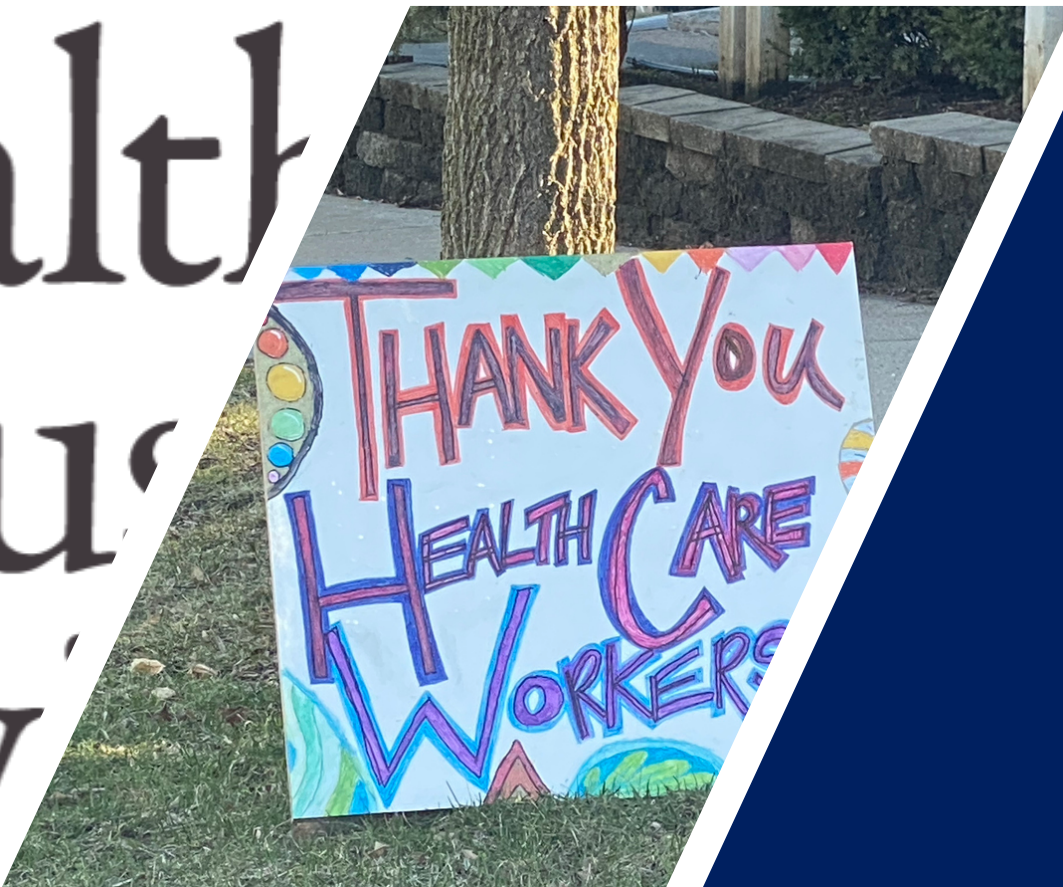




Health
Industry
Adv



Issue # 196

Tuesday, October 27, 2020

COVID-19 Report

Highlights

- Europe is "on-fire" to borrow phrase from Dr. Osterholm's of the Center for Infectious Disease and Research and Policy (CIDRAP) – even more so than the U.S.
 - **Andorra, Belgium and Czechia experienced the highest rates of new infections per capita in the world over the past seven days (countries with population > 1M)**
 - **Ten of the twelve countries with the highest new infection rates over the past week are on the European continent (again, countries with population > 1M)**
 - Belgium, Czechia, France, Italy, Netherlands, Spain, Switzerland and the United Kingdom experienced significant increases in this rate over the past several weeks
 - **By comparison, Belgium's rate is 5.7x that of the U.S.; Switzerland, 2.9x; France and the Netherlands, 2.6x; United Kingdom, 50% higher; and, Italy, 32% higher**
 - **Two countries that had previously been on-fire - Bahrain and Israel - have experienced notable declines in this rate during the past several weeks**
 - Notably, Sweden continues to experience a relatively low infection rate; While this rate has increased recently, this increase is much lower than for the other European countries named above
- Recent death rates tell a somewhat different story worldwide
 - **Argentina and Czechia experienced the highest rate of deaths per capita over the past week (among countries with population > 1M); The United States ranked twenty-eight on this metric, with a rate 78% lower than Czechia**
- **Yemen experienced the highest rate of deaths per 10,000 new cases (4-week lag) - by a significant margin; Czechia ranked twenty-second; Argentina, forty-fifth; and, the United States, seventy-first**
- **The United States has now reached a new high in infections per capita, surpassing the earlier peak set on July 19. Comparing the current U.S. situation to the earlier peak:**
 - **Tests per capita are 24% higher now**
 - The test-positive rate is 7.1% versus 8.5% on July 19
 - **Covid-19 census is 27% lower than on July 19**
 - The percentage of Covid-19 patients requiring intensive care is comparable to that on July 19
 - The percentage of Covid-19 patients on a ventilator declined from 13.8% to 10.6%
 - **The likelihood of an active case is hospitalized has been cut in 1/2**
 - It now takes 13.6 tests to identify a new case; on July 19, it took 11.2
 - 7-day average deaths are up slightly (832 v. 808), however,
 - **The death rate per 10,000 new cases (4-week lag) is 7.5% lower**

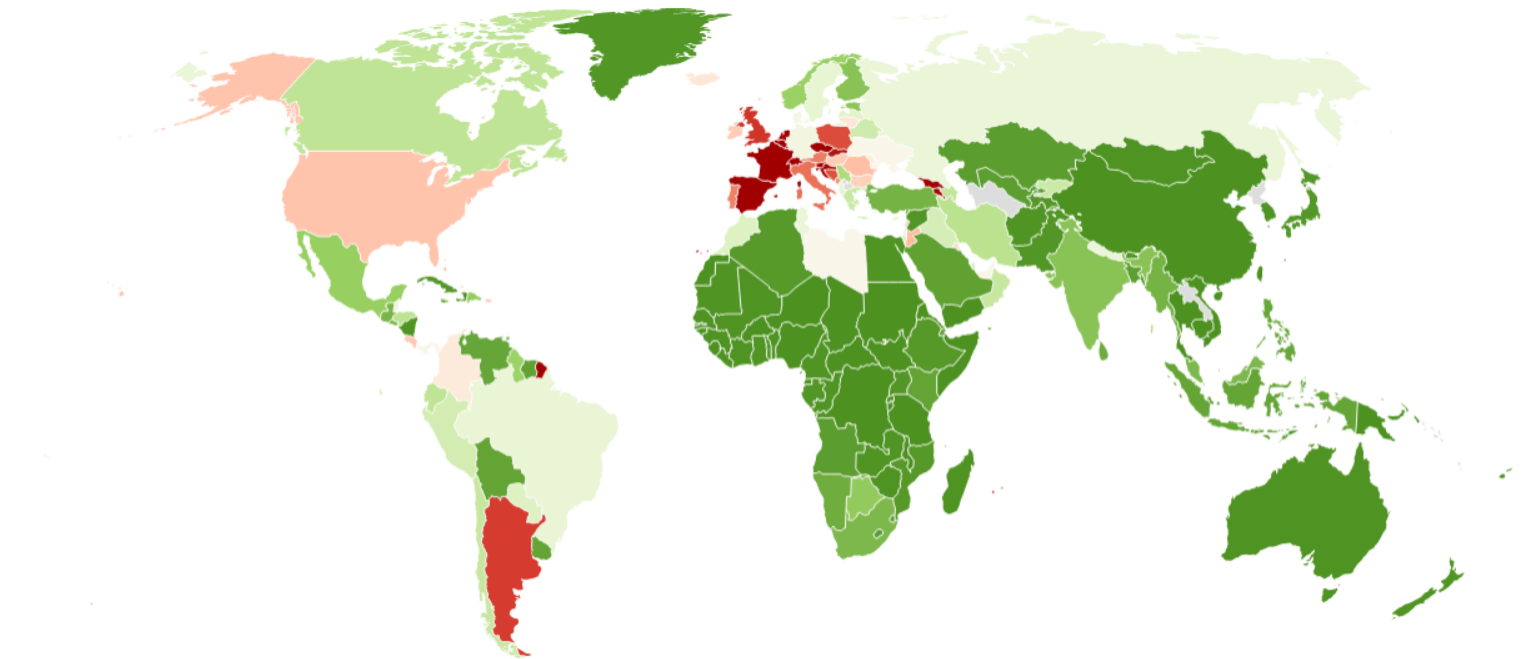
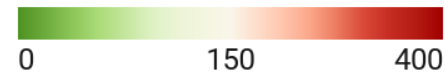
Much of Europe, Argentina and French Guiana are “on-fire”, with high current new infection rates per capita*

The United States is also experiencing a high infection rate

* - 7-day moving average basis

New Infections / Million

7-Day Moving Average, As of October 26



Map: Health Industry advisor LLC • Created with Datawrapper

European countries with the highest rates of new infections per capita* include Andorra, Belgium, Czech Republic, France, Monaco, Netherlands, Slovakia

* - 7-day moving average basis



The Netherlands and Russia have experienced extended periods of rising infections rates per capita*, followed by Italy and Germany

This rate has risen for twenty-four consecutive days in the United States

* - 7-day moving average basis

Consecutive Days of Increases in Newly Detected Cases Per Capita

7-Day Moving Average, As of October 26

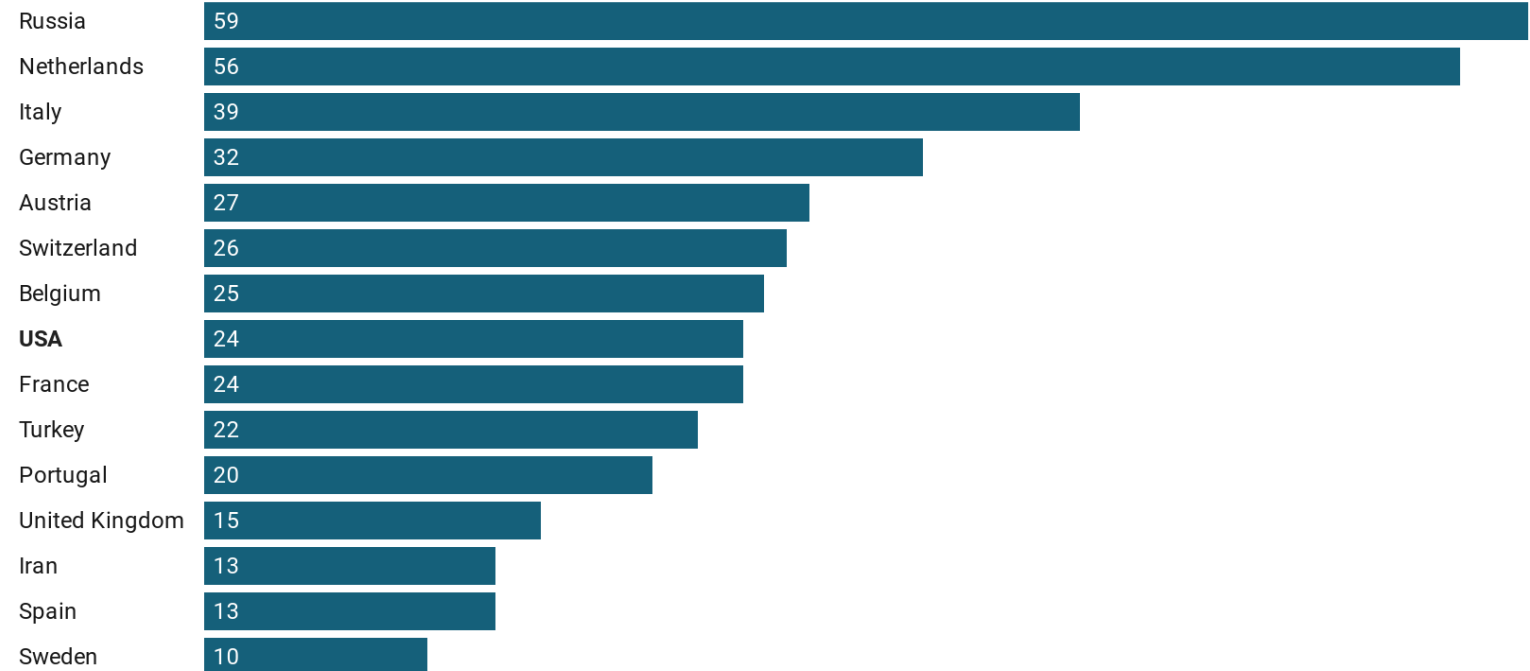


Chart: Health Industry Advisor LLC • Source: Worldometers.info • Created with Datawrapper

After leveling in late-August through early-September, new daily cases worldwide* have been increasing at a significant rate

New daily cases are now averaging nearly 450k each day

* - 7-day moving average basis

Newly Detected Daily Cases - Worldwide

7-Day Moving Average, As of October 26

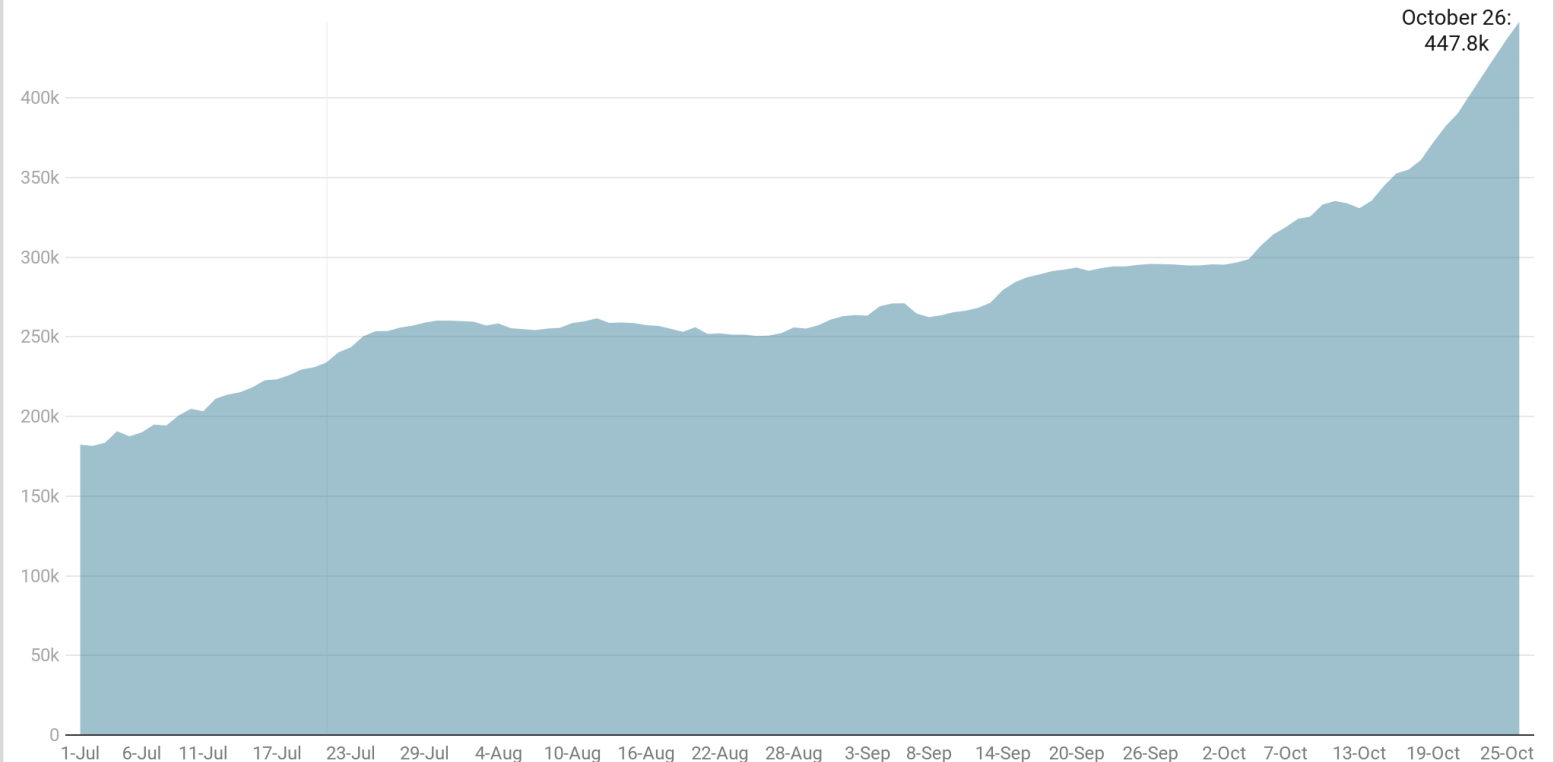


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Forty-two countries currently have new daily infection rates/1M* > 150

Andorra, Belgium, Czech Republic and French Guiana are experiencing infection rates significantly higher than other countries

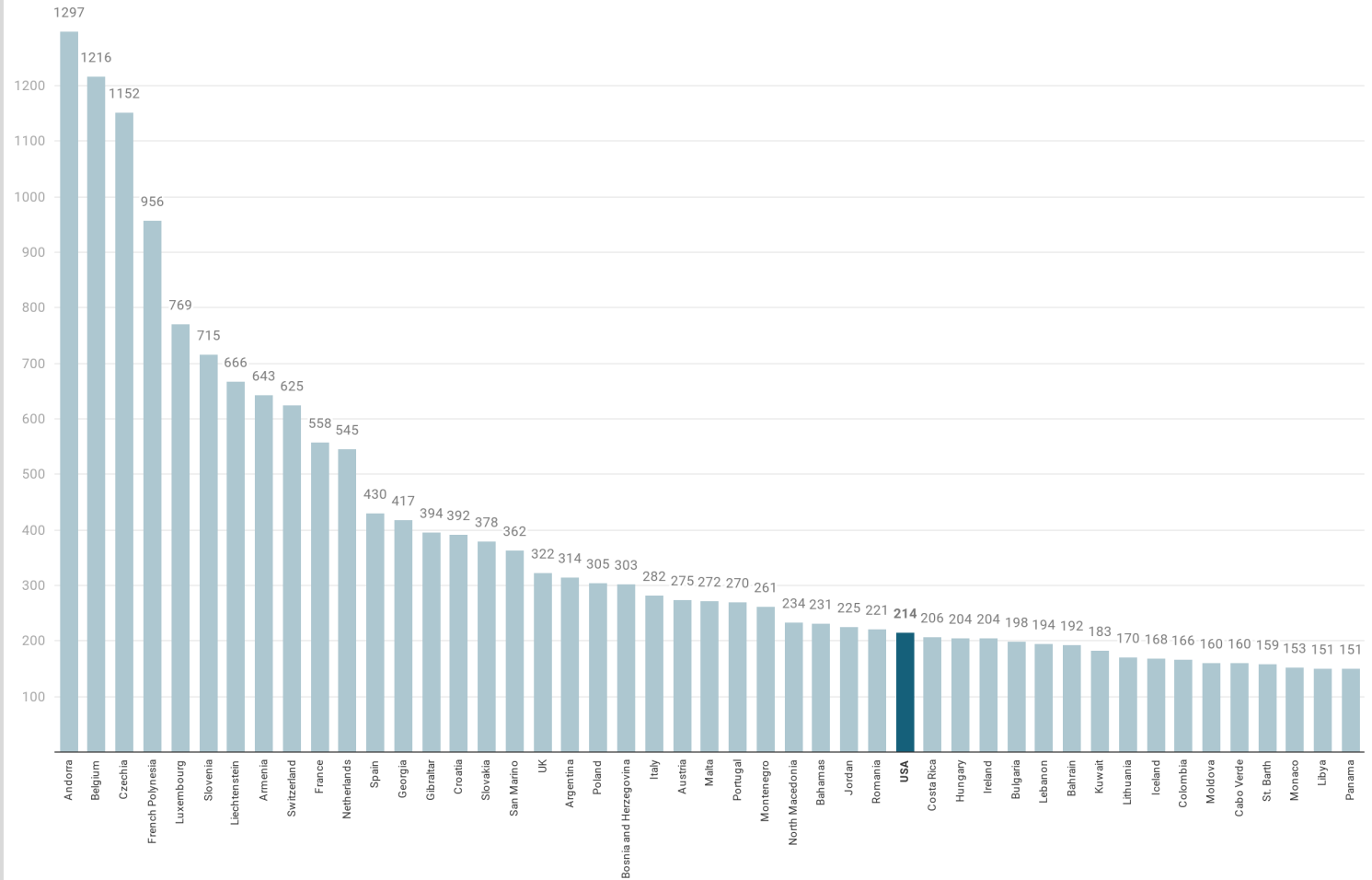
Europe is home to the three countries with the highest rates, and ten of the top twelve

The United States ranks thirty-first among all countries worldwide

* - 7-day moving average basis

New Daily Infections / Million Population

Trailing 7-Day Moving Average, As of October 26



Countries with > 1M population

Chart: Health IndustryAdvisor LLC • Source: worlometer.info • Created with Datawrapper

Infections have spread rapidly across Europe over the past two weeks – most notably in Belgium, Czechia, France,, the Netherlands, Spain and Switzerland

Rates in the countries are higher and, in some cases, increasing more sharply than in the United States

Sweden, with its controversy about how it has handled the pandemic, remains a relatively low rate

Bahrain and Israel have shown notable improvement in infection rates in the past several weeks

Newly Detected Infections / Million

7-day Moving Average

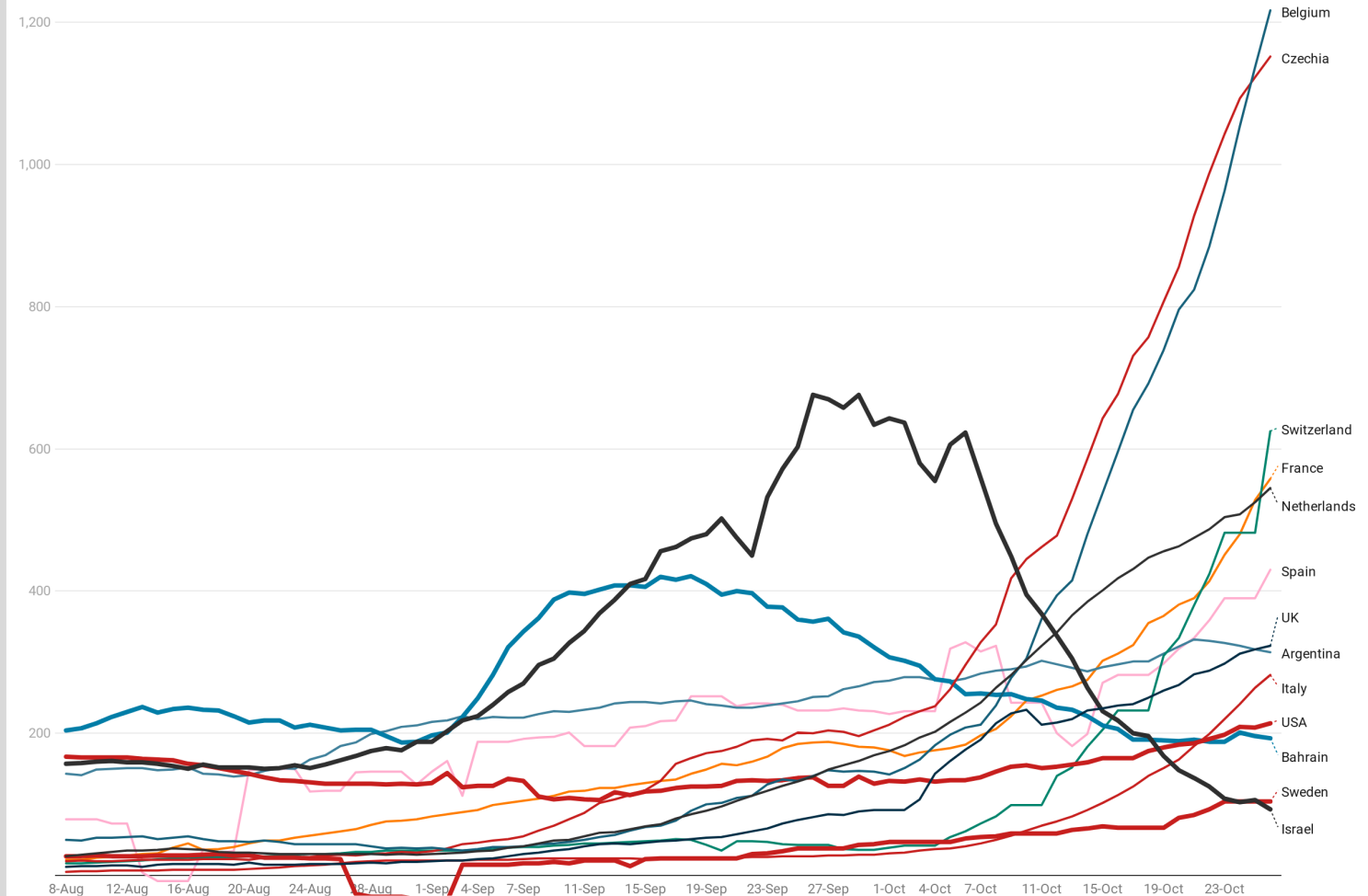


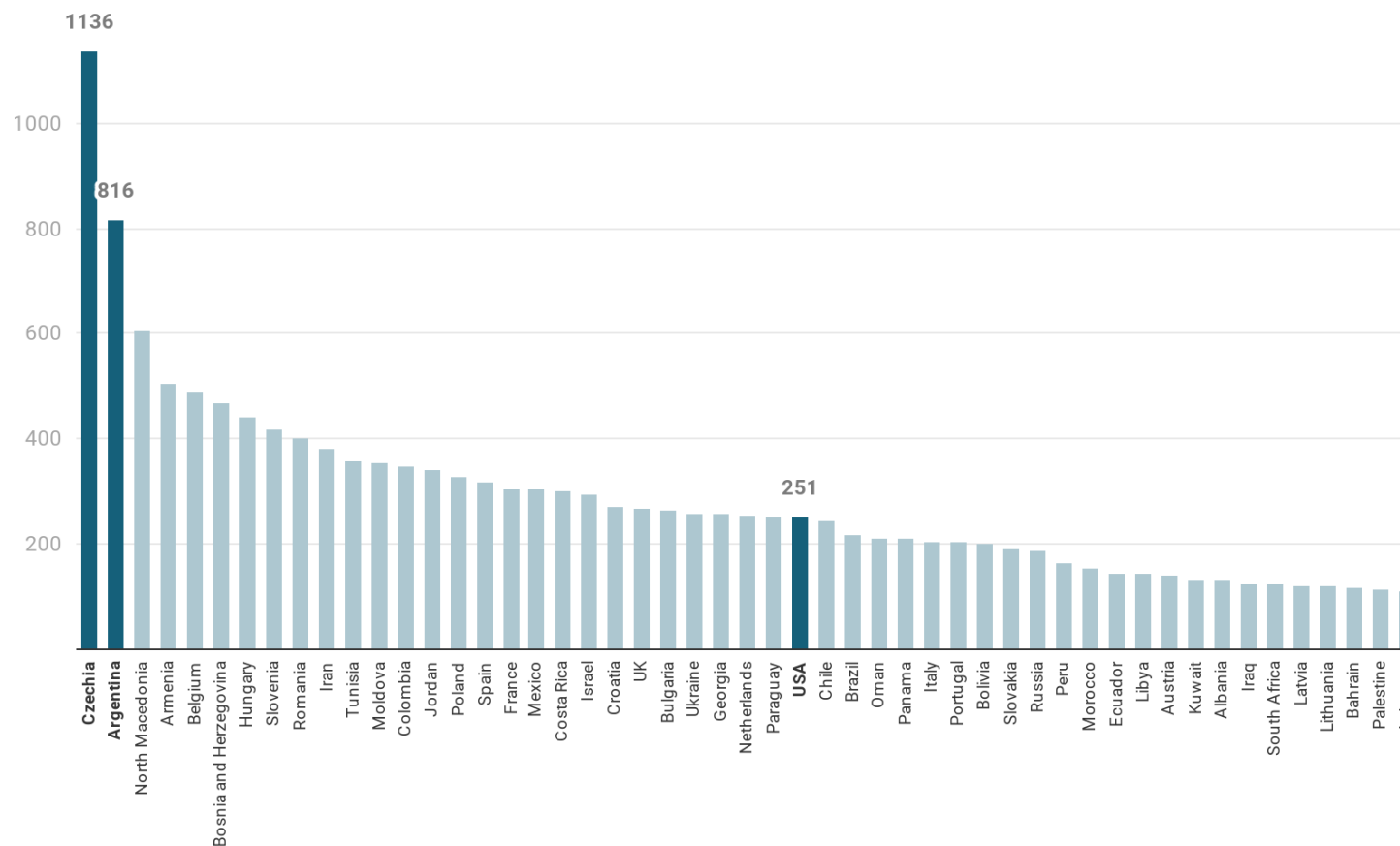
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Argentina and Czechia has the dubious distinction of the highest rates of deaths per capita over the past week

United States ranks twenty-eighth in the world on this metric

Reported Deaths

7-Day Moving Average / 100M Population, As of October 26



Includes Countries with Population > 1M

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

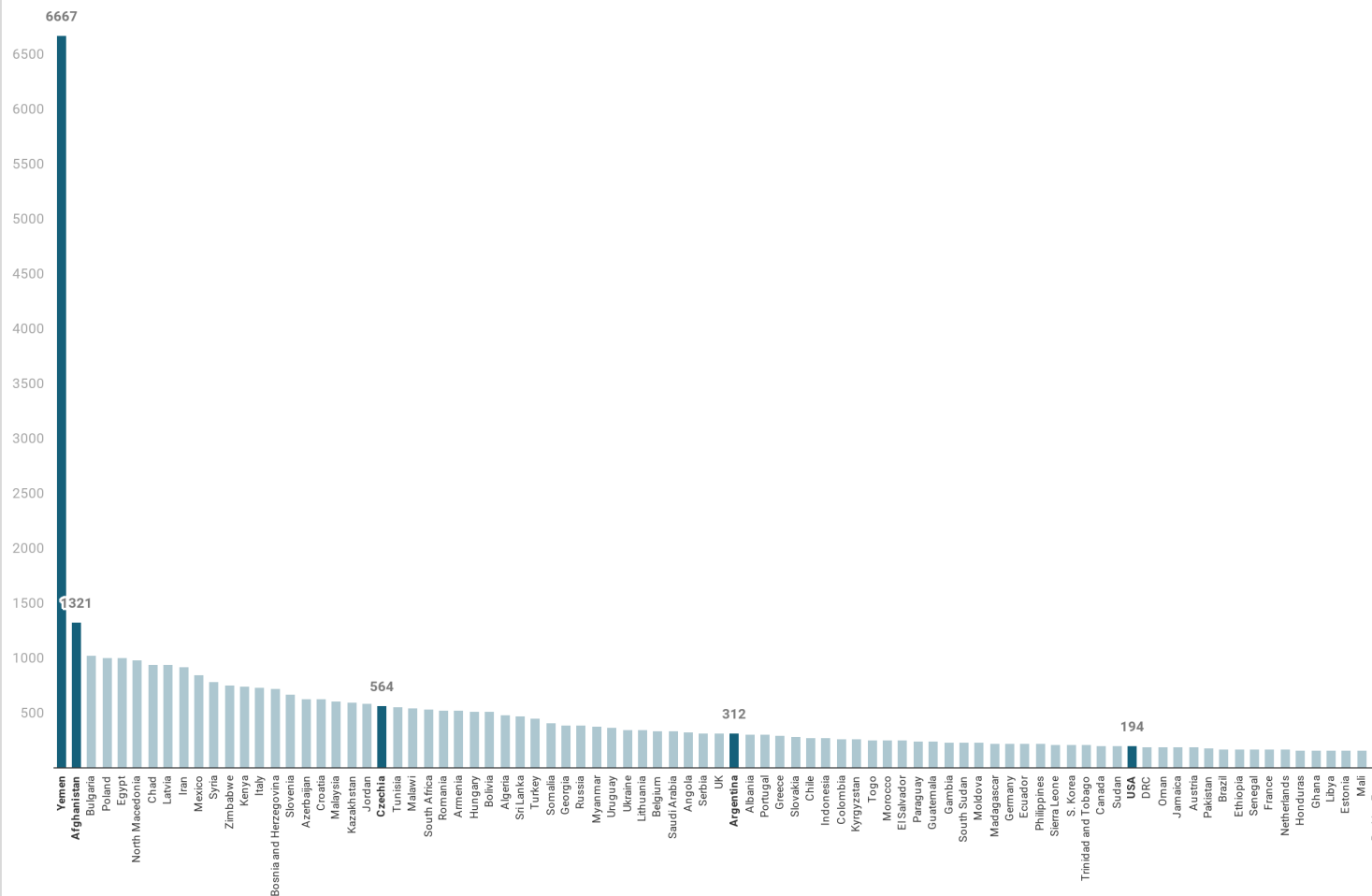
Yemen, by a significant margin, has experienced the highest rate of deaths per new case (4-week lag)* over the past week; Argentina is second

United States ranks seventy-first (of 201 countries) on this metric

* Countries with > 1M population

Reported Deaths / 10,000 New Cases (4-Week Lag)

7-Days Moving Averages, As of October 26



Includes Countries with Population > 1M

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

How does the United States current experience compare with our previous peak in new infections per capita?

- 24% more tests
- 1.5 percentage points lower test-positive rate
- 27% lower Covid-19 census
- 3.2 percentage points lower on rate of patients on ventilators
- 1.4 percentage points lower on rate of hospitalized active persons
- 7.5% lower rate of deaths / new case
- rate of patients in the ICU and number of deaths are comparable

Comparing Yesterday to Previous High Daily Infection Rate

July 19 v. October 26

	7-Day M.A. Newly Daily Detected Cases / Million	7-Day M.A. Daily Tests / Million	7-Day M.A. Test- Positive %	7-Day M.A. Tests / Newly Detected Case	Covid-19 Census	% ICU	% Vent	% of Active Cases in Hospital	7-Day M.A. Deaths / 10,000 New Cases (4- Week Lag)	7-Day M.A. Deaths
19-Jul	212	2,343	8.5%	11.2	57.6k	26.3%	13.8%	2.90%	2.02	808
26-Oct	216	2,913	7.1%	13.6	42.2k	26.3%	10.6%	1.50%	1.87	832

Table: Health Industry Advisor LLC • Created with Datawrapper

The rate of new infections per capita* in the U.S. rose for the twenty-third 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 26



Health Industry Advisor LLC analysis

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

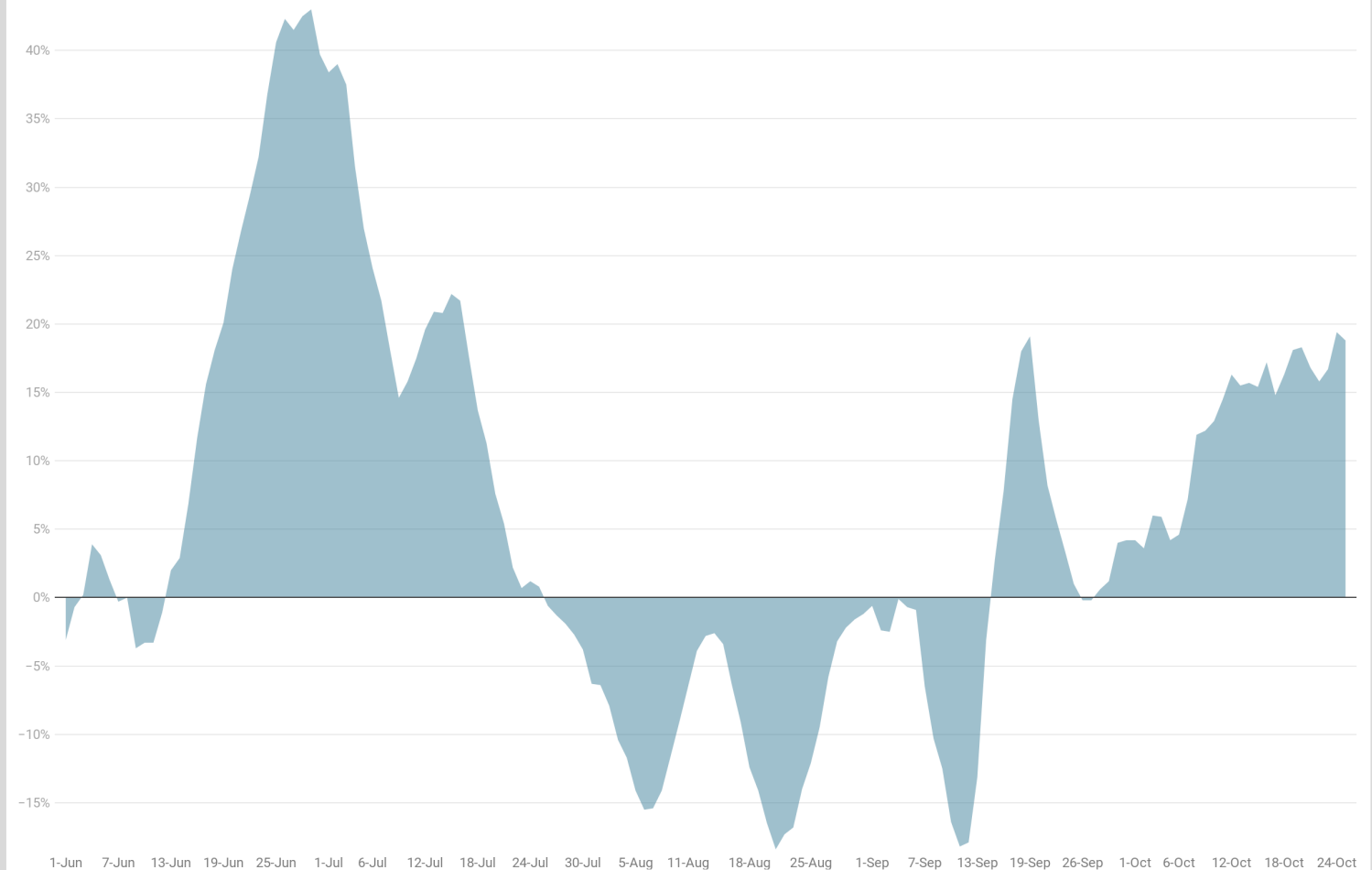
Following a seven-week period of decline, new cases began increasing on a week-over-week basis on September 15

Yesterday, this rate was up 18% 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 26



Health Industry Advisor LLC analysis

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

There were significantly more newly detected cases reported on Monday than on any other Monday since the pandemic began

Newly Detected Cases

Through October 26

Mondays Highlighted

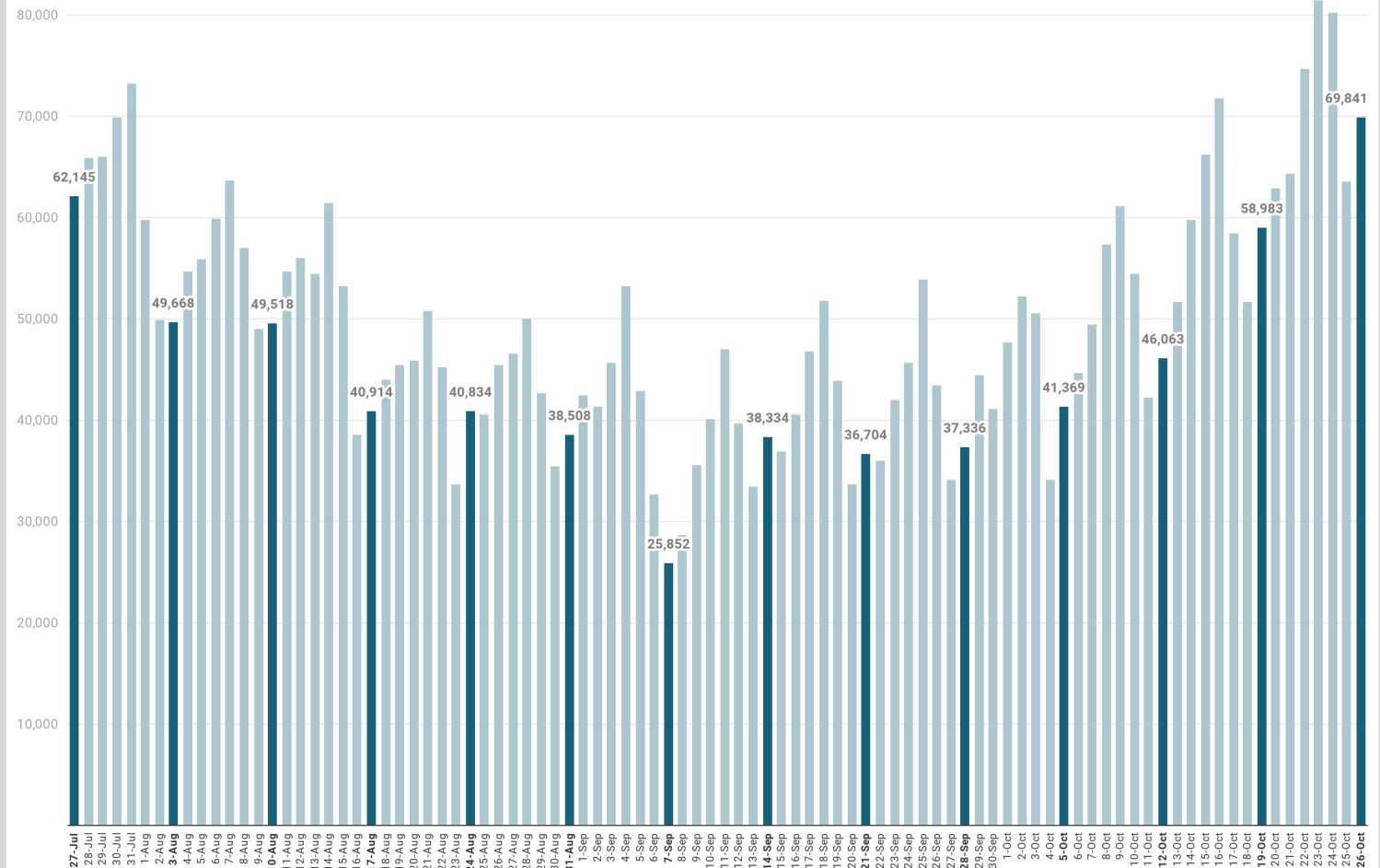


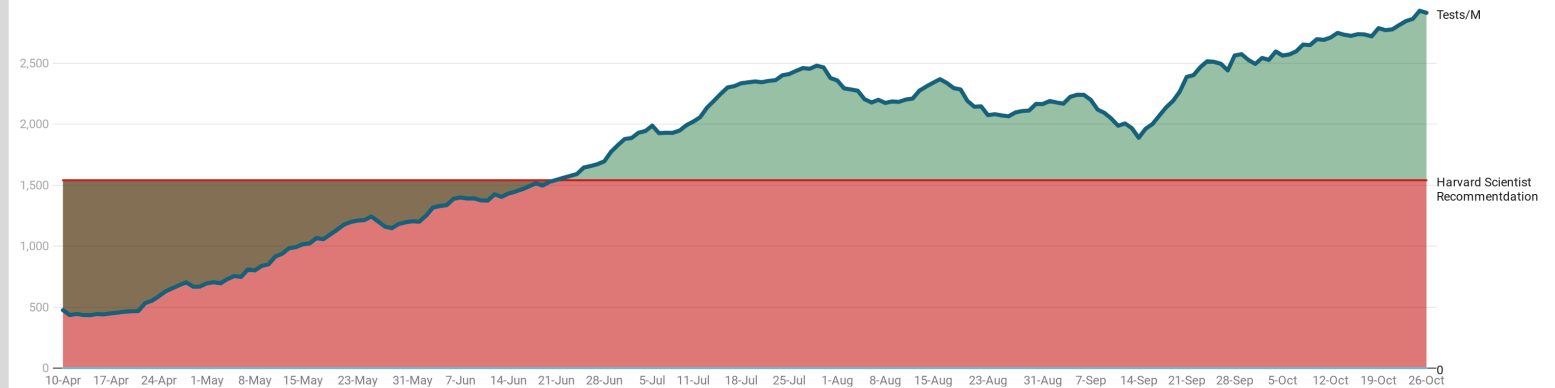
Chart: Health Industry Advisor LLC • Source: eorlometers.info • Created with Datawrapper

The 7-day average testing volume was slightly off from its highest level, posted on Sunday

The 7-day test-positive rate, however, has been trending upward since the beginning of October; Although it was slightly lower than on Sunday, it remains higher than it has been on any other day since August 15

Daily Tests Per 1 Million - United States

Trailing 7-Day Moving Average, As of October 26

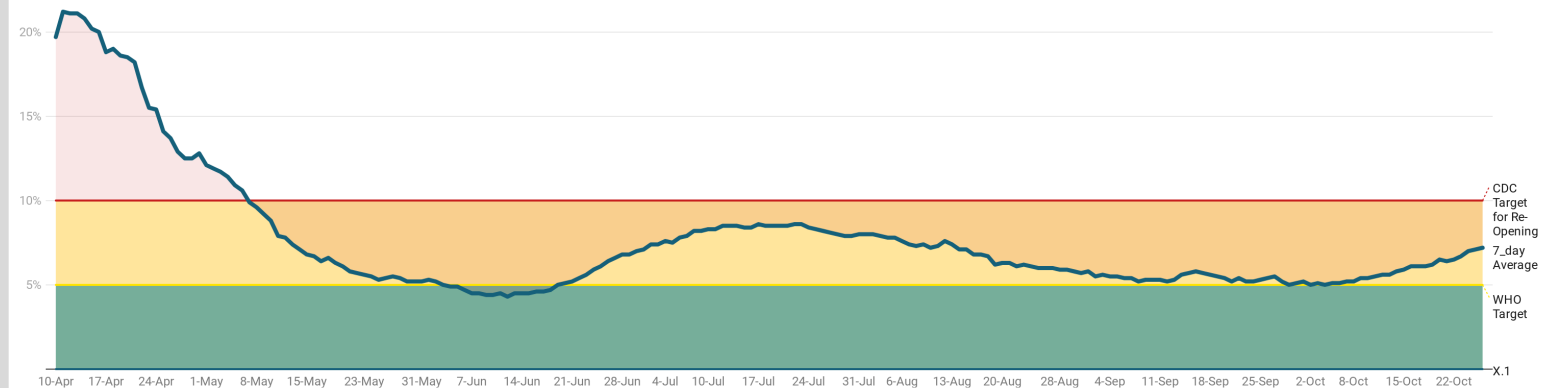


Health Industry Advisor LLC analysis

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

Test-Positive Rate - United States

Trailing 7-Day Moving Average, As of October 26



Health Industry Advisor LLC analysis

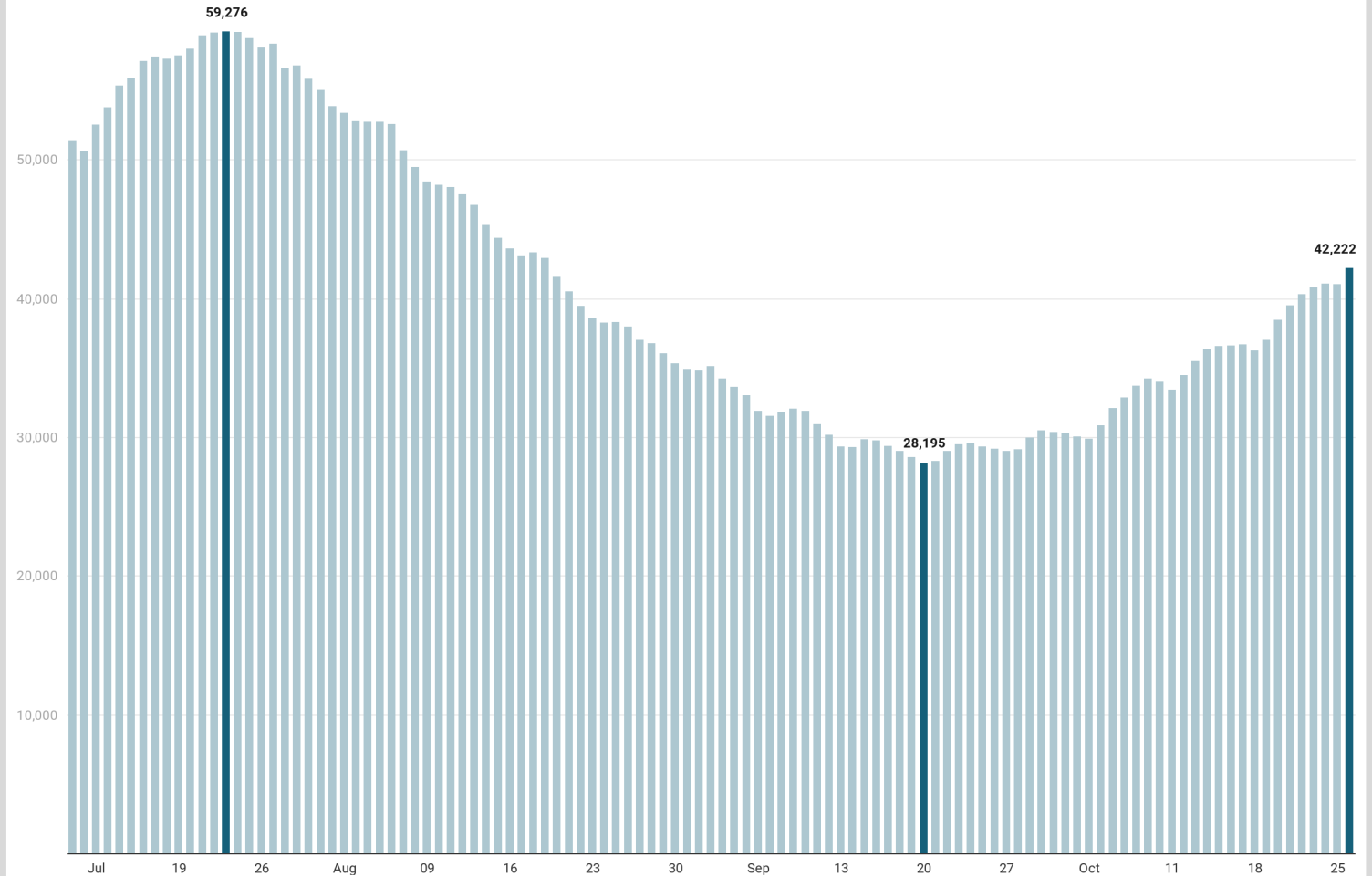
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

On a same-day, prior-week basis, inpatient Covid-19 census increased for the 33rd consecutive day

This census is 29% lower than it was at its peak in late-July yet, has regained 50% of the reduction in realized from late-July to September 20

Hospital Census: COVID-19 Patients

As of October 25



Florida data first available on July 10

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

Note that, while Covid-19 hospital census moves up-and-down with newly-detected cases, the impact of new cases on Covid-19 census has diminished over time

While hospitalizations trended down consistent with new cases in August/September, hospitalizations have not increased at the same rate as new cases in October

Daily New Detected Cases v. Covid-19 Hospital Census

As of October 25

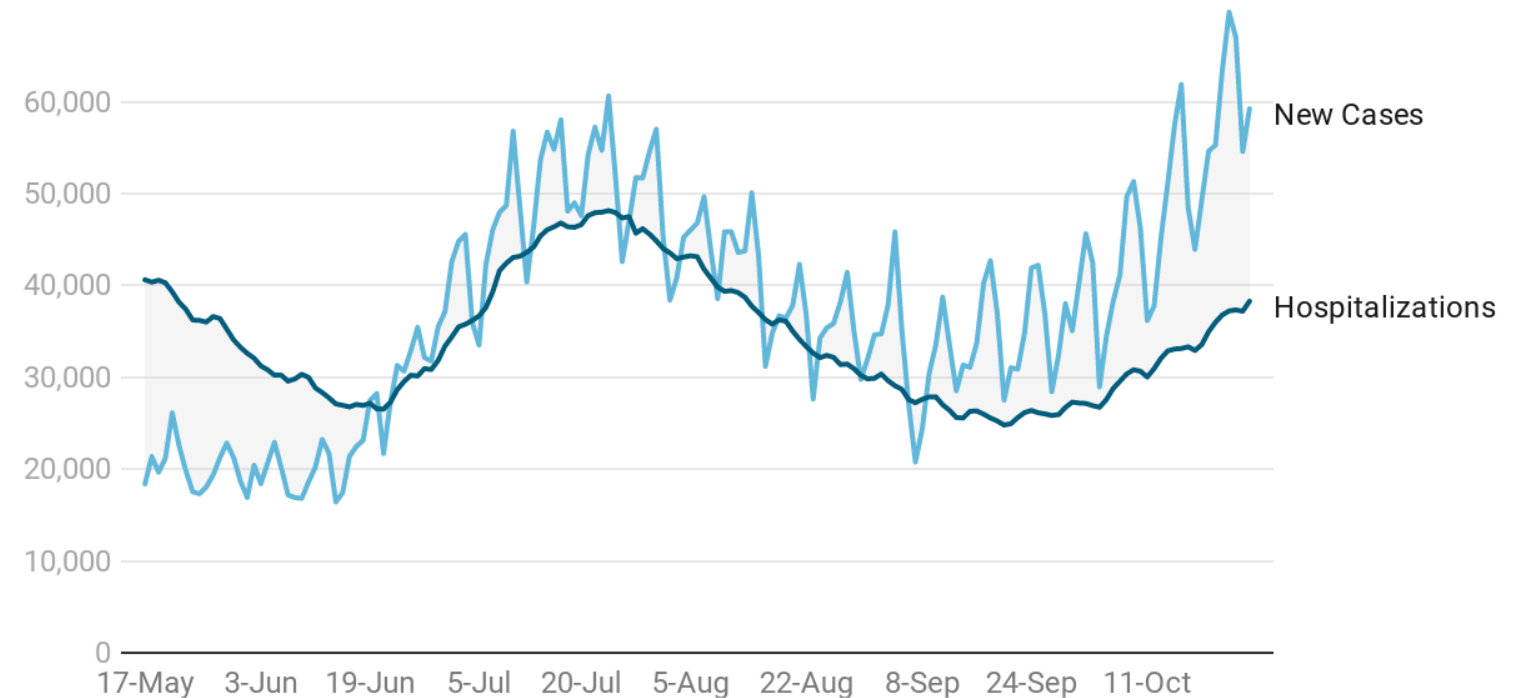


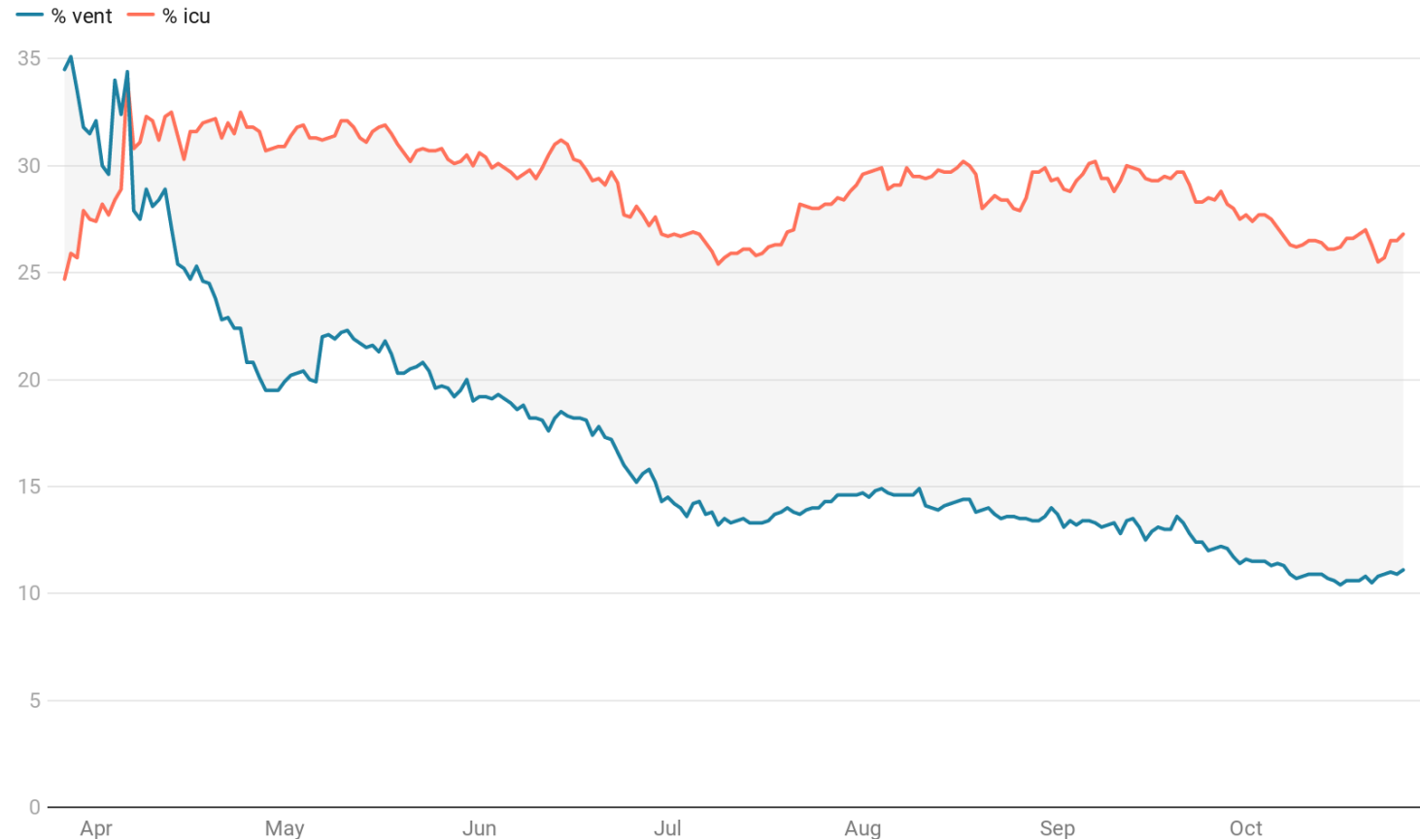
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking project & worldometers.info • Created with Datawrapper

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 26



Health Industry Advisor LLC analysis

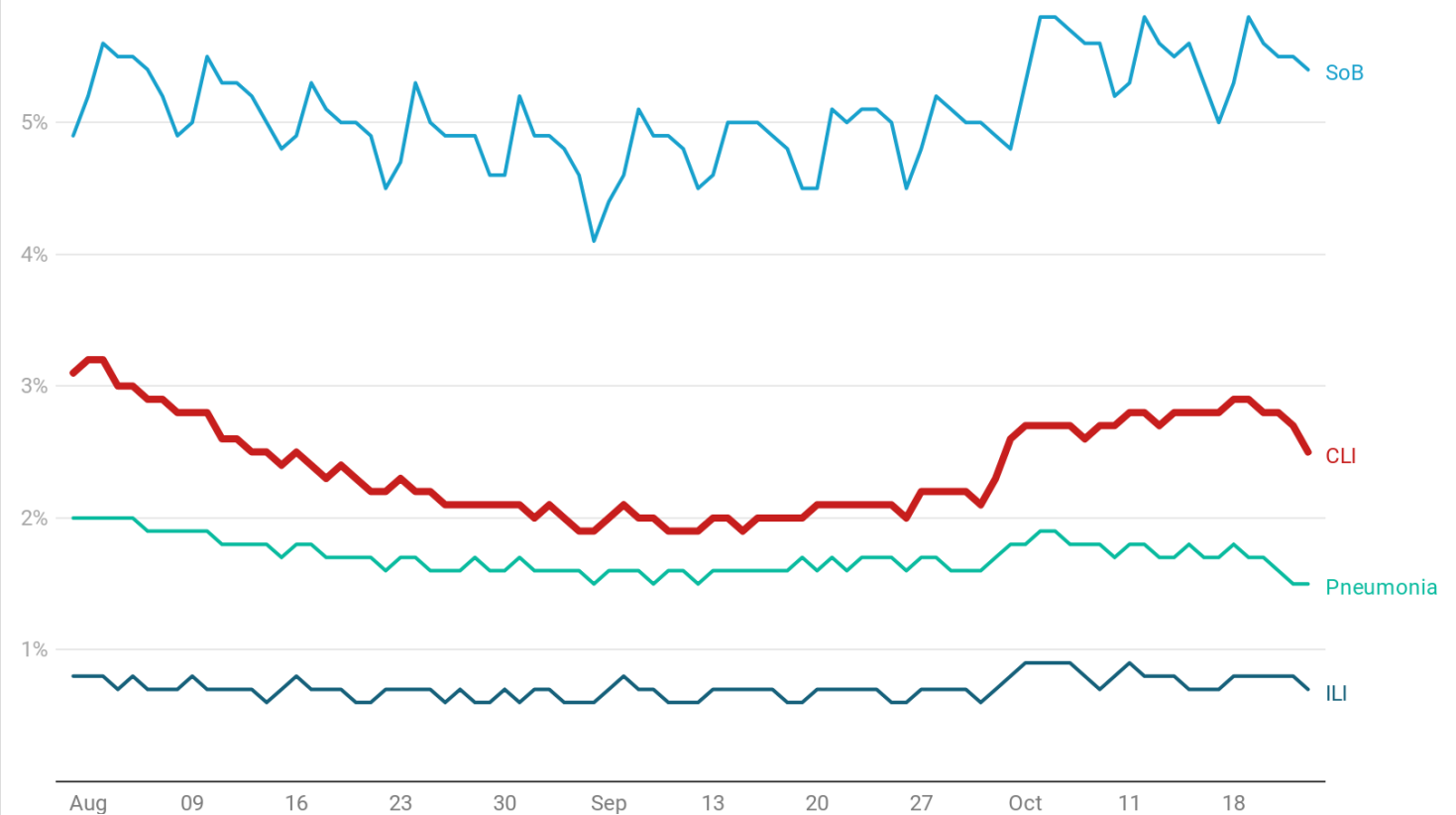
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

The % of ER visits for COVID-19-like illnesses (CLI) has eased in the past several days; this rate remains significantly lower than it was in mid-July

Although the flu season has officially begun, we have yet to observe any impact on the rate of 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 23



Health Industry Advisor LLC analysis

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

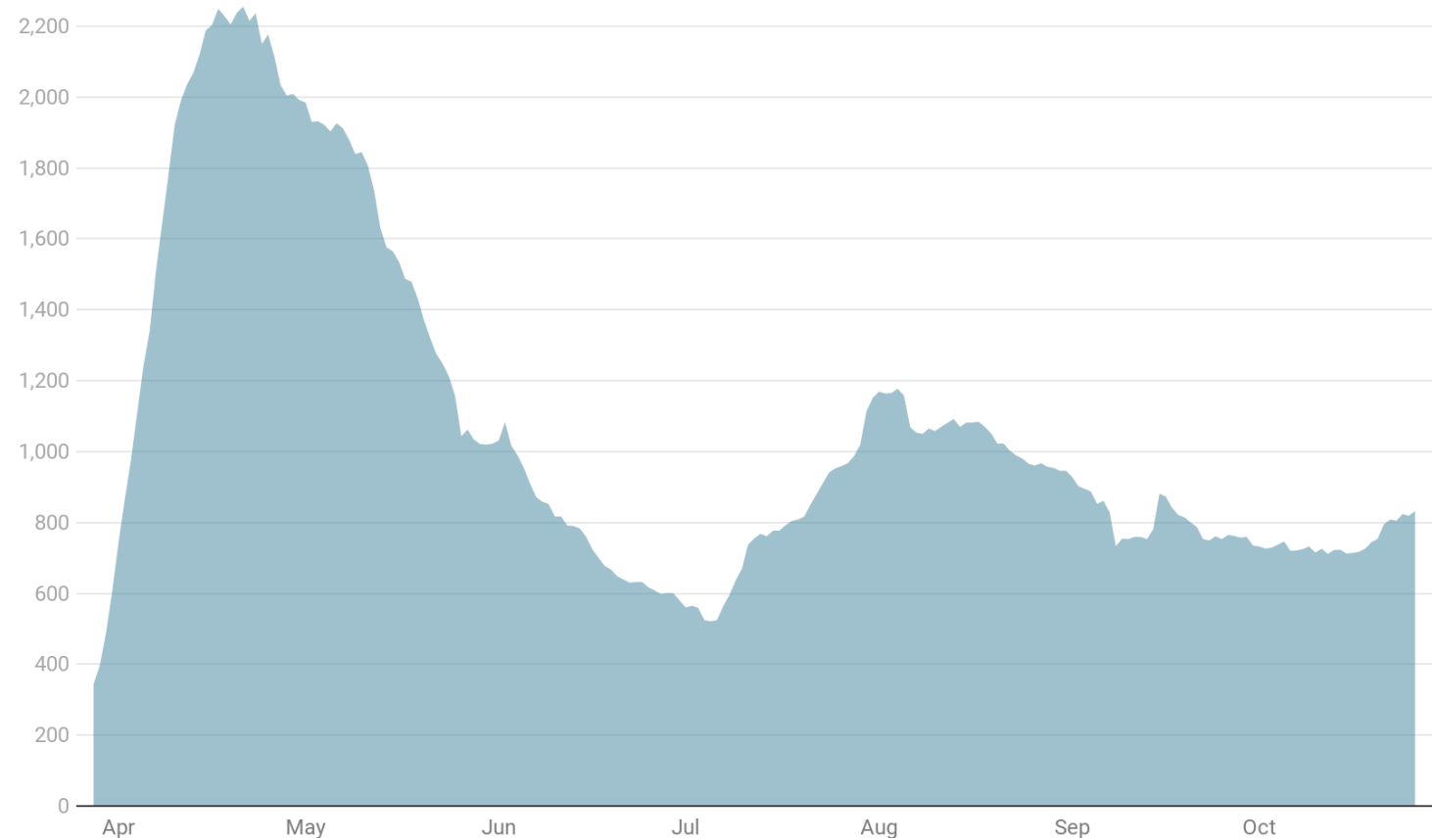
The recent uptick in newly-detected cases is beginning to effect deaths:

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

The current rate is higher than it has been since September 4

Deaths Reported With Coronavirus in the U.S.

Trailing 7-Day Moving Average, As of October 26



Health Industry Advisor LLC analysis

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

There were more deaths reported on Monday than on any other Monday since August 17

Newly Reported Deaths

Through October 26

Mondays Highlighted

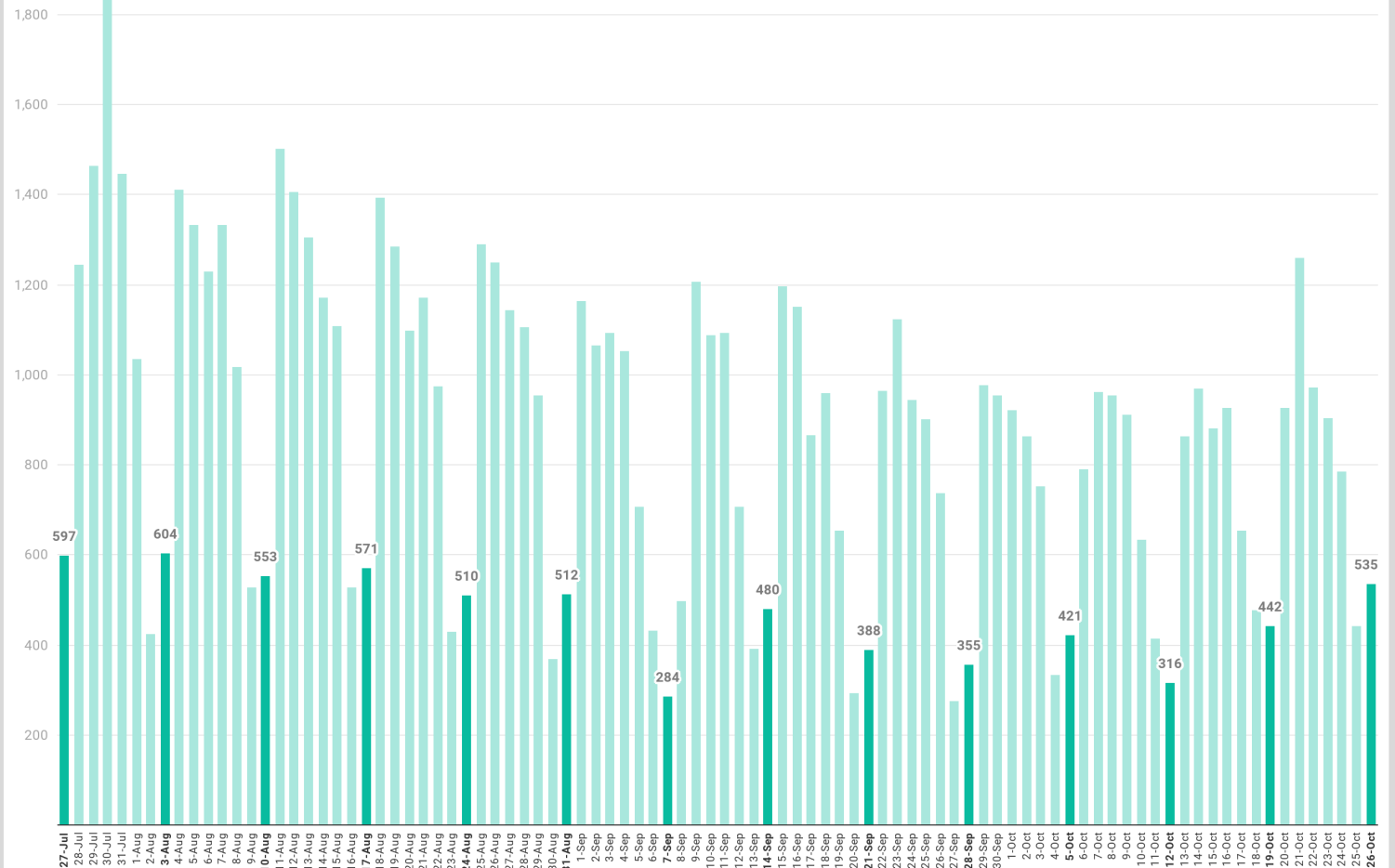


Chart: Health Industry Advisor LLC • Source: eorlometers.info • Created with Datawrapper

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>