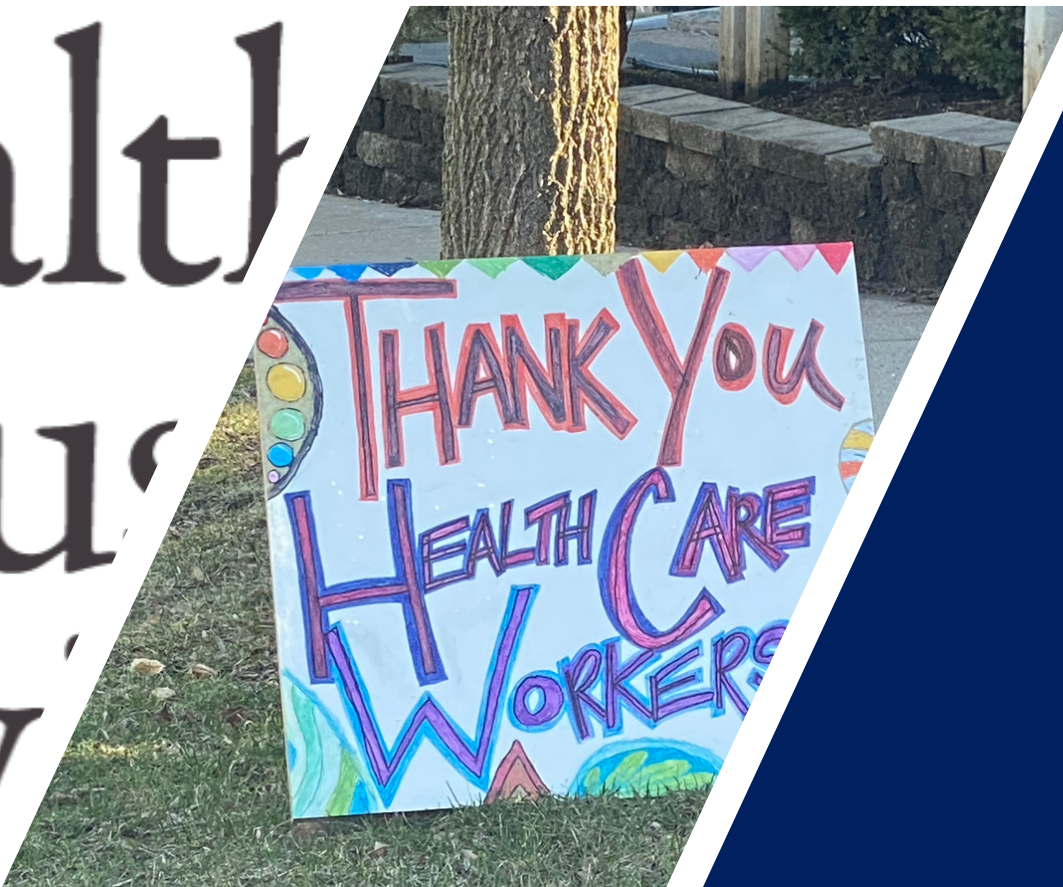




Health
Industry
Adv



Issue # 241
Saturday, December 19, 2020

COVID-19 Report

Highlights

- **Newly-detected cases continued to increase week-over-week, both in the U.S. and worldwide**
 - For the third consecutive week, California and Texas drove a significant portion of the growth in the U.S.
 - **California alone accounted for 18.2% of all new cases in the U.S. last week (with 12% of the population)**
 - **California's infection rate per capita has more than doubled in December**
 - **Without California, new cases declined week-over-week in the U.S. last week**
- **Hospital occupancy by Covid-19 patients also continued to grow**
 - Covid-19 patients occupied 36% of all inpatient beds in the U.S. last week, nearly twice the rate during its prior peak in July
 - **In California, this rate has increased from 37% to 64% since the beginning of December**
 - Without California, this occupancy rate for the U.S. is up modestly during the month
 - **There were more than 150k Covid-19 patient days spent in the ICU last week**
 - This has now increased for twelve consecutive weeks
 - **Yet, the % of hospitalized Covid-19 patients that are in the ICU is at its lowest point during the pandemic**
 - **There were more than 53k Covid-19 patient days spent on ventilators last week**
 - This has now increased for eleven consecutive weeks
 - **The % of hospitalized Covid-19 patient days spent on ventilators has now increased on five consecutive weeks**
- Tragically, the number of deaths with coronavirus is increasing sharply each week
 - **There were more than 53,000 deaths reported with the coronavirus in the U.S. last week**
 - **This was the ninth consecutive week-over-week increase in this count**
- Testing retreated somewhat last week
 - **Test volume declined week-over-week, the first decline since early-September**
 - Nevertheless, last week's volume represented the second highest recorded during the pandemic
 - **The test-positive rate for the fourth consecutive week; the current rate is higher than at any time since April**
- Despite the significant number of new cases and tests, much of the virus spread continues to be undetected
 - Using estimates for Young Gu's [covid19 projection model](#), more than 3/4 of infections in the U.S. have gone undetected to-date
 - **These estimates suggest that more than 18% of the U.S. population may already have been infected, as of December 4**
- Closing on some encouraging news, the 2020-21 flu season continues to be milder than each of the previous five seasons
 - Now into the twelfth week of the season, we are at a point in which flu visits typically begin to accelerate
 - **For the most-recently-reported week, flu visits are running at least 16% lower than the comparable week in each of the past five seasons and, 60% lower than last season**
 - Flu visits are typically a significant driver of hospital use; a mild flu season would help alleviate the pressure placed by Covid-19 patients

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

Testing declined week-over-week, the first week-over-week decline since September 11 – still, it represented the 2nd highest weekly testing volume during the pandemic

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

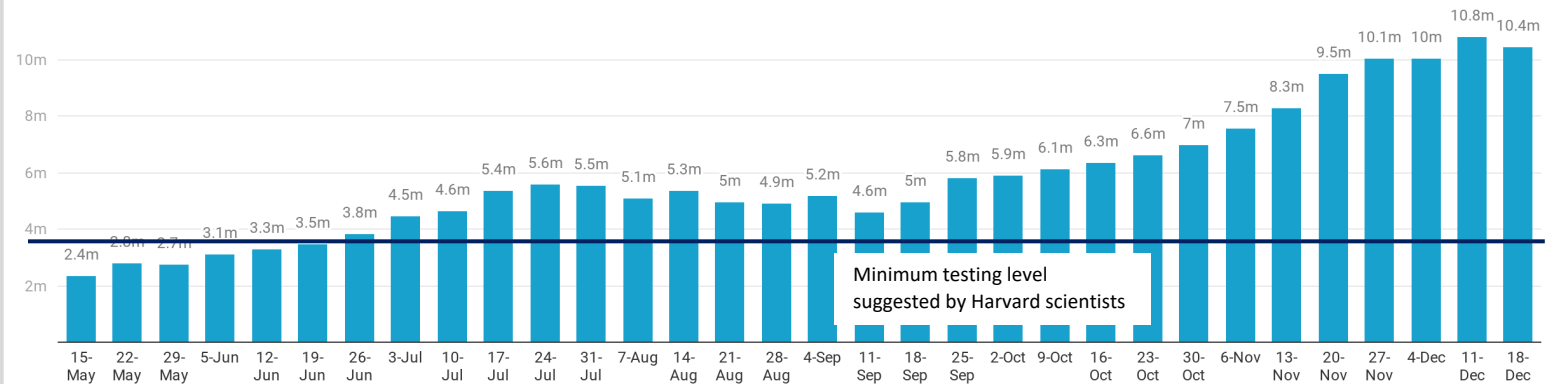


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

Weekly Test-Positive% - United States

For the 7 days ending on date shown

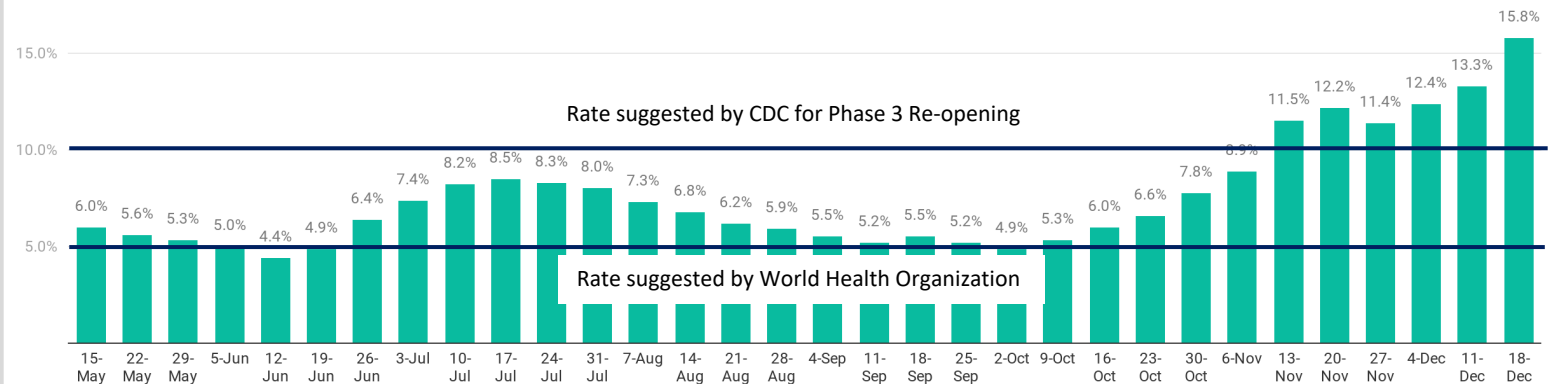


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking project • Created with Datawrapper

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

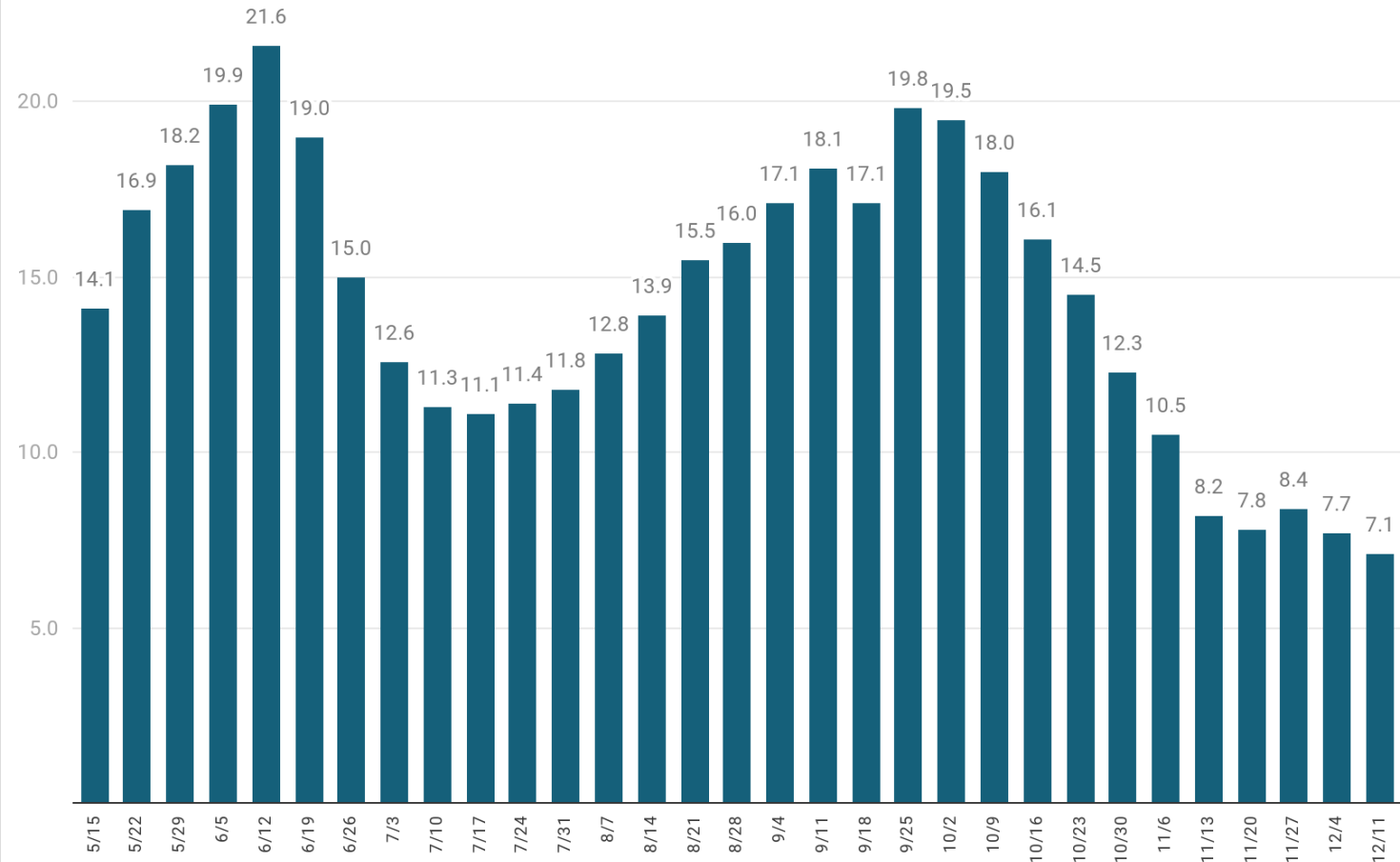


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project & worldometers.info • Created with Datawrapper

There were 4.6 million newly detected cases worldwide last week

New cases were up each of the past two weeks, following four weeks of relative stability

Weekly New Detected Cases - Worldwide

For the 7 days ending on date shown

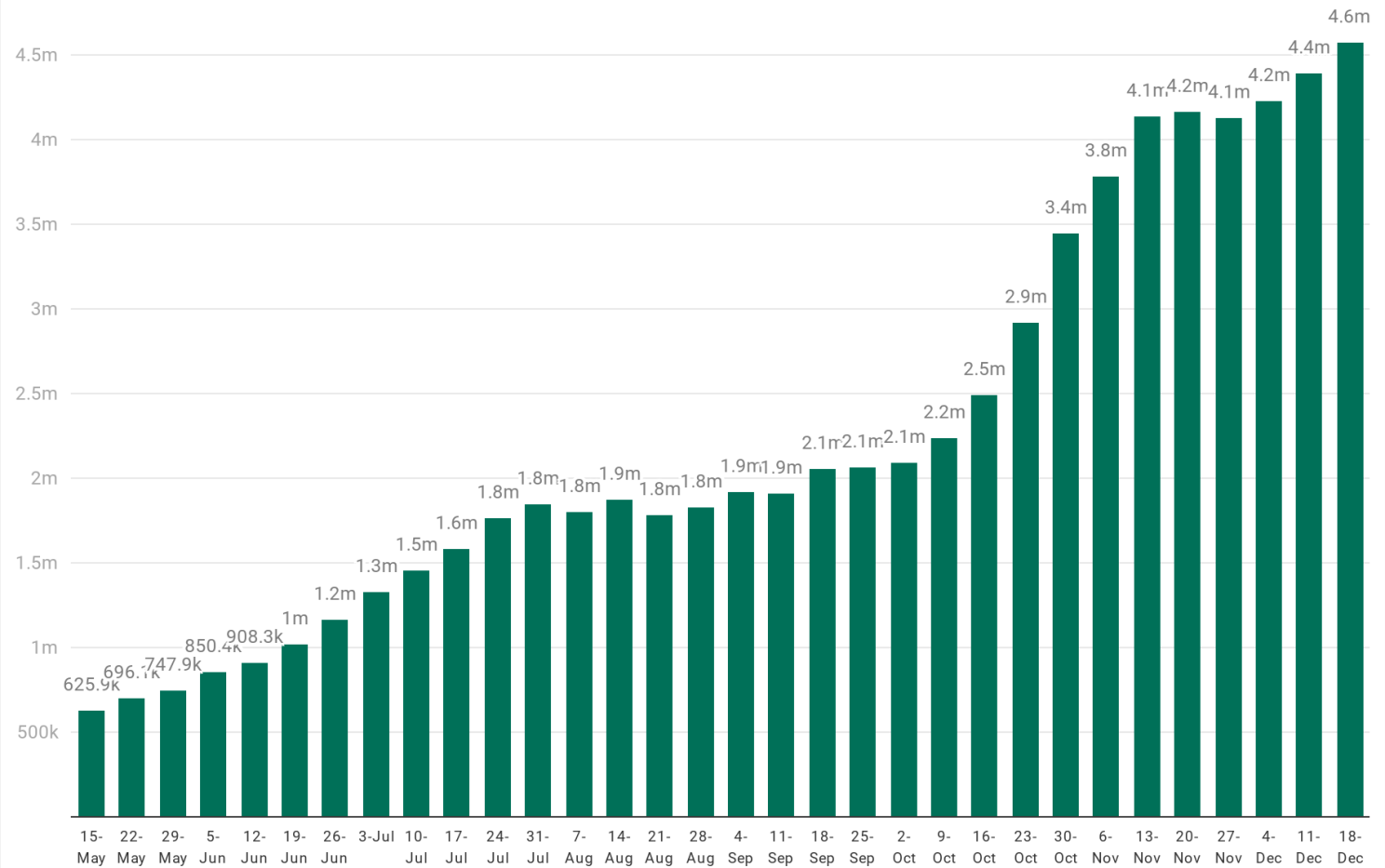


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

*Thanksgiving reporting-
interruption impact?*

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

1.6M new cases were
detected in the past seven
days

Weekly New Detected Cases - United States

For the 7 days ending on date shown

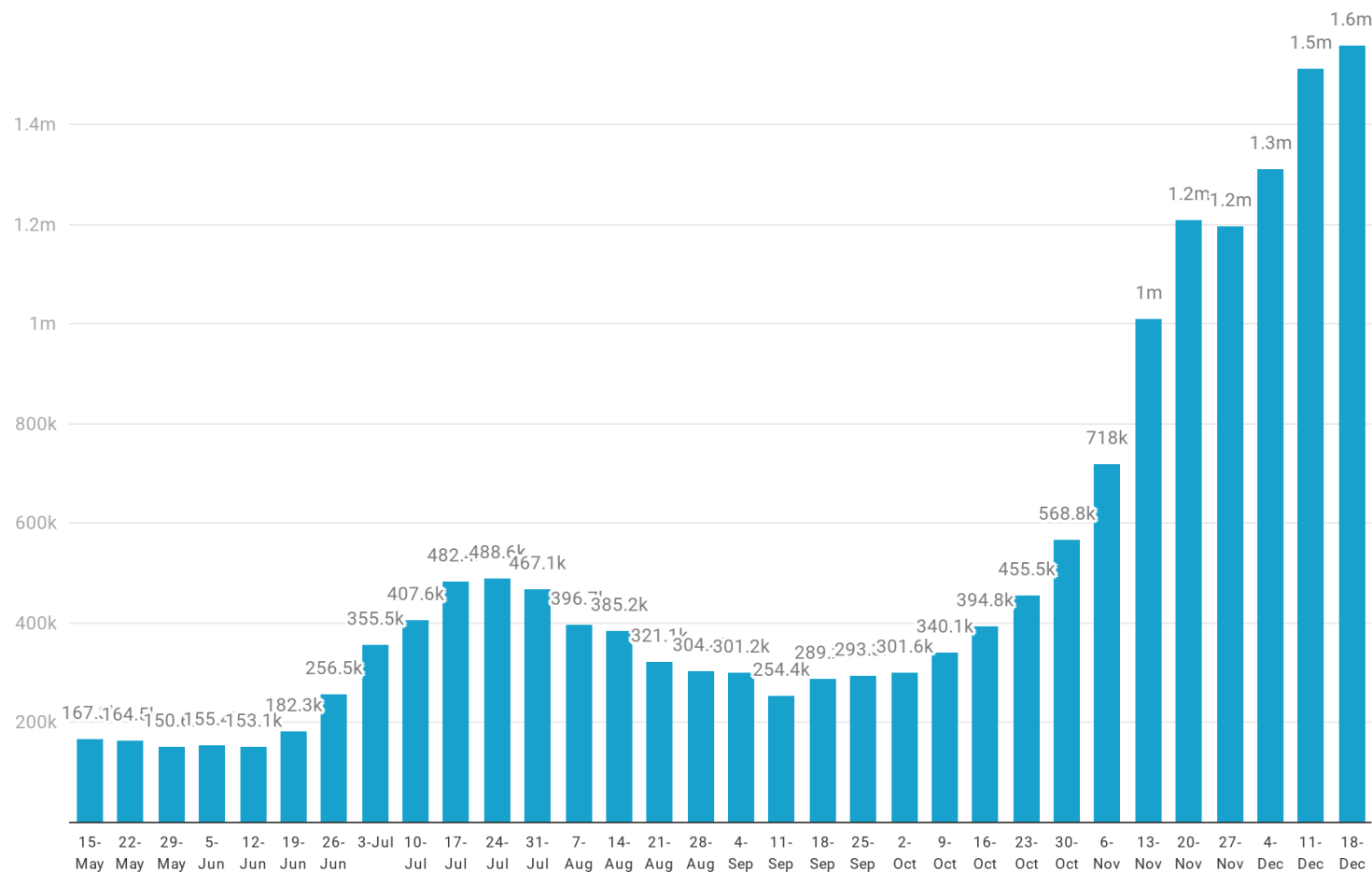


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

For the third consecutive week, California and Texas recorded the highest number of newly detected cases

California alone accounted for ~284k of the 1.6M new cases in the U.S. over the past seven days

New Weekly Detected Cases - By State

December 12-18

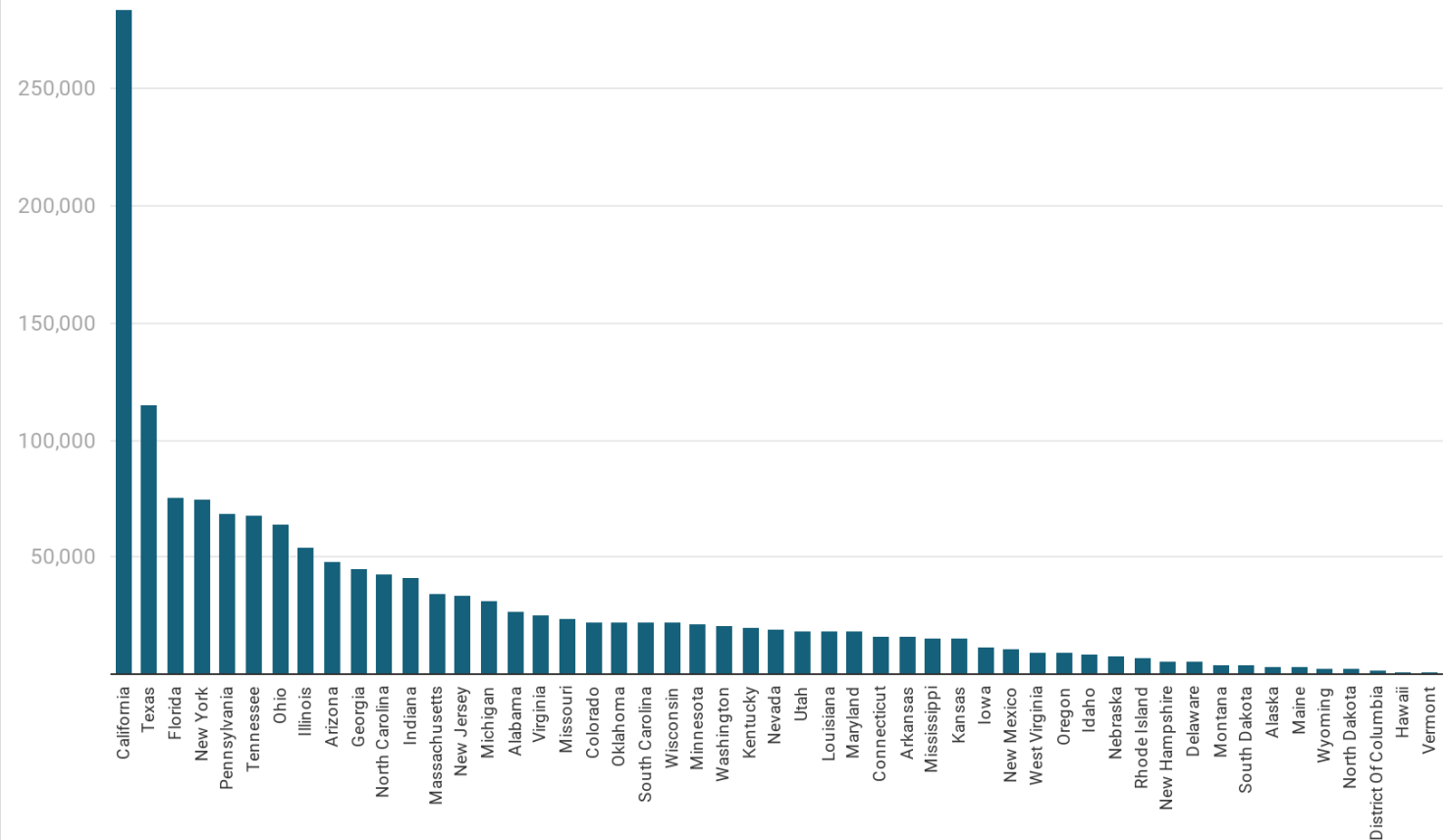


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

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

California reported 73k more new cases in the past seven days than one week earlier

Excluding California, there were 23k fewer new cases in the U.S. than the prior week

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

December 12-18 v. December 5-11

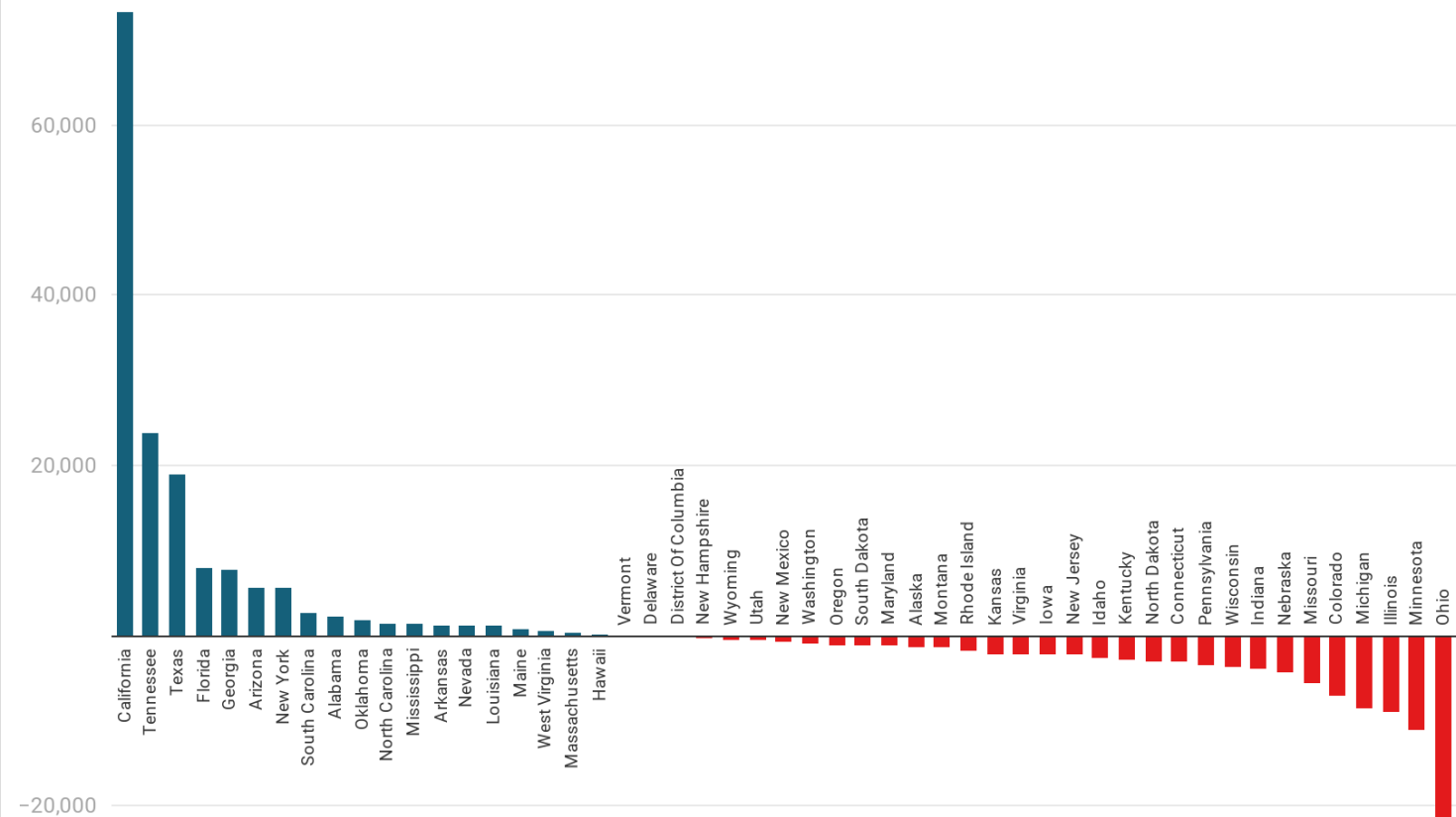


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

The December surge in cases and hospitalizations in California is driving the U.S. overall numbers
California's infection rate per capita has more than doubled in December; without California, the infection rate in the U.S. declined last week
California's Covid-19 hospital occupancy is up 73% in December; without California, the U.S. rate is up marginally

New Daily Infections / Million

For the week ending on date shown

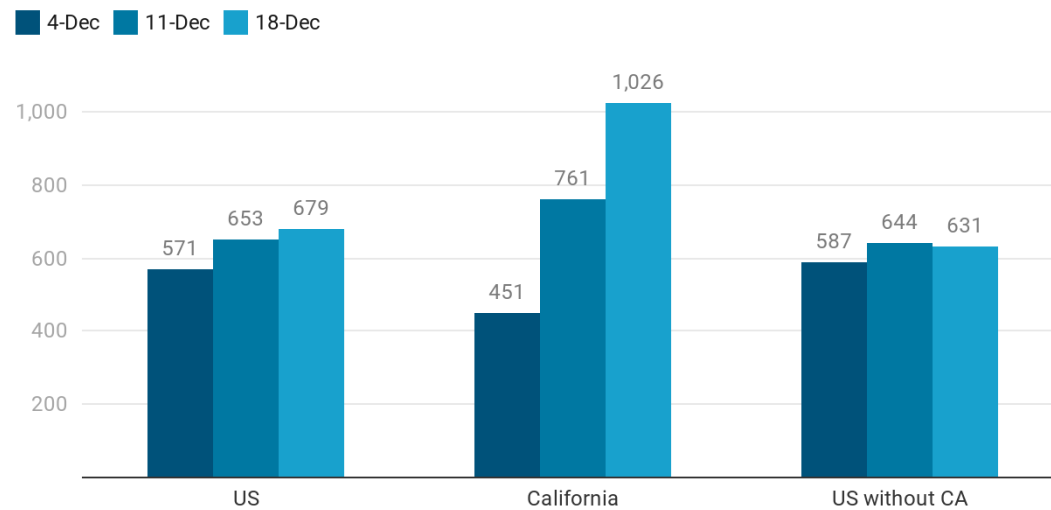


Chart: Health Industry advisor LLC • Source: worldometers.info • Created with Datawrapper

Covid-19 Patients as % of Inpatient Beds

For the date shown

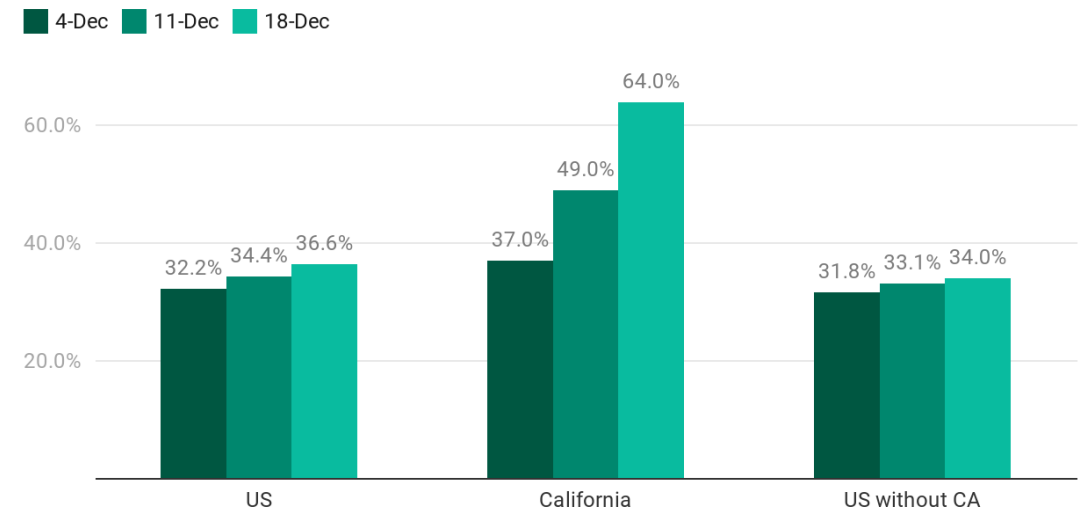


Chart: Health Industry advisor LLC • Source: The Atlantics Covid Tracking Project • Created with Datawrapper

Gu* estimates there were 4.4M new infections during the Thanksgiving week

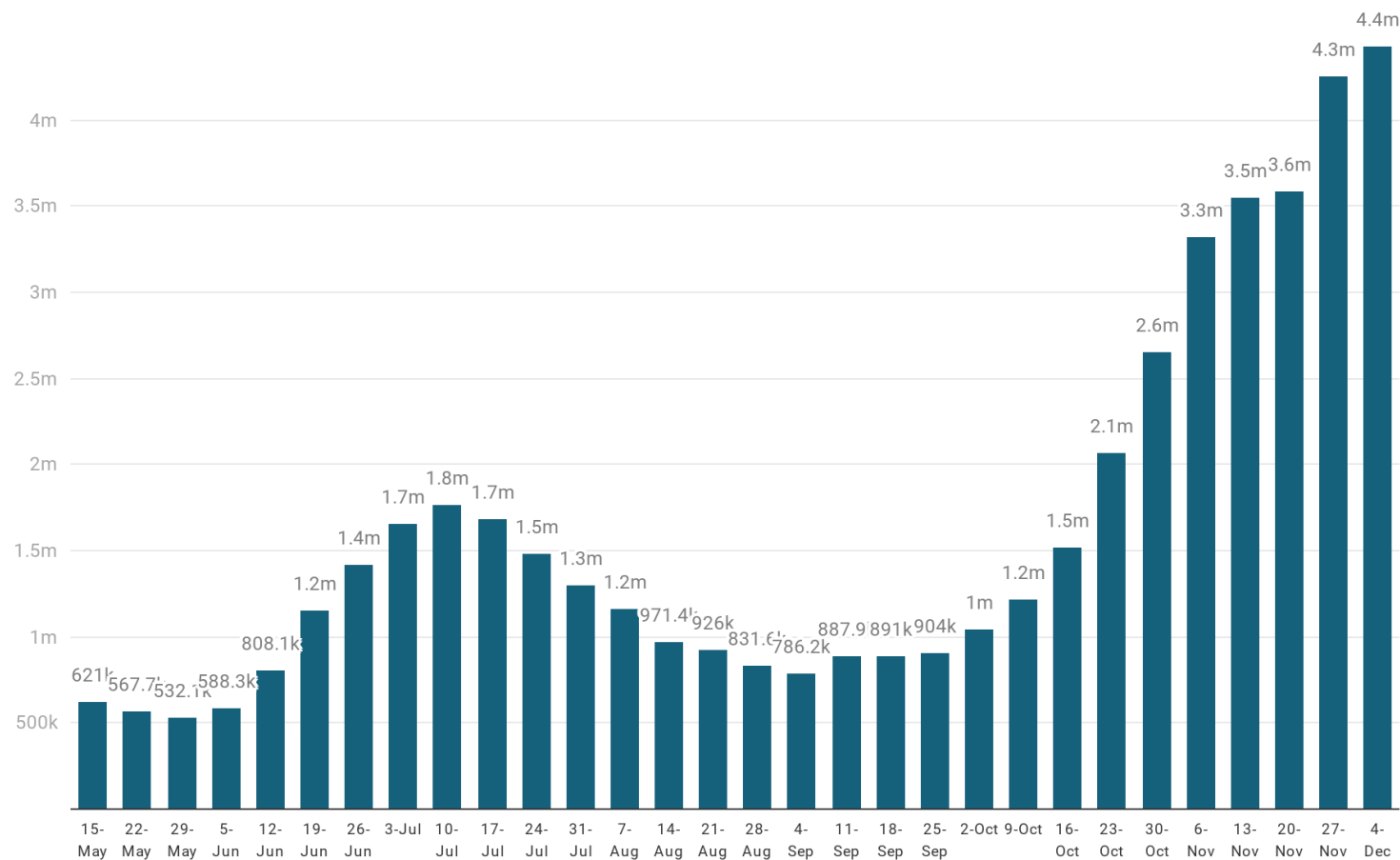
Estimated infections have increased thirteen consecutive weeks

Gu estimates that 18.3% of the U.S. population had been infected as of December 4 (range of 12.2-27.4%)

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

Weekly New Estimated Infections - United States

For the 7 days ending on date shown



Youyang Gu's estimates

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

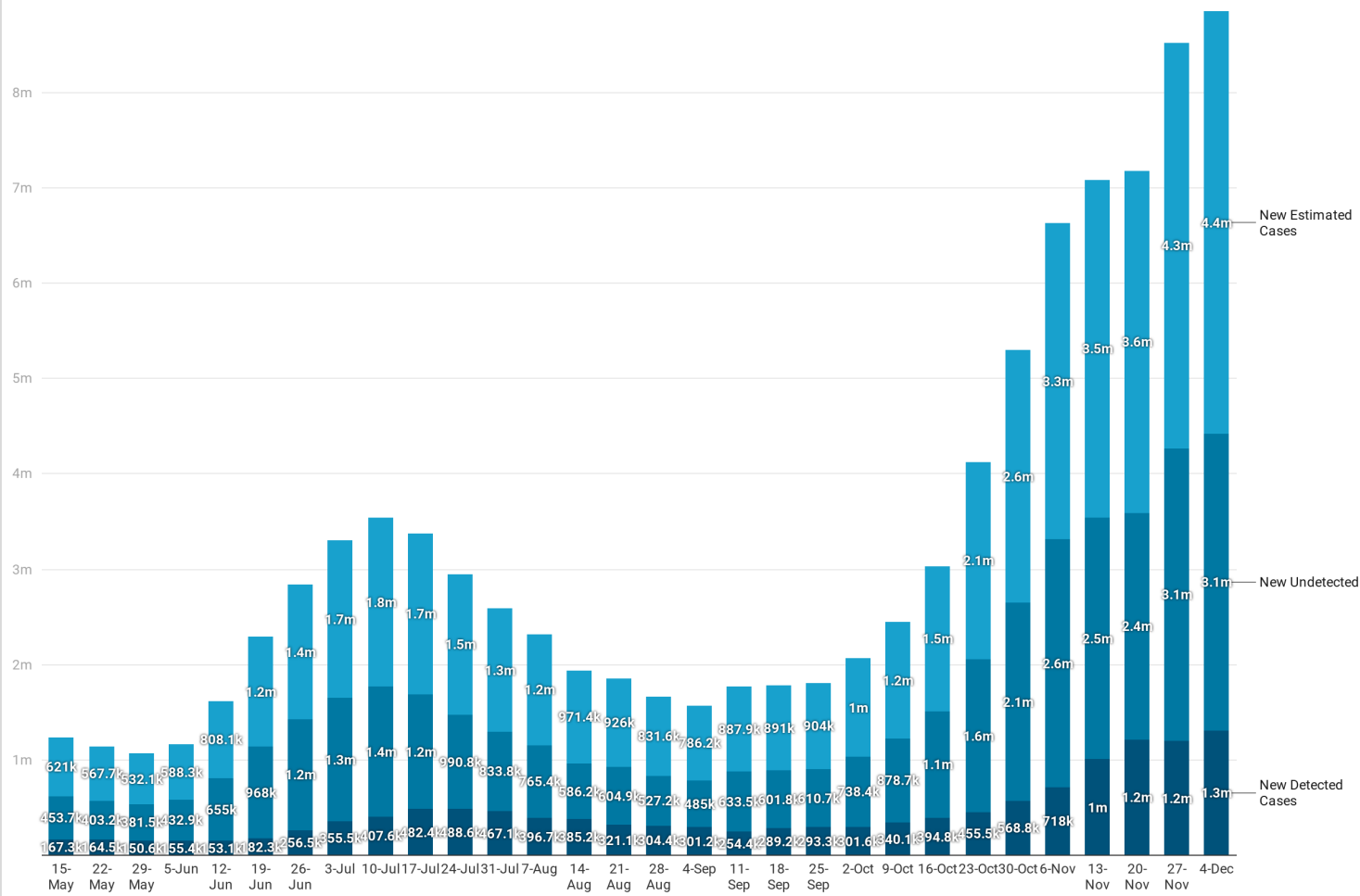
Undetected cases are significantly greater than cases detected via testing*

Gu estimates 3.1M new undetected cases each of the past two weeks

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

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 7.2 million people in the U.S. currently recovering from detected Covid-19 infections

The estimated number of active, detected cases in the U.S. has been increasing since the end of September

Current Active Cases - United States

For the 7 days ending on date shown

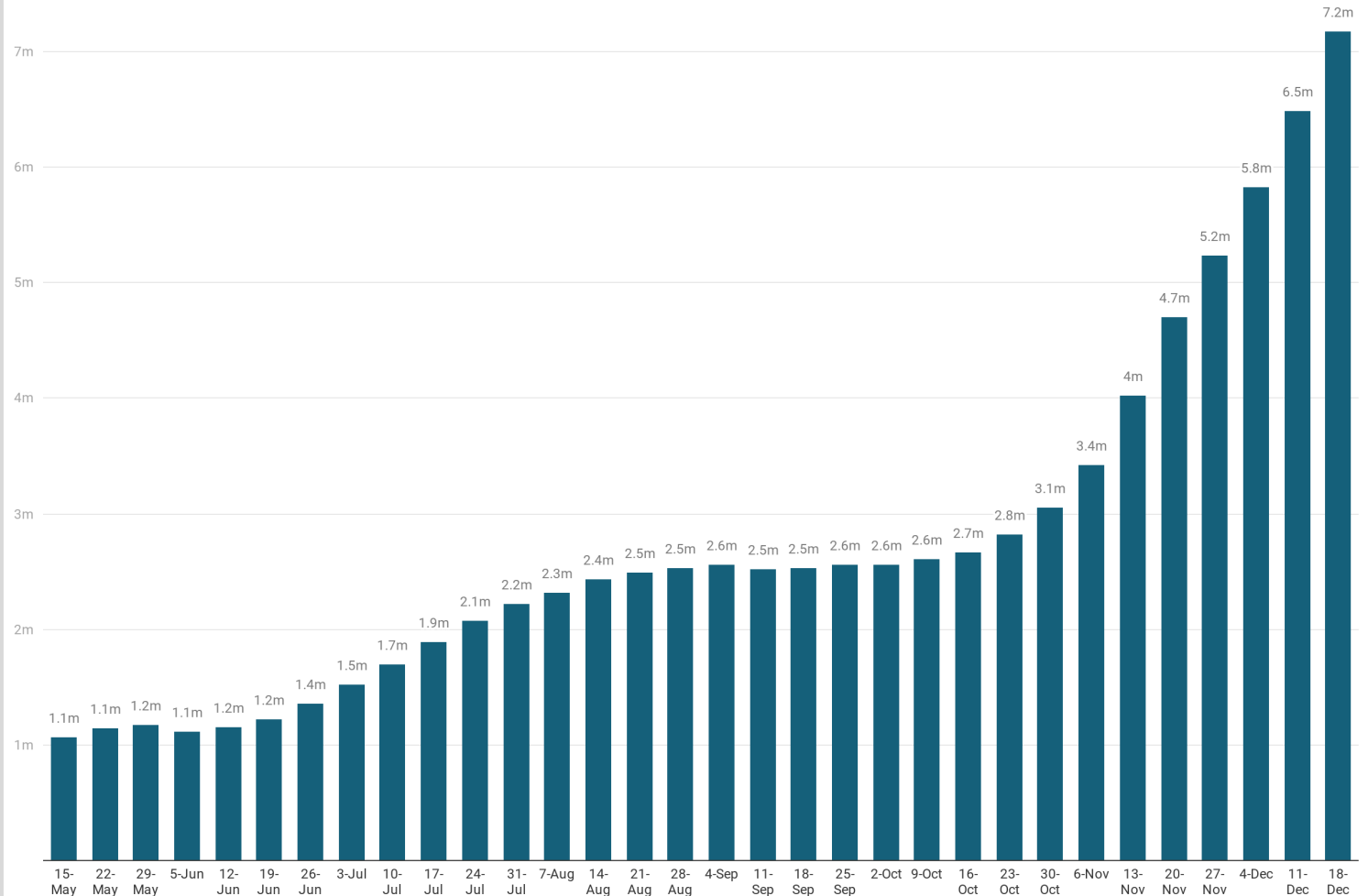


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

There were nearly 890k 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 eight weeks

10.4M 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

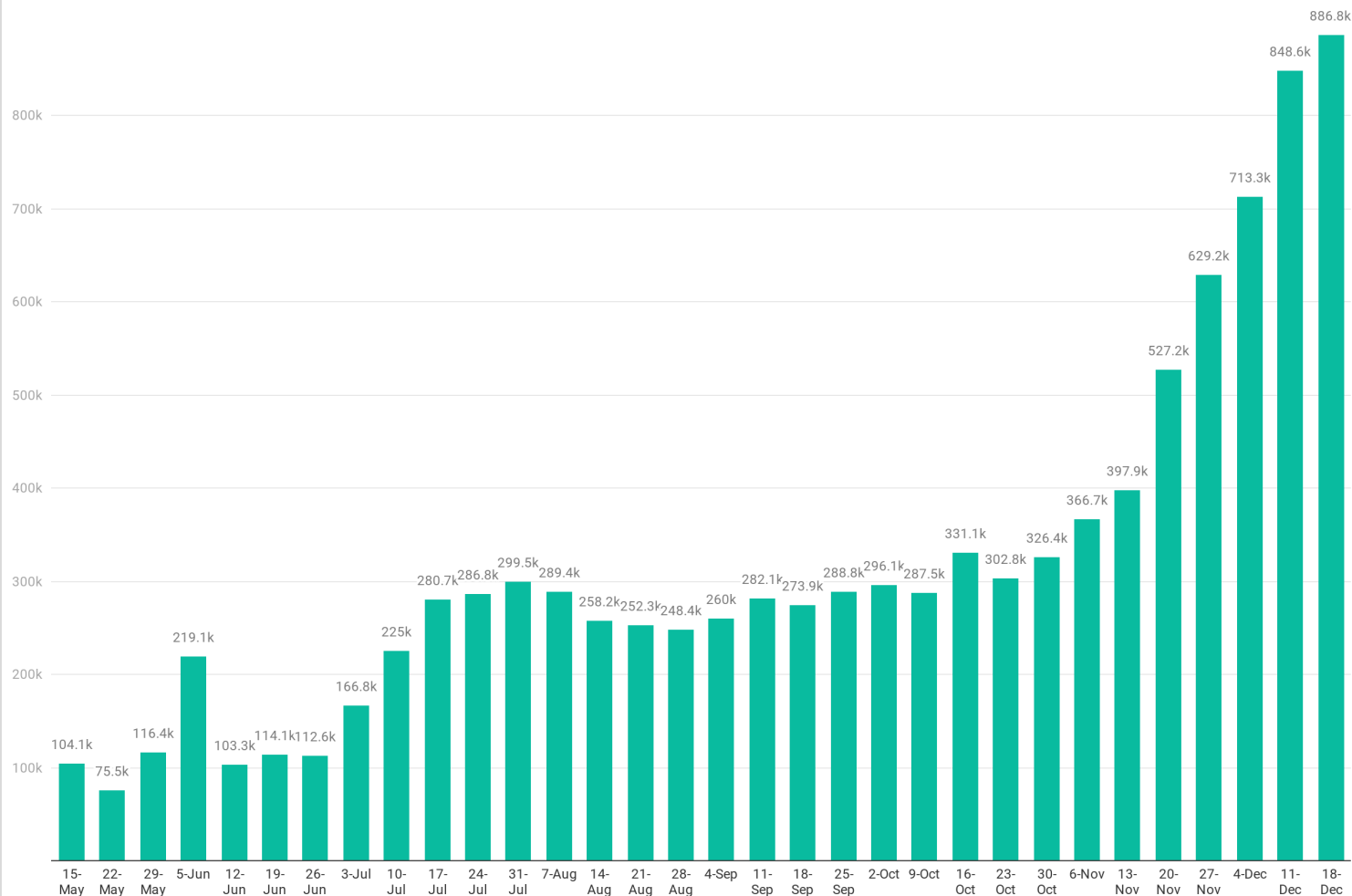


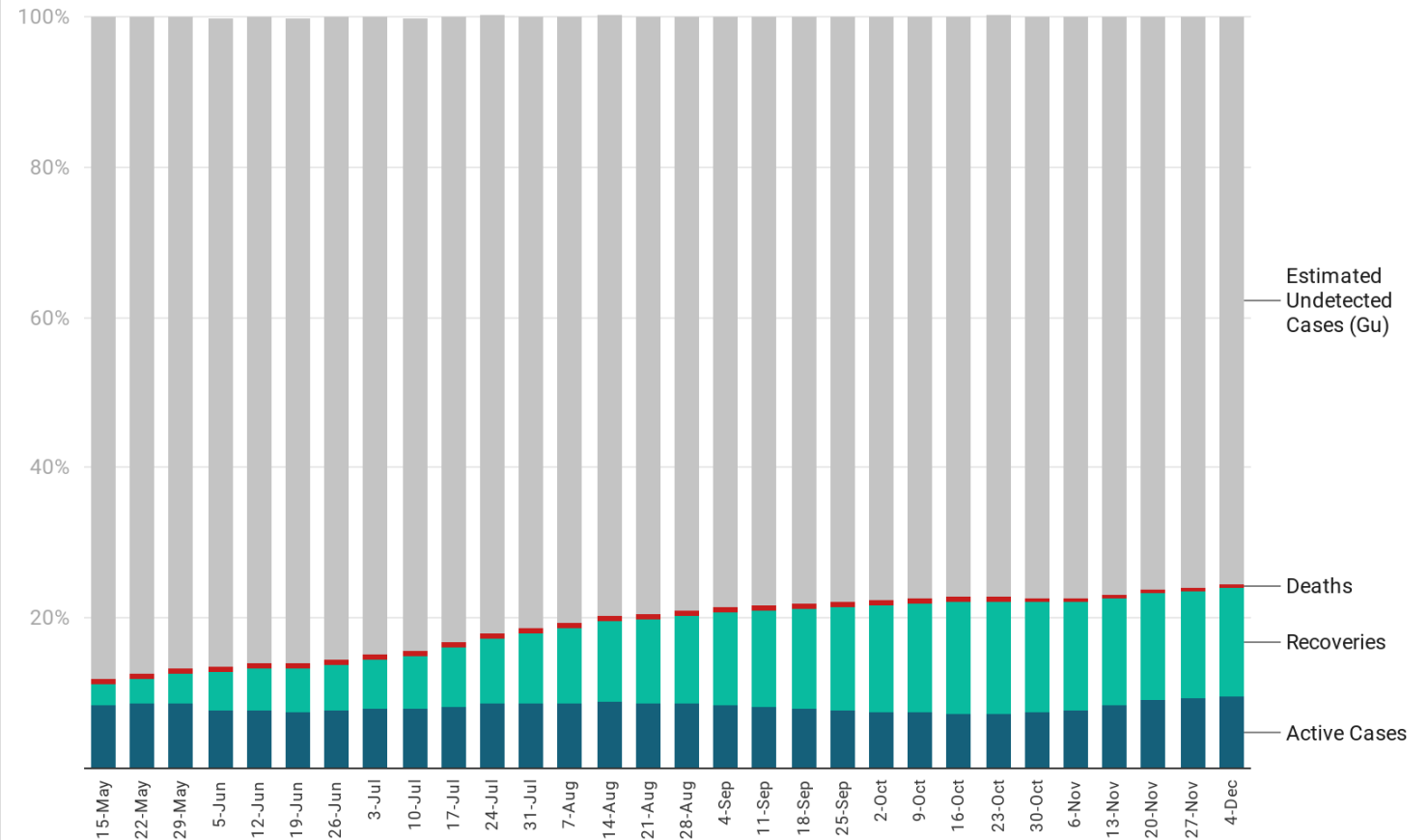
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Despite all the attention . . .
An invisible virus?

Using Gu's estimates, more
than 3-in-4 persons infected
with the SCARS-CoV-2 virus
have gone undetected

How has the status of cases changed over time?

As of the date shown



Undetected cases based on Youyang Gu's covid19projection.com model

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

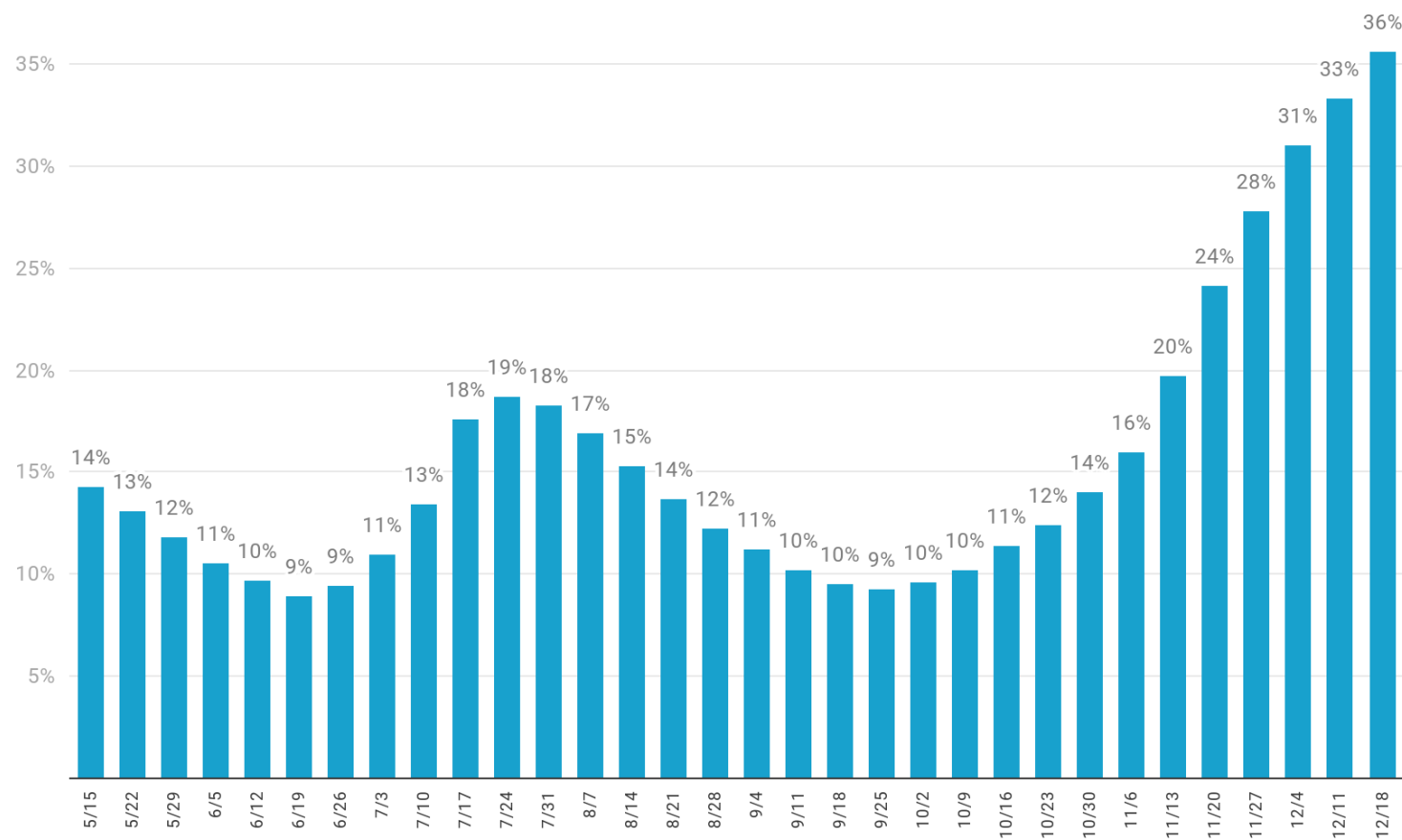
In the United States, Covid-19 patients occupied ~36% of available inpatient beds last week

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

This rate has more than doubled in the past six 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 increased last week

Nevertheless, this rate was lower last week than it has been for except four weeks during the pandemic

Covid-19 Inpatient Days / 100 New Cases

For the 7 days ending on the date shown

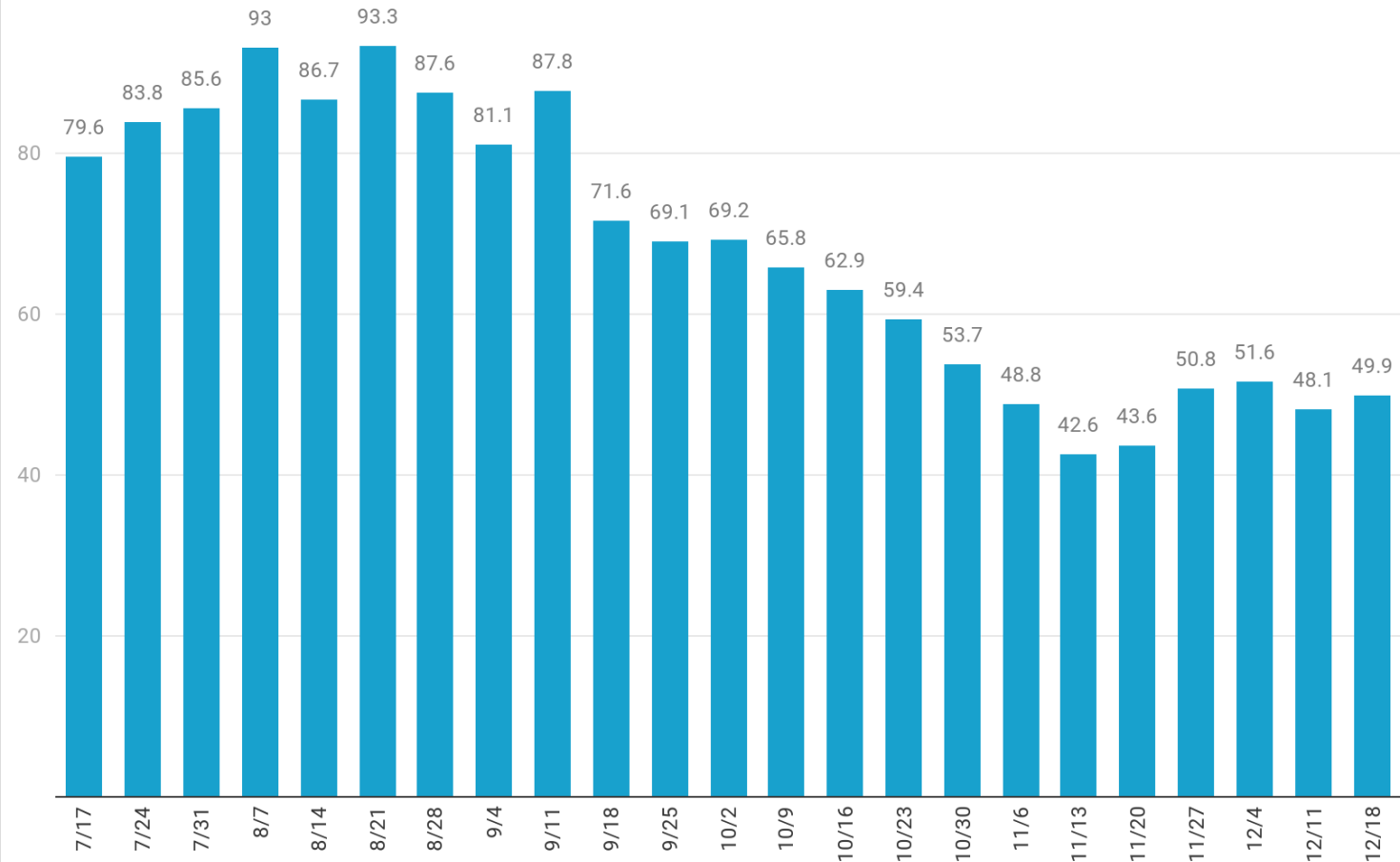


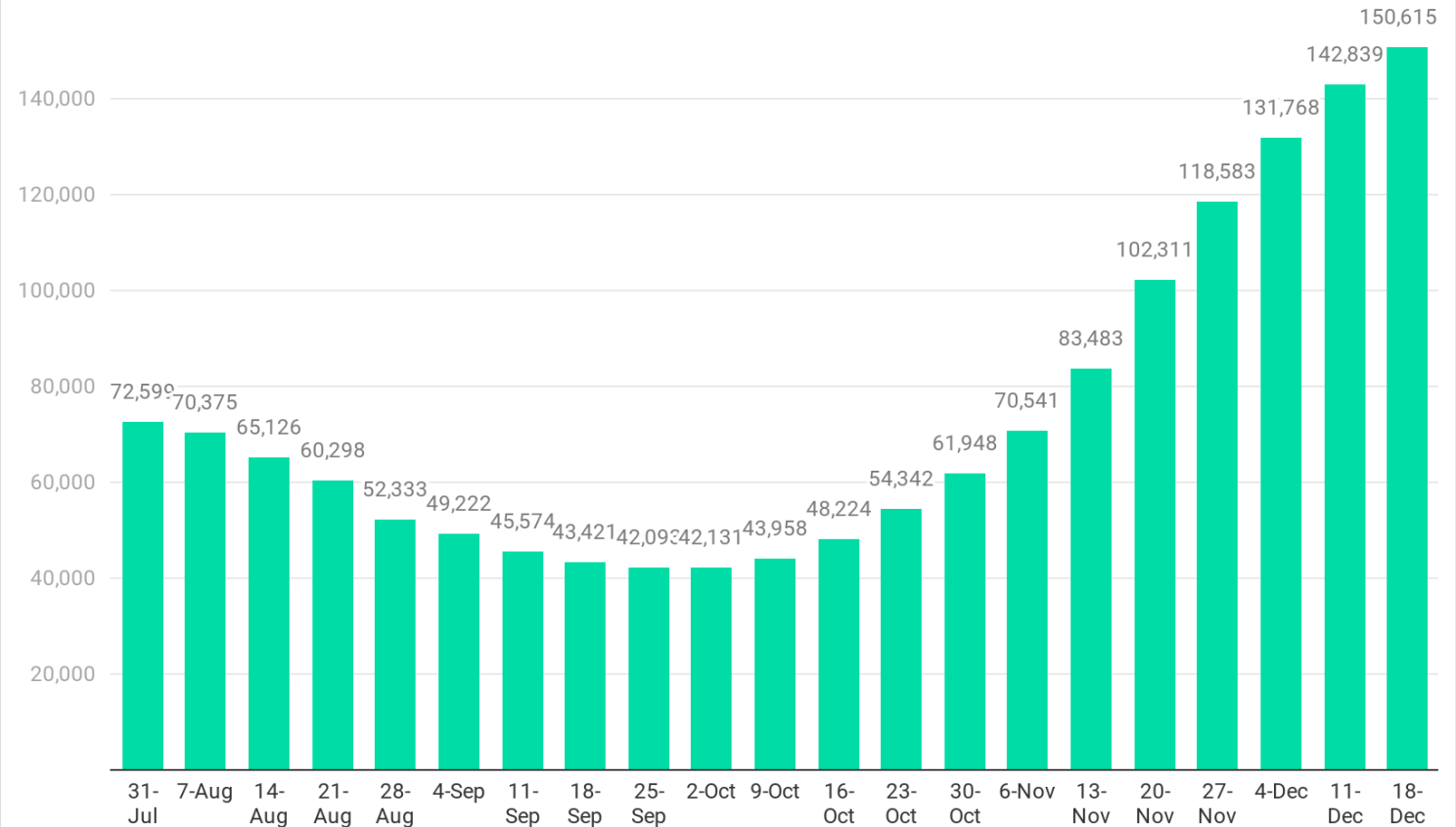
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project & worldometers.info • Created with Datawrapper

Covid-19 patients collectively spent nearly 150,000 days in the ICU last week

Covid-19 ICU census has now increased twelve consecutive weeks – it has increased by nearly 50% in the past month alone

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

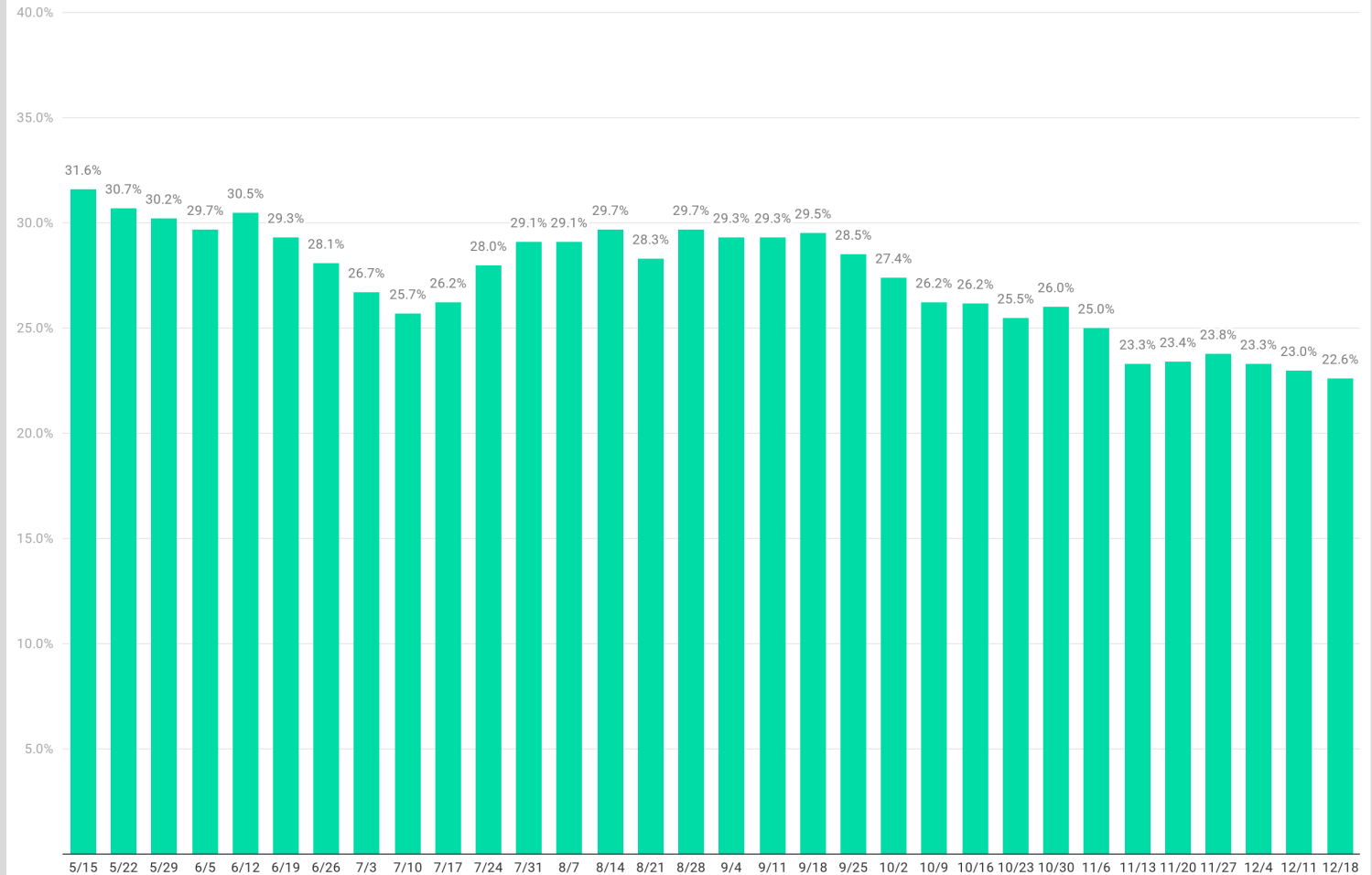
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

The % of Covid-19 inpatients were in the ICU declined for the third consecutive week

It is now lower than at any other 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

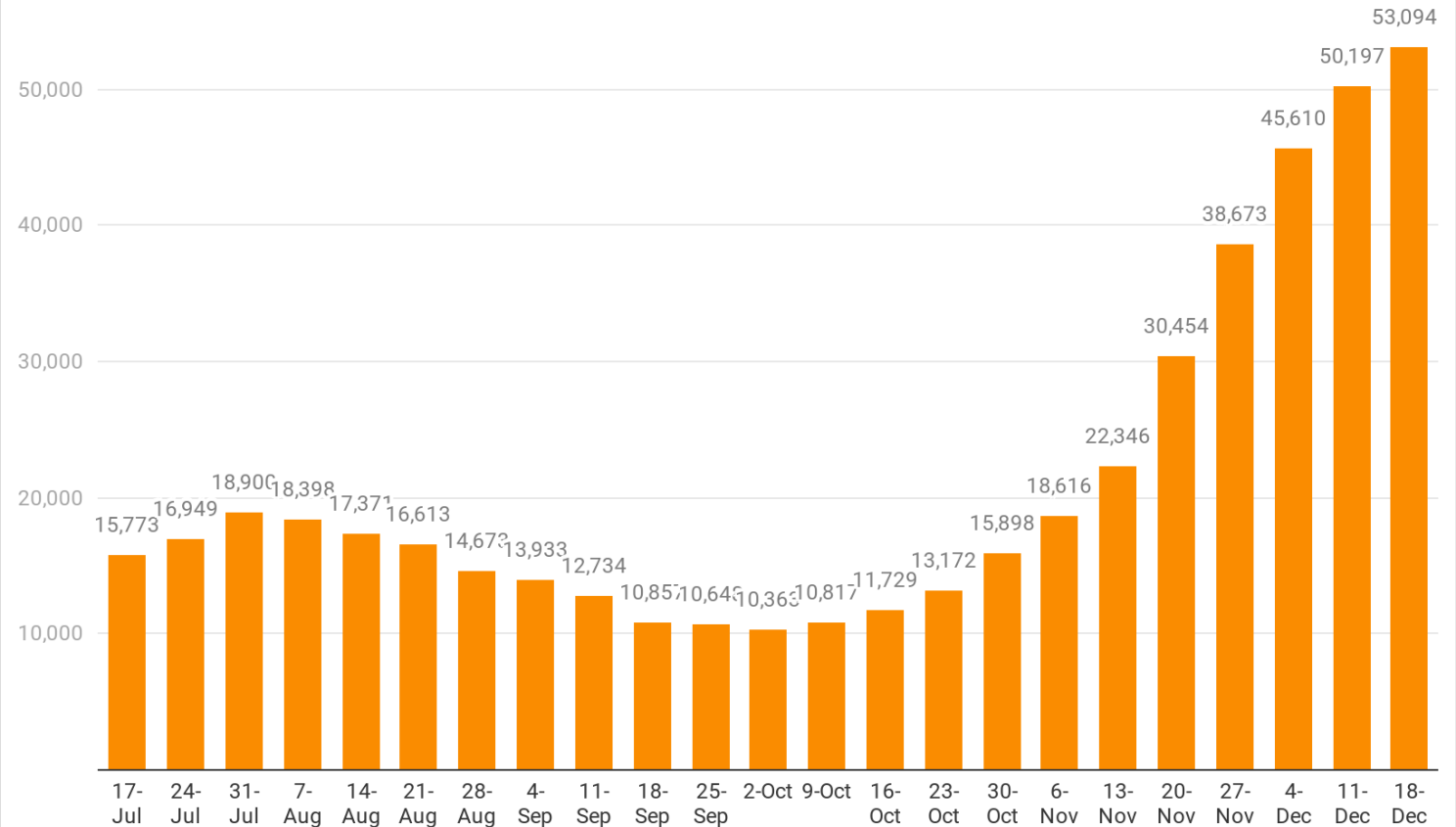
Chart: Health Industry Advisor LLC • Source: Atlantic's Covid Tracking project • Created with Datawrapper

Covid-19 patients on ventilators increased again last week, totaling more than 53,000 days on ventilators last week

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

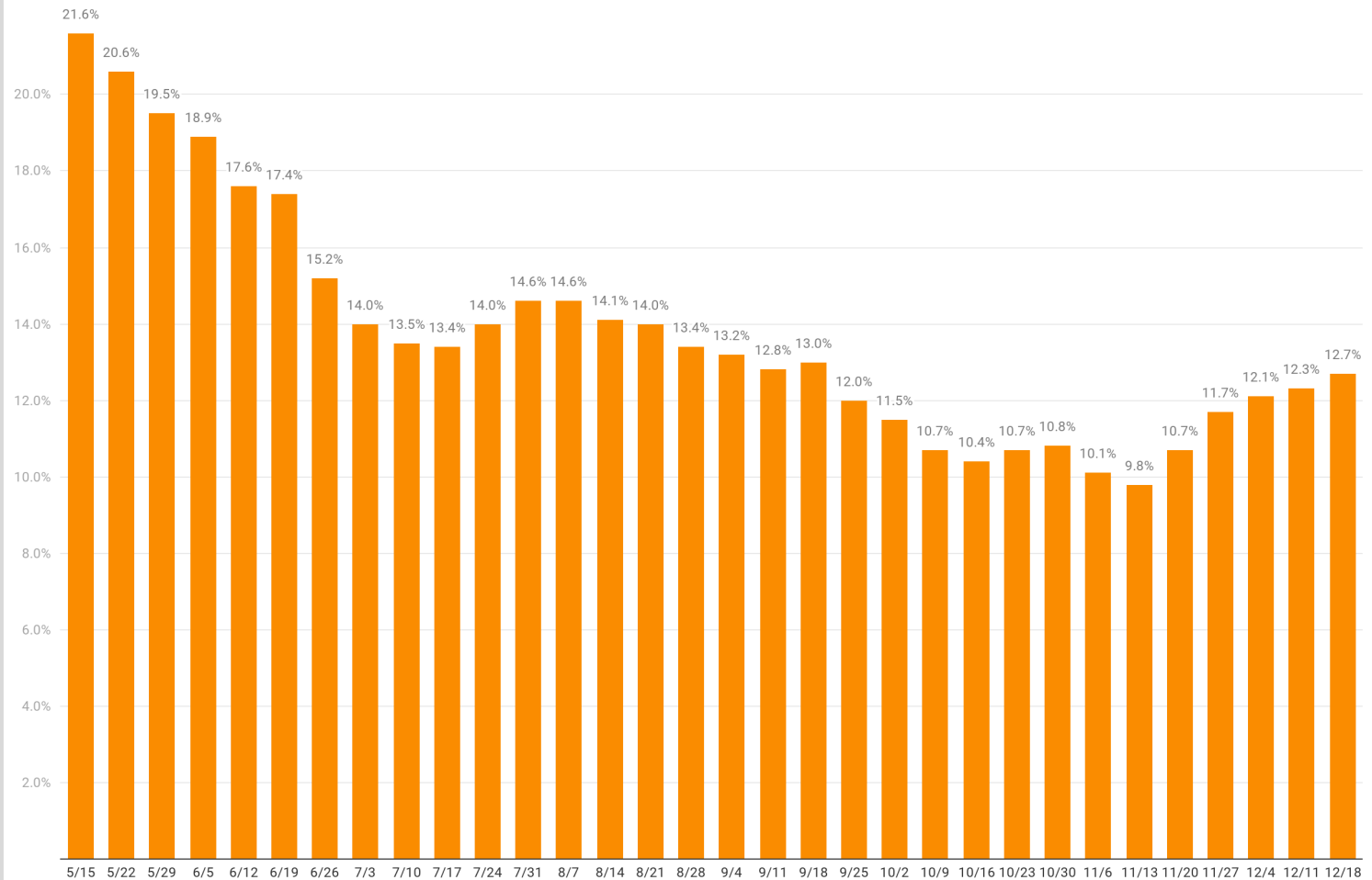
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

The likelihood of a hospitalized Covid-19 patient would be on a ventilator increased five consecutive weeks

Nearly 13% of Covid-19 inpatients were on a ventilator last week

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 18,000 people died with the coronavirus in the U.S. last week

This represented the ninth consecutive week of increasing deaths

Weekly Deaths - United States

For the 7 days ending on date shown

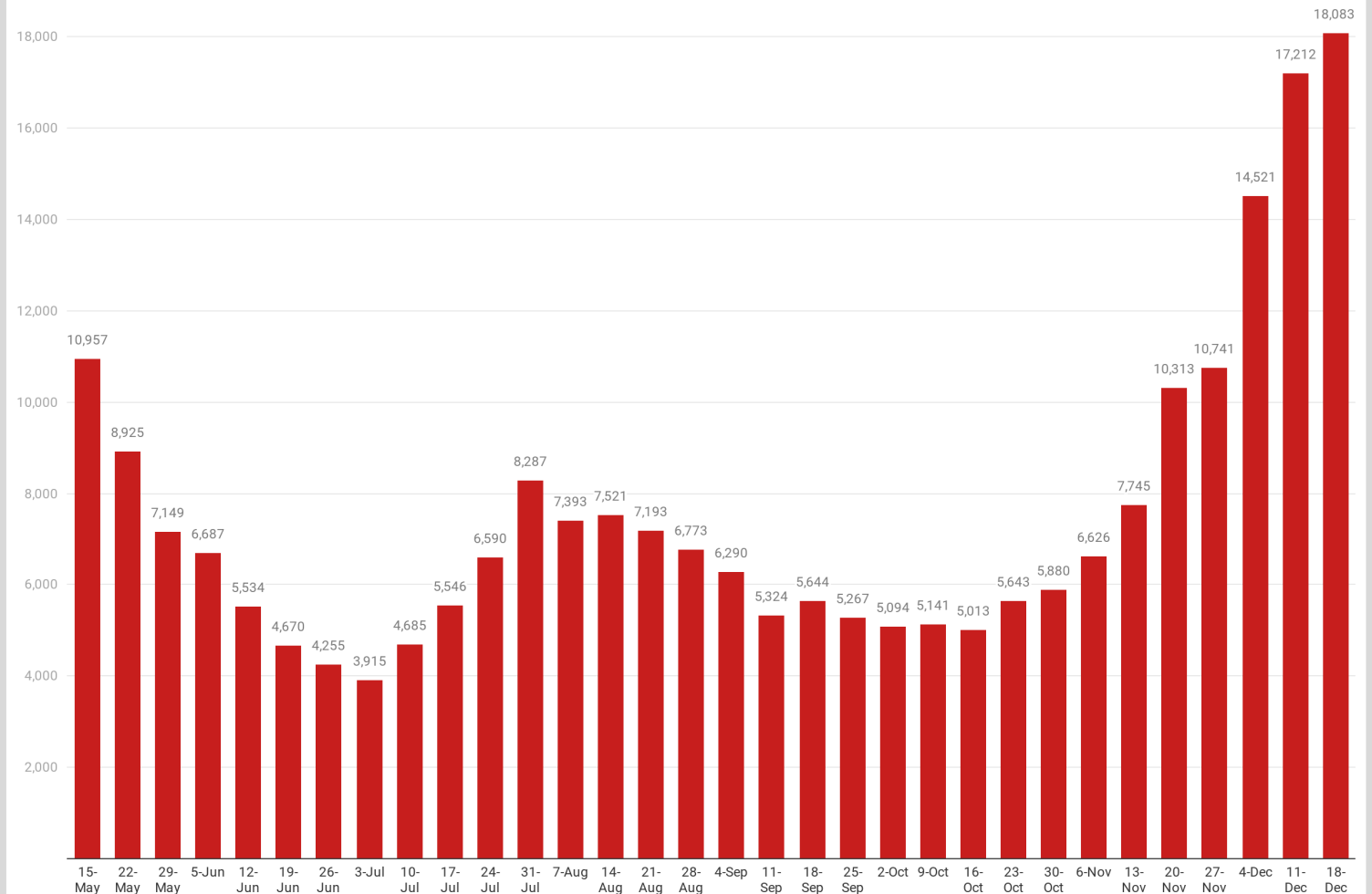
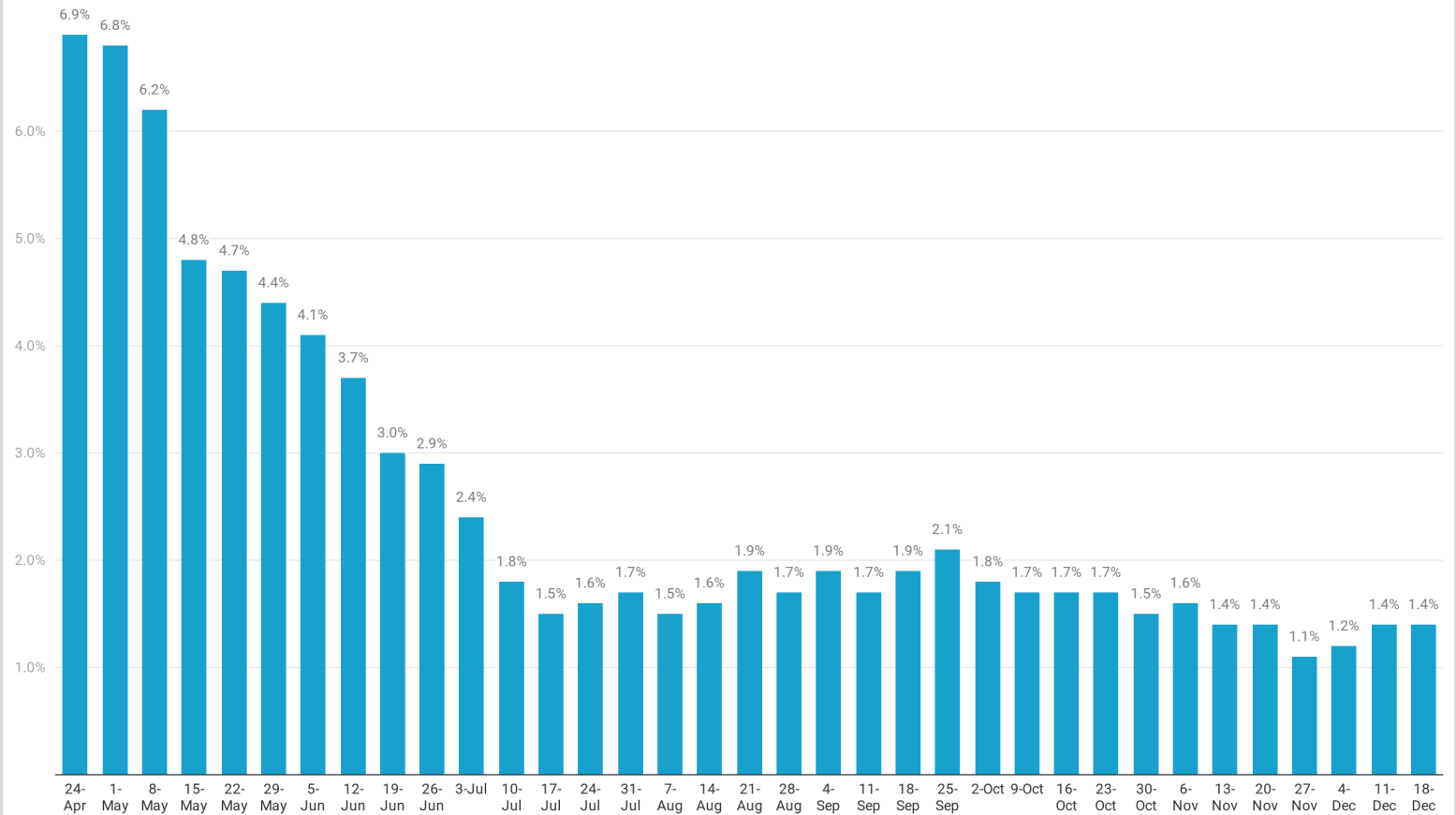


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

The case fatality rate has been stable for the past two months

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

For the 7 days ending on date shown



Deaths : New Cases, 2 week lag

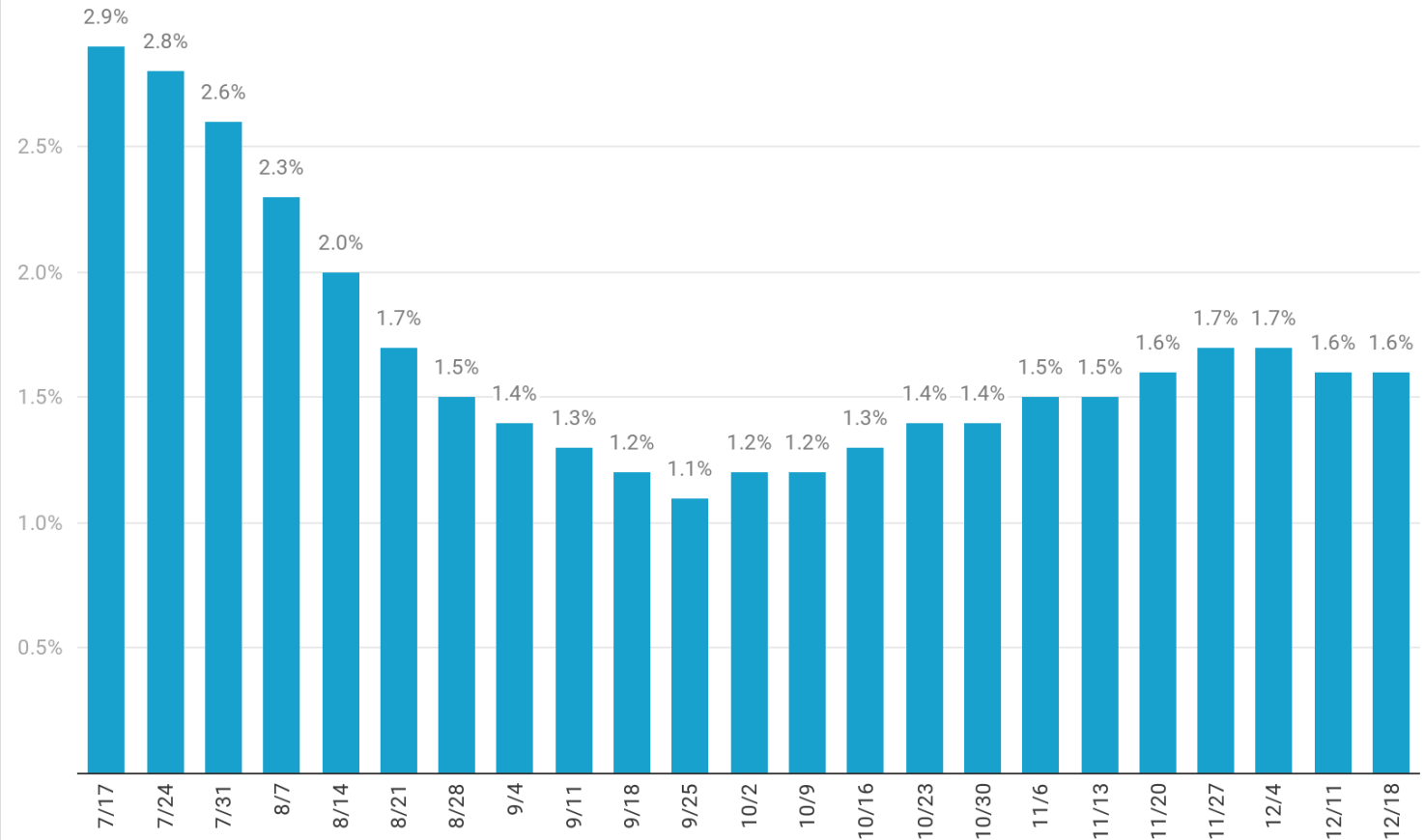
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Only about 1.6% of actively-infected persons are in the hospital – holding steady with recent week's experience

Despite the recent increase in Covid-19 inpatients, the likelihood of a detected & actively-infected person being in the hospital is significantly lower than what it was in mid-July

Estimated % of Detected & Active Covid-19 Patients in the Hospital

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 & Worldometers.info • Created with Datawrapper

Eleven weeks into the 2020-21 flu season, flu visits are trending lower than each of the past five years

Note that we have entered the period when flu visits accelerated in prior years – something that has not yet occurred this season

% of Visits For Influenza-Like Illnesses, National Summary

By Week & Flu Season

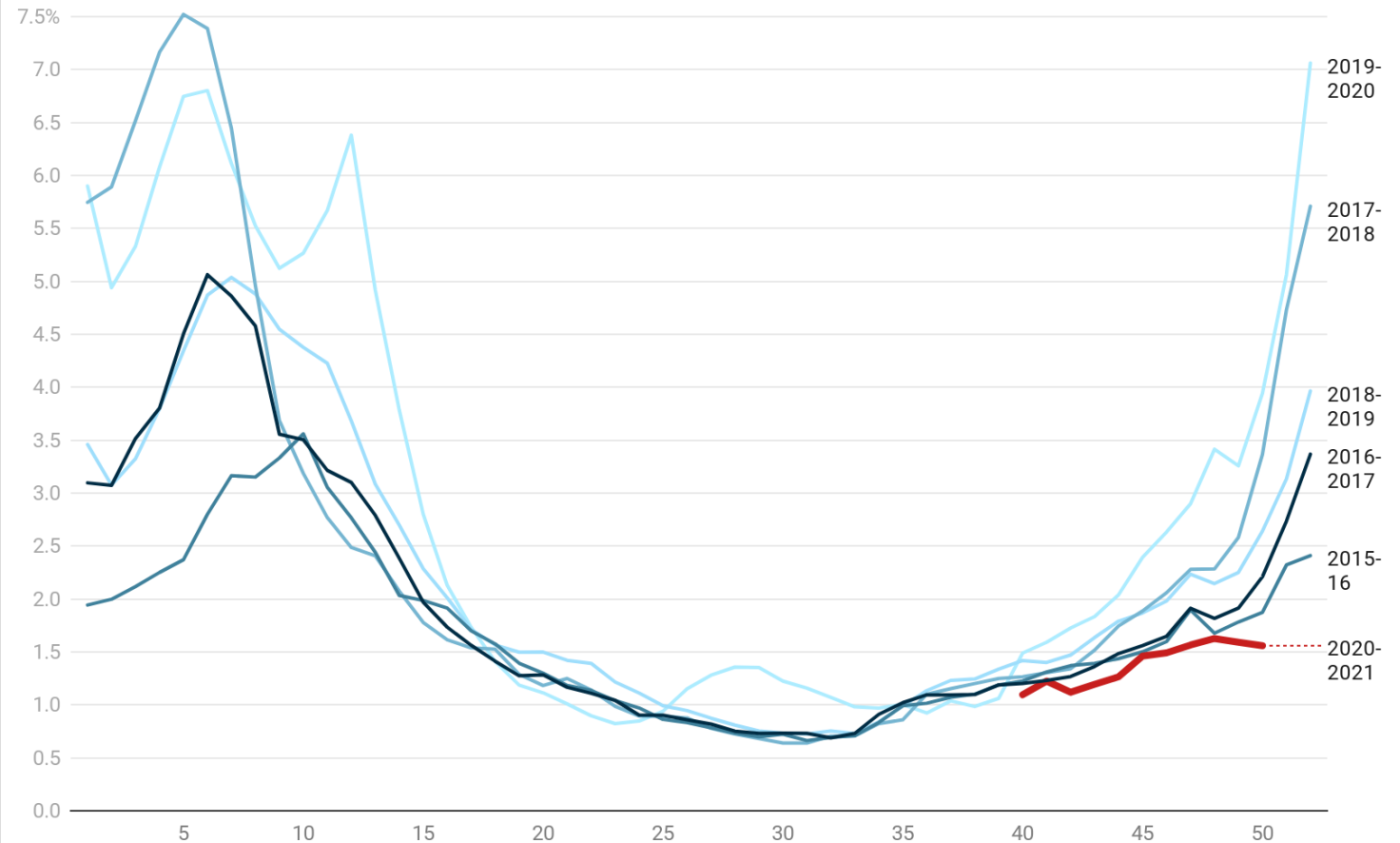


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control & Prevention • Created with Datawrapper

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>