



Health
Industry
Adv



Issue # 235
Saturday, December 12, 2020

COVID-19 Report

Highlights

- **Test volume in the U.S. increased for the eleventh time in the past twelve weeks. Testing is being conducted at 2x the rate it was in September**
- **The test-positive rate, however, also increased, this for the eighth time in the past nine weeks; The recent rate is higher than it has been since April**
- Newly-detected cases are higher than the previous two weeks - however, these prior weeks were affected by reporting interruptions during the Thanksgiving weekend
 - Detected cases reported Thanksgiving week were lower than the previous week, likely due to delays in state reporting
 - These reporting delays appeared to continue through at least the following Sunday
 - Youyang Gu's model of estimating actual infections suggest that these infections increased significantly Thanksgiving week, rather than declining as was reported with detected cases
- **California seems to be driving the increases in newly-detected cases over at least the past two weeks, with an "assist" from Texas**
 - California by itself accounted for 210k of the 1.5M new cases reported last week; Texas added nearly 100k
- The prior week, California and Texas combined to account for 210k of the 1.3M reported new cases
- **The magnitude of the infected cases in the U.S. is significant: according to Gu's estimates, more than 3/4 of all infections have gone undetected as of November 27**
- Covid-19 hospital occupancy continues to strain the U.S. healthcare system
 - **As of last week, Covid-19 patients occupied 33% of all inpatient beds**
 - **This occupancy rate has increased each week since mid-September, and has more than doubled in just five weeks**
 - **Covid-19 ICU and ventilator days have also more than doubled in the past five weeks**
 - Partially offsetting this strain, the rates of each of the following are at relatively-low levels:
 - Covid-19 inpatient days-to-new cases
 - % of Covid-19 inpatients on ventilators
 - % of Covid-19 inpatients in the ICU
- **Deaths with coronavirus increased significantly each of the past two weeks**

There were 4.4 million newly detected cases worldwide last week

New cases were up from the prior week, following four weeks of relative stability

Weekly New Detected Cases - Worldwide

For the 7 days ending on date shown

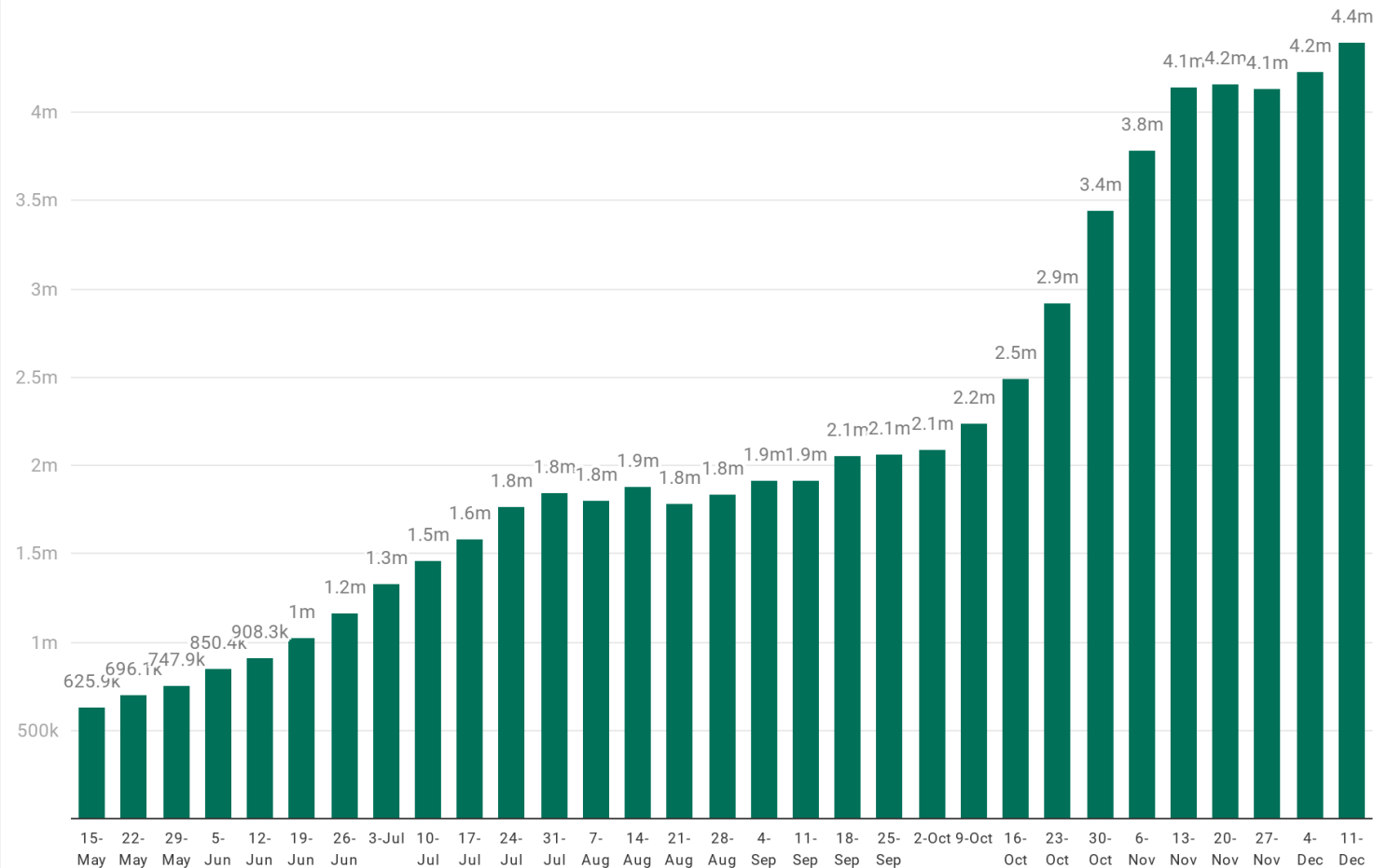


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

10.8 million tests were conducted in the U.S. in the past seven days

Testing has doubled in the since mid-September

Test-positive rate increased again last week – after declining during Thanksgiving week

The test-positive rate is as high as it has been since April

Weekly Tests - United States

For the 7 days ending on date shown

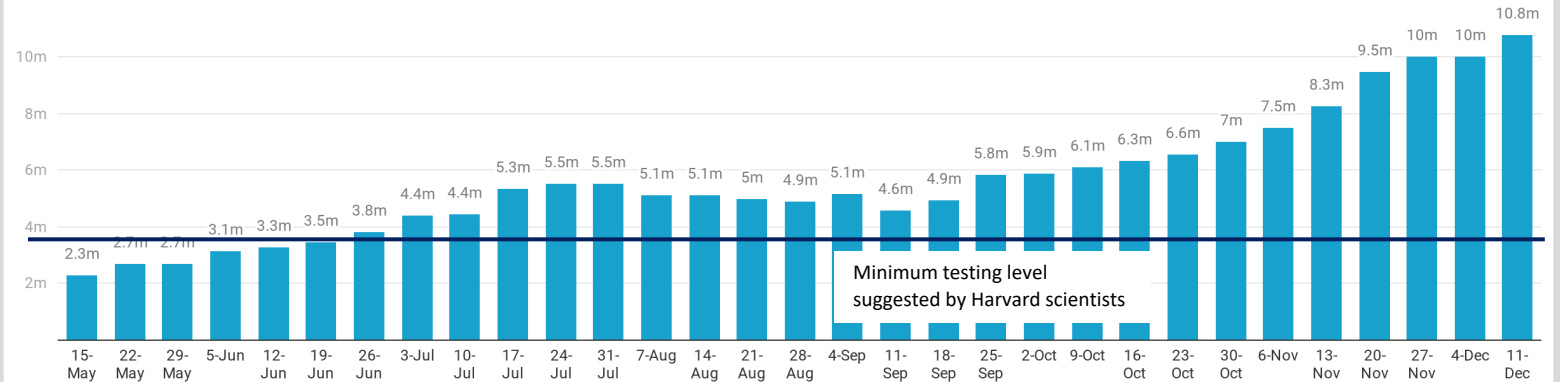


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

Weekly Test-Positive% - United States

For the 7 days ending on date shown

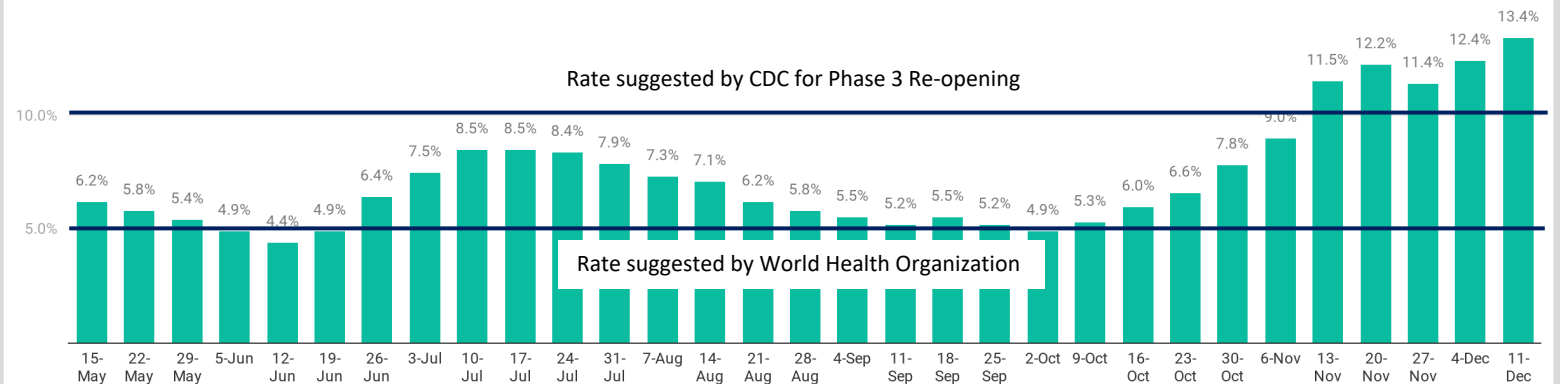


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking project • Created with Datawrapper

The ratio of tests performed to new cases detected declined last week - the tenth time in the last eleventh weeks

The higher this ratio, the more adequate testing is at identifying spread; a low measure suggests that testing isn't keeping pace

Weekly Tests / Newly Detected Case - United States

For the 7 days ending on date shown

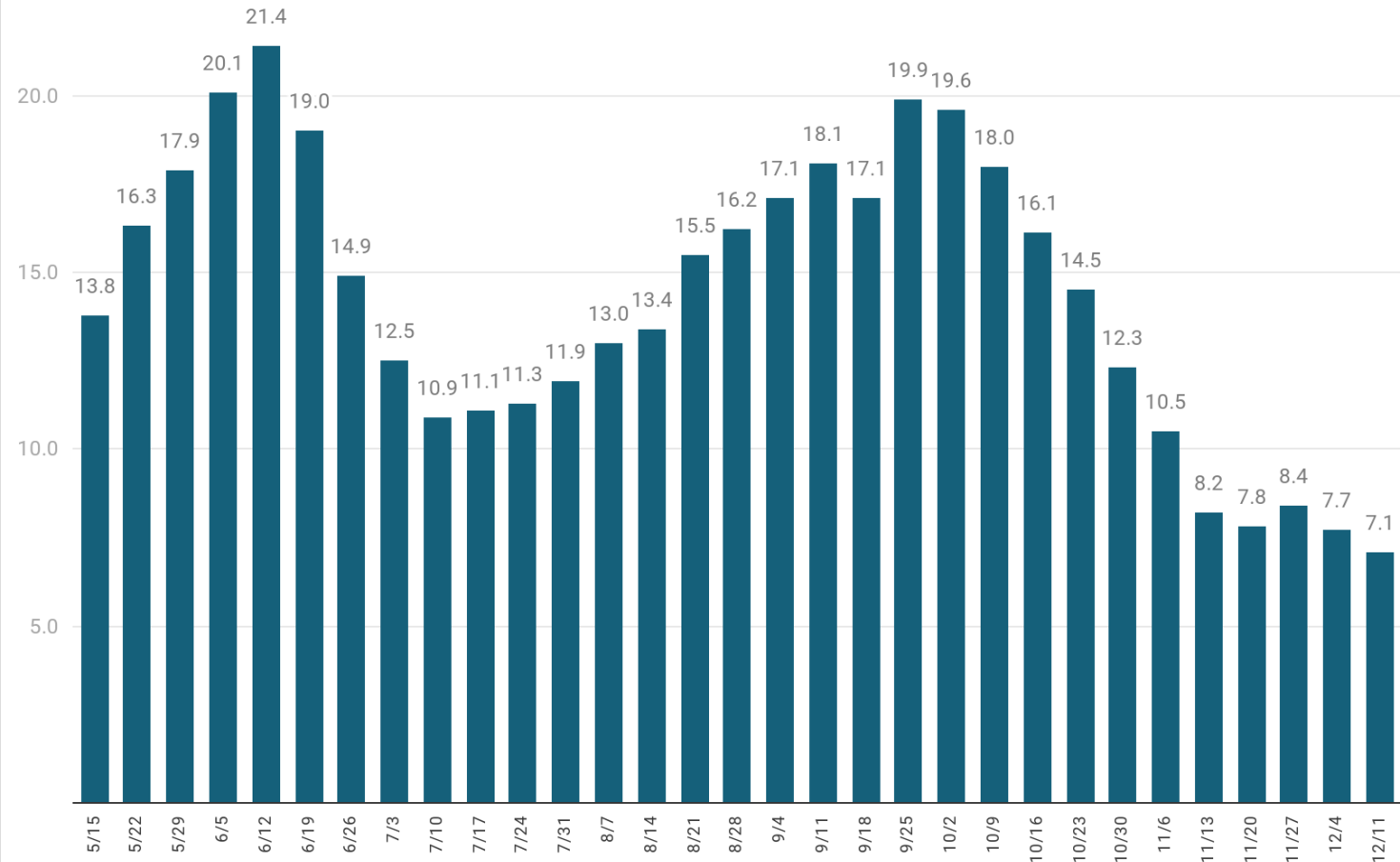


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project & worldometers.info • Created with Datawrapper

Thanksgiving reporting-interruption impact?

Newly detected cases increased again last week – the twelfth time in the past thirteen weeks – Thanksgiving week being the only exception

1.5M new cases were detected in the past seven days

Weekly New Detected Cases - United States

For the 7 days ending on date shown

Reporting interruptions delayed reporting of cases from 11/26-29 – thus, impacting weeks ending 11/27 & 12/4

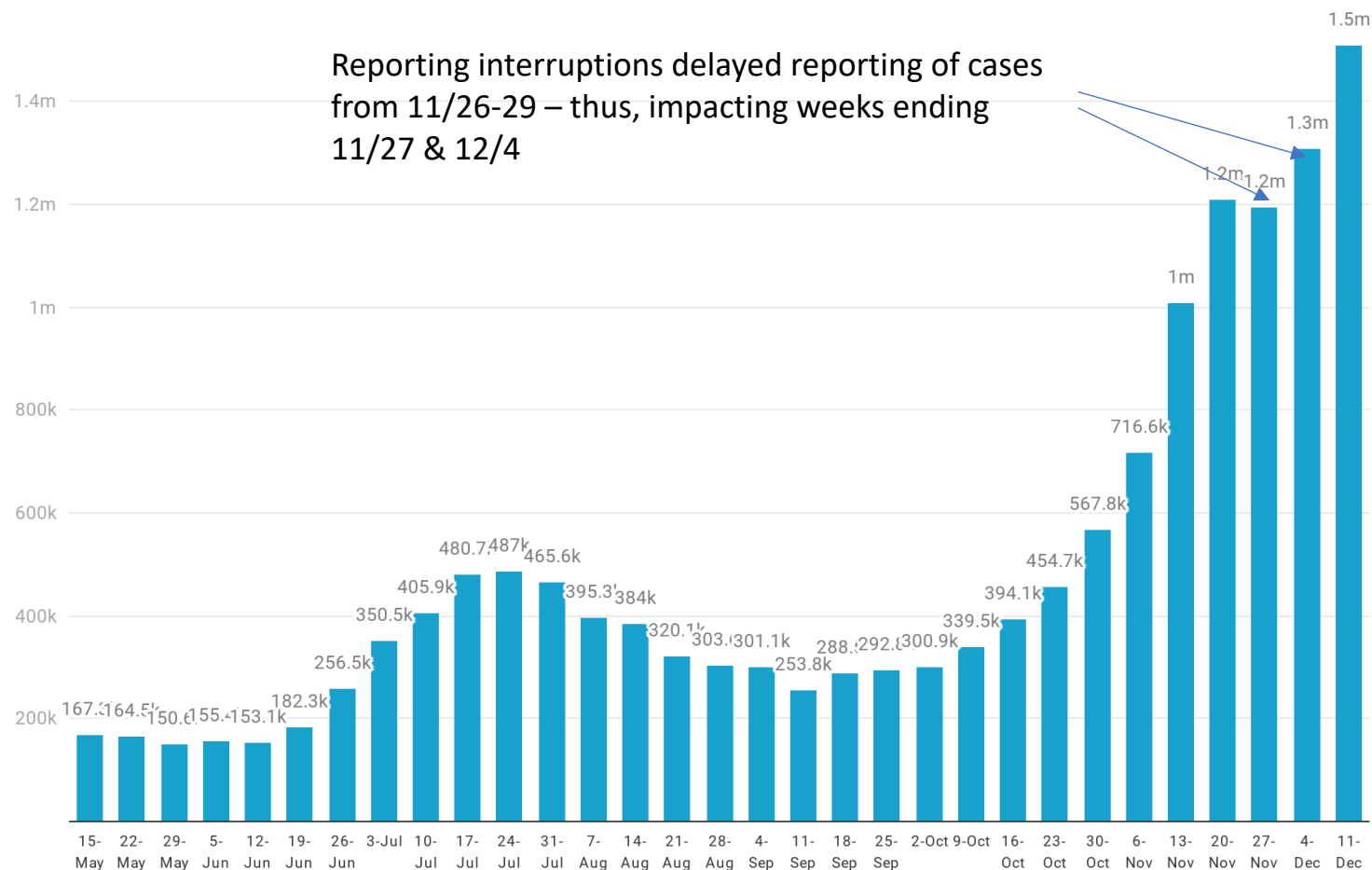


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

For the second consecutive week, California and Texas recorded the highest number of newly detected cases over the past seven days

California alone accounted for 210k of the 1.5M new cases in the U.S. over the past seven days

New Weekly Detected Cases - By State

December 5-11

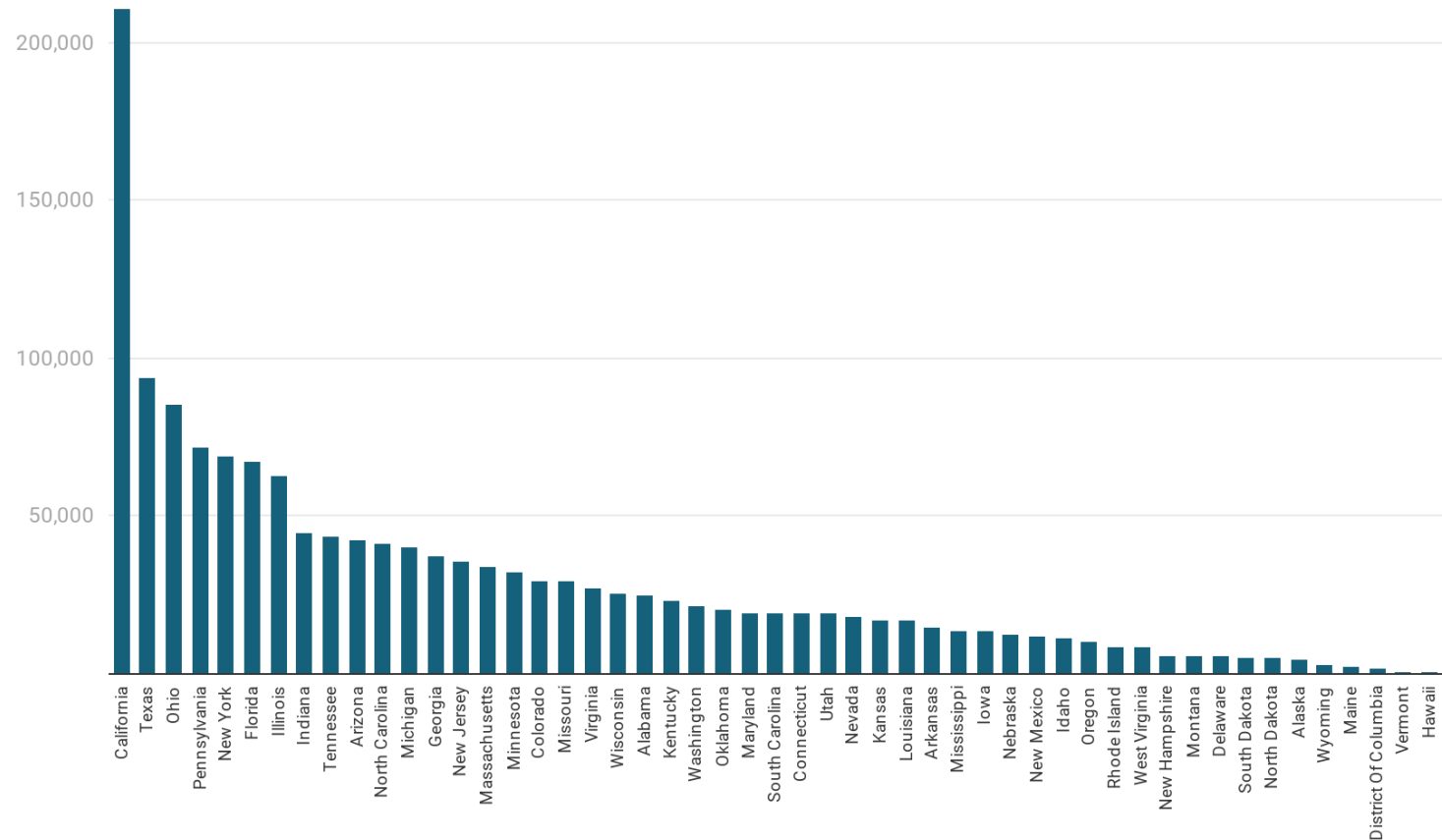


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

For the second consecutive week, California experienced the largest increase in new cases relative to the prior week

California reported 85k more new cases in the past seven days than one week earlier

Week-Over-Week Change In Newly Detected Cases - By State

December 5-11 v. November 28-December 4

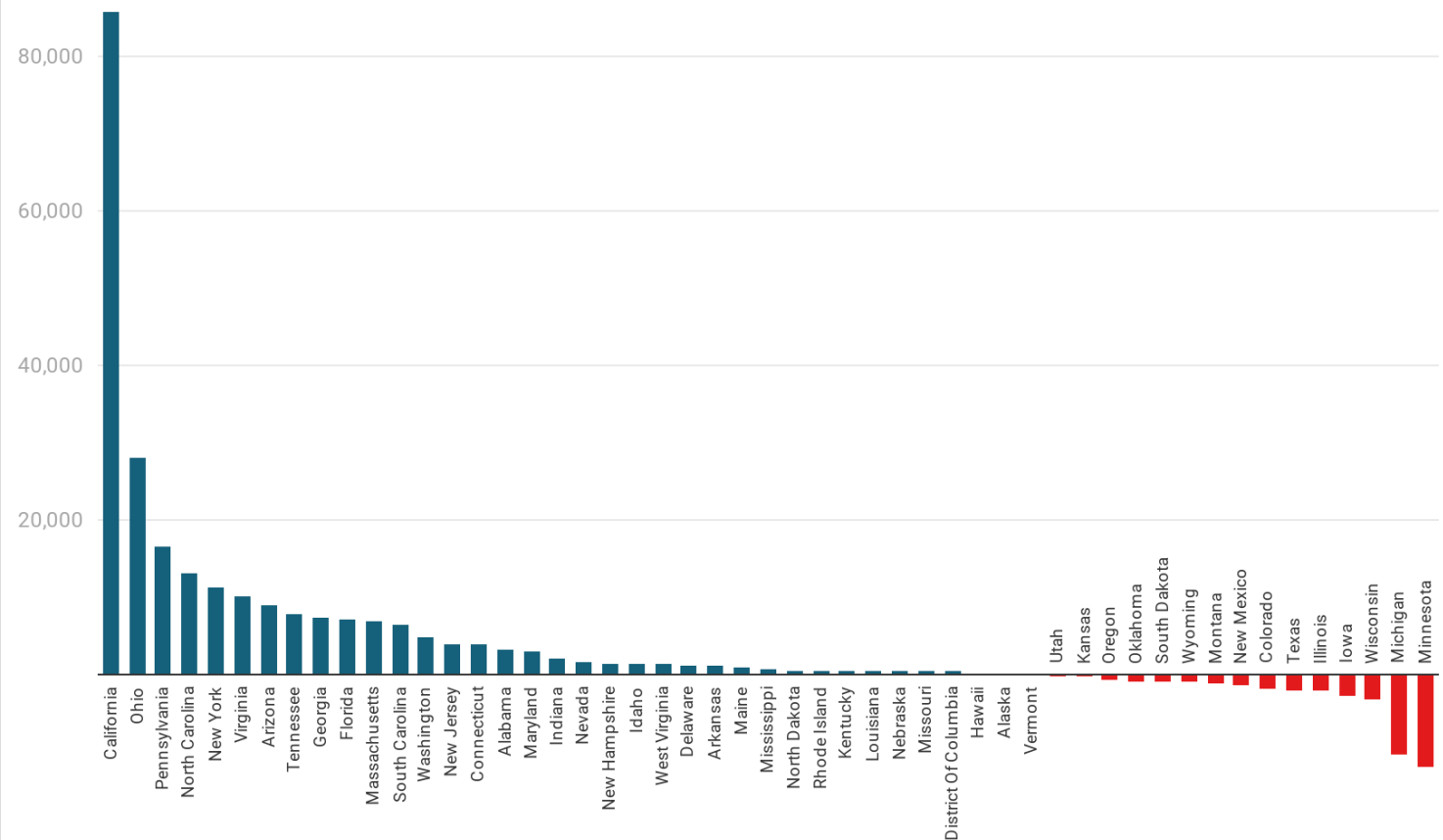


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Gu* estimates there were 4.2M new infections (detected + undetected) during the Thanksgiving week

This estimate differs from the decline in detected cases that week (detected cases were likely impacted by reporting interruptions)

Based on Youyang Gu's Covid Projection Model
Last update: December 11

Weekly New Estimated Infections - United States

For the 7 days ending on date shown

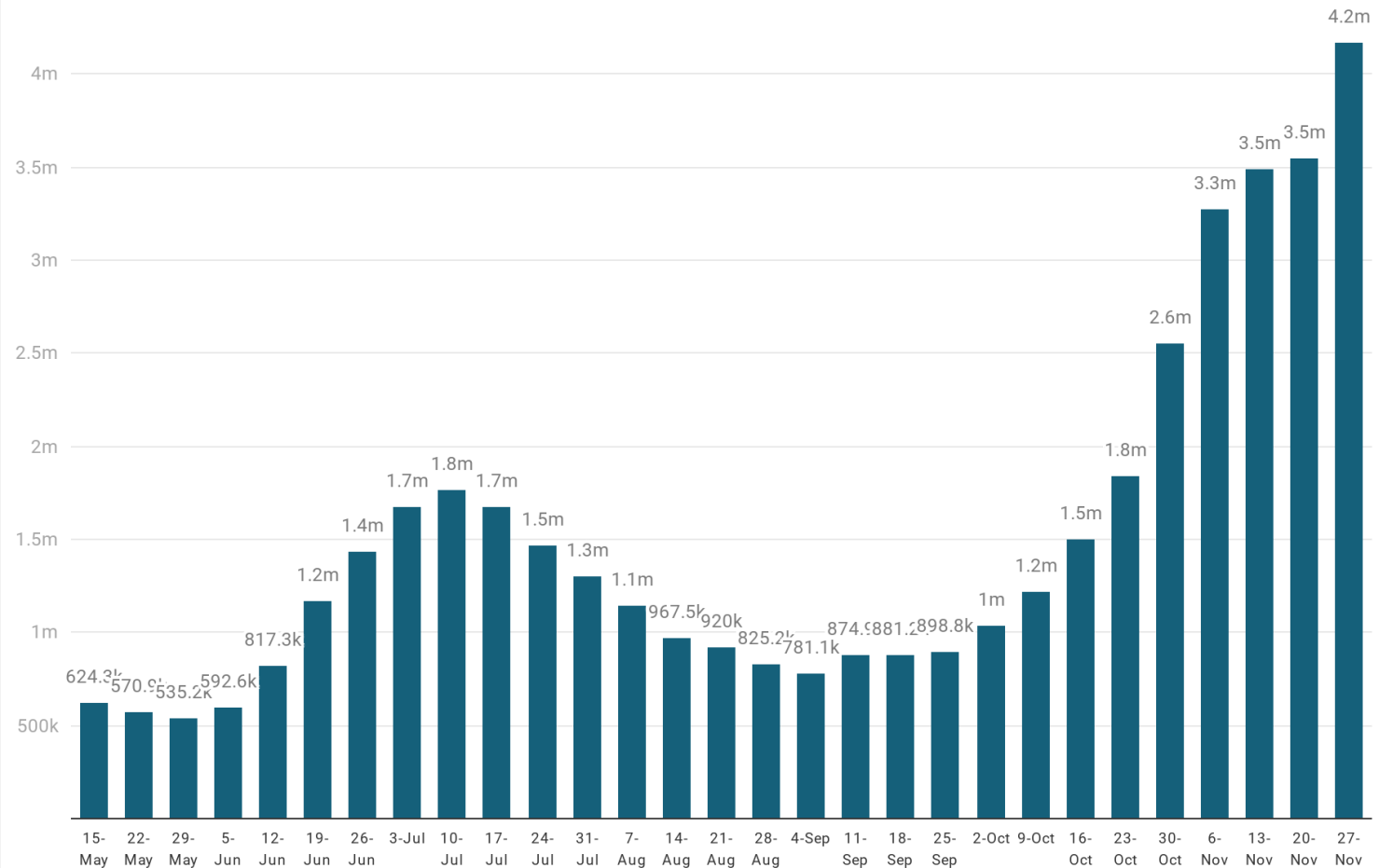


Chart: Health Industry Advisor LLC • Source: <https://covid19-projections.com> • Created with Datawrapper

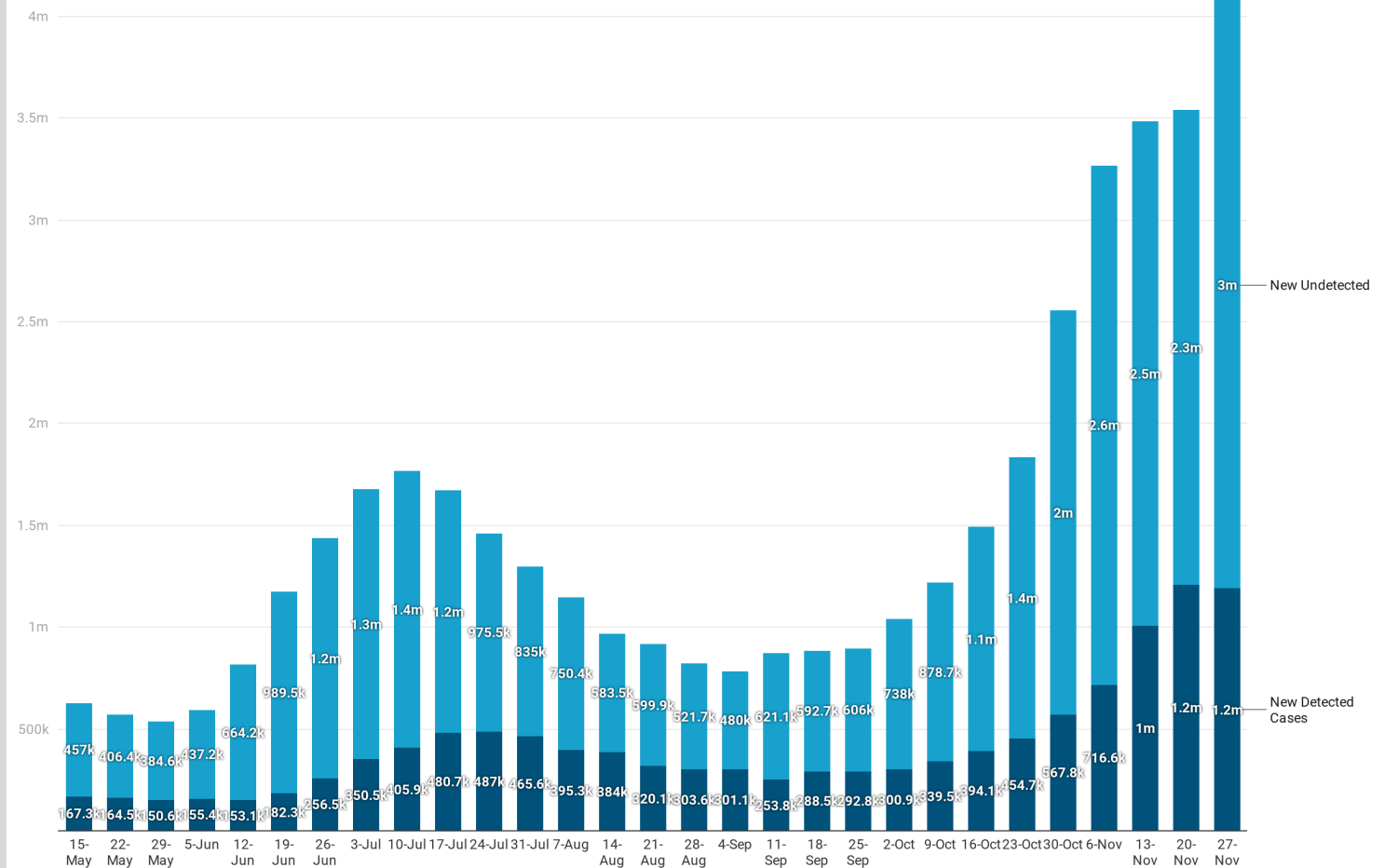
Undetected cases are significantly greater than cases detected via testing

Note: this graphic uses Youyang Gu's estimates of true infections

Gu estimates 3M new undetected cases during Thanksgiving week – up sharply from earlier weeks, and, in contrast to the slight decline in detected cases that week

Weekly New Detected and Estimated Undetected Cases - United States

For the 7 days ending on date shown



Undetected cases based on Youyang Gu's Covid-19 Projection Model

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

There are an estimated 6.5 million people in the U.S. currently recovering from detected Covid-19 infections

The estimated number of active, detected cases in the U.S. increased for the tenth consecutive week, following six weeks of relative stability

Current Active Cases - United States

For the 7 days ending on date shown

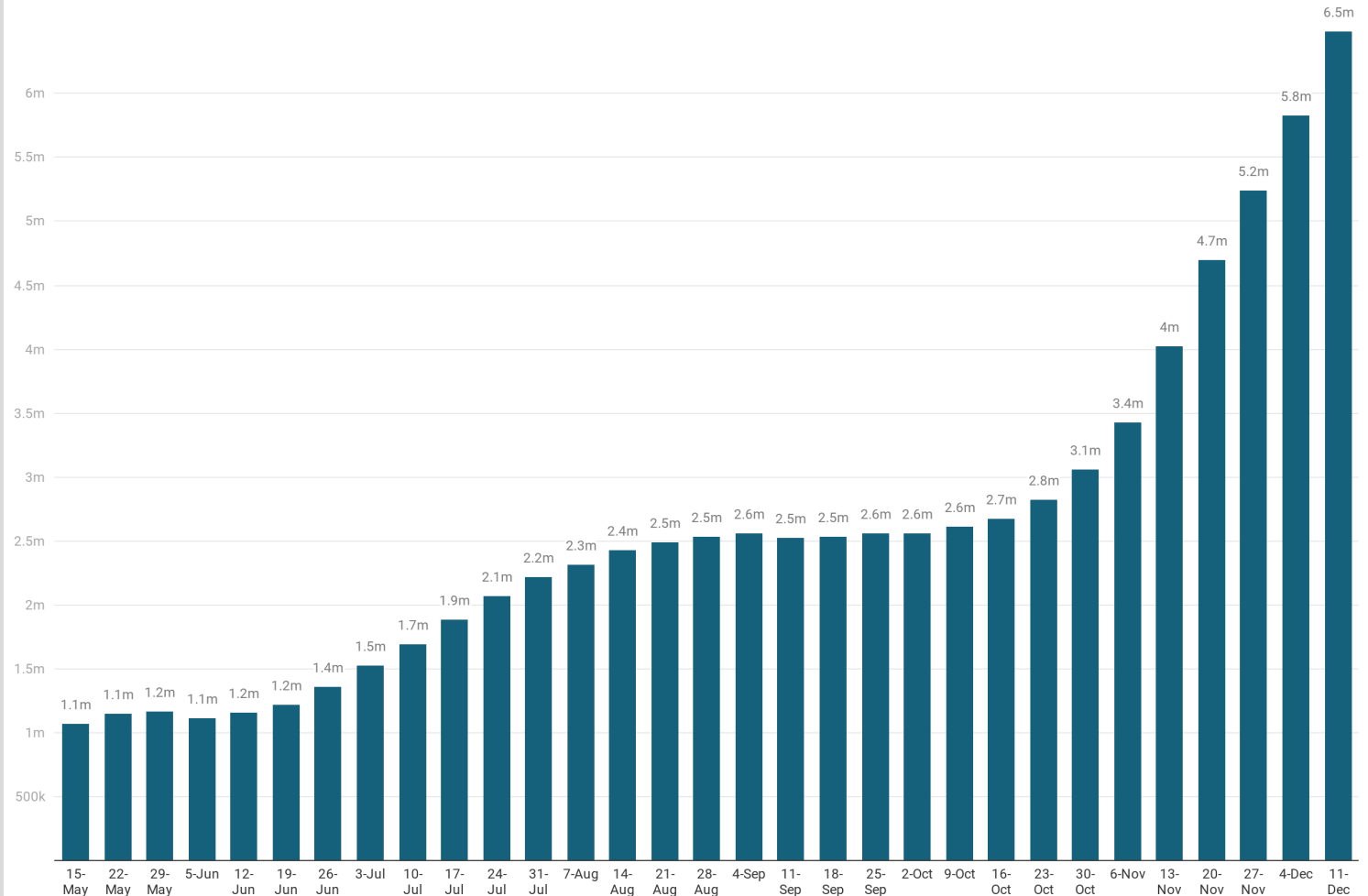


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

There were nearly 850k people that recovered from a detected SARS-CoV-2 infection in the U.S. last week

Recoveries from detected infections in the U.S. increased each of the past seven weeks

9.5M people in the U.S. have now recovered from a detected SARS-CoV-2 infection

Weekly Recoveries - United States

For the 7 days ending on date shown

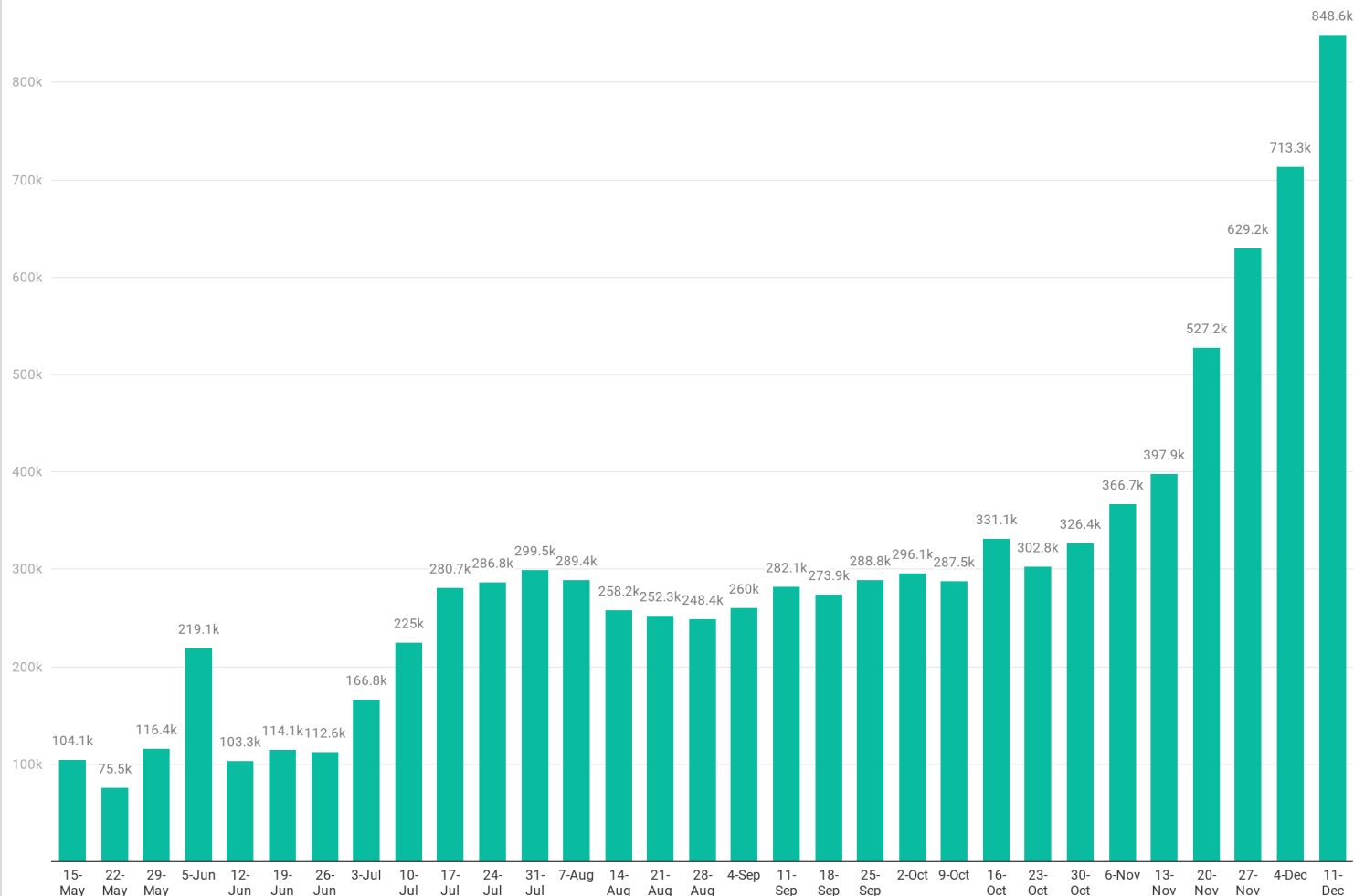


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Based on Gu's estimates, of undetected cases still significantly outnumber detected cases (~ 3-in-4 cases are undetected)

Over time, more-and-more persons infected by the SARS-CoV-2 virus have successfully recovered

The number of active cases, as a % of all detected cases, have recently increased

At this time, there are an estimated 31 people recovered from the virus as have died with it; there are estimated 3 people recovered for every two people currently infected

How has the status of cases changed over time?

As of the date shown

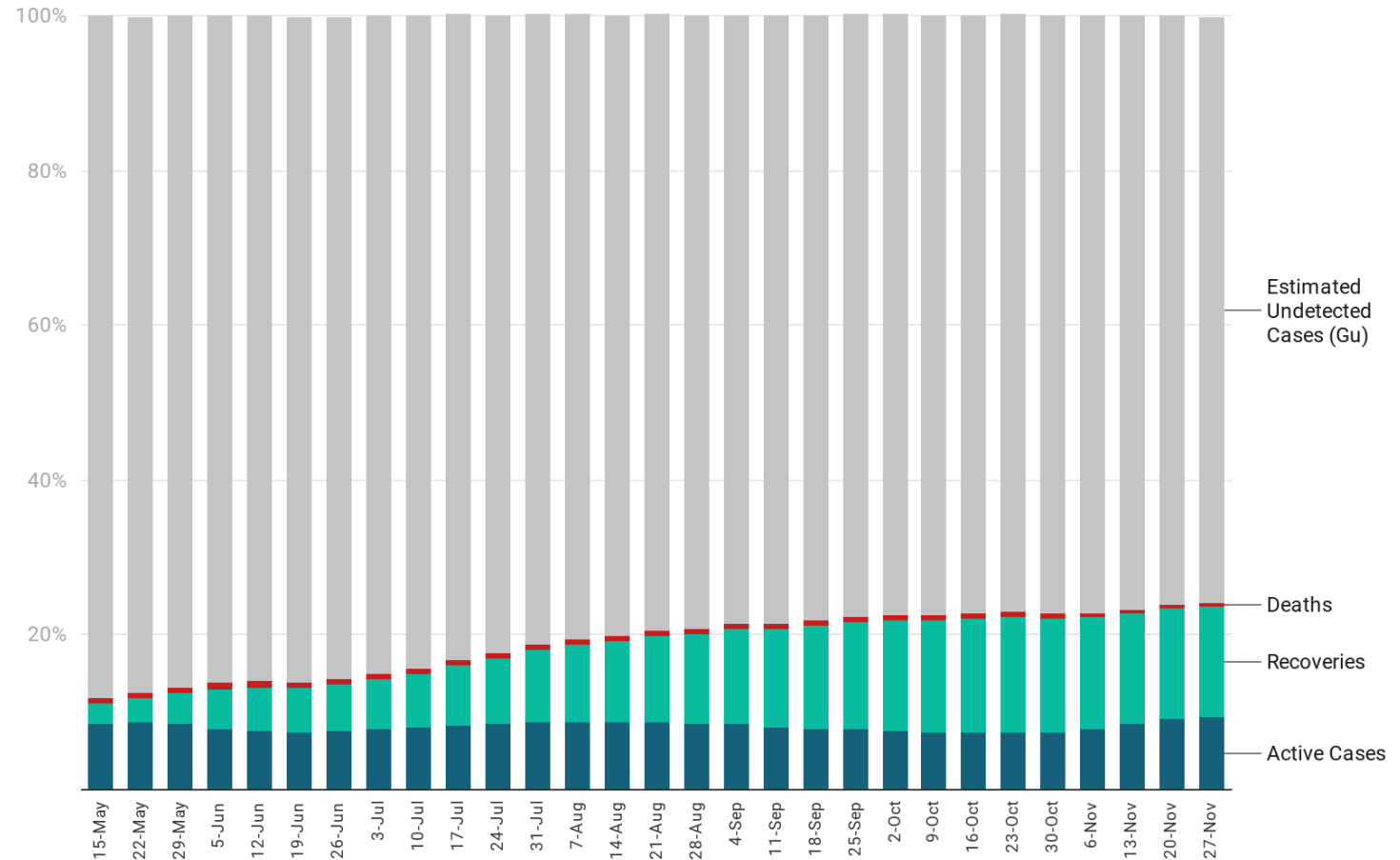


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

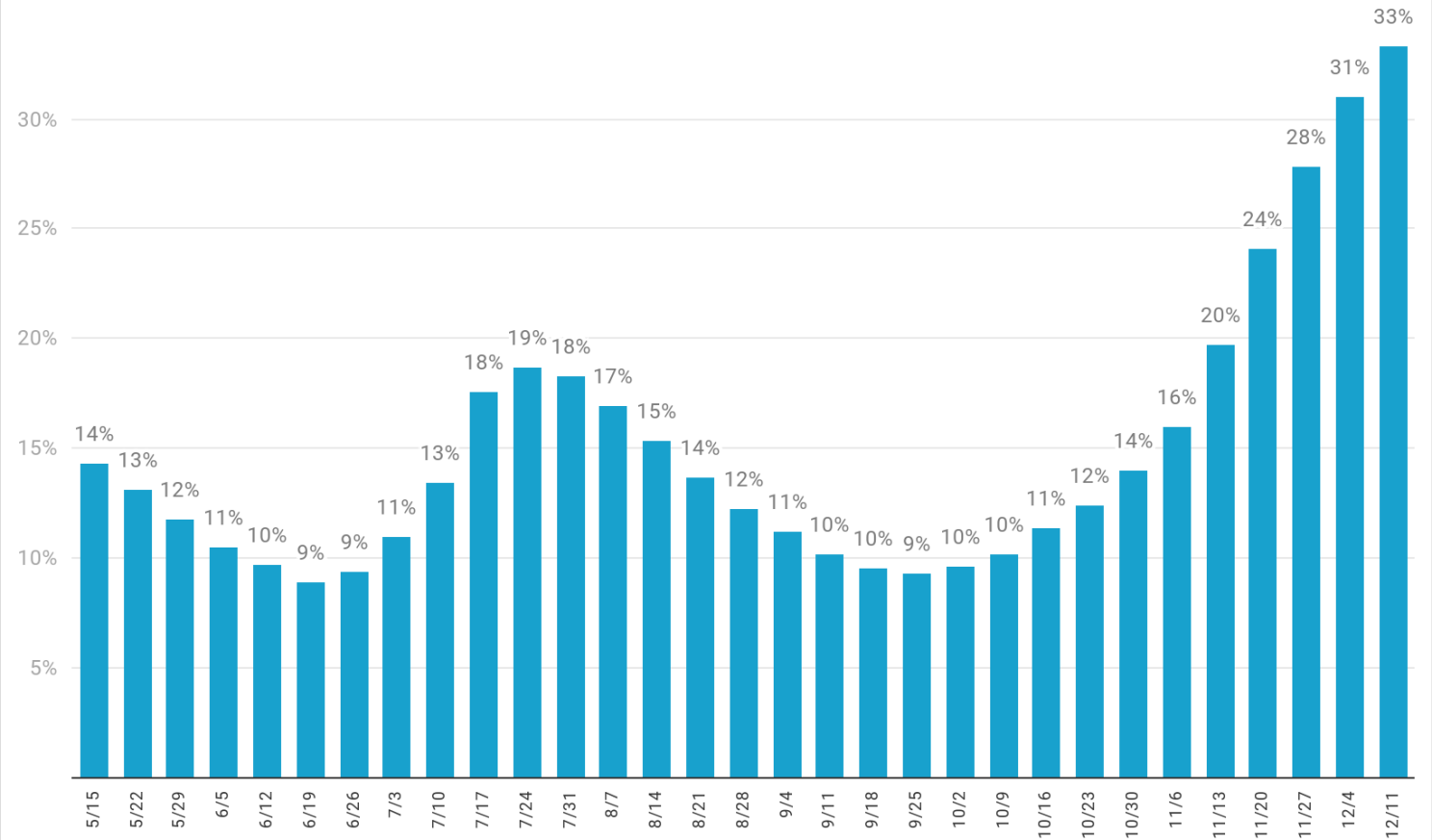
In the United States, Covid-19 patients occupied 33% of available inpatient beds last week

This occupancy rate has increased each week since the end of September

This rate has more than doubled in just five weeks

Covid-19 Occupancy - % of Inpatient Beds - United States

For the 7 days ending on date shown



The following states started reporting data on: HI, 7/14; KS, 7/25

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

Covid-19 inpatient days
per 100 new cases
declined last week

It was lower last week
than during any week
except November 7-13
and 14-20

Covid-19 Inpatient Days / 100 New Cases

For the 7 days ending on the date shown

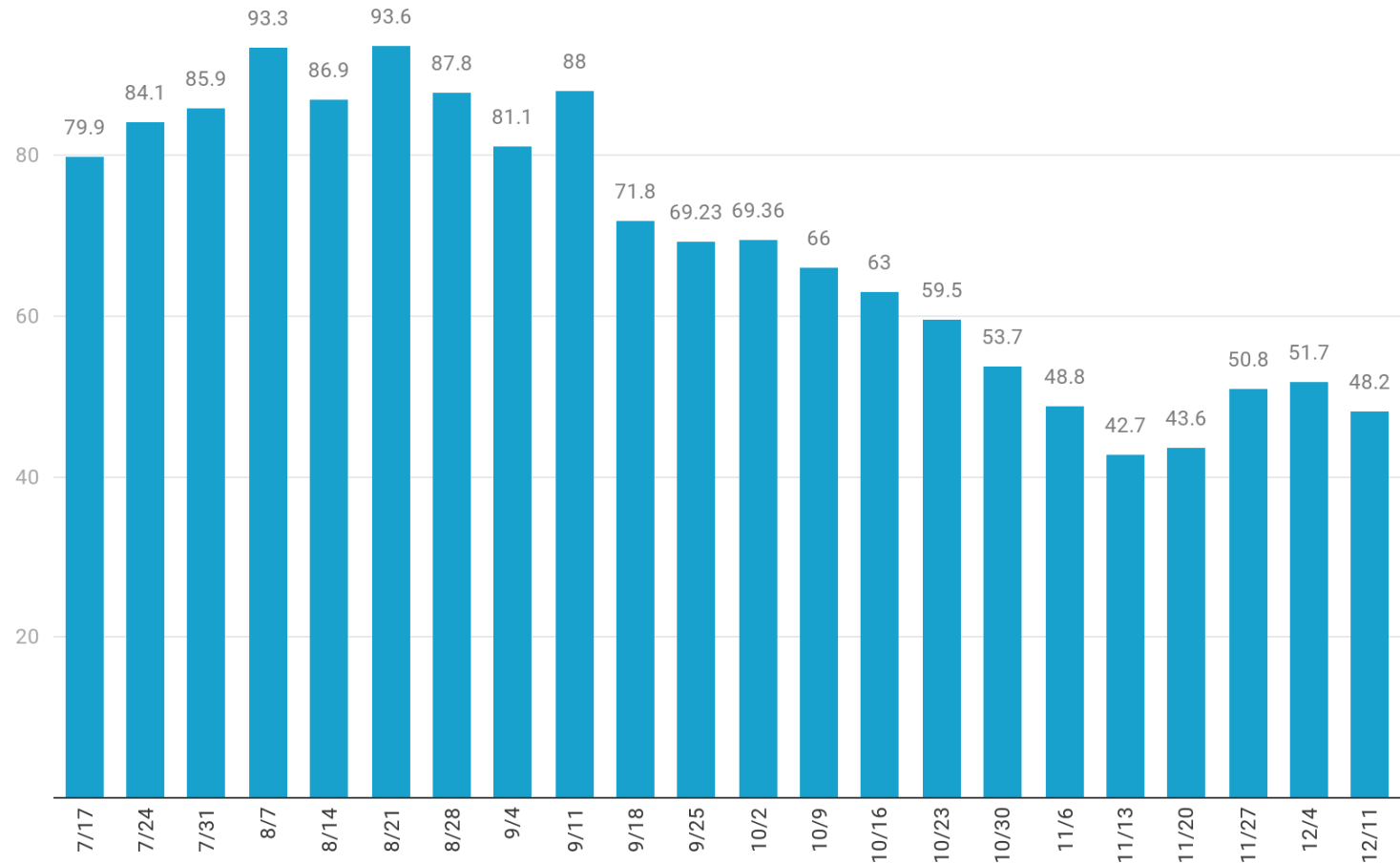


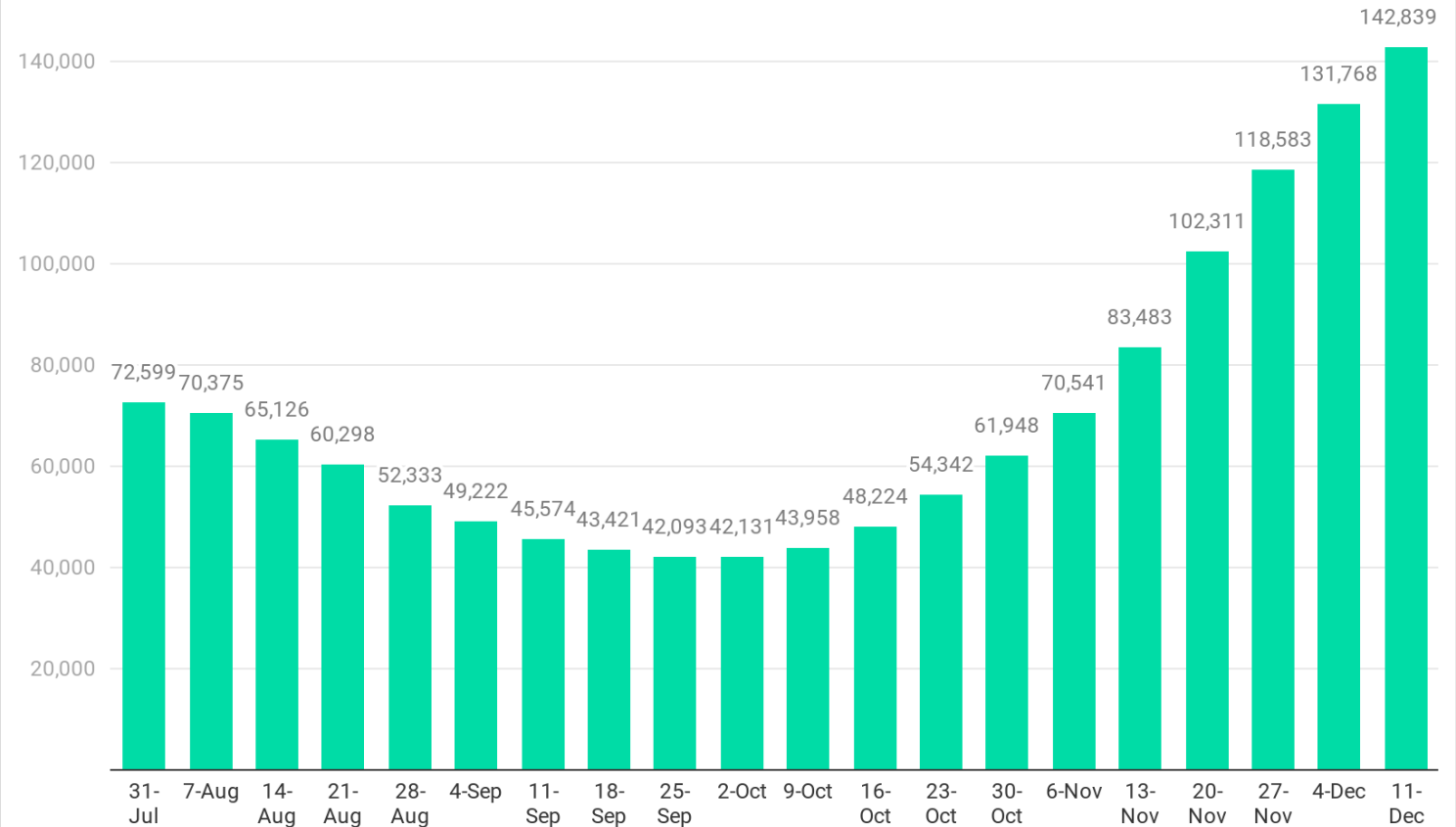
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project & worldometers.info • Created with Datawrapper

Covid-19 patients collectively spent nearly 143,000 days in the ICU last week

Covid-19 ICU census has now increased eleven consecutive weeks – increasing by nearly 3.4x in that time

Weekly ICU Covid-19 Census - United States

For the 7 days ending on date shown



The following states started reporting data on: HI, 7/30; ND, 8/19; SC, 7/28; TN, 8/12. The following states do not report: AL, AK, AR, CO, CT, FL, GA, LA, MO, MT, NE, NH, NM, PA, SD, VT, WA

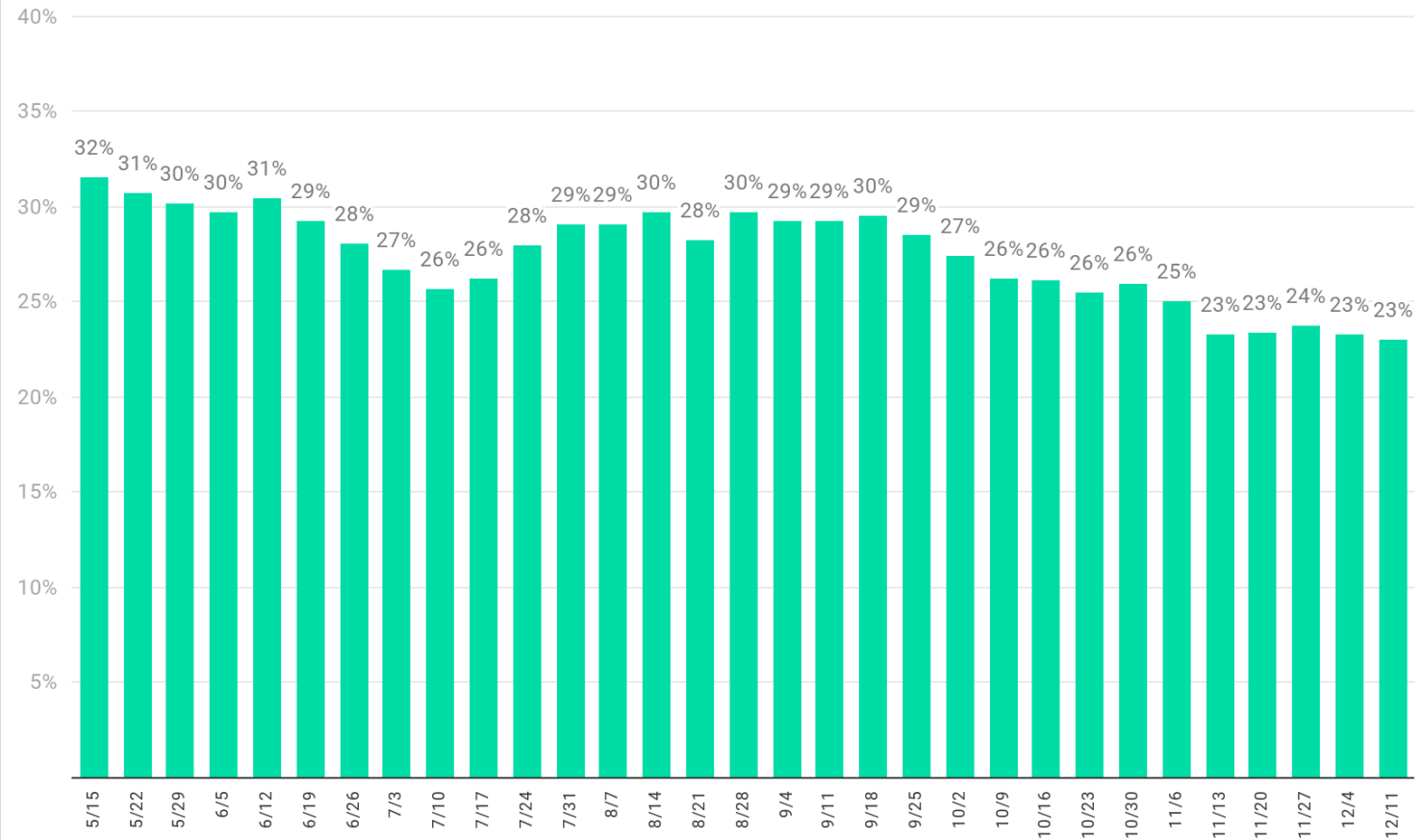
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

Fewer than a ¼ of Covid-19 inpatients were in the ICU last week

Throughout November and December, the % of Covid-19 patients requiring ICU care is lower than it had been at any time during the pandemic

% of Hospitalized Covid-19 Patients in the ICU

For the date shown



The following states started reporting data on: HI, 7/14; KS, 7/25

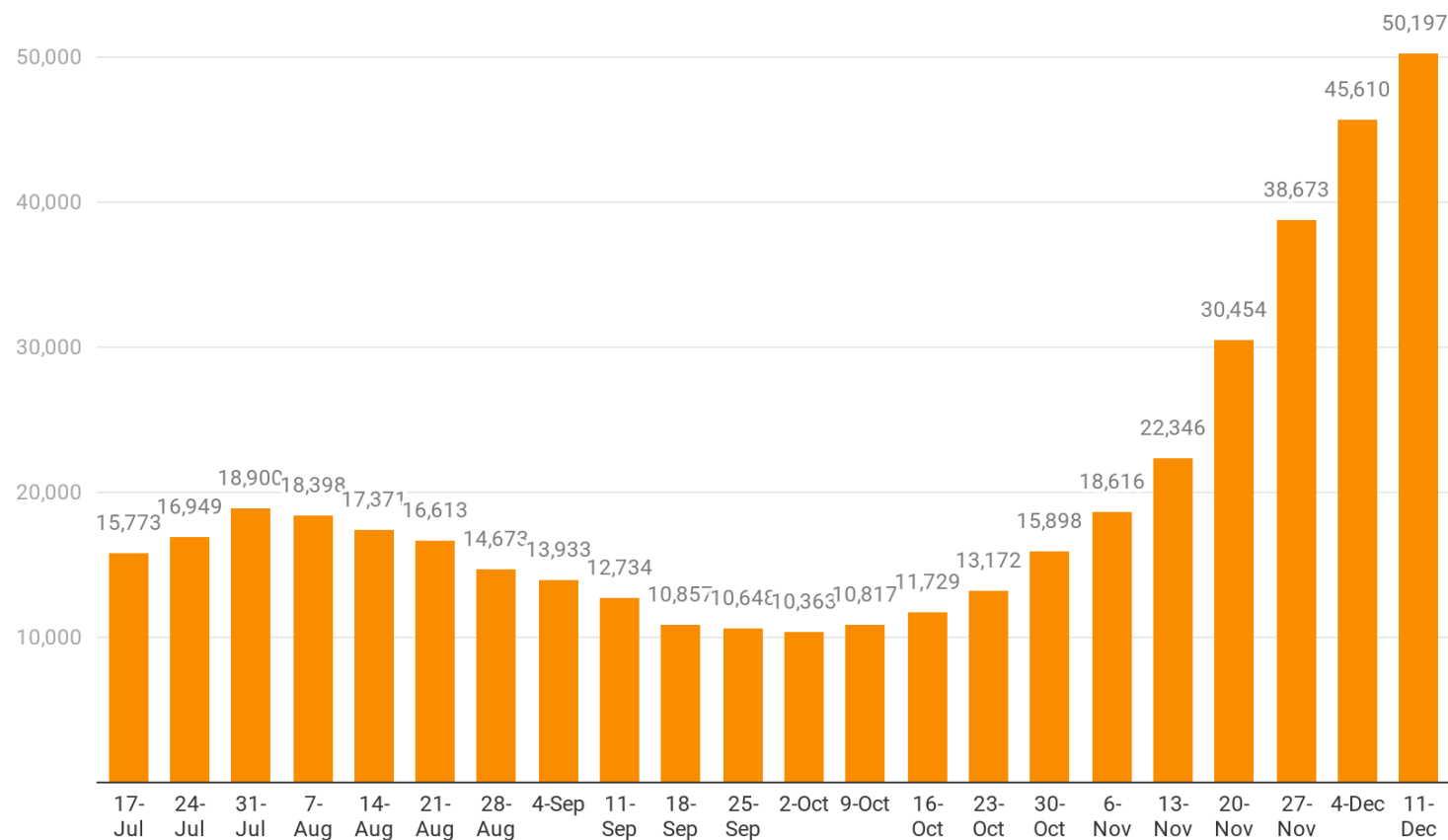
Chart: Health Industry Advisor LLC • Source: Atlantic's Covid Tracking project • Created with Datawrapper

Covid-19 patients on ventilators increased sharply again last week, totaling more than 50,000 days on ventilators last week

This census of COVID-19 patients on ventilators has now increased ten consecutive weeks – more than doubling in the last four weeks alone

Ventilator Days COVID-19 - United States

For the 7 days ending on date shown



The following states started reporting data: HI, 7/31; KS, 7/16; SC, 7/24; TN, 8/12. The following states do not report: AL, CA, CO, CT, FL, GA, ID, KY, MD, MN, MT, NH, NM, NC, ND, OK, SD, TX, UT, VT, WI, WY

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

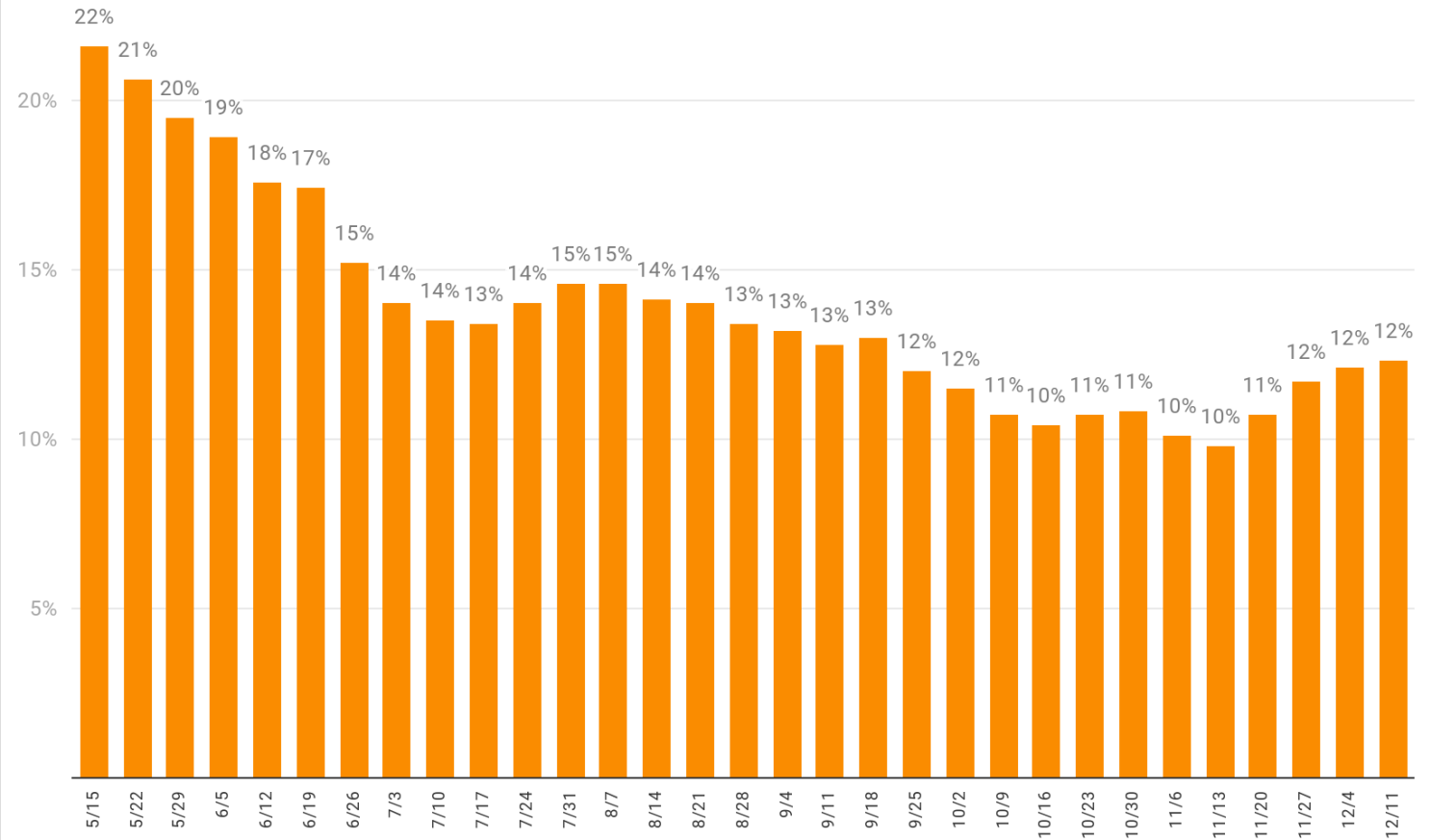
The likelihood of a hospitalized Covid-19 patient would be on a ventilator increased slightly each of the past few weeks

Slightly more than 12% of Covid-19 inpatients were on a ventilator last week

A reflection of changing treatment protocols, the likelihood of a person hospitalized with a SARS-CoV-2 infection has been cut nearly in ½ since mid-May

Weekly Comparison of the % of Hospitalized Covid-19 Patients on Ventilators

For the 7 days as of the date shown



The following states started reporting data on: HI, 7/14; KS, 7/25

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

Tragically, more than 10,000 people died with the coronavirus in the U.S. for the fourth consecutive week

The number of deaths increased sharply for the second consecutive week

Weekly Deaths - United States

For the 7 days ending on date shown

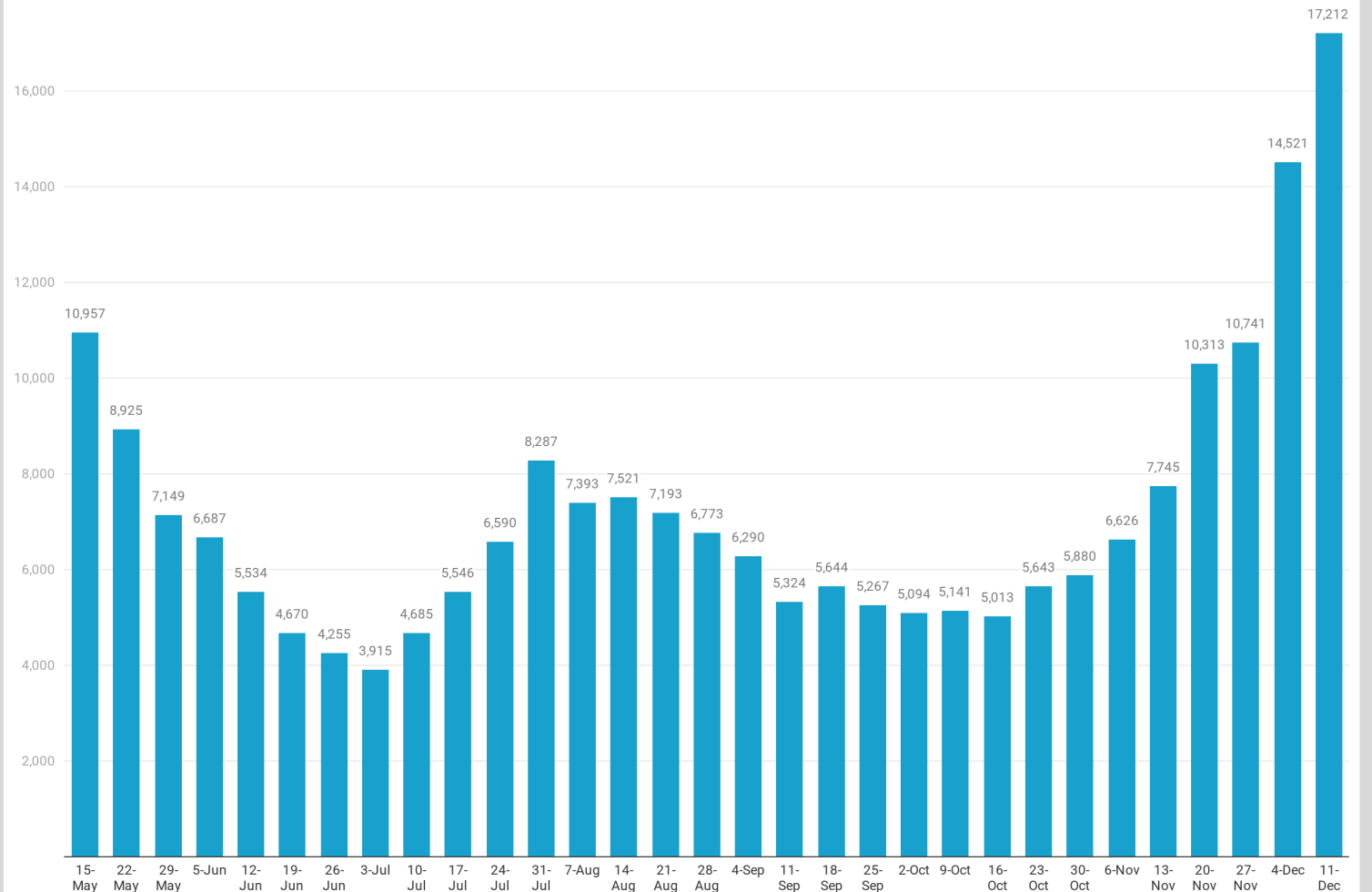
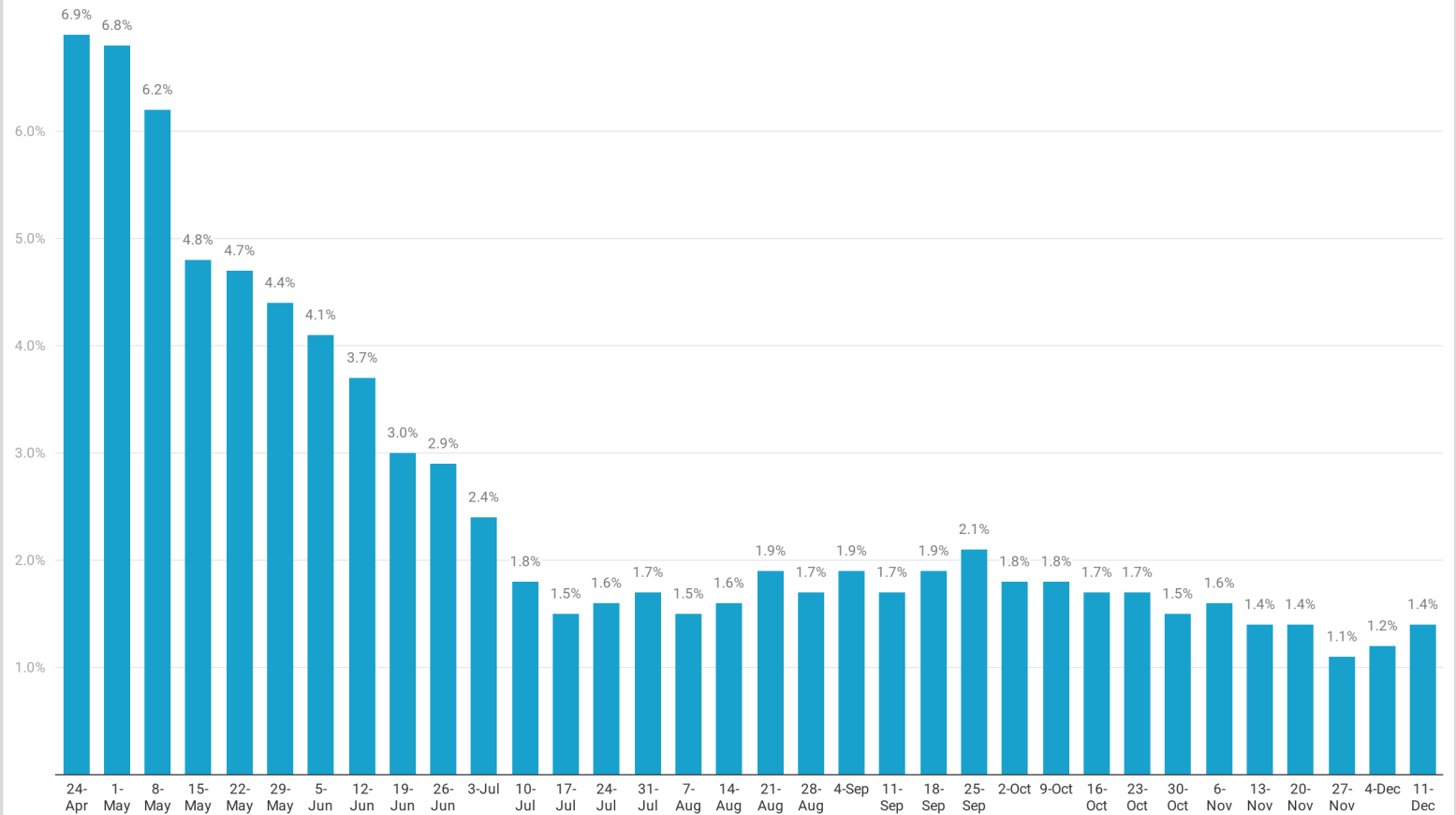


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Last week's slight increase is likely due to delays in state reporting of deaths during the Thanksgiving holiday weekend

Case Fatality Rate (2-Week Case Lag) - United States

For the 7 days ending on date shown



Deaths : New Cases, 2 week lag

Chart: Health Industry Advisor LLC • Source: worldometers.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>
- Oliver Wyman Pandemic Navigator, <https://pandemicnavigator.oliverwyman.com/forecast?mode=country®ion=United%20States&panel=mortality>