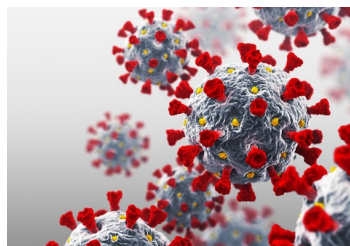


Covid-19 "Vital Signs"

Issue # 359

December 6, 2021

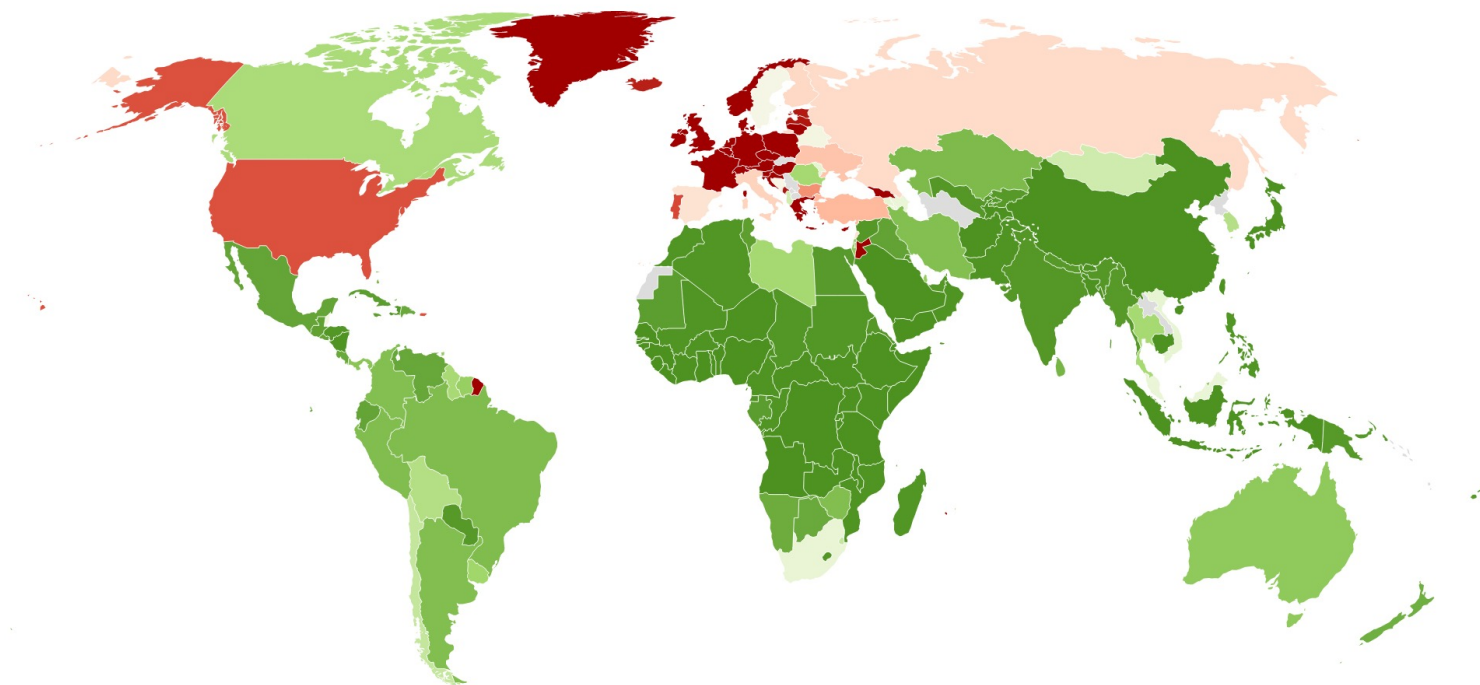
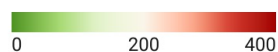


Newly Detected Cases / Million

Delta and now, Omicron, drove infection rates higher last week across Europe and the United States. Rates are generally low in many other parts of the world.

New Daily Cases / Million

7-Day Average, As of December 3



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

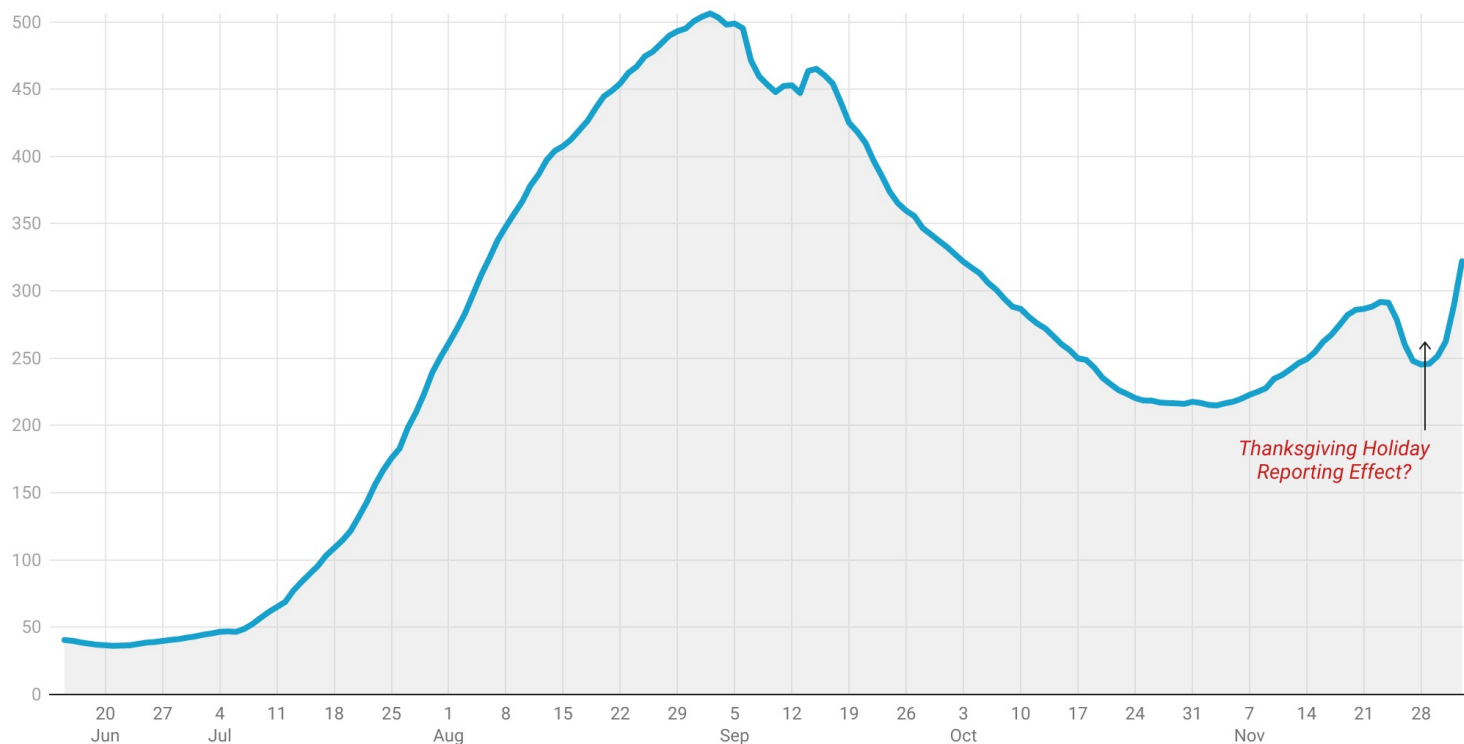
Covid-19 "Vital Signs"

Newly Detected Cases / Million - US

The new case rate spiked to its highest level on Friday since early October. Positing that Thanksgiving holiday reporting issues artificially lowered reported cases, the new case rate continued a five-week climb.

New Daily Cases / Million

7-Day Average



Thanksgiving Holiday
Reporting Effect?

Chart: Health Industry Advisor LLC • Created with Datawrapper

Covid-19 "Vital Signs"

Week-Over-Week Changes in New Cases – U.S.

Holiday case reporting issues cloud week-to-week comparisons. Nevertheless, new cases are spiking.

Week-Over-Week Change in New Daily Cases

7-Day Average

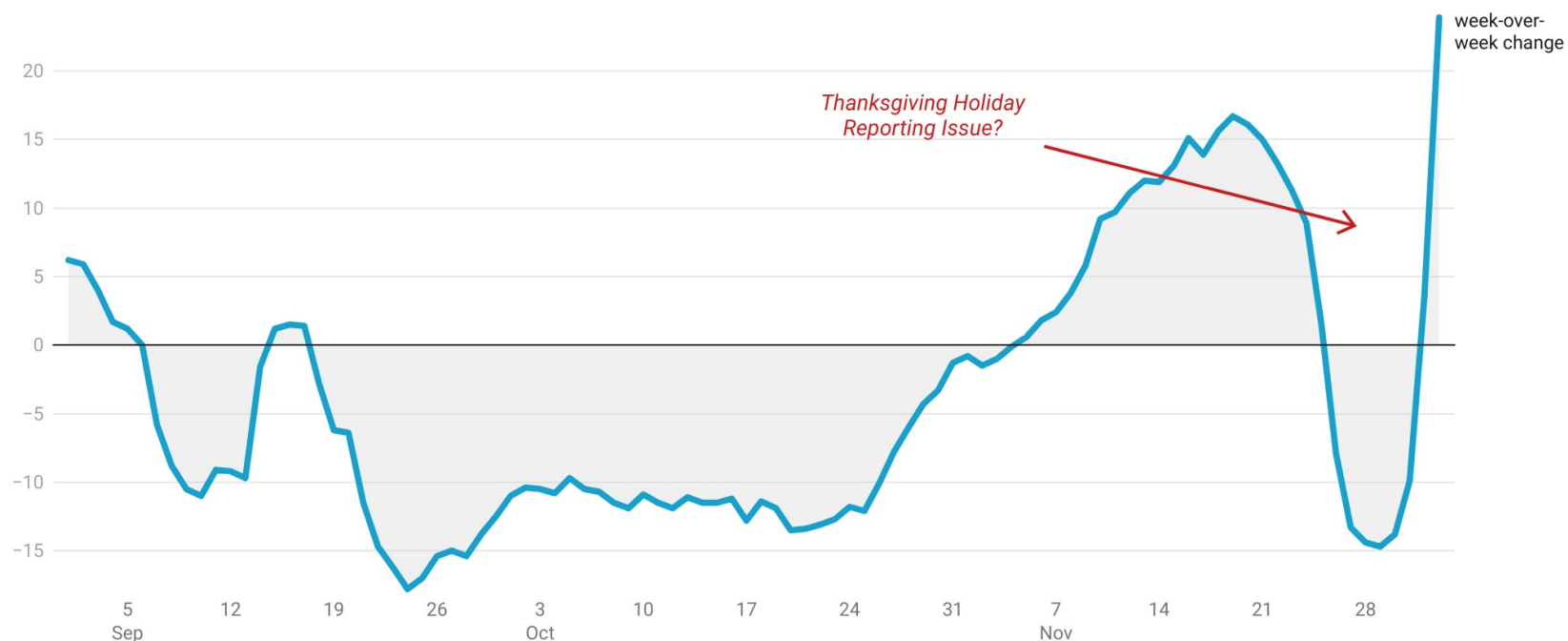


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Covid-19 "Vital Signs"

Estimated Daily Infections & New Case Rates – U.S.

Estimated daily infections increased 10% over the past five weeks.

Estimated Daily Infections v. Detected Cases

— Estimated Infections — Detected Cases/Day (7 Day Avg)

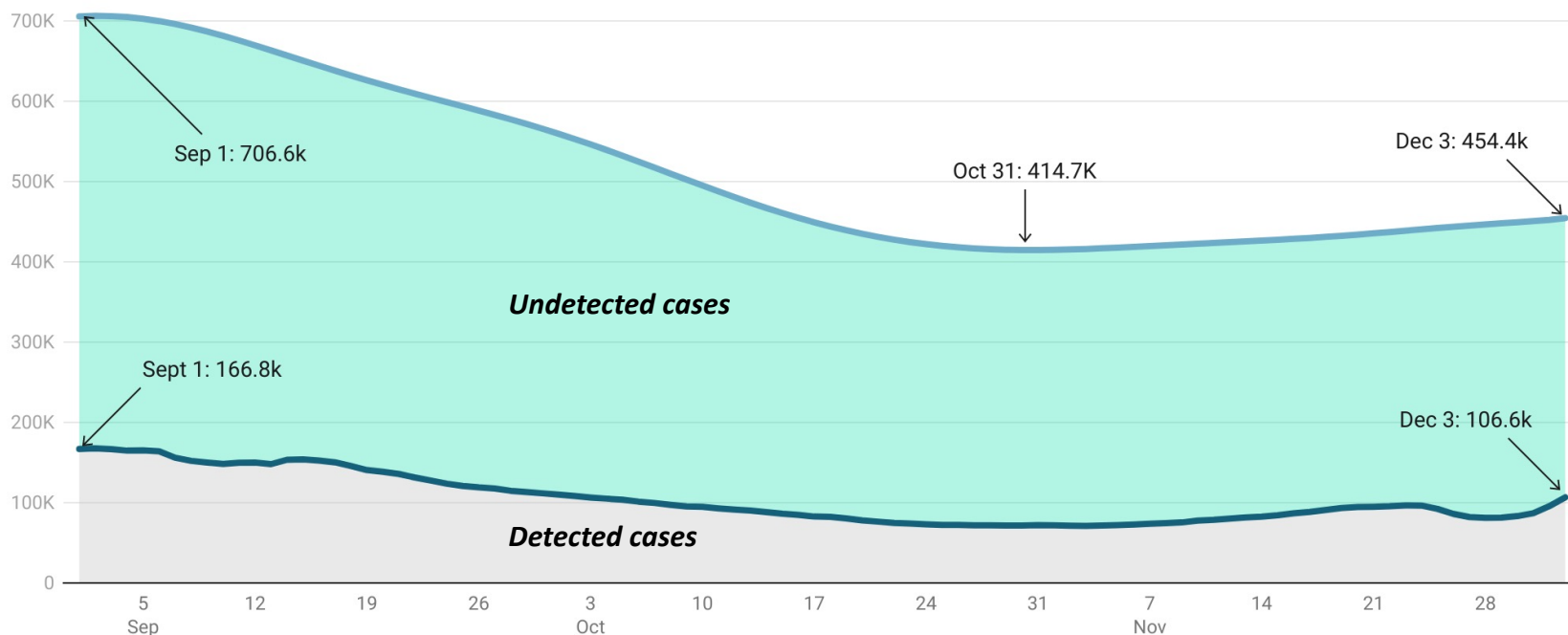


Chart: Health Industry Advisor LLC • Source: Yale School of Public Health • Created with Datawrapper

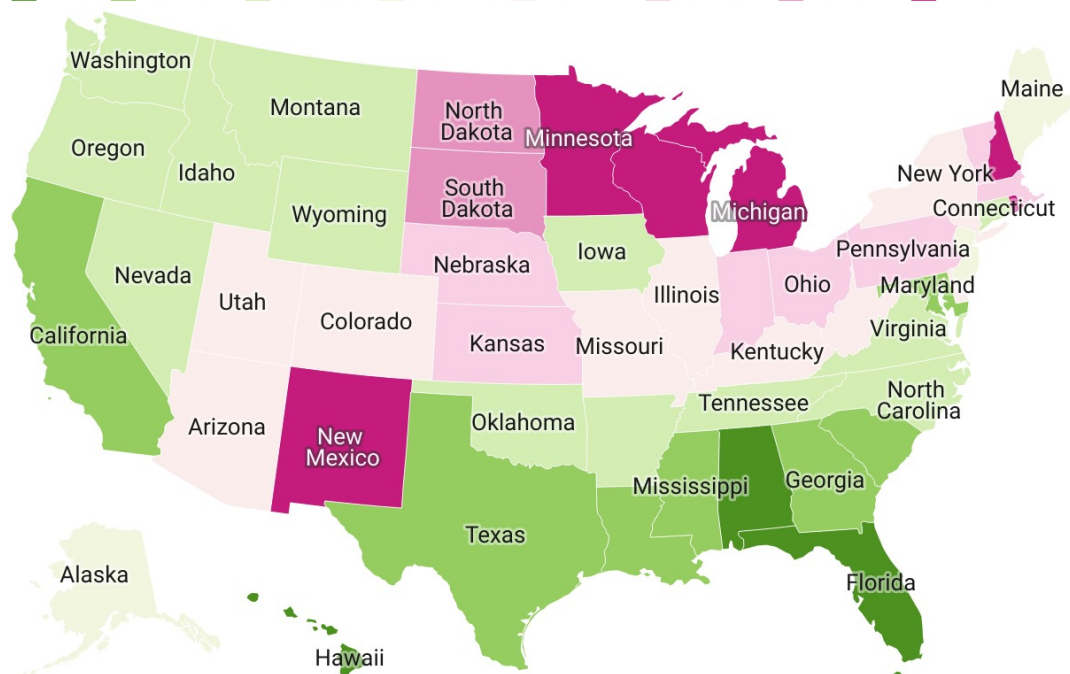
New Daily Cases Per Capita By State

Infections spiked last week across the Midwest and Northeast. Michigan, Minnesota, New Hampshire, New Mexico, and Wisconsin posted the highest new case rates of all states.

New Cases / Million

7-Day Average, As of December 3

< 100 100–200 200–300 300–400 400–500 500–600 600–700 ≥ 700



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

Covid-19 "Vital Signs"

Estimated Daily Infections & New Case Rates

Holiday reporting issues require us to view week-to-week comparisons with caution. Still, states with both high cases rates and significant week-to-week increased cases warrant attention (upper right quadrant in chart below.)

Current Reported Case Rate & Week-Over-Week Increase

7-Day Average, as of December 3

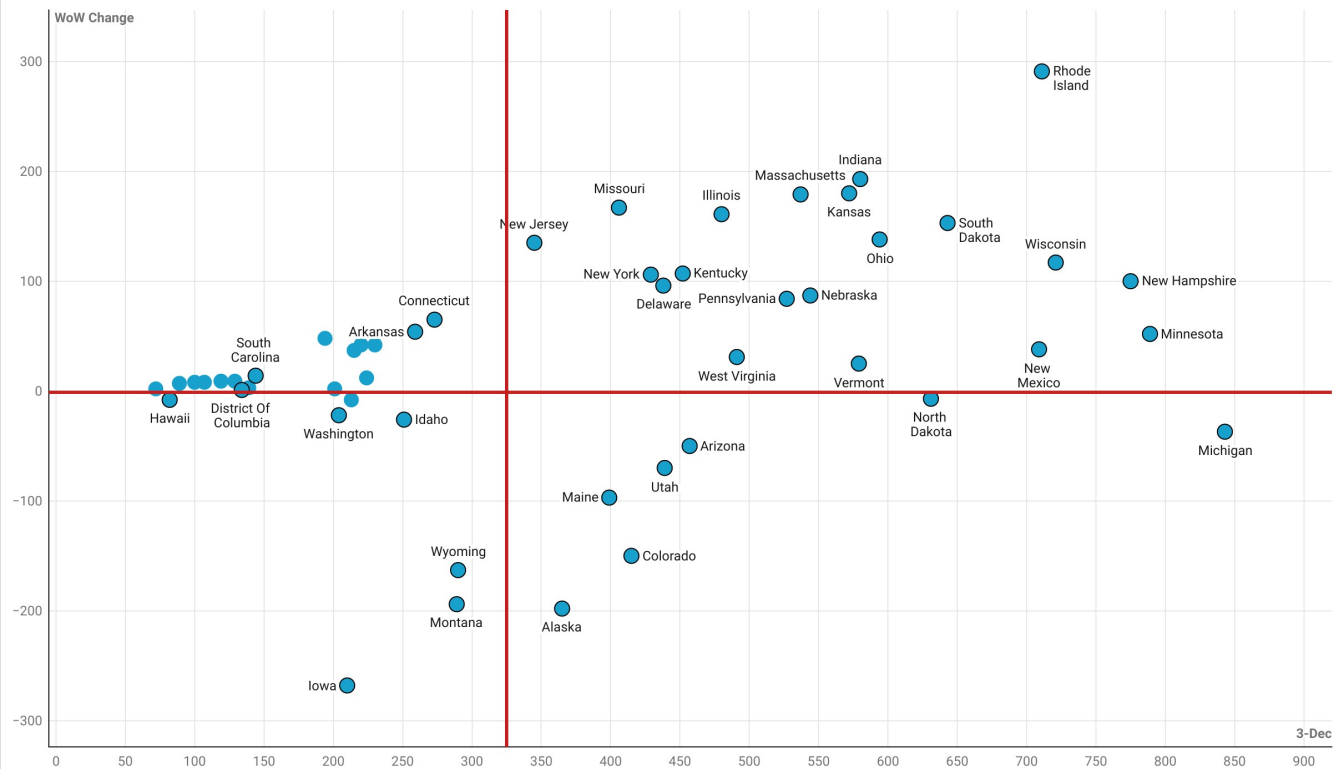


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Cases Per Capita By Age Group

Covid-19 "Vital Signs"

Infants and toddlers (0-to-4-years-old) continue to report a low infection rate per capita. Seniors, thanks to impressive vaccination rates, benefit from lower rates than any other age group. With the highest infection rate, children 5-to-11-years old should benefit from increasing vaccinations.

Cases / 100,000 - by Age

Week ending November 20

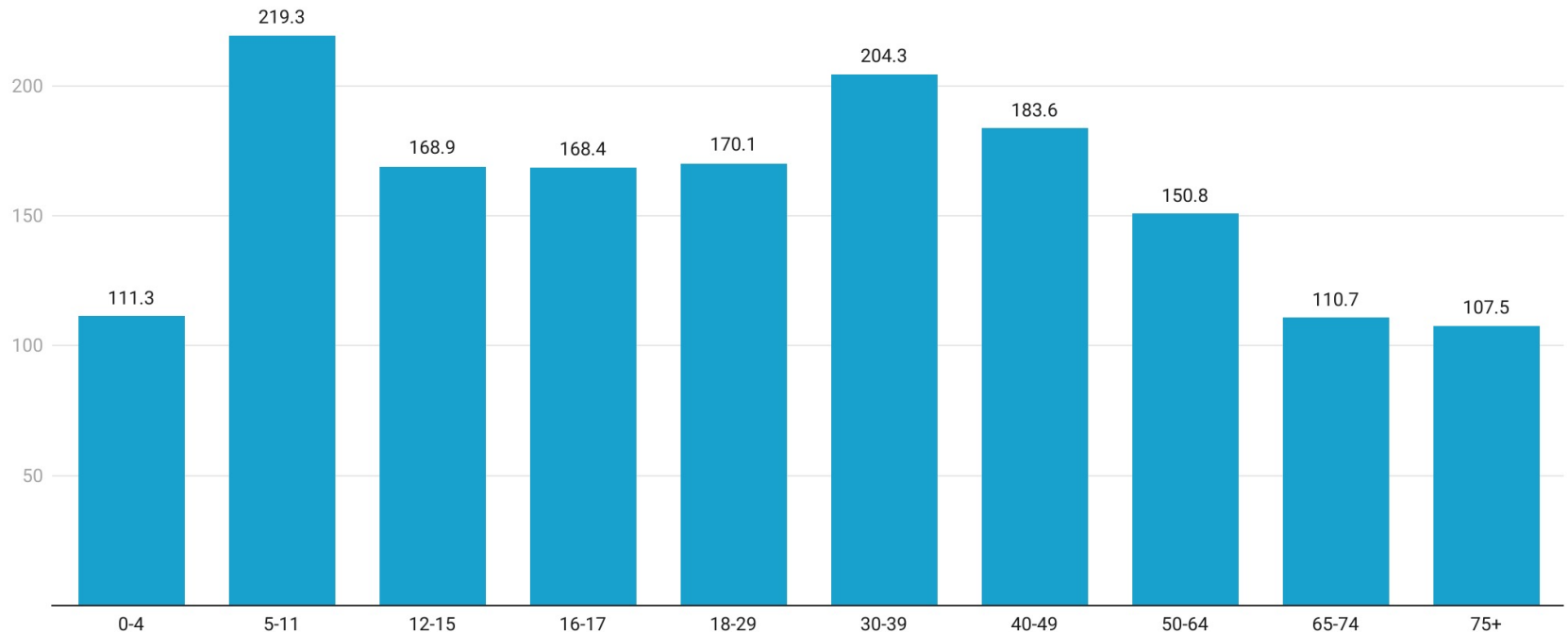


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

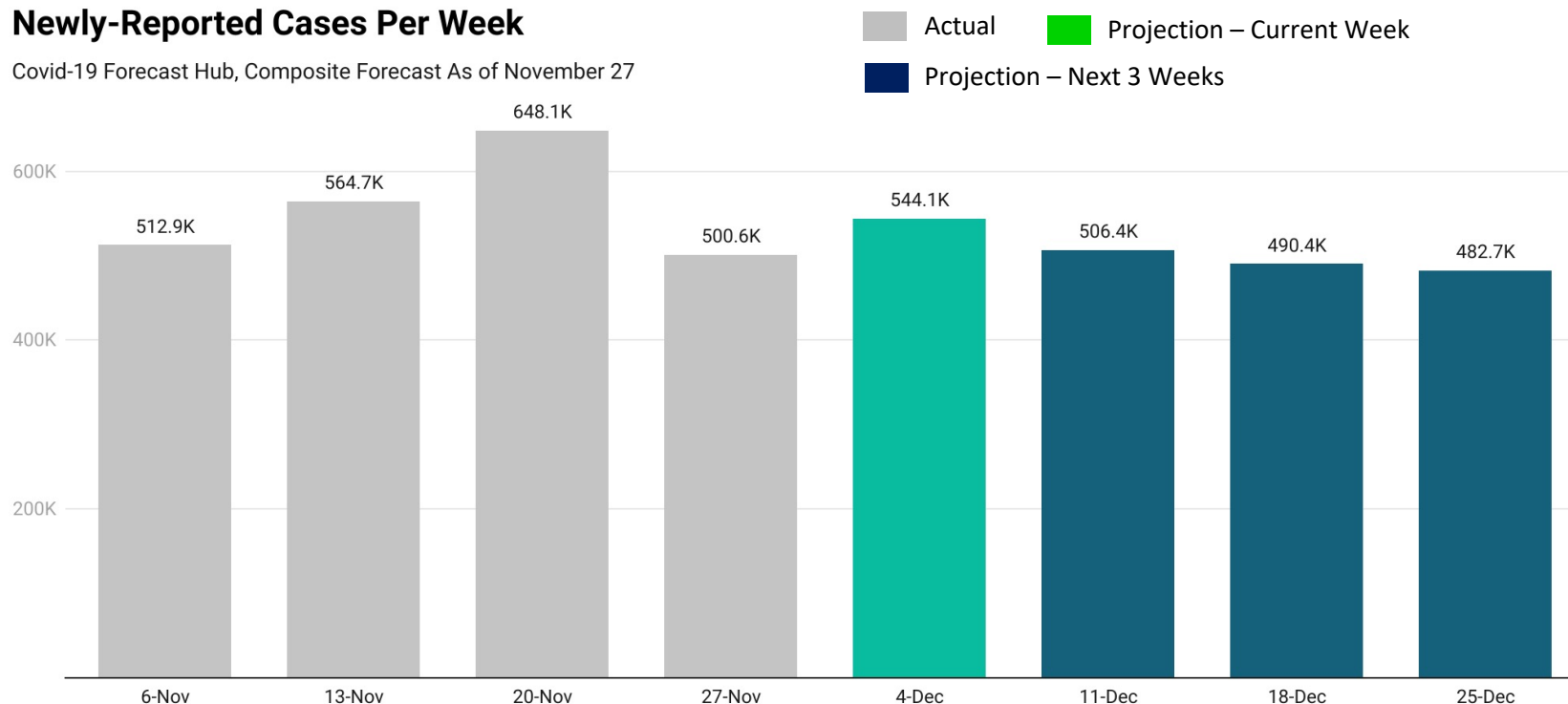
Covid-19 "Vital Signs"

Covid-19 Cases: Ensemble Forecast

The most-recent ensemble - formulated before Omicron surfaced - predicted a slowly declining infection rate.

Newly-Reported Cases Per Week

Covid-19 Forecast Hub, Composite Forecast As of November 27



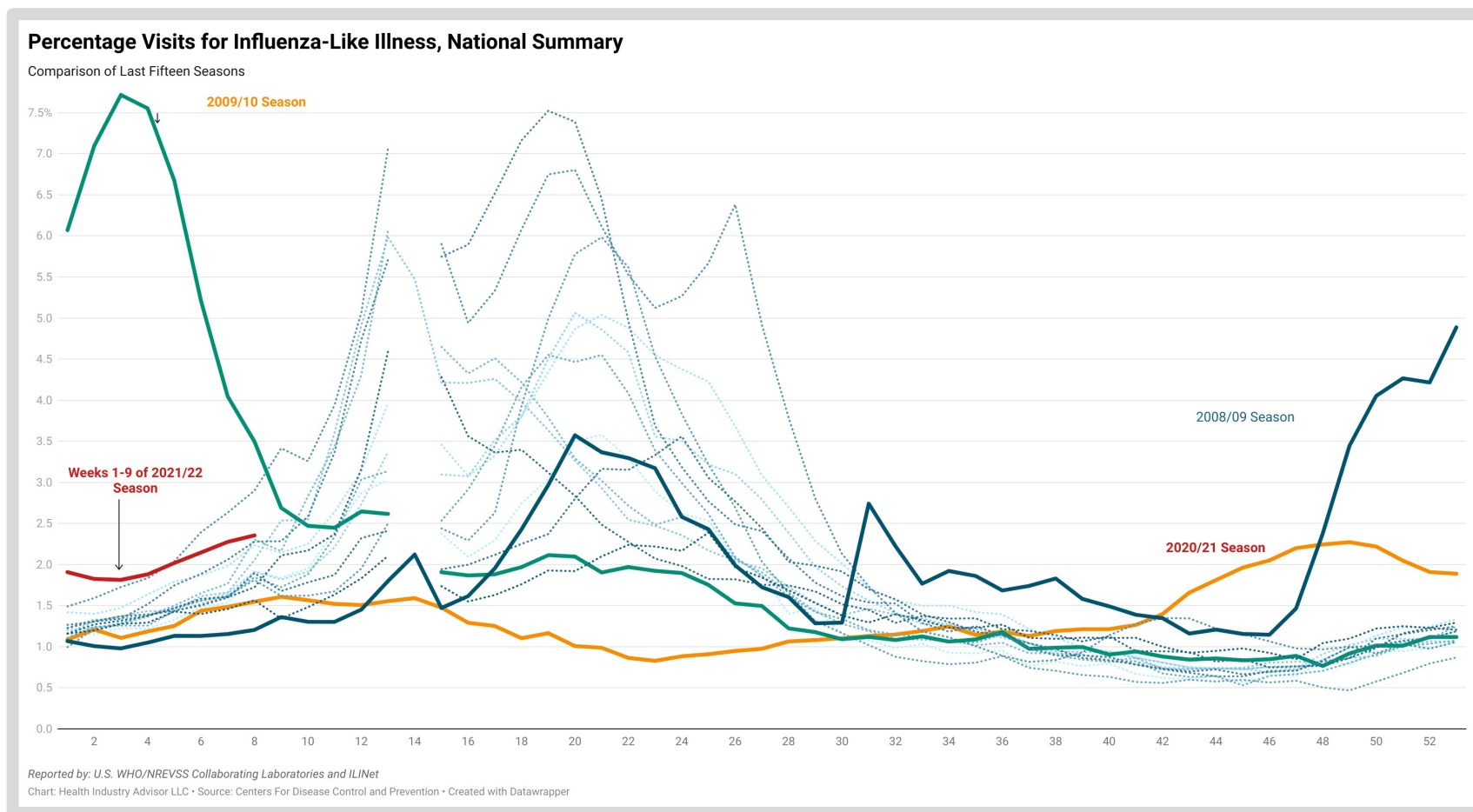
For the week ending on the date shown

Chart: Health Industry Advisor LLC • Source: Covid-19 Forecast Hub • Created with Datawrapper

<https://viz.covid19forecasthub.org>

Comparison of Flu Seasons

The United States' flu visit rate exceeds the rate for the comparable week during all but two of the last fifteen seasons. The peak of the typical flu season lies ahead of us.

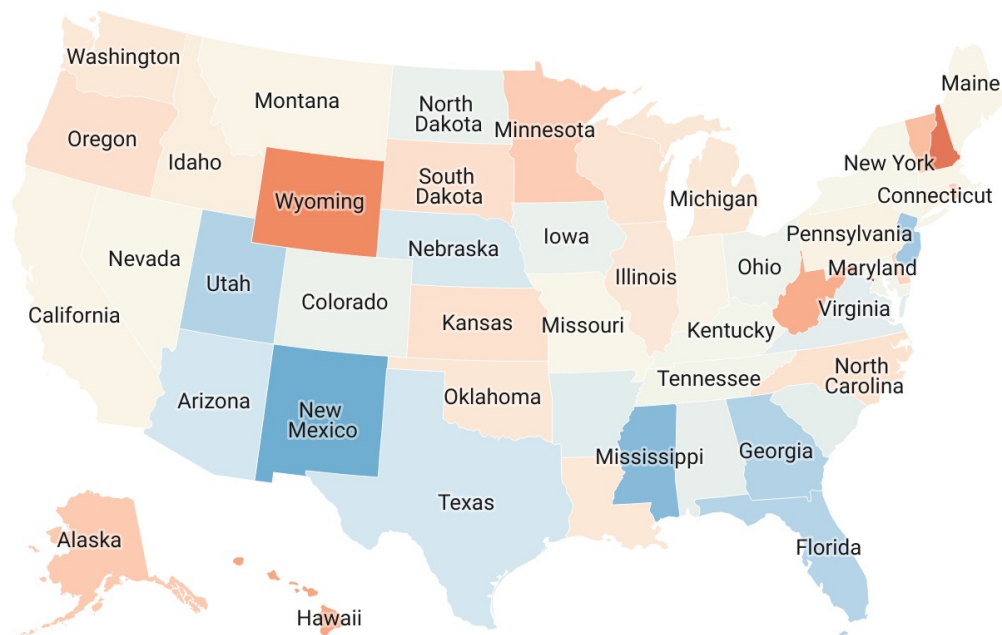


Flu Situation By State

Flu visits are highest across the southern United States.

Percentage of Visits for Influenza-Like Illnesses

Week ending November 27, 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

How Many Americans Remain Unvaccinated?

96 million Americans remain unvaccinated - half of them are working age adults.

Twenty million are too young to be vaccinated (under 5 years old). Twenty-four million are grade school aged (5 to 12 years old.)

Unvaccinated By Age Group

As of December 4

18-64 5-12 0-4 12-17 >=65

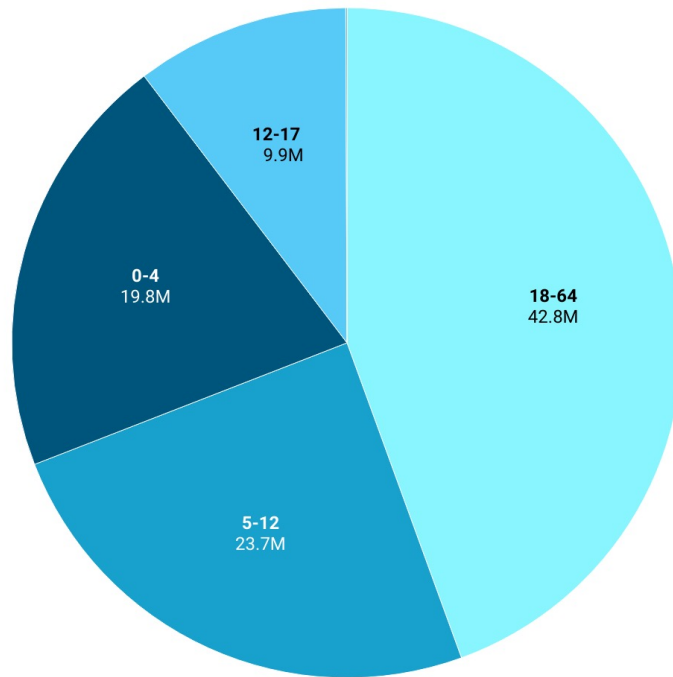


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Vaccination Status By Age – United States

Two of five senior citizens have received a booster shot. Fewer than 60,000 are unvaccinated. Nearly one-in-five grade school children have received an initial vaccination. Two-in-five 12-to-17-year-olds have yet to receive even a single dose.

Vaccination Status By Age

As of December 4

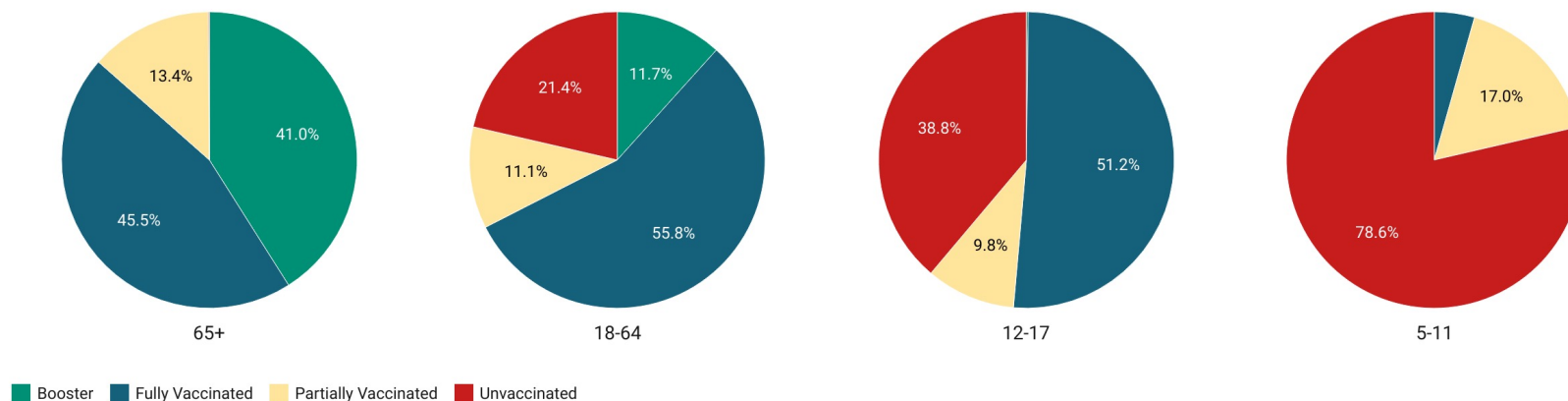


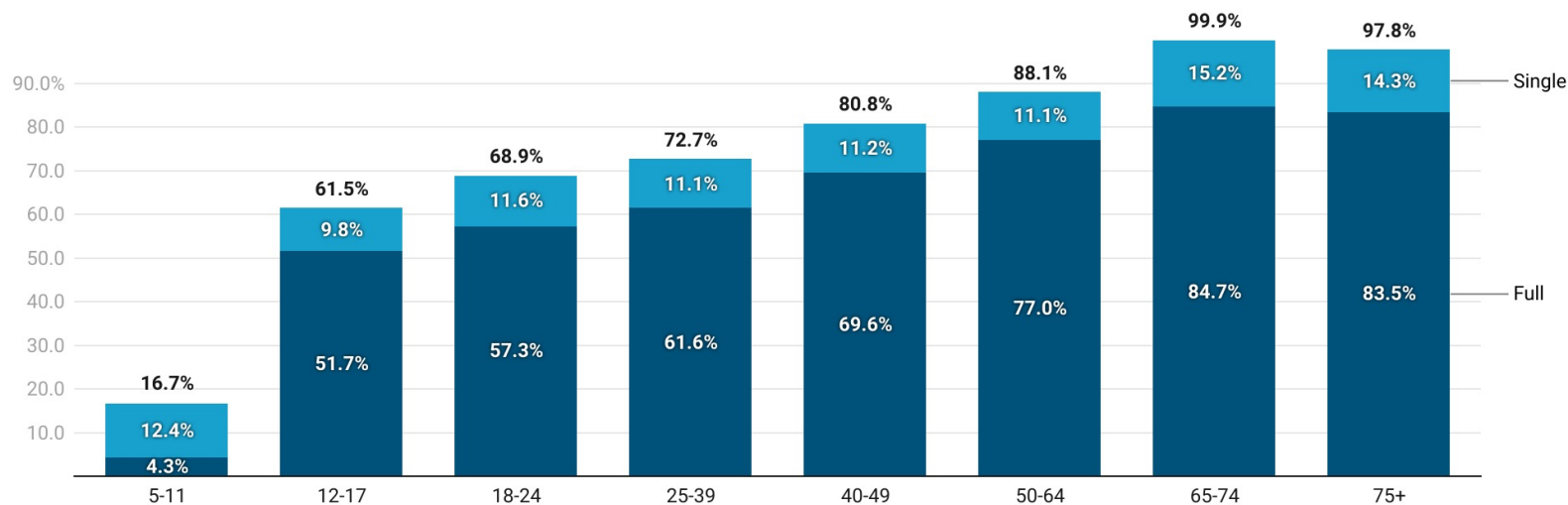
Chart: Health Industry Advisor LLC • Source: CDC • Created with Datawrapper

Vaccination Status By Age

Vaccine status increases with age, at least through age 74. Across most age groups, one-in-ten people have received an initial shot but not the second.

Vaccinations By Age

A of December 4



Created with Datawrapper

Test-Positive Rate

The test-positive rate has increased steadily since Halloween.

Test-Positivity Rate

7-Day Average, Through November 28

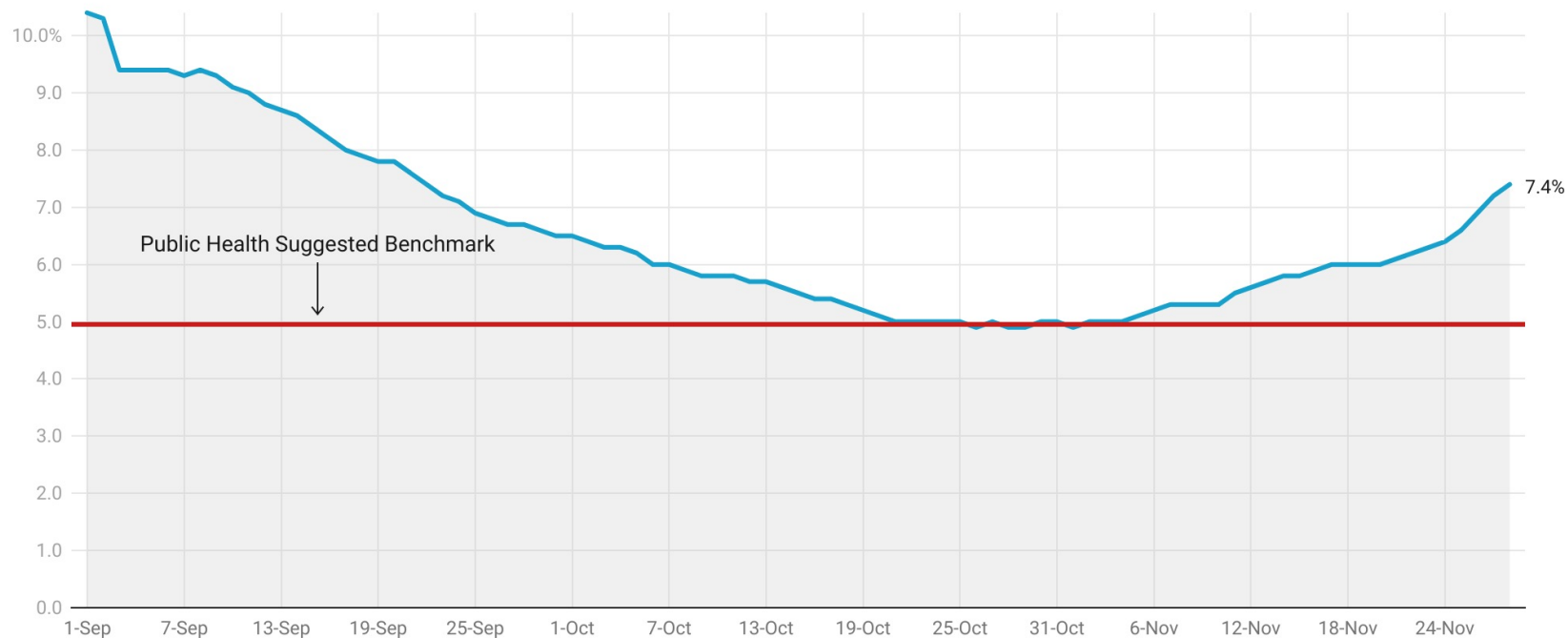


Chart: Health Industry Advisor LLC • Source: U.S. Department of Health & Human Services • Created with Datawrapper

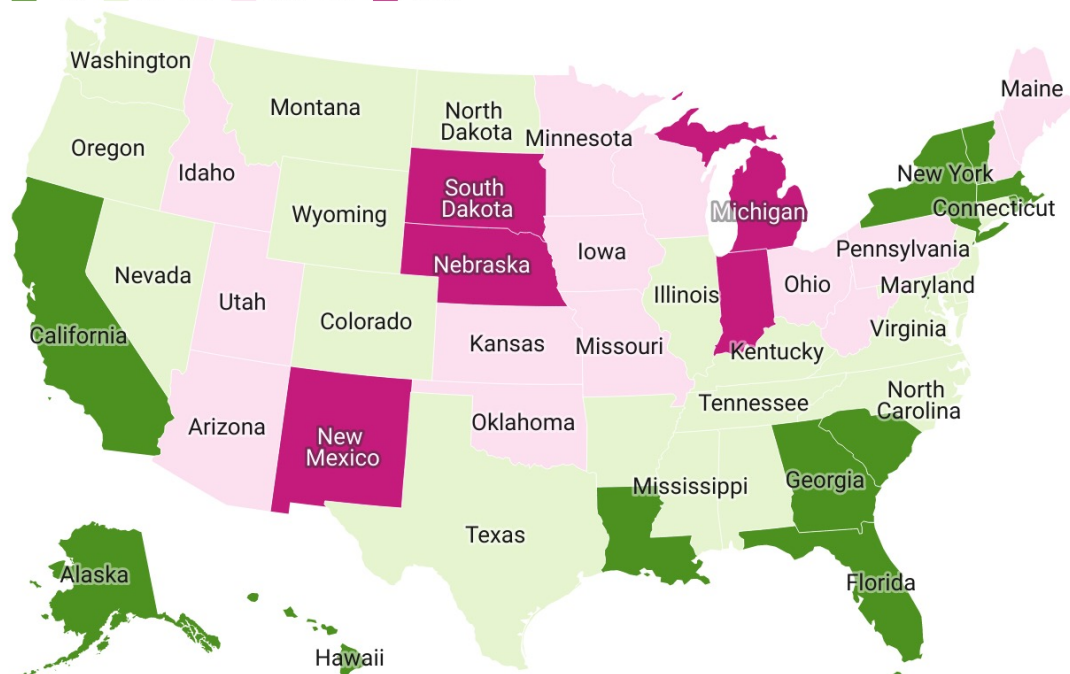
7-Day Average Test-Positivity %

Indiana, Michigan, Nebraska, New Mexico, and South Dakota posted the highest test-positivity rates of all states last week.

Test Positivity %

7-Day Average, As of November 28

■ < 5% ■ 5%–10% ■ 10%–15% ■ ≥ 15%



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

Covid-19 "Vital Signs"

Inpatient Covid Admissions and Census

Covid admissions began rising early in November, increasing 32% already. Covid census started increasing shortly thereafter. Census is up 23% in the past month. Fortunately, both measures are sharply lower than early September.

Covid-19 Admissions & Inpatient Census

As of December 2

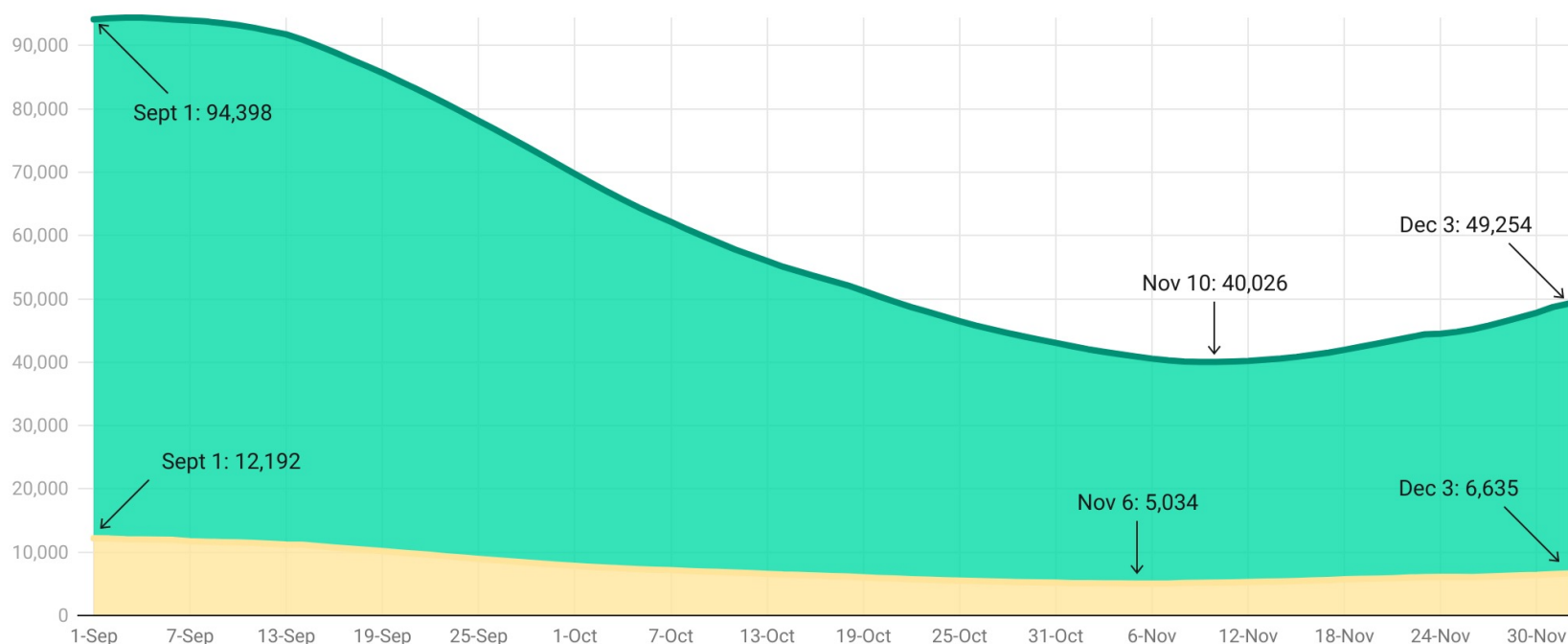


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Covid-19 "Vital Signs"

Covid Hospital Occupancy Trends

Covid census in most states increased over the past two weeks. Of particular concern are states with high occupancy rates already, including Arizona, Michigan, New Hampshire, and New Mexico.

Covid Hospital Occupancy % v. & Change in Census in Two Weeks

As of December 2

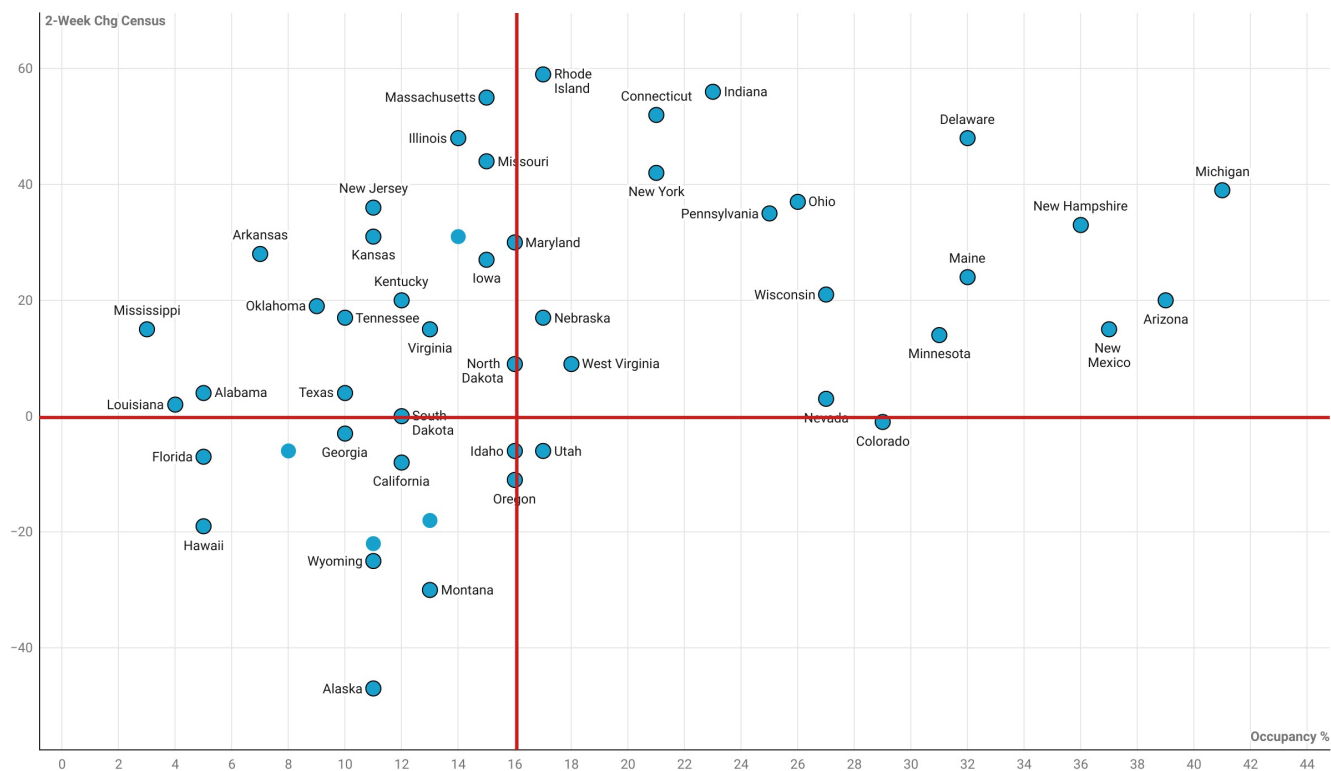


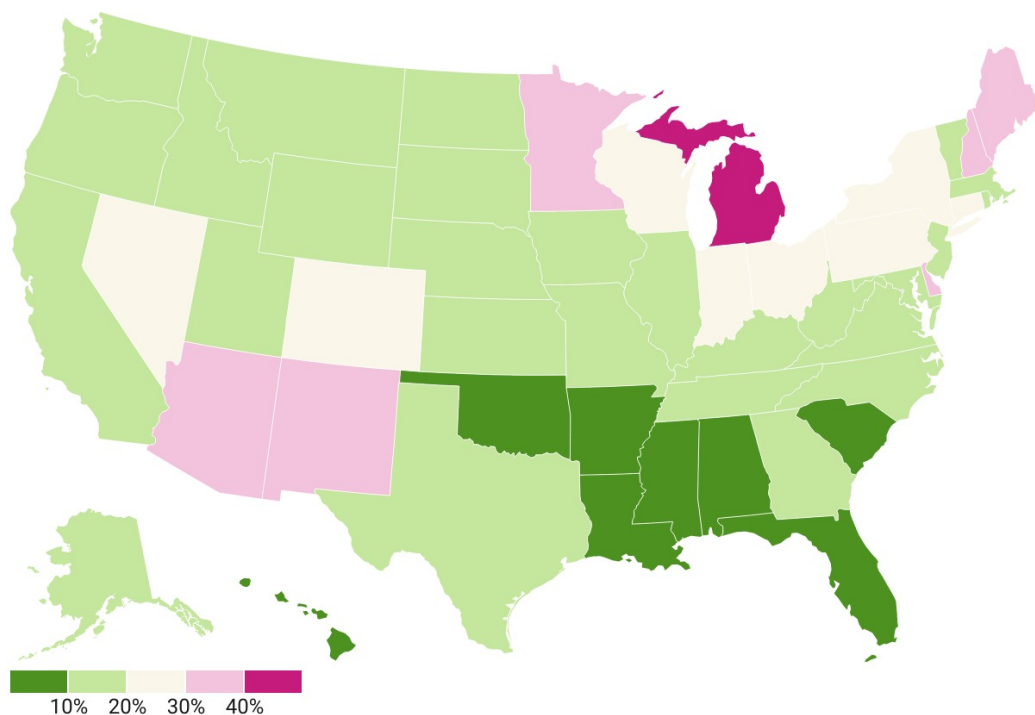
Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Covid Hospital Occupancy By State

Covid hospitalization levels reached concerning levels last week in Arizona, Maine, Michigan, Minnesota, New Hampshire, and New Mexico. Rates remain relatively low in across the Southeast.

Covid-19 Patients As % of All Inpatient Beds

As of December 2



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

Covid-19 "Vital Signs"

Deaths with Covid-19

Deaths with Covid increased last week, returning to the pre-Thanksgiving level. The current rate is above 1,000 per day.

Deaths With Coronavirus

7-Day Average, Through December 3

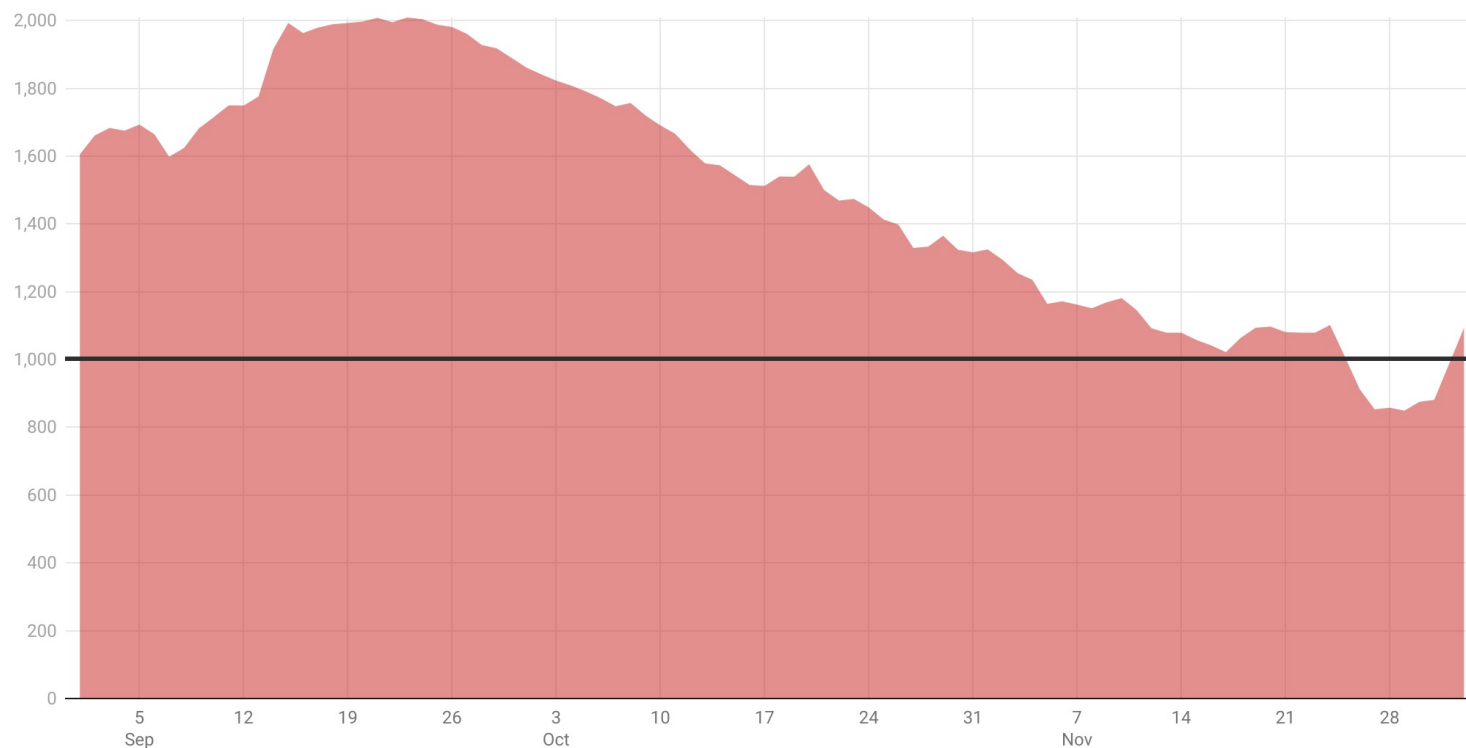


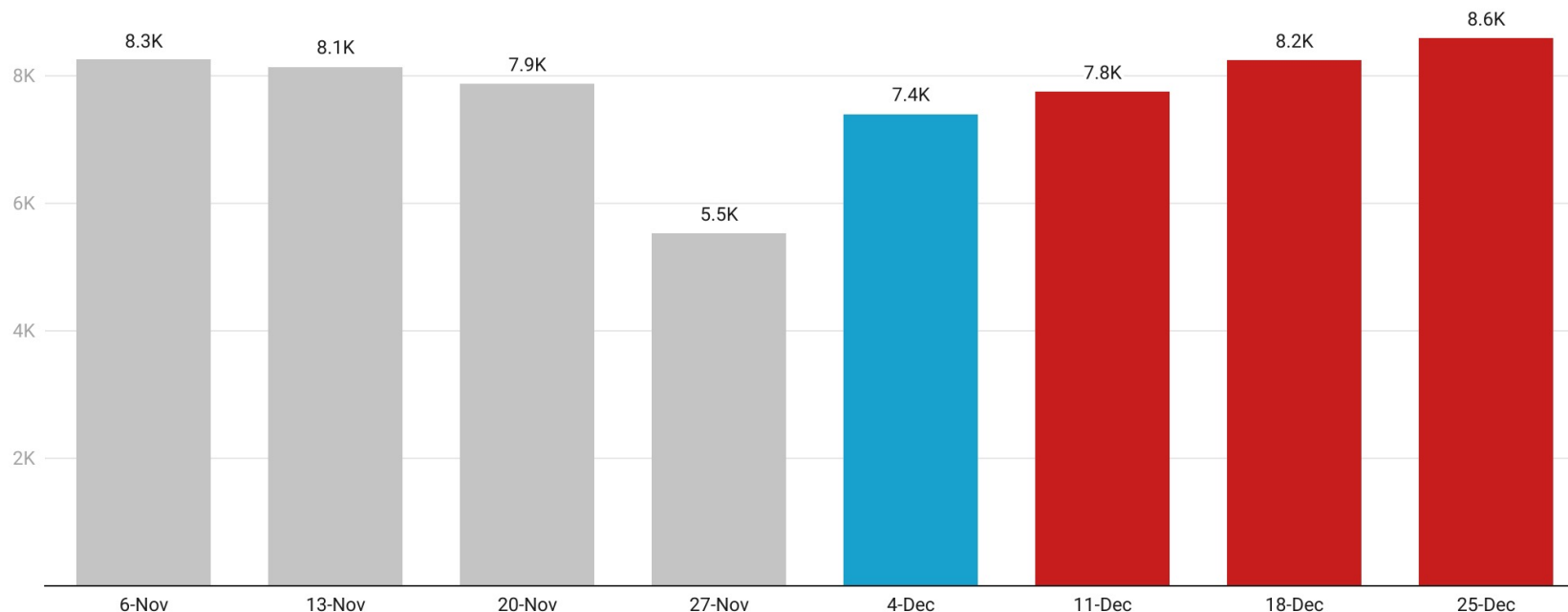
Chart: Health Industry Advisor LLC • Created with Datawrapper

Death Projections – Ensemble Forecast

The ensemble forecast – formulated before Omicron emerged - predicted rising Covid deaths over the next few weeks.

Newly-Reported Deaths Per Week

Covid-19 Forecast Hub, Composite Forecast As of November 27



For the week ending on the date shown

Chart: Health Industry Advisor LLC • Source: Covid-19 Forecast Hub • Created with Datawrapper

<https://viz.covid19forecasthub.org>

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>