

Covid-19 Report

Issue # 262

January 16, 2021

Covid-19 Highlights

- As feared, **deaths reported with the coronavirus continue to increase week-over-week. For the second successive week, these deaths exceeded 3,000 per day.** Tragically, with the increases in new cases over the past month, the number of deaths is likely to continue increasing each week for the next several weeks
- **Test volume finally increased on a week-over-week basis** - it had tapered off for the past several weeks. **Test volume last week was the highest of any week during the pandemic;**
- The test-positive rate also improved from the prior week; however, it remains higher than the desired level
- **Newly-detected cases declined last week. Excepting holiday weeks (which were impacting by reporting delays), the last time that new cases fell week-over-week was back in mid-September**
 - As in previous weeks, California led the states in both the number of new cases for the week and the week-over-week increase in the number of new cases
 - California, Texas, Florida, and New York accounted for 40% of the new cases reported last week
 - **Encouragingly, only eleven states experienced week-over-week increases in the number of new cases; Florida had more than 25,000 fewer new cases this week than last week**
- **Estimated actual infections also declined last week**, using the [Yale School of Public Health model](#); with this measure as well, it was back in mid-September that estimated new infections had fallen week-over-week
- Hospital occupancy continues to be a concern, with more than 40% of our nation's inpatient beds occupied by Covid-19 patients. **For the first time since late-September, however, Covid-19 hospital occupancy did not increase on a week-over-week basis**
 - The number of Covid-19 ICU patients increased week-over-week; however, this increase was smaller than for any week since the beginning of October
 - Similarly, the number of Covid-19 ventilator patients increased week-over-week; however, this increase also was smaller than for any week since the beginning of October
- **Vaccinations have ramped more slowly than anticipated** (here is where we need your leadership, Andy!). **Nonetheless, last week, we neared a million doses per day, the level that we had been modeling based on having two approved vaccines**
- **Based on the vaccinations to-date and estimated infections (using the Yale model referenced above), the percentage of Americans with presumed immunity increased modestly week-over-week but remains at about one-fourth to one-third of the level needed for herd immunity.** At this point, most of the existing immunity is from infection, not from vaccination

Covid-19

Testing

Testing finally returned and in fact exceeded previous high-water marks;
Test-positive% rate improved but, still exceeds the desired level

Weekly Tests - United States

For the 7 days ending on date shown

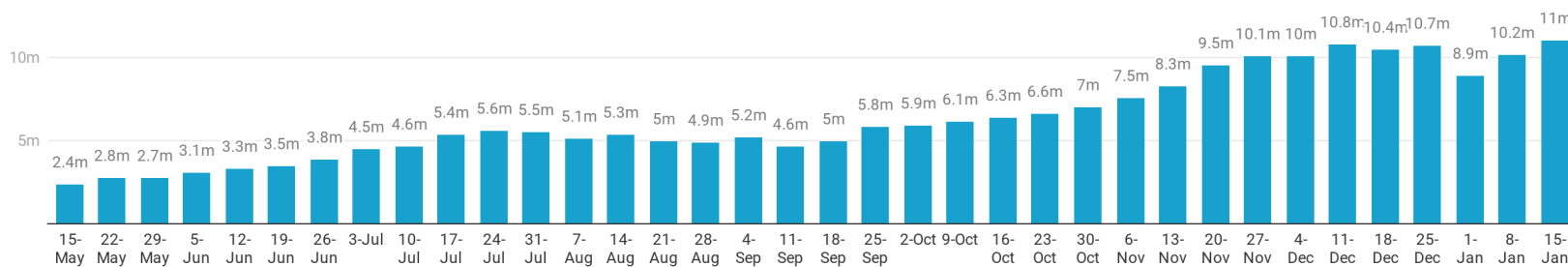


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

Weekly Test-Positive% - United States

For the 7 days ending on date shown

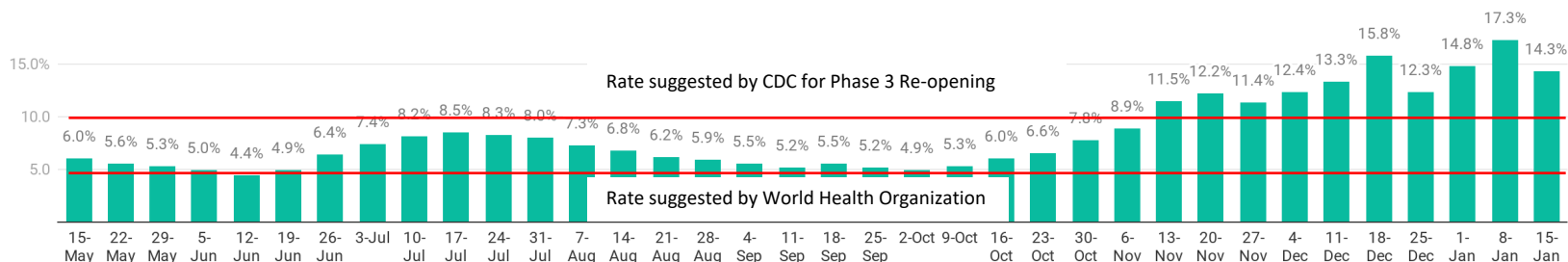


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking project • Created with Datawrapper

Newly Detected Cases

Ignoring weeks impacted by holiday reporting interruptions, new cases fell week-over-week for the first time since mid-September

Weekly New Detected Cases - United States

For the 7 days ending on date shown

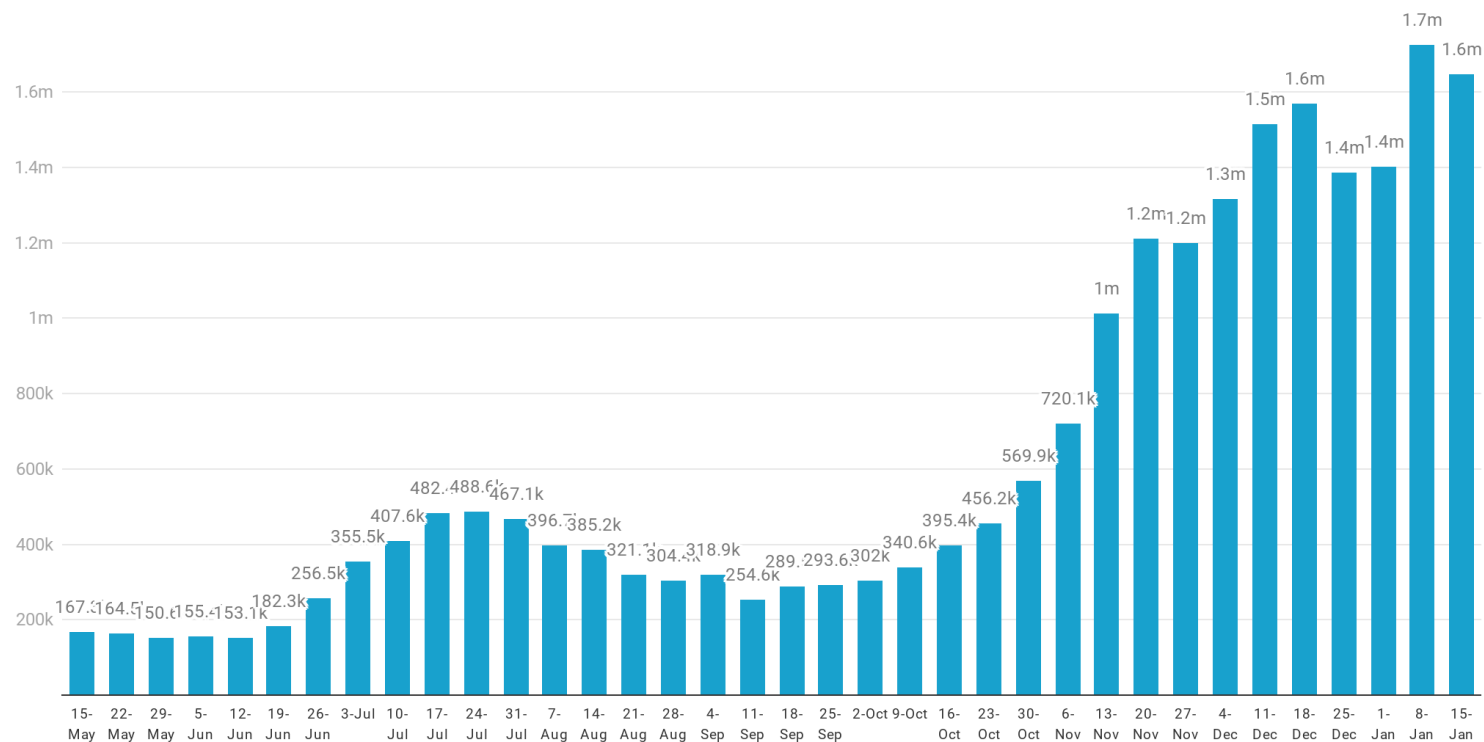


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

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Newly Detected Cases - By State

California was most-heavily impacted by newly detected cases over the past 7 days; followed in order by Texas, Florida and New York; collectively, these states accounted for 40% of new cases in the US last week

New Weekly Detected Cases - By State

January 2-8

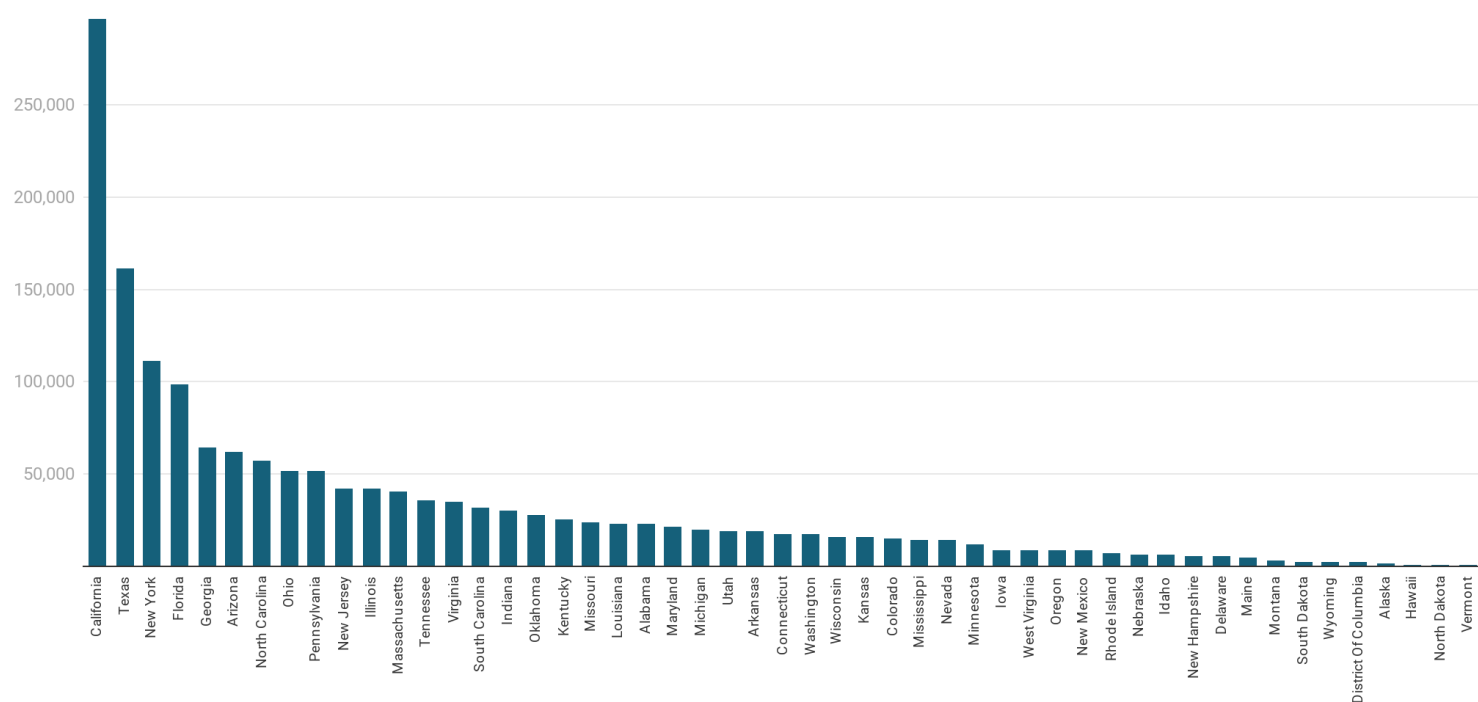


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

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Week-Over-Week Change in Newly Detected Cases

California also reported the largest week-over-week increase in new cases; only eleven states, however, experienced a week-over-week increase in the number of new cases

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

January 8-15 V. January 1-7

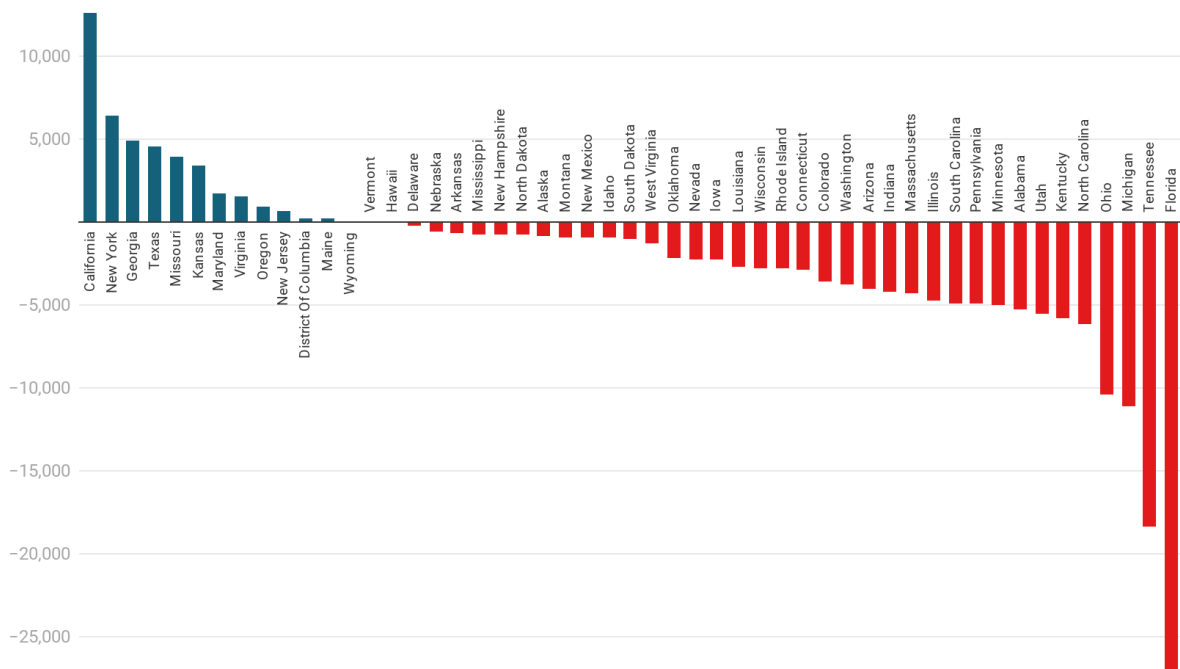


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

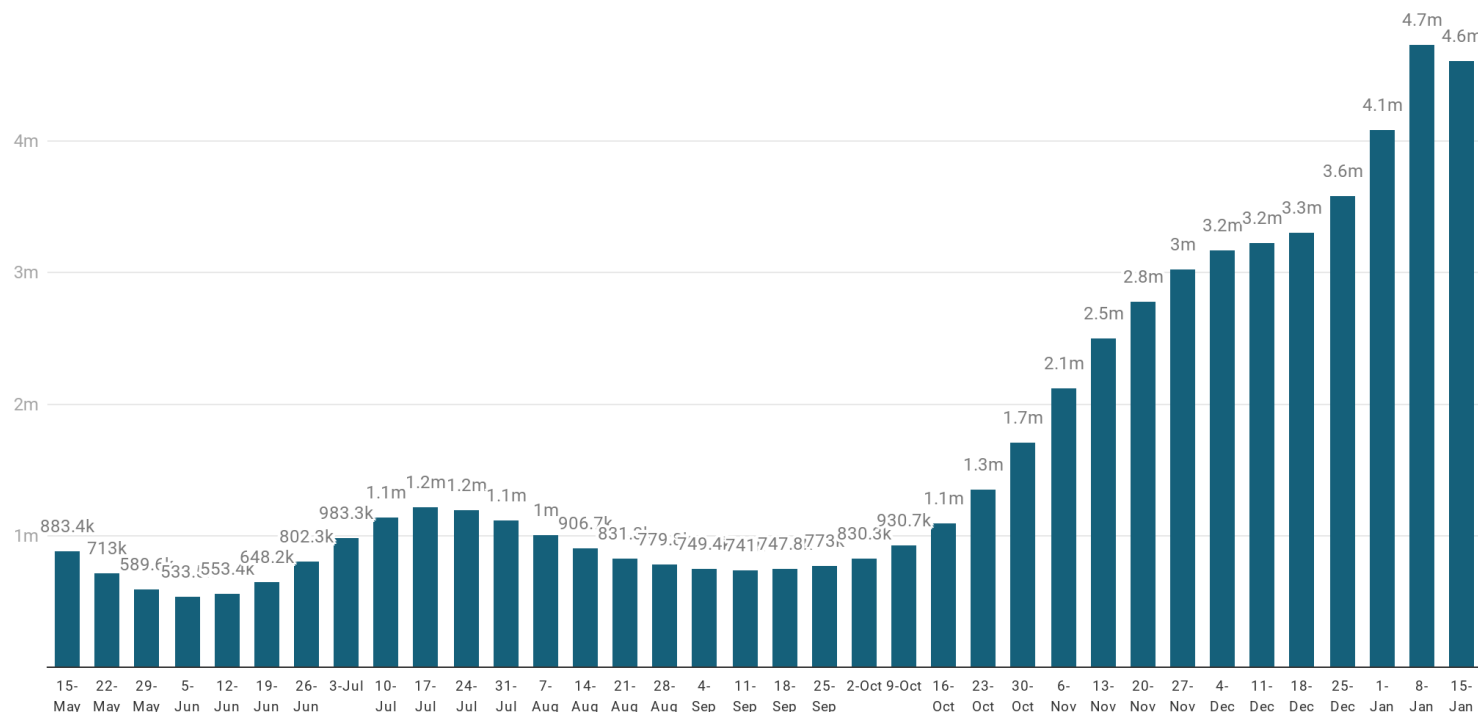
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Estimated True Infections – Yale Model

The Yale School of Public Health model estimates that true infections fell last week – the first time this has occurred since mid-September

Weekly New Estimated Infections - Yale Model

For the 7 days ending on date shown



Youyang Gu's estimates

Chart: Health Industry Advisor LLC • Source: Yale School of Public Health • Created with Datawrapper

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Active Cases

There are an estimated 9.5 million people in the US currently dealing with Covid-19 symptoms (known, detected cases)

Current Active Cases - United States

For the 7 days ending on date shown

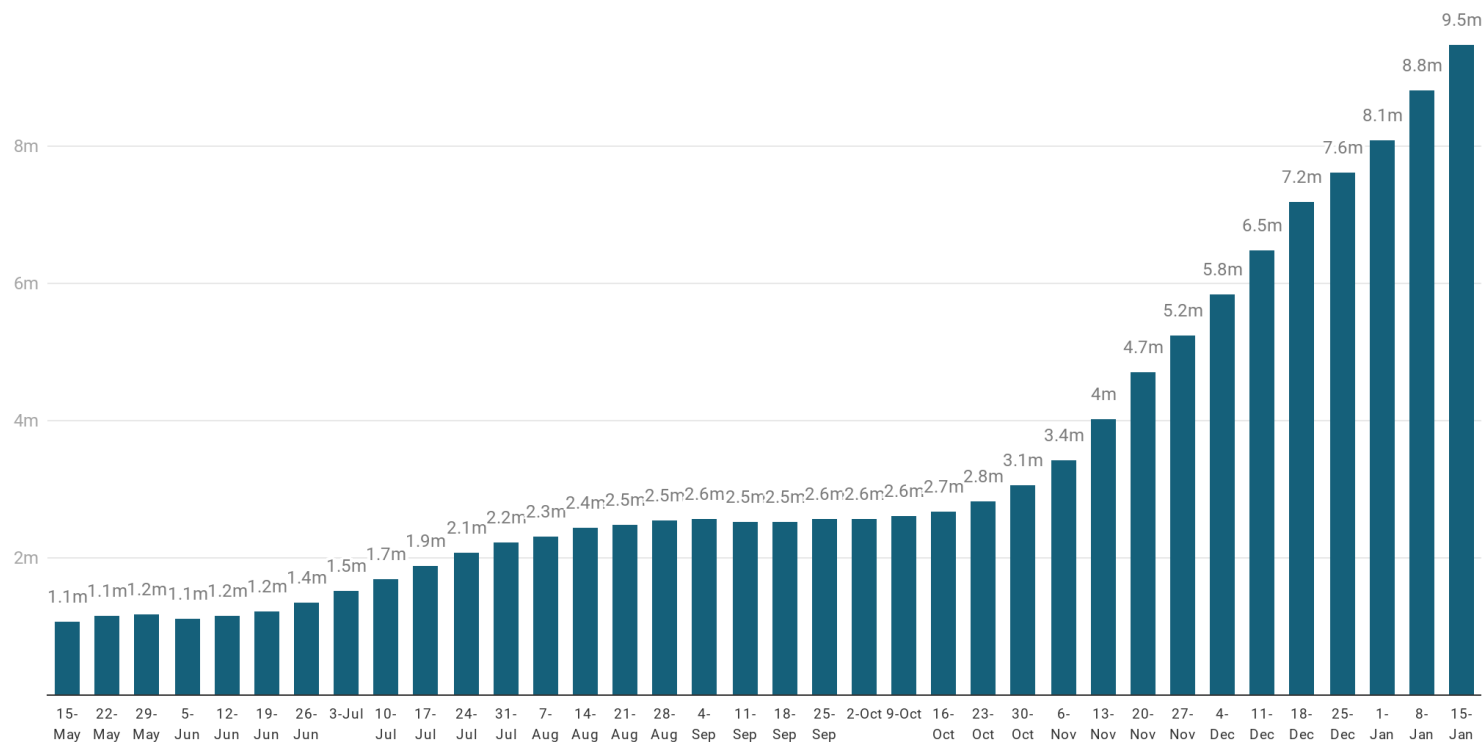


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

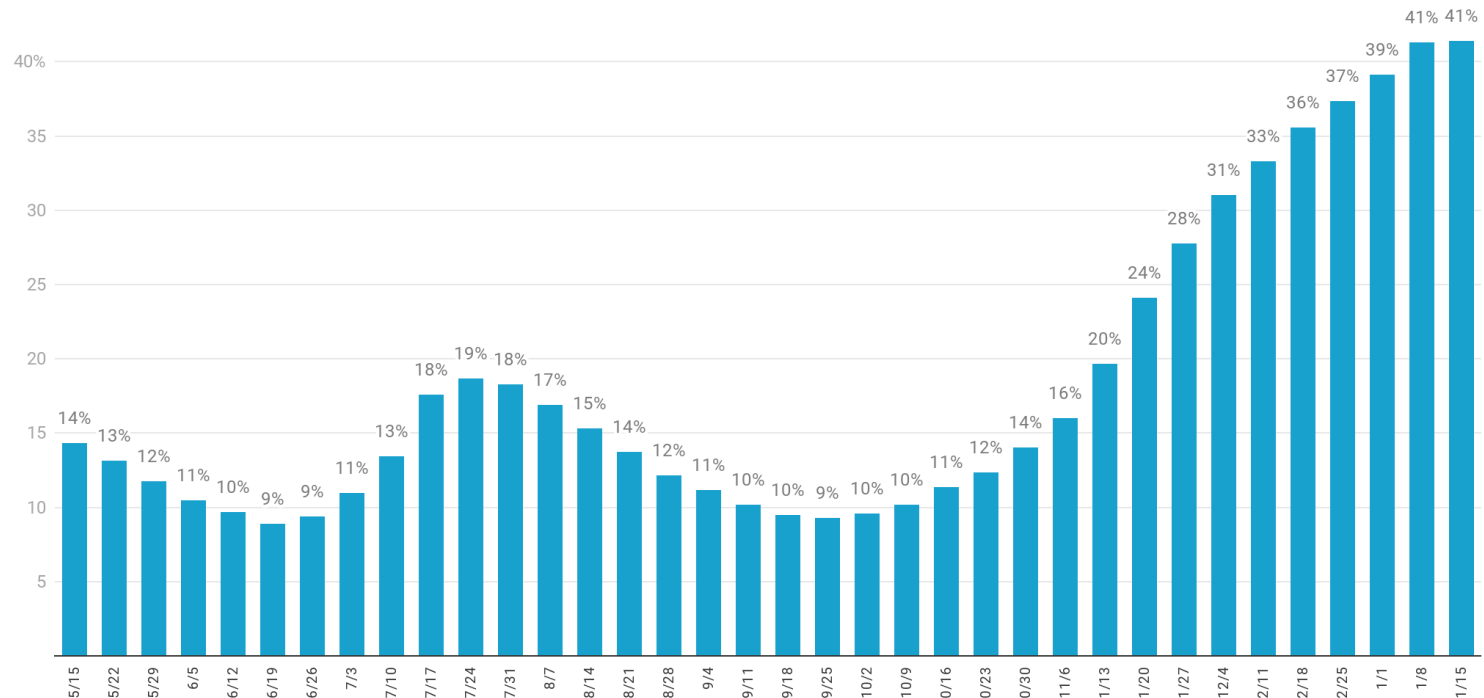
Covid-19 Hospital Occupancy

Covid-19

Covid-19 patients currently occupy more than 40% of all inpatient beds in the US; however, this rate was unchanged week-over-week. This was the first time since late-September that it did not increase week-over-week

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 Patient Days / 100 New Cases

Covid-19

The rate of patient days per new case increased last week; nonetheless, this rate remains significantly lower than it was in the summer

Covid-19 Inpatient Days / 100 New Cases

For the 7 days ending on the date shown

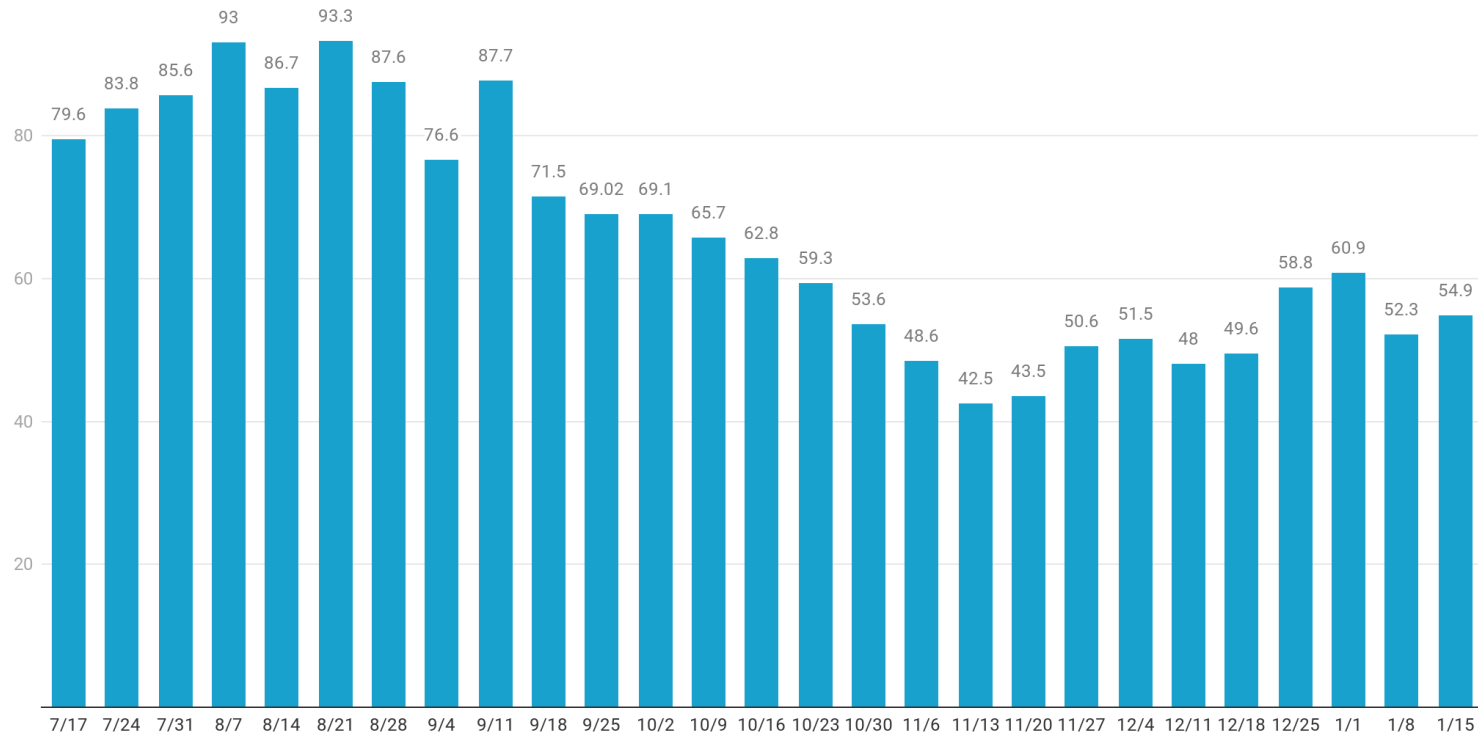


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project & worldometers.info • Created with Datawrapper

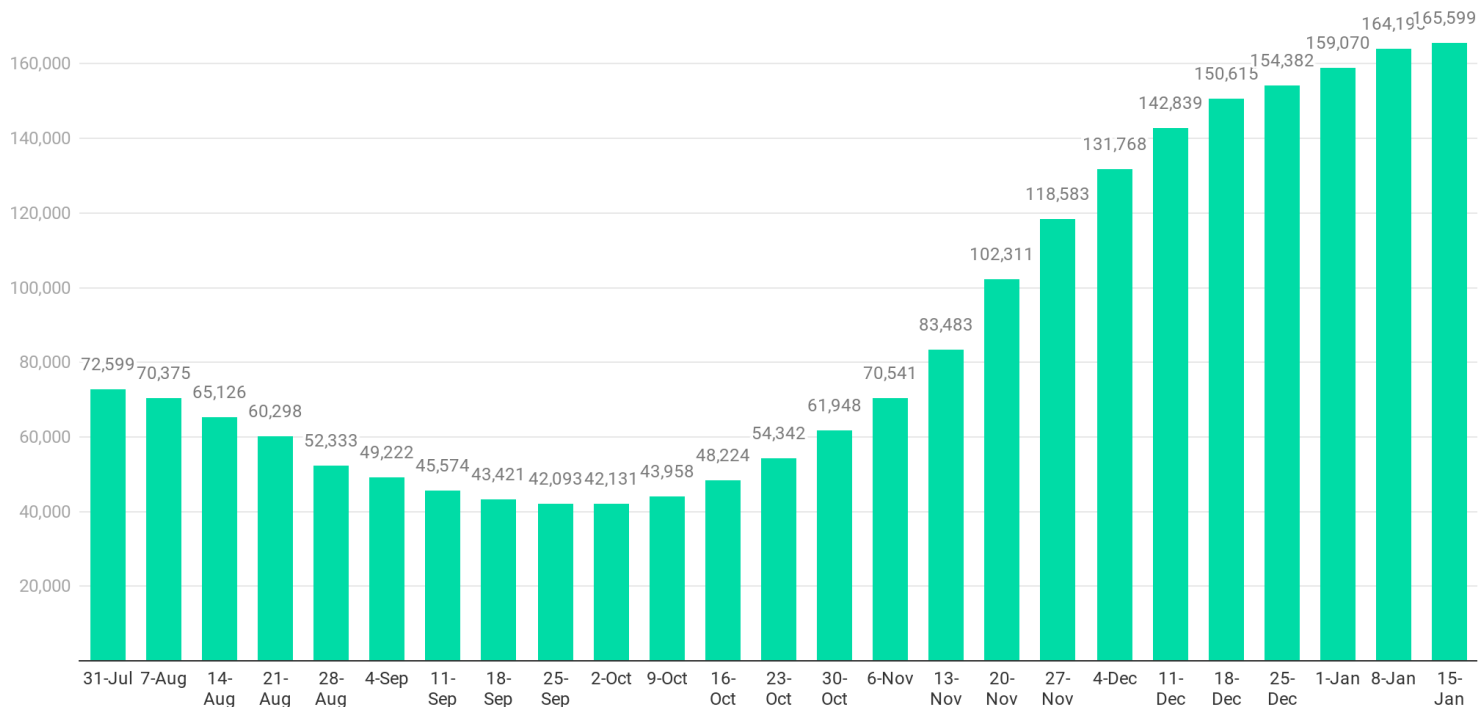
Covid-19 ICU Patient Days

Covid-19

The number of days that Covid-19 patients spent in the ICU rose again last week; albeit at the slowest rate since the beginning of October

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

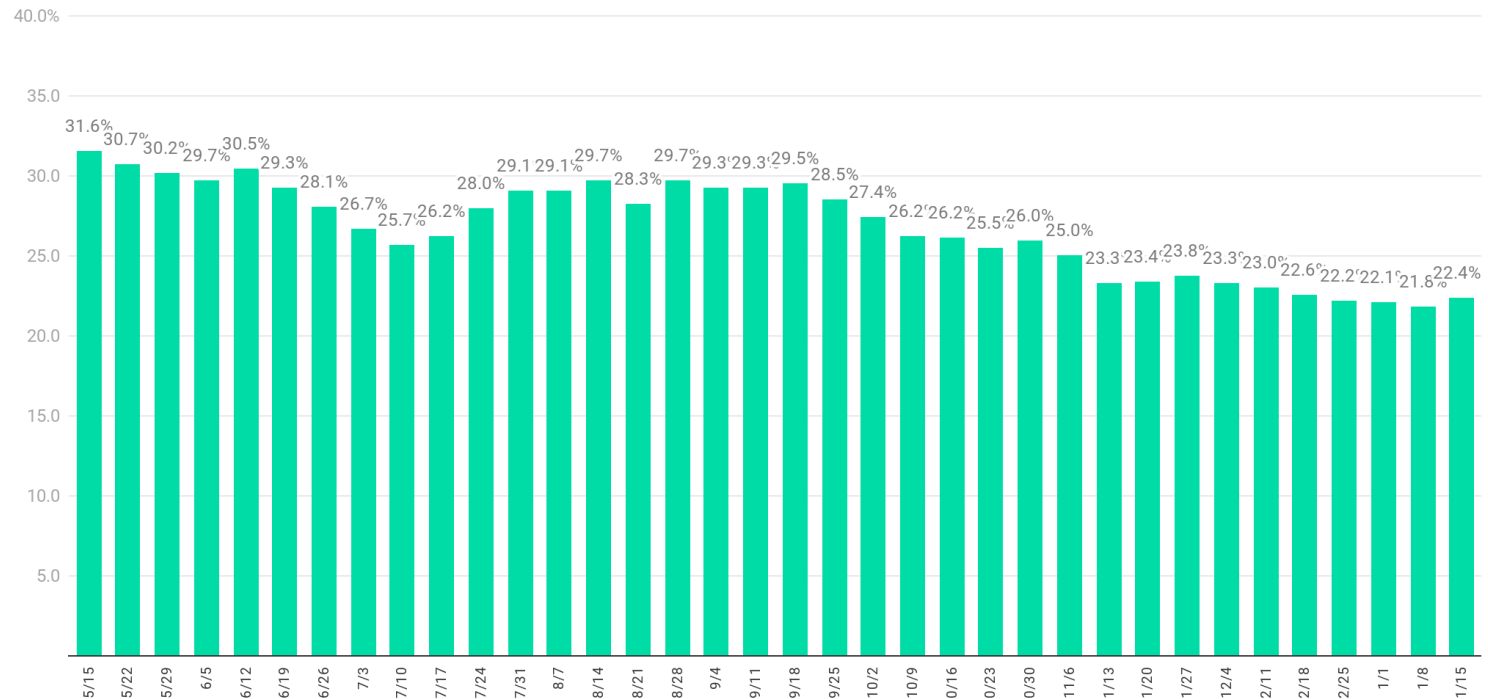
Mix of Covid-19 Patients: % in ICU

Covid-19

The % of Covid-19 patients requiring intensive care last week was in-line with where it has been for the past five weeks

% 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

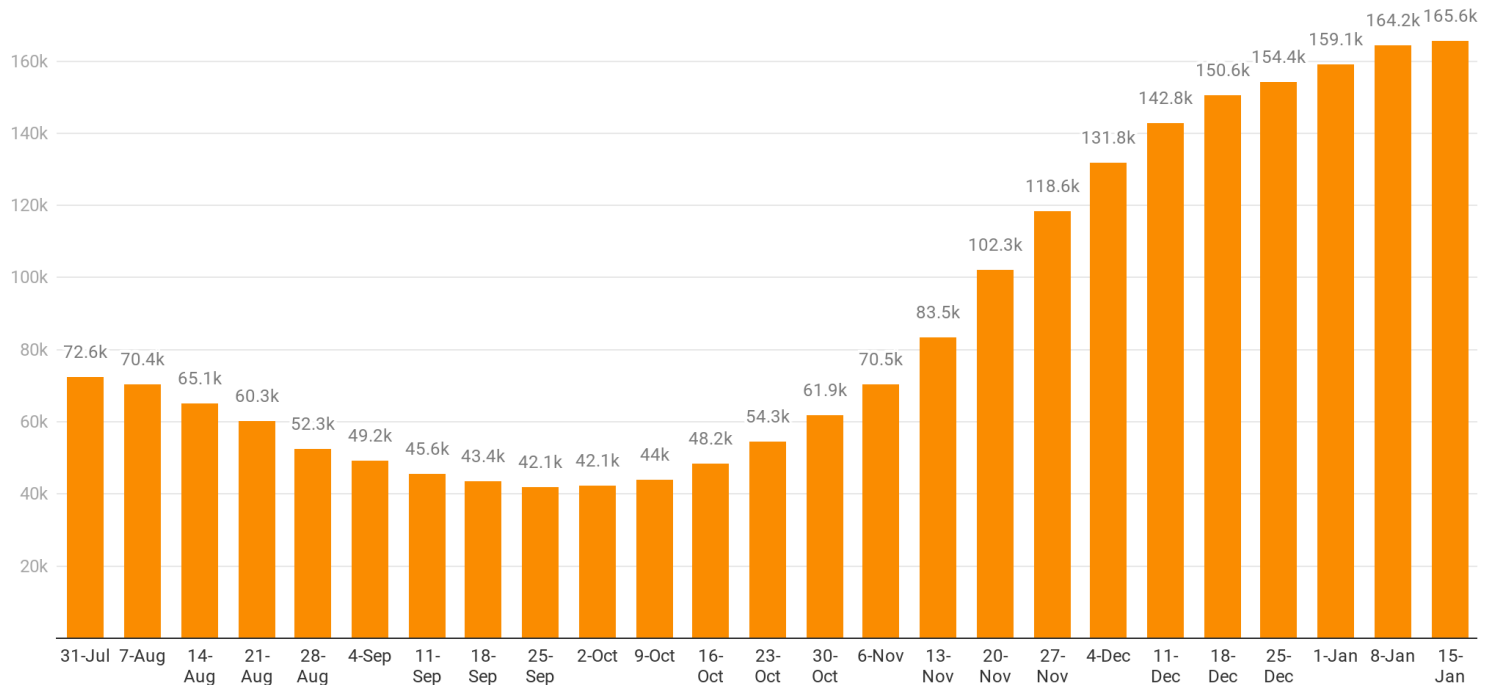
Covid-19 Ventilator Days

Covid-19

The number of days that Covid-19 patients spent on ventilators increase last week – however, this increase was smaller than it has been since the beginning of October

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

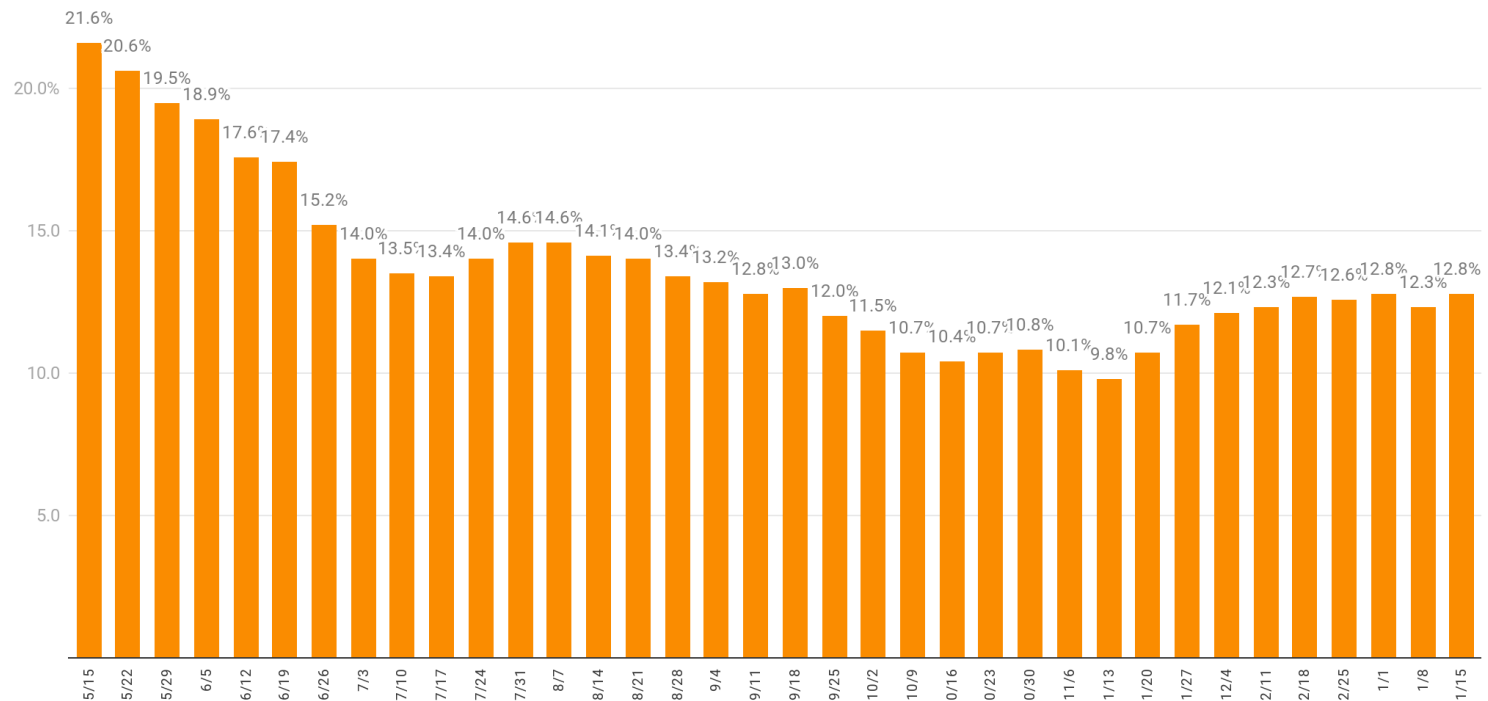
Mix of Covid-19 Patients: % on Ventilators

Covid-19

The % of Covid-19 patients requiring ventilator care increased slightly last week yet, remains in-line with where it has been for the past five weeks

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

Deaths With Coronavirus

Covid-19

Tragically, more people passed away last week with coronavirus than during any other since the pandemic began

Weekly Deaths - United States

For the 7 days ending on date shown

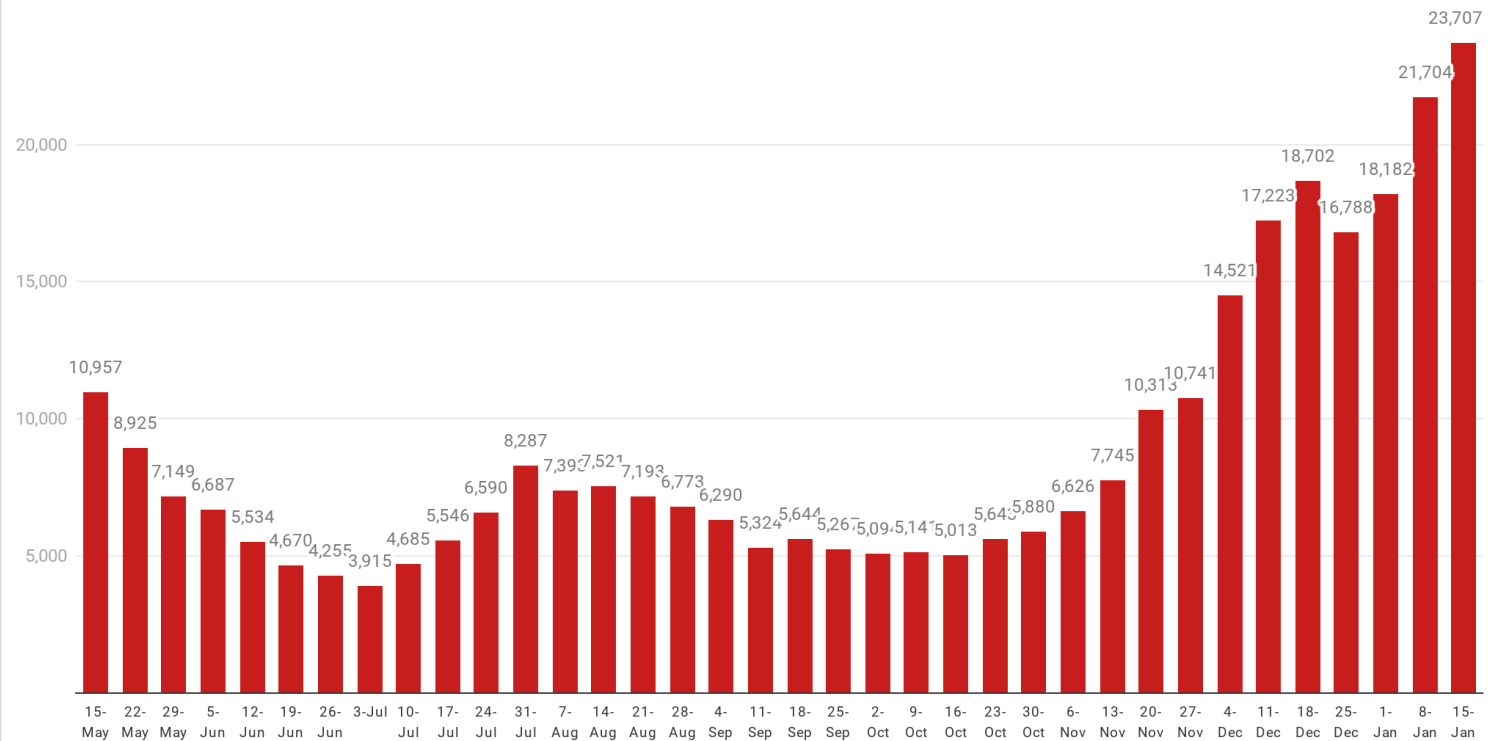


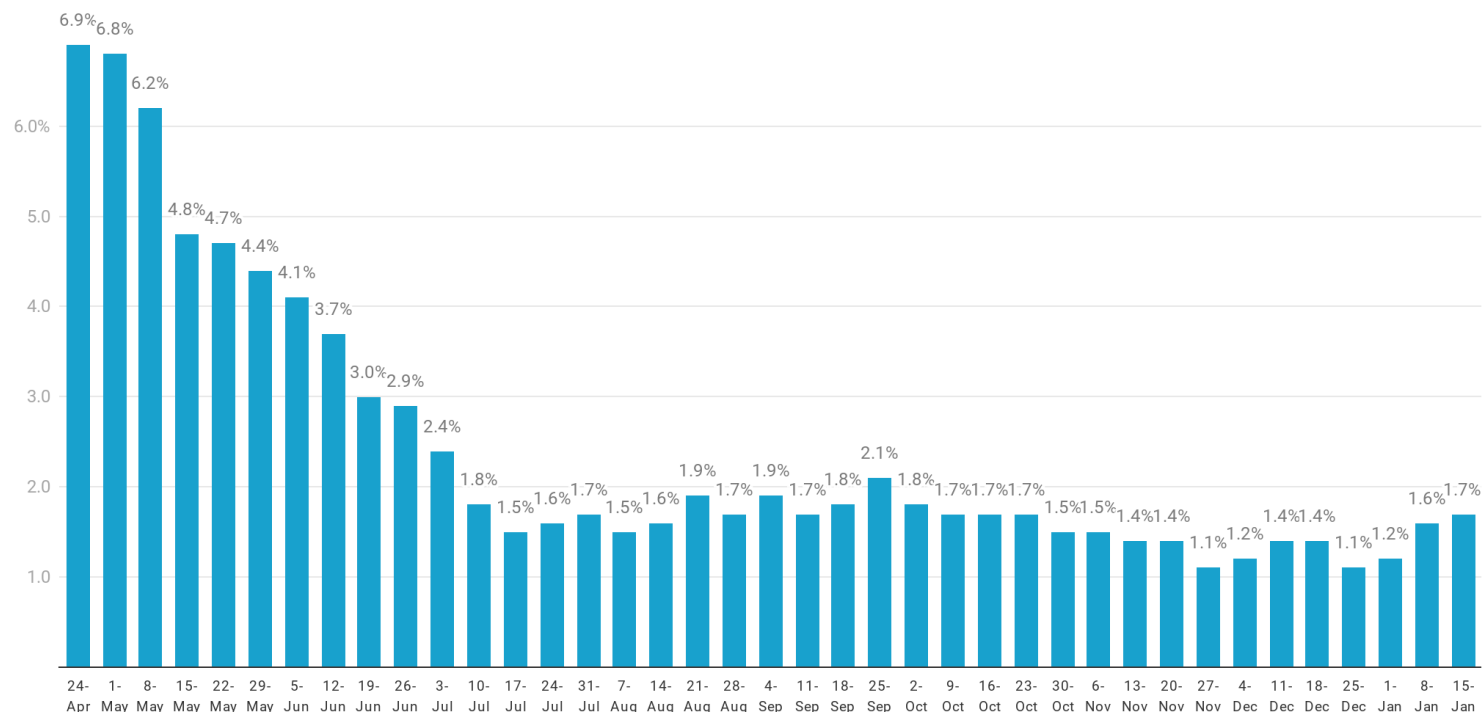
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Case Fatality Rate: 2-Week Lag From Case Detection

The case fatality rate rose slightly this week but, remains within the range experienced since the beginning of July

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

Mix of Cases – Active, Recovered, Death & Undetected

Although improving over time, most cases still go undetected

How has the mix of cases changed over time?

As of the date shown

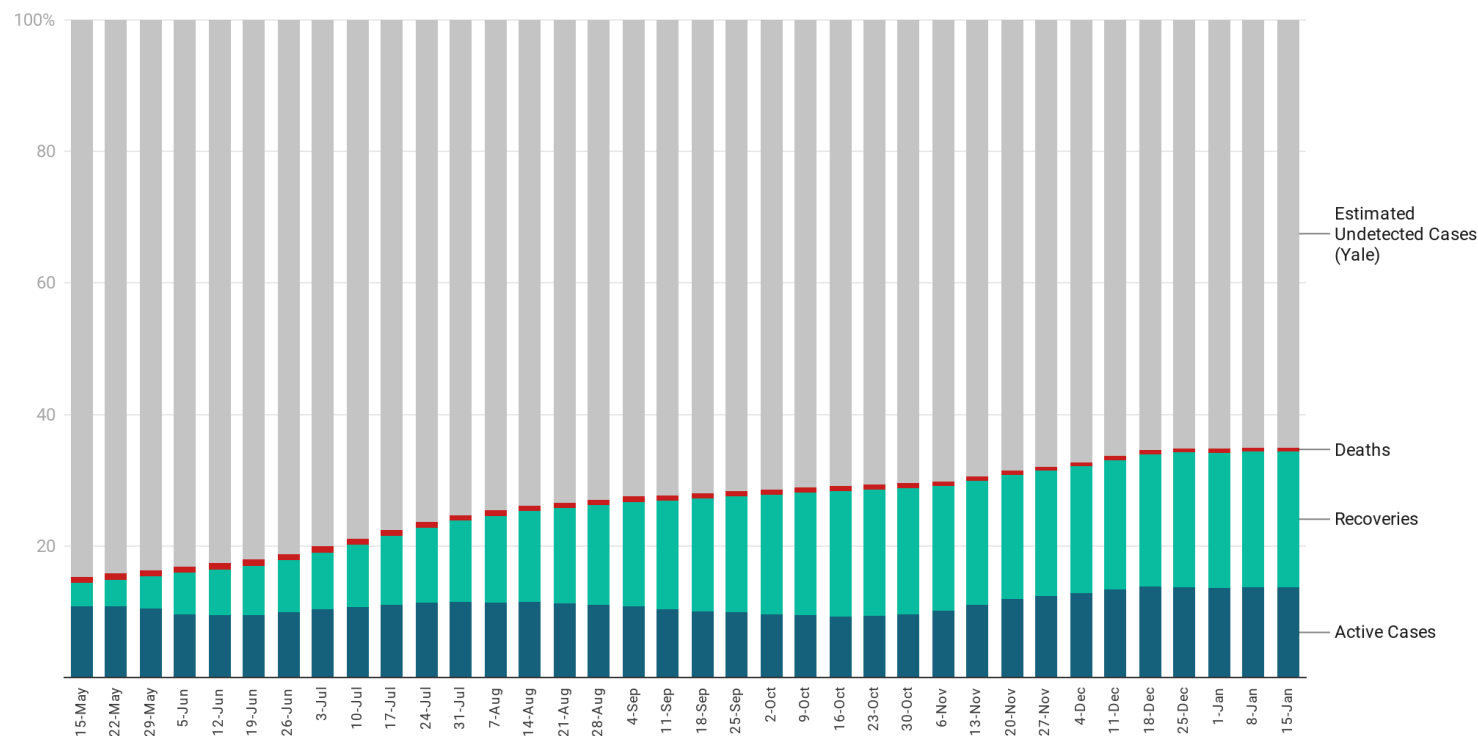


Chart: Health Industry Advisor LLC • Source: worldometers.info & Yale School of Public Health • Created with Datawrapper

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Vaccination and Immunity Status - US

The vaccination effort in the US has started slowly; in the past week, however, it neared the 1 million dose per day level that was anticipated; Thus far, immunity is largely due to prior infection, not new vaccinations

Covid-19 Vaccinations - US

As of the date shown

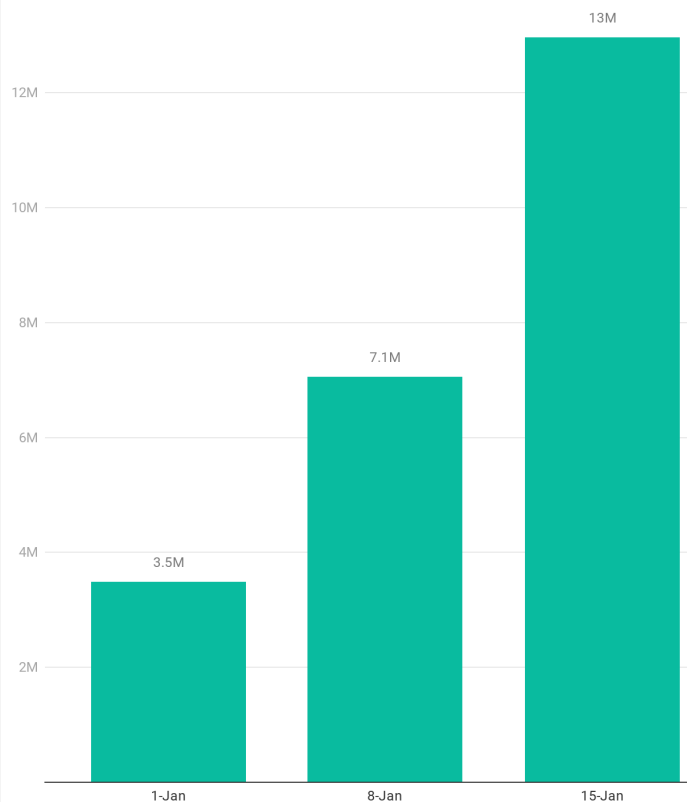
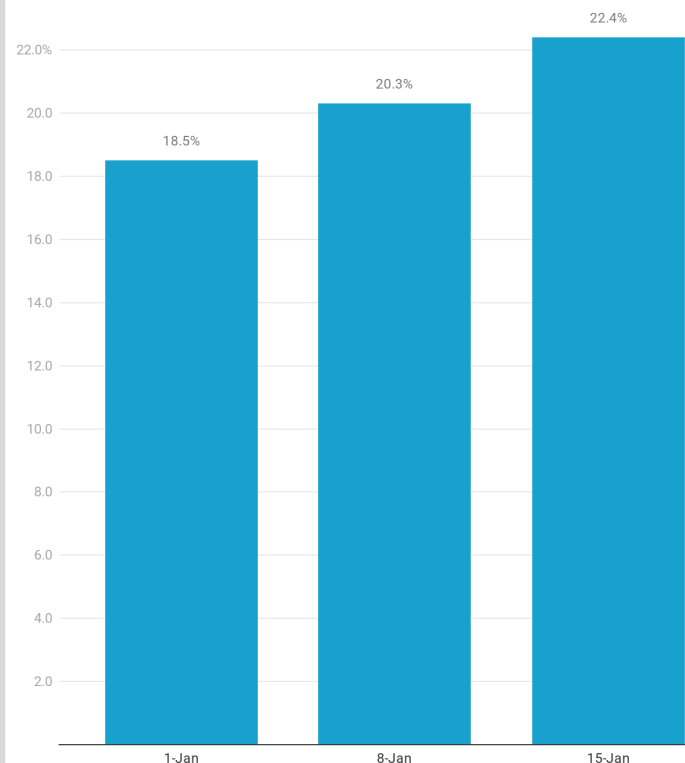


Chart: Health Industry Advisor LLC • Source: Bloomberg • Created with Datawrapper

Estimated % Immunity - US

Based on Vaccination Rate and Estimated True Infections (Yale Model)



Immunity from vaccinations presumes 2 shots per person; does not reflect the time required to reach full immunity (estimated 2 weeks)

Chart: Health Industry Advisor LLC • Source: Yale School of Public Health and Bloomberg • Created with Datawrapper

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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 and Prevention, National, Regional, and State Level Outpatient Illness and Viral Surveillance <https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html>
- Centers for Disease Control and Prevention, COVID-19 Laboratory-Confirmed Hospitalizations https://gis.cdc.gov/grasp/COVIDNet/COVID19_5.html
- Centers for Disease Control and Prevention, COVID Data Tracker <https://www.cdc.gov/covid-data-tracker/index.html#mobility>
- Centers for Disease Control and Prevention, Vaccines, <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/index.html>
- 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>
- Bloomberg Vaccine Trackers, <https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/?sref=Z0b6TmHW>