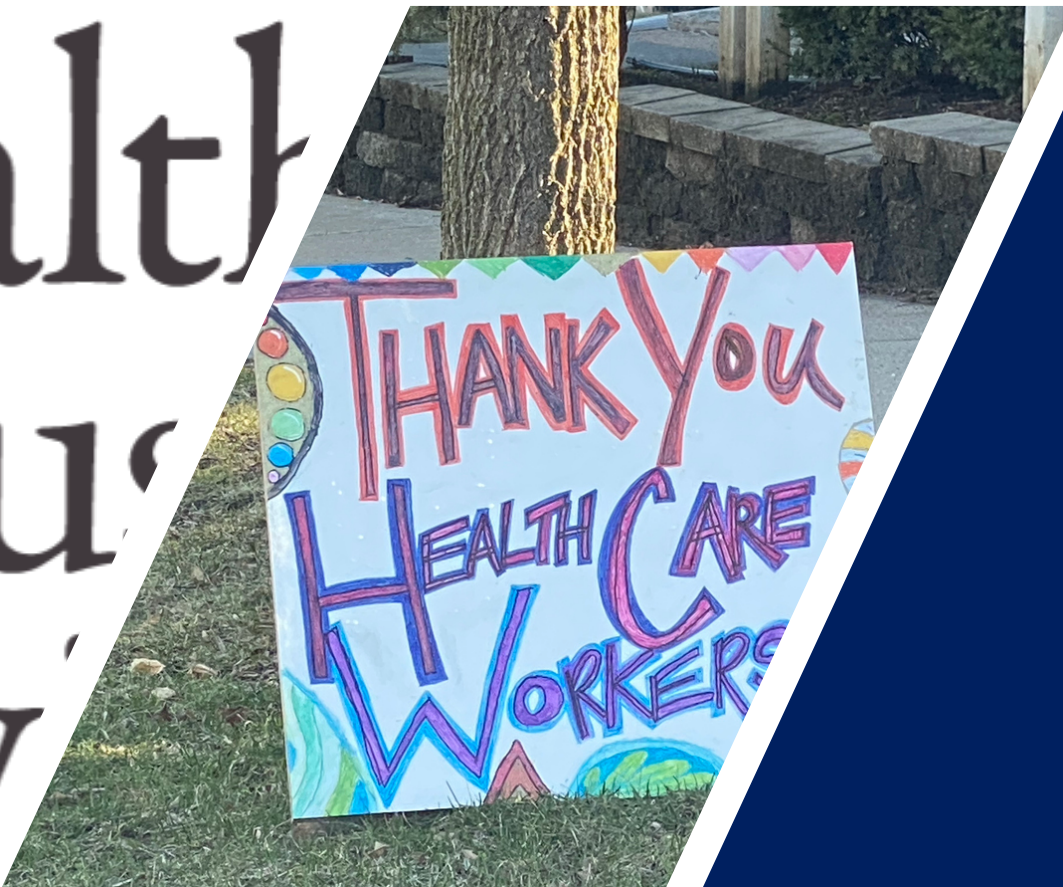




Health
Industry
Adv



Issue # 197
Wednesday, October 28, 2020

COVID-19 Report

Highlights

- Newly-detected cases are increasing in the U.S. at a high and unanticipated rate
 - **On a week-over-week basis, newly-detected cases in the U.S. are up 20%; a week ago, the composite projection, based on more than a dozen independent models, had estimated that new cases would be essentially flat week-over-week**
 - Based on this unanticipated increase in new cases, **the newly-released composite projection now suggests a 12% increase in new cases in the next three weeks**; under last-week's projection, these were anticipated to be flat
 - **Worldwide, new cases are now matching the week-over-week growth in the U.S.**; About one week ago, new cases worldwide were increasing at 1/2 the U.S. rate
- As new cases are identified in the U.S., hospital Covid-19 census is increasing too, although at a slower rate
 - Hospital Covid-19 census has increased by more than 50% in the past month; Nevertheless, this census is 27% lower than it was at its peak in late-July
 - **During October, new cases have risen by 69%, while Covid-19 census has risen 43%; Since the mid-July surge, new cases are 5% higher, while Covid-19 census is 36% lower**
 - The likelihood of an active Covid-19 case being hospitalized has increased modestly in October; This likelihood, however, is 1/2 of what it was during the July case surge and 1/3 of what it was in May
- **The likelihood of a hospitalized Covid-19 patient would require intensive care has declined throughout October; the likelihood of a hospitalized Covid-19 patient would be on a ventilator has steadily declined since April**
- Stress on other healthcare resources from both Covid-19 and the flu is significantly reduced from earlier levels
 - **The % of visits for Covid-19 illnesses is down 40% from its July peak and 60% from its April peak**
 - More than three weeks into the flu season, visit % for influenza-like illnesses remains lower than it has been at this point during each of the past 5 years
- Following the surge in new cases, deaths with coronavirus are now rising - and, at a faster rate than anticipated
 - **The 7-day average daily deaths has increased now on twelve of the past fourteen days**; the current rate is higher than at any point since September 18
 - Deaths reported in the past week exceeded the composite projection by 12%; **As a result, the latest update to this composite projection calls for a 16% increase in average daily deaths by the fourth week of the model**
 - Deaths per capita due to Covid-19, pneumonia and influenza were 2.25x higher in mid-July than today and 3.6x higher in than mid-April

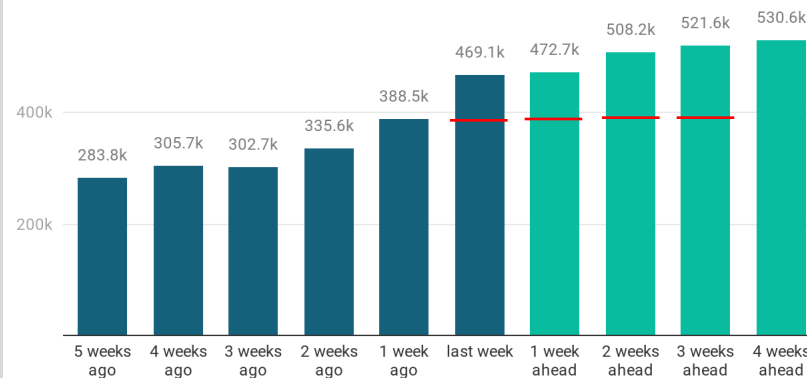
Cases and deaths last week were substantially greater than the composite projection

The latest composite projection now show continued increases through the 4-week projection window

* Composite of > a dozen projections, compiled each Tuesday by Covid-19 Forecast Hub and reported to the CDC

Newly Detected Cases, U.S. - Actual & Forecast

As of October 27



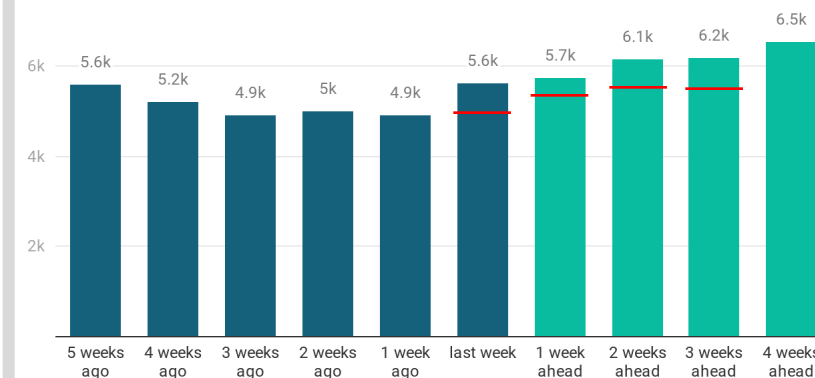
Composite of > a dozen independent models

Chart: Health Industry Advisor LLC • Source: Covid-19 Forecast Hub • Created with Datawrapper

— Composite projection, as of October 20

Newly Reported Deaths U.S. - Actual & Forecast

As of October 27



Composite of > a dozen independent models

Chart: Health Industry Advisor LLC • Source: Covid-19 Forecast Hub • Created with Datawrapper

Covid-19 hospitalizations and the % of deaths due to Covid-19 and other respiratory illness have trended downward since July and are significantly lower than in April

The % of deaths related to Covid-19 and respiratory illness is now as low as it has been since March

Covid-19 visit (%) is down more than 60% since April and nearly 40% from a July peak

% of All Deaths Due to Covid-19, Pneumonia & Flu; Covid-19 Hospitalizations per 100,000; % of Visits for Covid-19 Like Illnesses

By Week, As of October 17

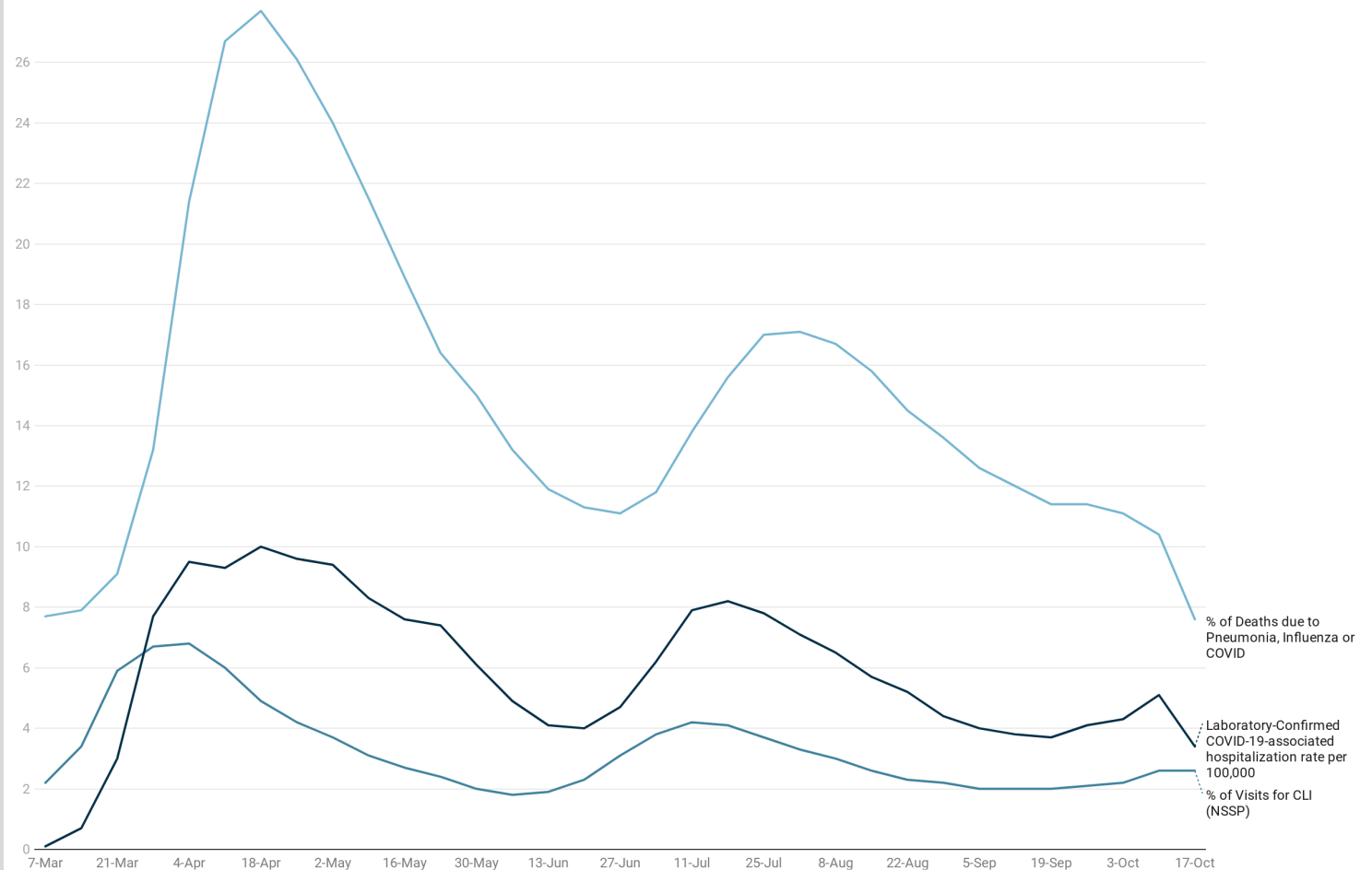
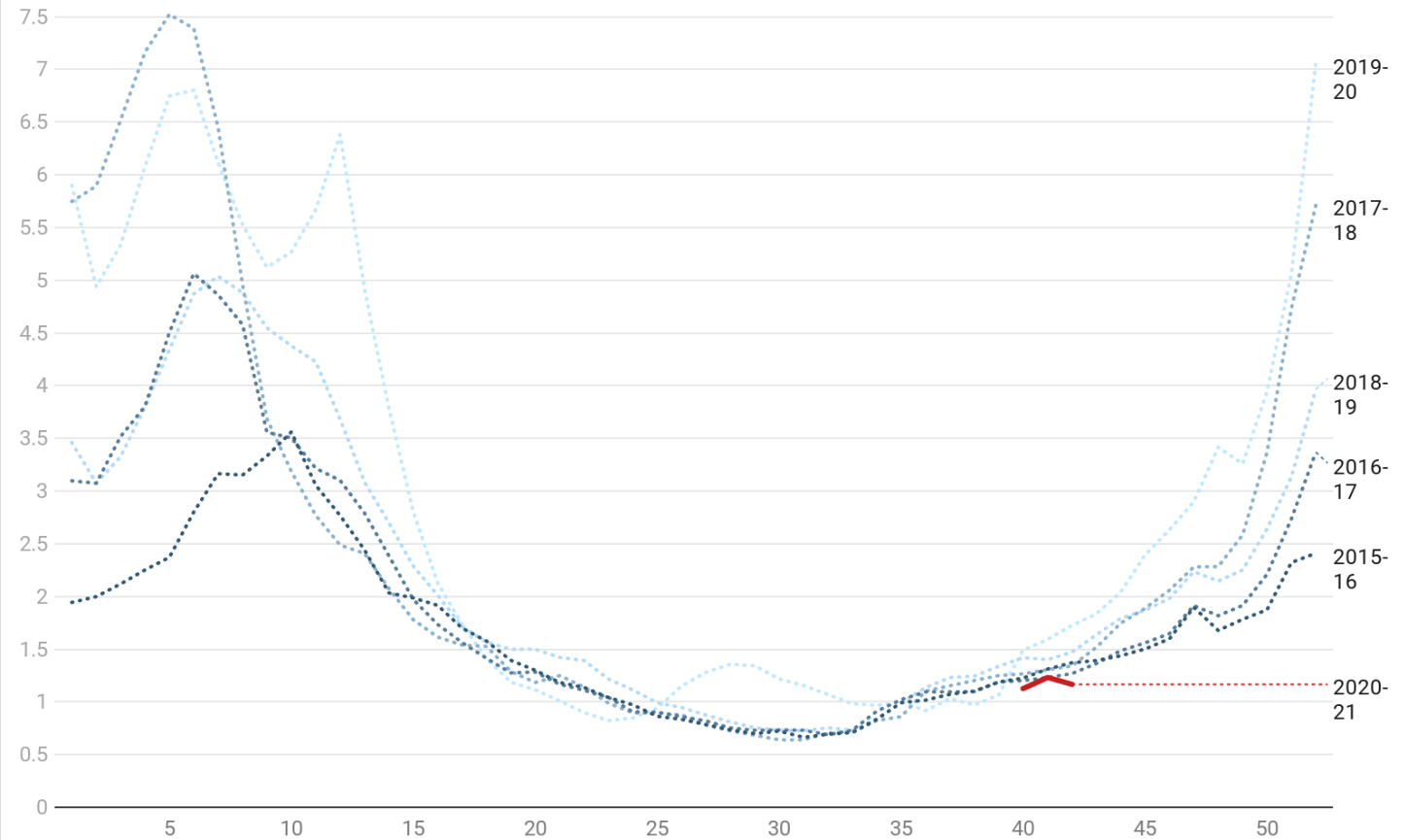


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control & Prevention • Created with Datawrapper

Three weeks into the 2020-21 flu season, flu visits are trending lower than each of the past five years (but, its still early)

% of Visits for Influenza-Like Illnesses, National Summary

By Week & Flu Season, As of October 17



Reported by : WHO, Collaborating Laboratories and ILNET

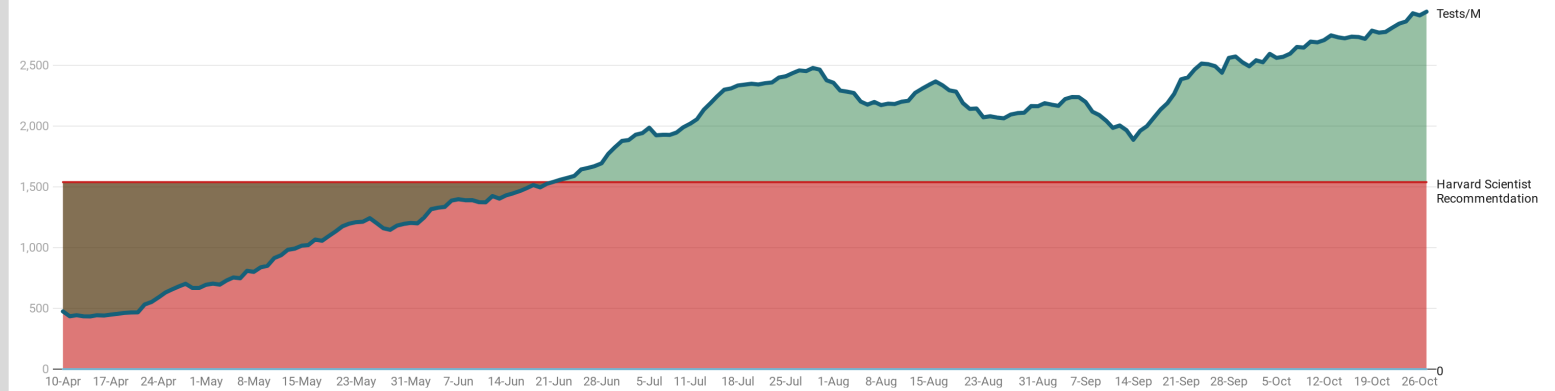
Chart: Health Industry Advisor LLC • Source: Centers for Disease Control & Prevention • Created with Datawrapper

The 7-day average testing volume set a new high yesterday – a rather consistent trend over the past month

The 7-day test-positive rate, has leveled-off the past four days; it had been trending upward since the beginning of October

Daily Tests Per 1 Million - United States

Trailing 7-Day Moving Average, As of October 27

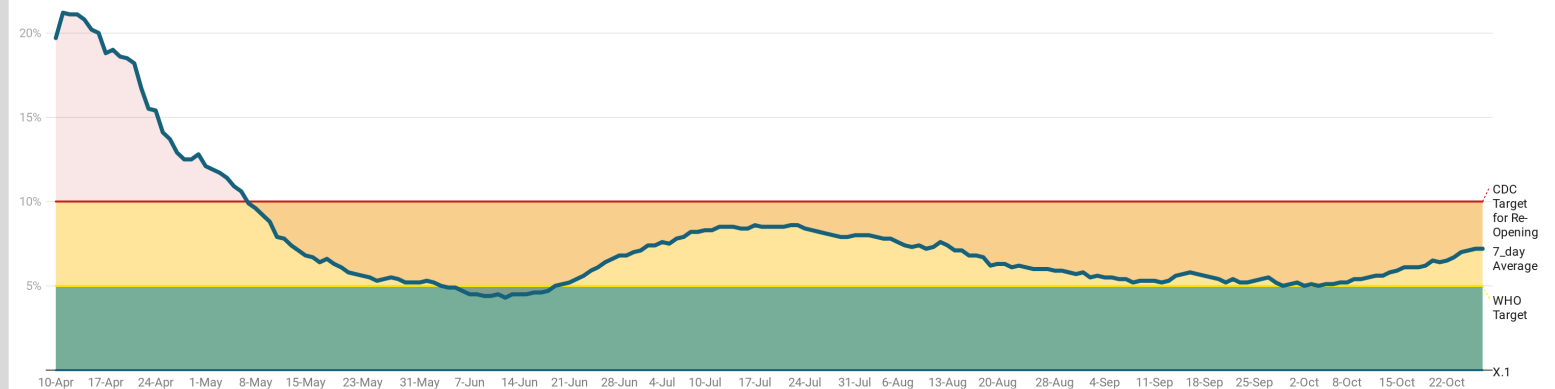


Health Industry Advisor LLC analysis

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 26



Health Industry Advisor LLC analysis

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

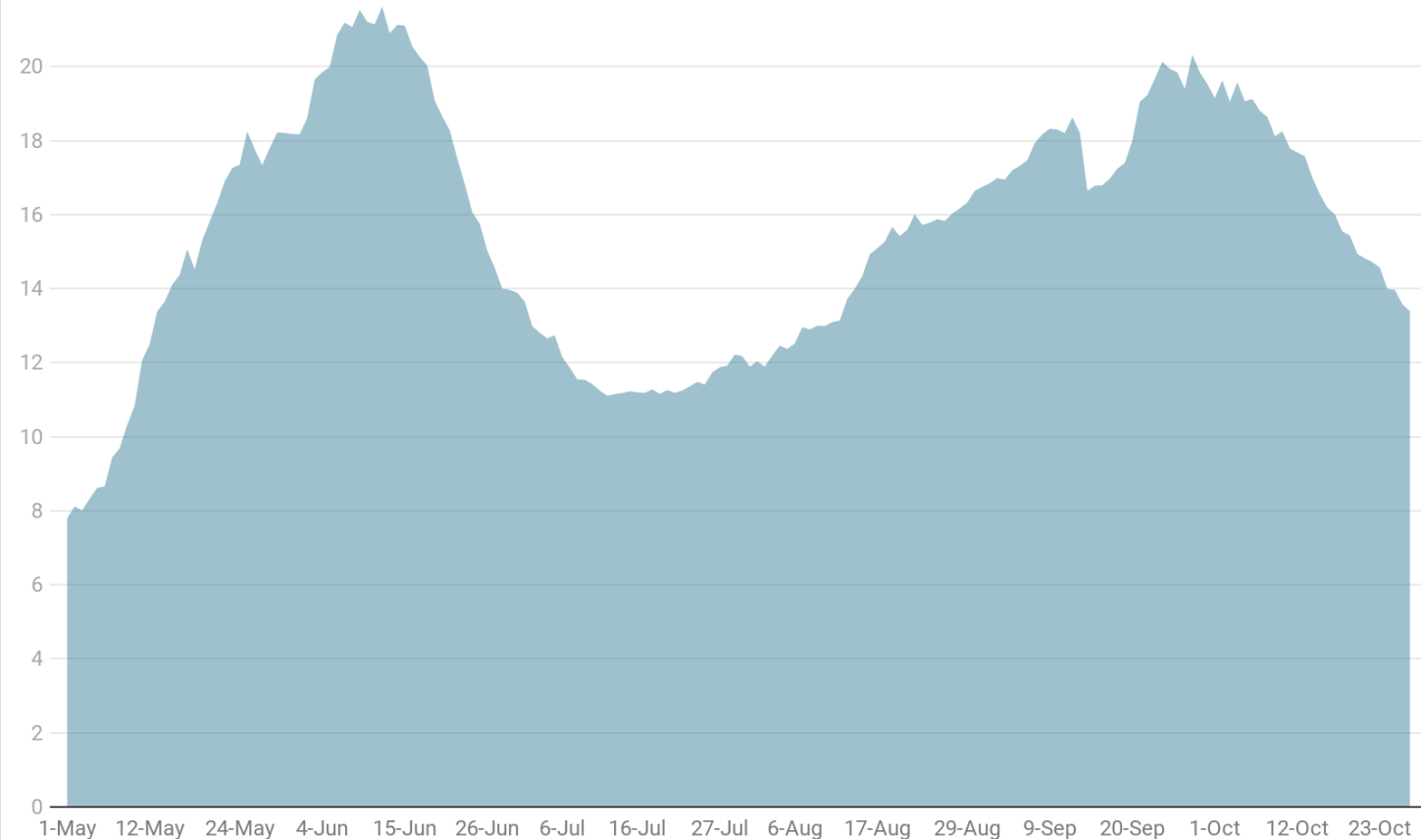
A measure of the effectiveness of testing is the ratio of tests performed to newly-detected cases

This ratio has been declining for the past month – perhaps, testing is not keeping up with the surge in new infections

This rate is now lower than it has been at any time since August 12

Tests / New Case Detected (7-Day Average)

How many tests does it take to detect a new case?



Prefer this ratio to be higher rather than lower

Chart: Health Industry Advisor LLC • Created with Datawrapper

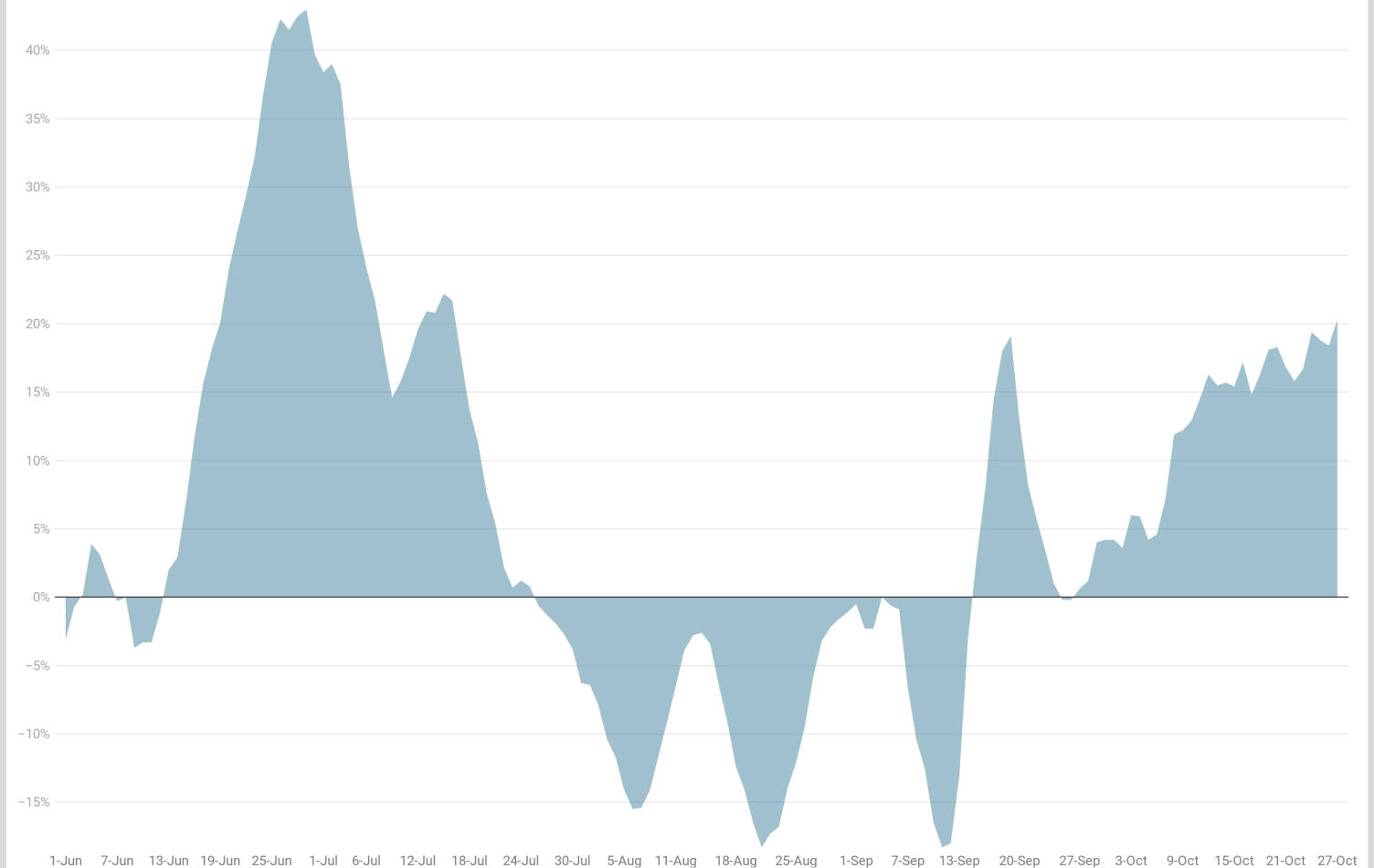
Following a seven-week period of decline, new cases began increasing on a week-over-week basis on September 15

Yesterday, this rate was up 20% on a week-over-week basis; Before this past weekend, it had bounced between 15.2-17.2% for nearly two weeks

This rate had previously peaked at 19.1% on September 19 and 43% on June 29

Week-Over-Week Change In New Cases

Through October 27



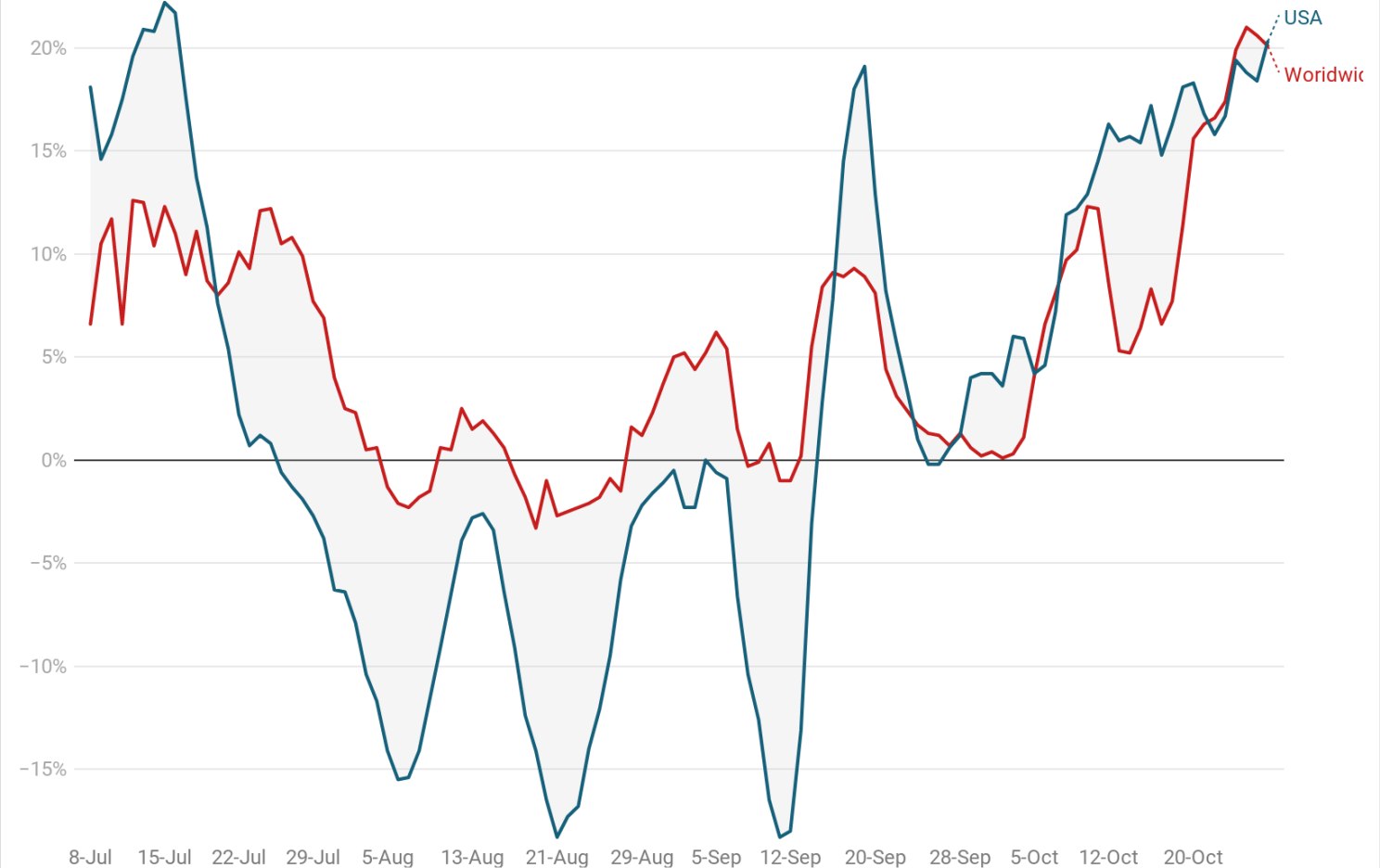
Health Industry Advisor LLC analysis

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

Newly-detected cases in the U.S. have increased throughout October

Worldwide, the rate of growth slowed mid-month but has since accelerated

Week-Over-Week Changes in Newly-Detected Cases: USA v. Worldwide



Created with Datawrapper

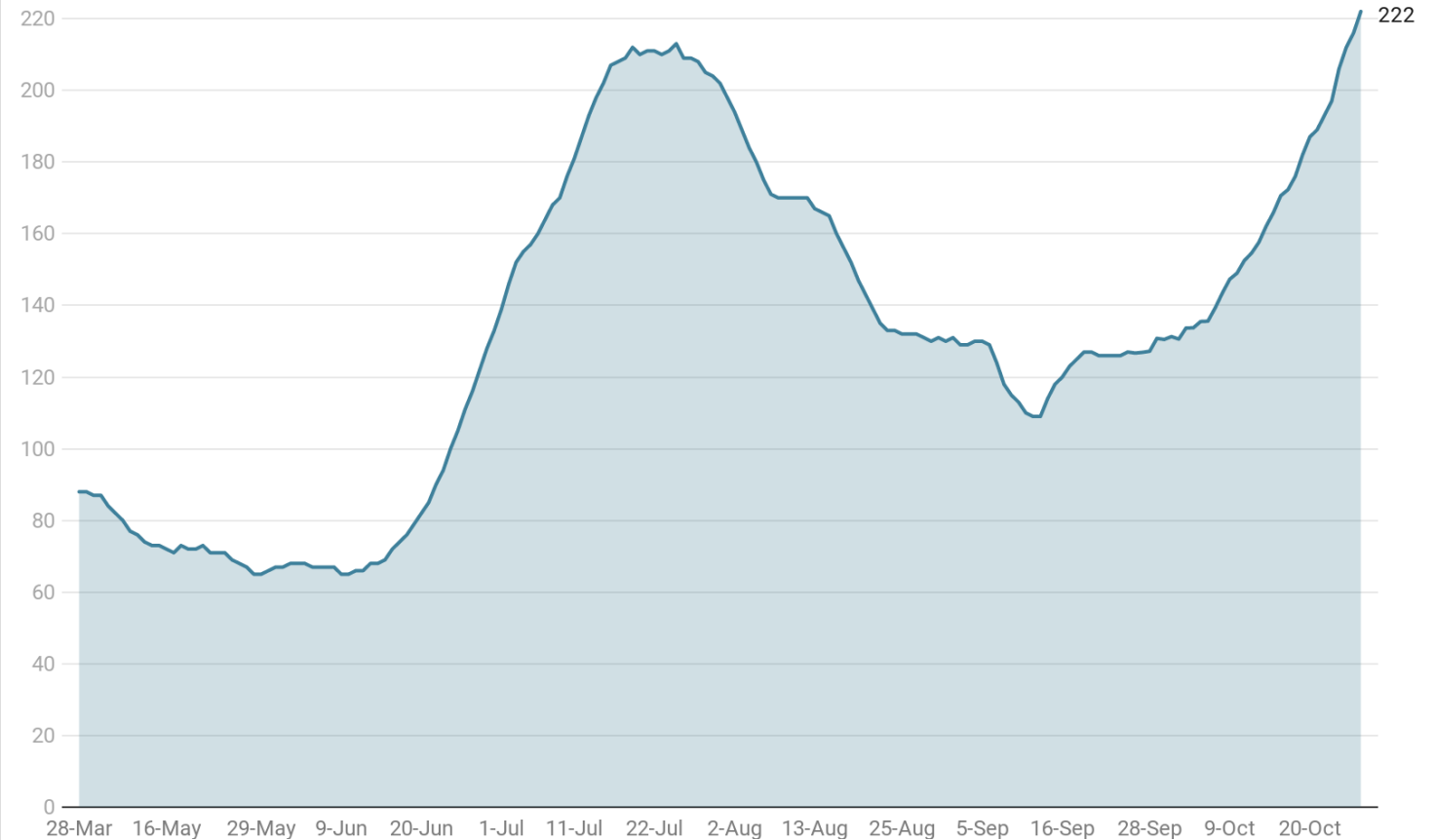
The rate of new infections per capita* in the U.S. rose for the twenty-tfifth consecutive day

This rate is the highest it has ever been during this pandemic

* - 7-day moving average basis

Newly Detected Infections Per 1 Million Population - United States

7-Day Moving Average, Through October 27



Health Industry Advisor LLC analysis

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

There were more newly-detected cases reported on Tuesday than on any other Tuesday since the pandemic began

Newly Detected Cases

Through October 27

Tuesdays Highlighted

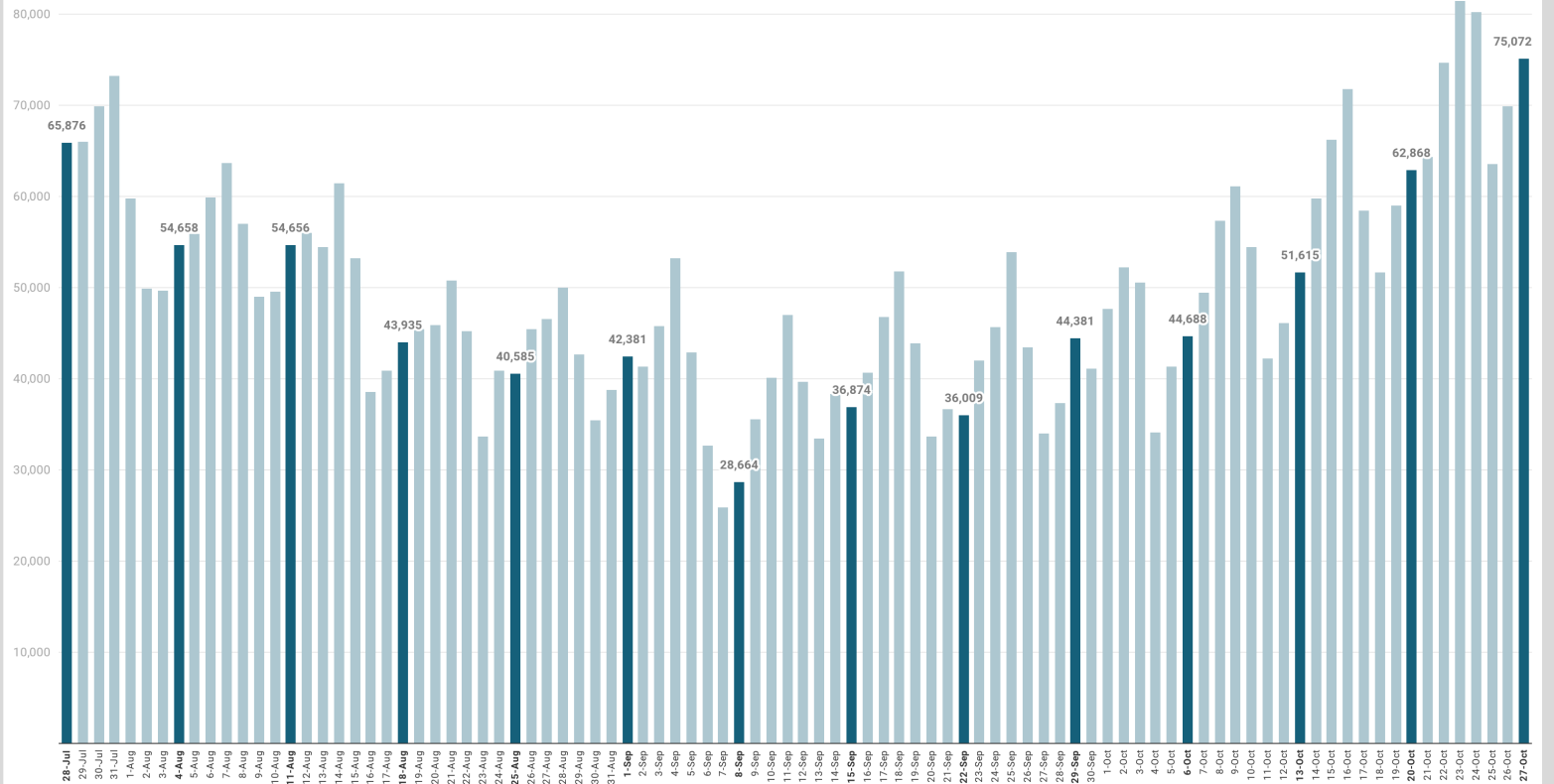


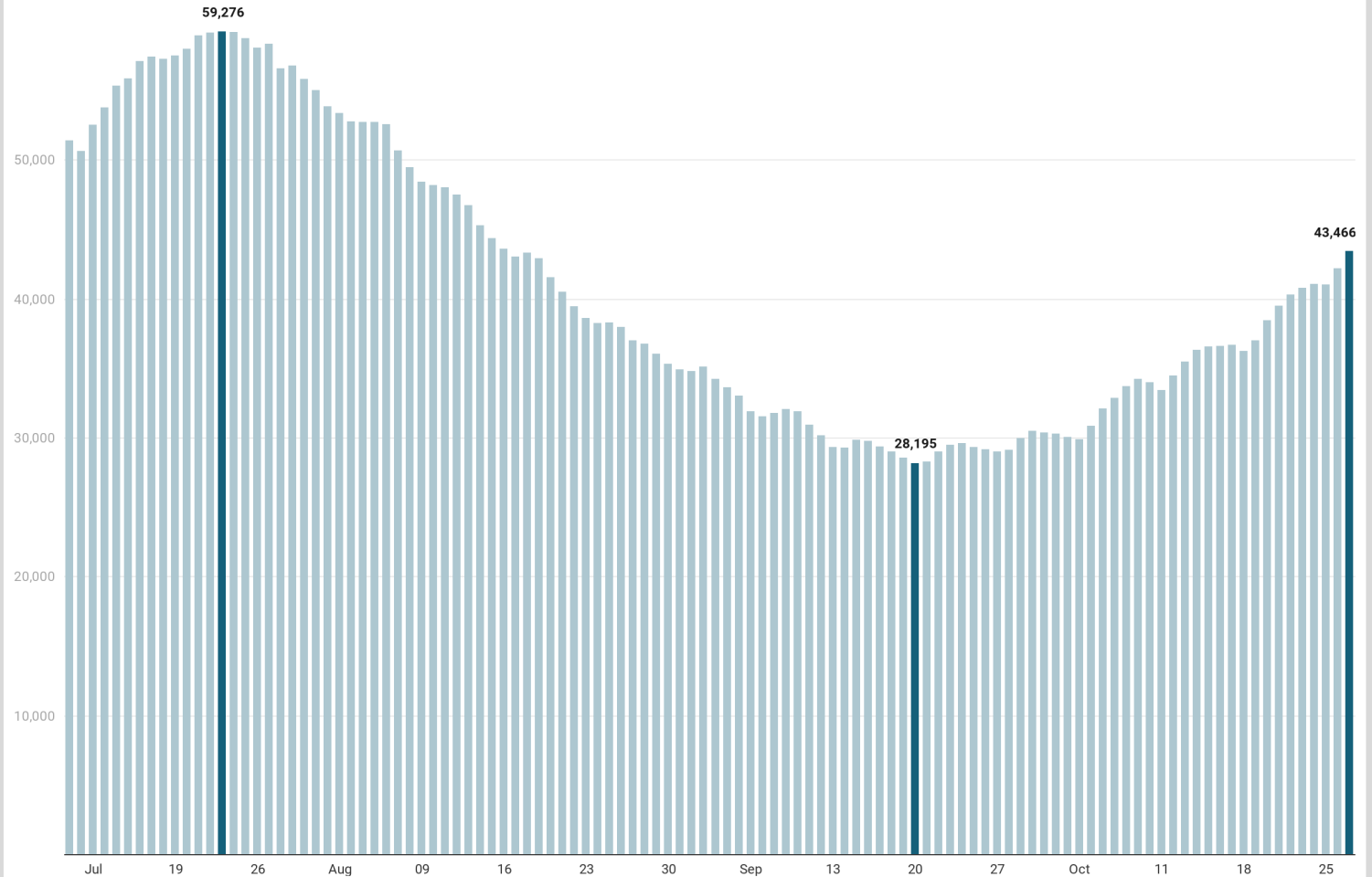
Chart: Health Industry Advisor LLC • Source: eoridometers.info • Created with Datawrapper

On a same-day, prior-week basis, inpatient Covid-19 census increased for the 35th consecutive day

This census is 27% lower than it was at its peak in late-July yet, is 54% higher than its low on September 20

Hospital Census: COVID-19 Patients

As of October 27



Florida data first available on July 10

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

Covid-19 Hospitalizations, while increasing, have not kept pace with the increase in newly-detected cases

New daily cases have increased 69% in October; hospital census has increased 43%

Since the late-July peak, new daily cases have increased 5%; Covid-19 census has declined 36%

7-Day M.A. Daily New Detected Cases v. Covid-19 Hospital Census

As of October 27

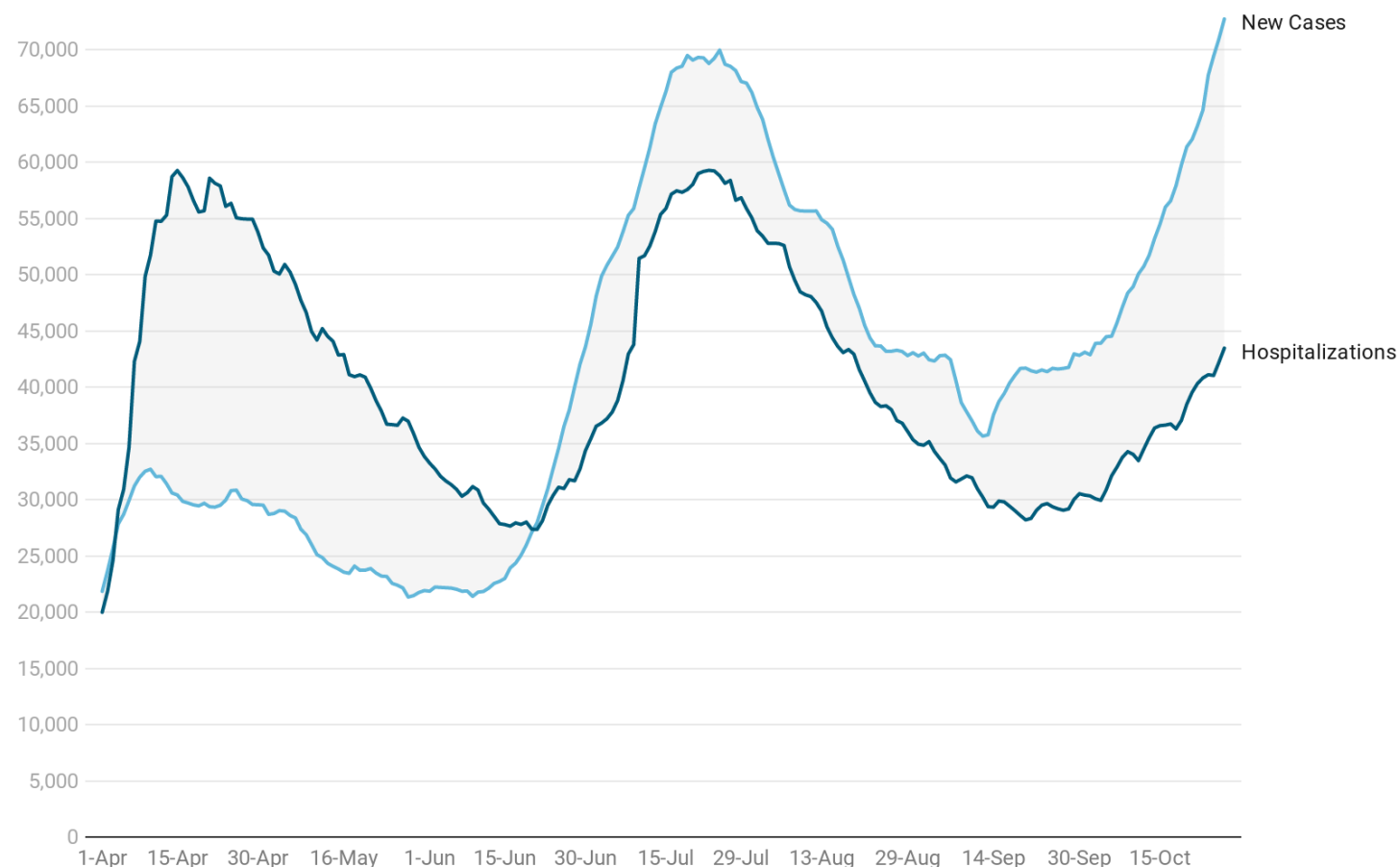


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking project & worldometers.info • Created with Datawrapper

The likelihood that a person with an active Covid-19 infection would be hospitalized has increased somewhat during October

Still, it is $\frac{1}{2}$ what it was during the July surge and $\frac{1}{3}$ of what it was in May

% of Active Covid-19 Cases in Hospital

As of October 27

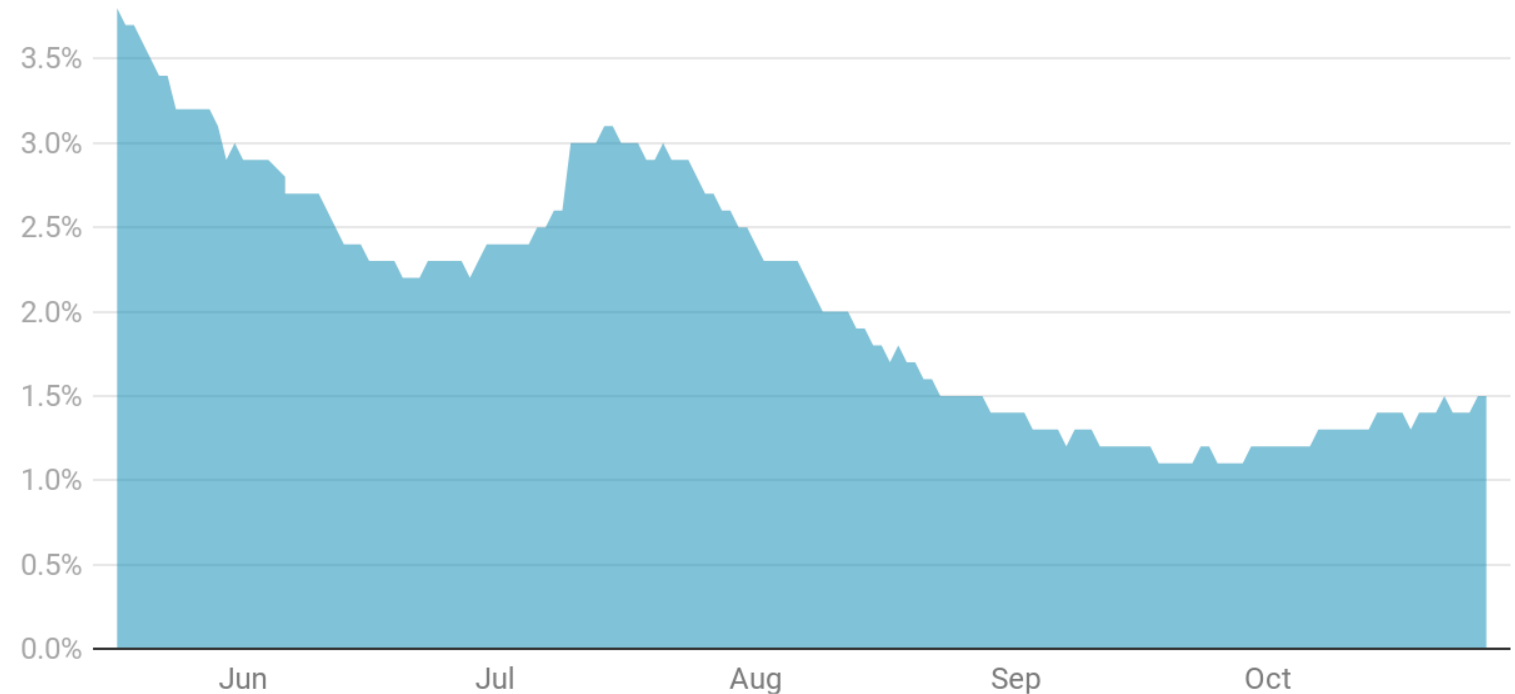


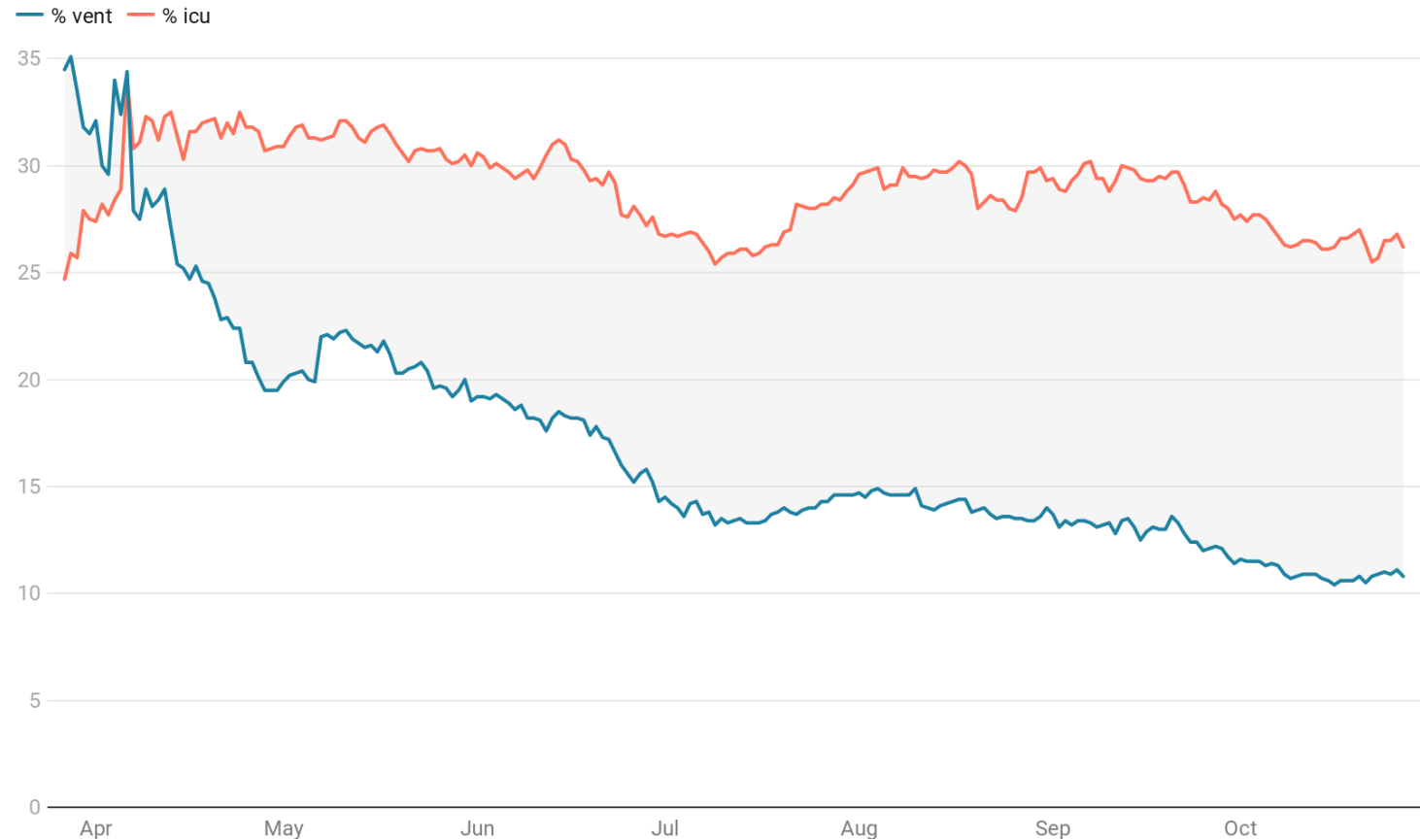
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking project & worldometers.info • Created with Datawrapper

During the recent rise in Covid-19 inpatient census, the % of those inpatients requiring intensive care has declined

The % of Covid-19 inpatients requiring ventilator care has steadily declined since April

Severity of Hospitalized Patients

% of patients on ventilators and in the ICU, As of October 27



Health Industry Advisor LLC analysis

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

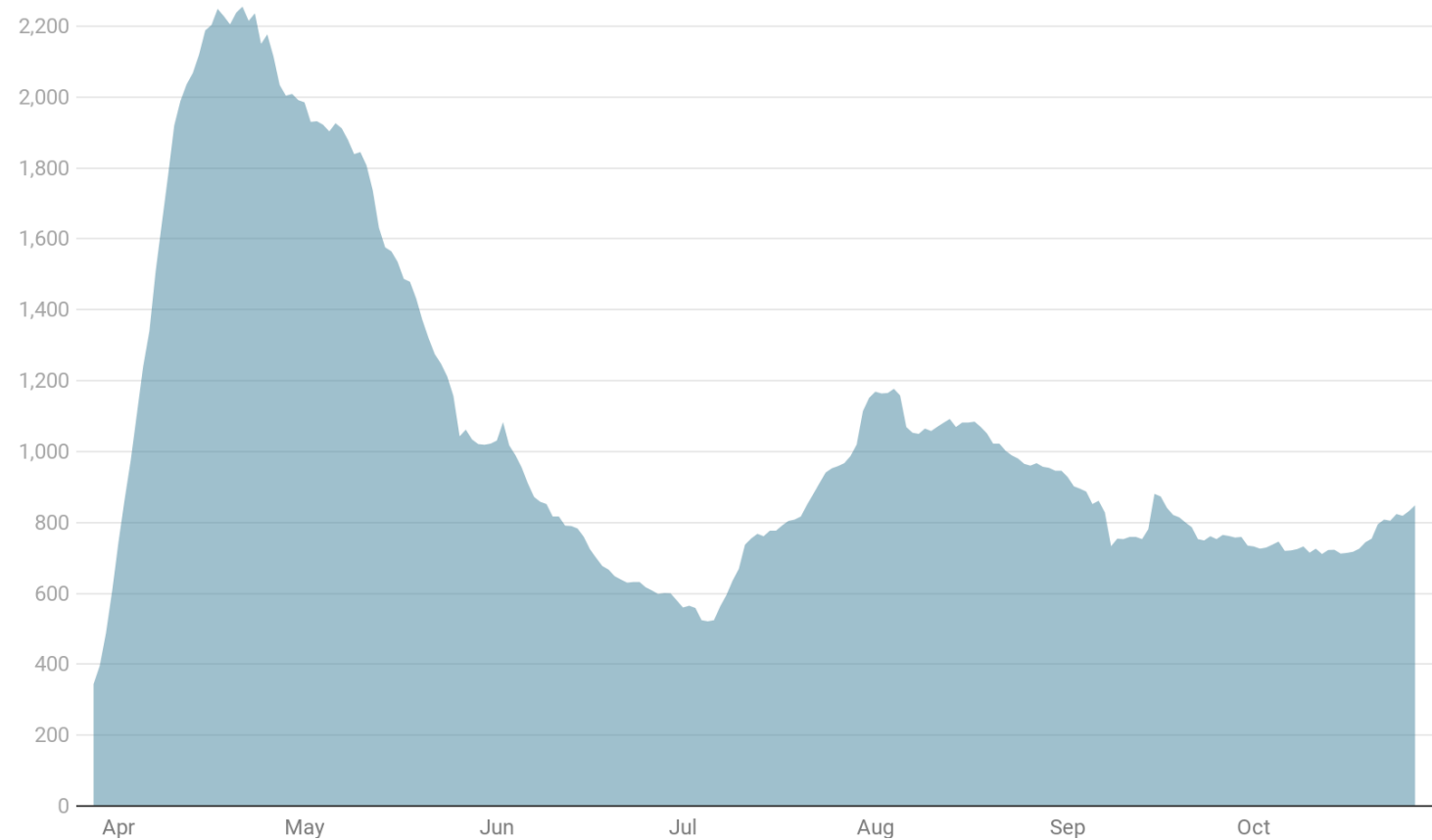
The recent uptick in newly-detected cases is beginning to effect deaths:

The 7-day average deaths per day has increased on twelve of the past fourteen days

The current rate is higher than it has been since September 18

Deaths Reported With Coronavirus in the U.S.

Trailing 7-Day Moving Average, As of October 27



Health Industry Advisor LLC analysis

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

There were more deaths reported on Tuesday than on any other Tuesday in the past five weeks

Newly Reported Deaths

Through October 27

Tuesdays Highlighted

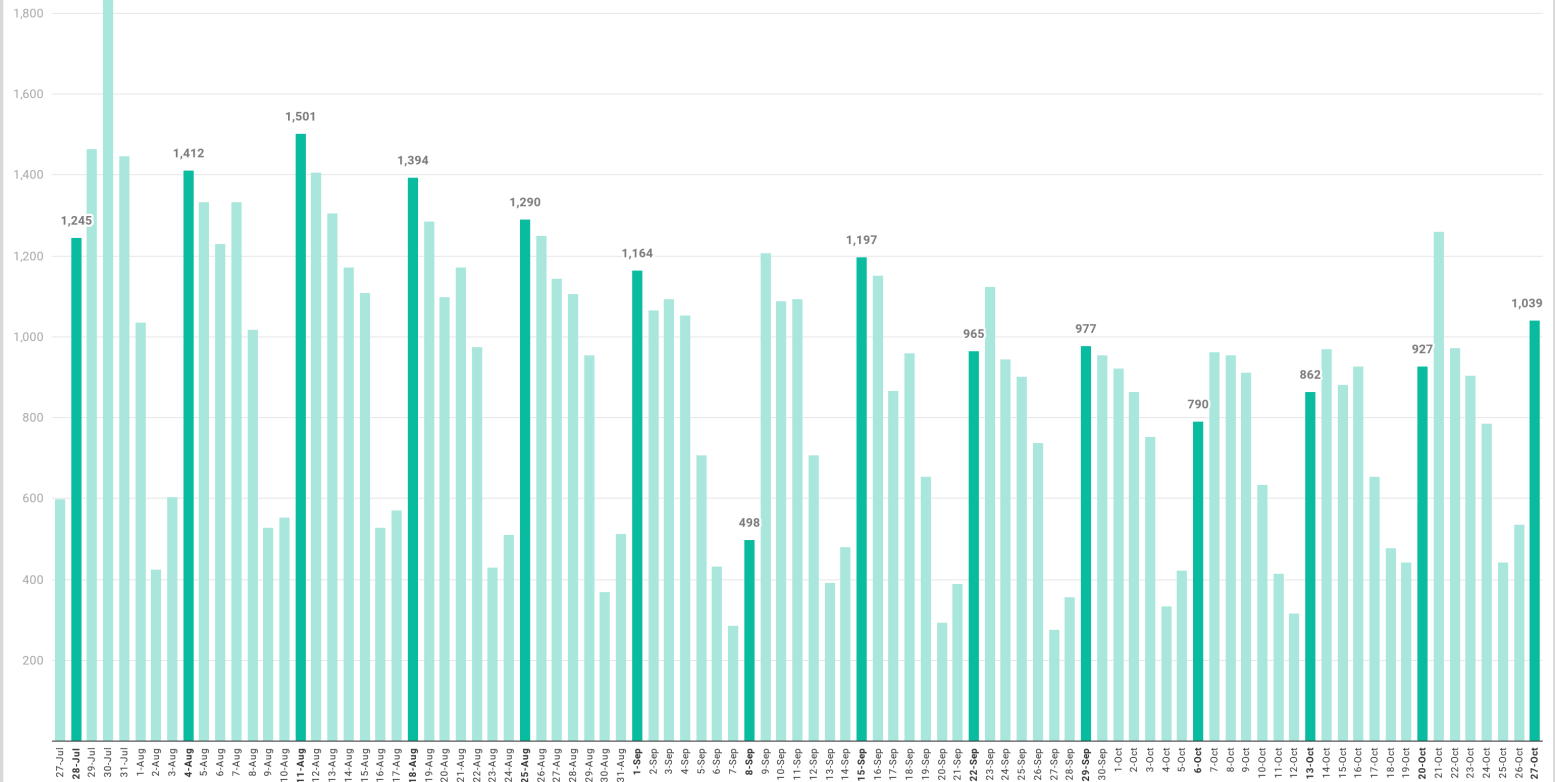


Chart: Health Industry Advisor LLC • Source: eoridometers.info • Created with Datawrapper

Deaths with coronavirus, relative to new cases (lagged 4 weeks) have moved within a narrow range for the past six weeks

This rate declined rapidly through June and July

The current rate is less than $\frac{1}{2}$ what it was in early-June

7-day M.A. Deaths / 7-Day M.A. New Cases (000s) (4-Week Lag)



Chart: Health Industry Advisor LLC • Source: worlometers.info • 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>