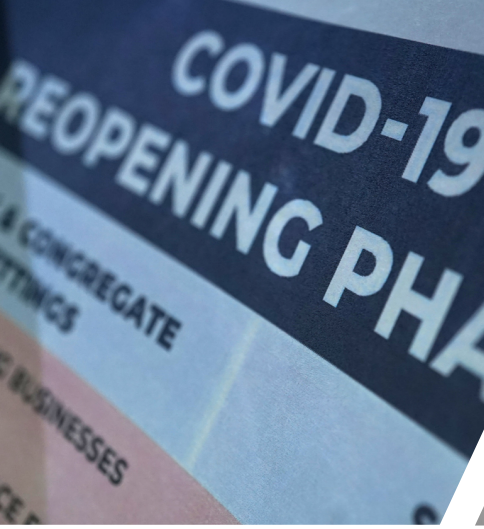
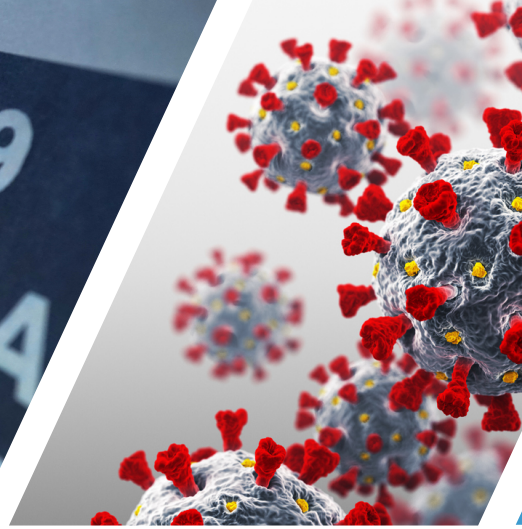
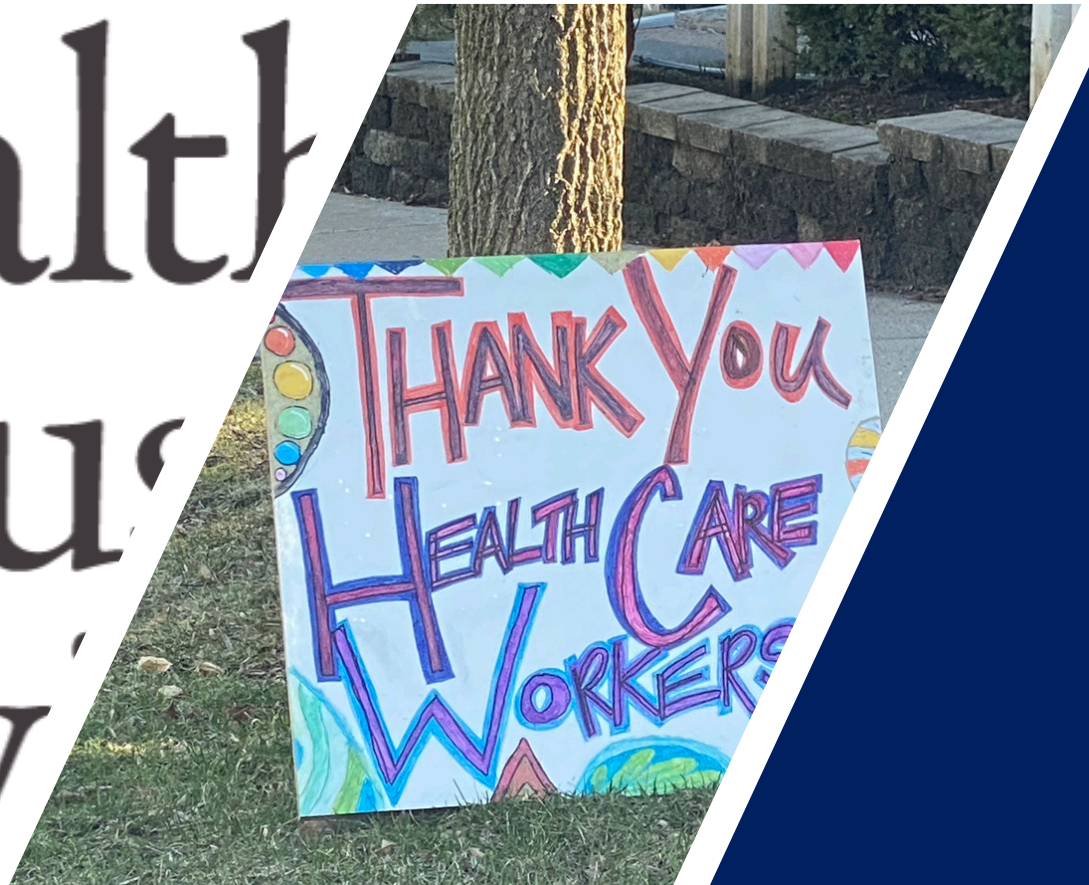




Health
Indus
Adv



Issue # 211

Friday, November 13, 2020

COVID-19 Report

Highlights

Major Areas in the U.S:

- **For at least the fifth consecutive week, Lubbock, Texas - home to Texas Tech University - had the highest rate of new infections per capita among the thirty-three campus-hosting areas included in our sample**. Stoney and Johnson Countries in Iowa - homes to Iowa State and the University of Iowa, respectively - ranked second and third among these areas
- **Among all Large Central and Large Fringe Metro Areas, fifty-five experienced new daily infections / million >700 over the past seven days. The twenty-one such areas with the highest rates over the past week were from just three states - Illinois, Minnesota and Wisconsin**

Hospital Resource Use for Covid-19 patients

- **On a same-day, prior week basis, Covid-19 hospital census has increased every day since September 23**
- **Remarkably, the Covid-19 hospitalization rate (hospital census per 100 new cases) declined yesterday - for the thirty-first time in the past thirty-four days; this rate has been cut in 1/2 during this time**
- Even those Covid-19 patients in the hospital are not as severe: the % of Covid-19 patients in the ICU declined yesterday for the tenth consecutive day; the % of these inpatients on ventilators declined for the ninth time in ten days
- **A significant concern is the available bed capacity to care for these patients. As of yesterday, four states - Connecticut, Illinois, Nevada and Wisconsin - are devoting 1/3 of more of their available inpatient bed capacity to Covid-19 patients. While this is a significant concern, there was as time in April that Connecticut, New Jersey and New York had more Covid-19 inpatients than available beds!**

Worldwide Trends - Some Progress in Recently Hard-Hit Countries

- On a week-over-week basis, the growth in new cases is easing somewhat worldwide, despite increasingly rather significantly in the U.S.
- **The highest rate of infections per capita are still found in Europe: of all countries > 1 million population, Europe (and Eurasia) count for twenty-six of the twenty-seven highest infection rates over the past week - the U.S. is the lone interloper on this dubious list, coming in at twenty-first**
- Switzerland had the highest rate during this time - nearly 2x the U.S. rate
- **Infection rates in several European countries have, nonetheless, begun to decline in recent days/week: Belgium's rate has dropped by 2/3 in just 11 days; Czechia's rate has fallen by 40% in just over two weeks; France, Netherlands, Spain and Switzerland eachohave also experienced marked declines in infection rates recently**

Metro Areas Home to Major Universities:

Of the 33 major areas in our sample, 18 are experiencing infection rates* higher the the national average (up from 15 last week)

For at least the fifth consecutive week, Lubbock, Texas, home to Texas Tech University had the highest infection rate last week. Story, IA (Iowa State University); Johnson, IA (University of Iowa); 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 12

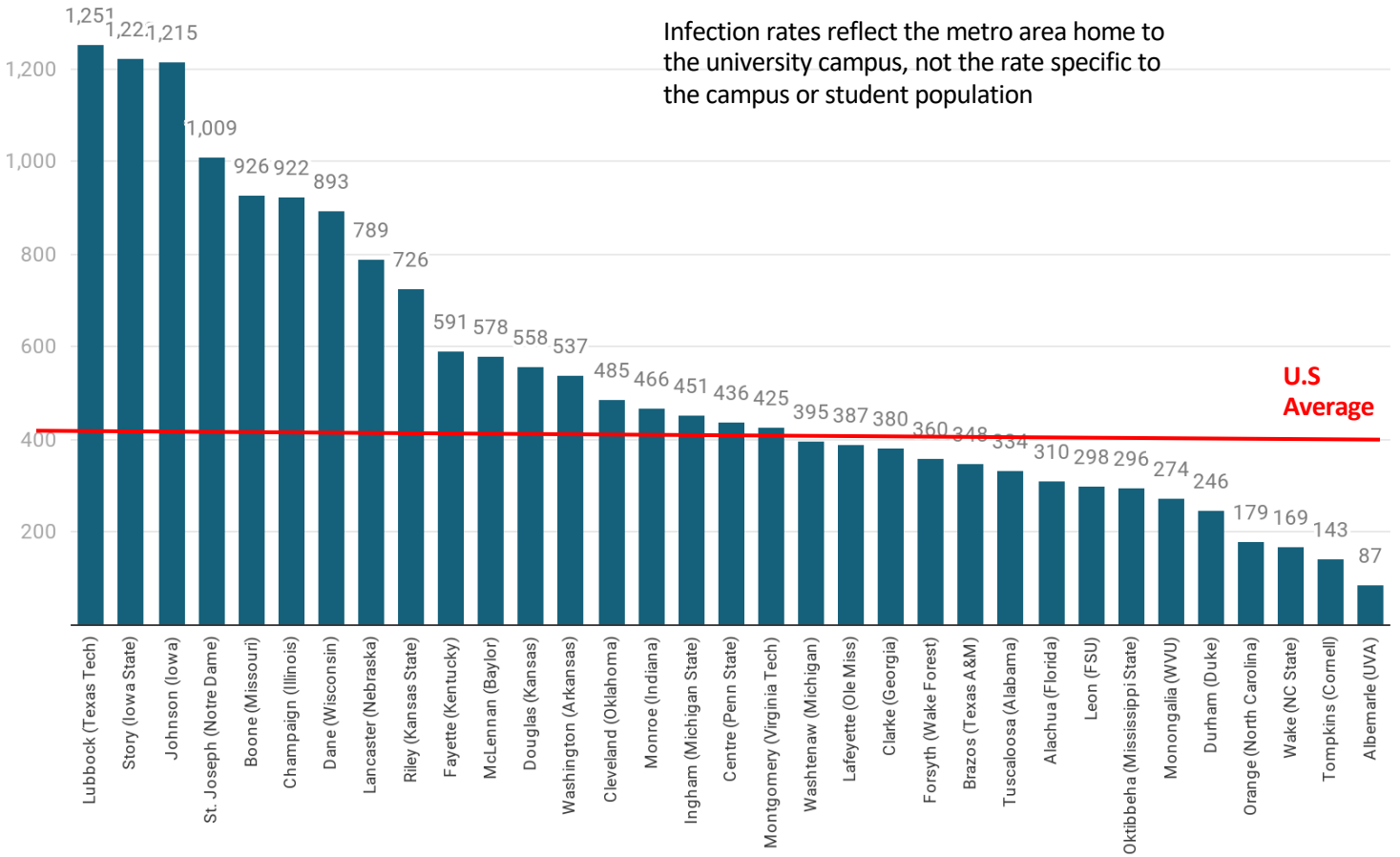


Chart: Health Industry Advisor LLC • Created with Datawrapper

Health Industry Advisor, llc

Metro Areas Home to Major Universities:

Johnson, Iowa - home to the University of Iowa - experienced the largest increase in new infection rate relative to last week, followed by Story, Iowa, home to Iowa State University

Lubbock, Texas, home to Texas Tech University experienced the most significant decline in this rate, followed by 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 12 v. November 5

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

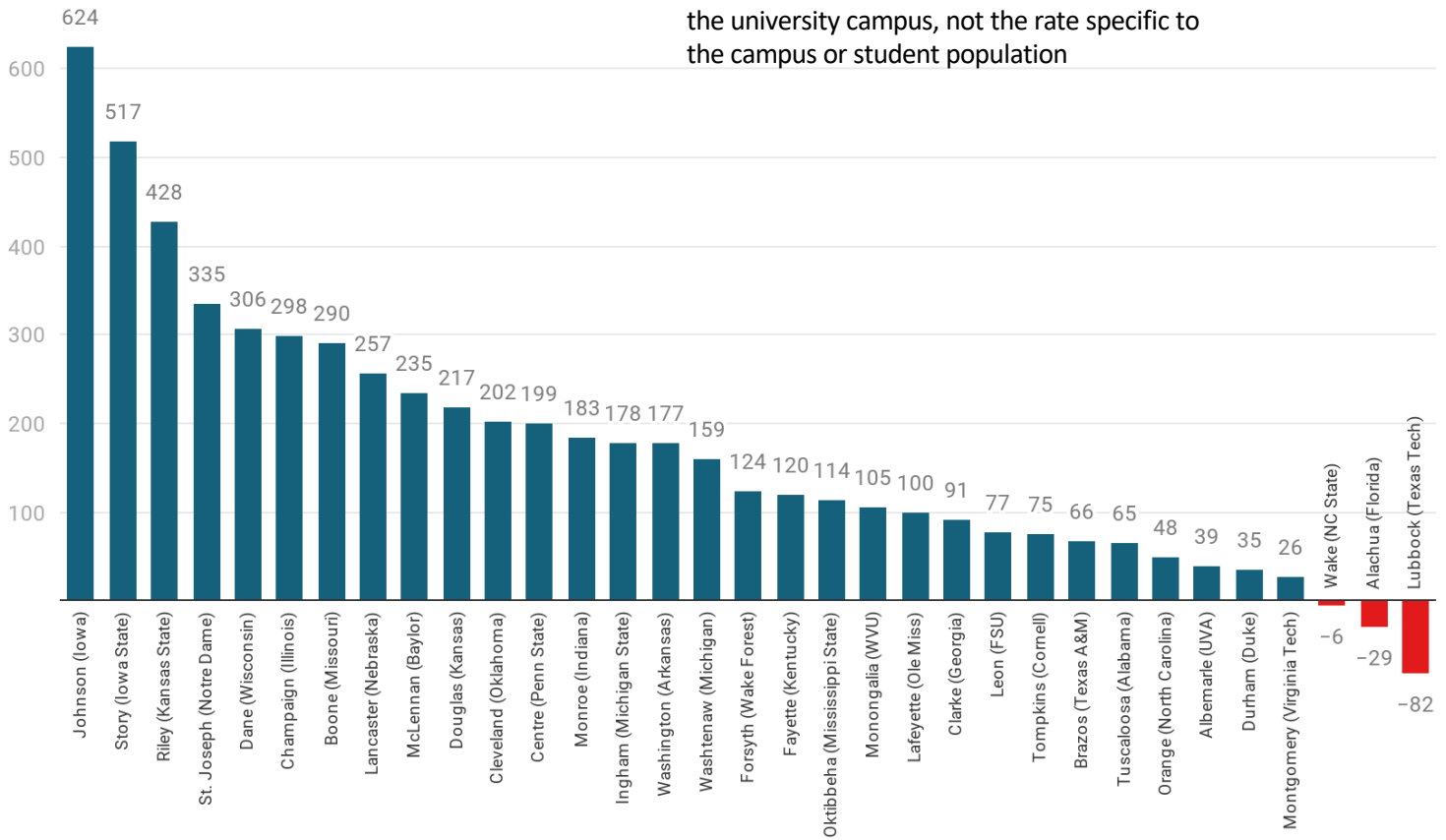
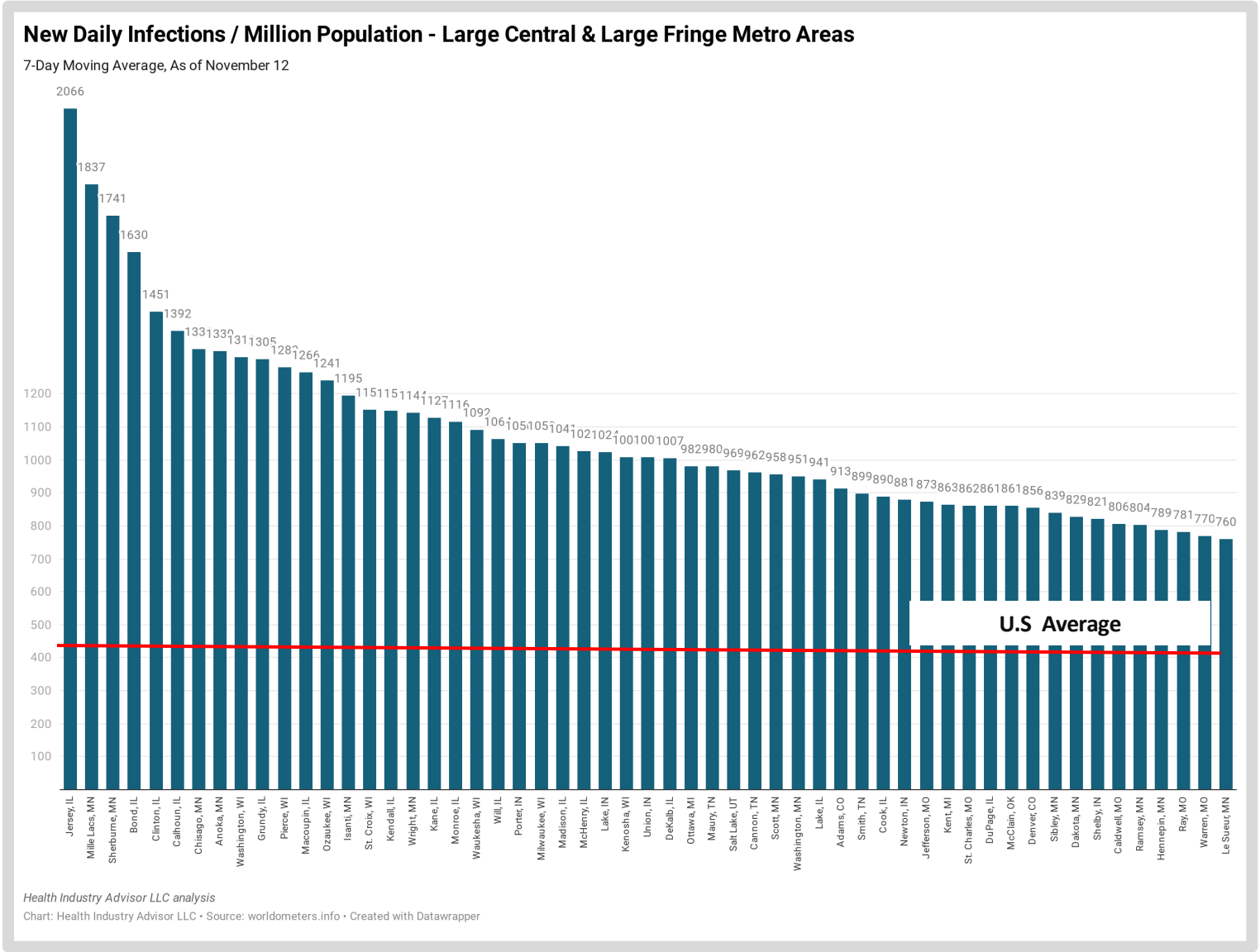


Chart: Health Industry Advisor LLC • Created with Datawrapper

Health Industry Advisor, llc

Fifty-five Large Central and large Fringe Metro Areas, experienced new daily infections per capita > 750 per million over the past seven days (forty-nine are at least 2x the national average)

Twenty-one with the highest rates are in just three states – Illinois, Minnesota and Wisconsin

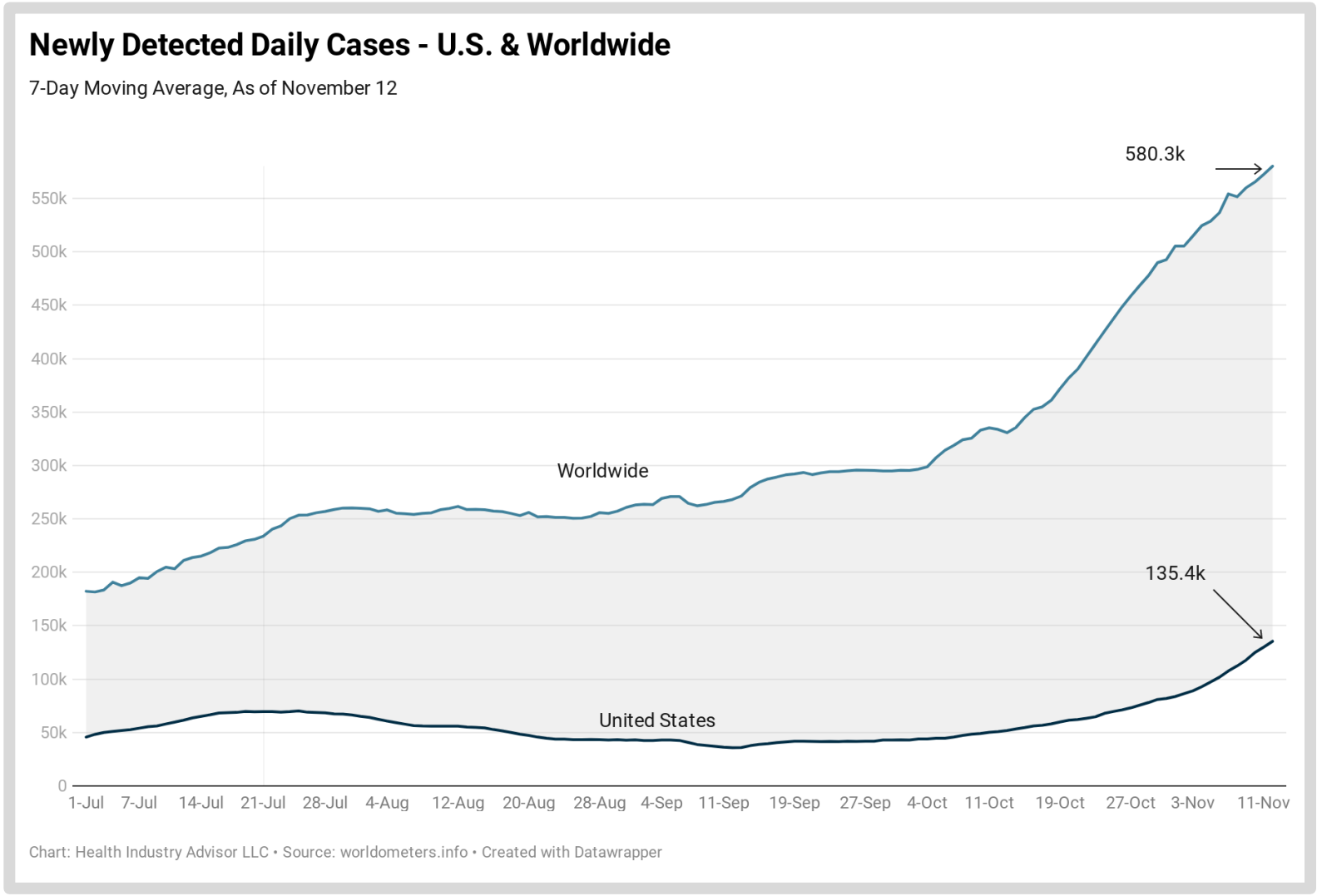


Health Industry Advisor, llc

Worldwide, we are experiencing ~580k new cases each day

The United States is averaging ~135k new cases each day

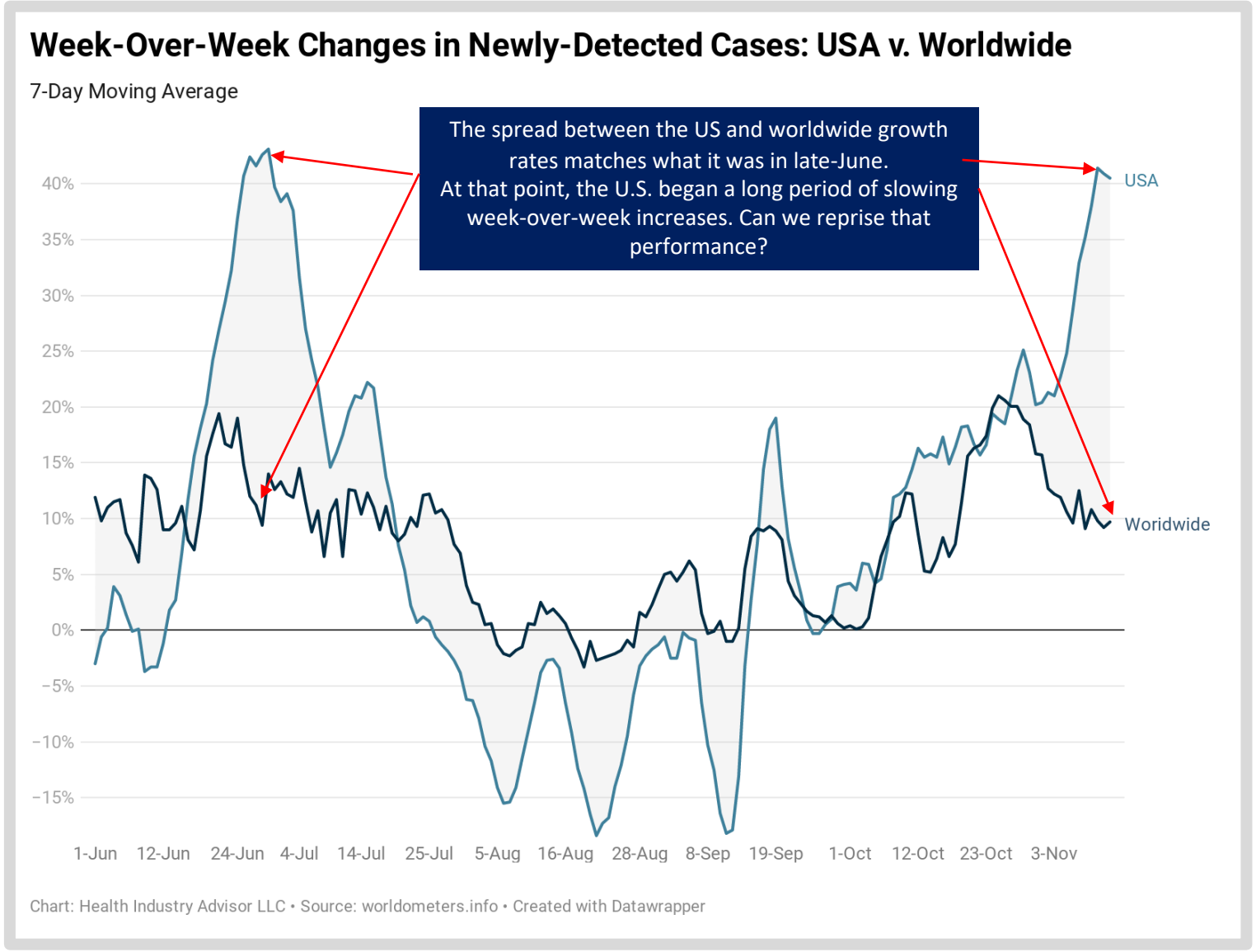
* - 7-day moving average basis



Health Industry Advisor, llc

Worldwide, the rate of growth slowed over the past two weeks

The U.S. is moving in the opposite direction, with the rate of change in new cases *increasing* throughout November (accelerating growth) – and approaching the week-over-week rate of increase experienced in late-June/early-July

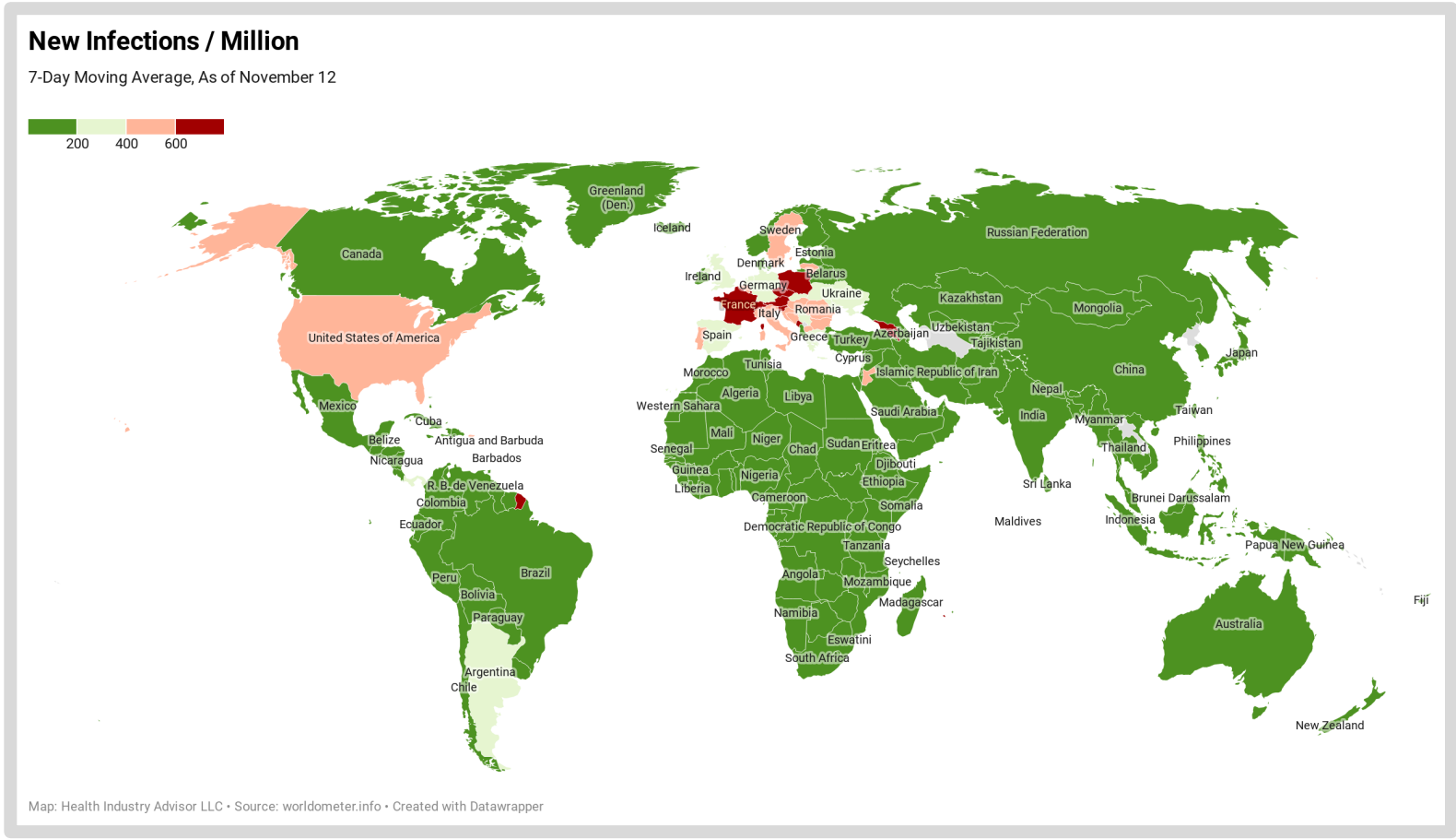


Health Industry Advisor, llc

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

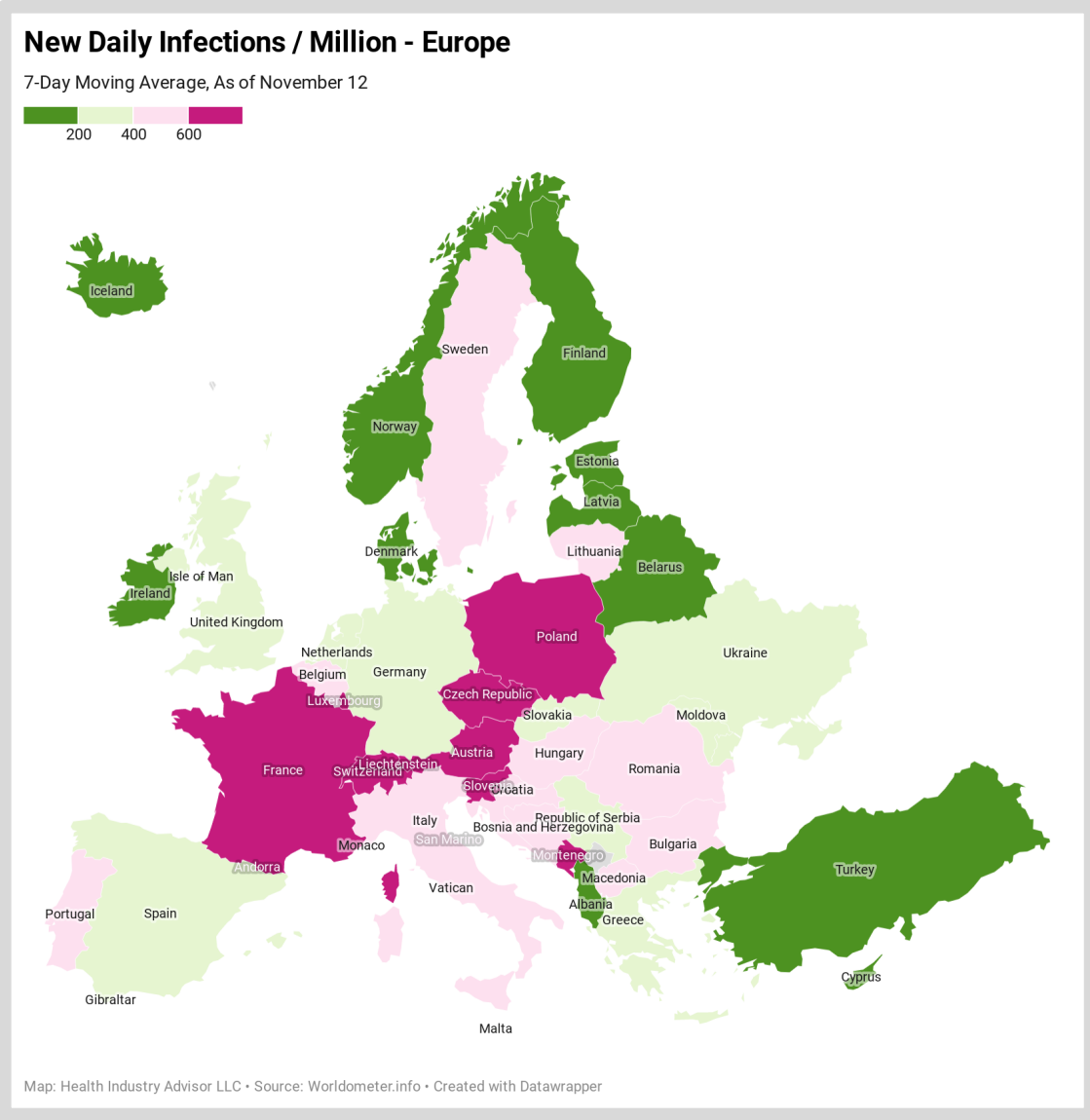


Note: Change in scale from prior reports, in order to better distinguish relative infection rates

Health Industry Advisor, llc

High rates of new infections in Austria, Croatia, Czechia, France, Montenegro, Poland and Switzerland

* - 7-day moving average basis



Note: Change in scale from prior reports, in order to better distinguish relative infection rates

Health Industry Advisor, llc

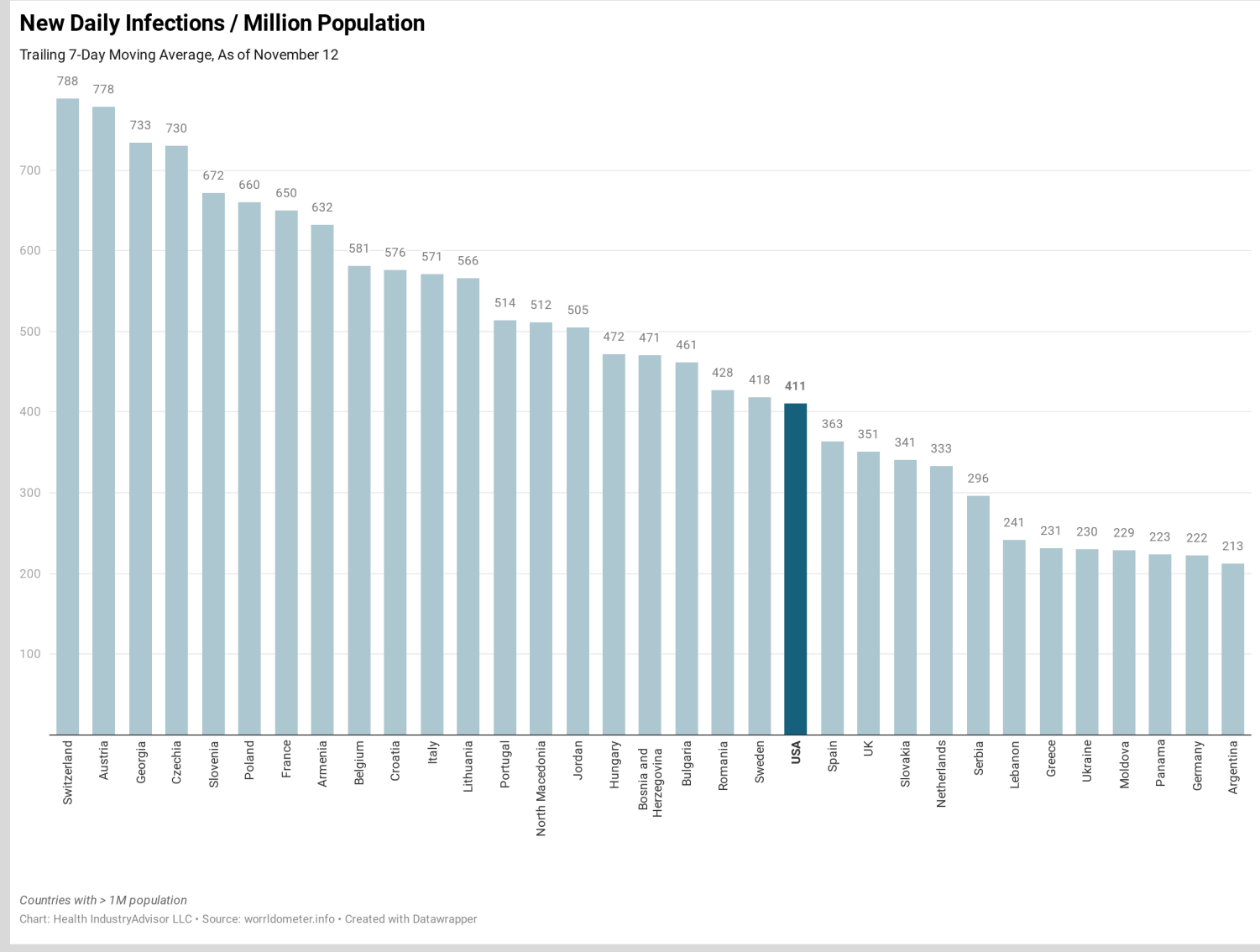
Among countries with > 1 million population, thirty-one countries currently have new daily infection rates/1M* > 200

In order, Switzerland, Austria, Georgia and Czechia have the highest rates (each >700)

Europe (and Eurasia) is home to the twenty-six of the twenty-seven countries with the highest rates

The United States is the lone non-European country, ranking twenty-one in infections per capita last week among these countries

* - 7-day moving average basis



Health Industry Advisor, llc

Belgium, Czechia, France, Israel, the Netherlands and Spain have seen infection rates decline from high rates experienced in October or early November

Several of these countries continue to have infection rates than that of the U.S. - yet, thy provide a guide for declining rates

* - Population >1 million
** - 7-day average

USA and Selected Countries With Recent High New Infection Rates

New Daily Infections / Million, 7-Day Moving Average, As of November 12

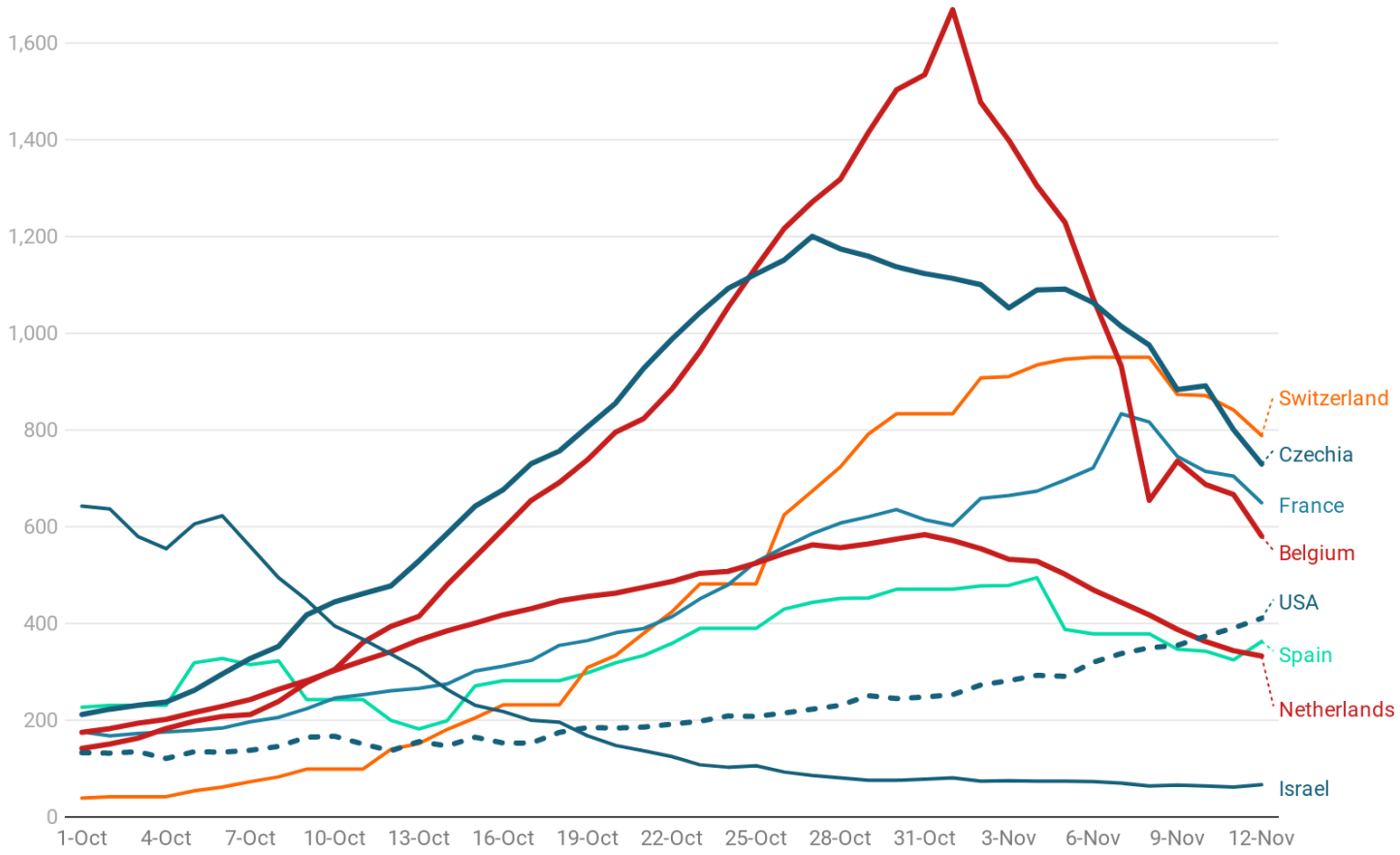
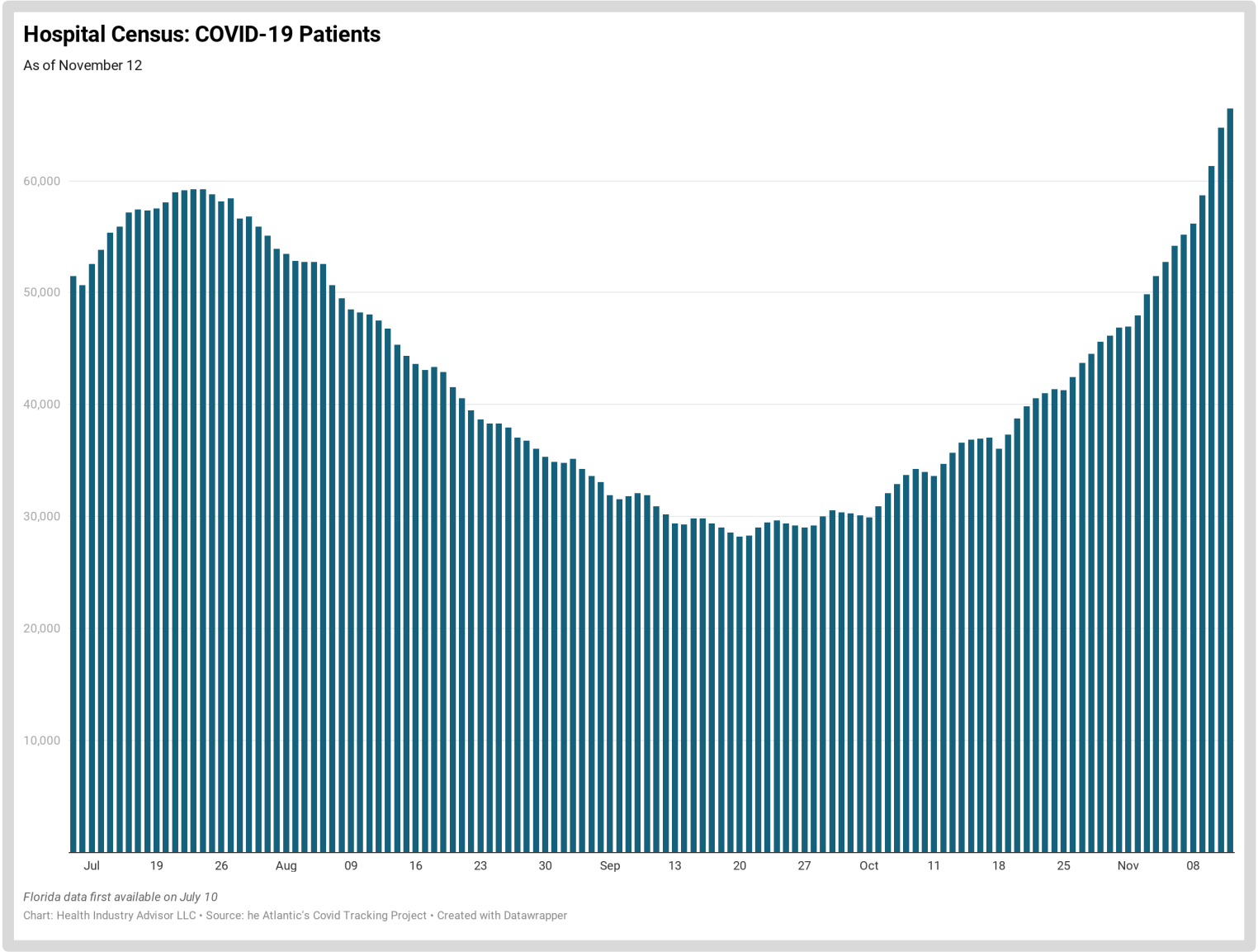


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

On a same-day, prior-week basis, inpatient Covid-19 census increased every day since September 23



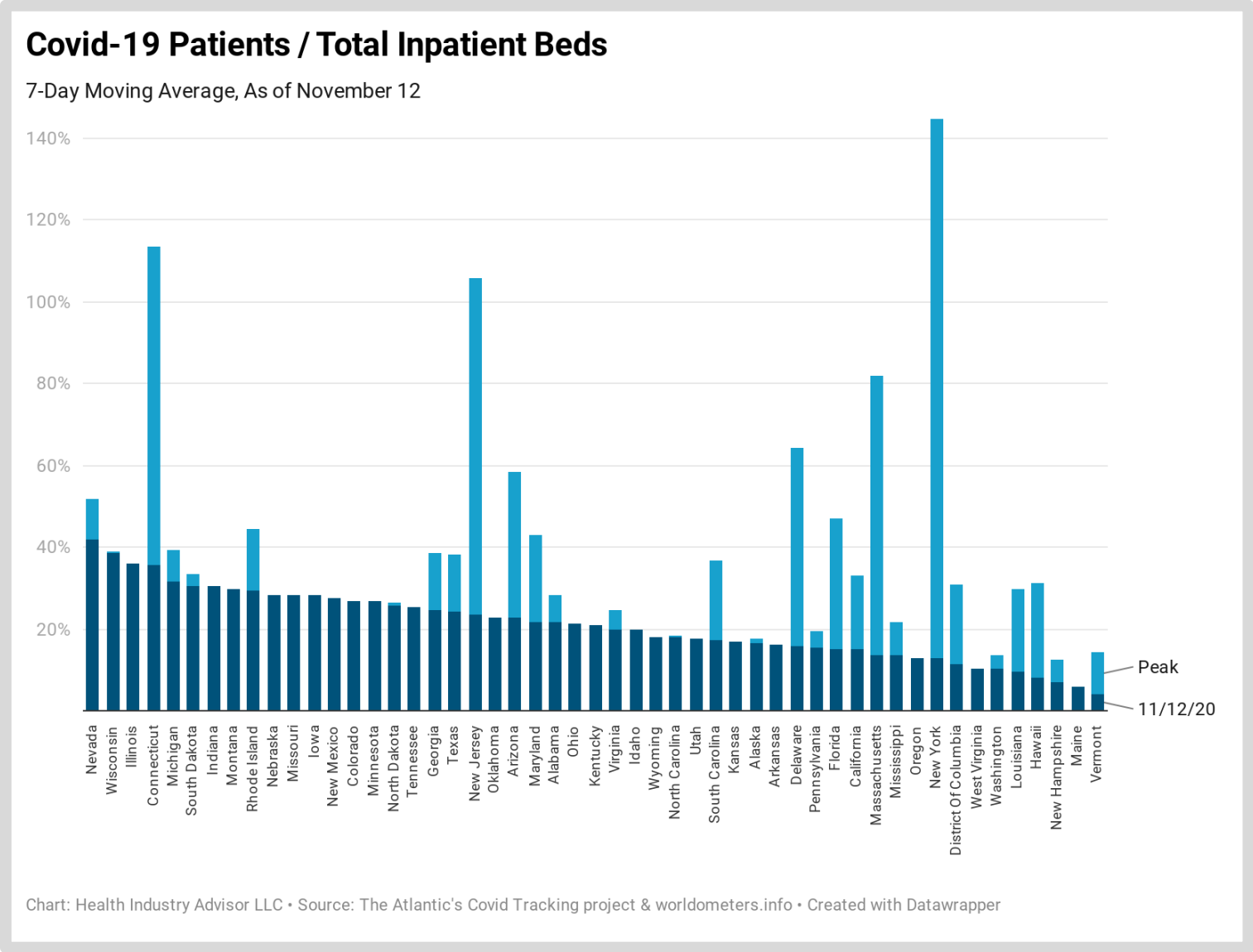
Health Industry Advisor, llc

Despite the recent rise in new cases, Covid-19 is not straining the U.S. healthcare system as it had in April and, to a lesser degree in July:

In April, Covid-19 patients exceeded the normal inpatient bed capacity in three states: Connecticut, New Jersey and New York, and peaked at 82% of bed capacity in Massachusetts

In July, Covid-19 patients occupied >1/2 the available beds in Arizona and Nevada

As of yesterday, in only four states are Covid-19 patients occupying >33% of available inpatient beds – Connecticut, Nevada, Illinois and Wisconsin

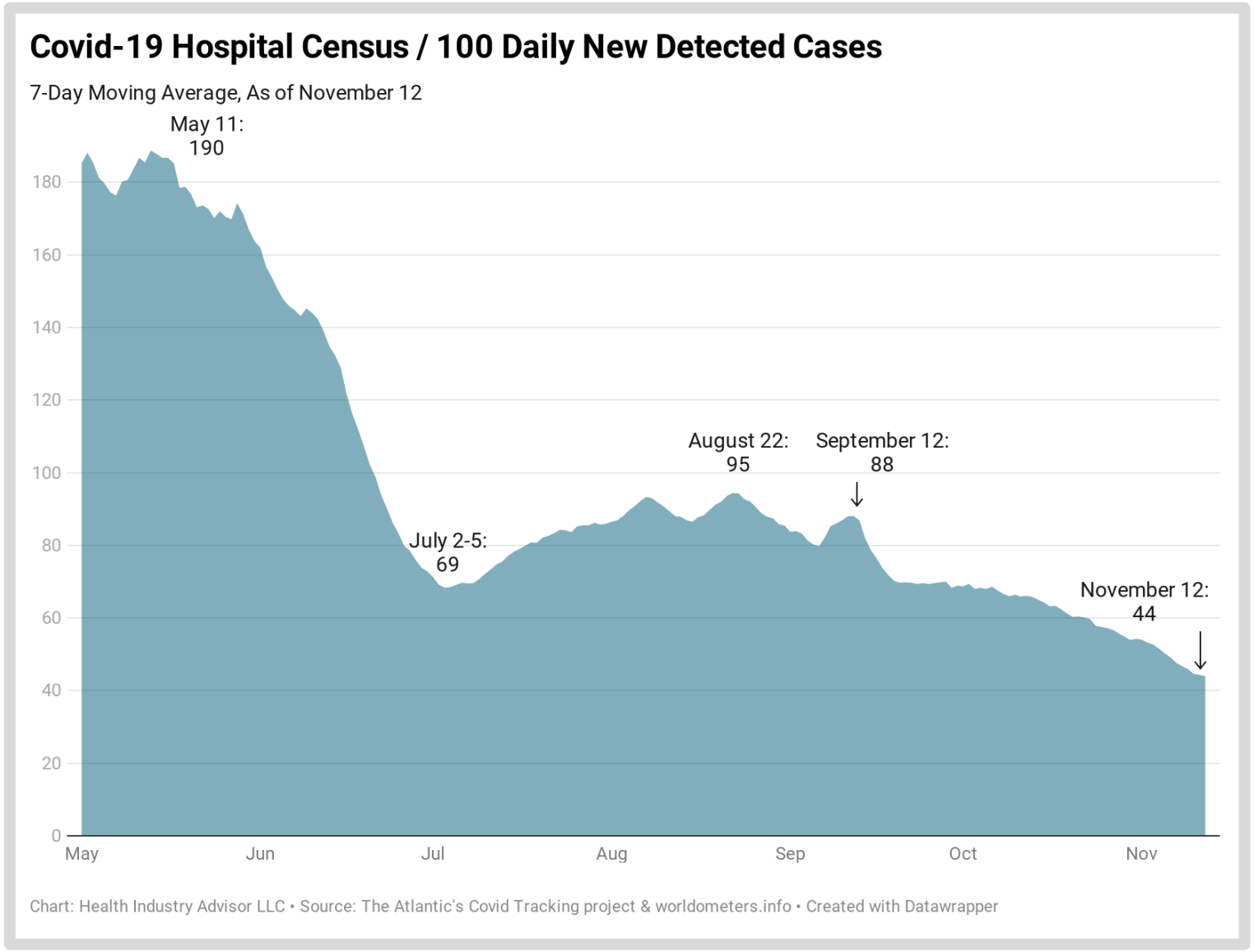


Health Industry Advisor, llc

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 eleven consecutive days and thirty-one of the past thirty-four days

This rate has been reduced by 1/2 since mid-September and by ¾ since mid-May



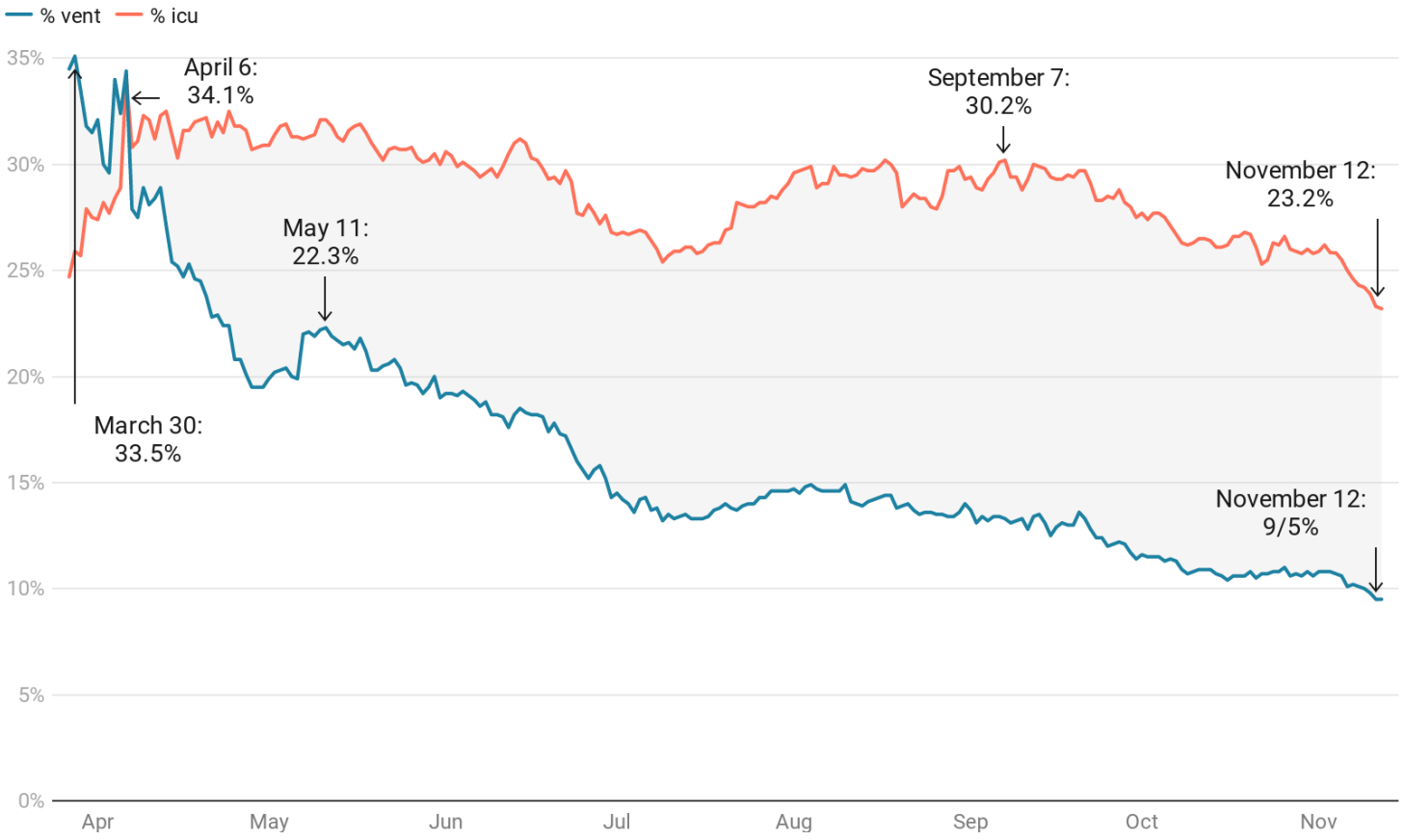
Health Industry Advisor, llc

The likelihood of a hospitalized Covid-19 patient would require ICU care has declined 23% since early-September and nearly 32% since early-April

The likelihood of a hospitalized Covid-19 patients would be on a ventilator has reduced by nearly 60% since mid-May and by >80% since March

Severity of Hospitalized Patients

% of patients on ventilators and in the ICU, As of November 12



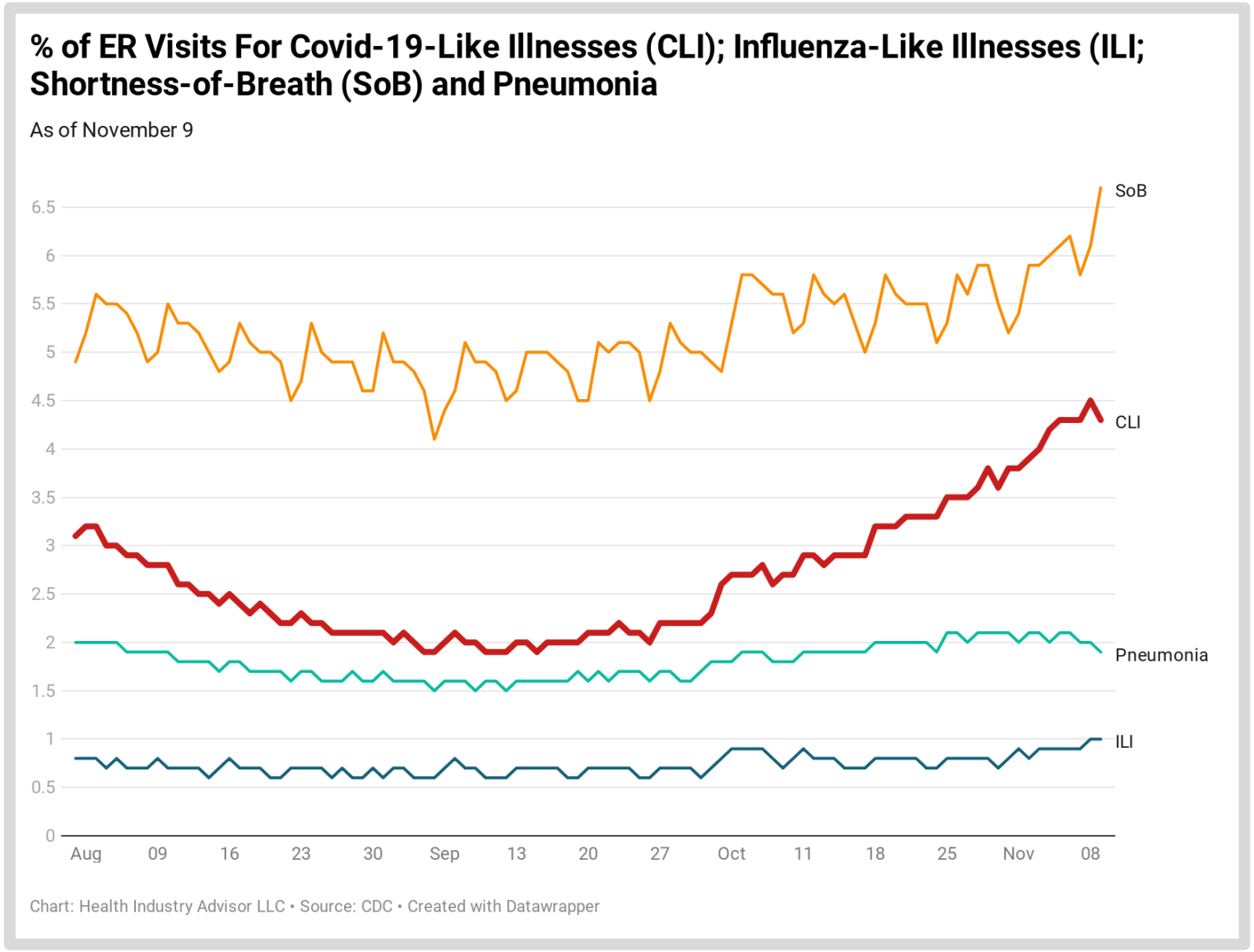
Health Industry Advisor LLC analysis

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

Health Industry Advisor, llc

The % of ER visits for COVID-19-like illnesses (CLI) has increased for the past six weeks

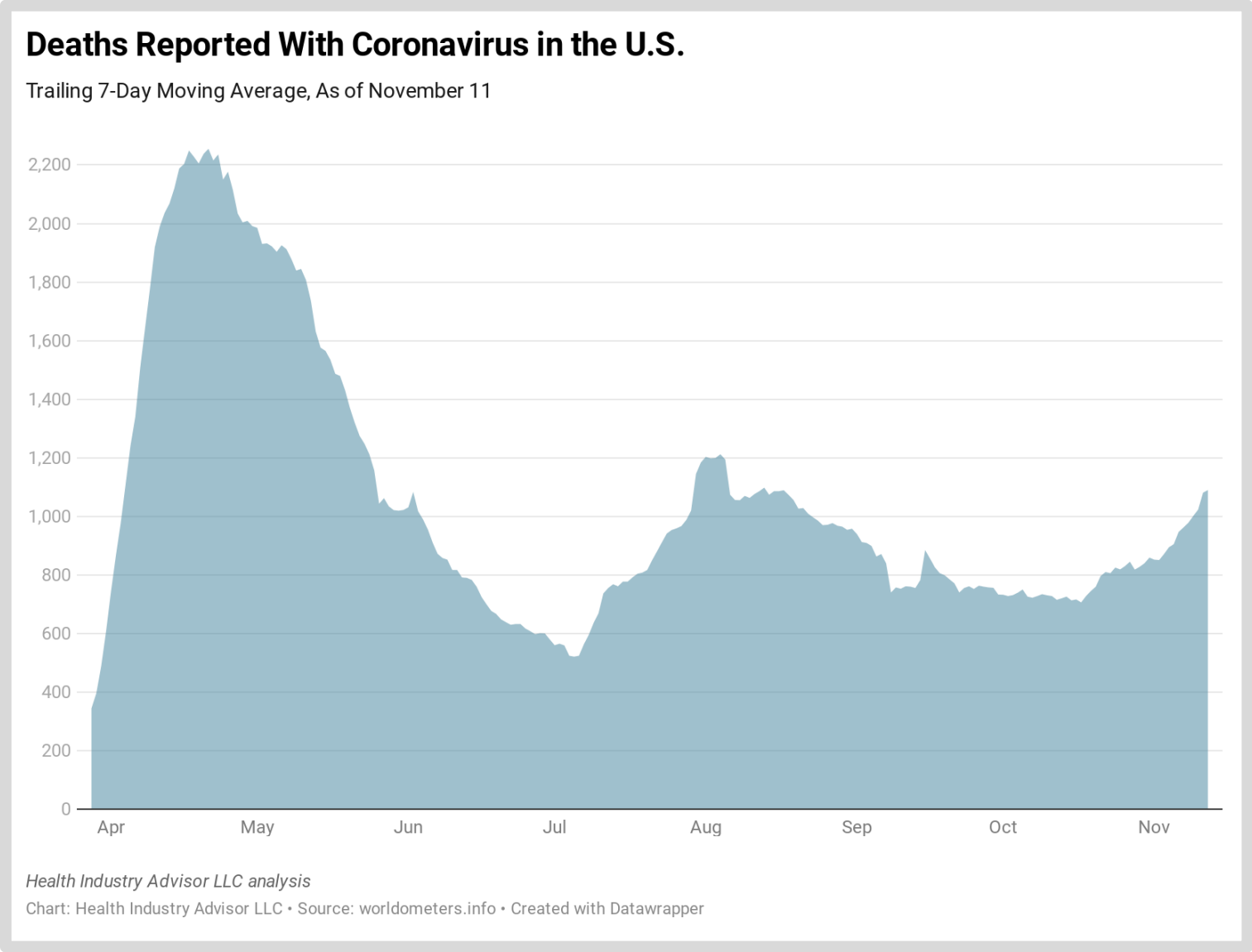
This rate remains lower, however, than it was in in March/April, and the rate of influenza visits remains low



Health Industry Advisor, llc

The recent uptick in newly-detected cases is is resulting in increased deaths:

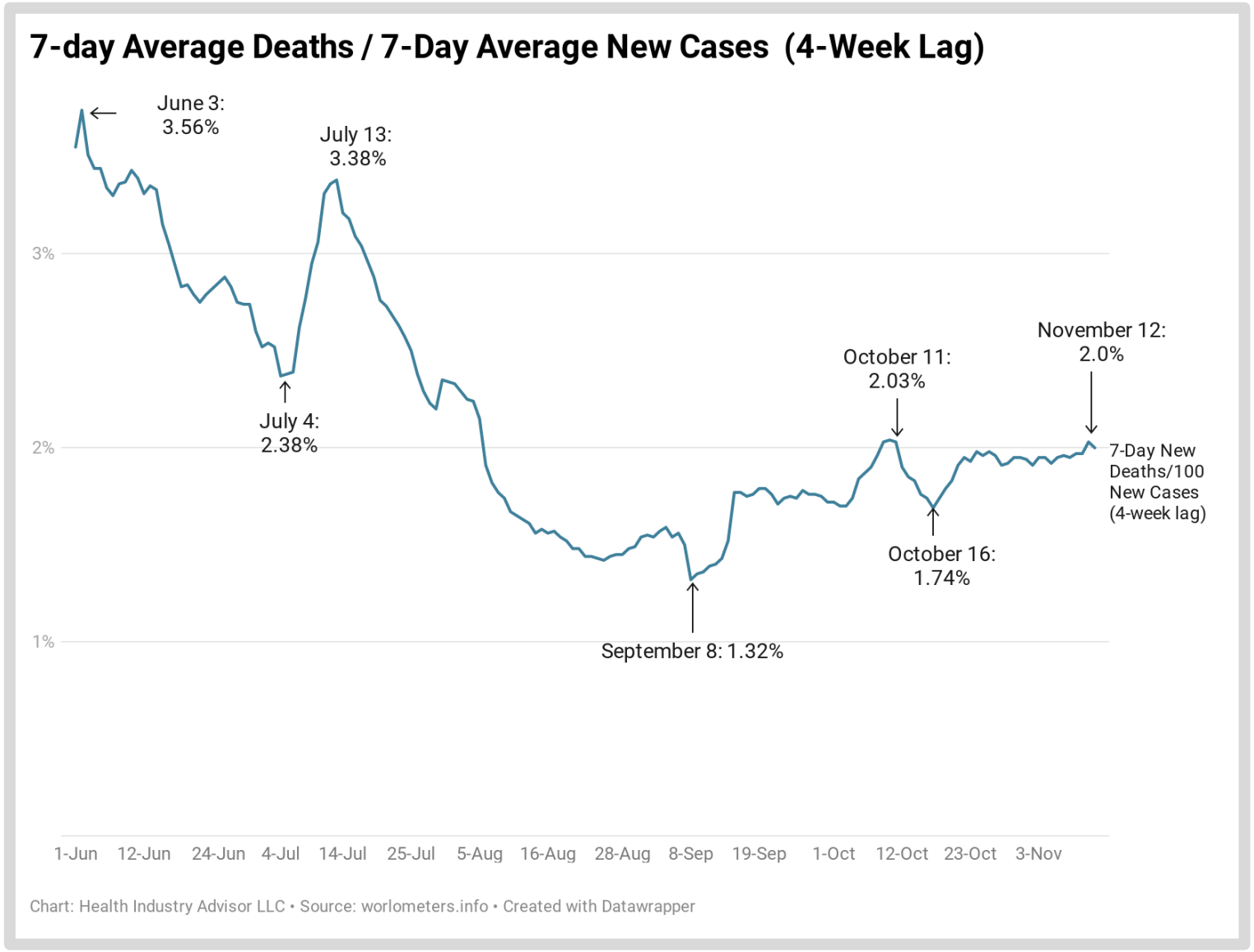
The 7-day average deaths per day has been increasing since mid-October



Health Industry Advisor, llc

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

This rate declined rapidly in July and August



Health Industry Advisor, llc

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