



Issue #383

Monday, May 23, 2022

COVID19 VITAL SIGNS

"Strategic Advice in an Era of Unprecedented Change"

Highlights – As of May 20

- Reported cases increased week-over-week in the United States, continuing a trend that started in late-March. The current rate ranks in the upper 40th percentile, compared to 7-day rates posted since August 2020
- Nonetheless, hospitalizations remain relatively low by pandemic-era standards. The rates of Covid admissions per capita and Covid occupancy remain in the lowest quintile for the pandemic era
- The Covid case fatality rate continued falling last week, approaching the pandemic low set earlier this year
- New case rates in most states ran high last week, ranking in the upper two quintiles (upper 40% of the pandemic era)
- However, hospitalization and case fatality rates in most states rank low (bottom quintile for the pandemic era)
- The composite forecast envisions that cases will increase each of the next few weeks, before slipping in mid-June. Deaths rise in each of the next several weeks, according to this forecast
- Reported cases surged in the Democratic People's Republic of Korea (North Korea) last week, with 5.5 times as many cases as a week earlier
- Asia Pac countries posted the five highest new infection rates among large countries (population greater than five million) last week. North Korea topped this list, followed by Taiwan, Australia, New Zealand, and Singapore
- Globally, new cases spiked 28% higher than a week earlier, paced by Asia's doubling in cases. In contrast, cases fell 30% week-over-week in Europe
- New cases rose 7% in North America, slowing from the 14% growth a week earlier
- The Reproduction Rate (R_t) in the United States remains above 1.0, reflecting the continued virus spread in this country
- However, the case fatality rate in the United States remains relatively low compared to other countries

The new case rate rose further in the United States last week, continuing a trend that began in 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

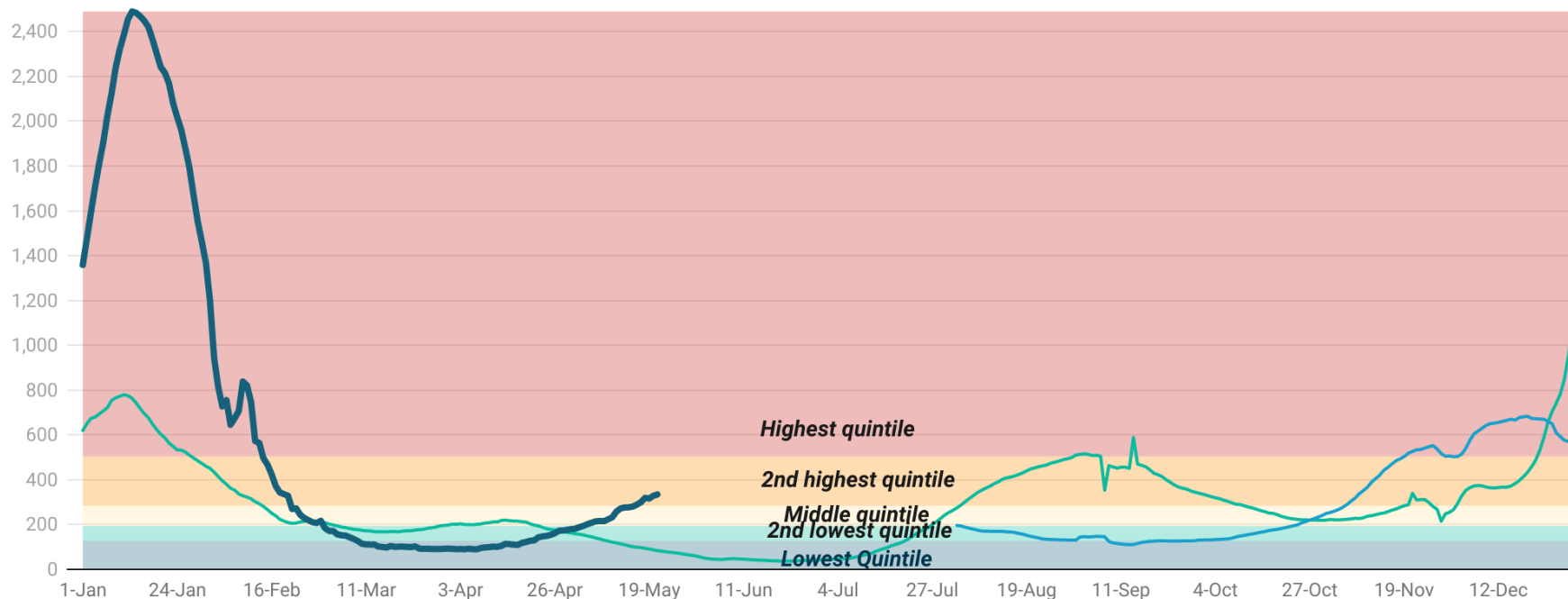


Chart: CHealth Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Quintiles calculated from United States experience from August 1, 2020 – May 19, 2022

The per capita admission rate for the United States climbed last week. However, the current rate remains in the lowest quintile – for now

Admissions / 100,000 Population

7-day Average

2022 2021 2020

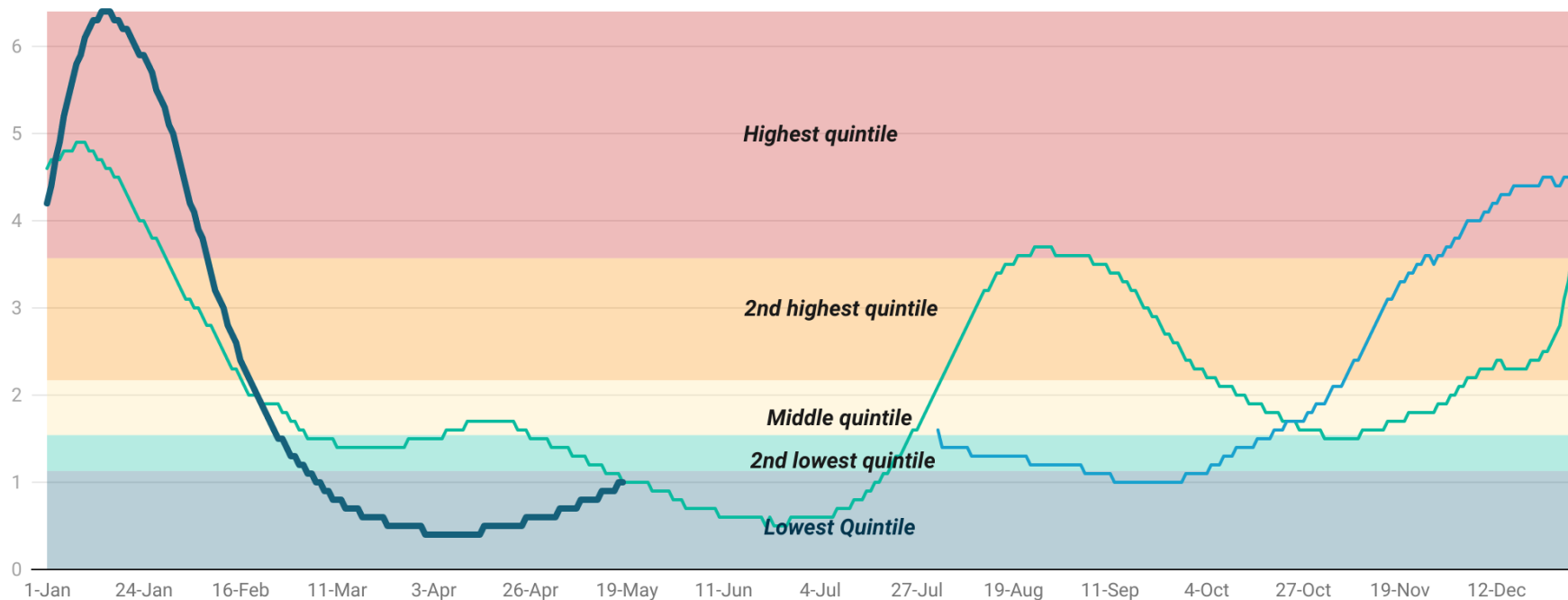


Chart: CHealth Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Quintiles calculated from United States experience from August 1, 2020 – May 19, 2022

Covid occupancy rates remain in the lowest quintile, compared to levels posted since August 2020

Covid Inpatients as % of Inpatient Beds

7-day Average

2022 2021 2020

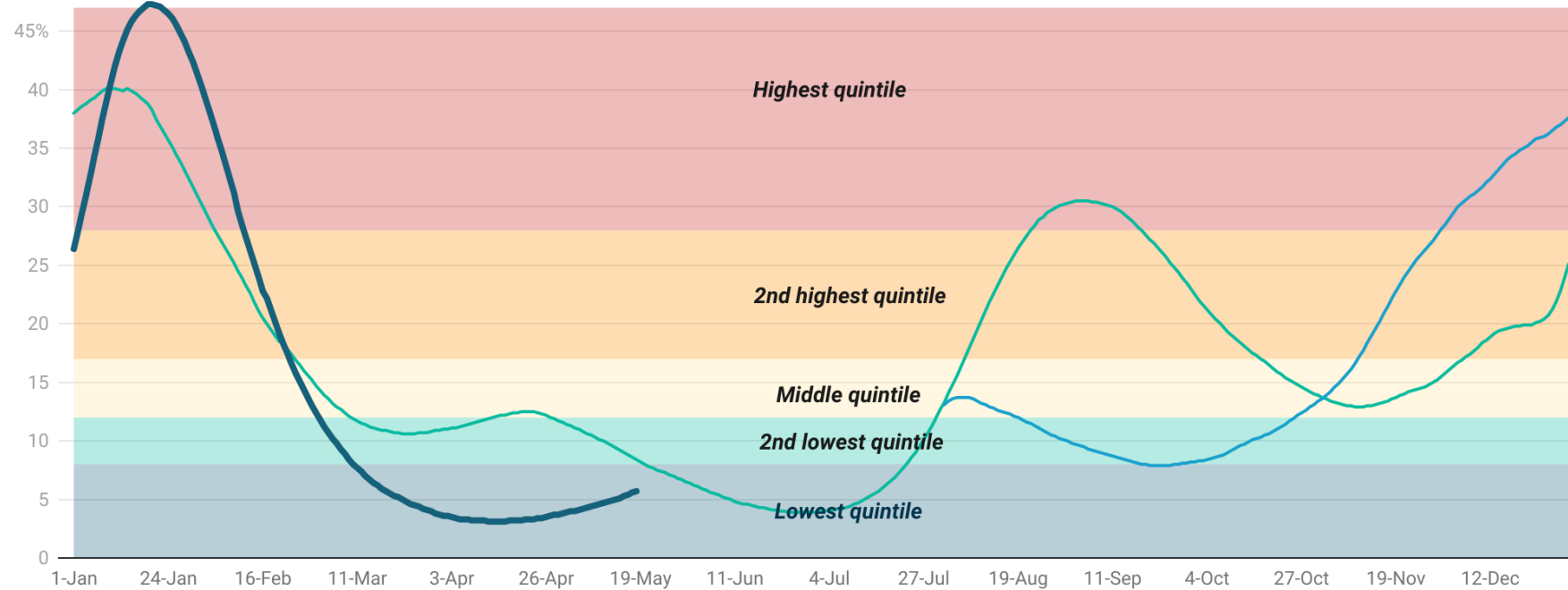


Chart: CHHealth Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Quintiles calculated from United States experience from August 1, 2020 – May 19, 2022

The case fatality rate fell further last week, approaching the pandemic-low set earlier this year

Case Fatality Rate

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

2022 2021 2020

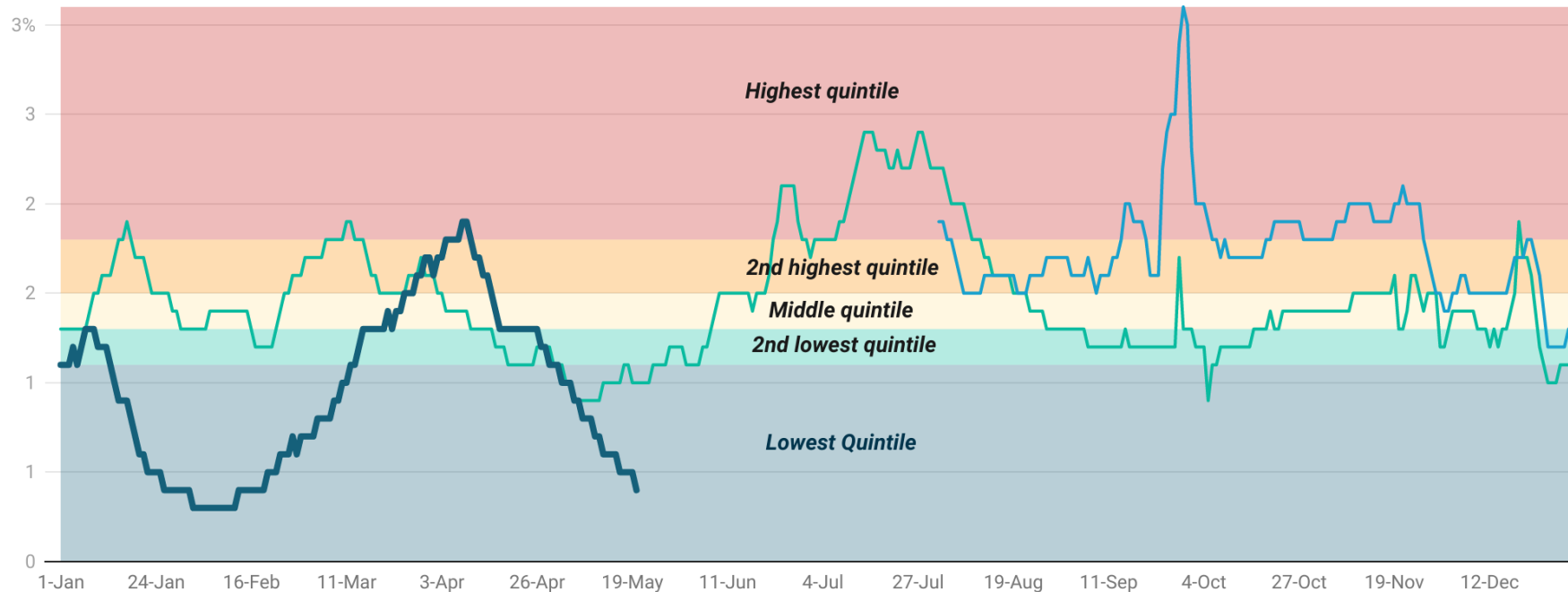


Chart: CHealth Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Quintiles calculated from United States experience from August 1, 2020 – May 19, 2022

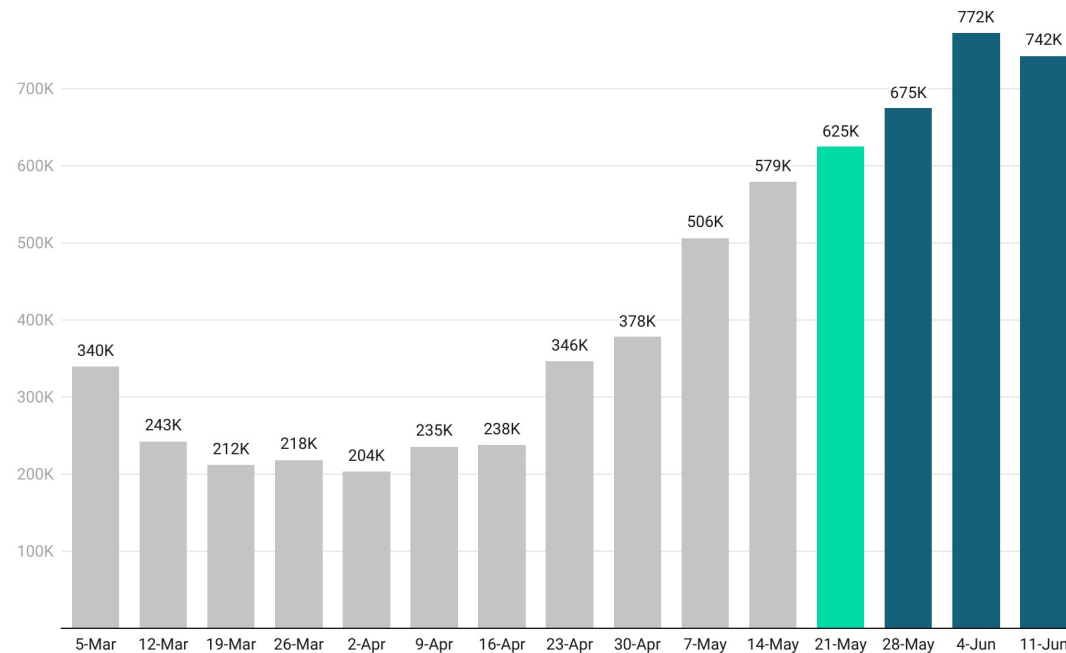
While new daily infection rates in many states are high by pandemic standards, most report low hospitalization and death rates

New Daily Infections / Million		Admissions/100,000		Covid Occupancy %		Case Fatality Rate		New Daily Infections / Million		Admissions/100,000		Covid Occupancy %		Case Fatality Rate	
State	7-Day	Trend	7-Day	Trend	7-Day	Trend	7-Day	Trend	State	7-Day	Trend	7-Day	Trend	7-Day	Trend
Alabama	92		0.52		1%		1.1%		Montana	144		0.99		2%	
Alaska	324		0.68		6%		1.2%		Nebraska	131		0.62		3%	
Arizona	141		0.79		4%		1.2%		Nevada	204		0.82		7%	
Arkansas	90		0.39		1%		1.2%		New Hampshire	457		1.80		11%	
California	349		0.73		6%		0.7%		New Jersey	552		1.54		9%	
Colorado	285		0.80		3%		0.2%		New Mexico	218		0.69		4%	
Connecticut	727		1.80		20%		0.6%		New York	501		1.99		18%	
Delaware	591		2.23		18%		0.6%		North Carolina	327		0.80		8%	
District Of Columbia	451		1.84		3%		0.1%		North Dakota	139		0.73		2%	
Florida	401		1.37		7%		0.5%		Ohio	239		1.03		4%	
Georgia	145		0.55		4%		1.2%		Oklahoma	74		0.31		1%	
Hawaii	721		1.86		12%		0.4%		Oregon	369		1.03		10%	
Idaho	108		0.46		2%		1.3%		Pennsylvania	312		1.34		7%	
Illinois	453		1.27		6%		0.3%		Rhode Island	784		1.35		10%	
Indiana	173		0.83		3%		0.6%		South Carolina	285		0.71		3%	
Iowa	223		0.84		3%		0.8%		South Dakota	77		0.39		1%	
Kansas	233		0.54		1%		7.1%		Tennessee	160		0.57		3%	
Kentucky	240		0.87		3%		2.6%		Texas	122		0.48		2%	
Louisiana	185		0.69		1%		1.0%		Utah	201		0.70		3%	
Maine	408		1.70		21%		0.2%		Vermont	549		1.85		13%	
Maryland															

New infections could rise in the next few weeks, then drop in mid-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 14

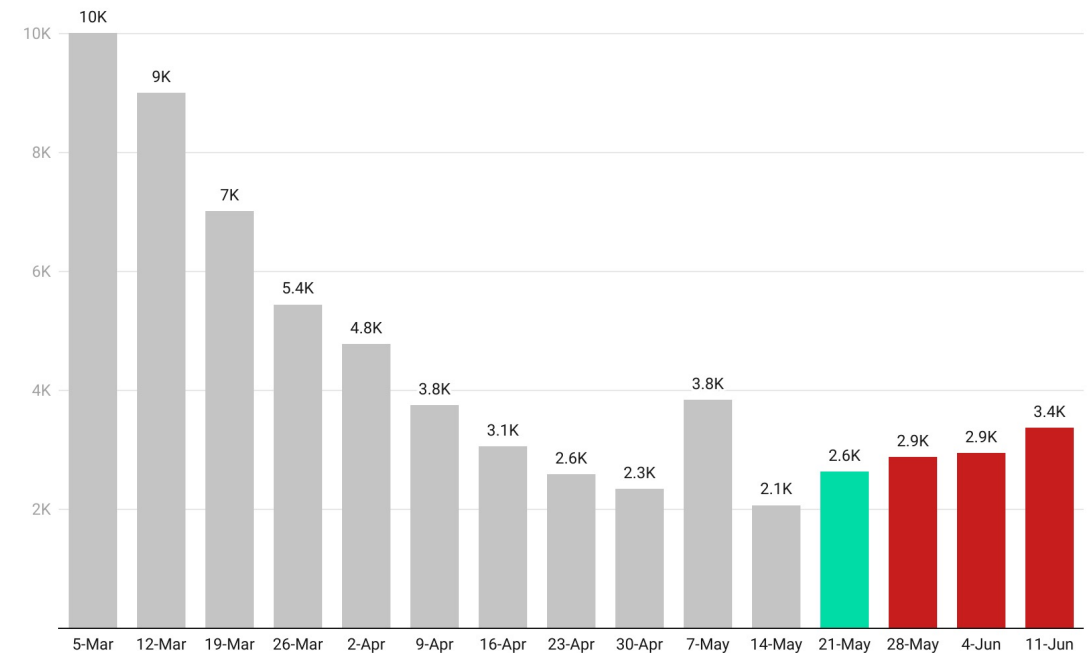


For the week ending on the date shown

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 14



For the week ending on the date shown

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

The test-positive rate exceeds public health guidance and continues rising. Virus levels increased in wastewater testing sites across the country

Test-Positivity Rate

7-Day Average, Through May 13

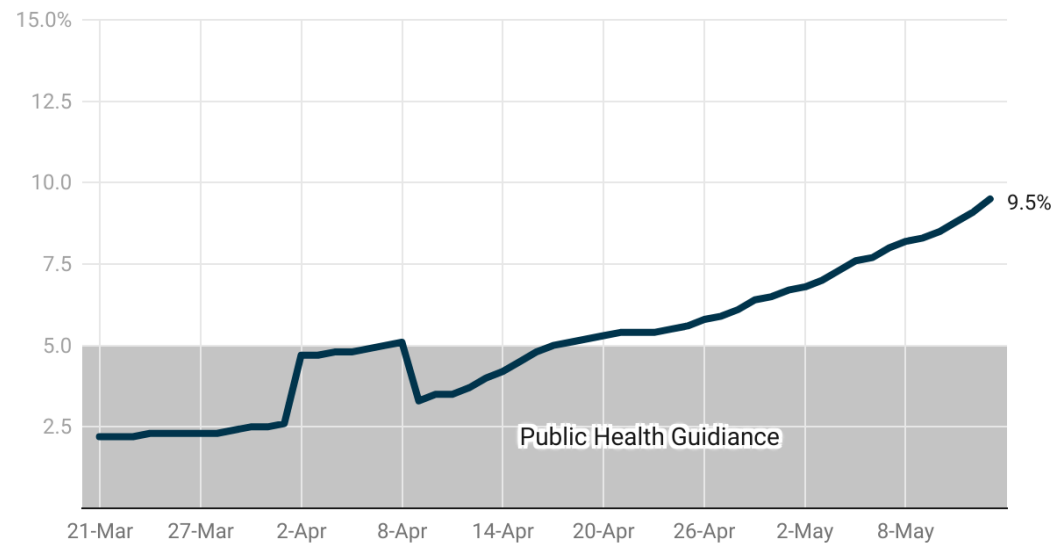
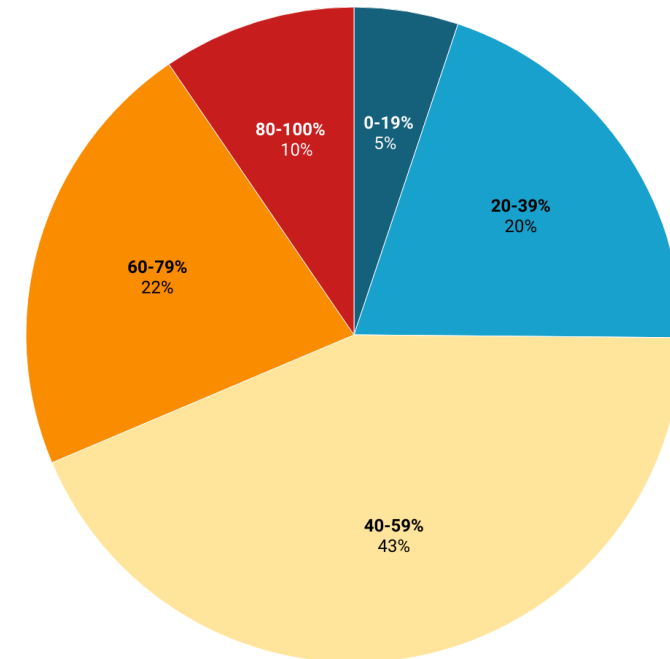


Chart: Health Industry Advisor LLC • Source: U.S. Department of Health & Human Services • Created with Datawrapper

Current SARS-CoV-2 virus levels by site, United States

Compared to Highest Level Since December 1, 2021

0-19% 20-39% 40-59% 60-79% 80-100%



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

Virus levels in monitored wastewater sites remain lower than earlier peaks. However, many sites posted sizeable increases in the past fifteen days

Current Wastewater Virus Levels v. Peak

May 5 -19

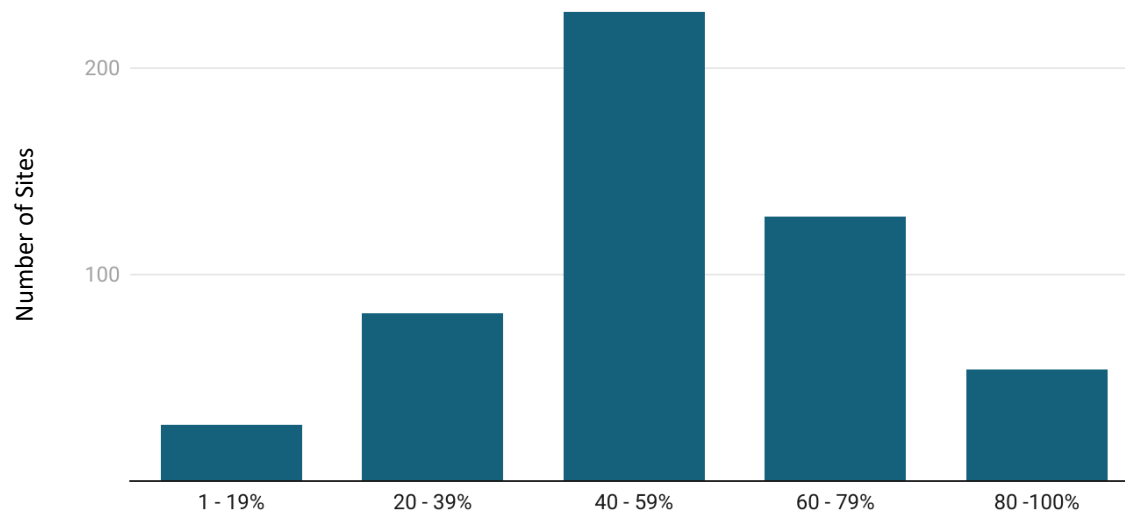


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Change since last reporting period

0% (29%) (2%) 13% 26%

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

May 5 - 19

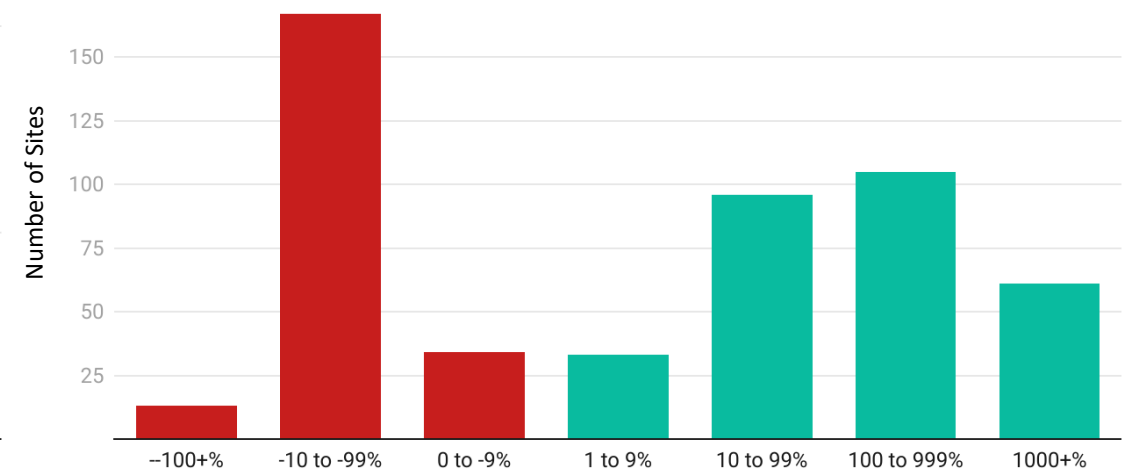
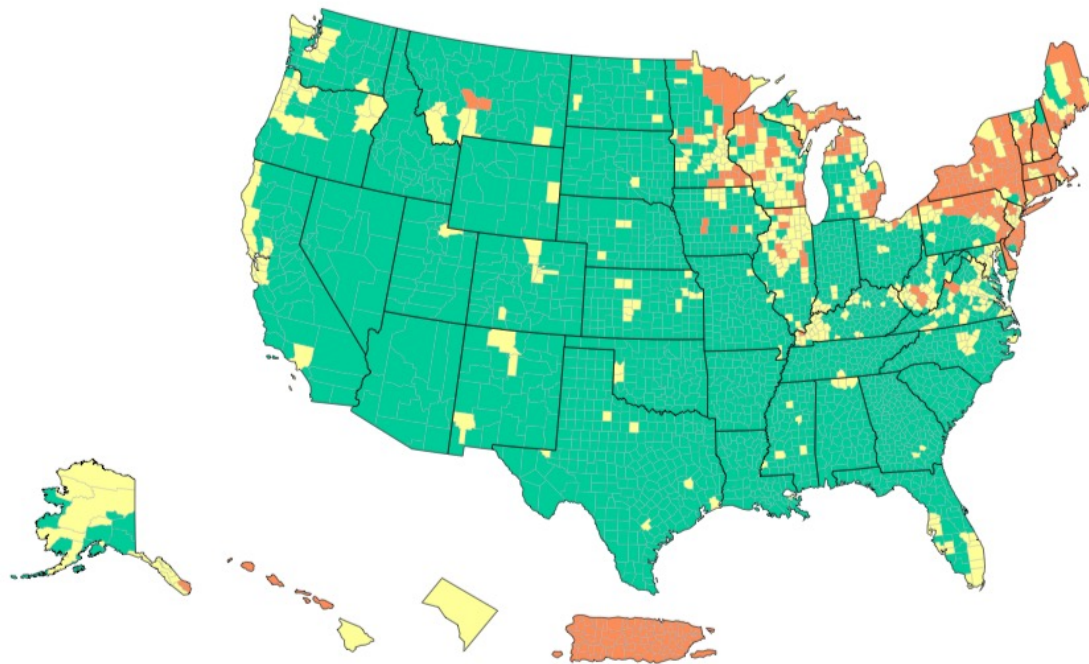


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

63% (13%) (13%) 83% (17%) (34%) (5%)

297 counties (9%) rate "High" in the CDC's Community Level system, an increase from 137 a week earlier. Nonetheless, three of four communities rated Low

May 11-17, 2022



Community Levels By County

As of May 17

Low Medium High

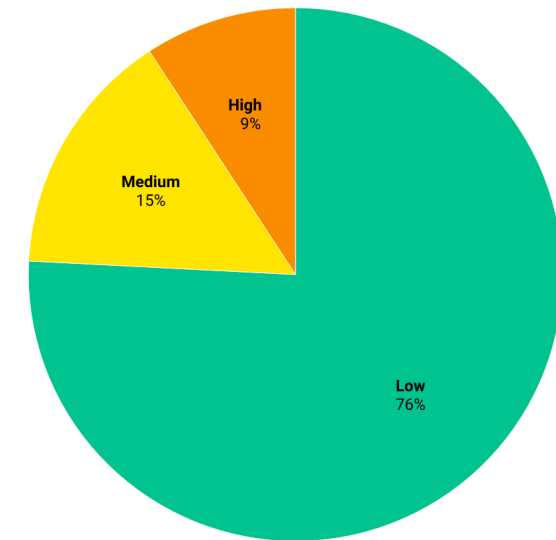
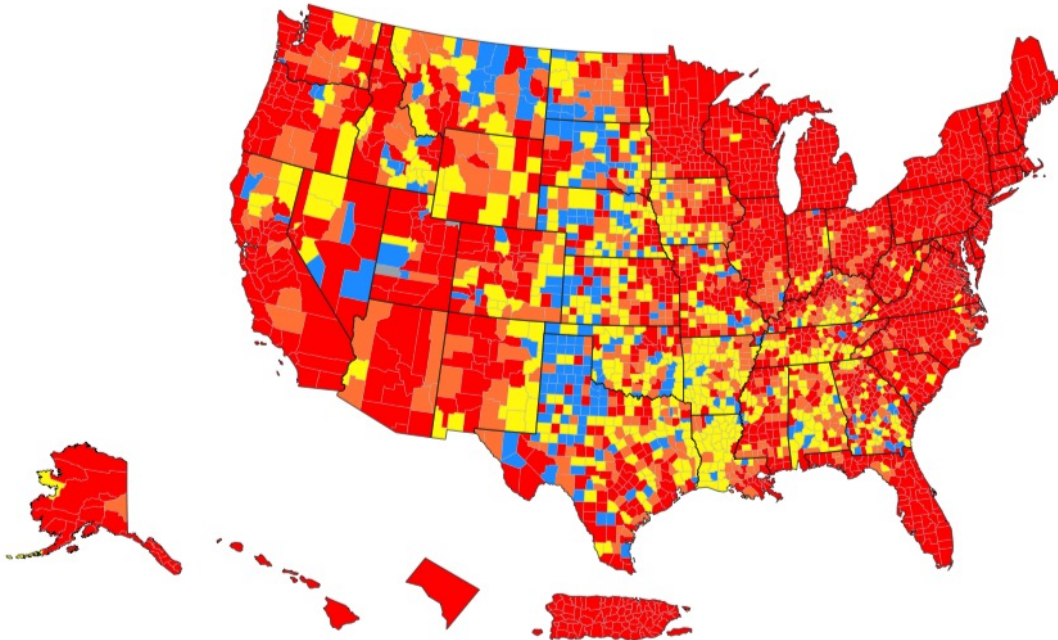


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Source: Centers for Disease Control and Prevention website; accessed May 20, 2022

Virus spread in 58% of U.S. counties rate as “High”, up from 46% a week earlier; spread is “Substantial” in 16% of these counties, down from 26% last week

Community Transmission
May 12-18, 2022



Source: Centers for Disease Control and Prevention website; accessed May 20, 2022

Community Transmission By County

As of May 18

High Substantial Moderate Low

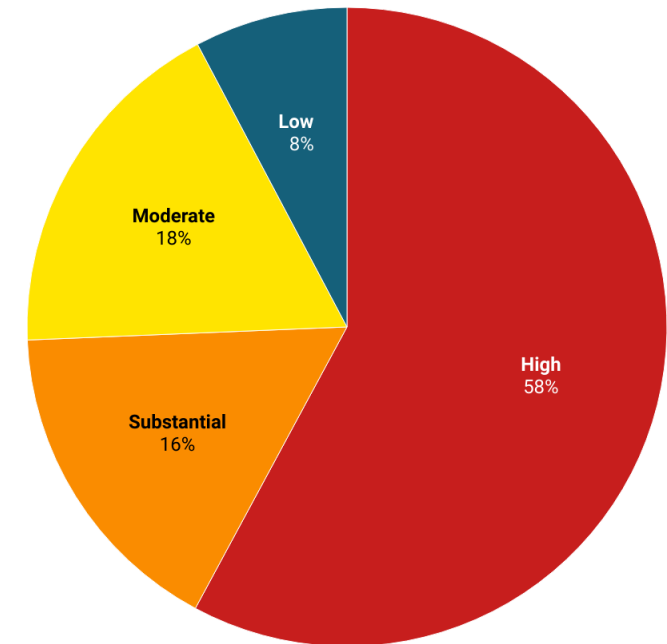
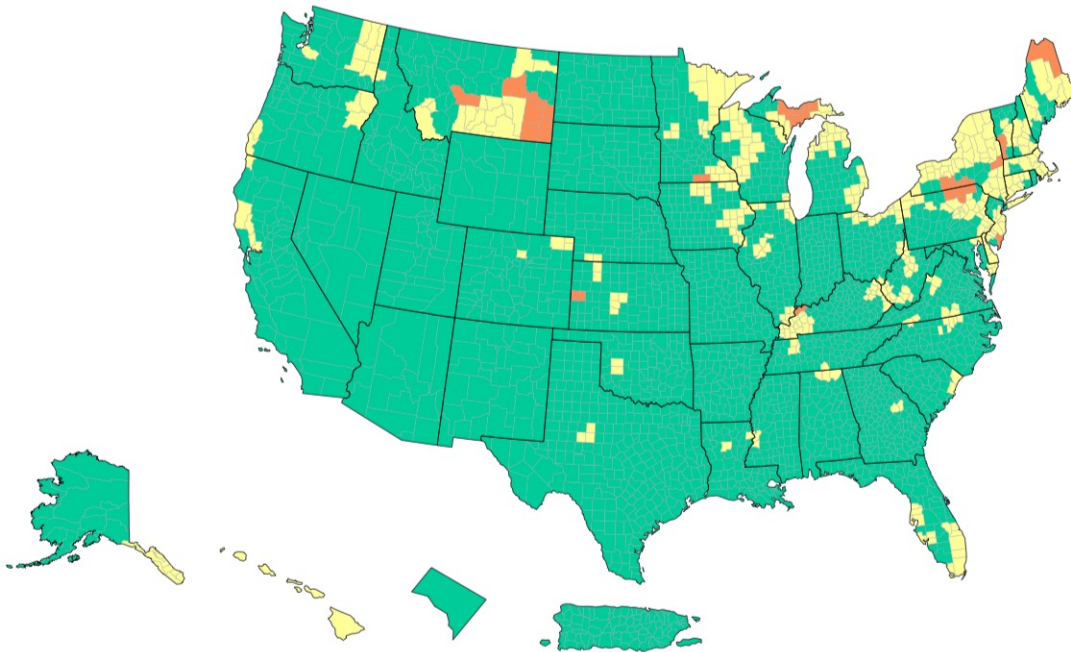


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Covid admission rates remain low in most U.S. counties

7-Day Covid Admissions / 100,000



Counties: Admissions per 100,000

May 13 - 20

<10 10.0 - 19.9 ≥20.0

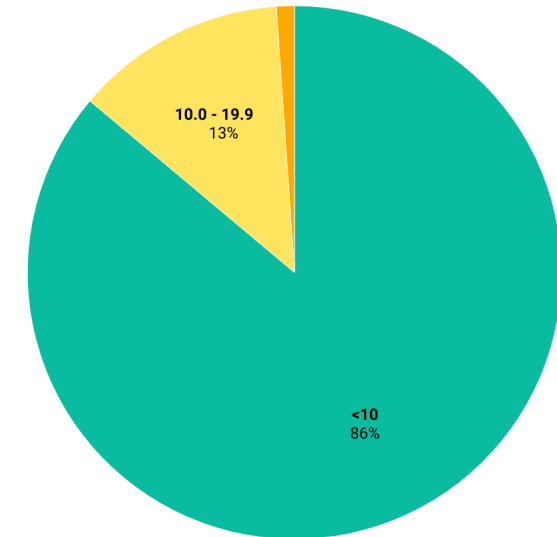


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Source: CDC website, https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=all_states&list_select_county=all_counties&data-type=Hospital&metric-admissions=admissions_covid_confirmed_last_7_days_per_100k_population, accessed May 22, 2022

The reported case fatality rate has trended lower since at least the Fall, 2020.

Deaths per 1000 Cases, 3 week lag

7-day average



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

Globally, cases spiked 28% from a week earlier, fueled by a doubling of cases in Asia. Europe posted a sharp decline in new cases

Weekly Change in Cases By Continent

As of May 20

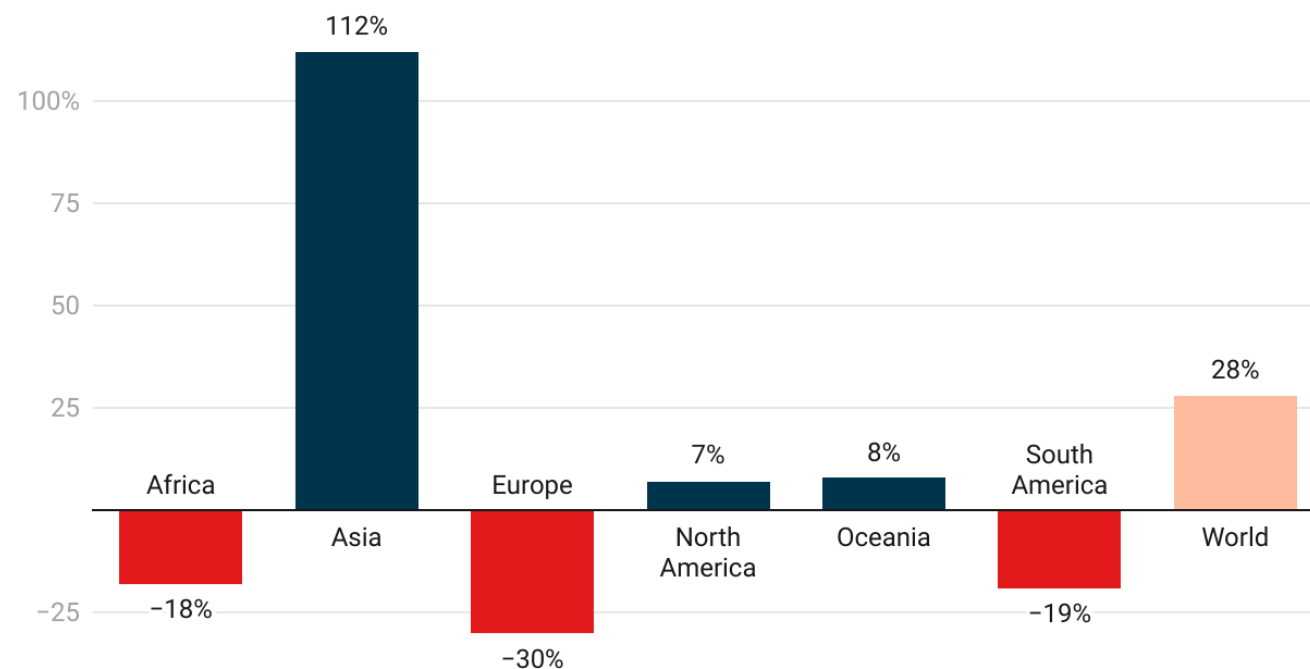


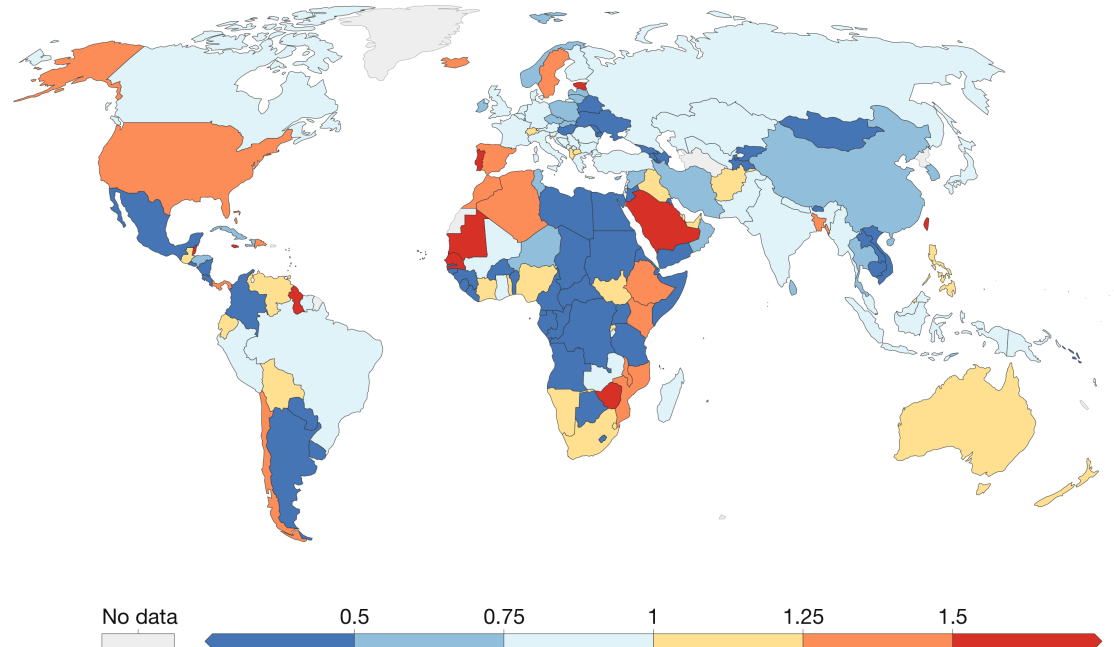
Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

The Reproduction Rate (R_t) in the United States exceed 1.0, reflecting the continuing spread of the virus

Estimate of the effective reproduction rate (R) of COVID-19, May 17, 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.

Our World
in Data



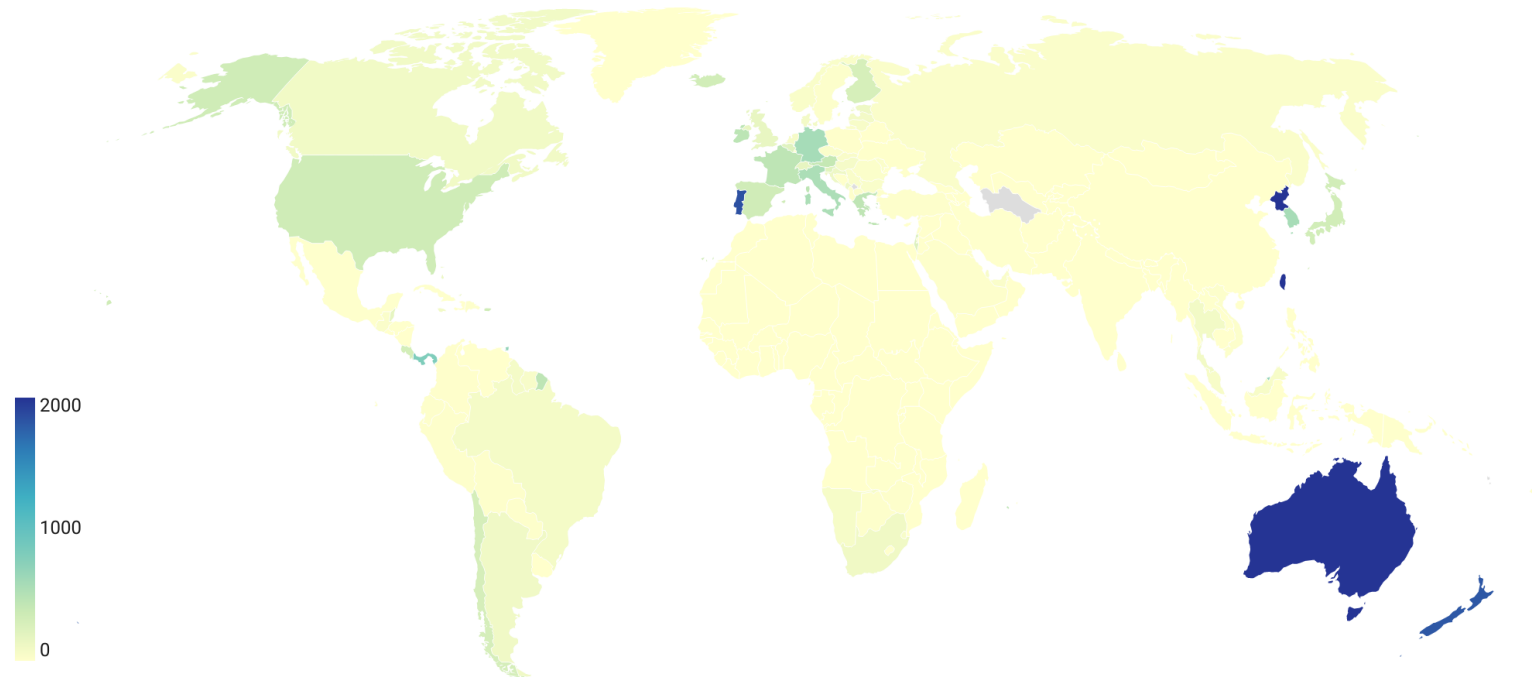
Our World in Data chart,
<https://ourworldindata.org/covid-cases>
accessed May 212, 202

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.

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

New Daily Cases / Million

7-Day Average, As of May 20

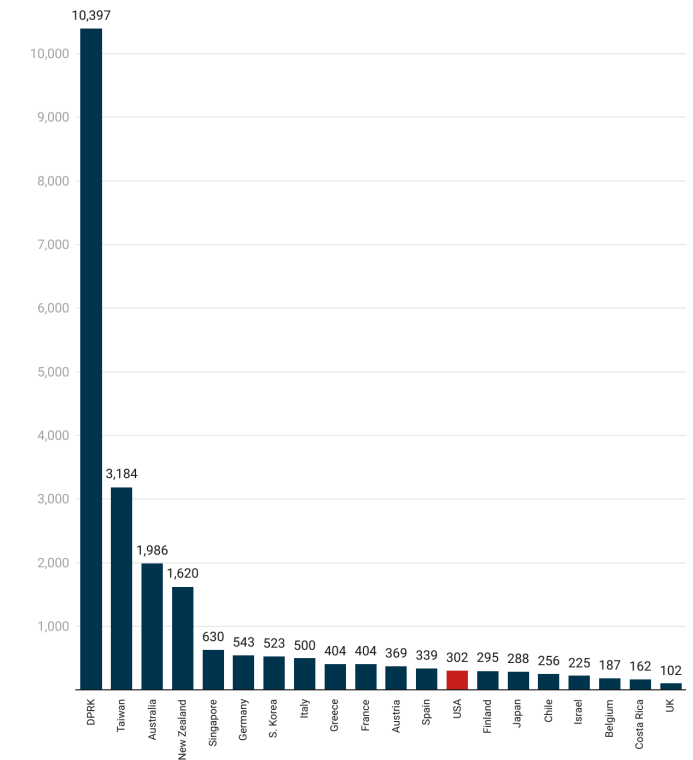


Map: Health Industry Advisor LLC • Source: worldometer.info • Created with Datawrapper

New Daily Cases Per Million

7-Day Average, As of May 20

* - Population 5M or greater



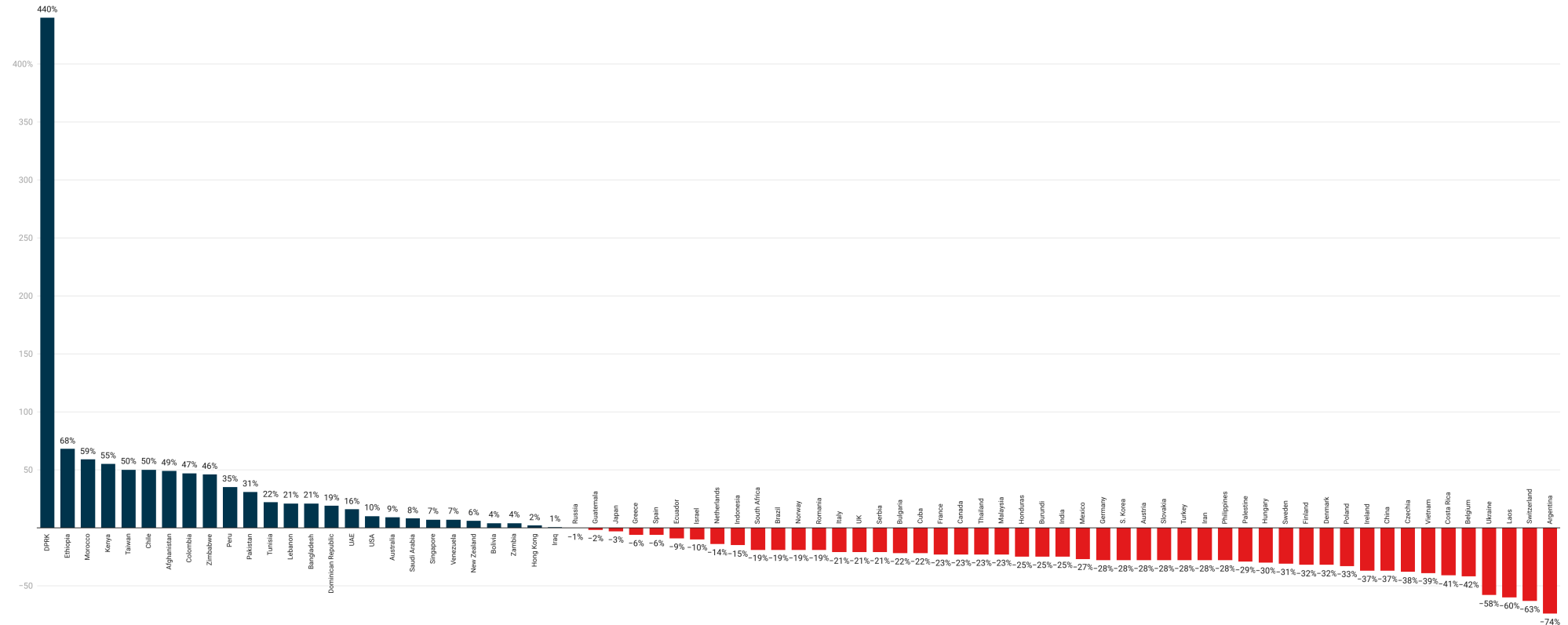
Countries with minimum 5M population

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

North Korea outpaced large countries, with cases surging 440% higher than a week ago

Week-over-Week Increase in Covid Cases

As of May 20



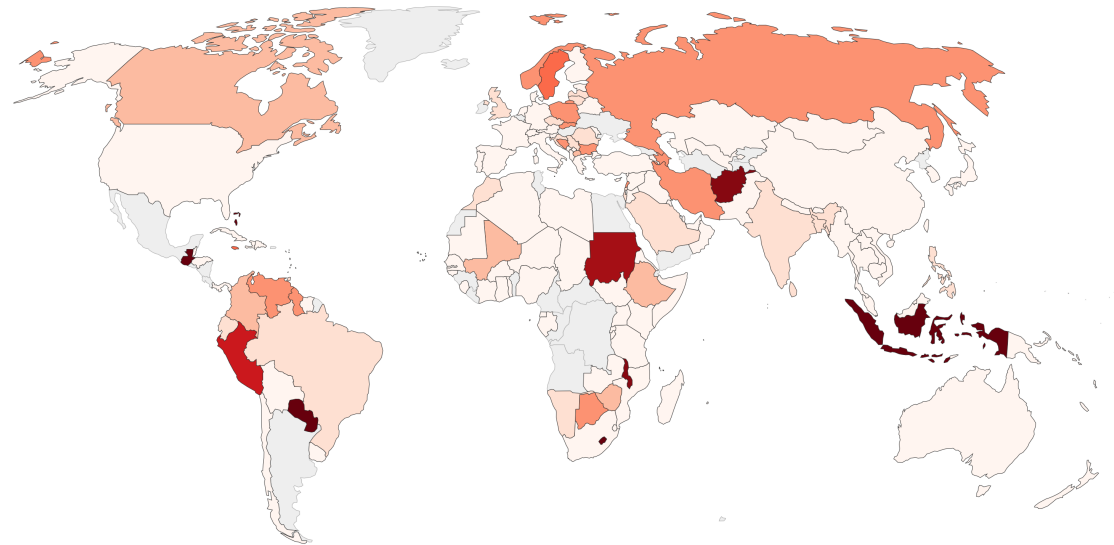
Countries with >5M population and minimum 100 cases each week
 Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

The case fatality rate in the United States ranks relatively low compared to other countries

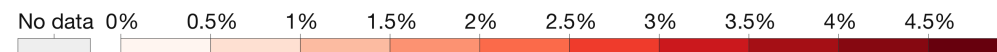
Moving-average case fatality rate of COVID-19, May 21, 2022

The case fatality rate (CFR) is the ratio between confirmed deaths and confirmed cases. Our rolling-average CFR is calculated as the ratio between the 7-day average number of deaths and the 7-day average number of cases 10 days earlier.

Our World
in Data



Our World in Data chart,
<https://ourworldindata.org/covid-cases>
accessed May 21, 2022



Source: Johns Hopkins University CSSE COVID-19 Data

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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
- 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, Vaccines, <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/index.html>
- 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 Forecast Hub, <https://viz.covid19forecasthub.org>
- COVID-19 Projections Using Machine Learning, <https://covid19-projections.com>
- 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>
- Our World In Data, <https://ourworldindata.org/covid-vaccinations>
- U.S. Department of Health & Human Services <https://beta.healthdata.gov/dataset/COVID-19-Diagnostic-Laboratory-Testing-PCR-Testing/j8mb-icvb>
- U.S. Department of Health & Human Services: <https://healthdata.gov/dataset/covid-19-estimated-patient-impact-and-hospital-capacity-state>
- Worldometers.info: <https://www.worldometers.info/coronavirus/>
- Yale School of Public Health & Harvard TH Chan School of Public Health, <https://covidestim.or>