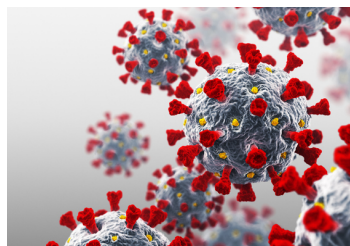


Covid-19 "Vital Signs"

Issue # 289

February 22, 2021



Covid-19 "Vital Signs"

Week-Over-Week Changes in New Cases

New cases in the US and Worldwide have declined week-over-week for more than five weeks. The rate of decline in the US remains high but, is easing worldwide.

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

7-Day Moving Average, As of February 21

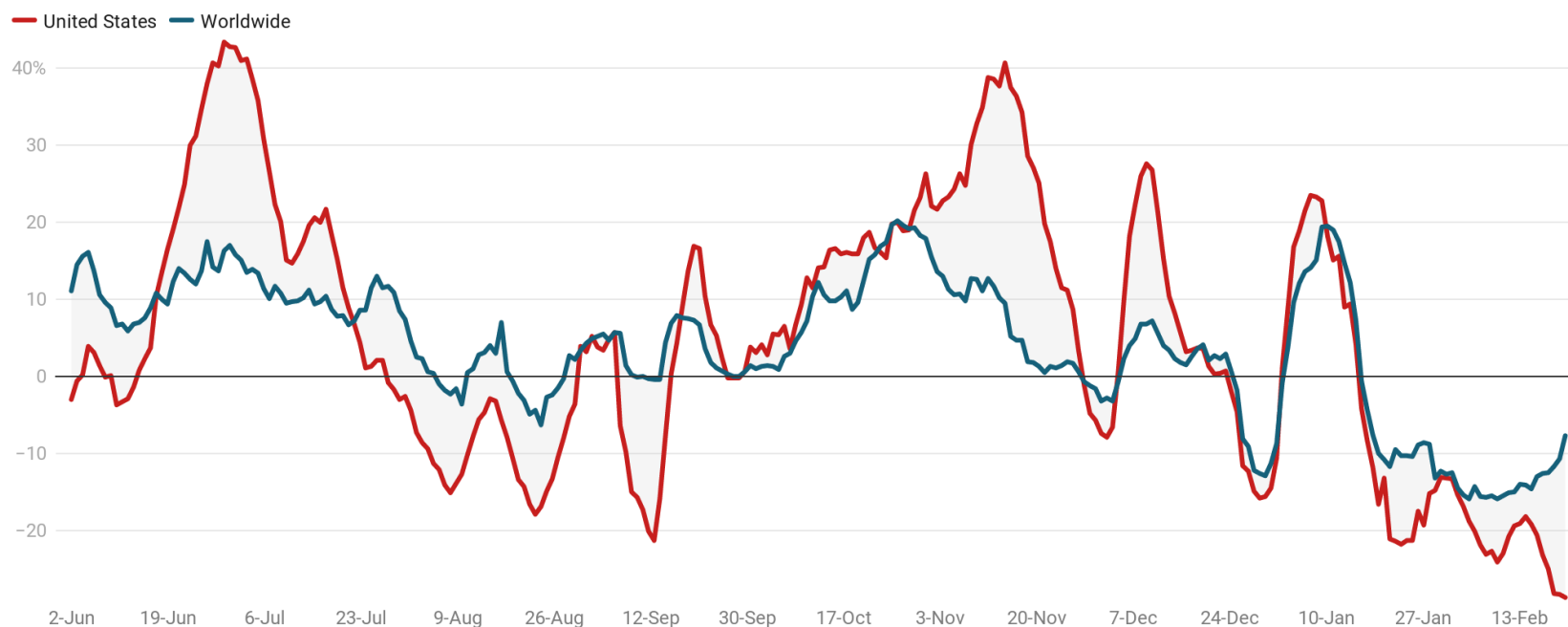


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Covid-19 "Vital Signs"

Highest Rate of Infection Prevalence Worldwide

The US ranks 7th worldwide in infection prevalence (% of population with a detected case)

Infection Prevalence

% of Population With A Detected Case, As of February 22

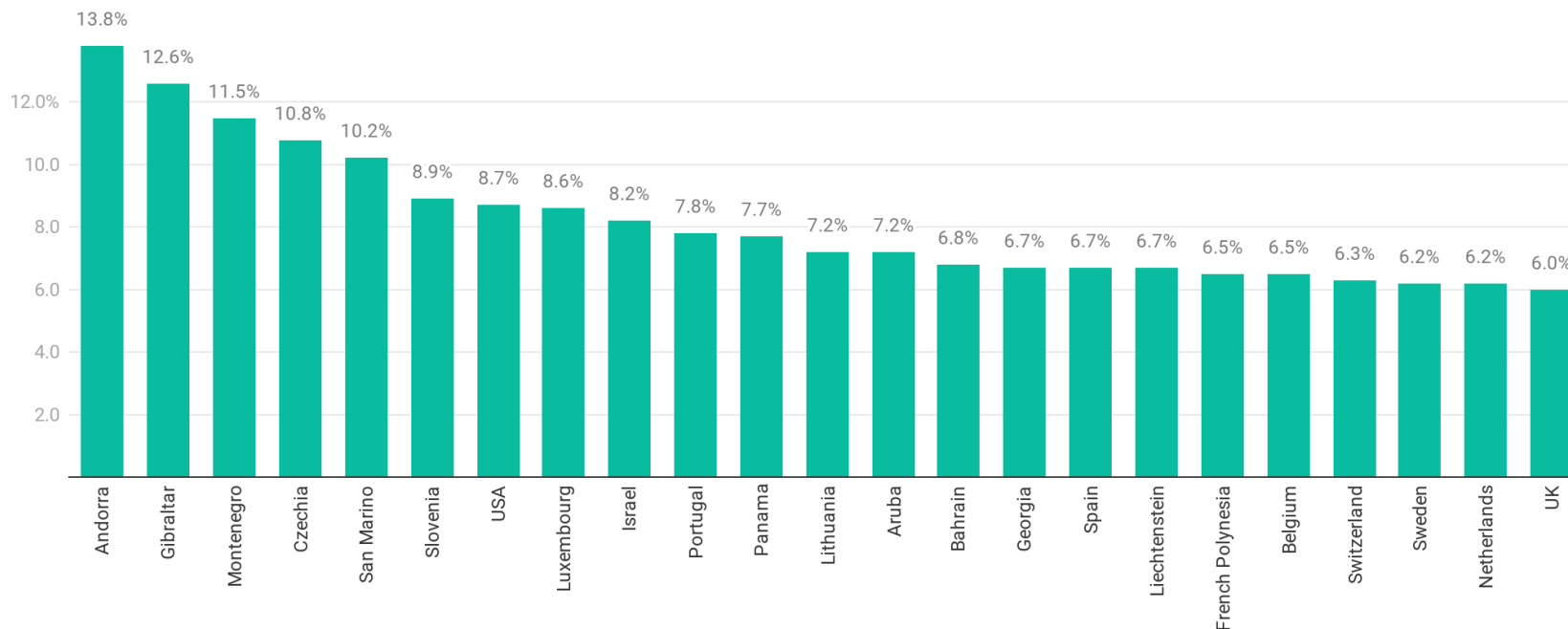


Chart: Health Industry Advisor LLC • Created with Datawrapper

Highest Current Case Rates Worldwide

The US ranks 36th worldwide in new daily cases pe capita. Brazil and South Africa, despite new variant concerns, rank 35th and 111th, respectively.

7-Day New Daily Cases / Million

As of February 21

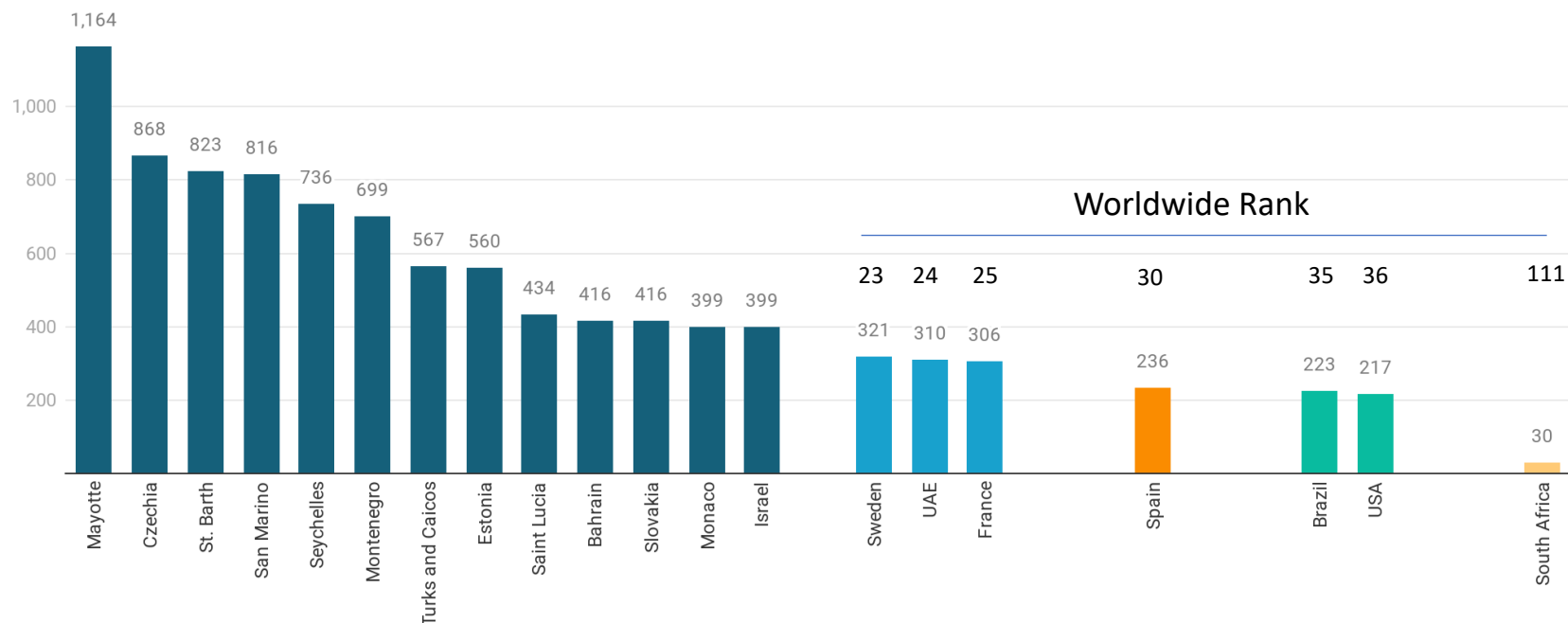


Chart: Health Industry Advisor LLC • Created with Datawrapper

Covid-19 "Vital Signs"

Newly Detected Cases / Million

Case rates defy concerns about emerging variants in the countries of origin: Brazil, South Africa and the UK report relatively low and declining rates. Israel's rates have fallen steadily, as their standard-setting vaccination program begins paying dividends.

Newly Detected Cases Per Million

7-Day Moving Average

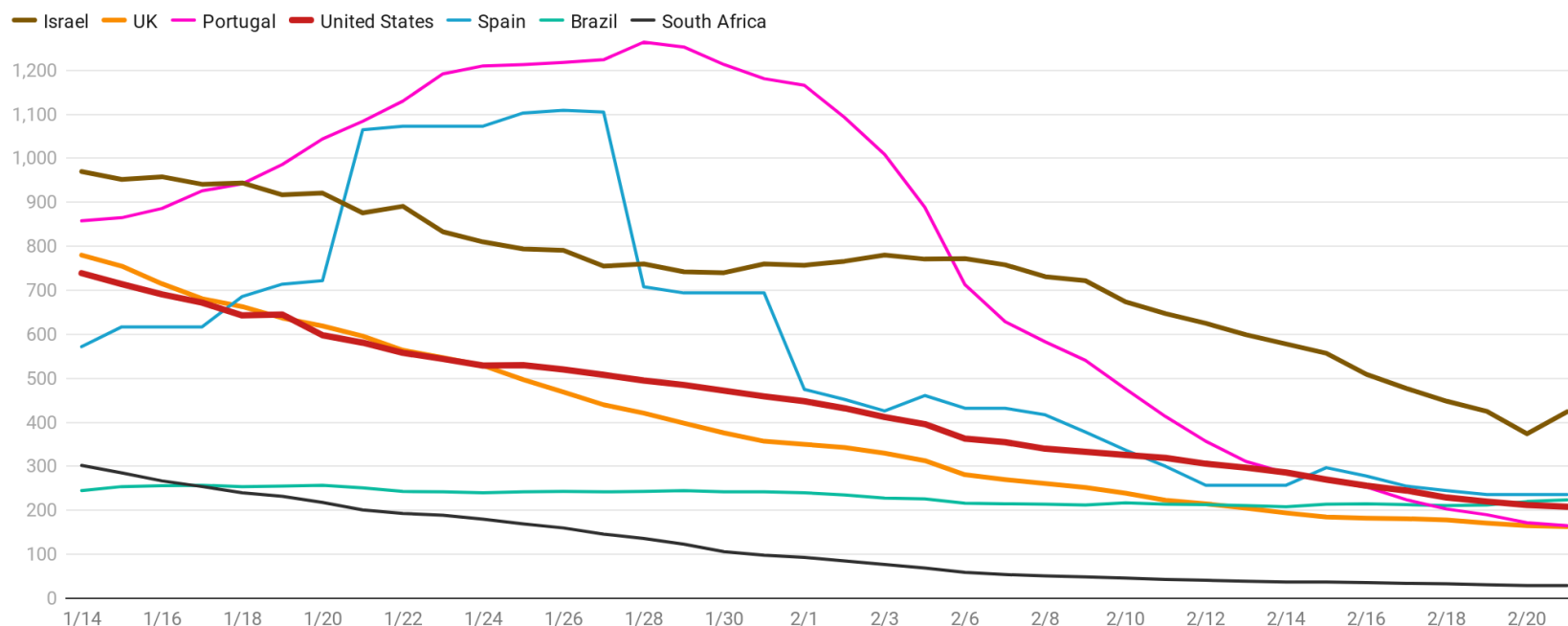


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

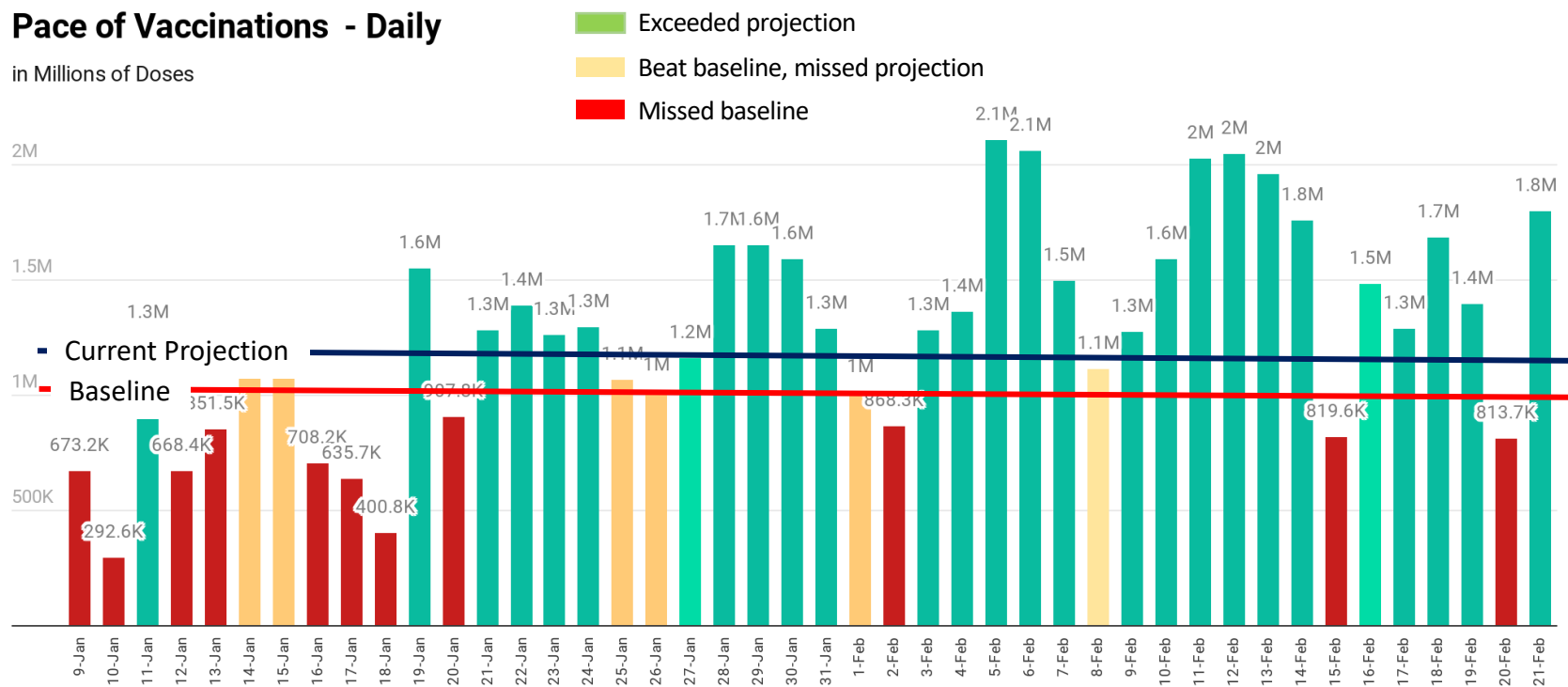
Covid-19 "Vital Signs"

Pace of Vaccinations

The US jabbed 1.8 million citizens yesterday and more than 1.3 million sixteen of the past nineteen days. Vaccinations surpassed our Current Projection on twenty-six of the past thirty-four days.

Pace of Vaccinations - Daily

in Millions of Doses



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



Vaccine Tracking

To date, the US has administered 75 million doses, with 18.7 million people jabbed twice. On average, 1.3 million shots were administered each day during the past week

Vaccination Progress

Most Recent Four Weeks

■ First Doses ■ Second Doses

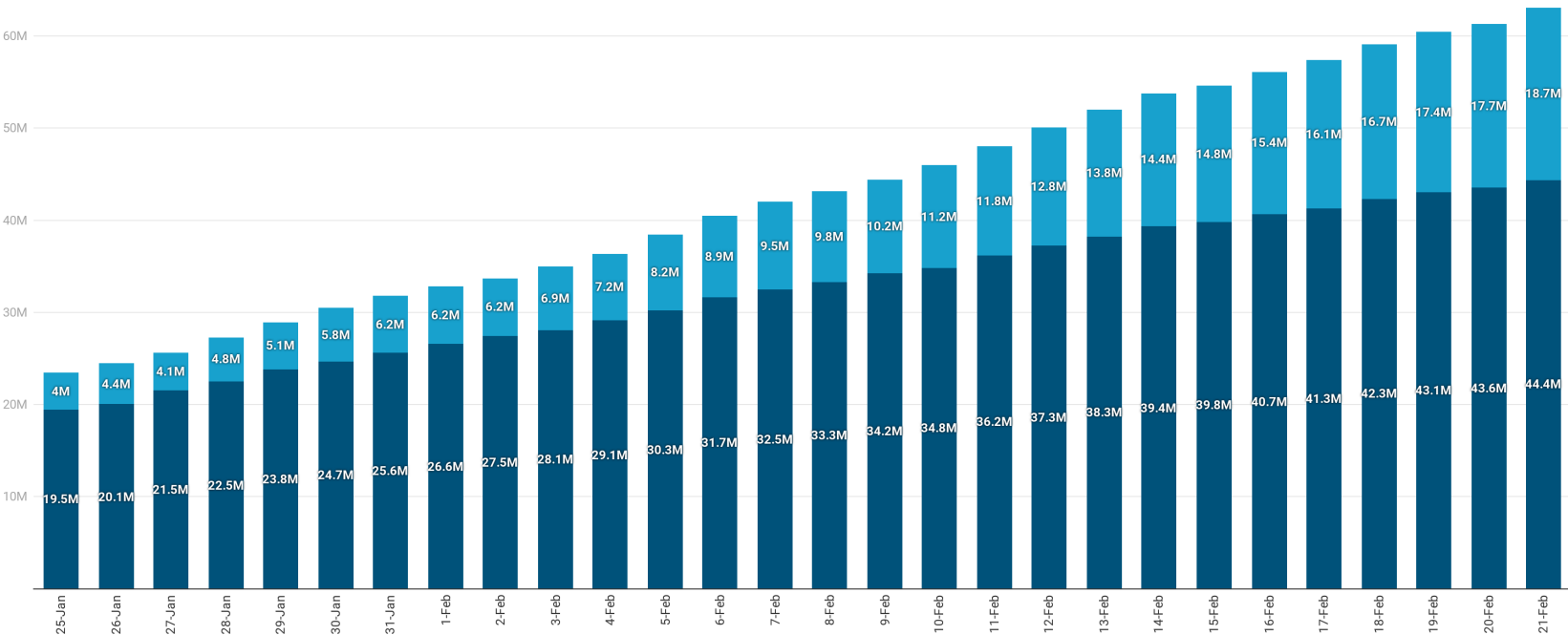


Chart: Health Industry Advisor LLC • Source: CDC, Bloomberg • Created with Datawrapper

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

Vaccines Distributed v. Unused

Vaccines supplies have not kept pace with vaccinations recently: The US administered more doses that were distributed to the states for six straight days.

% of Doses Distributed & % Unused - Cumulative

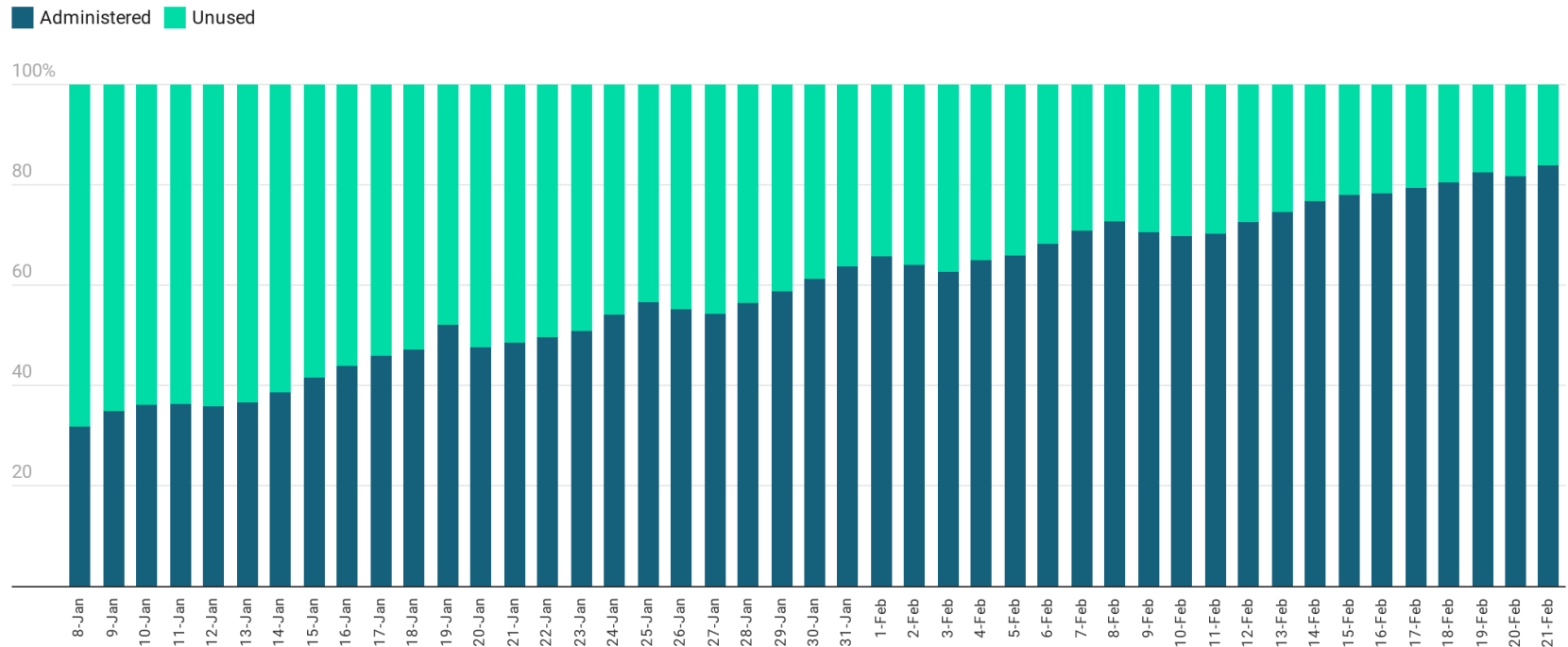


Chart: Health Industry Advisor LLC • Source: Bloomberg • Created with Datawrapper

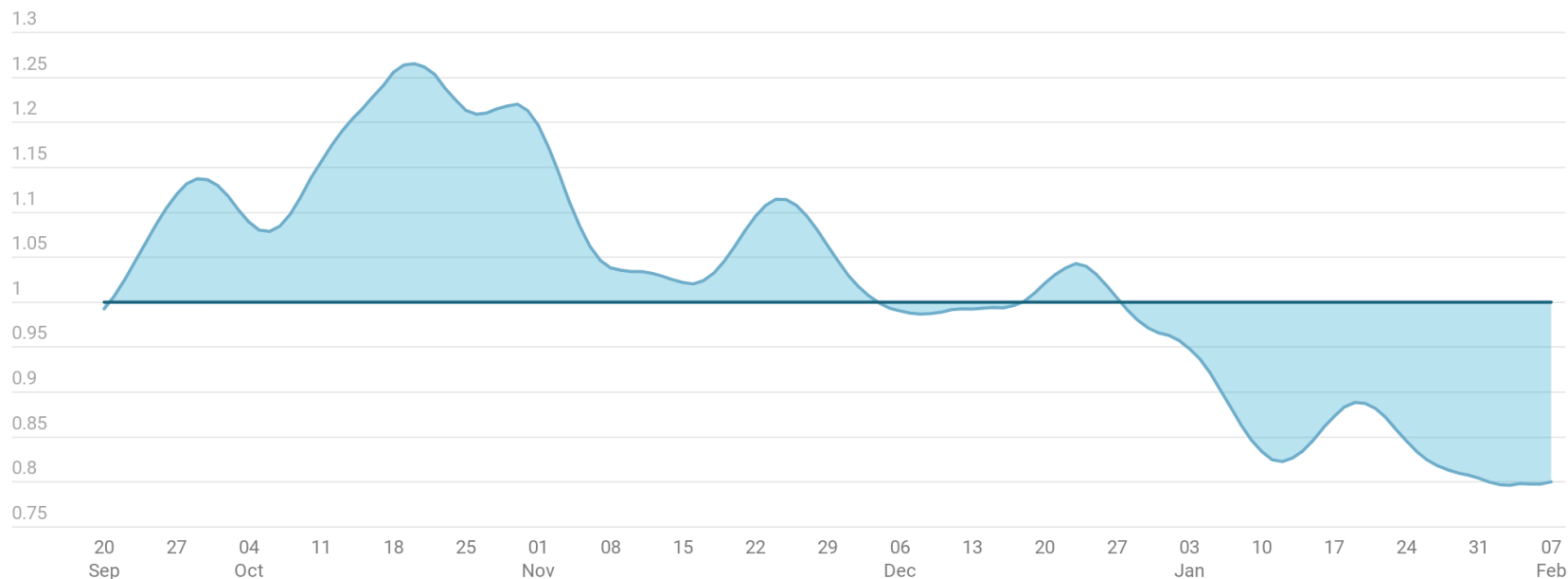
Reproduction Rate (R_t) – Gu* Model

Gu's R_t estimate signals a prolonged slowdown in infection spread.

Reproduction Rate (R_t) - US

*Youyang Gu: Covid-19projections.com

Youyang Gu Estimate, September 20, 2020 - February 7, 2021



R_t is an estimate of how many additional people a single person will infect

Chart: Health Industry Advisor LLC • Source: Youyang Gu • Created with Datawrapper

Covid-19 "Vital Signs"

Newly Detected Cases / Million - US

Newly detected cases (7-day average) are freefalling from a January 11th peak. Cases plunged an astonishing 73% in just over six weeks. This rate has not been this low since the third week of October.

Newly-Detected Cases / Million - US

7-Day Moving Average

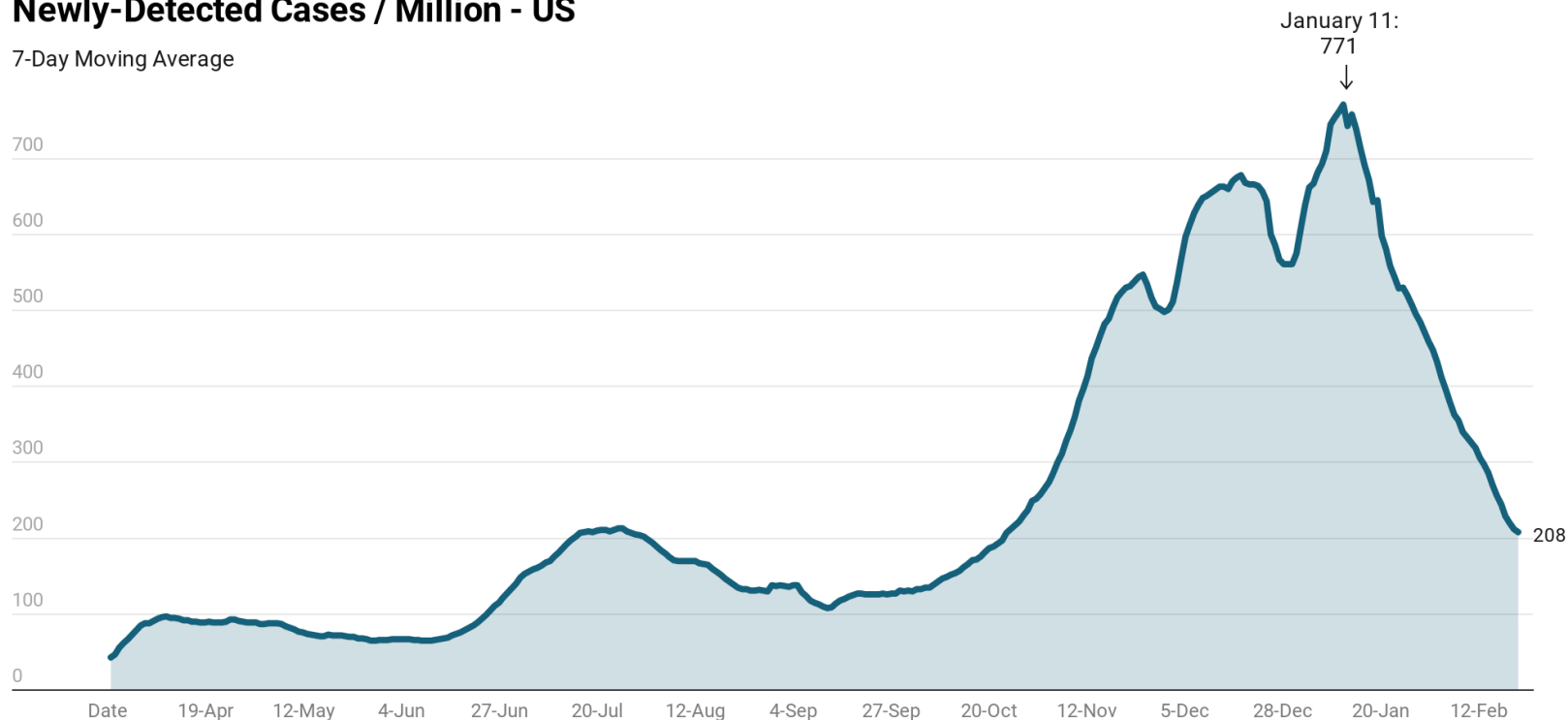


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Covid-19 “Vital Signs”

Estimated Daily Infections & New Case Rates

Estimated new infections and reported cases are plunging in the US. The Yale/Harvard model suggests that the infections have plummeted 85% since peaking in early-January; Gu estimates a 75% decline

Estimated Daily Infections v. Detected Cases

Gu & Yale/Harvard Schools of Public Health Models

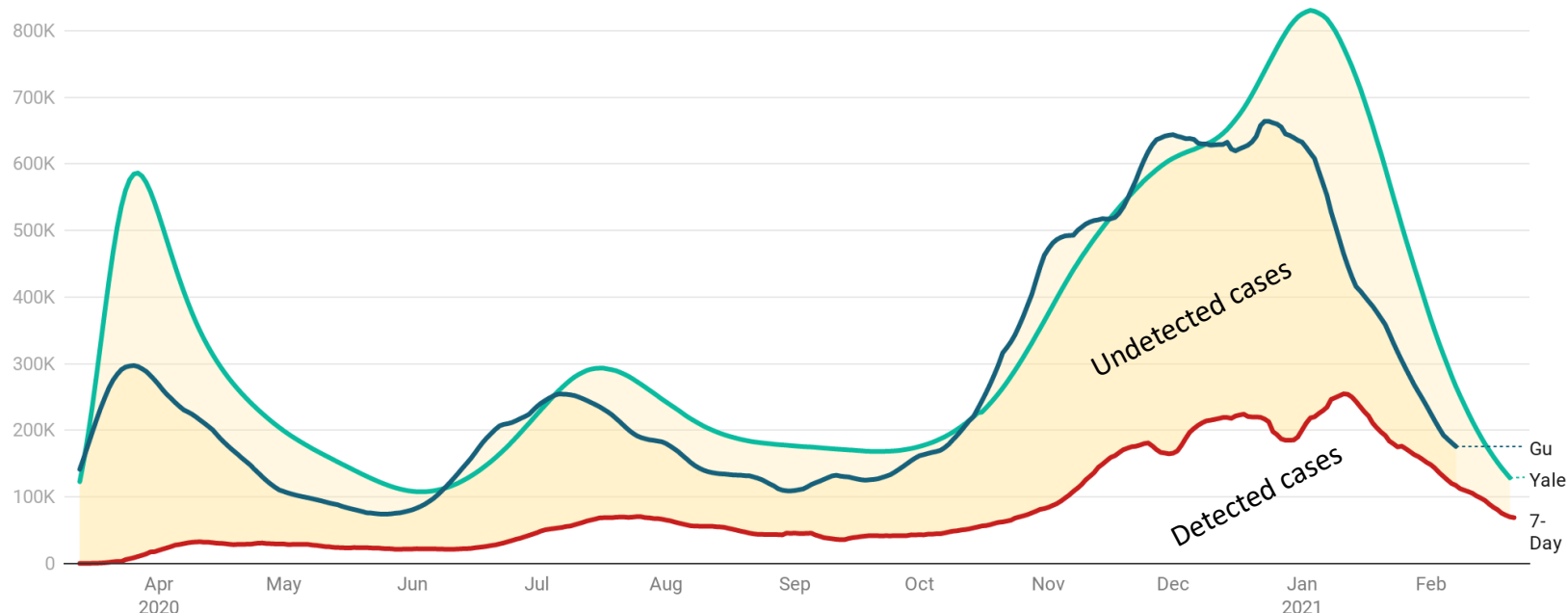


Chart: Health Industry Advisor LLC • Source: Youyang Gu, Yale School of Public Health • Created with Datawrapper

Two models:

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

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 55% during that time. Outside the US, rates were essentially unchanged week-over-week.

Newly Detected Cases Per Day

As of February 21

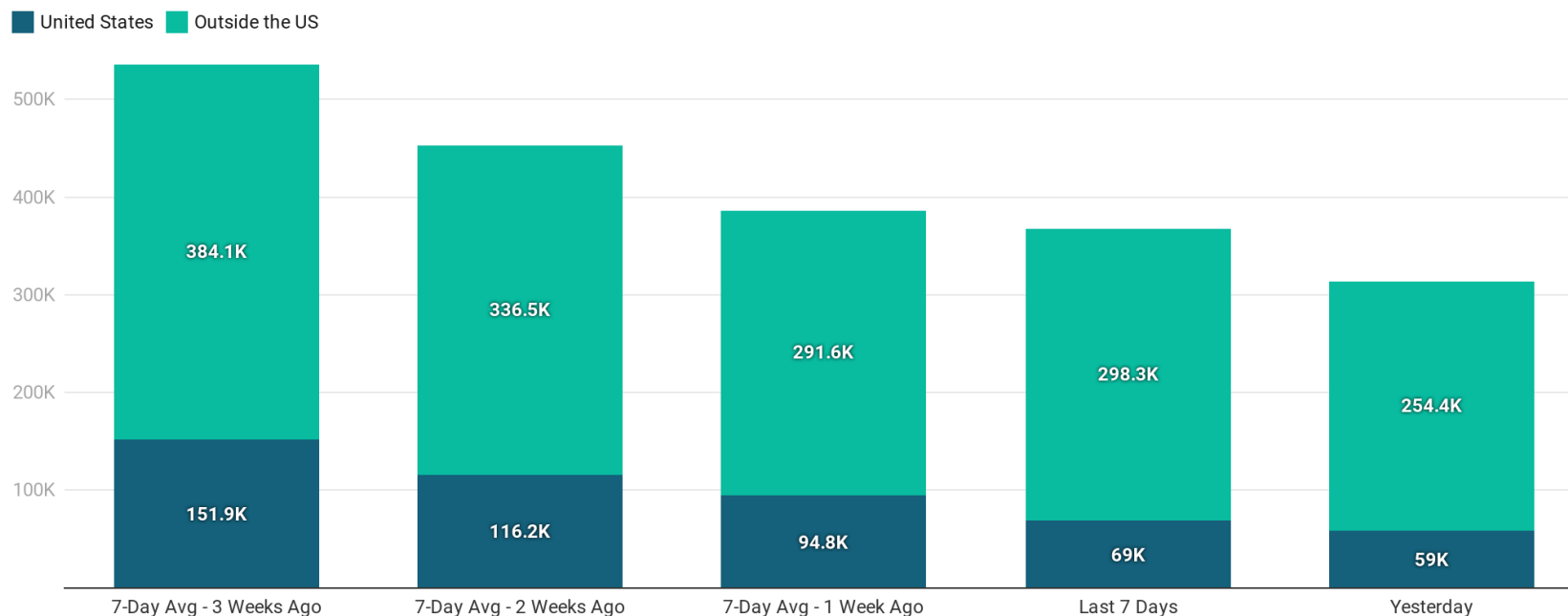


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Covid-19 "Vital Signs"

Covid-19 Hospitalizations

Covid-19 hospitalizations plunged over the past month, with 76,000 fewer patients yesterday than on January 6 (56% decline). ICU and ventilator days declined each of the past three weeks.

Hospitalized Covid-19 Patients

Compared to Same Day, Prior Weeks, As of February 21

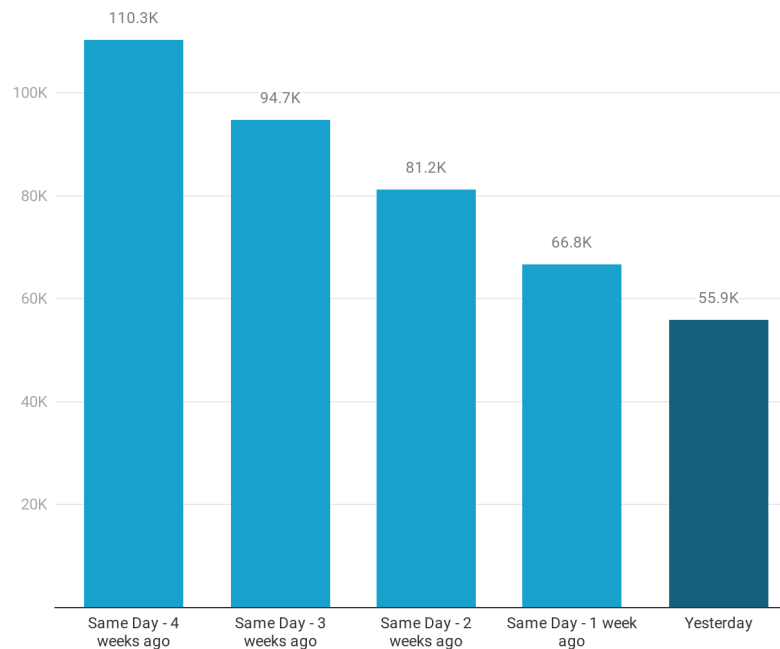


Chart: Health Industry Advisor LLC • Source: The Atlantic • Created with Datawrapper

Covid-19 Patients in the ICU

Compared to Same Day, Prior Weeks, As of February 21

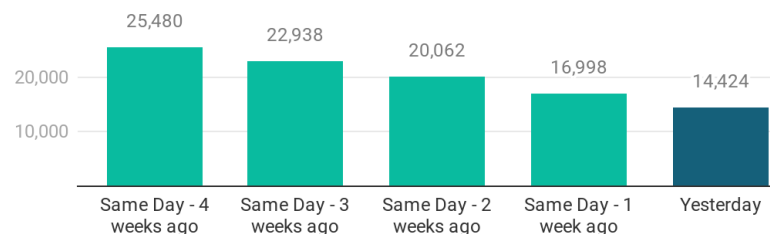


Chart: Health Industry Advisor LLC • Source: The Atlantic • Created with Datawrapper

Covid-19 Patients on Ventilators

Compared to Same Day, Prior Weeks, As of February 21

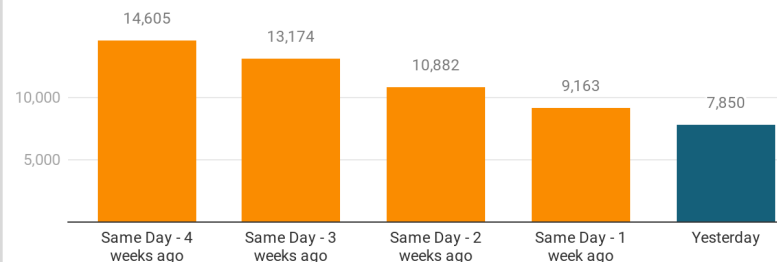


Chart: Health Industry Advisor LLC • Source: The Atlantic • Created with Datawrapper

Covid-19 "Vital Signs"

Testing (US)

Test volume continues sliding, as fewer people seem to be concerned about recent exposure. The test-positive rate improved over the three preceding weeks, reinforcing the belief that actual infections are waning. Test-positivity is now below the WHO guideline.

Tests / Million / Day (US)

As of February 21

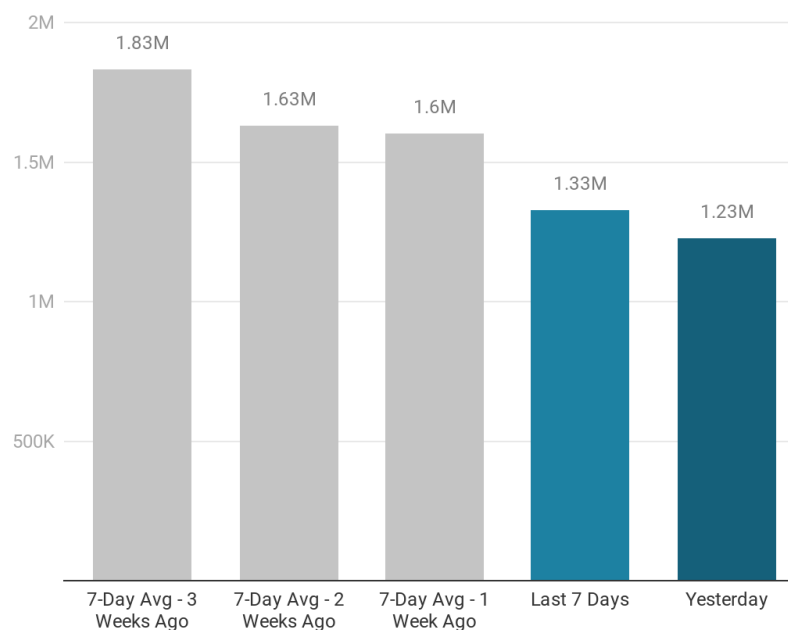


Chart: Health Industry Advisor LLC • Source: The Atlantic • Created with Datawrapper

Test-Positivity Rate

As of February 21

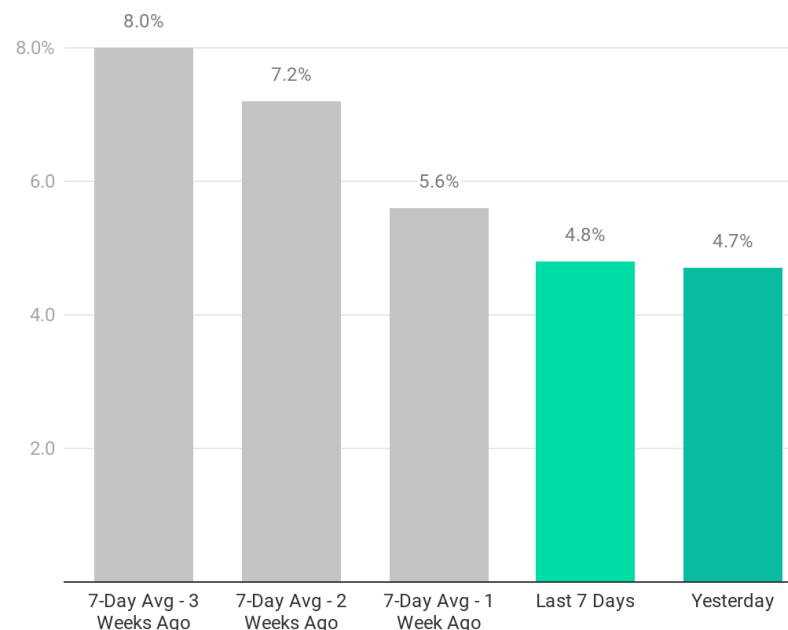


Chart: Health Industry Advisor LLC • Source: The Atlantic • Created with Datawrapper

Deaths Reported With Coronavirus

The 7-day average death rate fell below 2,000 for the first time in more than two months.

Daily Deaths Reported With Coronavirus

As of February 21

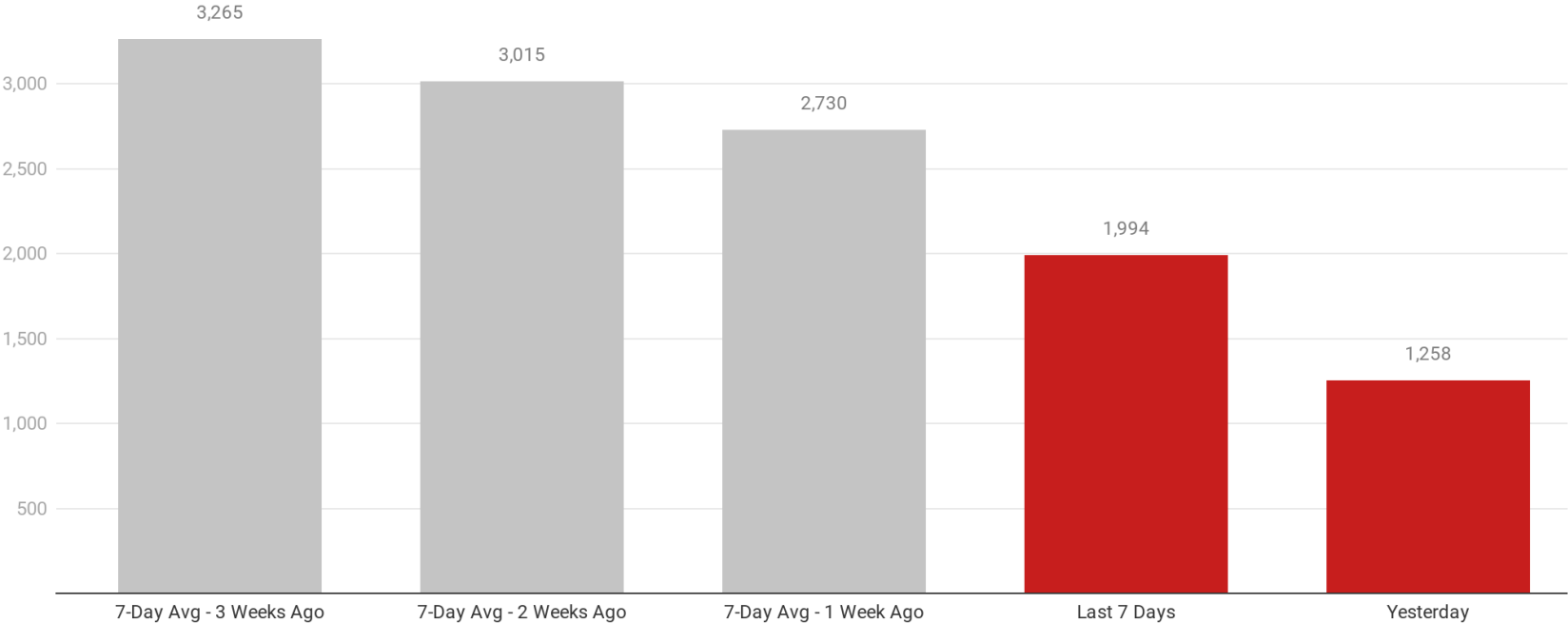


Chart: Health Industry Advisor LLC • Source: The Atlantic • Created with Datawrapper

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®ion=United%20States&panel=mortality>
- [Rt.live](https://www.rti.com/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>