Health Industry Advisor, llc

"Strategic Advice in an Era of Unprecedented Change"

Covid-19 Report

Issue # 260

January 14, 2021

Covid-19 Highlights

- Starting this morning with several vaccine updates:
  - **In the past three days, the federal government's Operation Warp Speed has distributed an additional 7.2 million doses to the states; this brings the total to nearly 30 million**. Just more than 10 million doses have been administered in the US
  - Johnson & Johnson (JNJ) had several updates on its vaccine:
    - In a New England Journal of Medicine article published yesterday, **the JNJ vaccine was demonstrated to be safe for both young and the elderly; it also was shown to produce long-lasting antibodies**
    - Phase 3 clinical trial results are expected within two weeks, perhaps setting up Emergency Use Authorization (EUA) early in February
    - **JNJ, also announced, however, production delays that may set back their original distribution schedule by up to two months. JNJ still anticipates delivering 60 million doses by the end of April**
  - Pfizer/BioNTech announced plans to increase worldwide production of its vaccine to 2 billion doses in 2021, up from 1.3 billion
  - **Officials from Operation Warp Speed suggested that AstraZeneca's vaccine may not be available in the US until April;** the US is awaiting results of an expanded Phase 3 clinical trial, after concerns were raised about earlier results. This vaccine was approved for use in the UK as of December 30. The US has ordered 300 million doses
  - Moderna affirmed its commitment to deliver 100 million doses in the US by the end of the first quarter and 200 million by the end of the second quarter
- Yesterday proved to be another tragic day in the US: **for the second consecutive day, more than 4,300 deaths were reported with coronavirus.** With the high rate of cases recently, deaths will likely continue to be high

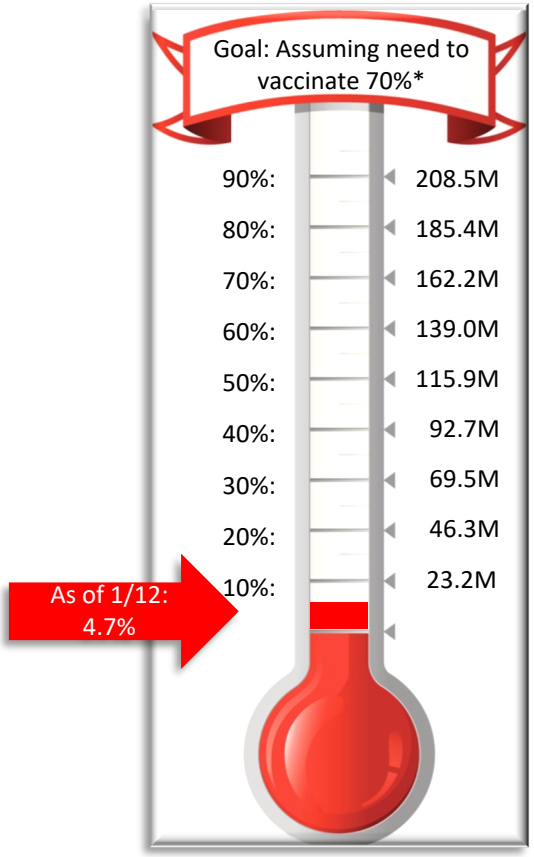
- **For the second consecutive day, Covid-19 hospitalizations declined on a week-over-week basis**
  - More notably, hospitalizations declined day-over-day – something that had not occurred on a Wednesday since September 16
  - **Further, hospitalizations have declined five of the past seven days – this pattern also had not occurred since mid-September**
  - Nevertheless, **the ensemble forecast** published this morning by the Centers for Disease Control has hospital admissions increasing through the first week of February - the forecast s**hows an increase >10% from this week to the first week of February**
  - Significant increases in admission over the next several weeks are projected in California, Florida, Georgia, Hawaii, Maine, Minnesota, North Carolina, New York, South Carolina, Vermont and Washington; Significant declines are projected for Arkansas, Idaho, Michigan, New Mexico, North Dakota, Tennessee, South Dakota, Wisconsin and Wyoming
- The US may be getting some relief in new case growth:
  - **There were fewer newly detected cases yesterday than the 7-day moving average - not the norm for one of the highest census days of the week**
  - The 7-day average new cases per capita declined for the second consecutive day
  - **Estimated new infections (Gu) also fell for the second consecutive day**
  - **The reproduction rate (R_t) (also, Gu) declined eight straight days**, from December 22-30 (December 30 is the most recent date for which Gu provides an estimate, as his model determines R_t based on outcomes including deaths two weeks post-infection)

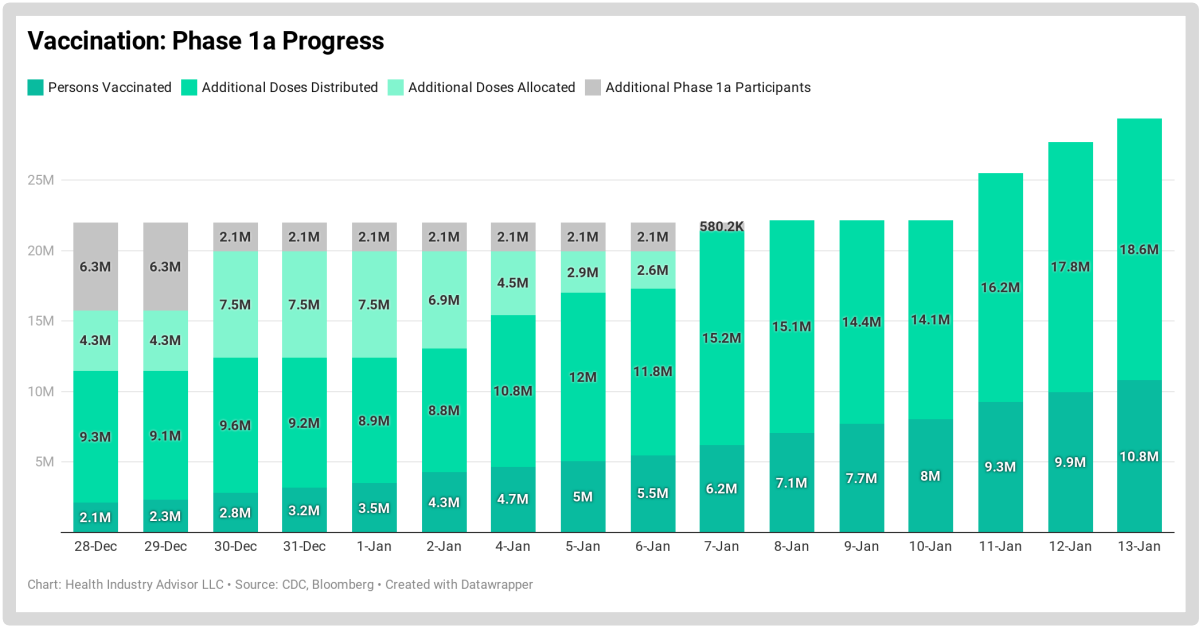
Health Industry Advisor, llc

Vaccine Tracking

Covid-19

In the past three days, an additional 7.2 million doses have been distributed to the states; this brings the total available to nearly 30 million. As of yesterday, 10.8 million does have been administered





From the CDC vaccine webpage: “Healthcare providers report doses to state, territorial, and local public health agencies up to 72 hours after administration. There may be additional reporting lag for data to be transmitted from the state, territorial, or local public health agency to CDC.”

Vaccine data from: Centers for Disease Control and Prevention and Bloomberg Vaccine Tracker

Health Industry Advisor, llc

Covid-19 Vaccine Update

- Increasing worldwide 2021 production from 1.3 billion to 2 billion doses

- Single dose administration; can be stored at refrigerator temperatures
- Phase 3 results expected within 2 weeks
- Recent production snags; delays up to 2 months
- Still, anticipate 60 million doses by end of April

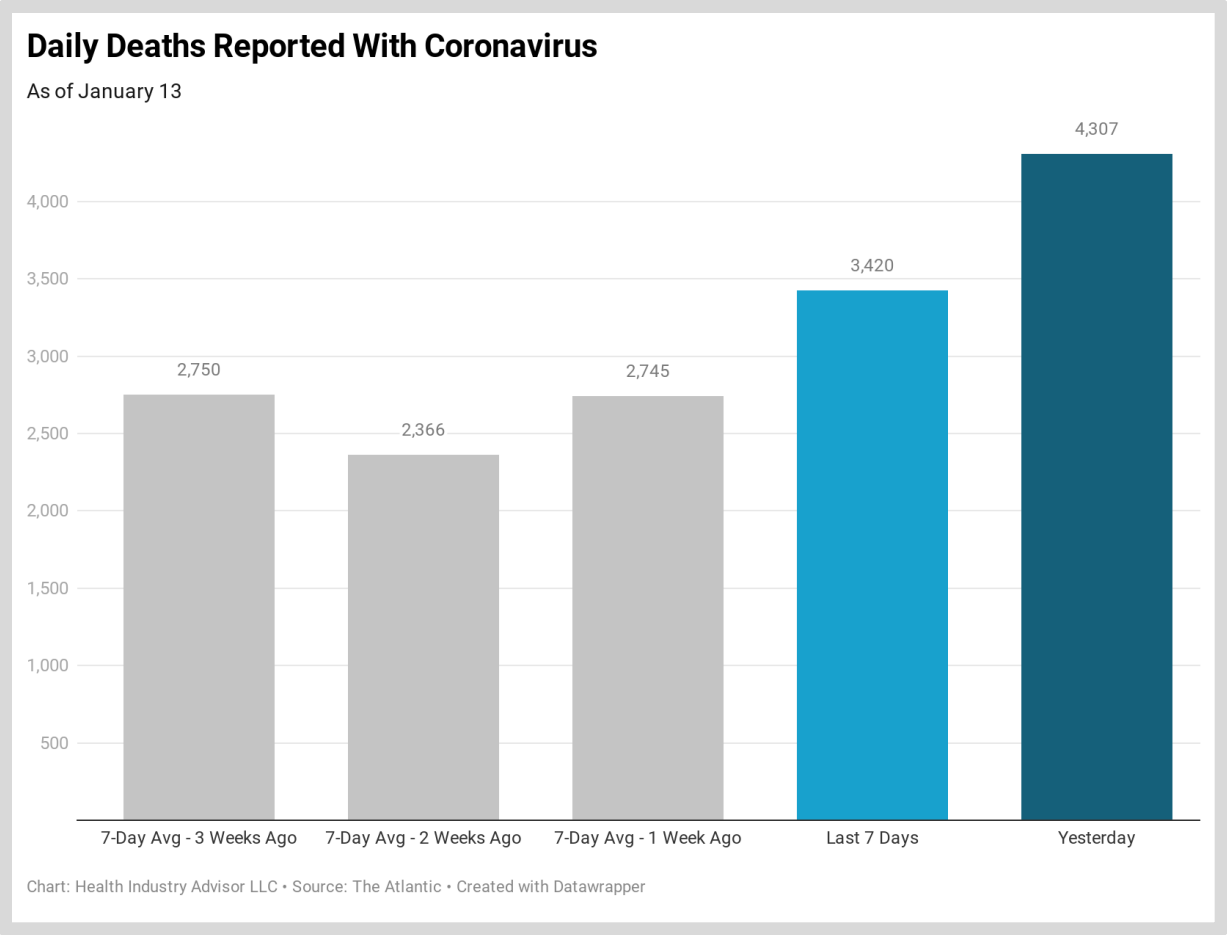
- Expects to make 100 million doses available in US in Q1 2021; another 100 million in Q2

- Authorized for us in the UK since December 30
- May not be available in the US until April
- US has ordered 300 million doses

Deaths Reported With Coronavirus

Covid-19

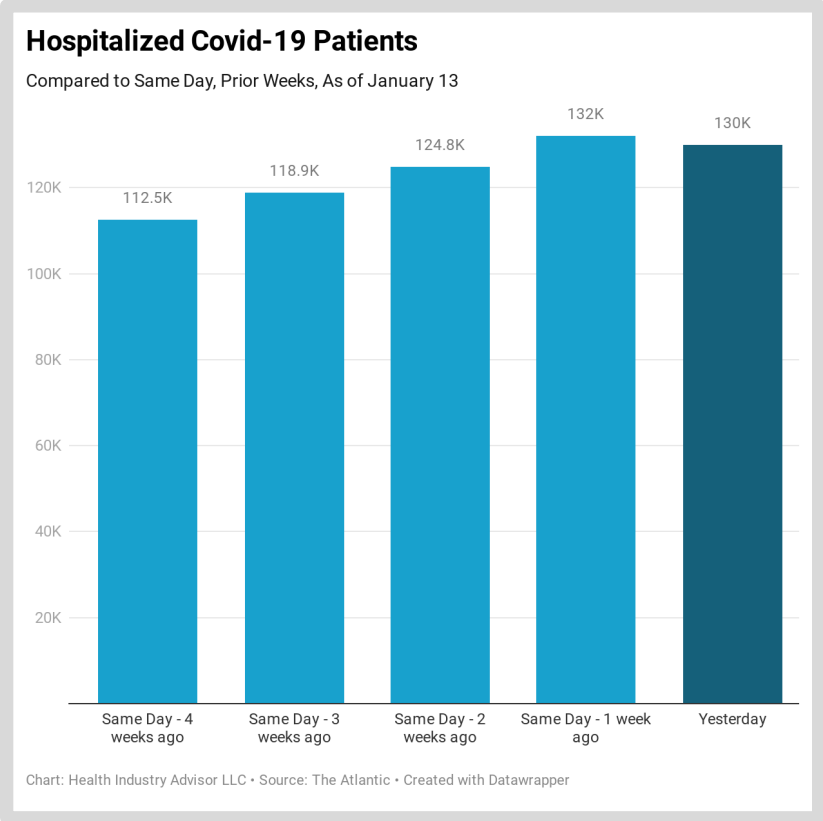
Tragically, there were more than 4,300 deaths reported with coronavirus each of the past two days

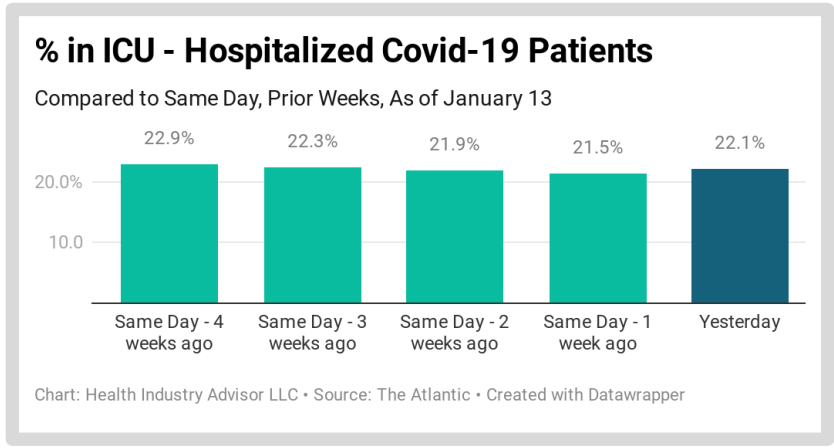


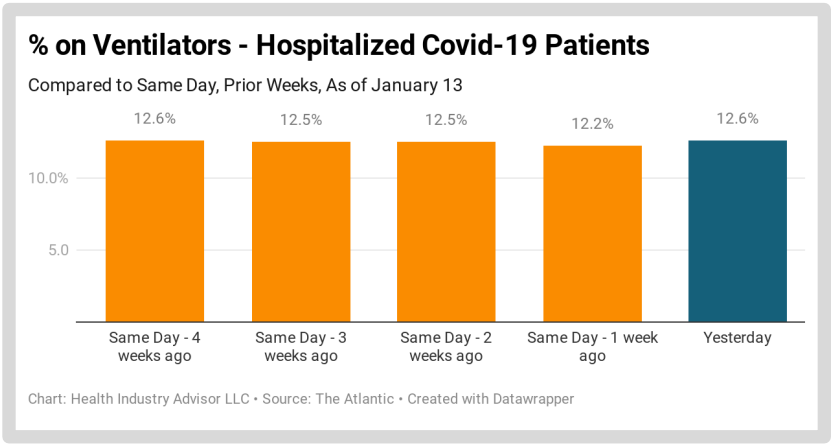
Health Industry Advisor, llc

Covid-19 Hospitalizations

For the second consecutive day, Covid-19 hospitalizations declined slightly over the past week. Indeed, this census fell day-over-day – an unusual occurrence for a Wednesday (it has not happened since September 16). Census has now declined day-over-day five days in the past week (this also has not happened since mid-September)



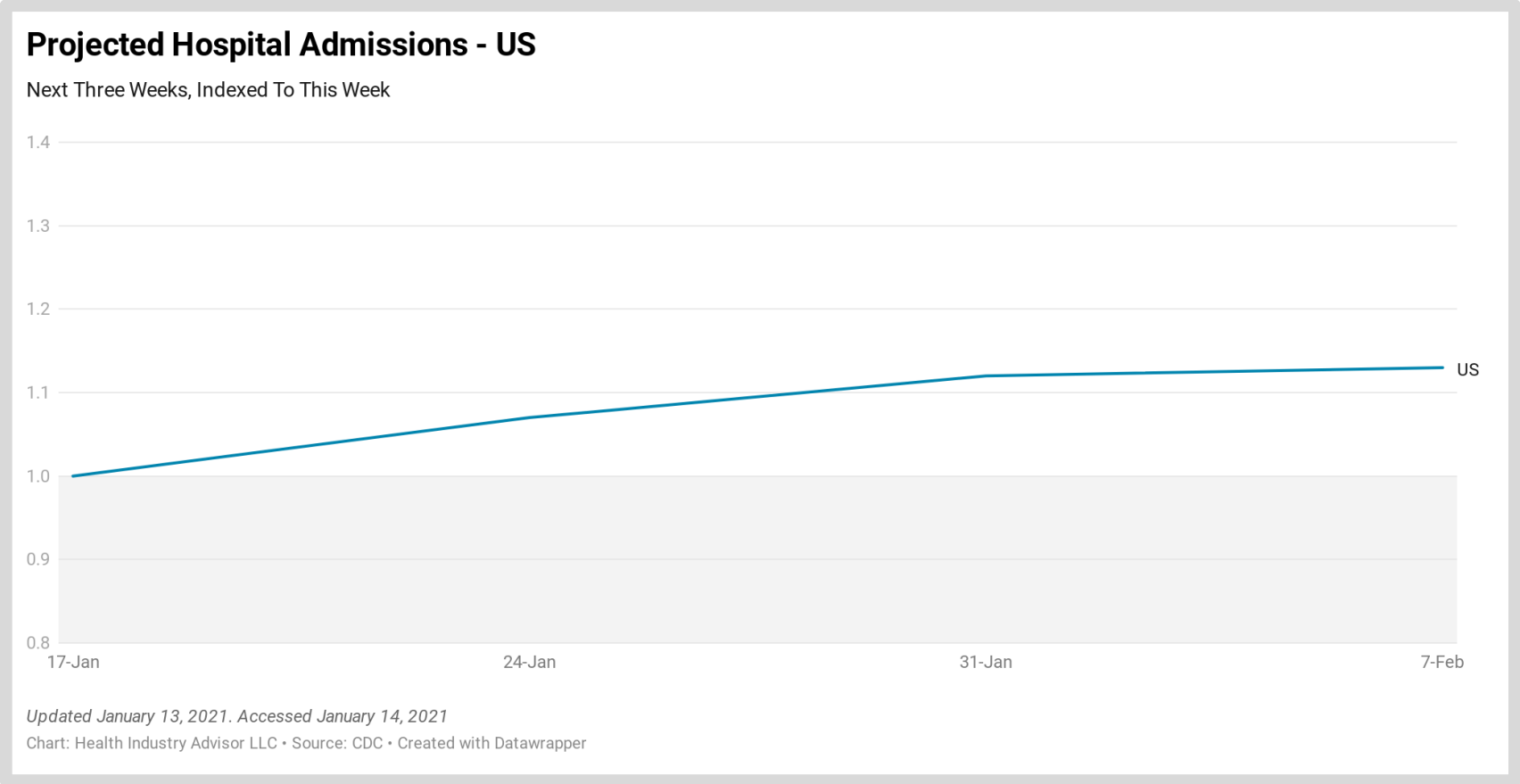




Projected Hospital Admissions - US

Covid-19

Hospital admissions with Covid-19 symptoms are projected to trend higher throughout January and into early-February; admissions are projected to be >10% higher in early-February than this week



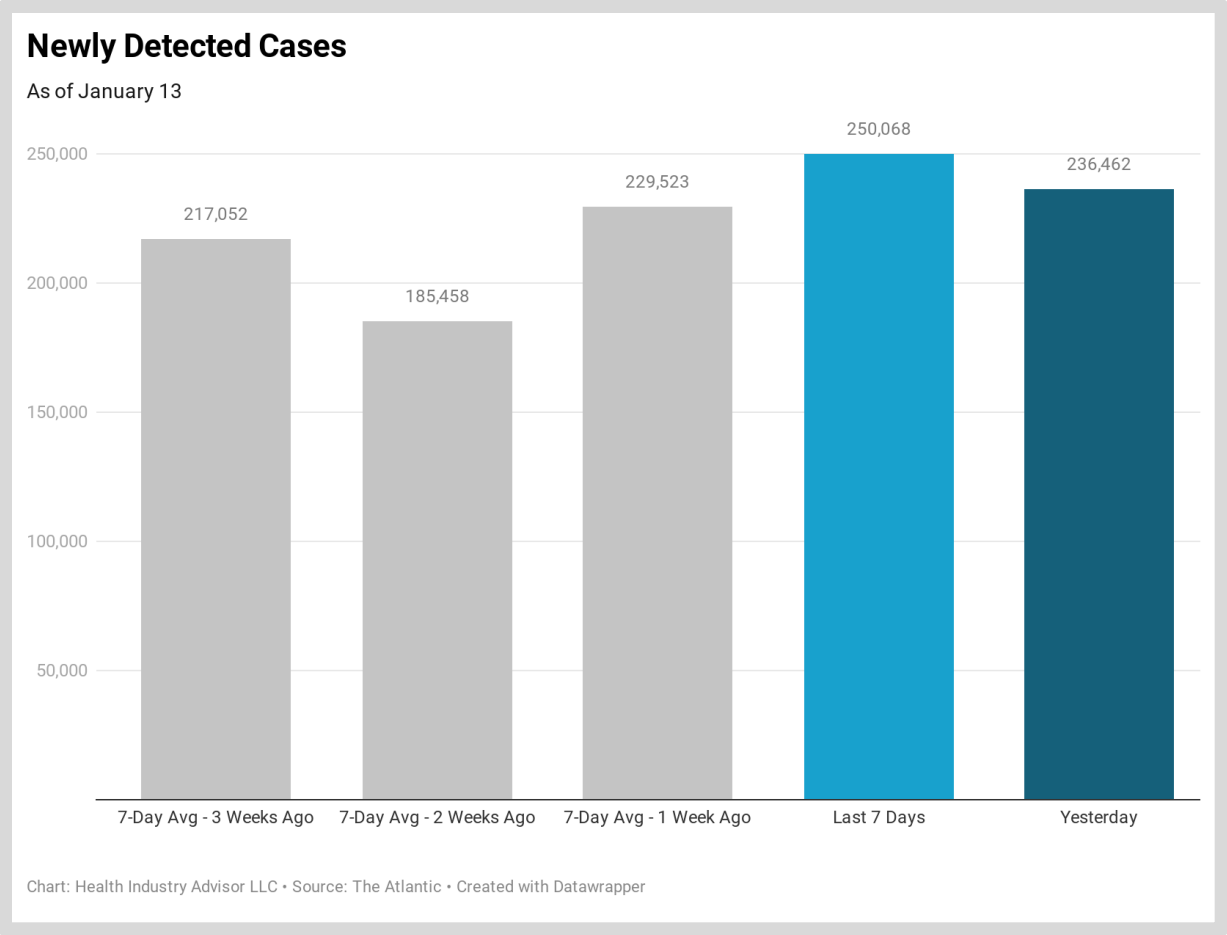
As of December 30, 2020. Accessed January 5, 2021

Health Industry Advisor, llc

Newly Detected Cases

Covid-19

New cases yesterday were below the 7-day average again yesterday – unusual for a Wednesday, and were significantly lower than reported last Wednesday

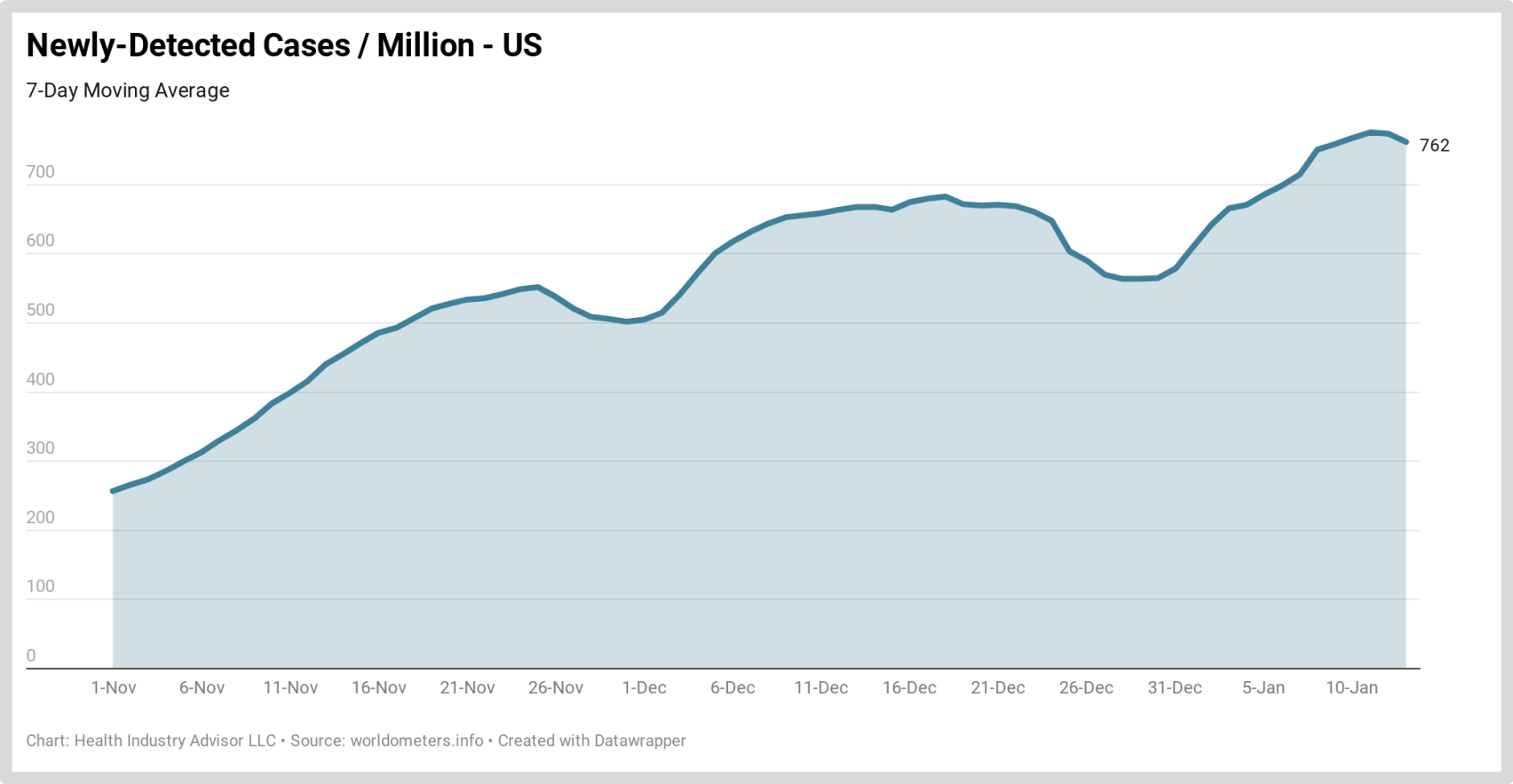


Health Industry Advisor, llc

Covid-19

Newly Detected Cases / Million - US

Newly detected cases (7-day average) have now declined on consecutive days

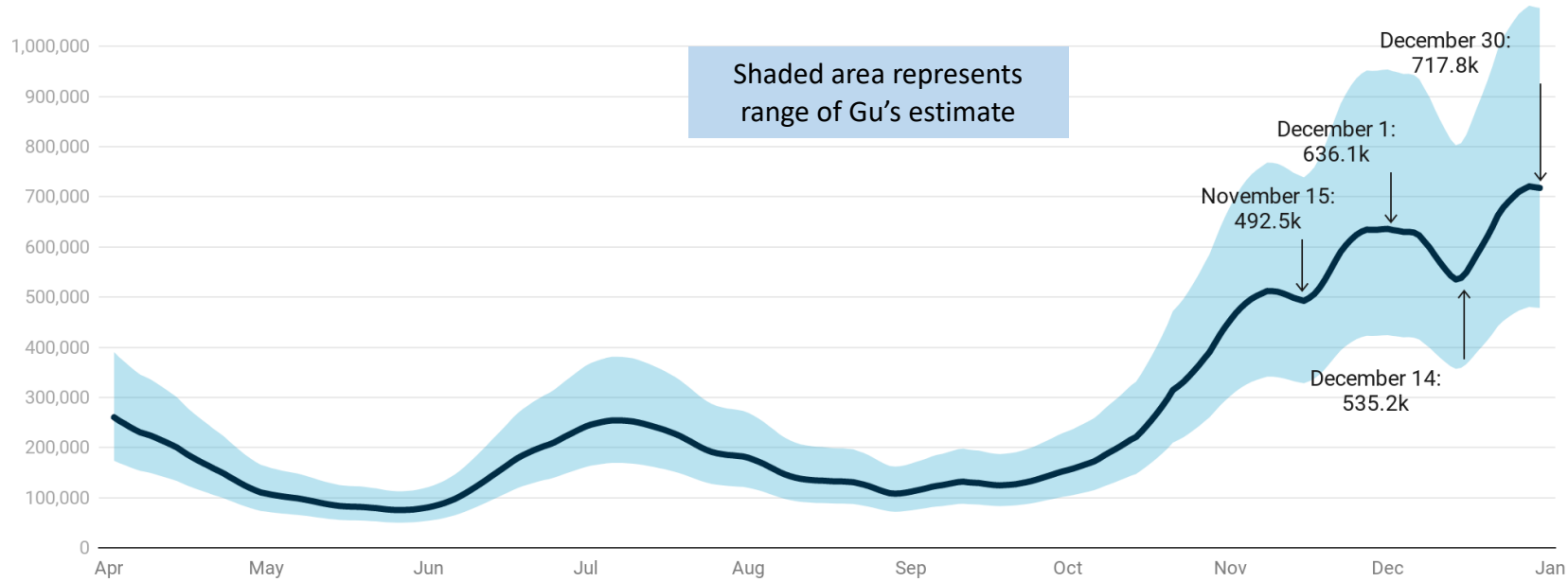


Health Industry Advisor, llc

Estimated New Daily Infections – Gu* Model

Covid-19

Estimated new infections have declined on consecutive days – this for the first time since mid-December

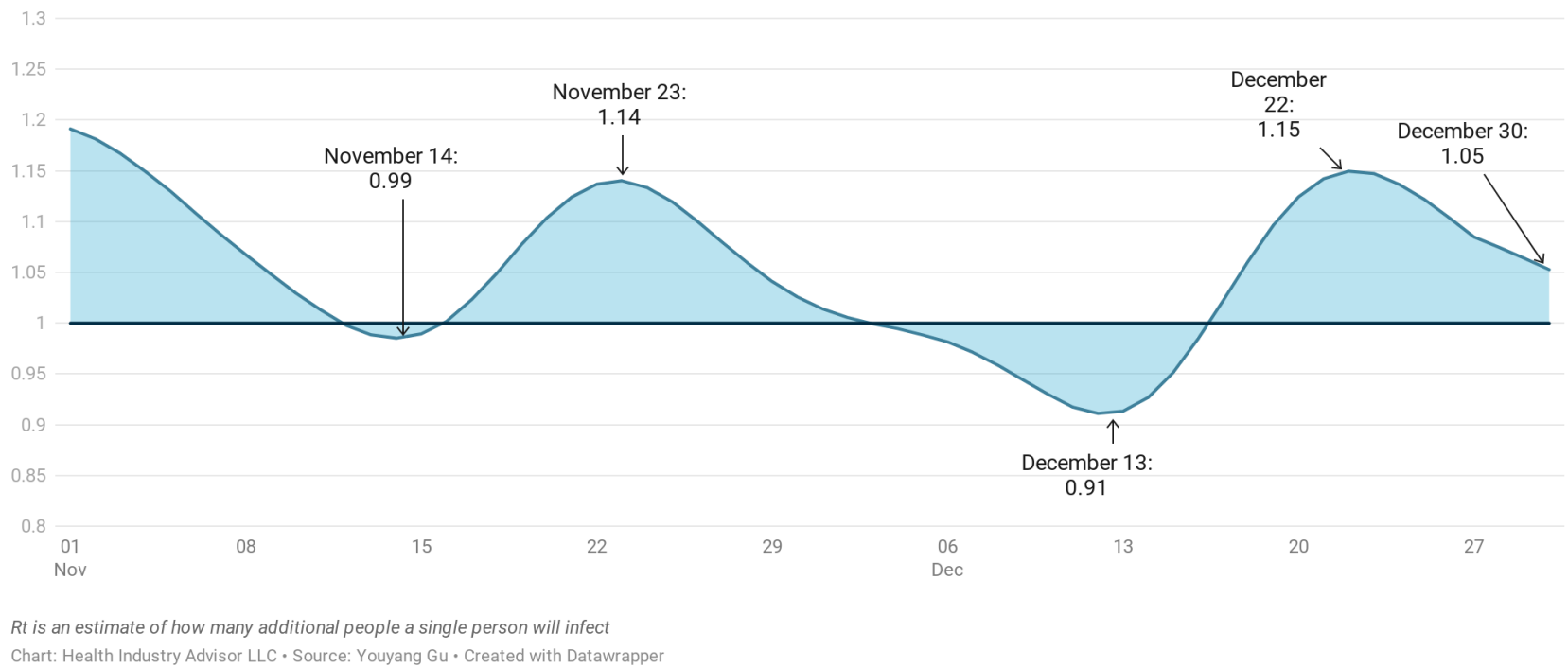


Health Industry Advisor, llc

Covid-19

Reproduction Rate (R_t) – Gu* Model

Gu's estimate of R_t reached an intermediate peak on December 22 before declining the next 8 days; it remains >1

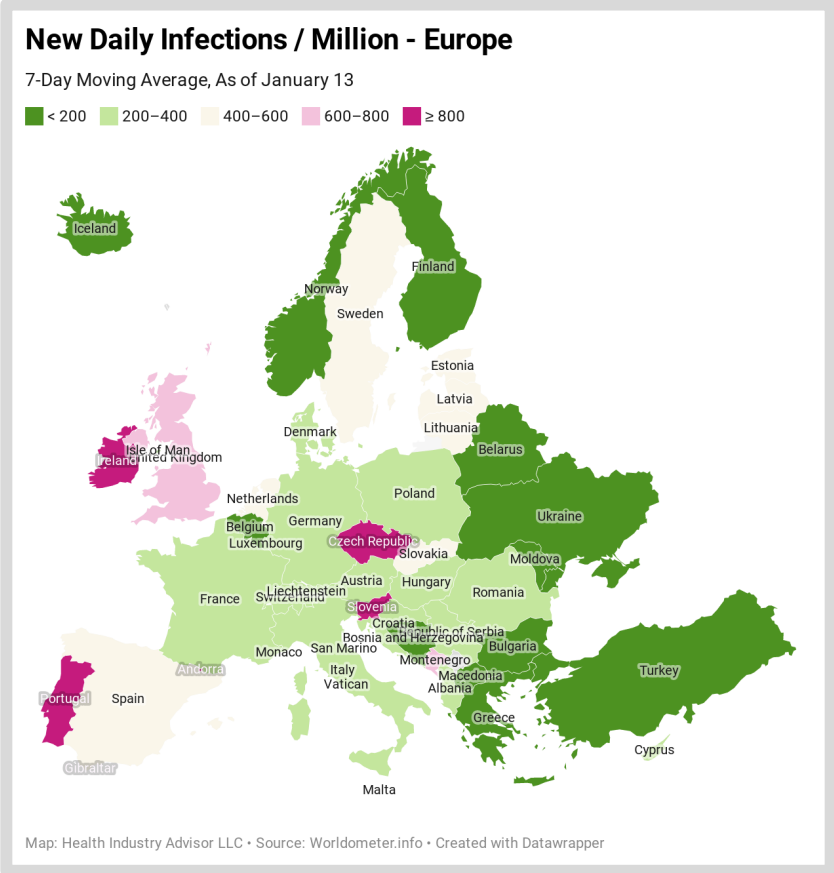


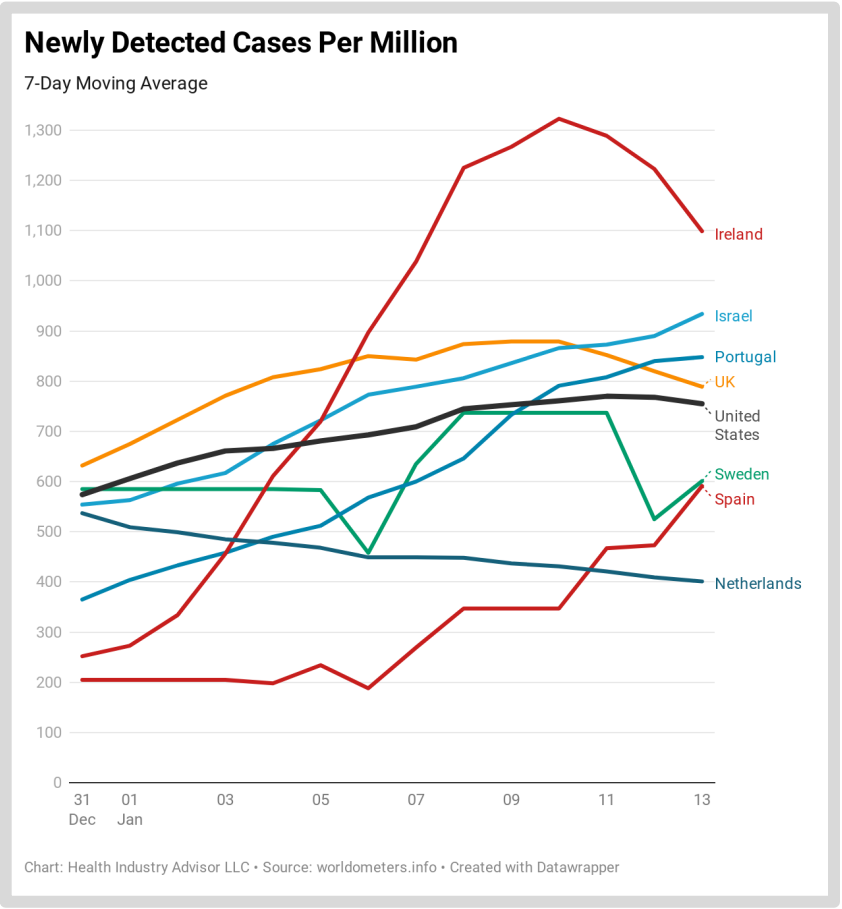
Health Industry Advisor, llc

Newly Detected Cases Per Million

Covid-19

Israel, Portugal and Spain are experiencing rapid increases in new cases; Ireland and, to a lessor degree, the UK are getting some relief





Health Industry Advisor, llc

State-By-State Scorecard: Scoring Grid

Covid-19

Designed to reflect five critical measures of a state's current experience with Covid-19

Worse ← → Better

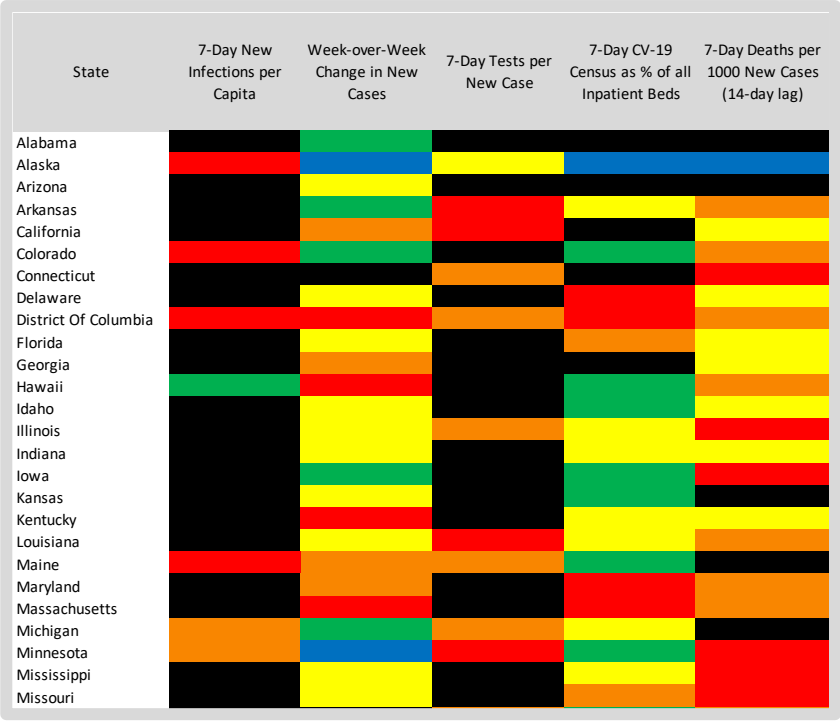
Metric		Black	Red	Orange	Yellow	Green	Blue
7-Day Average New Daily Reported Infections per Capita	Greater than	450	350	250	150	50	0
Week-over-Week Change in Newly Reported Cases	Greater than	30%	20%	10%	0%	-10%	N/A
7-Day Average Viral Tests per 7-Day Average Newly Reported Cases	Less than	5	10	25	50	75	N/A
Covid-19 Inpatient Census as % of All Inpatient Beds	Greater than	50%	40%	30%	20%	10%	0%
7-Day Deaths per 1000 New Cases (14-day lag)	Greater than	25	20	15	10	5	0

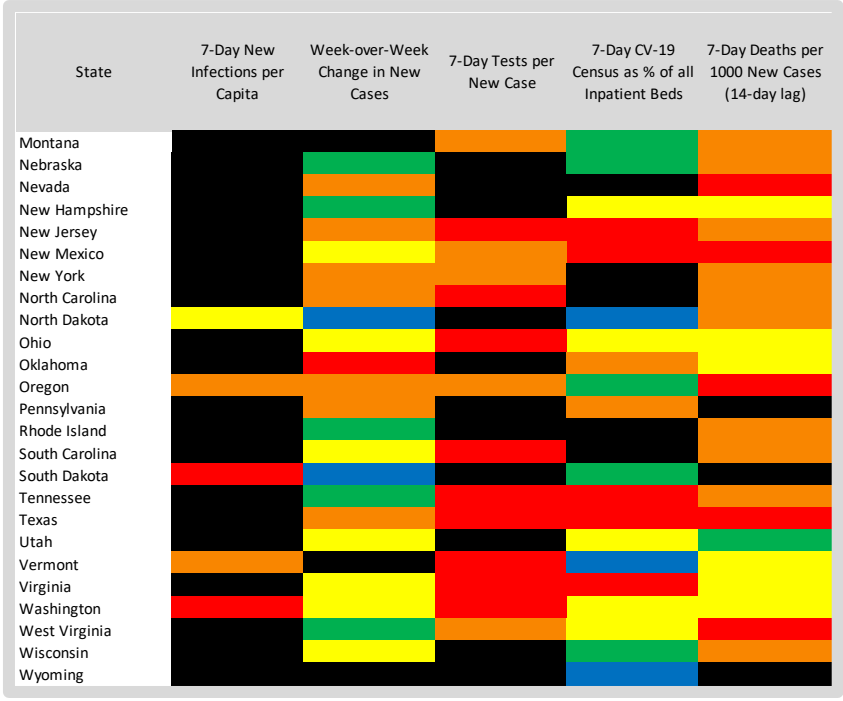
Health Industry Advisor, llc

State-By-State Scorecard:

Covid-19

Overall, a very discouraging picture across the country; however, week-over-week changes in new cases is improving. The hospital crisis may be concentrated in a handful of states



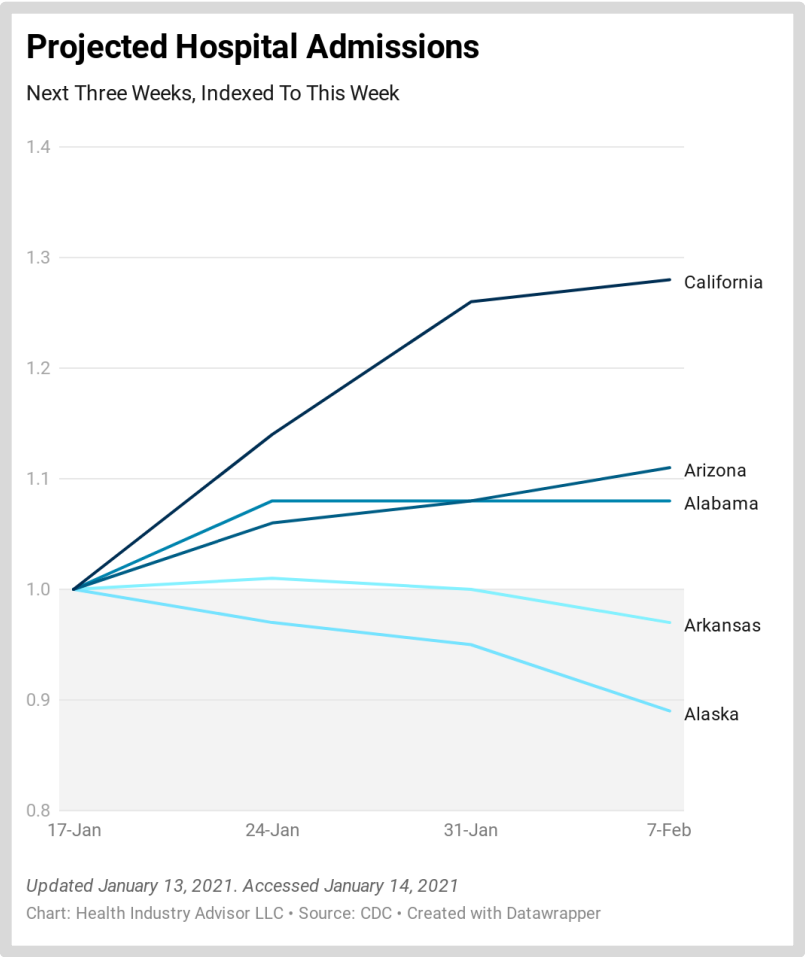


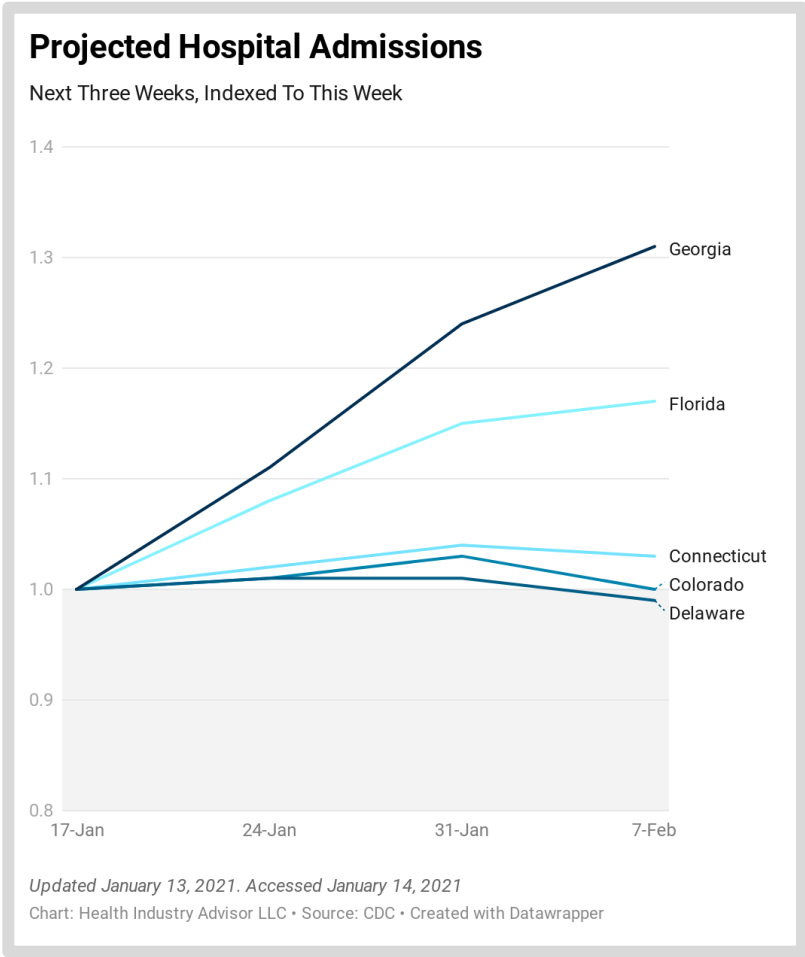
Health Industry Advisor, llc

Projections of Hospital Admissions (US)

Covid-19

Hospital admissions in California, Florida and Georgia are projected to increase throughout the month; Alaska and Arkansas are projected to get some relief



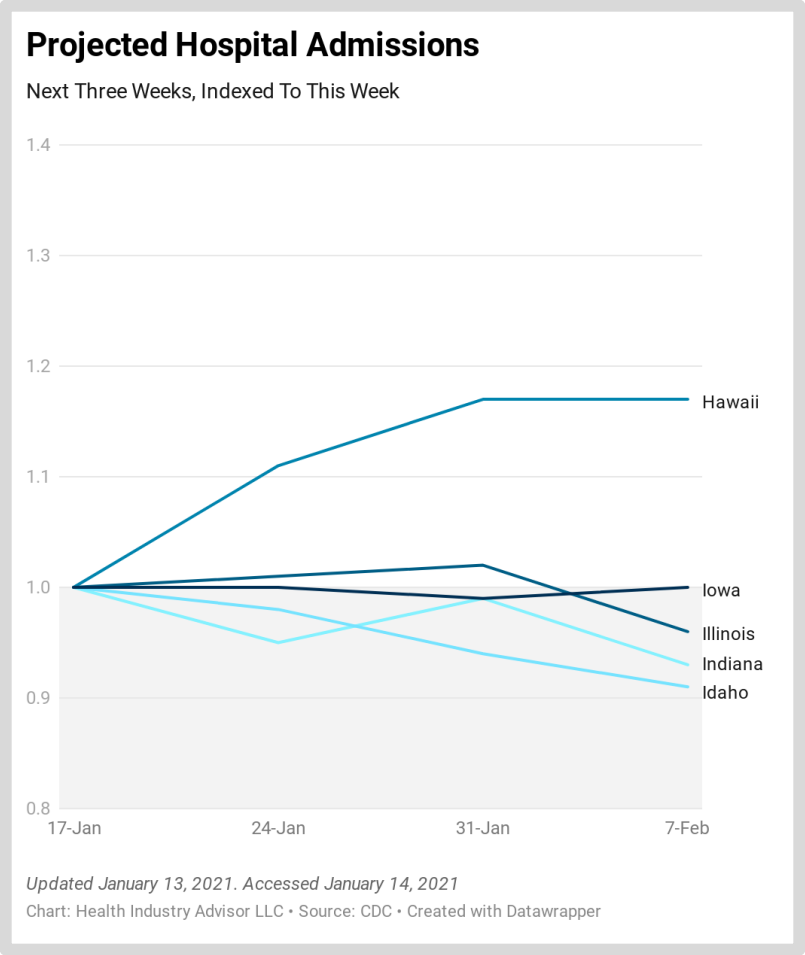


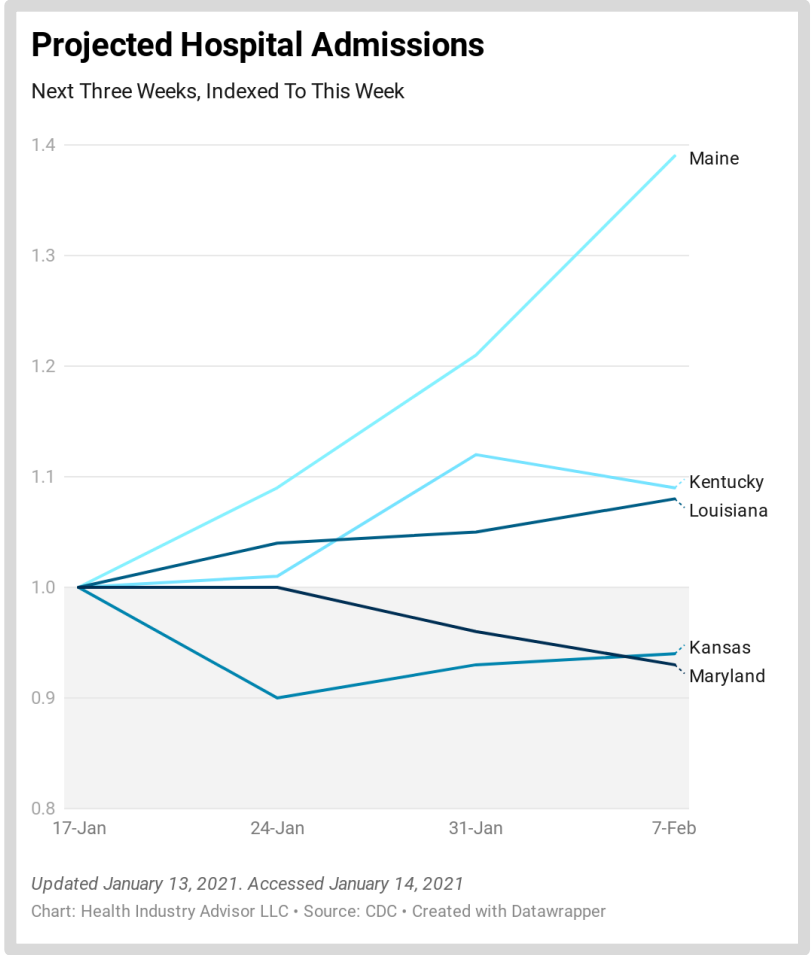
Health Industry Advisor, llc

Projections of Hospital Admissions (US)

Covid-19

Hospital admissions in Hawaii and Maine are projected to increase throughout the month; Illinois, Indiana, Idaho, Kansas and Maryland are projected to get some relief



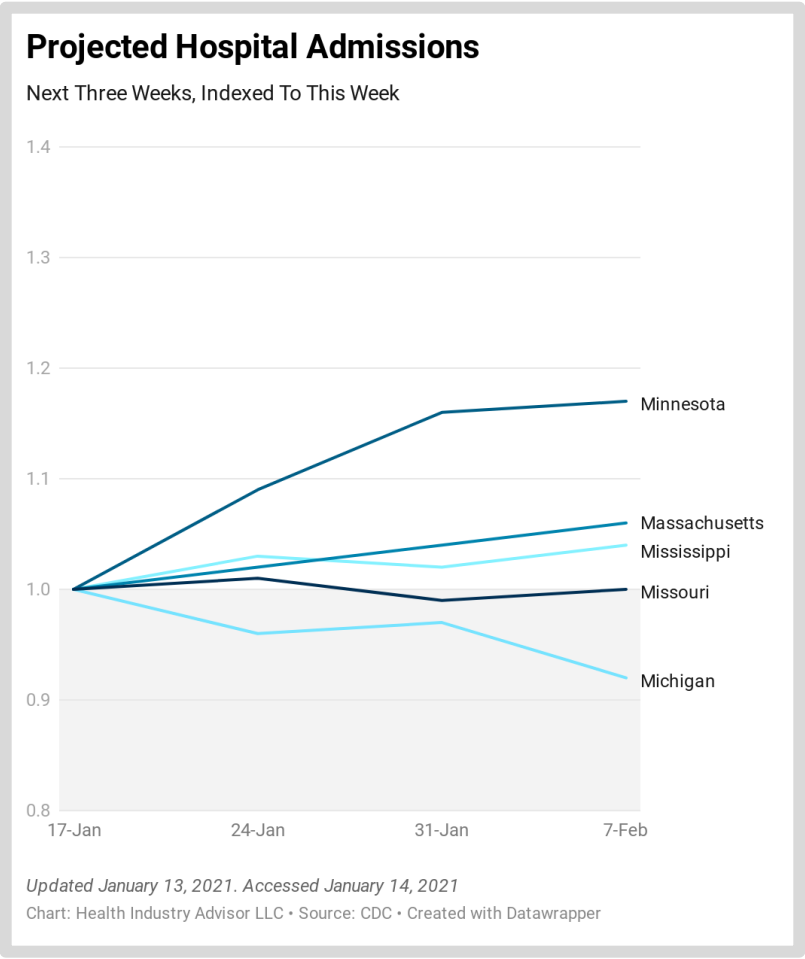


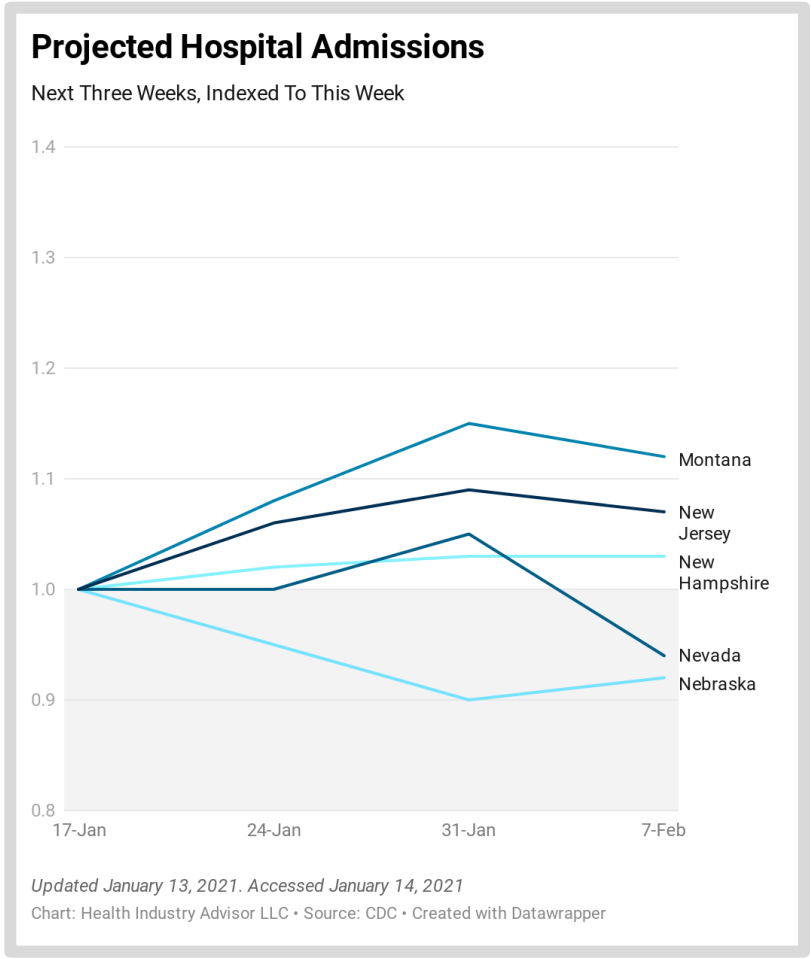
Health Industry Advisor, llc

Projections of Hospital Admissions (US)

Covid-19

Hospital admissions in Minnesota are projected to increase throughout the month; Michigan, Nevada and Nebraska are projected to get some relief



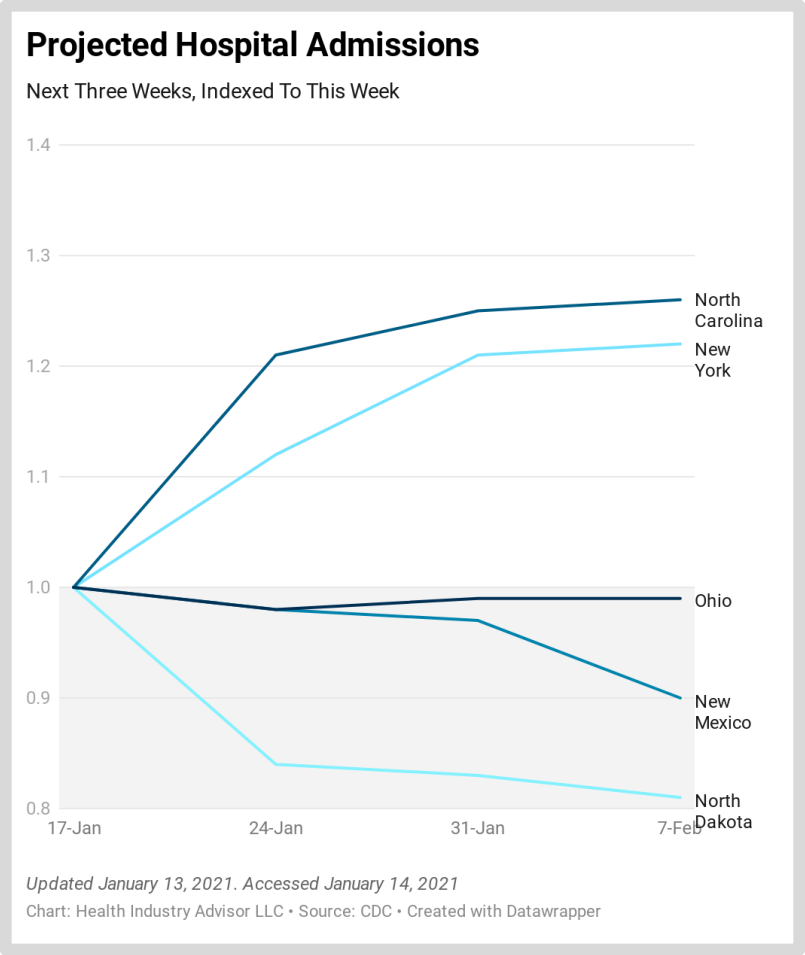


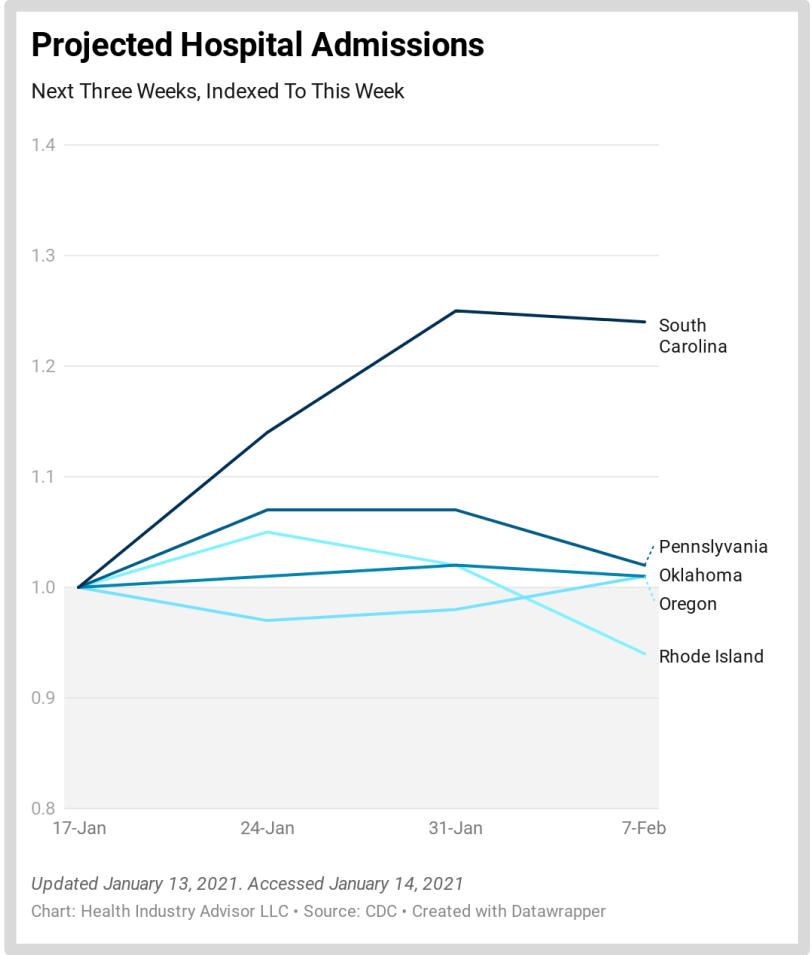
Health Industry Advisor, llc

Projections of Hospital Admissions (US)

Covid-19

Hospital admissions in North Carolina, New York and South Carolina are projected to increase throughout the month; New Mexico, North Dakota and Rhode Island are projected to get some relief



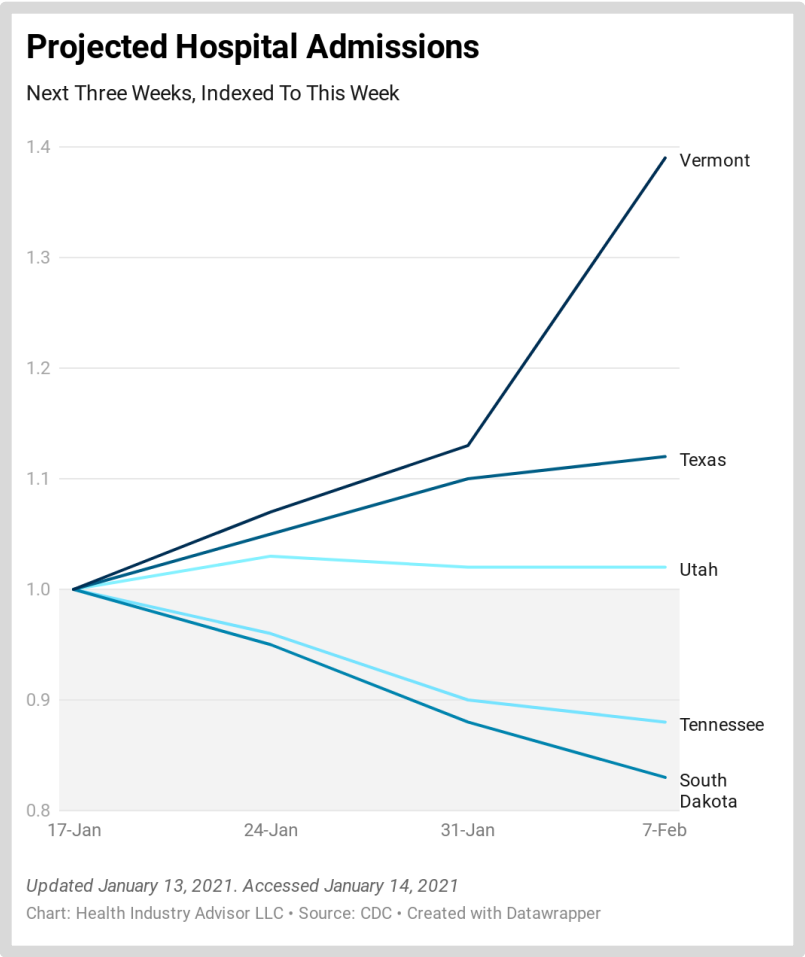


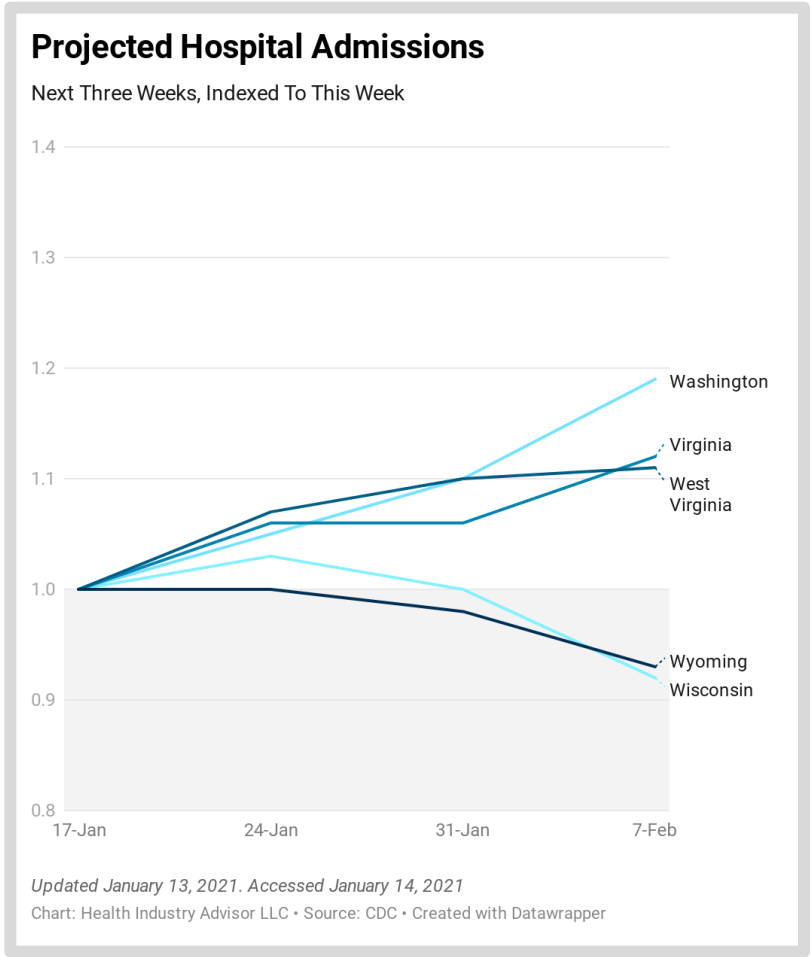
Health Industry Advisor, llc

Projections of Hospital Admissions (US)

Covid-19

Hospital admissions in Vermont, Texas and Washington are projected to increase throughout the month; South Dakota, Tennessee, Wisconsin and Wyoming are projected to get some relief





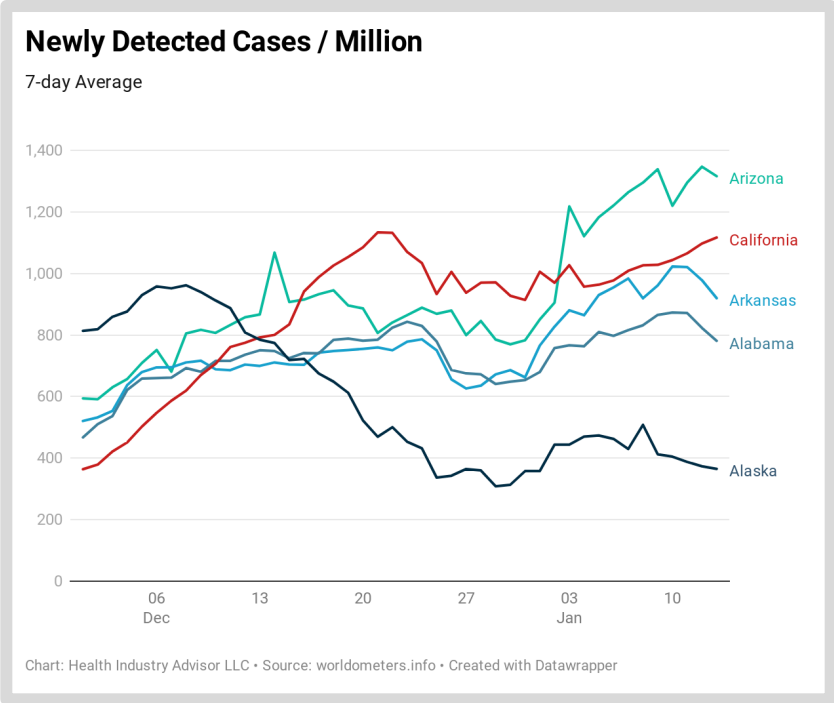
Health Industry Advisor, llc

Newly Detected Cases Per Million

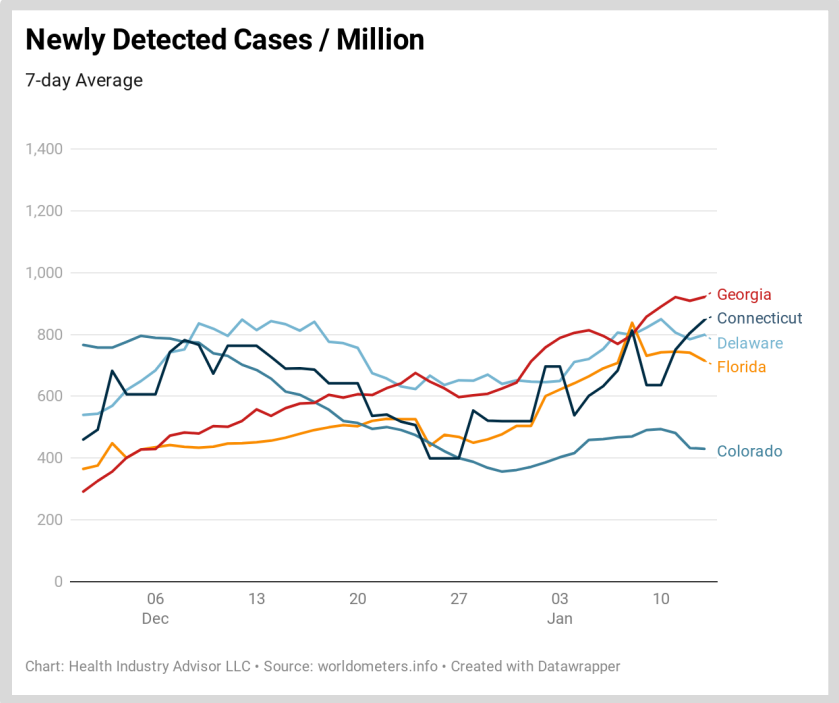
Covid-19

Cases in Arizona and California are high and rising; Case rates in Georgia are also of concern

Alabama - California



Colorado – Georgia



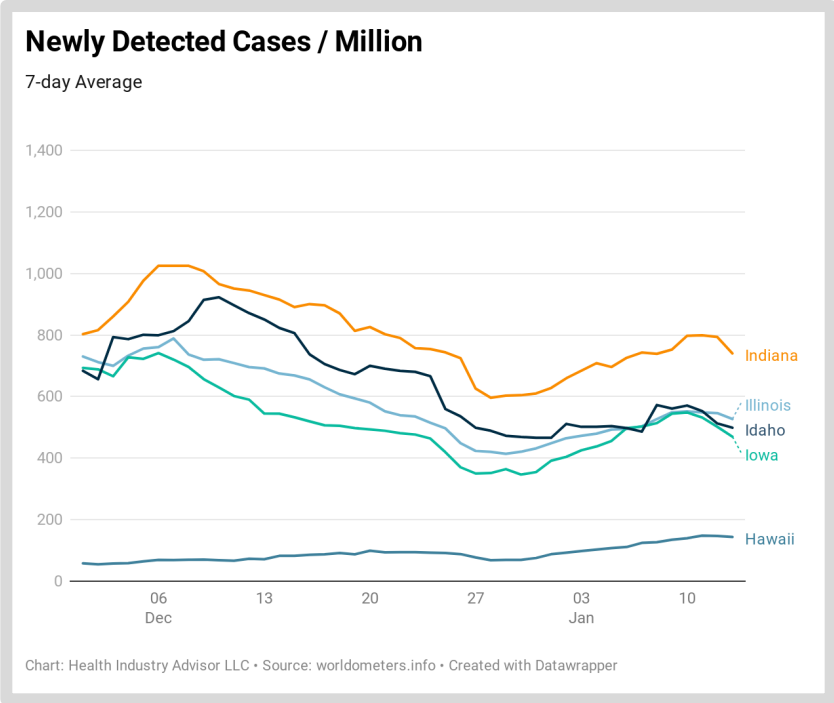
Health Industry Advisor, llc

Newly Detected Cases Per Million

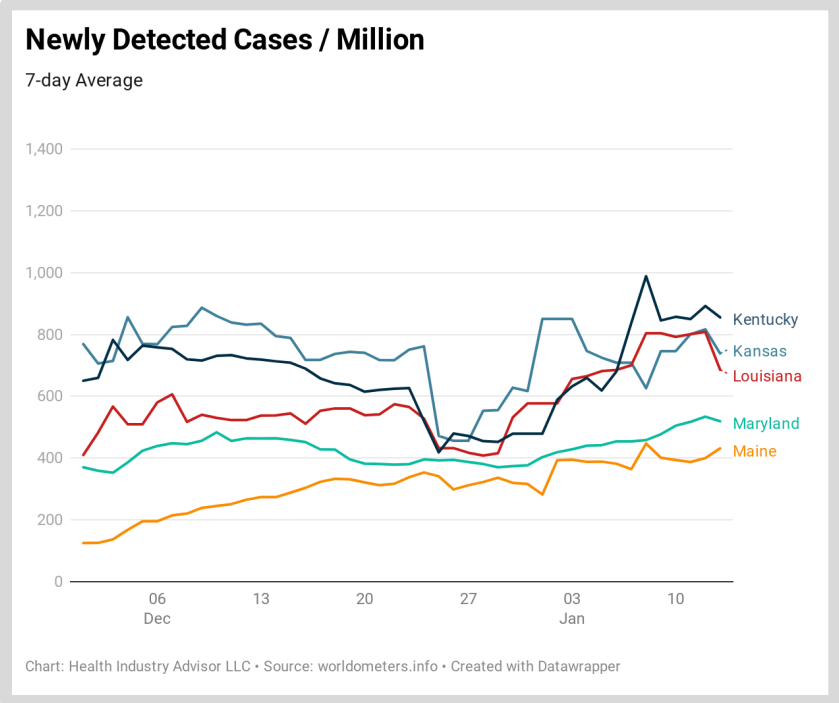
Covid-19

Maine's rate is increasing but, remains relatively low; rate in several Midwestern states are dropping

Hawaii - Iowa



Louisiana - Maryland



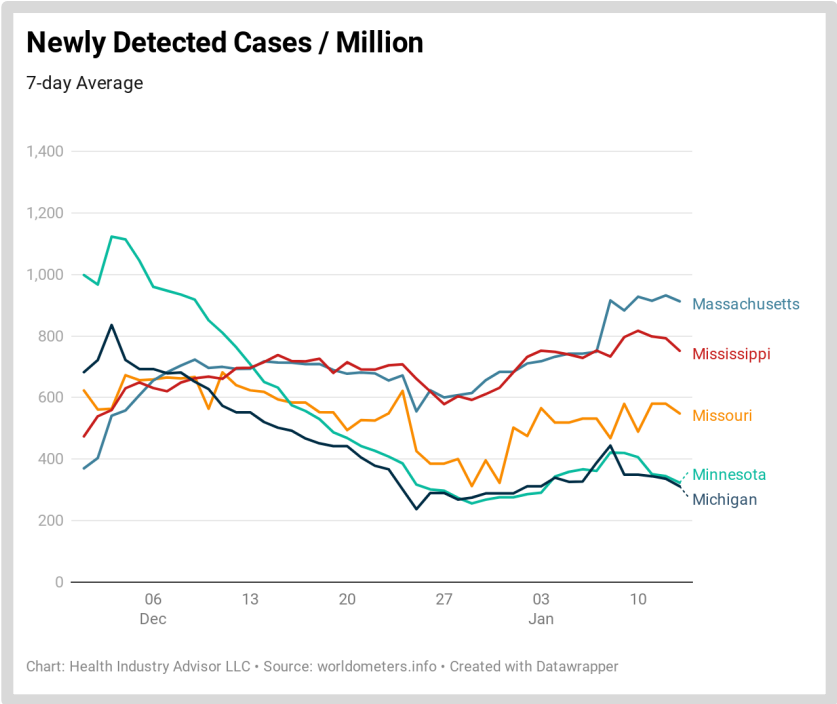
Health Industry Advisor, llc

Newly Detected Cases Per Million

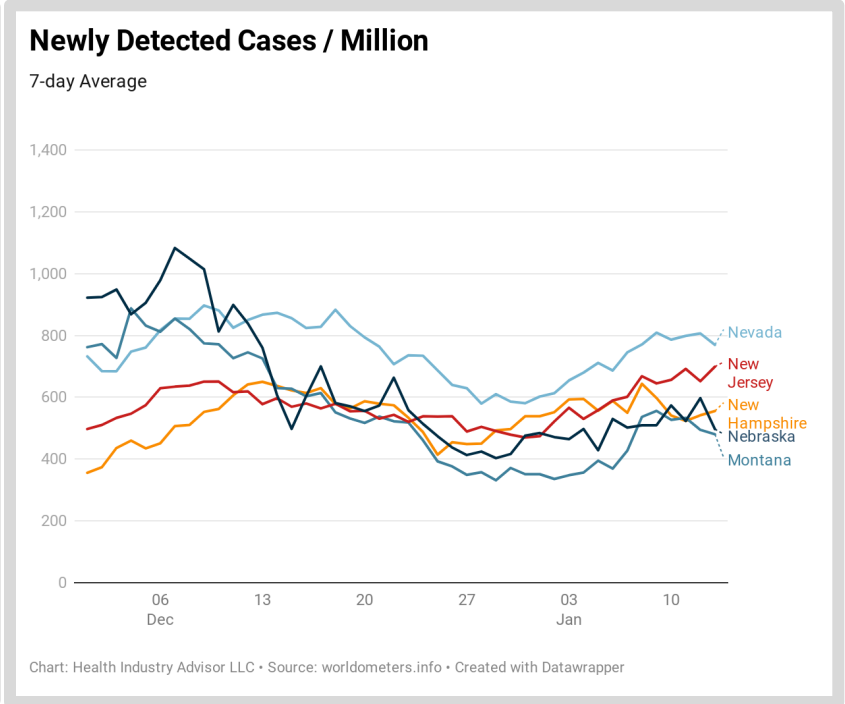
Covid-19

Rates are increasing in Massachusetts, Mississippi and New Jersey; rates have dropped significantly in Michigan, Minnesota and Nebraska

Massachusetts - Missouri



Montana – New Jersey



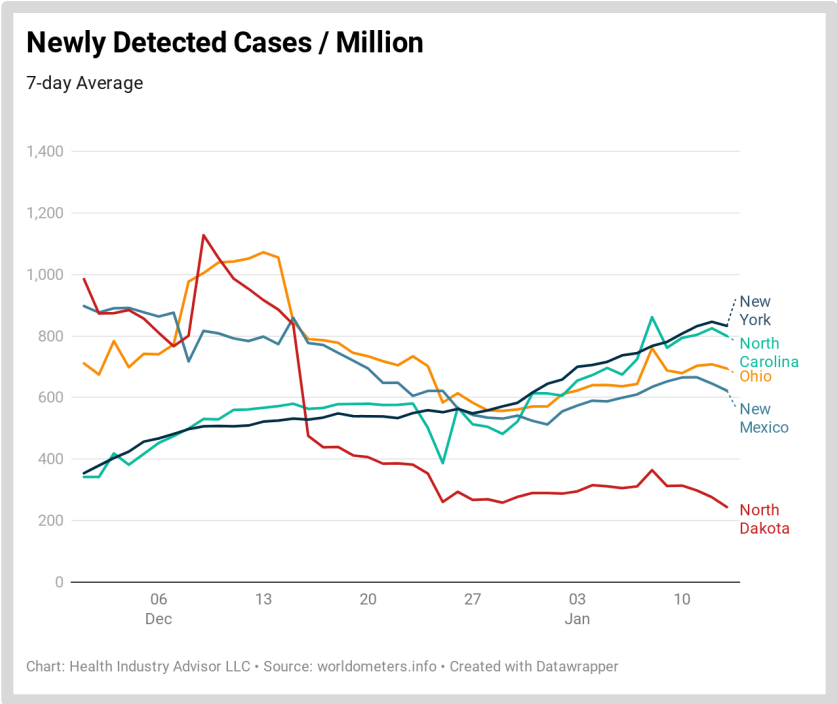
Health Industry Advisor, llc

Newly Detected Cases Per Million

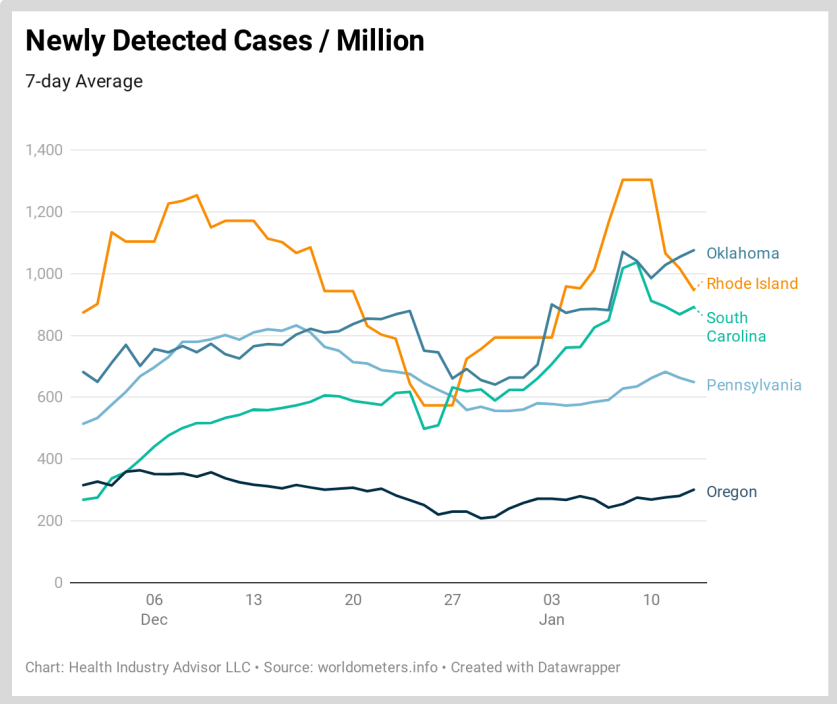
Covid-19

Rates have steadily increased in New York, North Carolina, Oklahoma and South Carolina; Rates in North Dakota has declined; Rates in Rhode Island are lower of late, after increasing through December

New Mexico - Ohio



Oklahoma – South Carolina



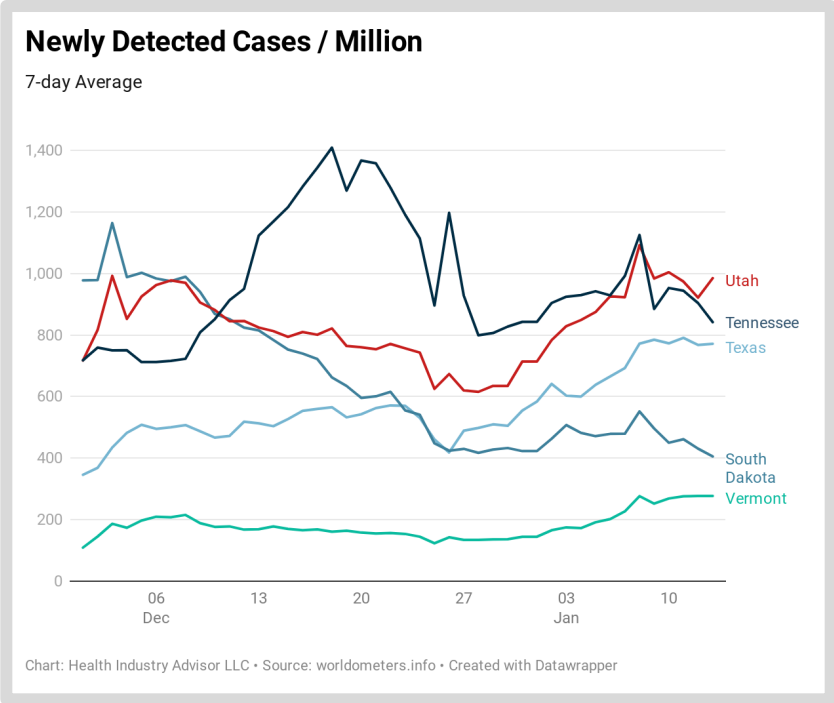
Health Industry Advisor, llc

Newly Detected Cases Per Million

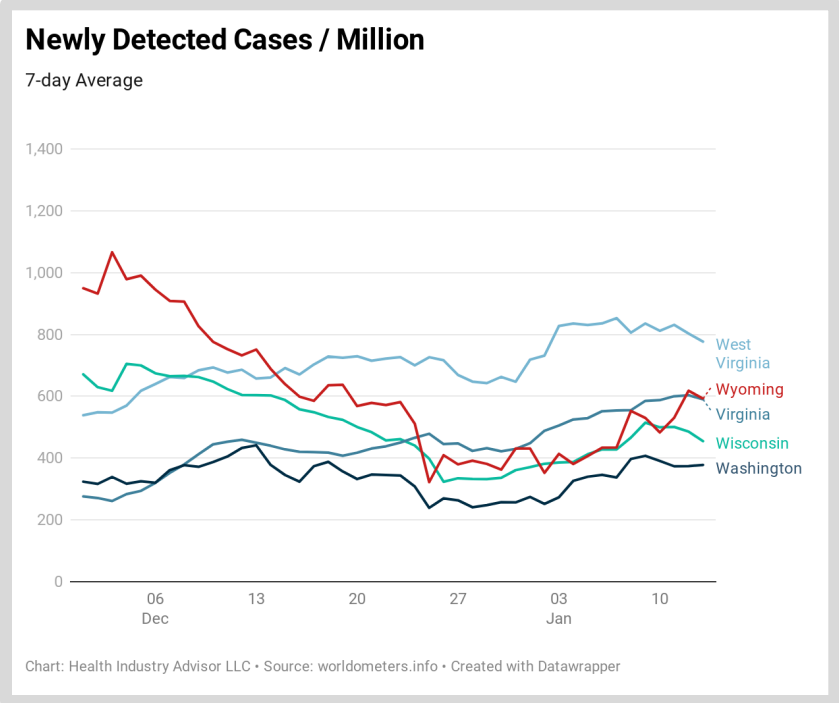
Covid-19

Tennessee's rate has improved but, remains high; Utah and Texas are experiencing recent increases in rate; Vermont's rate, low throughout the pandemic, is rising

Tennessee - Vermont



Virginia - Wyoming



Health Industry Advisor, llc

Covid-19 State-By-State Data Table (1 of 3)

State-By-State Comparisons

As of January 13

State	Infection Prevalence	Deaths per 1 Million Population	Tests per 1M Population Past 7 days	Test-Positive % (7-Day Moving Average)	New Daily Cases Per 1M Population (7-Day M.A.)	Tests / New Case	Covid-19 Census % of All Beds	Week-Over-Week Change in New Cases	7-Day Deaths /1000 New Cases , 14-Day Lag
Alabama	8.4%	1,175	2,228	35.1%	781	3	52%	-2%	34
Alaska	6.7%	308	11,682	3.1%	365	32	10%	-21%	4
Arizona	8.8%	1,466	3,200	41.1%	1,316	2	84%	8%	31
Arkansas	8.7%	1,387	5,214	18.8%	920	6	27%	-4%	20
California	7.2%	801	8,294	13.0%	1,117	7	85%	14%	14
Colorado	6.4%	918	1,951	22.0%	430	5	18%	-7%	16
Connecticut	6.2%	1,833	11,992	7.1%	846	14	66%	34%	24
Delaware	6.9%	1,021	2,850	28.0%	799	4	42%	6%	11
District Of Columbia	4.6%	1,177	8,394	5.1%	429	20	43%	23%	16
Florida	7.1%	1,089	2,414	29.0%	715	3	38%	4%	15
Georgia	7.4%	1,112	3,239	21.4%	921	4	73%	16%	14
Hawaii	1.7%	220	148	100.0%	144	1	12%	29%	19
Idaho	8.5%	873	1,263	40.6%	499	3	16%	0%	13
Illinois	8.3%	1,548	7,228	7.3%	527	14	25%	7%	24
Indiana	8.5%	1,361	1,812	40.9%	740	2	29%	2%	15
Iowa	9.5%	1,341	894	37.8%	470	2	12%	-6%	22
Kansas	8.7%	1,152	2,276	32.8%	738	3	19%	4%	26
Kentucky	7.0%	669	4,040	21.2%	855	5	27%	26%	12

Health Industry Advisor, llc

Covid-19 State-By-State Data Table (2 of 3)

State-By-State Comparisons

As of January 13

State	Infection Prevalence	Deaths per 1 Million Population	Tests per 1M Population Past 7 days	Test-Positive % (7-Day Moving Average)	New Daily Cases Per 1M Population (7-Day M.A.)	Tests / New Case	Covid-19 Census % of All Beds	Week-Over-Week Change in New Cases	7-Day Deaths /1000 New Cases , 14-Day Lag
Louisiana	7.7%	1,726	5,927	11.6%	686	9	28%	0%	20
Maine	2.3%	337	6,764	6.4%	431	16	20%	13%	27
Maryland	5.2%	1,059	2,440	21.3%	519	5	49%	14%	17
Massachusetts	6.5%	1,922	3,220	28.3%	913	4	45%	23%	16
Michigan	5.7%	1,435	4,302	7.2%	312	14	22%	-5%	33
Minnesota	7.8%	1,036	1,875	17.2%	323	6	13%	-12%	23
Mississippi	8.2%	1,786	2,641	28.5%	752	4	25%	3%	24
Missouri	7.6%	1,093	1,223	39.5%	548	2	32%	3%	22
Montana	8.2%	1,000	5,069	9.5%	480	11	12%	30%	19
Nebraska	9.3%	932	1,236	39.7%	497	2	15%	-6%	18
Nevada	8.2%	1,167	1,912	40.2%	770	2	79%	12%	24
New Hampshire	4.0%	651	2,544	21.8%	555	5	27%	-5%	15
New Jersey	6.8%	2,276	5,851	12.5%	699	8	48%	19%	20
New Mexico	7.6%	1,339	6,296	9.9%	622	10	40%	4%	21
New York	6.2%	2,066	11,638	7.1%	833	14	69%	13%	16
North Carolina	6.1%	738	7,123	11.2%	800	9	55%	19%	17

Health Industry Advisor, llc

Covid-19 State-By-State Data Table (3 of 3)

State-By-State Comparisons

As of January 13

State	Infection Prevalence	Deaths per 1 Million Population	Tests per 1M Population Past 7 days	Test-Positive % (7-Day Moving Average)	New Daily Cases Per 1M Population (7-Day M.A.)	Tests / New Case	Covid-19 Census % of All Beds	Week-Over-Week Change in New Cases	7-Day Deaths /1000 New Cases , 14-Day Lag
North Dakota	12.5%	1,781	779	31.4%	244	3	5%	-20%	16
Ohio	6.8%	846	4,320	16.1%	694	6	28%	9%	11
Oklahoma	8.6%	720	4,710	22.8%	1,076	4	34%	21%	12
Oregon	3.1%	405	3,914	7.2%	301	13	17%	12%	24
Pennsylvania	5.8%	1,445	1,645	39.3%	649	3	35%	11%	30
Rhode Island	9.7%	1,876	3,521	26.9%	947	4	51%	-6%	16
South Carolina	7.1%	1,148	5,787	15.4%	892	6	53%	8%	15
South Dakota	11.8%	1,813	1,334	30.4%	405	3	14%	-15%	32
Tennessee	9.7%	1,192	4,370	19.3%	842	5	41%	-9%	19
Texas	7.1%	1,086	4,115	18.6%	771	5	49%	16%	21
Utah	9.8%	452	2,557	38.5%	985	3	22%	6%	8
Vermont	1.5%	253	2,605	10.6%	277	9	10%	37%	10
Virginia	4.8%	650	4,277	13.8%	590	7	49%	7%	13
Washington	3.7%	516	3,052	12.2%	378	8	22%	9%	15
West Virginia	5.8%	935	8,653	9.0%	776	11	25%	-7%	23
Wisconsin	8.8%	901	1,468	36.8%	454	3	18%	6%	15
Wyoming	8.3%	902	923	64.1%	592	2	8%	37%	39

Table: Health Industry Advisor LLC • Created with Datawrapper

Health Industry Advisor, llc

Covid-19

Sources

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

- The Atlantic's Covid Tracking Project: https://covidtracking.com
- 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
- Oliver Wyman Pandemic Navigator, https://pandemicnavigator.oliverwyman.com/forecast?mode=country&region=United%20States&panel=mortality
- Bloomberg Vaccine Trackers, https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/?sref=Z0b6TmHW

Health Industry Advisor, llc