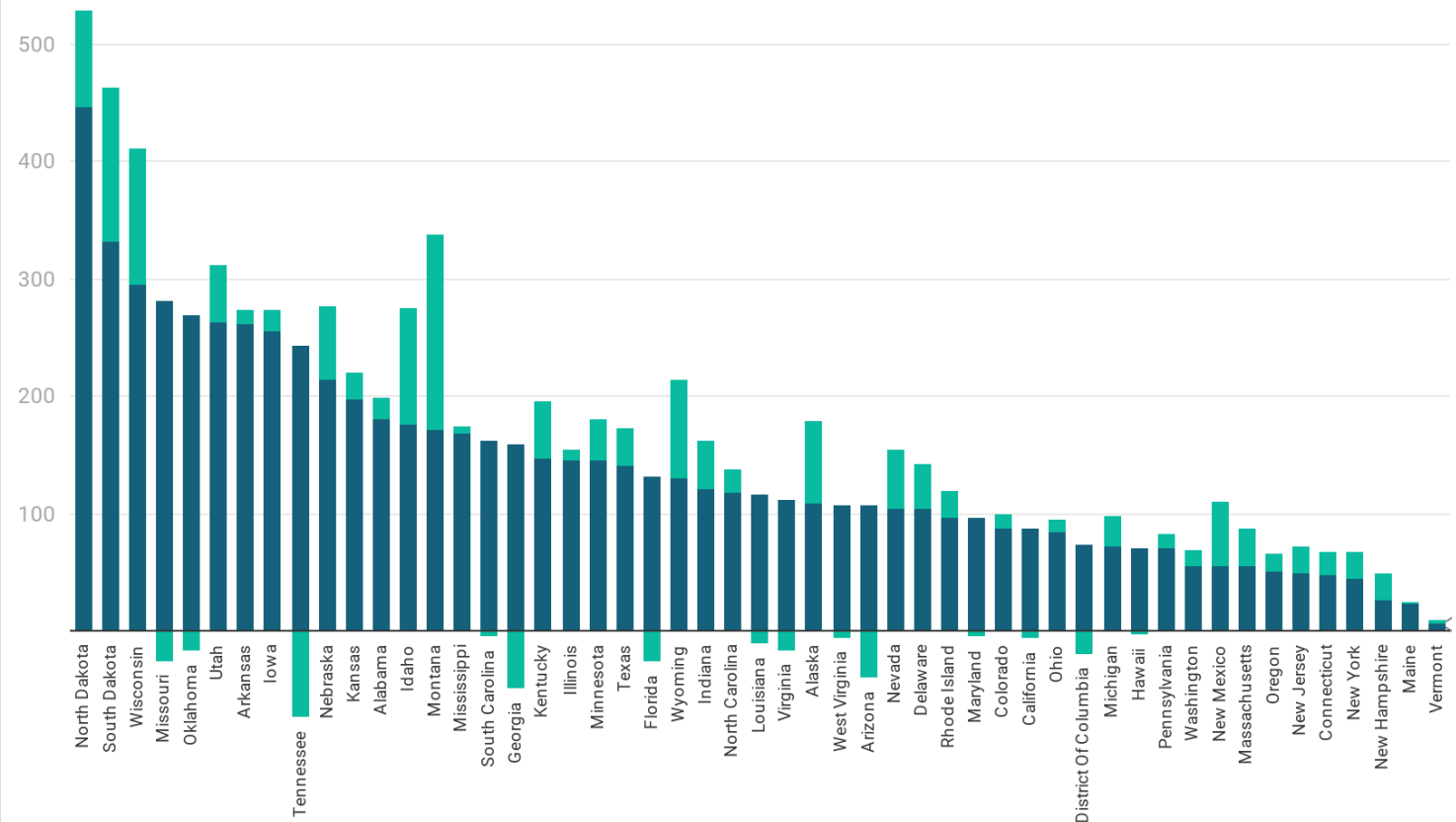
Alaska, Idaho, Montana and Wyoming also experienced significant increases in this rate during the past week

This rate increased in thirty-seven states during the past week

* - 7-day moving average basis

New Daily Infections / Million

7- Day Moving Average, As of September 25 & October 4



Created with Datawrapper

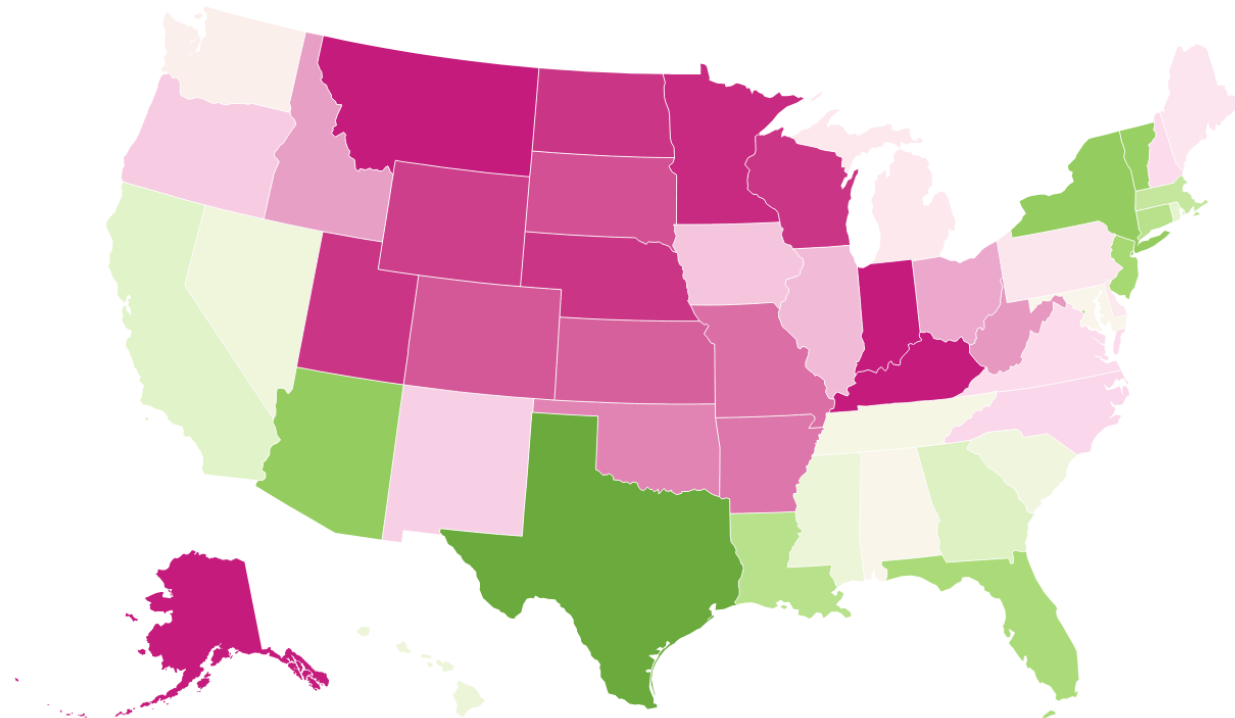
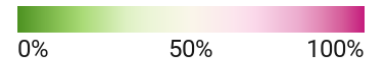
The Ohio River Valley,
Upper Midwest and
Mountain States are at
or near their highest
new daily infection
rates*

The Northeast,
Southeast and South
west are experiencing
rates significantly than
peak

* - 7-day moving average basis

How Close Is Each State's New Infection Rate to Its Peak Rate?

7-Day Moving Average, As of October 4



Map: Health Industry Advisor LLC • Created with Datawrapper

The 7-day average deaths per day increased over the weekend

Nonetheless, average daily deaths remain lower than any period from the beginning of July to September 29

Deaths Reported With Coronavirus in the U.S.

Trailing 7-Day Moving Average, As of October 4



Health Industry Advisor LLC analysis

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

There were more deaths reported this past weekend than each of the past two weekends

Nonetheless, there were fewer deaths this weekend than any other weekend since the Independence Day weekend

Newly Reported Deaths

Through October 4

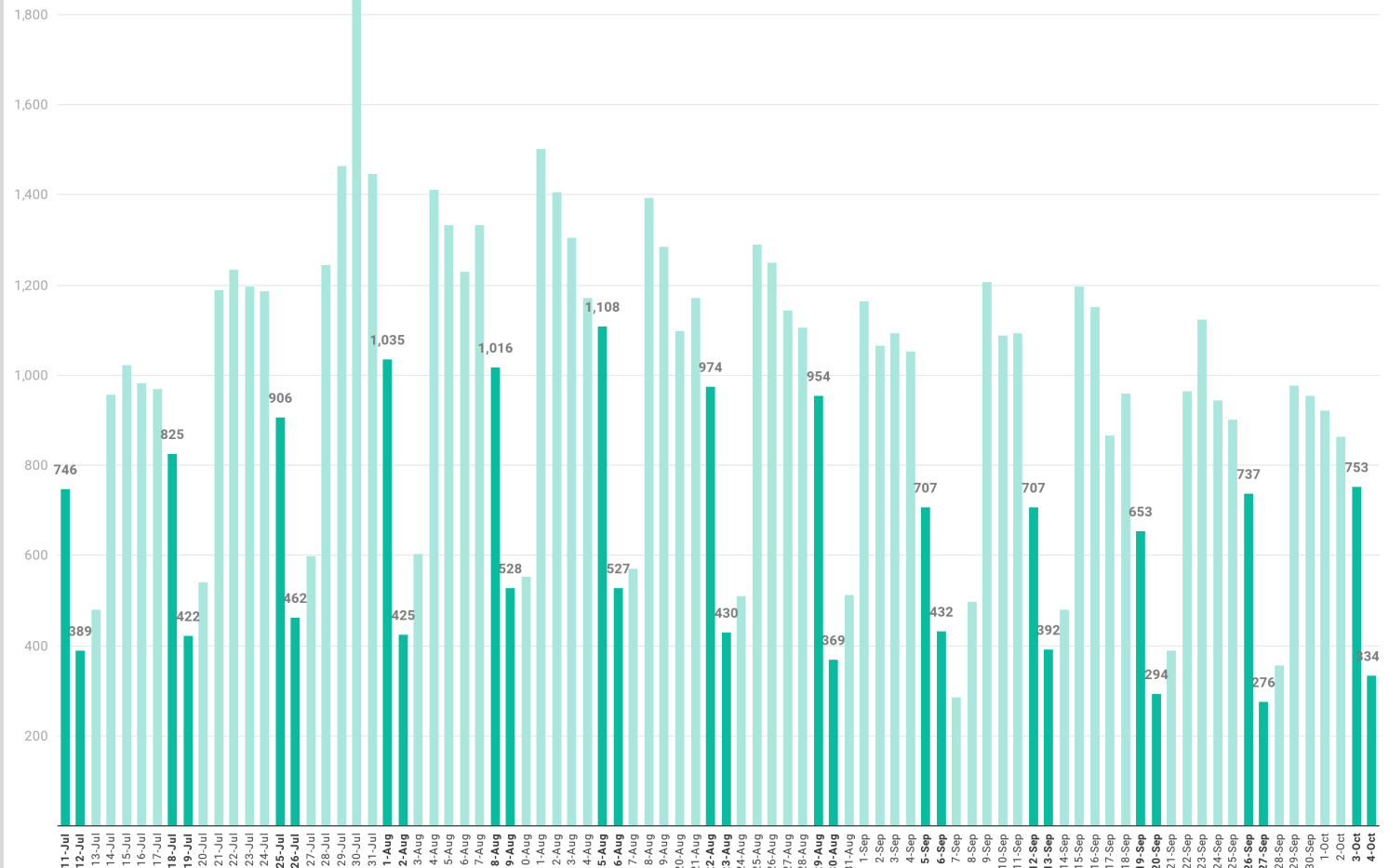


Chart: Health Industry Advisor LLC • Source: eorlometers.info • Created with Datawrapper

Newly reported deaths on the weekend were higher than prior weekend

Overall trend, however, remains negative:

- nine of past fourteen days show fewer new deaths than same-day, prior week
- amplitude of declines were greater than for increases

Change In Newly Reported Deaths - United States

Compared to Same Day, Prior Week



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

Inpatient COVID-19 census has increased relative to same-day, prior week on eleven consecutive days

Change in COVID-19 Inpatient Census - U.S.

Compared to Same-Day, Prior Week

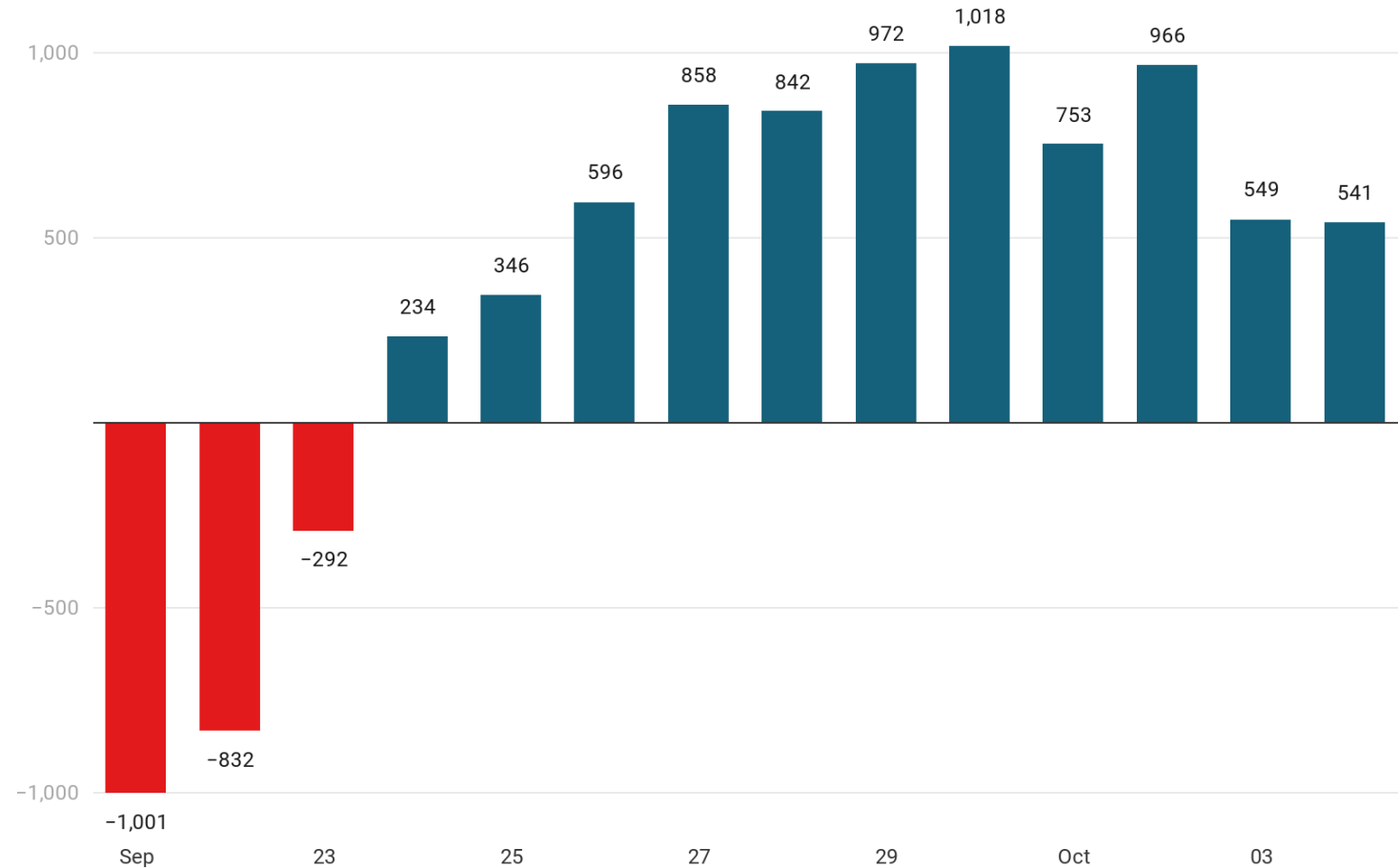


Chart: Health Industry Advisor LLC • Created with Datawrapper

Unlike inpatient census, ICU census of COVID-19 patients continued a downward trend:

ICU census declined from same-day, prior week on both weekend days and ten of the past fourteen days

Change in COVID-19 ICU Census - U.S.

Compared to Same-Day, Prior Week

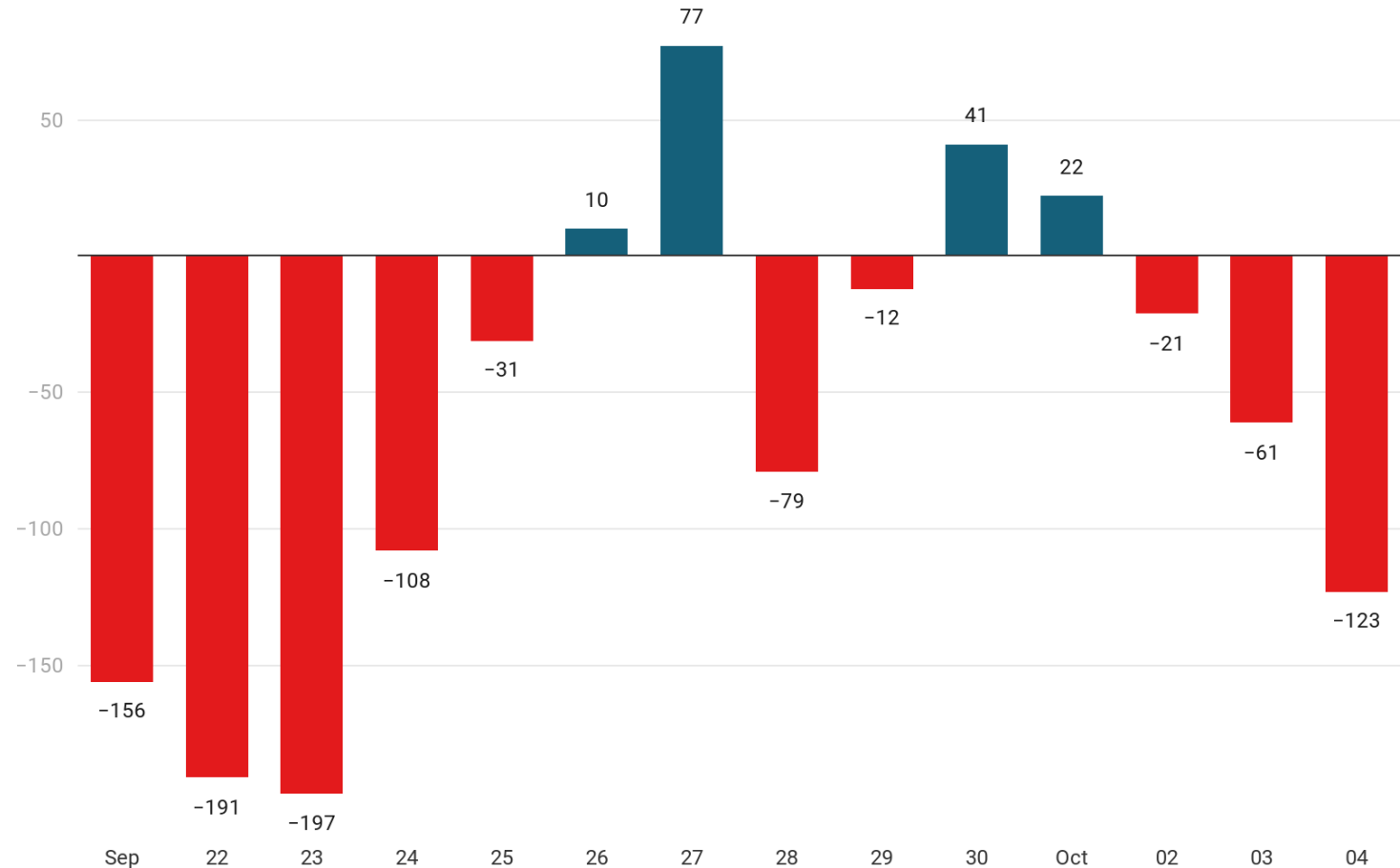


Chart: Health Industry Advisor LLC • Created with Datawrapper

Like ICU census,
ventilator patients
continued a downward
trend:

Ventilator patients
declined from same-day,
prior week on both
weekend days and
twelve of the past
fourteen days

Change in COVID-19 Ventilator Patients - U.S.

Compared to Same-Day, Prior Week

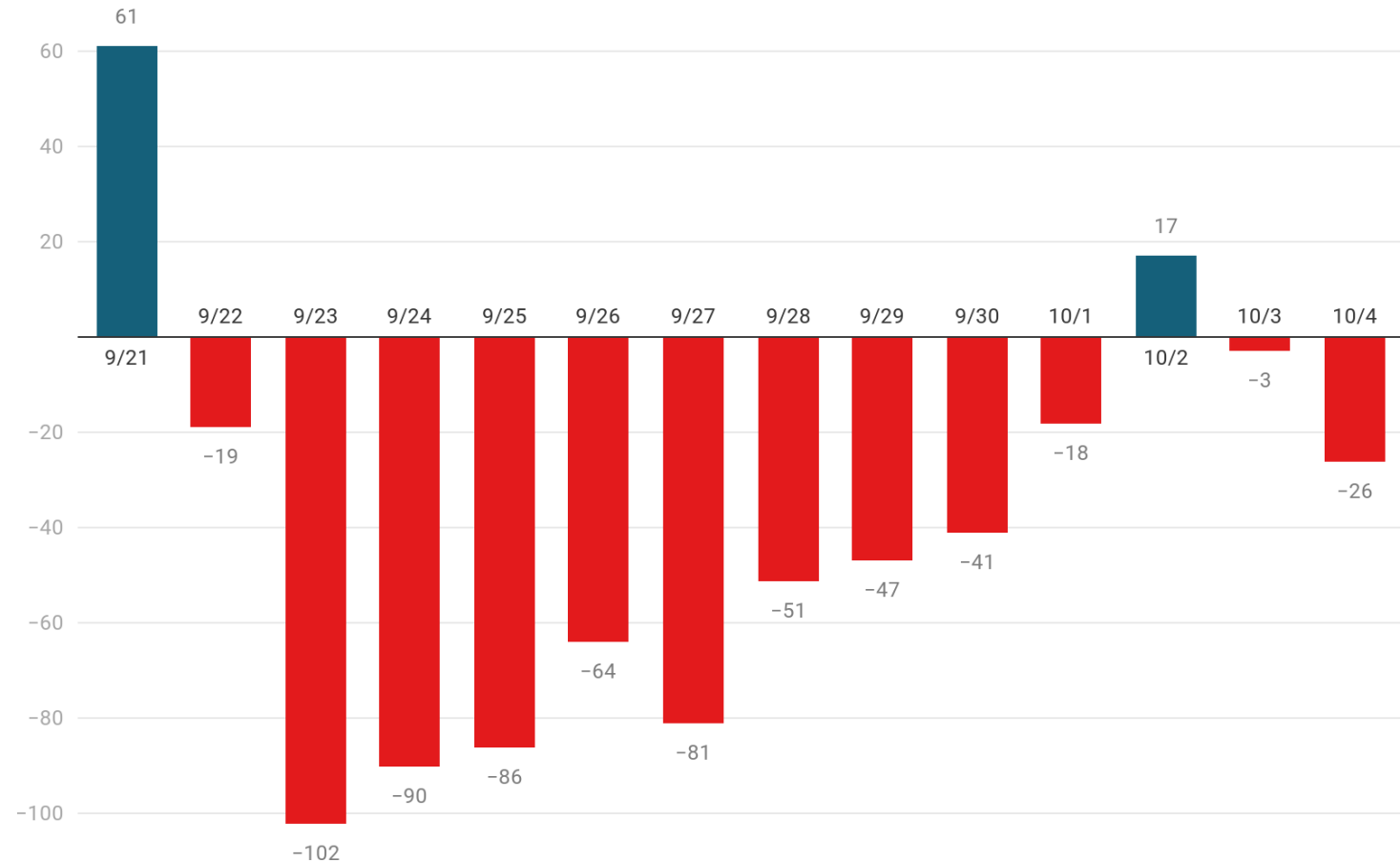


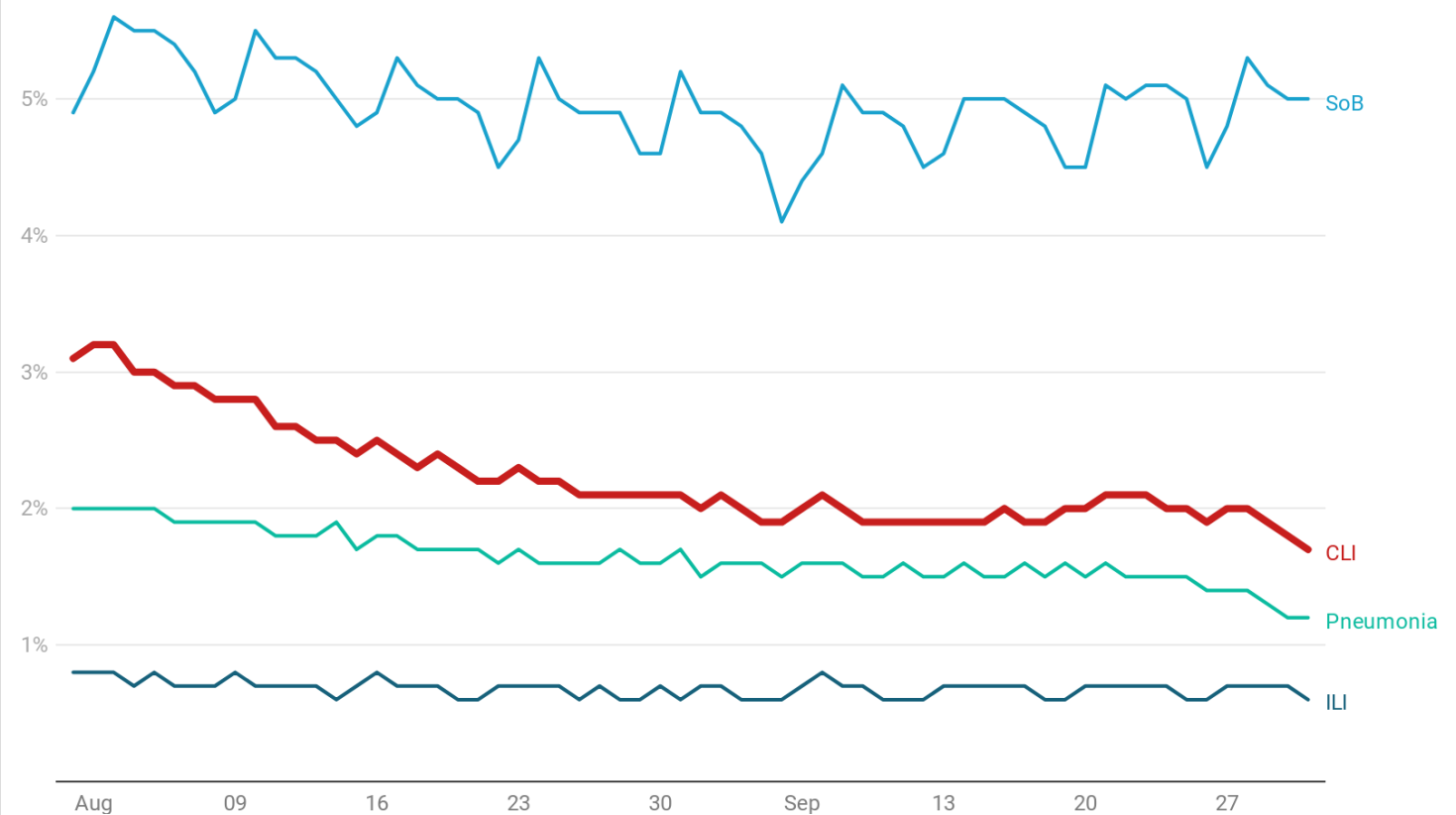
Chart: Health Industry Advisor LLC • Created with Datawrapper

The % of ER visits for COVID-19-like illnesses (CLI) has steadily declined since July

Flu season is not yet evidenced by influenza-like illness (ILI) visits to the ER

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

As of October 1



Health Industry Advisor LLC analysis

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

Data Sources

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>