

Covid-19 Report

Issue # 256

January 9, 2021

Covid-19 Highlights

- Starting with a bit of encouraging news: the vaccination process continues to ramp in the US: yesterday, we reported that the number of vaccines increased by 60% and 80% over the previous two days, respectively. **Yesterday, another 865k Americans were vaccinated, an increase of 22.3% from the number vaccinated on Thursday**
- **The other encouraging news: the number of hospitalized Covid-19 patients declined for the second consecutive day. What makes this particularly notable: hospital census typically is highest on Thursdays and Fridays yet, fewer Covid-19 patients were hospitalized on these two days**
- Test volume rebounded from its holiday season-low yet, remains lower than it was in early December; **the test-positive rate rose last week to its highest level since at least May**
- **Newly detected cases similarly rebounded from the underreported levels of the holiday season and are at all-time highs;** if there is any sliver of encouragement from these data, these were lower than had the pre-Christmas growth trend in new cases continued
 - California saw the most new-cases - more than 16% of all new cases for the week; Collectively, California, Florida, New York and Texas accounted for 36% of the new cases for the week
- Most new infections still go undetected. Using the Yale School of Public Health model, **there were slightly more estimated-new infections last week than the prior week; these had sharply increased the prior week**
- Despite the two-day decline in Covid-19 patients, hospital occupancy continues to be a significant concern: **Covid-19 patients now occupy 41% of all inpatient beds. This rate has doubled since mid-November and is up 4x since early-October**
- **Covid-19 patients in the ICU rose again last week; this number has increased by 4x since mid-September.** Despite this increase, however, the % of Covid-19 patients requiring intensive care continues to decline each week; this % is now 1/3 lower than it was in May
- **The number of Covid-19 patients on ventilators was stable week-over-week; nevertheless, this number has increased by 5x since early-October.**
- Tragically, the number of deaths with coronavirus was sharply higher last week and, the most ever recorded in a single week. The number of reported deaths the prior two weeks was likely underreported due to holiday reporting interruptions

Covid-19

Testing

Testing picked-up the past week yet, remains below pre-Christmas levels;
Test-positive% rate was higher this week than any week since at least May

Weekly Tests - United States

For the 7 days ending on date shown

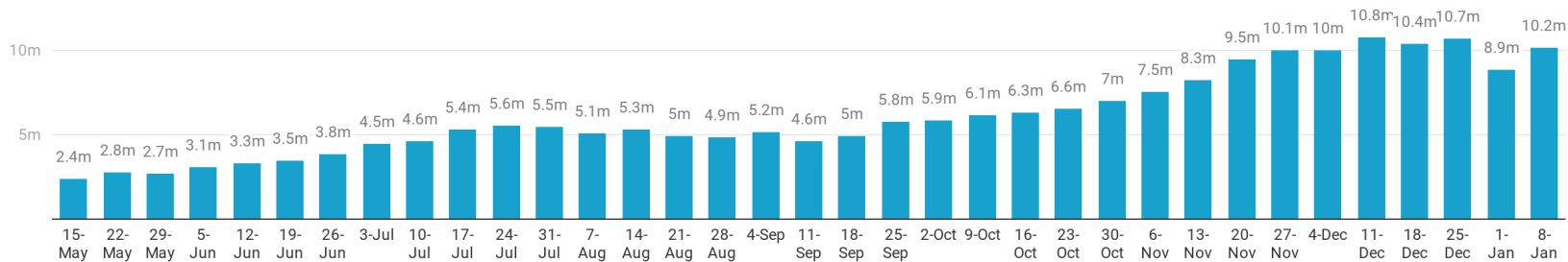


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

Weekly Test-Positive% - United States

For the 7 days ending on date shown

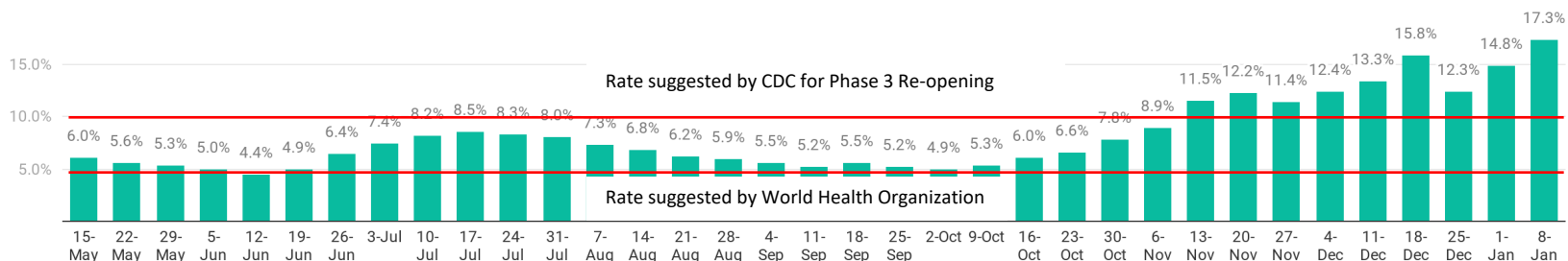


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking project • Created with Datawrapper

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Newly Detected Cases

The impact of reporting interruptions during the extended Holiday season are evident in this chart; Over the past 7 days, however, reported new cases have again set new highs

Weekly New Detected Cases - United States

For the 7 days ending on date shown

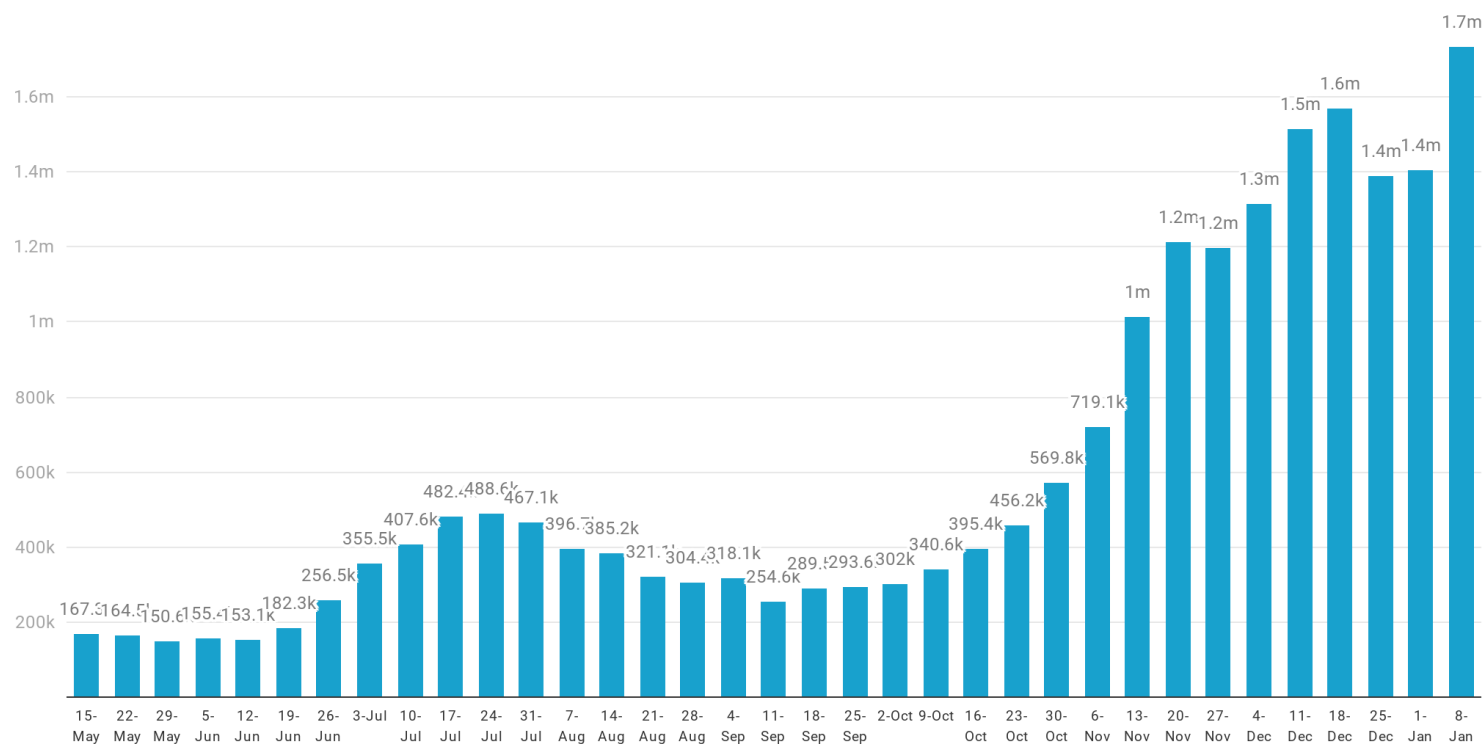


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

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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 36% of new cases in the US last week

New Weekly Detected Cases - By State

January 2-8

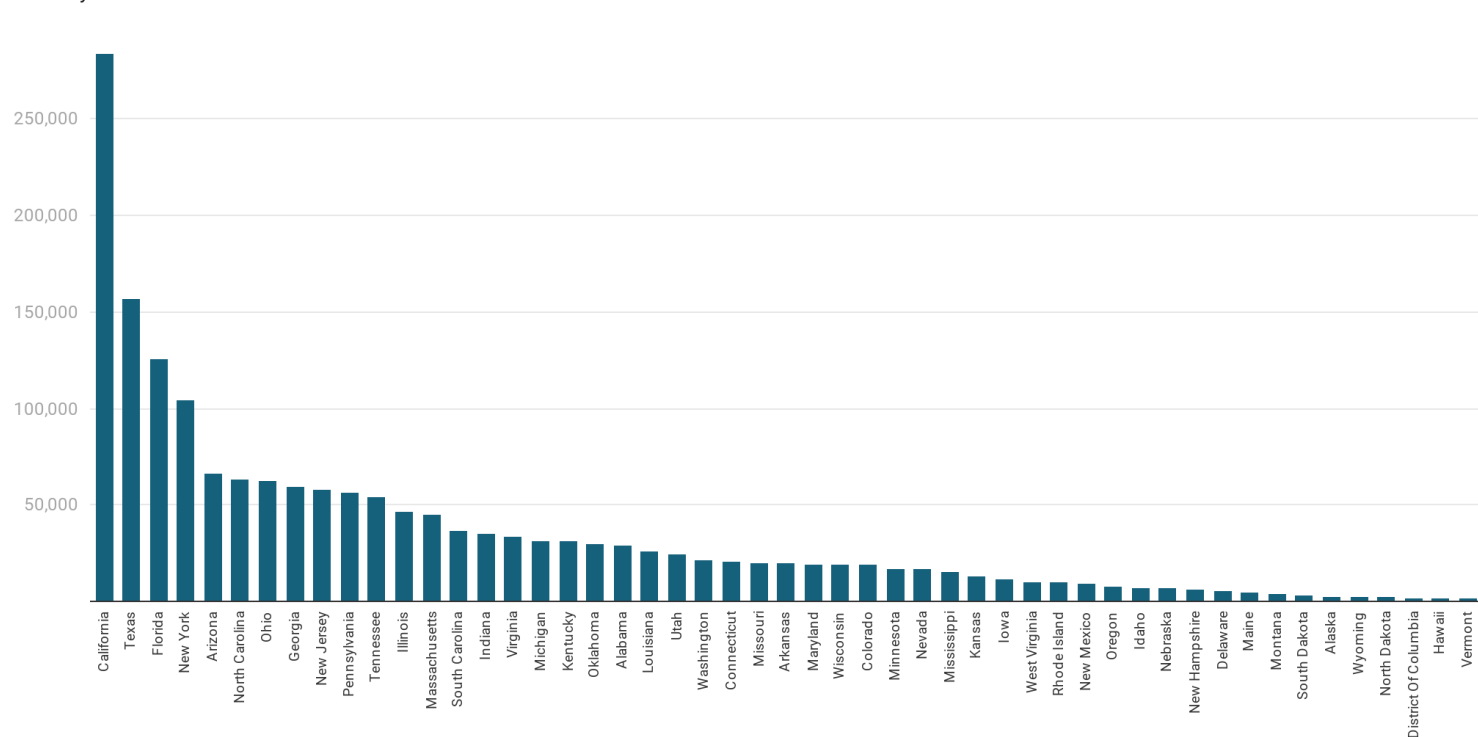


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

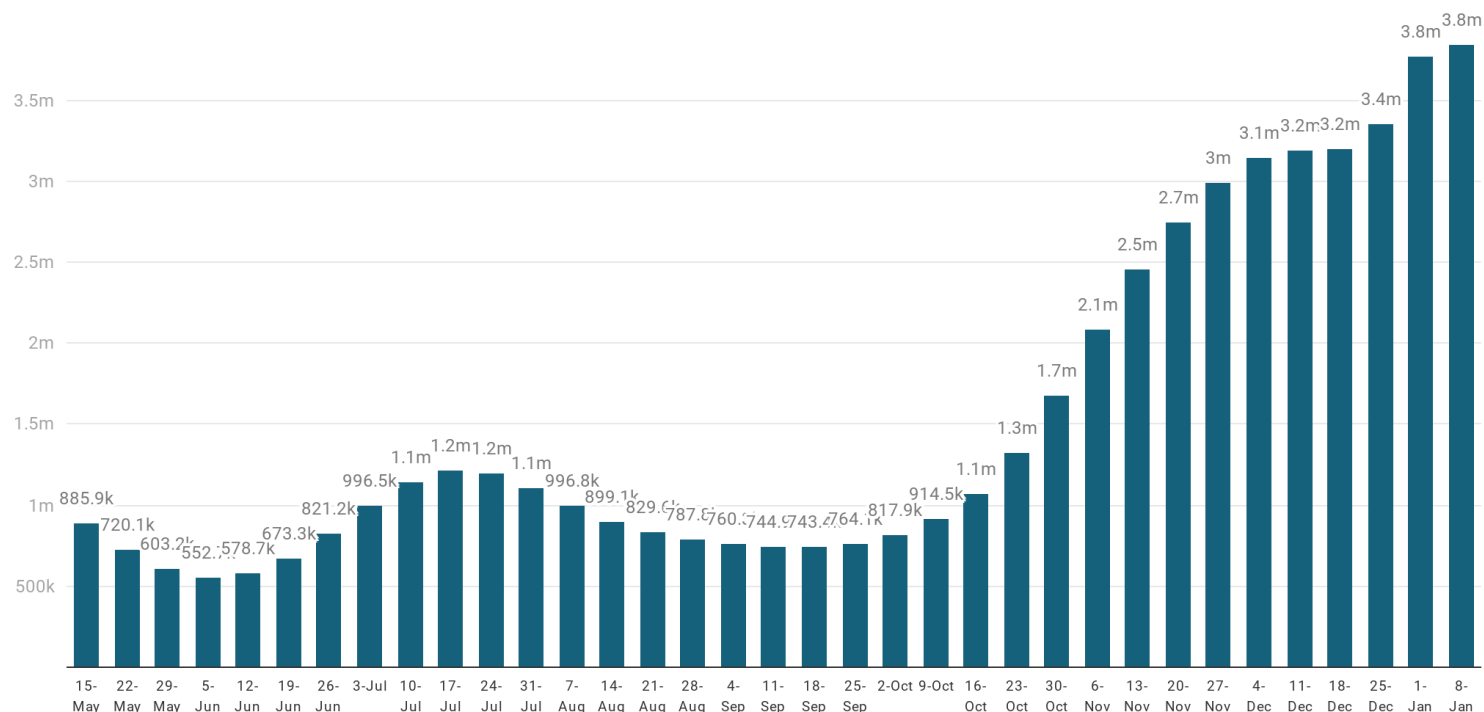
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Estimated True Infections – Yale Model

Most cases in the US continue to go undetected; The Yale School of Public Health model estimates that true infections rose sharply the last 2 weeks, after being somewhat stable through much of December

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 8.8 million people in the US currently dealing with Covid-19 symptoms

Current Active Cases - United States

For the 7 days ending on date shown

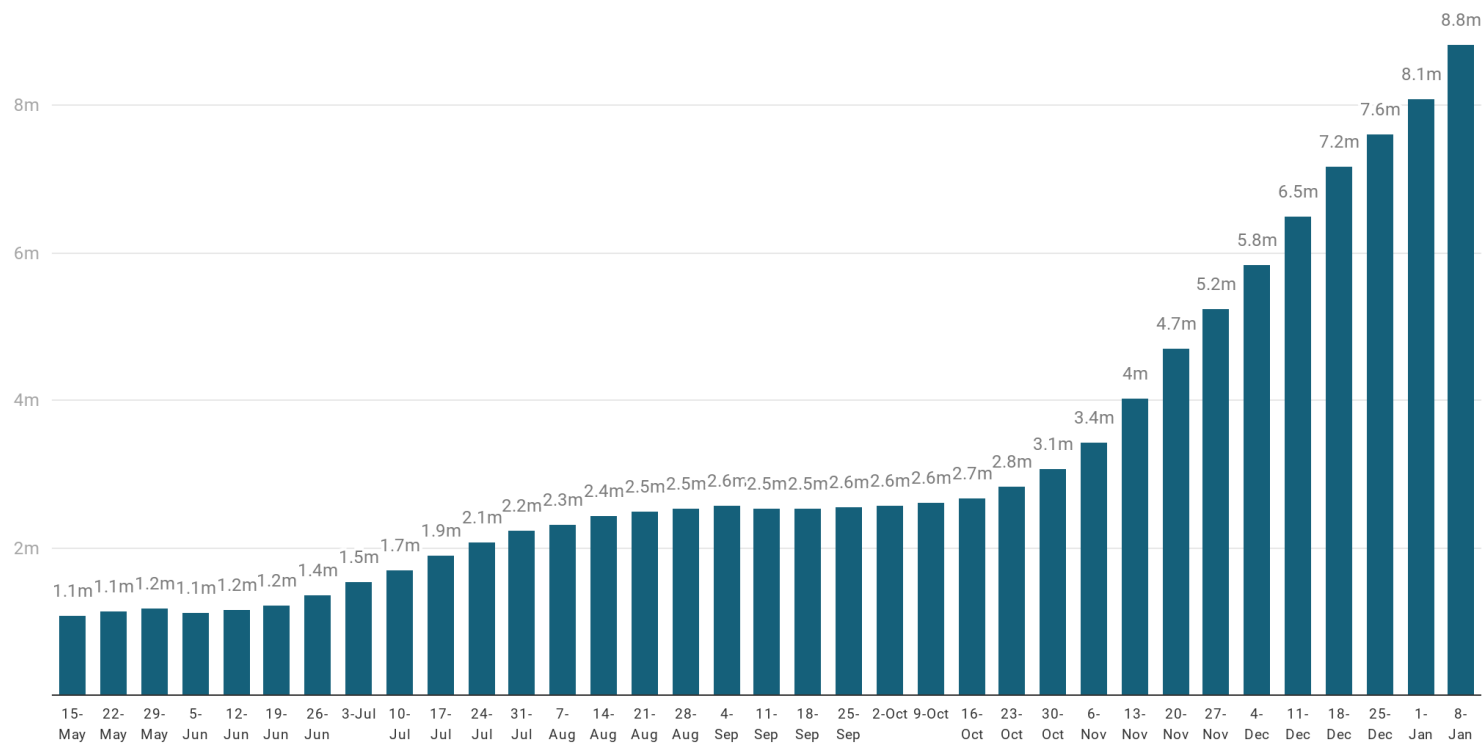


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

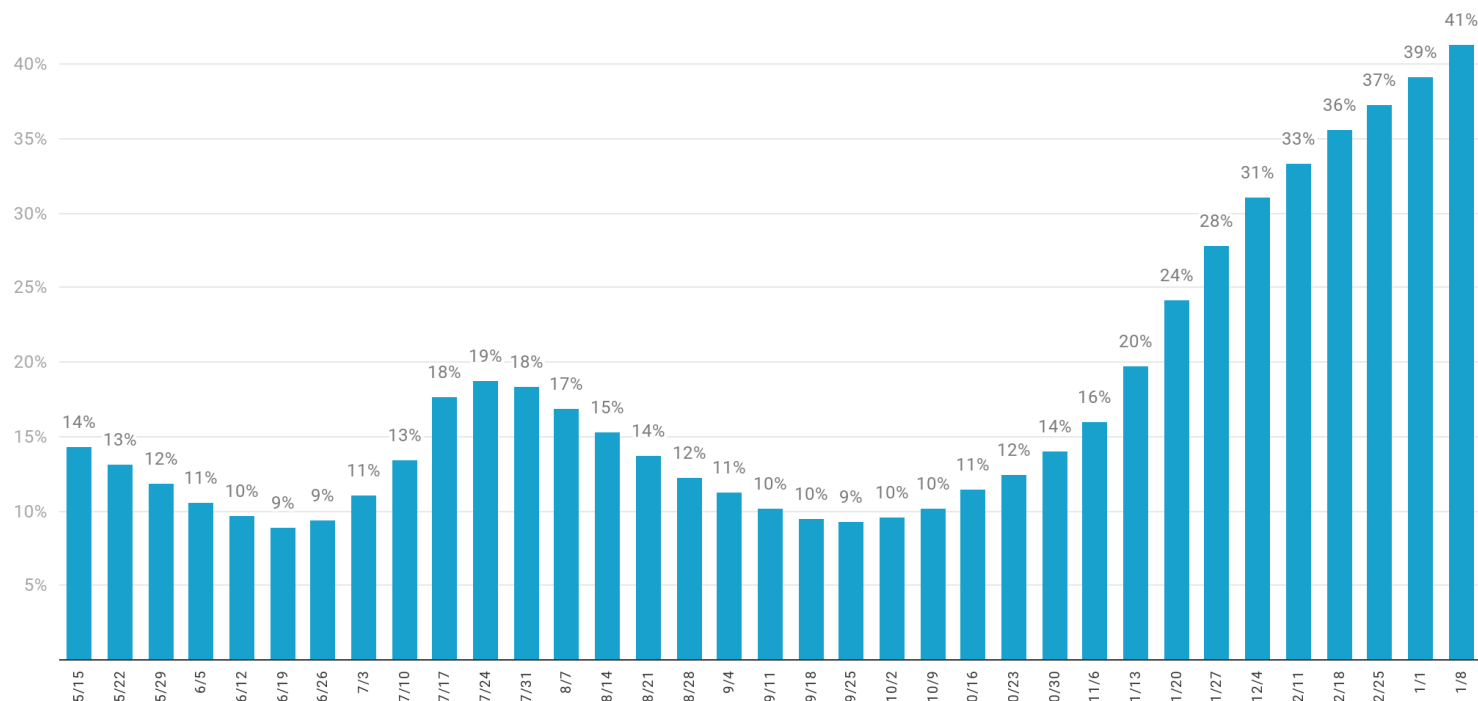
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Covid-19 Hospital Occupancy

Covid-19 patients currently occupy more than 40% of all inpatient beds in the US – the highest rate of any point during the pandemic; An encouraging note, however, the number of Covid-19 patients declined both Thursday and Friday (typically, peak census days during the 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

After increasing for 3 consecutive weeks, the rate of patient days per new case declined during the past week; 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

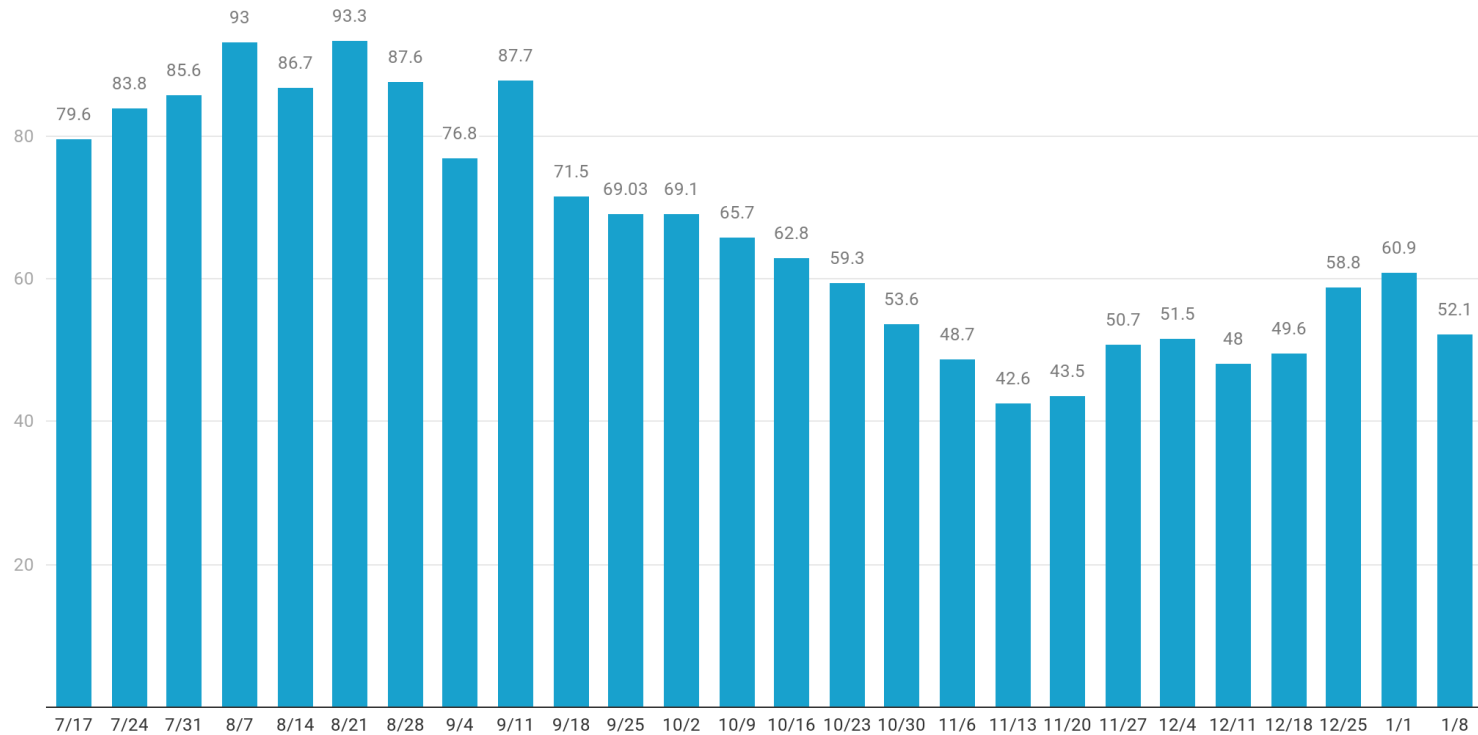


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project & worldometers.info • Created with Datawrapper

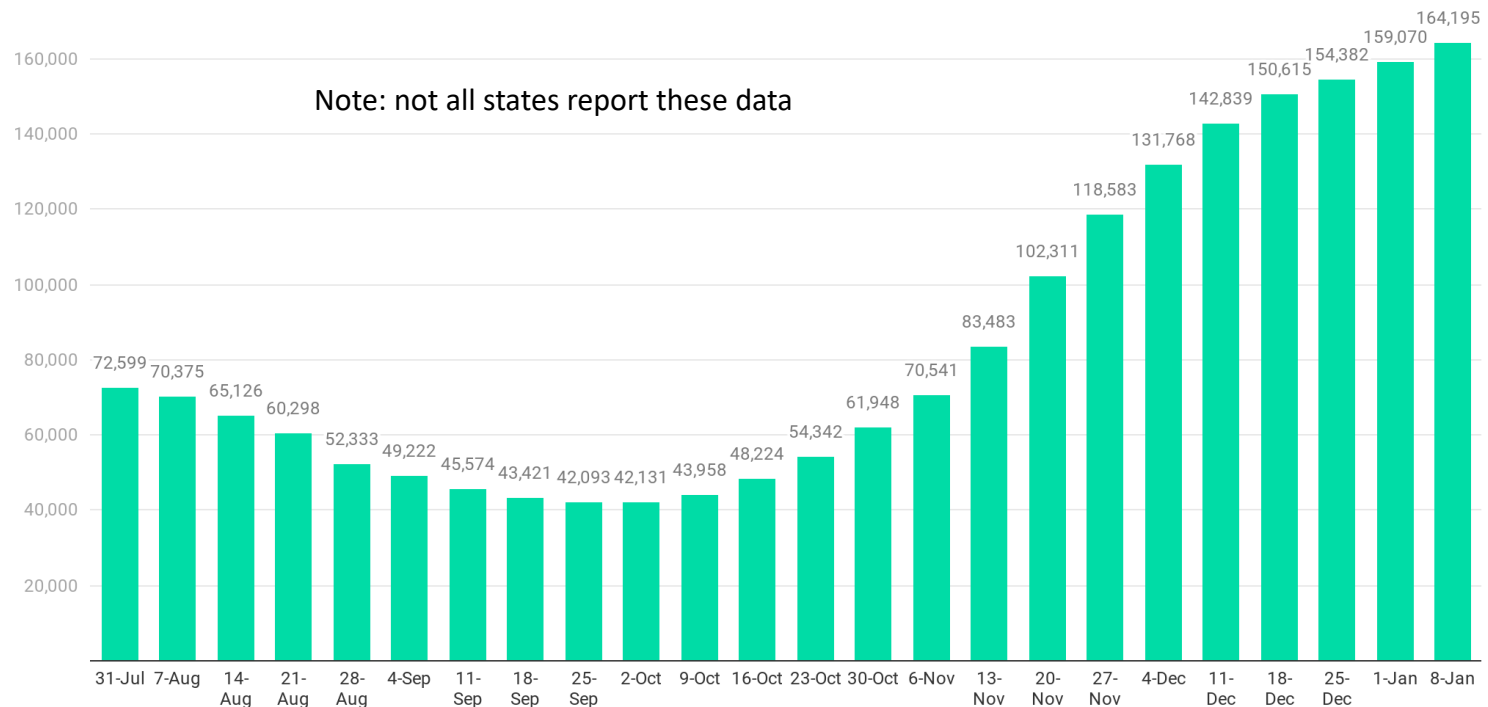
Covid-19 ICU Patient Days

Covid-19

The number of days that Covid-19 patients spent in the ICU rose again last week; these are nearly 4x what they were in mid-September

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

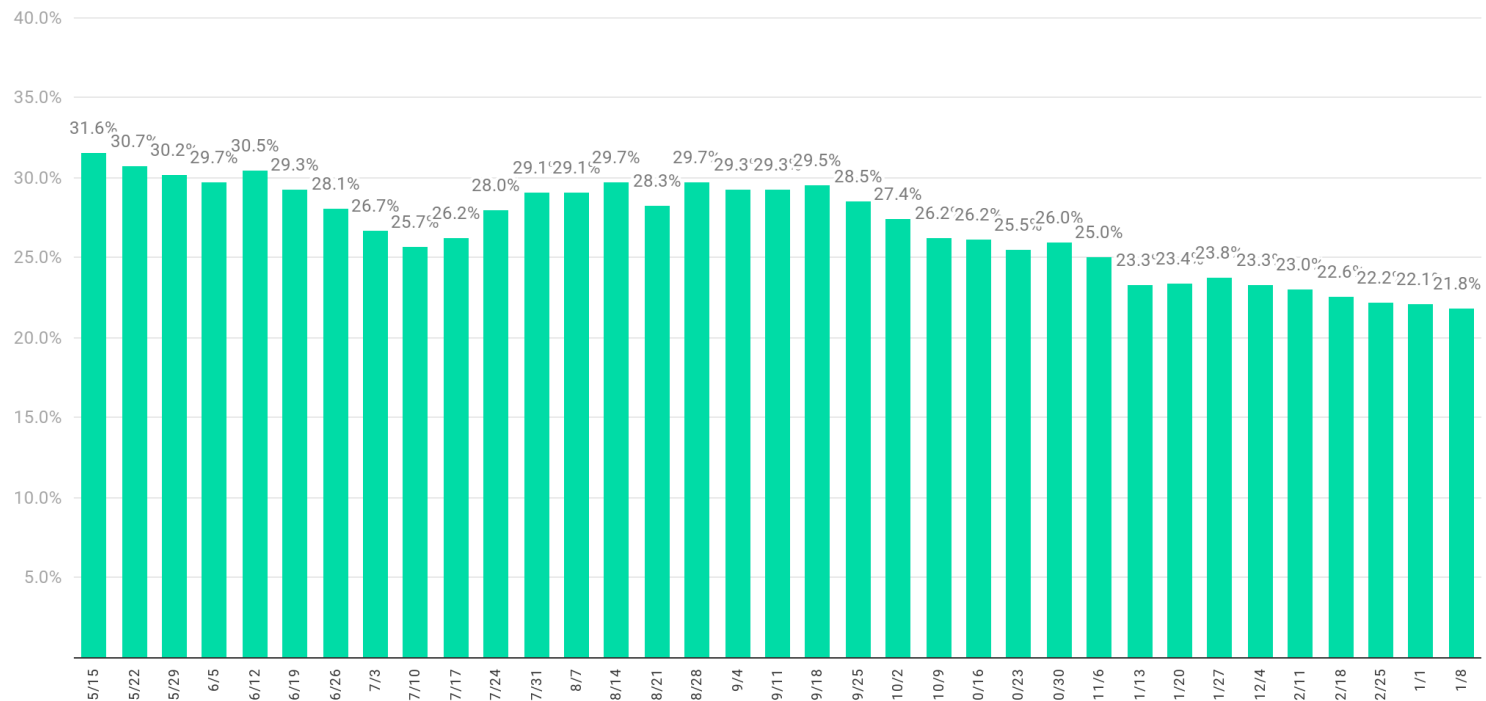
Mix of Covid-19 Patients: % in ICU

Covid-19

The % of Covid-19 patients requiring intensive care continued its steady decline; the current rate is nearly 1/3 lower than it was in May

% 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

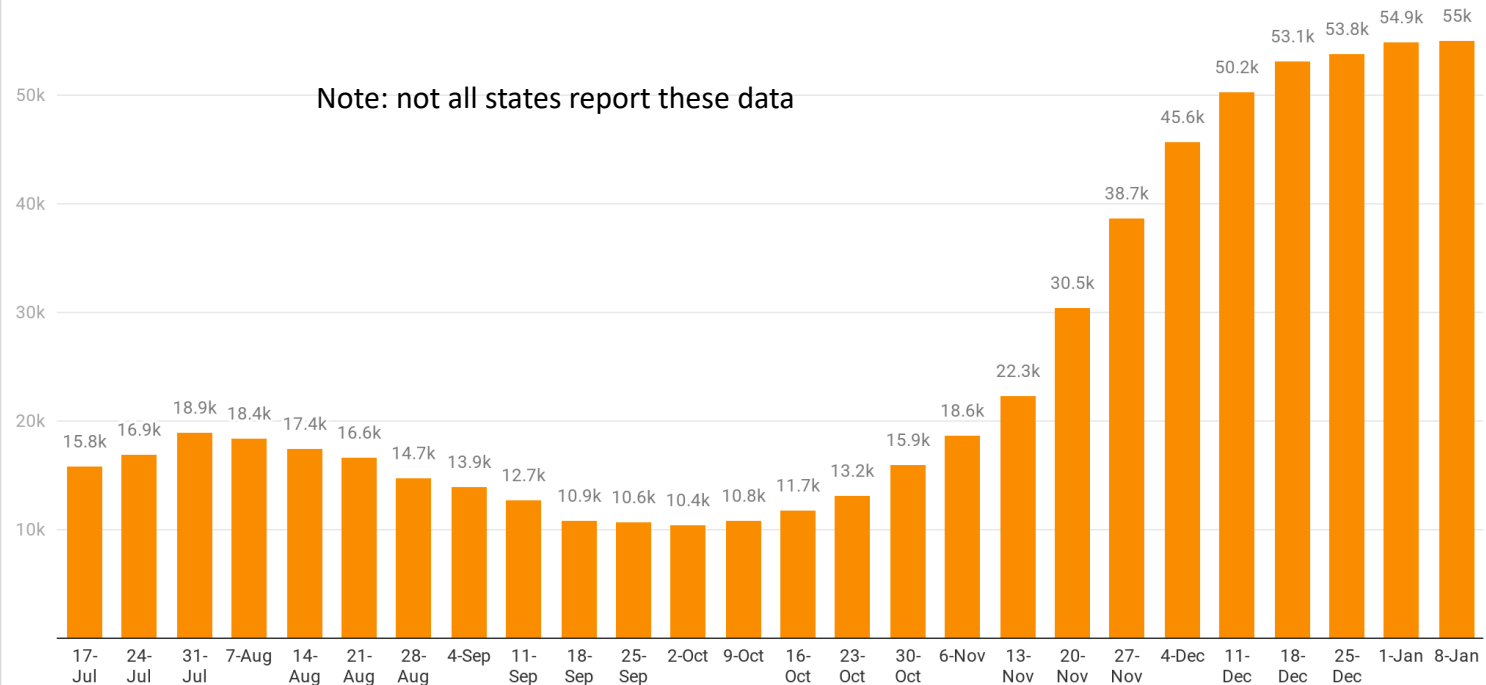
Covid-19 Ventilator Days

Covid-19

The number of days that Covid-19 patients spent on ventilators was essentially unchanged from the prior week; Nevertheless, these were 5x what they were in early-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

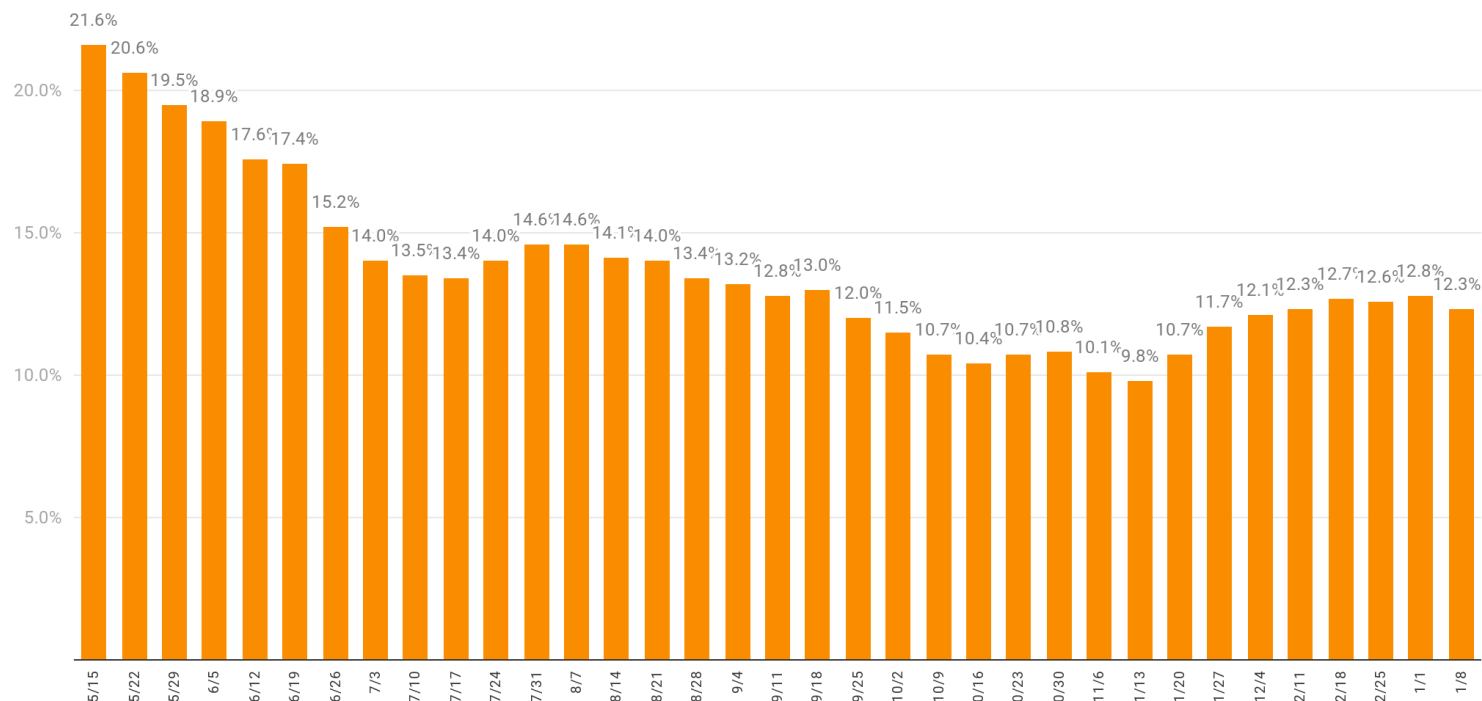
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Mix of Covid-19 Patients: % on Ventilators

The % of Covid-19 patients requiring ventilator care declined last week; after increasing from mid-November to mid-December, it has been relatively stable lately

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 week to-date;

Weekly Deaths - United States

For the 7 days ending on date shown

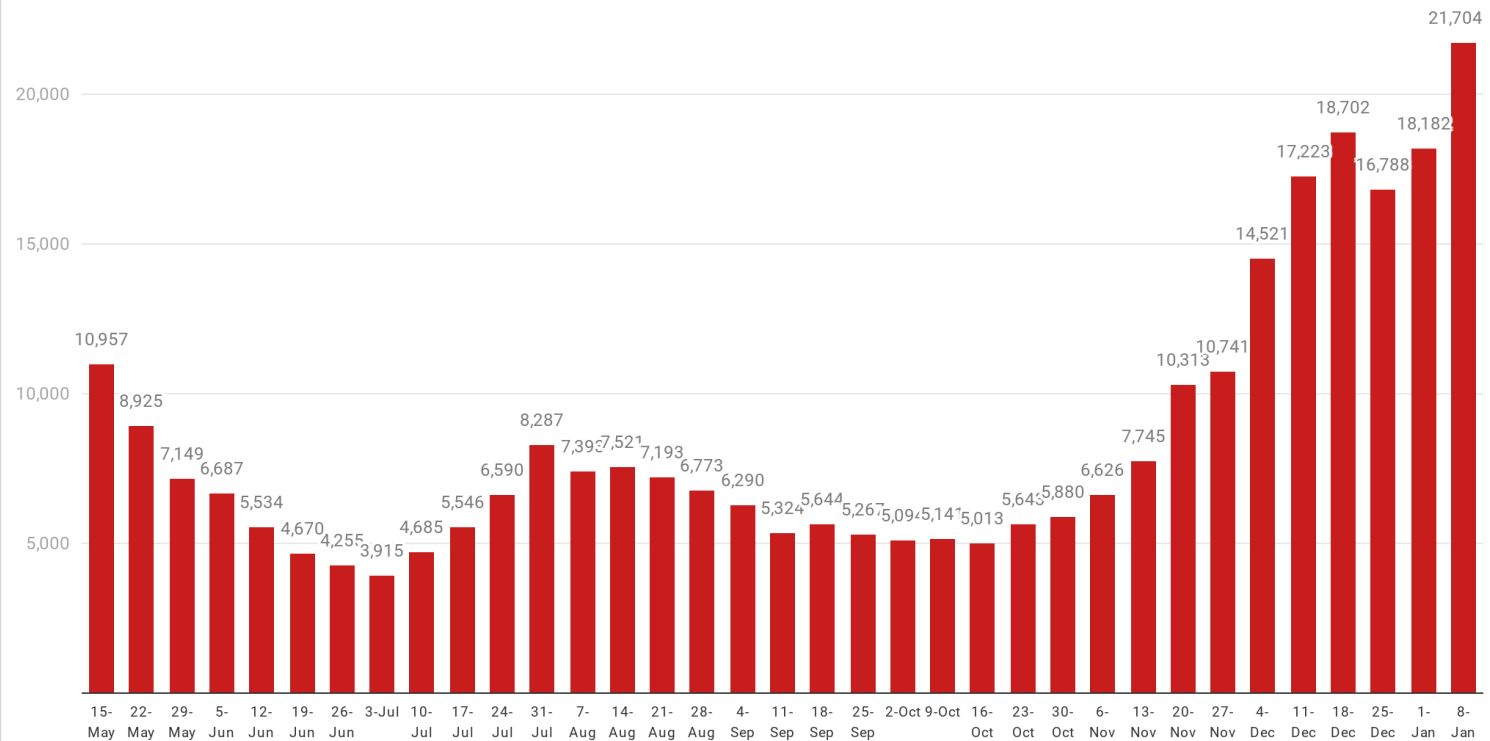


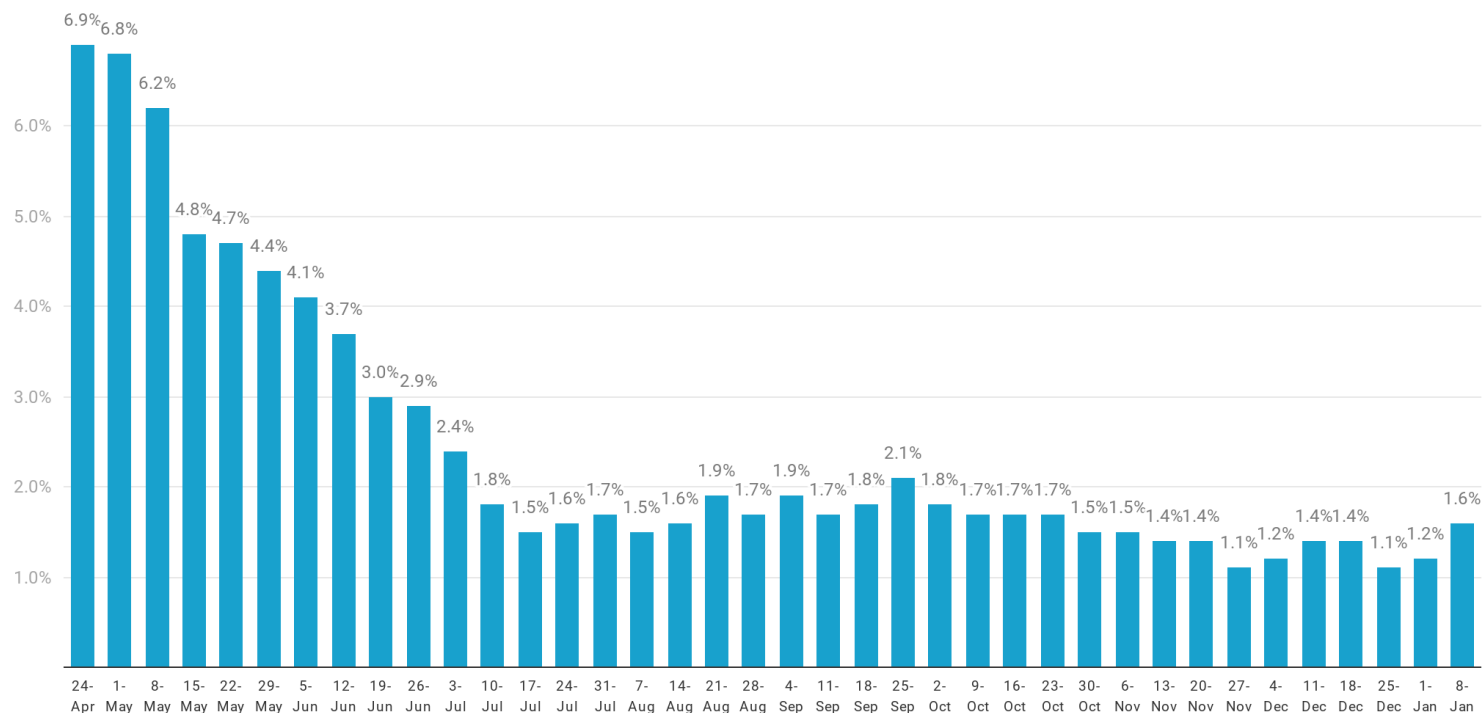
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Case Fatality Rate – 2-Week Lag From Case Detection

The case fatality rate rose sharply this week – this is likely due to underreported cases two weeks ago (Christmas week)

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

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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

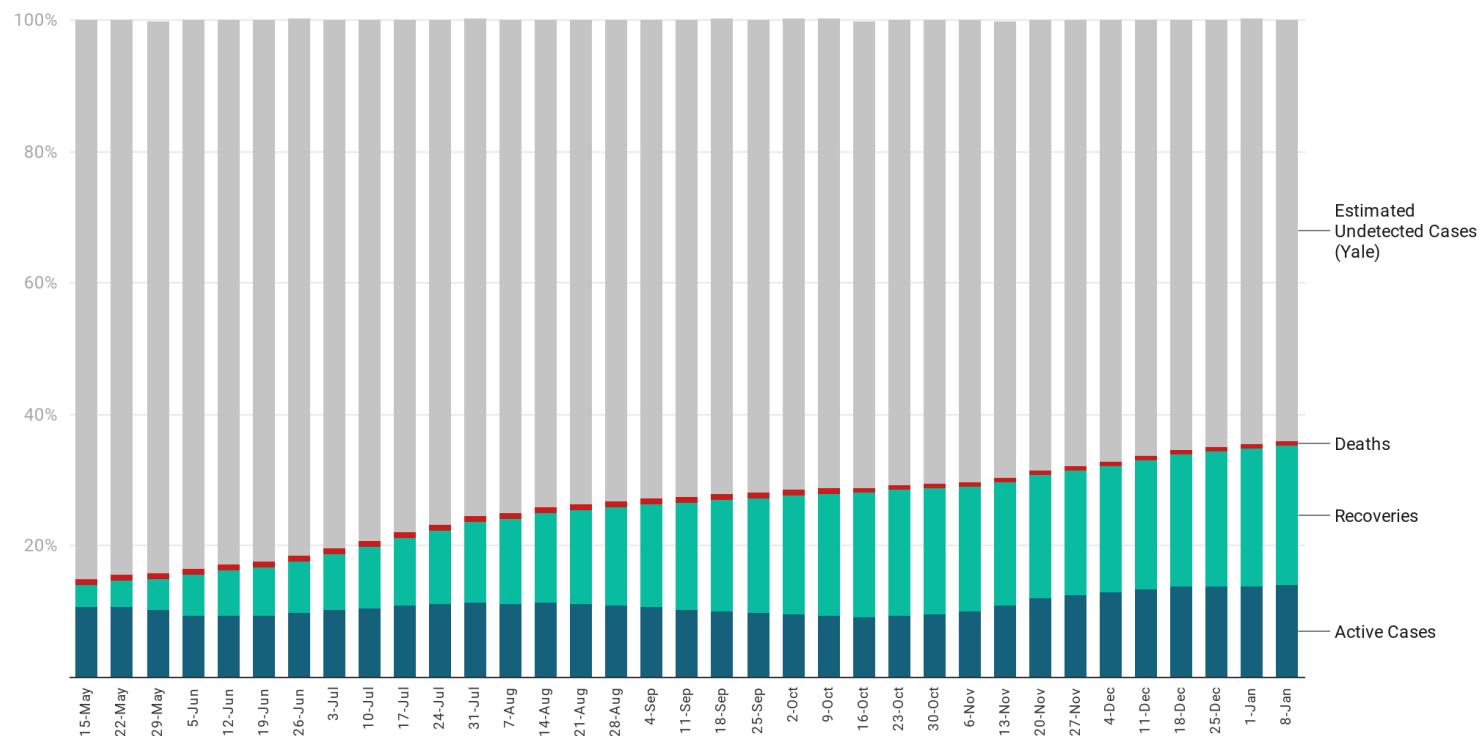


Chart: Health Industry Advisor LLC • Source: worldometers.info & Yale School of Public Health • Created with Datawrapper

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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>