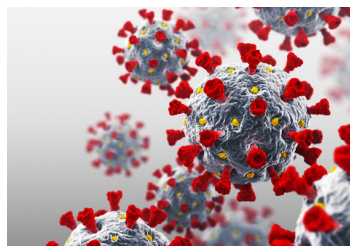


Covid-19 "Vital Signs"

Issue # 318

April 14, 2021

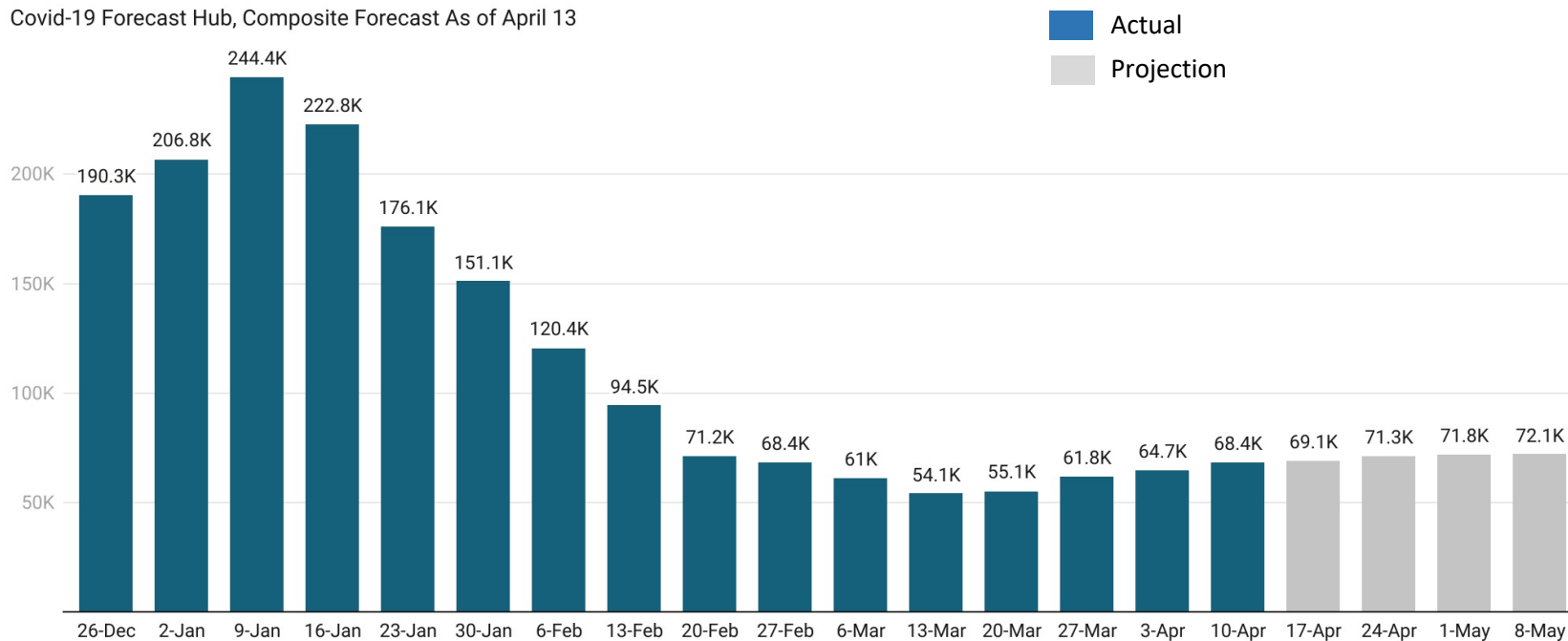


Covid-19 Cases: Ensemble Forecast

The most recent ensemble forecast projects that new daily cases be essentially flat to slightly increasing over the next four weeks.

Newly-Detected Cases Per Day

Covid-19 Forecast Hub, Composite Forecast As of April 13



For the week ending on the date shown

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

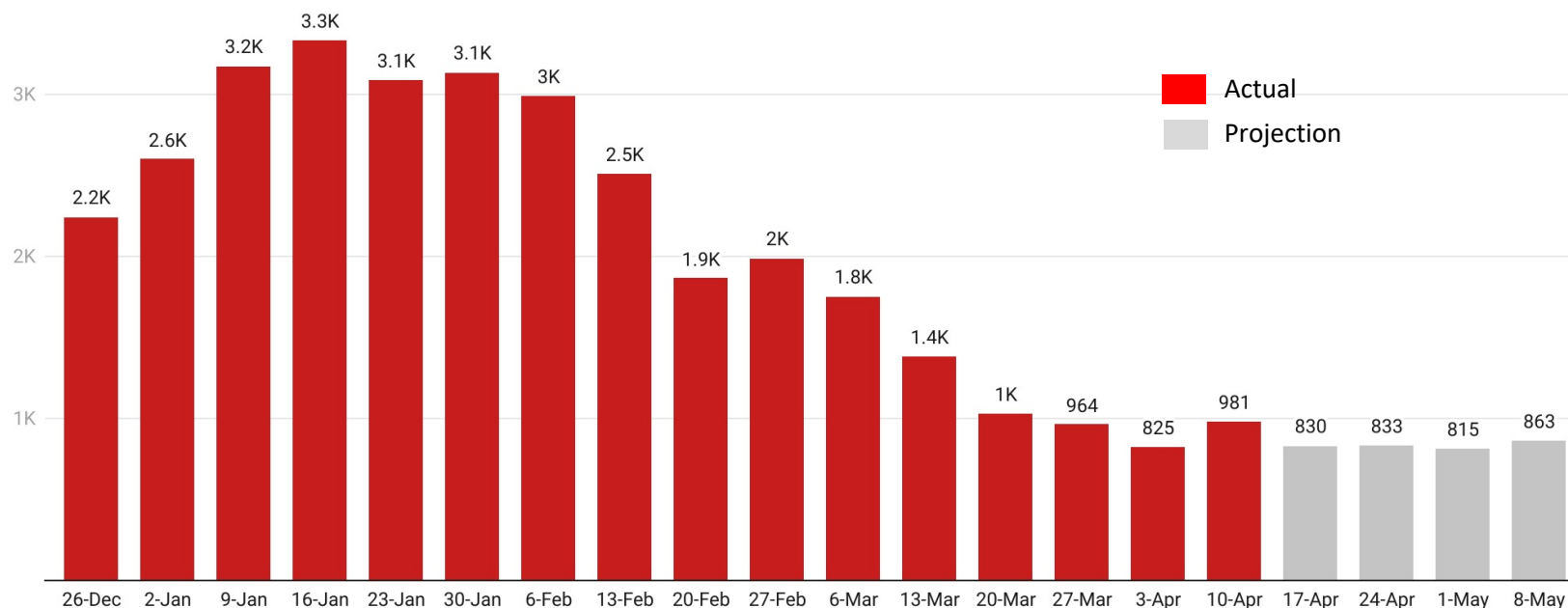
<https://viz.covid19forecasthub.org>

Death Projections – Ensemble Forecast

The most recent ensemble forecast projects that deaths will be relatively consistent week-over-week during the forecast period.

Newly-Reported Deaths Per Day

Covid-19 Forecast Hub, Composite Forecast As of April 13



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>

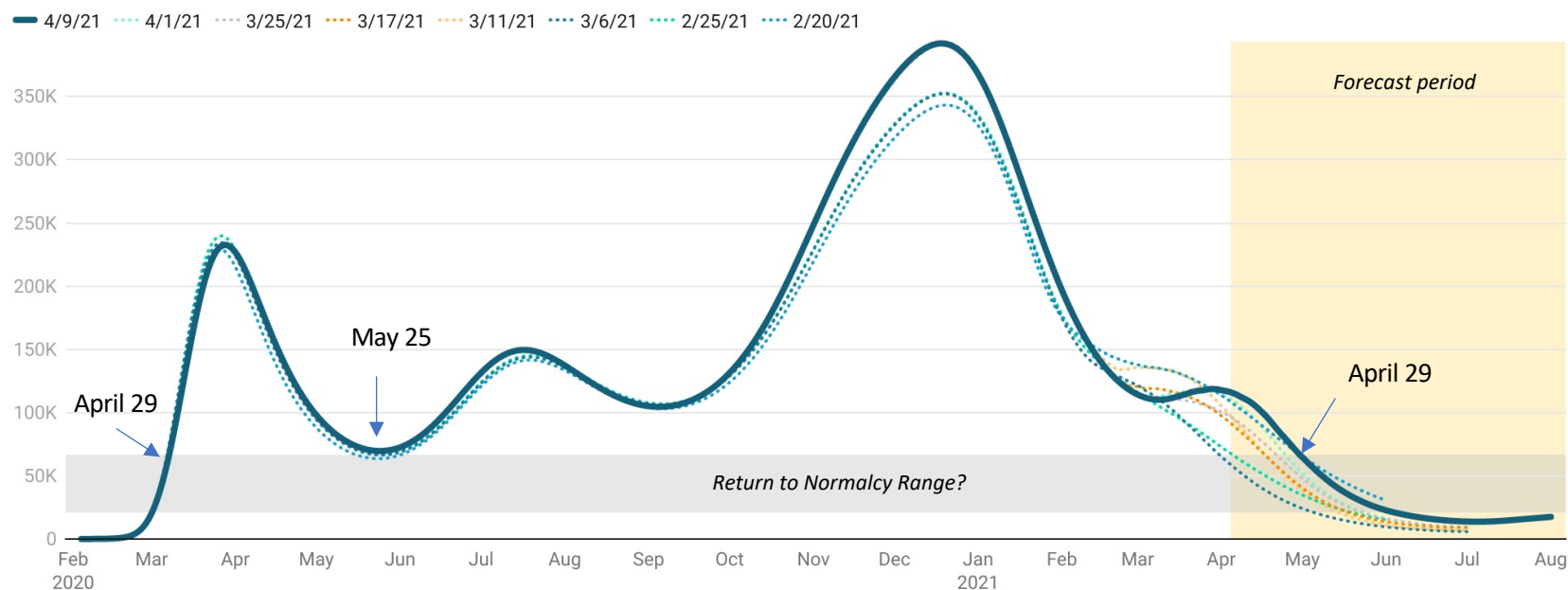
Covid-19 “Vital Signs”

Estimated Infections IHME Projection

The anticipated fourth wave may have already crested, according to the latest IHME model. Estimated daily infections decline an average of 3.1% daily in the next seven weeks. By April 29, estimated new infections fall to the lowest point since March 7, 2020.

Estimated & Projected New Infections

Institute for Health Metrics and Evaluation (IHME)



Covid-19 "Vital Signs"

Estimated Infections IHME Projection - Michigan

IHME's model suggests that infections may have peaked in Michigan. This model suggests that new infections will plummet, as they had done following two earlier surges.

Estimated & Projected New Infections: Michigan

Institute for Health Metrics and Evaluation, As of April 9 Projection

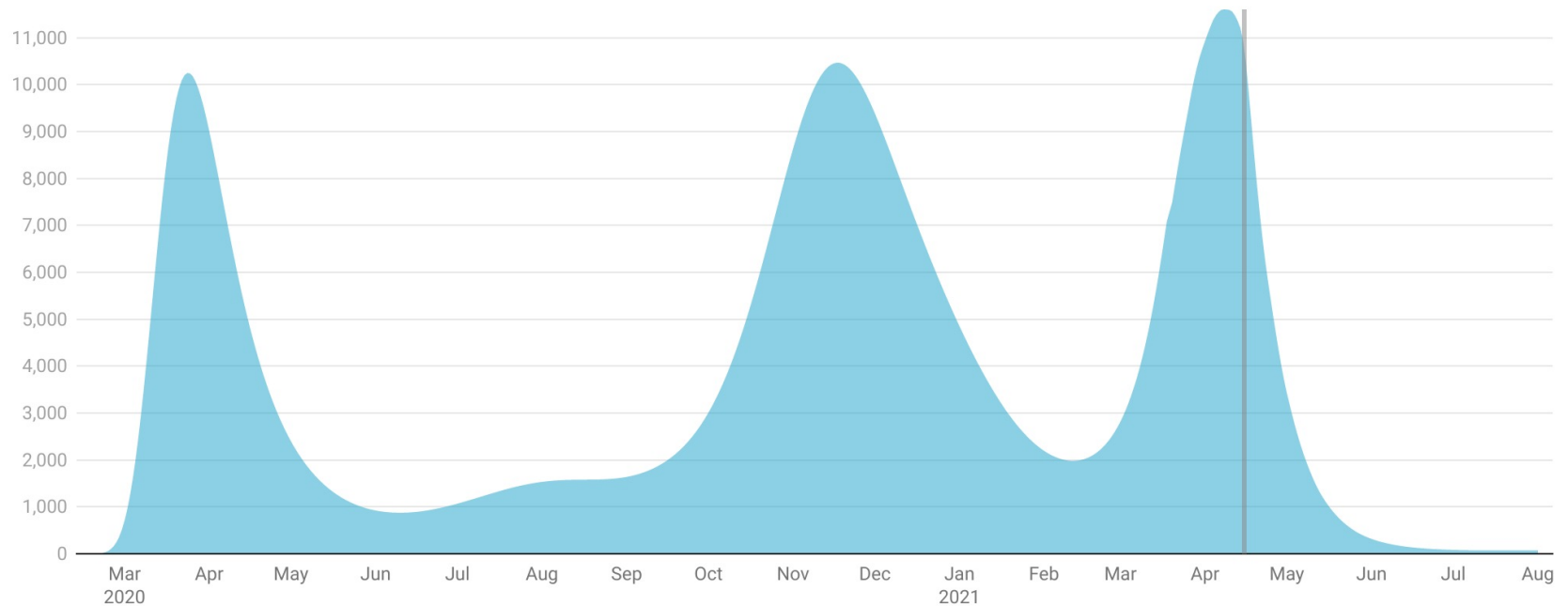


Chart: Health Industry Advisor LLC • Source: Institute for Health Metrics and Evaluation • Created with Datawrapper

Covid-19 "Vital Signs"

Estimated Infections IHME Projection – Select States

New case rates in Michigan, Minnesota, New Jersey and New York have raised concerns recently. IHME's model suggests that infections may have peaked in in each of these states.

Estimated & Projected New Infections: Michigan, Minnesota, New Jersey & New York

Institute for Health Metrics and Evaluation, As of April 9 Projection

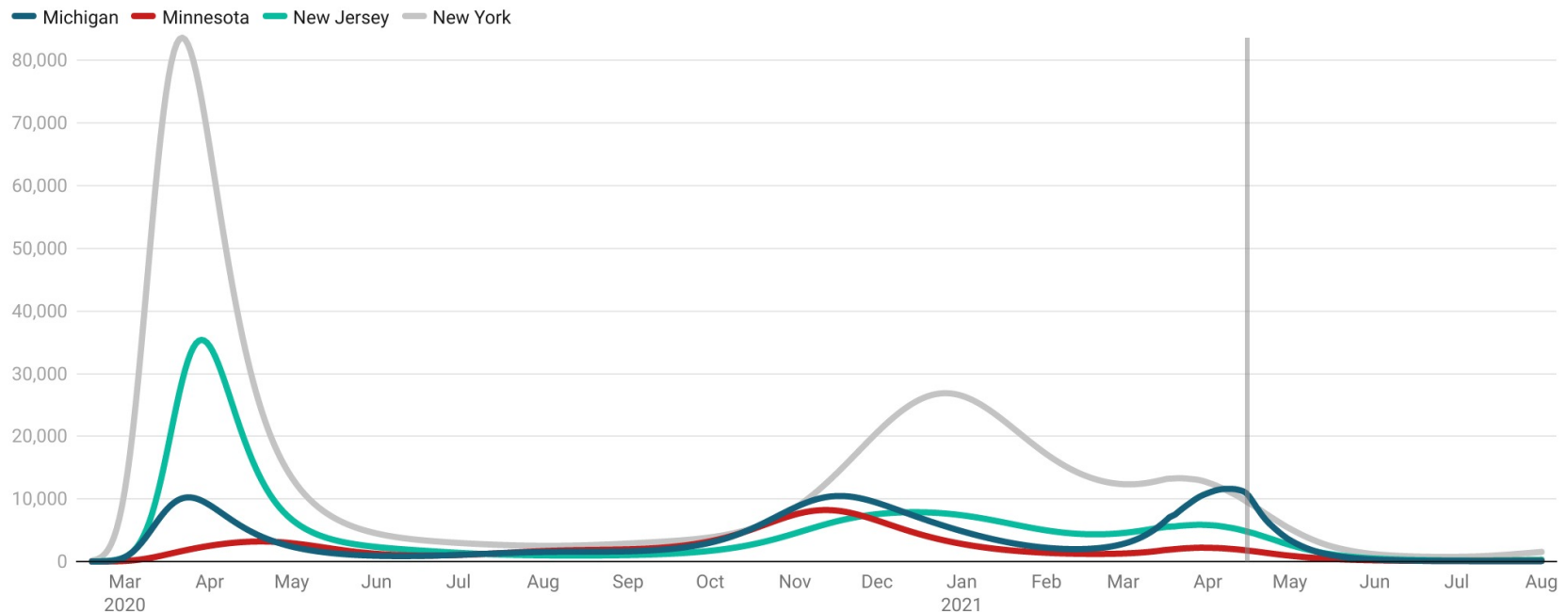


Chart: Health Industry Advisor LLC • Source: Institute for Health Metrics and Evaluation • Created with Datawrapper

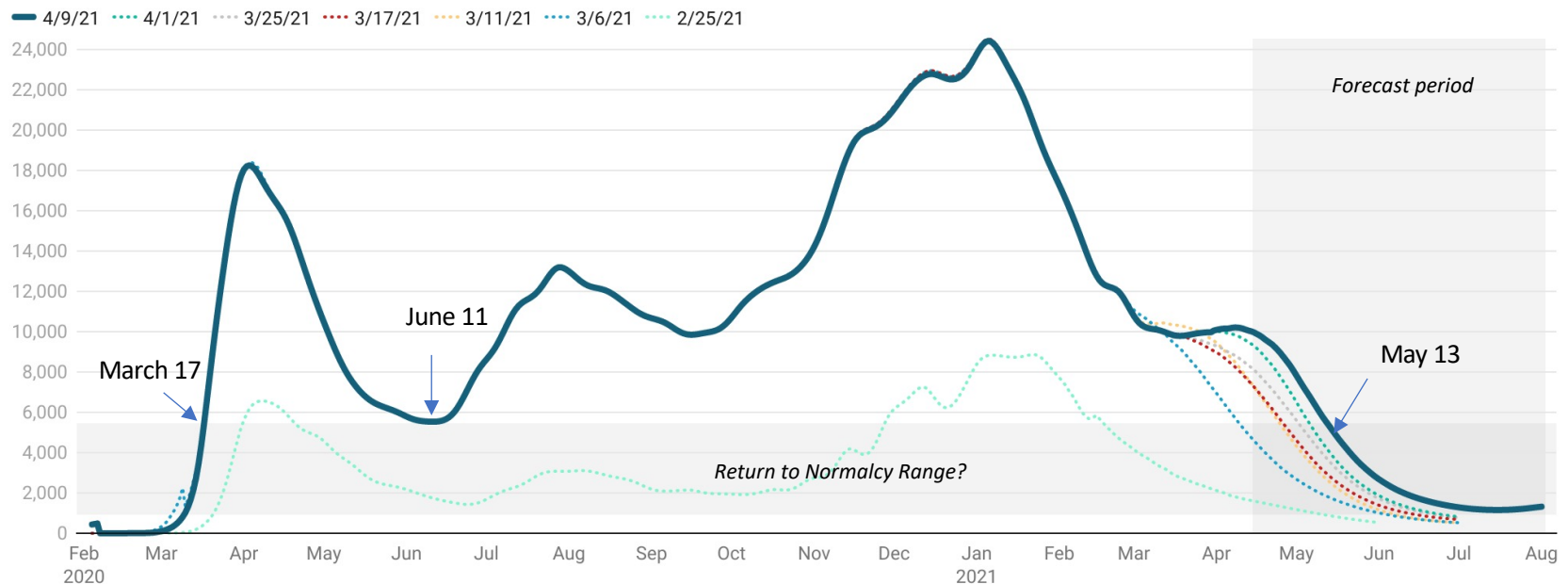
Covid-19 "Vital Signs"

Covid-19 Inpatient Admissions – IHME Projections

Projected Covid-19 admissions peaked last week according to the latest IHME model. By May 13th, projected admissions drop lower than at any time since mid-March 2020.

Estimated & Projected Covid-19 Admissions

Institute For Health Metrics and Evaluation



Key Date Reflects Date of Forecast

Chart: Health Industry Advisor LLC • Source: Institute For Health Metrics and Evaluation • Created with Datawrapper

Covid-19 "Vital Signs"

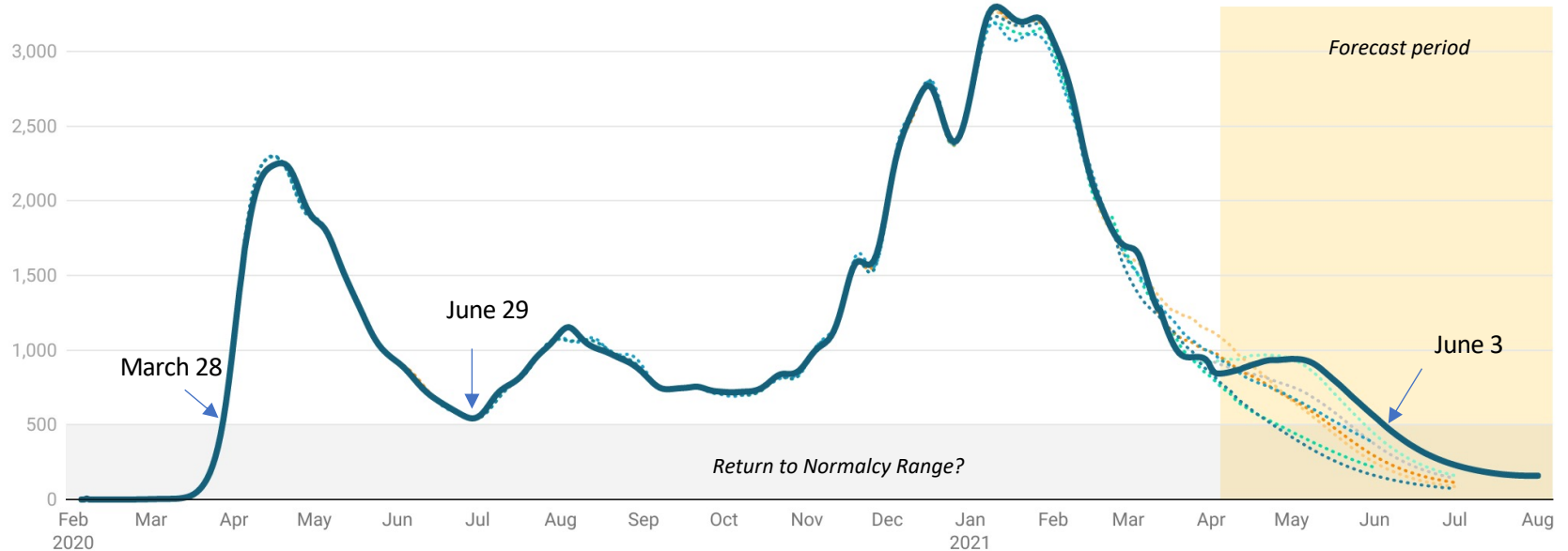
Deaths With Covid-19: IHME Projection

Projected deaths with Covid-19 increase for the remainder of April then decline for the remainder of the forecast period., according to the latest IHME model. By June 3rd, projected Covid-19 deaths fall lower than at any time since the last week in March 2020.

Estimated & Projected Deaths With Covid-19

Institute for Health Metrics and Evaluation (IHME)

4/9/21 4/1/21 3/25/21 3/17/21 3/11/21 3/6/21 2/25/21 2/20/21

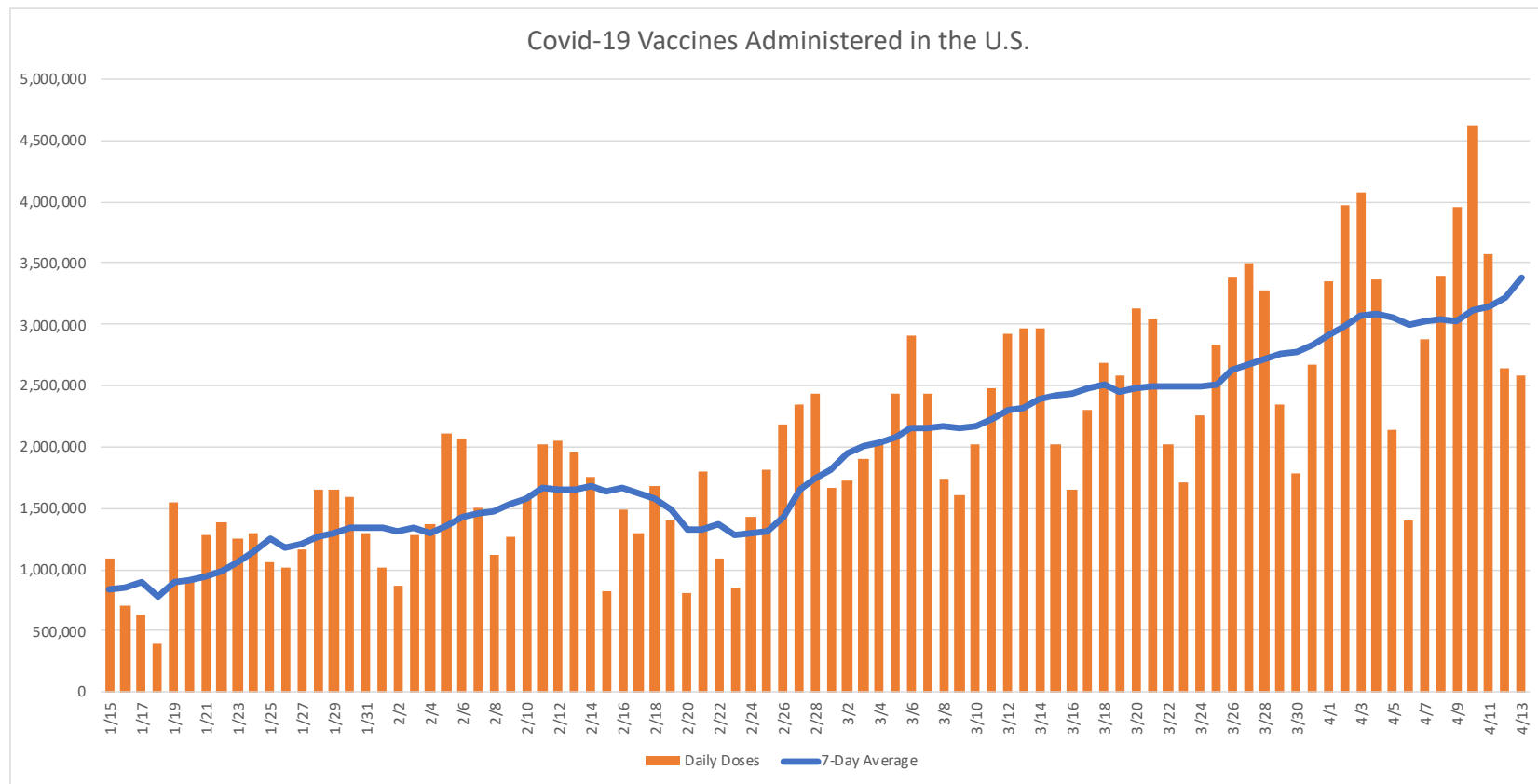


Key Date Reflects Date of Forecast

Chart: Health Industry Advisor LLC • Source: Institute for Health Metrics and Evaluation • Created with Datawrapper

Pace of Vaccinations

The 7-day average set a new high on Monday, with 3.4 million daily doses.



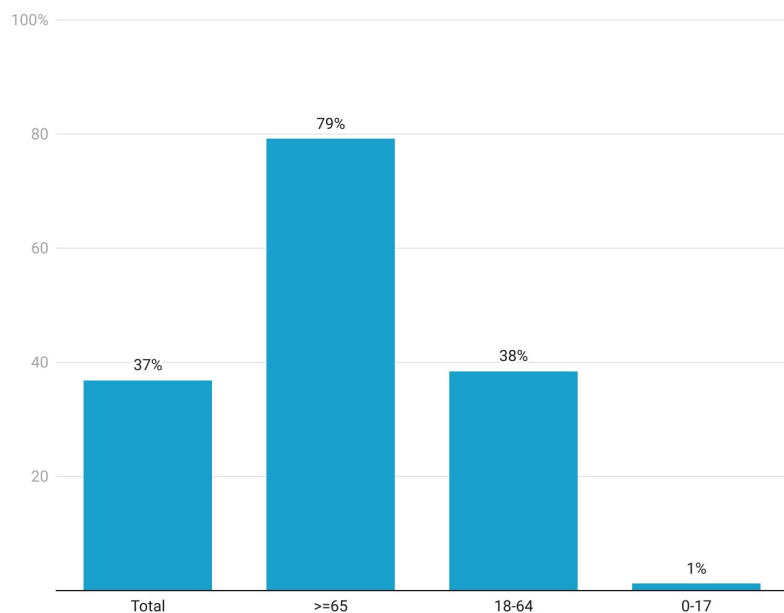
Covid-19 "Vital Signs"

Vaccine Uptake and Immunity

Vaccine uptake among seniors is high (~80%), given early vaccine hesitancy polls. Update among younger adults (37%) reflects limited appointment access. This update needs to accelerate in the coming weeks.

Vaccine Participation

% of Population By Age Group Receiving At Least One Dose



As of April 12

Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Fully Vaccinated Population

By Age Group

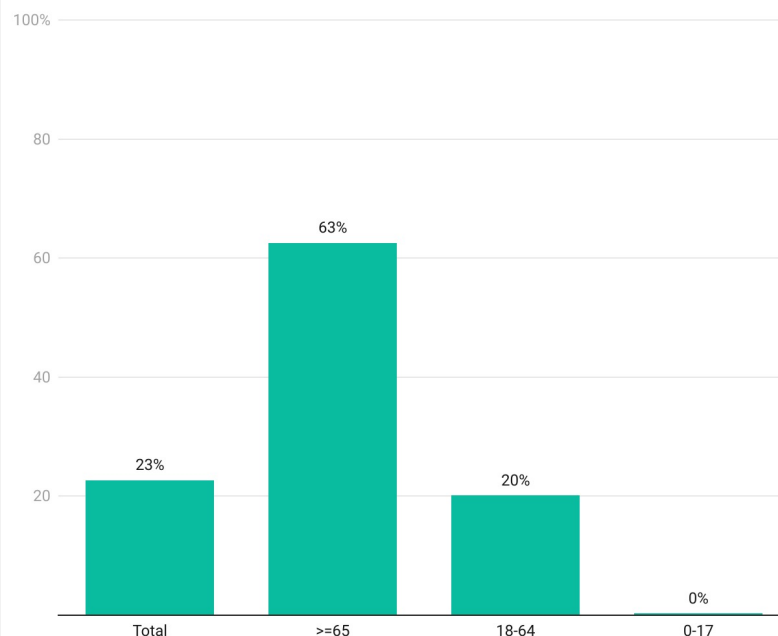


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Covid-19 “Vital Signs”

Vaccine Tracking

To date, the US has distributed nearly 245 million doses and administered 192 million. 74.5 million people are fully inoculated – 29.2% of the adult population. Another 43 million people have received the first of two required doses.

Vaccination Progress

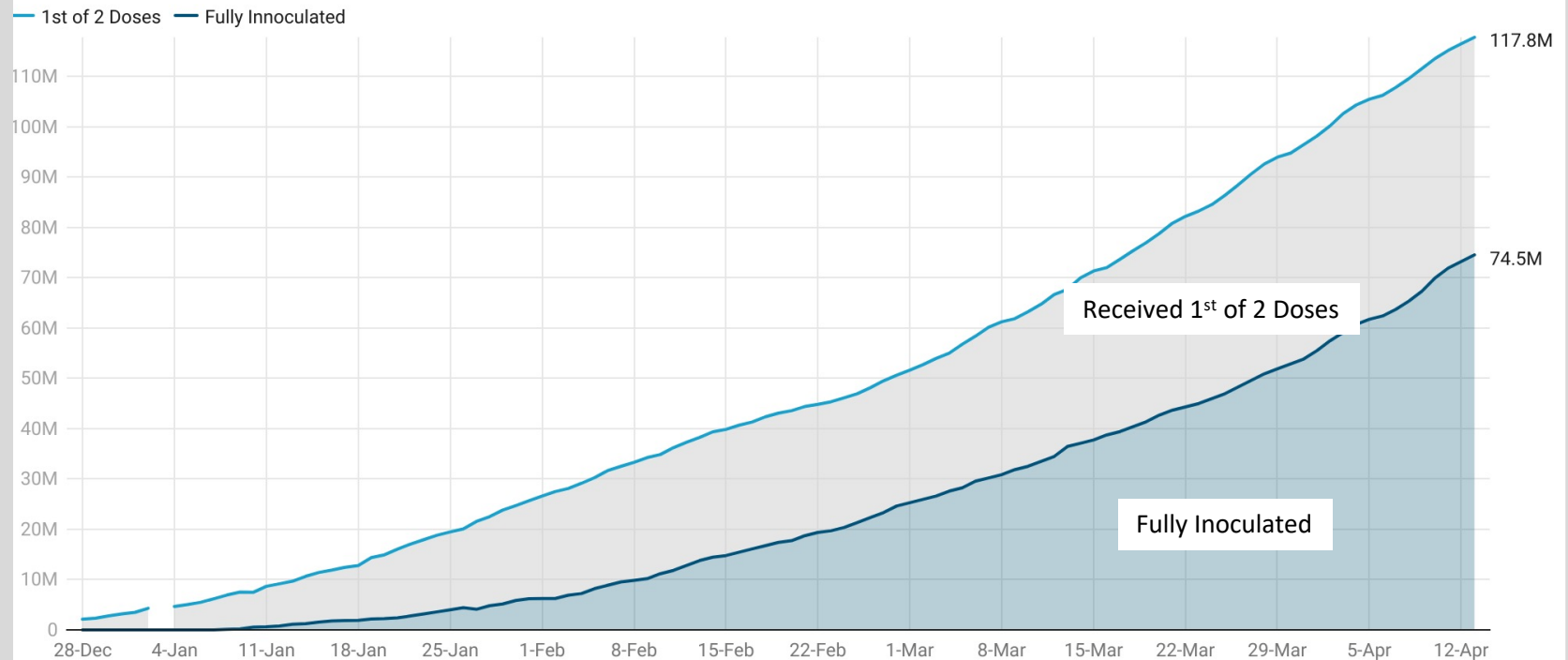


Chart: Health Industry Advisor LLC • Source: CDC, Bloomberg • Created with Datawrapper

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

Covid-19 "Vital Signs"

Newly Detected Cases Per Day

In the US, 7-day new case rates increased 10% week-over-week, after increasing less than 1% the prior week and more than 12% a week earlier. Outside the U.S., cases increased 19% week-over-week after increasing 6% the week prior and 14% two weeks earlier.

Newly Detected Cases

As of April 13

■ United States ■ Outside the US

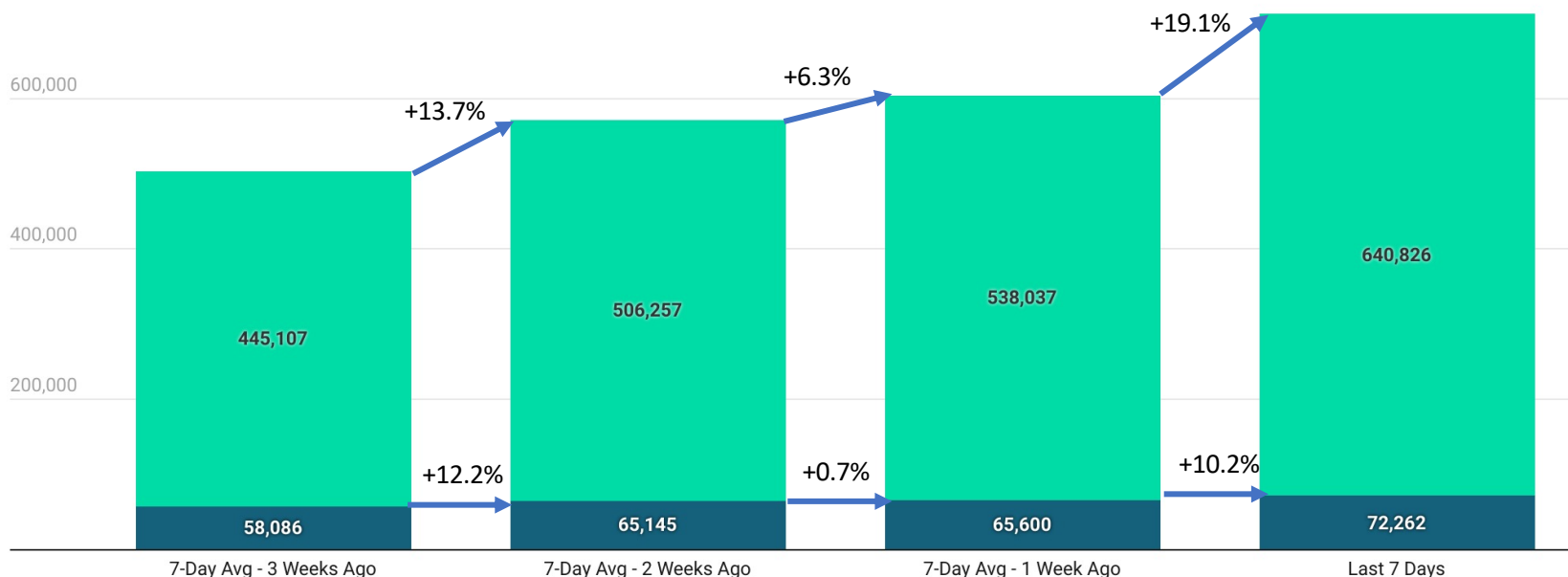


Chart: Health Industry Advisor LLC • Source: The Atlantic • Created with Datawrapper

Covid-19 "Vital Signs"

Newly Detected Cases / Million - US

The 7-day new case rate in the United States spiked again in the past few days.

Newly-Detected Cases / Million

7-Day Average

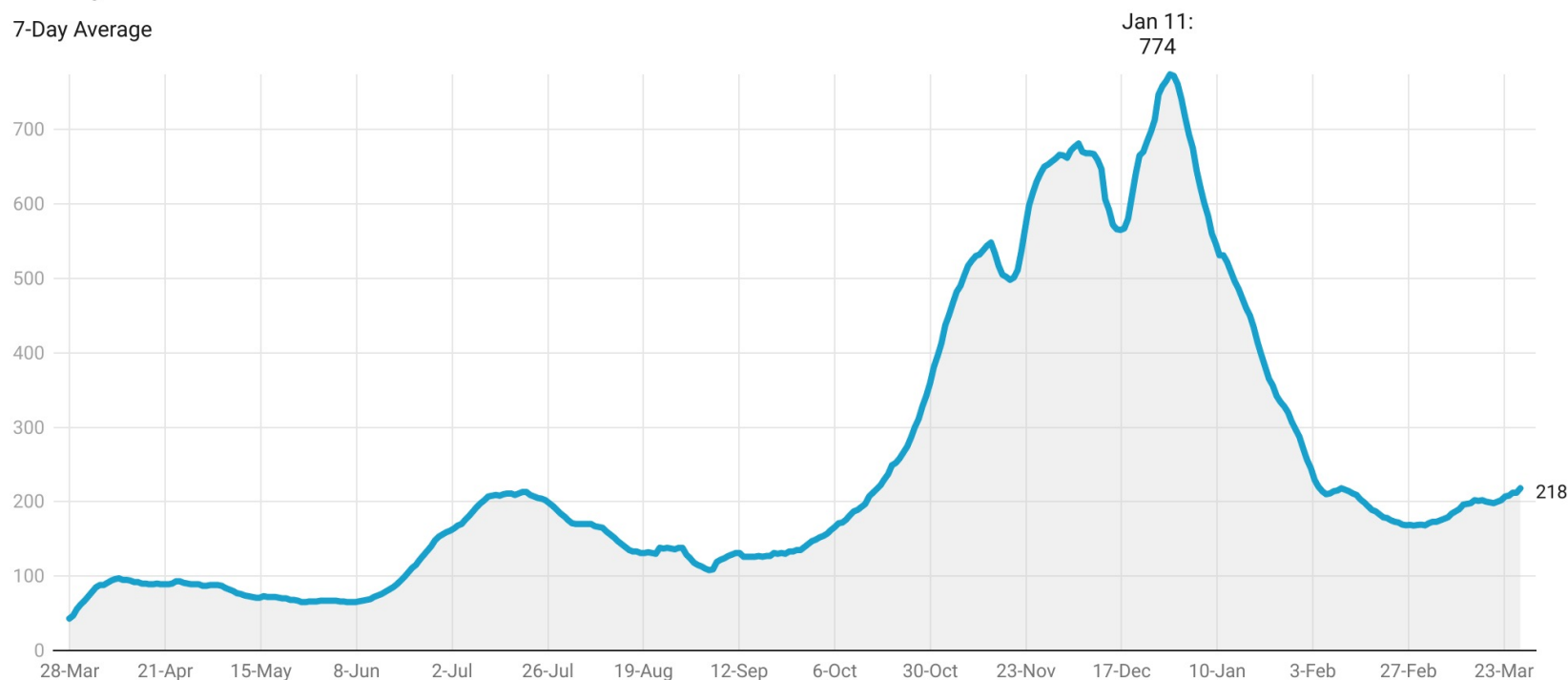


Chart: Health Industry Advisor LLC • Created with Datawrapper

Covid-19 "Vital Signs"

Estimated Daily Infections & New Case Rates

Countering the recent rise in detected cases, estimated actual infections declined seven straight days.

Estimated Daily Infections v. Detected Cases

Yale/Harvard Schools of Public Health Model

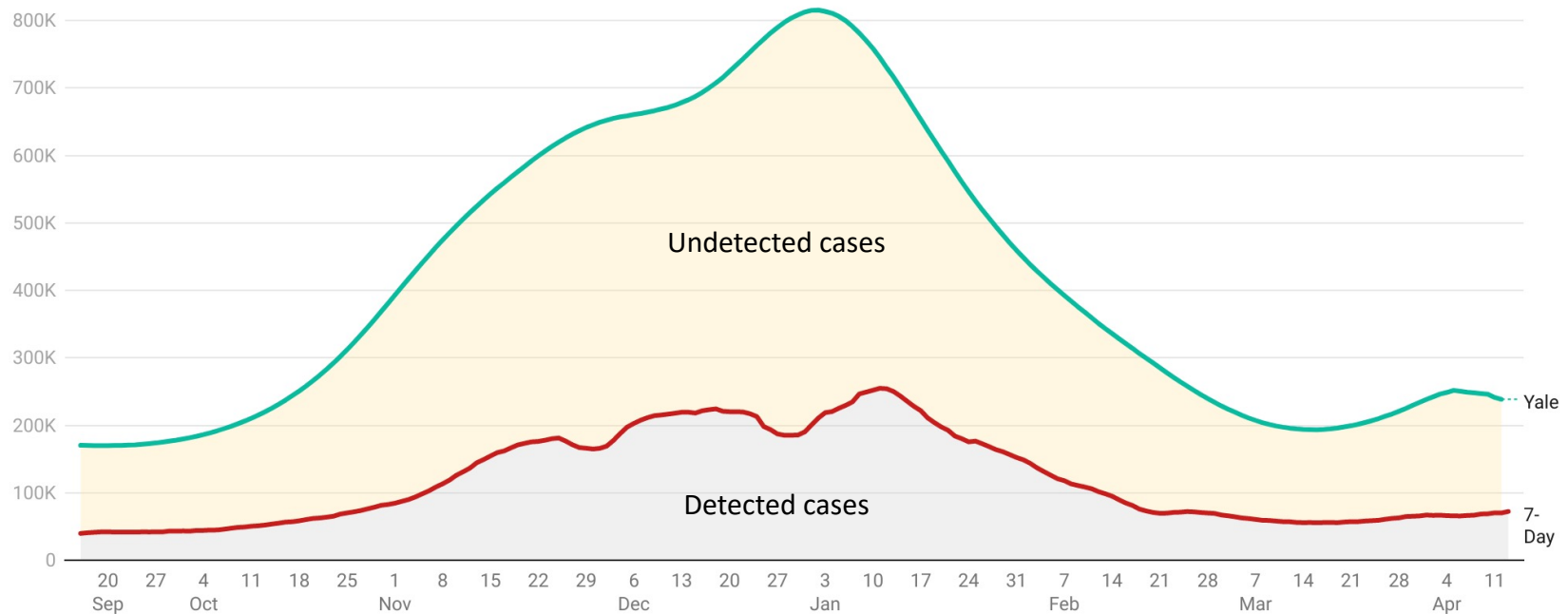


Chart: Health Industry Advisor LLC • Source: Youyang Gu, Yale School of Public Health • Created with Datawrapper

Covid-19 “Vital Signs”

Covid-19 Inpatient Census

Covid-19 inpatient census has moved up somewhat since mid-March yet remains substantially lower than it was in January and February.

Covid-19 Inpatient Census

Through April 11

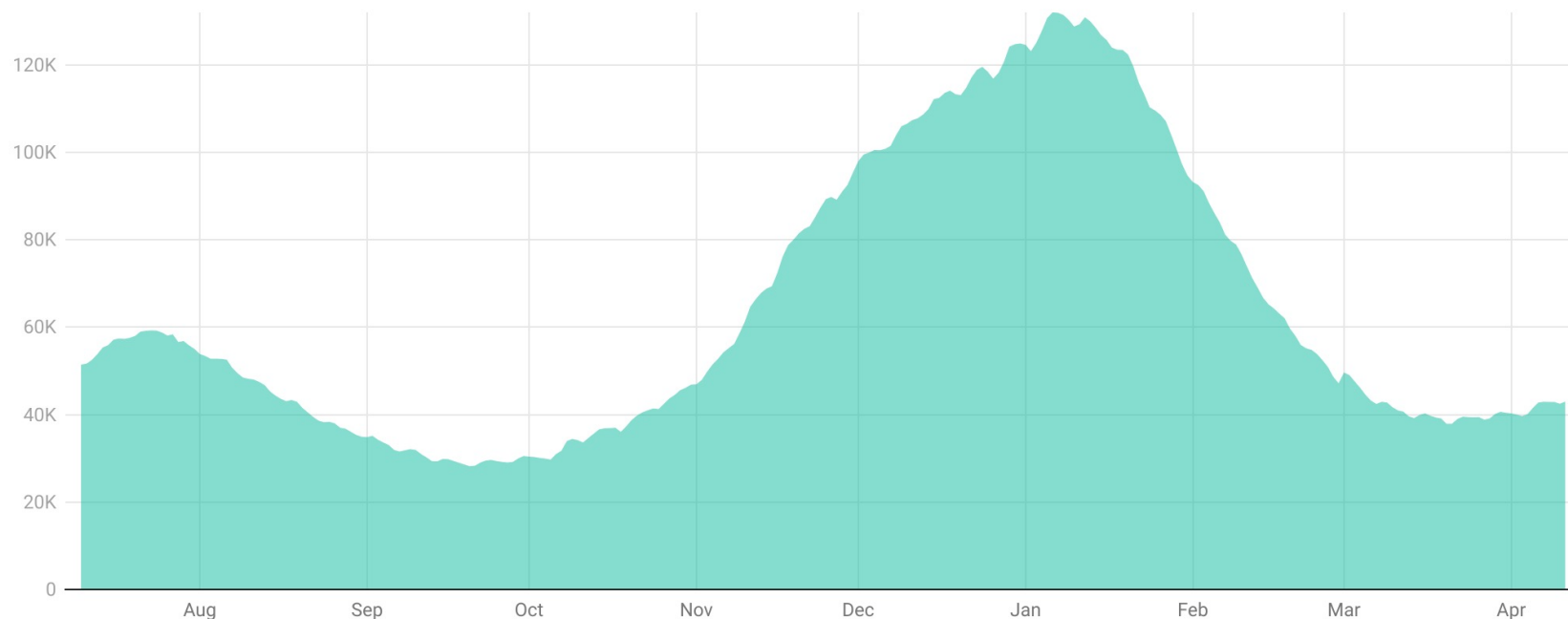


Chart: Health Industry advisor LLC • Source: U.S. Department of Health & Human Services • Created with Datawrapper

Covid-19 Inpatient Census

Covid-19 inpatient census increased each of the past three Sundays on a week-over-week basis.

Hospitalized Covid-19 Patients

Compared to Same Day, Prior Weeks

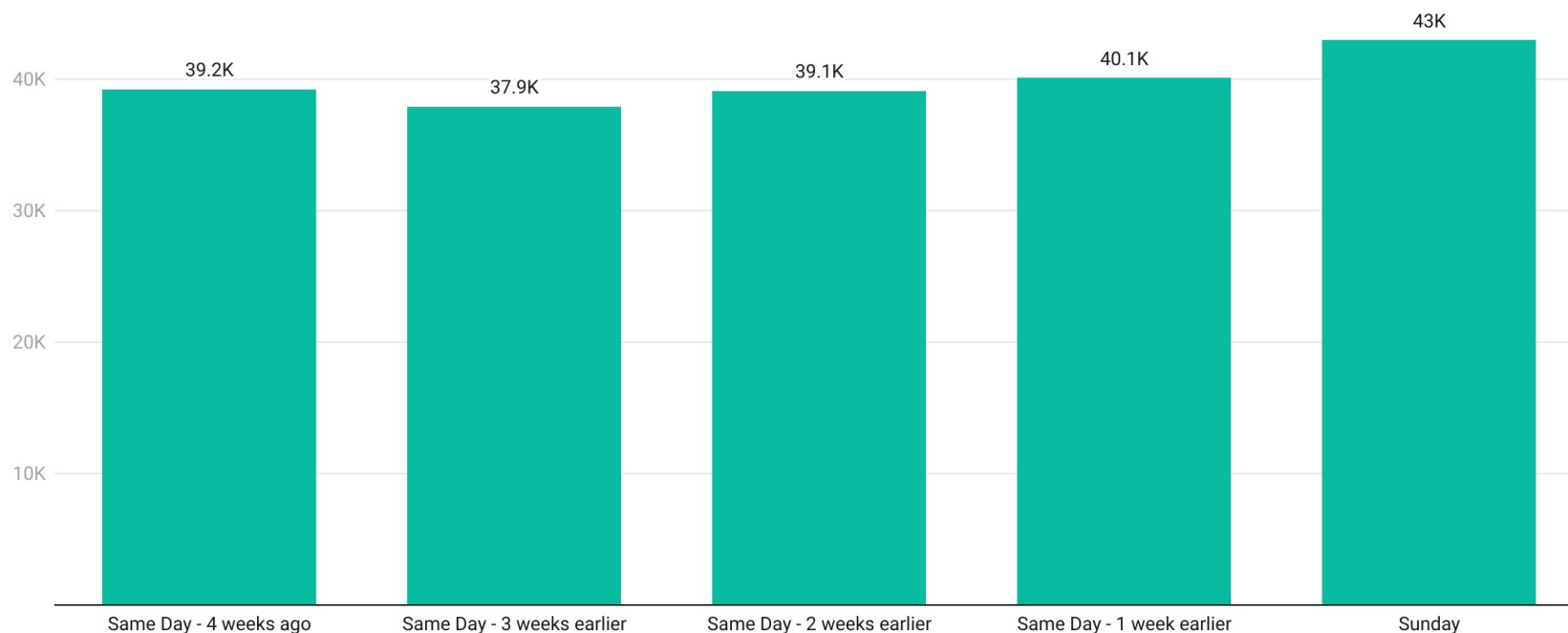


Chart: Health Industry Advisor LLC • Source: U.S. Department of Health & Human Services • Created with Datawrapper

Covid-19 "Vital Signs"

Deaths With Coronavirus

Deaths with coronavirus (7-day average) have declined nearly 80% since a peak in late January. This rate is lower than it has been in nearly six months.

Deaths With Coronavirus

7-Day Average, Through April 13

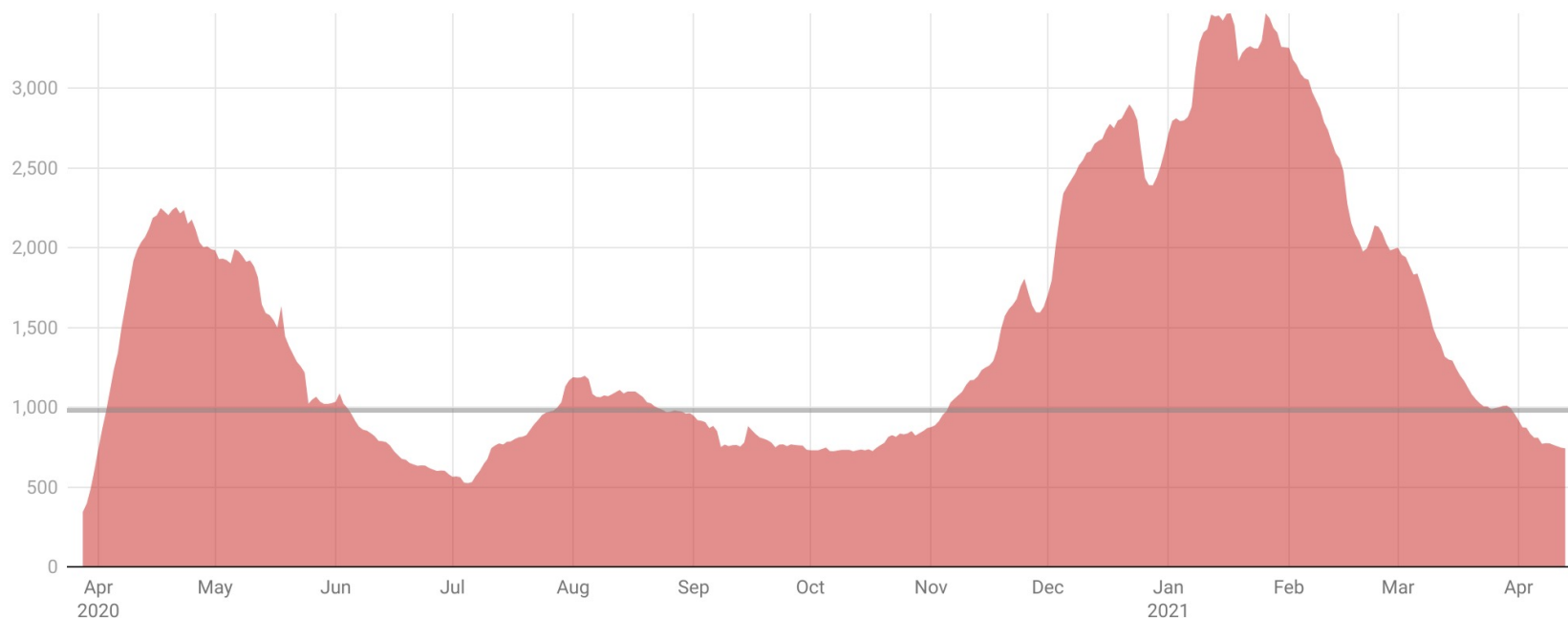


Chart: Health Industry Advisor LLC • Created with Datawrapper

Deaths Reported With Coronavirus

Deaths declined more than 8% week-over-week and more than 23% in three weeks.

Daily Deaths Reported With Coronavirus

As of April 13

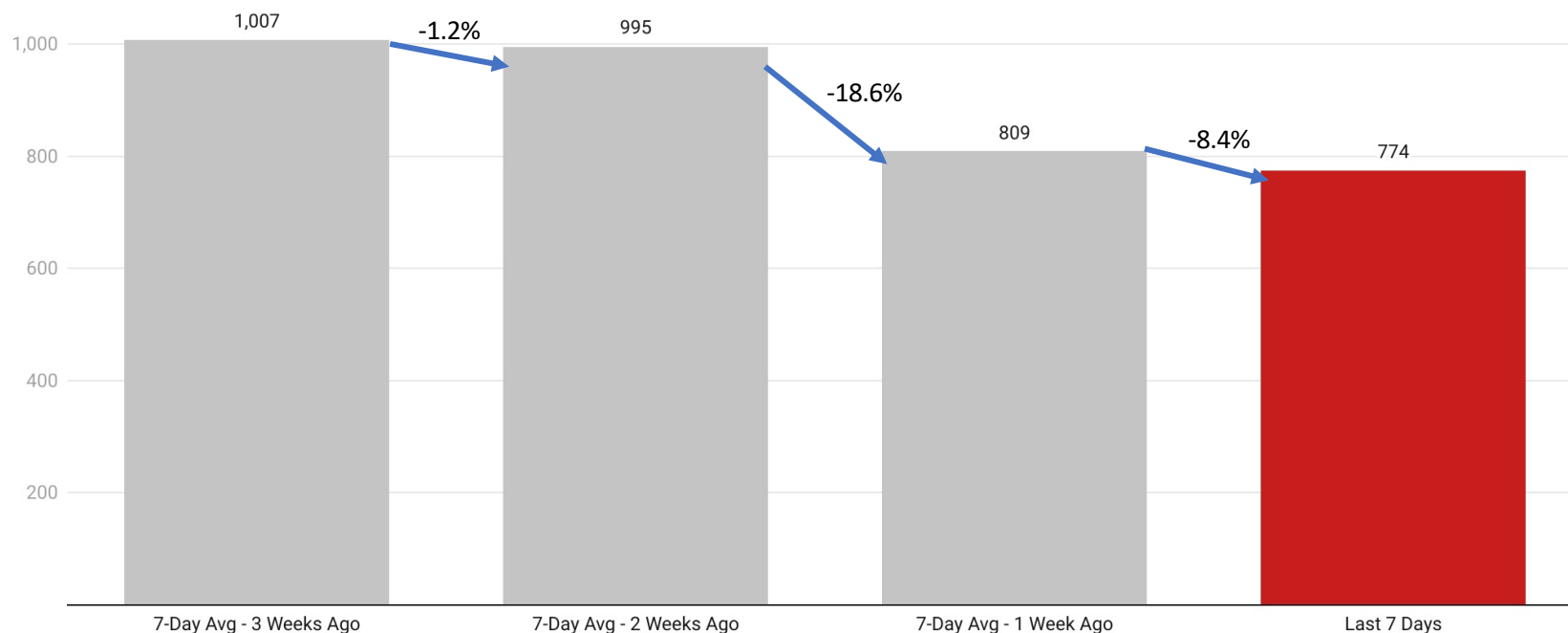


Chart: Health Industry Advisor LLC • Source: The Atlantic • Created with Datawrapper

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>
- 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>