Health Industry Advisor, llc

"Strategic Advice in an Era of Unprecedented Change"

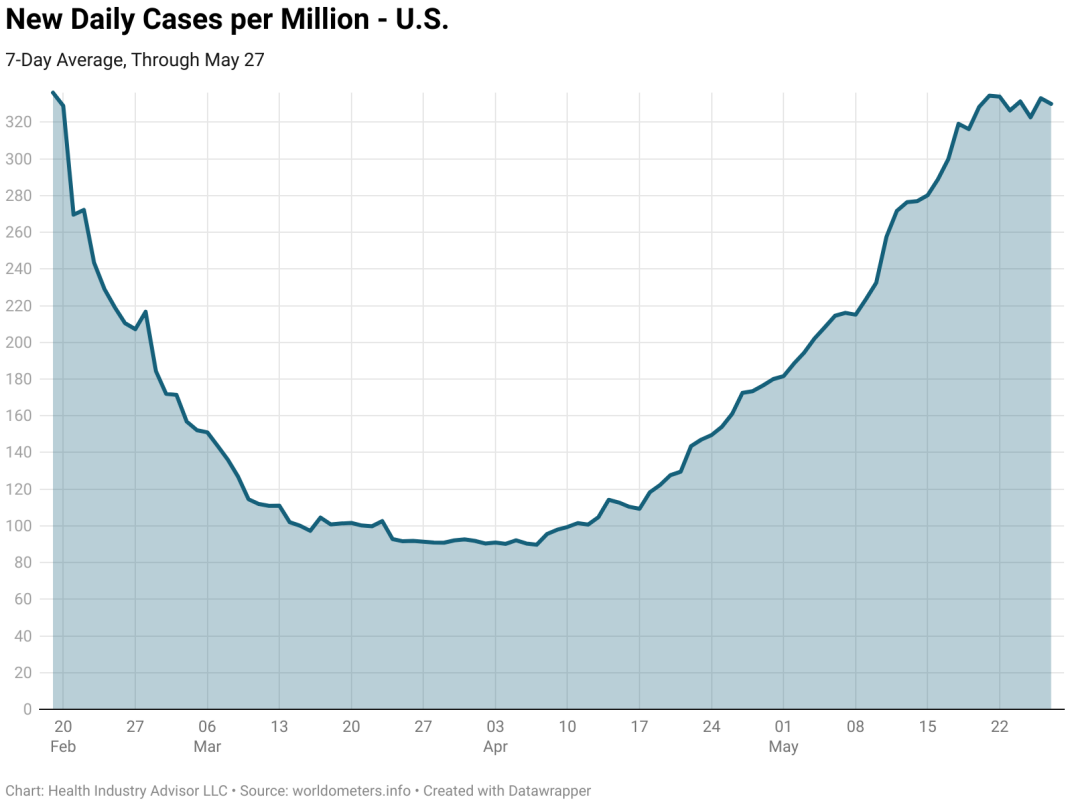
Issue #384
Tuesday, May 31, 2022

COVID19 VITAL SIGNS

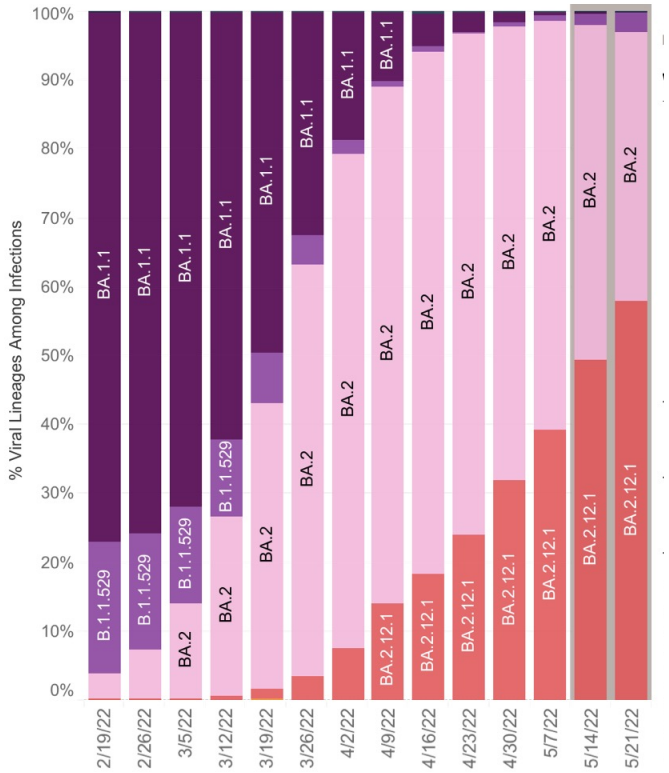
Highlights – As of May 27

- The BA.2.12.1 sub lineage of the Omicron variant became more prevalent in May, driving the latest surge in Covid cases in the United States. This strain may now be dominant in this country
- Reported new cases in the United States stabilized last week, following weeks of increases. New York witnessed declining new cases, hopefully, a harbinger of what is to come nationally
- Globally, new cases plunged 24% last week. South America reported more cases (24%) than a week earlier, the only continent to witness a week-over-week increase in cases
- The Centers for Disease Control and Prevention's (CDC's) scorecard offer mixed signals on the virus' current state in the U.S.:
    - Its Community Transmission scorecard rates virus spread as as High or Substantial in four of every five communities.
    - However, the CDC rates the virus impact as Low in nearly three quarters of all counties
- Surveillance measures indicate the virus remains prevalent across the country:
    - The test-positive rate rose further last week and exceeds recommended levels
    - Most wastewater testing sites report presence of the virus in nearly every sample tested
    - The reproduction rate (Rt) exceed 1.0, indicating on-going spread
- New case rates in the U.S. are nearly five times higher than a year ago. However, hospitalization rates are consistent with year-ago levels; case fatality rates are substantially lower
- Cases per capita in the United States (7-day average, as of May 27) exceeded the rates posted nearly two-thirds of the time since August 1, 2020 (65th percentile)
    - A month ago, cases per capita exceeded just more then one-third of these rate since August 1, 2020 (34th percentile)
    - A year ago, cases per capita similarly exceeded just more than one-third of these rates (35th percentile)
- Admissions per capita (7-day average, as of May 26) ranked in the 18th percentile for the rate since August 1, 2020
    - A month ago, admissions per capita ranked in the 3rd percentile
    - A year ago, admissions per capita ranked in the 20th percentile
- Covid patient occupancy (7-day average, as of May 26) ranked in the 25th percentile for the rate since August 1, 2020
    - A month ago, admissions per capita ranked in the 5th percentile
    - A year ago, admissions per capita ranked in the 18th percentile
- The case fatality rate (7-day average, as of May 27) ranked in the 5th percentile for the rate since August 1, 2020
    - A month ago, the case fatality rate ranked in the 25th percentile
    - A year ago, the case fatality rate ranked in the 20th percentile

Two specific Omicron variants, BA.2 and BA.2.12.1, emerged in the United States earlier this year, driving up case counts. BA2.12.1's growing prevalence in April and May provoked our recent surge



Sub-variant prevalence



Source: CDC website, accessed May 29, 2022.
https://covid.cdc.gov/covid-data-tracker/#variant-proportions

The Delta variant (2021) lowered vaccine effectiveness against infection but did not breakthrough vaccine effectiveness in preventing hospitalizations. The Omicron variant further lowered vaccine effectiveness in preventing infections and lowered effectiveness in preventing hospitalizations, albeit to a lesser degree

Age-Adjusted Vaccine Effectiveness

Fully Vaccinated Persons

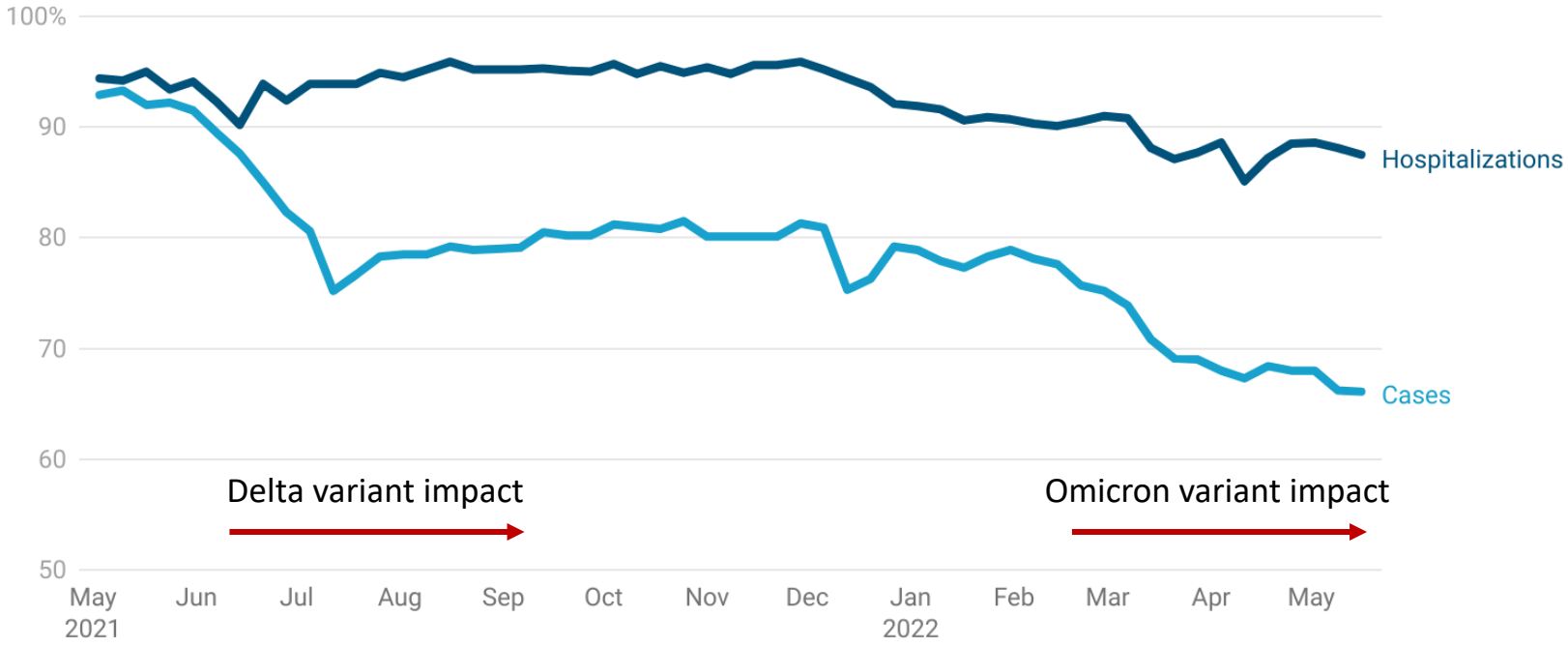
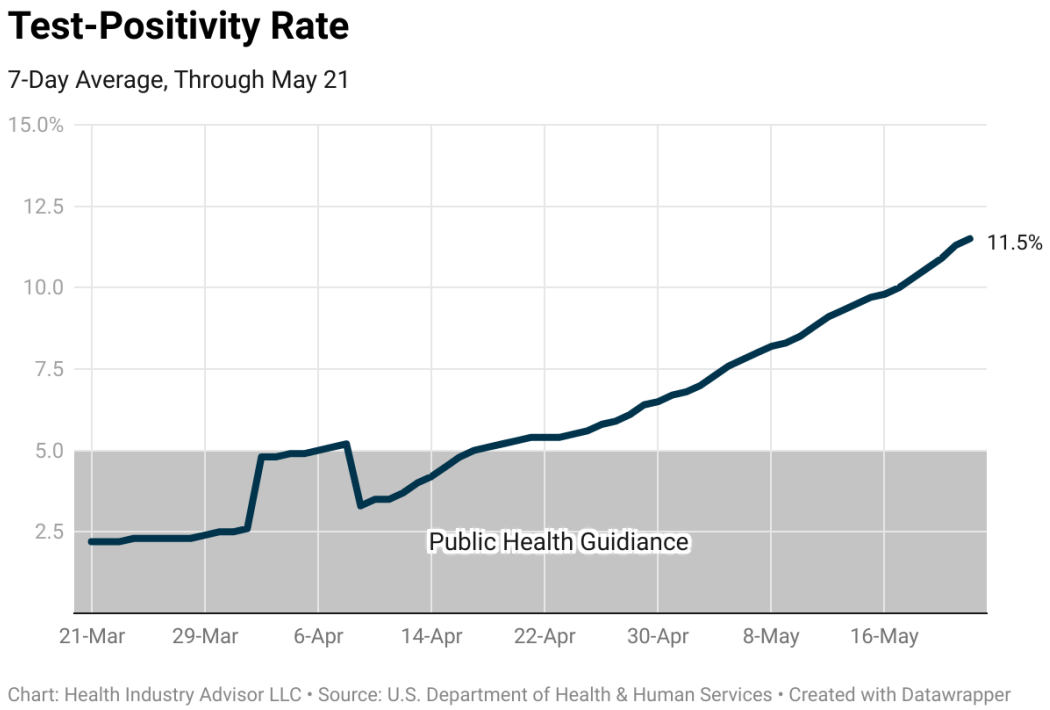
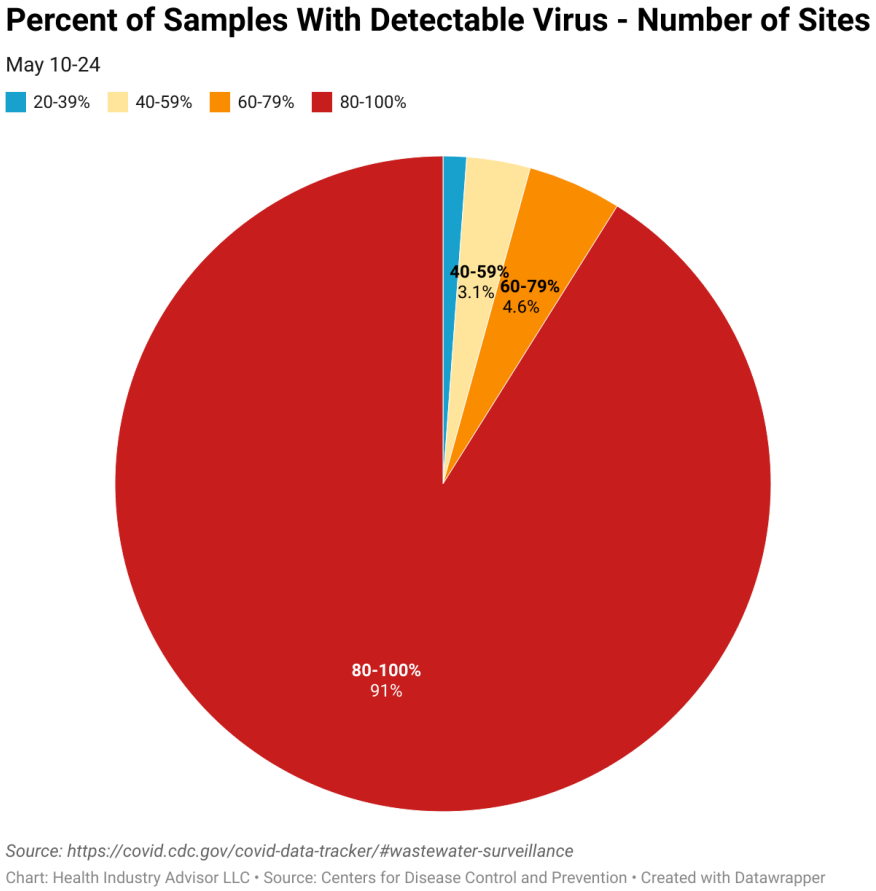


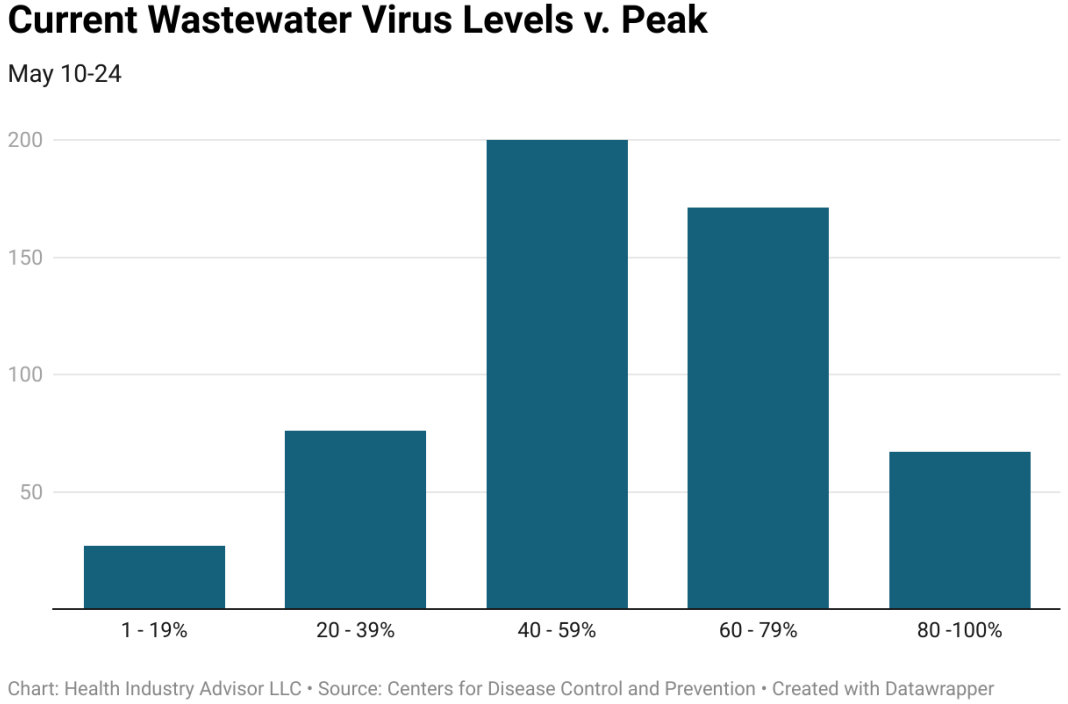
Chart: Health Industry Advisor LLC • Source: New York State Health Department • Created with Datawrapper

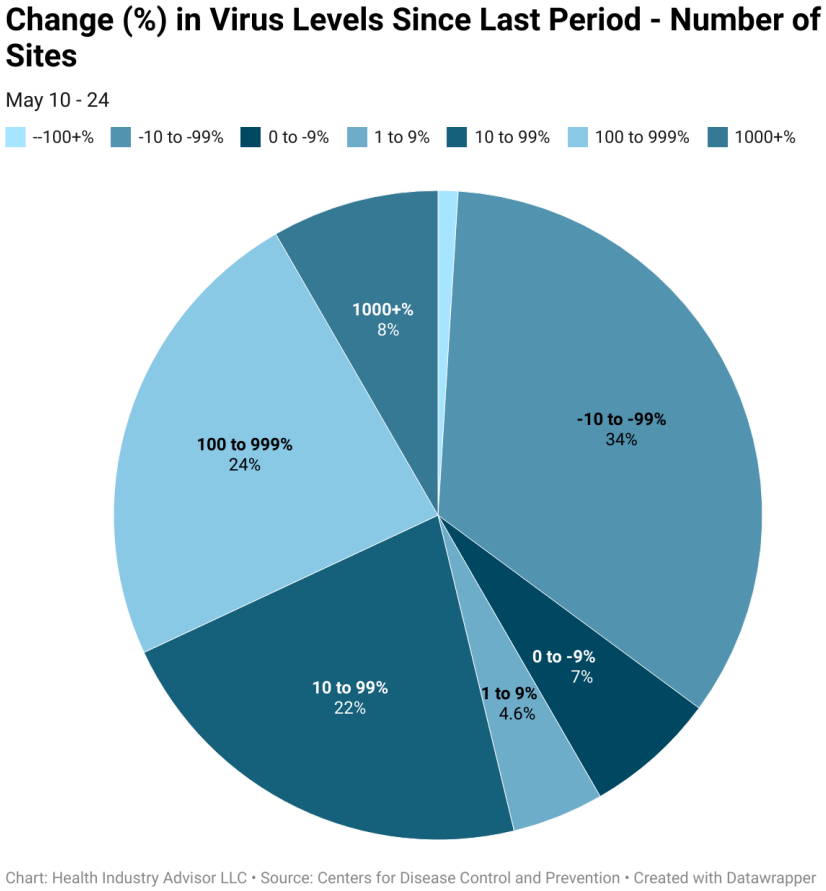
The test-positive rate exceeds public health guidance and continues rising. Most wastewater testing sites (91%) across the country detect the virus in nearly all samples (80 – 100%)





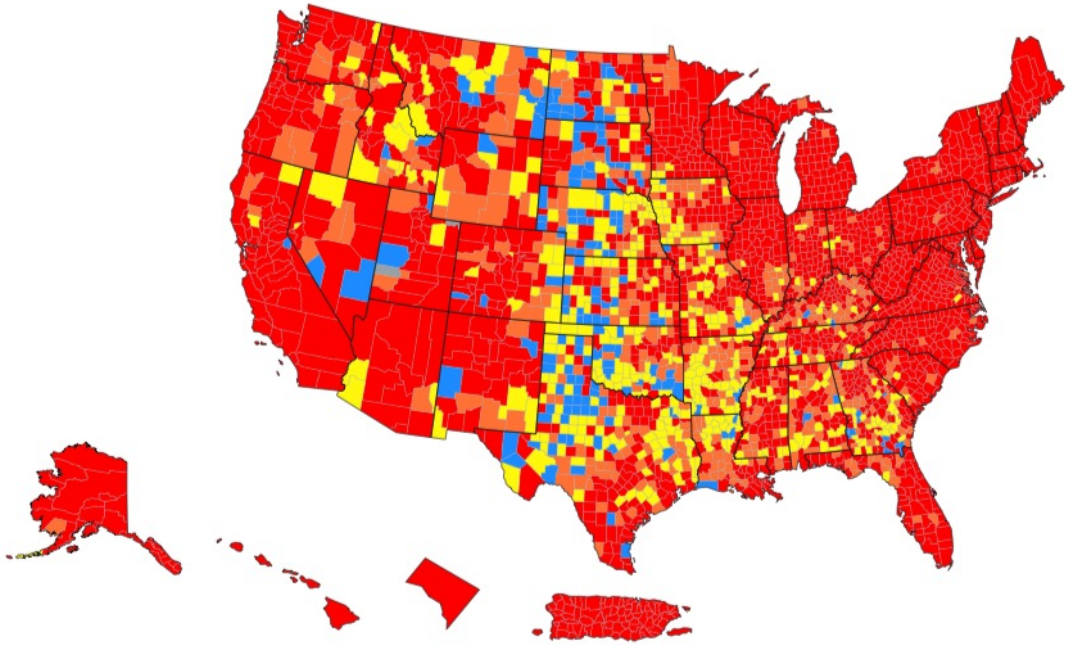
Wastewater virus levels increased in most sites since the last testing period. Current virus levels range between 40% to 80% of peak measurement in most sites

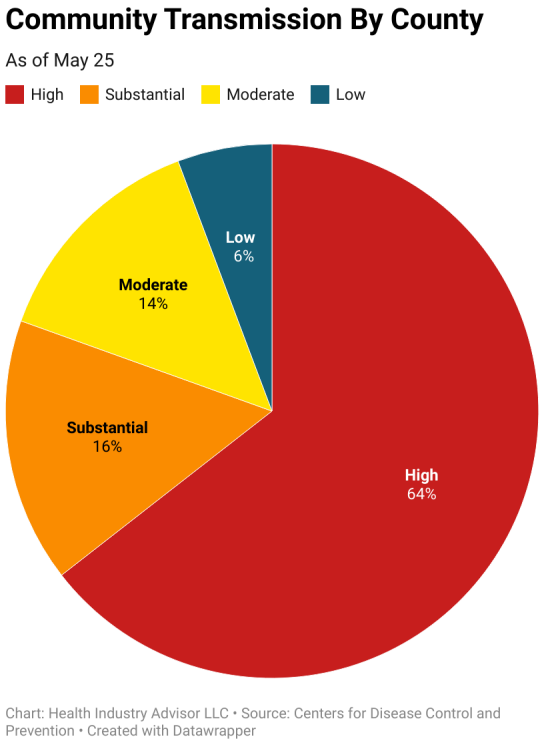




Virus spread rated High in two-thirds of U.S. counties last week, up from 58% a week earlier

Community Transmission
May 19-25, 2022

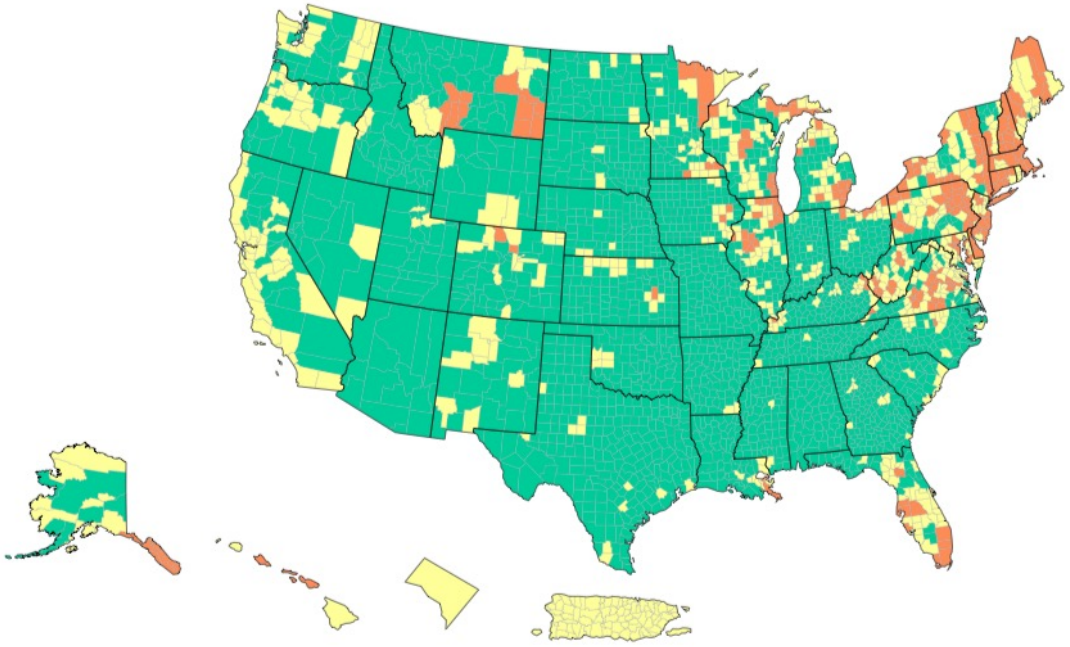


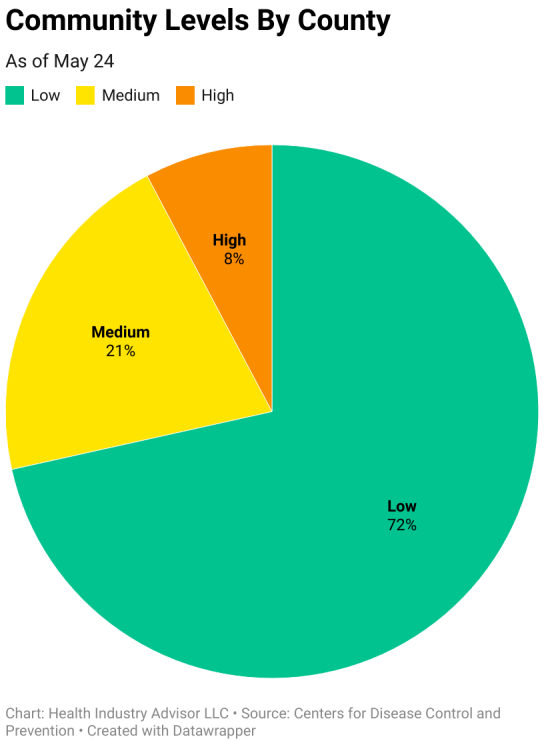


Source: Centers for Disease Control and Prevention website; accessed May 28, 2022

Nearly three-quarters of all counties rated Low on the CDC's Community Level scorecard last week, down slightly from the prior week. One-in-five rated Medium, up from 15% a week earlier

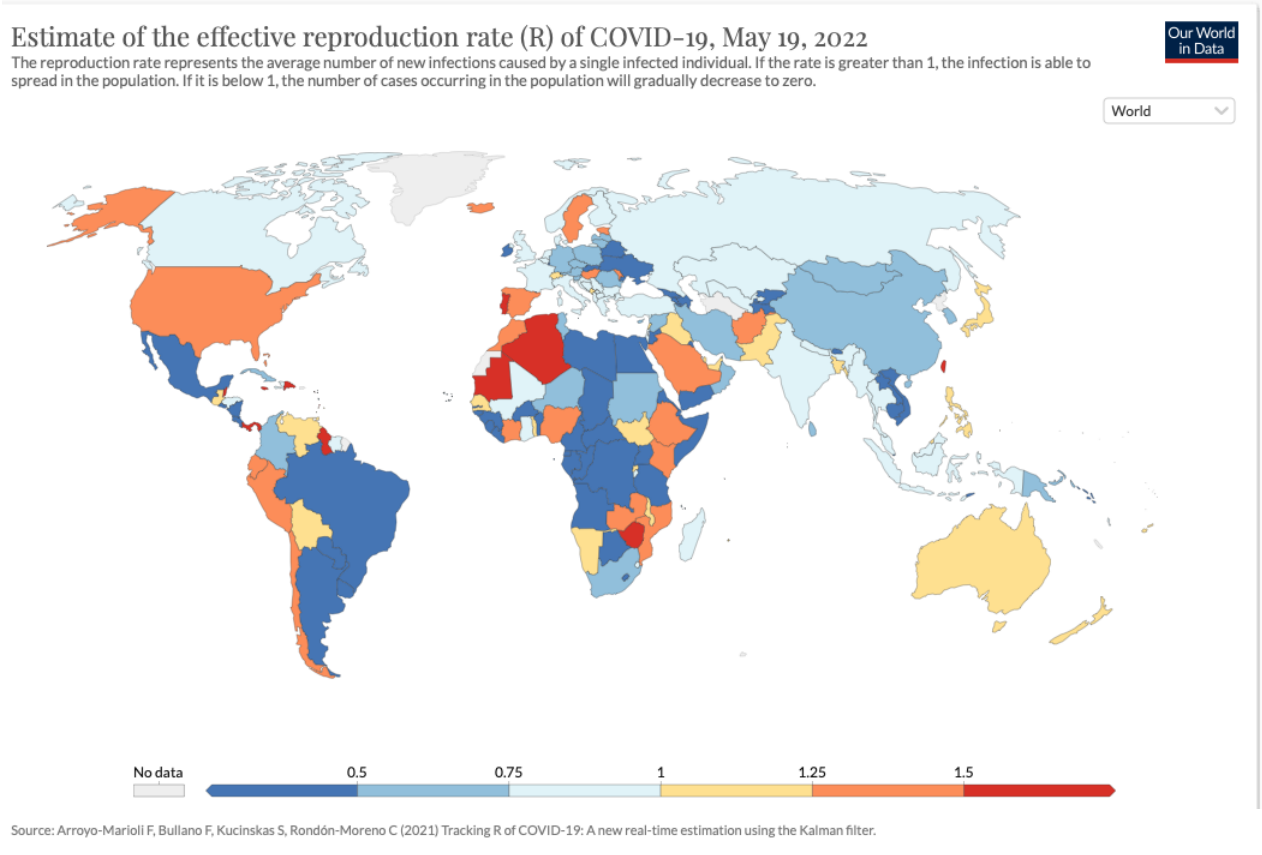
May 18-24, 2022

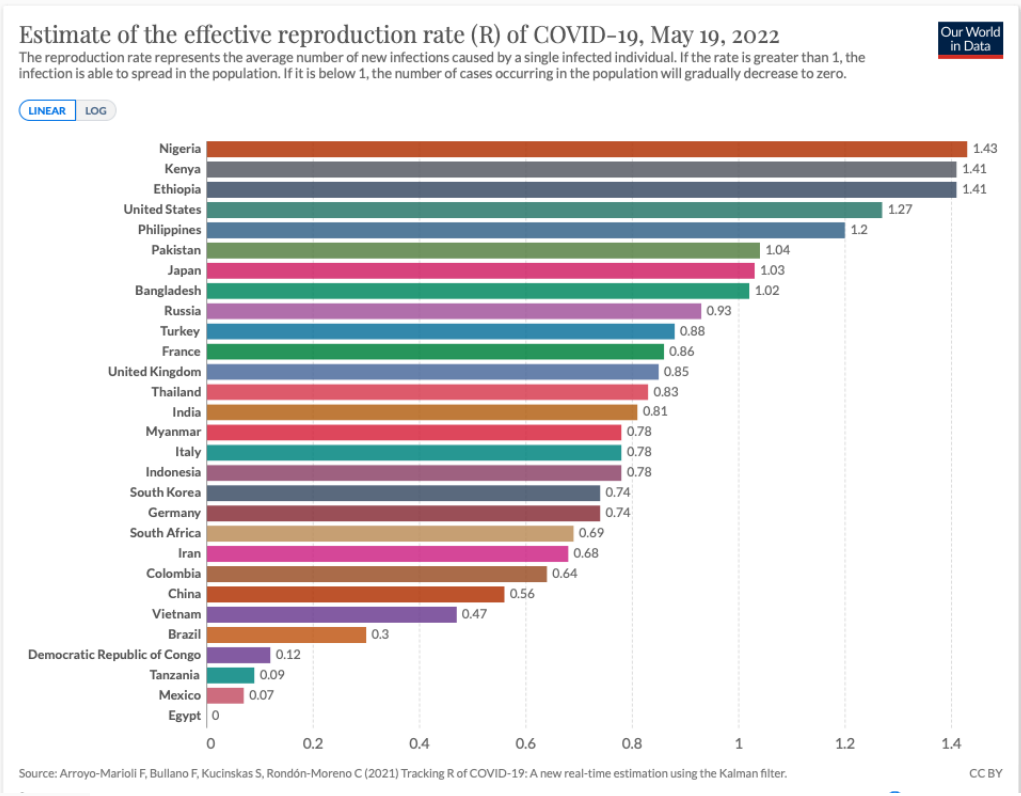




Source: Centers for Disease Control and Prevention website; accessed May 28, 2022

The Reproduction Rate (Rt) in the United States ranks fourth worldwide among the largest thirty countries. This Rt of 1.27 reflects the continuing spread of the virus





Our World in Data chart, https://ourworldindata.org/covid-cases accessed May 30, 2022

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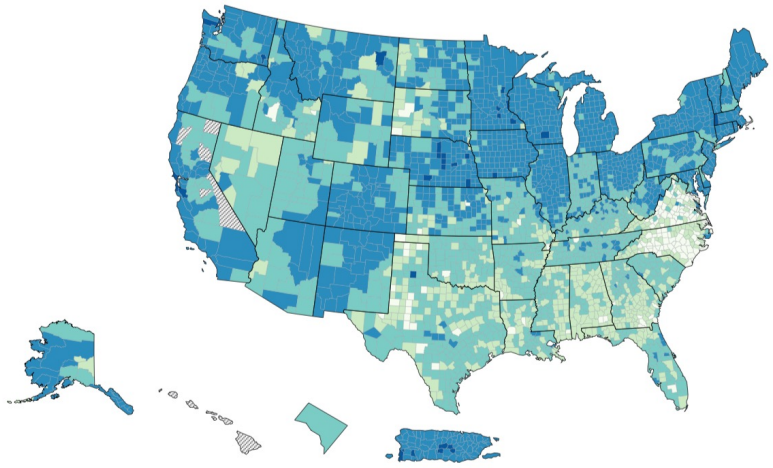
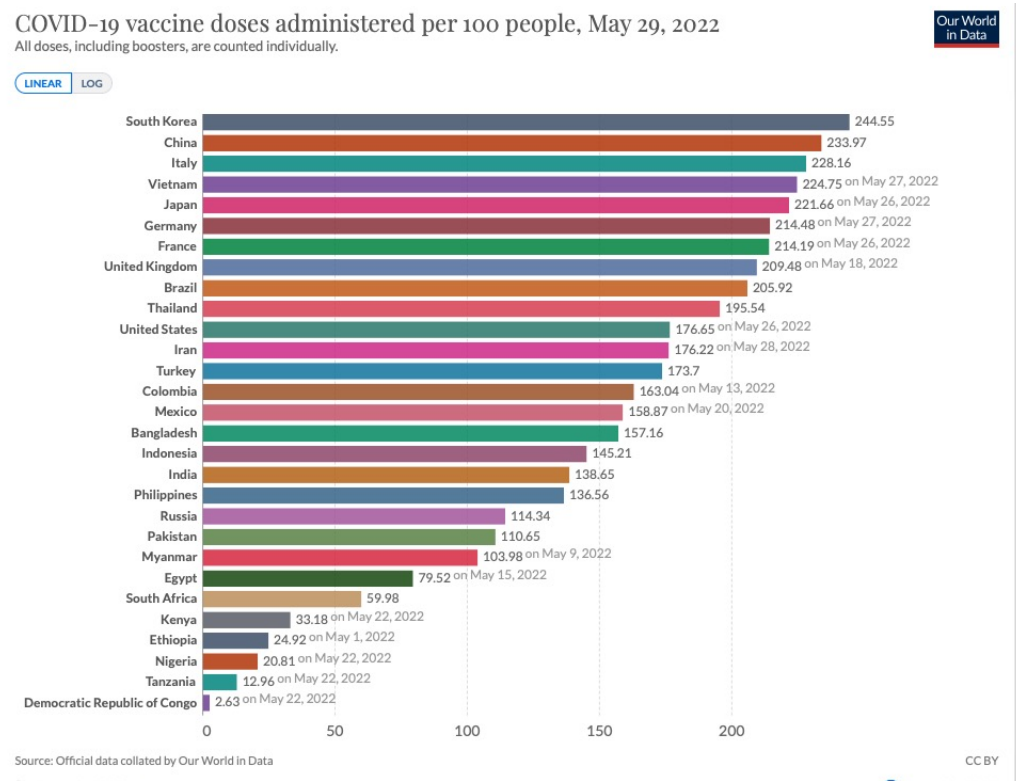
The United States ranks eleventh among the thirty largest countries in the number of vaccines administered per capita. Vaccination rates in the North and West United States surpass rates in the South and Southwest

% of fully vaccinated population ≥ 18 years of age with a first booster dose of All Counties in US



0-29.9% 30-39.9% 40-49.9% 50-69.9% 70%+ No Data

Mon May 30 2022 05:20:08 GMT-0400



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Covid patient days doubled since reaching a near pandemic low in mid-April. Covid admissions spiked 154% during this time. However, both rates remain substantially lower than posted earlier this year

Covid-19 Admissions & Census

7-Day Average Thru May 26

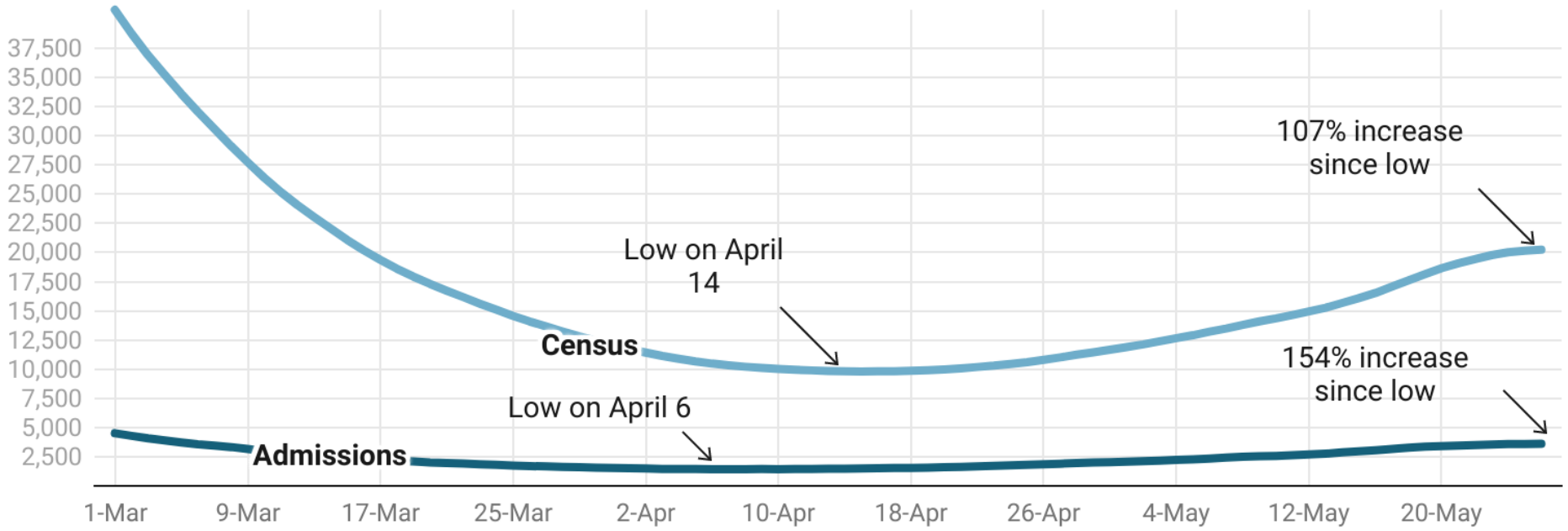

Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

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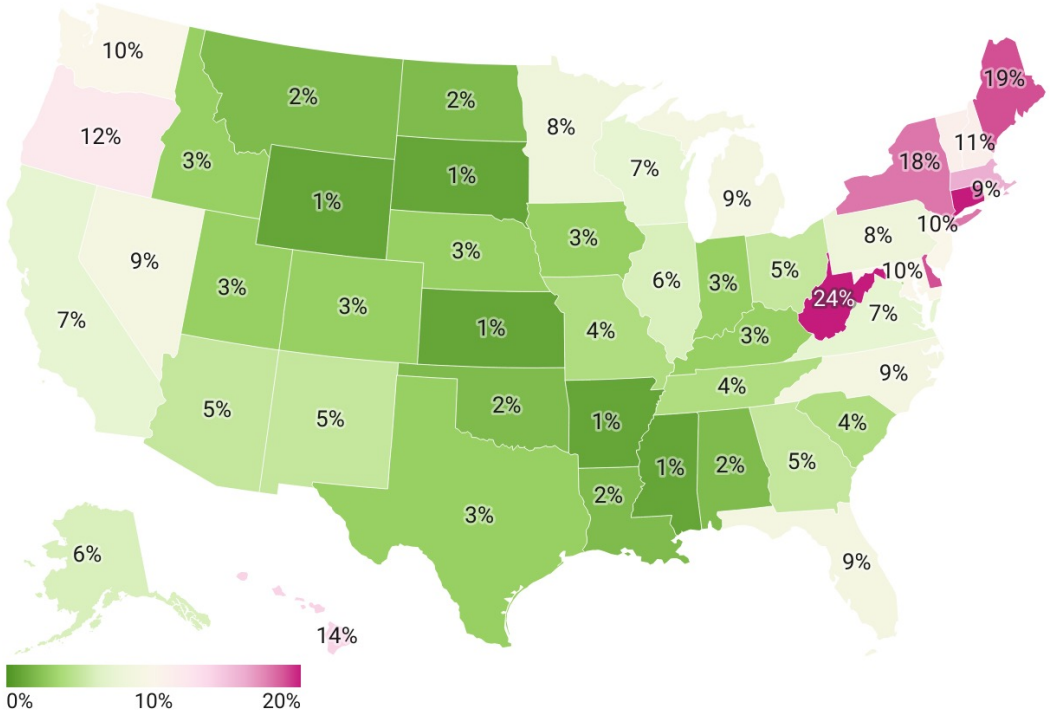
Covid patients occupy nearly one of every sixteen inpatient beds in the United States. Occupancy rates are highest in Connecticut, Delaware, Maine, New York, and West Virginia. Rates fell in ten states last week

Covid-19 Patients As % of All Inpatient Beds

As of May 26



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

Week-over-Week Change

Down in 10 states

- Alaska
- Maryland
- Minnesota
- New Hampshire
- New York

Up in 40 states

- North Dakota
- Rhode Island
- Utah
- Vermont
- Wisconsin

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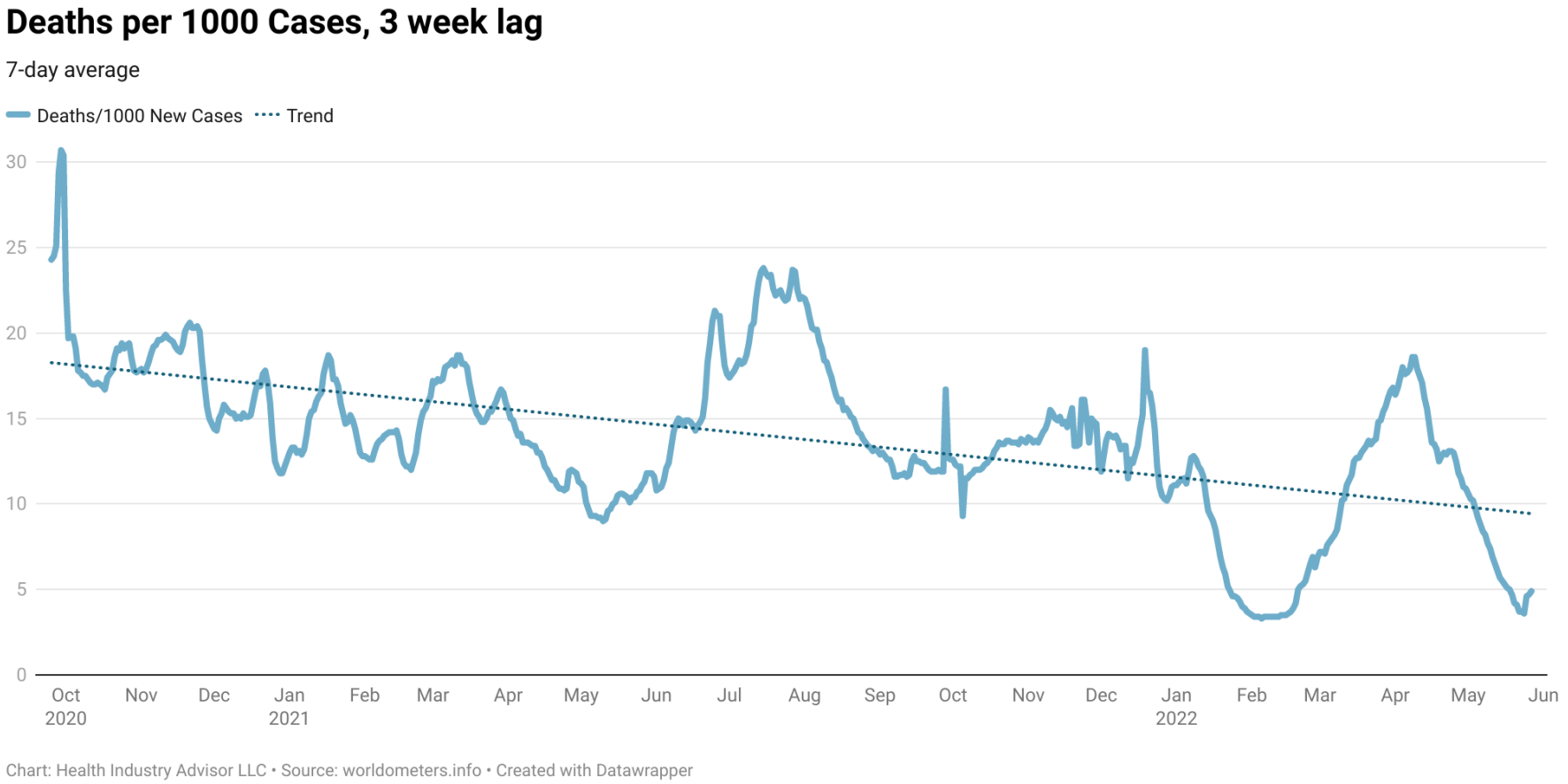
The reported case fatality rate has trended lower since at least the Fall, 2020.



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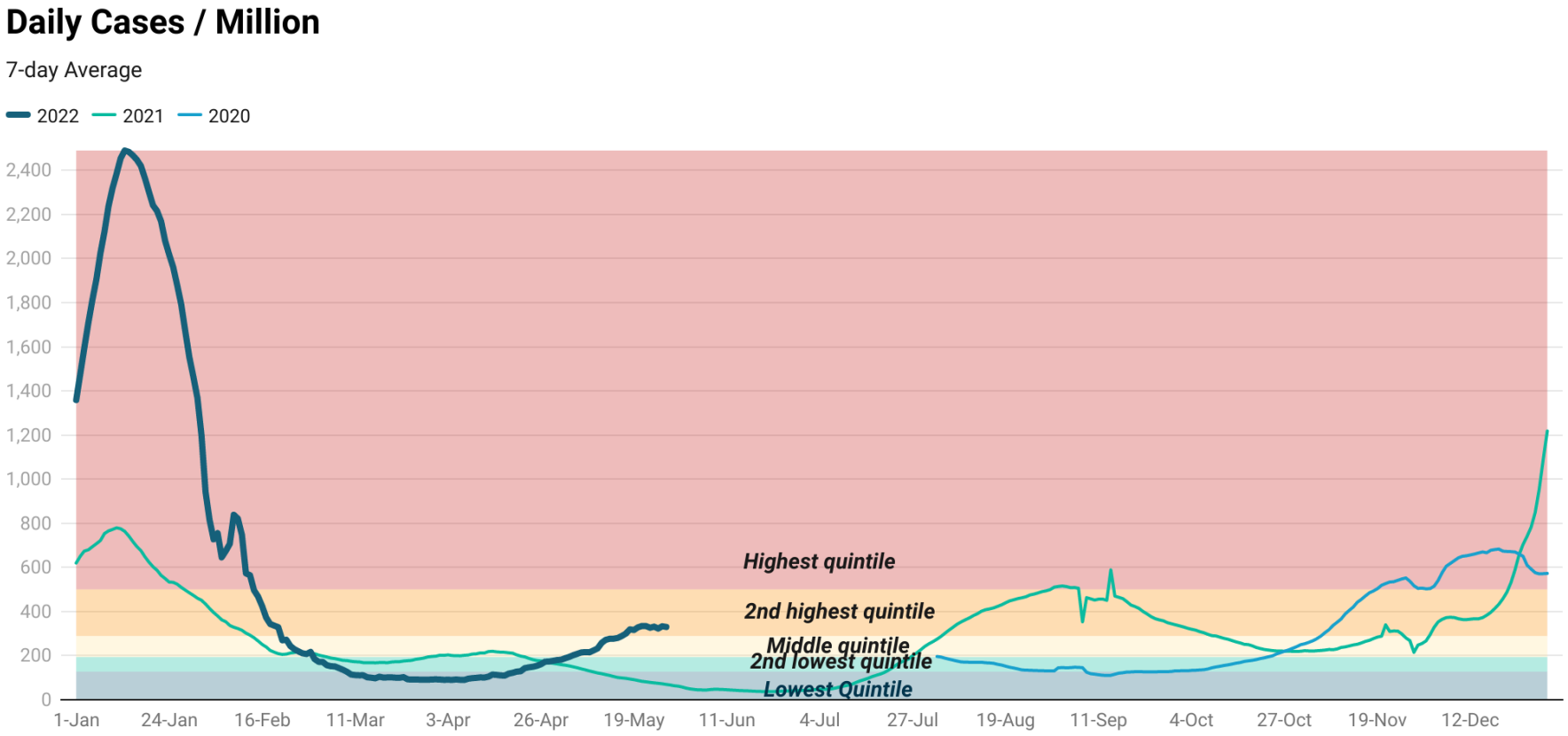
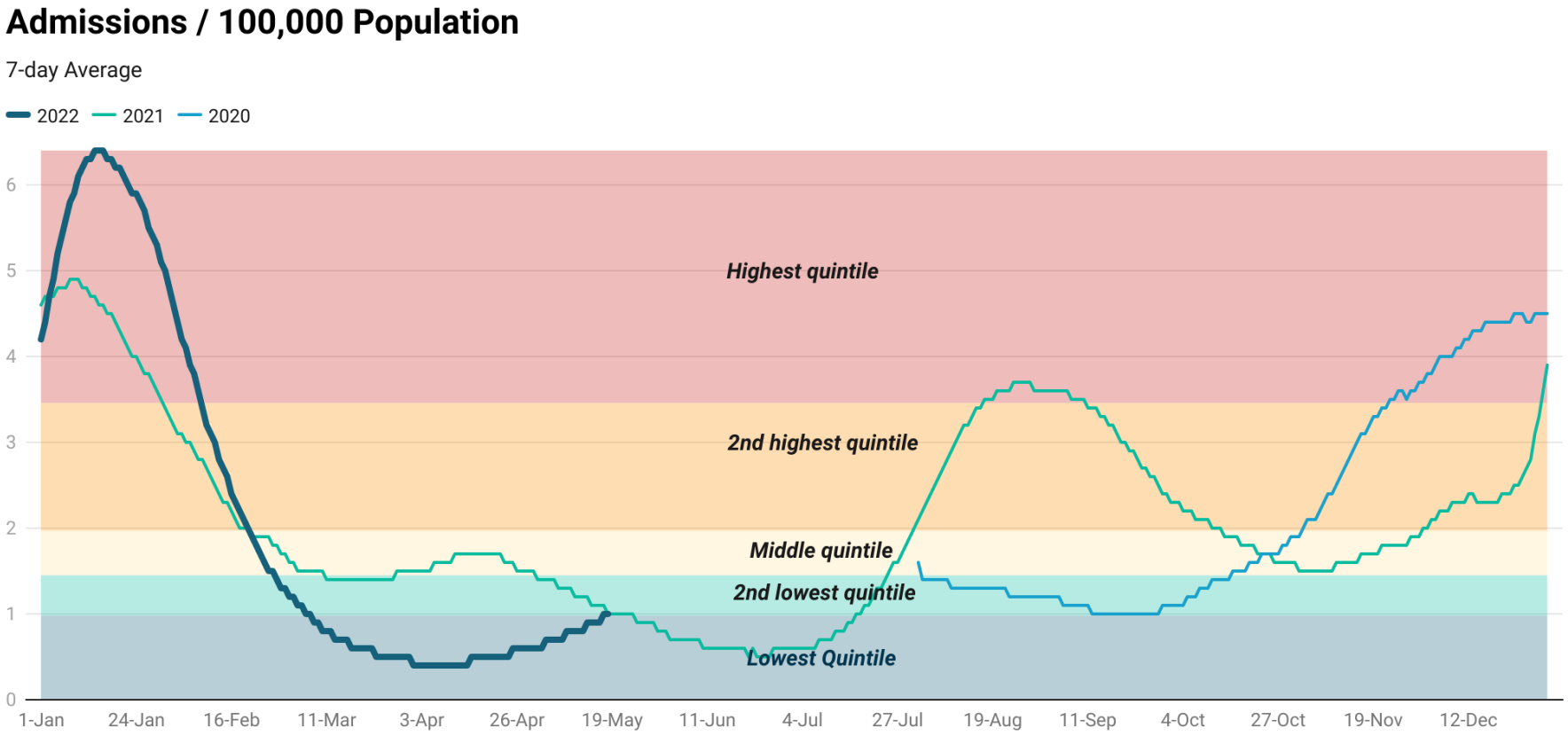
The new case rate stabilized in the United States last week, after increasing since late March. Comparatively, the current rate sits in the top 40% (second highest quintile) for rates posted since August 2020



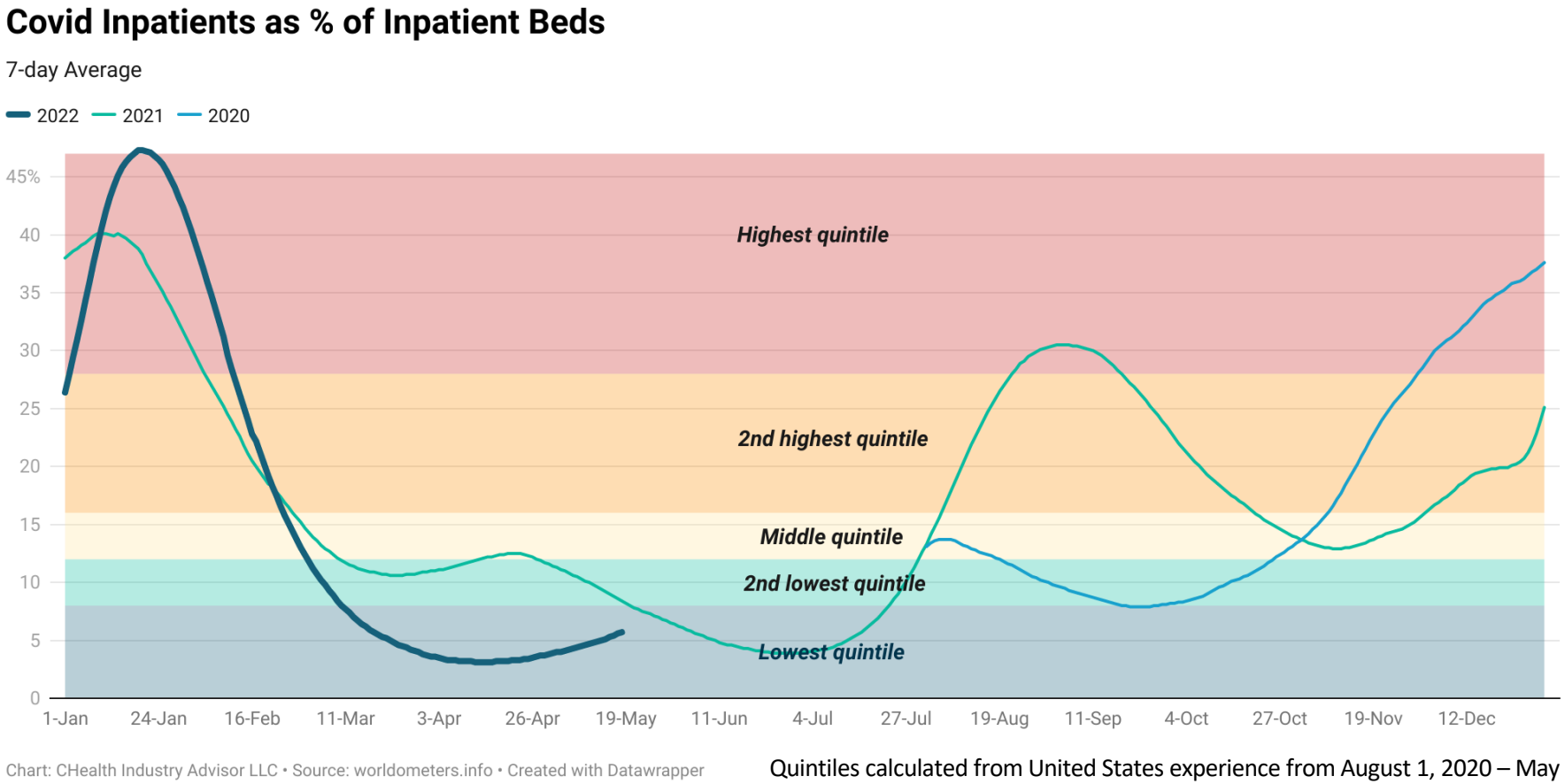
Quintiles calculated from United States experience from August 1, 2020 – May 27, 2022

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



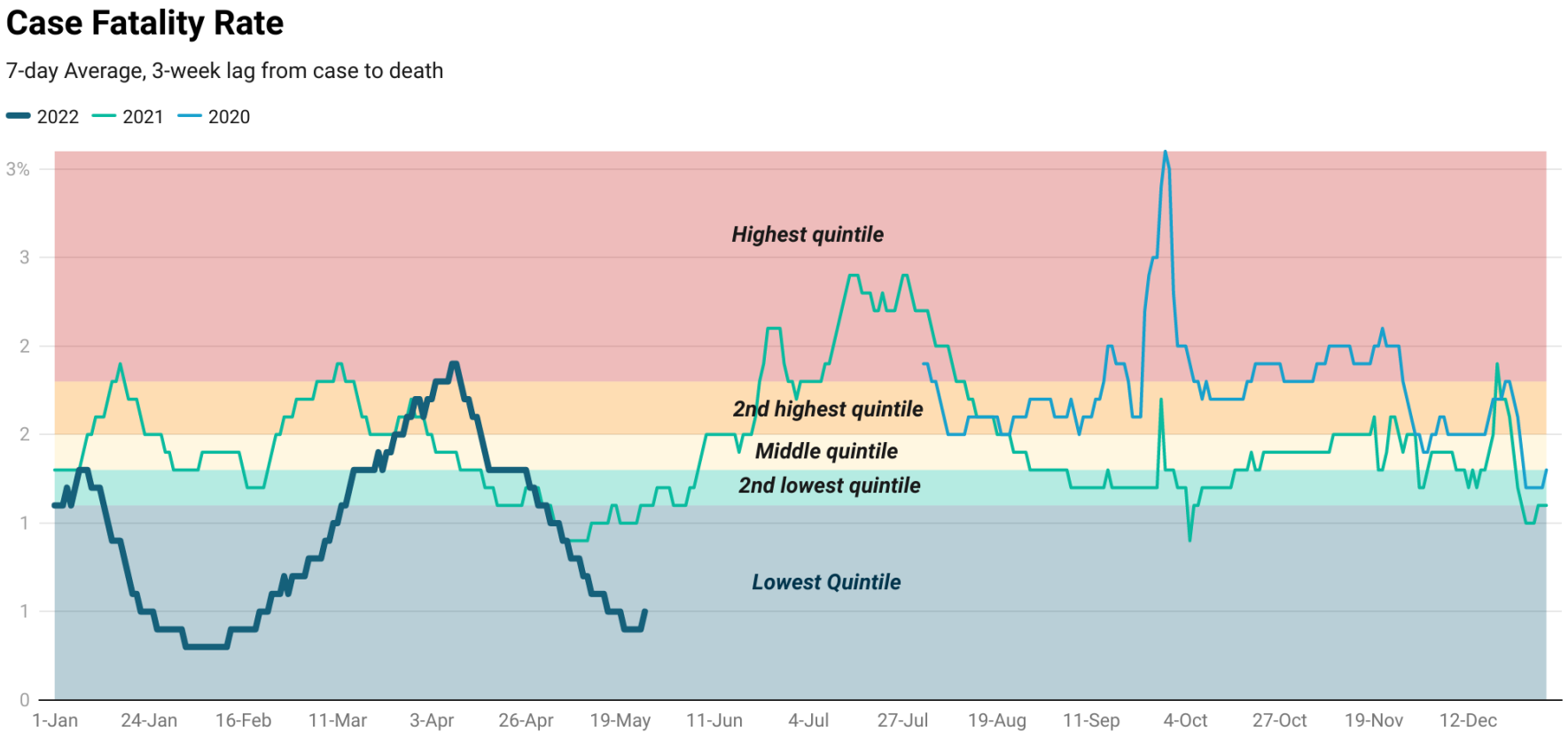
Quintiles calculated from United States experience from August 1, 2020 – May 27, 2022

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



Quintiles calculated from United States experience from August 1, 2020 – May 27, 2022

The case fatality rate increased slightly last week, yet remains squarely in the lowest quintile



Quintiles calculated from United States experience from August 1, 2020 – May 27, 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 7-Day	Trend	Admissions/100,000 7-Day	Trend	Covid Occupany % 7-Day	Trend	Case Fatality Rate 7-Day	Trend
Alabama	133		0.56		2%		0.6%	
Alaska	372		1.11		6%		0.0%	
Arizona	226		0.83		5%		1.0%	
Arkansas	108		0.43		1%		4.1%	
California	396		0.85		7%		0.5%	
Colorado	560		0.92		3%		0.6%	
Connecticut	355		1.85		22%		0.3%	
Delaware	529		1.95		19%		0.3%	
District Of Columbia	479		2.06		4%		0.0%	
Florida	444		1.65		9%		0.4%	
Georgia	193		0.68		5%		0.7%	
Hawaii	900		1.95		14%		0.1%	
Idaho	135		0.61		3%		0.4%	
Illinois	415		1.36		6%		0.2%	
Indiana	186		0.85		3%		0.6%	
Iowa	229		0.84		3%		0.6%	
Kansas	153		0.62		1%		6.8%	
Kentucky	248		0.94		3%		1.5%	
Louisiana	206		1.02		2%		0.5%	
Maine	407		1.36		19%		0.2%	
Maryland	364		1.24		10%		0.6%	
Massachusetts	468		1.99		16%		0.4%	
Michigan	371		1.43		9%		0.0%	
Minnesota	307		1.14		8%		0.4%	
Mississippi	130		0.40		1%		0.4%	
Missouri	171		0.78		4%		0.8%	

State	New Daily Infections / Million 7-Day	Trend	Admissions/100,000 7-Day	Trend	Covid Occupany % 7-Day	Trend	Case Fatality Rate 7-Day	Trend
Montana	174		1.43		2%		0.7%	
Nebraska	146		0.63		3%		4.5%	
Nevada	290		0.99		9%		2.0%	
New Hampshire	350		1.79		11%		0.5%	
New Jersey	543		1.63		10%		0.3%	
New Mexico	309		0.74		5%		6.0%	
New York	431		1.79		18%		0.3%	
North Carolina	397		0.88		9%		0.1%	
North Dakota	167		0.71		2%		1.2%	
Ohio	239		1.20		5%		0.3%	
Oklahoma	123		0.36		2%		0.1%	
Oregon	375		1.11		12%		0.4%	
Pennsylvania	331		1.45		8%		2.0%	
Rhode Island	565		1.00		9%		0.2%	
South Carolina	223		0.79		4%		0.3%	
South Dakota	96		0.53		1%		2.1%	
Tennessee	209		0.64		4%		2.8%	
Texas	158		0.57		3%		0.3%	
Utah	451		0.74		3%		0.5%	
Vermont	368		1.51		11%		0.3%	
Virginia	377		1.06		7%		0.3%	
Washington	388		1.23		10%		0.4%	
West Virginia	376		1.29		24%		1.9%	
Wisconsin	363		1.14		7%		0.6%	
Wyoming	112		0.64		1%		0.0%	
United States	**330**		**1.08**		**6%**		**0.5%**	

%-iles	New Infections	Admissions	Occupancy	Case Fatality
Lowest Quintile	127	0.98	7%	1.1%
2nd Lowest Quintile	194	1.45	12%	1.3%
Middle Quintile	289	1.97	16%	1.5%
2nd Highest Quintile	500	3.46	28%	1.8%
Highst Quintile	> 500	> 3.46	> 28%	> 1.8%

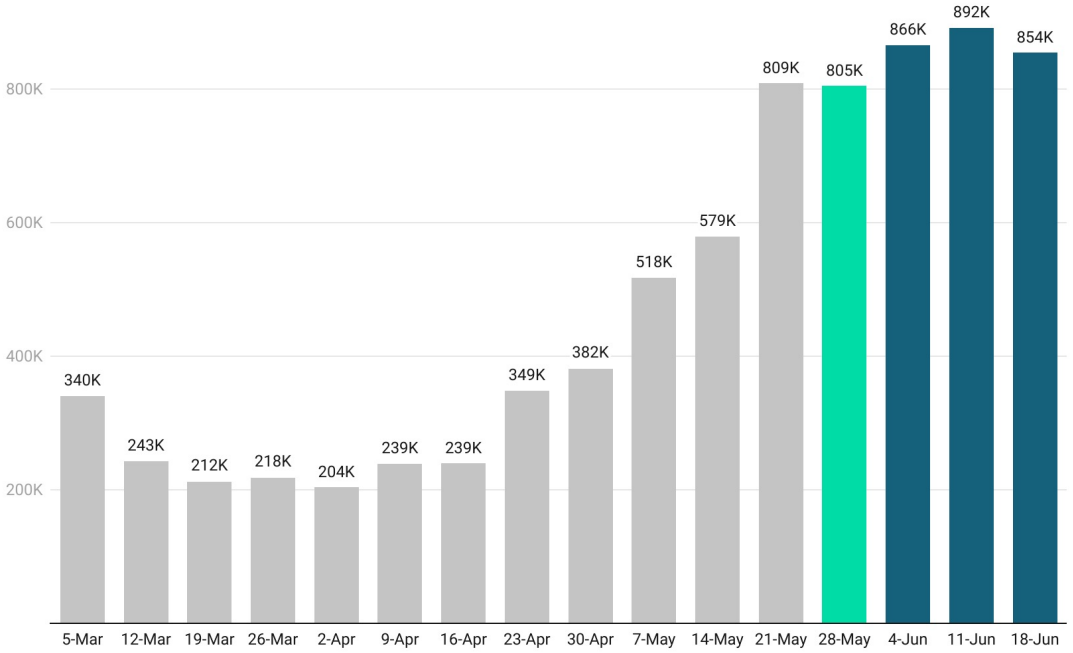
Quintiles calculated from United States experience from August 1, 2020 – May 27, 2022

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

New infections could rise in the next few weeks, then drop in 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 21

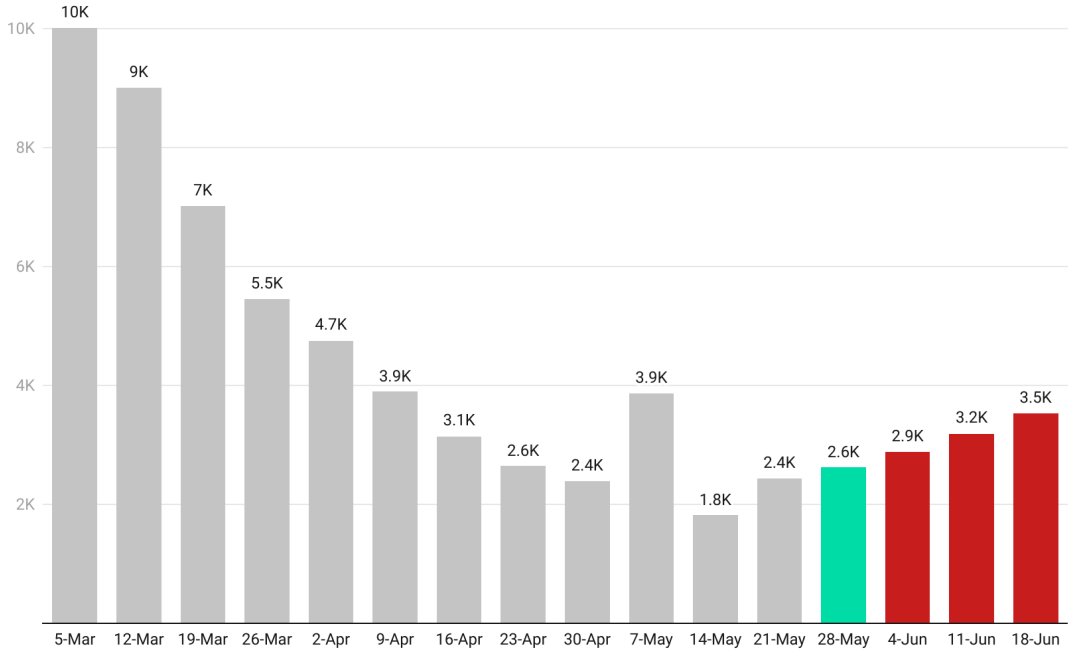


For the week ending on the date shown

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 21



For the week ending on the date shown

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

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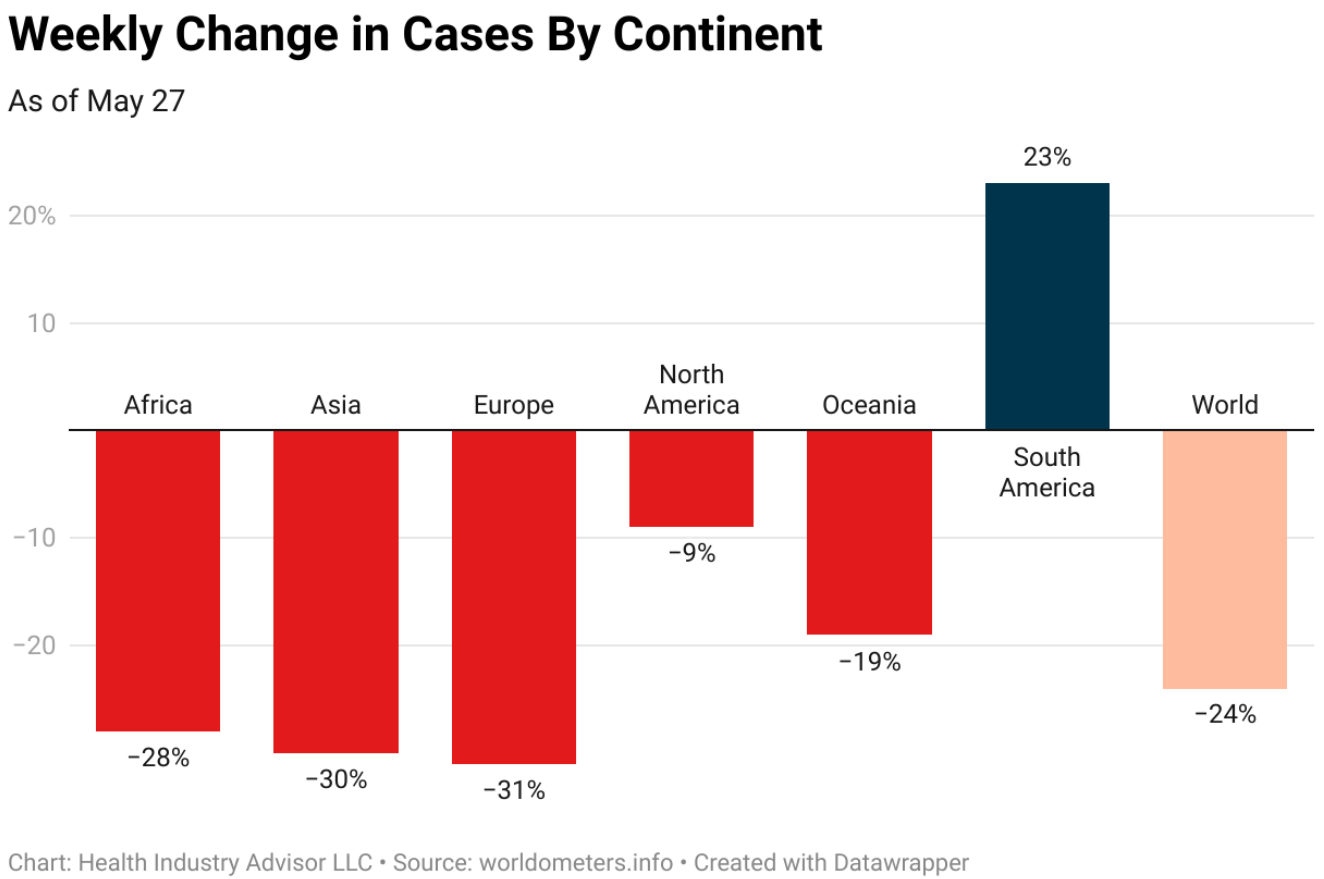
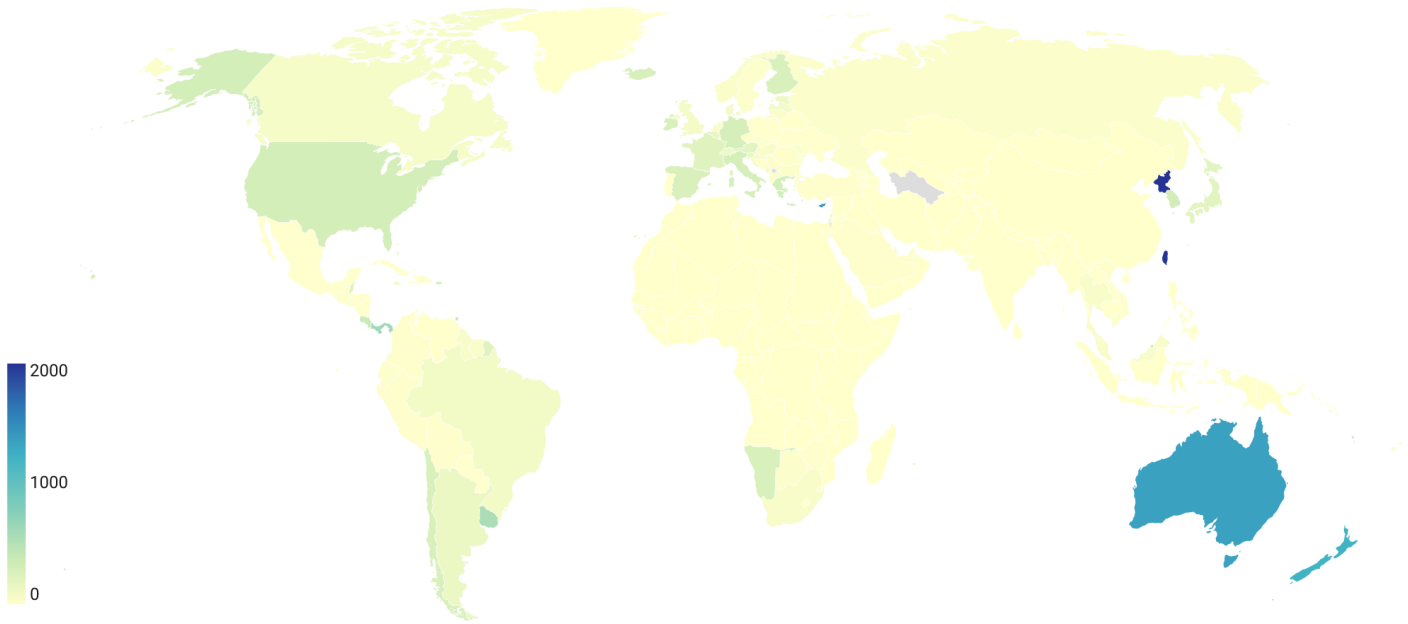
Globally, cases plunged 24% from a week earlier. Only South America reported an increase in new cases



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

New Daily Cases / Million

7-Day Average, As of May 27

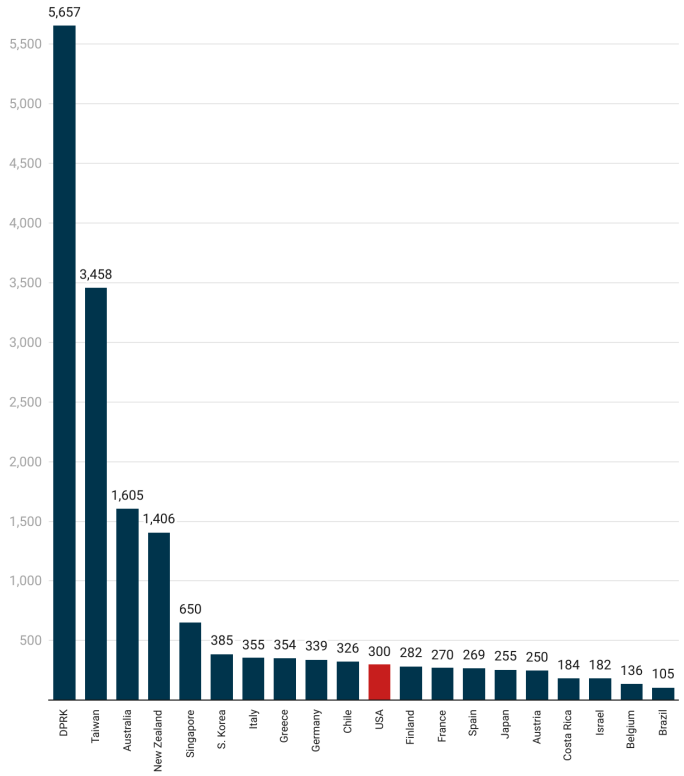


Map: Health Industry Advisor LLC • Source: worldometer.info • Created with Datawrapper

New Daily Cases Per Million

* - Population 5M or greater

7-Day Average, As of May 27



Countries with minimum 5M population

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

Over the past month, Europe has witnessed a sharp decline in bew case rates

New Daily Cases / Million

7-Day Average, As of April 22

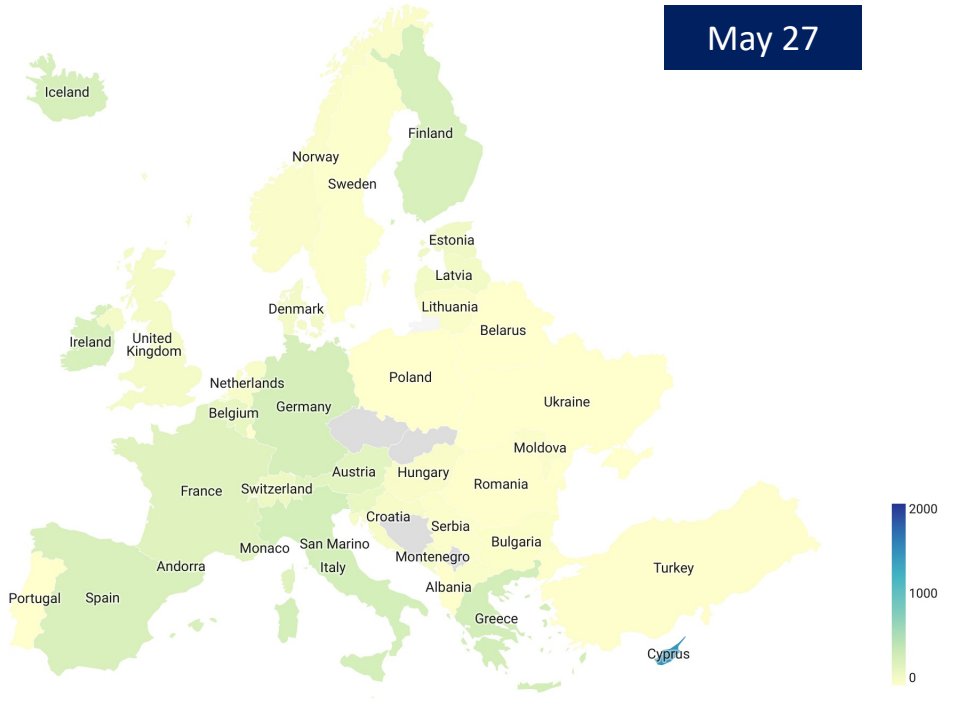
April 22

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

New Daily Cases / Million

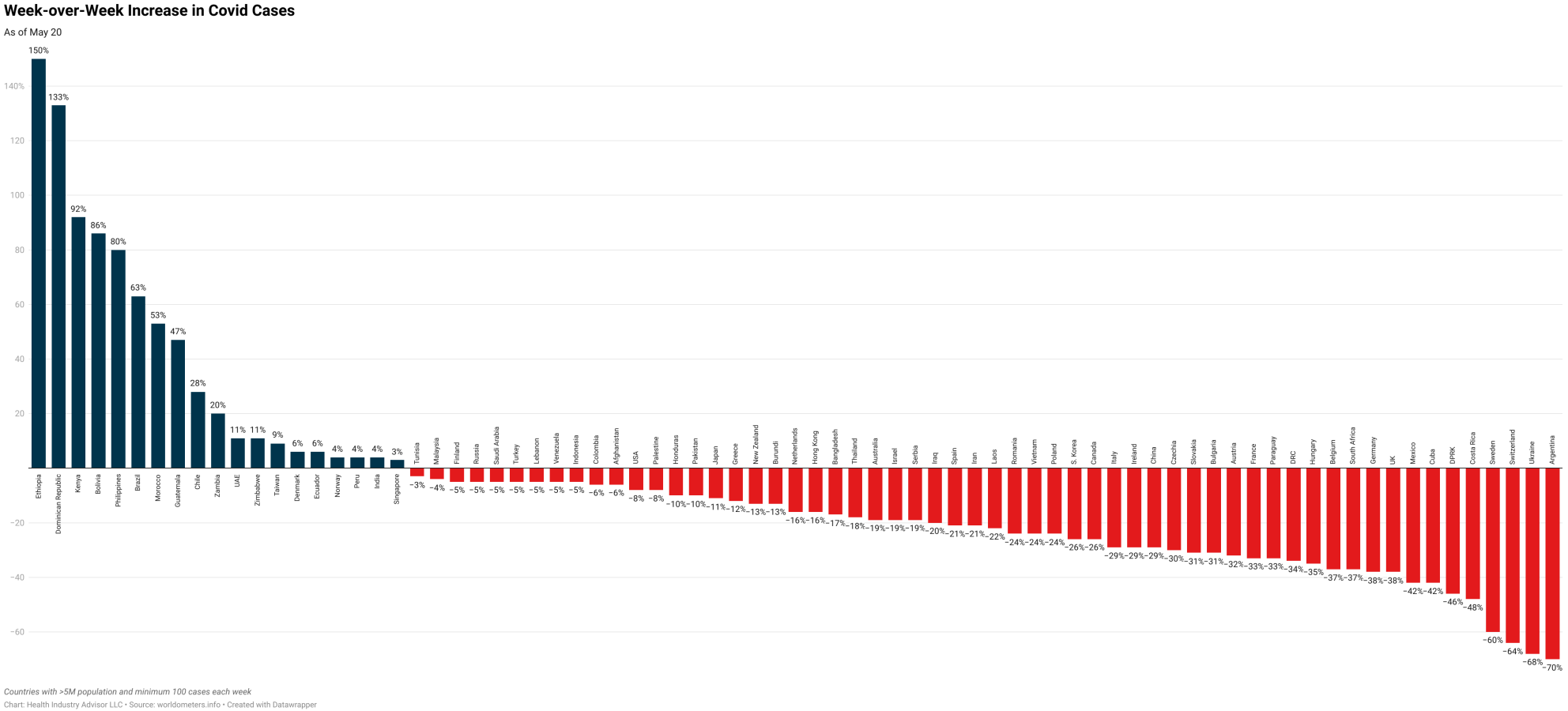
7-Day Average, As of May 27

May 27



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

Week-over-week case growth in Ethiopia and the Dominican Republic outpaced large countries



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