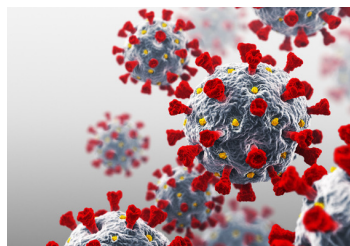


Covid-19 "Vital Signs"

Issue # 333

May 13, 2021



Covid-19 "Vital Signs"

Newly Detected Cases Per Day

In the US, 7-day new case rate declined 21% week-over-week and 42% over the last three weeks. Outside the U.S., cases declined 1% week-over-week, after spiking for several weeks.

Newly Detected Cases

As of May 12

■ United States ■ Outside the US

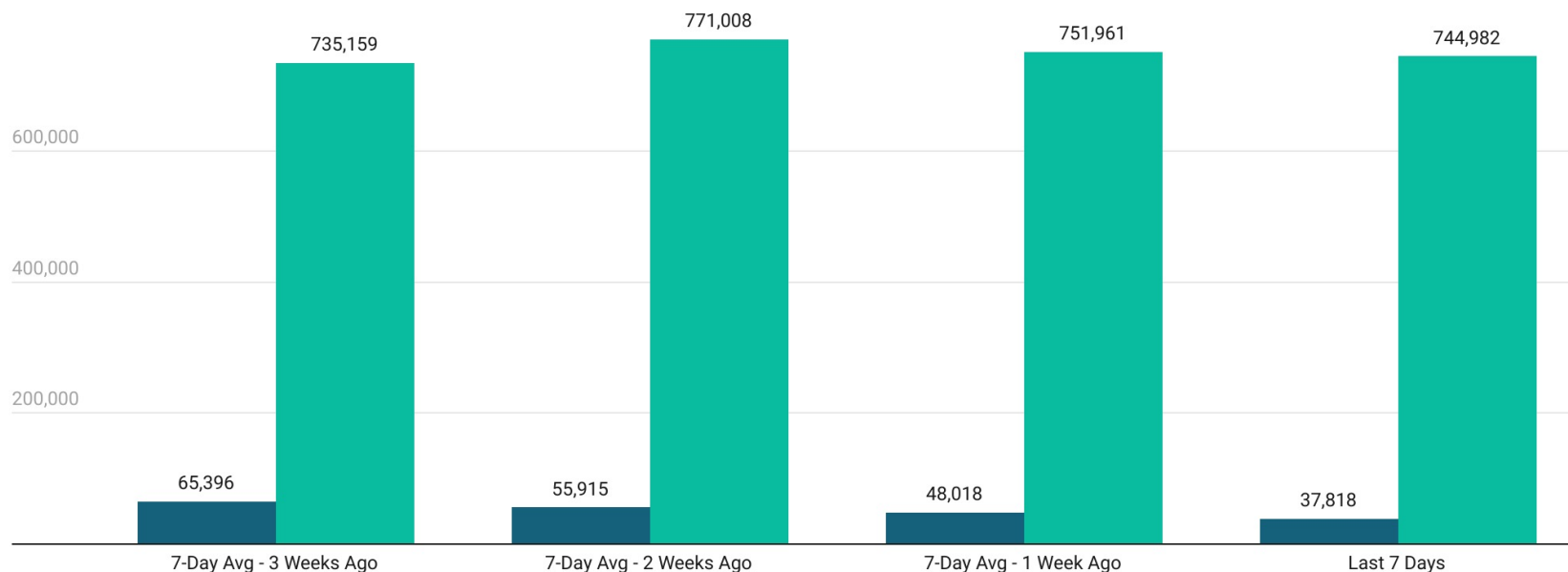


Chart: Health Industry Advisor LLC • Source: The Atlantic • Created with Datawrapper

Covid-19 "Vital Signs"

Week-Over-Week Changes in New Cases

*New cases in the U.S. have been declining at a faster rate each day.
Worldwide, new cases have been trending down for twelve straight days.*

Week-Over-Week Changes in Newly-Detected Cases: USA v. Worldwide

7-Day Moving Average, As of May 12



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

Covid-19 "Vital Signs"

Newly Detected Cases / Million - US

The U.S. 7-day new case rate declined for the twenty-eighth straight day, dropping to 114 per million. This rate is lower than on all except four days since last June.

Newly-Detected Cases / Million

7-Day Average

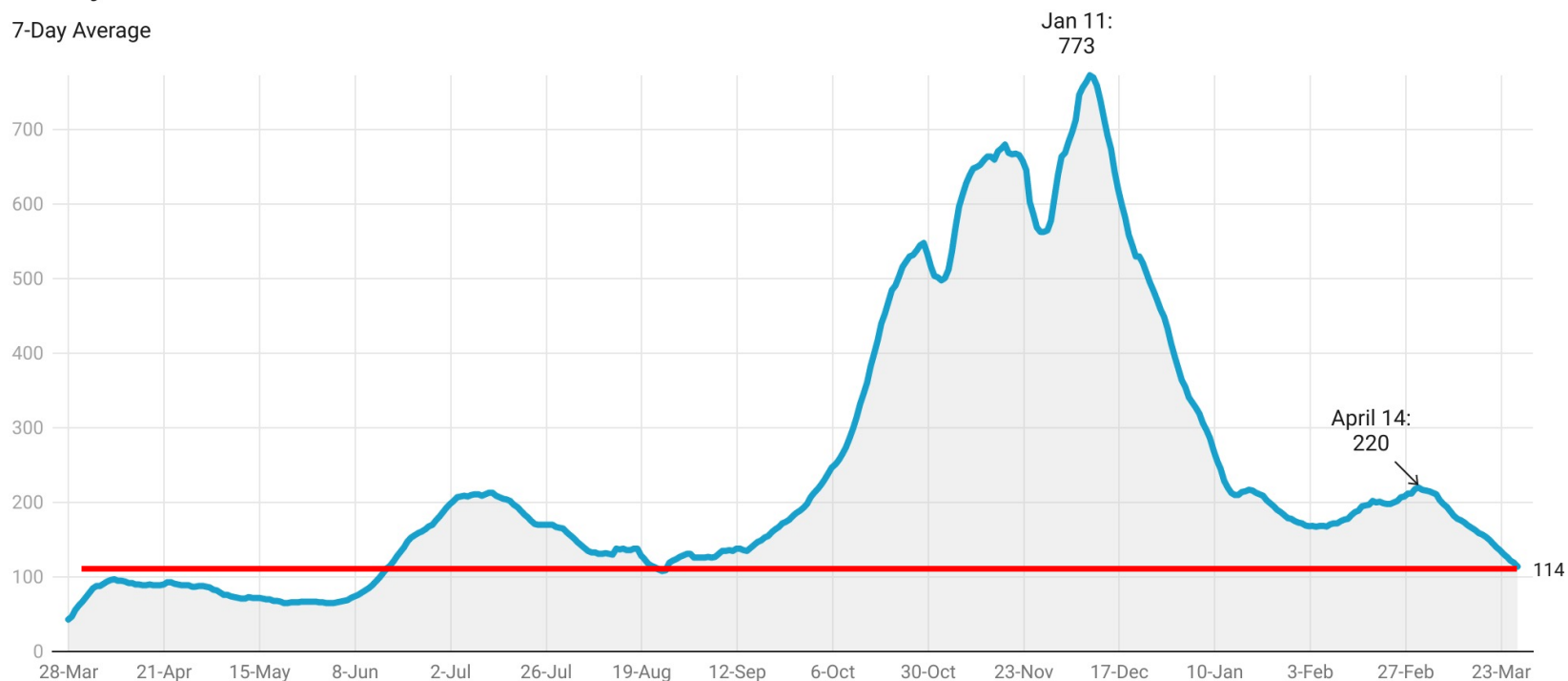
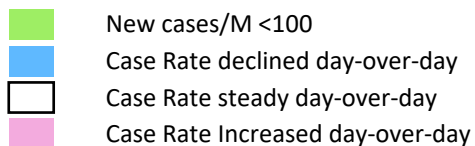
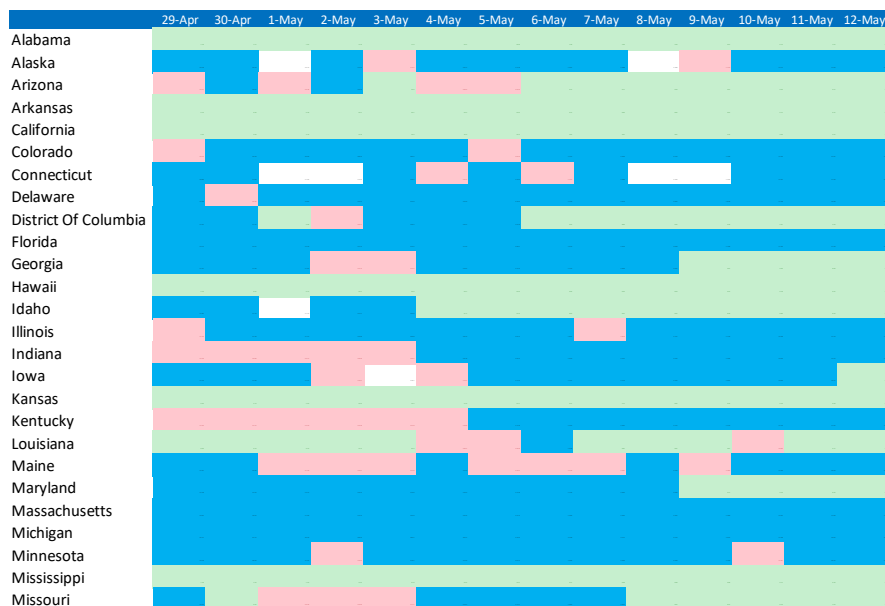


Chart: Health Industry Advisor LLC • Created with Datawrapper

Covid-19 "Vital Signs"

Trends in New Case Rates

No states are experiencing upward trending case rates. Twenty-three states have rates <100 per million per day



Covid-19 "Vital Signs"

Newly Detected Cases / Million - % Highest State Rates

The U.S. 7-day new case rate is declining in each of the states with the highest current rates in the U.S. Michigan, with the highest current rate, has seen its rate cut by two-thirds since peaking a month ago.

States With Highest New Cases/Million

7-Day Average

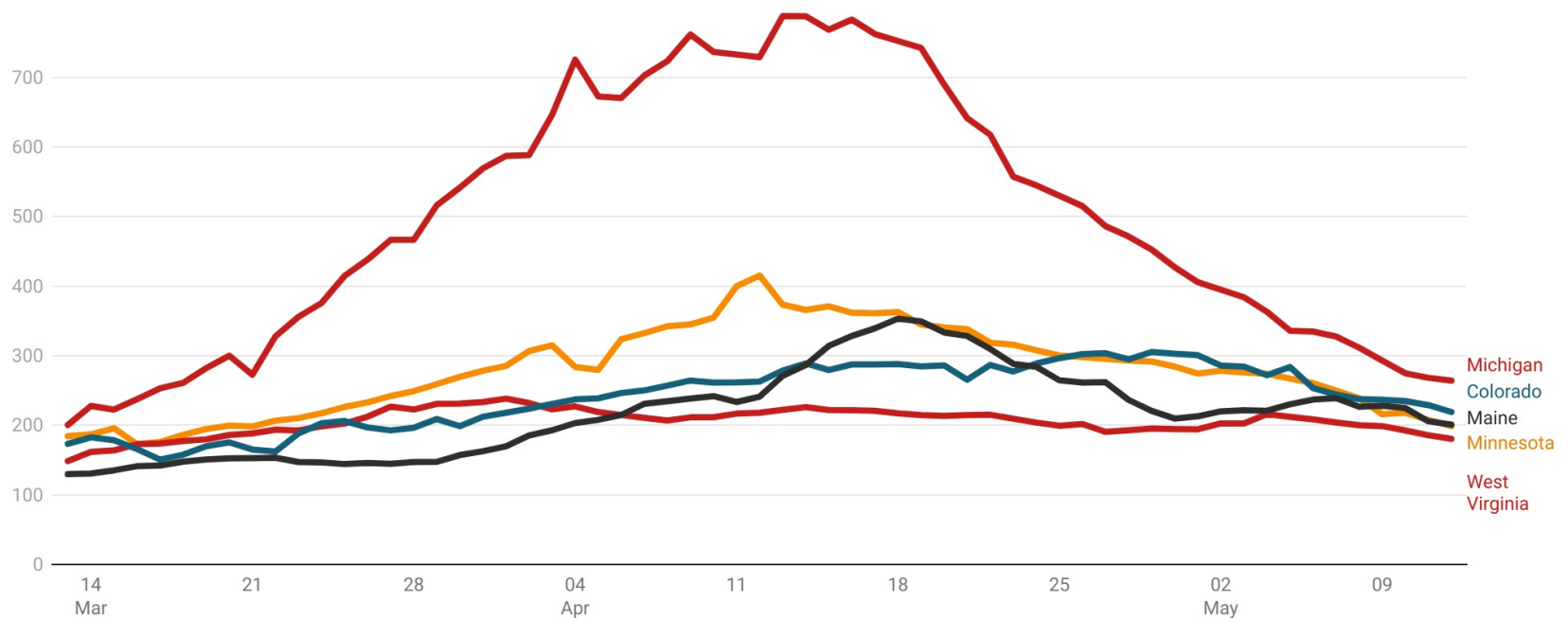


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Covid-19 "Vital Signs"

Estimated Daily Infections & New Case Rates

Estimated infections have dropped to the lowest level since last March, when the national emergency was first declared.

Estimated Daily Infections v. Detected Cases

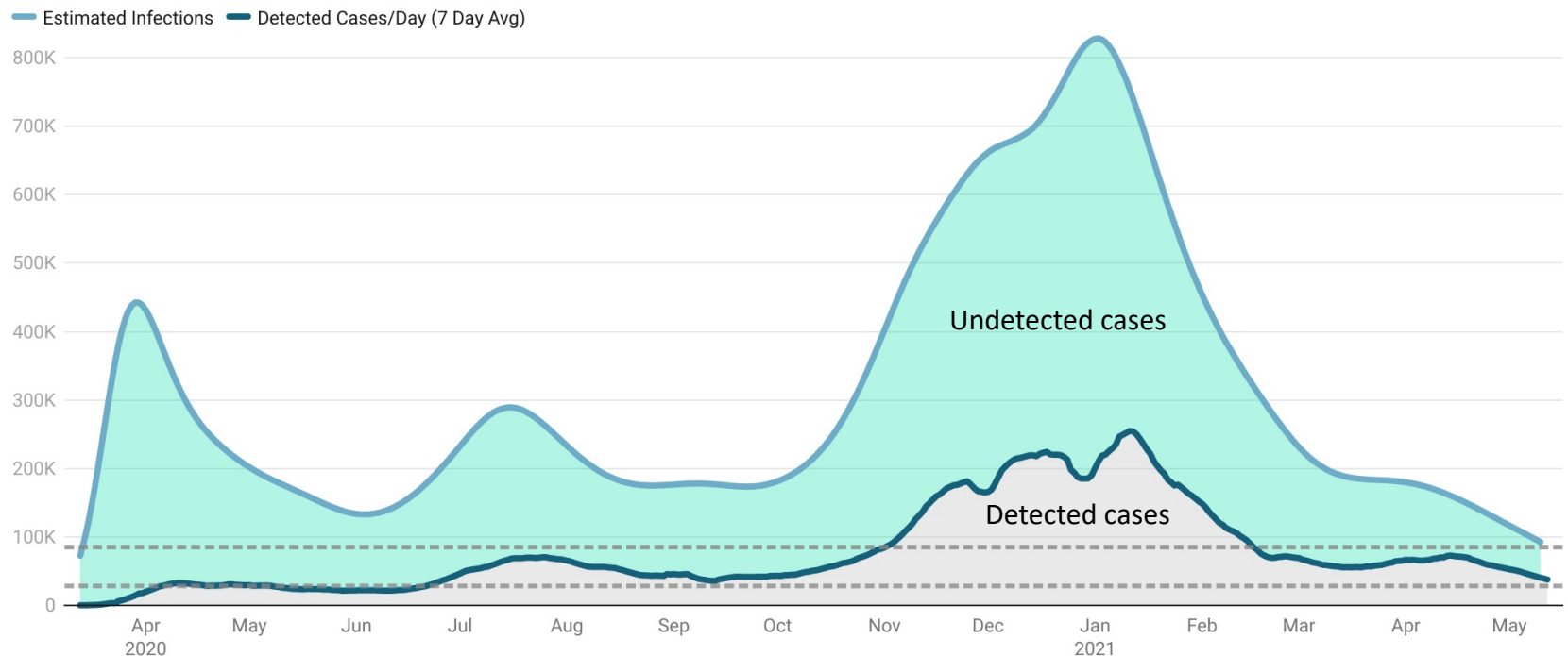


Chart: Health Industry Advisor LLC • Source: Yale School of Public Health • Created with Datawrapper

Covid-19 "Vital Signs"

Test-Positivity Rate

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

Test-Positivity Rate

As of May 3

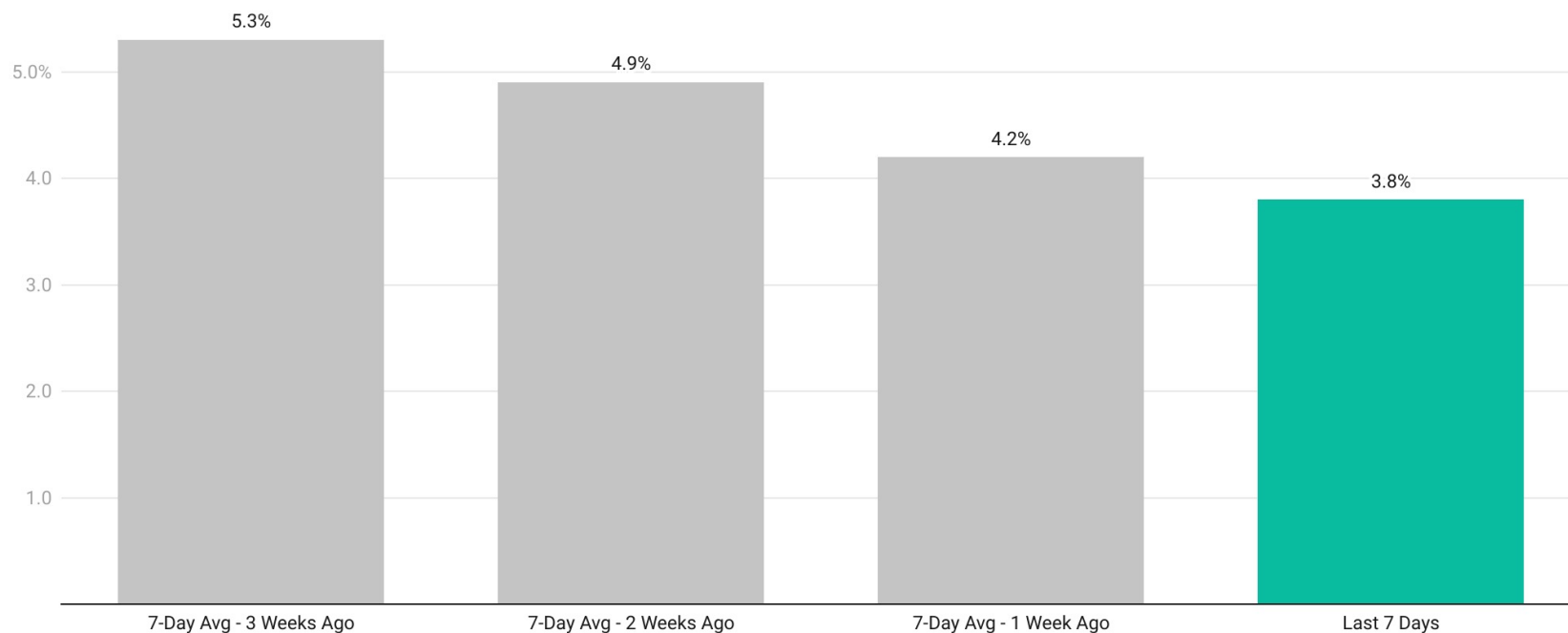


Chart: Health Industry Advisor LLC • Source: The Atlantic • Created with Datawrapper

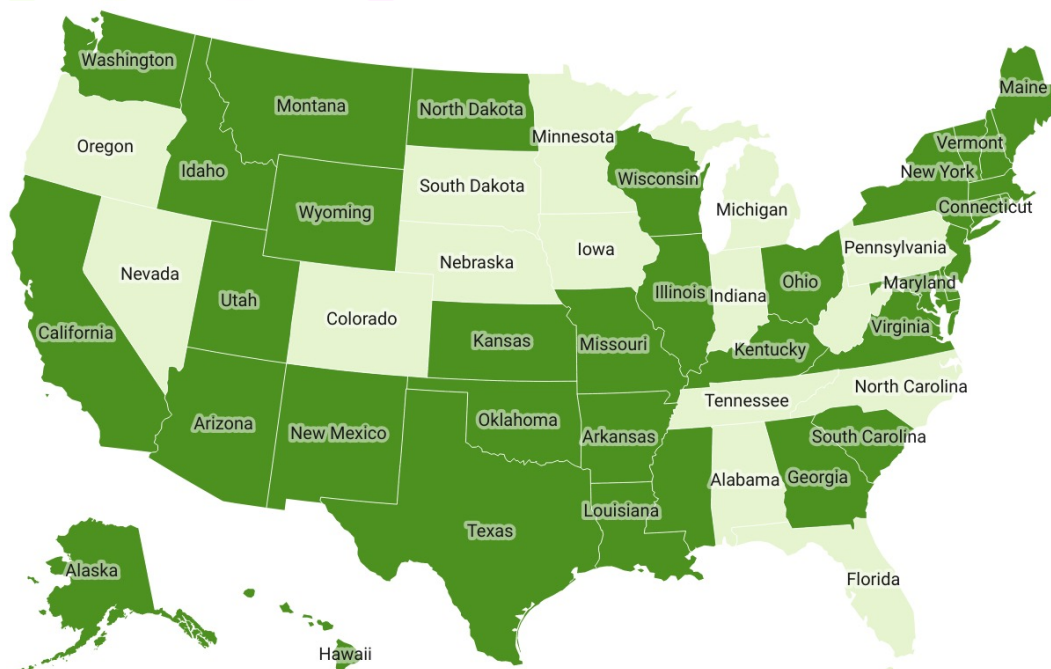
7-Day Average Test-Positivity %

No states report test-positivity rates > 10%. Theis rate exceeds 5% in Alabama, Colorado, Florida, Indiana, Iowa, Michigan, Minnesota, Nebraska, Nevada, North Carolina, Oregon, Pennsylvania, South Dakota, and Tennessee.

Test Positivity %

Latest Available Data, As of May 5

■ < 5%
 ■ 5%–10%
 ■ 10%–15%
 ■ ≥ 15%



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

Covid-19 Inpatient Census

Covid-19 inpatient census has declined 10% in the last week and 20% in the last three weeks.

Hospitalized Covid-19 Patients

Compared to Same Day, Prior Weeks

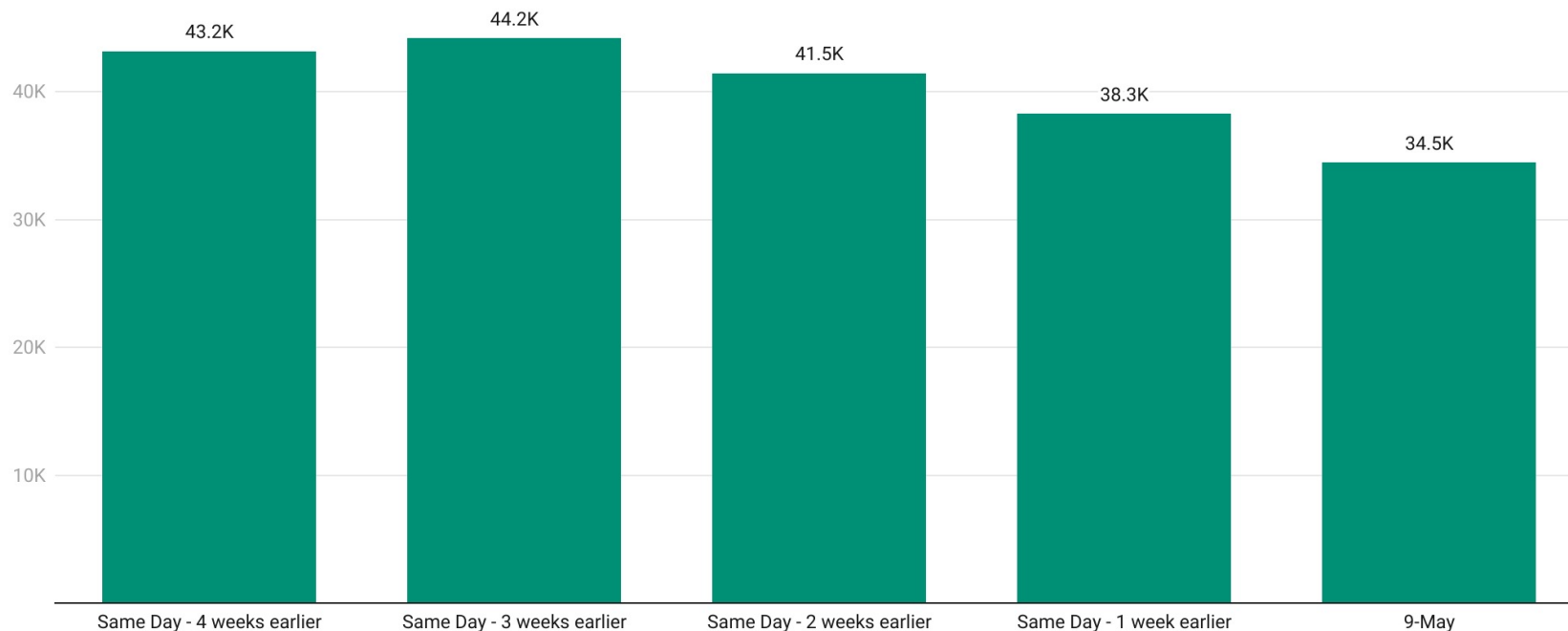


Chart: Health Industry Advisor LLC • Source: U.S. Department of Health & Human Services • Created with Datawrapper

Deaths Reported With Coronavirus

The 7-day death rate declined 4% week-over-week and 12% in the last three weeks.

Daily Deaths Reported With Coronavirus

As of May 12

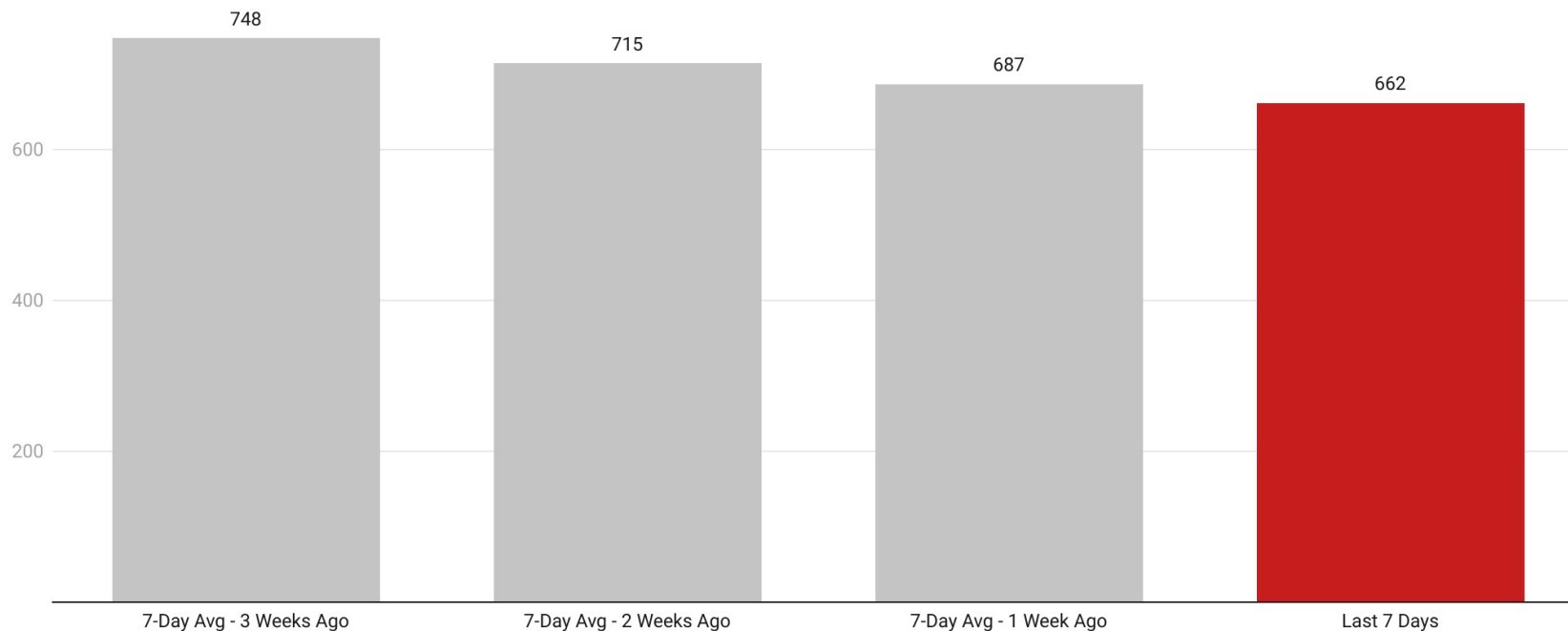


Chart: Health Industry Advisor LLC • Source: worldometer.info • Created with Datawrapper

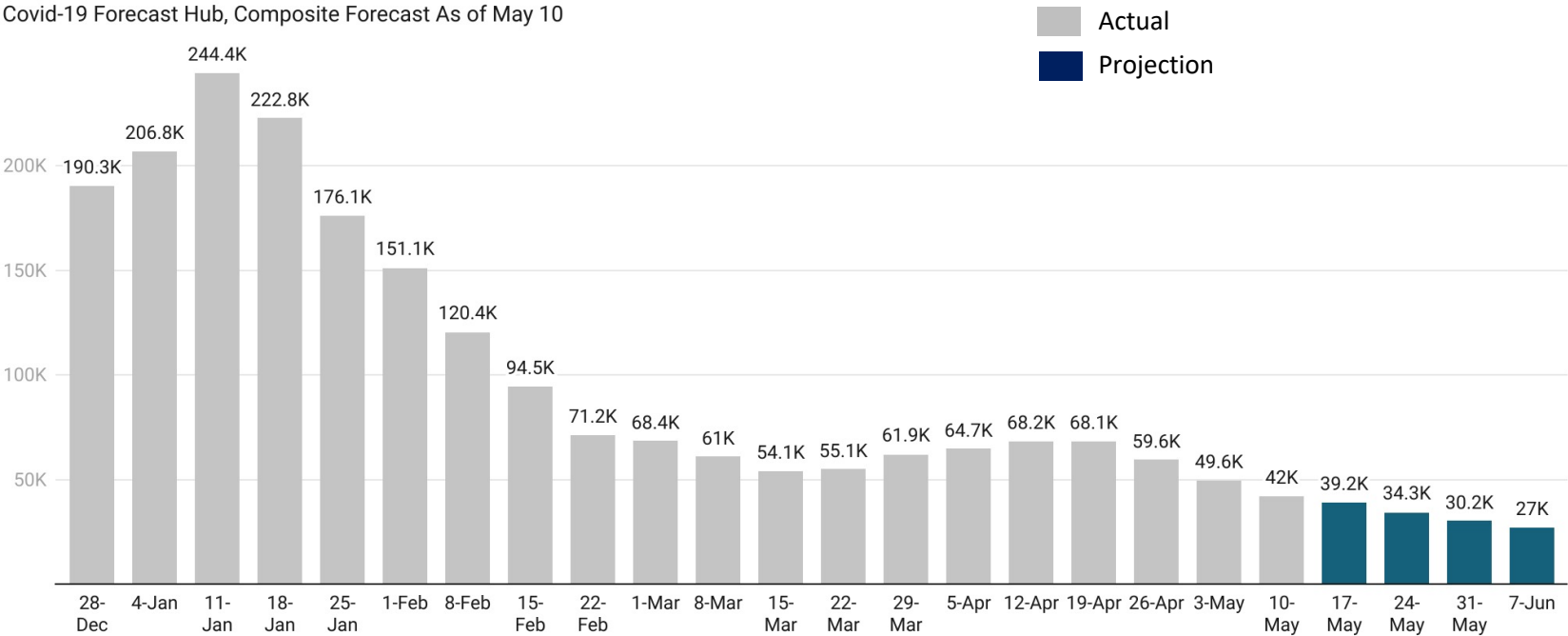


Covid-19 Cases: Ensemble Forecast

The most recent ensemble forecast projects that new daily cases decline each of the next four since April 2020.

Newly-Detected Cases Per Day

Covid-19 Forecast Hub, Composite Forecast As of May 10



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>

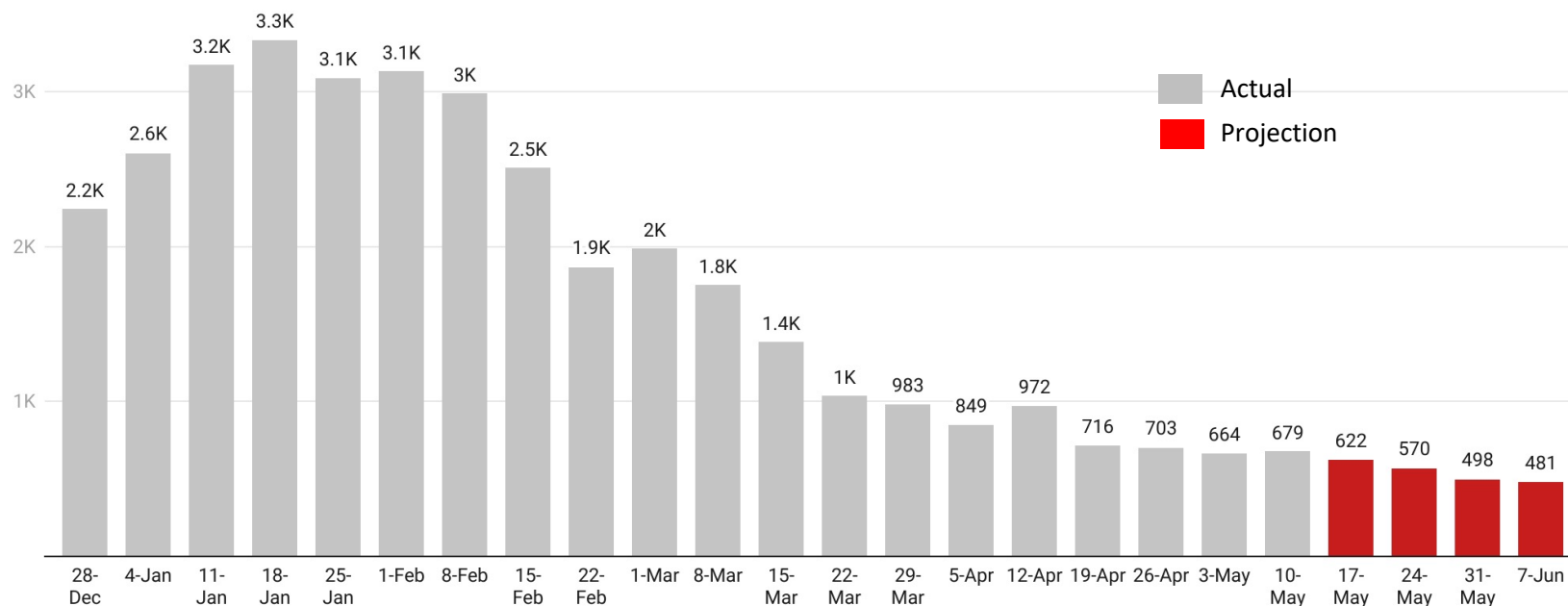
Covid-19 "Vital Signs"

Death Projections – Ensemble Forecast

The most recent ensemble forecast projects that deaths decline each of the next four weeks. By the June, there may be fewer weekly deaths than any time since April 2020.

Newly-Reported Deaths Per Day

Covid-19 Forecast Hub, Composite Forecast As of May 10



For the week ending on the date shown

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

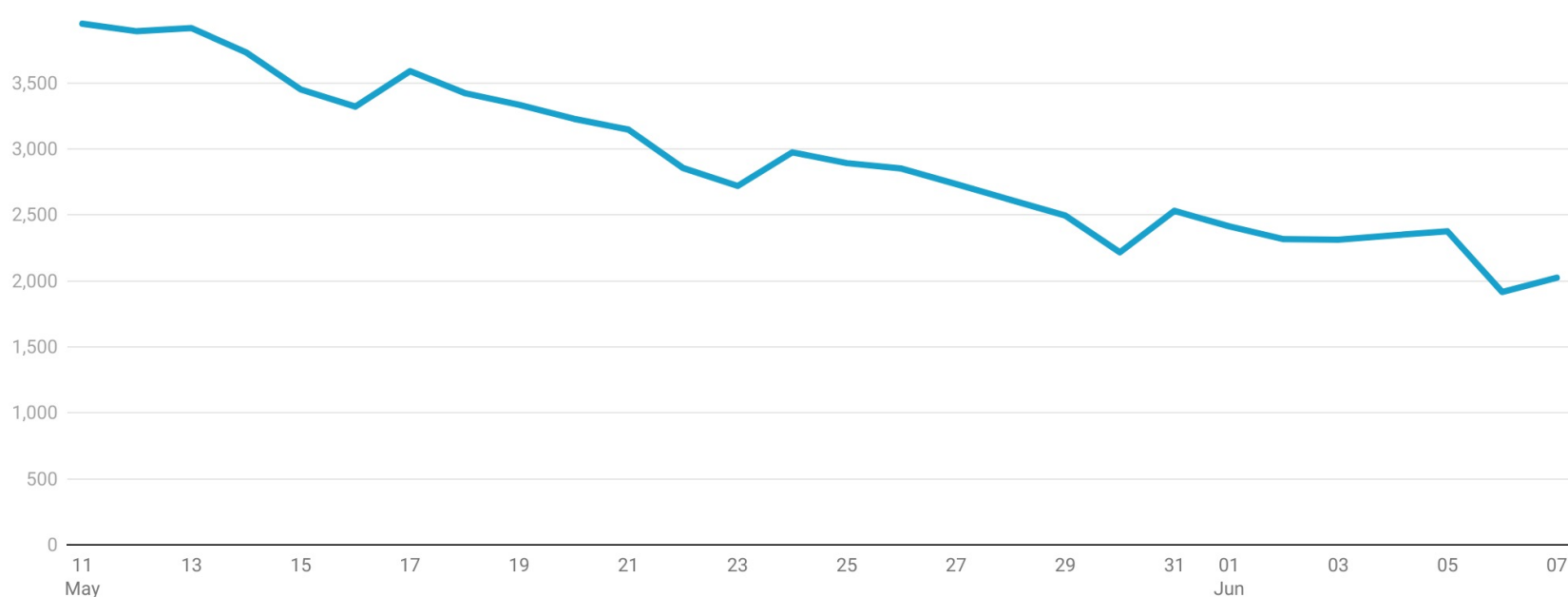
<https://viz.covid19forecasthub.org>

New Hospitalizations– Ensemble Forecast

The most recent ensemble forecast projects that new hospitalizations will decline throughout the four weeks.

Incident Covid-19 Hospitalizations

Ensemble Forecast



Forecast Date: May 10, 2021

Chart: Health Industry Advisor LLC • Source: Covid19 Forecast Hub • Created with Datawrapper

Estimated Immunity By State

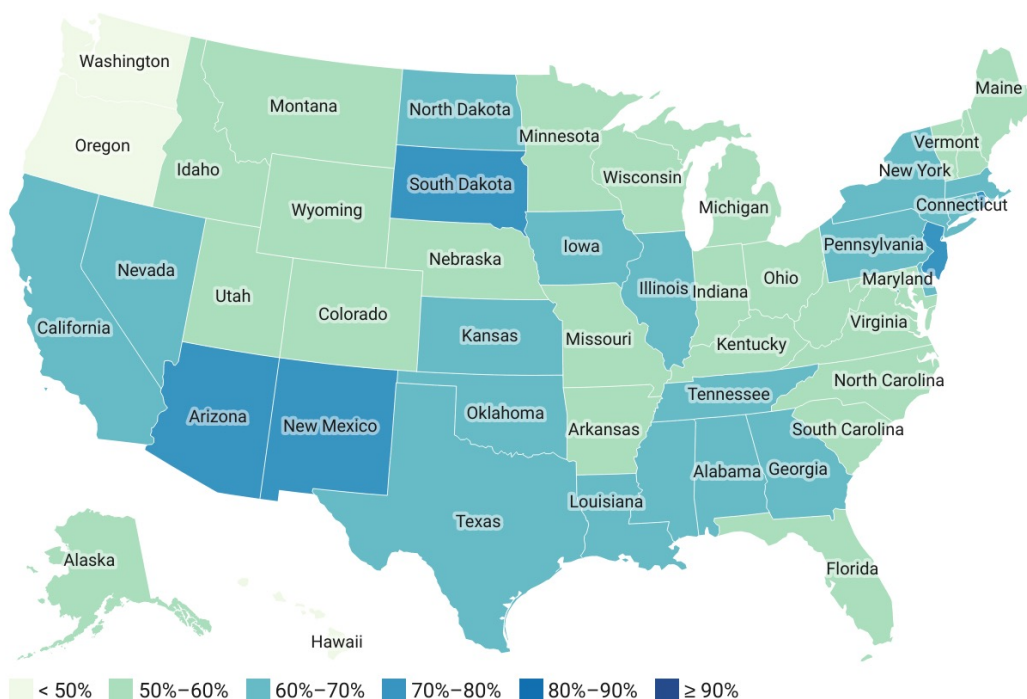
Estimated immunity is highest in Arizona, New Jersey, New Mexico, and South Dakota. Tis rate is lowest in Oregon and Washington.

- 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>

Estimated Immunity Prevalence, As of May 12

Based on Vaccinations To-Date & Harvard/Yale Estimated Infection Model



Presumed 14-day lag for immunity.

Map: Health Industry Advisor LLC • Source: Harvard/Yale Schools of Public Health • Created with Datawrapper

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



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

Covid-19 "Vital Signs"

State-By-State Scorecard:

New case rates are highest in Colorado, Delaware, Florida, Maine, Michigan, Minnesota, Oregon, Pennsylvania, Washington, and West Virginia. Yet, rates are declined more than 10% week-over-week in each of these states.

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	Green	Blue	Orange	Blue	Red
Alaska	Green	Blue	Green	Blue	Blue
Arizona	Green	Blue	Orange	Blue	Yellow
Arkansas	Green	Blue	Orange	Blue	Black
California	Blue	Green	Blue	Blue	Black
Colorado	Yellow	Blue	Orange	Green	Green
Connecticut	Green	Blue	Green	Green	Green
Delaware	Yellow	Blue	Yellow	Green	Green
District Of Columbia	Green	Blue	Blue	Green	Yellow
Florida	Yellow	Blue	Orange	Green	Yellow
Georgia	Green	Blue	Yellow	Blue	Green
Hawaii	Green	Blue	Orange	Blue	Green
Idaho	Yellow	Blue	Orange	Green	Yellow
Illinois	Green	Blue	Orange	Green	Yellow
Indiana	Green	Blue	Orange	Blue	Yellow
Iowa	Green	Blue	Yellow	Blue	Yellow
Kansas	Green	Blue	Yellow	Blue	Red
Kentucky	Green	Blue	Orange	Blue	Red
Louisiana	Green	Blue	Orange	Blue	Orange
Maine	Yellow	Blue	Yellow	Blue	Blue
Maryland	Green	Blue	Green	Yellow	Green
Massachusetts	Green	Blue	Blue	Blue	Green
Michigan	Orange	Blue	Orange	Yellow	Yellow
Minnesota	Orange	Blue	Yellow	Green	Green
Mississippi	Green	Orange	Red	Blue	Yellow
Missouri	Green	Blue	Orange	Blue	Orange

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	Green	Blue	Orange	Blue	Orange
Nebraska	Green	Yellow	Orange	Green	Yellow
Nevada	Green	Yellow	Orange	Green	Yellow
New Hampshire	Green	Blue	Yellow	Green	Green
New Jersey	Green	Blue	Orange	Green	Yellow
New Mexico	Green	Blue	Orange	Blue	Orange
New York	Green	Blue	Orange	Green	Yellow
North Carolina	Green	Blue	Orange	Blue	Green
North Dakota	Green	Blue	Orange	Blue	Green
Ohio	Green	Blue	Yellow	Green	Green
Oklahoma	Blue	Blue	Orange	Blue	Black
Oregon	Yellow	Blue	Orange	Green	Green
Pennsylvania	Yellow	Blue	Orange	Green	Yellow
Rhode Island	Green	Blue	Orange	Blue	Yellow
South Carolina	Green	Blue	Orange	Blue	Yellow
South Dakota	Green	Blue	Orange	Blue	Yellow
Tennessee	Green	Blue	Orange	Blue	Green
Texas	Green	Blue	Orange	Green	Orange
Utah	Green	Blue	Orange	Blue	Yellow
Vermont	Green	Blue	Orange	Green	Green
Virginia	Green	Blue	Orange	Green	Yellow
Washington	Yellow	Blue	Orange	Green	Green
West Virginia	Yellow	Blue	Orange	Blue	Orange
Wisconsin	Green	Blue	Yellow	Blue	Orange
Wyoming	Green	Yellow	Orange	Blue	Blue

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%	2,243	1,094	5.9%	67	16	9%	25
Alaska	9.1%	474	8,173	2.3%	114	72	6%	4
Arizona	12.0%	2,395	1,753	4.7%	90	19	9%	14
Arkansas	11.2%	1,914	815	3.2%	61	13	4%	19
California	9.5%	1,581	4,152	1.2%	44	95	7%	31
Colorado	9.1%	1,137	3,887	5.6%	219	18	15%	6
Connecticut	9.7%	2,289	7,213	2.1%	103	70	19%	7
Delaware	10.9%	1,688	5,429	4.3%	155	35	18%	9
District Of Columbia	6.8%	1,580	6,875	1.9%	60	115	15%	10
Florida	10.6%	1,671	3,240	7.5%	164	20	16%	11
Georgia	10.5%	1,924	1,413	5.3%	87	16	15%	17
Hawaii	2.4%	345	2,766	1.8%	59	47	6%	7
Idaho	10.6%	1,152	1,663	4.4%	92	18	7%	8
Illinois	10.7%	1,944	4,841	3.9%	151	32	13%	10
Indiana	10.9%	1,997	2,525	5.4%	137	18	10%	10
Iowa	12.6%	1,900	1,904	5.5%	99	19	4%	11
Kansas	10.7%	1,726	1,623	4.4%	60	27	4%	23

Covid-19 "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	7-Day Deaths /1000 New Cases , 14-Day Lag
Kentucky	10.1%	1,484	2,123	4.4%	115	18	7%	24
Louisiana	10.0%	2,251	2,125	2.7%	98	22	4%	15
Maine	4.8%	594	6,451	2.9%	201	32	14%	3
Maryland	7.5%	1,469	4,582	4.5%	85	54	26%	10
Massachusetts	10.1%	2,549	10,191	1.6%	115	89	8%	6
Michigan	9.7%	1,955	3,605	10.2%	264	14	24%	13
Minnesota	10.5%	1,300	6,030	5.8%	199	30	11%	6
Mississippi	10.6%	2,434	523	4.0%	69	8	4%	13
Missouri	9.6%	1,543	1,753	5.0%	77	23	10%	18
Montana	10.3%	1,492	2,163	5.1%	115	19	4%	18
Nebraska	11.5%	1,167	1,420	6.9%	101	14	4%	7
Nevada	10.4%	1,790	1,737	5.5%	122	14	15%	10
New Hampshire	7.1%	972	4,362	3.1%	127	34	8%	7
New Jersey	11.4%	2,914	4,204	5.3%	73	57	14%	11
New Mexico	9.5%	1,961	1,722	2.9%	99	17	9%	18
New York	10.9%	2,731	6,862	2.8%	124	55	19%	11
North Carolina	9.4%	1,223	2,152	5.6%	132	16	13%	8

Covid-19 "Vital Signs"

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

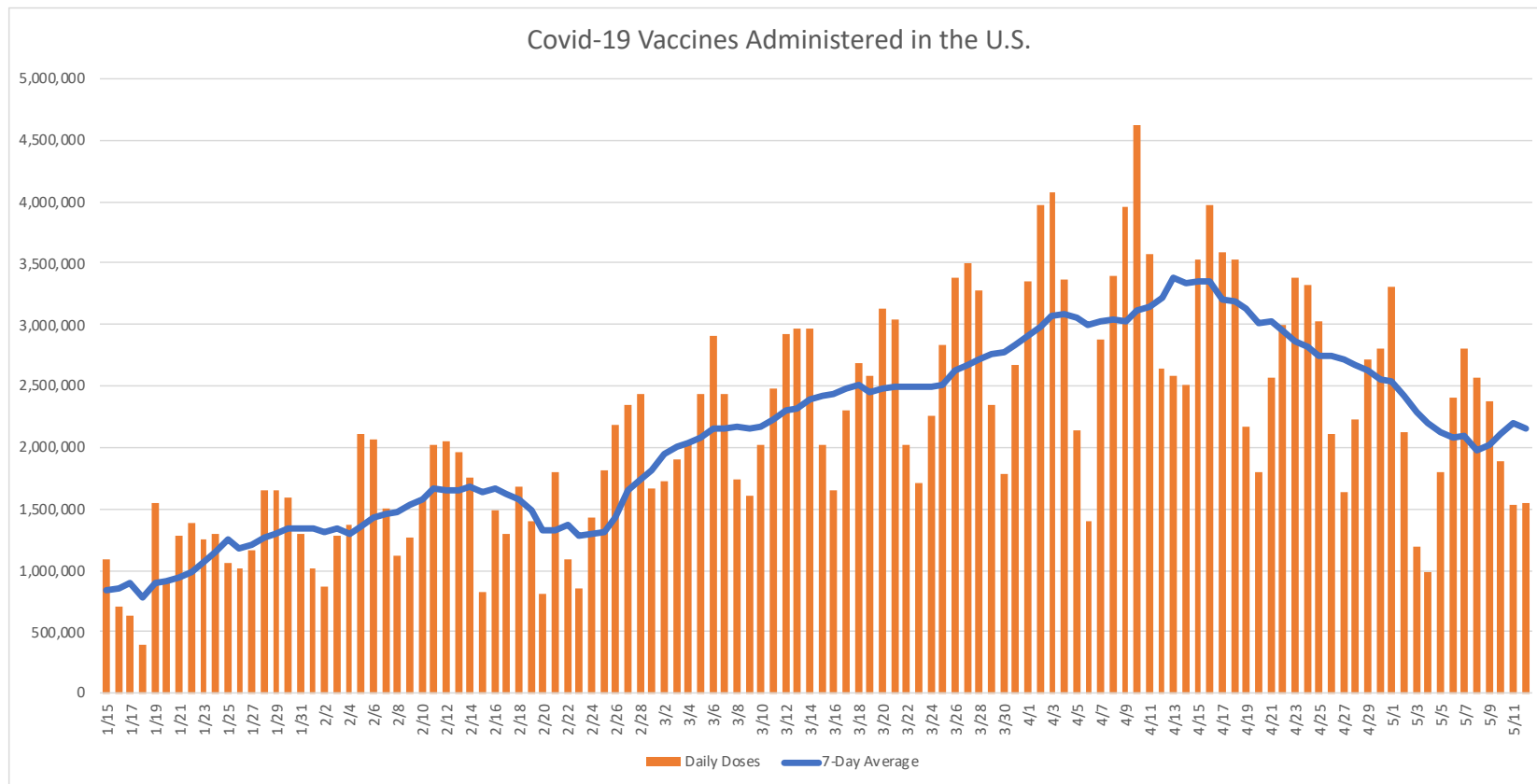
State-By-State Comparisons

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	7-Day Deaths /1000 New Cases , 14-Day Lag
North Dakota	14.3%	1,971	2,835	2.9%	128	22	6%	5
Ohio	9.3%	1,663	2,655	3.8%	103	26	10%	9
Oklahoma	11.4%	1,738	687	4.5%	46	15	5%	54
Oregon	4.6%	606	2,663	6.1%	156	17	13%	8
Pennsylvania	9.2%	2,091	3,144	6.6%	169	19	15%	11
Rhode Island	14.2%	2,545	10,066	1.7%	142	71	17%	7
South Carolina	11.4%	1,865	2,308	4.2%	104	22	7%	13
South Dakota	14.0%	2,247	1,283	9.1%	72	18	4%	14
Tennessee	12.5%	1,799	1,111	6.1%	98	11	10%	9
Texas	10.1%	1,759	1,718	4.8%	80	21	10%	16
Utah	12.5%	702	2,266	4.2%	101	22	5%	11
Vermont	3.8%	404	10,189	1.5%	92	110	2%	8
Virginia	7.8%	1,281	1,824	5.0%	77	24	11%	12
Washington	5.5%	744	2,967	5.0%	151	20	13%	7
West Virginia	8.8%	1,538	2,995	6.8%	181	17	8%	17
Wisconsin	10.4%	1,191	3,268	3.5%	84	39	8%	17
Wyoming	10.2%	1,230	2,075	3.5%	112	18	3%	4

Table: Health Industry Advisor LLC • Created with Datawrapper

Pace of Vaccinations

The 7-day average vaccination rate stands at 2.2 million doses.



Covid-19 “Vital Signs”

Vaccine Tracking

To date, the US has distributed 337 million doses and administered 264 million. 116 million people are fully inoculated – 46% of the adult population. Another 32 million people have received the first of two required doses.

Vaccination Progress

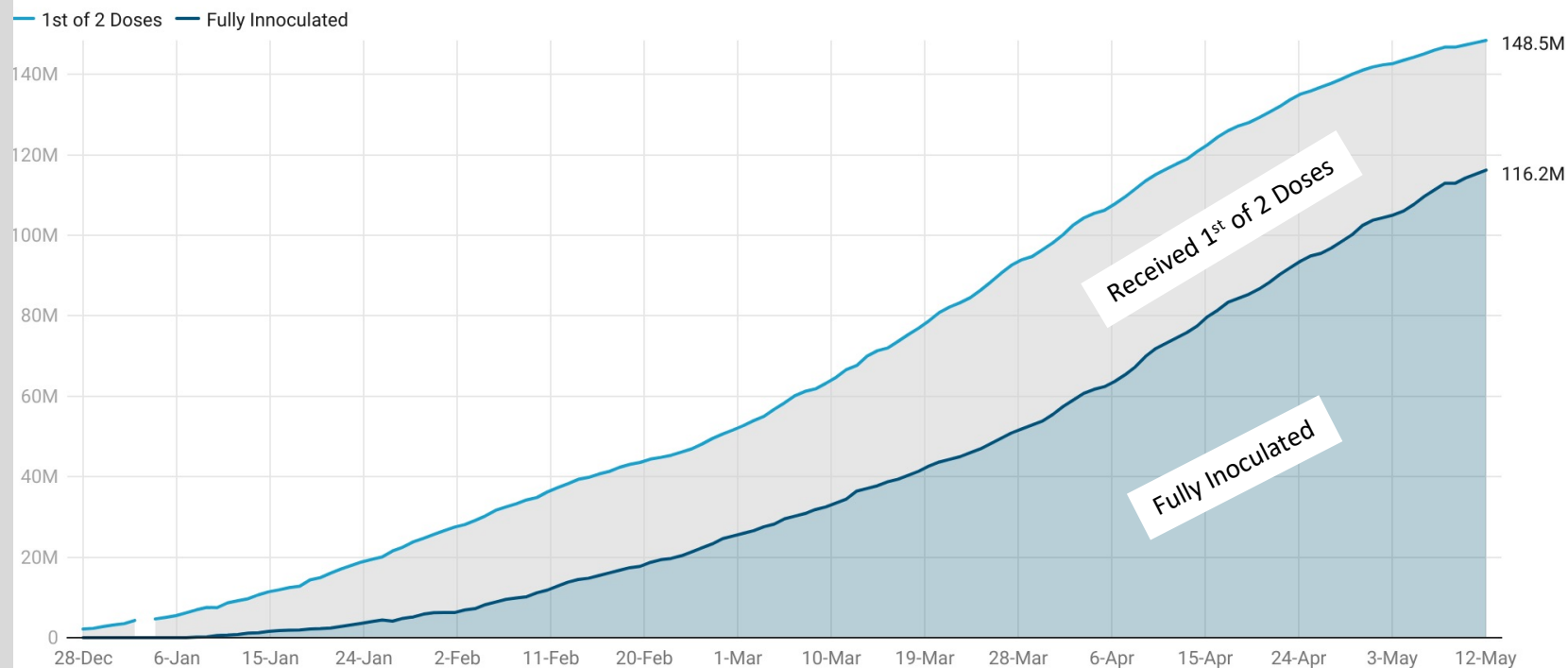


Chart: Health Industry Advisor LLC • Source: CDC, Bloomberg • Created with Datawrapper

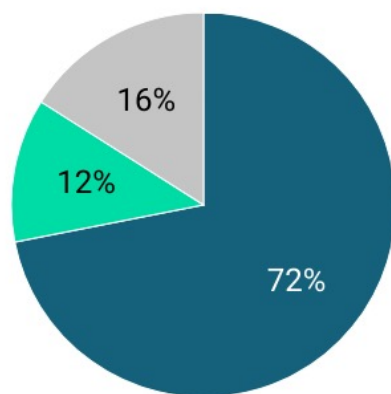
Vaccine data from: [Centers for Disease Control and Prevention](#) and [Bloomberg Vaccine Tracker](#)

Vaccination Status By Age

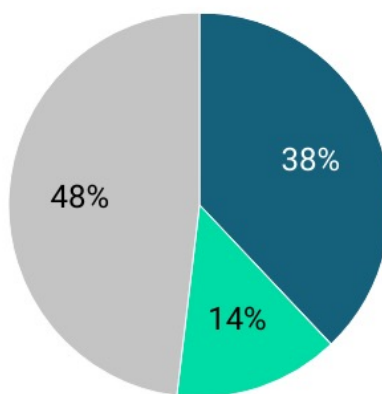
84% of seniors are participating in the vaccination process; 72% are fully vaccinated. More than half of younger adults have received at least one shot; 38% are fully vaccinated..

Vaccination Status By Age

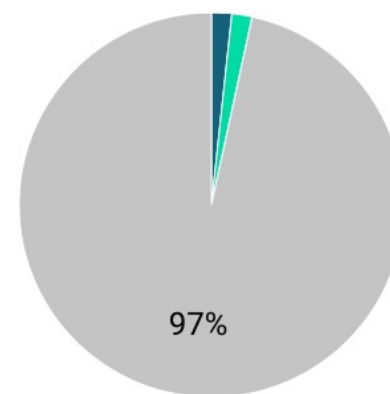
As of May 11



65+



18-64



0-17

■ Fully Vaccinated ■ Partially Vaccinated ■ Unvaccinated

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

Covid-19 "Vital Signs"

Vaccine Tracking - % of Adult Population Vaccinated

Hawaii, Massachusetts, and Vermont are the first states to have begun vaccinating 70+% of the adult population. Connecticut, Maine, and New Jersey have fully inoculated 55+% of the adult population.

Vaccinations of Adult Population

% Receiving 1 or 2 doses, as of May 11

■ % 2 Doses ■ % 1 dose

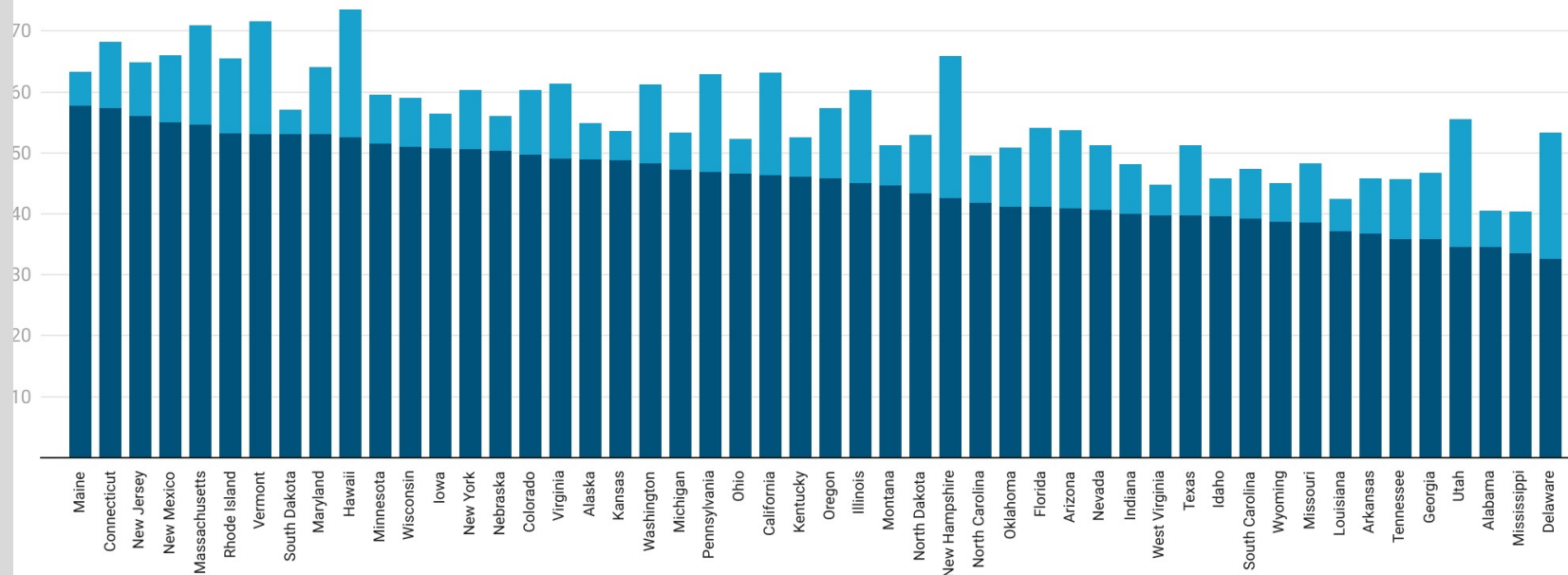


Chart: Health Industry Advisor LLC • Source: CDC, Bloomberg • Created with Datawrapper

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>