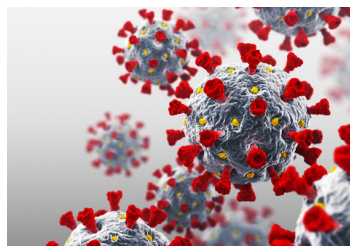


Covid-19 "Vital Signs"

Issue # 352

October 18, 2021



Vaccinations Last Week

Of the 5.8 million doses administered last week, four in ten vaccines were booster shots. Three in ten were initial vaccinations.

Doses Administered

October 9-15, 2021

Boosters Second Doses First Doses

First doses:

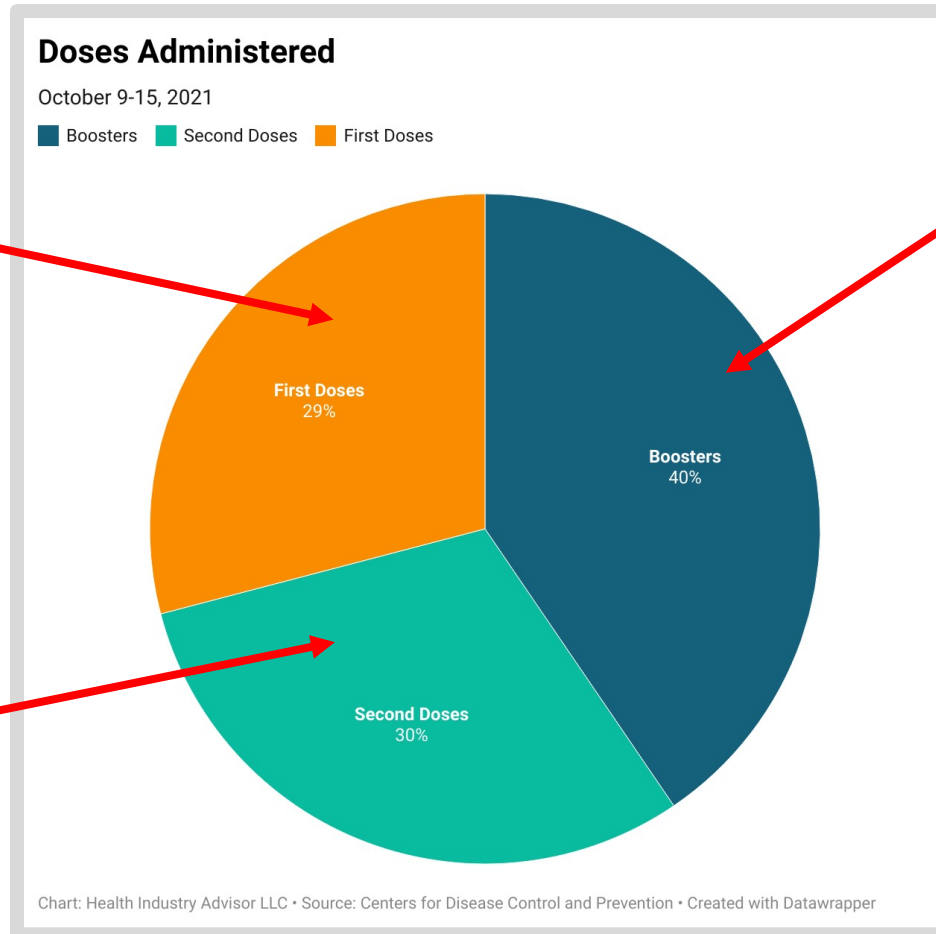
- 70% to 18–49-year-olds
- 21% to 65+
- 9% to 12-17-year-olds

Second doses:

- 77% to 18–49-year-olds
- 12% to 65+
- 11% to 12-17-year-olds

Boosters:

- 60% to seniors
- 40% to non-seniors



Vaccination Status By Age – United States

11.7% of seniors have received a booster shot already. This is 2.5x the number of seniors that remain unvaccinated. 41.5% of eligible teens and 25.7% of non-senior adults are unvaccinated.

Vaccination Status By Age

As of October 15

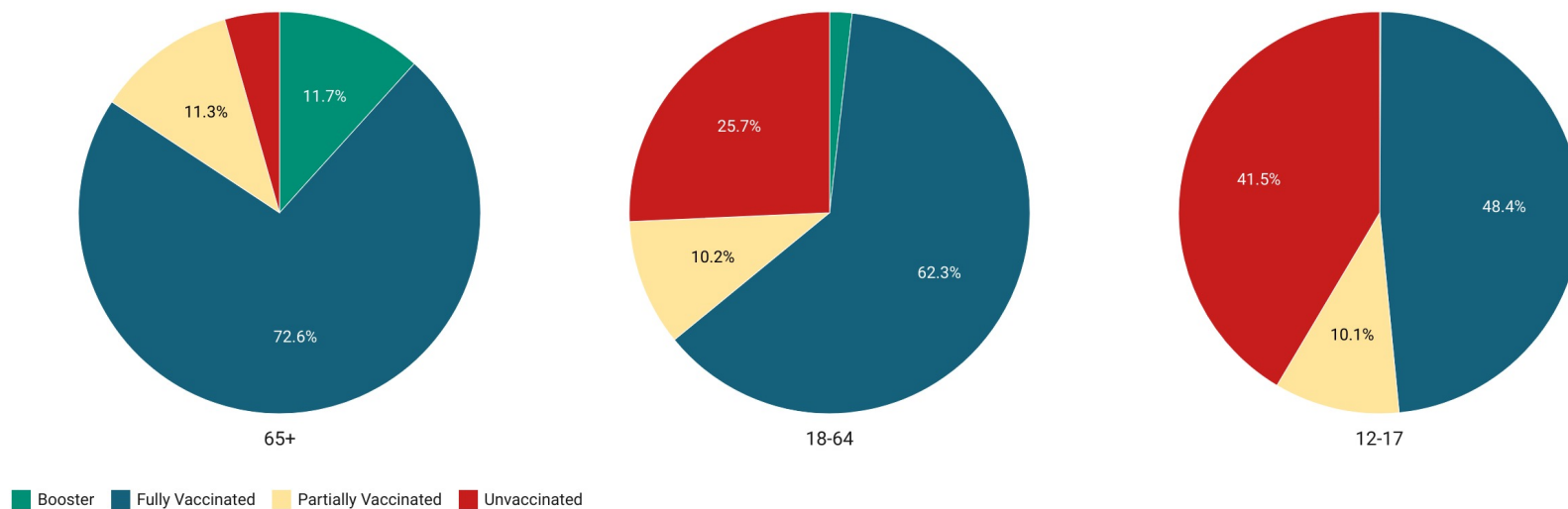


Chart: Health Industry Advisor LLC • Source: CDC • Created with Datawrapper

Case Rate by Age and Vaccination Status

Unvaccinated 12-to-17-year-olds posted the highest weekly new infection rate, followed by unvaccinated 30-to-49-year-olds. Surprisingly, unvaccinated person 80 years and older had fewer new infections per capita than any other age group.

Cases Per 100,000 By Vaccination Status

Week ending September 4

■ Vax ■ Unvax

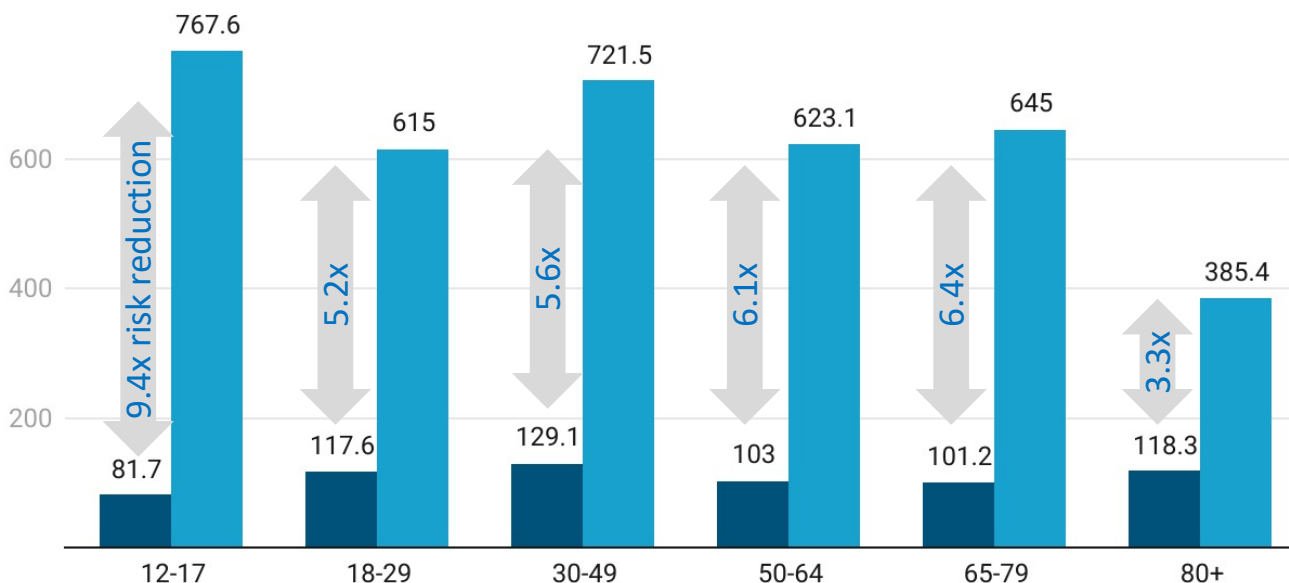


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Deaths by Age and Vaccination Status

Deaths were rare among 12-to-29-year-olds, regardless of vaccination status, and among vaccinated 30-64-year-olds.

Deaths Per 100,000 By Vaccination Status

Week ending September 4

■ Vax ■ Unvax

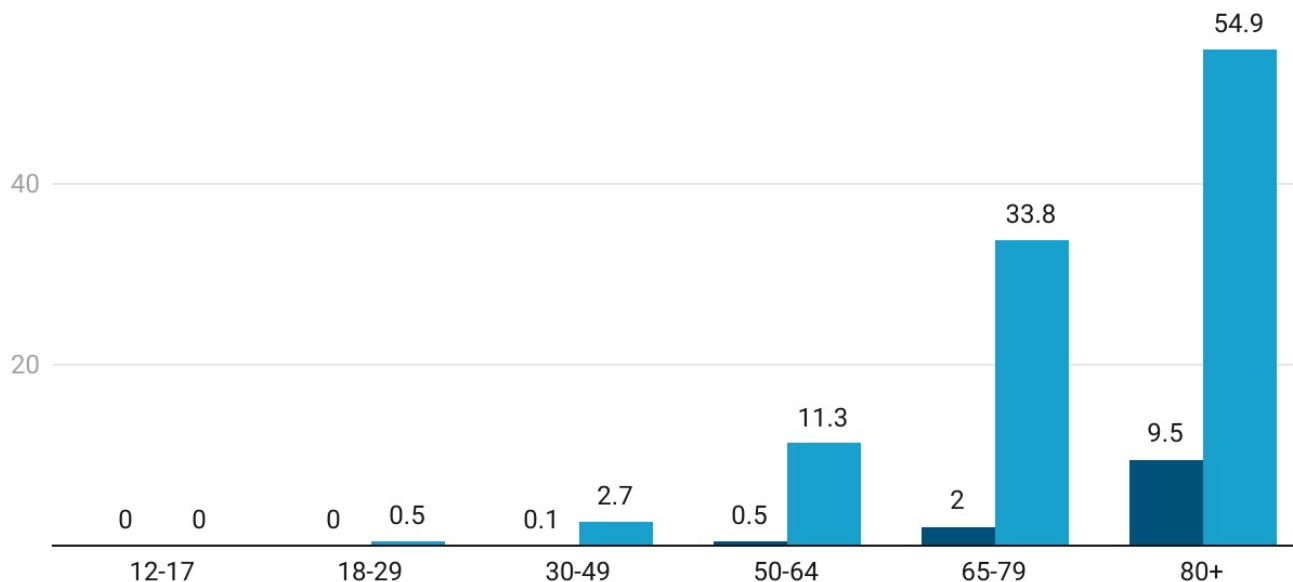


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Hospitalizations by Age and Vaccination Status

Vaccines are keeping people out of the hospital. Unvaccinated 18-to-49-year-olds face twice the risk of hospitalization than vaccinated seniors.

Hospitalizations Per 100,000 By Vaccine Status and Age

Week ending August 28

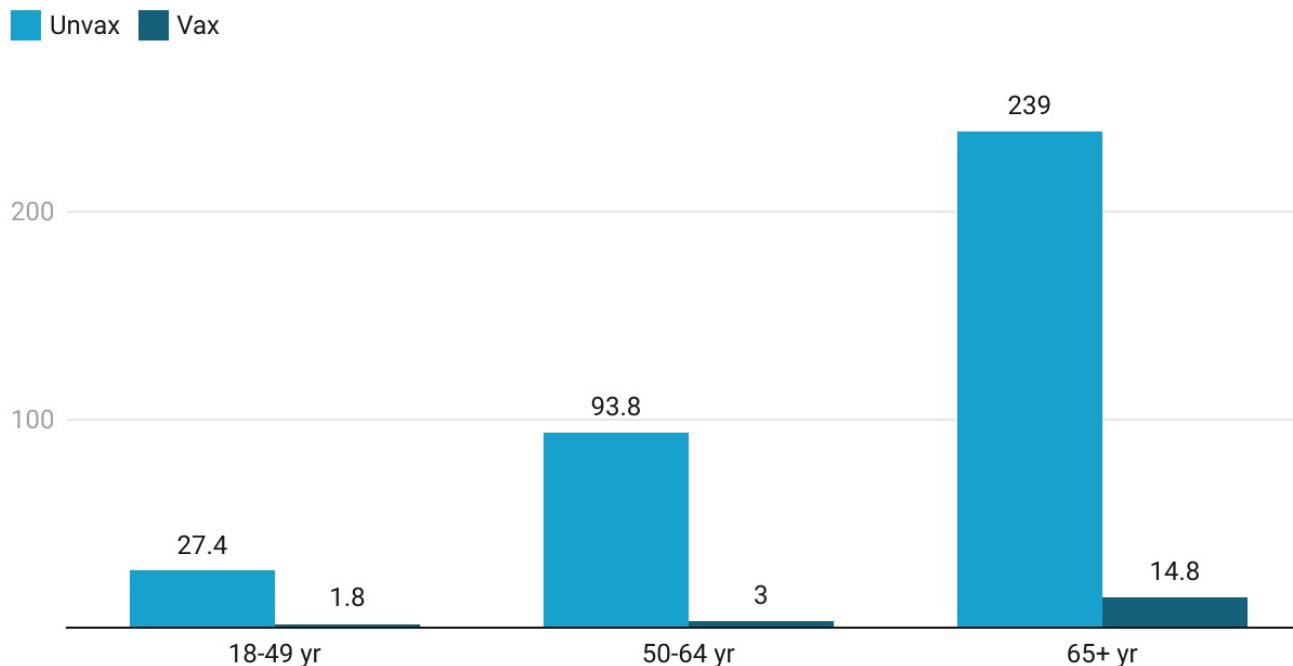


Chart: Health Industry advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

New Case and Death Rates By Vaccine

All three vaccines in use in the United States are effective in lowering the risk of infection and death. Moderna is proving most effective; JNJ (Janssen) single dose slightly less effective.

New Cases Per 100,000 By Vaccine

Week ending September 4

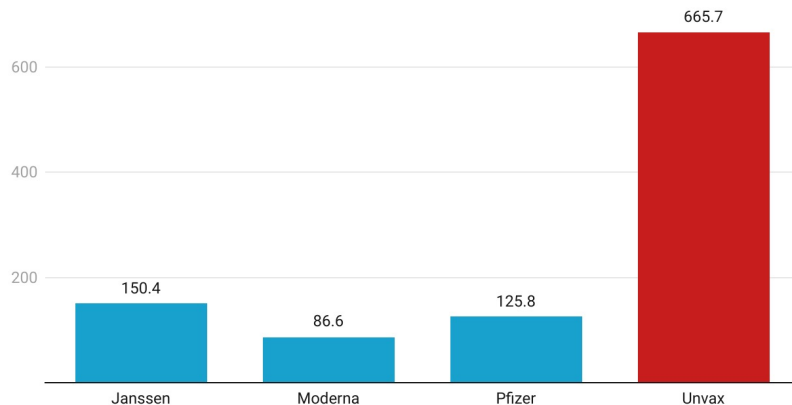


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Deaths Per 100,000 By Vaccine

Week ending September 4

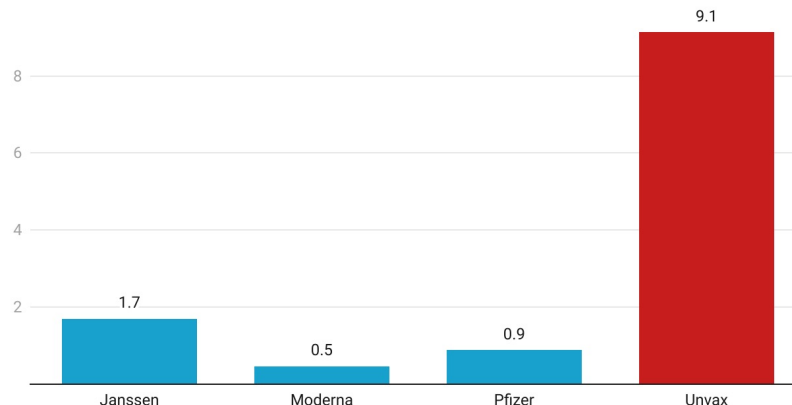


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

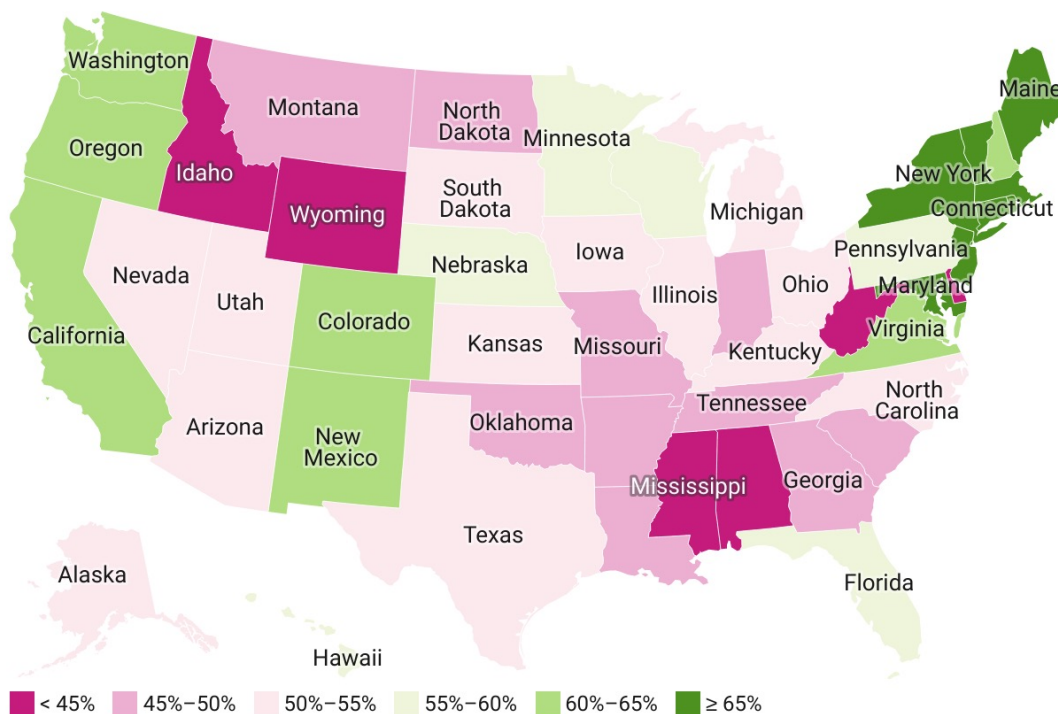
Vaccine Tracking - % of Population Vaccinated

The United States still has a long way to go in getting enough people vaccinated against Covid-19.

- Alabama, Delaware, Idaho, Mississippi, West Virginia, and Wyoming trail the rest of the country in vaccination rates.
- Other states that have vaccinated fewer than half of their citizens: Arkansas, Georgia, Indiana, Louisiana, Missouri, Montana, North Dakota, Ohio, Oklahoma, South Carolina, and Tennessee.
- Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Rhode Island, and Vermont have done the best job of vaccinating citizens.
- Other states that have vaccinated at least 60% of their citizens: California, Colorado, New Hampshire, New Mexico, Oregon, Virginia, and Washington.

% of Population Fully Vaccinated

As of October 15



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

Covid-19 "Vital Signs"

Estimated Daily Infections & New Case Rates

Estimated infections are falling even faster than detected cases.

- Estimated new daily cases peaked on September 1
- Since then, these infections plunged 68%
- Infections are lower than they have been in more than twelve weeks.
- Reported cases have dropped in half in the past month-and-a-half
- These cases are now at an eleven-week low.

Estimated Daily Infections v. Detected Cases

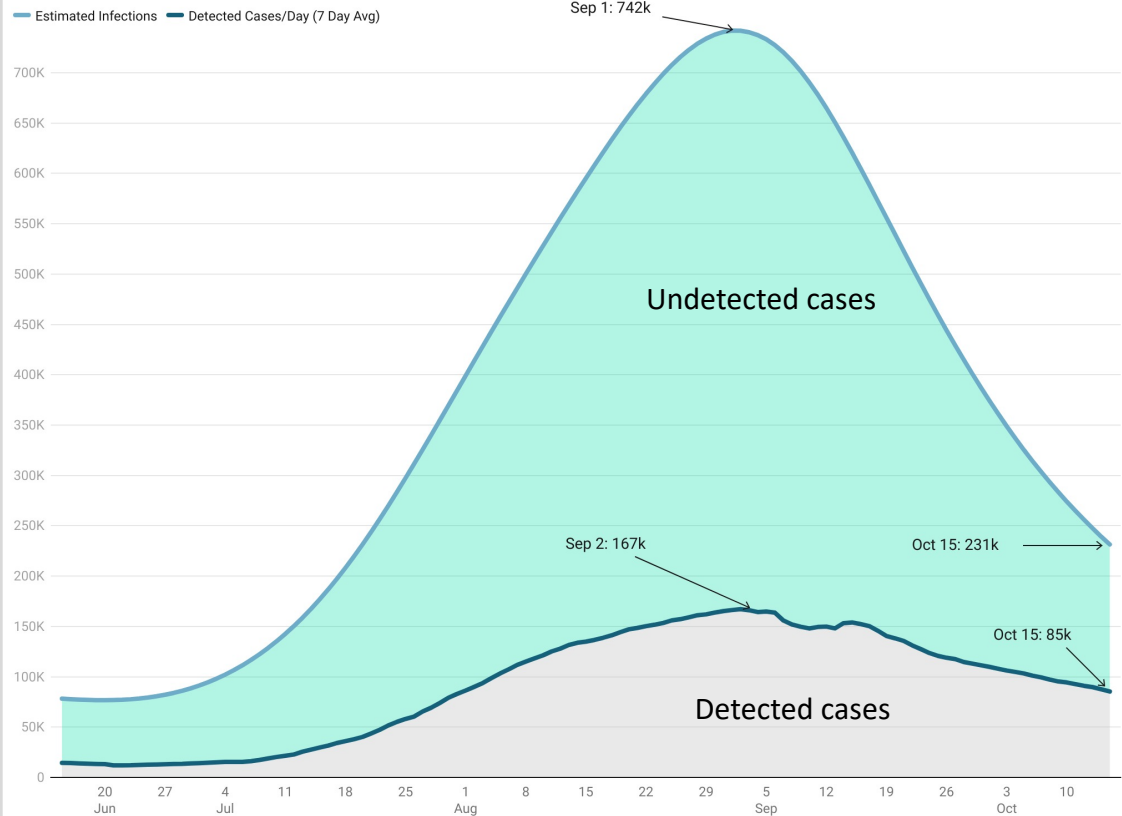


Chart: Health Industry Advisor LLC • Source: Yale School of Public Health • Created with Datawrapper

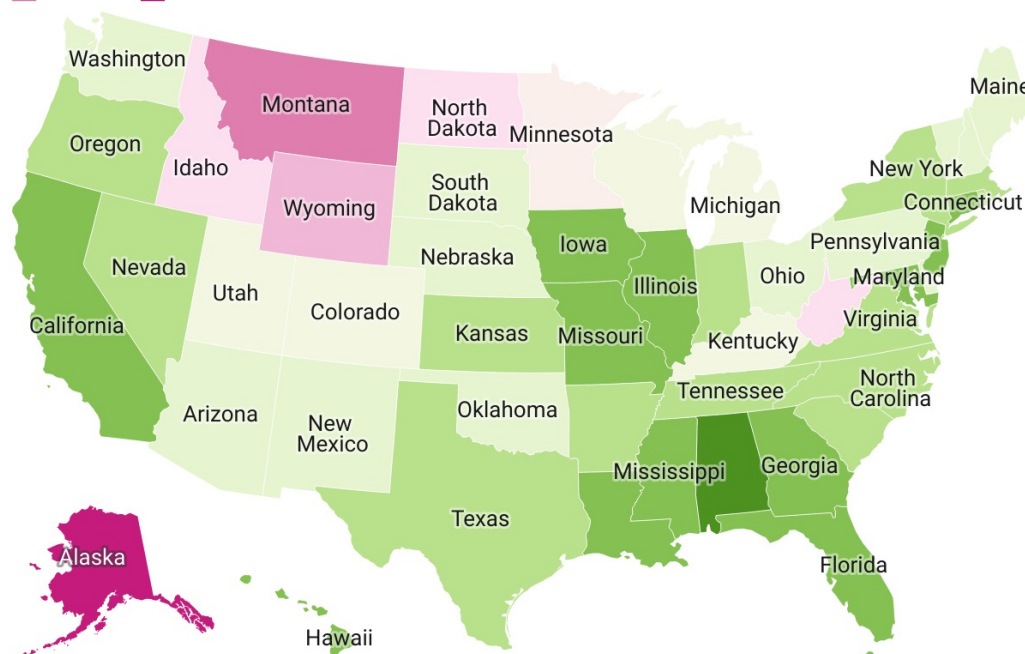
New Daily Cases Per Capita By State

Pockets of high case rates are found across the country.

- Alaska, Idaho, Montana, North Dakota, West Virginia, and Wyoming posted the highest rates of new cases per capita, as of Friday
- Alabama, California, Connecticut, Florida, Georgia, Hawaii, Illinois, Iowa, Louisiana, Maryland, Mississippi, Missouri, and New Jersey have the lowest rates in the country.

New Cases / Million

7-Day Average, As of October 15



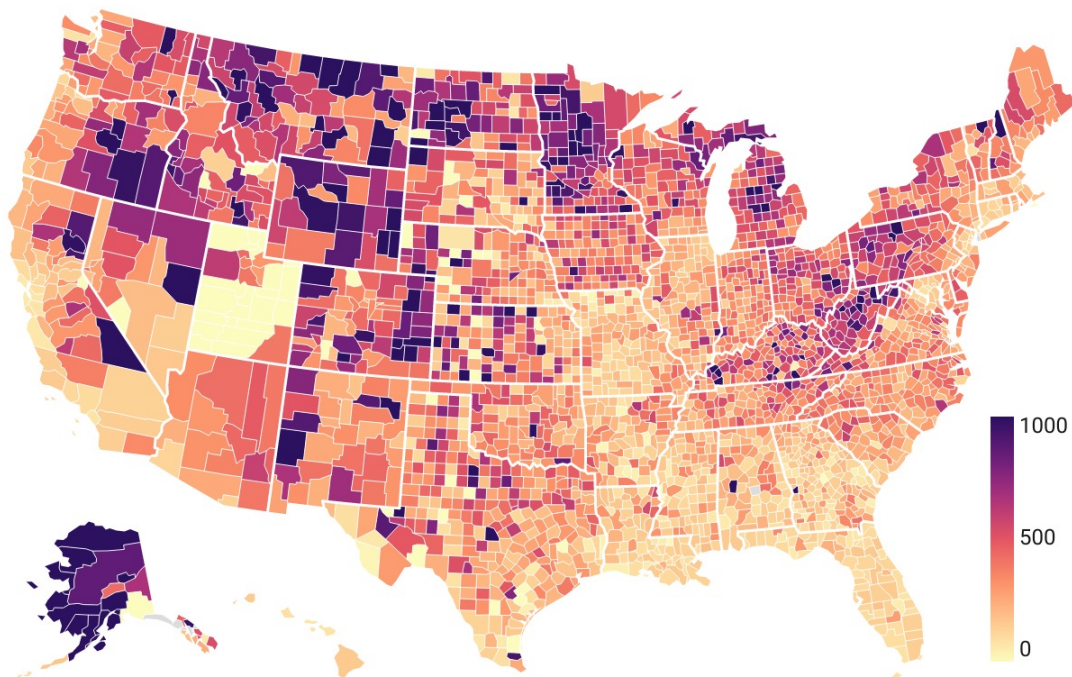
Map: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

New Daily Cases Per Capita By Municipality

Pockets of high case rates are found in municipalities in Alaska, Colorado, Kansas, Kentucky, Michigan, Minnesota, Montana, New Mexico, North Dakota, Oregon, Pennsylvania, West Virginia, and Wyoming.

New Daily Infections / Million

7-Day Moving Average, As of October 15



Map: Health Industry Advisor LLC • Source: Center for Systems Science and Engineering at Johns Hopkins University • Created with Datawrapper

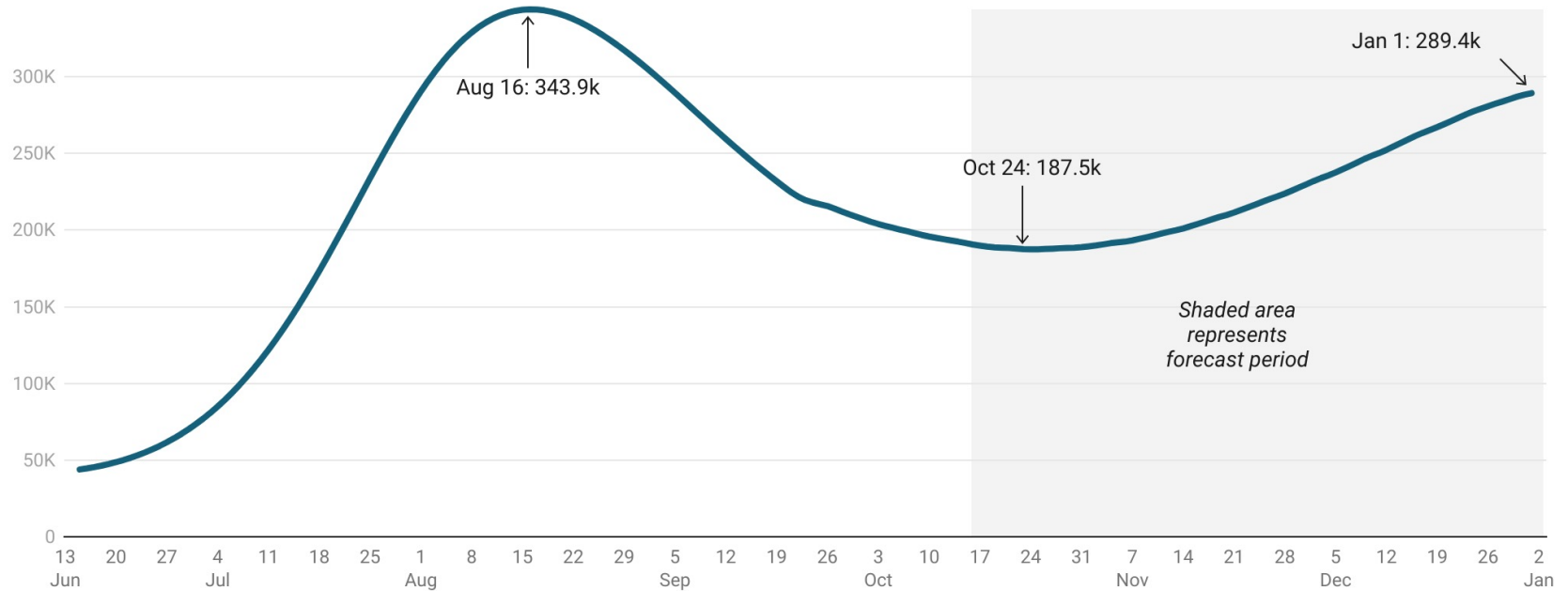
Covid-19 "Vital Signs"

Estimated Infections- IHME Projections

IHME's latest model (published October 15) anticipates that infections will increase starting next week through the end of the year. These are not expected to reach the peak set in mid-August.

Estimated and Projected Infections - U.S.

Institute For Health Metrics and Evaluation



Forecast Date: October 15

Chart: Health Industry Advisor LLC • Source: Institute For Health Metrics and Evaluation • Created with Datawrapper

Covid-19 "Vital Signs"

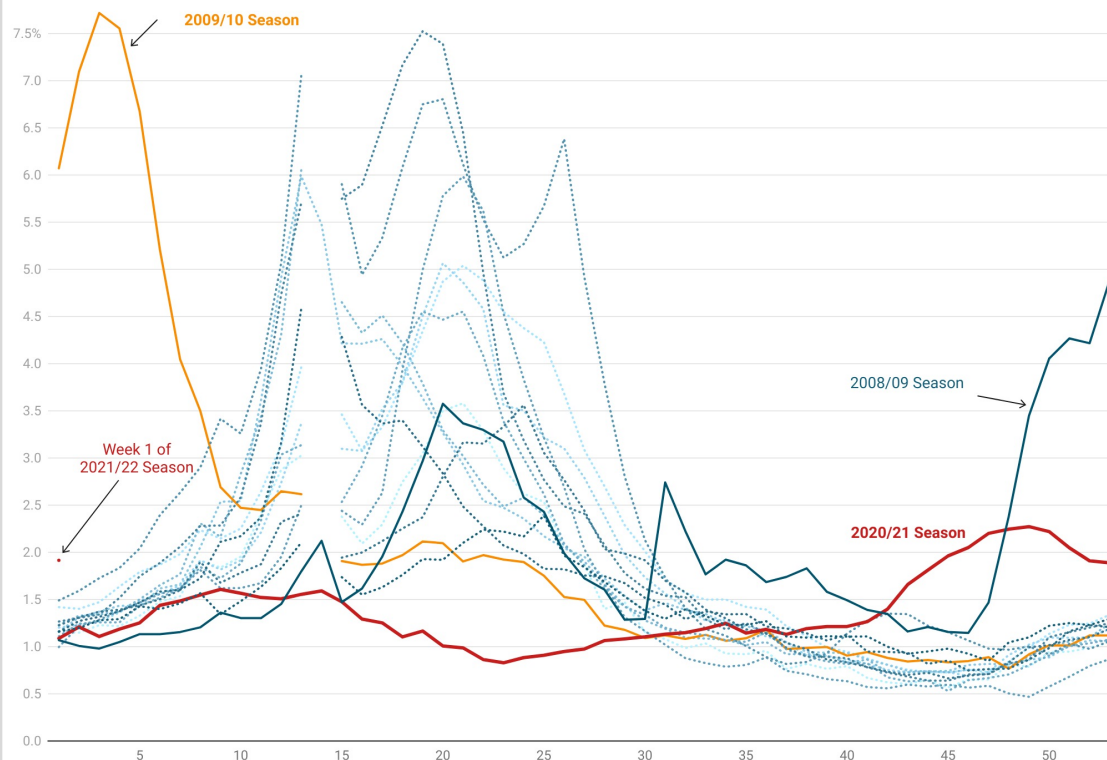
Comparison of Flu Seasons

After a concerning run-up in flu cases last month, these visits have slowed in recent weeks. However, they remain higher than experienced last winter.

- Last Winter, we enjoyed the mildest flu experience in at least fifteen years
- However, as the 2021/22 season, begins we need to be vigilant of the possibility of a severe season this Winter:
 - We are seeing more visits than during the peak of the season last Winter
 - Only the 2008/09 season ended in worse shape than we are in now. The subsequent 2009/2010 season was among the worst we have experienced in fifteen years
 - This 2009/10 season also reached peak earlier than in any other season

Percentage Visits for Influenza-Like Illness, National Summary

Comparison of Last Fifteen Seasons



Reported by: U.S. WHO/NREVSS Collaborating Laboratories and ILINet

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

Covid-19 "Vital Signs"

Flu Situation By State

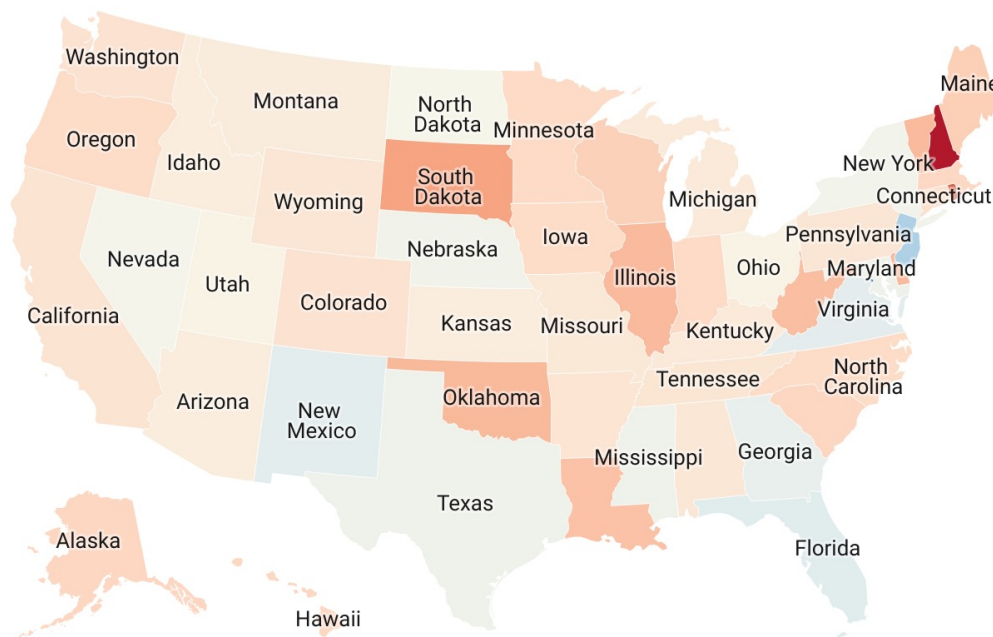
Sixteen states are seeing more than twice as many flu visits as this time one year ago. Rates in four states exceed last year's peak visits.

As of the week ending October 9:

- The 2021/22 flu season has just started
- However, twenty states are experiencing higher flu visit rates than at any time during the 2020/21 season:
 - Alaska, Arkansas, Colorado, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Jersey, New Mexico, New York, Ohio, South Dakota, Utah, Virginia, Washington, and Wisconsin
- Rates in twelve states are at least double what they were one year ago:
 - Delaware, Maryland, Michigan, Minnesota, Nevada, New Jersey, New Mexico, New York, Ohio, Virginia, Washington, and Wyoming.

Percentage of Visits for Influenza-Like Illnesses

Week ending October 9, 2021



Reported by: U.S. WHO/NREVSS Collaborating Laboratories and ILINet

Map: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Covid-19 "Vital Signs"

Inpatient Covid Admissions and Census

Inpatient census and admissions are declining for the United States in total. Admissions have dropped 48% since late August. Census has declined 42% since early September.

Covid-19 Admissions & Inpatient Census

As of October 14

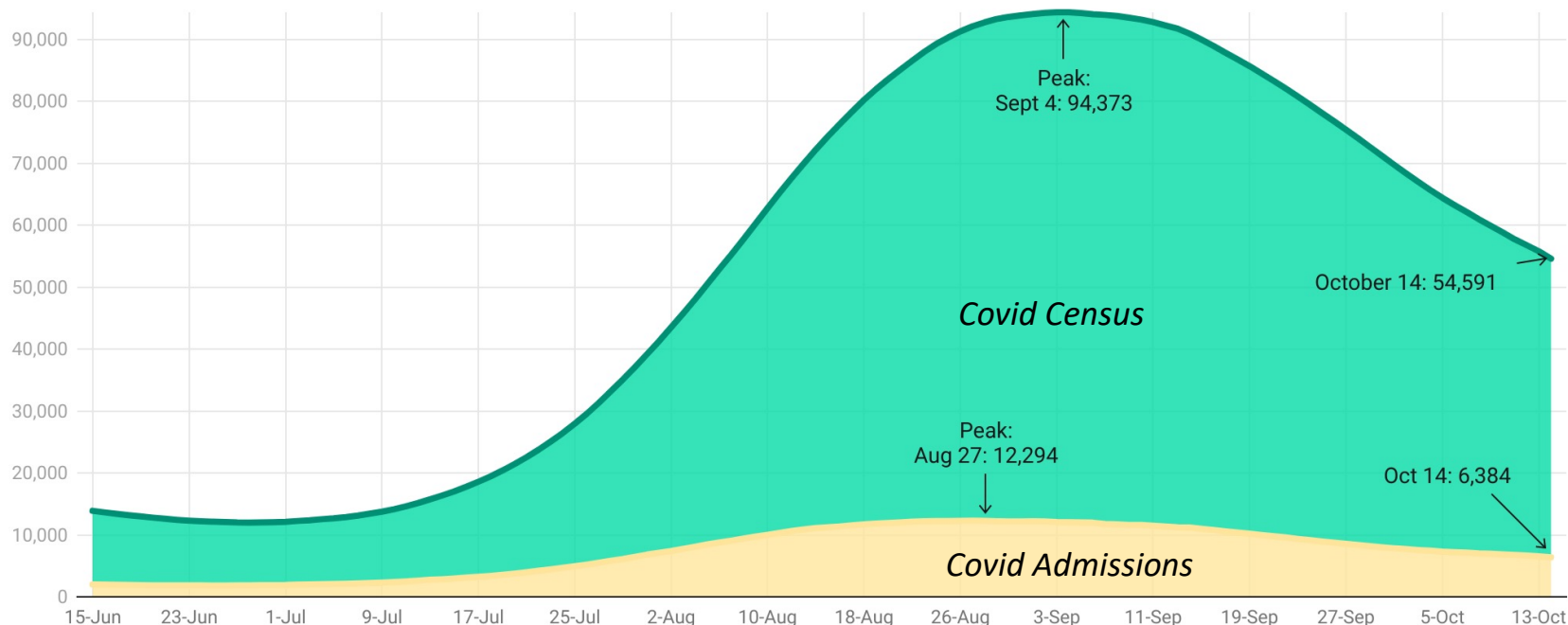


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

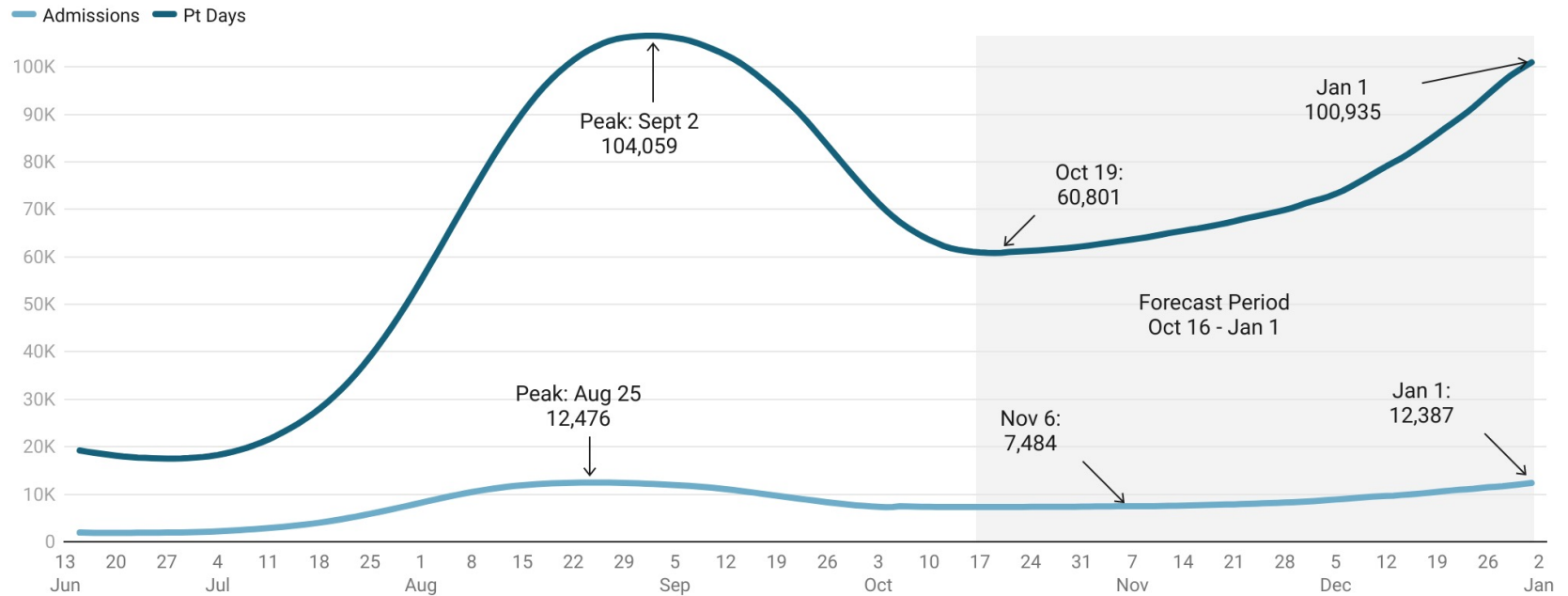
Covid-19 "Vital Signs"

Covid-19 Inpatient Admissions & Census – IHME

IHME suggests that Covid hospital admissions will rise again, starting in about three weeks. Covid inpatient census could increase starting later this week. Both measures are projected to near their late summer peaks by the end of the year.

Estimated & Projected Hospital Covid-19 Admissions & Patient Days

Institute for Health Metrics and Evaluation



Forecast Date: October 15

Chart: Health Industry Advisor LLC • Source: Institute for Health Metrics and Evaluation • Created with Datawrapper

Covid-19 "Vital Signs"

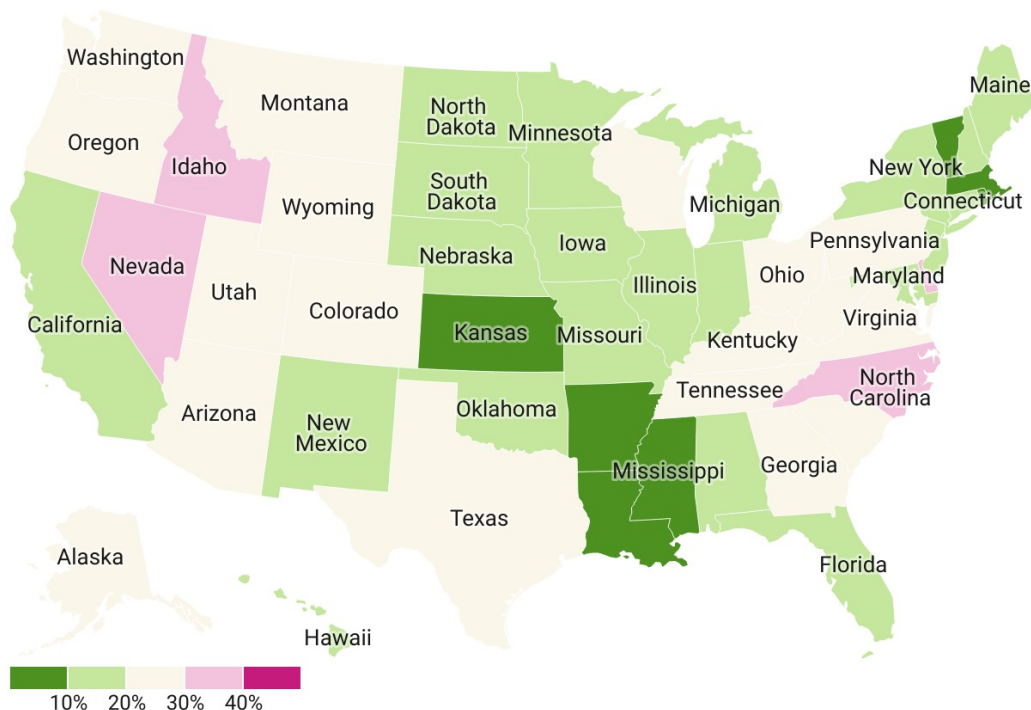
Covid Hospital Occupancy By State

Covid inpatient census is falling but, remains too high in several states.

- Covid patients account for one-third of available beds in Idaho, Nevada, and North Carolina
- In Arkansas, Illinois, Kansas, Louisiana, Massachusetts, Mississippi, Rhode Island, and Vermont, Covid patients occupy fewer than 10% of available beds

Covid-19 Patients As % of All Inpatient Beds

As of October 13



Map: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Covid-19 "Vital Signs"

Projected Change ICU Covid Occupancy By Year-End

Covid ICU census is projected to increase in most states between now and year-end. Vermont may experience the steepest increase, followed by New Hampshire, California, and Maryland.

Percentage Change in Projected ICU Covid Census

October 15 - January 1

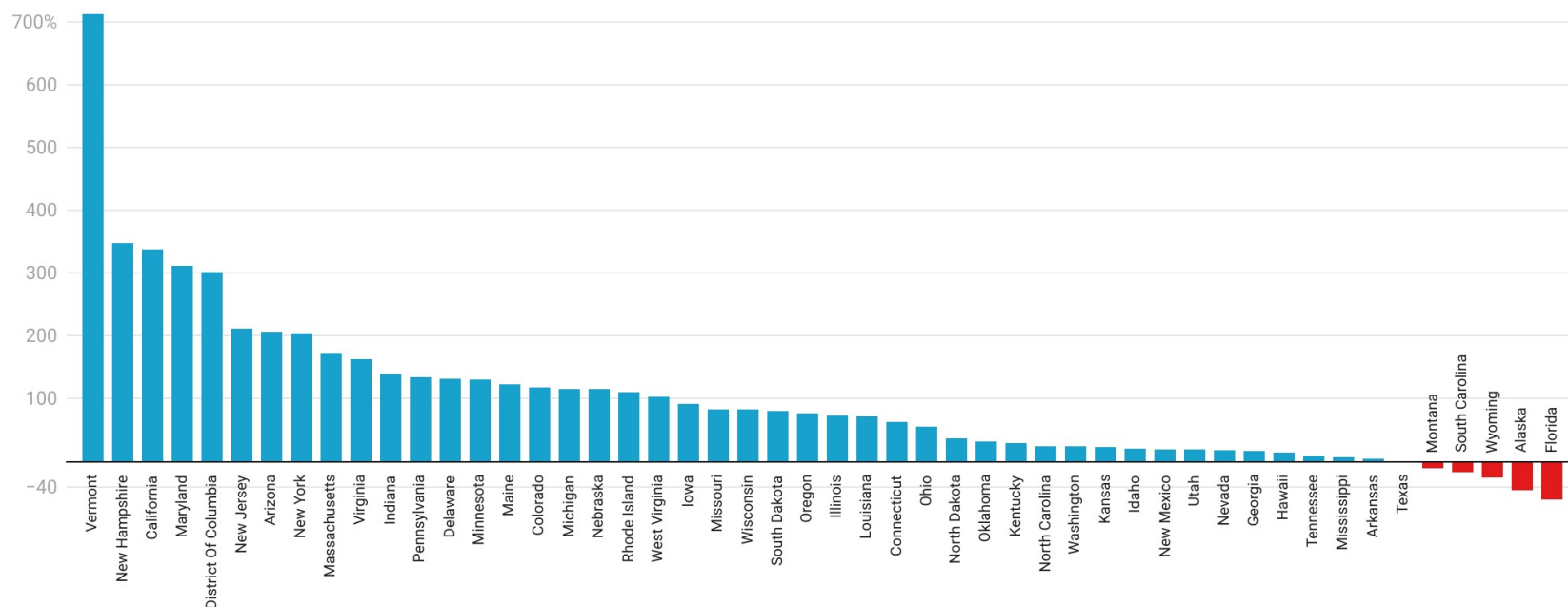


Chart: Health Industry Advisor LLC • Source: Institute for health Metrics and Evaluation • Created with Datawrapper

Test-Positive Rate

The test-positive rate continues to drop. This rate is now as low as it has been since mid-July.

Test-Positivity Rate

7-Day Average, Through October 12

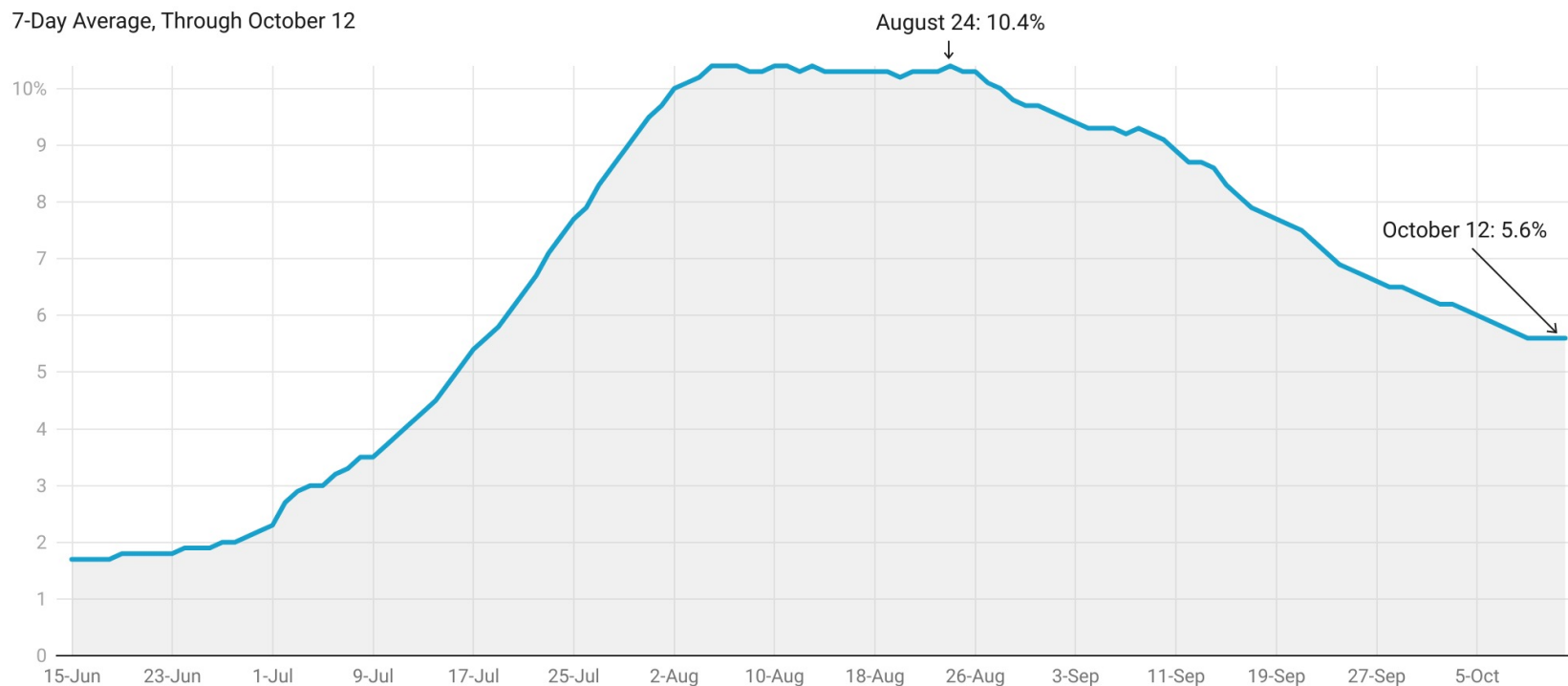


Chart: Health Industry Advisor LLC • Source: U.S. Department of Health & Human Services • Created with Datawrapper

7-Day Average Test-Positivity %

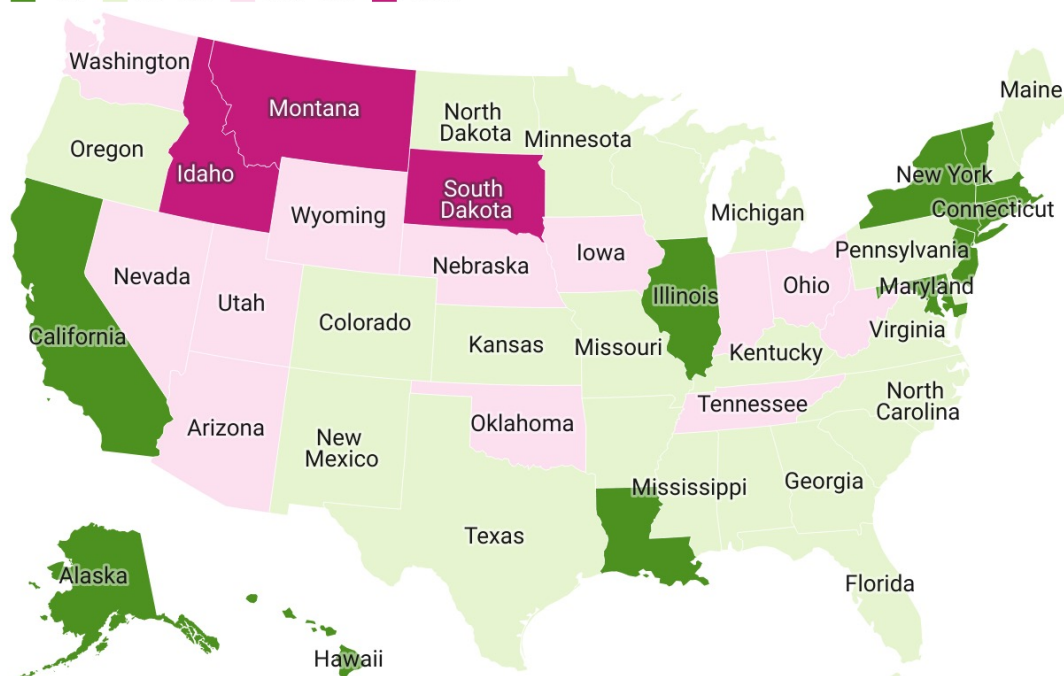
Test-positivity rates are improving but, still higher than recommended by public health officials.

- Several states continue to post high test-positive rates (>15%):
 - Idaho, Montana, and South Dakota
- Several states report rates that beat recommended targets (<5%):
 - Alaska, California, Connecticut, Florida, Hawaii, Illinois, Louisiana, Maryland, Massachusetts, New Jersey, New York, Rhode Island, and Vermont.

Test Positivity %

7-Day Average, As of October 12

■ < 5% ■ 5%–10% ■ 10%–15% ■ ≥ 15%



Map: Health Industry Advisor LLC • Source: U.S. Department of Health & Human Services • Created with Datawrapper

Deaths with Covid-19

Deaths with Covid-19 reached a nearly eight-week low.

Deaths With Coronavirus

7-Day Average, Through October 15

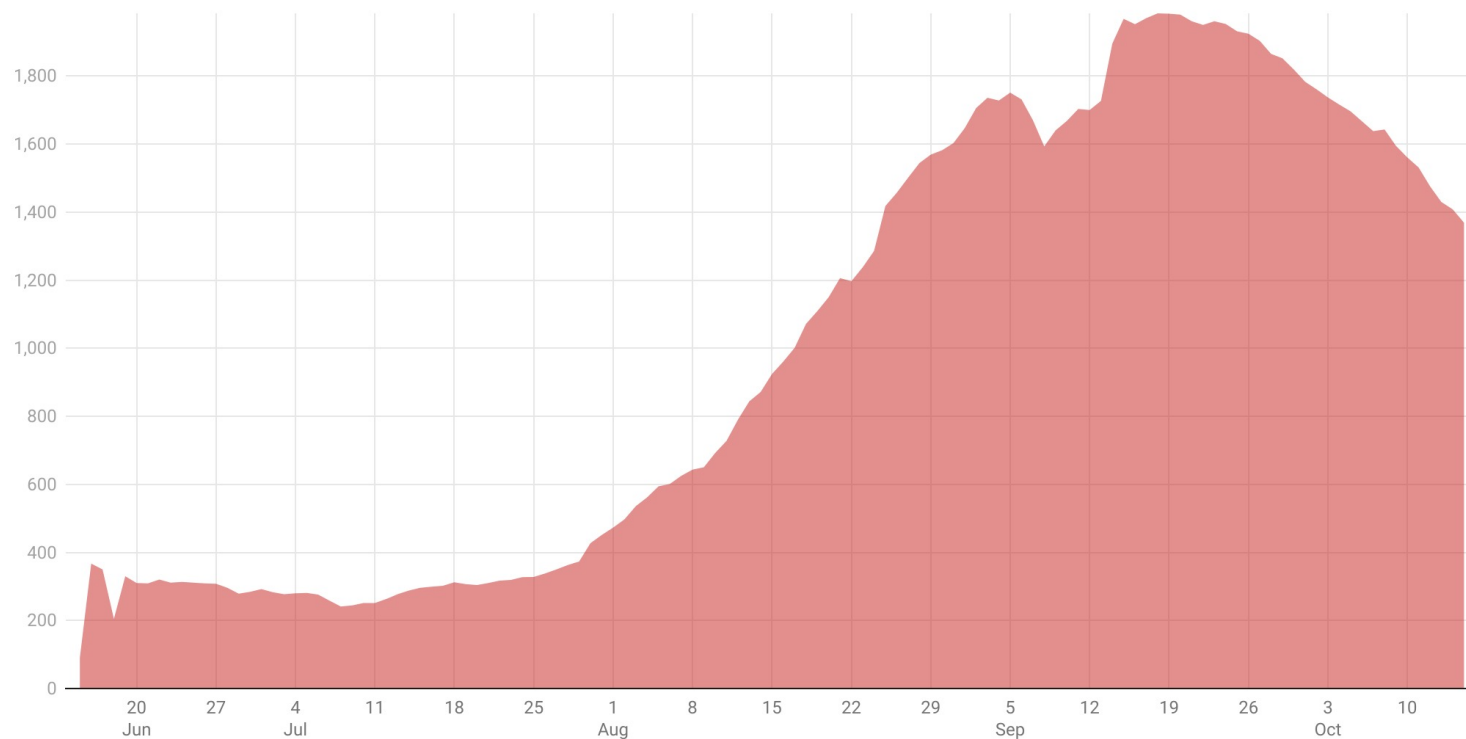


Chart: Health Industry Advisor LLC • Created with Datawrapper

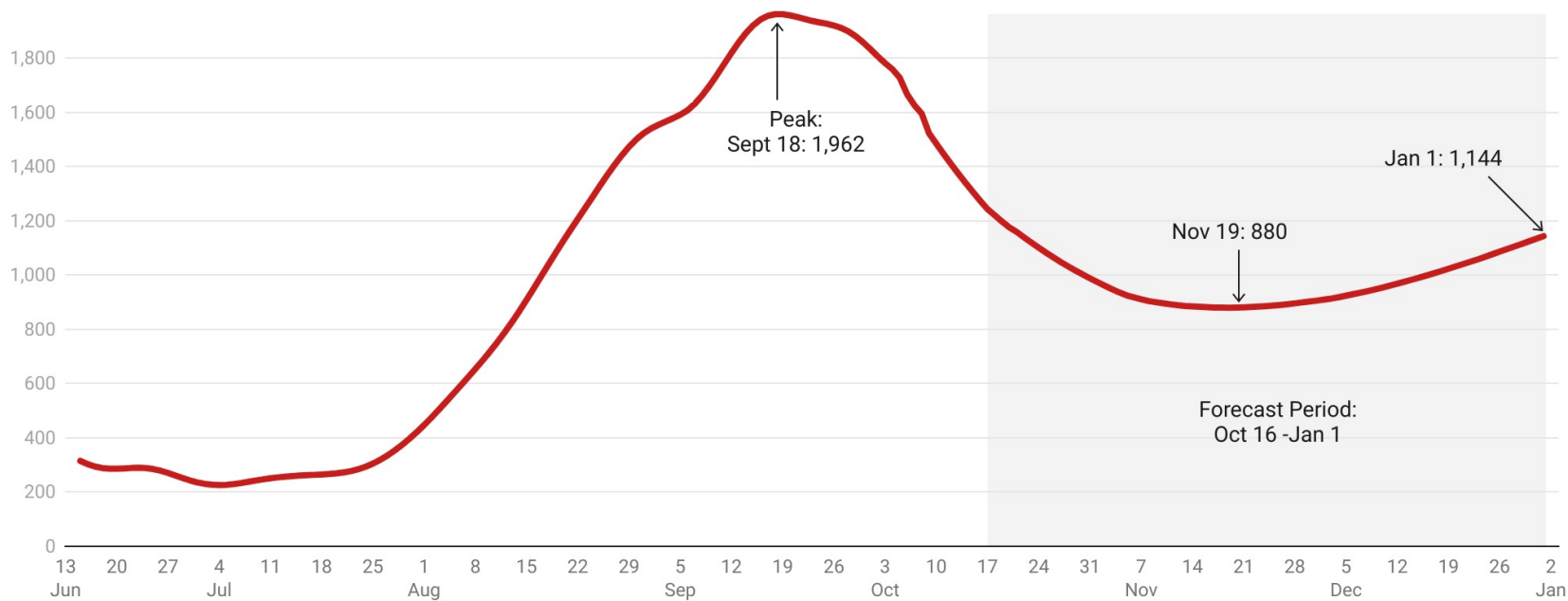
Covid-19 "Vital Signs"

Deaths With Covid-19: IHME Projection

IHME's model suggests that we have seen the peak of daily deaths from the Delta variant. Deaths are expected to drop until Thanksgiving, before rising again through the end of the year.

Estimated and Projected Covid Deaths - U.S.

Institute For Health Metrics and Evaluation



Forecast Date: September 30

Chart: Health Industry Advisor LLC • Source: Institute For Health Metrics and Evaluation • Created with Datawrapper

Sources

The following data sources are accessed on a daily or weekly basis

- U.S. Department of Health & Human Services: <https://healthdata.gov/dataset/covid-19-estimated-patient-impact-and-hospital-capacity-state>
- U.S. Department of Health & Human Services <https://beta.healthdata.gov/dataset/COVID-19-Diagnostic-Laboratory-Testing-PCR-Testing/j8mb-icvb>
- 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>
- Our World In Data, <https://ourworldindata.org/covid-vaccinations>
- Covid-19 Forecast Hub, <https://viz.covid19forecasthub.org>
- Yale School of Public Health & Harvard TH Chan School of Public Health, <https://covidestim.org>
- Bloomberg Vaccine Trackers, <https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/?sref=Z0b6TmH>