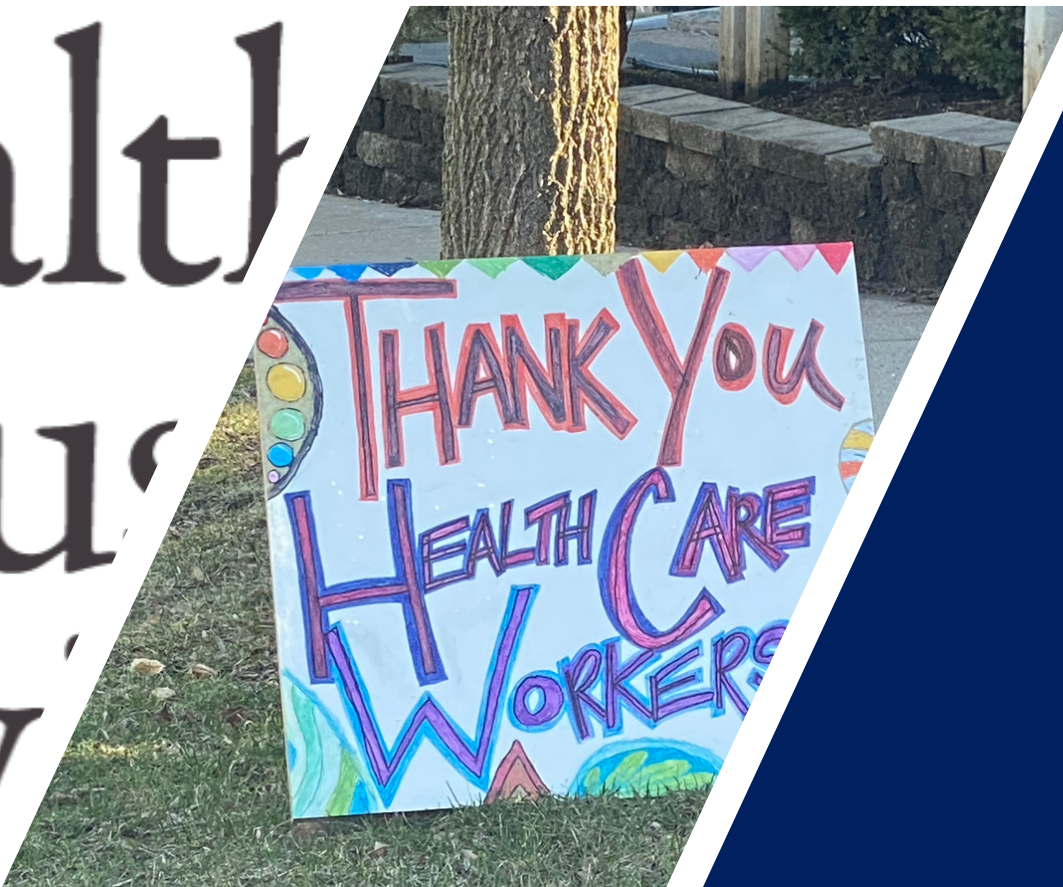




Health
Industry
Adv



Issue # 226

Wednesday, December 2, 2020

COVID-19 Report

Highlights

- Yesterday, the CDC's Advisory Committee for Immunization Practices met in emergency session to establish guidelines for the states to consider when prioritizing who should receive vaccines first:
 - The initial priority is to include 21 million healthcare workers and 3 million nursing home residents
 - This recommendation is subject to review by CDC Director Robert Redfield and then shared with the states, which are responsible for setting their own priorities
 - The committee vote was 13-1, with the lone dissenter raising concerns that the vaccines have not been adequately tested on nursing home residents
 - 5 to 10 million doses are expected to be available in the U.S. each week this month - sufficient to vaccinate 20 million Americans by the end of the month
- Also yesterday, Pfizer and its partner BioNTech received emergency use authorization from the UK government for its vaccine
 - Vaccination in the UK is expected to begin within a week, with an initial 800,000 doses
 - The UK government has ordered 40 million doses, enough to vaccinate 20 million people; the pace at which vaccinations will occur depends on how quickly the vaccine can be produced at a plant in Belgium
- In his daily podcast this morning, **Dr Sanjay Gupta delivered an informative perspective on the mRNA vaccine process, which is being employed by both Pfizer and Moderna. With the success of the mRNA method, it offers great hope for developing vaccines for other viruses. I encourage you to listen to this 8-minute podcast: <https://www.cnn.com/audio/podcasts/coronavirus>**
- Senior citizens are bearing a heavy and increasing burden of the SARS-CoV-2 virus in the United States:
 - Seniors represent about 16.5% of the U.S. population
 - Detected Covid-19 infections among seniors is proportionate to the share of population, about 15%
 - However, seniors now account for 50% of hospitalized Covid-19 patients
 - Further, these seniors account for 80% of deaths with the coronavirus
 - Persons 75 & older represent about 6% of the population and just more than 7% of cases; these represent nearly 60% of deaths
 - Persons 85 & older represent about 2% of the population and just less than 3% of cases; these represent nearly 1/3 of deaths
- Healthcare resource use in treating Covid-19 patients continues to trend higher:
 - As of yesterday, nearly 100,000 people were hospitalized in the U.S with Covid-19
 - The hospitalization rate per new case, while low compared to earlier in the pandemic, has risen by 1/3 since mid-November
 - The % of hospitalized Covid-19 patients requiring ventilator care, also low by historical experience, has now increased for the past two weeks
 - The % of inpatient beds occurred by Covid-19 patients has doubled in the past four weeks; currently just under 1/3 of all inpatient beds in the U.S. are in use by Covid-19 patients
- Fortunately, we seem to be experiencing a mild flu season, thus far:
 - Flu cases typically tax the hospital system each Winter
 - Now eight weeks into the flu season, flu visits each week have been lower than the comparable weeks for each of the past five flu seasons
 - During the most recent week, flu visits were nearly 50% lower than last year

The Thanksgiving holiday caused a decline in new cases, both worldwide and in the United States

On a 7-day moving average basis, new cases worldwide we already plateauing prior to the Thanksgiving holiday, while they were slowing in the United States

There were ~584.5k new cases worldwide each day, as of Tuesday

The United States is averaging ~164.5k new cases each day

* - 7-day moving average basis

Newly Detected Daily Cases - U.S. & Worldwide

7-Day Moving Average, As of December 1

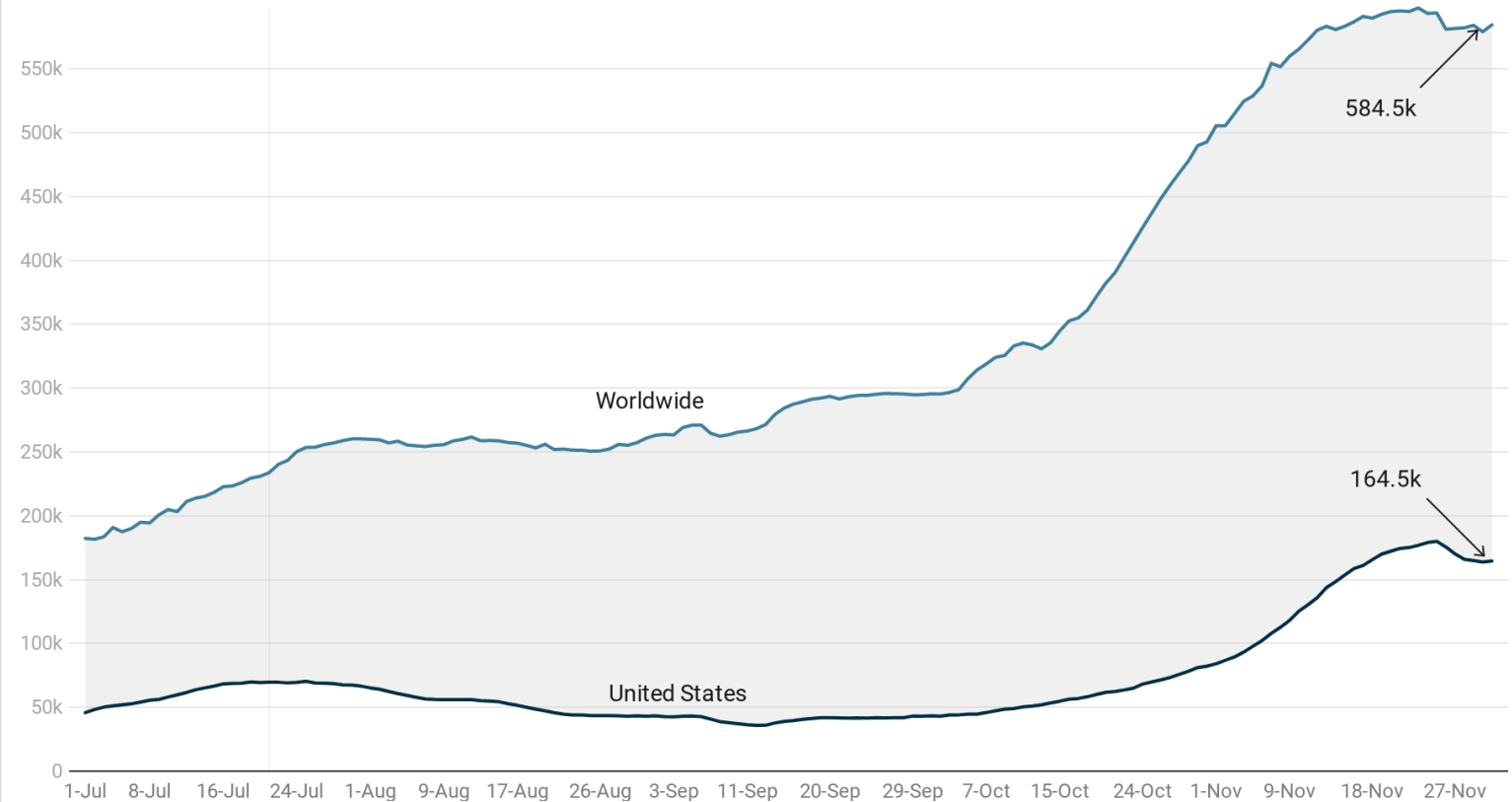


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

The rate of increase in new cases, both worldwide and in the United States, has been easing for an extended period

The Thanksgiving holiday caused this rate to go negative

This rate could turn back up starting later this week for two reasons: 1) starting on Thursday, the week-over-week comparison will be affected by the low new-case count on Thanksgiving and 2) the potential uptick in cases from increased social interaction

Week-Over-Week Changes in Newly-Detected Cases: USA v. Worldwide

7-Day Moving Average, As of December 1

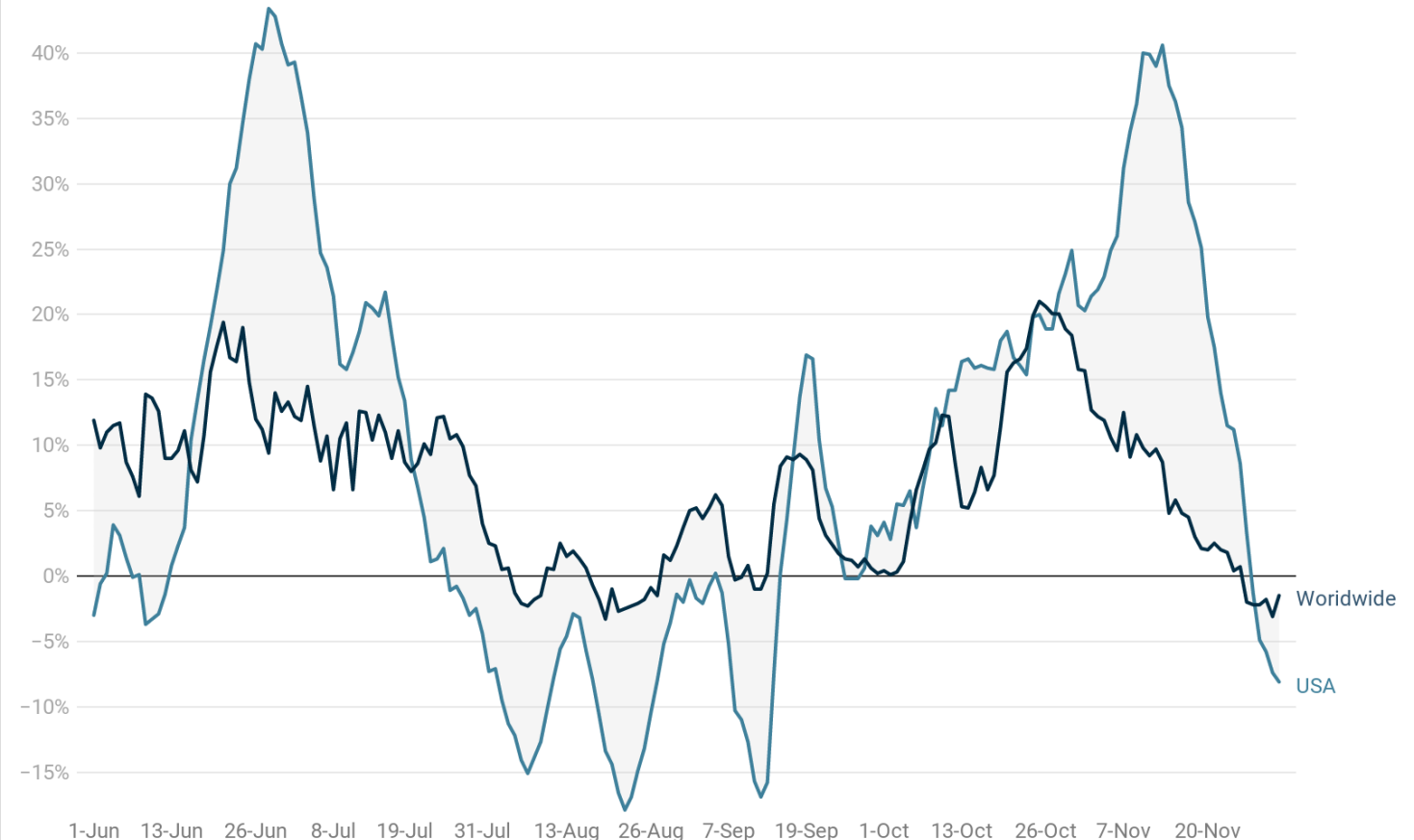


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

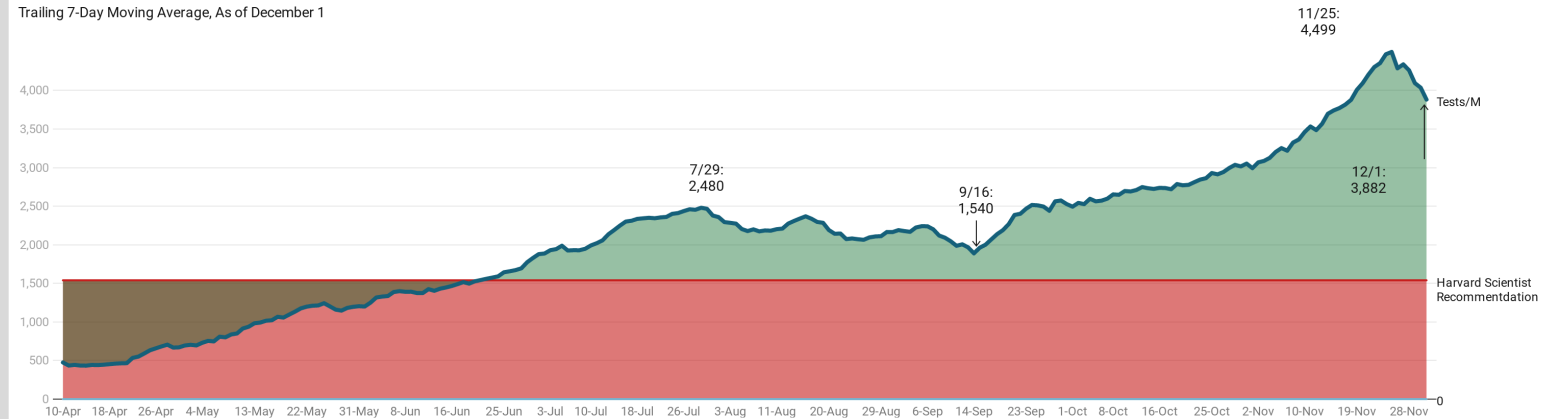
The 7-day test volume declined over the past several days, as a result of slow testing/reporting on the Thanksgiving holiday

Coincident with this reduced testing, the test-positive rate has been increased recently

Does this suggest that only people with more severe symptoms sought testing?

Daily Tests Per 1 Million - United States

Trailing 7-Day Moving Average, As of December 1



Health Industry Advisor LLC analysis

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

Test-Positive Rate - United States

7-Day Moving Average, As of December 1

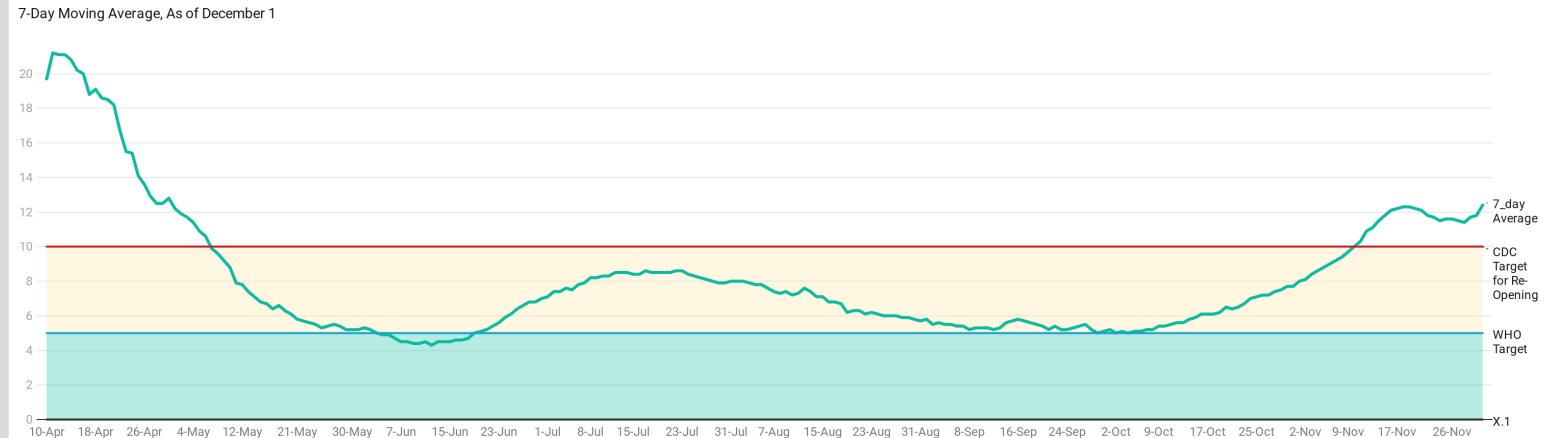


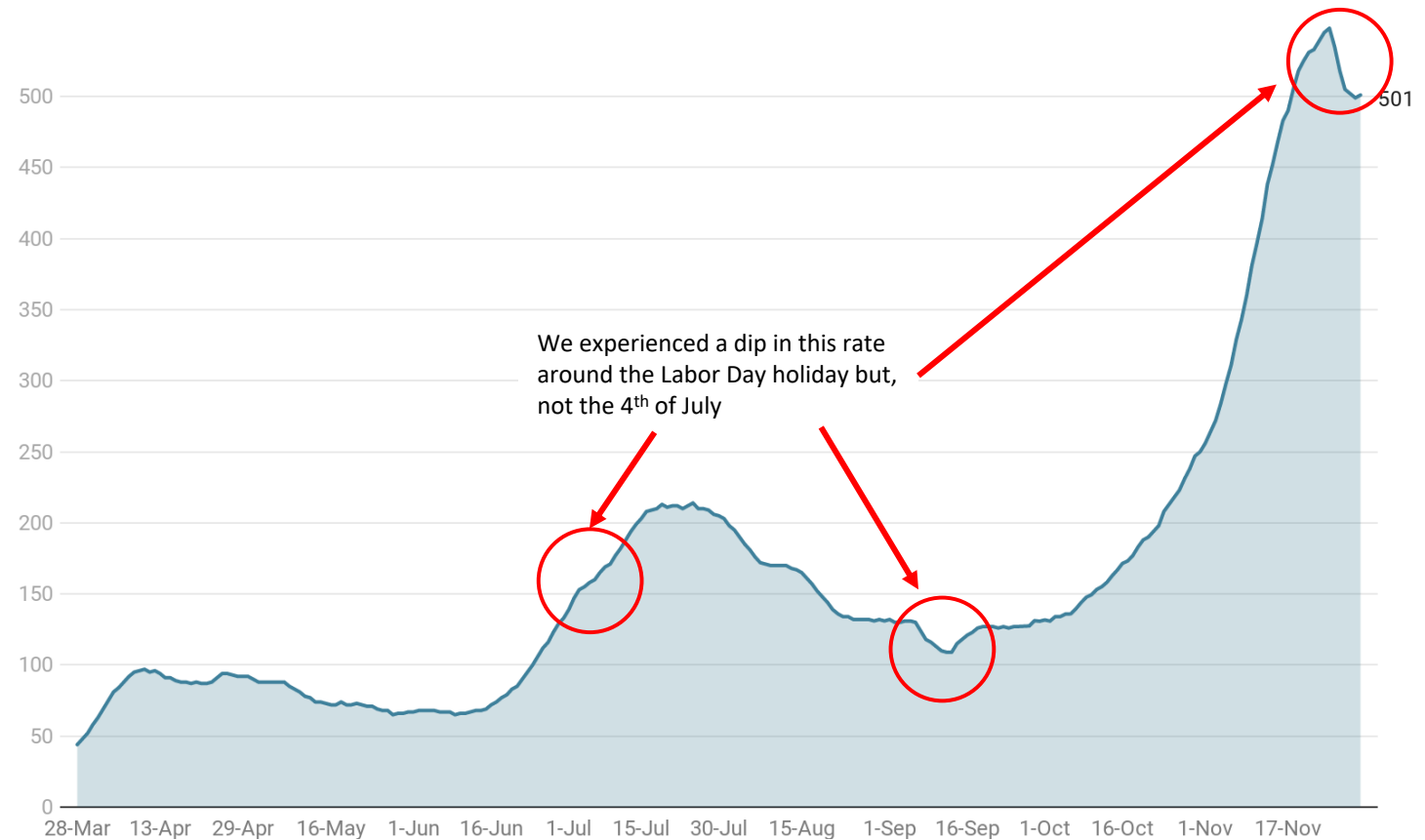
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

The rate of new infections per capita* in the U.S. may have been nearing a plateau prior to Thanksgiving – increased social gathering around the holiday, however, may disrupt this trend

* - 7-day moving average basis

Newly Detected Infections Per 1 Million Population - United States

7-Day Moving Average, Through December 1



Health Industry Advisor LLC analysis

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

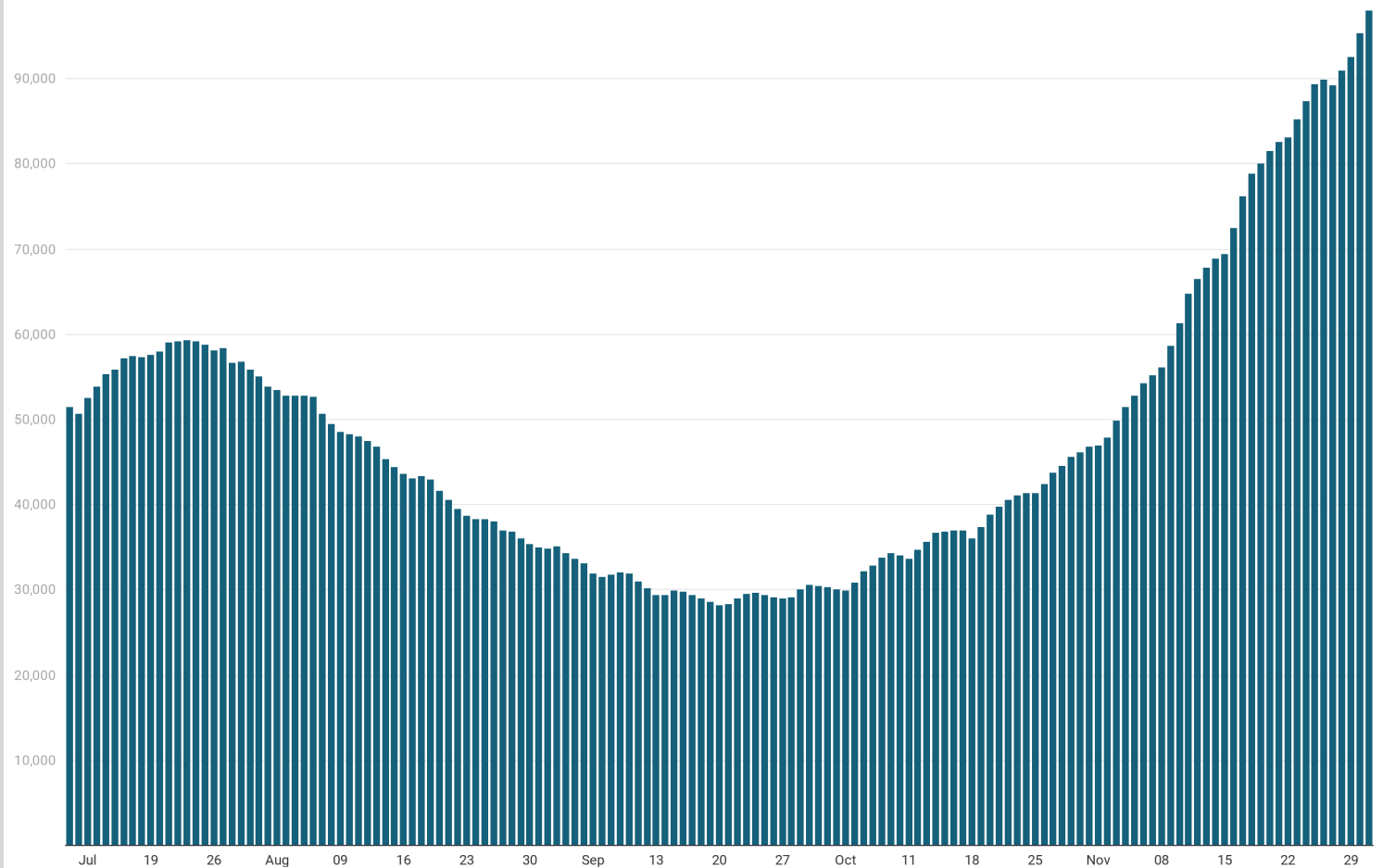
There were just less than 100,000 Covid-19 patients in U.S. hospitals yesterday

On a same-day, prior-week basis, inpatient Covid-19 census increased on all except one day since September 23

The mild flu season, however, may be helping somewhat. Typically flu cases place a heavy strain on hospital beds in the Winter

Hospital Census: COVID-19 Patients

As of December 1



Florida data first available on July 10

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

Rates of Hospitalizations generally increase with age:

Since June, the mix of inpatients has shifted to the elderly, with a declining percentage of patients in the 18-49 year-old cohort

Persons 65 & older now represent 50% of Covid-19 inpatients

Rate remain very low for persons > 18 years old

Covid-19 Laboratory Confirmed Hospitalizations By Age

Percentage By Age

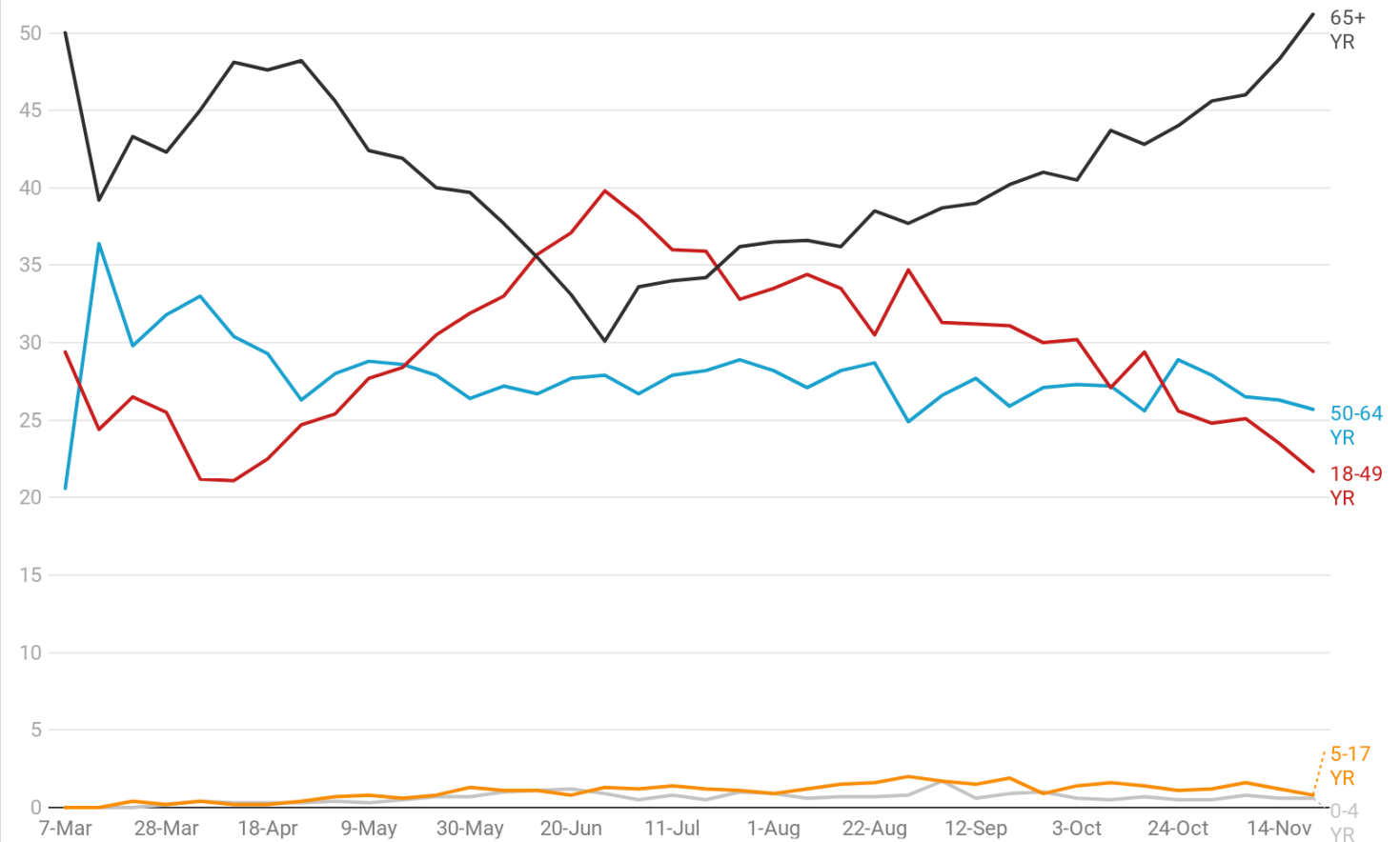


Chart: Health Industry Advisor LLC • Source: Centers For Disease Control & Prevention • Created with Datawrapper

The average Covid-19 census per 100 new-cases increased since mid-November

Covid-19 Hospital Census / 100 Daily New Detected Cases

7-Day Moving Average, As of December 1

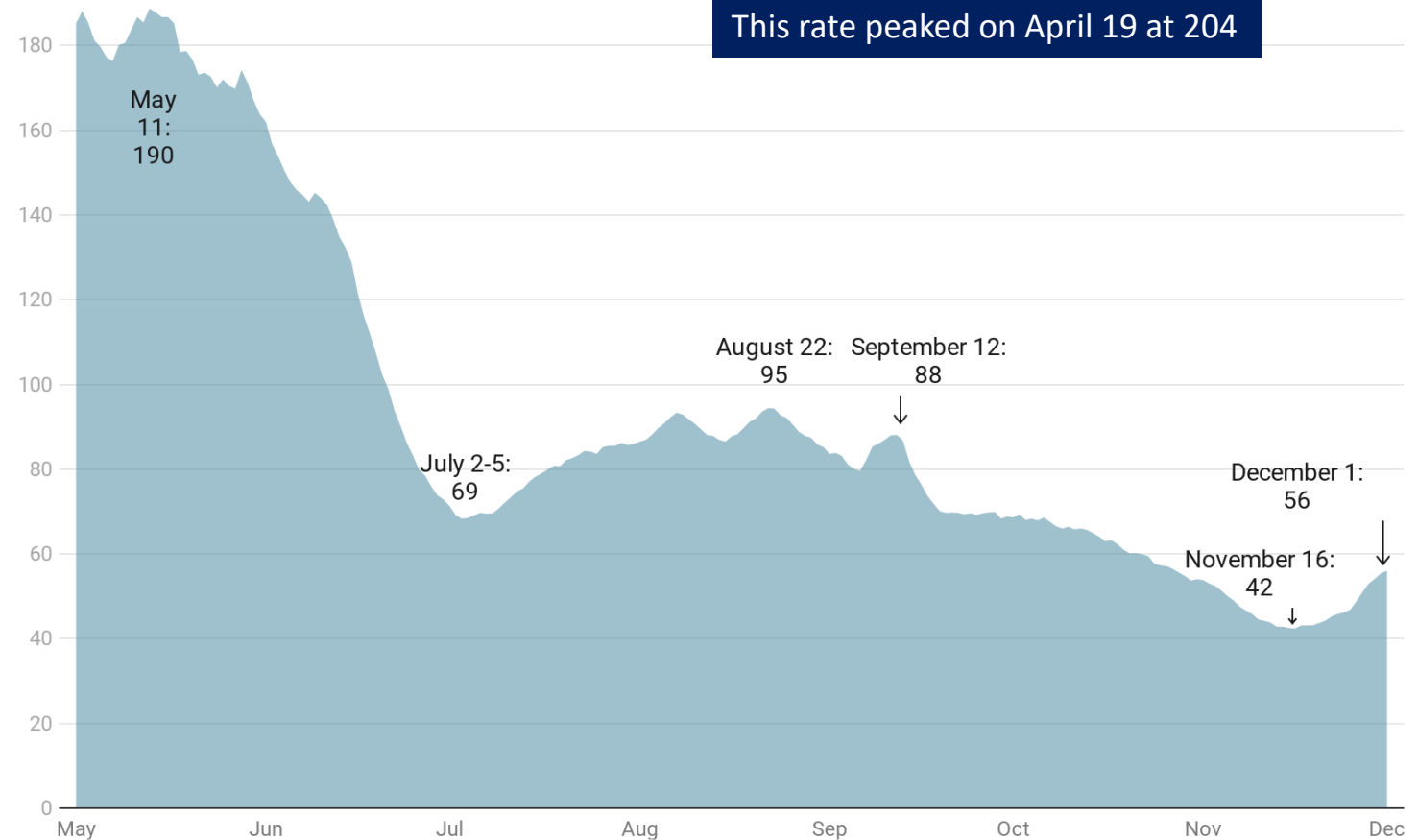
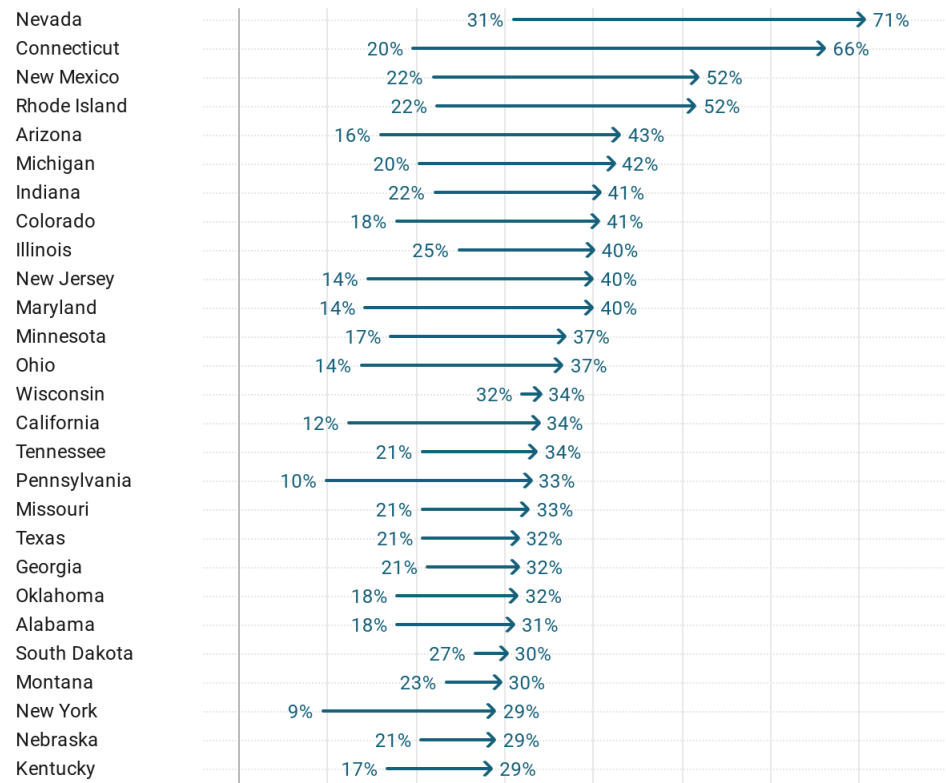


Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking project & worldometers.info • Created with Datawrapper

Increasing Covid-19 census is straining available healthcare resources: In Nevada, Covid-19 patients occupy 71% of all inpatient beds – more than doubling in four weeks; In Connecticut, these patients occupy 66% of beds – more than tripling in for weeks. For the U.S. overall, this occupancy has doubled to 32%

Covid-19 Patients as % of All Inpatient Beds

December 1 v. 4 Weeks Earlier



Covid-19 Patients as % of All Inpatient Beds

December 1 v. 4 Weeks Earlier

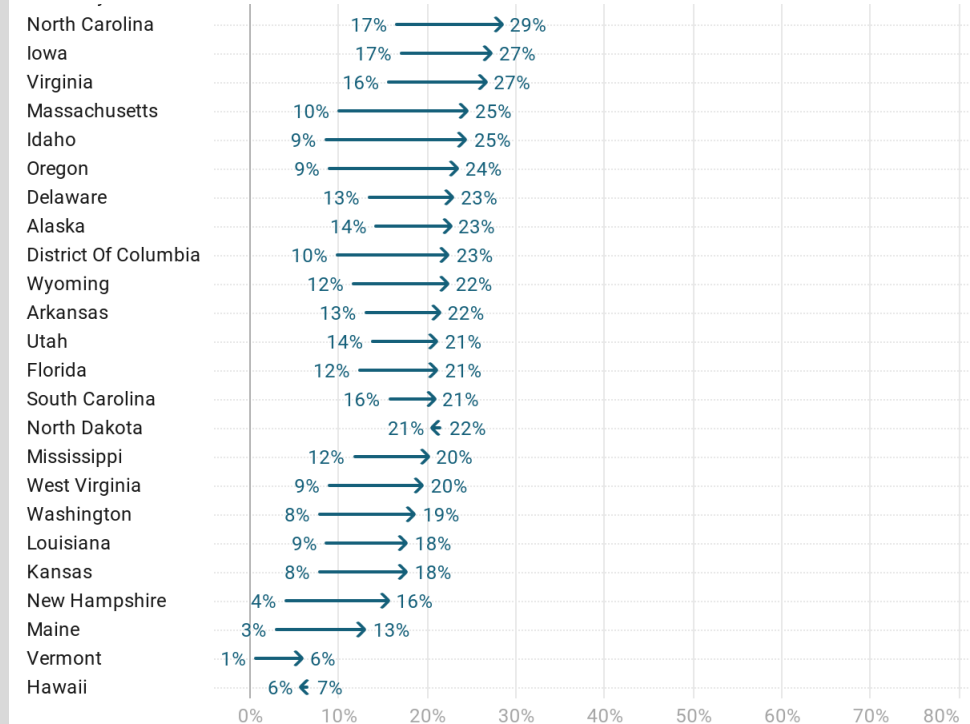


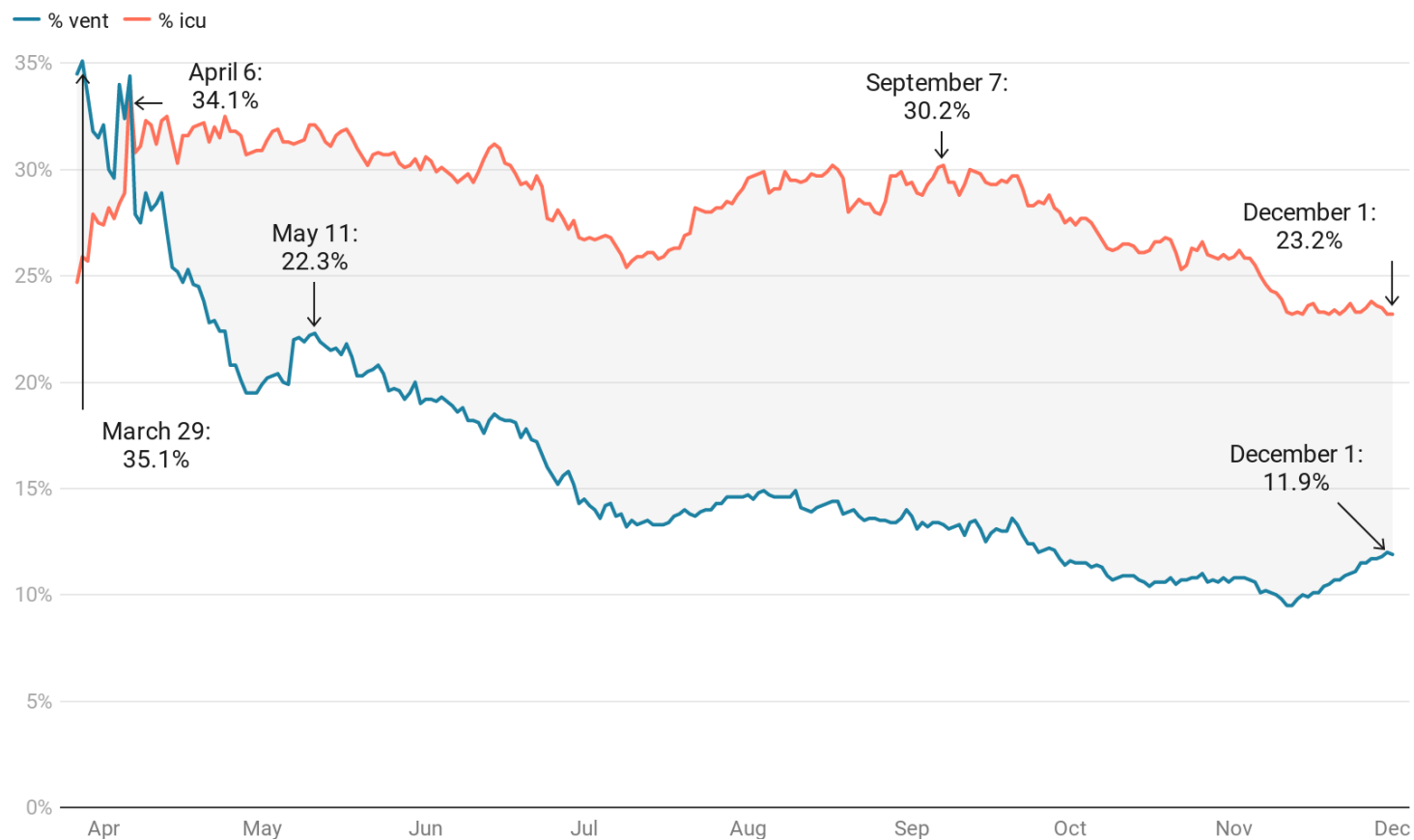
Chart: Health Industry Advisor LLC • Source: The Atlantic's Covid Tracking Project • Created with Datawrapper

The likelihood of a hospitalized Covid-19 patient would require ICU care has been lower throughout November than at any time during the pandemic

The likelihood of a hospitalized Covid-19 patients would be on a ventilator, however, has increased in the past two weeks

Severity of Hospitalized Patients

% of patients on ventilators and in the ICU, As of December 1



Health Industry Advisor LLC analysis

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

Now seven weeks into the 2020-21 flu season, flu visits are trending lower than each of the past five years - and, currently 57% lower than last year

% of Visits For Influenza-Like Illnesses, National Summary

By Week & Flu Season

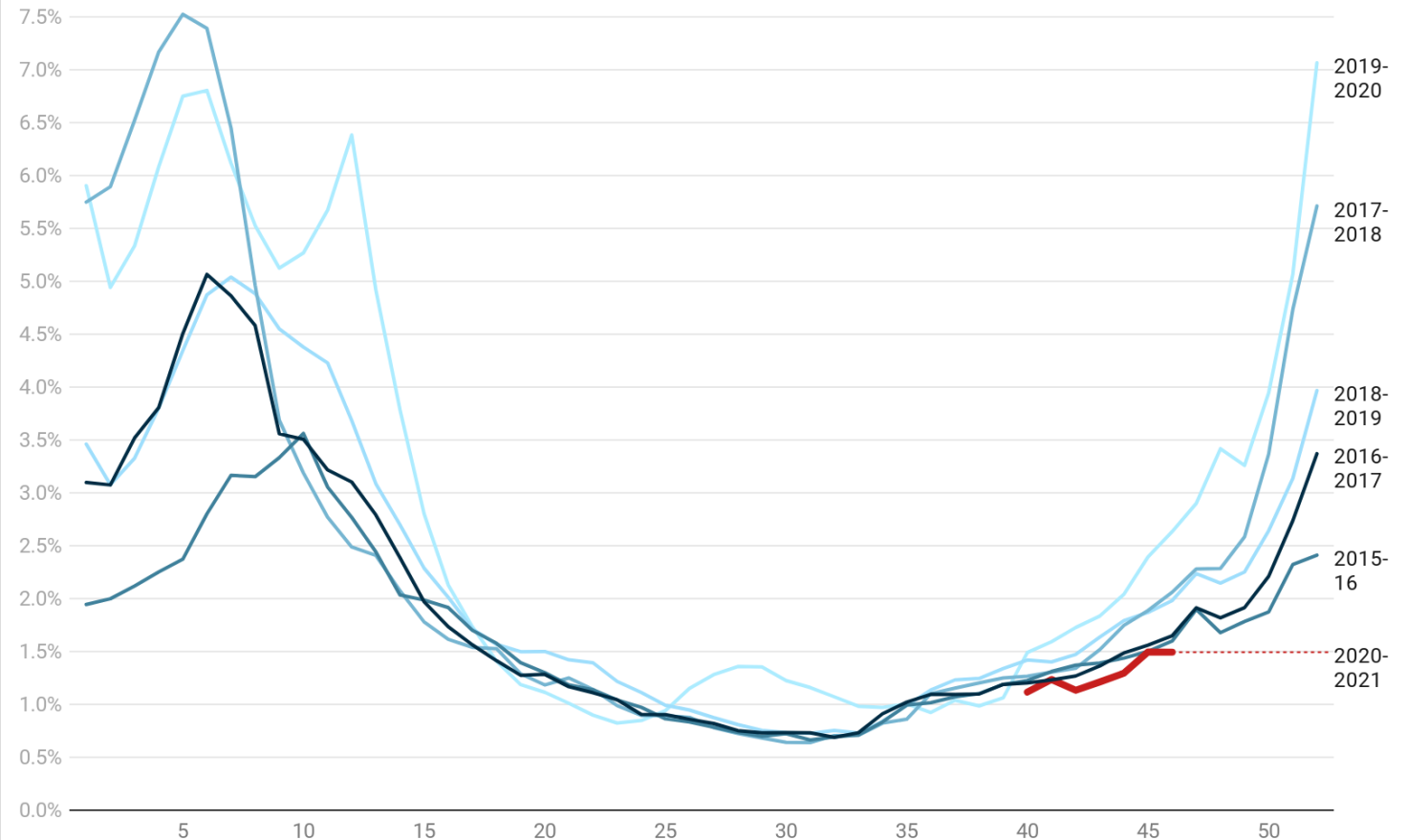
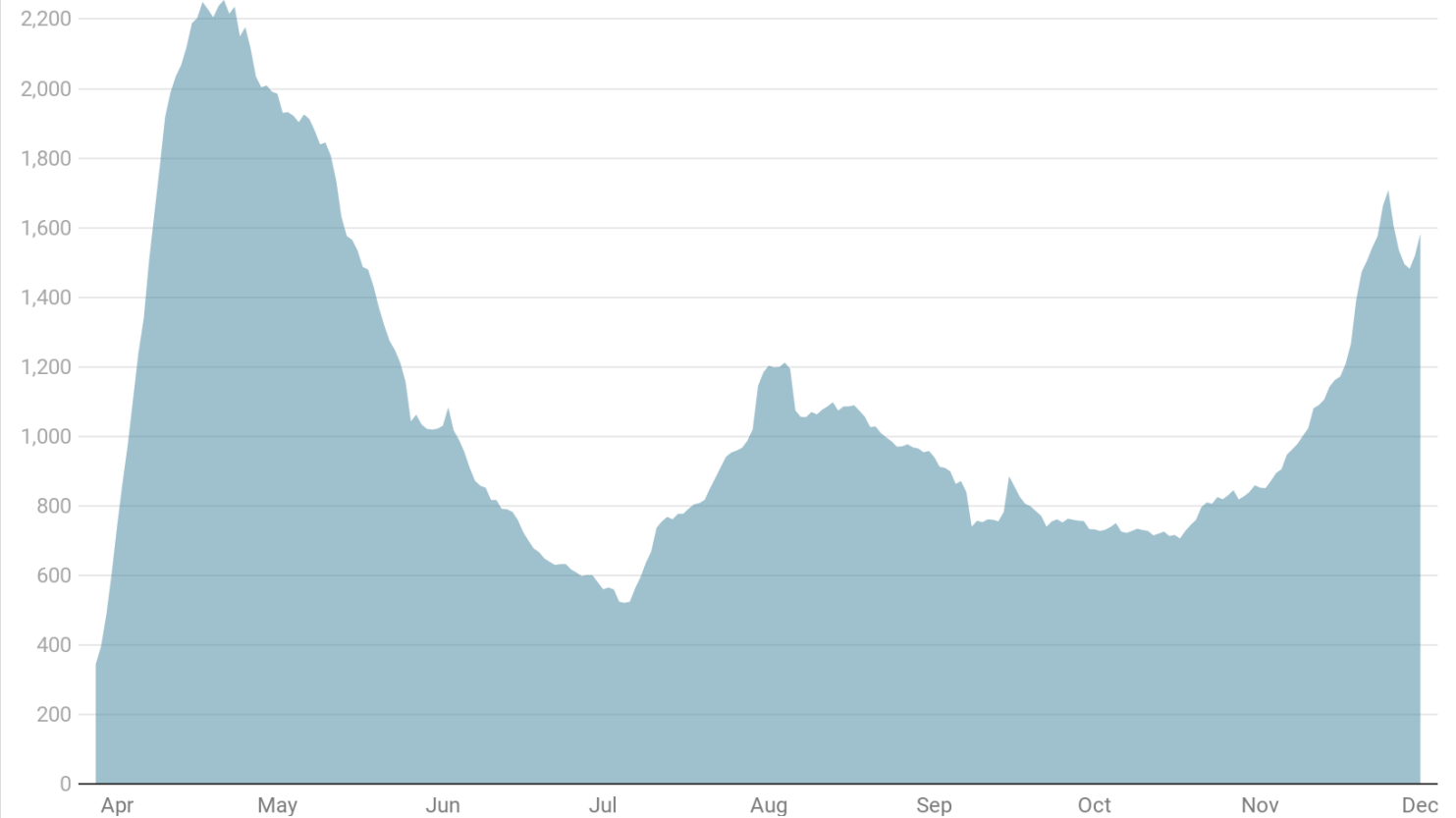


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control & Prevention • Created with Datawrapper

After a relative respite in the 7-day average deaths since Thanksgiving Day, these increased again on Monday and again on Tuesday

Deaths Reported With Coronavirus in the U.S.

Trailing 7-Day Moving Average, As of December 1



Health Industry Advisor LLC analysis

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

Deaths with coronavirus, relative to new cases (lagged 2 weeks) have moved up in the past week yet, remain lower than most of October

This rate declined rapidly in July and August

7-day Average Deaths / 7-Day Average New Cases (2-Week Lag)

As of December 1



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

Persons between 18-29 years old account for more Covid-19 cases than any other age group yet, they represent only 0.5% of deaths

Persons 85 years and older represent less than 3% of cases yet, nearly 1/3 of all deaths

Senior citizens represent less than 15% of all cases yet, 80% of all deaths

Case Distribution By Age Group

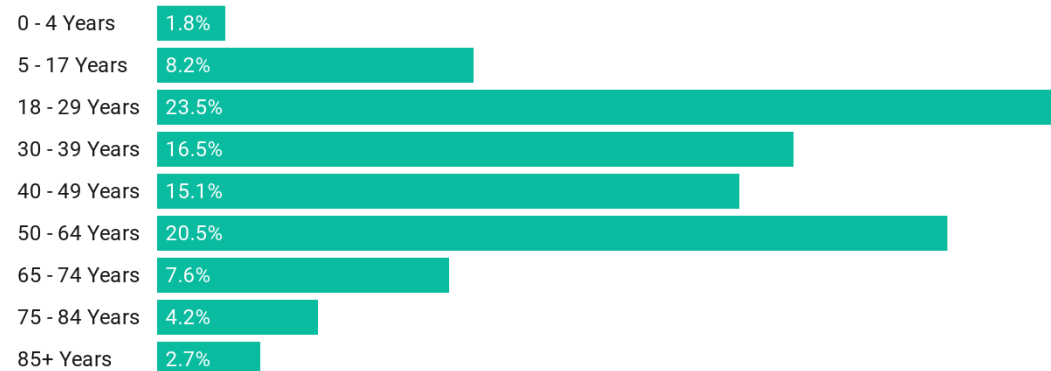


Chart: Health Industry advisor LLC • Source: CDC • Created with Datawrapper

Death Distribution By Age Group

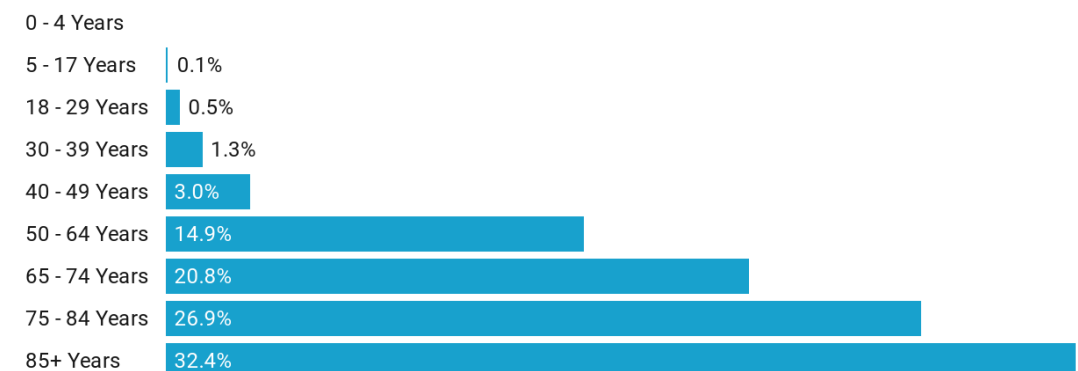


Chart: Health Industry advisor LLC • Source: CDC • Created with Datawrapper

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>