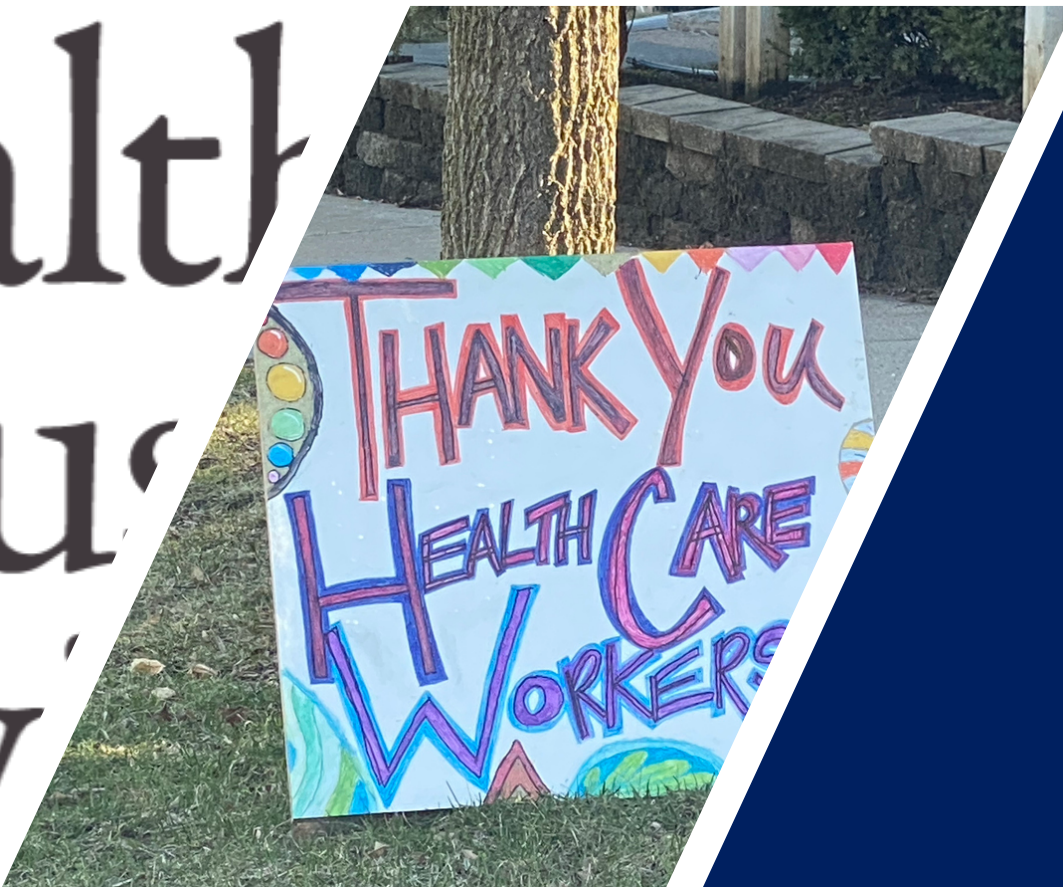




Health
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Issue # 205

Friday, November 6, 2020

COVID-19 Report

Highlights

- **Lubbock, Texas, home to Texas Tech University, experienced the highest rate of new infections among the thirty-three metro areas we include in our University sample. This is at the least the fourth consecutive week that Lubbock led this list.** Lubbock's rate is nearly 2x that of the next metro area on this list - Story, Iowa, home to Iowa State University; and is more than 2x that of the third area on the list, St. Joseph, Indiana, home to Notre Dame
- Story experienced the largest increase in this rate week-over-week, followed by Boone, Missouri (University of Missouri) and Johnson, Iowa (University of Iowa)
- Expanding our sample to all large central and large metro areas, the Midwest headlines the list of areas with the highest rates over the past seven days: **Twenty-three of the twenty-six large central and large fringe areas with the highest infection rates are in the Midwest; Seven are in Wisconsin alone, including the two highest, Ozaukee and Washington counties**
- **Although worldwide new cases are continuing to increase - these are now averaging ~530k per day - the rate of increase has slowed for eleven consecutive days**
- **Among countries with > 1 million population, ten of the eleven (and, twenty of the twenty-three) with the highest rates are in Europe**
- **The two countries of > 1 million population with the highest current infection rates - Belgium and Czechia - fortunately, have seen these rates begin to ease over the past several days;** In contrast, Switzerland and France are experiencing high and increasing infection rates
- **Test volume in the United States sets new record highs nearly every day; still, the test-positive rate continues to increase - suggesting that we still are playing "catch-up" with the rapid infection spread in this country**
- With the prolonged increase in new cases, Covid-19 hospital census continues to increase; the rate of hospitalization per new case, however, is as low as it has ever been. This rate has declined on twenty-eight of the past thirty days
- **Another encouraging note about hospitalizations - each of the ten states with the highest new infection rates are posting hospitalization rates below the national average. The two states among this group of ten with the highest hospitalization rates - Illinois and Wisconsin - have seen their hospitalization rates decline recently**
- Similarly encouraging, the likelihood of a hospitalized patient requiring ICU care, and the likelihood of a hospitalized patient requiring mechanical ventilator, both continue to decline
- Less encouraging - the % of ER visits for Covid-19-like illnesses has been increasing for the past several weeks; it remains lower than it was in July
- The prolonged increase in new cases is also resulting in a higher daily death count; the case fatality rate, on a 4-week lag basis has been stable for the past several weeks - at substantially lower than it was in the Spring and Summer

Metro Areas Home to Major Universities:

Of the 33 major areas in our sample, 15 are experiencing infection rates* higher than the national average (down from 20 last week)

For at least the fourth consecutive week, Lubbock, Texas, home to Texas Tech University had the highest infection rate last week. Story, IA (Iowa State University), St. Joseph, IN (Notre Dame), Boone, MO (University of Missouri) and Champaign, IL (University of Illinois) were next

Tompkins NY (Cornell), and Albemarle, VA (University of Virginia) experienced the lowest rates

* 7-day average

Metro Areas With Major Universities: New Daily Infections / 1M Population

7-Day Average, As of November 5

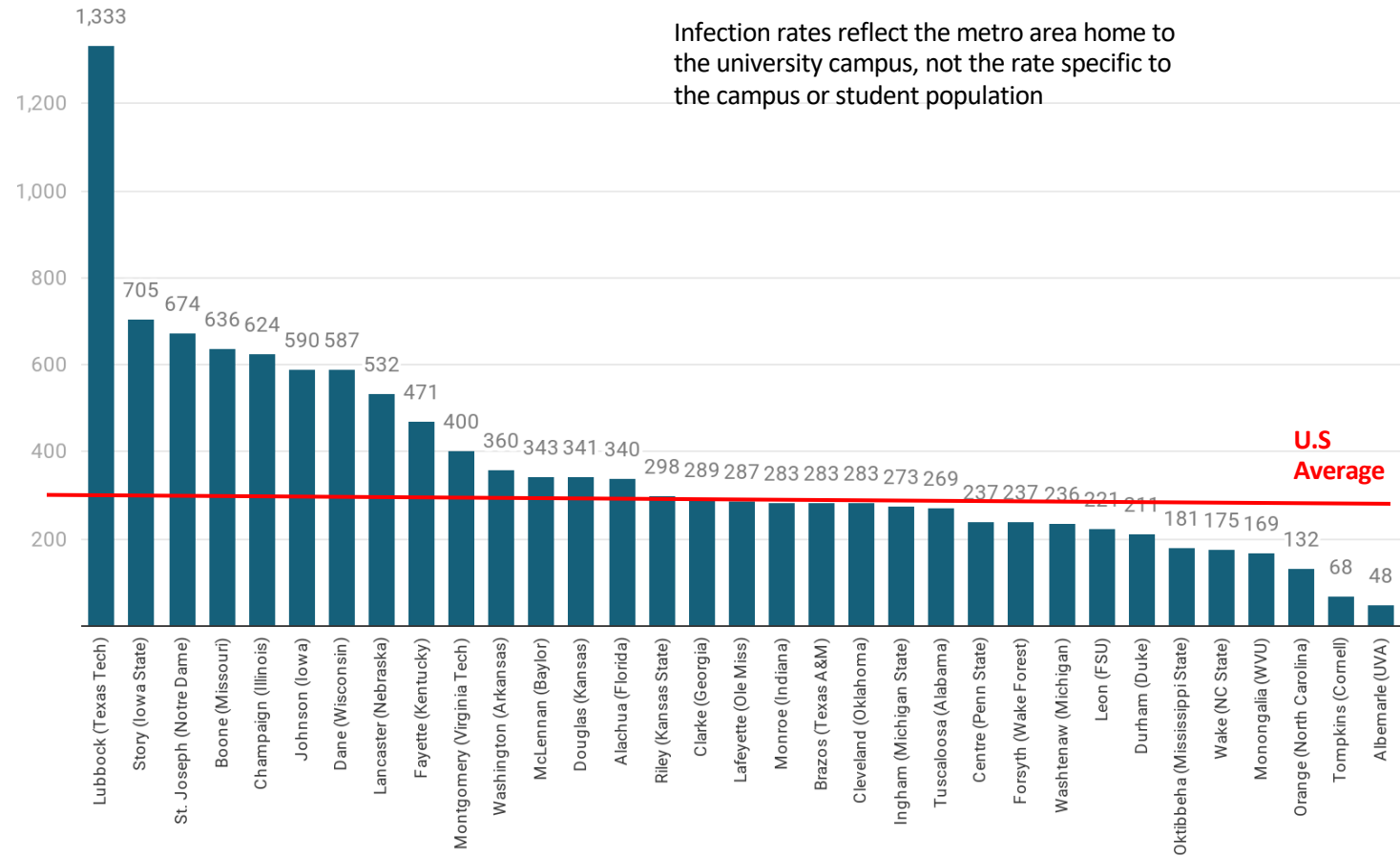


Chart: Health Industry Advisor LLC • Created with Datawrapper

Metro Areas Home to Major Universities:

Story, Iowa, home to Iowa State University experienced the largest increase in new infection rate relative to last week, followed by Boone, Missouri (University of Missouri) and Johnson, Iowa (University of Iowa)

Centre, Pennsylvania (home of Penn State University) experienced the most significant decline in this rate, followed by Tuscaloosa, Alabama (University of Alabama) and Albemarle, Virginia (University of Virginia)

* 7-day average

Metro Areas With Major Universities: Week-Over-Week Change In New Daily Infections / 1M Population

7-Day Average, November 5 v. October 29

Infection rates reflect the metro area home to the university campus, not the rate specific to the campus or student population

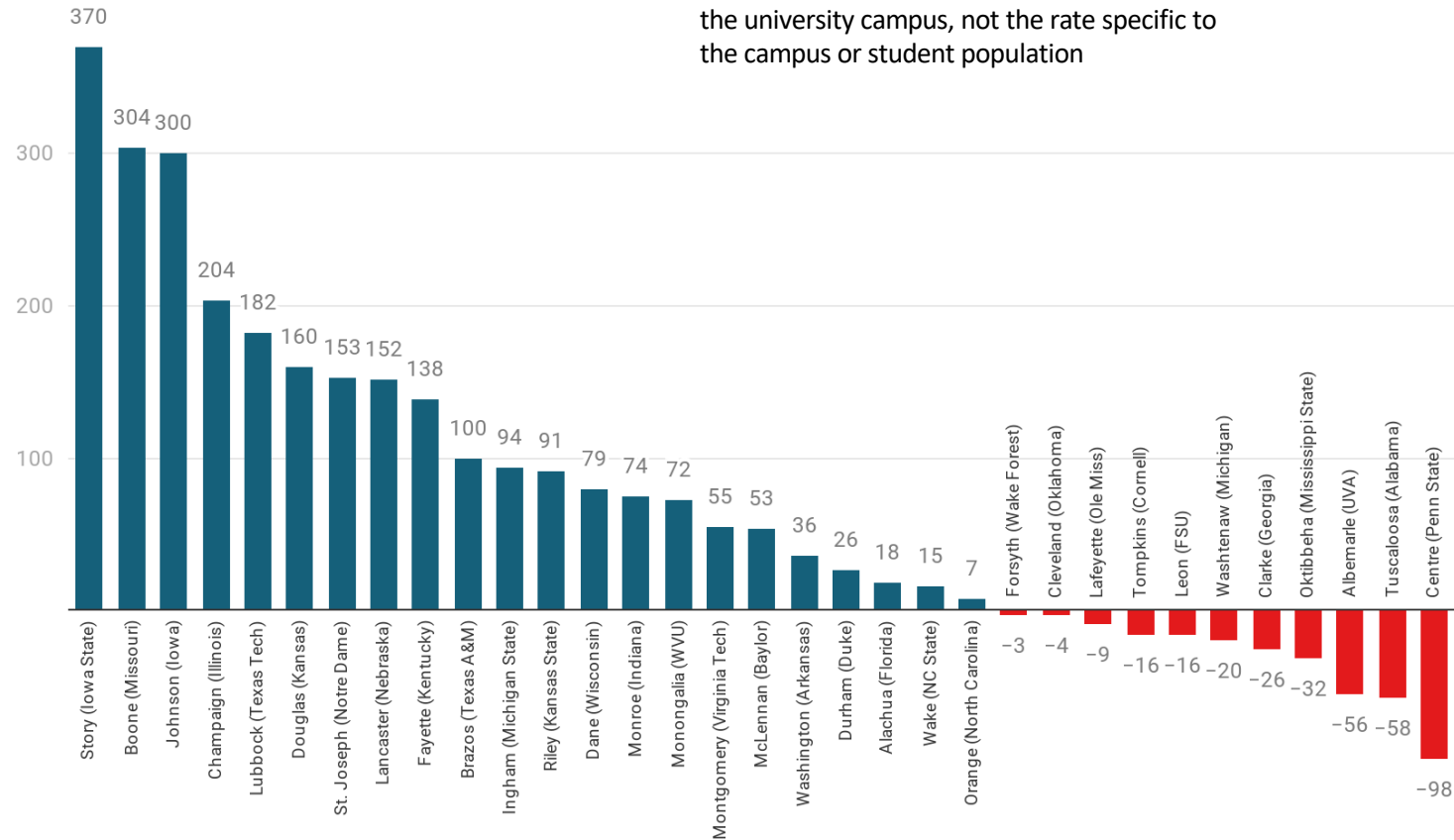


Chart: Health Industry Advisor LLC • Created with Datawrapper

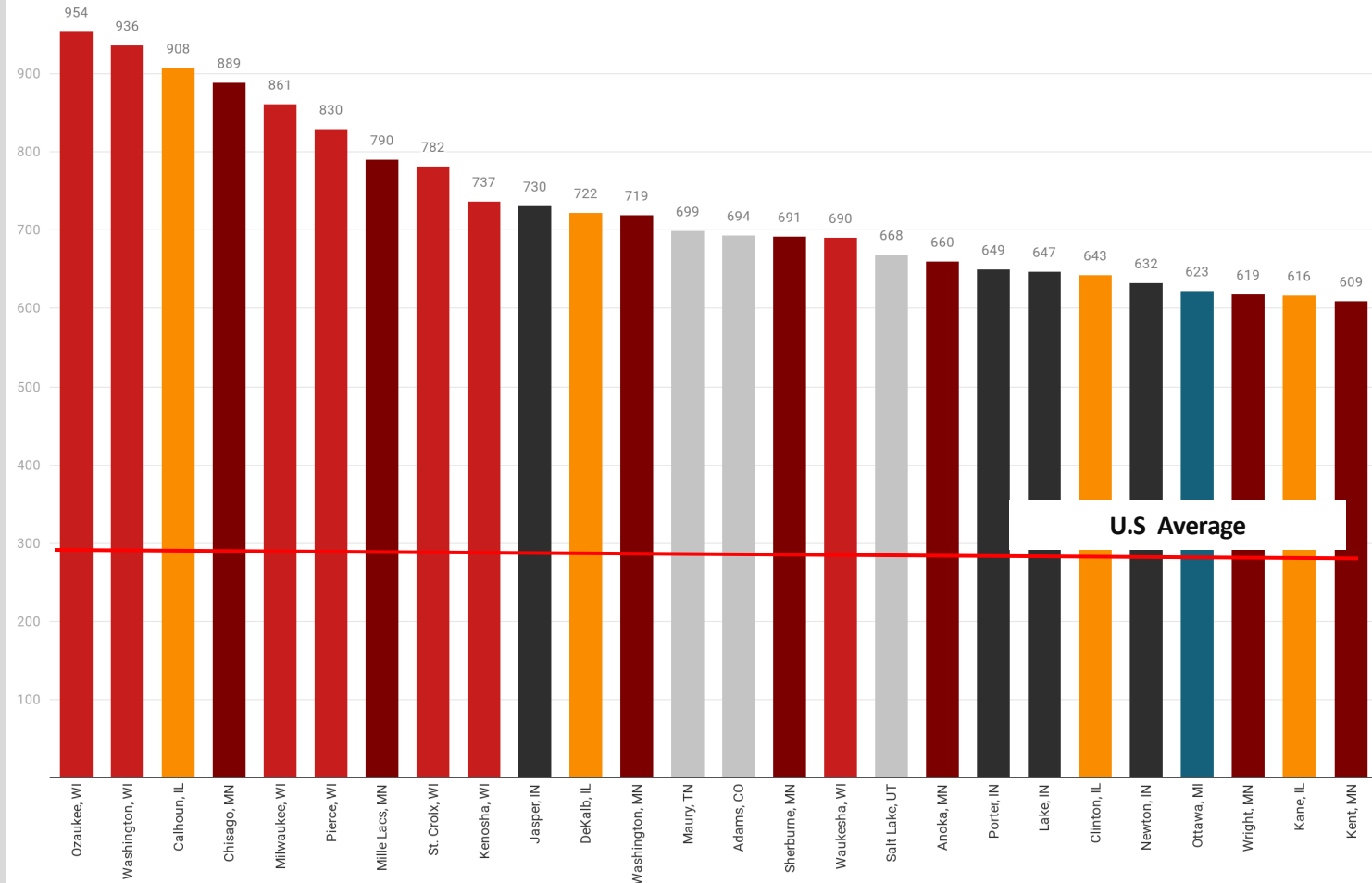
Twenty-six Large Central and large Fringe Metro Areas, experienced new daily infections per capita > 600 per million over the past seven days (just more than 2x the national average)

Twenty-three of these are in the Midwest

Seven are in Wisconsin, including Ozaukee and Washington counties, which had the highest infection rates among these areas last week

New Daily Infections / Million Population - Large Central & Large Fringe Metro Areas

7-Day Moving Average, As of November 5



Health Industry Advisor LLC analysis

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

Worldwide, we are experiencing ~530k new cases each day

* - 7-day moving average basis

Newly Detected Daily Cases - Worldwide

7-Day Moving Average, As of November 5



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

Newly-detected cases in the U.S. follows a similar pattern as newly-detected cases worldwide - although the peaks and valleys are more pronounced in the U.S.

Worldwide, the rate of growth slowed over the eleven days – will the U.S. begin to turn this around too?

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

7-Day Moving Average

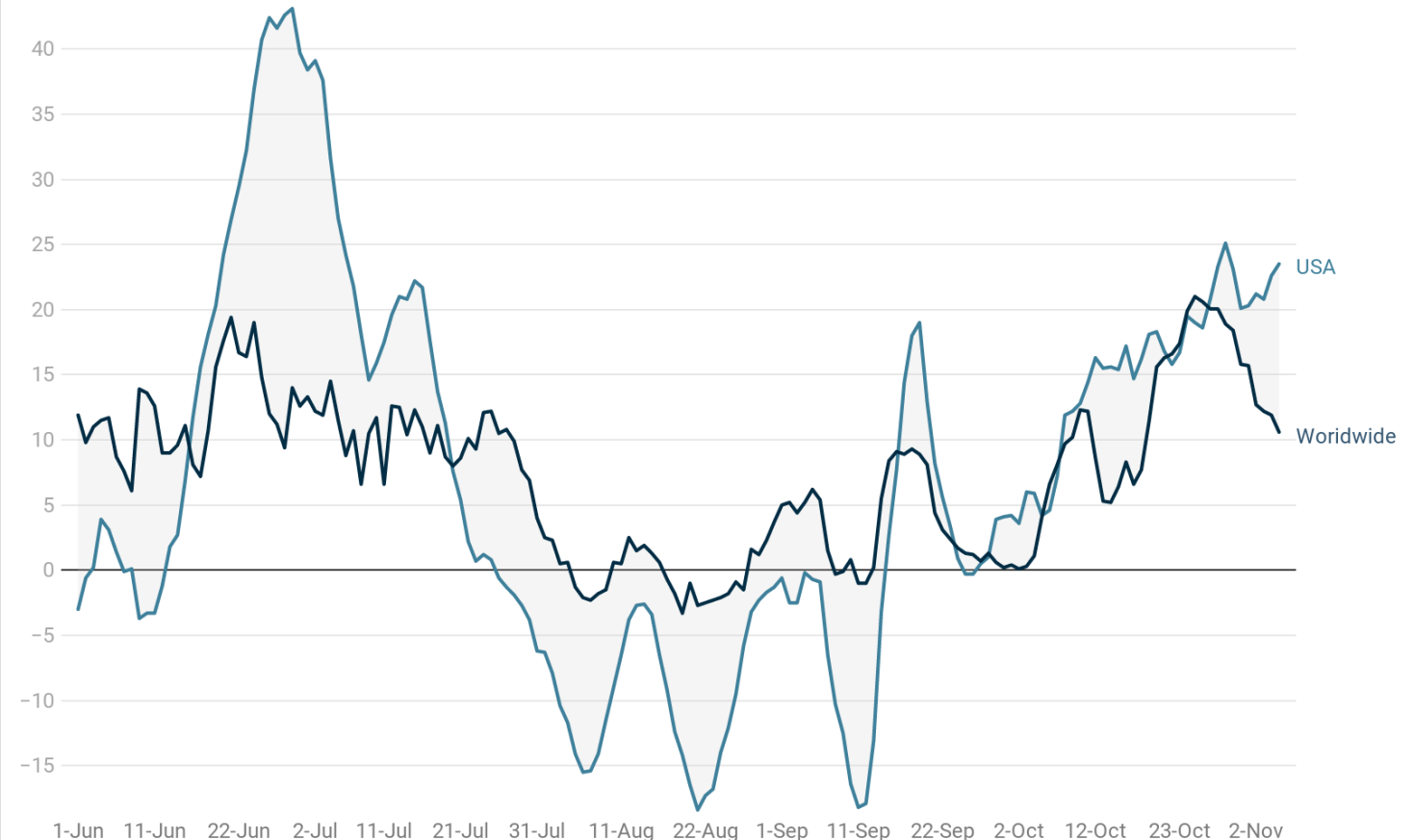


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

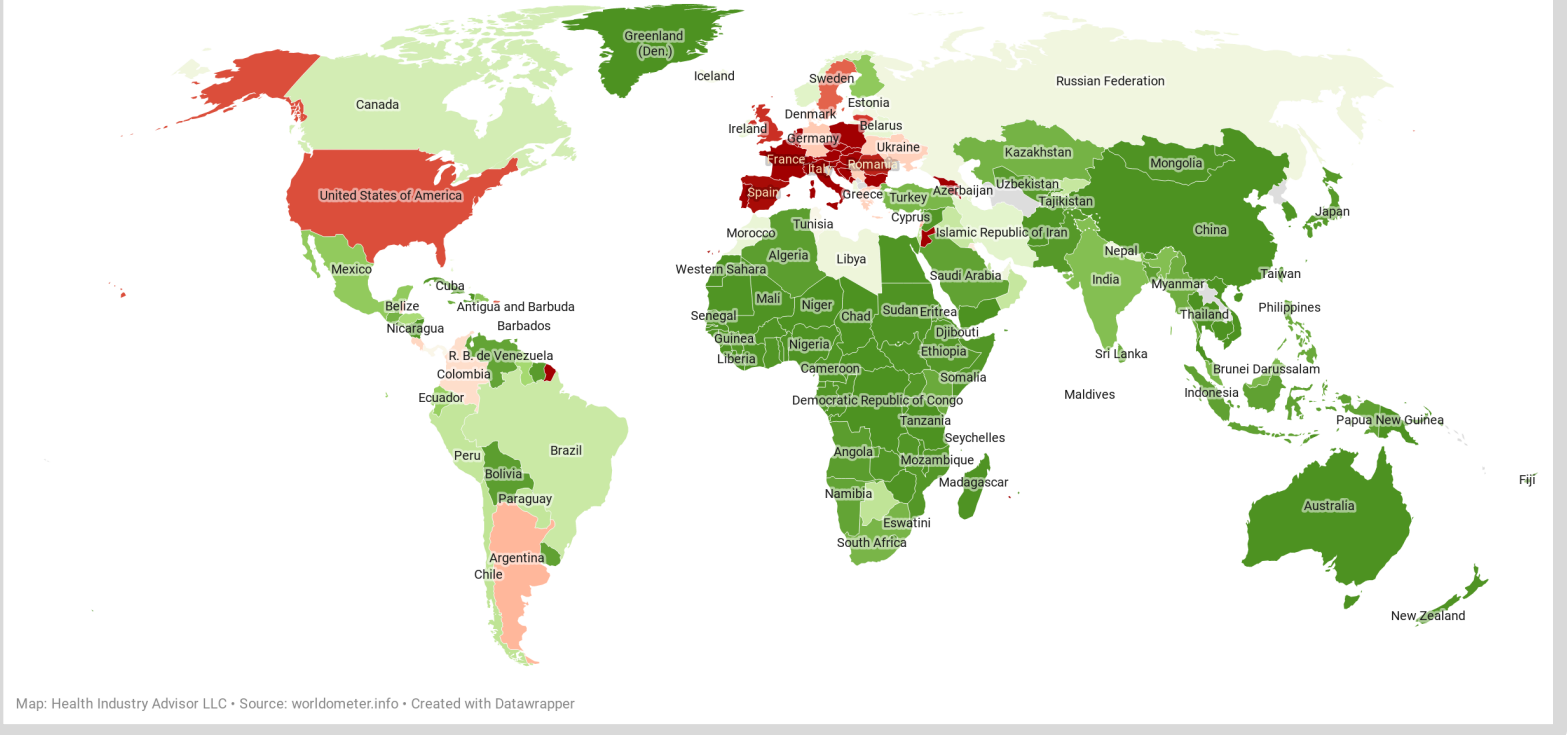
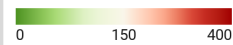
European countries continue to experience the highest infection rates per capita

Argentina and the United States have lower, yet still concerning rates

* - 7-day moving average basis

New Infections / Million

7-Day Moving Average, As of November 5

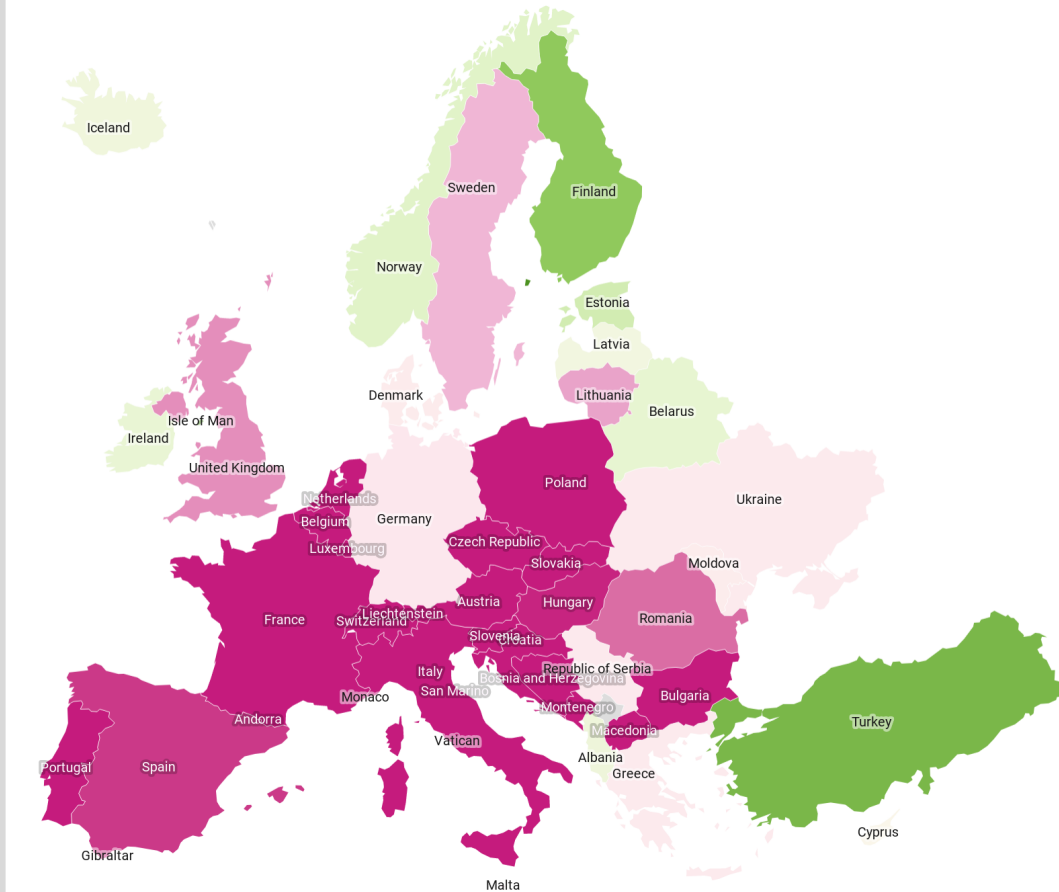
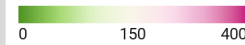


High rates of new infections are being reported across Europe – with exceptions in the north and eastern parts of the continent

* - 7-day moving average basis

New Daily Infections / Million - Europe

7-Day Moving Average, As of November 5



Map: Health Industry Advisor LLC • Source: Worldometer.info • Created with Datawrapper

Among countries with > 1 million population, twenty-eight countries currently have new daily infection rates/1M* > 200

In order, Belgium, Czechia, Switzerland, Slovakia, Armenia, France and Austria have the highest rates (each >600)

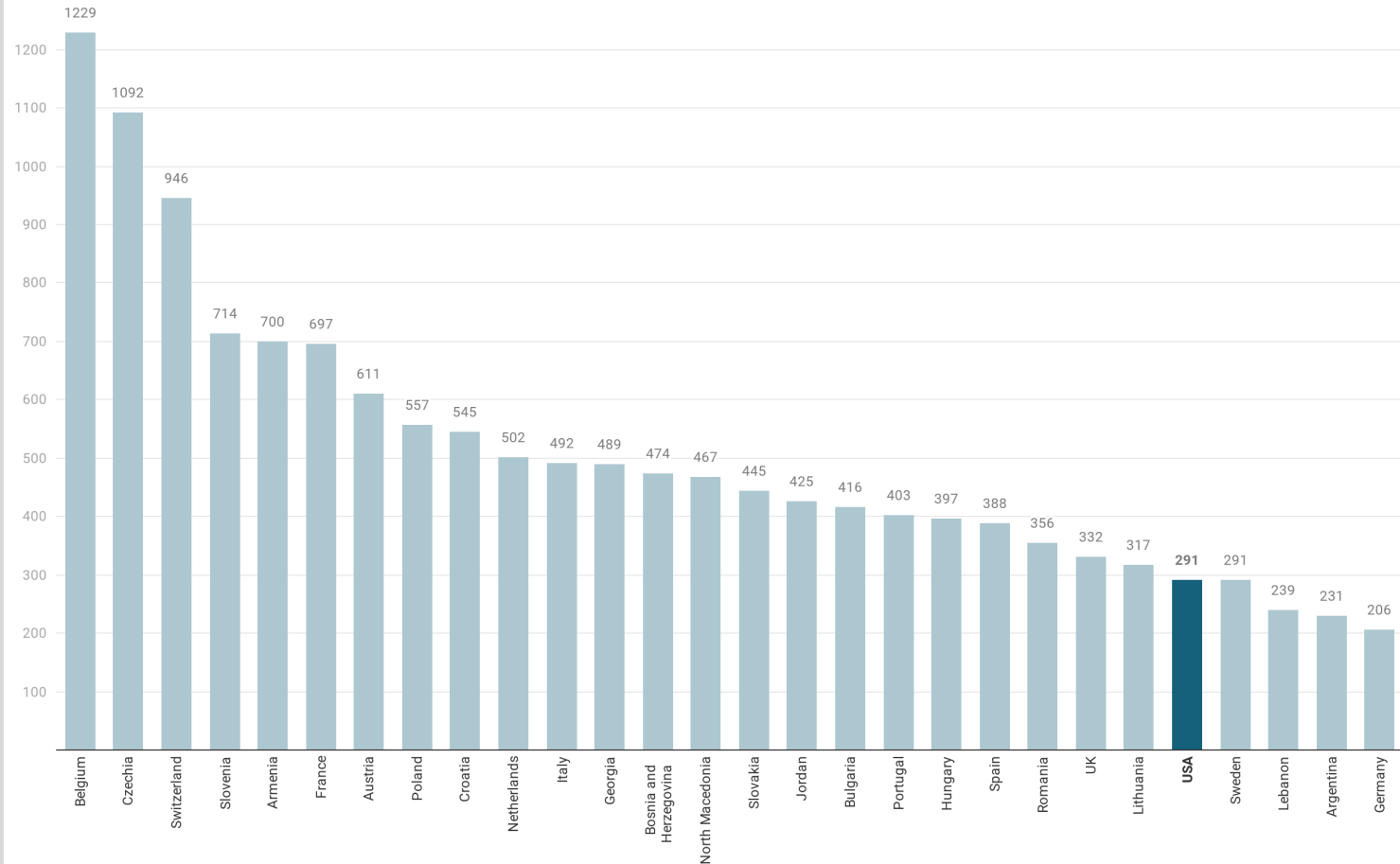
Europe is home to the ten of the eleven countries with the highest rates; and twenty of the twenty-three highest

The United States ranks twenty-fourth among these countries (Belgium's rate is 4.2x higher than the U.S.; Czechia's is 3.75x higher)

* - 7-day moving average basis

New Daily Infections / Million Population

Trailing 7-Day Moving Average, As of November 5



Countries with > 1M population

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

Belgium and Czechia - the two countries with the highest new infection rates, are seeing these rates begin to ease

Netherlands and Spain are also showing signs of easing

Switzerland and France are seeing increasing rates

* - Population >1 million

** - 7-day average

USA and Selected European Countries With High New Infection Rates

New Daily Infections / Million, 7-Day Moving Average, As of November 5

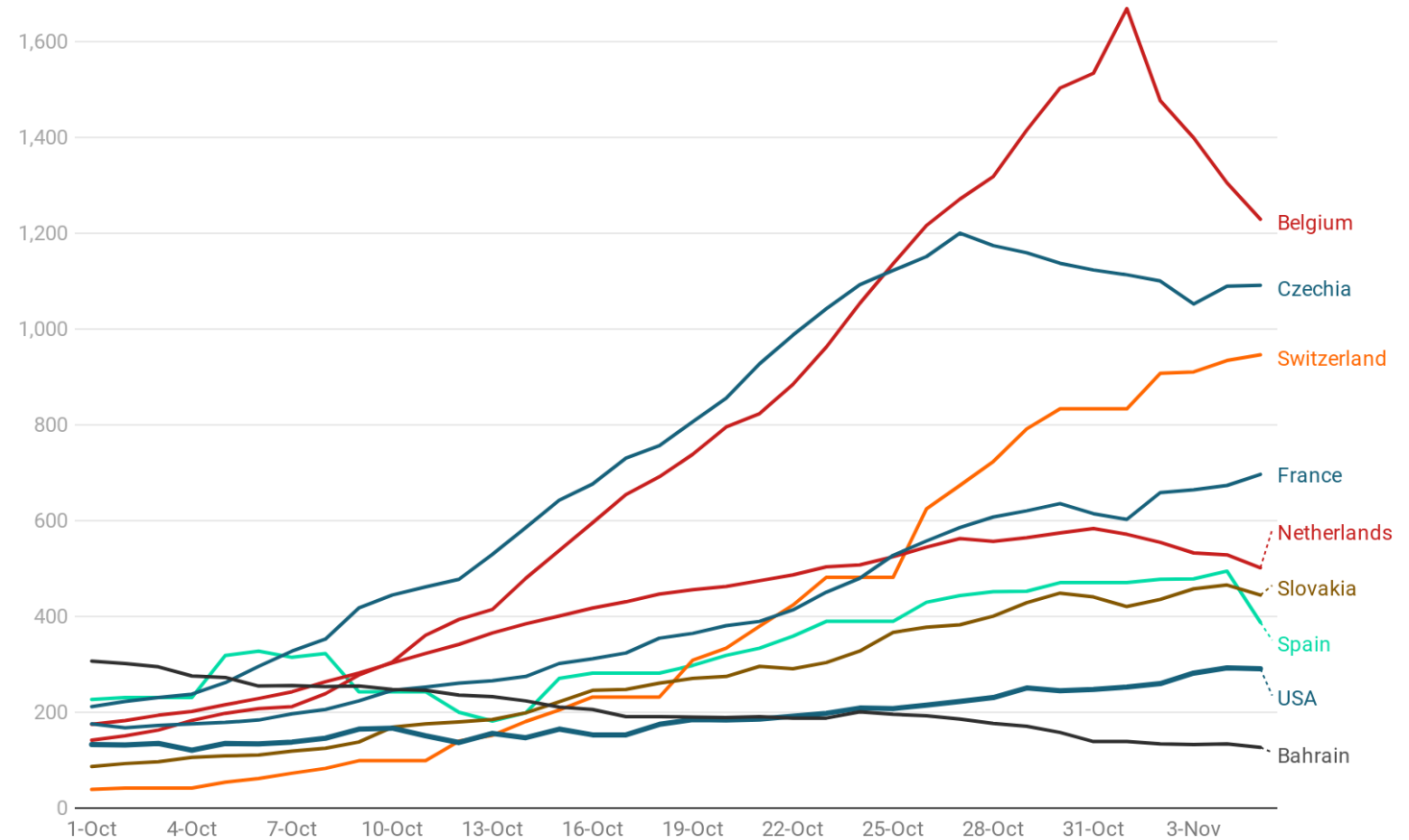


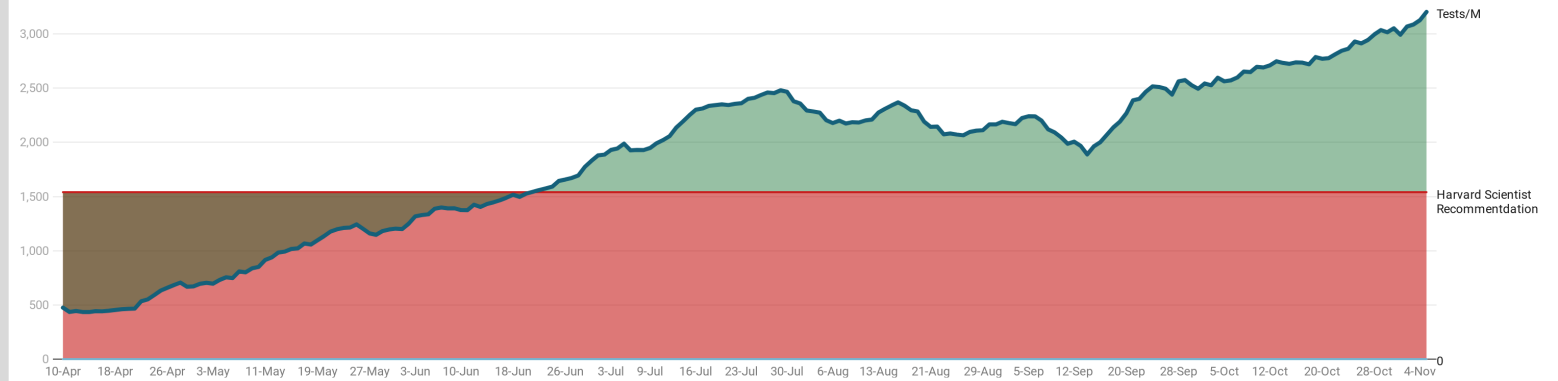
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

The 7-day average testing volume set another new high on Thursday; this rate has increased by nearly 65% since mid-September

The 7-day test-positive rate, however, has been trending upward since the beginning of October

Daily Tests Per 1 Million - United States

Trailing 7-Day Moving Average, As of November 5

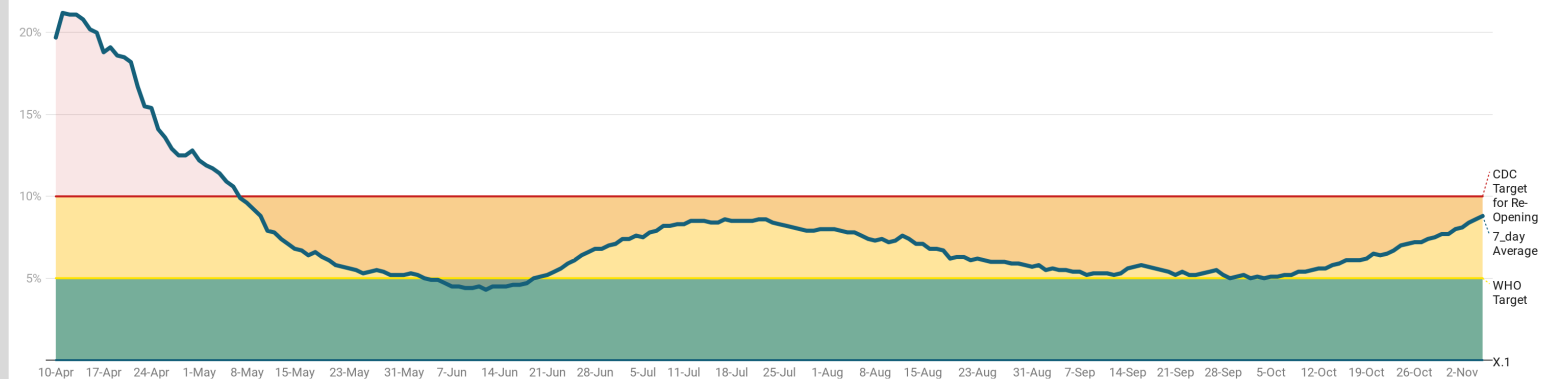


Health Industry Advisor LLC analysis

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 November 4



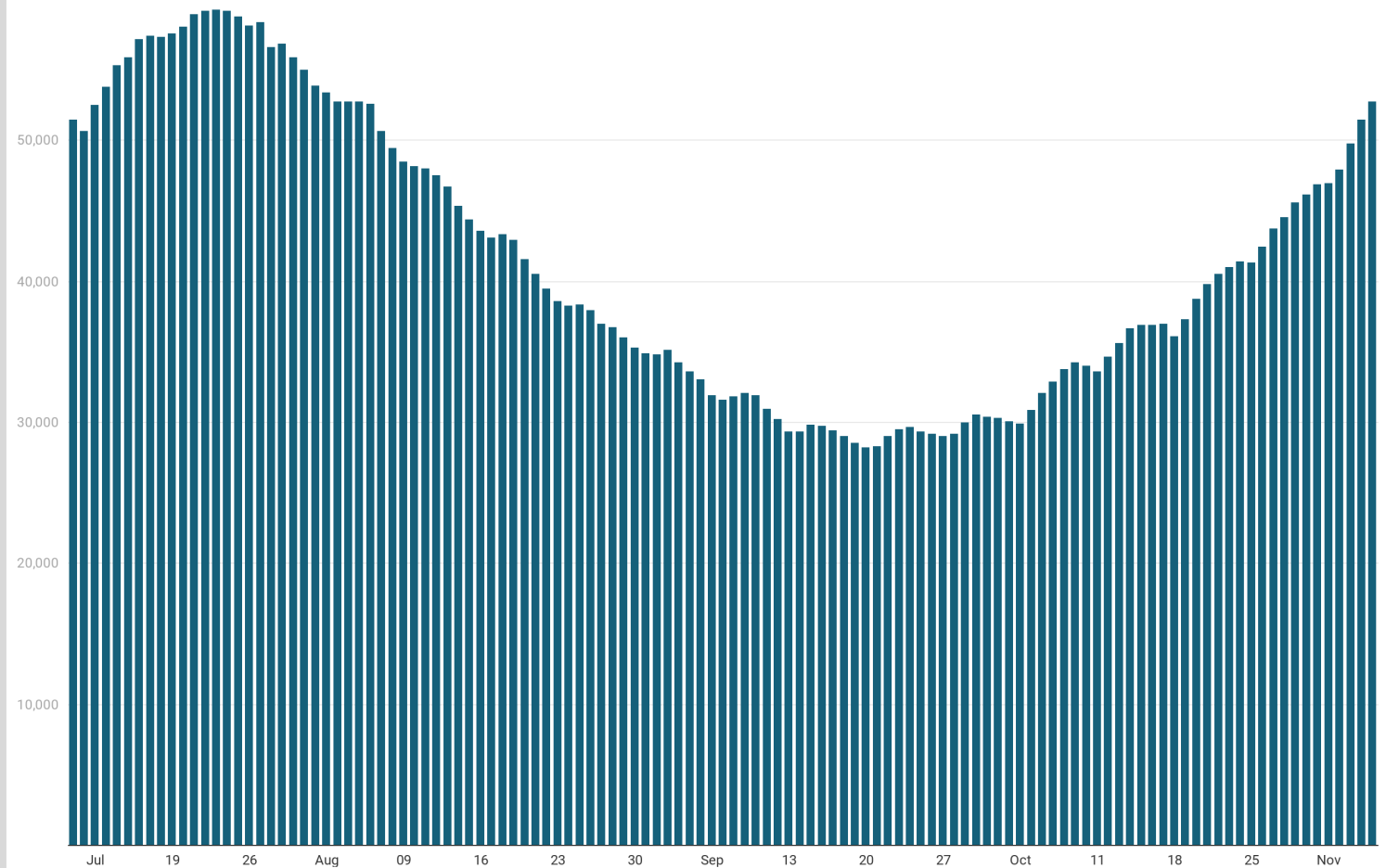
Health Industry Advisor LLC analysis

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 every day since September 23

Hospital Census: COVID-19 Patients

As of November 5



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:

The average Covid-19 census per 100 new cases has declined on twenty-eight of the past thirty days

The current rate is lower than it has been since at least April

Covid-19 Hospital Census / 100 Daily New Detected Cases

7-Day Moving Average, As of November 4

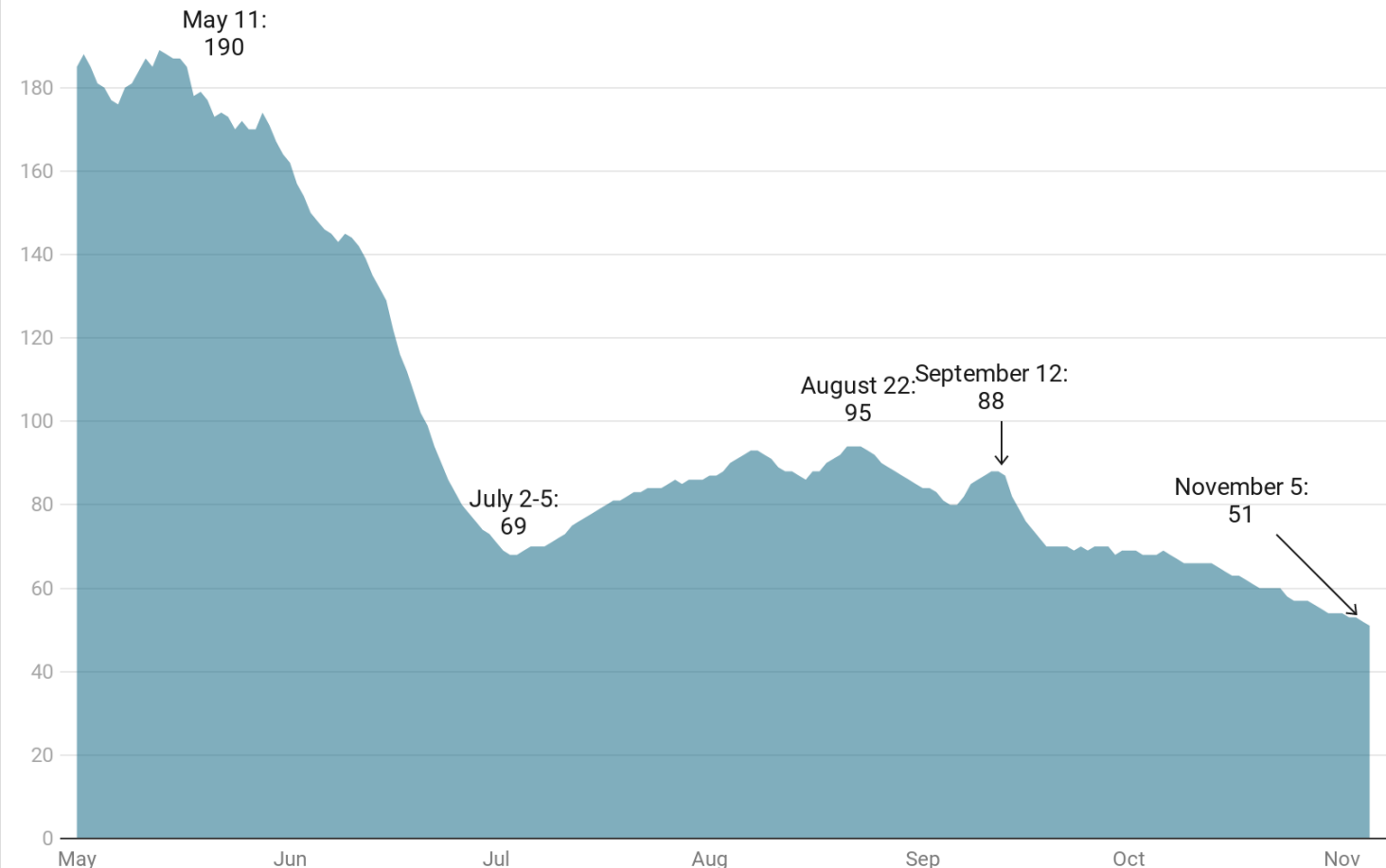


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking project & worldometers.info • Created with Datawrapper

The ten states with the highest current rates of new infections are each experiencing a lower rate of hospitalization than the national average

Among these ten states, Illinois has the highest rate of hospitalization, however this rate has fallen sharply over the past 6 weeks

Wisconsin has the second highest rate; its rate, however, has declined over the past week

Covid-19 Census / 100 New Cases

7-Day Moving Averages, As of November 5

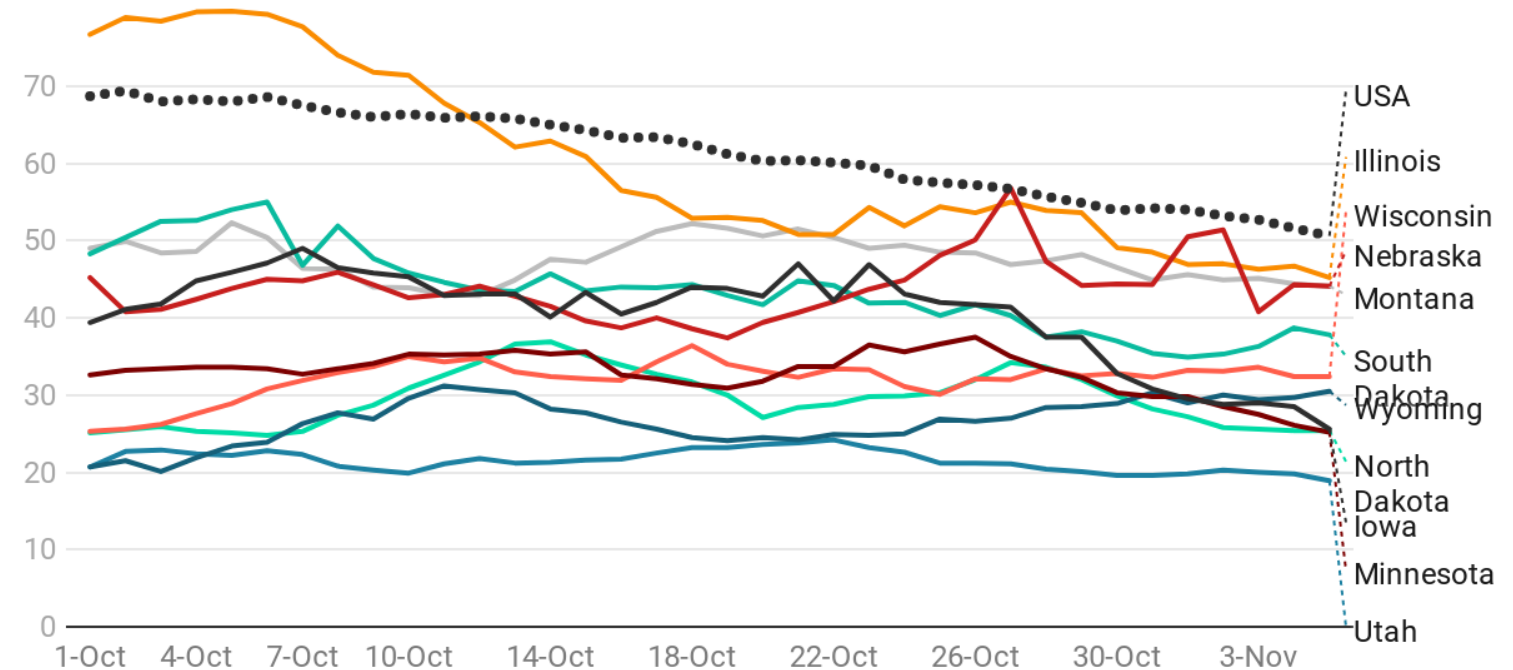


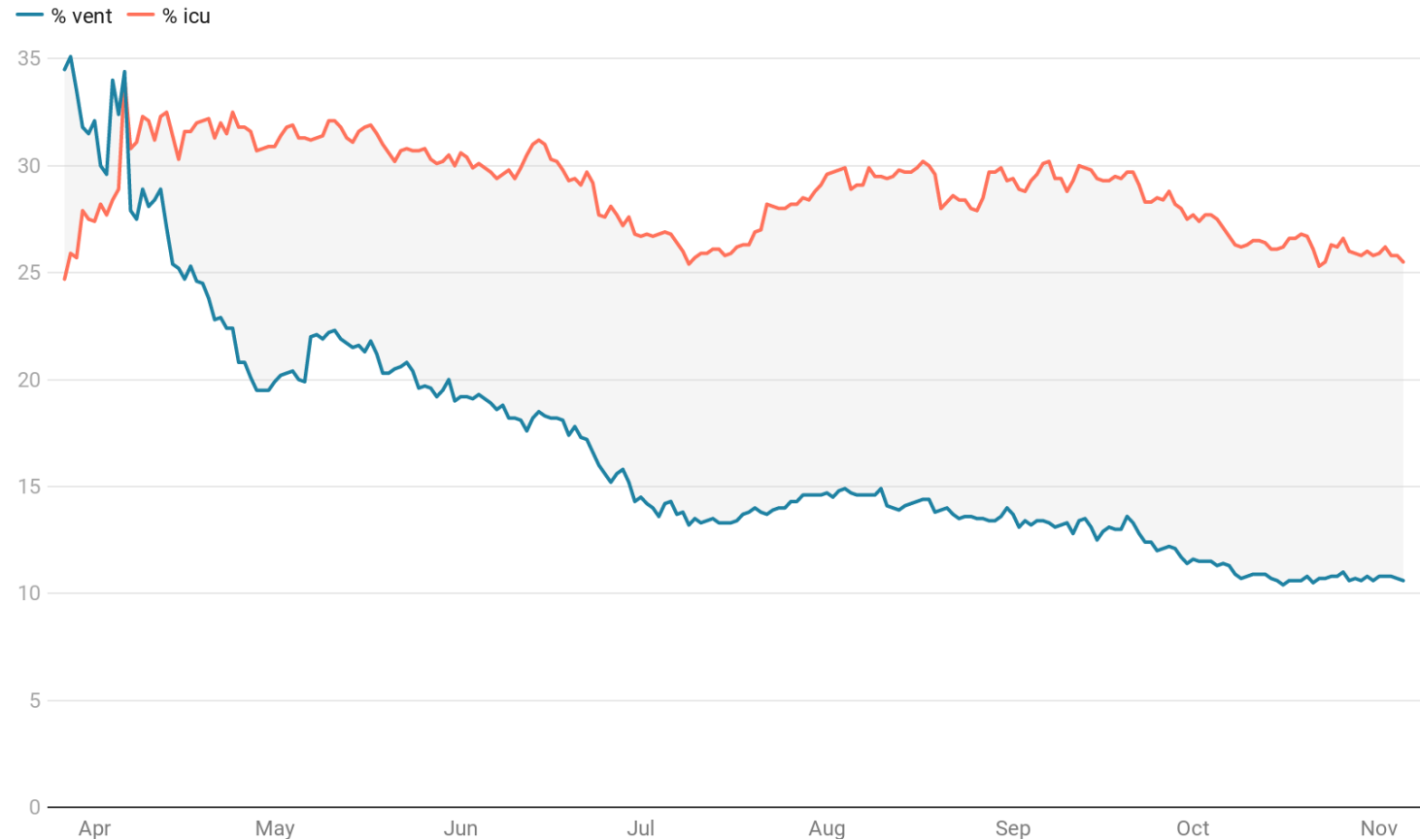
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project & worldometers.info • Created with Datawrapper

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 November 5



Health Industry Advisor LLC analysis

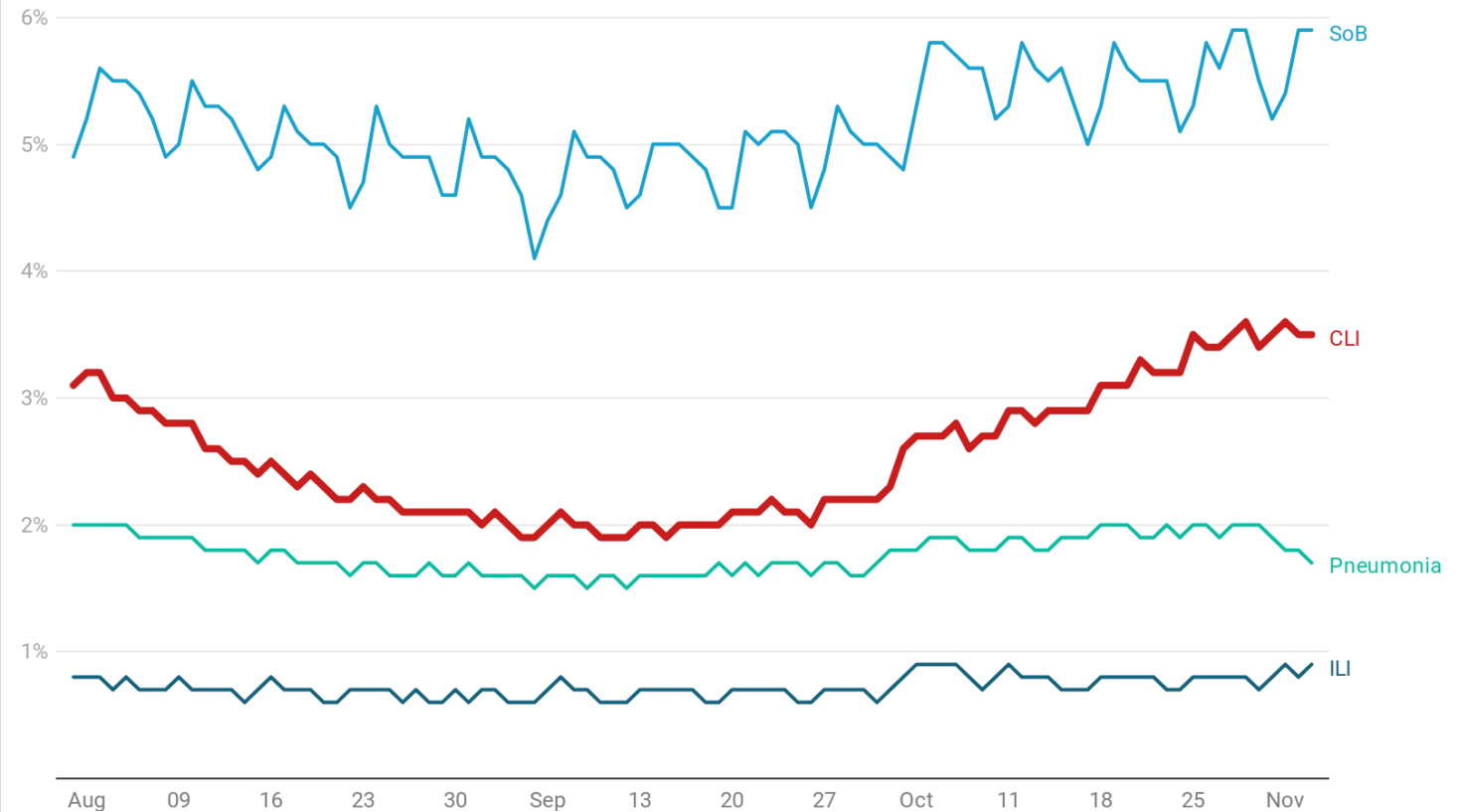
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

The % of ER visits for COVID-19-like illnesses (CLI) has increased throughout October and into November

This rate remains lower, however, than it was in July

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

As of November 3



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 resulting in increased deaths:

The 7-day average deaths per day has generally been higher from mid-October to now than from early-September through early October

Deaths Reported With Coronavirus in the U.S.

Trailing 7-Day Moving Average, As of November 5



Health Industry Advisor LLC analysis

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

Recoveries from the virus continue to increase

Active cases have increased during the recent surge in new infections

Active Cases, Recoveries & Deaths

Through November 5

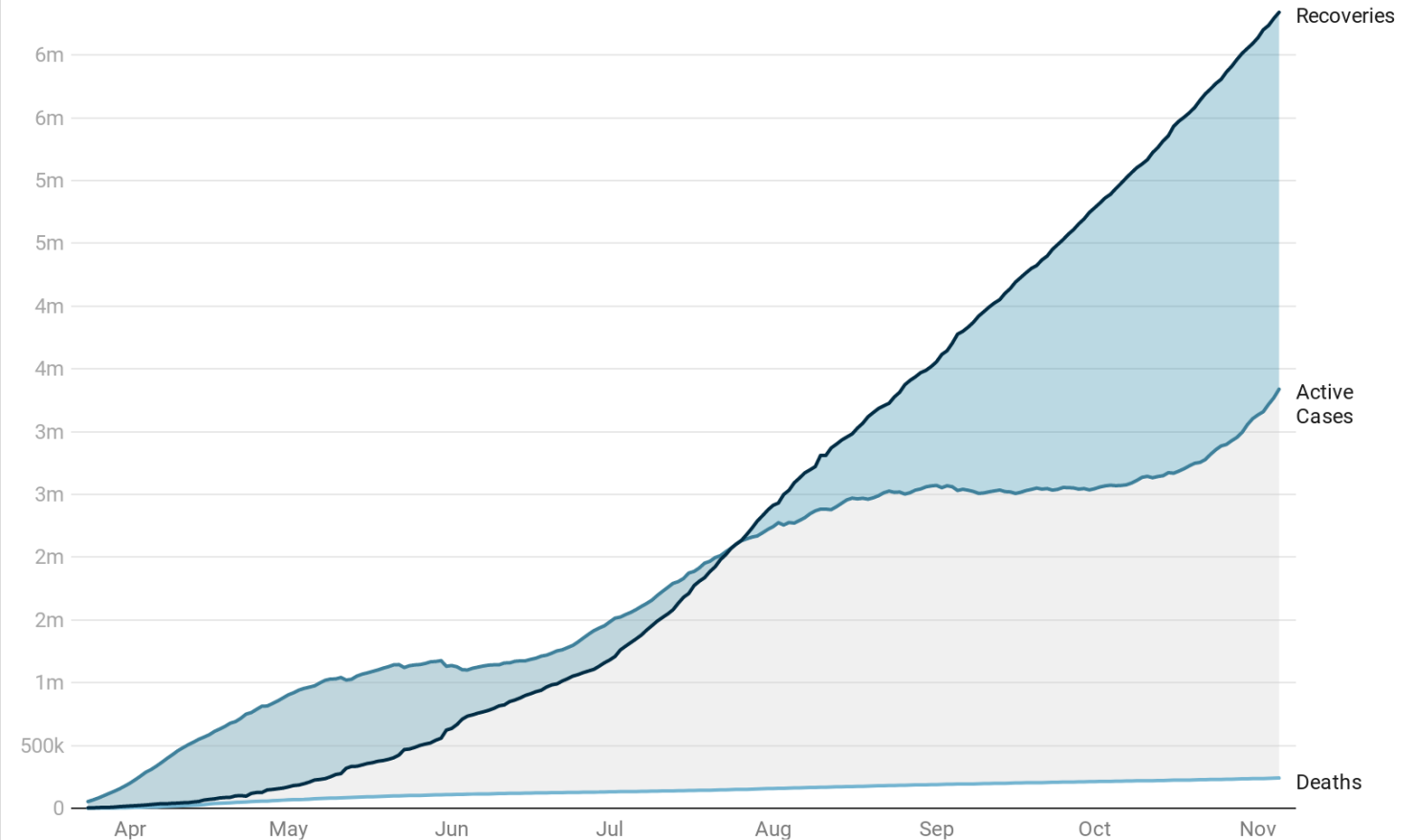


Chart: Health Industry Advisor LLC • Source: worldometers.info & The Atlantic's Covid Tracking Project • Created with Datawrapper

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>