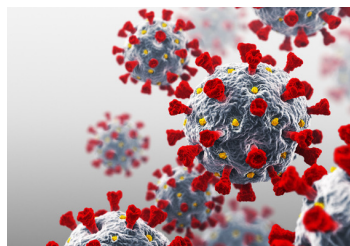


Covid-19 "Vital Signs"

Issue # 305

March 22, 2021



Covid-19 "Vital Signs"

Newly Detected Cases Per Day

In the US, 7-day new case rates stabilized week-over-week, pausing the two-month-long decline in rates. Worldwide cases trended up over the past three weeks.

Newly Detected Cases

As of March 21

United States Outside the US

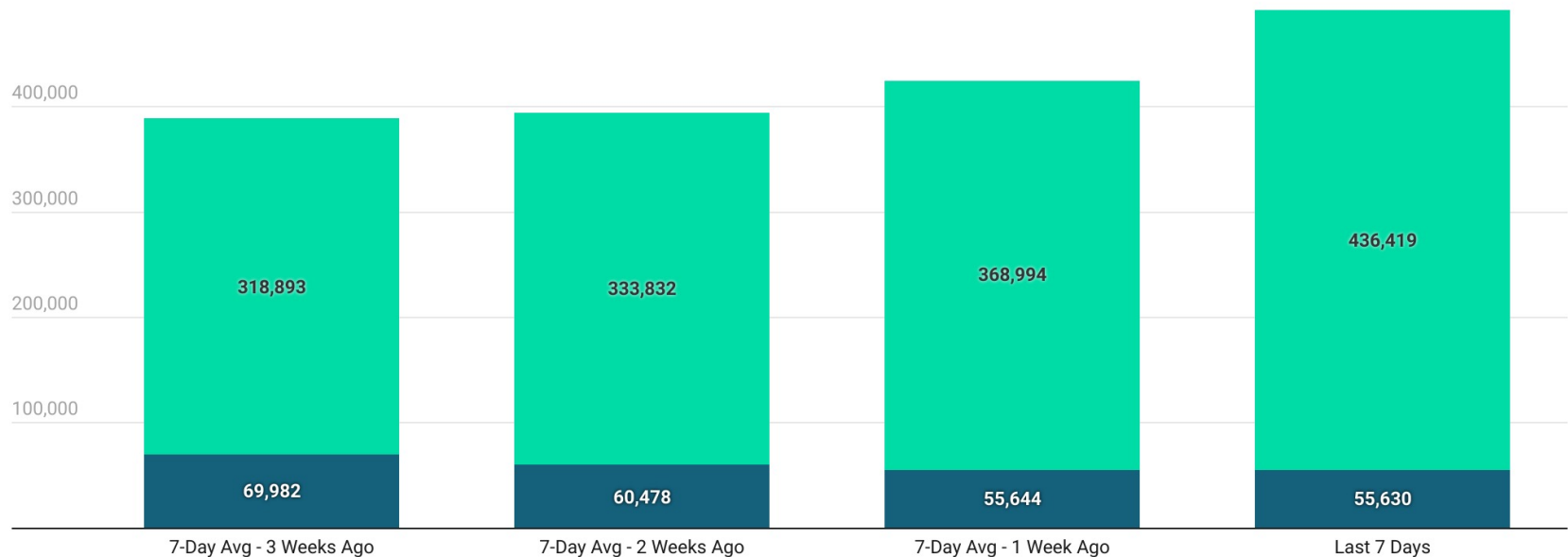


Chart: Health Industry Advisor LLC • Source: The Atlantic • Created with Datawrapper

Newly Detected Cases / Million

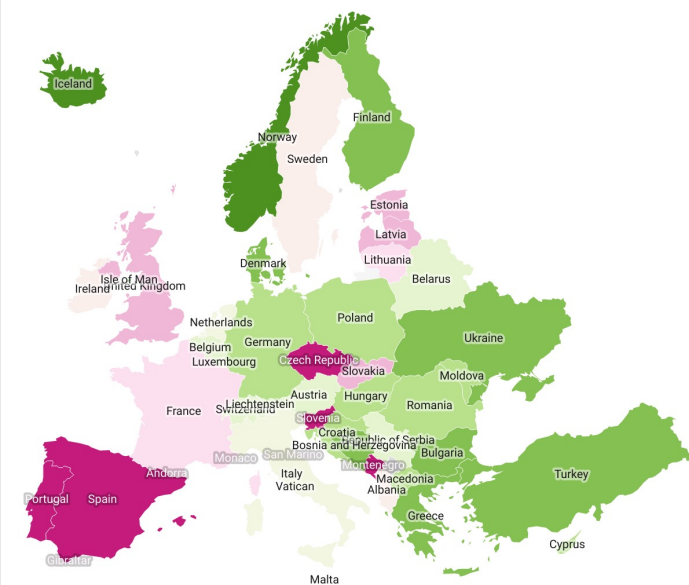
Bulgaria, Estonia, Hungary, Spain, Poland, Portugal, Spain, and Sweden experienced increasing new case rates over the last two weeks. Czechia, Slovenia and the United Kingdom saw declining rates.

March 7

New Daily Infections / Million - Europe

7-Day Moving Average, As of March 7

■ < 50
 ■ 50-100
 ■ 100-150
 ■ 150-200
 ■ 200-250
 ■ 250-300
 ■ 300-350
 ■ 350-400
 ■ 400-450
 ■ ≥ 450



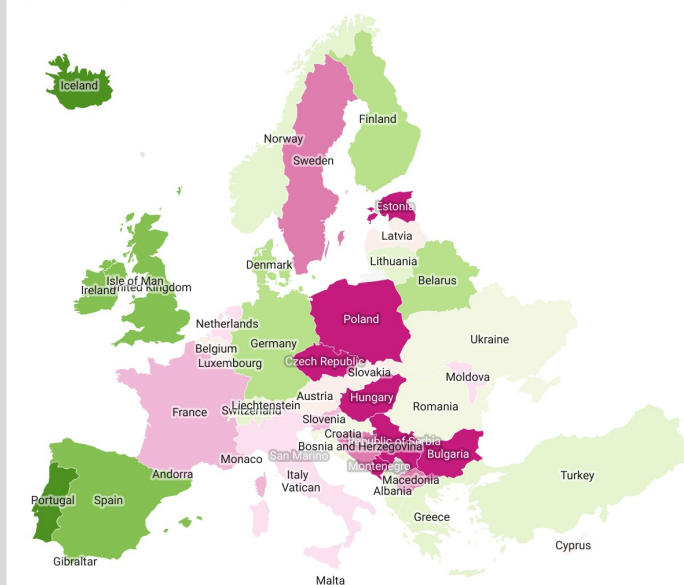
Map: Health Industry Advisor LLC • Source: Worldometer.info • Created with Datawrapper

March 21

New Daily Infections / Million - Europe

7-Day Moving Average, As of March 21

■ < 50
 ■ 50-100
 ■ 100-150
 ■ 150-200
 ■ 200-250
 ■ 250-300
 ■ 300-350
 ■ 350-400
 ■ 400-450
 ■ ≥ 450



Map: Health Industry Advisor LLC • Source: Worldometer.info • Created with Datawrapper

Covid-19 "Vital Signs"

Case Trends – Select Countries of Interest

Case rates have declined in three countries with relatively high vaccination rates – Israel, the United Kingdom and the United States.

Newly Detected Cases Per Million: Select Countries of Interest

7-Day Moving Average

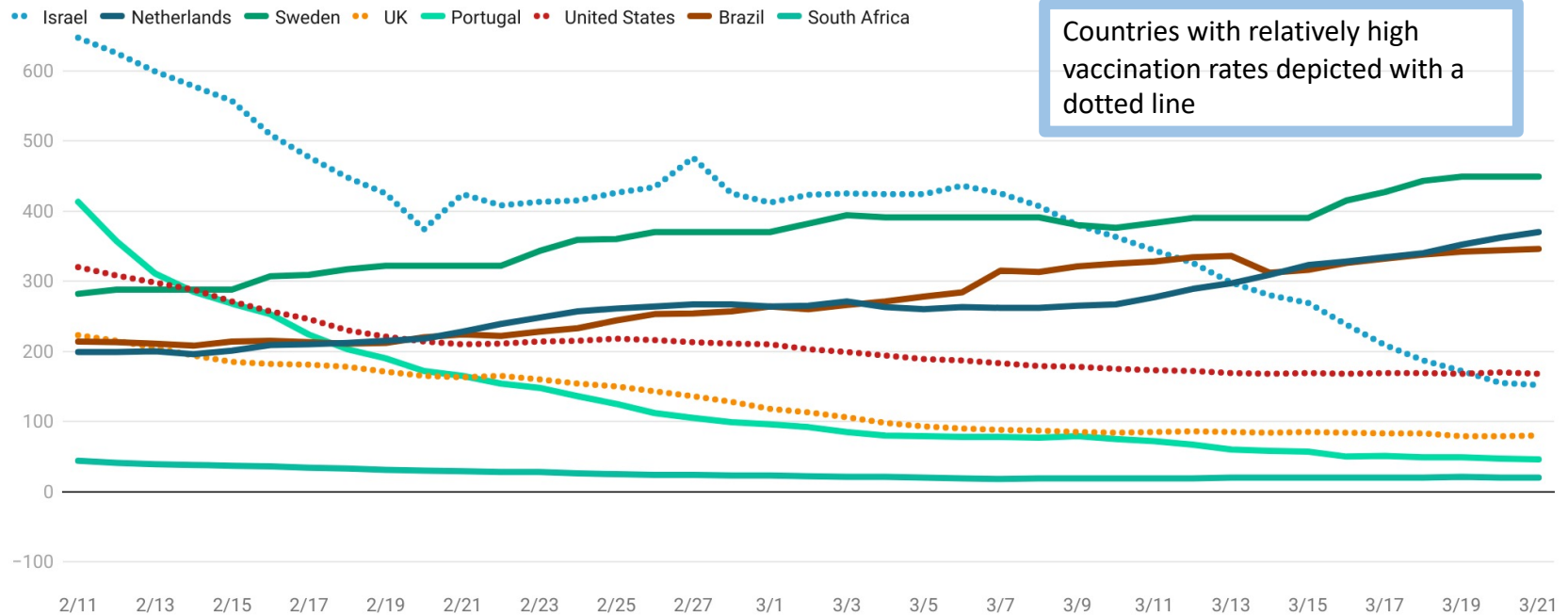


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Covid-19 "Vital Signs"

Impact of Vaccines & Natural Immunity

Recent changes in new case rates were found to be highly correlated with vaccination and natural infection rates. Czechia, Israel, the United Kingdom, and the United States, with high vaccine and infection rates, experienced declining new case rates.

Country	Doses/100 People	Infection Prevalence %	Chg in New Cases/M Last 2 weeks
Belgium	12.14	7.2	136
Bulgaria	5.31	4.4	240
Czechia	12.52	13.7	-267
Estonia	16.82	7.2	128
France	12.58	6.6	137
Germany	12.5	3.2	56
Israel	112.5	9	-257
Italy	12.97	5.6	26
Mexico	4.35	3.7	13
Poland	13.25	5.4	242
Portugal	13.32	8	-32
Sweden	12.81	7.3	58
United Kingdom	43.99	6.3	-8
United States	37.22	9.2	-15

Several countries with low infection prevalence but high vaccine rates, saw increasing new case rates. This suggests that the vaccine efforts are still too early for a significant impact.

SUMMARY OUTPUT

Regression Statistics

Multiple R 0.79173758
Adjusted R S 0.55900265
Standard Err 101.030166
Observations 14

ANOVA

	df	SS	MS	F	Significance F
Regression	2	188613.174	94306.5872	9.2393175	0.00441946
Residual	11	112278.04	10207.0945		
Total	13	300891.214			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	306.5642	77.6623383	3.947	0.00228286	135.630573	477.497881	135.630573	477.497881
Doses/100	-2.2502931	0.0490423	-2.14	0.05511525	-4.5592196	0.05863346	-4.5592196	0.05863346
Inf Pref %	-32.124739	2.0379729	-2.91	0.01417928	-56.419153	-7.8303244	-56.419153	-7.8303244

Covid-19 "Vital Signs"

Pace of Worldwide Vaccinations

Gibraltar and Israel are pacing the world in vaccinating residents, with more than one vaccine per person. The United States ranks tenth in the world.

Vaccines Per 100 Population

As of March 19

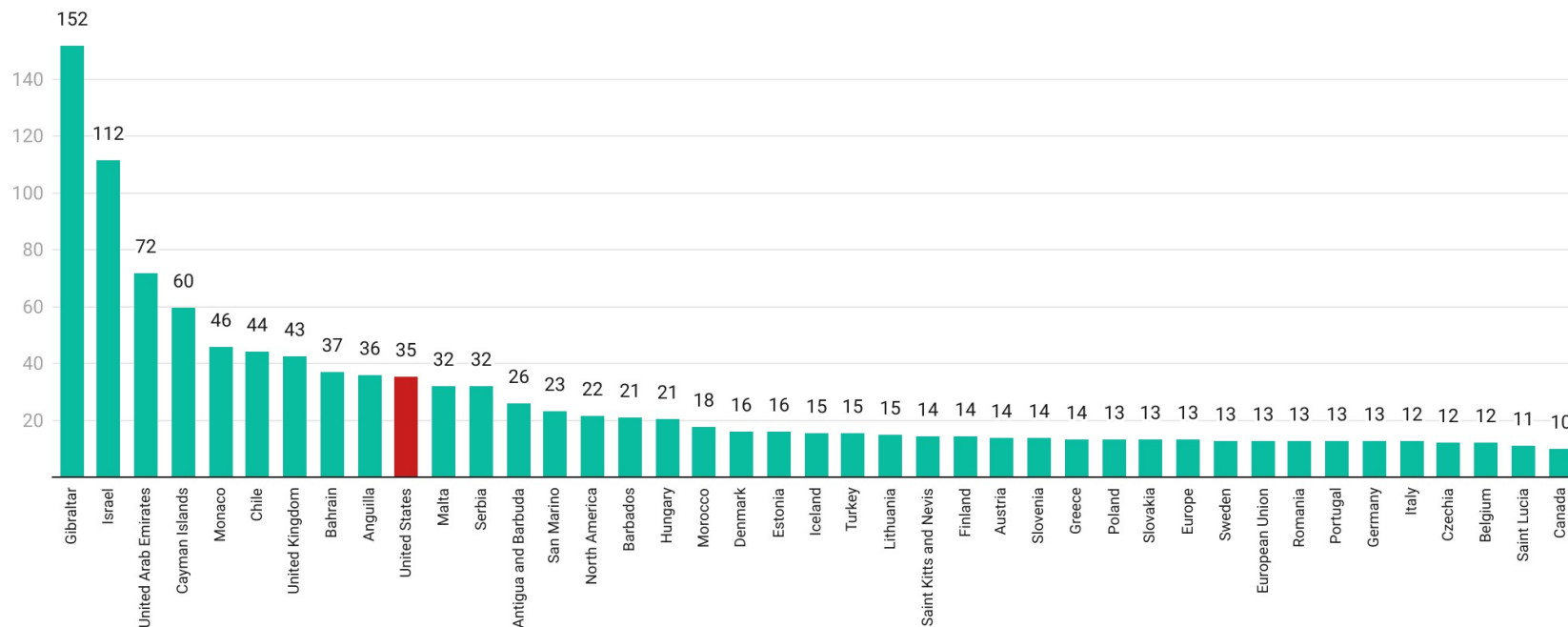


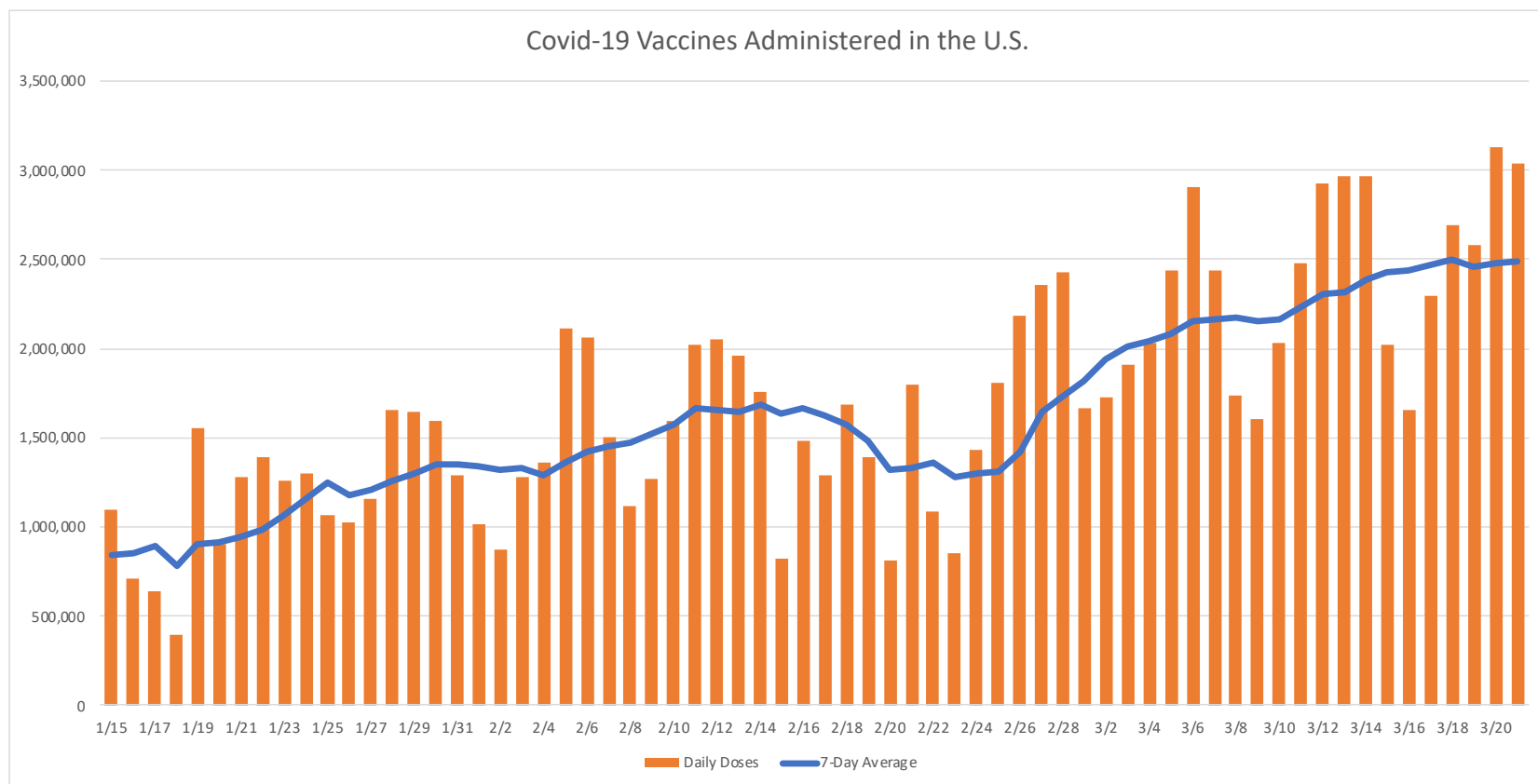
Chart: Health Industry Advisor LLC • Source: Our World In Data • Created with Datawrapper

<https://ourworldindata.org/covid-vaccinations>

Covid-19 "Vital Signs"

Pace of Vaccinations

An average of 2.5 million people were vaccinated over the past week, an increase of 4% from one week earlier and 15% from two weeks earlier. The highest two vaccination rates to-date occurred the past two days.



Covid-19 "Vital Signs"

Vaccine Tracking

To date, the US has administered 124 million doses, with 43.7 million people fully inoculated – 17% of the adult population.

Vaccination Progress

Most Recent Two Weeks

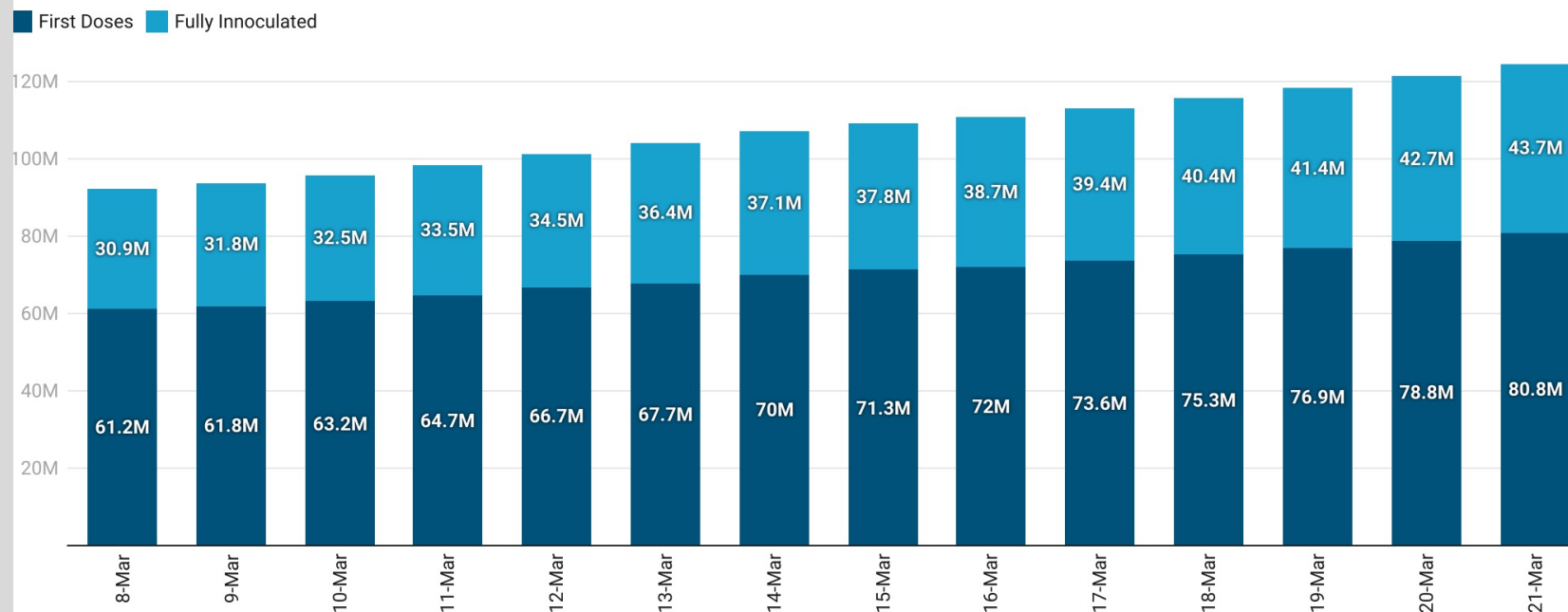


Chart: Health Industry Advisor LLC • Source: CDC, Bloomberg • Created with Datawrapper

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

Covid-19 "Vital Signs"

Immunity: Projected v. Estimated

Estimated immunity is 41% to 46%, based on vaccination and estimated infection rates, vaccine efficacy and a presumed two-week lag from infection or vaccination to immunity.

Estimated Immunity

Current Estimates v. HIA Projection

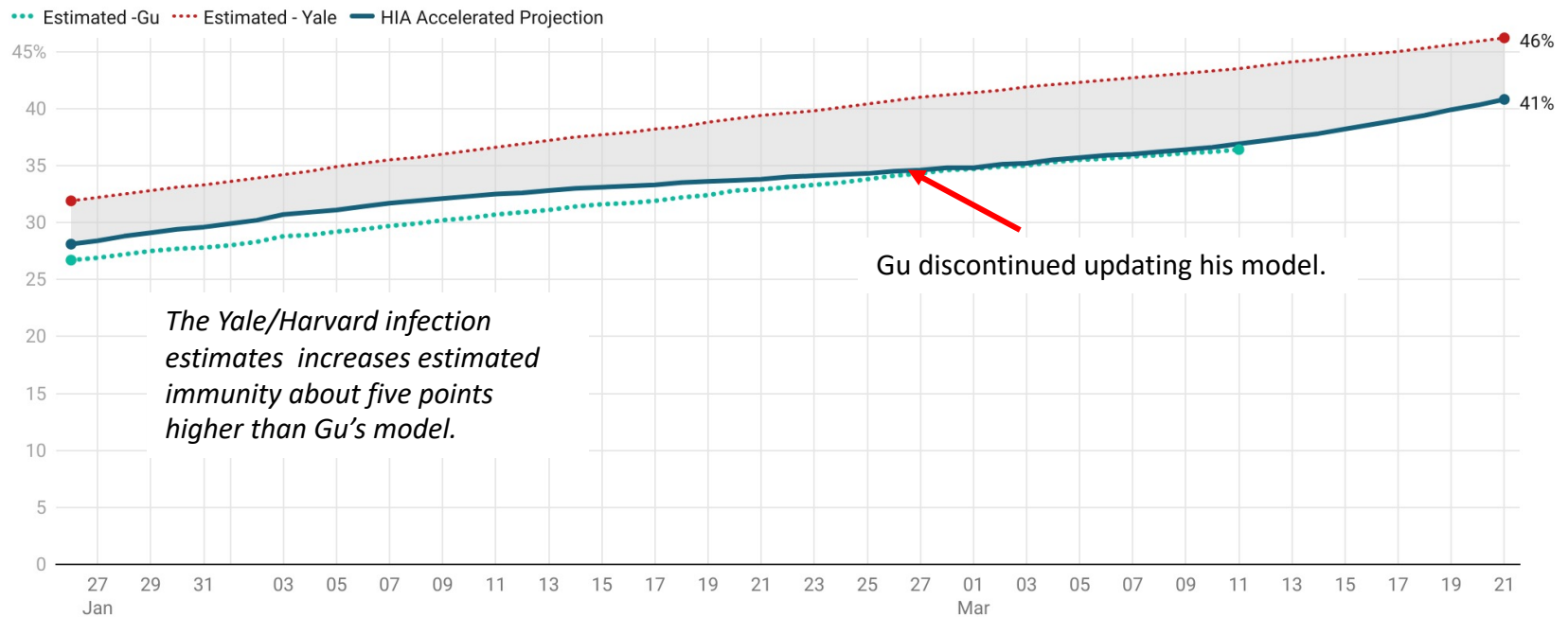


Chart: Health Industry Advisor LLC • Created with Datawrapper

Covid-19
"Vital Signs"

Newly Detected Cases / Million - US

Newly detected cases (7-day average) stabilized over the past week.

Newly-Detected Cases / Million

7-Day Average

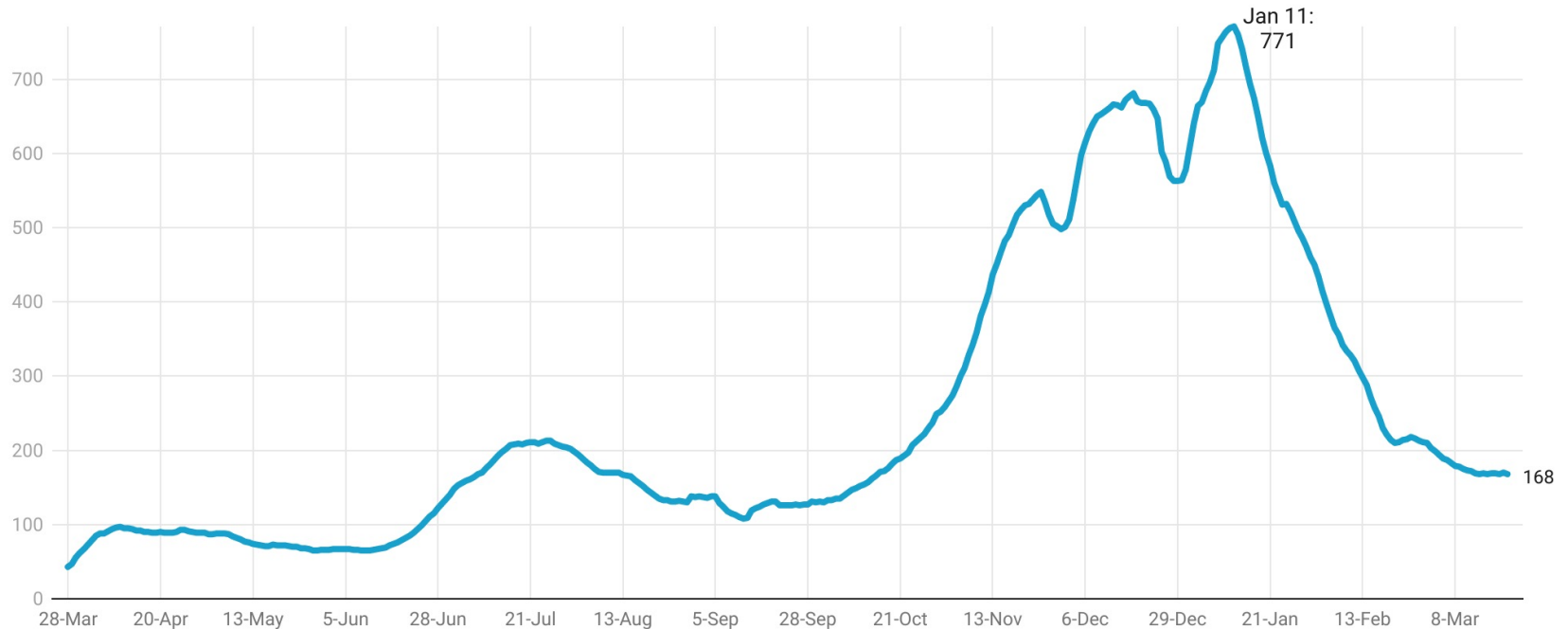


Chart: Health Industry Advisor LLC • Created with Datawrapper

Covid-19 "Vital Signs"

Covid-19 Inpatient Census

Covid-19 inpatient census has declined steadily since early February, when the Department of Health & Human Services began tabulating these data (a 58% decline in six weeks).

Covid-19 Inpatient Census

Through March 21

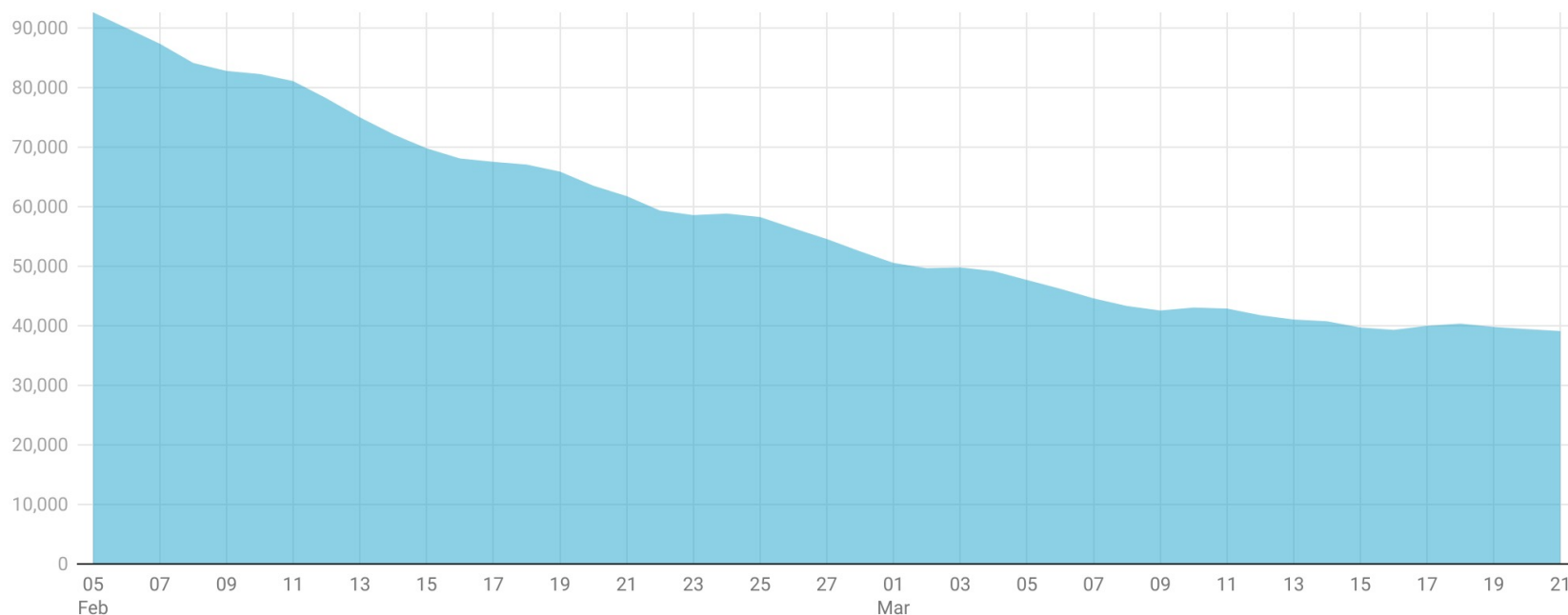


Chart: Health Industry advisor LLC • Source: U.S. Department of Health & Human Services • Created with Datawrapper



Covid-19 Inpatient Census

Covid-19 inpatient census fell 4% from last week and nearly 40% in the past four weeks.

Hospitalized Covid-19 Patients

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

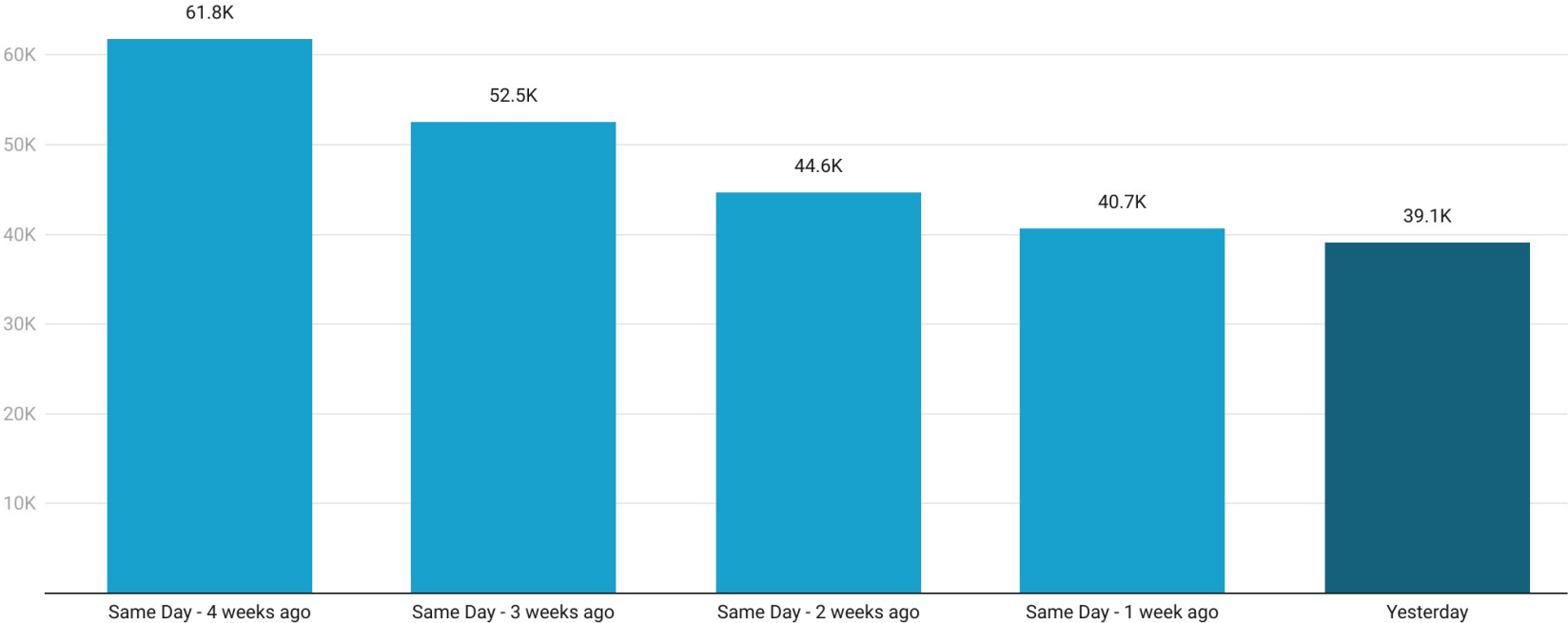


Chart: Health Industry Advisor LLC • Source: U.S. Department of Health & Human Services • Created with Datawrapper

Covid-19 “Vital Signs”

Deaths With Coronavirus

Deaths with coronavirus (7-day average) have declined by 64% since a peak in late January. This rate is lower than at any time in the last four months.

Deaths With Coronavirus

7-Day Average, Through March 21



Chart: Health Industry Advisor LLC • Created with Datawrapper



Deaths Reported With Coronavirus

The 7-day average death rate fell 14% from last week and more than 40% in two weeks.

Daily Deaths Reported With Coronavirus

As of March 21

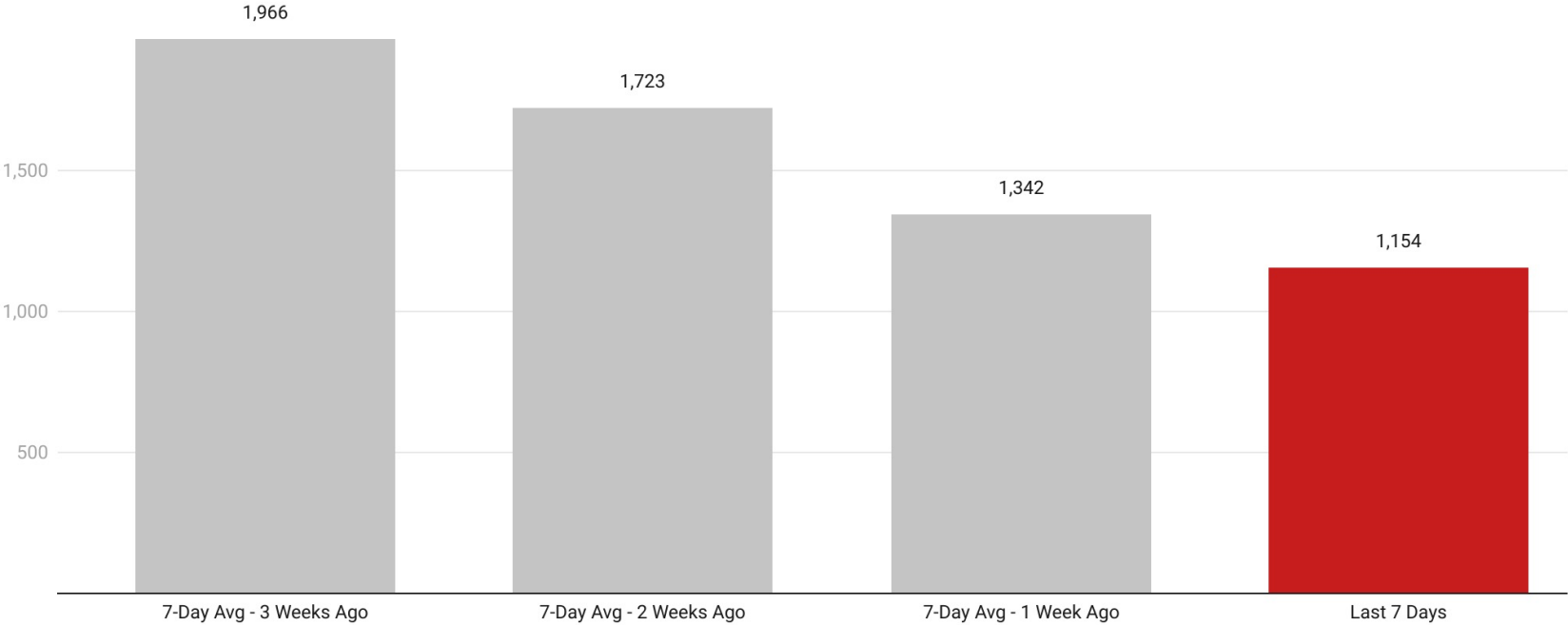


Chart: Health Industry Advisor LLC • Source: The Atlantic • Created with Datawrapper

Sources

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

- 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>
- 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>