



*"Strategic Advice in an Era of Unprecedented Change"*

Issue #385

Monday, June 6, 2022

COVID19  
VITAL SIGNS

# Highlights – As of June 3

- Newly-reported cases dropped 15% in the United States week-over-week
- However, the virus spread further across the country. Transmission levels in six of every seven counties rated High or Substantial last week, up from two of three two weeks earlier
- Most (84%) wastewater treatment sites detected the virus in substantially every sample tested in the past fifteen days. More than half these sites reported increased virus levels compared to the prior fifteen-day period
- Nevertheless, the CDC's Community Level scorecard paints a positive picture of the virus' impact. Seven in ten counties rated Low for overall impact. Fewer counties rated High each of the past two weeks
- Hospitalizations doubled since mid-April. However, the current occupancy and admission per capita rates remain relatively low, ranking in the 20<sup>th</sup> and 28<sup>th</sup> percentile respectively for the August 2020 – June 2022 period
- The case fatality rate dropped to its lowest level of the pandemic
- Globally, newly reported cases fell 16% compared to a week earlier, led by a 25% drop in Asia. North America reported 16% fewer cases week-over-week
- North Korea and Taiwan suffered higher infections per capita than all other large countries, both more than twice that experienced in next highest New Zealand and Australia.
  - Singapore's rate, fifth highest among large country, was half that of Australia's
  - Infections in the United States ranked eleventh highest, at one-fourth of Australia's and one-twelfth of North Korea's
- Cases doubled week-over-week in the Democratic Republic of Congo, Ethiopia, and Kenya. Cases fell most sharply in Argentina, China, and Costa Rica

The current Covid wave appears to be more prolonged yet less intense than prior waves. Moreover, case rates exceed the relatively low levels posted in May and June of 2020 and 2021

### New Daily Cases per Million - U.S.

7-Day Average, Through June 3

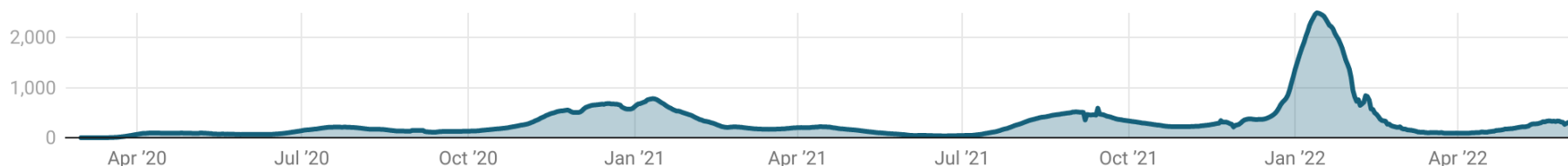


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

### Deaths With Covid - U.S.

7-Day Average, Through June 3

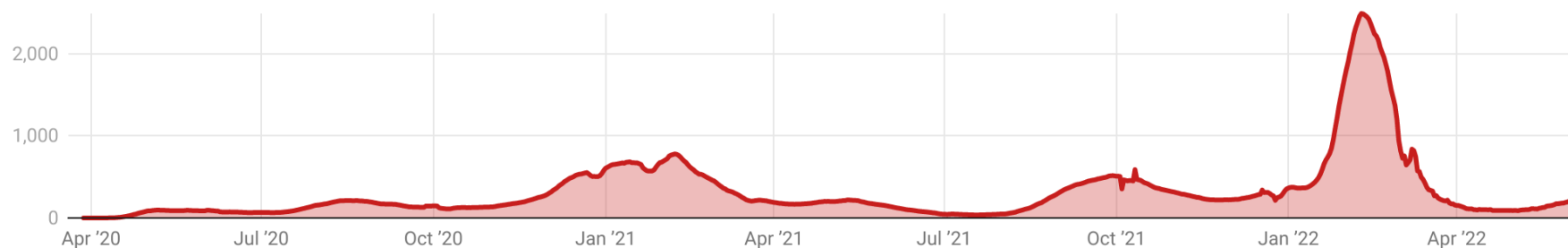


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Newly reported cases dropped 15% week-over-week in the United States. However, apparent reporting delays during the Memorial Day holiday period cloud the picture somewhat

## New Daily Cases per Million - U.S.

7-Day Average, Through June 3

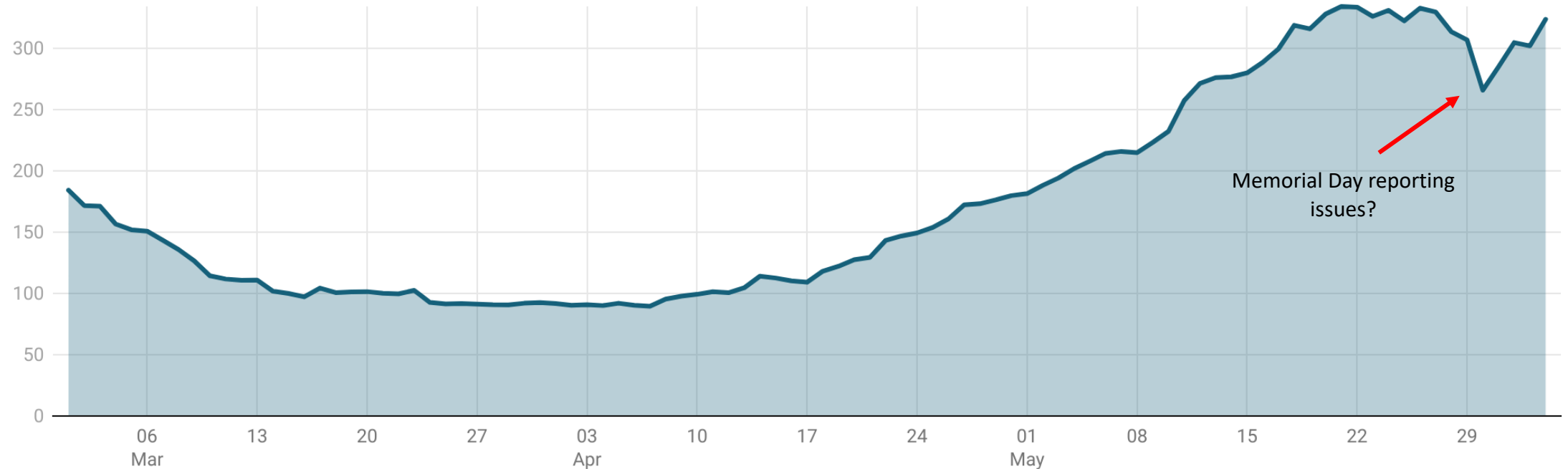


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Most wastewater testing sites (84%) across the country detect the virus in nearly all samples (80 – 100%). However, one-in-ten sites found no evidence of the virus

## Test-Positivity Rate

7-Day Average, Through May 30

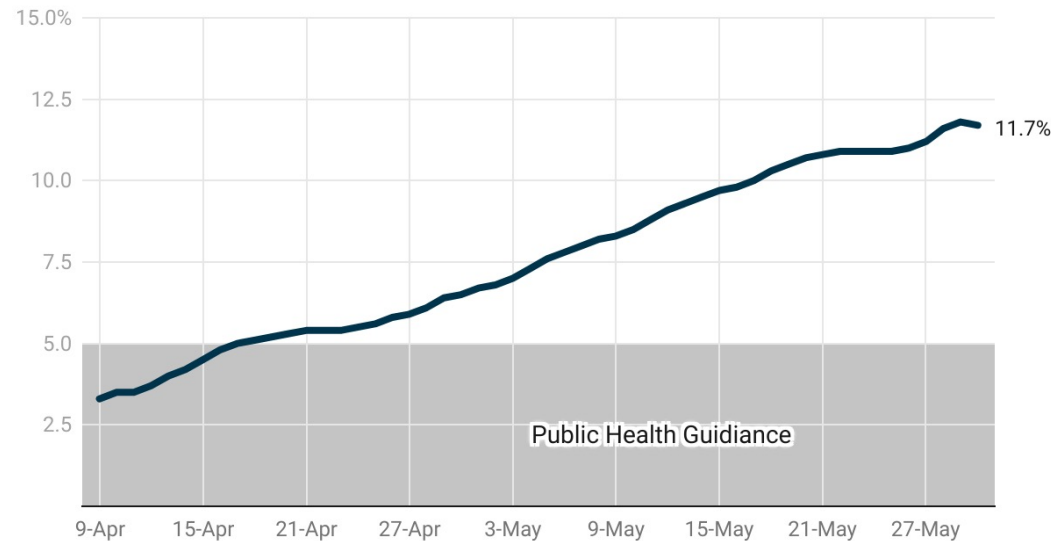
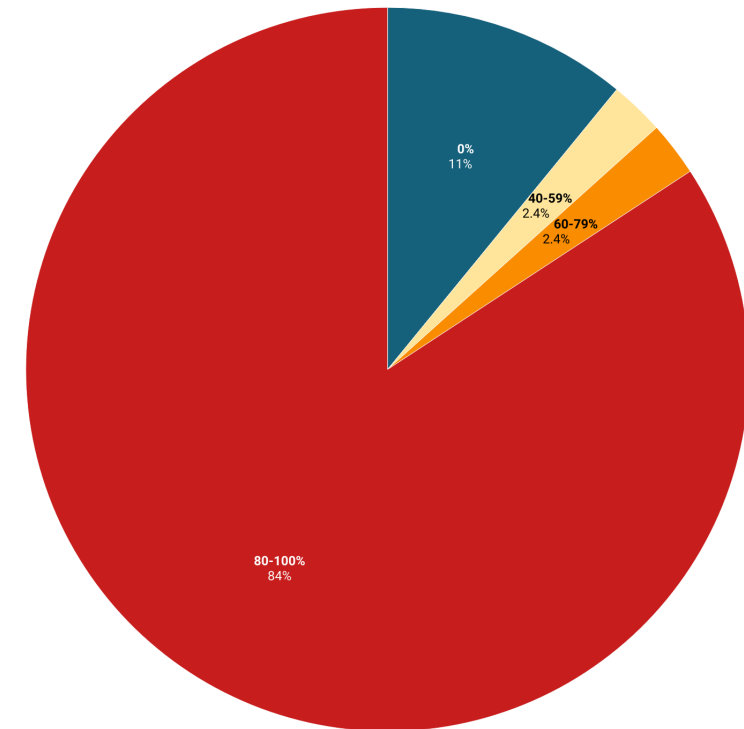


Chart: Health Industry Advisor LLC • Source: U.S. Department of Health & Human Services • Created with Datawrapper

## Percent of Samples With Detectable Virus - Number of Sites

May 18 - June 1

0% (11%) 40-59% (2.4%) 60-79% (2.4%) 80-100% (84%)



Source: <https://covid.cdc.gov/covid-data-tracker/#wastewater-surveillance>

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

Wastewater virus levels increased in most sites since the last testing period. Current virus levels range between 40% to 80% of peak measurement in most sites

### Current Wastewater Virus Levels v. Peak

May 18 - June 1

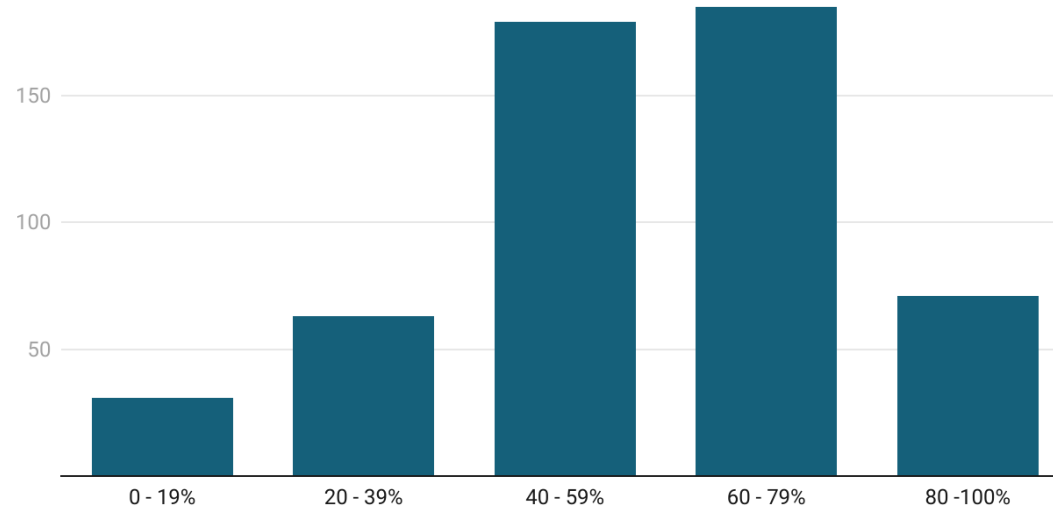


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

### Change (%) in Virus Levels Since Last Period - Number of Sites

May 18 - June 1

Legend: -100+% (Dark Green), -10 to -99% (Teal), 0 to -9% (Light Green), 1 to 9% (Light Orange), 10 to 99% (Orange), 100 to 999% (Red), 1000+% (Dark Red)

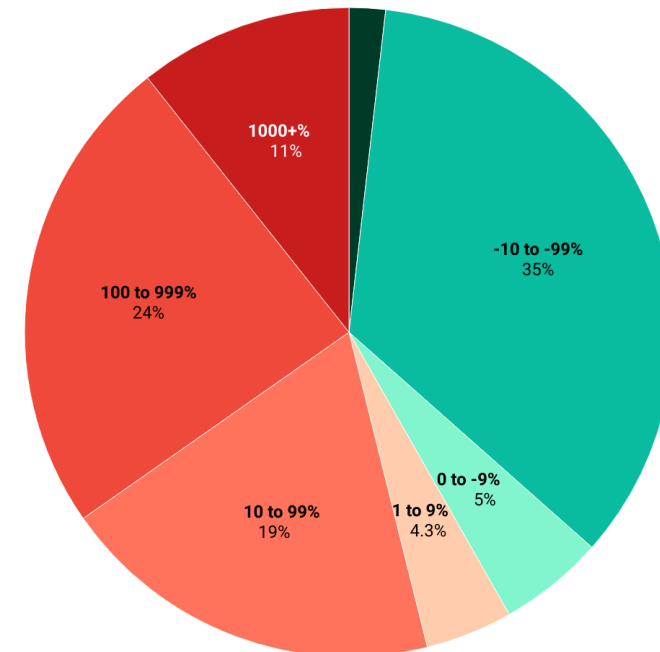
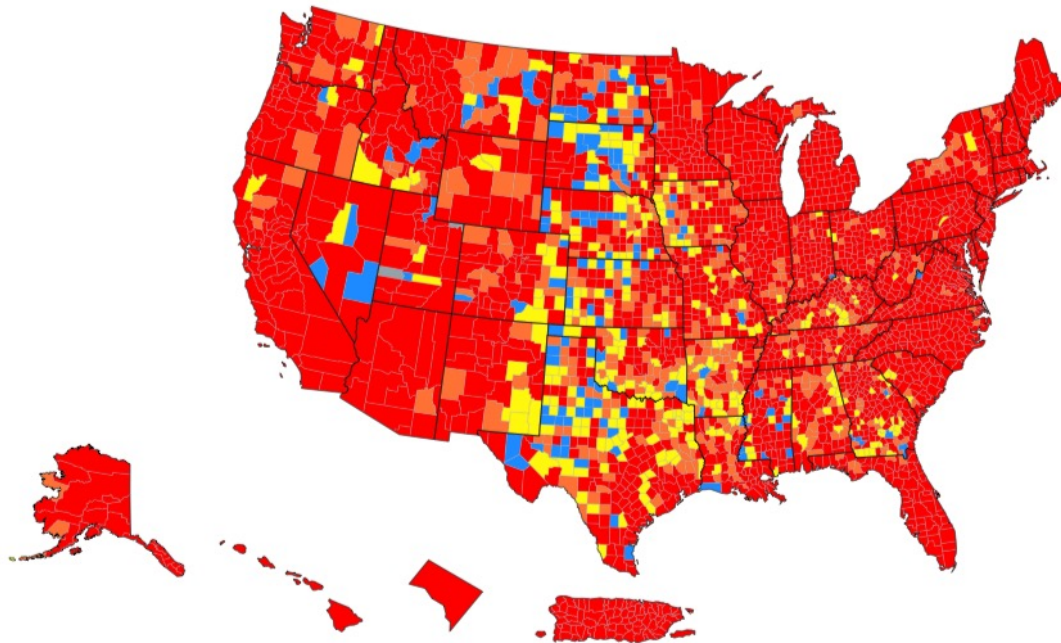


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Virus spread rated High or Substantial in 85% of U.S. counties last week. 72% rated High, up sharply from 58% two weeks earlier

Community Transmission  
May 27 –June 2, 2022



Source: Centers for Disease Control and Prevention website; accessed June 4, 2022

Community Transmission By County

As of June 2

■ High ■ Substantial ■ Moderate ■ Low

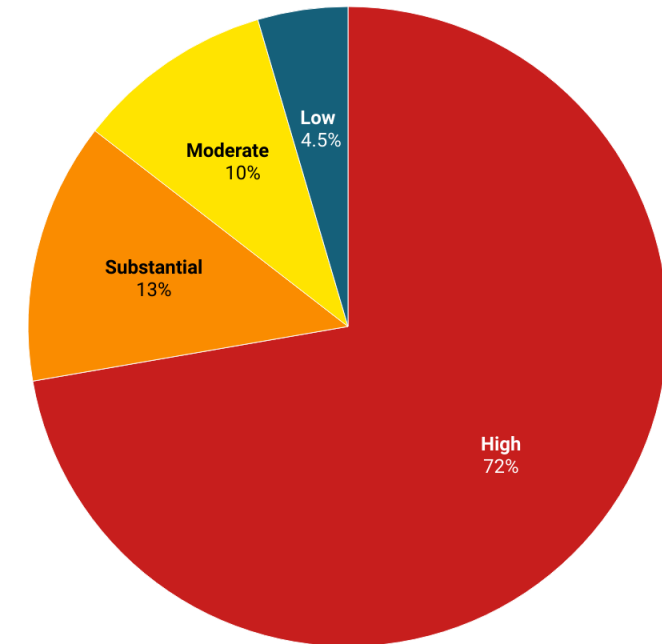


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

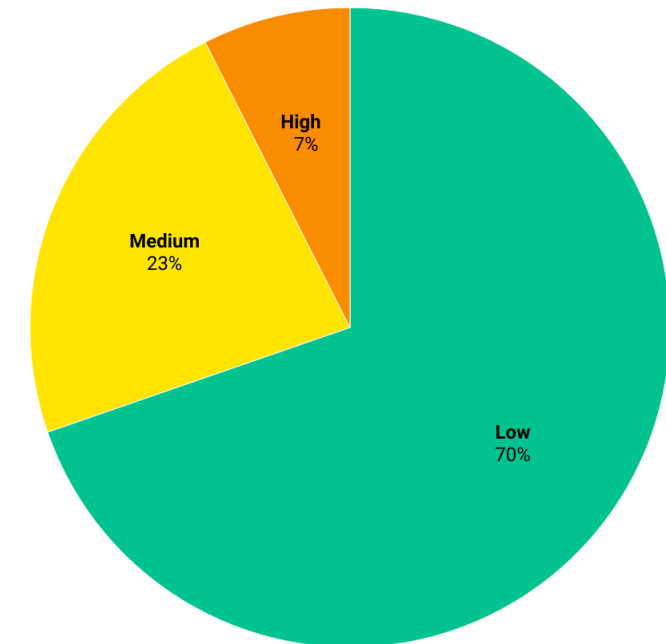
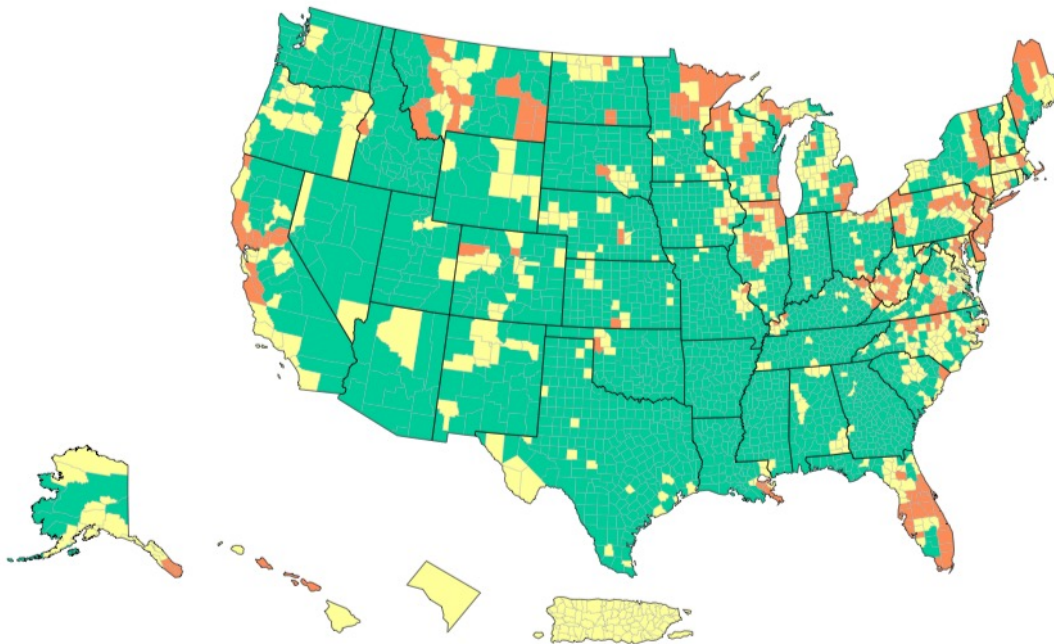
Seven-in-ten counties rated Low on the CDC's Community Level scorecard last week, down slightly from the prior week. The number of counties rated High fell each of the past two weeks

May 27 June 3, 2022

### Community Levels By County

As of June 3

Low Medium High



Source: Centers for Disease Control and Prevention website; accessed June 5, 2022

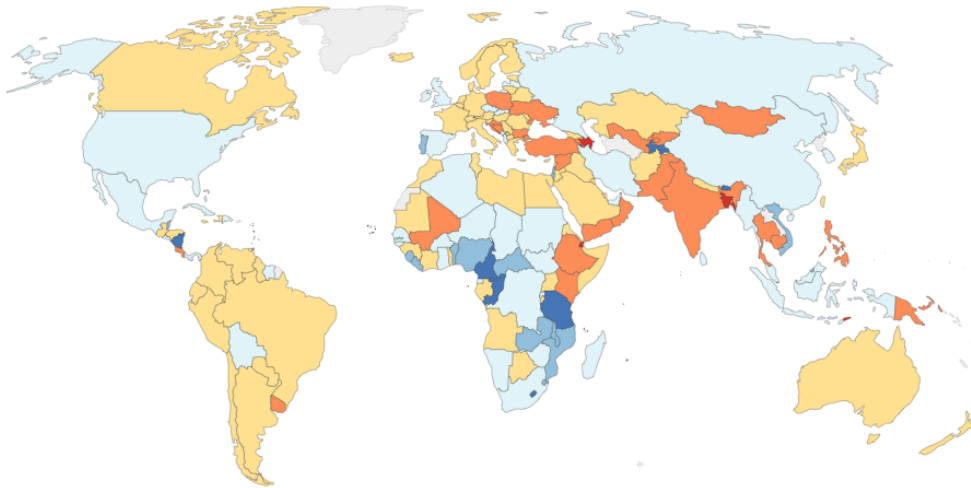
Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

The Reproduction Rate ( $R_t$ ) fell in much of Europe and South America during the past month but rose in India, the United States and several African and Asian countries

As of March 18

Estimate of the effective reproduction rate ( $R$ ) of COVID-19, Mar 18, 2021

The reproduction rate represents the average number of new infections caused by a single infected individual. If the rate is greater than 1, the infection is able to spread in the population. If it is below 1, the number of cases occurring in the population will gradually decrease to zero.

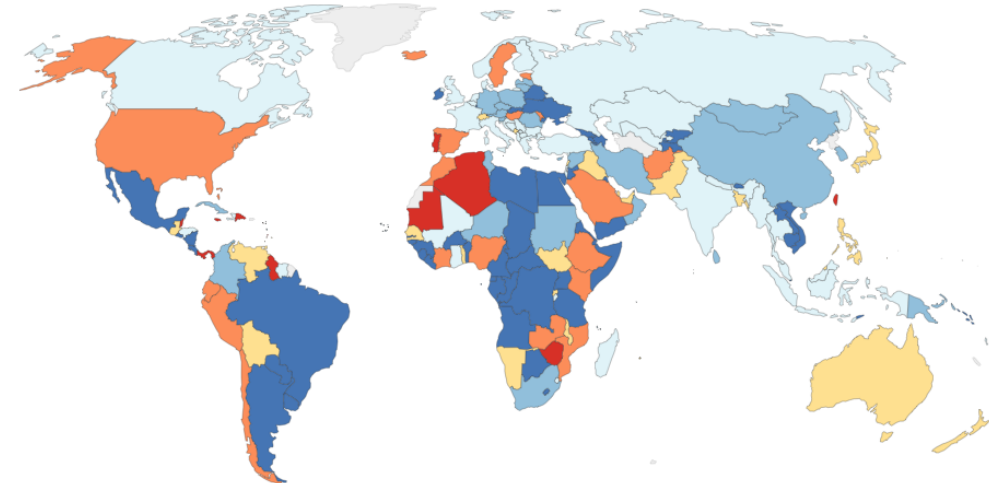


Source: Arroyo-Marioli F, Bullano F, Kucinskas S, Rondón-Moreno C (2021) Tracking R of COVID-19: A new real-time estimation using the Kalman filter.

As of May 19

Estimate of the effective reproduction rate ( $R$ ) of COVID-19, May 19, 2022

The reproduction rate represents the average number of new infections caused by a single infected individual. If the rate is greater than 1, the infection is able to spread in the population. If it is below 1, the number of cases occurring in the population will gradually decrease to zero.



Source: Arroyo-Marioli F, Bullano F, Kucinskas S, Rondón-Moreno C (2021) Tracking R of COVID-19: A new real-time estimation using the Kalman filter.

Our World in Data chart, <https://ourworldindata.org/covid-cases> accessed June 6, 2022

The United States averaged 277 thousand daily vaccine shots last week, ranking fifth highest globally. However, its 31% boosted population rates fares poorly compared to other countries

### Daily Rate of Vaccine Dose Administration

Week ending June 4

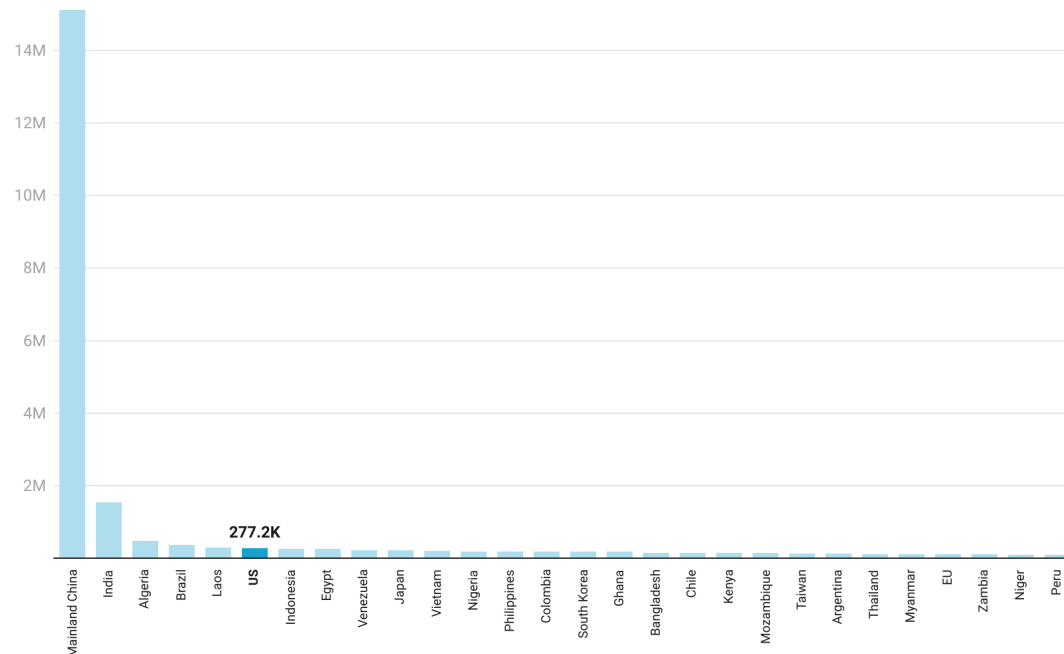


Chart: Health Industry Advisor LLC • Source: Our World in Data • Created with Datawrapper

### % of Population Receiving Booster Shots

Selected countries, as of June 4

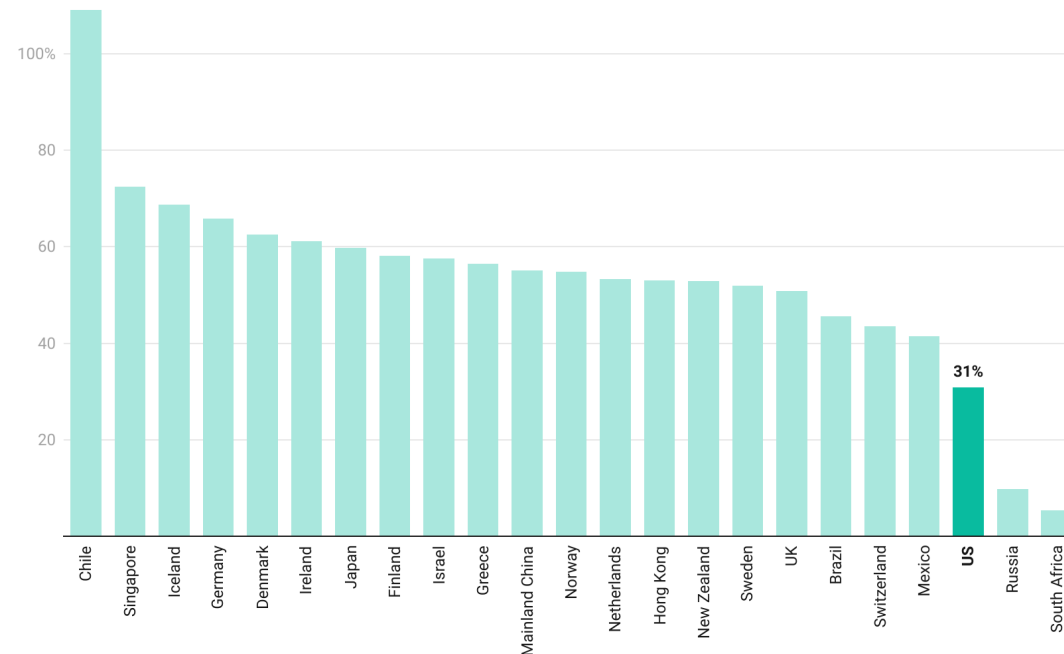


Chart: Health Industry Advisor LLC • Source: Our World in Data • Created with Datawrapper

Covid patient days doubled since reaching a near pandemic low in mid-April. However, both rates remain substantially lower than posted earlier this year

## Covid-19 Admissions & Census

7-Day Average Thru June 2

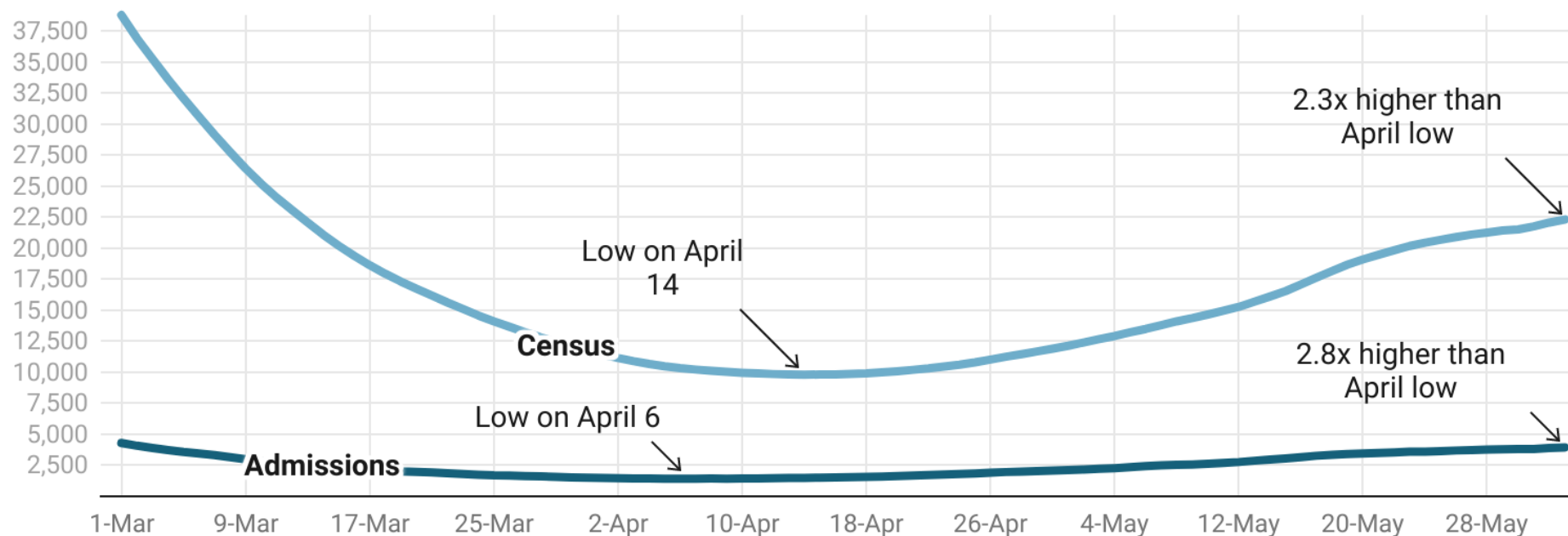
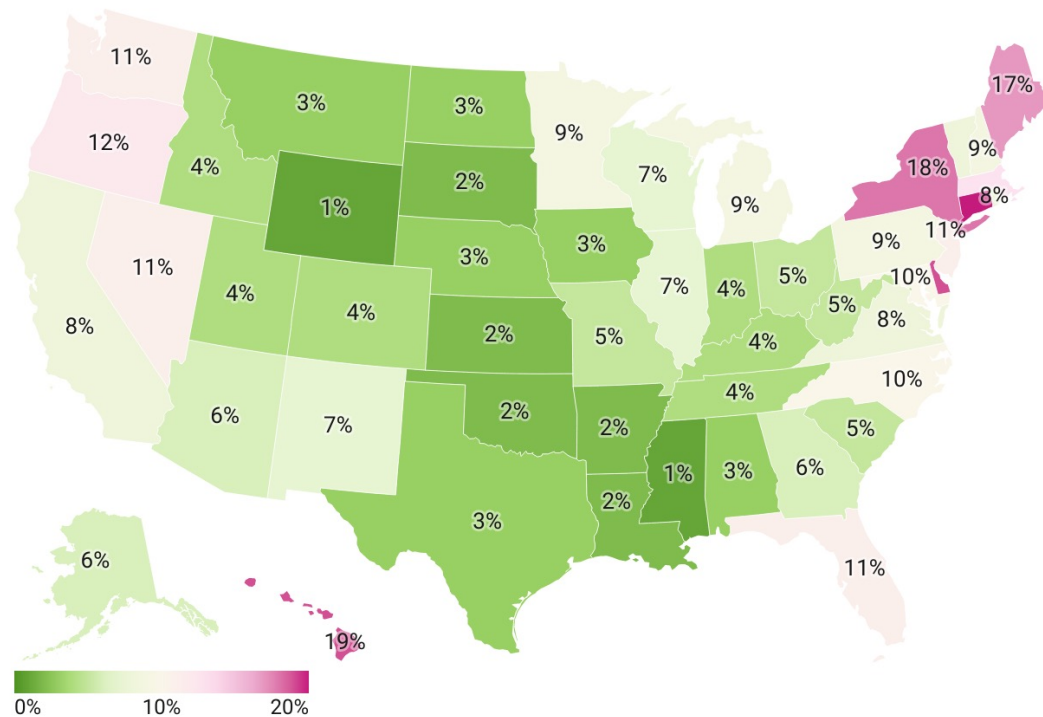


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Covid patients occupy one of every fourteen inpatient beds in the United States. Occupancy rates are highest in Connecticut, Delaware, Hawaii, Maine, and New York. Rates fell in ten states last week

## Covid-19 Patients As % of All Inpatient Beds

As of June 2

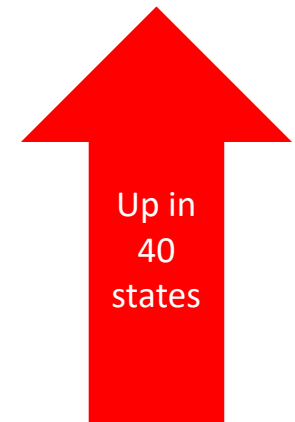


Map: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

## Week-over-Week Change



Down  
in 10  
states



Up in  
40  
states

- Connecticut
- Maine
- Maryland
- Massachusetts
- Michigan
- New Hampshire
- New York
- Rhode Island
- Vermont
- West Virginia

The reported case fatality rate has trended lower since at least the Fall, 2020. Moreover, last week's rate fell further below the long-term trend line

### Deaths per 1000 Cases, 3 week lag

7-day average

Deaths/1000 New Cases    Trend



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

The new case rate stabilized in the United States last week, after increasing since late March. Comparatively, the current rate sits in the top 40% (second highest quintile) for rates posted since August 2020

### Daily Cases / Million

7-day Average

— 2022 — 2021 — 2020

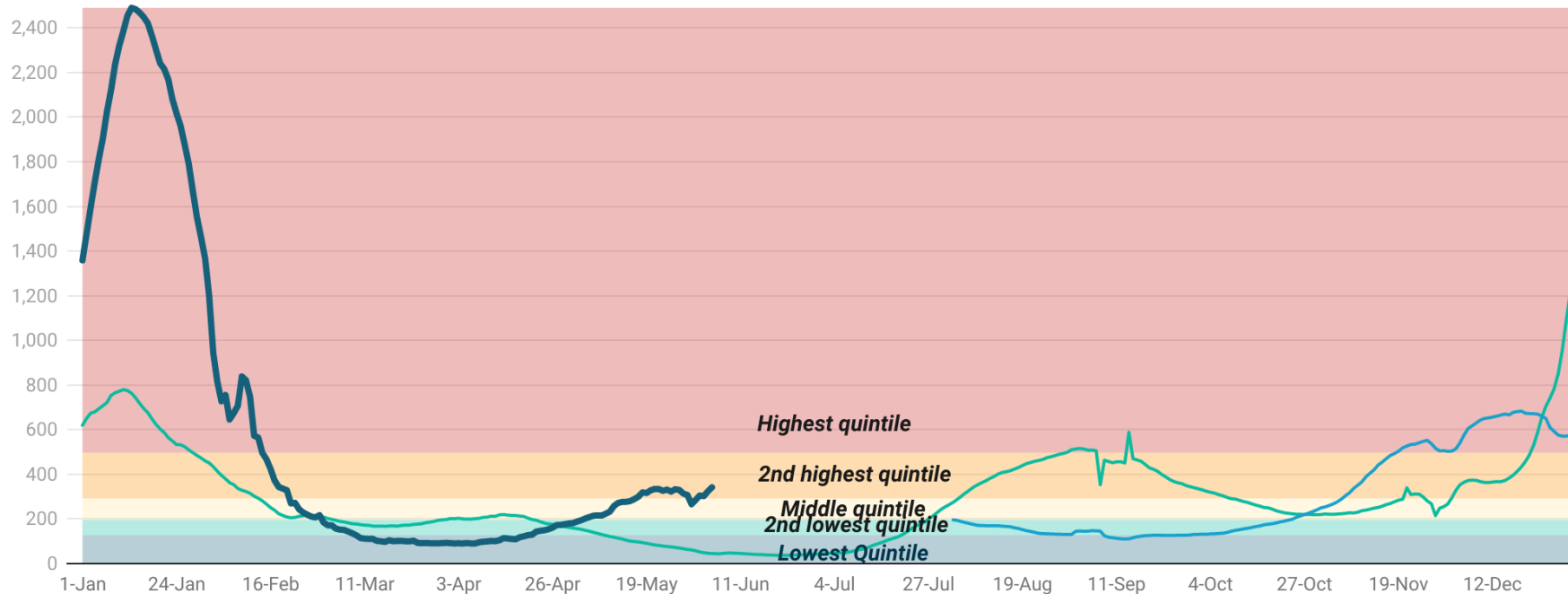


Chart: CHealth Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Quintiles calculated from United States experience from August 1, 2020 – June 3, 2022

The per capita admission rate for the United States climbed last week.  
The current rate moved into the second quintile – 28% percentile

### Admissions / 100,000 Population

7-day Average

2022 2021 2020

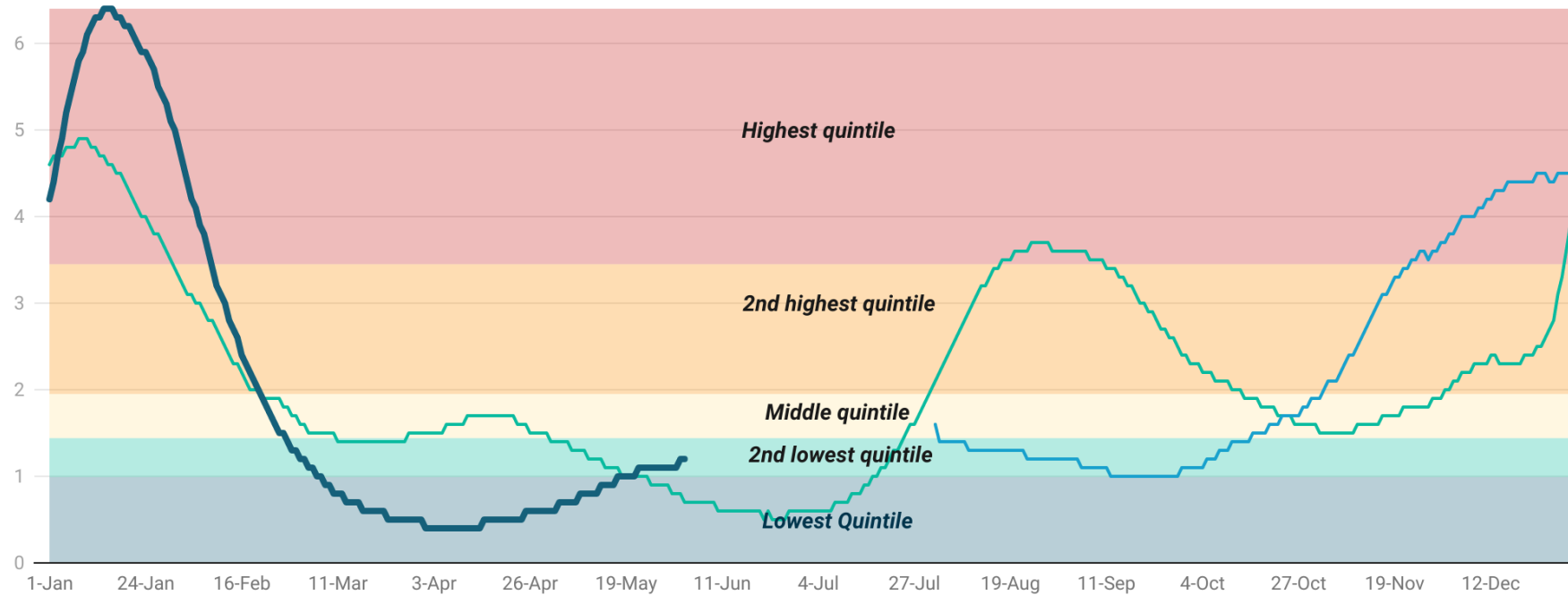


Chart: CHealth Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Quintiles calculated from United States experience from August 1, 2020 – June 2, 2022

Covid occupancy rates reached the cusp of the lowest quintile, compared to levels posted since August 2020

## Covid Inpatients as % of Inpatient Beds

7-day Average

2022 2021 2020

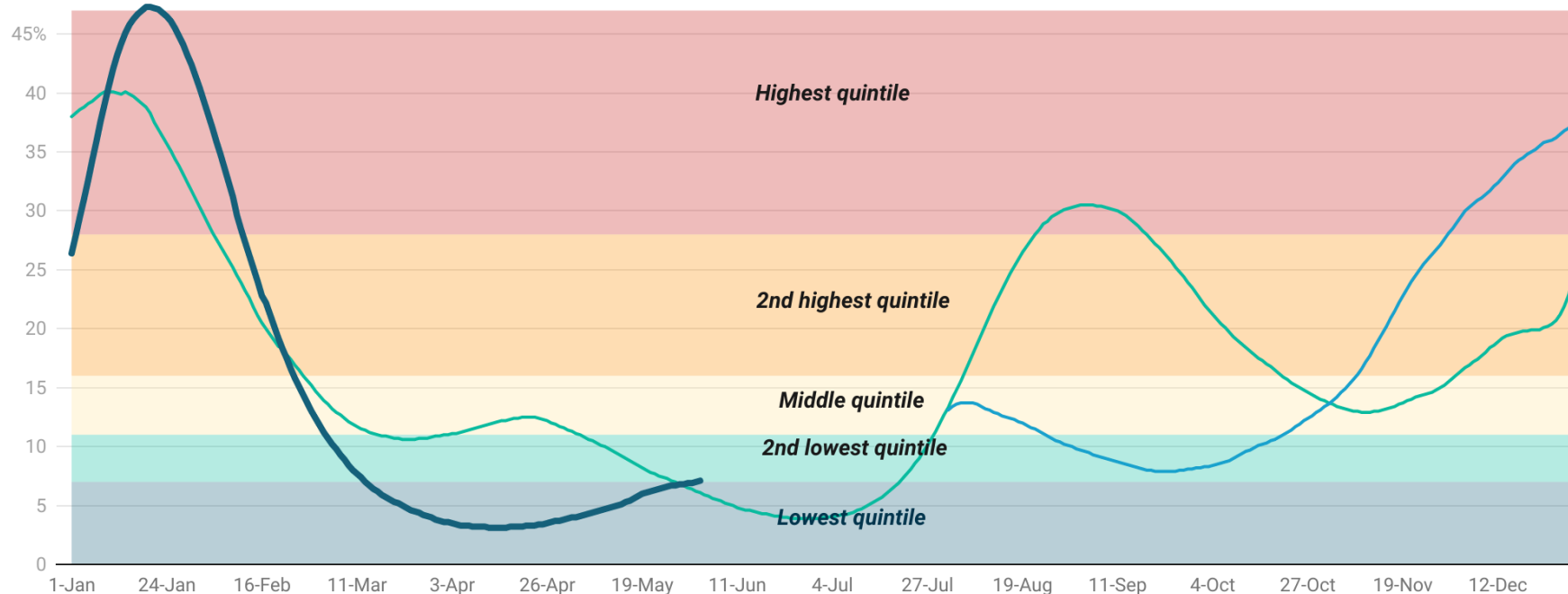


Chart: CHealth Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Quintiles calculated from United States experience from August 1, 2020 – June 2, 2022

The case fatality dropped to its lowest level experienced during the pandemic

### Case Fatality Rate

7-day Average, 3-week lag from case to death

2022 2021 2020

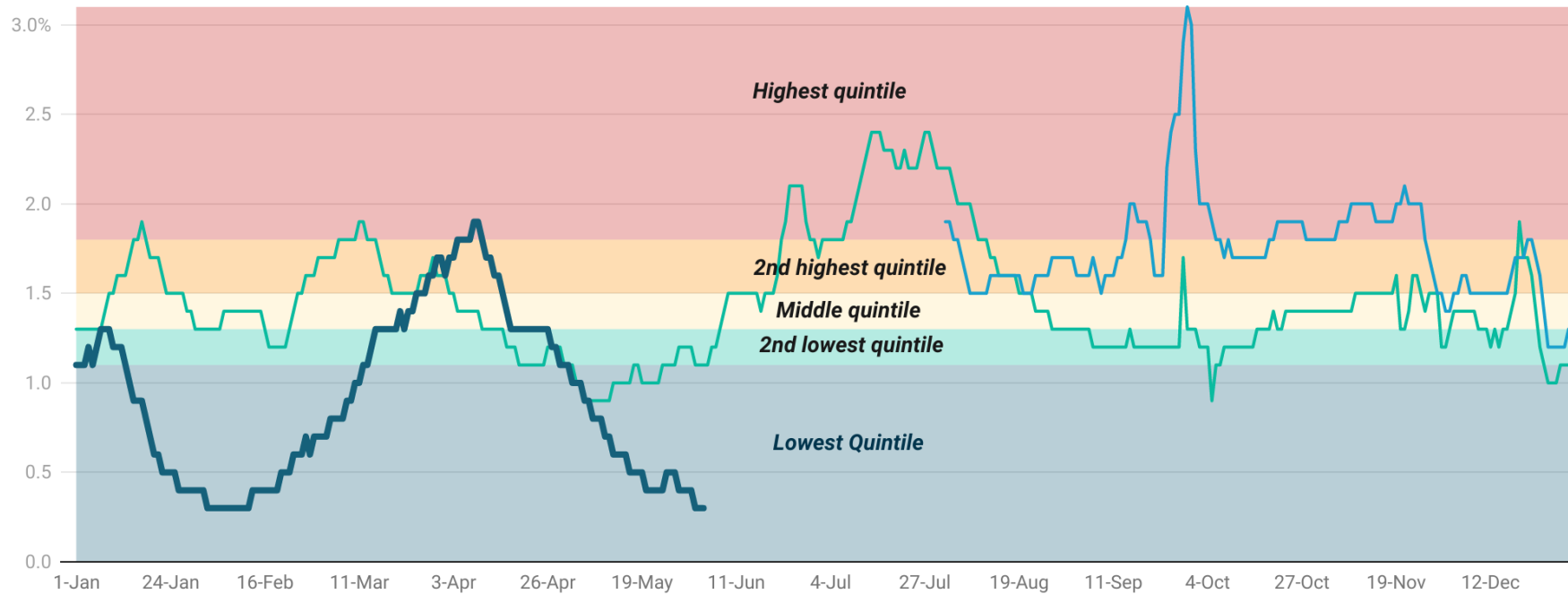


Chart: CHHealth Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Quintiles calculated from United States experience from August 1, 2020 – June 3, 2022

While new daily infection rates in many states are high by pandemic standards, most report low hospitalization and death rates

| State                | New Daily Infections / Million |       | Admissions/100,000 |       | Covid Occupancy % |       | Case Fatality Rate |       | State          | New Daily Infections / Million |       | Admissions/100,000 |       | Covid Occupancy % |       | Case Fatality Rate |       |
|----------------------|--------------------------------|-------|--------------------|-------|-------------------|-------|--------------------|-------|----------------|--------------------------------|-------|--------------------|-------|-------------------|-------|--------------------|-------|
|                      | 7-Day                          | Trend | 7-Day              | Trend | 7-Day             | Trend | 7-Day              | Trend |                | 7-Day                          | Trend | 7-Day              | Trend | 7-Day             | Trend | 7-Day              | Trend |
| Alabama              | 165                            | 🚩     | 0.80               | 🚩     | 3%                | 🚩     | 0.6%               | 🚩     | Montana        | 200                            | 🚩     | 1.71               | 🚩     | 3%                | 🚩     | 12.8%              | 🚩     |
| Alaska               | 344                            | 🚩     | 1.46               | 🚩     | 6%                | 🚩     | 0.0%               | 🚩     | Nebraska       | 174                            | 🚩     | 0.95               | 🚩     | 3%                | 🚩     | 0.8%               | 🚩     |
| Arizona              | 256                            | 🚩     | 1.06               | 🚩     | 6%                | 🚩     | 0.6%               | 🚩     | Nevada         | 336                            | 🚩     | 1.47               | 🚩     | 11%               | 🚩     | 0.7%               | 🚩     |
| Arkansas             | 130                            | 🚩     | 0.62               | 🚩     | 2%                | 🚩     | 1.8%               | 🚩     | New Hampshire  | 235                            | 🚩     | 1.17               | 🚩     | 9%                | 🚩     | 0.3%               | 🚩     |
| California           | 373                            | 🚩     | 0.98               | 🚩     | 8%                | 🚩     | 0.3%               | 🚩     | New Jersey     | 426                            | 🚩     | 1.65               | 🚩     | 11%               | 🚩     | 0.3%               | 🚩     |
| Colorado             | 333                            | 🚩     | 1.08               | 🚩     | 4%                | 🚩     | 0.1%               | 🚩     | New Mexico     | 324                            | 🚩     | 0.89               | 🚩     | 7%                | 🚩     | 2.2%               | 🚩     |
| Connecticut          | 219                            | 🚩     | 1.70               | 🚩     | 20%               | 🚩     | 0.3%               | 🚩     | New York       | 371                            | 🚩     | 1.61               | 🚩     | 18%               | 🚩     | 0.2%               | 🚩     |
| Delaware             | 406                            | 🚩     | 2.11               | 🚩     | 19%               | 🚩     | 0.6%               | 🚩     | North Carolina | 379                            | 🚩     | 1.05               | 🚩     | 10%               | 🚩     | 0.1%               | 🚩     |
| District Of Columbia | 306                            | 🚩     | 1.74               | 🚩     | 5%                | 🚩     | 0.2%               | 🚩     | North Dakota   | 206                            | 🚩     | 1.03               | 🚩     | 3%                | 🚩     | 0.3%               | 🚩     |
| Florida              | 477                            | 🚩     | 2.12               | 🚩     | 11%               | 🚩     | 0.4%               | 🚩     | Ohio           | 214                            | 🚩     | 1.20               | 🚩     | 5%                | 🚩     | 0.2%               | 🚩     |
| Georgia              | 203                            | 🚩     | 0.79               | 🚩     | 6%                | 🚩     | 0.4%               | 🚩     | Oklahoma       | 110                            | 🚩     | 0.41               | 🚩     | 2%                | 🚩     | 0.8%               | 🚩     |
| Hawaii               | 820                            | 🚩     | 2.07               | 🚩     | 19%               | 🚩     | 0.1%               | 🚩     | Oregon         | 318                            | 🚩     | 1.15               | 🚩     | 12%               | 🚩     | 0.4%               | 🚩     |
| Idaho                | 156                            | 🚩     | 0.75               | 🚩     | 4%                | 🚩     | 0.3%               | 🚩     | Pennsylvania   | 321                            | 🚩     | 1.51               | 🚩     | 9%                | 🚩     | 0.5%               | 🚩     |
| Illinois             | 368                            | 🚩     | 1.47               | 🚩     | 7%                | 🚩     | 0.1%               | 🚩     | Rhode Island   | 445                            | 🚩     | 0.90               | 🚩     | 8%                | 🚩     | 0.2%               | 🚩     |
| Indiana              | 171                            | 🚩     | 1.19               | 🚩     | 4%                | 🚩     | 0.3%               | 🚩     | South Carolina | 223                            | 🚩     | 0.80               | 🚩     | 5%                | 🚩     | 0.0%               | 🚩     |
| Iowa                 | 220                            | 🚩     | 1.12               | 🚩     | 3%                | 🚩     | 0.4%               | 🚩     | South Dakota   | 105                            | 🚩     | 0.90               | 🚩     | 2%                | 🚩     | 0.2%               | 🚩     |
| Kansas               | 157                            | 🚩     | 0.64               | 🚩     | 2%                | 🚩     | 0.2%               | 🚩     | Tennessee      | 219                            | 🚩     | 0.70               | 🚩     | 4%                | 🚩     | 1.4%               | 🚩     |
| Kentucky             | 251                            | 🚩     | 1.12               | 🚩     | 4%                | 🚩     | 1.0%               | 🚩     | Texas          | 191                            | 🚩     | 0.74               | 🚩     | 3%                | 🚩     | 0.2%               | 🚩     |
| Louisiana            | 248                            | 🚩     | 1.12               | 🚩     | 2%                | 🚩     | 0.4%               | 🚩     | Utah           | 255                            | 🚩     | 0.95               | 🚩     | 4%                | 🚩     | 0.1%               | 🚩     |
| Maine                | 208                            | 🚩     | 1.37               | 🚩     | 17%               | 🚩     | 0.1%               | 🚩     | Vermont        | 278                            | 🚩     | 1.10               | 🚩     | 8%                | 🚩     | 0.4%               | 🚩     |
| Maryland             | 295                            | 🚩     | 1.12               | 🚩     | 10%               | 🚩     | 0.2%               | 🚩     | Virginia       | 333                            | 🚩     | 1.00               | 🚩     | 8%                | 🚩     | 0.2%               | 🚩     |
| Massachusetts        | 338                            | 🚩     | 1.55               | 🚩     | 13%               | 🚩     | 0.3%               | 🚩     | Washington     | 338                            | 🚩     | 0.96               | 🚩     | 11%               | 🚩     | 0.4%               | 🚩     |
| Michigan             | 279                            | 🚩     | 1.46               | 🚩     | 9%                | 🚩     | 0.7%               | 🚩     | West Virginia  | 328                            | 🚩     | 1.61               | 🚩     | 5%                | 🚩     | 1.2%               | 🚩     |
| Minnesota            | 272                            | 🚩     | 1.25               | 🚩     | 9%                | 🚩     | 0.2%               | 🚩     | Wisconsin      | 335                            | 🚩     | 1.15               | 🚩     | 7%                | 🚩     | 0.2%               | 🚩     |
| Mississippi          | 175                            | 🚩     | 0.53               | 🚩     | 1%                | 🚩     | 0.2%               | 🚩     | Wyoming        | 151                            | 🚩     | 0.79               | 🚩     | 1%                | 🚩     | 0.0%               | 🚩     |
| Missouri             | 297                            | 🚩     | 1.07               | 🚩     | 5%                | 🚩     | 5.9%               | 🚩     | United States  | 324                            | 🚩     | 1.18               | 🚩     | 7%                | 🚩     | 0.3%               | 🚩     |

| %-iles               | New Infections | Admissions | Occupancy | Case Fatality |
|----------------------|----------------|------------|-----------|---------------|
| Lowest Quintile      | 127            | 0.99       | 7%        | 1.1%          |
| 2nd Lowest Quintile  | 196            | 1.44       | 11%       | 1.3%          |
| Middle Quintile      | 292            | 1.95       | 16%       | 1.5%          |
| 2nd Highest Quintile | 497            | 3.45       | 28%       | 1.8%          |
| Highest Quintile     | > 497          | > 3.45     | > 28%     | > 1.8%        |

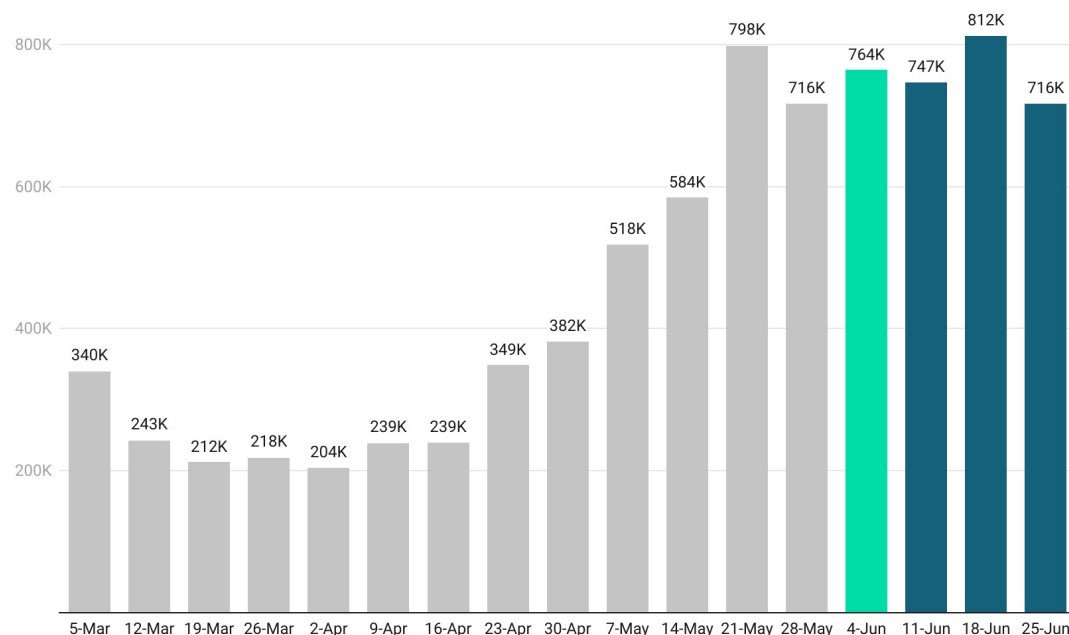
Quintiles calculated from United States experience from August 1, 2020 – June 2, 2022

Trend reflects change from prior week: Red flag = Increase; Green flag = Decline

New infections could rise in the next few weeks, then drop in late-June, according to the latest composite forecast. Deaths could increase each of the next several weeks

### Newly-Reported Cases Per Week

Covid-19 Forecast Hub, Composite Forecast As of May 28

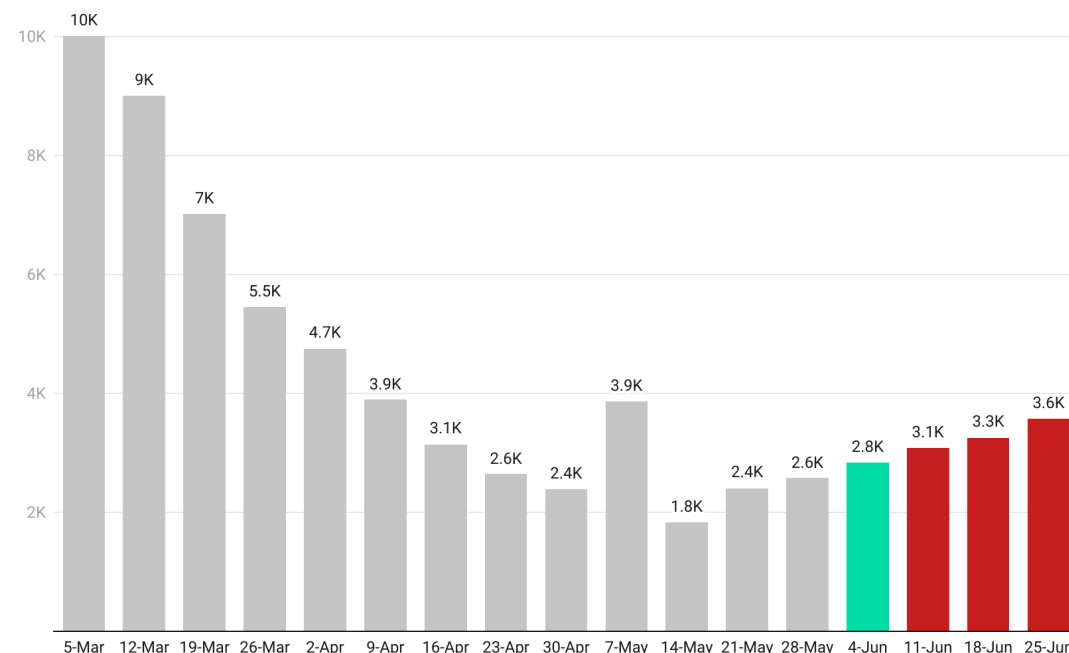


For the week ending on the date shown

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

### Newly-Reported Deaths Per Week

Covid-19 Forecast Hub, Composite Forecast As of May 28



For the week ending on the date shown

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

Globally, cases plunged 16% from a week earlier. South America and Europe reported more new cases week-over-week

## Weekly Change in Cases By Continent

As of June 3

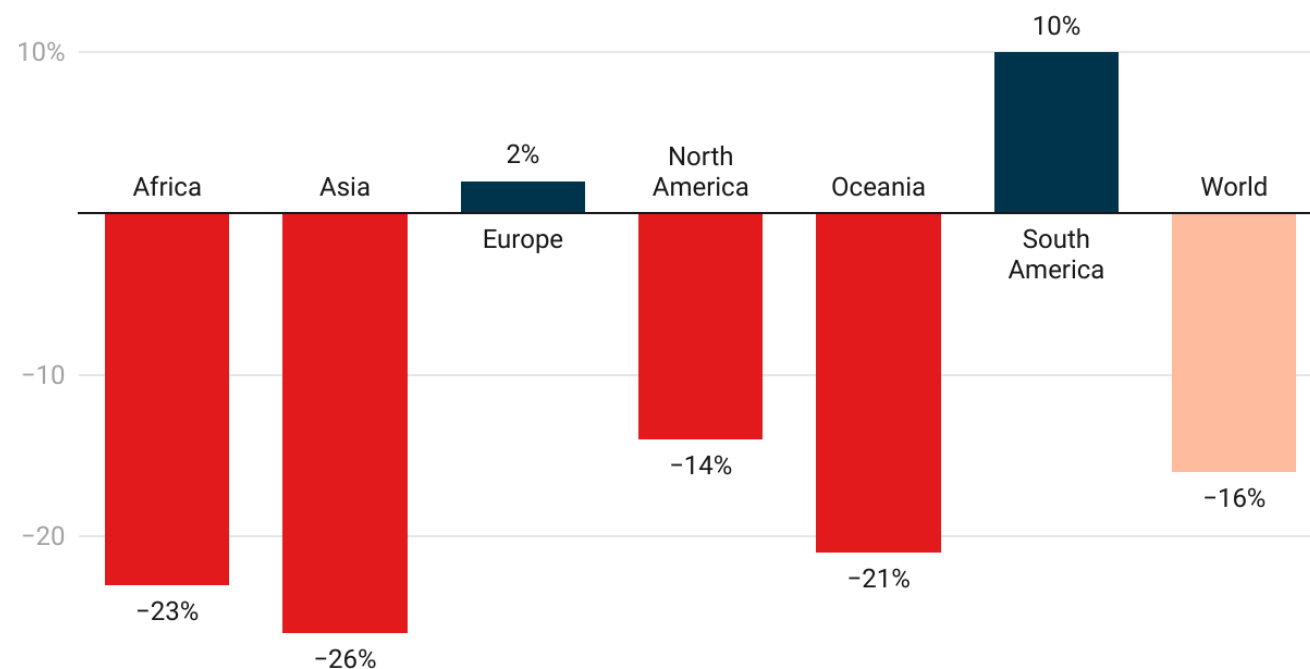


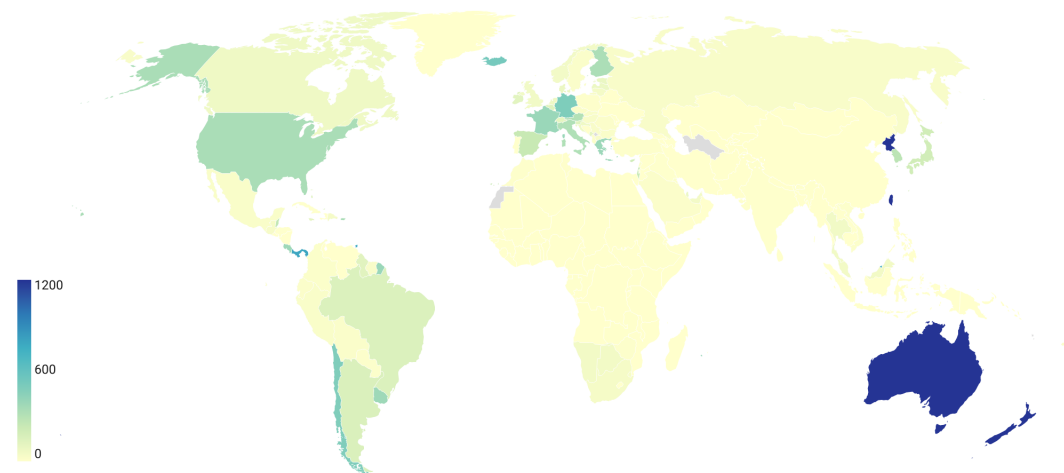
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Among large countries, Australia, New Zealand, North Korea, and Taiwan posted the highest case rates per capita last week. The United States ranked eleventh

\* - Population 5M or greater

### New Daily Cases / Million

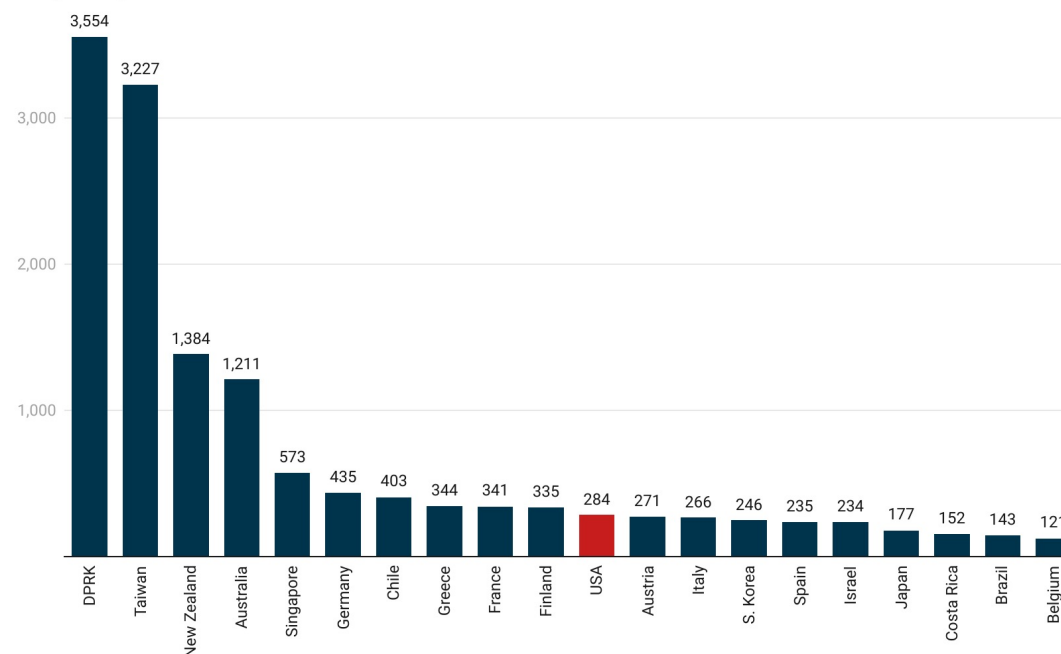
7-Day Average, As of June 3



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

### New Daily Cases Per Million

7-Day Average, As of June 3



Countries with minimum 5M population

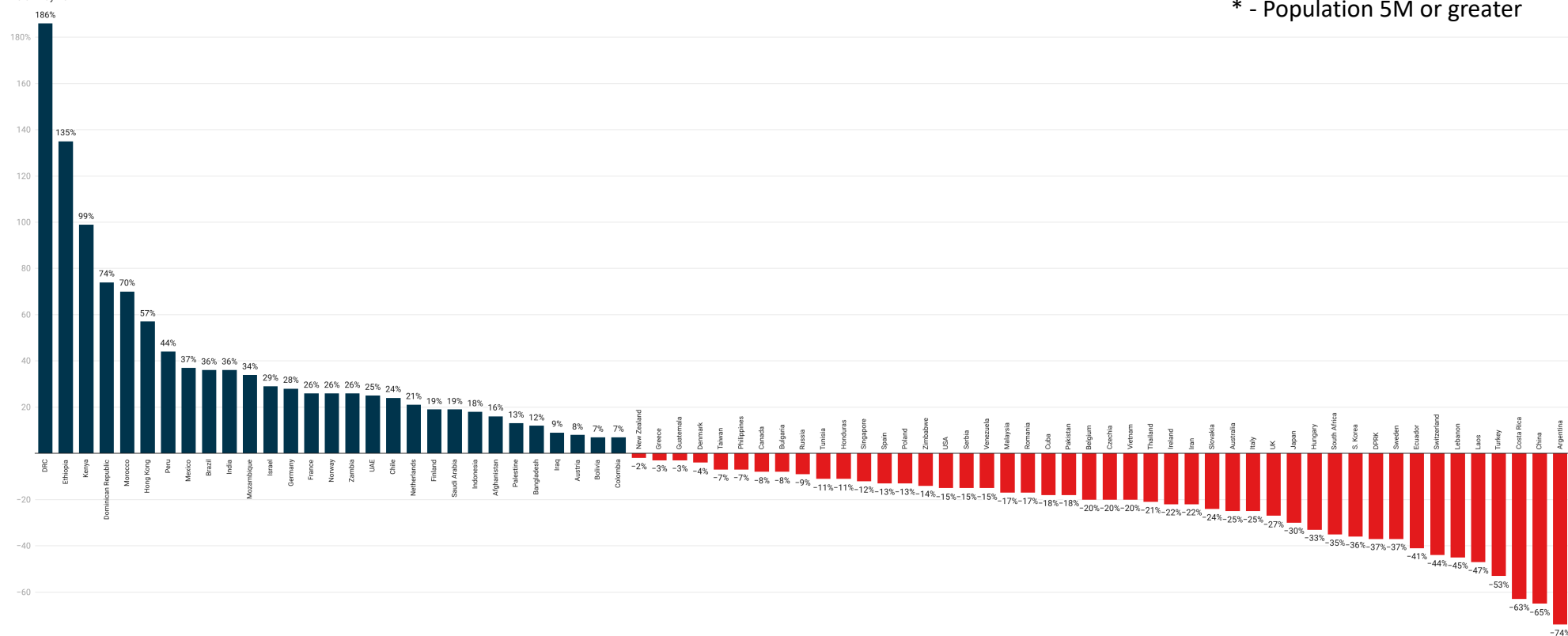
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

# Week-over-week case growth in the Democratic Republic of Congo, Ethiopia and Kenya outpaced large countries

## Week-over-Week Increase in Covid Cases

As of May 20

\* - Population 5M or greater



Countries with >5M population and minimum 100 cases each week  
 Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

## Sources

- Bloomberg Vaccine Trackers, <https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/?sref=Z0b6TmH>
- 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, COVID-19 Laboratory-Confirmed Hospitalizations [https://gis.cdc.gov/grasp/COVIDNet/COVID19\\_5.html](https://gis.cdc.gov/grasp/COVIDNet/COVID19_5.html)
- Centers for Disease Control and Prevention, National, Regional, and State Level Outpatient Illness and Viral Surveillance <https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html>
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