Health Industry Advisor, llc

"Strategic Advice in an Era of Unprecedented Change"

Covid-19 "Vital Signs"

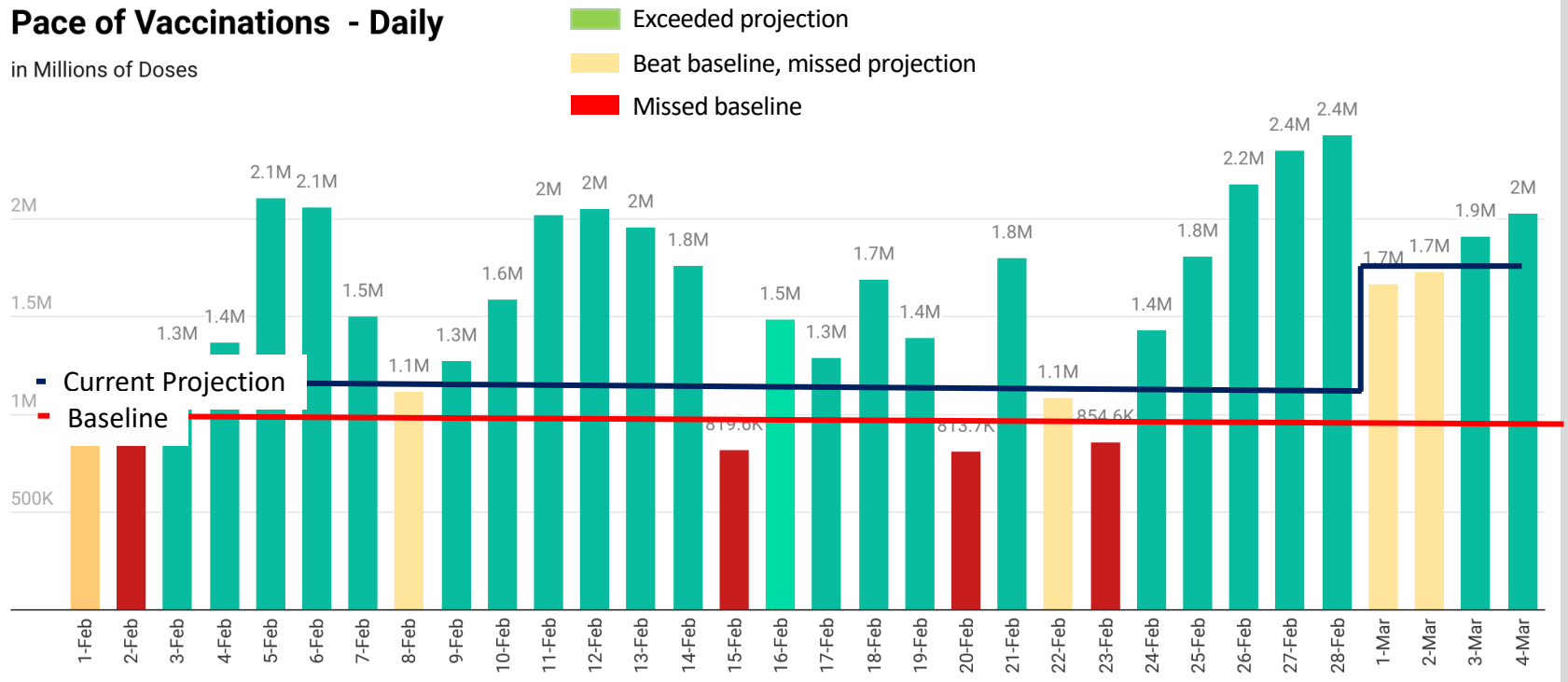
Issue # 295

March 5, 2021

Covid-19
"Vital Signs"

Pace of Vaccinations

Vaccinations continue a strong pace, averaging more than 2 million daily for the past seven days



Baseline: 100 Million Doses in 100 Days Current Projection: Ramped-Up Vaccinations; Additional 100M Pfizer and Moderna doses; and JNJ vaccine available on 3/1

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

"Current projection" is from Health Industry Advisor's vaccination model, reflecting recent developments: increase pace of vaccinations; increase in Pfizer and Moderna doses to 300 million each; and anticipated availability of JNJ vaccine

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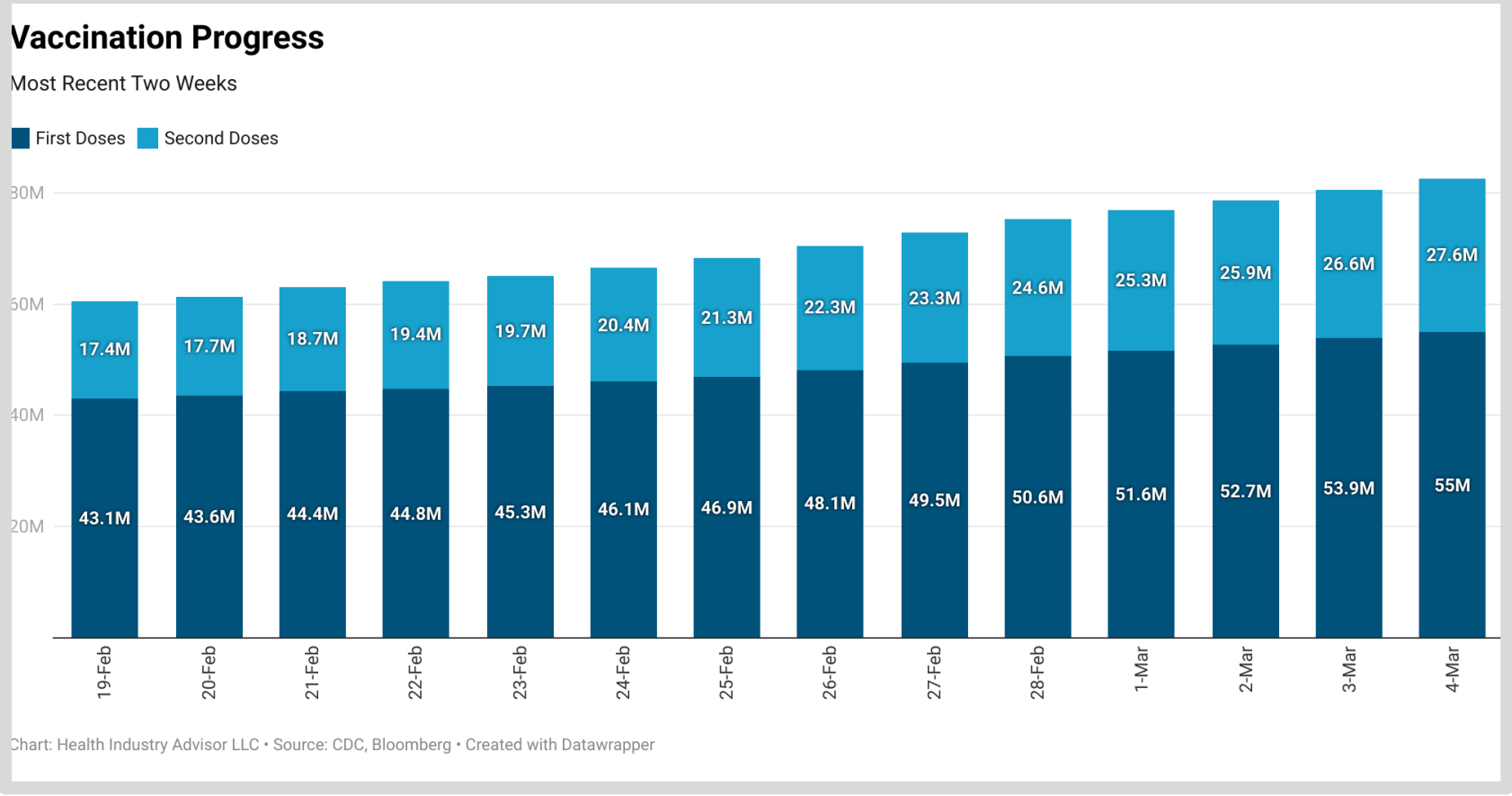
Vaccine Tracking

To date, the US has administered 82.6 million doses, with 27.6 million people jabbed twice. As of yesterday, 21.5% of U.S. adults have received at least one dose; 10.8% have received two.



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

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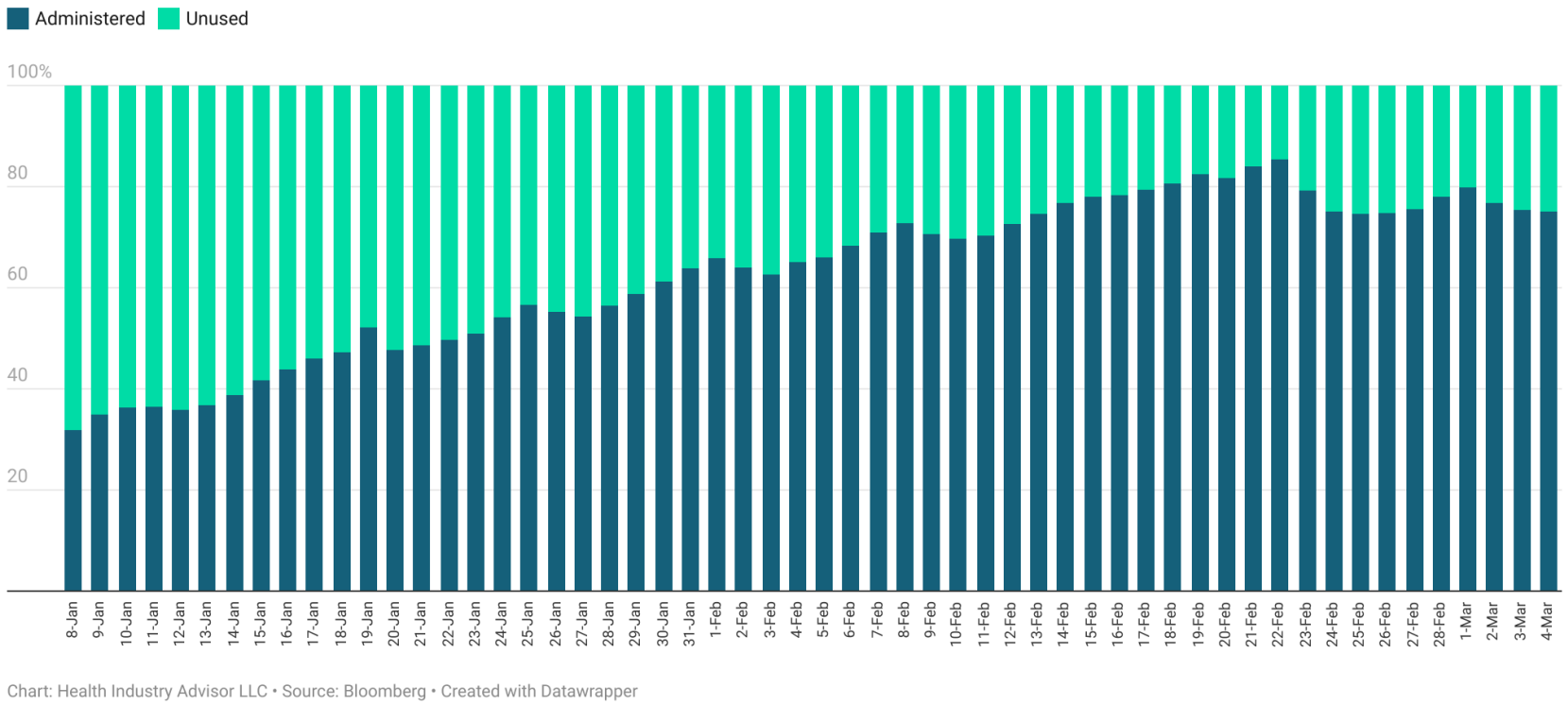
Vaccines Distributed v. Unused

Nearly 110 million doses have been distributed in the United States. As vaccine distribution increases, we have established a pipeline of unused doses for administration in the next several days..



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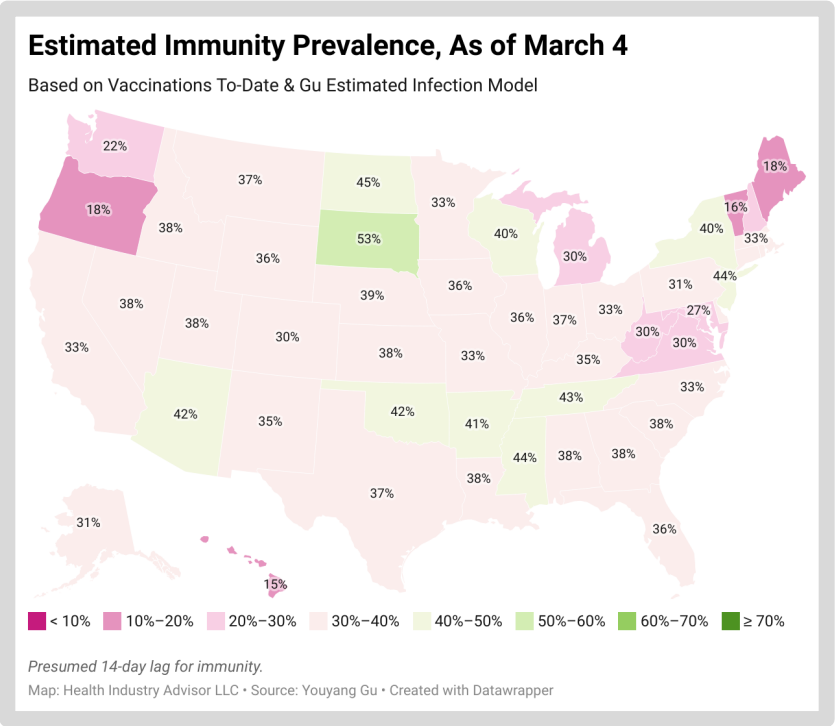
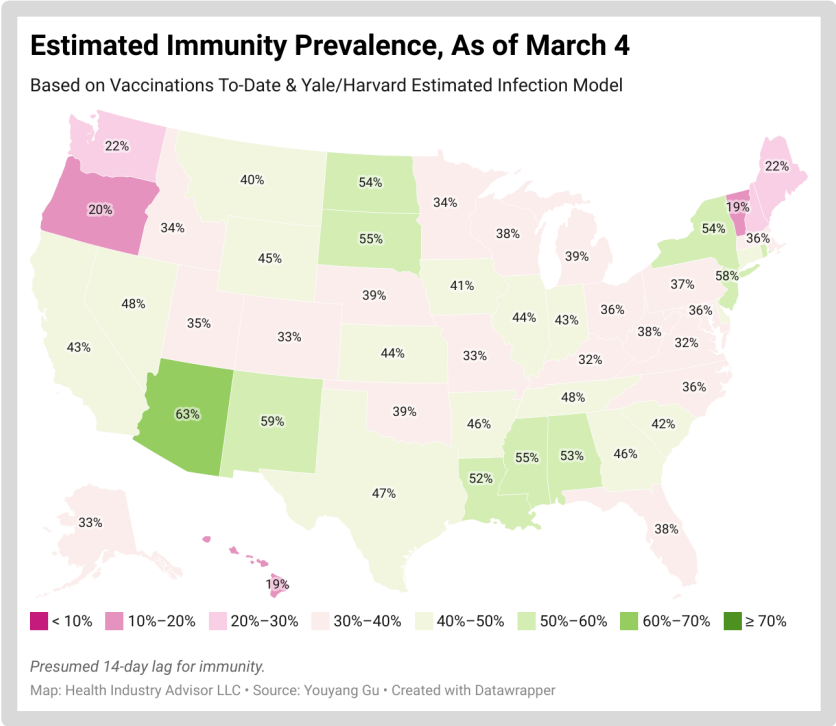
Alternative Views Of Immunity By State

Using Gu's model, North and South Dakota lead the country in estimated immunity; the U.S. overall reached 35.3% estimated immunity. Using Yale/Harvard's estimate, several stats have pushed past 50% estimated immunity; the U.S. overall reached 41.9% estimated immunity.

Estimated immunity reflects estimated infections and vaccinations to-date. Immunity assumes a 14-day lag



Estimated infections from: Youyang Gu: Covid-19projections.com



Estimated infections from Yale/Harvard : https://covidestim.org

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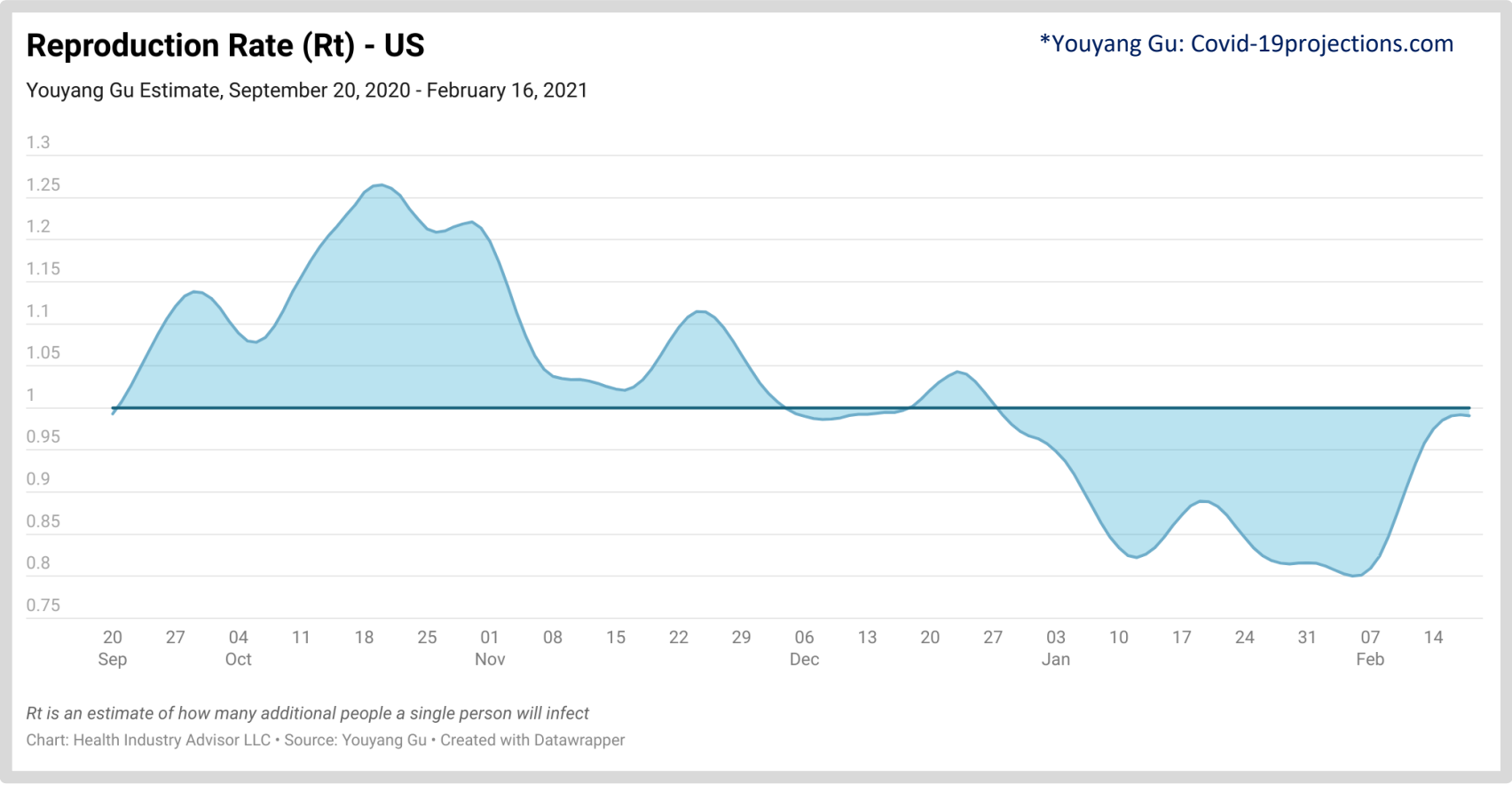
Reproduction Rate (R_t) – Gu* Model

Gu's R_t latest estimate shows Rt staying below 1.0, where it has been since December 27.



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Estimated Daily Infections & New Case Rates

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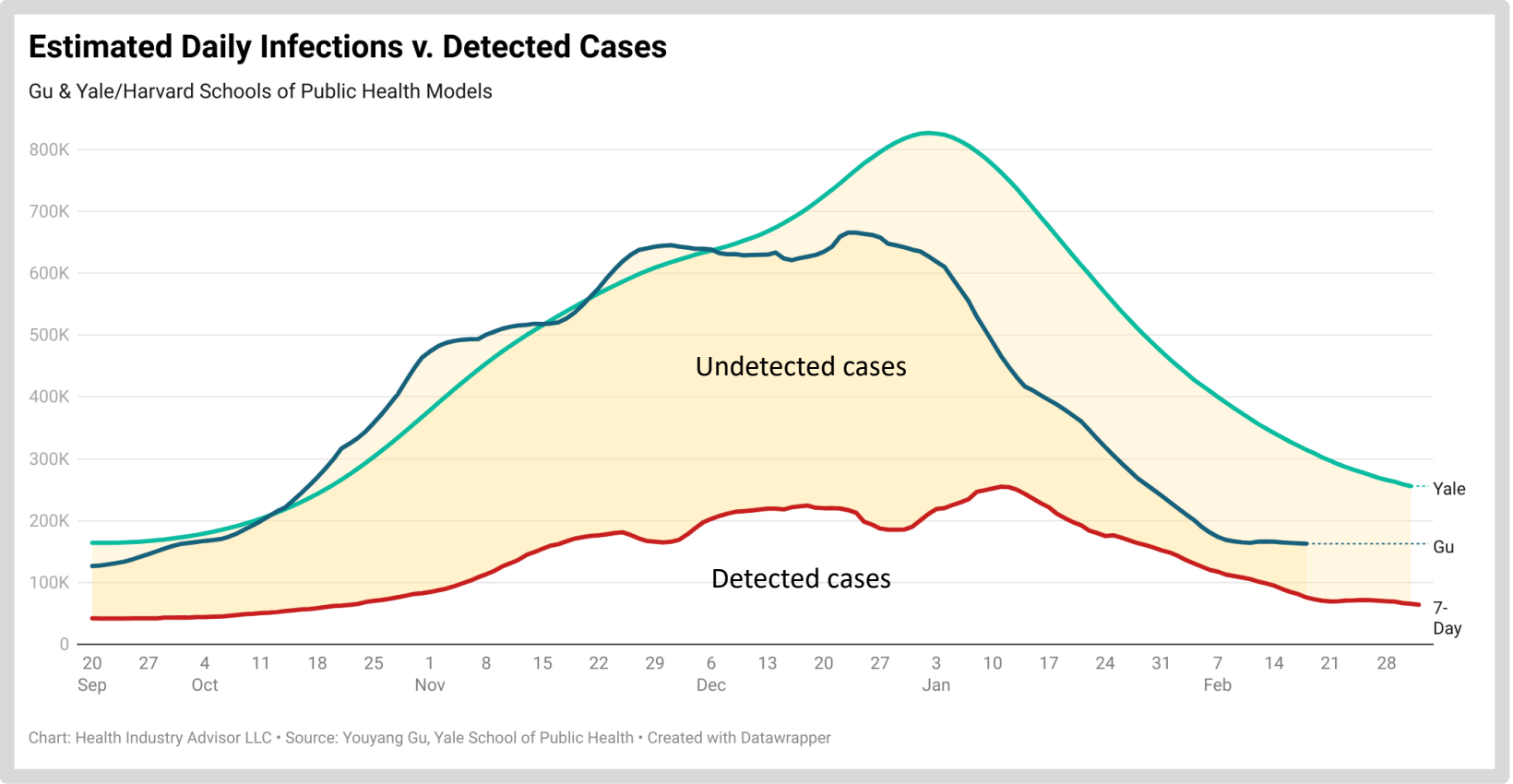
Estimated new infections and reported cases continue falling in the US. The Yale/Harvard and Gu models suggests that infections have plummeted 70% to 75% since the beginning of the year. The 7-day new case rate fell for the seventh straight day, reaching nineteen-week low.



Two models:

- Youyang Gu: https://covid19-projections.com, lags by two weeks
- Yale School of Public Health: https://covidestim.org

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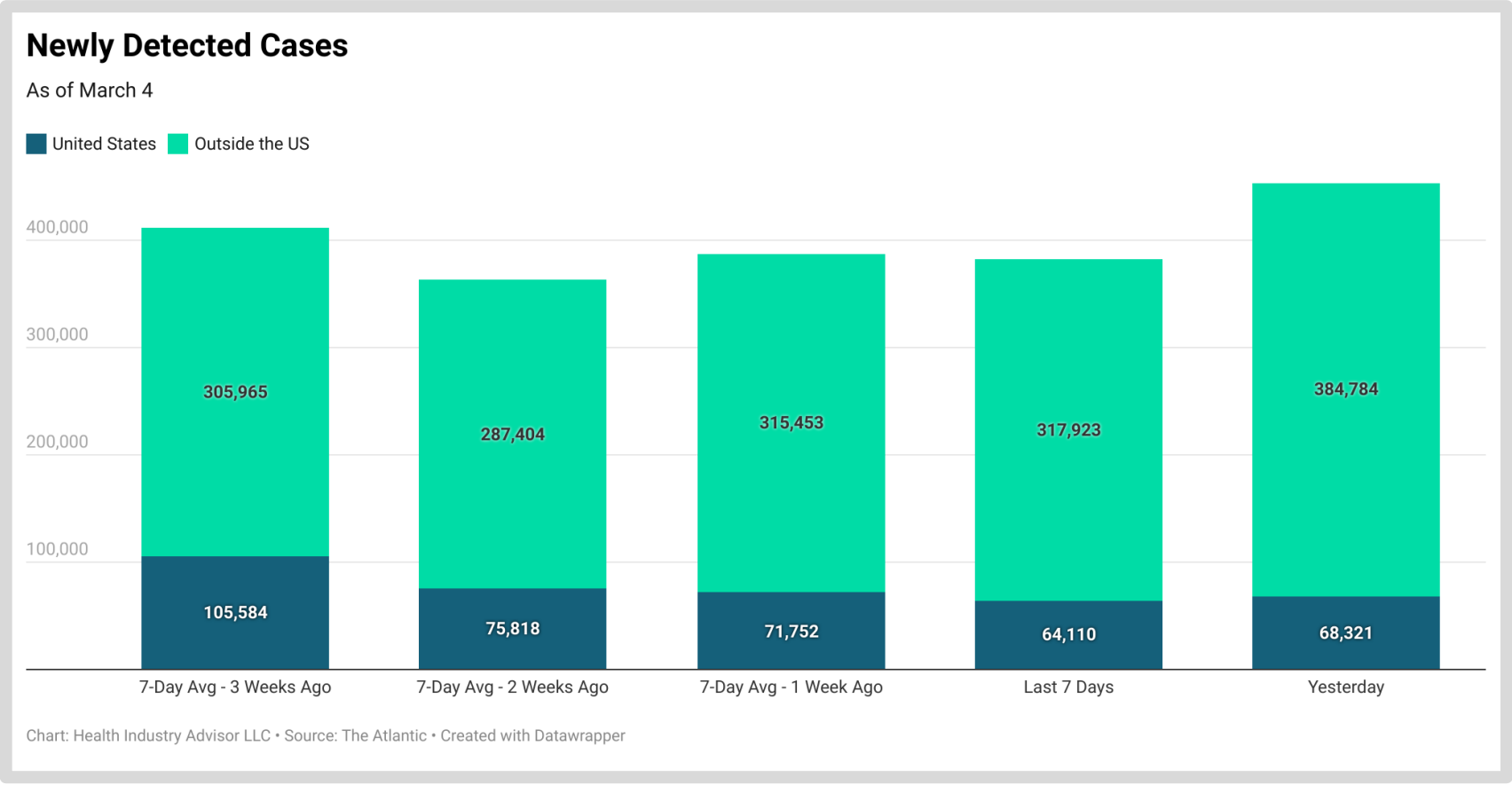
Newly Detected Cases Per Day

In the US, 7-day new case rates dropped during each of the past three weeks, plunging 40% during that time. Outside the US, rates increased over the past several weeks, however, led by increases in Brazil, Germany, India, Italy, and Turkey.



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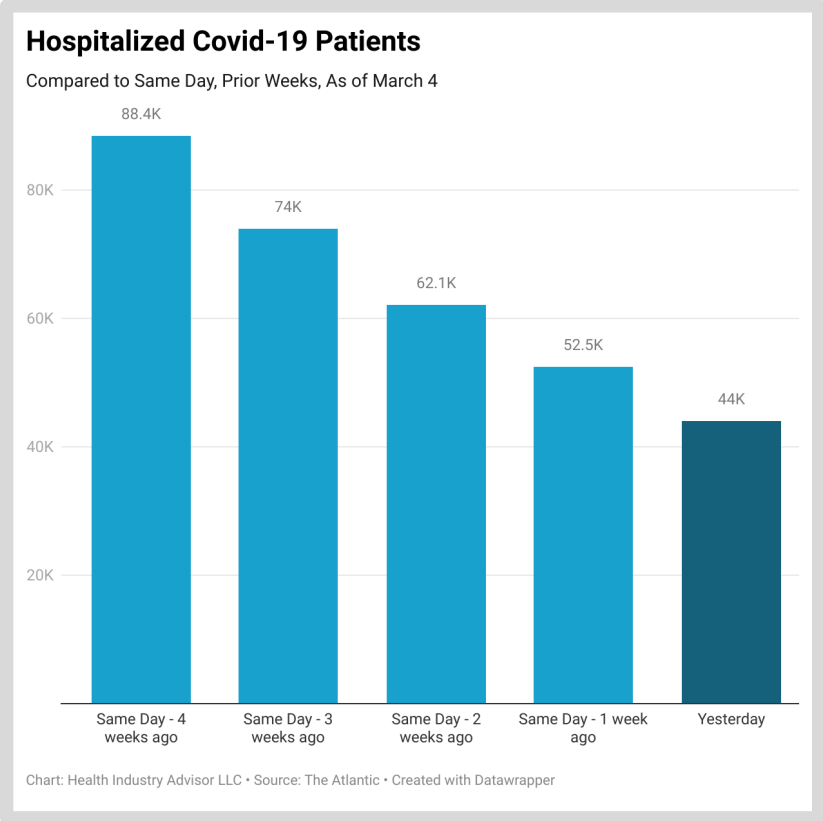
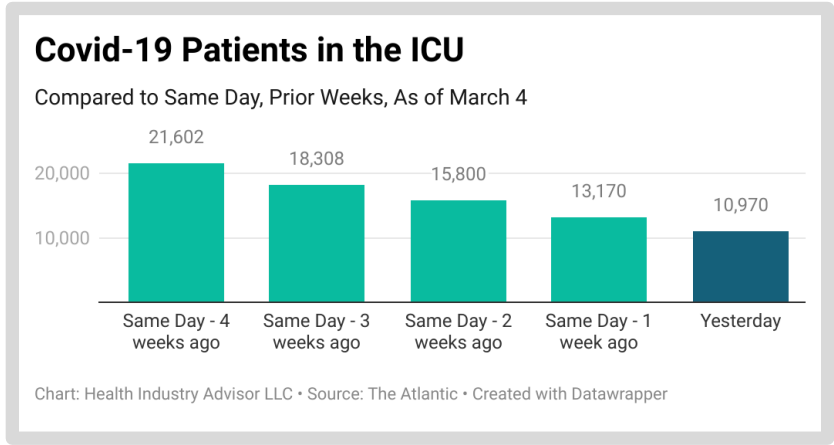
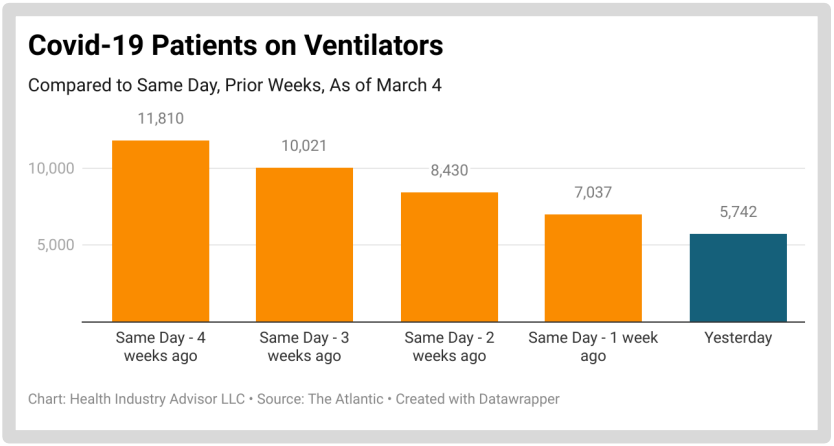
Covid-19 Hospitalizations

Covid-19 hospitalizations plunged over the past month, with 88,000 fewer patients yesterday than on January 6 (67% decline). These have dropped in half in the past three weeks alone.







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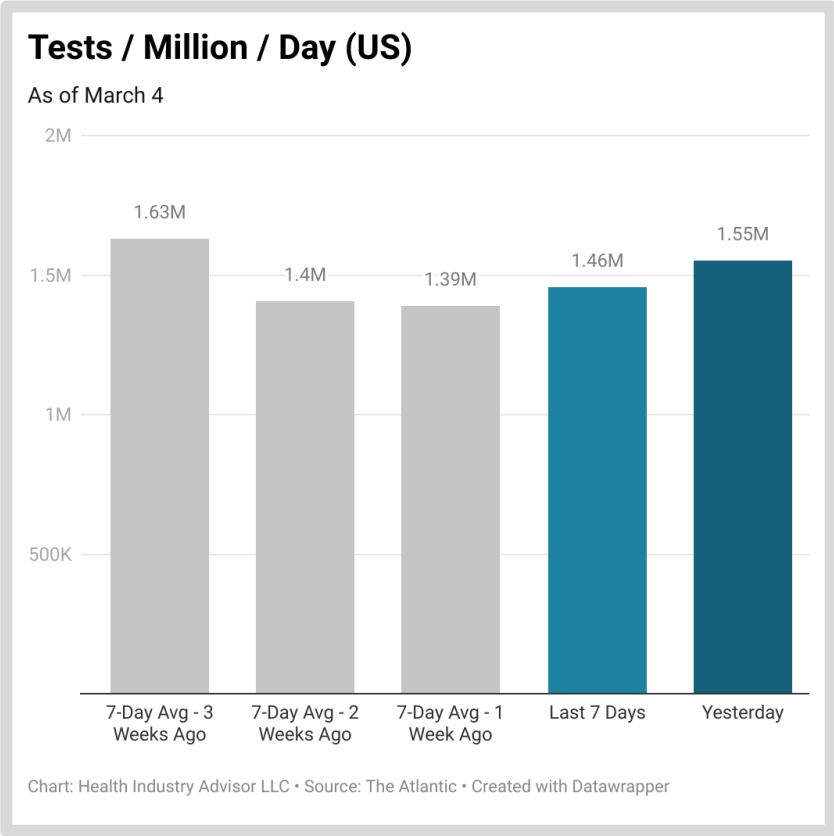
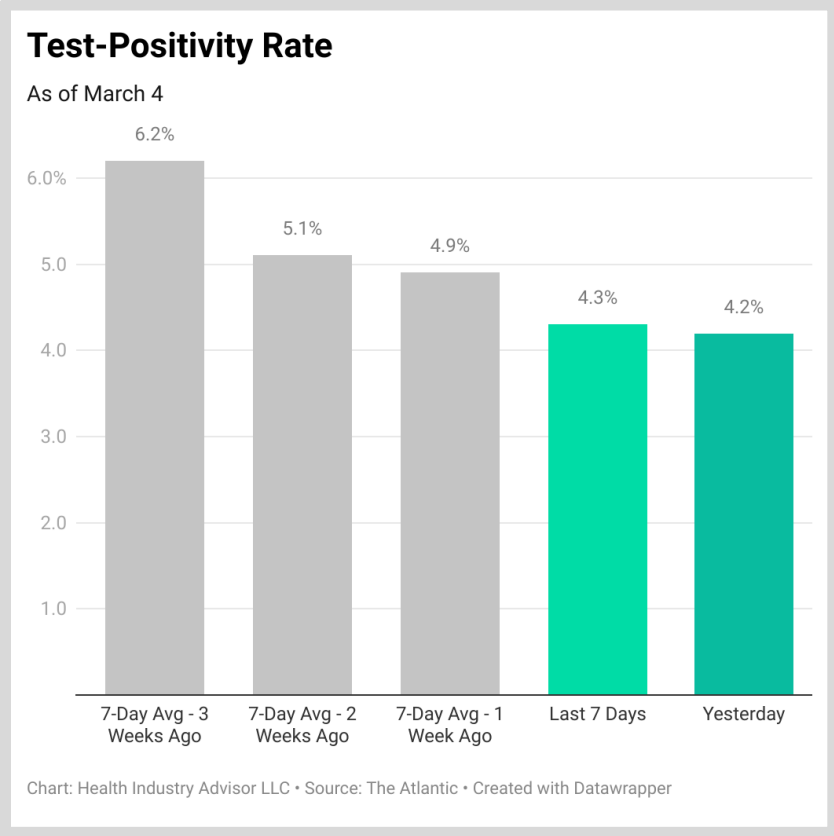
Testing (US)

Test volume increased week-over-week, reversing recent trends. Test-positivity improved over the three preceding weeks, reaching a twenty-one-week low.





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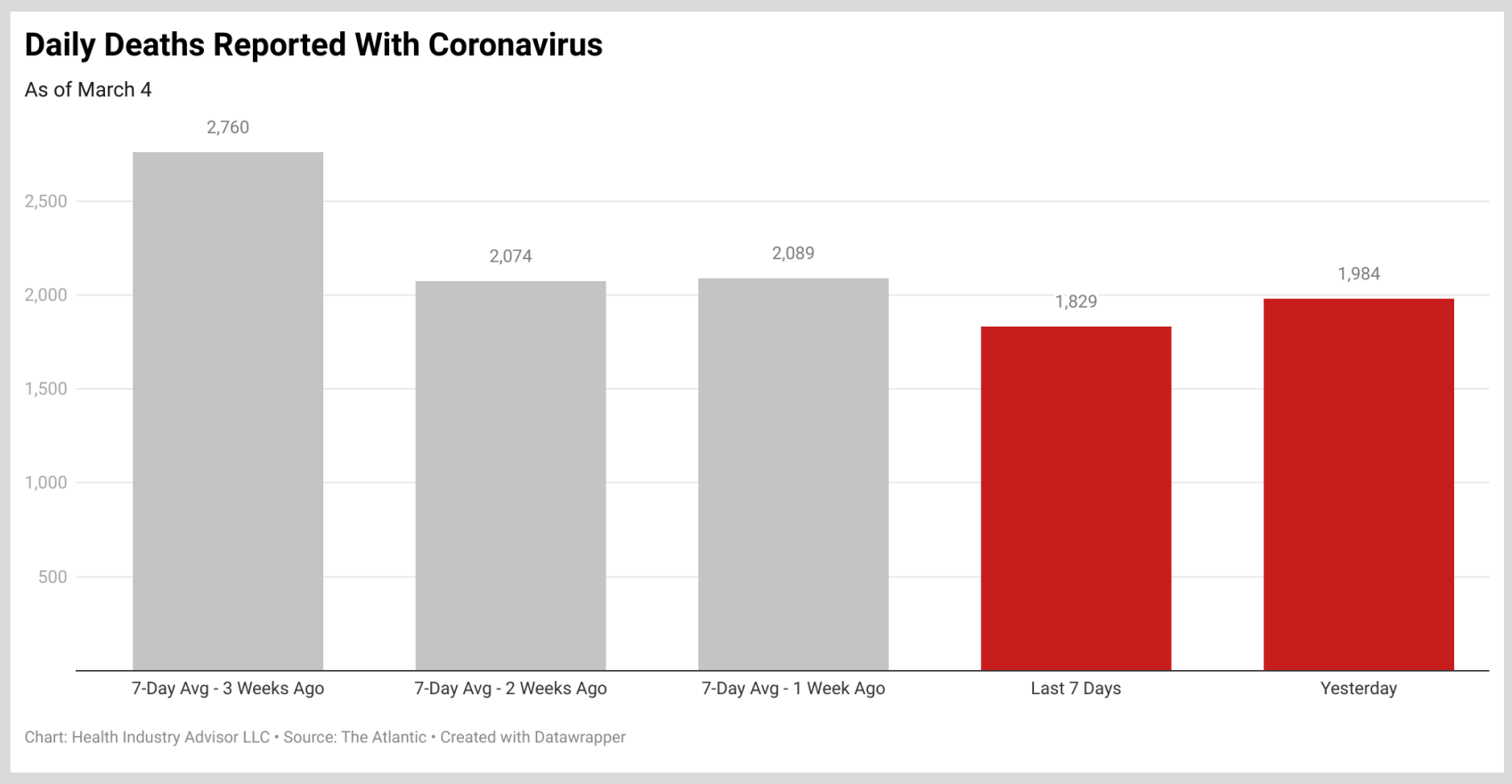
Deaths Reported With Coronavirus

The 7-day average death rate fell 12.5% from last week and 33% in three weeks. This latest rate set a 91-day low.



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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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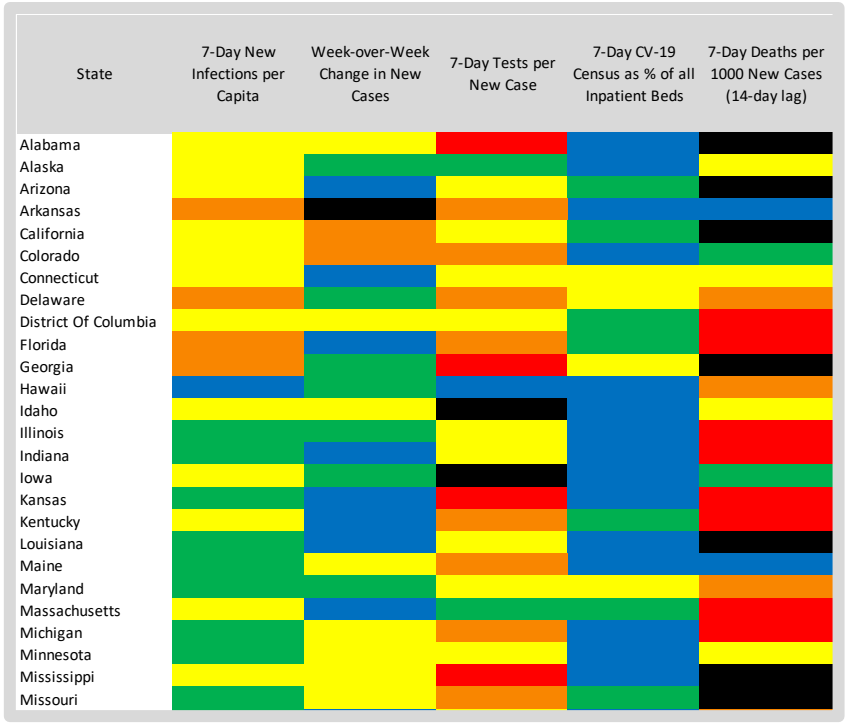
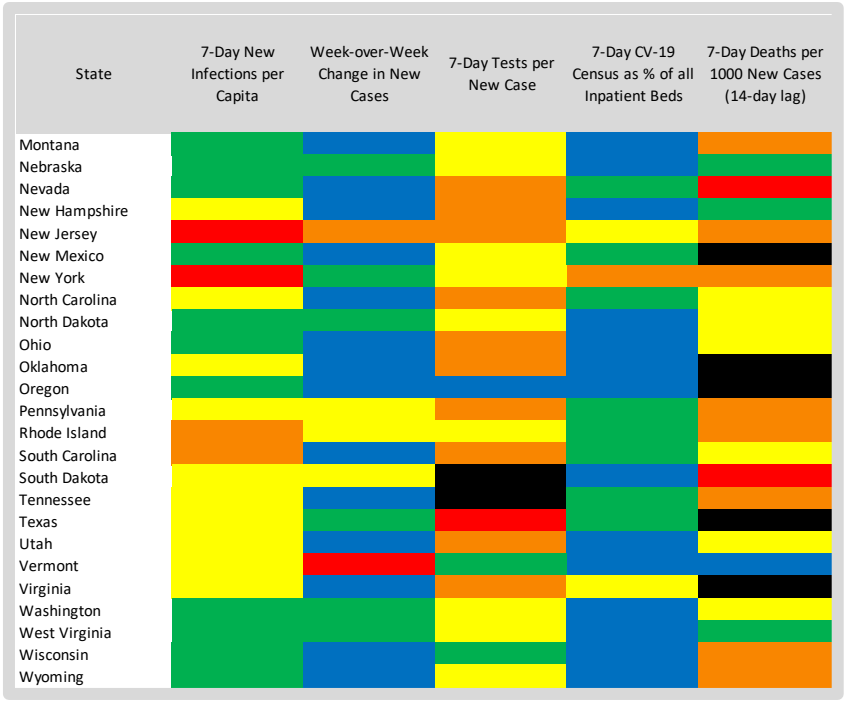
State-By-State Scorecard:

New case rates are "cautious" to "good" across many parts of the country; and the week-over-week changes in new cases are encouraging. The hospital crisis eased for most of the country.





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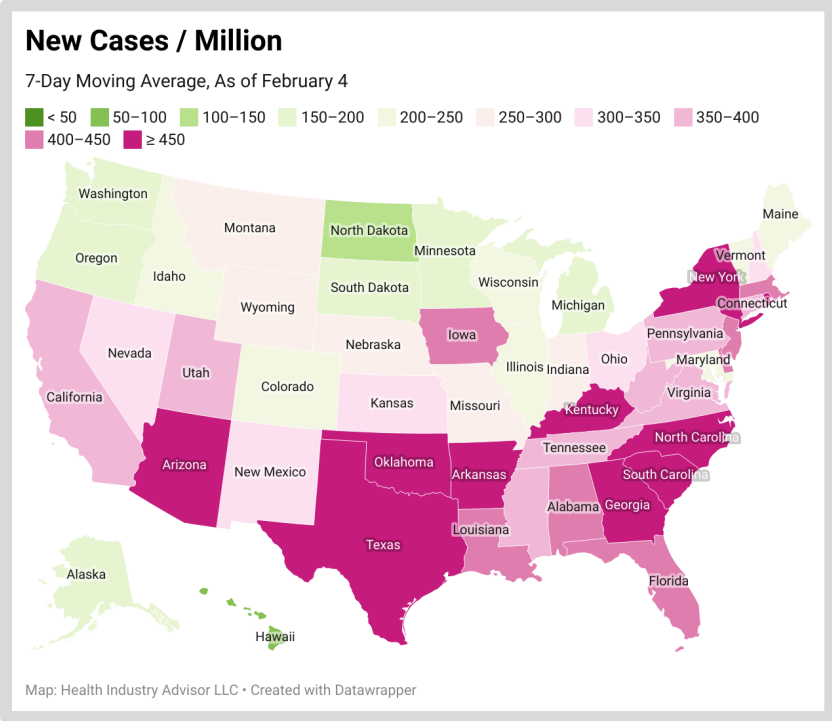
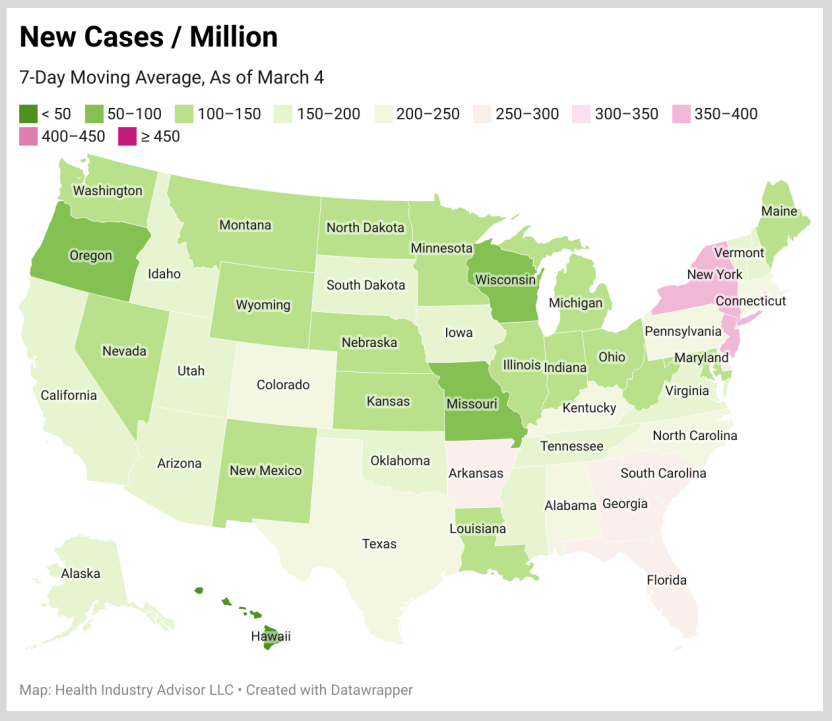
New Cases / Million

New daily case rates have fallen sharply in the past month.

February 4	March 4





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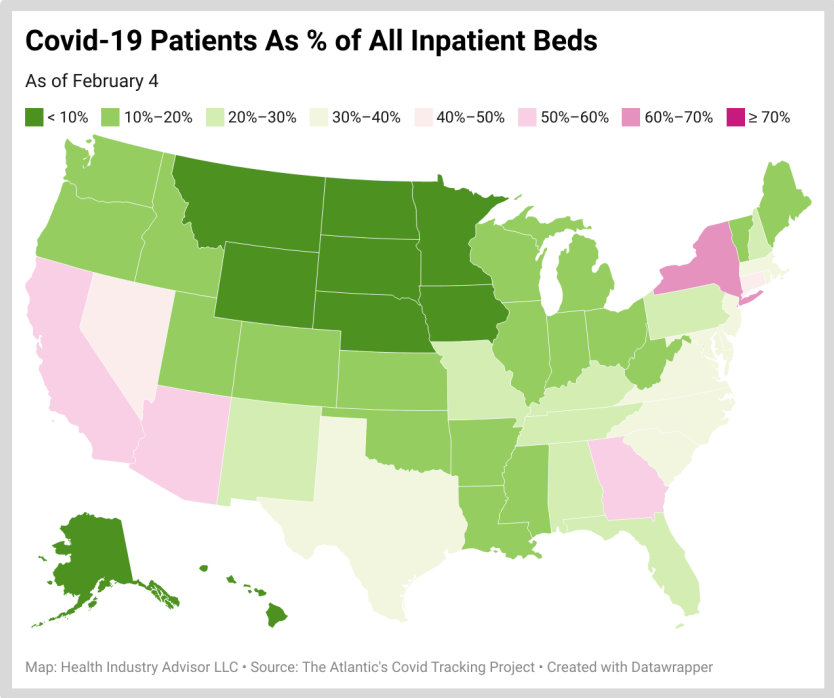
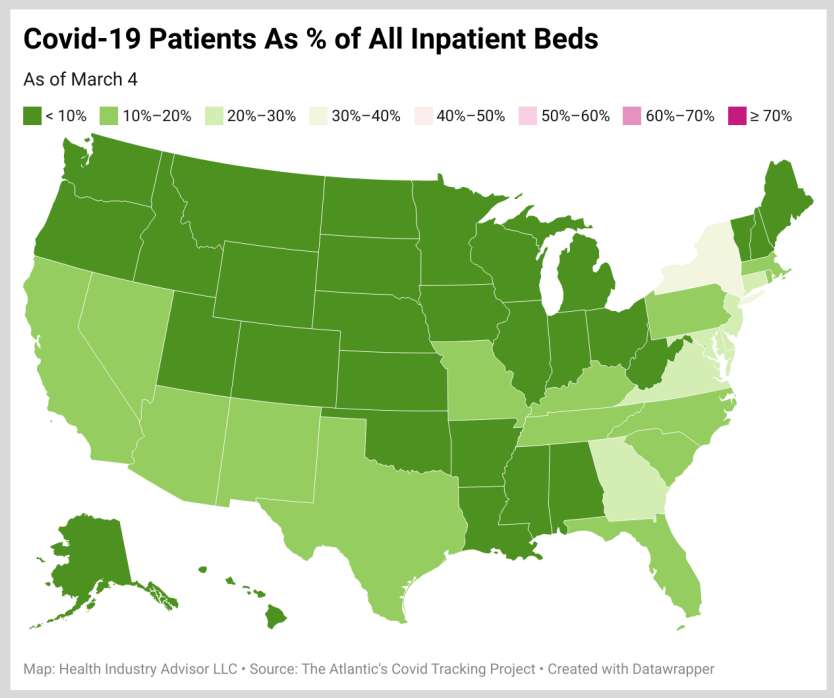
Covid-19 Hospitalizations

Covid-19 hospital census plunged in the past month. Covid-19 patients occupied 14% of US beds yesterday versus its peak of 42% six weeks ago.

February 4	March 4





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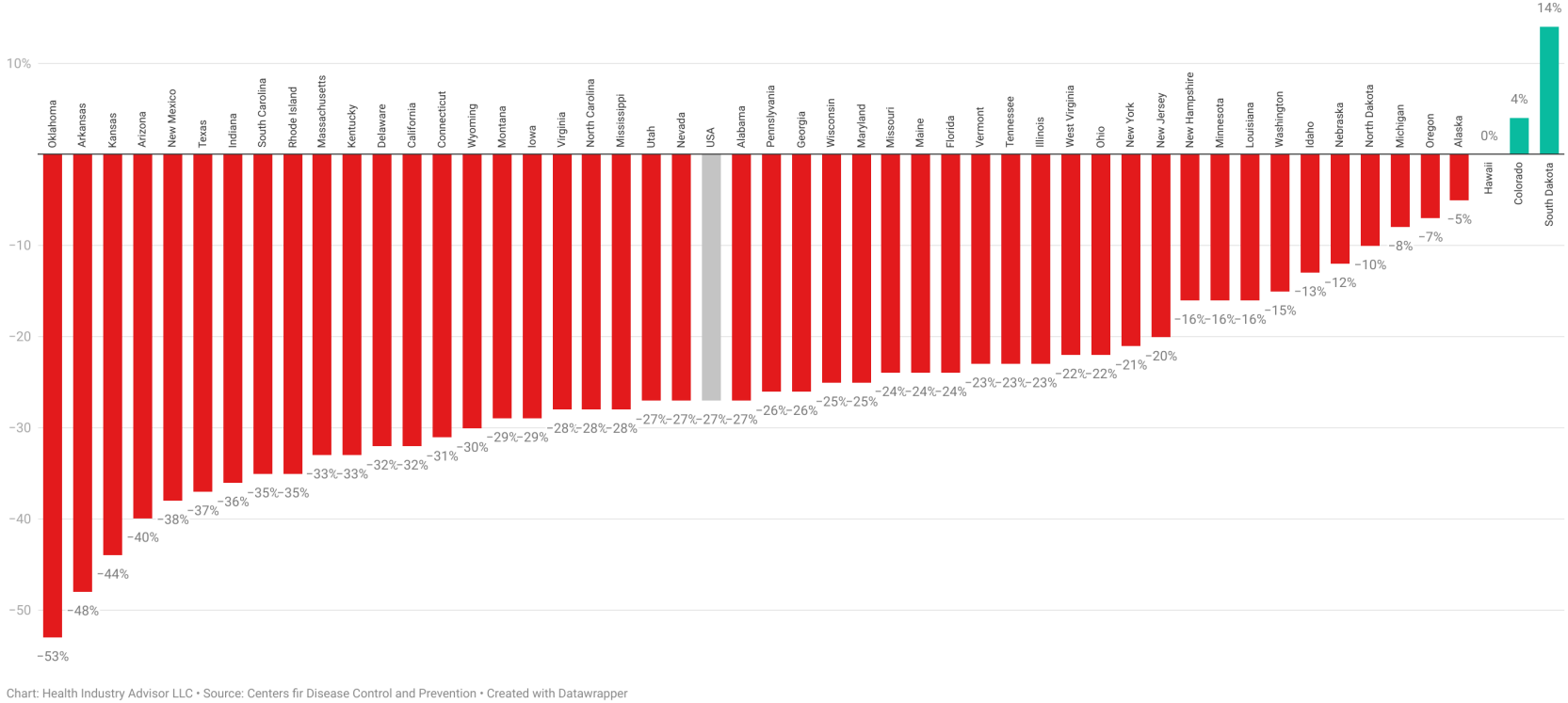
Projected Covid-19 Admission Trends

Projected Covid-19 hospital admissions decline in all but three states over the next three weeks. For the U.S. overall, projected Covid-19 admissions drop 27% in this time.



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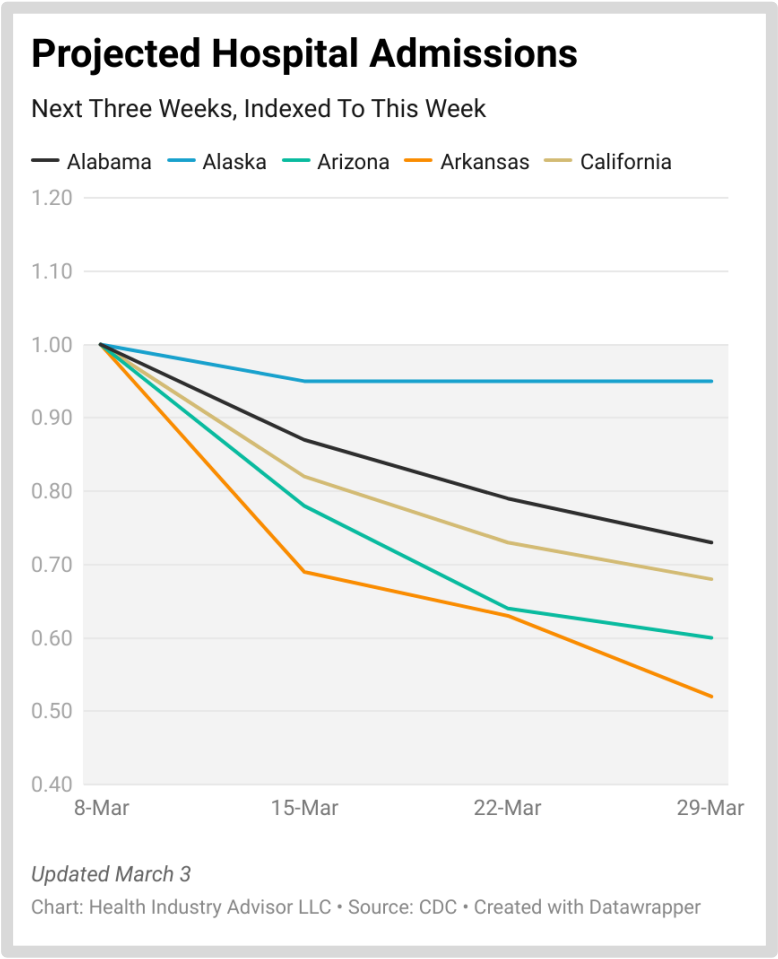
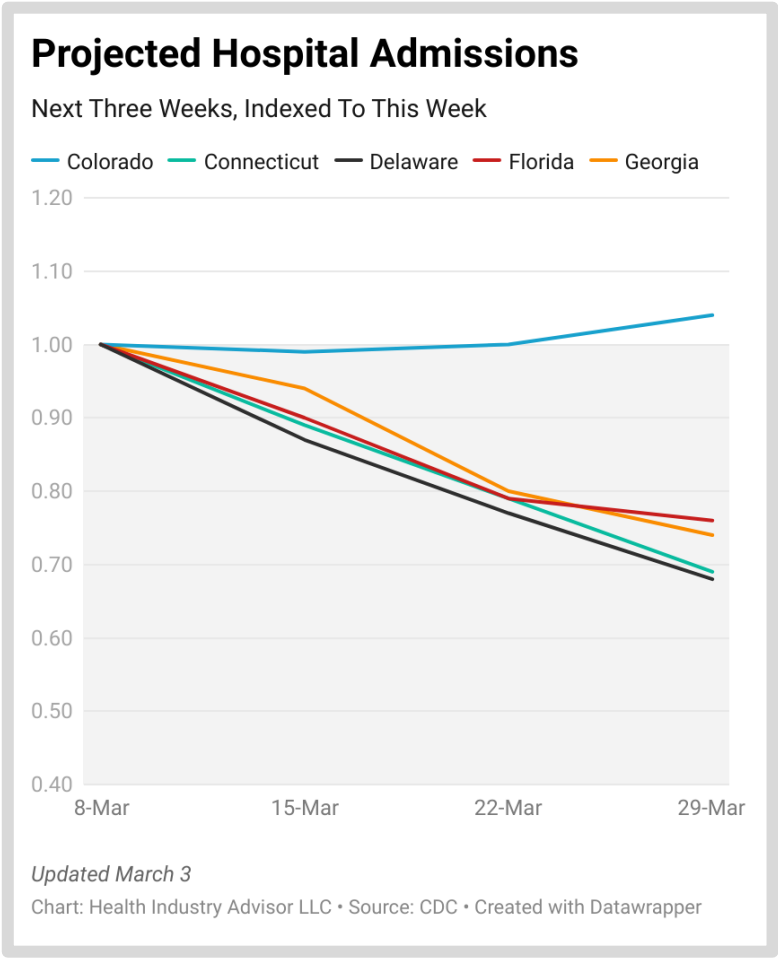
Projections of Hospital Admissions (US) – 1 of 5

Projected hospital admissions decline over the next few weeks in every state, in most cases by 25% or more.





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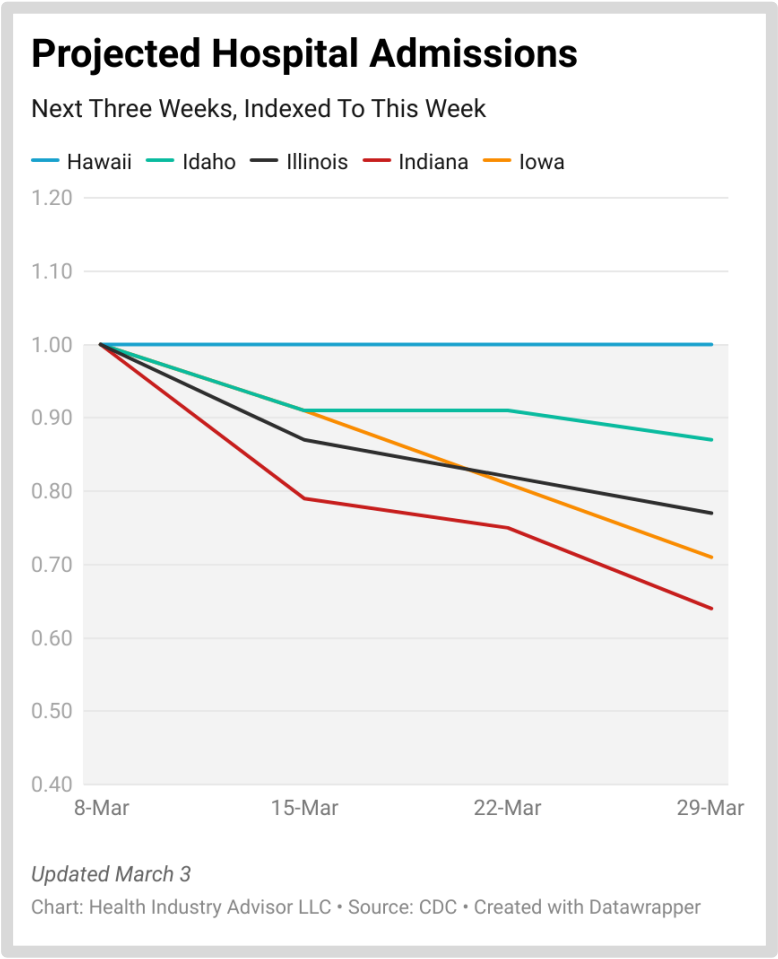
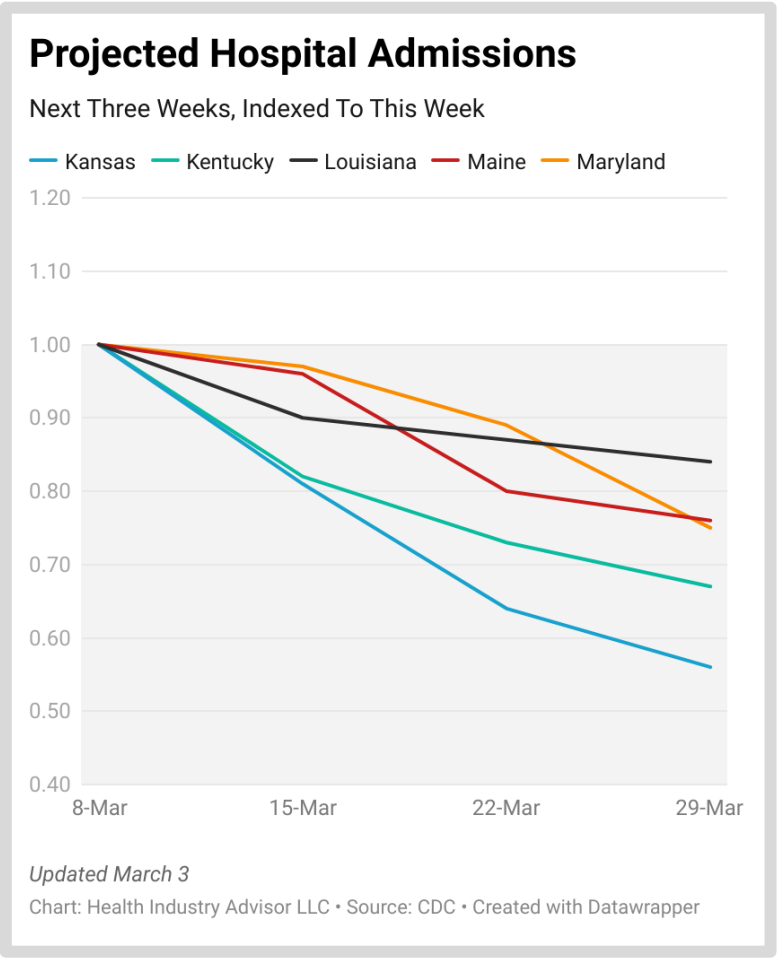
Projections of Hospital Admissions (US) – 2 of 5

Projected hospital admissions decline over the next few weeks in every state, in most cases by 25% or more.





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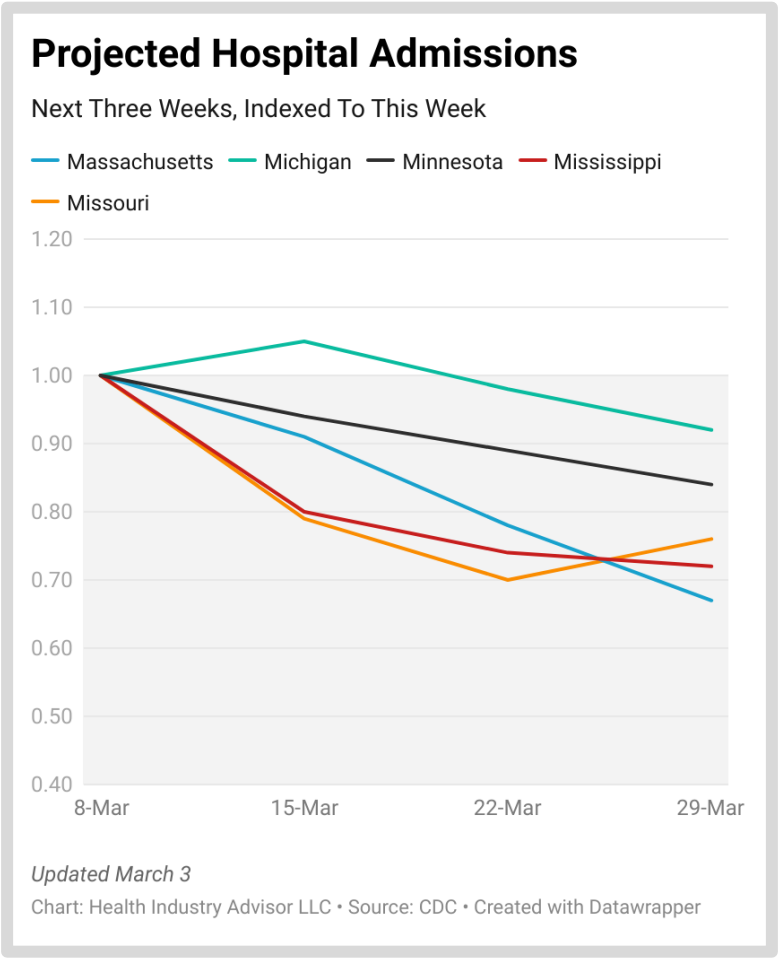
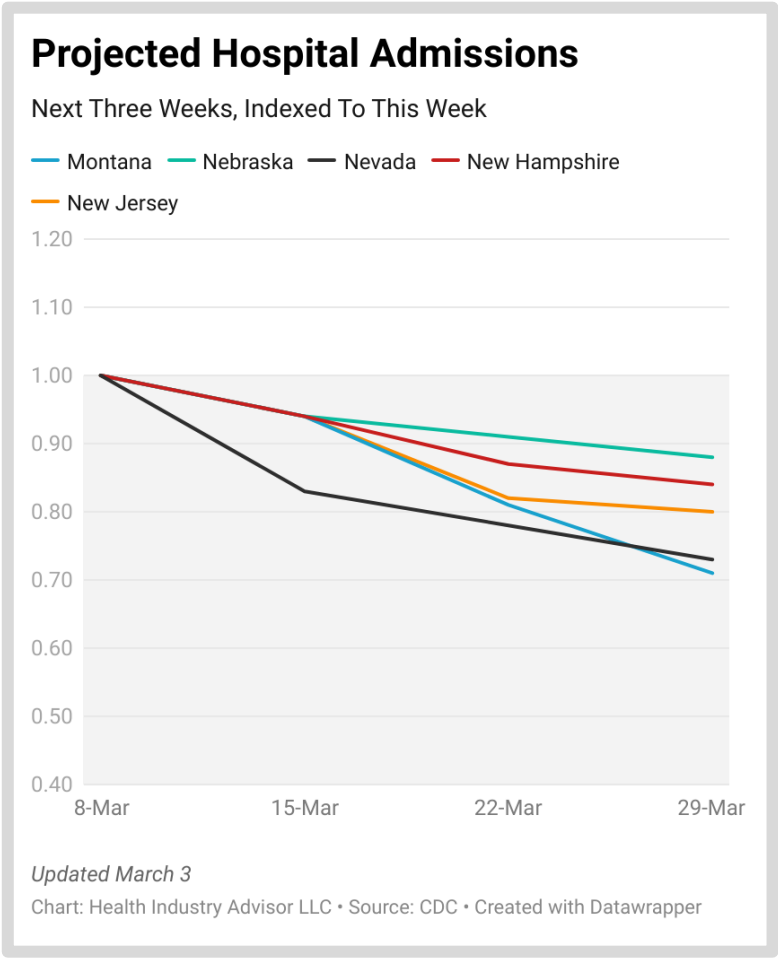
Projections of Hospital Admissions (US) – 3 of 5

Projected hospital admissions decline over the next few weeks in every state, in most cases by 25% or more.





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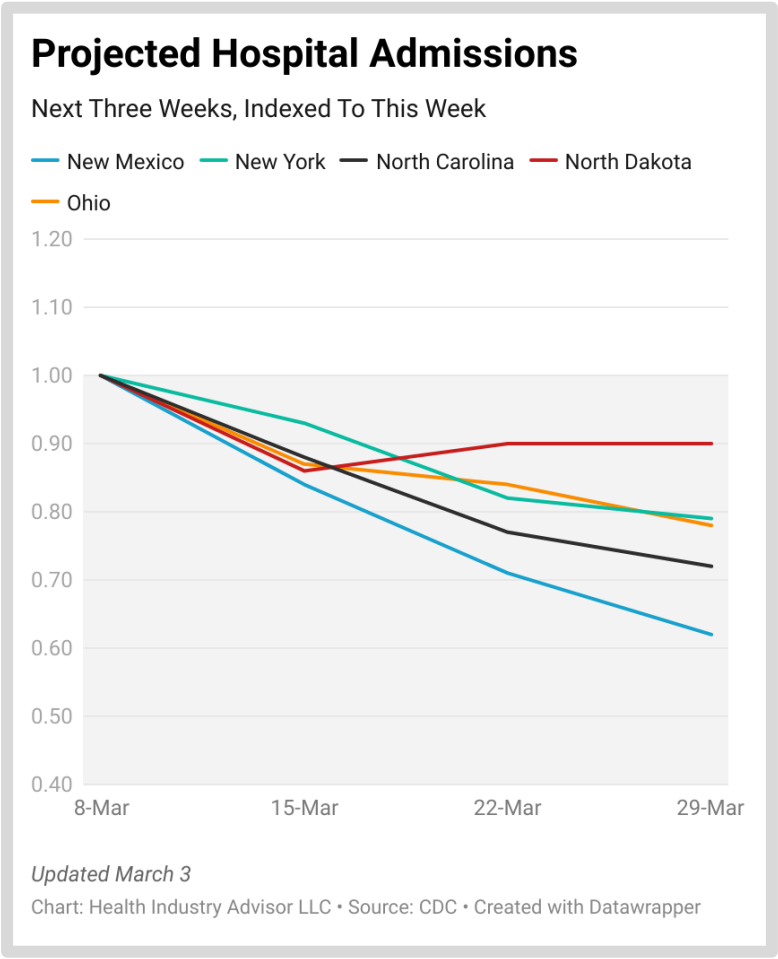
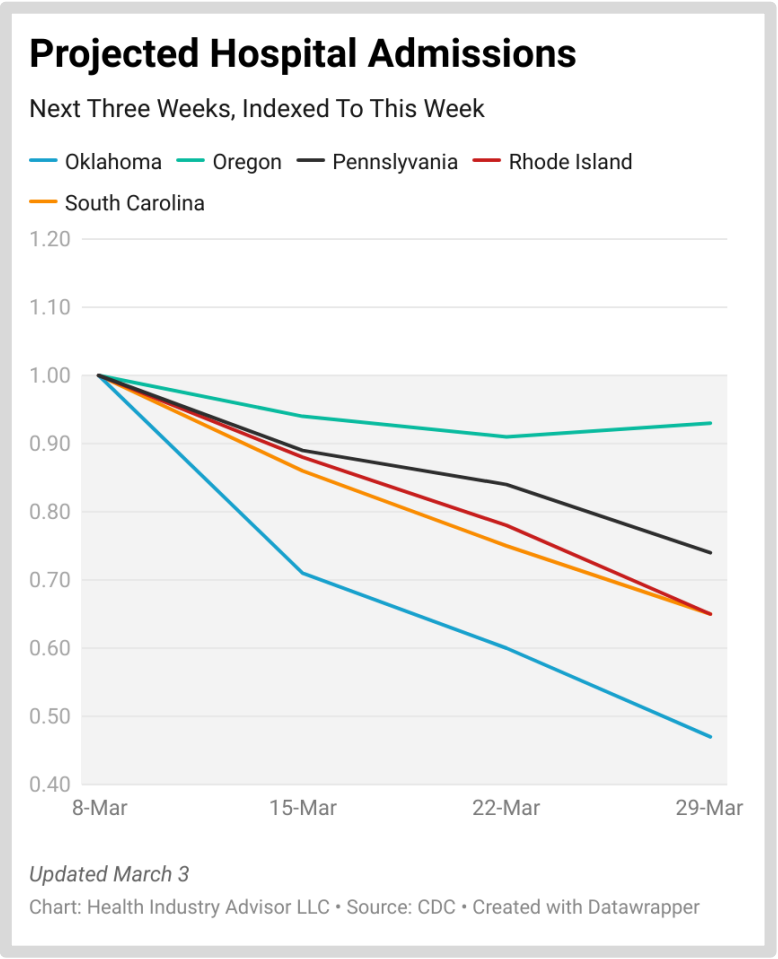
Projections of Hospital Admissions (US) - 4 of 5

Projected hospital admissions decline over the next few weeks in every state, in most cases by 25% or more.





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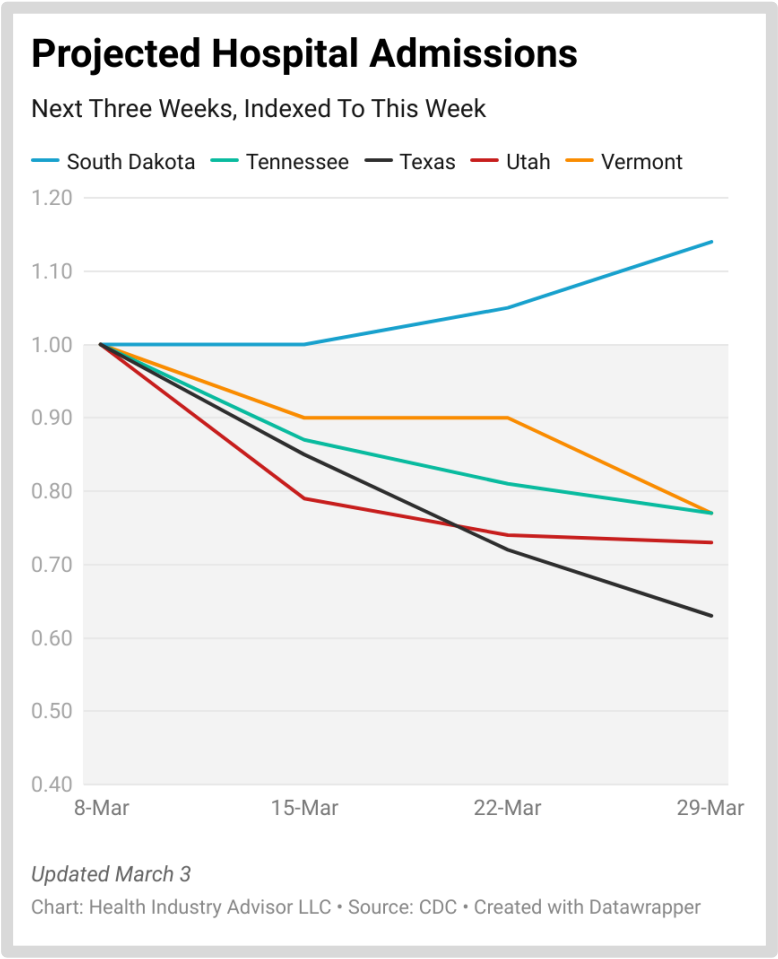
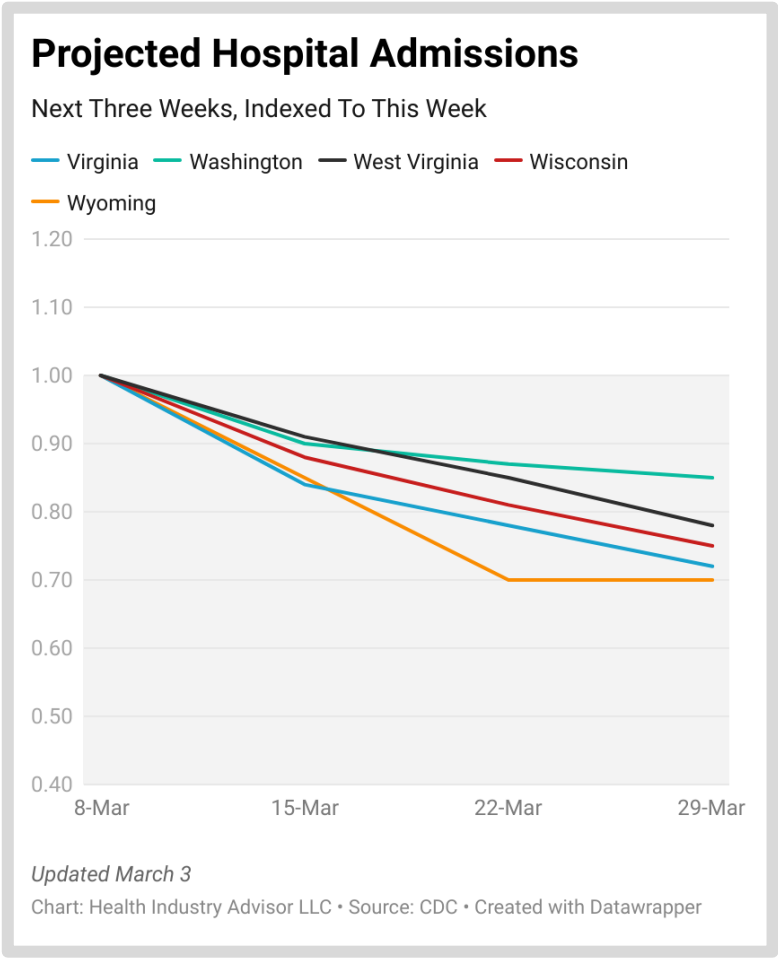
Projections of Hospital Admissions (US) – 5 of 5

Projected hospital admissions decline over the next few weeks in every state, in most cases by 25% or more.





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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	Week-Over-Week Change in New Cases	7-Day Deaths /1000 New Cases , 14-Day Lag
Alabama	10.2%	2,059	1,020	19.9%	203	5	10%	3%	39
Alaska	7.8%	409	10,436	1.6%	168	62	5%	-2%	14
Arizona	11.3%	2,224	4,437	3.6%	161	28	18%	-23%	33
Arkansas	10.7%	1,747	4,331	6.2%	267	16	8%	53%	-36
California	9.1%	1,353	4,821	2.1%	173	28	19%	16%	40
Colorado	7.5%	1,037	4,735	4.4%	207	23	7%	15%	6
Connecticut	8.0%	2,158	8,469	2.5%	214	40	25%	-26%	15
Delaware	9.0%	1,483	6,175	4.4%	270	23	24%	-6%	19
District Of Columbia	5.8%	1,451	6,510	2.8%	181	36	12%	9%	25
Florida	9.0%	1,462	3,936	6.3%	252	16	18%	-11%	21
Georgia	9.6%	1,672	2,070	13.0%	270	8	26%	-3%	25
Hawaii	2.0%	311	5,083	0.8%	34	148	3%	-5%	18
Idaho	9.6%	1,047	641	24.9%	159	4	8%	2%	15
Illinois	9.4%	1,807	5,566	2.4%	136	41	8%	-4%	23
Indiana	9.9%	1,881	4,904	2.3%	113	43	8%	-23%	23
Iowa	11.6%	1,755	586	19.4%	166	4	4%	-8%	6
Kansas	10.2%	1,653	784	14.2%	136	6	4%	-22%	20
Kentucky	9.1%	1,059	2,421	8.8%	214	11	10%	-26%	21

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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	Week-Over-Week Change in New Cases	7-Day Deaths /1000 New Cases , 14-Day Lag
Louisiana	9.3%	2,084	4,114	3.6%	149	28	8%	-17%	28
Maine	3.4%	524	2,795	4.2%	118	24	7%	8%	4
Maryland	6.4%	1,310	5,349	2.3%	125	43	22%	-4%	19
Massachusetts	8.4%	2,343	12,903	1.6%	212	61	15%	-14%	24
Michigan	6.5%	1,661	3,302	4.2%	139	24	9%	9%	20
Minnesota	8.6%	1,168	4,872	2.9%	140	35	5%	0%	13
Mississippi	10.0%	2,273	1,274	12.6%	160	8	8%	2%	31
Missouri	8.5%	1,423	1,842	3.1%	93	20	13%	9%	39
Montana	9.4%	1,287	3,894	3.7%	145	27	4%	-19%	20
Nebraska	10.4%	1,081	4,153	3.3%	138	30	5%	-10%	10
Nevada	9.6%	1,625	2,303	4.9%	113	20	18%	-11%	21
New Hampshire	5.6%	866	3,969	4.3%	169	23	9%	-26%	5
New Jersey	9.0%	2,645	5,854	6.5%	381	15	24%	16%	16
New Mexico	8.9%	1,797	5,895	2.4%	141	42	10%	-11%	41
New York	8.8%	2,483	12,047	3.1%	387	31	40%	-0%	15
North Carolina	8.3%	1,087	3,322	6.2%	205	16	18%	-23%	11

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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	13.1%	1,900	3,101	3.4%	106	29	1%	-4%	10
Ohio	8.3%	1,484	3,056	4.8%	148	21	7%	-20%	14
Oklahoma	10.8%	1,146	3,500	4.6%	162	22	7%	-21%	33
Oregon	3.7%	542	8,848	0.9%	72	123	6%	-25%	30
Pennsylvania	7.4%	1,900	3,624	5.7%	206	18	11%	9%	17
Rhode Island	12.1%	2,397	15,969	2.1%	343	47	19%	9%	17
South Carolina	10.1%	1,682	4,629	6.0%	278	17	16%	-39%	12
South Dakota	12.8%	2,143	795	22.4%	178	4	5%	1%	24
Tennessee	11.4%	1,683	-516	-34.5%	178	-3	12%	-12%	19
Texas	9.3%	1,552	2,002	12.4%	248	8	18%	-1%	42
Utah	11.6%	613	2,516	5.8%	173	15	9%	-23%	13
Vermont	2.5%	332	14,034	1.4%	194	72	5%	22%	4
Virginia	6.8%	1,096	2,373	7.4%	174	14	21%	-20%	83
Washington	4.5%	670	2,868	3.7%	100	29	9%	-7%	14
West Virginia	7.4%	1,292	4,862	3.1%	149	33	6%	-9%	8
Wisconsin	9.7%	1,111	4,493	2.6%	90	50	5%	-17%	16
Wyoming	9.4%	1,178	3,099	3.8%	119	26	2%	-28%	20

Table: Health Industry Advisor LLC • Created with Datawrapper

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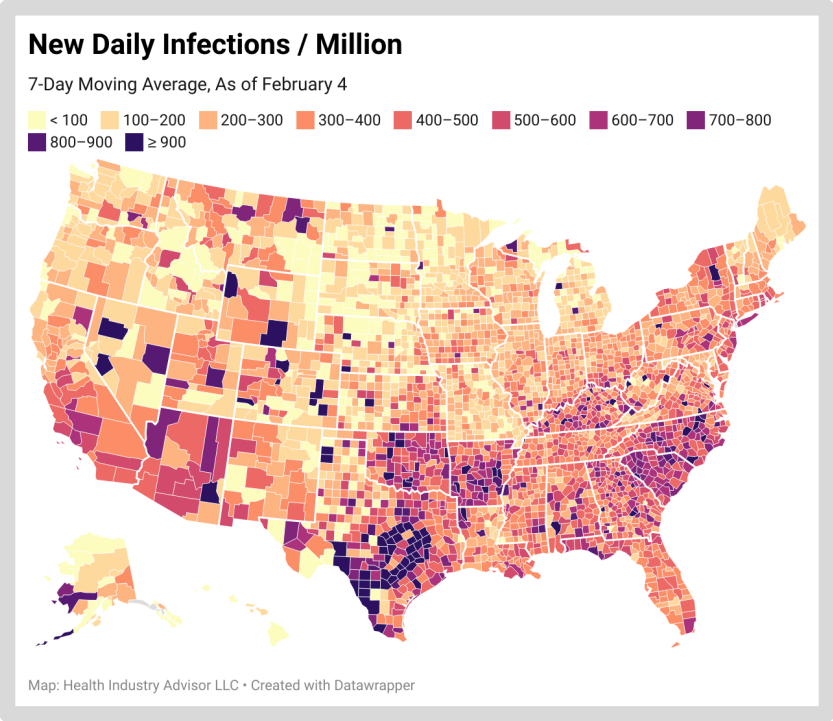
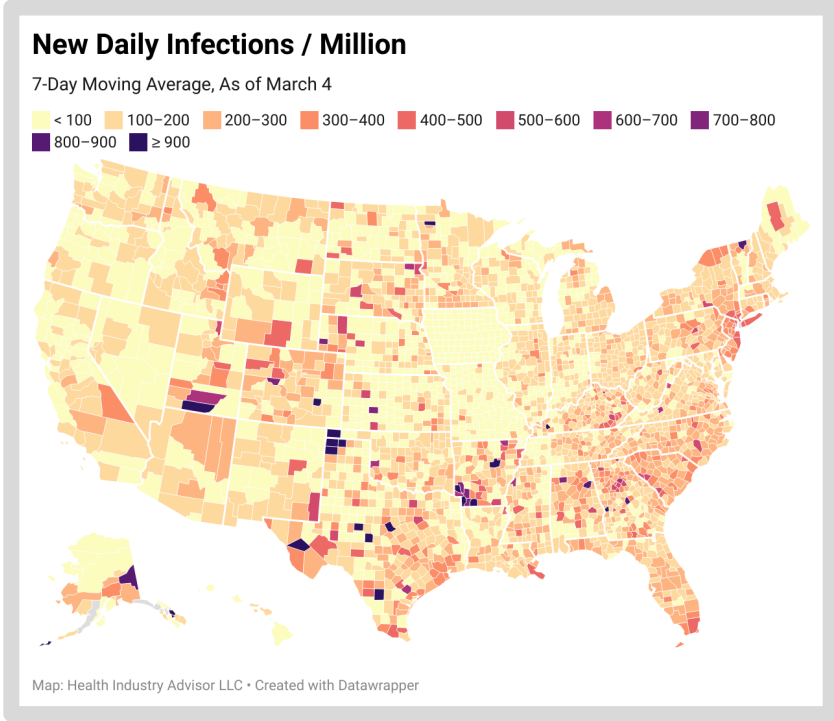
"Vital Signs"

Metro Areas in the US

The improved case rate over the past month can be seen at the Metro Area-level

February 4	March 4





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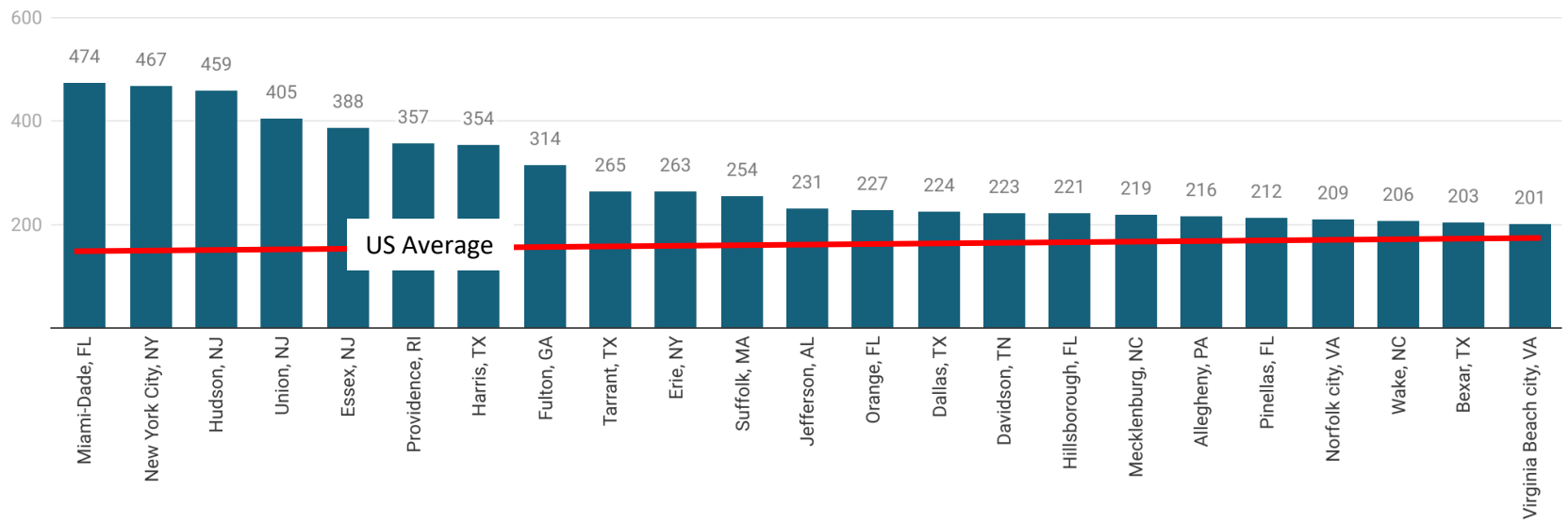
Large Central Metro Areas

Miami-Dade, Florida, New York City, and Hudson, New Jersey lead all Large Central Metro Areas in 7-day new cases per capita.



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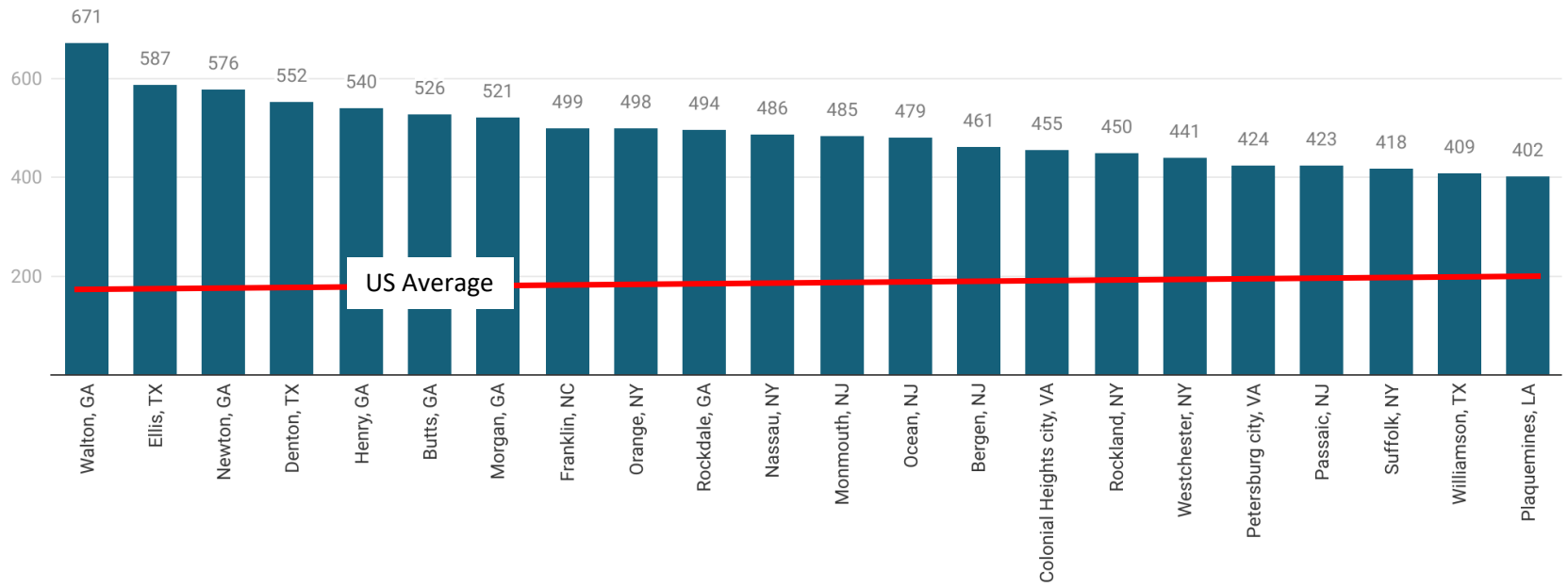
Large Fringe Metro Areas

Among Large Fringe areas, several Georgia and New Jersey countries experienced high case rates this week.



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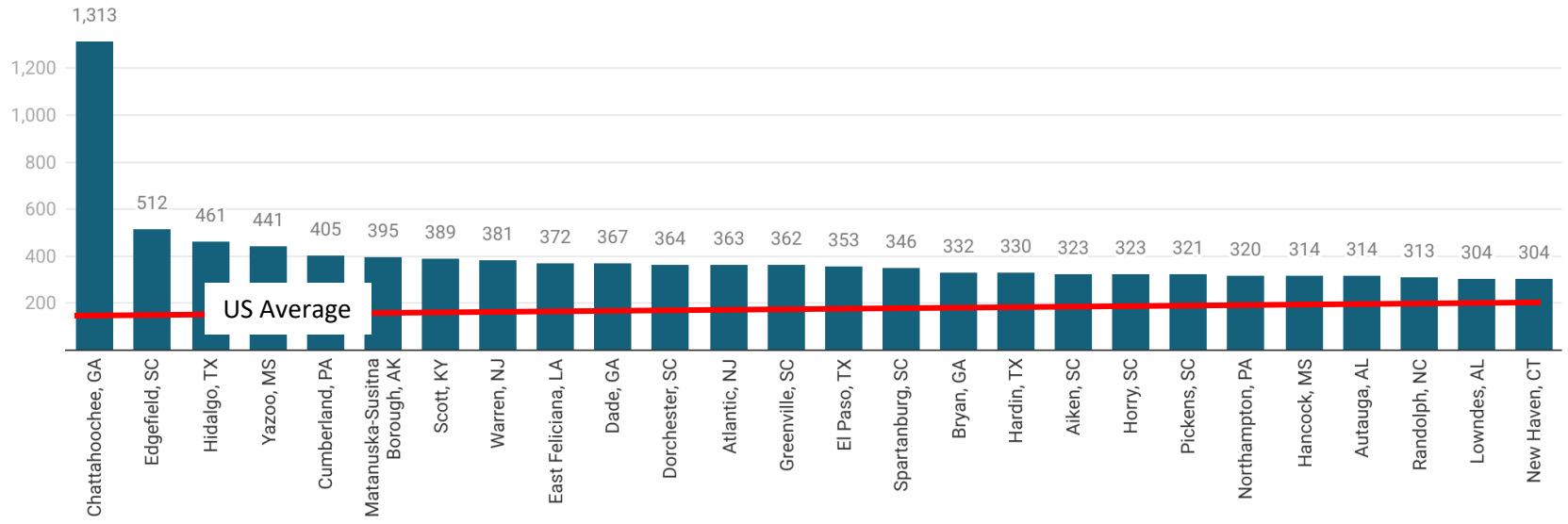
Medium Metro Areas in the US



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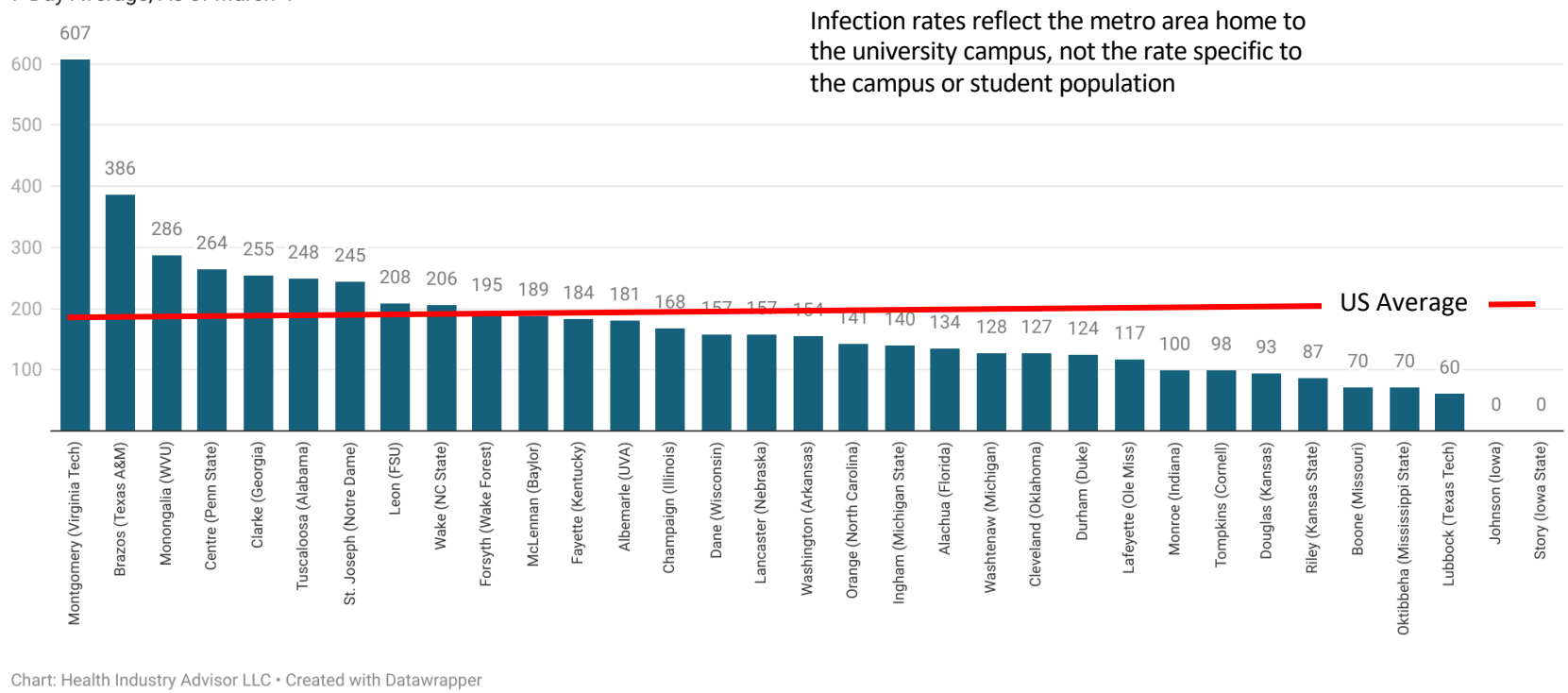
Metro Areas With Major Universities

Montgomery County County, home to Virginia Tech, reported the highest new case rate of the 33 such areas we track.



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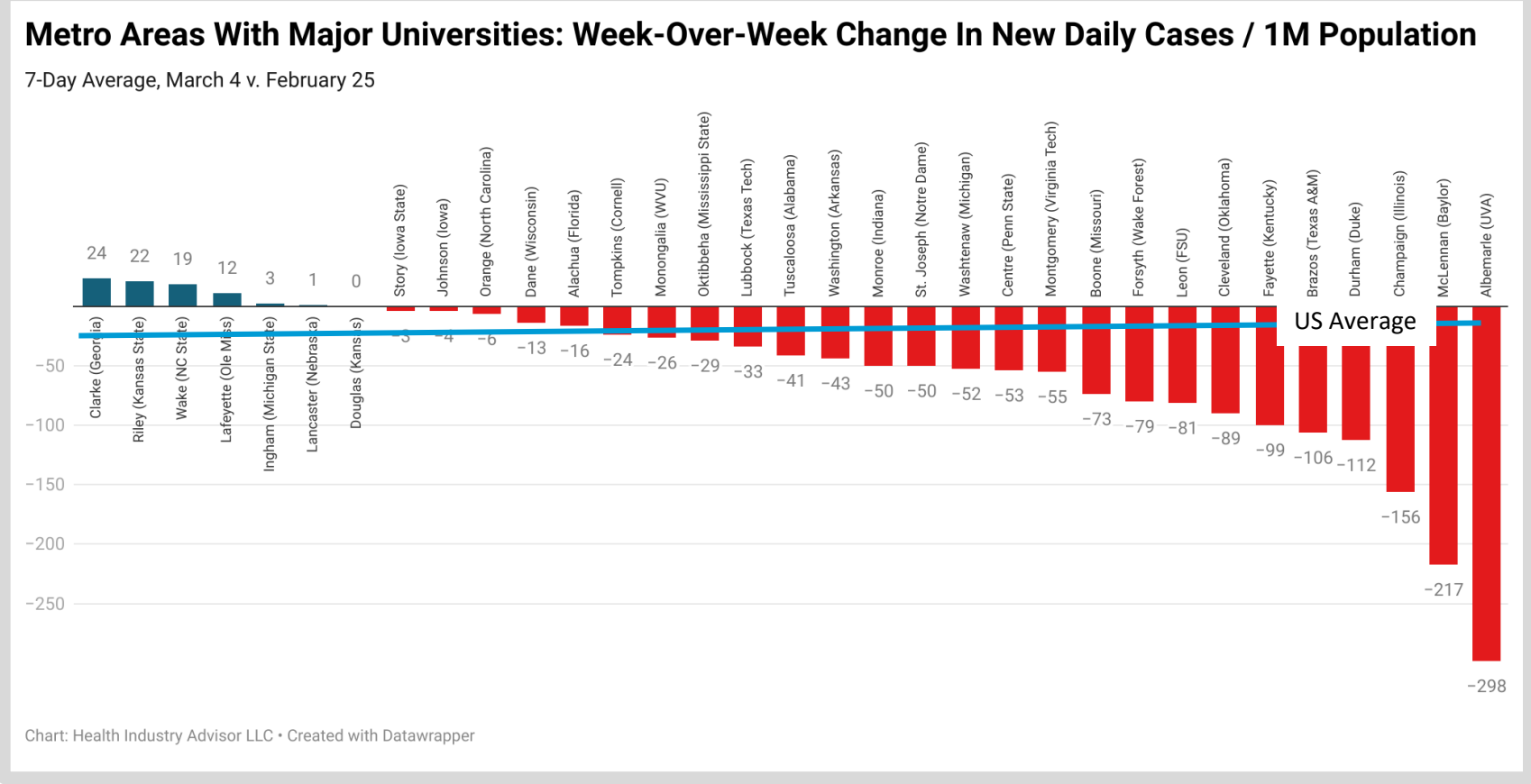
Metro Areas With Major Universities

Most of the University-based metro areas we track saw declining case rates over the past week.



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Sources

The following data sources are accessed on a daily or weekly basis

- The Atlantic's Covid Tracking Project: https://covidtracking.com
- 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
- Covid-19 Forecast Hub, https://viz.covid19forecasthub.org
- Oliver Wyman Pandemic Navigator, https://pandemicnavigator.oliverwyman.com/forecast?mode=country&region=United%20States&panel=mortality
- Rt.live
- 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=Z0b6TmHW

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