Health Industry Advisor, llc

"Strategic Advice in an Era of Unprecedented Change"

Covid-19 "Vital Signs"

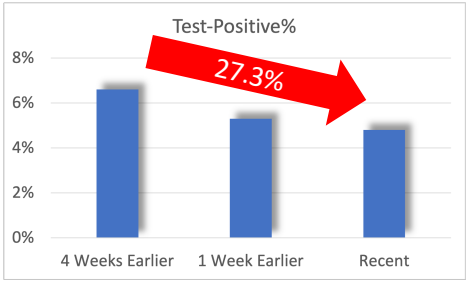
Issue # 354

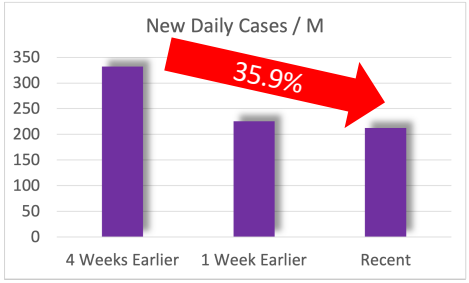
November 1, 2021

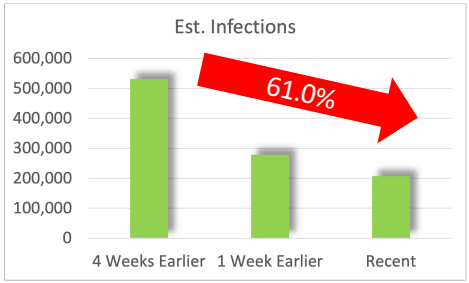
Covid-19
"Vital Signs"

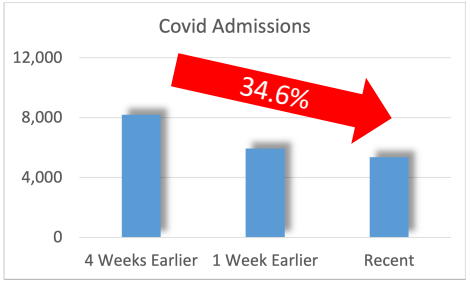
Covid Snapshot – Comparing Last Week to Prior Weeks

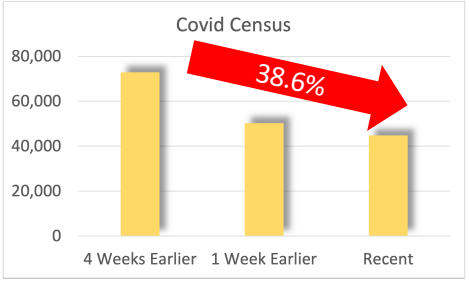
Across several key metrics, our Covid experience is improving relative to a week ago and to four weeks ago.

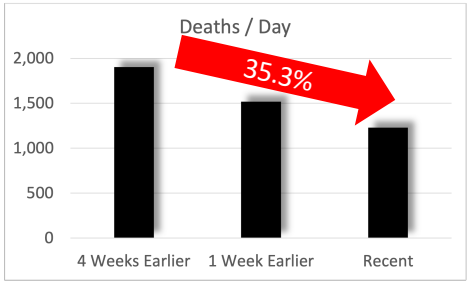


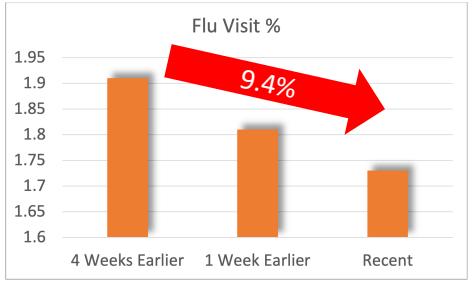












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State-By-State Scorecard: Scoring Grid

Designed to reflect five critical measures of each state's current experience with Covid-19.

Worse ← → Better

Metric		Black	Red	Orange	Yellow	Green	Blue
7-Day Average New Daily Reported Infections per Capita	Greater than	450	350	250	150	50	0
Week-over-Week Change in Newly Reported Cases	Greater than	30%	20%	10%	0%	-10%	>-10%
7-Day Average Viral Tests per 7-Day Average Newly Reported Cases	Less than	5	10	25	50	75	N/A
Covid-19 Inpatient Census as % of All Inpatient Beds	Greater than	50%	40%	30%	20%	10%	0%
7-Day Deaths per 1000 New Cases (14-day lag)	Greater than	25	20	15	10	5	0

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State-By-State Scorecard

Of the eight states with the highest current case rate, all except Colorado, North Dakota, and Utah reported fewer cases than a week earlier. States with relatively high and increasing rates include Arizona, Michigan, Minnesota, New Mexico, and Wisconsin.

State	7-Day New Infections per Capita	Week-over-Week Change in New Cases	7-Day Tests per New Case	7-Day CV-19 Census as % of all Inpatient Beds	7-Day Deaths per 1000 New Cases (14-day lag)
Alabama					
Alaska					
Arizona					
Arkansas					
California					
Colorado					
Connecticut					
Delaware					
District Of Columbia					
Florida					
Georgia					
Hawaii					
Idaho					
Illinois					
Indiana					
Iowa					
Kansas					
Kentucky					
Louisiana					
Maine					
Maryland					
Massachusetts					
Michigan					
Minnesota					
Mississippi					
Missouri					

State	7-Day New Infections per Capita	Week-over-Week Change in New Cases	7-Day Tests per New Case	7-Day CV-19 Census as % of all Inpatient Beds	7-Day Deaths per 1000 New Cases (14-day lag)
Montana					
Nebraska					
Nevada					
New Hampshire					
New Jersey					
New Mexico					
New York					
North Carolina					
North Dakota					
Ohio					
Oklahoma					
Oregon					
Pennsylvania					
Rhode Island					
South Carolina					
South Dakota					
Tennessee					
Texas					
Utah					
Vermont					
Virginia					
Washington					
West Virginia					
Wisconsin					
Wyoming					

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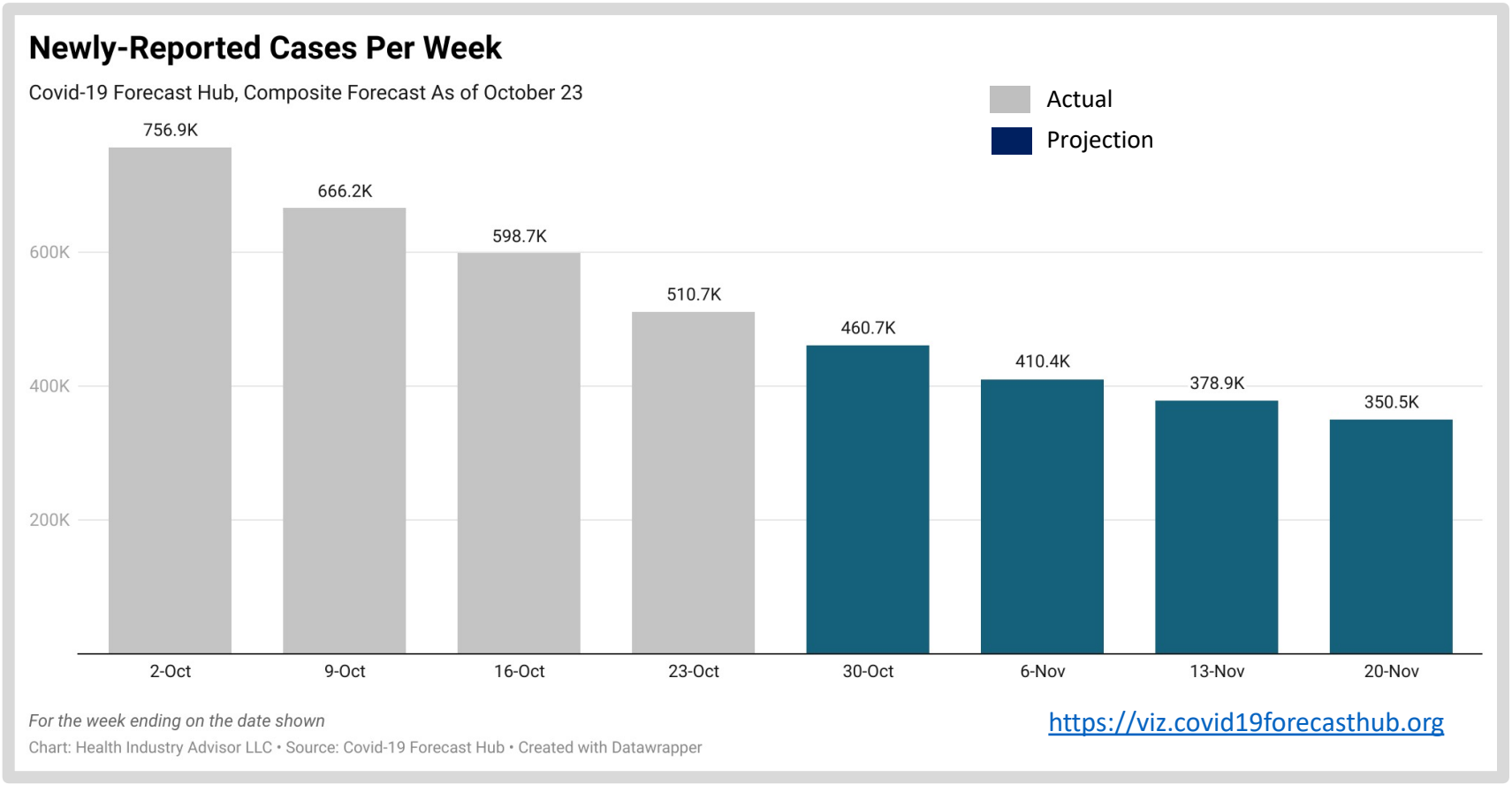
Covid-19 Cases: Ensemble Forecast

The ensemble forecast published a week ago predicts that infections will continue falling for the next several weeks. In this forecast, cases plunge 30% in four weeks.



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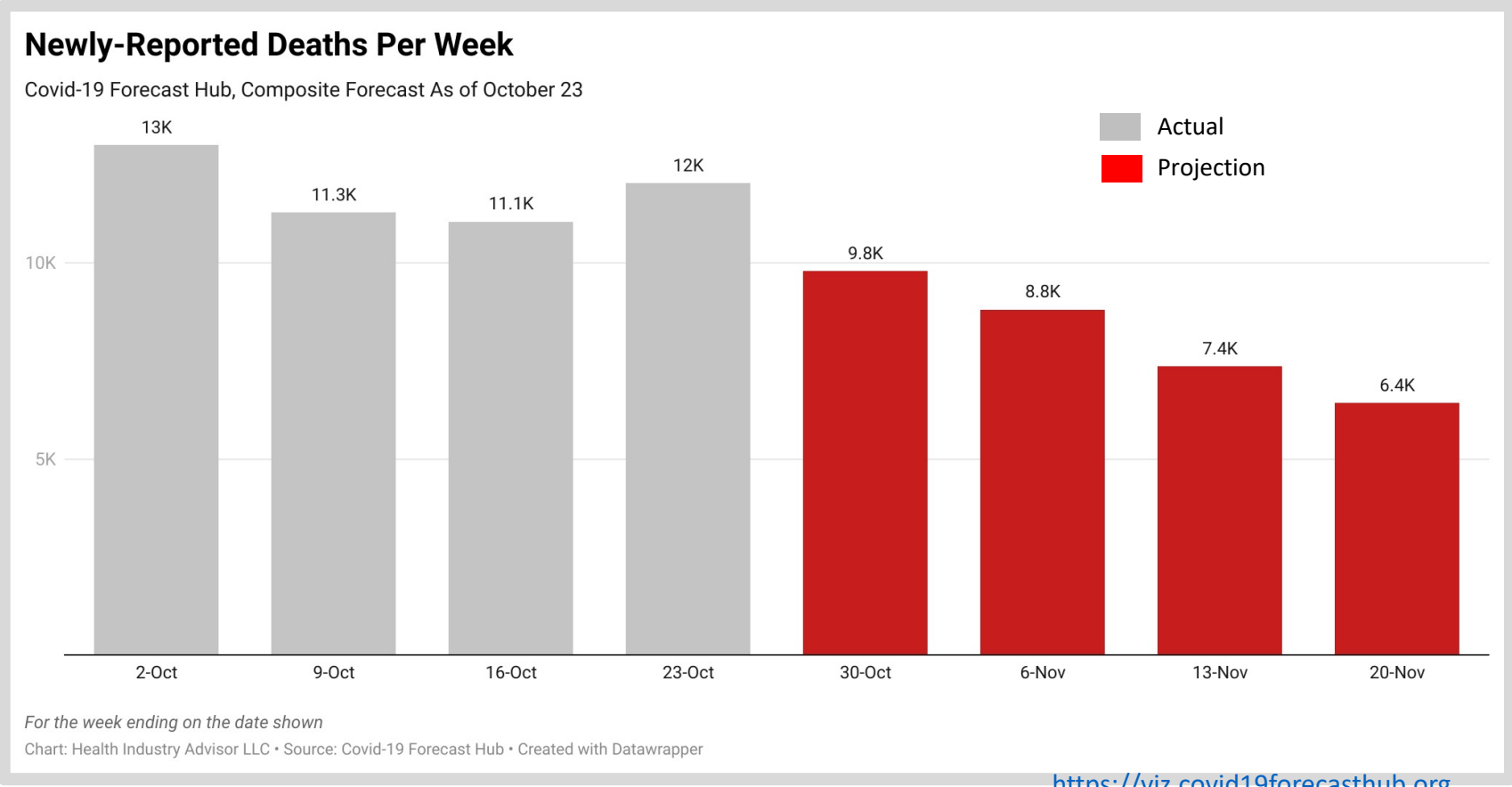
Death Projections – Ensemble Forecast

The ensemble forecast also predicts declining Covid deaths (46%) over the next four weeks.



https://viz.covid19forecasthub.org

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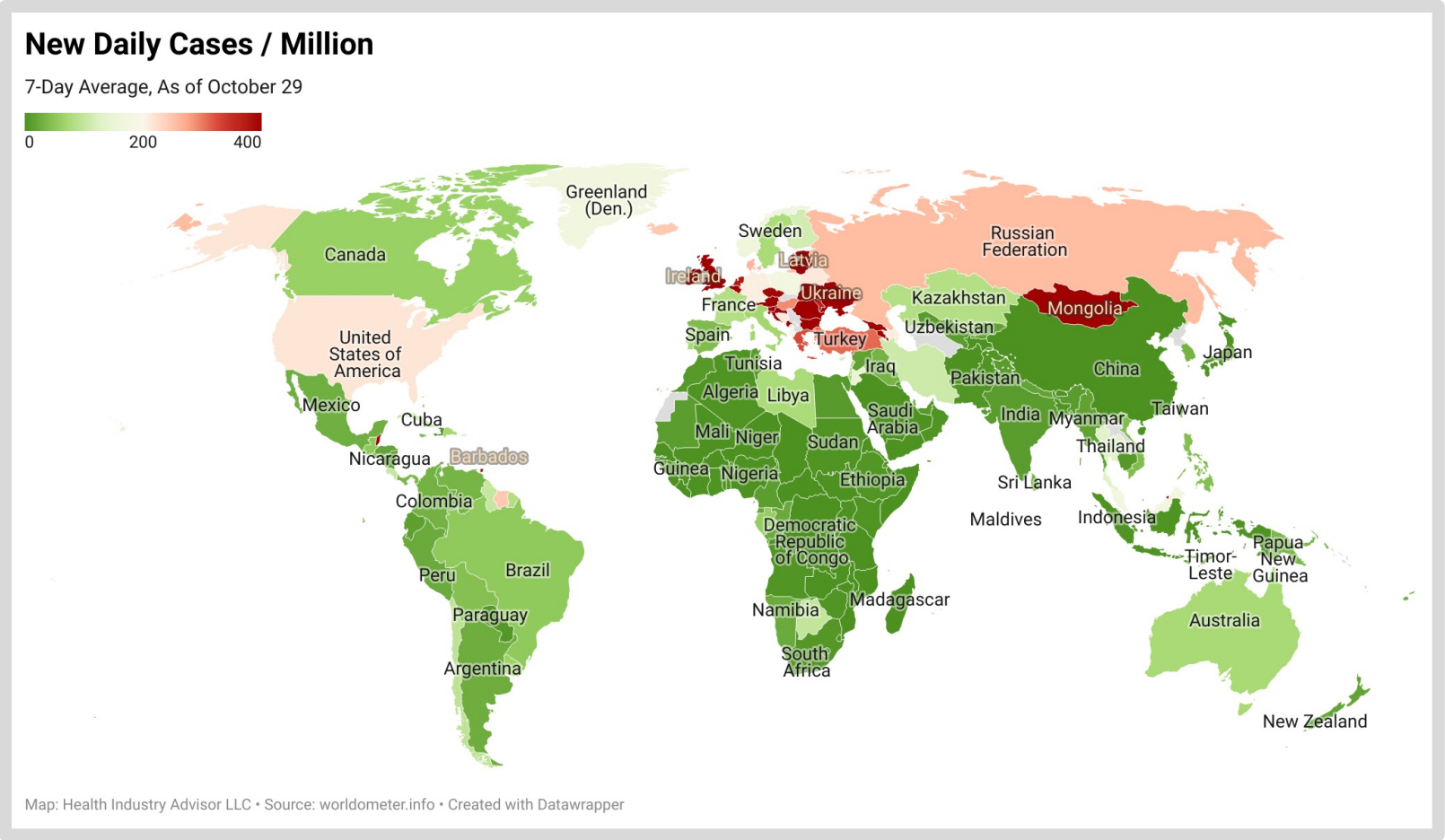
Newly Detected Cases / Million

Europe is seeing the highest new case rates currently. Rates are generally low in most of the world.



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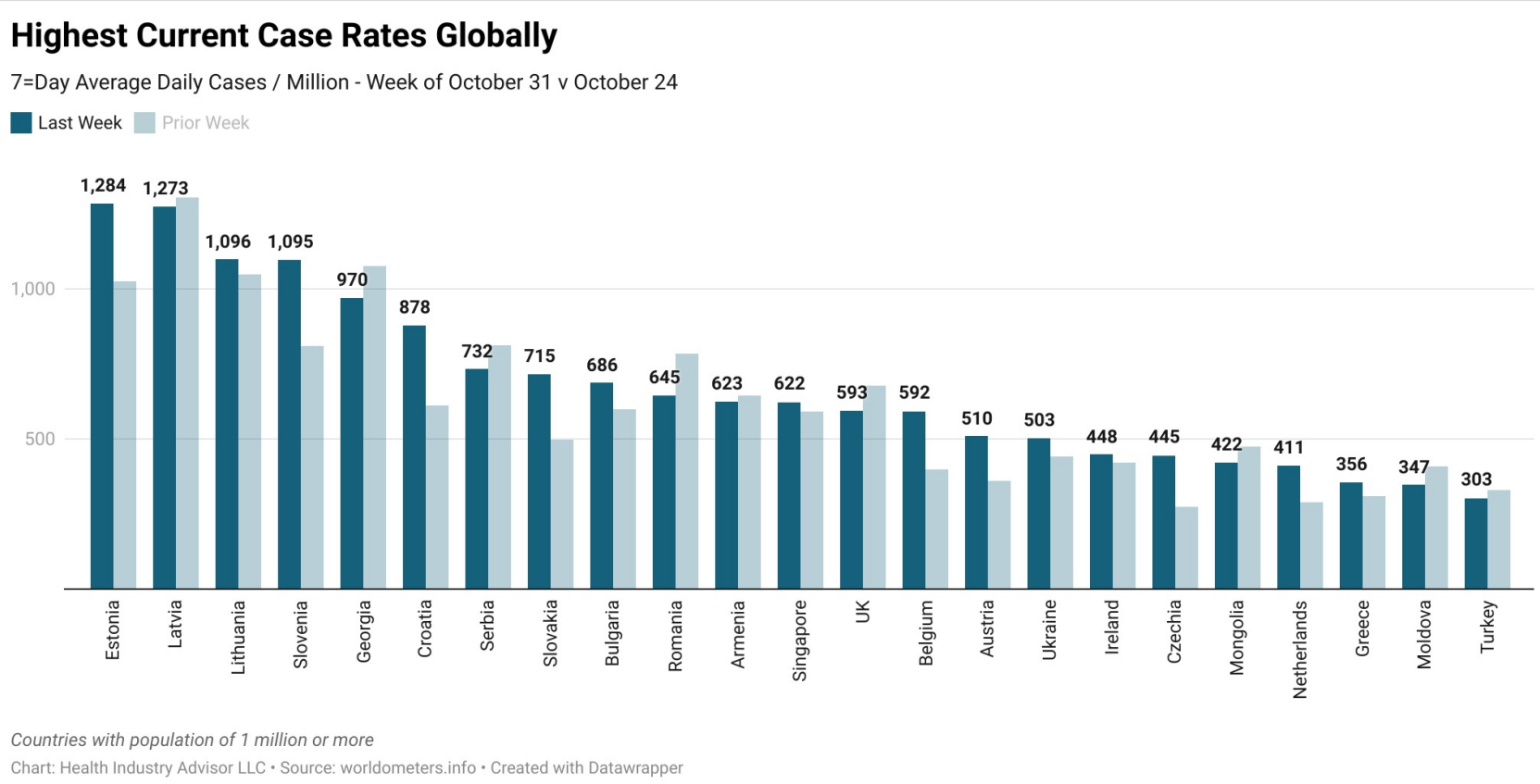
Highest Current Case Rate Globally

European countries top the list of highest current case rates. However, most of these countries are seeing fewer cases week-over-week. The U.S. ranks 41^{tst} among all countries.



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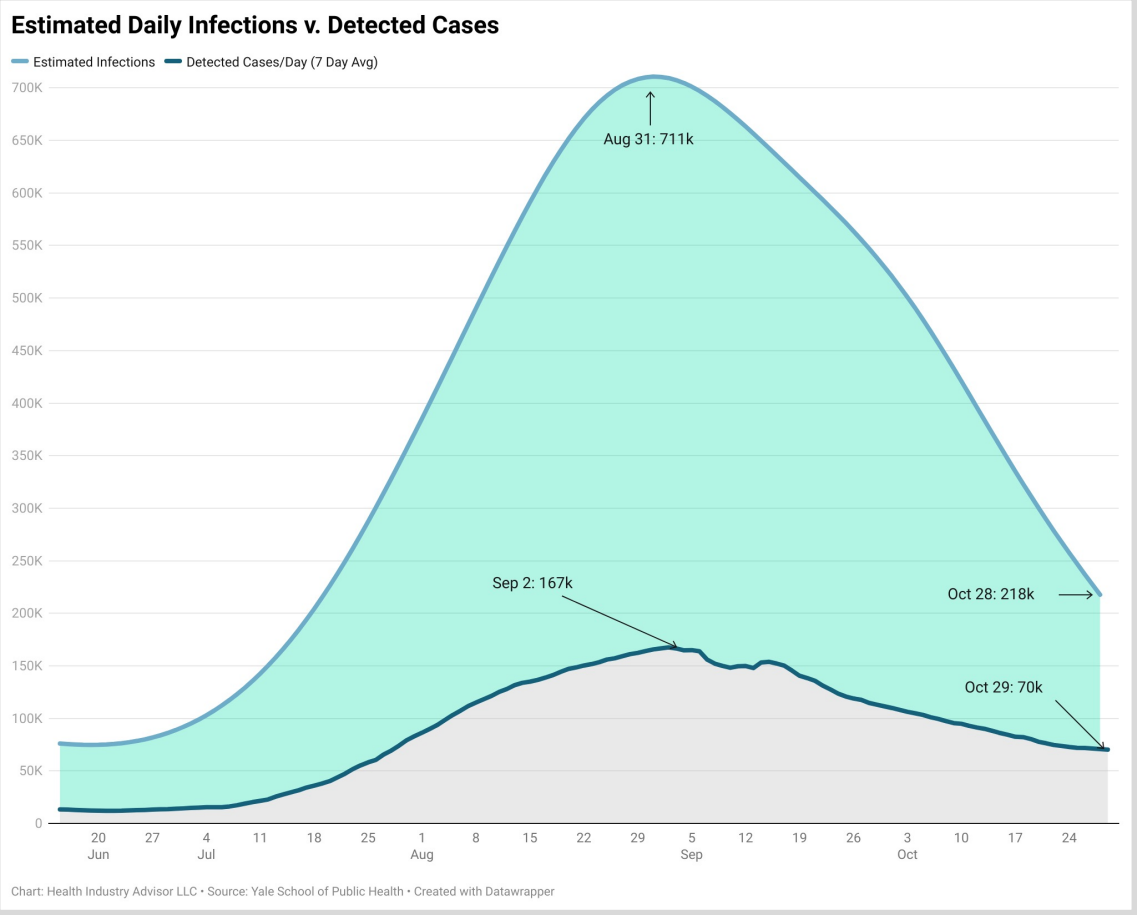
Estimated Daily Infections & New Case Rates

Estimated infections reached a fifteen-week low, while reported case at at a thirteen-week low.

- Estimated new daily infection peaked on August 31
- Since then, these infections plunged 70%
- Infections are lower than they have been in nearly fifteen weeks
- New daily reported cases peaked on September 2
- Since then, new daily cases plunged 58%
- These cases are now at thirteen+-week low.



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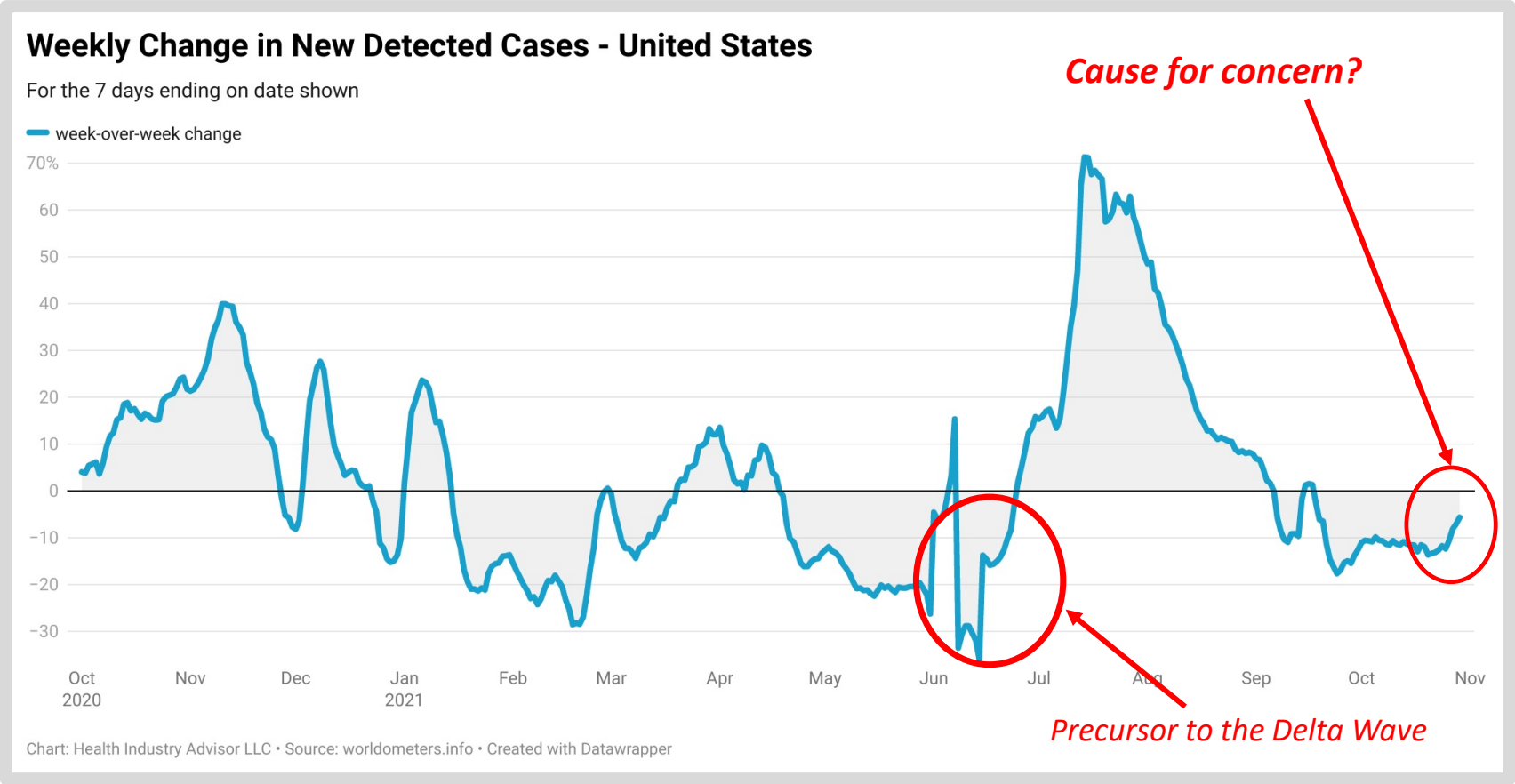
Week-Over-Week Changes in New Cases

New cases are falling, but at a slower rate in recent days.



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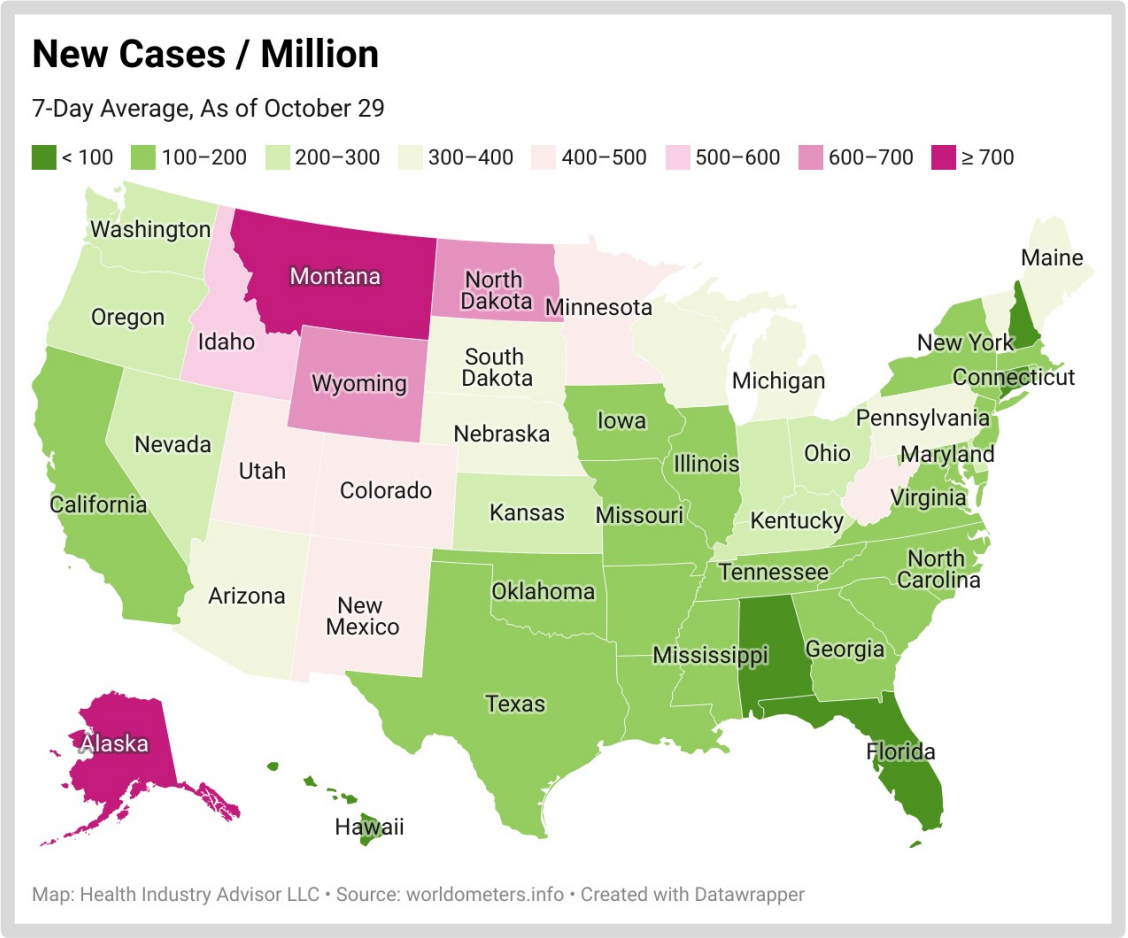
New Daily Cases Per Capita By State

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
- Rates in Alabama, Connecticut, Florida, Hawaii, and Louisiana dropped below 100 per million population per day. (New Hampshire has not updated case totals for more than a week.)



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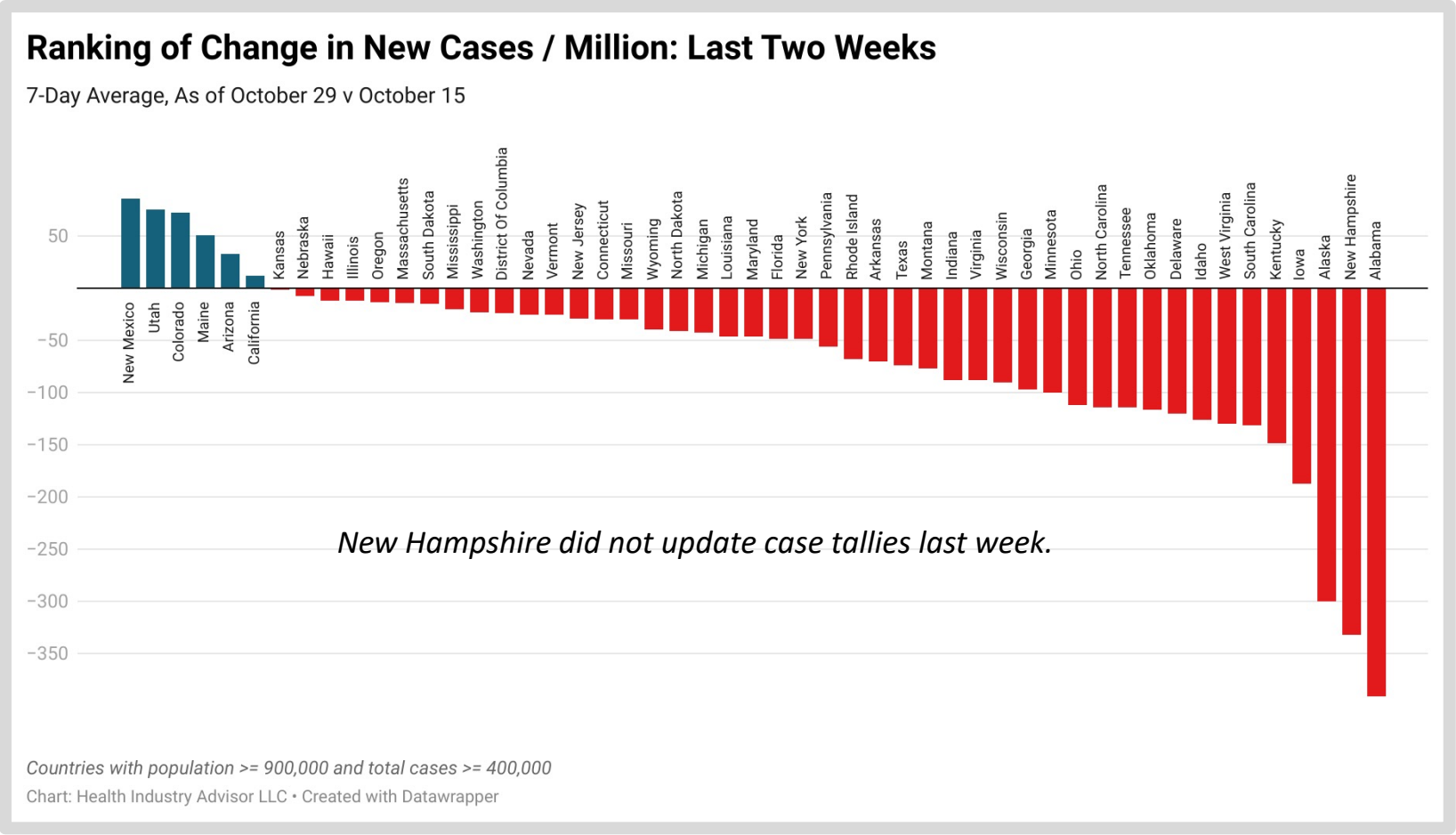
Change in Newly Detected Cases - Last Two Weeks

New cases dropped over the past two weeks in all states, save Arizona, California, Colorado, Maine, New Mexico, and Utah. Alabama and Alaska reported the sharpest declines



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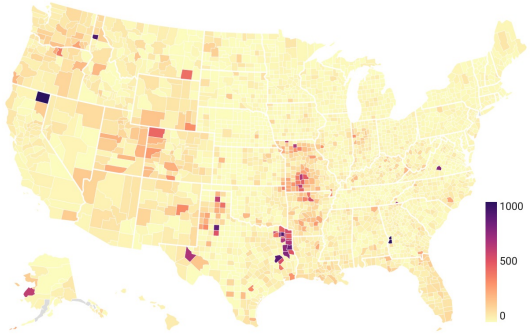
Timeline of the Delta Wave Across the U.S.

These graphs, spaced three weeks apart, show how the Delta variant spread from the Southeast in early August to Alaska and the Northwest in early October. Note how quickly the virus spun out-of-control in various parts of the country.

New Daily Infections / Million

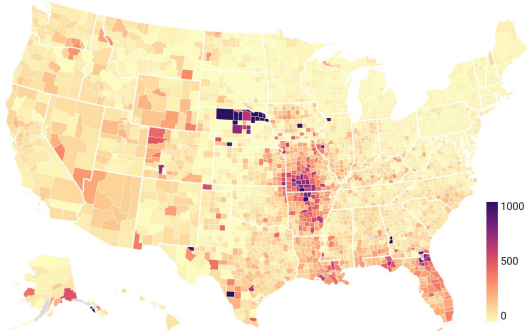
7-Day Moving Average, As of June 25



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

New Daily Infections / Million

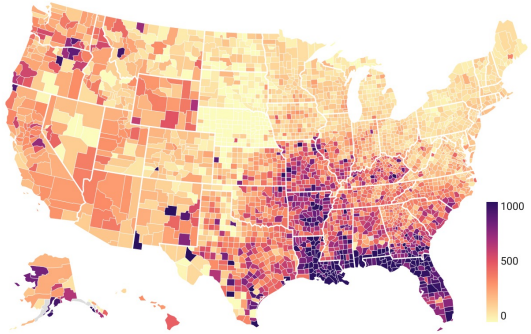
7-Day Moving Average, As of July 16



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

New Daily Infections / Million

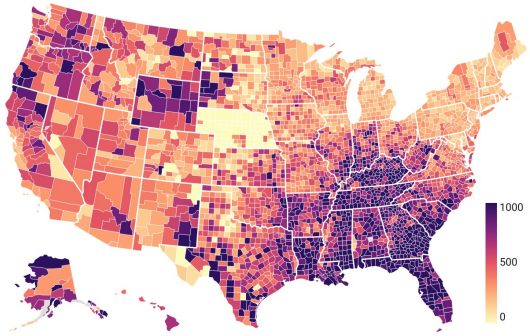
7-Day Moving Average, As of August 6



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

New Daily Infections / Million

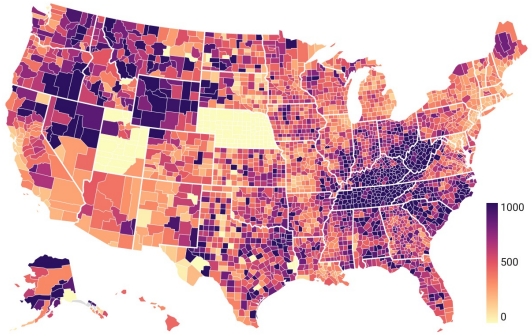
7-Day Moving Average, As of August 27



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

New Daily Infections / Million

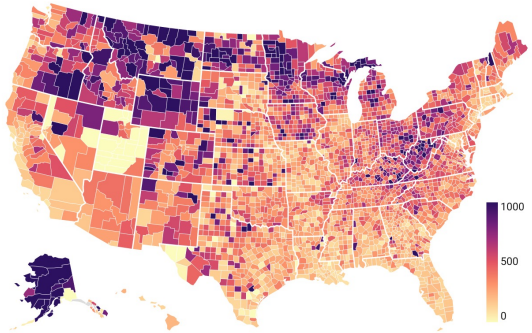
7-Day Moving Average, As of September 17



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

New Daily Infections / Million

7-Day Moving Average, As of October 8



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

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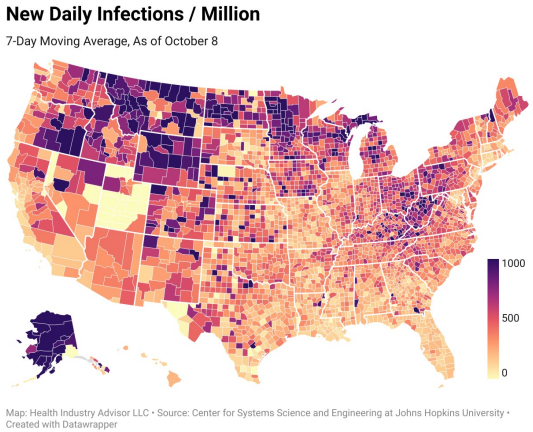
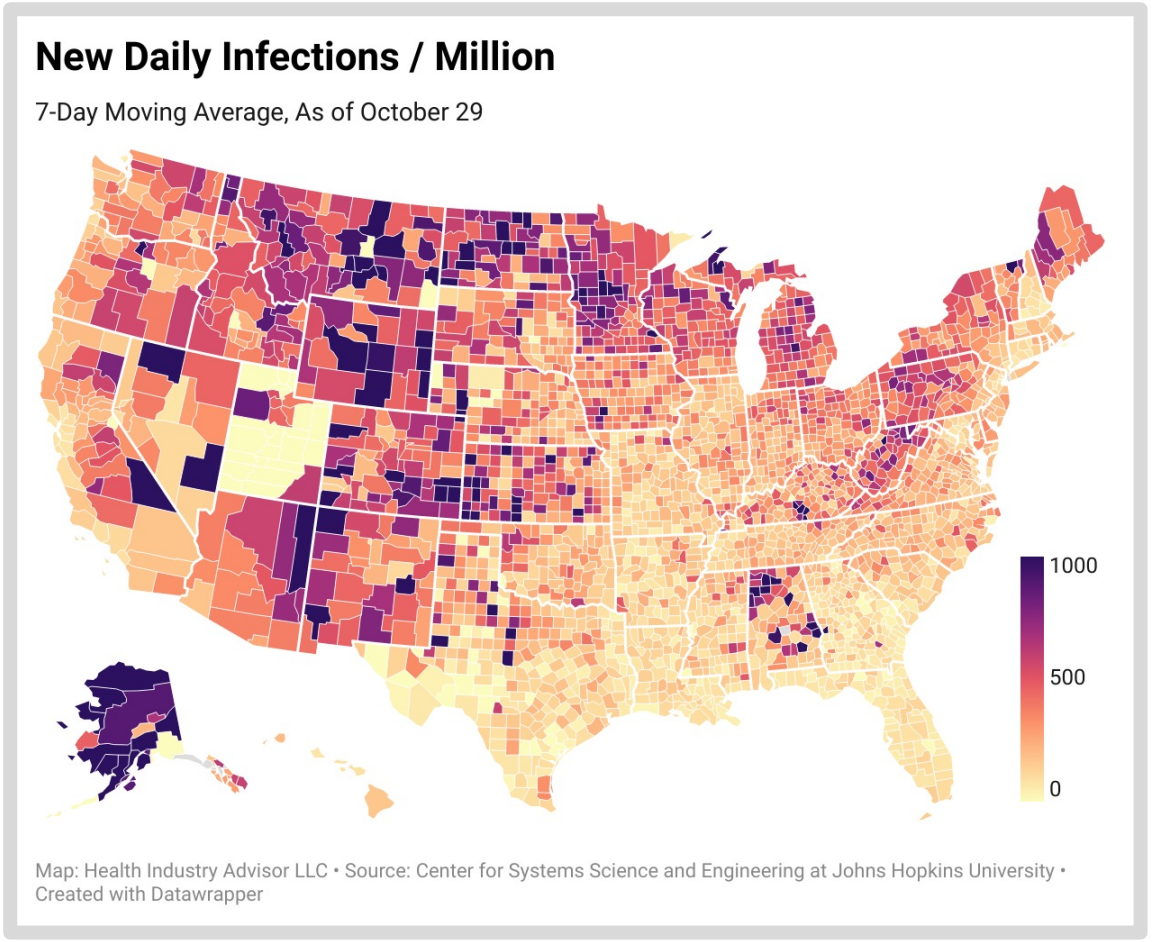
Timeline of the Delta Wave Across the U.S.

New cases rates declined across the United States during the past three weeks, particularly in the Southeast.





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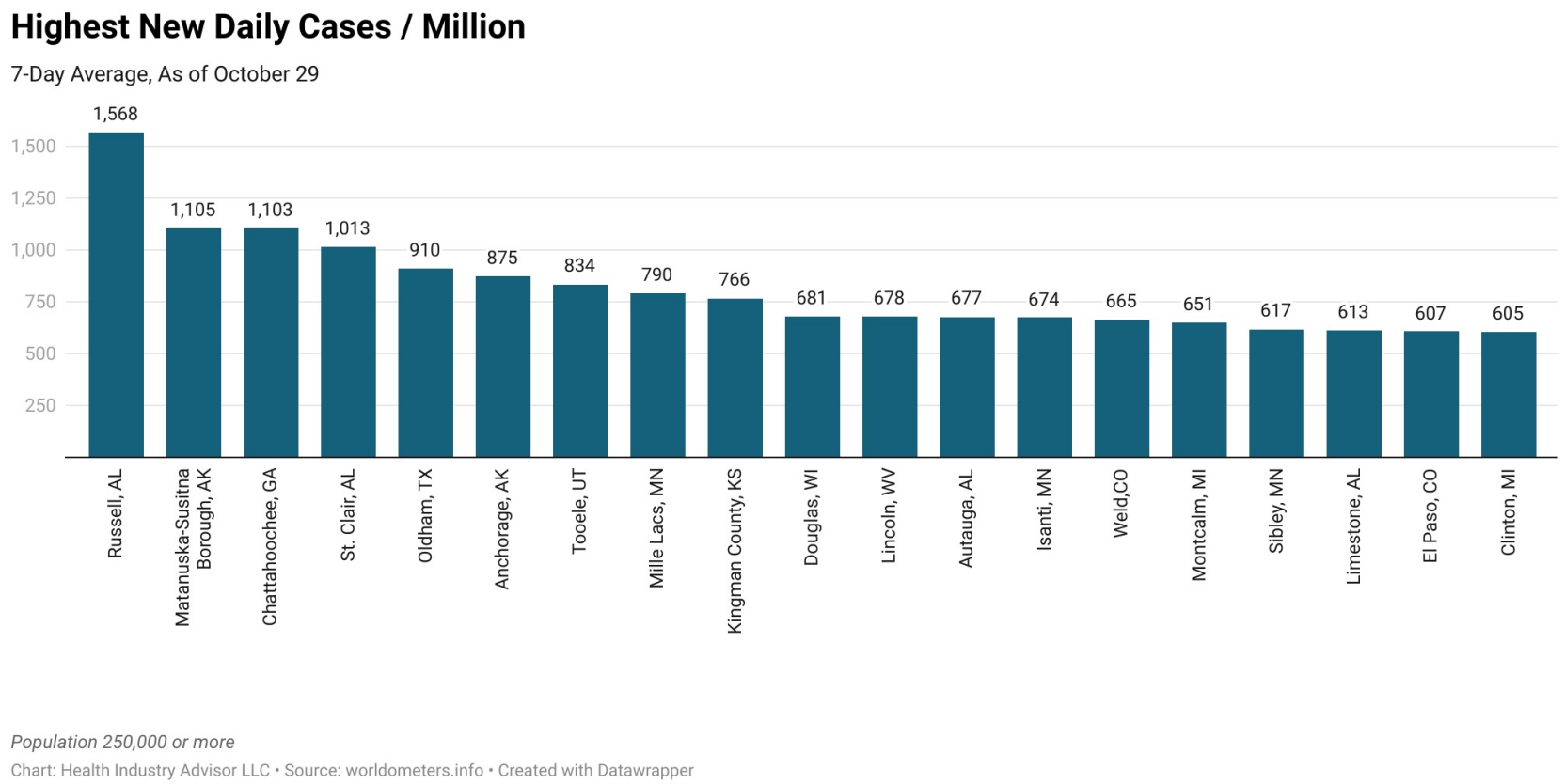
Highest New Cases per Capita - Population 250,000+

Of the municipalities with the highest current infection rates, four are in Alabama, three in Minnesota, and two each in Alaska, Colorado, and Michigan.



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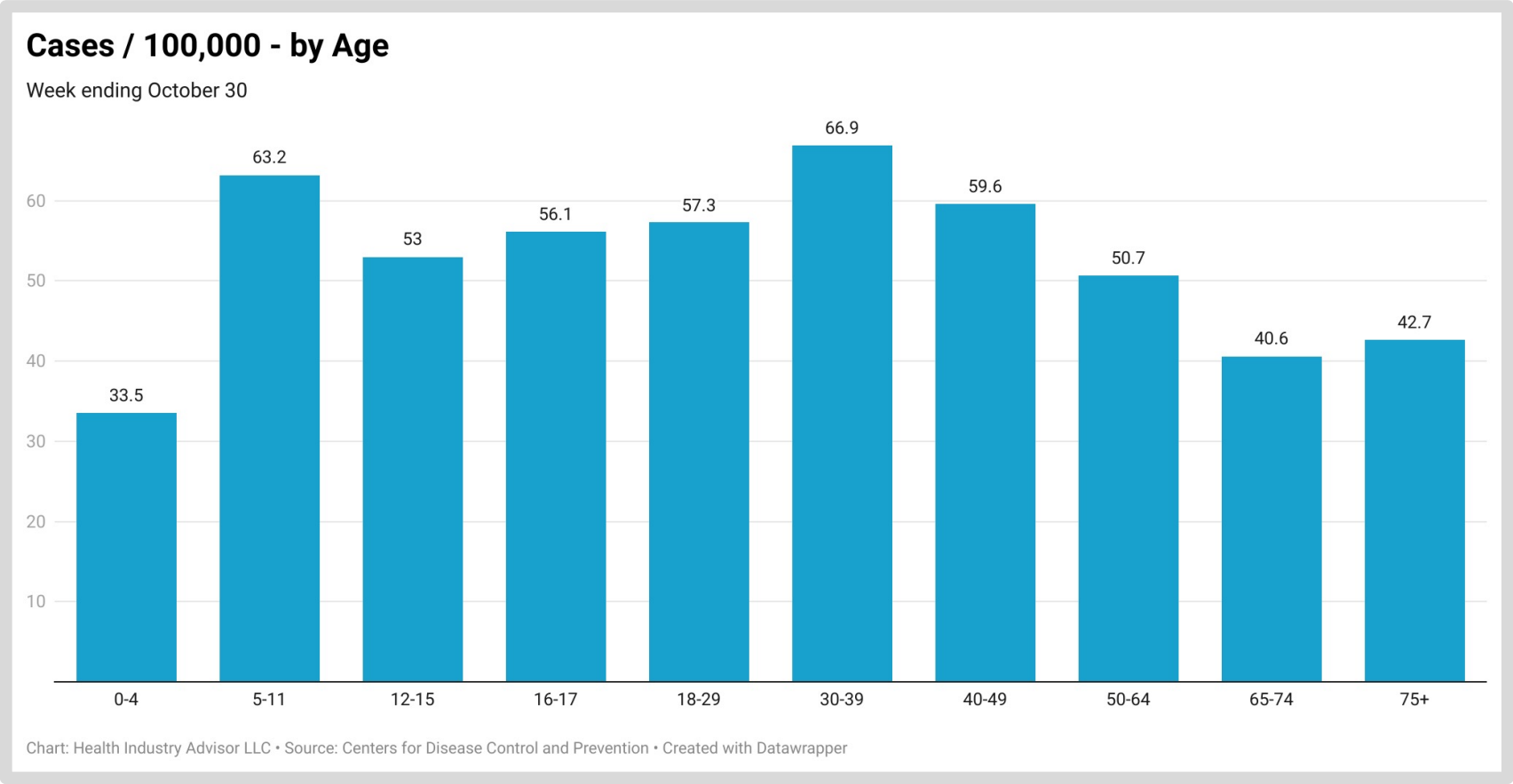
Cases Per Capita By Age Group

Infants and toddlers (0-to-4-years-old) continue to report the lowest infection rate per capita. Seniors, thanks to impressive vaccination rates, benefit from lower rates than any other age group. Children 5-to-11-years old could benefit from ***anticipated vaccine approval.***



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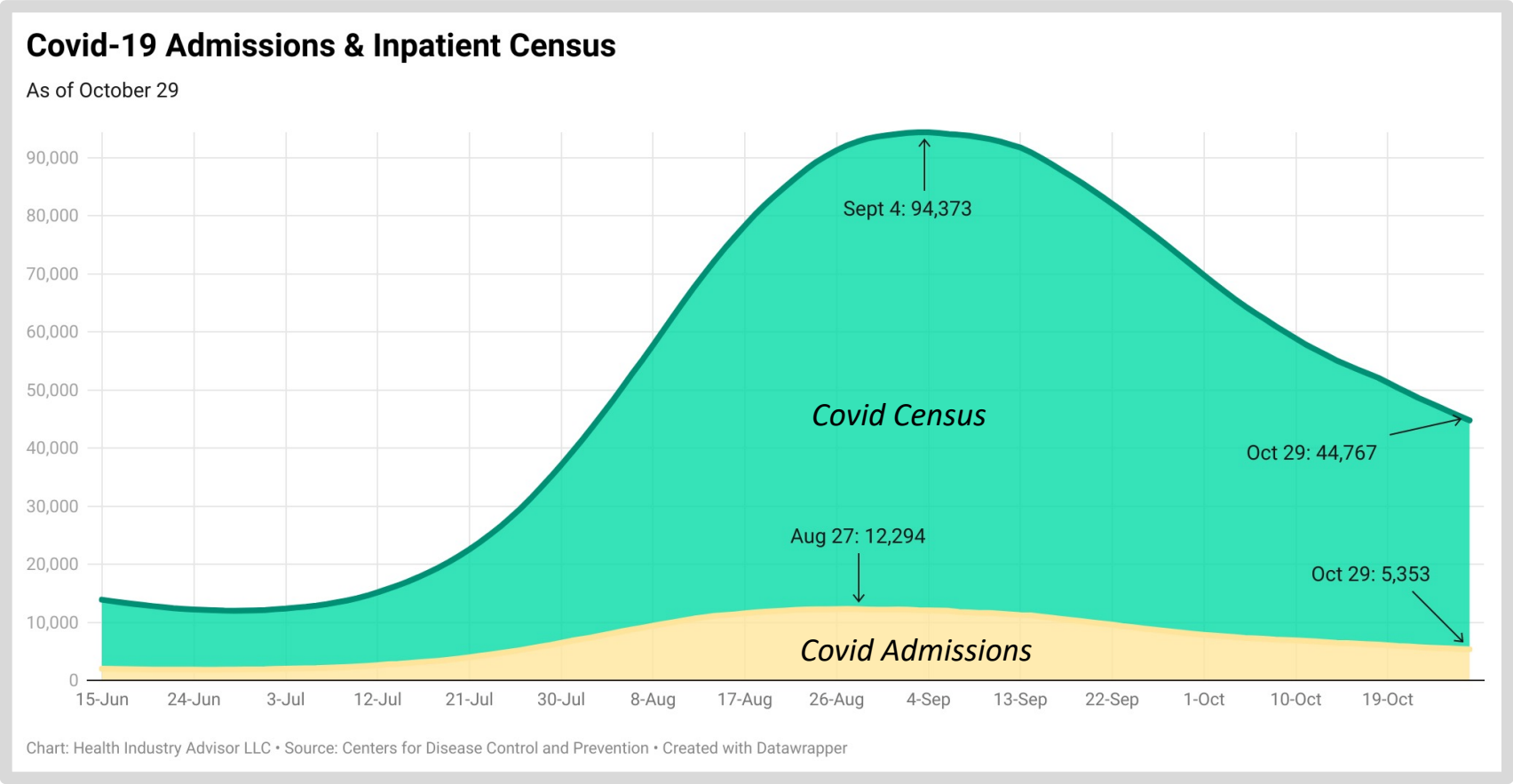
Inpatient Covid Admissions and Census

Inpatient census and admissions are declining for the United States in total. Admissions have dropped 57% since late August. Census has declined 53% since early September.



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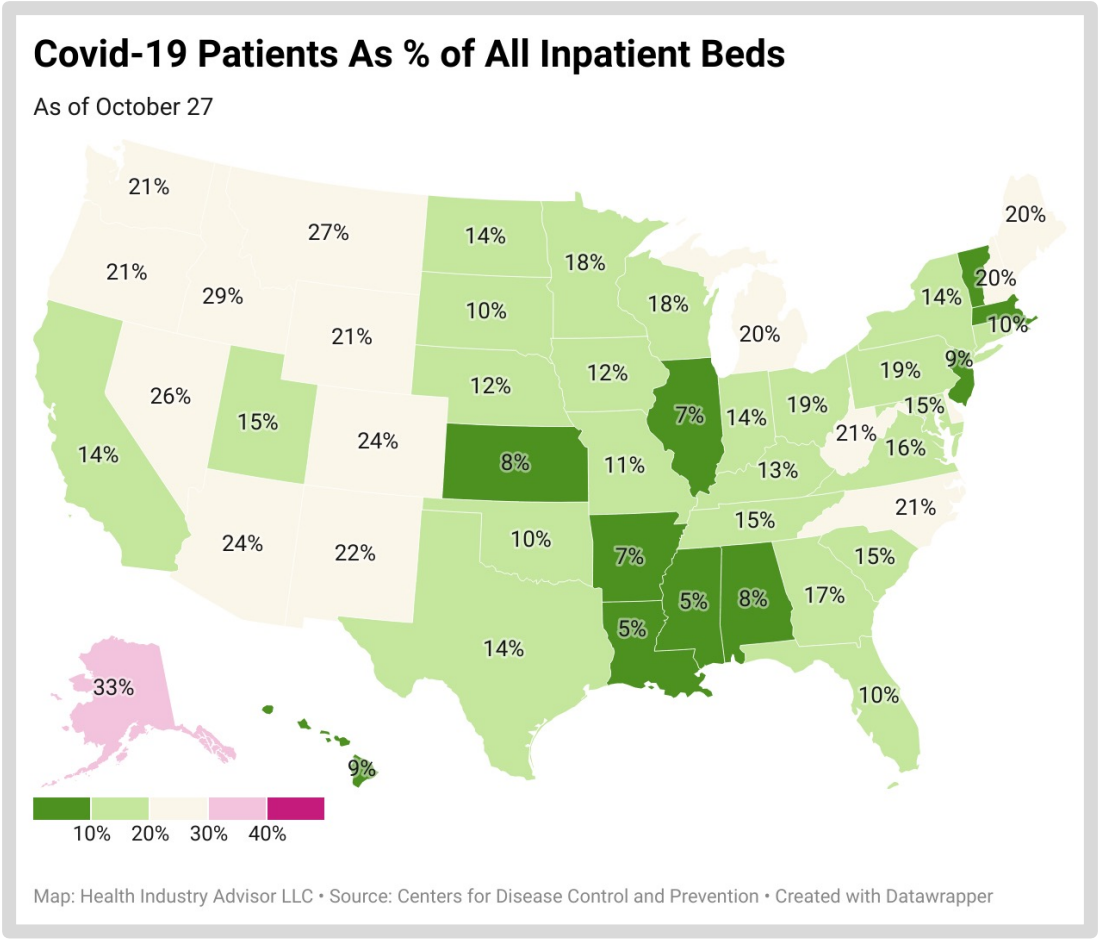
Covid Hospital Occupancy By State

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



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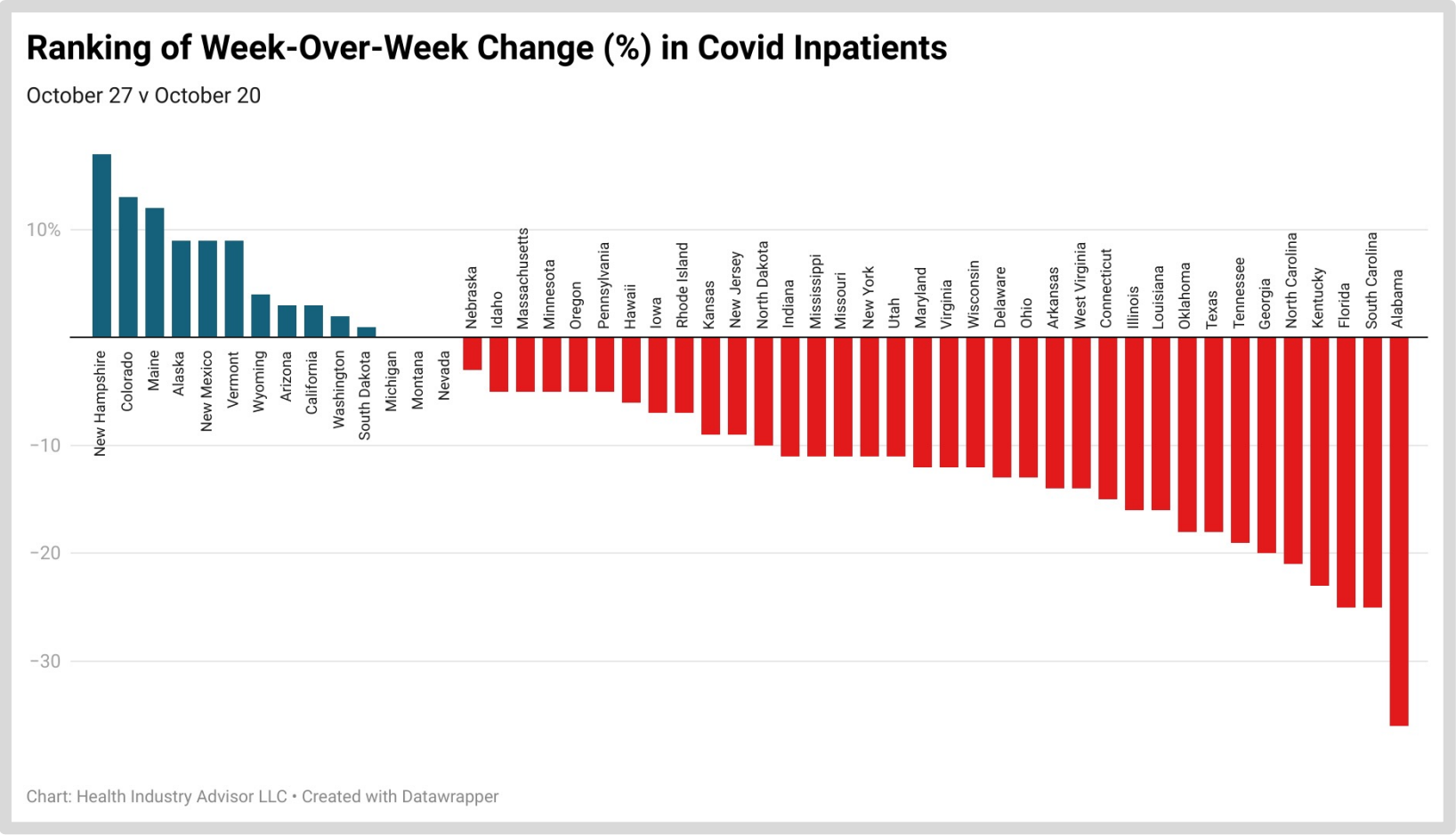
Week-Over-Week Change in Covid Inpatients

Covid inpatient census is falling in most states. This census increased most (on a % basis) in New Hampshire, Colorado and Maine. In Maine, Michigan, Montana, South Dakota, and Vermont, the increase was only 1-to-3 patients per day.



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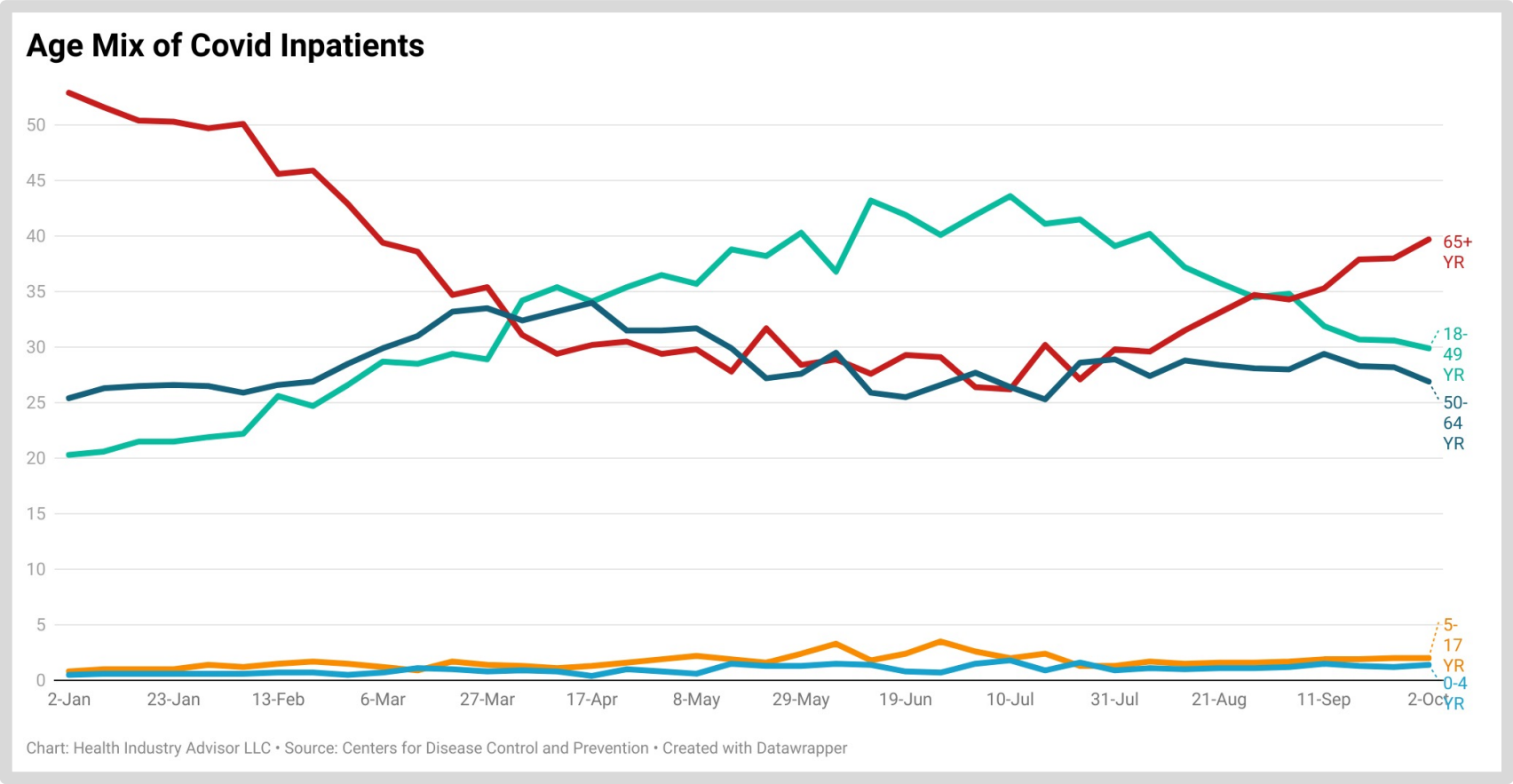
Covid-19 Hospital Census – Distribution By Age

With census falling, senior citizens now represent the plurality of Covid inpatients. Minors represent only a fraction of Covid patients.



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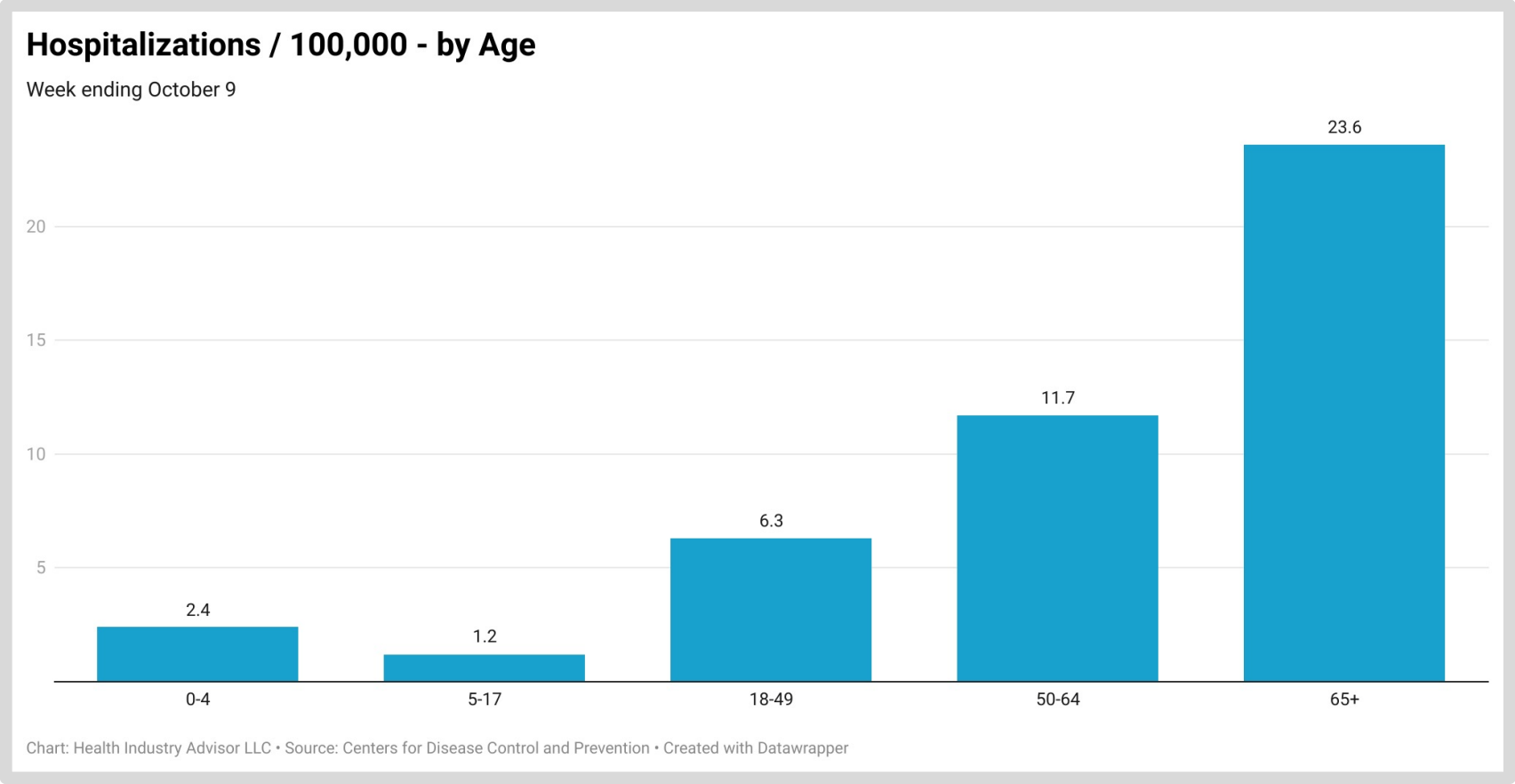
Hospitalizations Per Capita By Age Group

Seniors are hospitalized at twice the rate of 50-to-64-year-olds and nearly four times the rate of 18-to-49-year-olds. In turn, these 18-to-49-year-olds have five times the hospitalization rate of 5-to-17-year-olds.



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Vaccinations Are Trending Toward Greater Equity

During October, Blacks, Hispanics, and multi-racial persons received second vaccinations at a faster pace than other groups. For example, Hispanics, which represent 17% of the population, accounted for 20% of those getting a second shot. Blacks, with 12% of the population, received 14% of the second vaccinations.

Vaccinations Are Becoming More Equitable

Comparing Racial/Ethnic Mix to Mix of Persons Reaching Double Vaccination in October

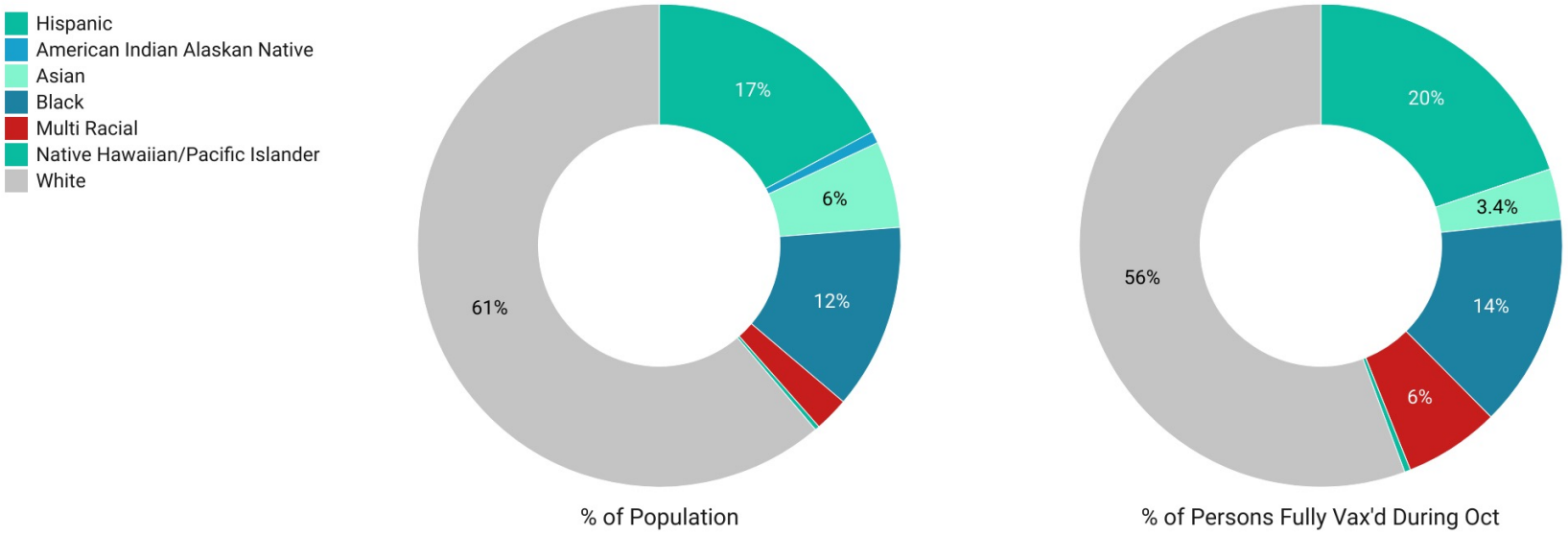

Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

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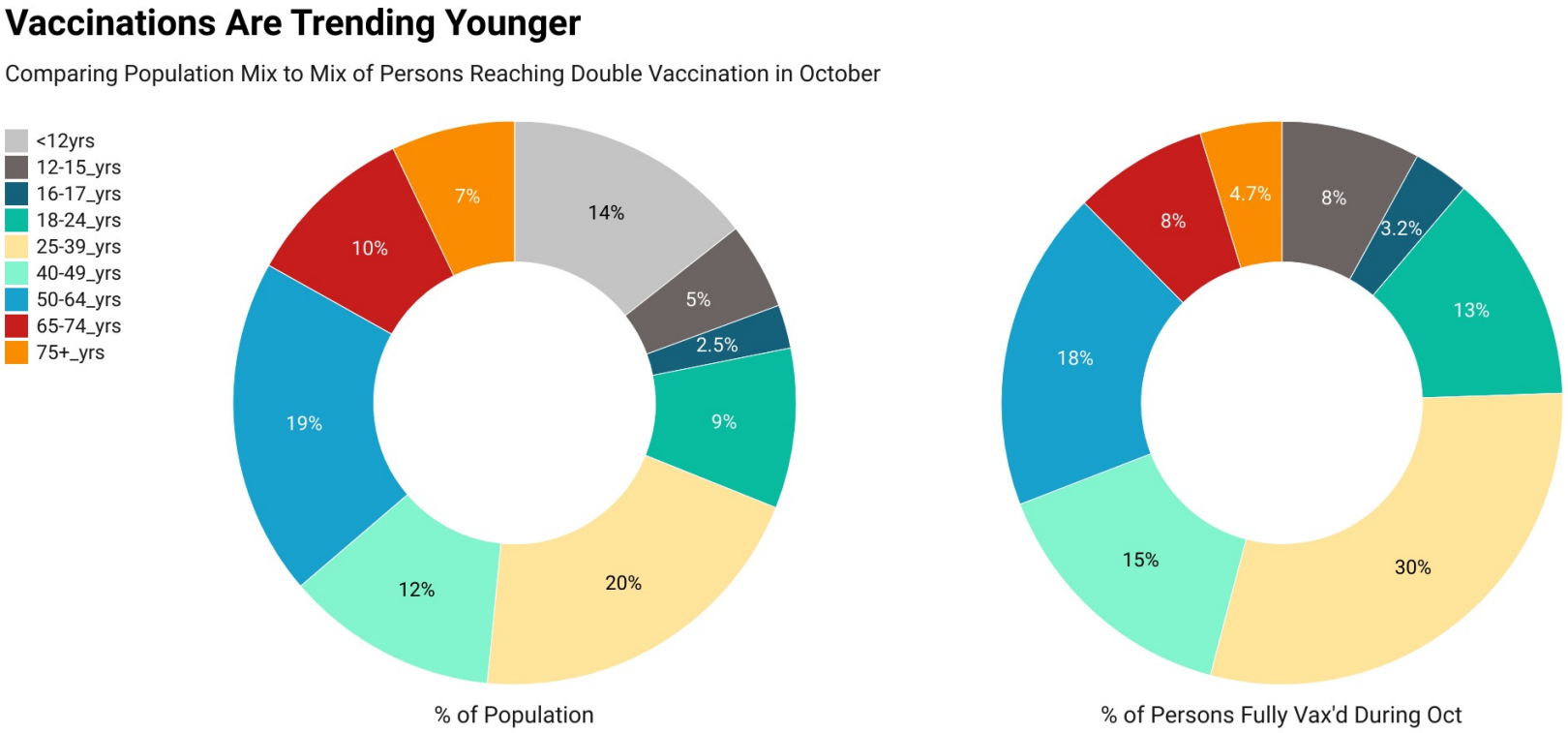
Vaccinations Are Also Trending Younger

12-to-15-years-olds are 5% of the population but, represented 8% of second vaccinations during the month. For 18-to-24-year-olds, these figures were 9% and 13%; For 25-to-39-year-olds, they were 20% and 30%.



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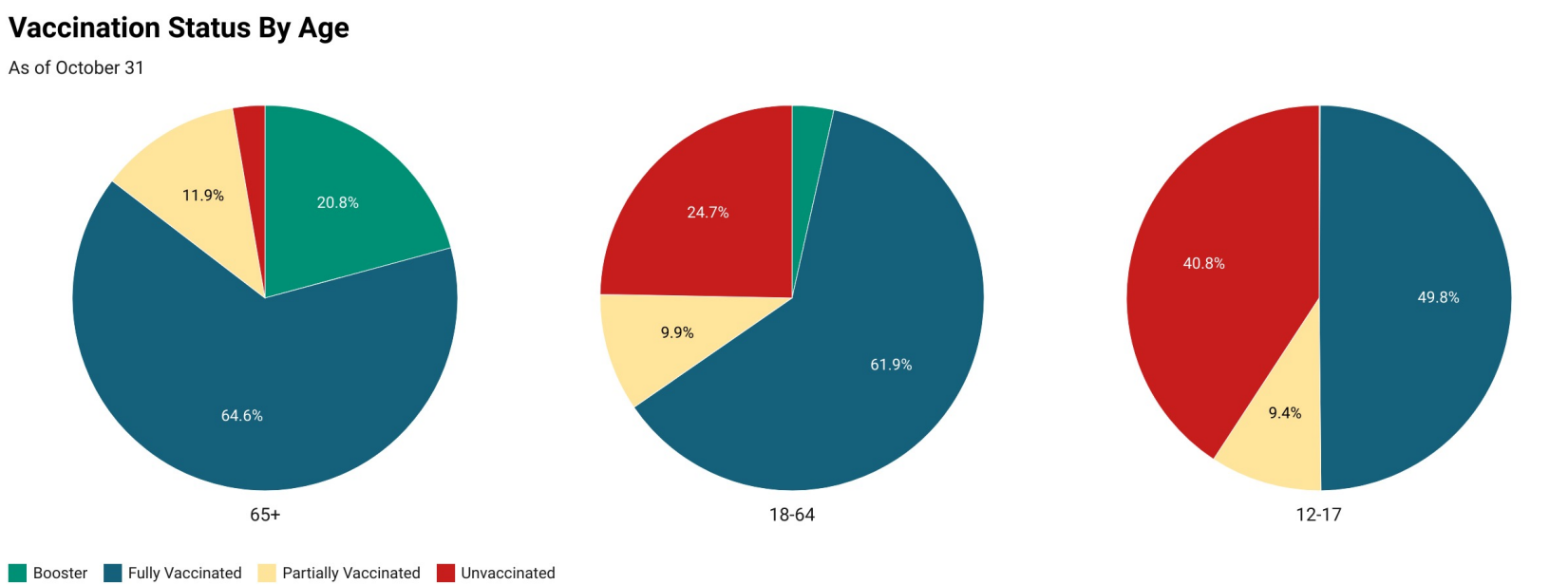
Vaccination Status By Age – United States

97% of seniors are at least partially vaccinated; 85% are fully vaccinated.. One-in-five has already received a booster shot. Two of every three adults under 65 years old are fully vaccinated, as are half of 12-to-17-year-olds.



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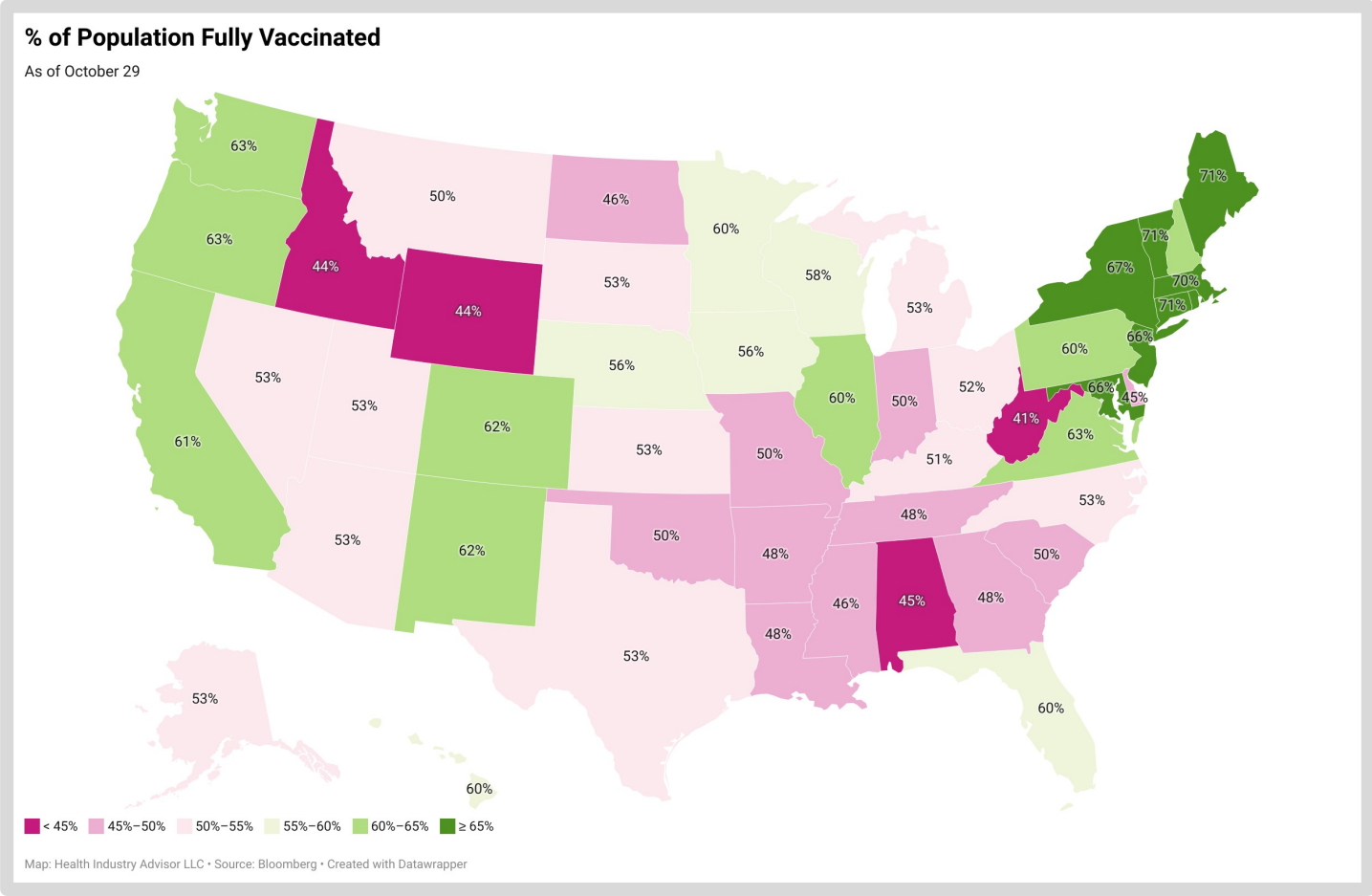
Vaccine Tracking - % of Population Vaccinated

Alabama, Idaho, Montana, and West Virginia trail the rest of the country in vaccination rates. New England states are setting the pace.



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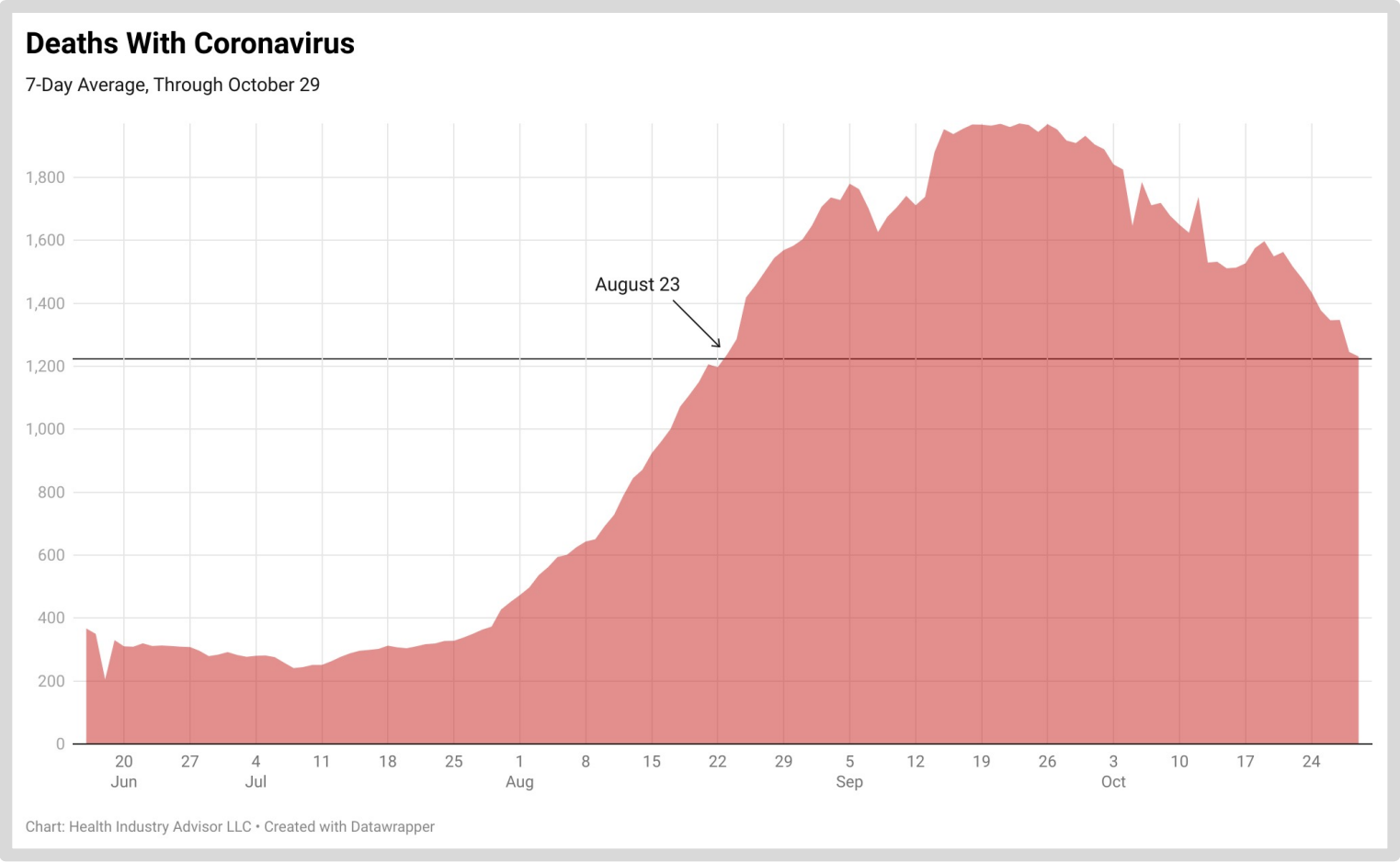
Deaths with Covid-19

Adjusting for an apparent reporting update by Oklahoma two weeks ago, deaths appear to continuing an extended decline. Rates reached a two-month low.



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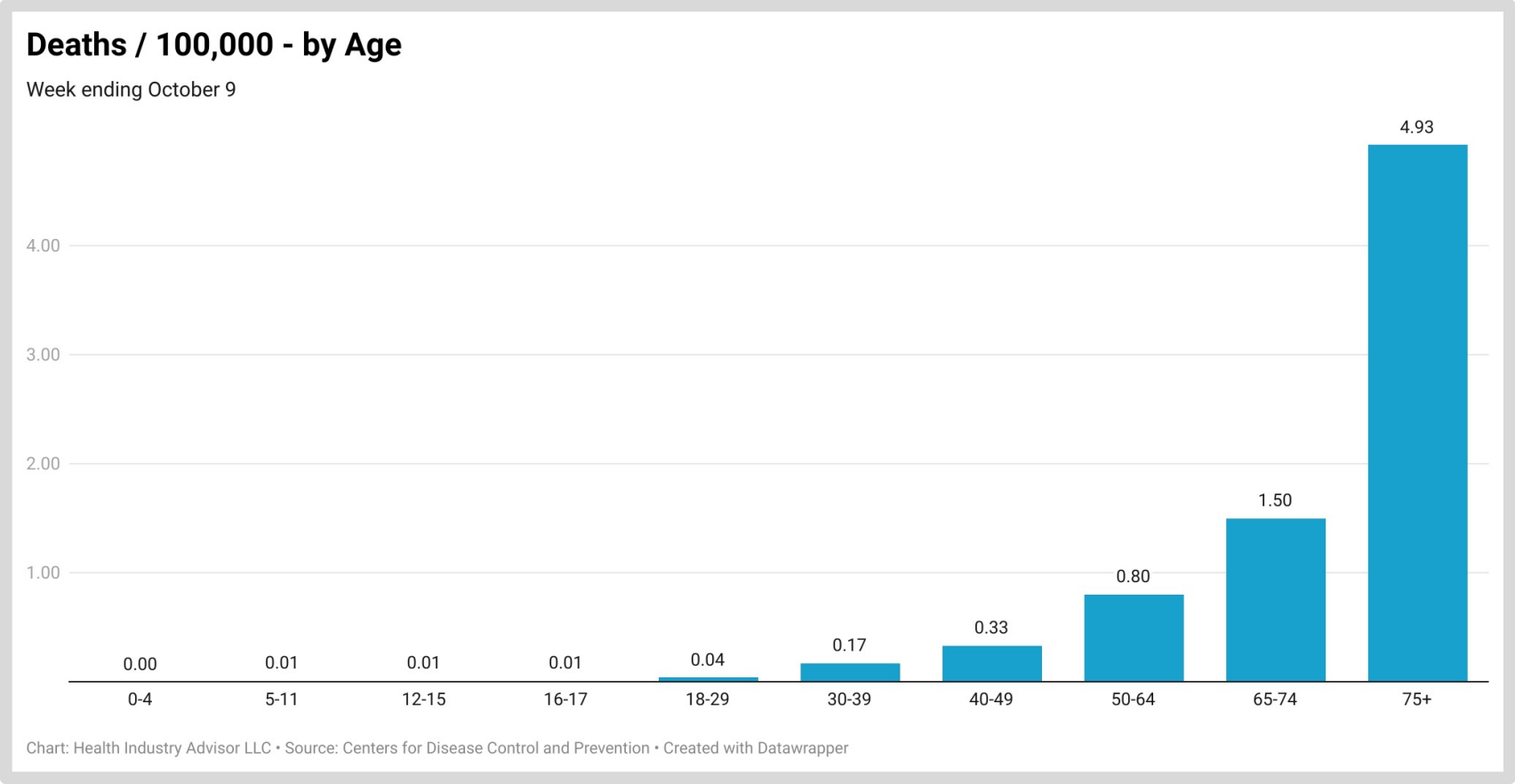
Deaths Per Capita By Age Group

Deaths per capita are three time higher for 75+ year-olds as 56-to-74-year-olds and six times higher than for 50-to-64-year-olds. Rates fall off dramatically for person 49-and-younger.



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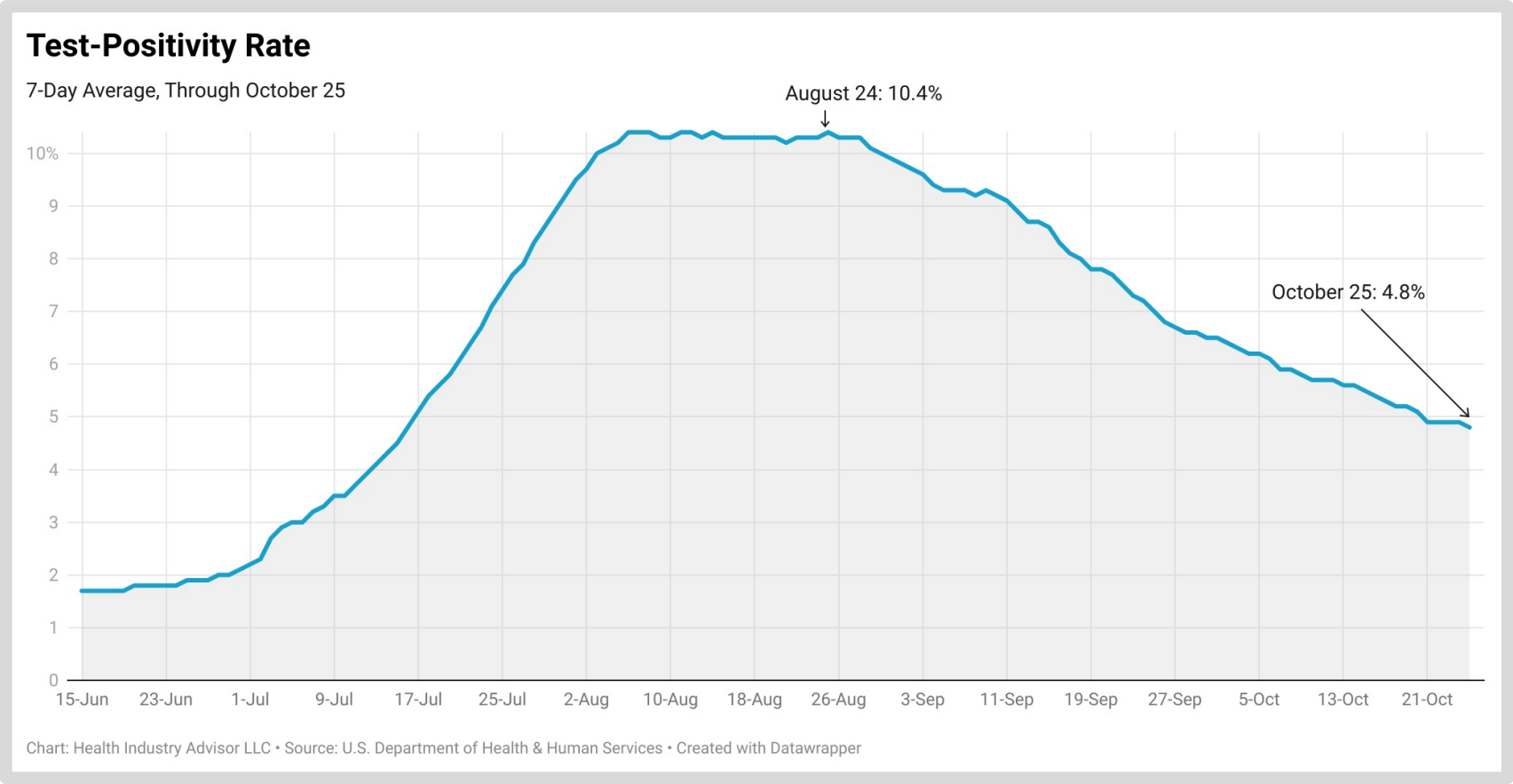
Test-Positive Rate

The test-positive rate continues to drop, falling below the 5% benchmark set by public health officials. This rate is now as low as it has been since mid-July.



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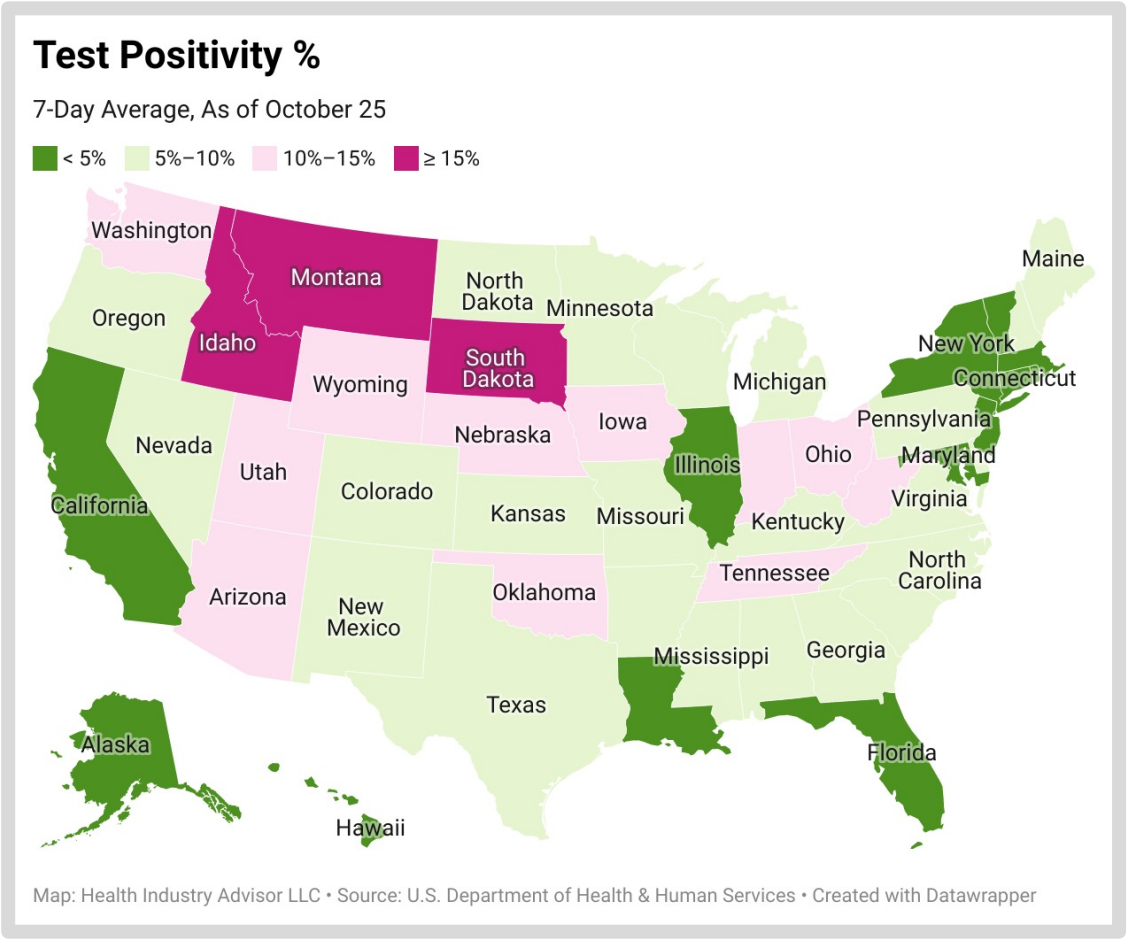
7-Day Average Test-Positivity %

Test-positivity rates are low in many of the heavily-populated states.

- 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.



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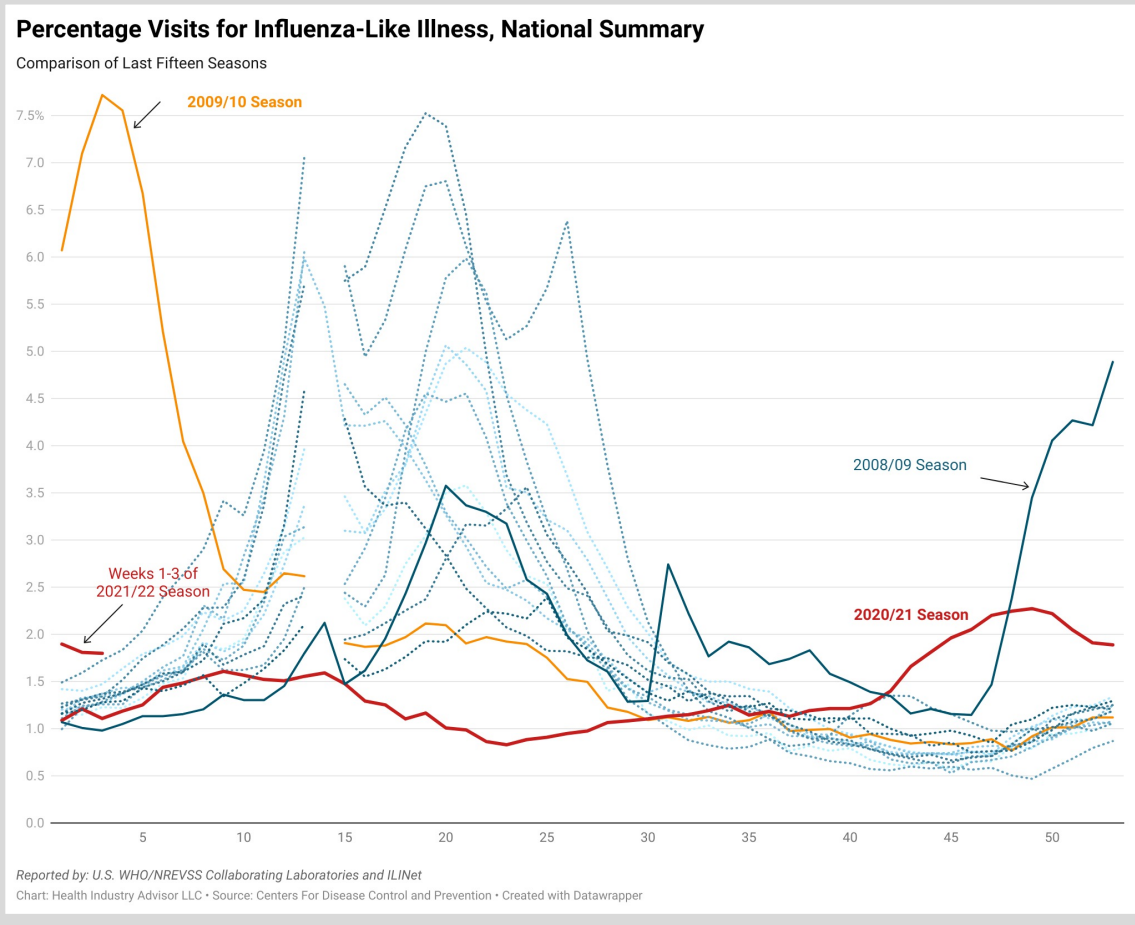
Comparison of Flu Seasons

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 still seeing more visits than during the peak of the season last Winter
  - We are experiencing a higher flu visit rate than every season in the past fifteen years, except for the 2009/2010 season.
  - This 2009/10 season reached peak earlier than in any other season



Covid-19
"Vital Signs"

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

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