Health Industry Advisor, llc

"Strategic Advice in an Era of Unprecedented Change"

Covid-19 "Vital Signs"

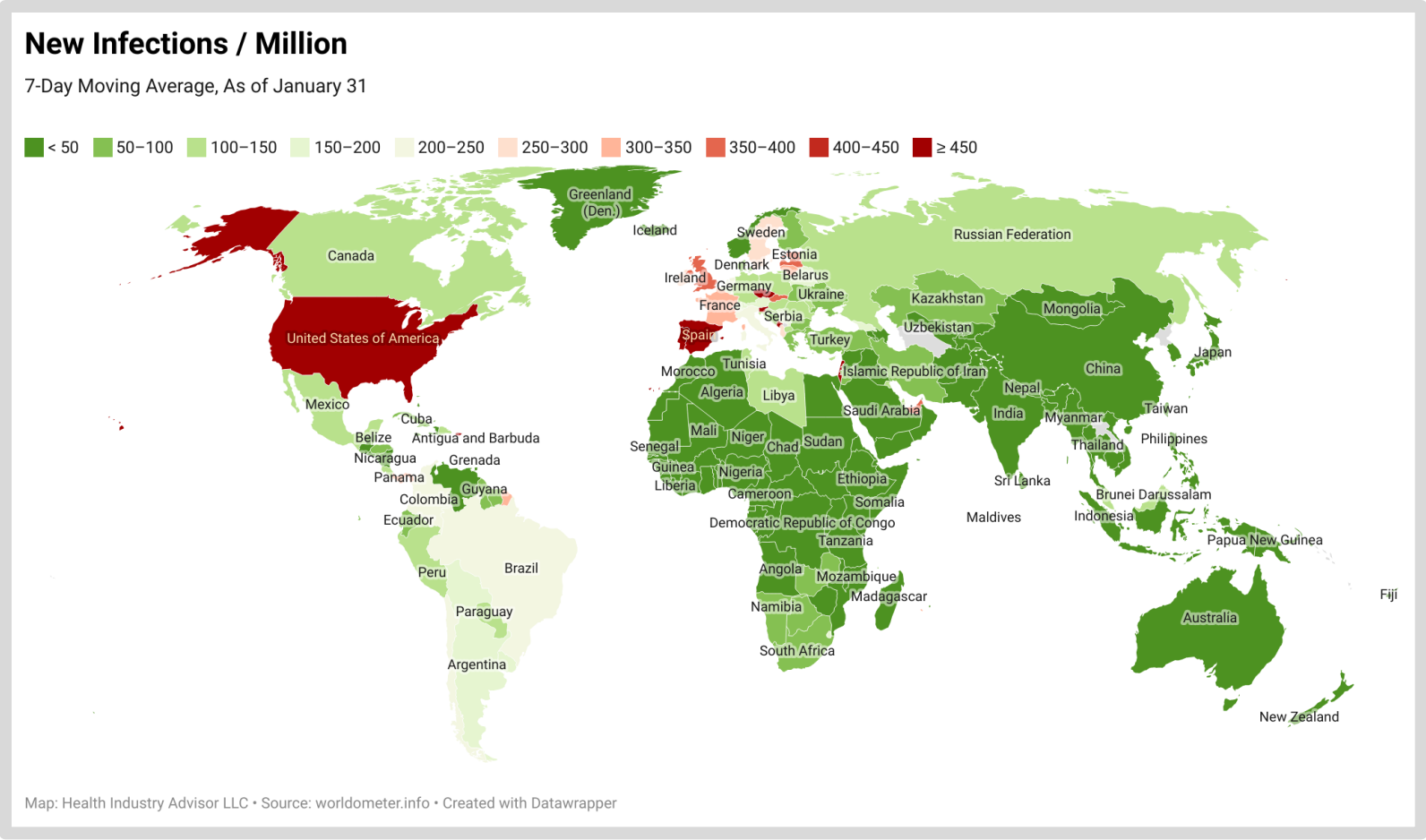
Issue # 293

March 1, 2021

Covid-19
"Vital Signs"

7-Day New Infections / Million: January 31

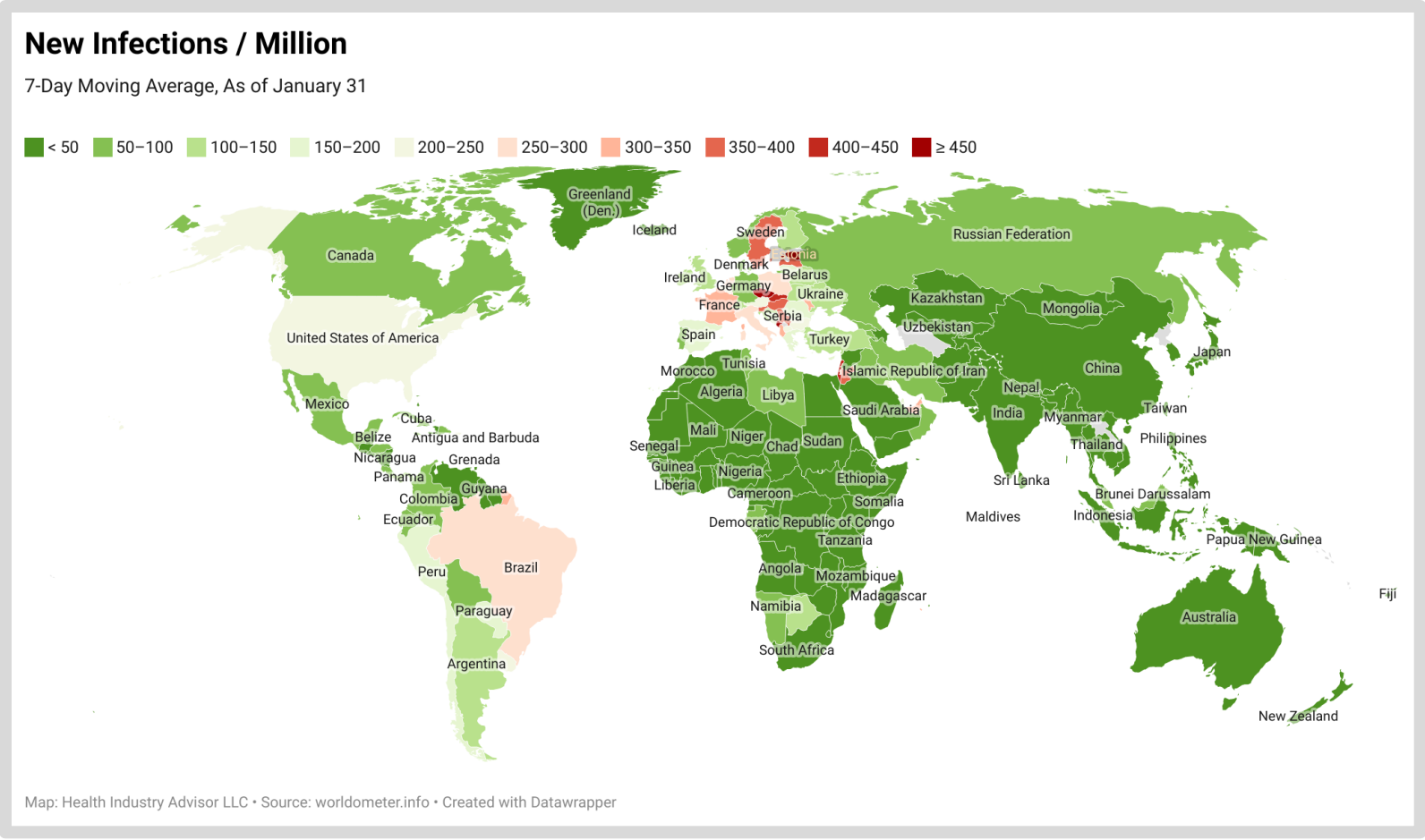
At of the end of January, Spain and the United States were struggling with high new infection rates.



Covid-19
"Vital Signs"

7-Day New Infections / Million: February 28

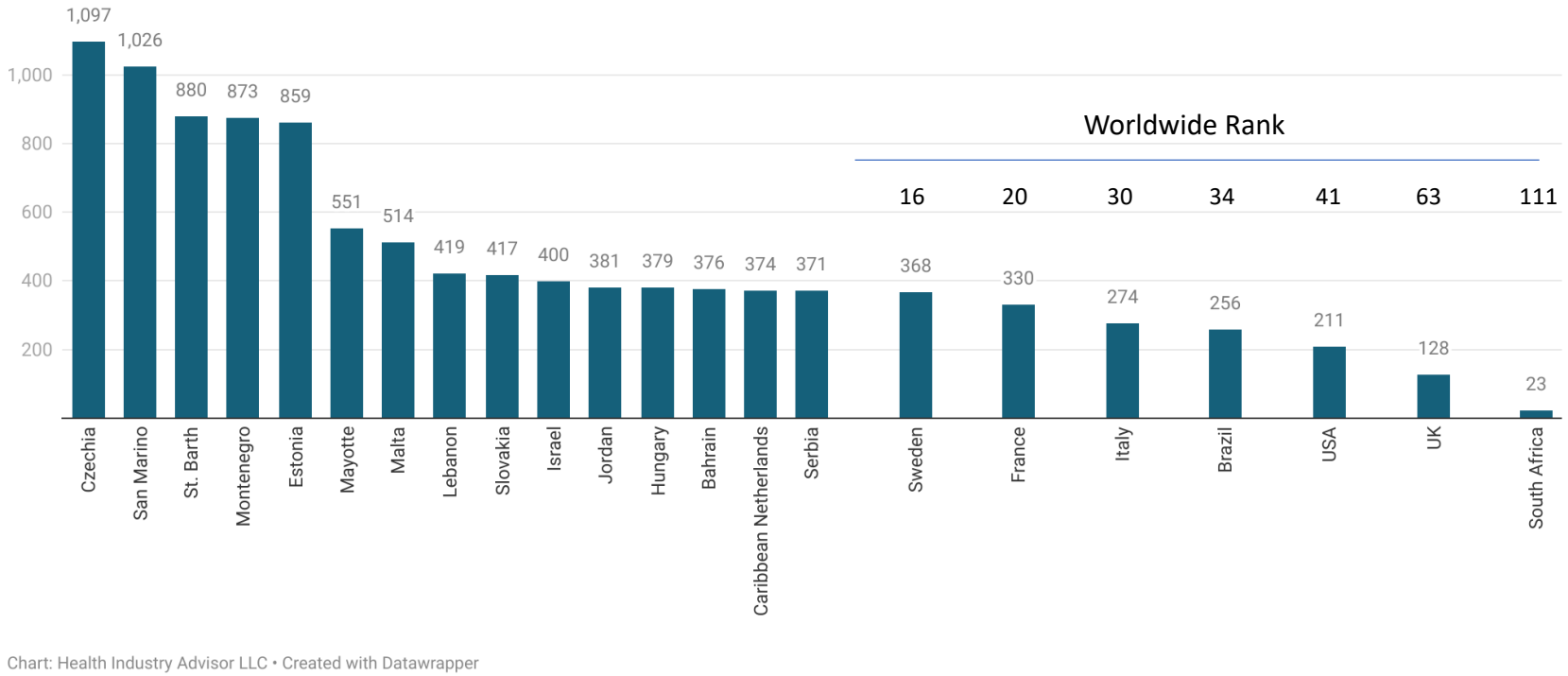
By the end of February, infection rates cooled in Spain and the United States but increased in Brazil.



Covid-19
"Vital Signs"

Highest Current Case Rates Worldwide

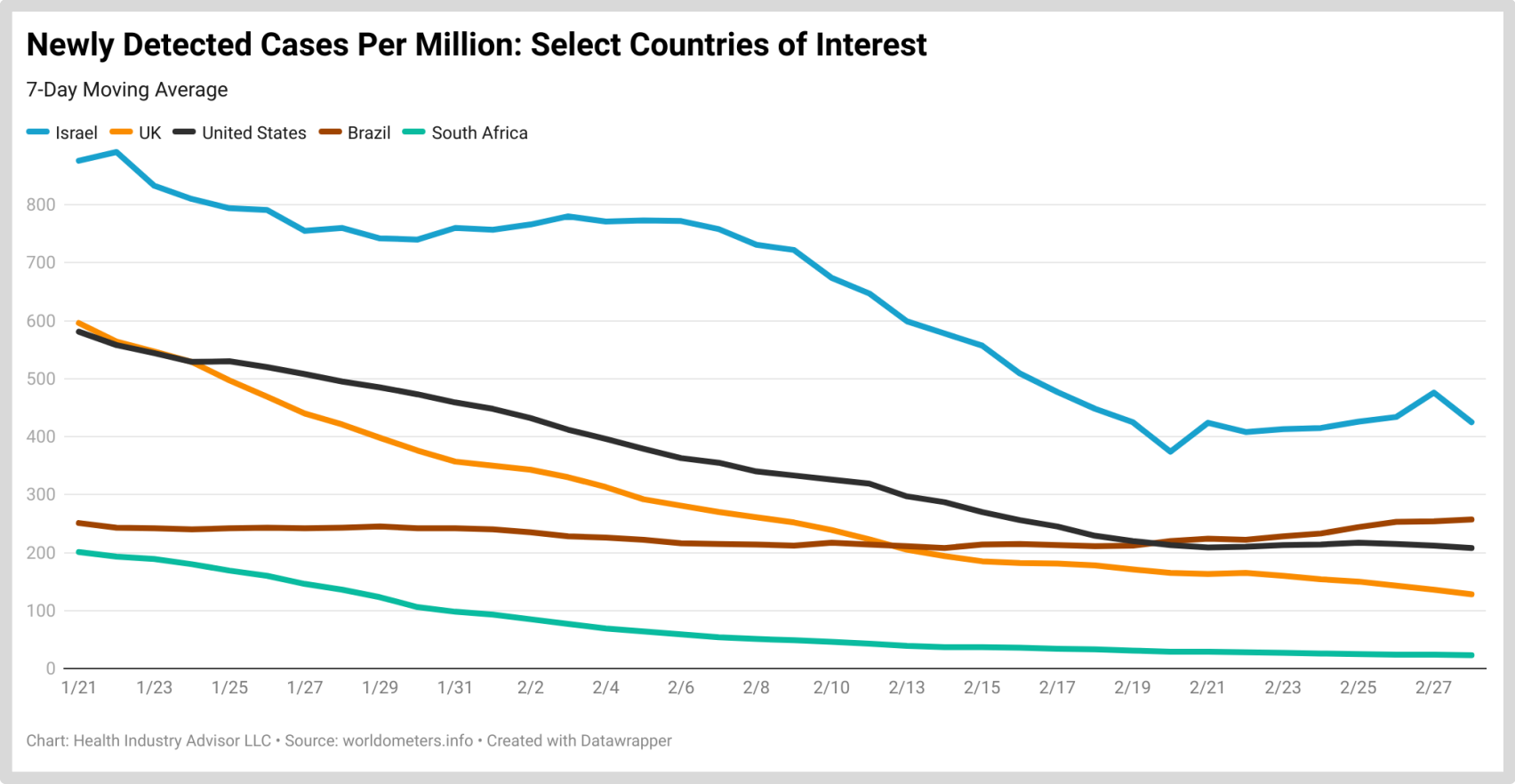
The US ranks 41st worldwide in new daily cases per capita. Brazil, the United Kingdom, and South Africa, despite new variant concerns, rank 34th, 63rd, and 111th, respectively.



Covid-19
"Vital Signs"

Newly Detected Cases / Million

Case rates defy concerns about emerging variants in the countries of origin: South Africa and the UK report relatively low and declining rates. Brazil's rate is increasing yet remains relatively moderate. Israel's rate had fallen sharply until turning up slightly about a week ago

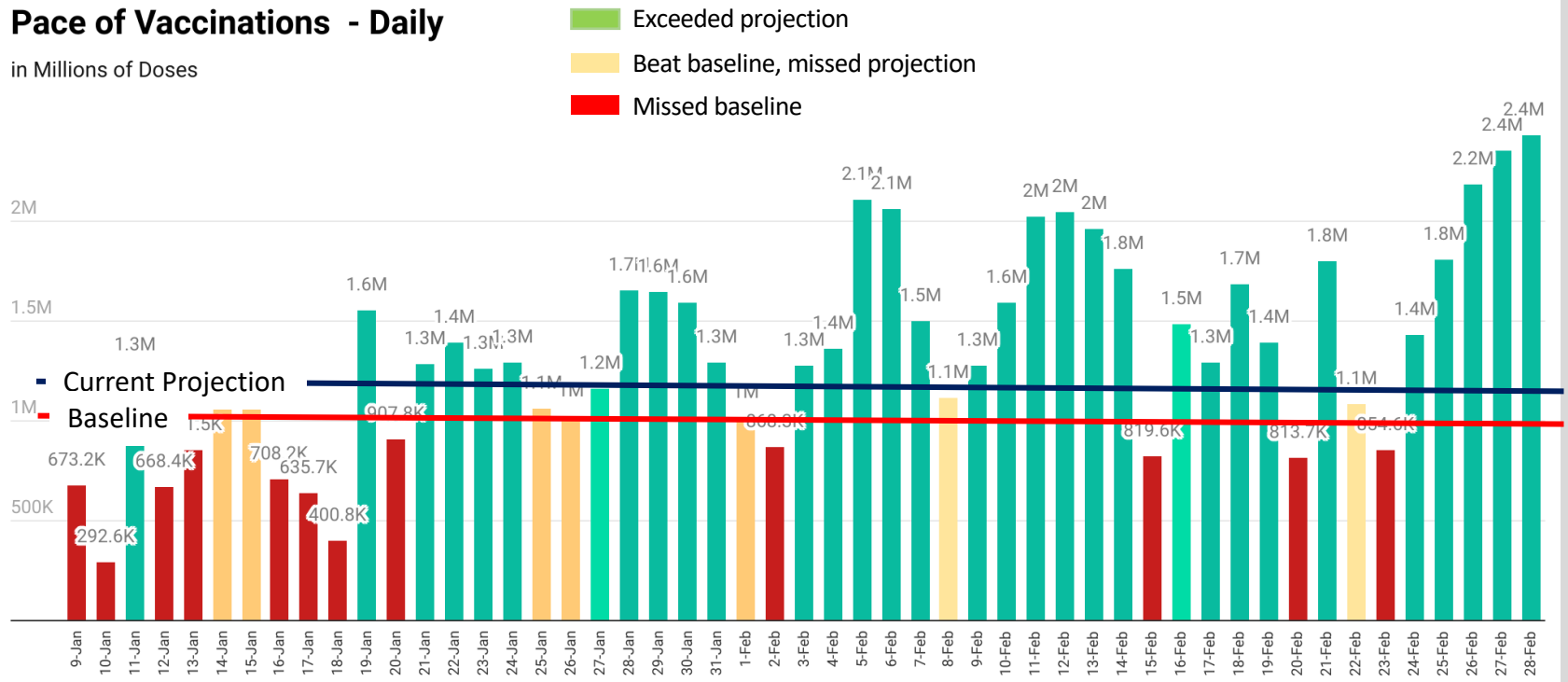


Health Industry Advisor, llc

Covid-19
"Vital Signs"

Pace of Vaccinations

Vaccinations accelerated over the past five days, as earlier logistical issues eased. The US jabbed more than 2 million people each of the past three 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

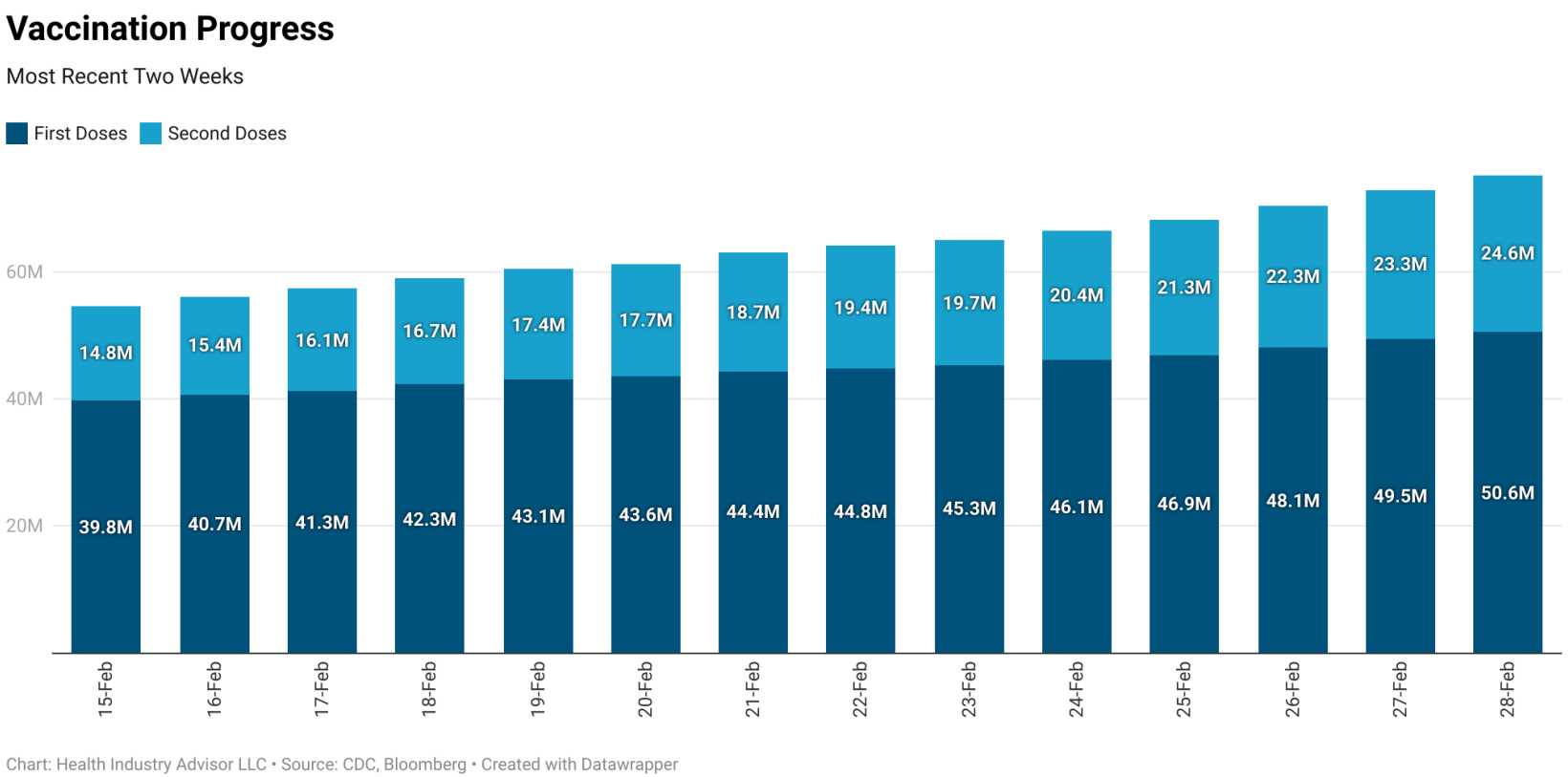
Chart: Health Industry Advisor LLC • Source: Bloomberg • Created with Datawrapper

"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

Covid-19 "Vital Signs"

Vaccine Tracking

To date, the US has administered 75 million doses, with 24.6 million people jabbed twice. As of yesterday, just less than 20% of U.S. adults have received at least one dose; nearly 10% have received two.

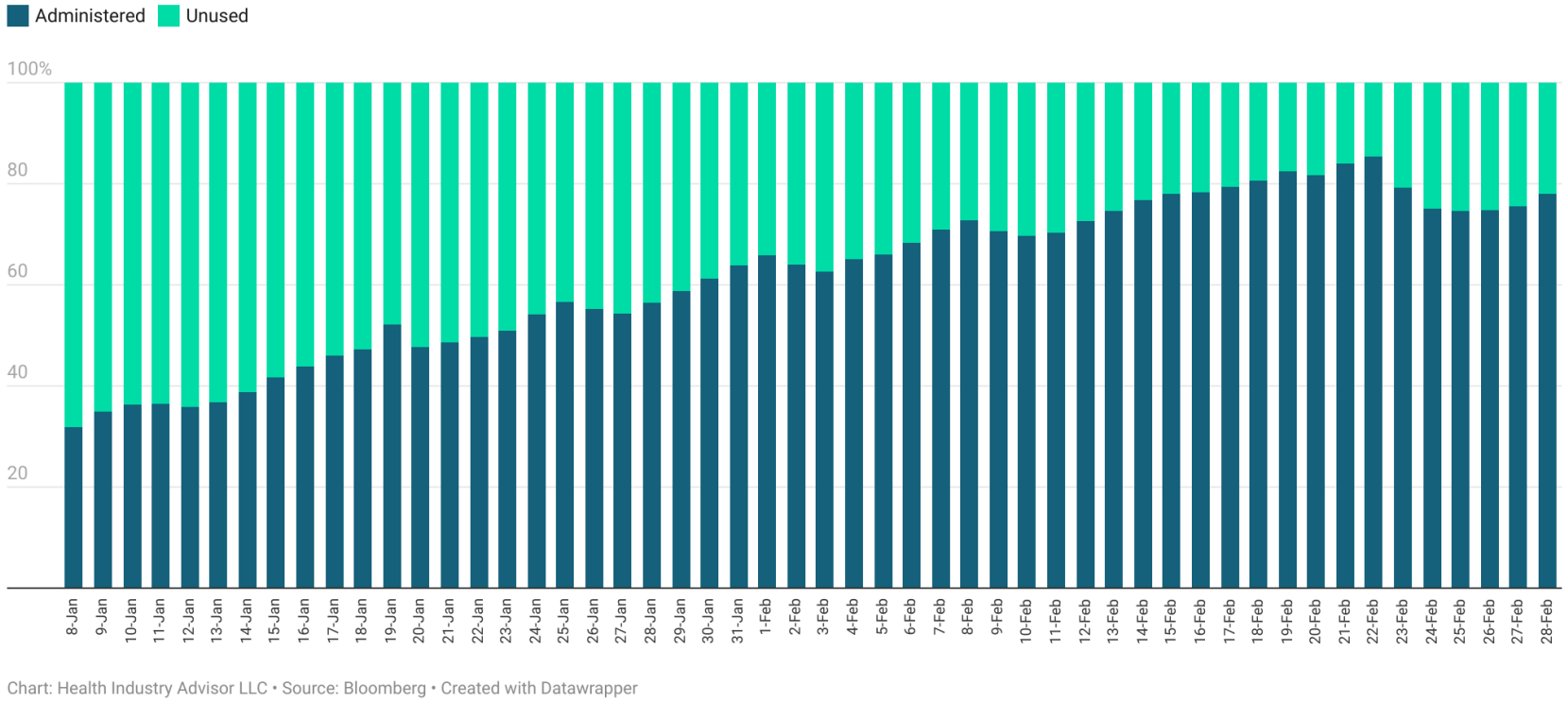


Vaccine data from: Centers for Disease Control and Prevention and Bloomberg Vaccine Tracker

Covid-19
"Vital Signs"

Vaccines Distributed v. Unused

The US distributed an astounding 21.2 million additional doses in the last five days, rebuilding depleted inventories.



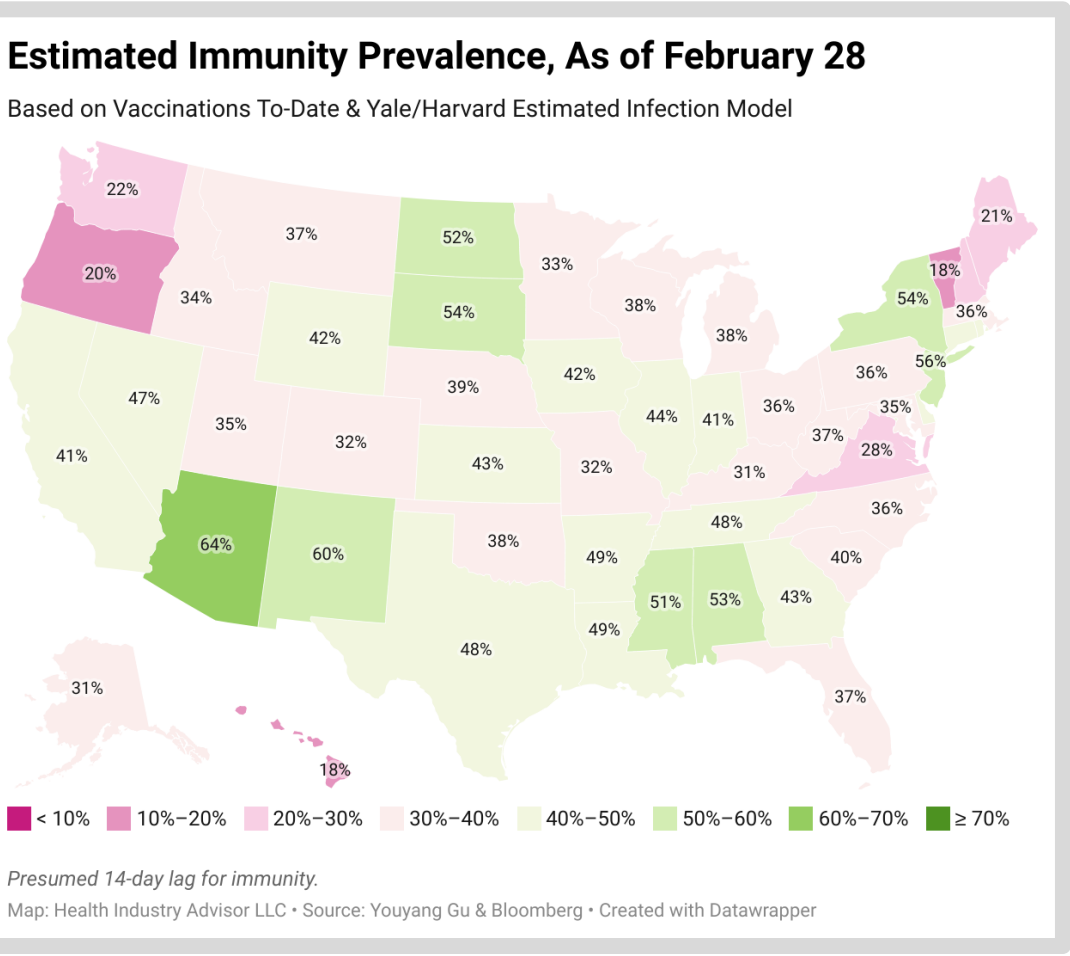
Covid-19 "Vital Signs"

Estimated Immunity By State

Estimated immunity exceeds 50% in eight states – Arizona, Arkansas, Mississippi, New Jersey, New Mexico, New York, North Dakota, and South Dakota.

- 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

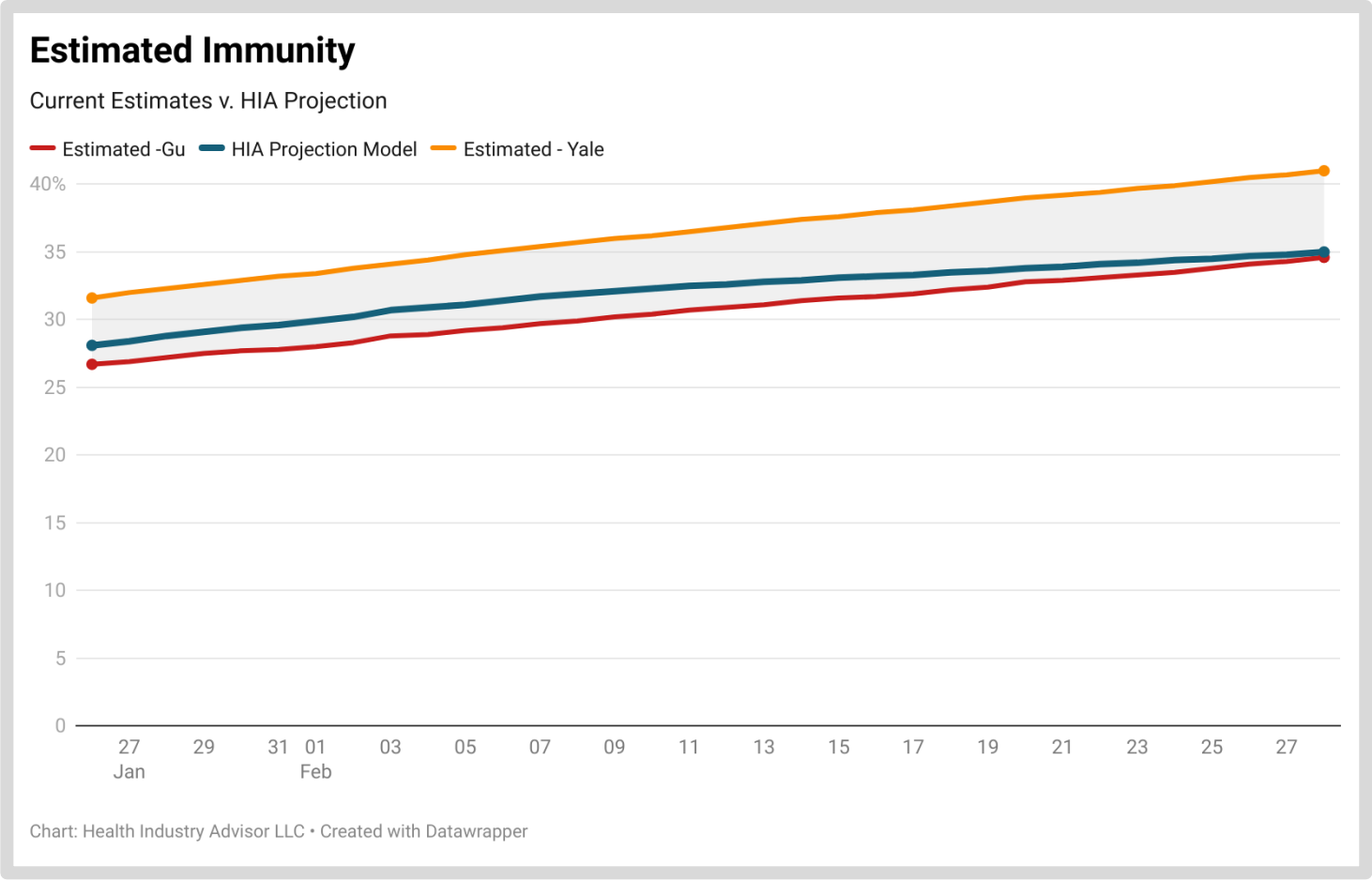


Health Industry Advisor, llc

Covid-19
"Vital Signs"

Immunity: Projected v. Estimated

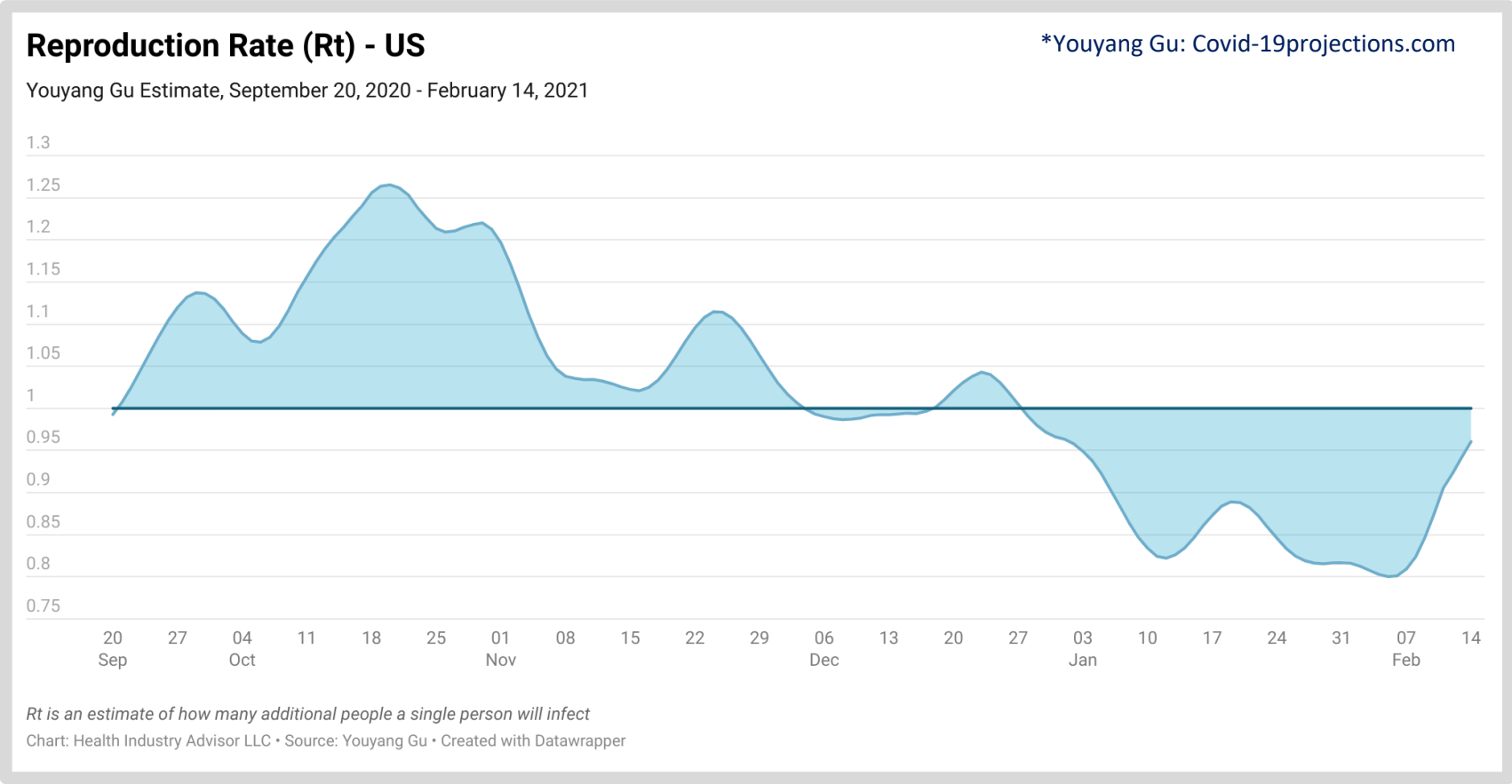
With better-than-anticipated vaccine rates, estimated immunity levels are beginning to outpace our " Current Projection" model. Our model estimates 60% of the U.S. will be immune by May 30 and 70% by July 1.



Covid-19
"Vital Signs"

Reproduction Rate (R_t) – Gu* Model

Gu's R_t estimate signals a prolonged slowdown in infection spread. Of concern, however, Rt is approaching 1.0 as of mid-February.

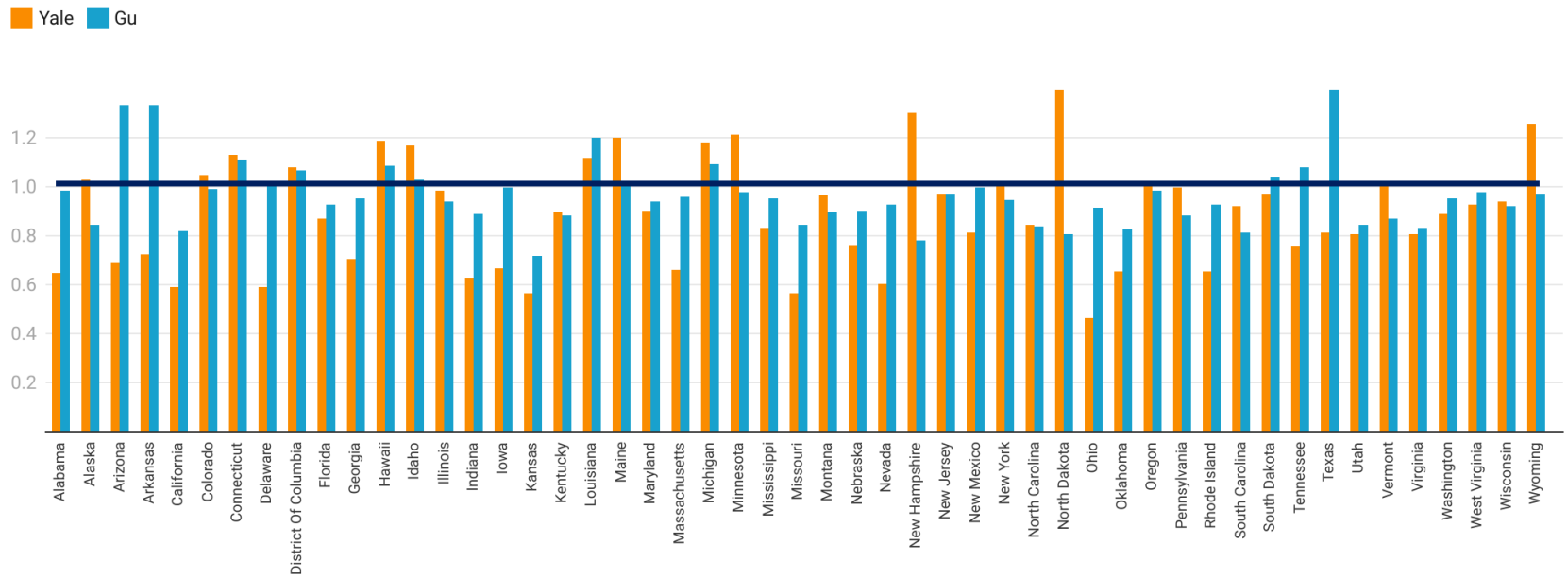


Health Industry Advisor, llc

Covid-19
"Vital Signs"

Reproduction Rate (R_t) Estimates By State

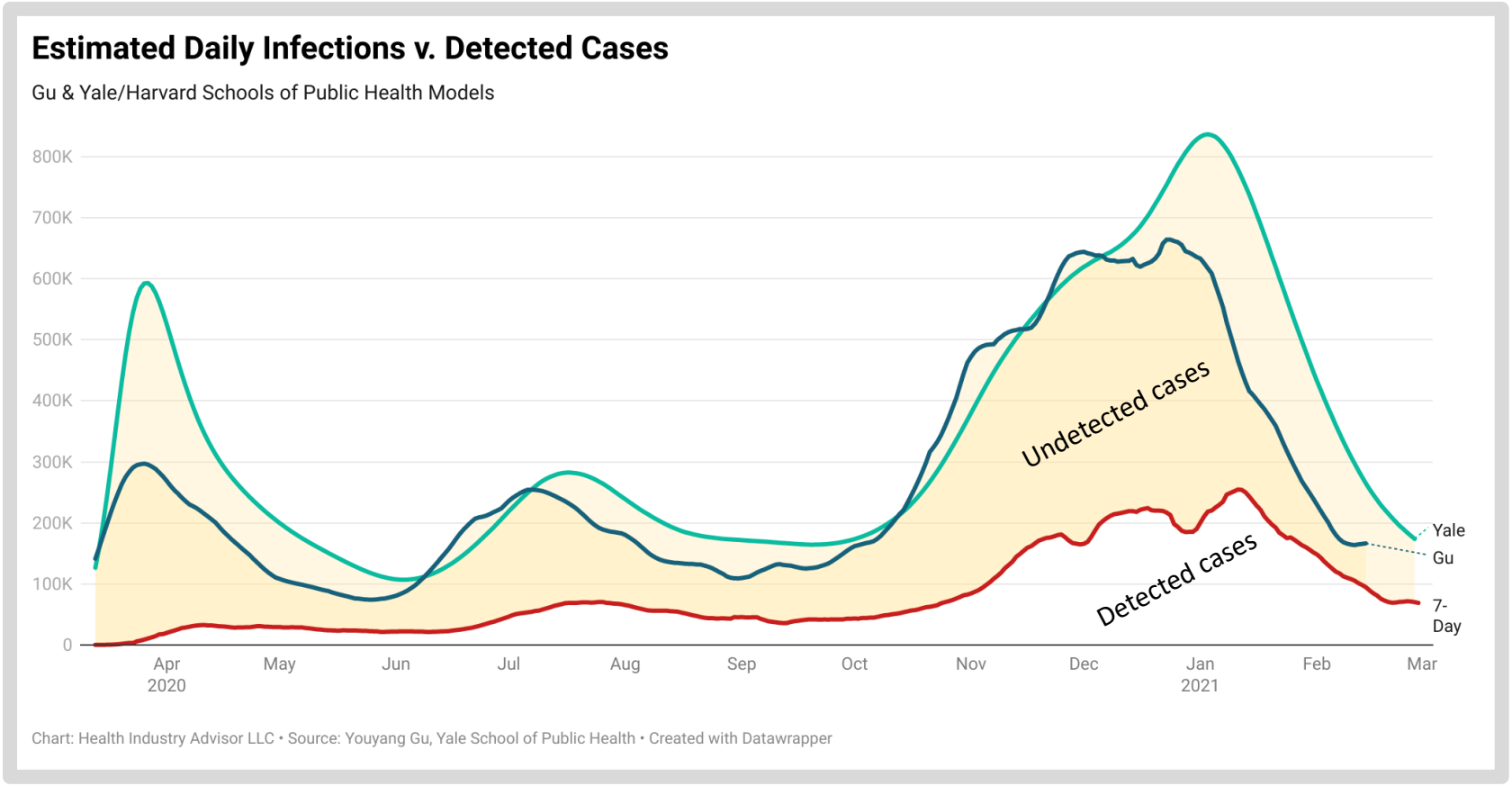
Estimated Reproduction Rates (Rt) signal infection spread across the US. Although using different methods, both Gu and Yale/Harvard agree that spread is slowing in most states. Both models believe that spread is increasing in Connecticut, Hawaii, Idaho, Louisiana, and Michigan.



Estimated Daily Infections & New Case Rates

Covid-19 "Vital Signs"

Estimated new infections and reported cases are plunging in the US. The Yale/Harvard model suggests that the infections have plummeted 80% since peaking in early-January; Gu estimates a 75% decline but, that infections began increasing again in mid-February



Two models:

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

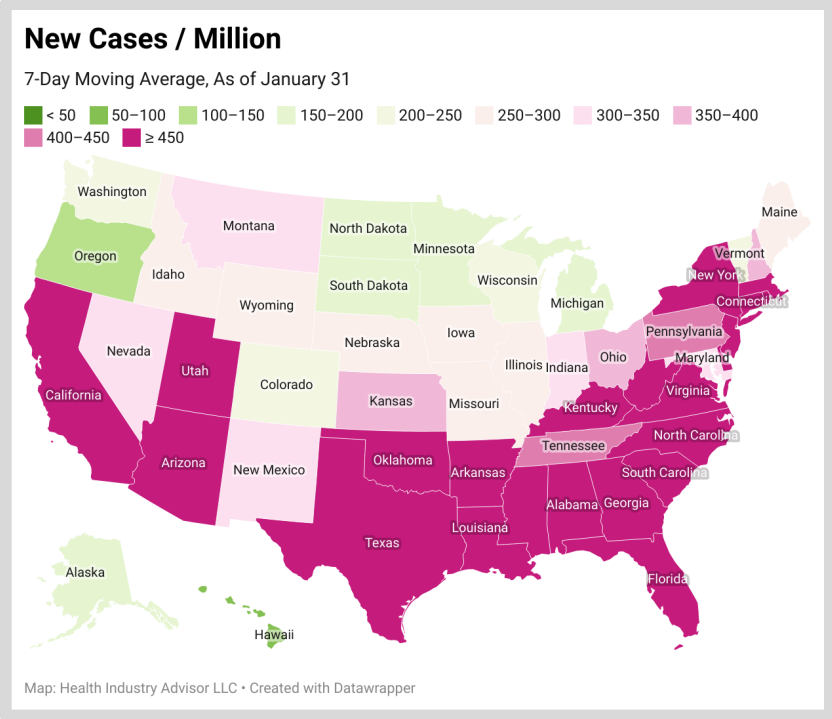
Health Industry Advisor, llc

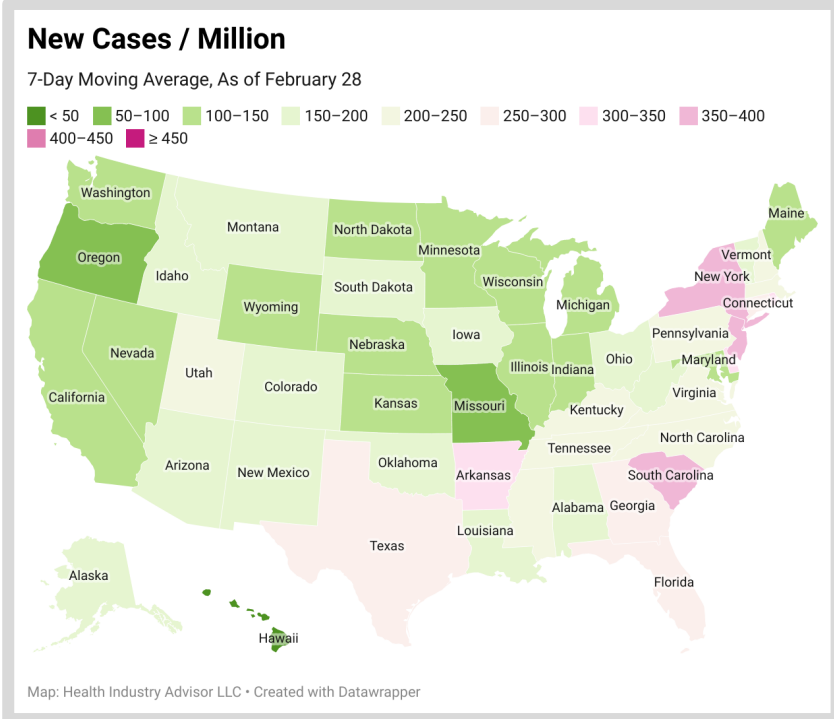
Covid-19
"Vital Signs"

New Cases / Million

Much of the US rebounded from the high infection rates seen last month. For the U.S., yesterday's 7-day rate set an eighteen-week low.

January 31	February 28



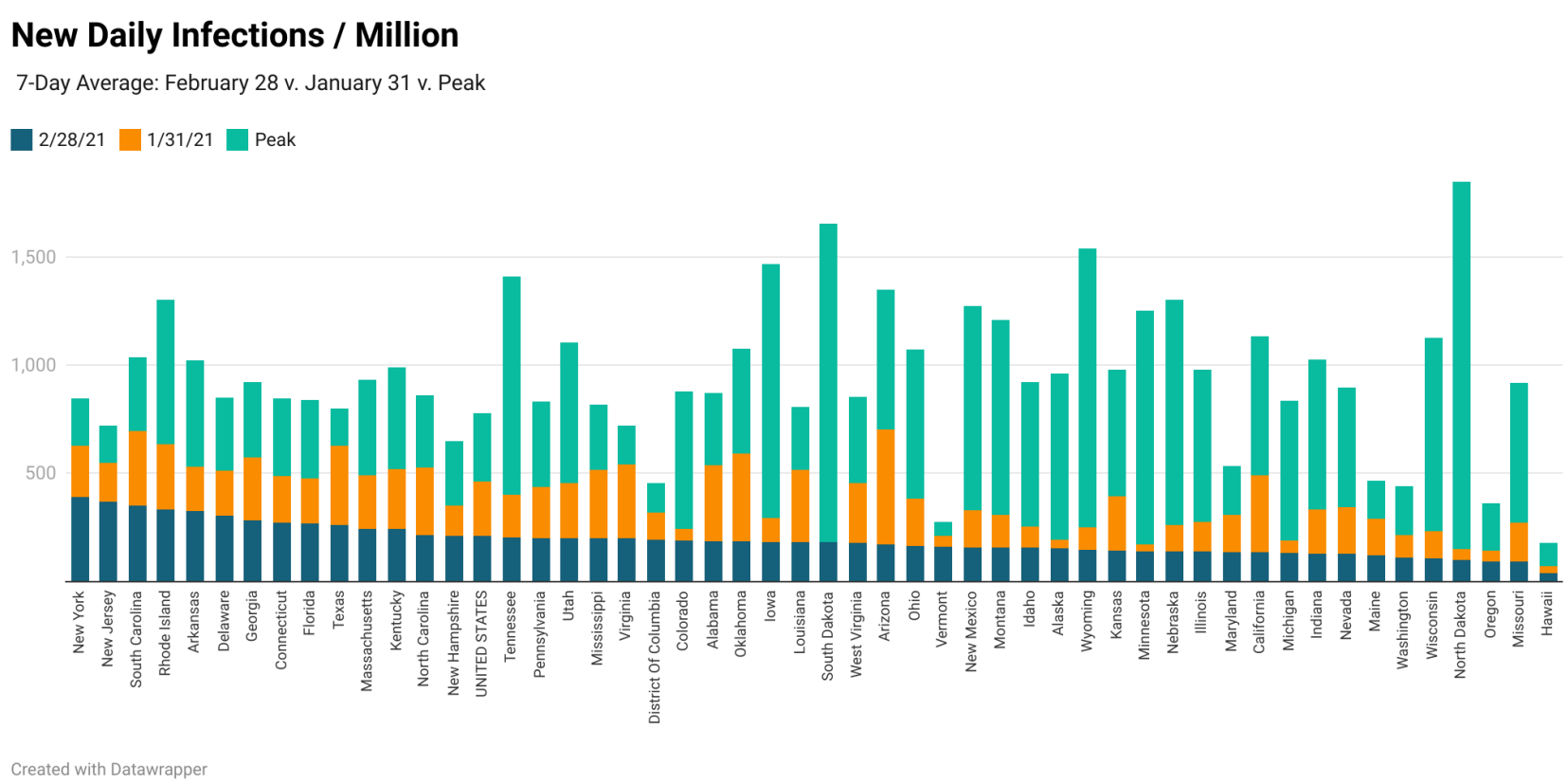


Health Industry Advisor, llc

Covid-19
"Vital Signs"

New Cases / Million

Every state has benefited from lower infection rates over the past month; these rates are materially lower than peak pandemic rates.

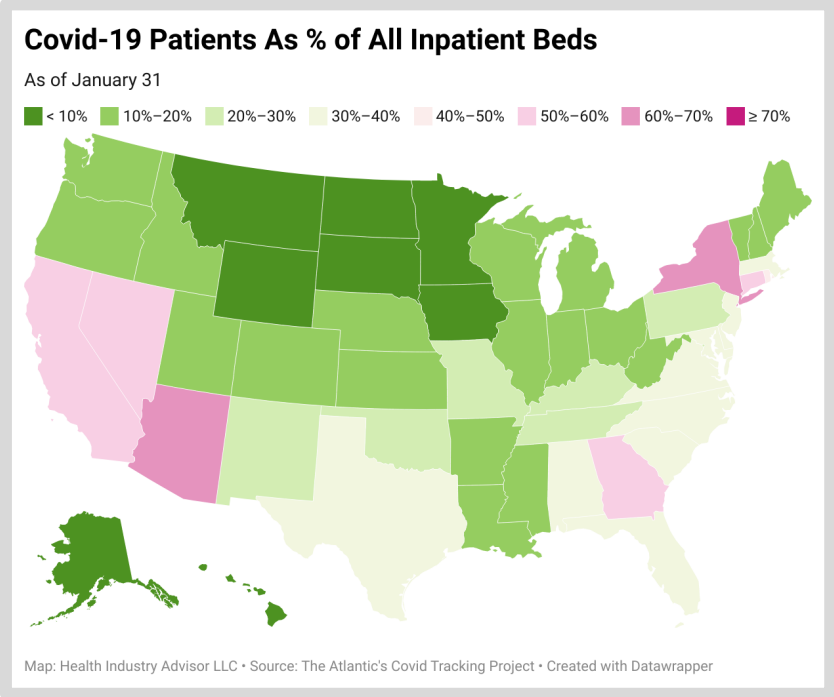


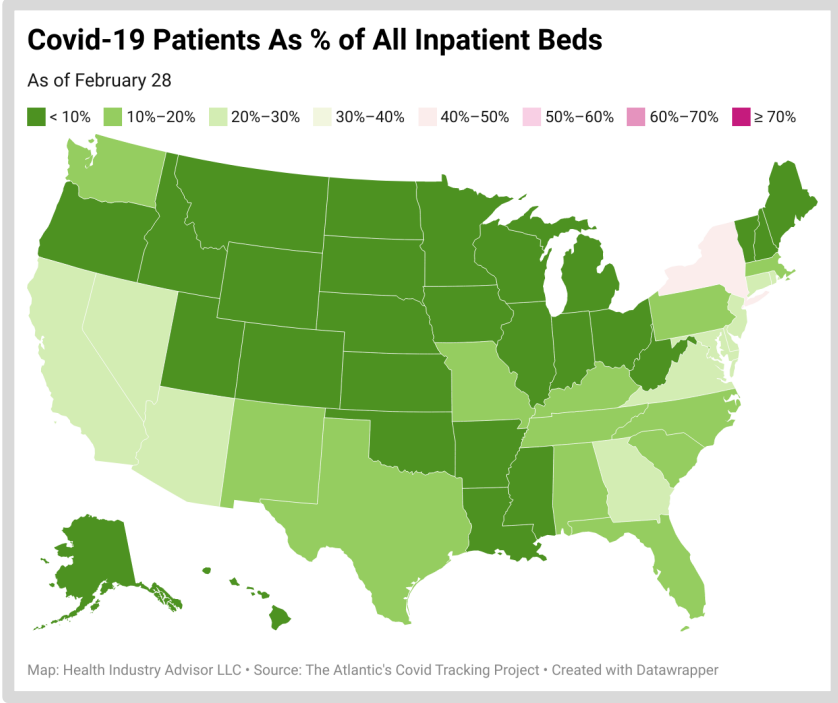
Covid-19 "Vital Signs"

Covid-19 Hospitalizations

Covid-19 hospital census plunged in the past six weeks. Covid-19 patients occupied 15% of US beds yesterday versus 42% six weeks ago. Only New York is above 40% currently.

January 31	February 28



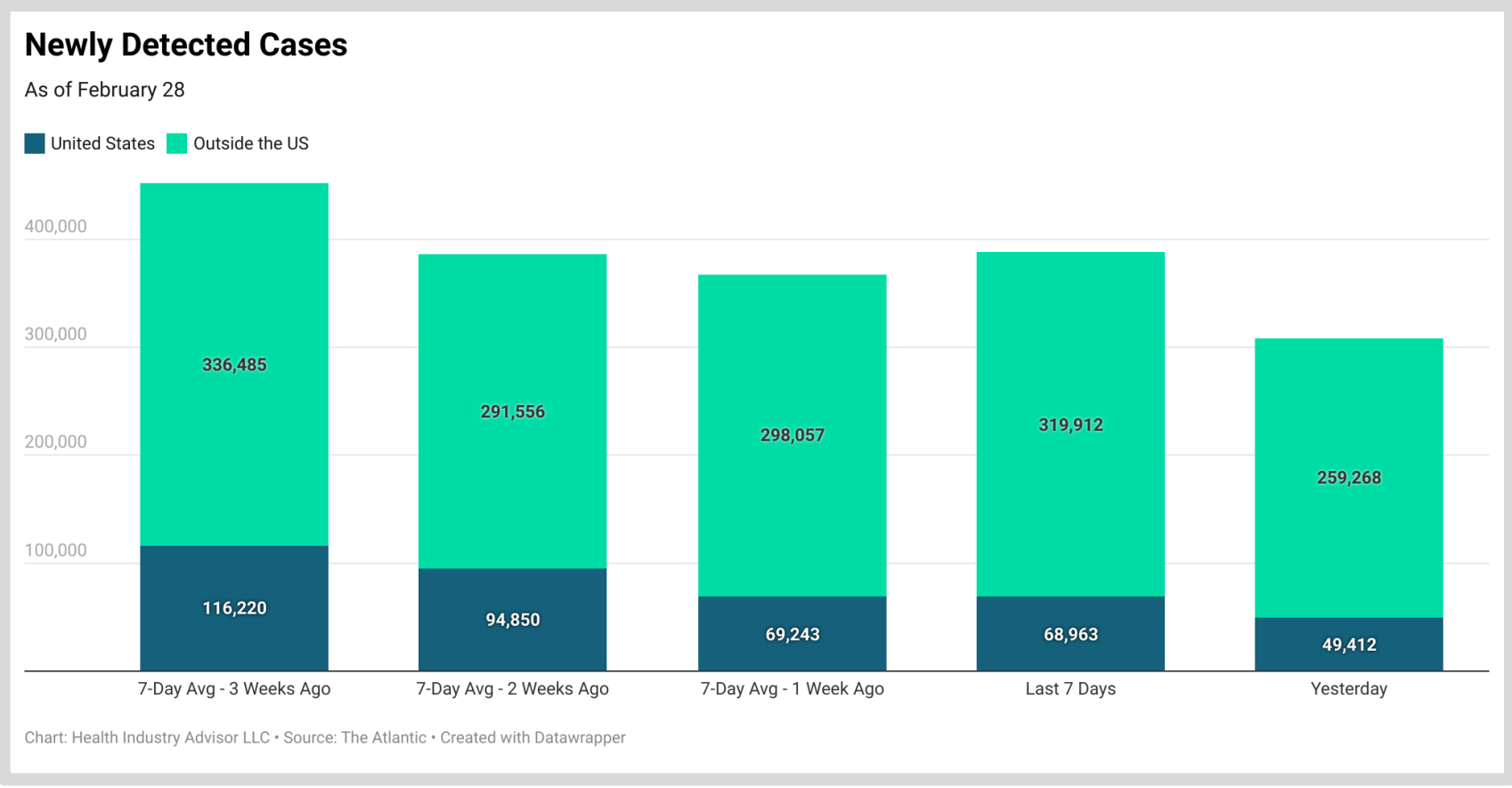


Health Industry Advisor, llc

Covid-19
"Vital Signs"

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 two weeks, led by increases in Brazil, India, Czechia, France, Italy, Hungary, Jordan, and Turkey.

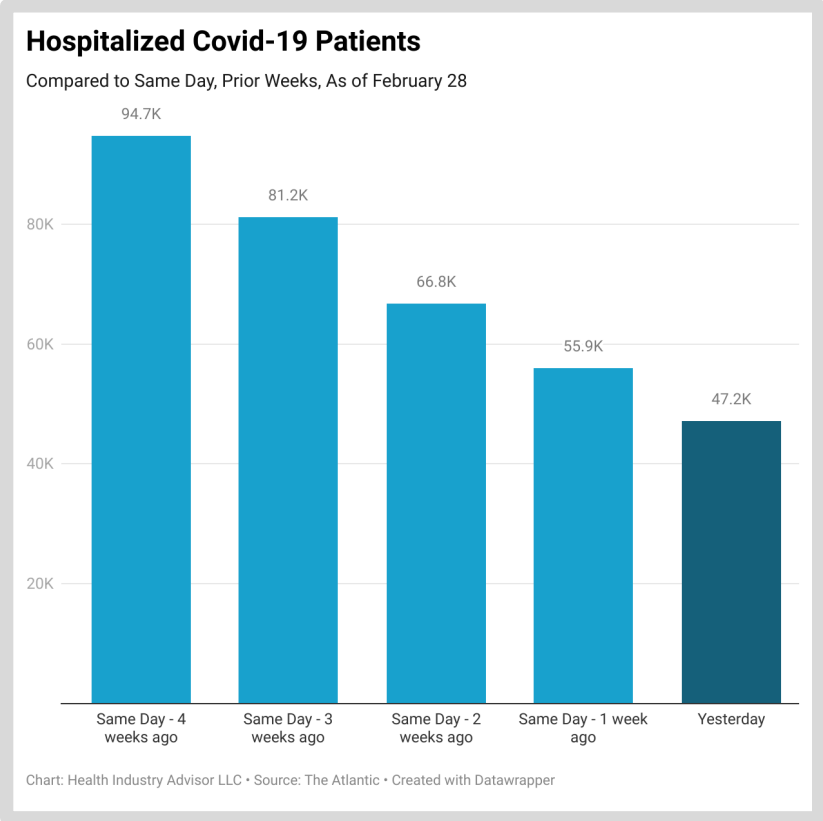


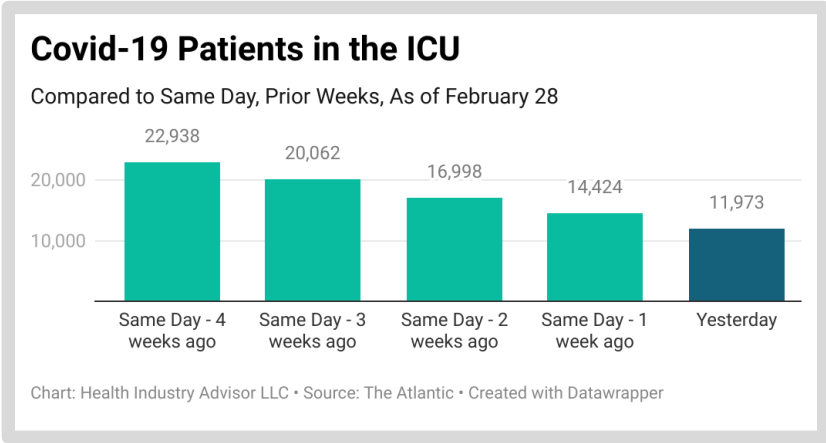
Health Industry Advisor, llc

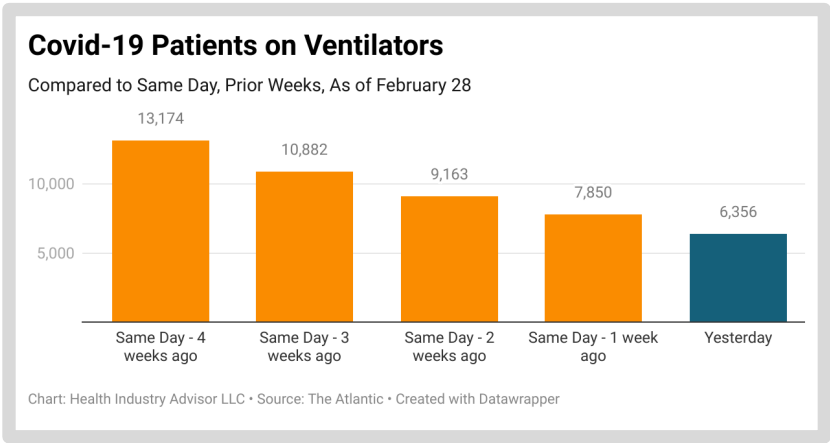
Covid-19
"Vital Signs"

Covid-19 Hospitalizations

Covid-19 hospitalizations plunged over the past month, with 85,000 fewer patients yesterday than on January 6 (65% decline). Yesterday's census set an eighteen-week low. ICU and ventilator days declined each of the past three weeks.





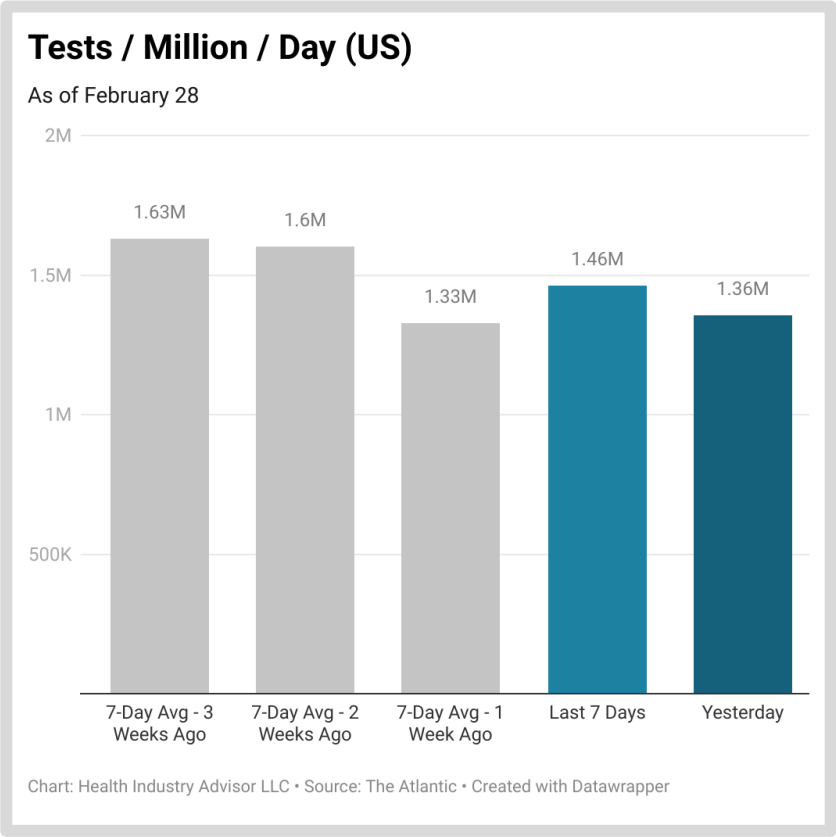


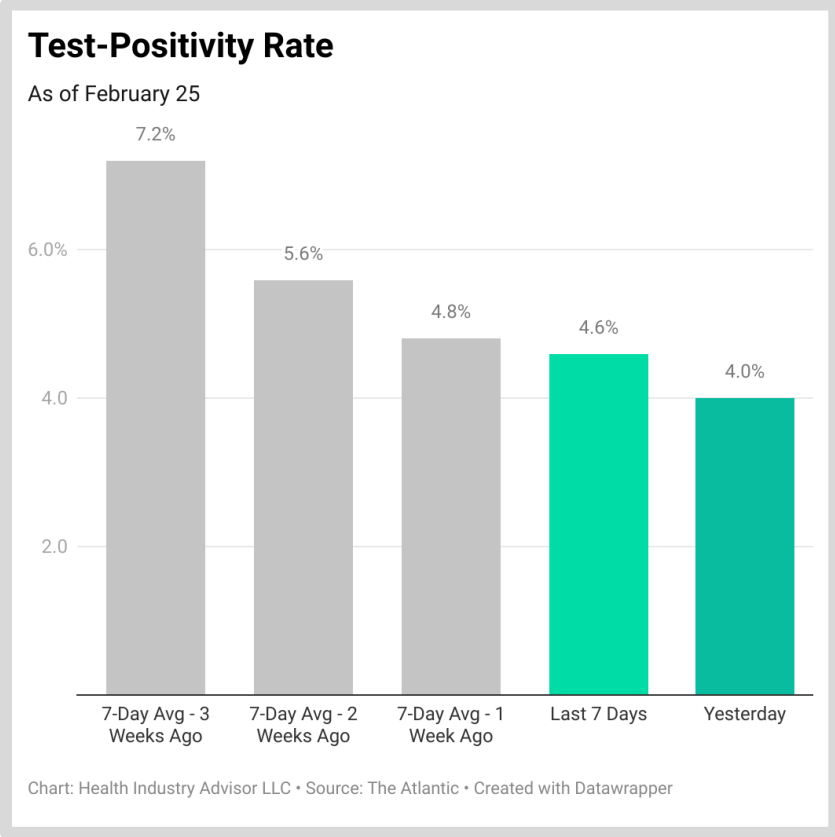
Health Industry Advisor, llc

Covid-19
"Vital Signs"

Testing (US)

Test volume increased week-over-week, reversing recent trends. Test-positivity improved over the three preceding weeks, reaching a nineteen-week low. For the day, test-positivity matched a twenty-two-week low.



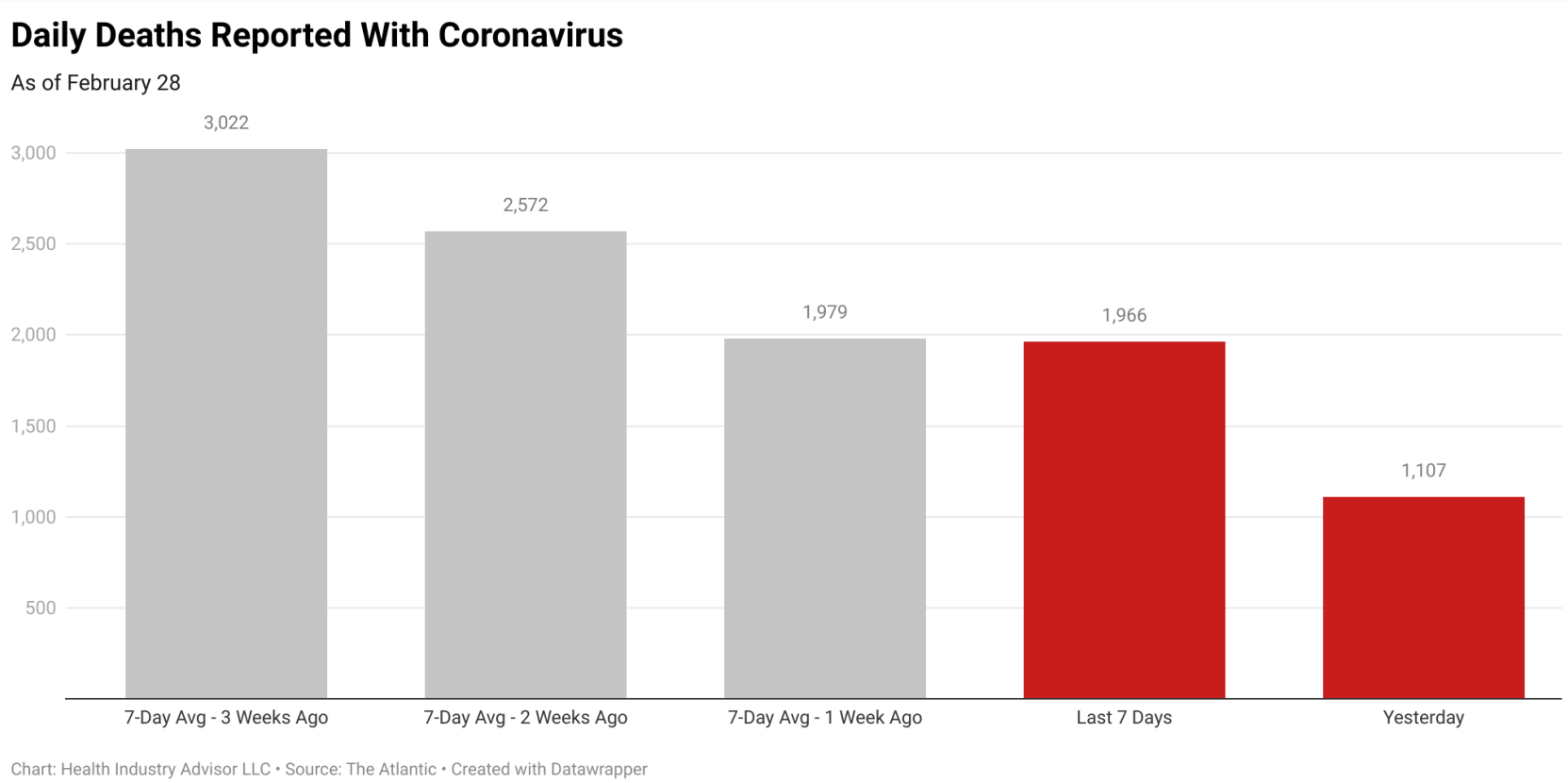


Health Industry Advisor, llc

Covid-19
"Vital Signs"

Deaths Reported With Coronavirus

The 7-day average death rate fell slightly compared to a week ago. This rate is fallen more than 40% in five weeks and is now lower than its has been since the beginning of December.



Health Industry Advisor, llc

Covid-19
"Vital Signs"

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

Health Industry Advisor, llc