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"Strategic Advice in an Era of Unprecedented Change"

Covid-19 "Vital Signs"

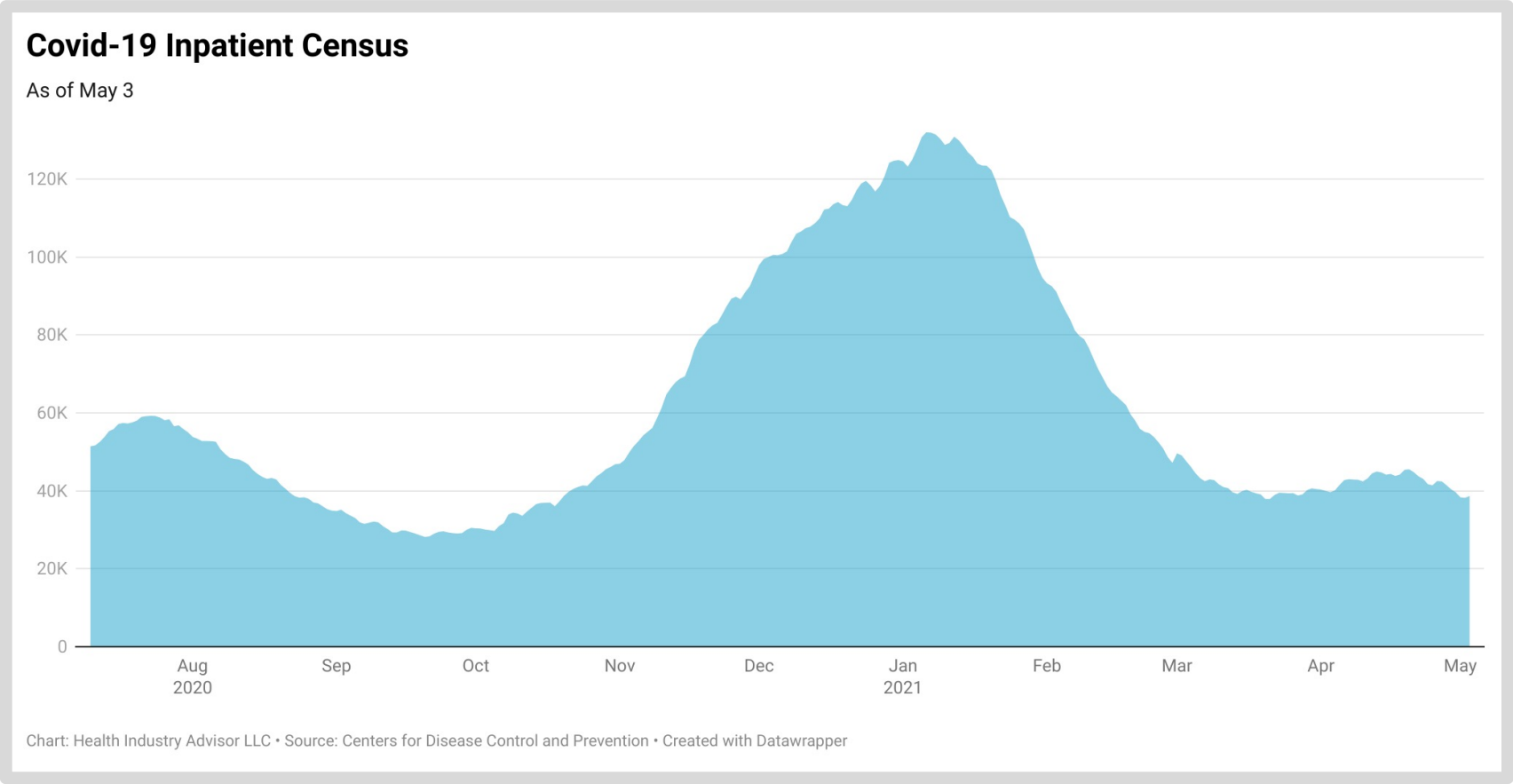
Issue # 330

May 7, 2021

Covid-19 "Vital Signs"

Covid-19 Inpatient Census

Covid-19 inpatient census has dropped to levels unseen since last October.



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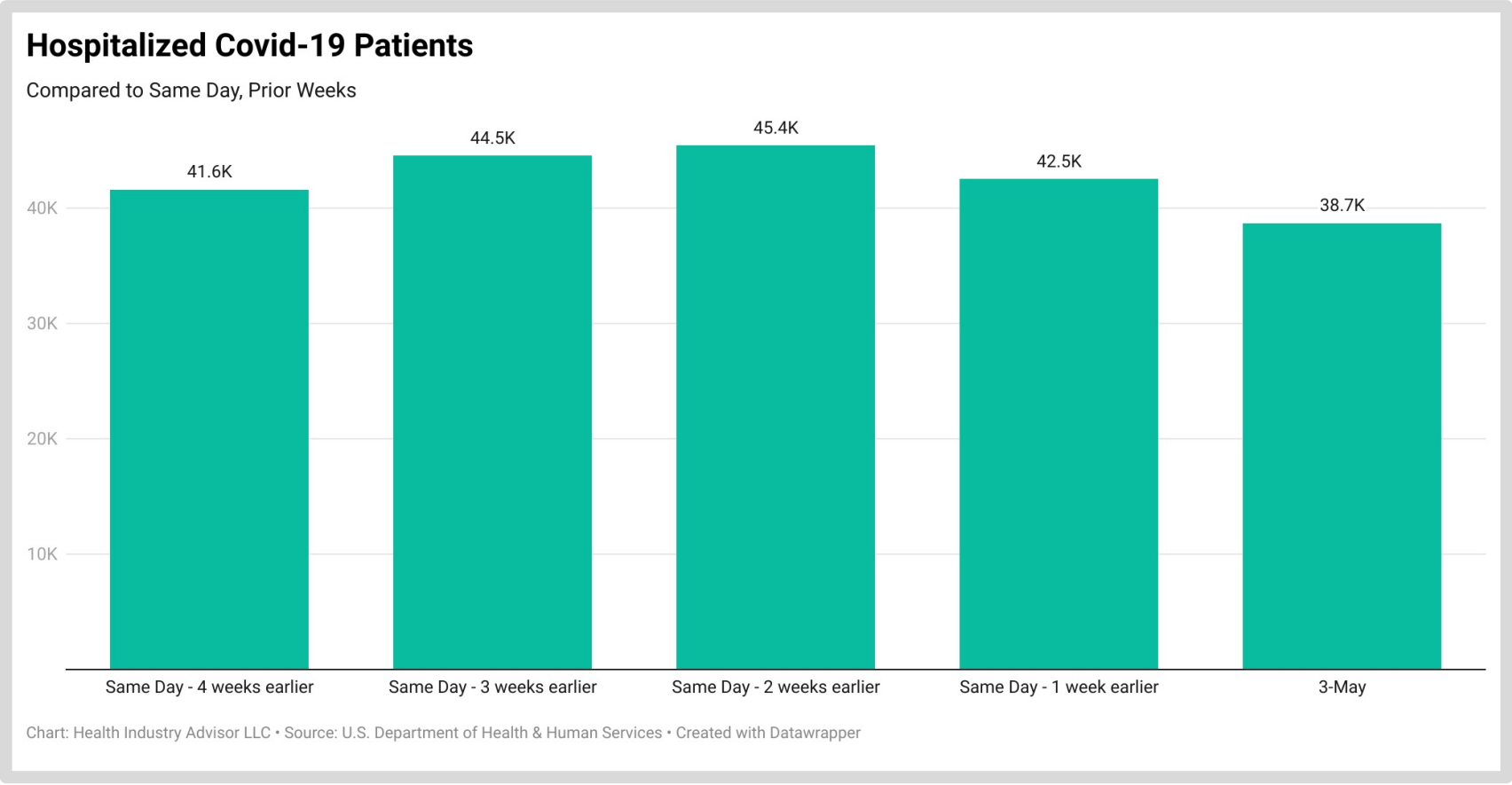
Covid-19 Inpatient Census

Covid-19 inpatient census has been declining for several weeks.



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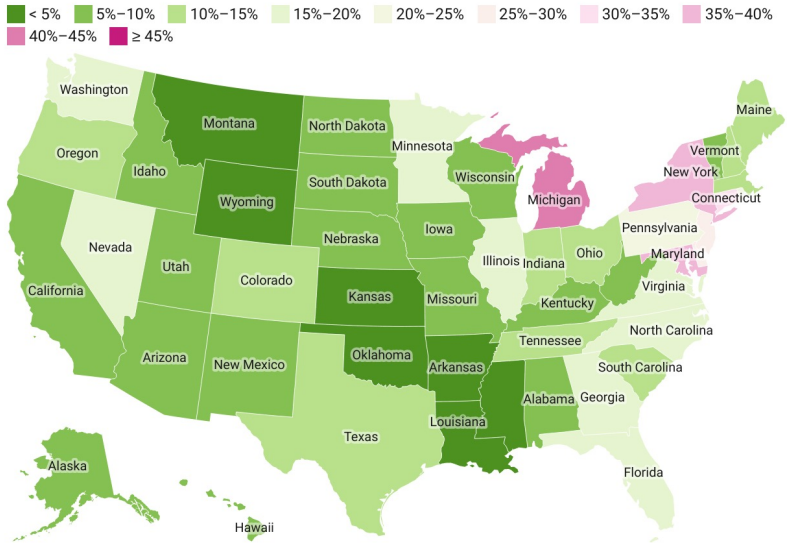
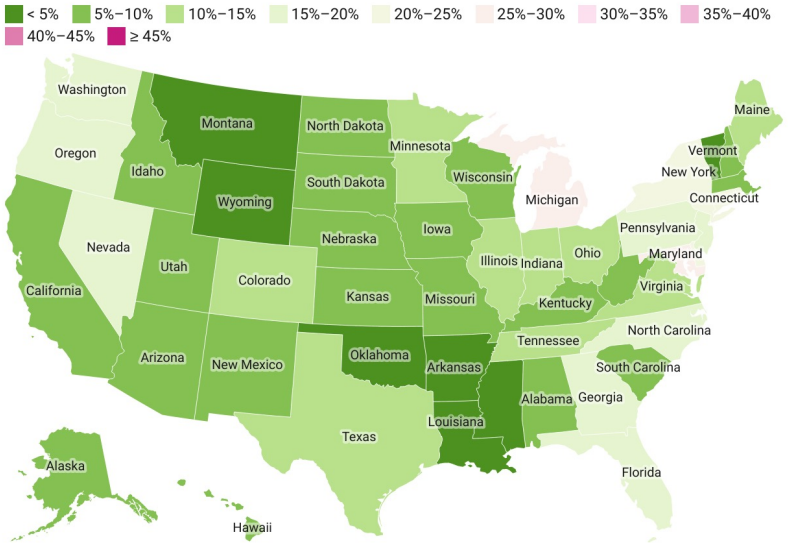
Covid-19 Hospitalizations

Covid-19 hospital census has declined in states which had recently seen the highest Covid-19 occupancy rates: Connecticut, Maryland, Michigan and New York.

As of April 19



As of May 3



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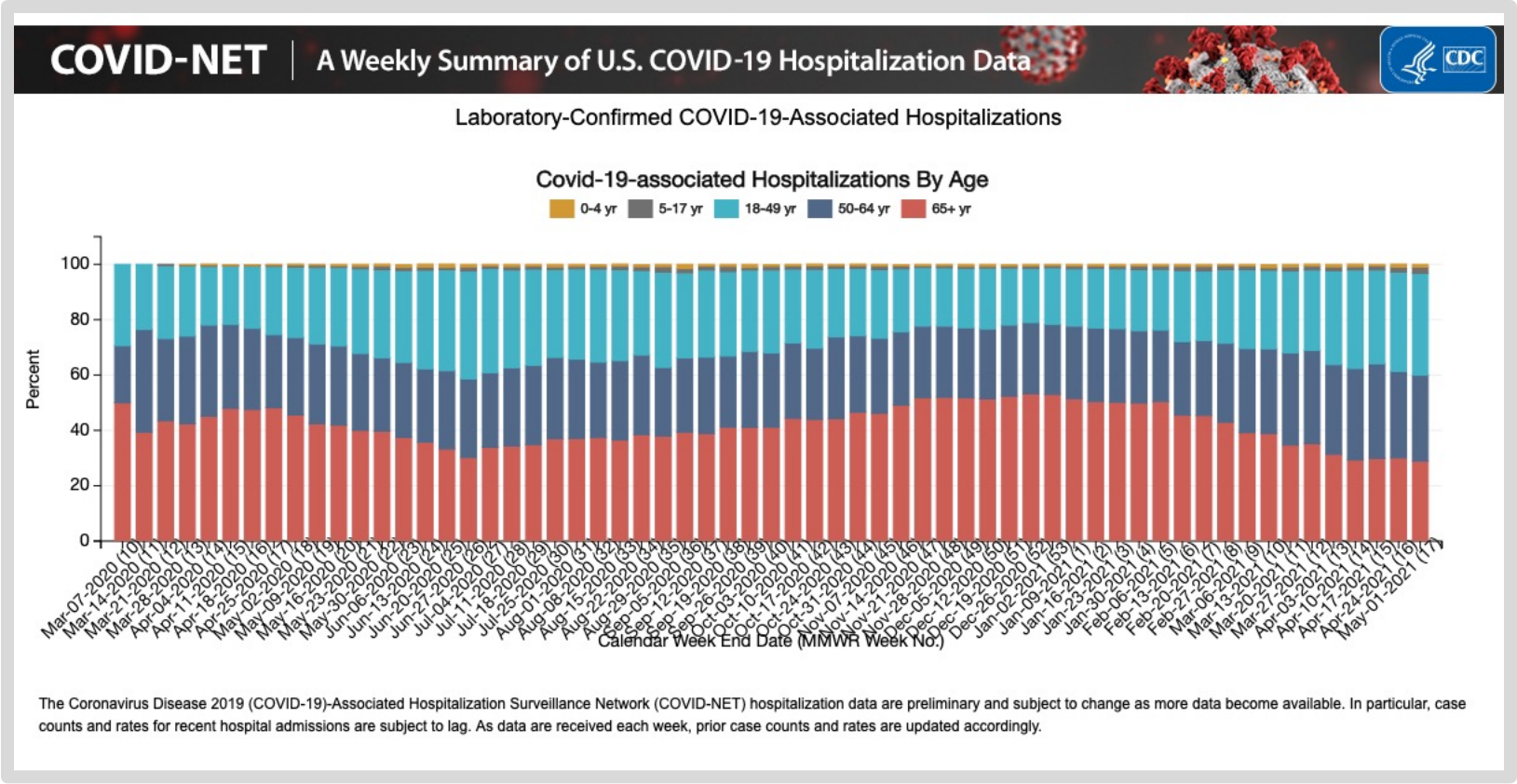
Covid-19 Hospitalizations By Age

Hospitalized Covid-19 patients have shifted younger since the beginning of the year, particularly to 18–49-year-olds. Responding to vaccinations efforts, the mix of senior citizens has fallen sharply.



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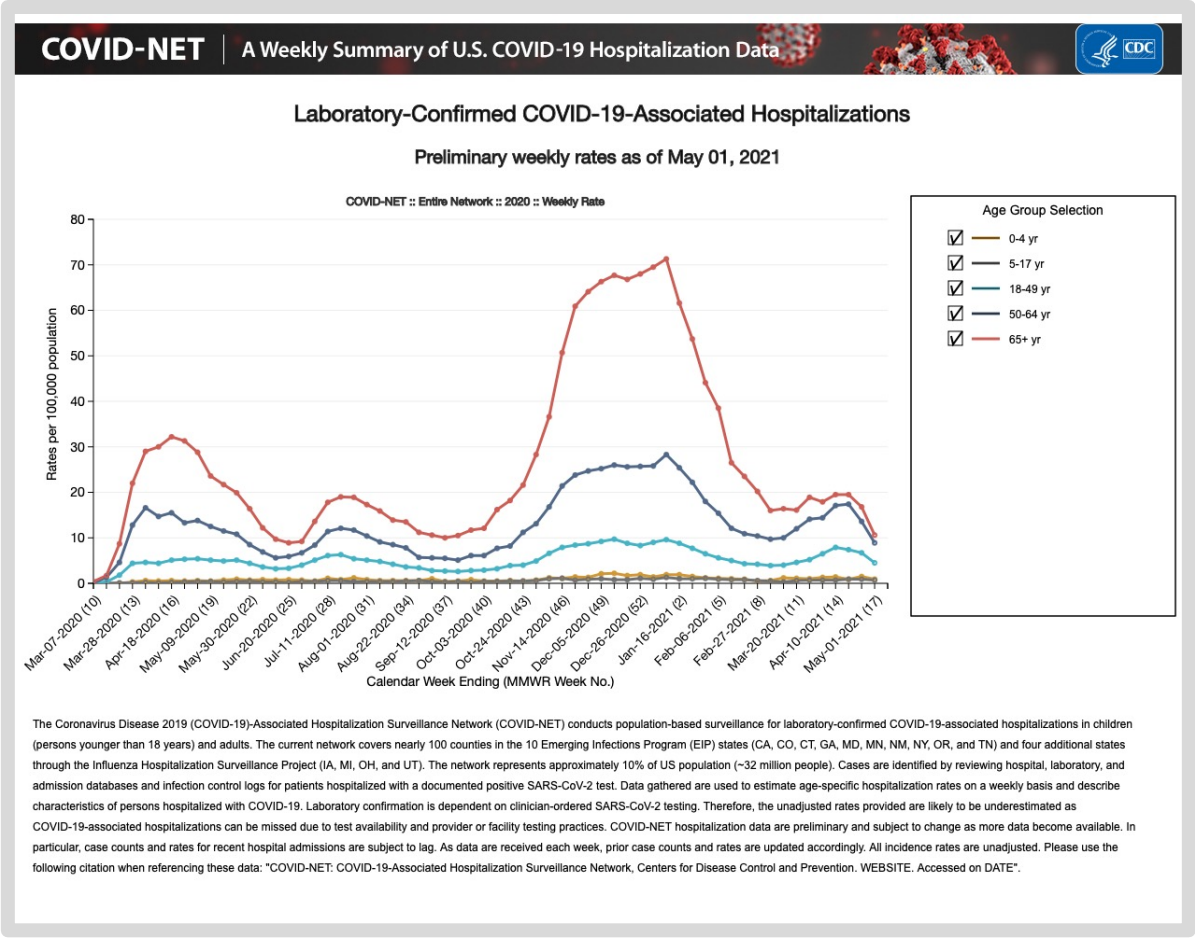
Covid-19 Hospitalizations Per Capita By Age

Covid-19 hospitalizations per capita have fallen across all age groups. The decline has been most notable among senior citizens.



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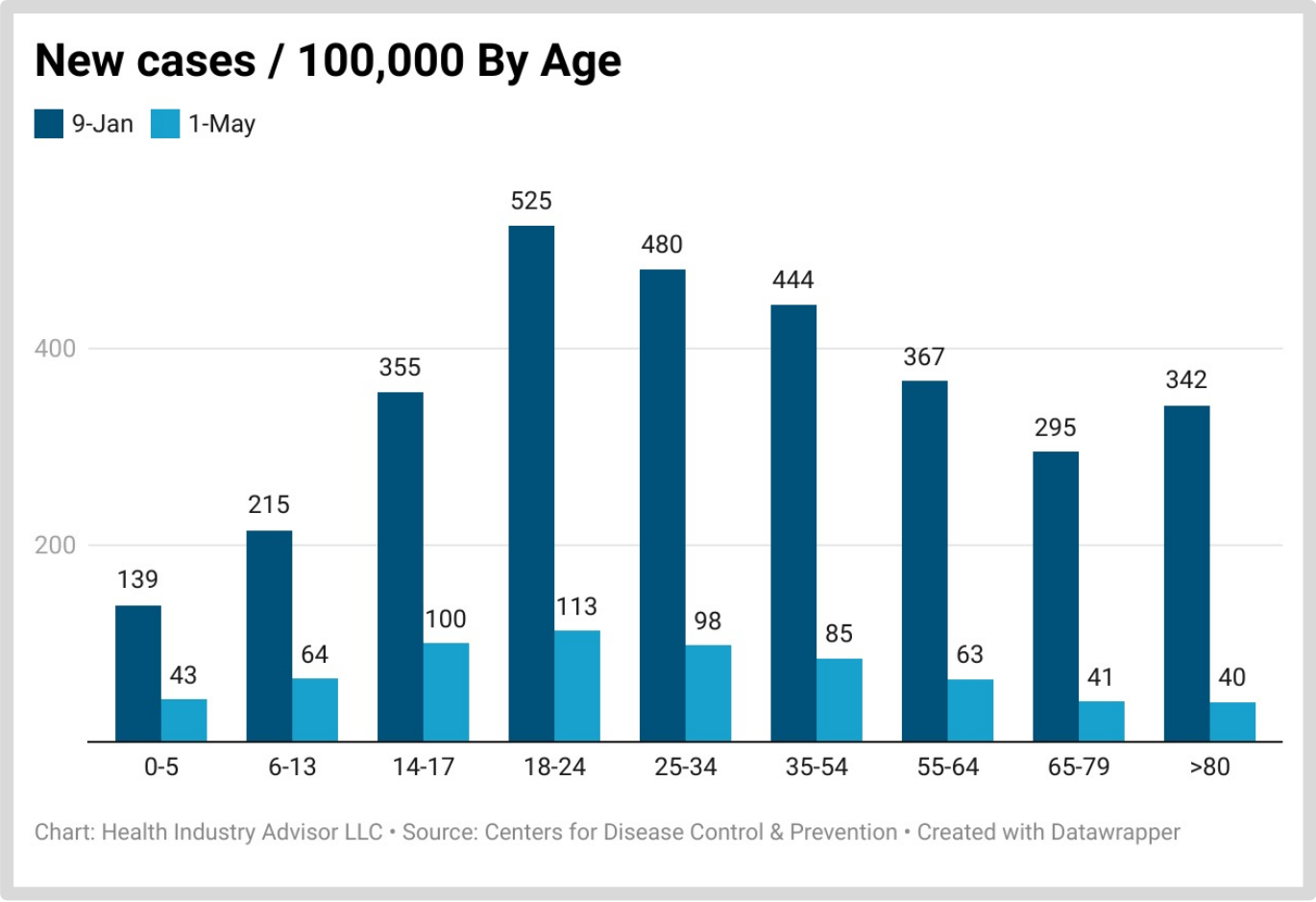
Covid-19 Cases Per Capita By Age

Covid-19 cases per capita have fallen across all age groups. The highest rate per capita continues to be among 18–24-year-olds.



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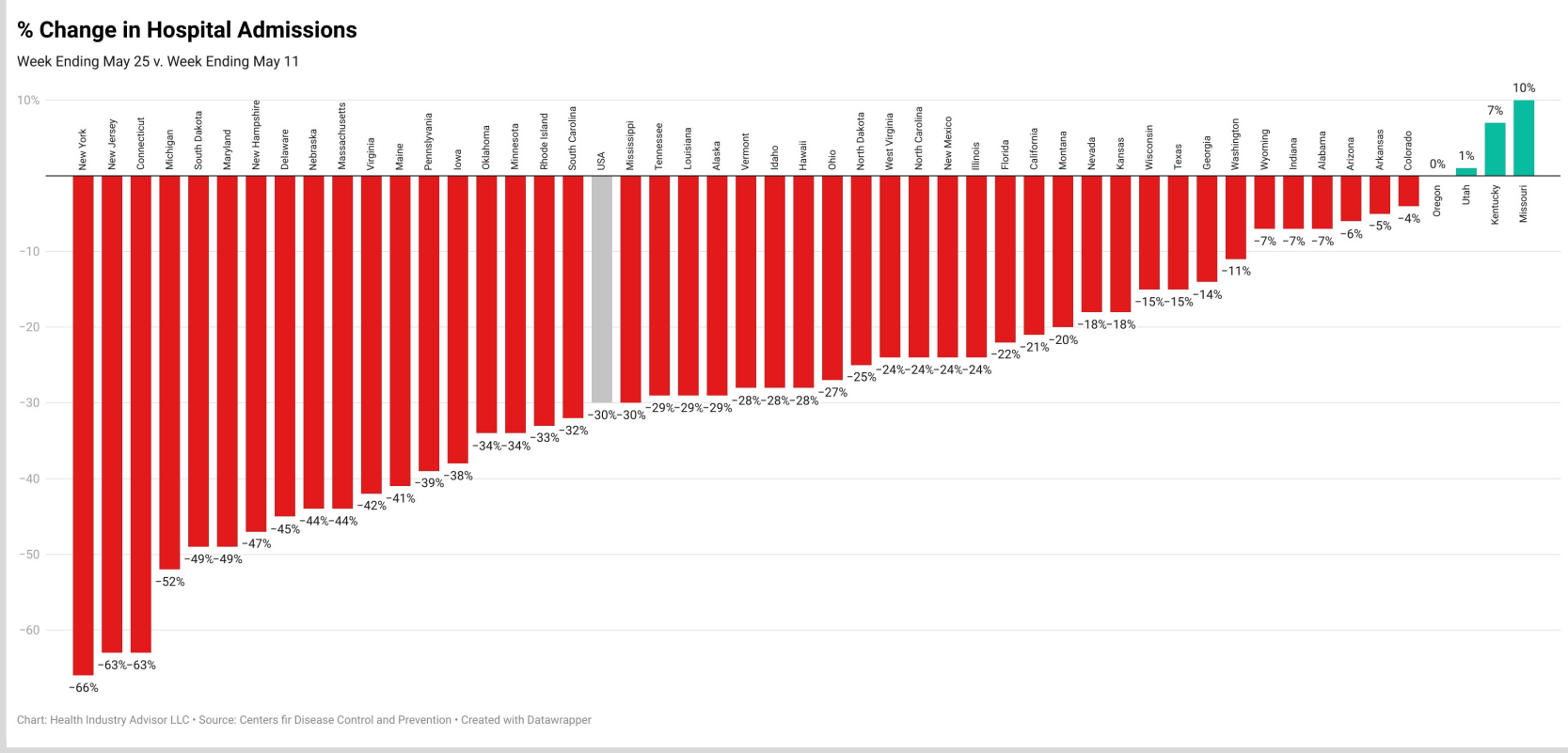
Projected Covid-19 Admission Trends

For the U.S. overall, projected Covid-19 admissions drop 30% in the next three weeks. Projected declines are steepest in Connecticut, Michigan, New Jersey and New York..



Trends in New Case Rates

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Maine and New Mexico are the only states where cases are showing upward trends. Michigan is recovering, with declining rates for more than two weeks.

New cases/M <100

Case Rate declined day-over-day

Case Rate steady day-over-day

Case Rate Increased day-over-day

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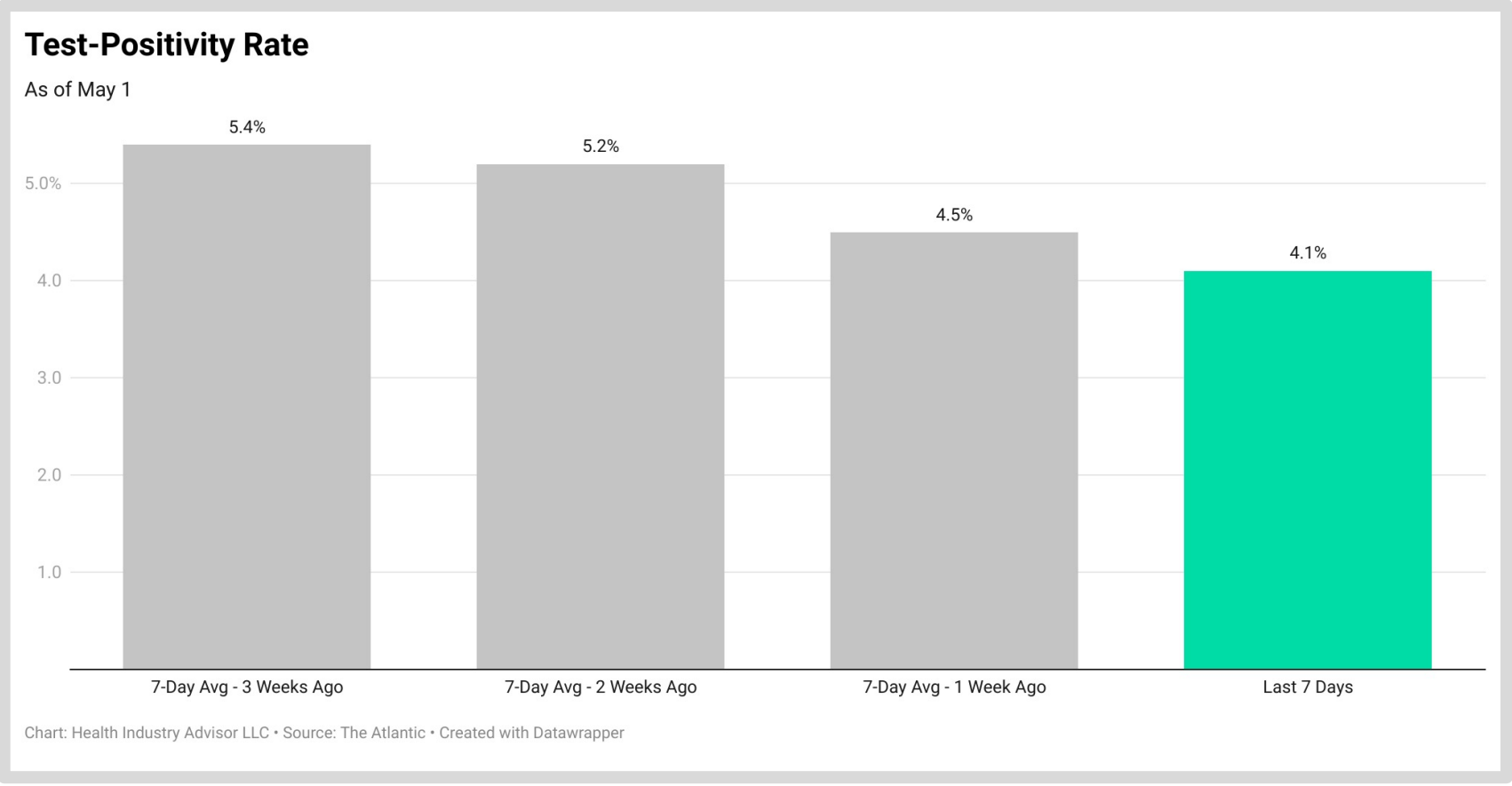
Test-Positivity Rate

The test-positivity rate dropped below the suggested WHO target and continues to trend downward.



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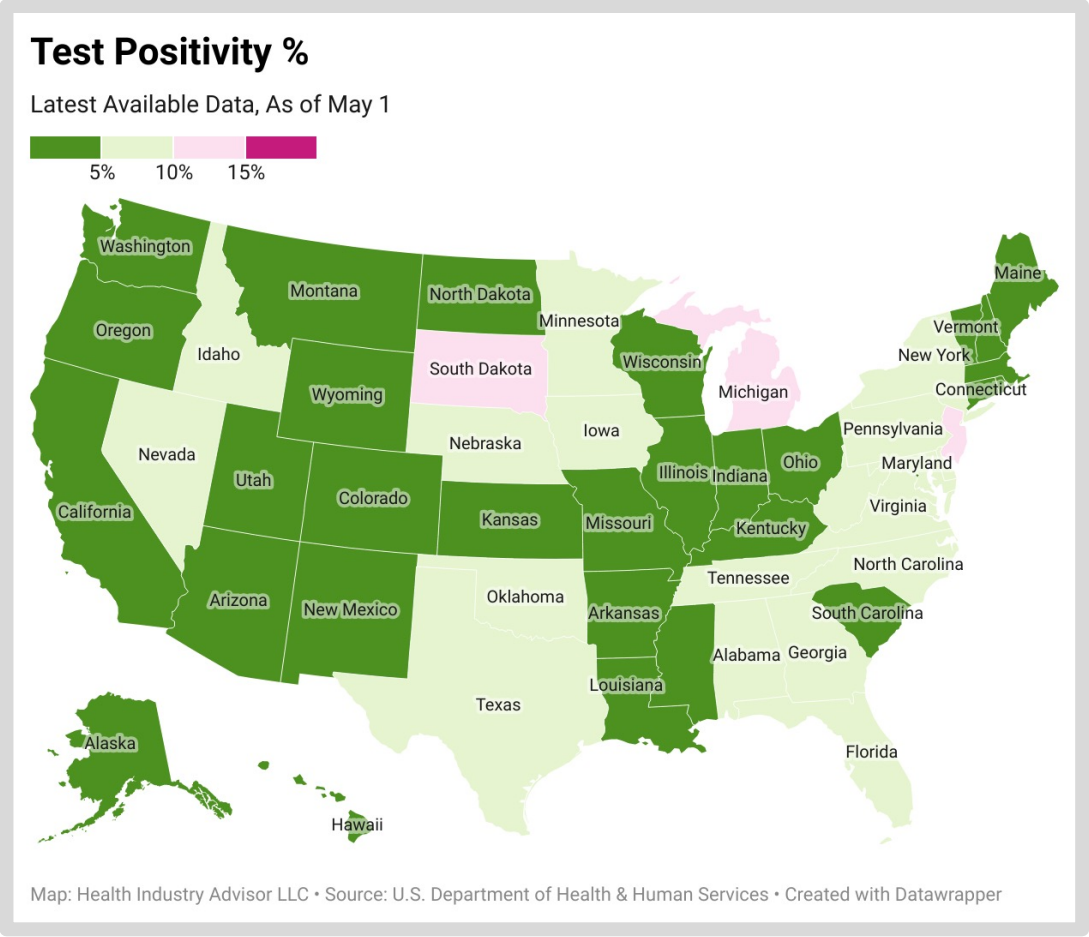
Test-Positivity %

Michigan, New Jersey and South Dakota are the only states where test-positivity exceeds 10%



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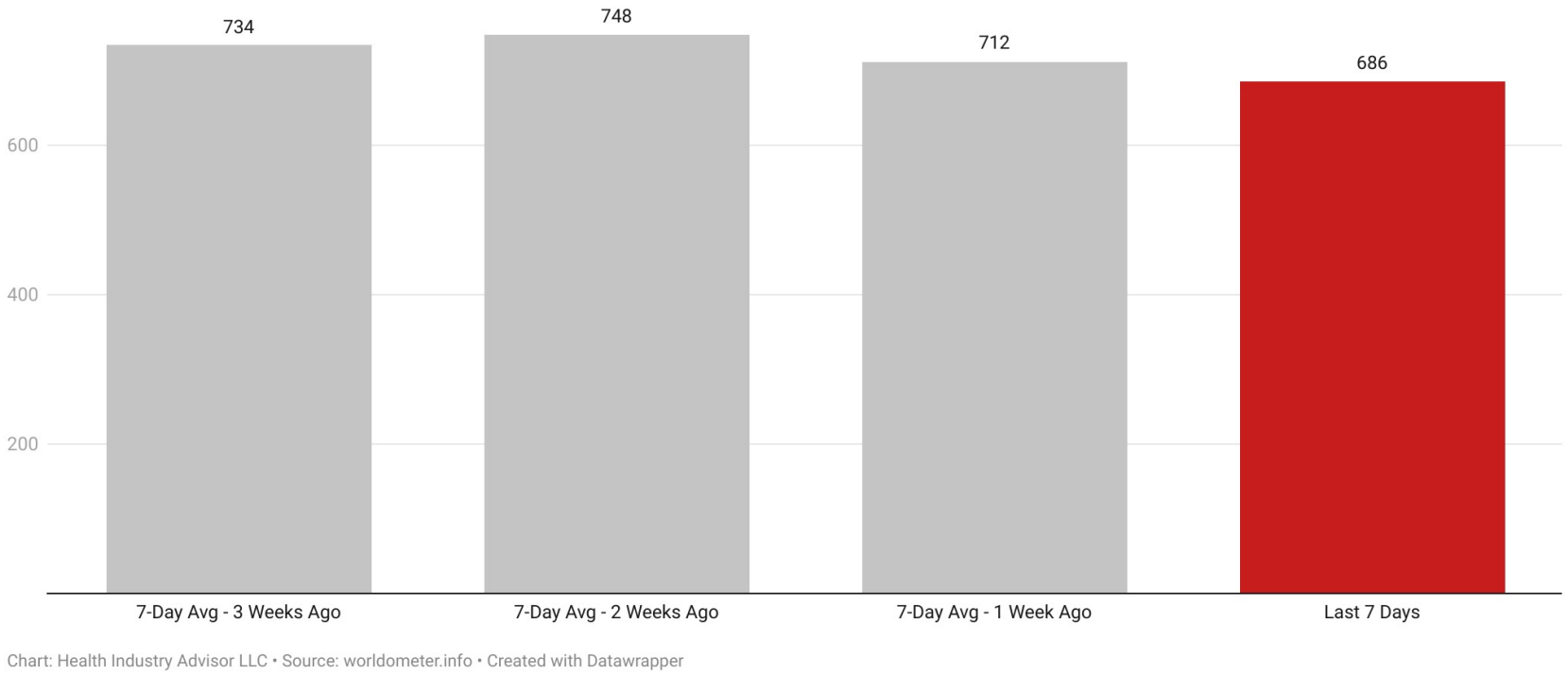
Deaths Reported With Coronavirus

The 7-day death rate declined each of the past two weeks.



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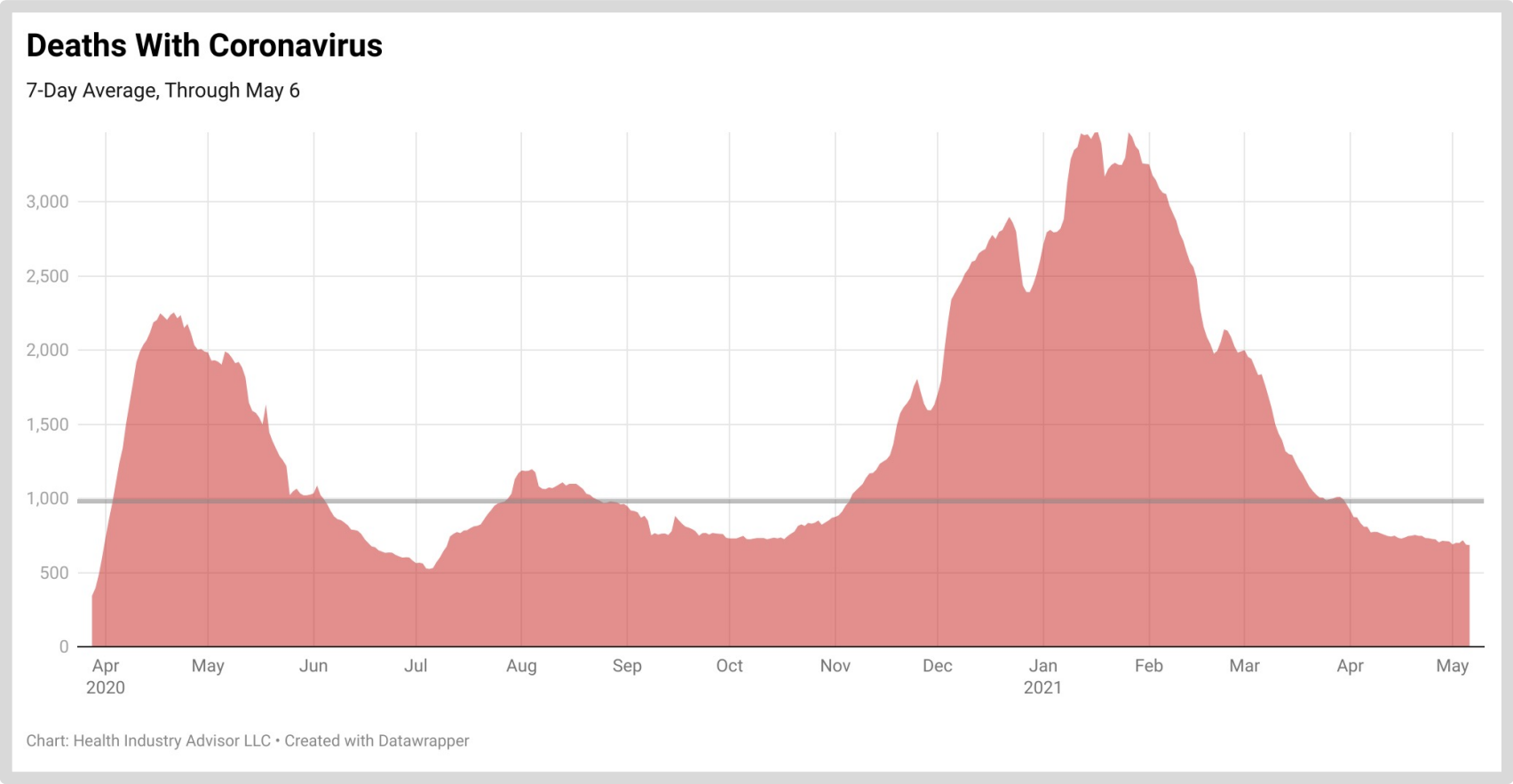
Deaths With Coronavirus

Deaths with coronavirus (7-day average) remains lower than it has been for most of the last nine months.



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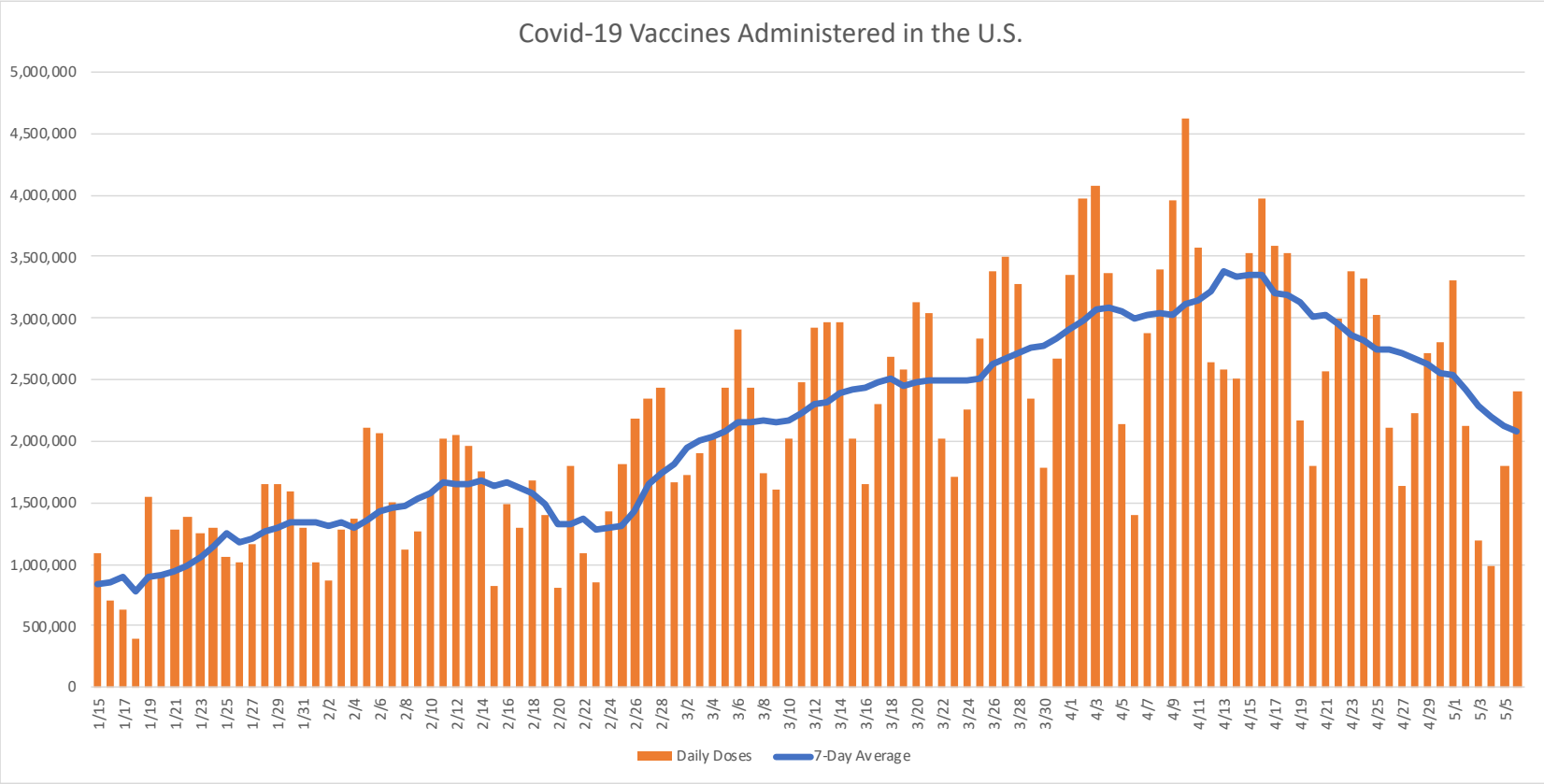
Pace of Vaccinations

Vaccinations continue to decline in the United States. The 7-day average fell below 2.1 million, its lowest since March 5.



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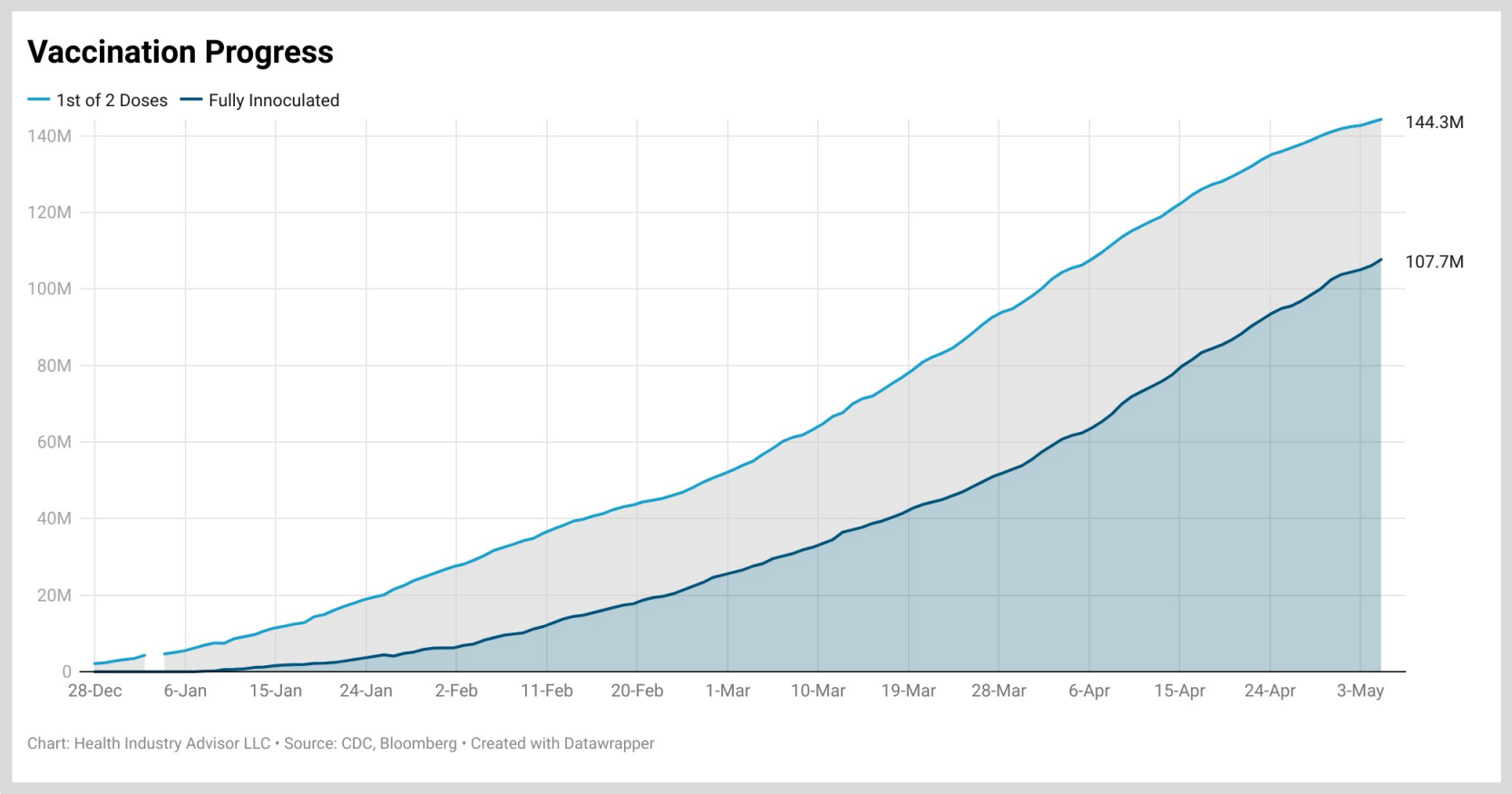
Vaccine Tracking

To date, the US has distributed 325 million doses and administered 252 million. 108 million people are fully inoculated – 42.2% of the adult population. Another 38 million people have received the first of two required doses.



Vaccine data from: Centers for Disease Control and Prevention and Bloomberg Vaccine Tracker

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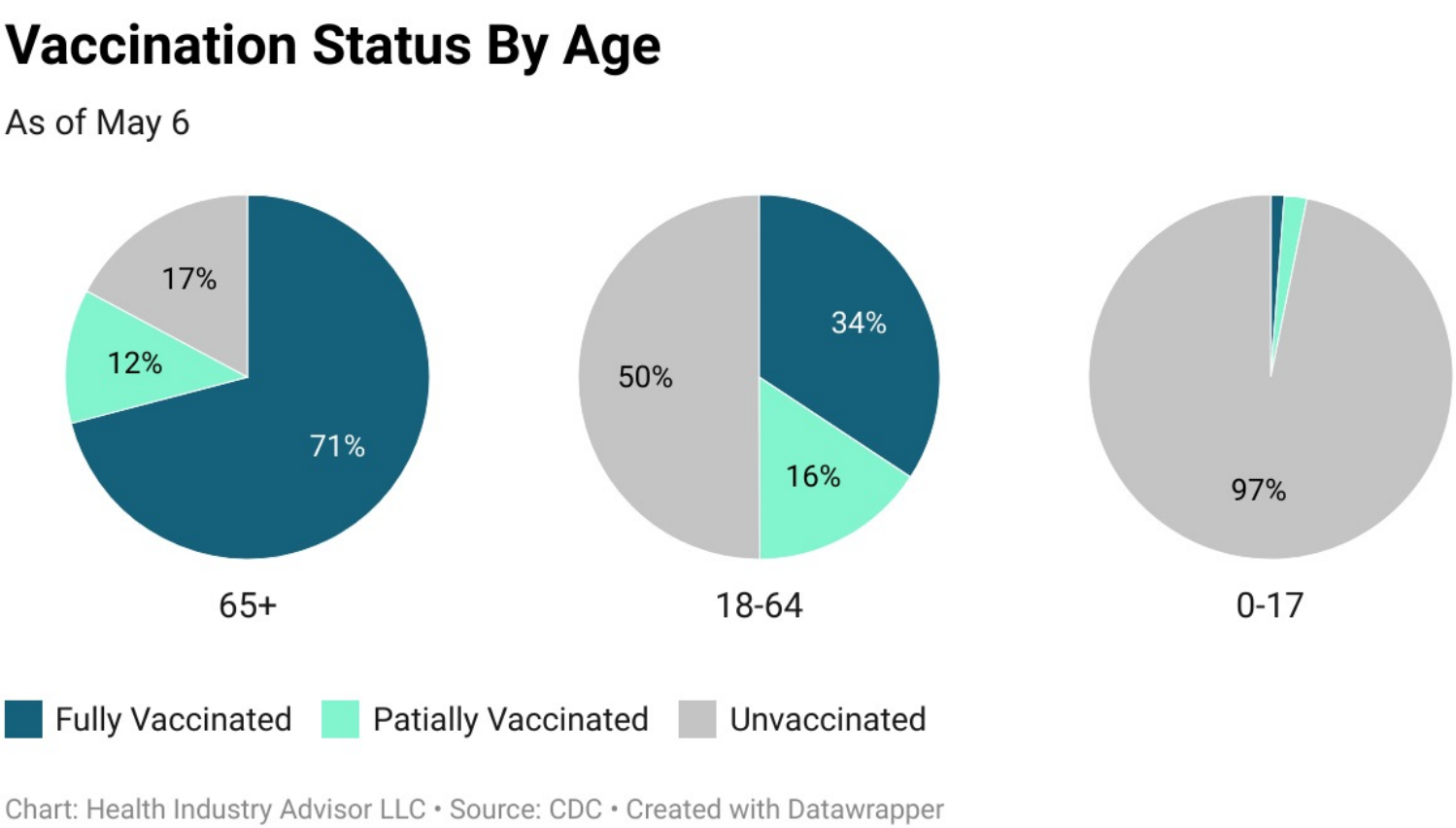
Vaccination Status By Age

83% of seniors are participating in the vaccination process; 71% are fully vaccinated. Half of younger adults have received at least one shot; one-third are fully vaccinated..



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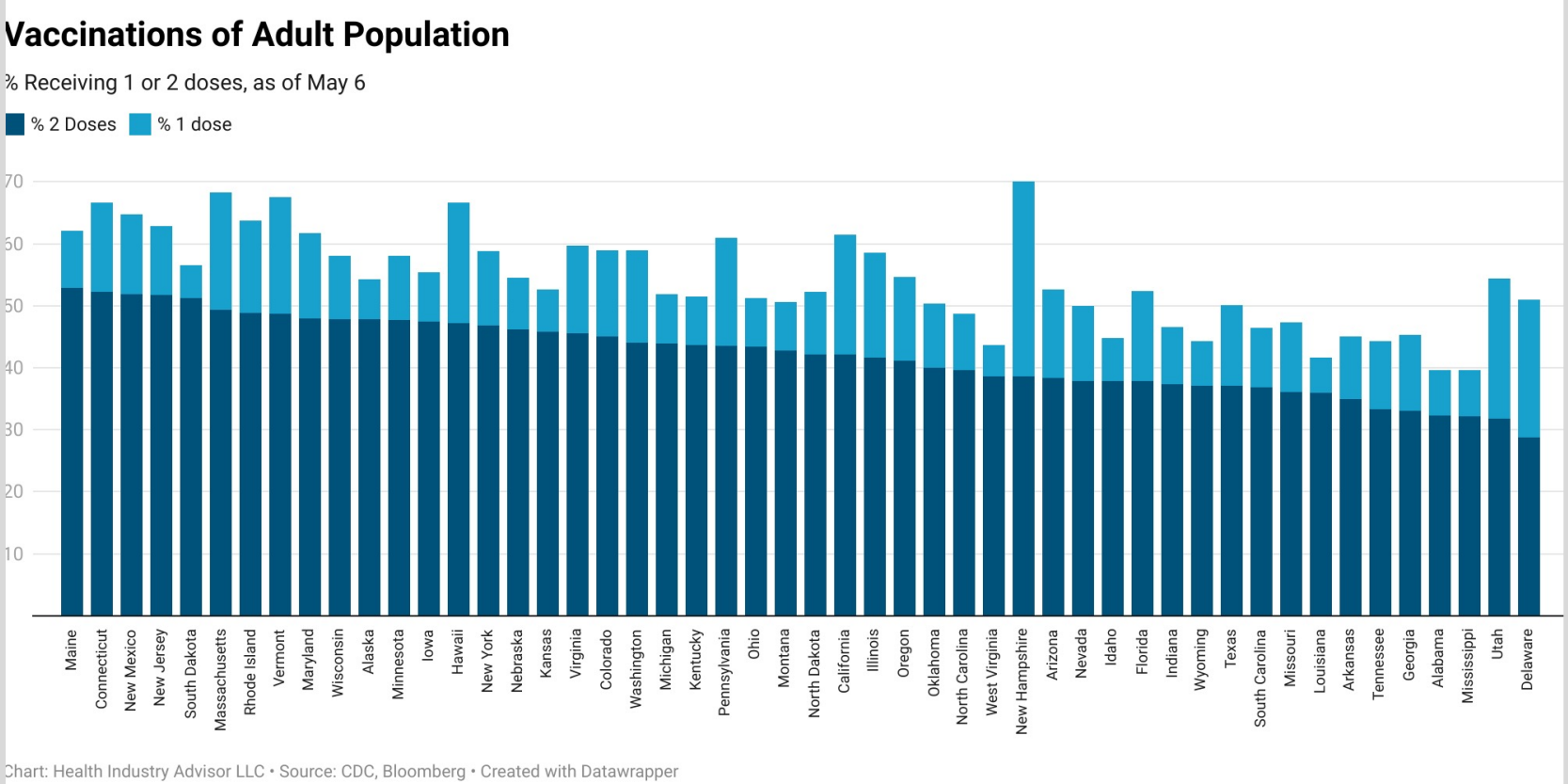
Vaccine Tracking - % of Adult Population Vaccinated

Connecticut, Maine, New Jersey, New Mexico and South Dakota lead the country wit more than half of all adults in each state fully vaccinated.



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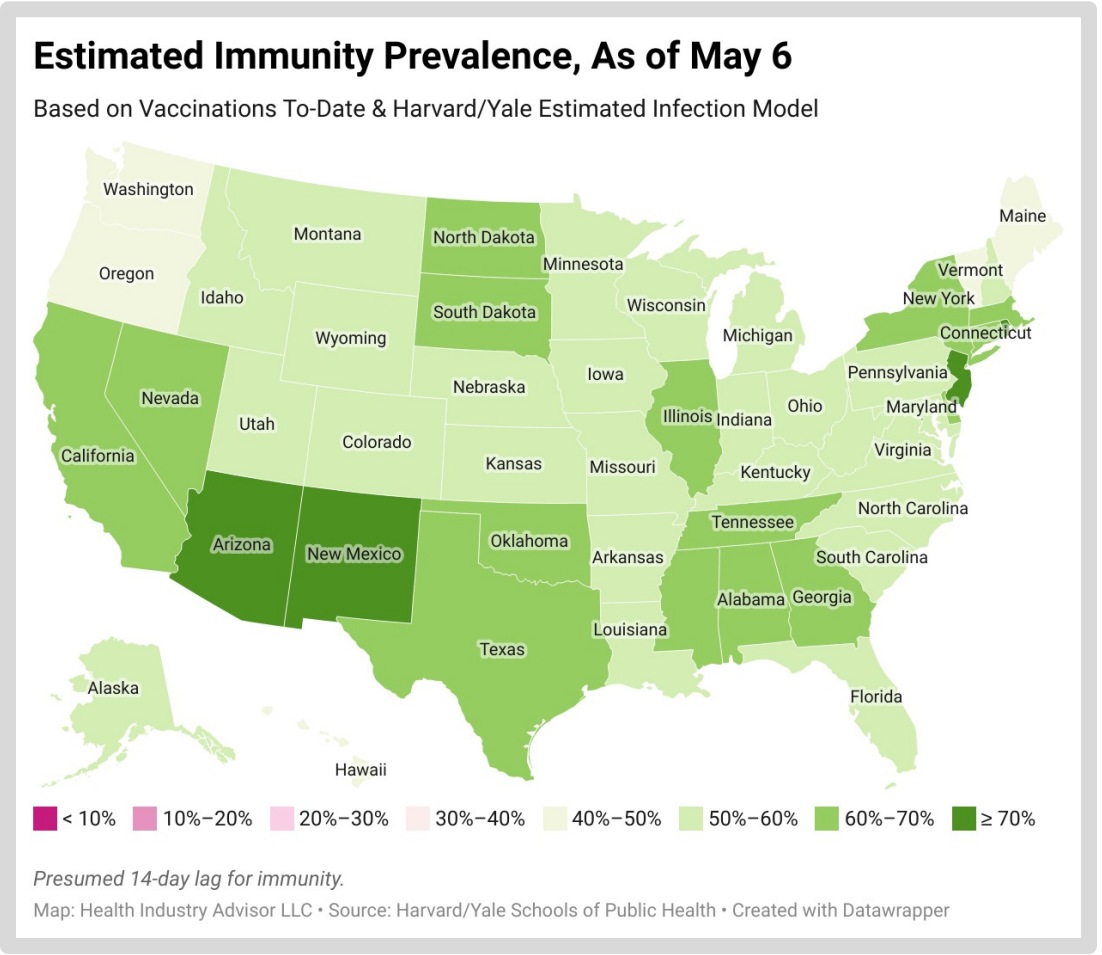
Estimated Immunity By State

Estimated immunity is highest in Arizona New Jersey, and New Mexico. Close behind are Alabama, Georgia, Illinois, Mississippi, Nevada, New York, North Dakota, South Dakota, and Tennessee

- Public health experts have suggested that 60-80% of the population would need immunity, for herd immunity to be reached
- Immunity could result from an infection or via vaccination
- It is not established how long immunity, from either infection of vaccination, will last
- For purposes of this illustration, we use both reported vaccination rates and the Yale/Harvard* mean estimates of true infections

* https://covidestim.org



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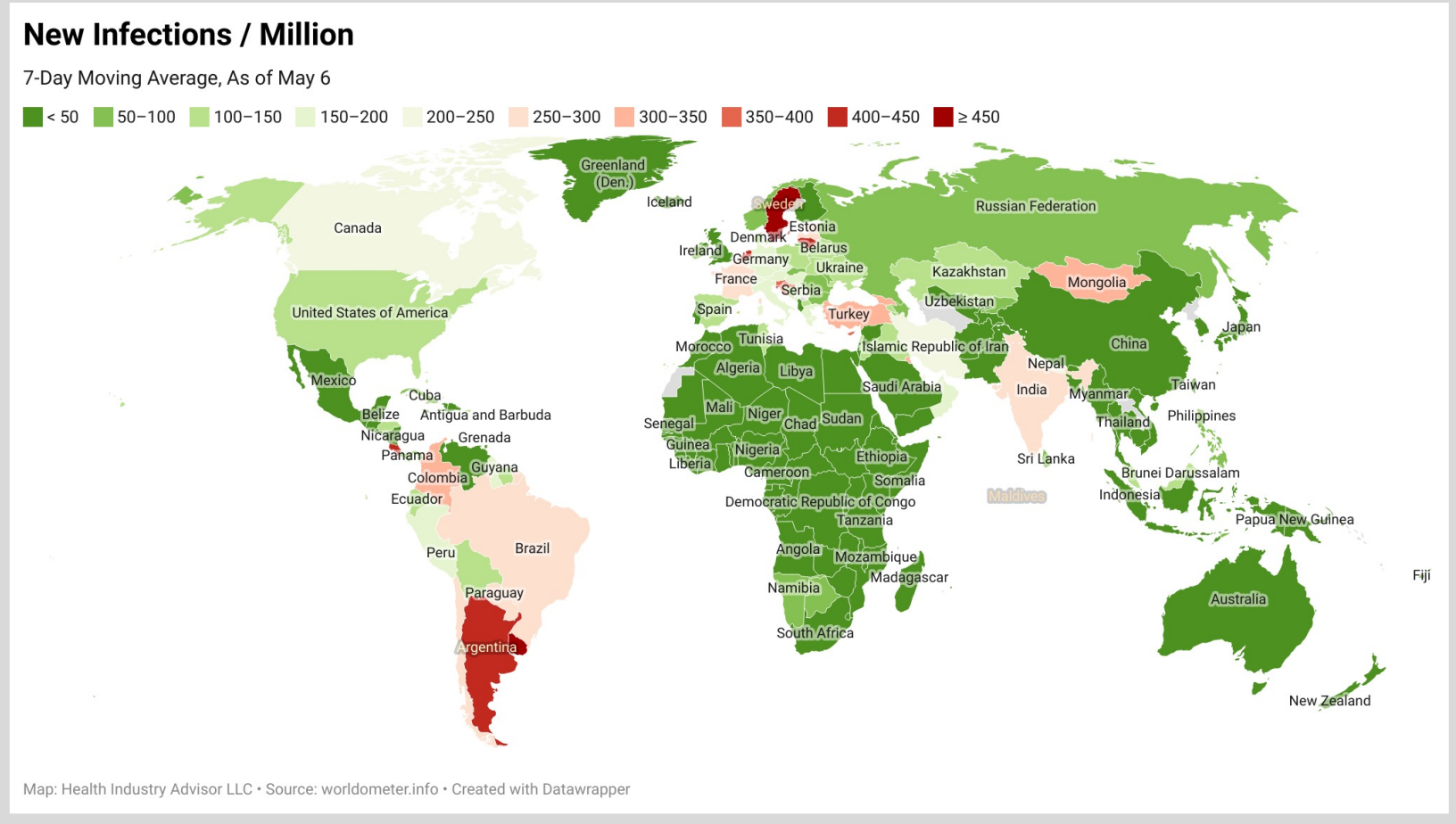
Newly Detected Cases / Million

Case rates are highest in parts of Europe and South America. India is under siege at this time die to rapidly increasing cases. Yet, the country ranks 27th globally in new cases per capita. Countries with higher rates are seeing rates decline.



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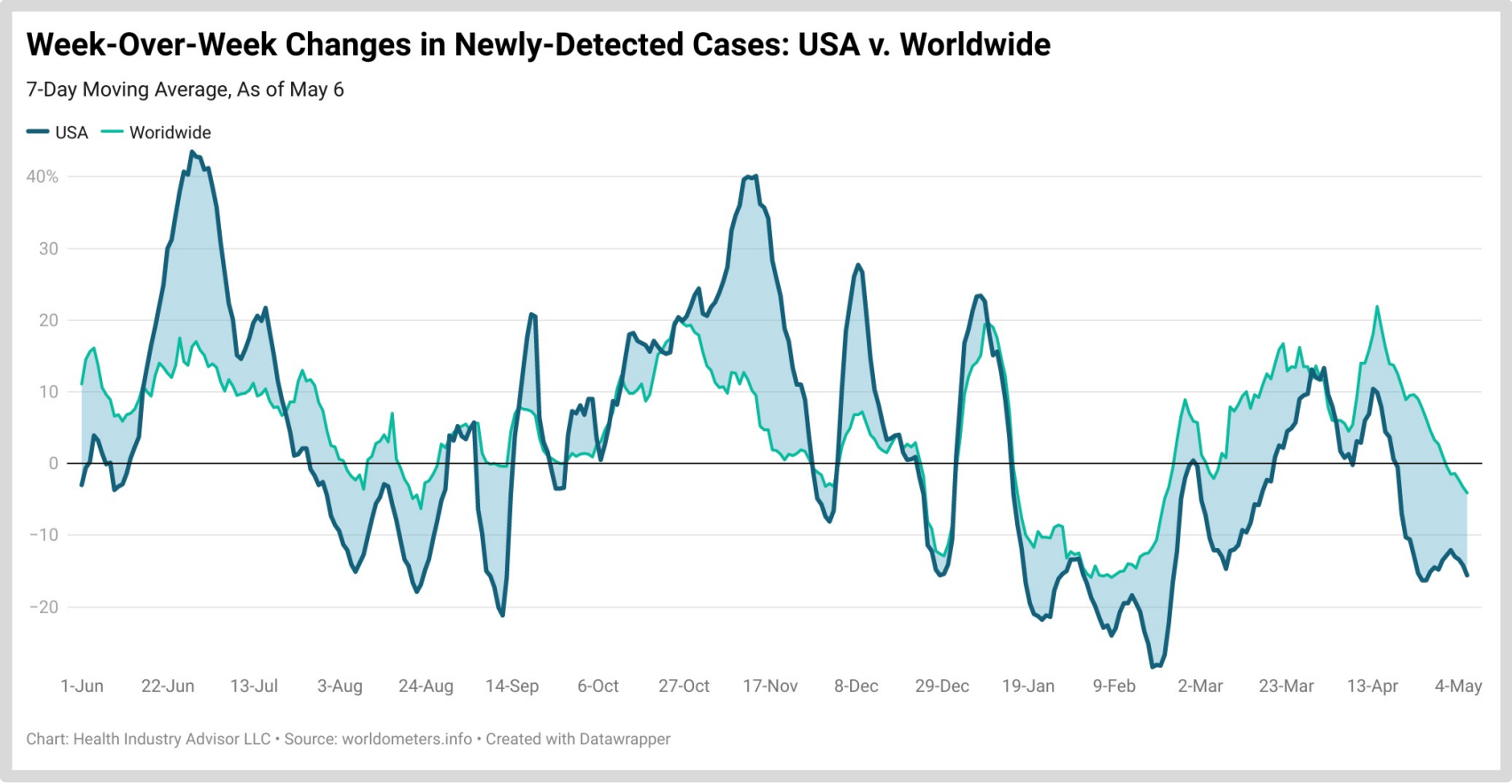
Week-Over-Week Changes in New Cases

The rate of change in new cases in the U.S. turned negative eighteen days ago. Worldwide, new cases have been trending down for six days.



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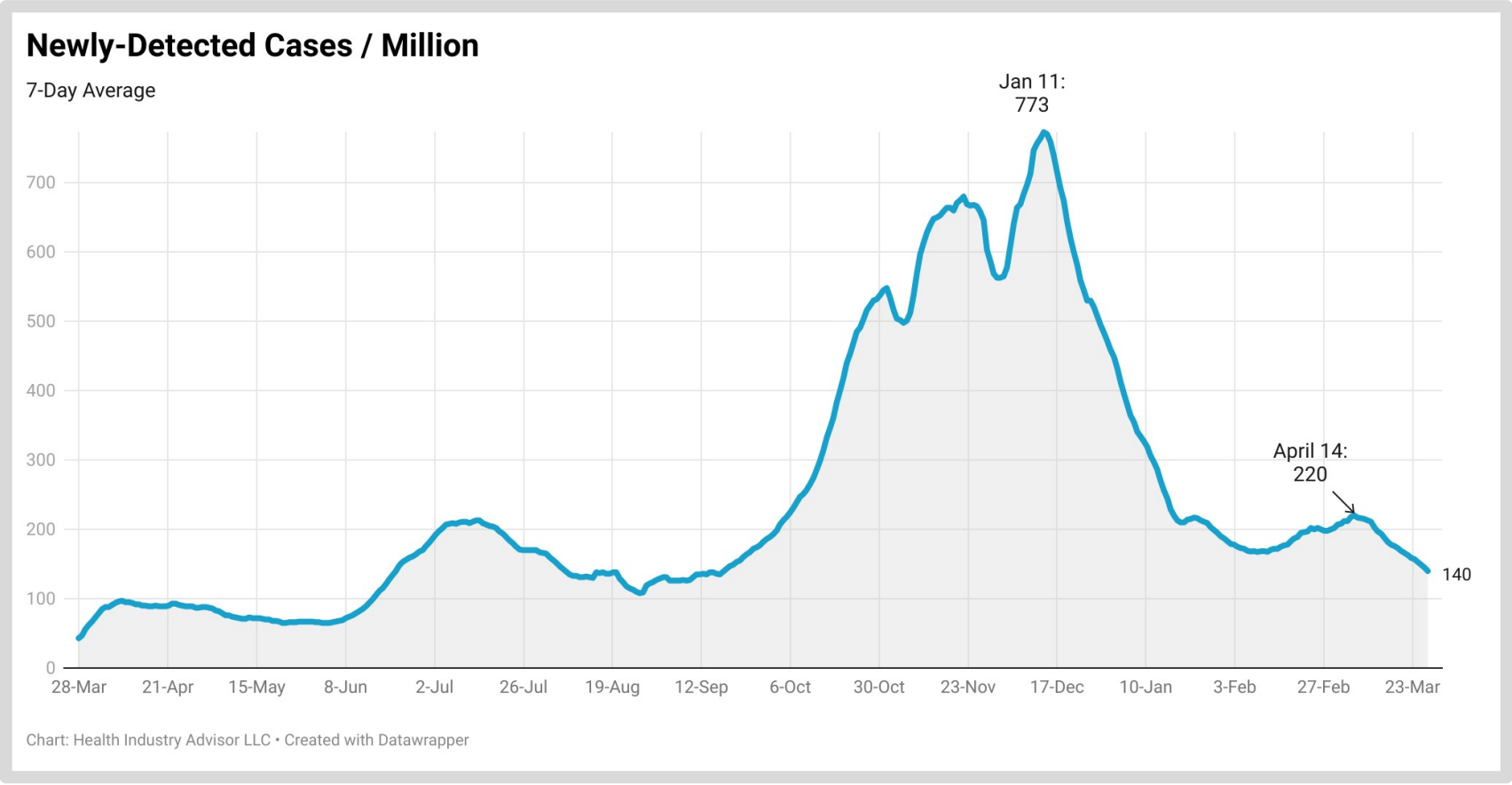
Newly Detected Cases / Million - US

The U.S. 7-day new case rate declined for the fourteenth straight day, dropping to 140 per million. This rate is lower than it has been since October 7th.



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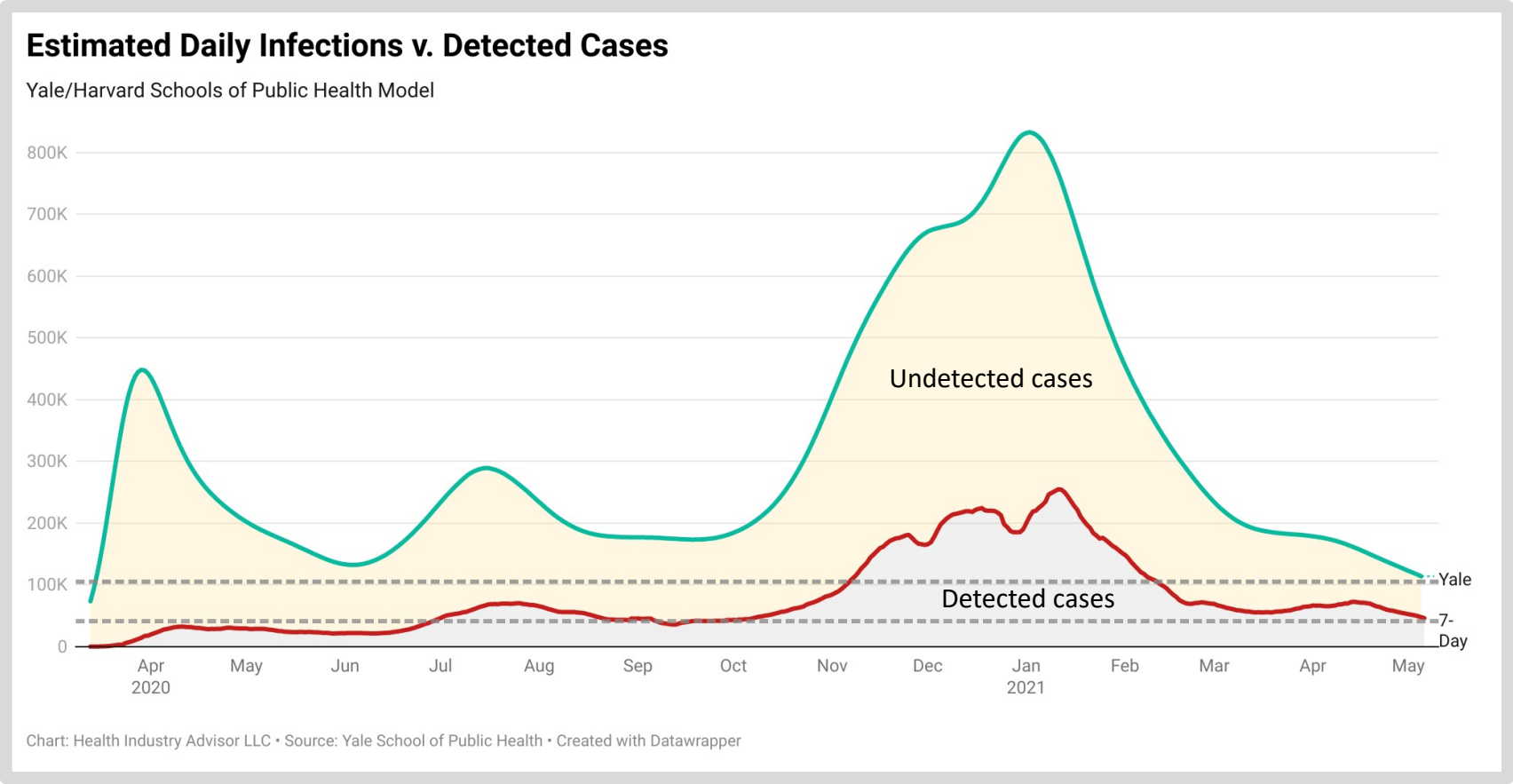
Estimated Daily Infections & New Case Rates

Estimated infections have dropped to the lowest level since last March when the pandemic had just begun. Detected cases have dropped to levels seen briefly since September.



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Covid-19 "Vital Signs"

State-By-State Scorecard: Scoring Grid

Designed to reflect five critical measures of a 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%	N/A
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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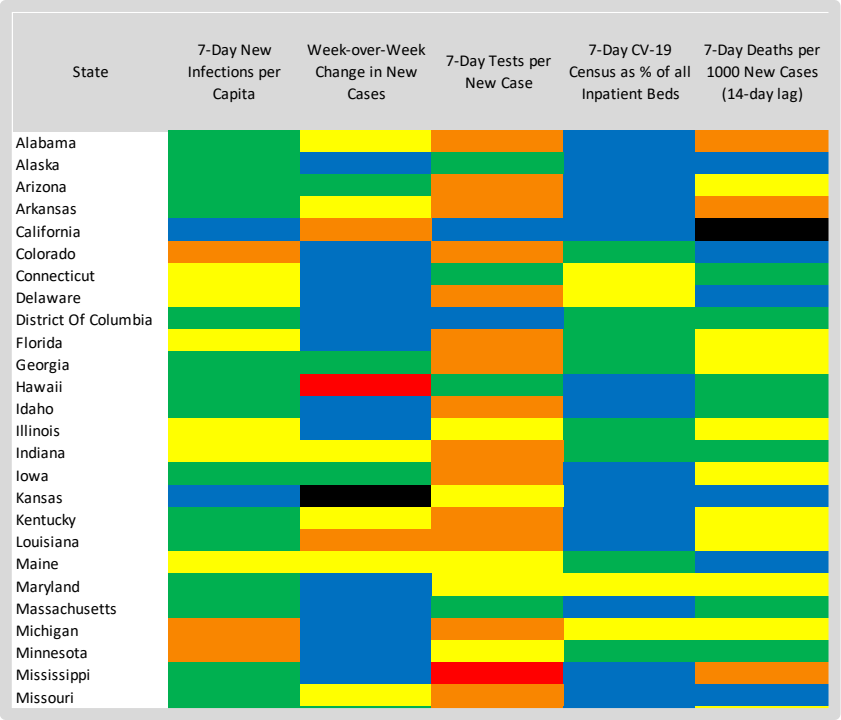
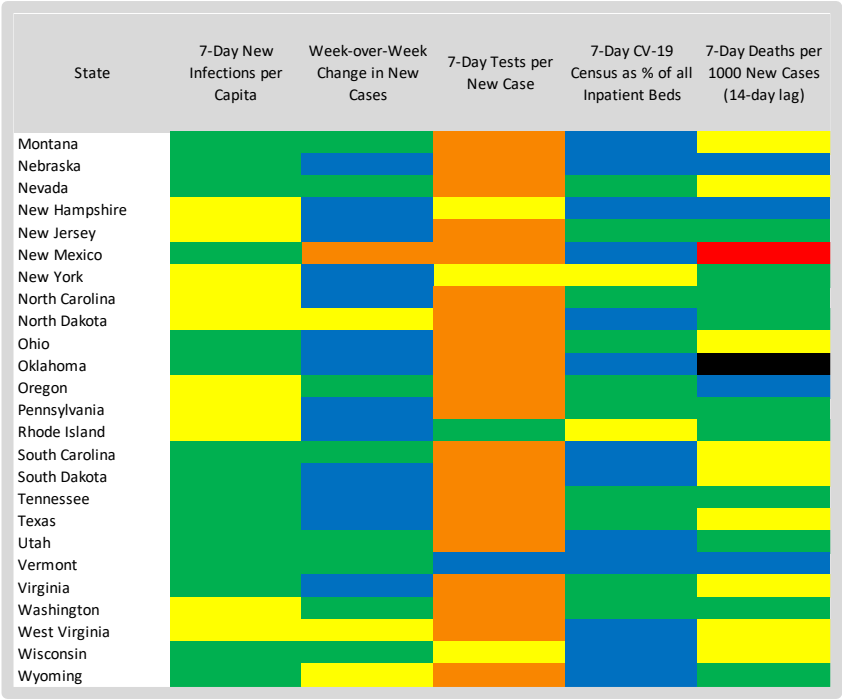
State-By-State Scorecard:

New case rates are of concern in Colorado, Delaware, Michigan, Pennsylvania, and Rhode Island.



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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State-By-State Data Table (1 of 3)

State-By-State Comparisons

State	Infection Prevalence	Deaths per 1 Million Population	Tests per 1M Population Past 7 days	Test-Positive % (7-Day Moving Average)	New Daily Cases Per 1M Population (7-Day M.A.)	Tests / New Case	Covid-19 Census % of All Beds	7-Day Deaths /1000 New Cases , 14-Day Lag
Alabama	10.8%	2,232	1,131	5.8%	73	16	8%	15
Alaska	9.0%	469	7,840	2.4%	144	54	9%	2
Arizona	11.9%	2,386	2,069	4.8%	98	21	10%	13
Arkansas	11.2%	1,908	1,077	3.1%	67	16	4%	17
California	9.5%	1,574	3,988	1.2%	49	81	7%	31
Colorado	9.0%	1,129	3,883	5.7%	254	15	15%	5
Connecticut	9.6%	2,281	7,875	2.2%	154	51	23%	8
Delaware	10.8%	1,673	5,365	4.4%	225	24	22%	2
District Of Columbia	6.8%	1,573	7,632	1.9%	94	81	15%	7
Florida	10.5%	1,656	3,375	7.6%	201	17	18%	11
Georgia	10.4%	1,911	1,428	5.3%	112	13	16%	14
Hawaii	2.3%	343	4,015	1.8%	70	58	6%	5
Idaho	10.5%	1,146	1,761	4.5%	89	20	7%	6
Illinois	10.6%	1,932	4,922	3.9%	184	27	14%	11
Indiana	10.8%	1,987	2,658	5.3%	162	16	11%	8
Iowa	12.6%	1,895	1,989	5.5%	122	16	6%	15
Kansas	10.6%	1,716	1,638	4.5%	44	37	5%	-

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"Vital Signs"

State-By-State Data Table (2 of 3)

State-By-State Comparisons

State	Infection Prevalence	Deaths per 1 Million Population	Tests per 1M Population Past 7 days	Test-Positive % (7-Day Moving Average)	New Daily Cases Per 1M Population (7-Day M.A.)	Tests / New Case	Covid-19 Census % of All Beds	Week-Over-Week Change in New Cases	7-Day Deaths /1000 New Cases , 14-Day Lag
Kentucky	10.0%	1,466	2,189	4.2%	133	16	7%	13	
Louisiana	9.9%	2,243	1,958	2.7%	102	19	4%	14	
Maine	4.7%	590	6,550	2.9%	237	28	14%	4	
Maryland	7.5%	1,459	4,643	4.1%	114	41	29%	13	
Massachusetts	10.0%	2,542	10,702	1.6%	147	73	10%	6	
Michigan	9.6%	1,925	3,923	10.4%	335	12	30%	12	
Minnesota	10.4%	1,291	7,119	5.8%	261	27	14%	6	
Mississippi	10.5%	2,428	569	4.0%	61	9	4%	19	
Missouri	9.6%	1,529	1,805	5.0%	109	17	9%	-	
Montana	10.3%	1,478	2,090	5.1%	124	17	4%	11	
Nebraska	11.4%	1,163	1,607	6.7%	101	16	5%	2	
Nevada	10.3%	1,782	1,531	5.6%	118	13	17%	12	
New Hampshire	7.1%	964	4,571	3.1%	153	30	8%	4	
New Jersey	11.3%	2,898	4,109	5.5%	170	24	18%	9	
New Mexico	9.5%	1,950	1,916	2.8%	109	18	8%	22	
New York	10.9%	2,717	6,944	2.9%	156	44	25%	9	
North Carolina	9.3%	1,215	2,414	5.5%	150	16	15%	8	

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State-By-State Data Table (3 of 3)

State-By-State Comparisons

State	Infection Prevalence	Deaths per 1 Million Population	Tests per 1M Population Past 7 days	Test-Positive % (7-Day Moving Average)	New Daily Cases Per 1M Population (7-Day M.A.)	Tests / New Case	Covid-19 Census % of All Beds	Week-Over-Week Change in New Cases	7-Day Deaths /1000 New Cases , 14-Day Lag
North Dakota	14.2%	1,967	2,955	3.1%	172	17	8%	8	
Ohio	9.2%	1,655	2,739	3.8%	114	24	11%	13	
Oklahoma	11.4%	1,727	732	4.5%	54	14	5%	27	
Oregon	4.5%	596	2,701	6.0%	181	15	15%	4	
Pennsylvania	9.2%	2,074	3,322	6.8%	224	15	18%	9	
Rhode Island	14.1%	2,535	11,096	1.7%	201	55	21%	7	
South Carolina	11.3%	1,856	2,435	4.2%	138	18	8%	10	
South Dakota	13.9%	2,235	1,449	9.3%	101	14	5%	14	
Tennessee	12.5%	1,792	1,400	6.0%	117	12	10%	5	
Texas	10.1%	1,749	1,700	4.7%	92	19	11%	15	
Utah	12.5%	692	2,298	4.3%	106	22	5%	8	
Vermont	3.7%	399	11,360	1.4%	108	105	3%	5	
Virginia	7.8%	1,272	1,939	4.6%	101	19	12%	12	
Washington	5.4%	737	2,775	5.1%	178	16	16%	7	
West Virginia	8.7%	1,518	3,032	6.8%	208	15	8%	14	
Wisconsin	10.3%	1,181	3,474	3.5%	104	33	7%	14	
Wyoming	10.1%	1,227	2,265	3.6%	113	20	4%	7	

Table: Health Industry Advisor LLC • Created with Datawrapper

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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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