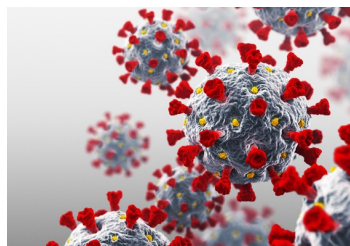


Covid-19 "Vital Signs"

Issue # 348

September 20, 2021



Reported Case Rates in Selected “Football” Communities

Covid-19 “Vital Signs”

Considering infection trends prior to the first weekend of college football games, large crowds in seven communities we studied did not appear to spike in the two weeks following the games.

New Daily Infections / Million

7-Day Average

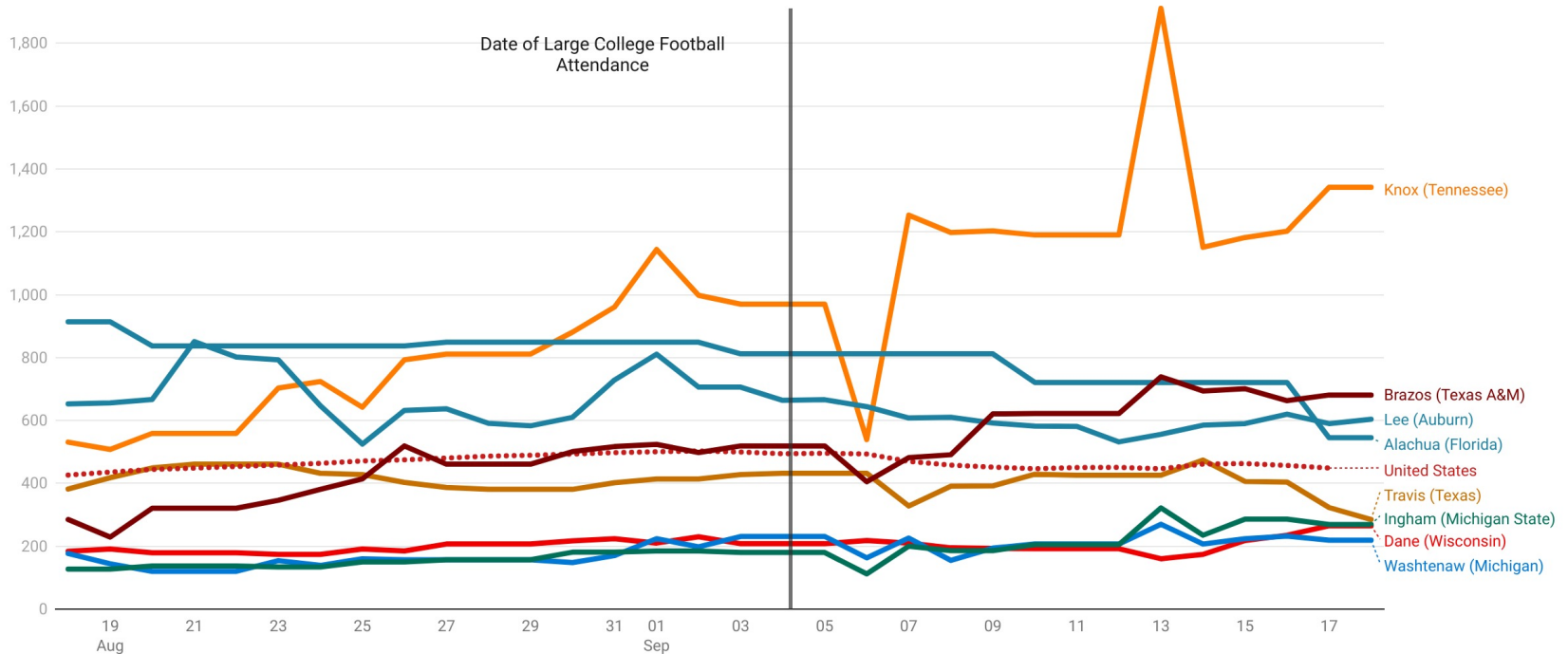


Chart: Health Industry Advisor LLC • Source: nytimes • Created with Datawrapper

Covid-19 "Vital Signs"

Reported Case Rates in Selected "Football" Communities – Before & After Initial Large Crowds

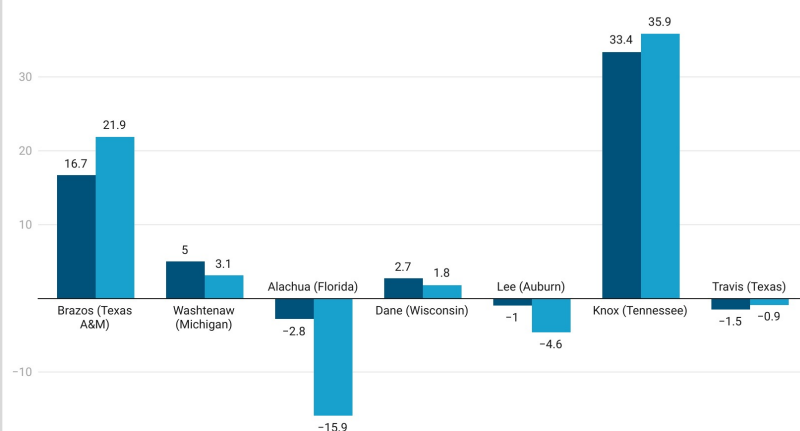
The seven communities we studied hosted game crowds of 77,000 to 109,000 on September 4. Only Brazos County, Texas (home to Texas A & M) experienced in significant increase in the rate of infection spread following the game. Alachua County, Florida (University of Florida) reported a much sharper decline in infection spread.

The graphic below shows the average increase (decrease) in new cases per million per day, before and after hosting the initial large football crowd.

Before & After Home Football Opener Slope in New Daily Cases / Million

Average Daily Change in New Cases Rates, Before & After Home Football Opener

8/18-9/4 9/4-9/17



Seven Counties With Largest College Football Attendance on September 4, 2021

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

Home Football Attendance

September 4, 2021

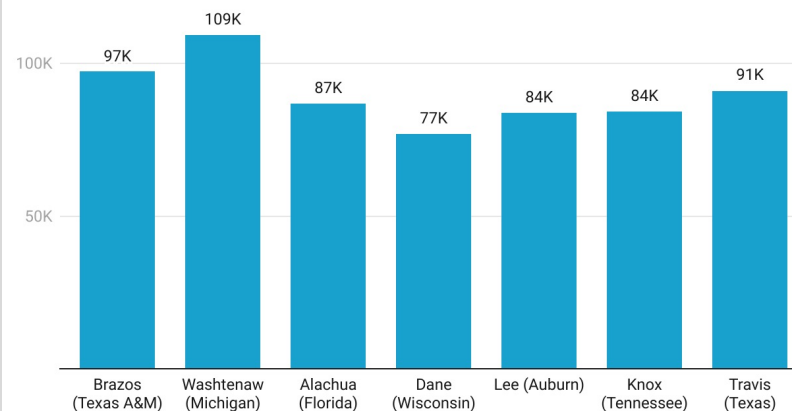


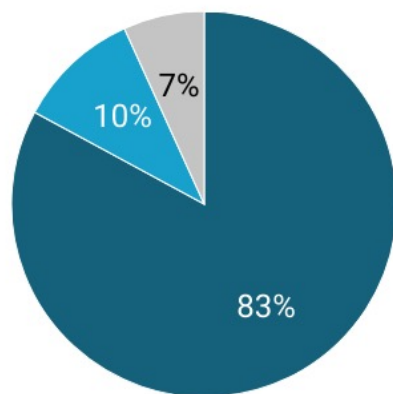
Chart: Health Industry Advisor LLC • Created with Datawrapper

Vaccination Status By Age – United States

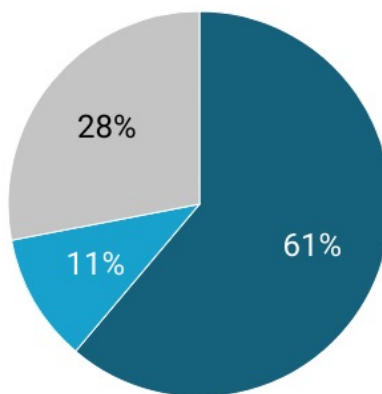
For the first time, more 12–17-year-olds are fully vaccinated than unvaccinated. In the past month, the fully vaccinated rate for this group increased from 36.7 to 45%, an increase of 2 million kids. The unvaccinated rate for kids plunged from 50% to 44%.

Vaccination Status By Age

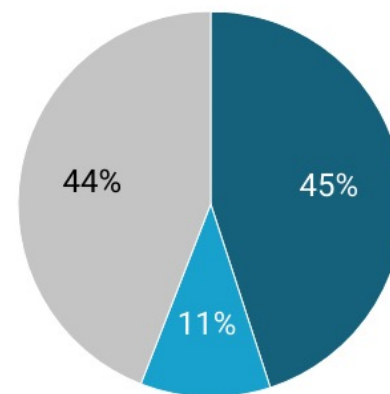
As of September 18



65+



18-64



12-17

■ Fully Vaccinated ■ Partially Vaccinated ■ Unvaccinated

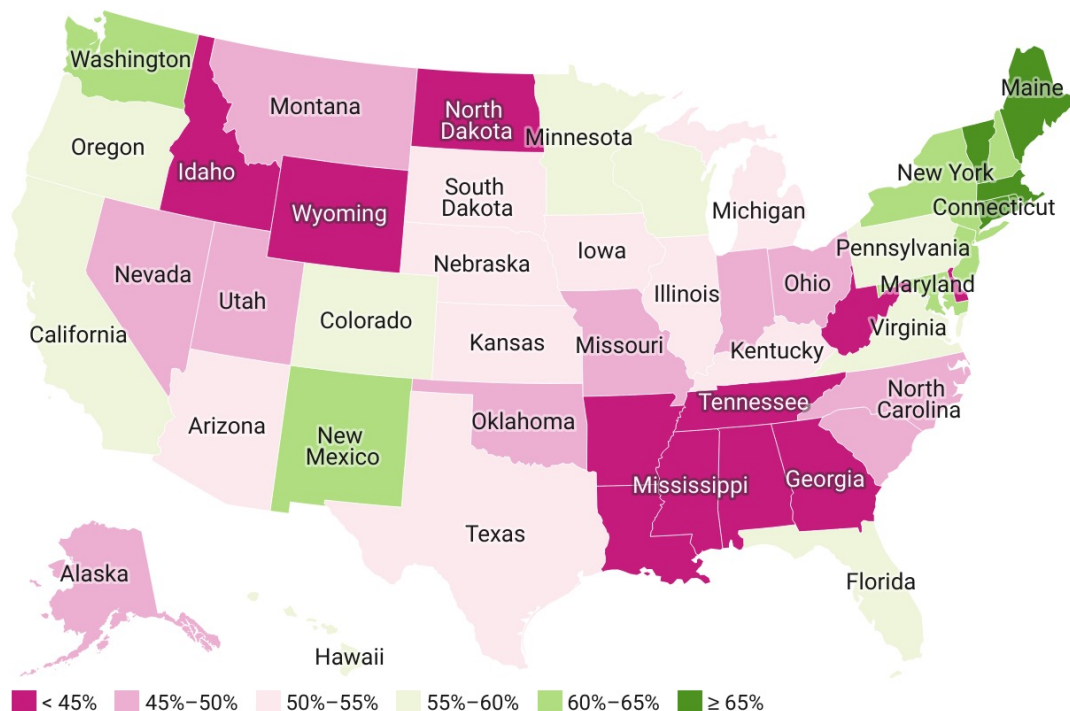
Chart: Health Industry Advisor LLC • Source: CDC • Created with Datawrapper

Vaccine Tracking - % of Population Vaccinated

Vaccine rates are highest in Connecticut, Maine, and Vermont, followed by Maryland, New Jersey, New Mexico, New York, and Washington. Rates are lowest in Alabama, Arkansas, Delaware, Georgia, Idaho, Louisiana, Mississippi, North Dakota, Tennessee, West Virginia, and Wyoming.

% of Population Fully Vaccinated

As of September 17



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

Test-Positive Rate

The test-positive stabilized over the past two weeks.

Test-Positivity Rate

7-Day Average, Through September 12

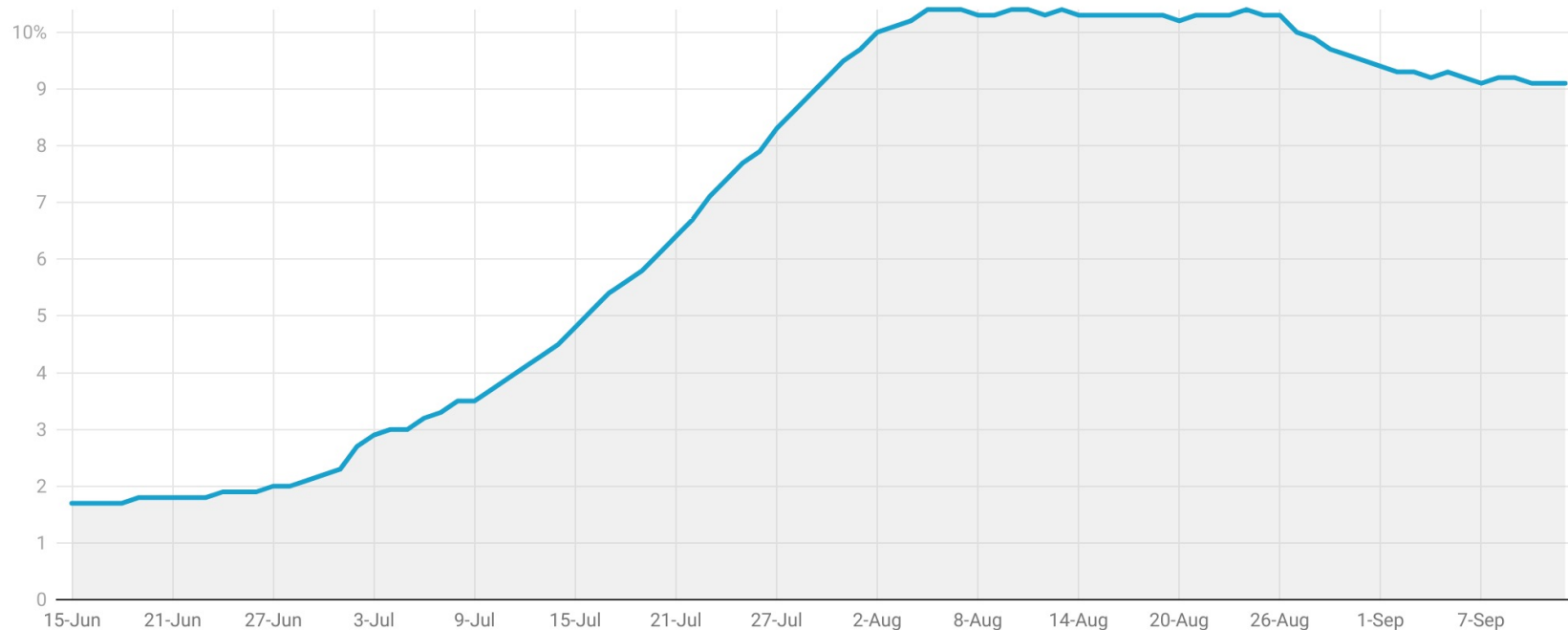


Chart: Health Industry Advisor LLC • Source: U.S. Department of Health & Human Services • Created with Datawrapper

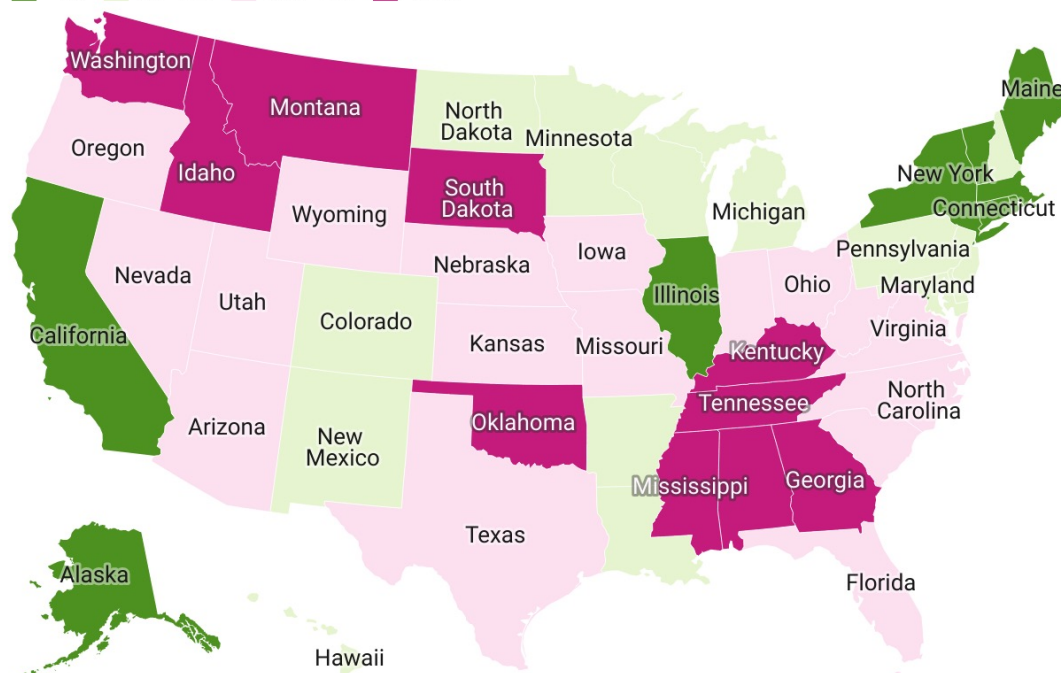
7-Day Average Test-Positivity %

Test-positive rates in nine states are below the desired 5% level: Alaska, California, Connecticut, Illinois, Maine, Massachusetts, New York, Rhode Island, and Vermont. Rates in ten states exceed 15%: Alabama, Georgia, Idaho, Kentucky, Mississippi, Montana, Oklahoma, South Dakota, Tennessee, and Washington.

Test Positivity %

Latest Available Data, As of September 12

■ < 5% ■ 5%–10% ■ 10%–15% ■ ≥ 15%



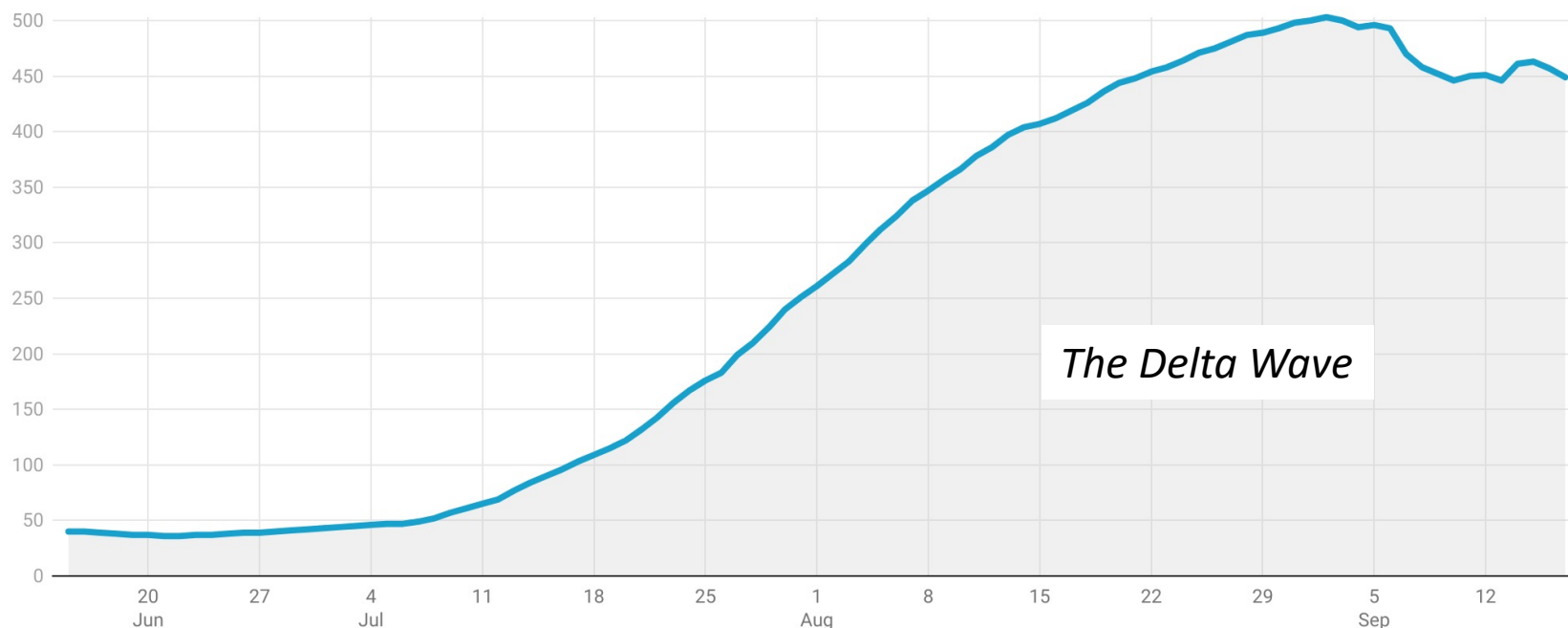
Map: Health Industry Advisor LLC • Source: U.S. Department of Health & Human Services • Created with Datawrapper

Newly Detected Cases

The 7-day new daily case rate rode briefly early last week. By the end of the week, the rate was as low as it has been for a month.

New Daily Cases / Million

7-Day Average



The Delta Wave

Chart: Health Industry Advisor LLC • Created with Datawrapper

Covid-19 "Vital Signs"

Weekly Change in Newly Detected Cases

On a comparative week-over-week basis, it appears that new daily cases have stabilized, after declining for more than two months. This will bear watching, as it seems to be driven by an unusually low new case total on the day after Labor Day.

Week-Over-Week Changes in Newly-Detected Cases: USA

7-Day Moving Average, As of September 17

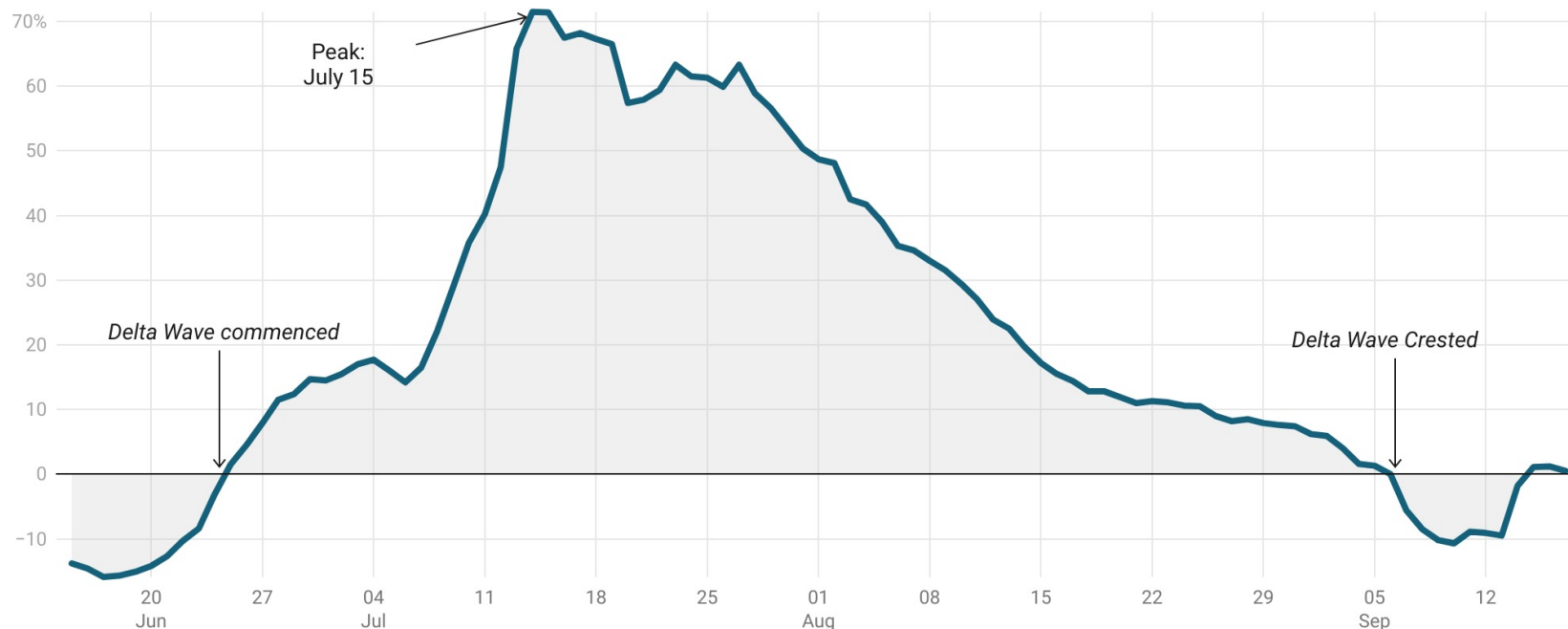


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Covid-19 "Vital Signs"

Estimated Daily Infections & New Case Rates

Based on reported cases, the Delta wave crested in September 2. Using estimated infections, the wave peaked on August 26. Further, while reported daily cases dropped 11% in the past two weeks, IHME estimates that daily infections dropped 30% already in just over three weeks.

Estimated Daily Infections v. Detected Cases

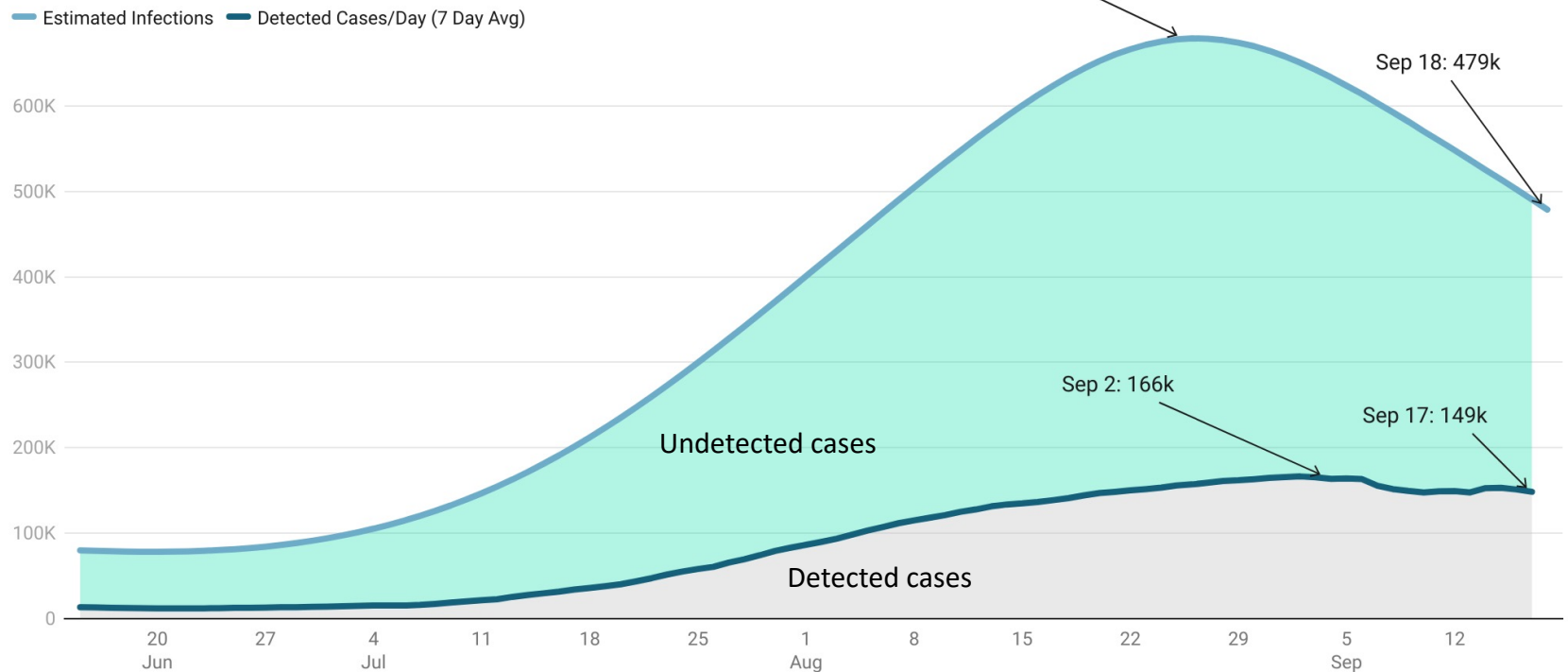


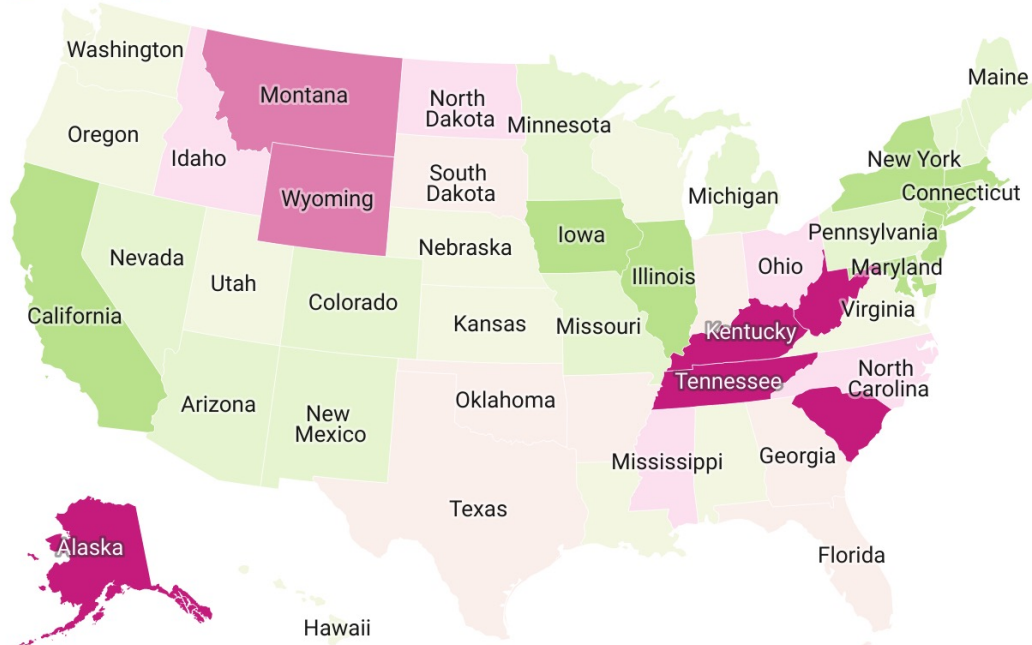
Chart: Health Industry Advisor LLC • Source: Yale School of Public Health • Created with Datawrapper

New Daily Cases per Capita By State

New case rates are highest in Alaska, Kentucky, South Carolina, and Tennessee. Next in line are Montana and Wyoming. Rates are lowest in California, Connecticut, Illinois, Iowa, Maryland, Massachusetts, New Jersey, and New York.

New Cases / Million

7-Day Average, As of September 17



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

Covid-19 "Vital Signs"

Week-Over-Week Change in New Daily Cases per Capita

Alaska, Montana and West Virginia have seen the sharpest increase in reported infection rates over the past two weeks. Conversely, Alabama, Florida, Georgia, and Mississippi have experienced even steeper declines during this period.

Change in New Daily Cases / Million - Past Two Weeks

7-Day Average

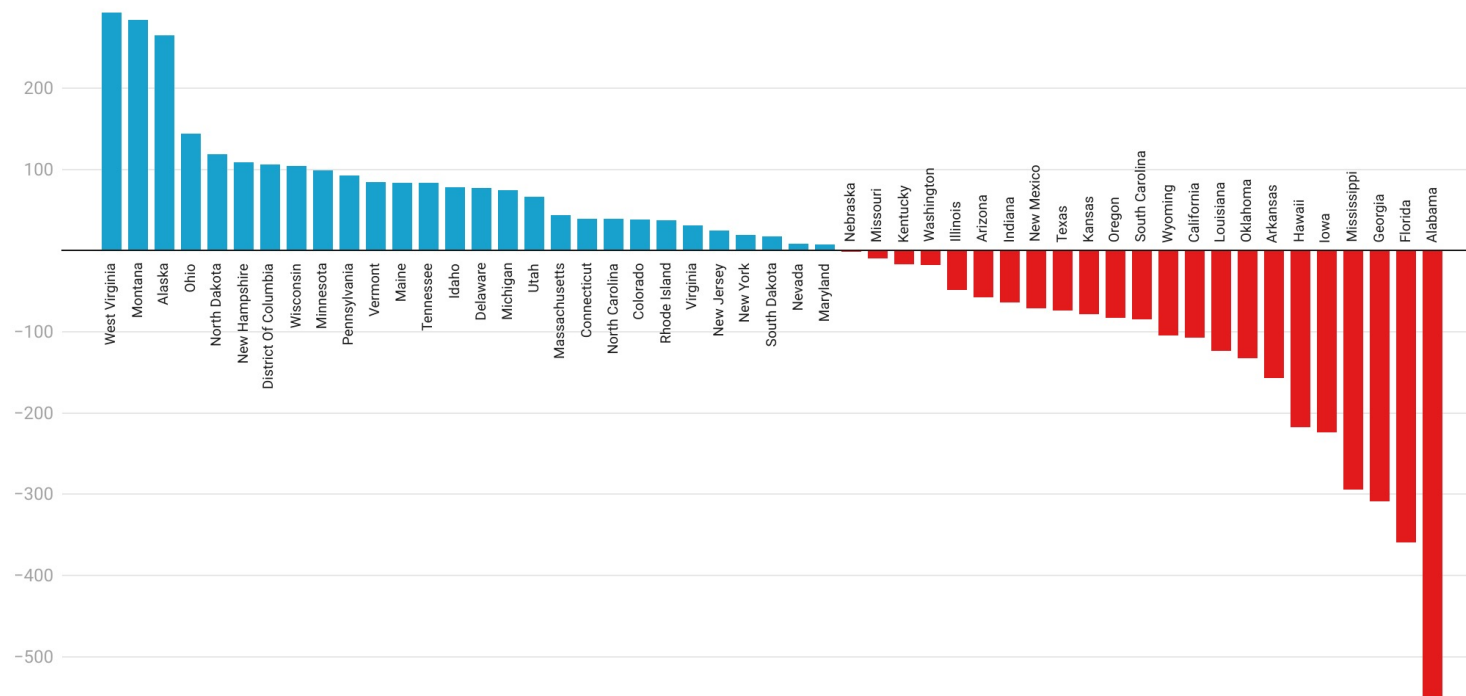
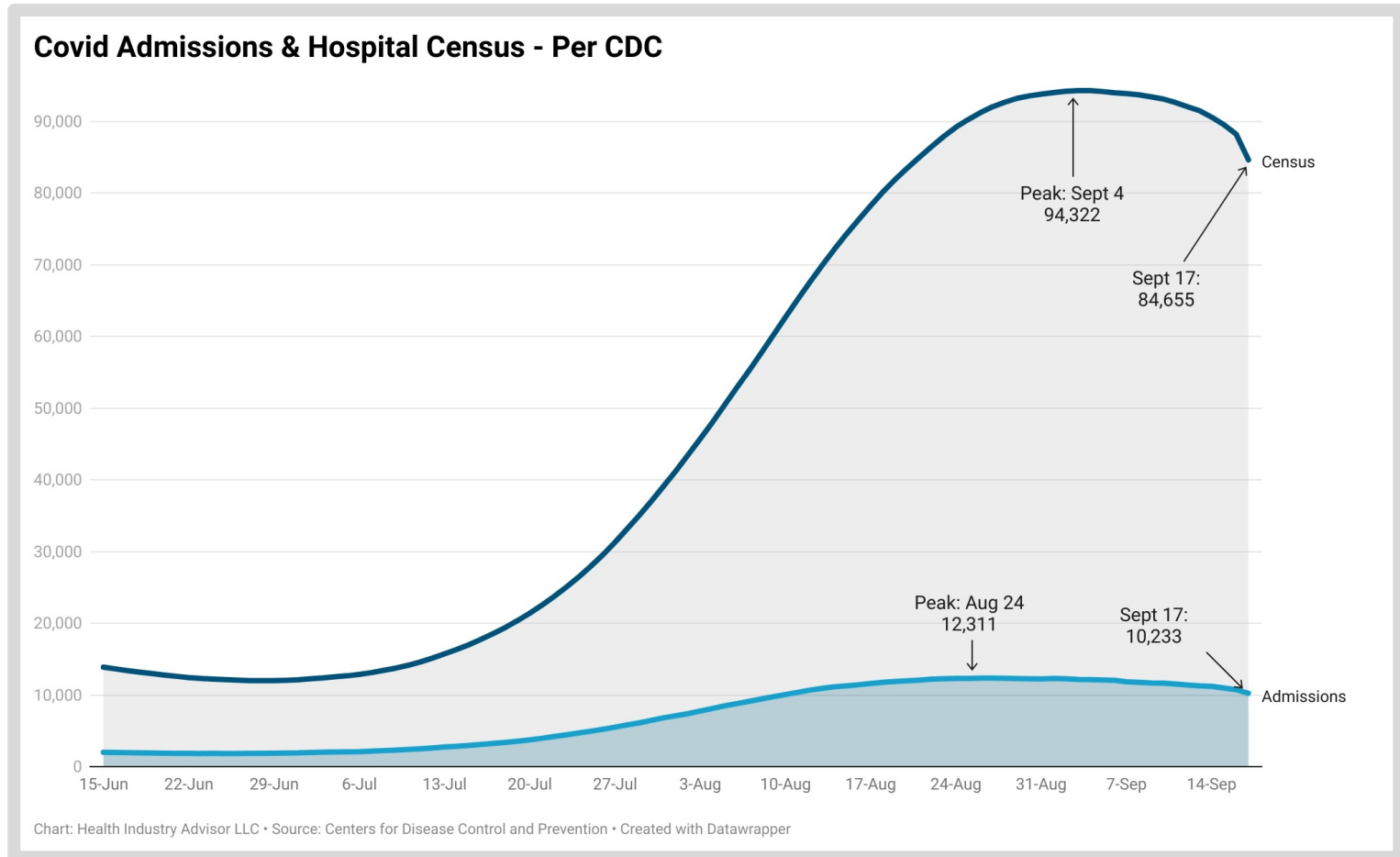


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Covid-19 “Vital Signs”

Covid Hospital Admissions and Census – Per CDC

*Covid hospital admissions peaked on August 24 and have dropped 17% since that date.
Covid census peaked on September 4 and has declined 10% in the past two weeks.*



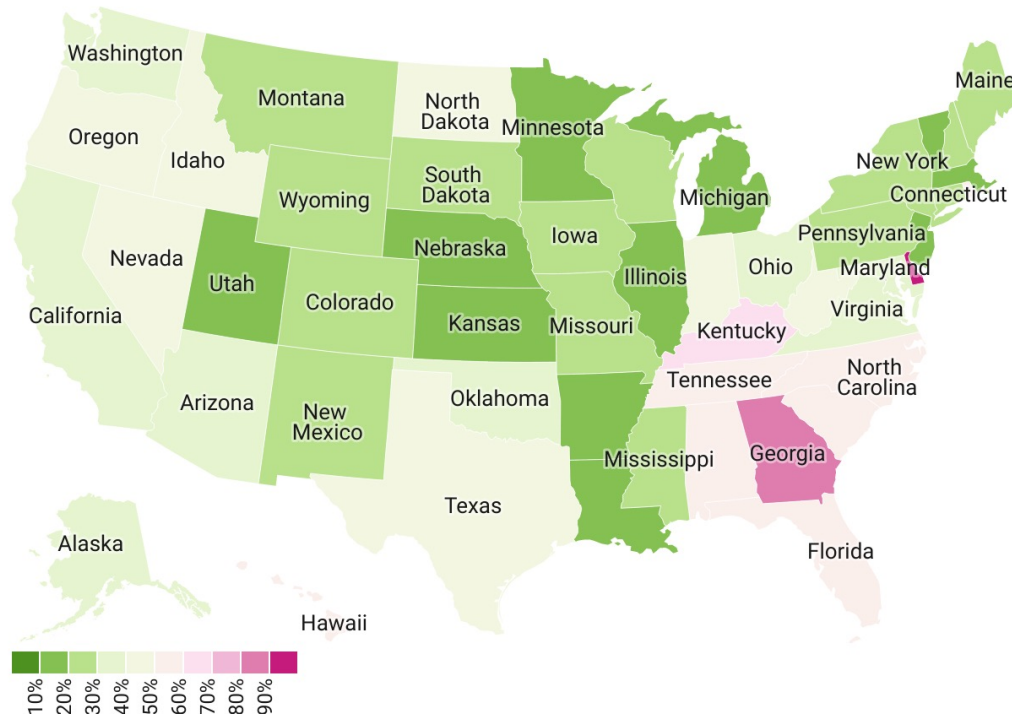
Covid Hospital Occupancy By State

Covid-19 "Vital Signs"

Delaware and Georgia are devoting eight of every ten beds to Covid-19 patients. Alabama, Florida, Hawaii, Kentucky, North Carolina, Rhode Island, South Carolina, and Tennessee are committing more than half the available beds to Covid patients. Conversely, Arkansas, Illinois, Kansas, Louisiana, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Jersey, Utah, and Vermont are dedicating fewer than one in five beds for these patients.

Covid-19 Patients As % of All Inpatient Beds

As of September 16



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



Deaths with Covid-19

Deaths with Covid-19 increased sharply versus a week ago..

Deaths With Coronavirus

7-Day Average, Through September 17

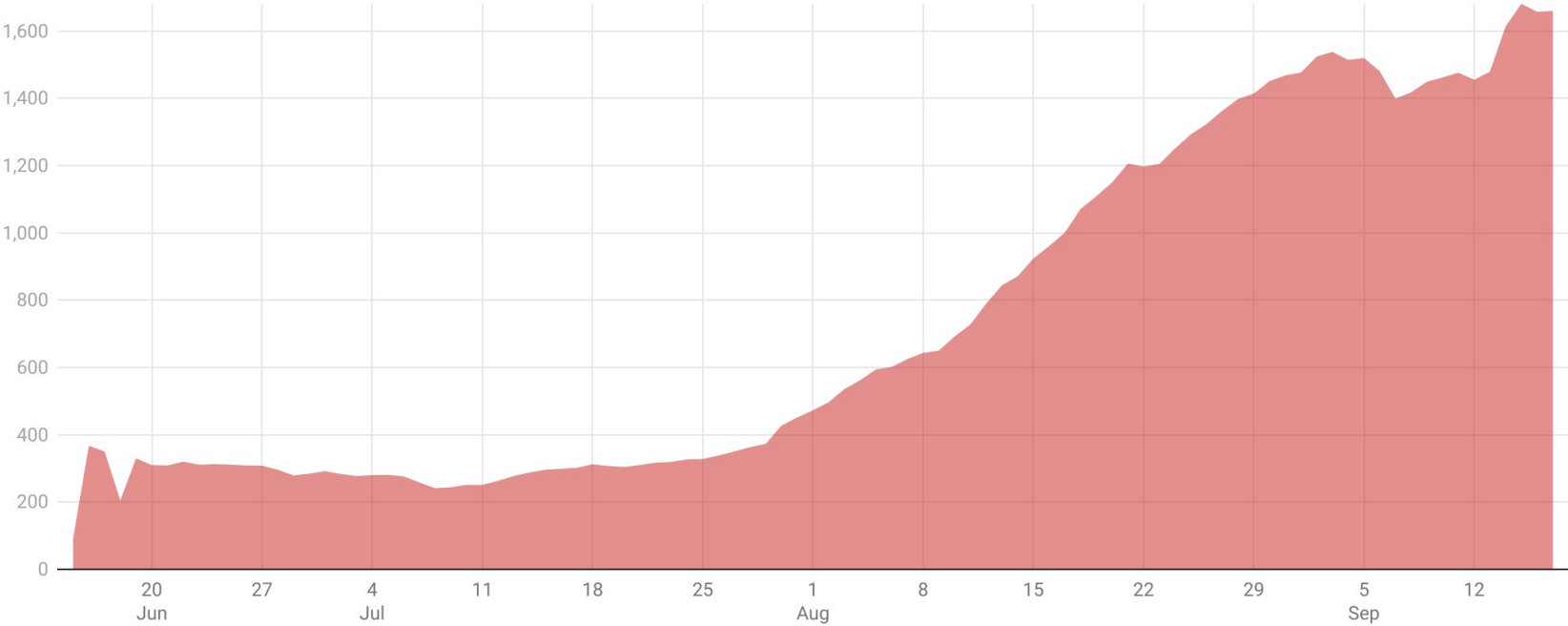


Chart: Health Industry Advisor LLC • Created with Datawrapper

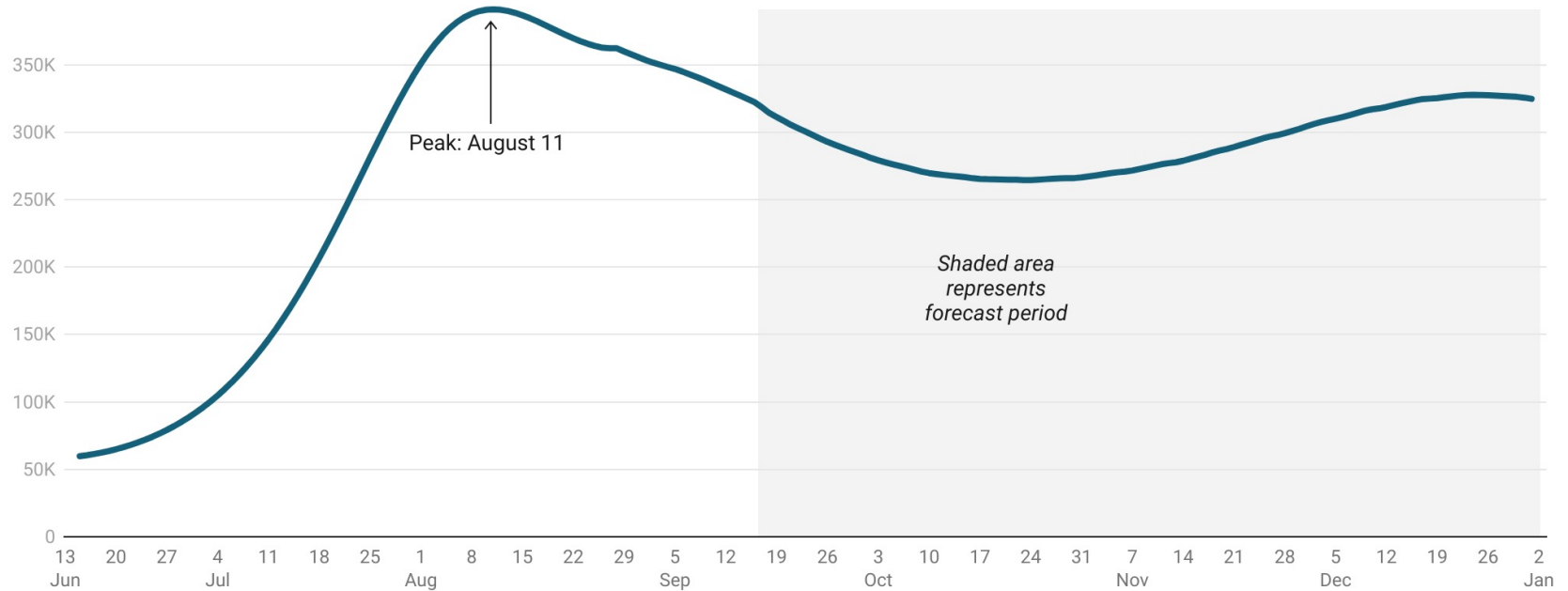
Covid-19 "Vital Signs"

Estimated Infections- IHME Projections

IHME's latest model anticipates that infections will decline for another five weeks, then increase through Christmas.

Estimated and Projected Infections - U.S.

Institute For Health Metrics and Evaluation



Forecast Date: September 16

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

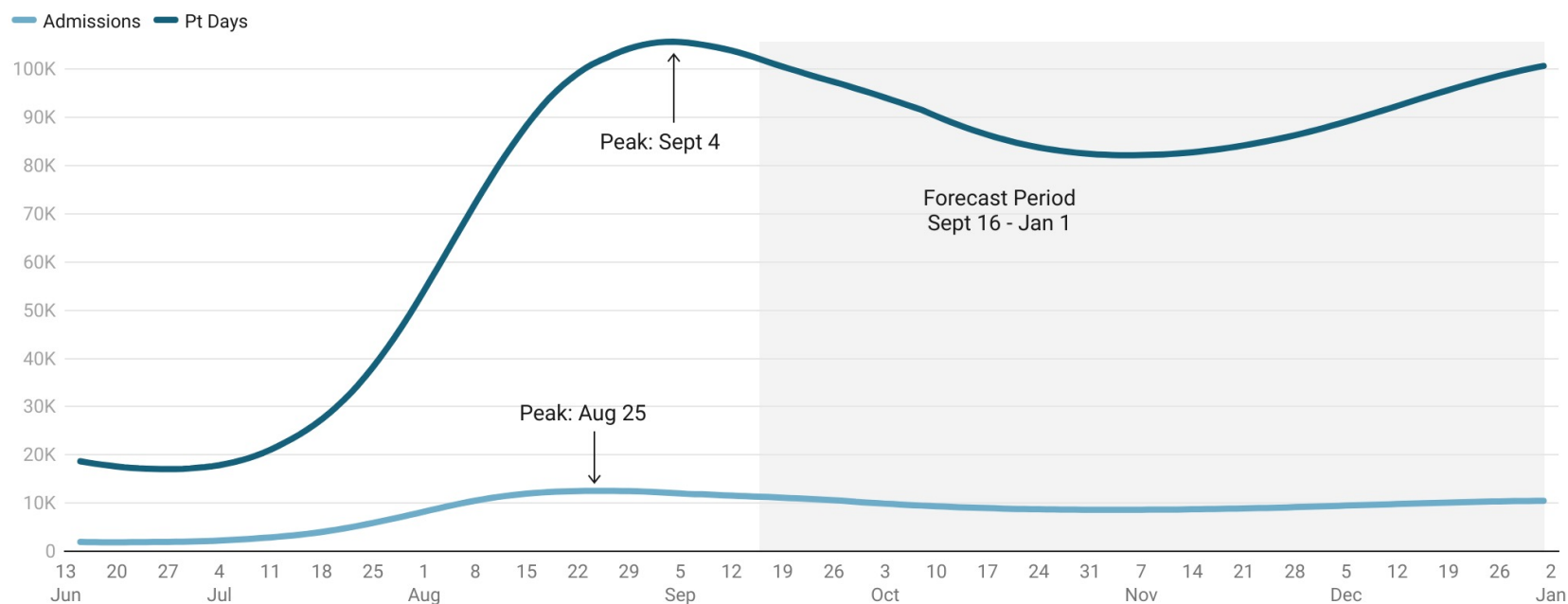
Covid-19 "Vital Signs"

Covid-19 Inpatient Admissions & Census – IHME

IHME suggests that Covid hospital admissions peaked nearly three weeks ago and Covid hospital census peaked two weeks ago. Both measures are expected to increase in November and December.

Estimated & Projected Hospital Covid-19 Admissions

Institute for Health Metrics and Evaluation



Forecast Date: Sept 16

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

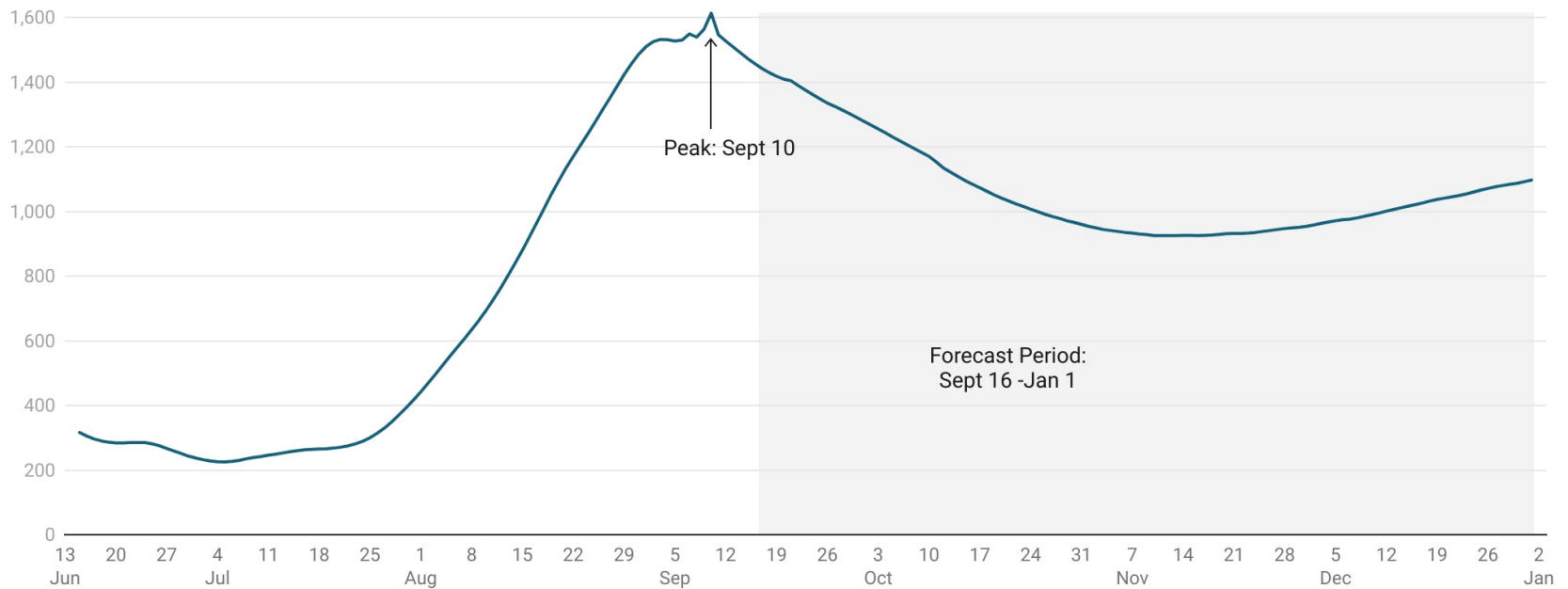
Covid-19 “Vital Signs”

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 for about two months, before rising again in the last six weeks of the year.

Estimated and Projected Covid Deaths - U.S.

Institute For Health Metrics and Evaluation



Forecast Date: September 16

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>