



"Strategic Advice in an Era of Unprecedented Change"

COVID19 VITAL SIGNS

ISSUE #365

MONDAY, JANUARY 17, 2022

Reported Cases Reached Record Highs Last Week; Estimated Infections Are 4.5x Higher than Reported Cases

1

Estimated Daily Infections v. Detected Cases

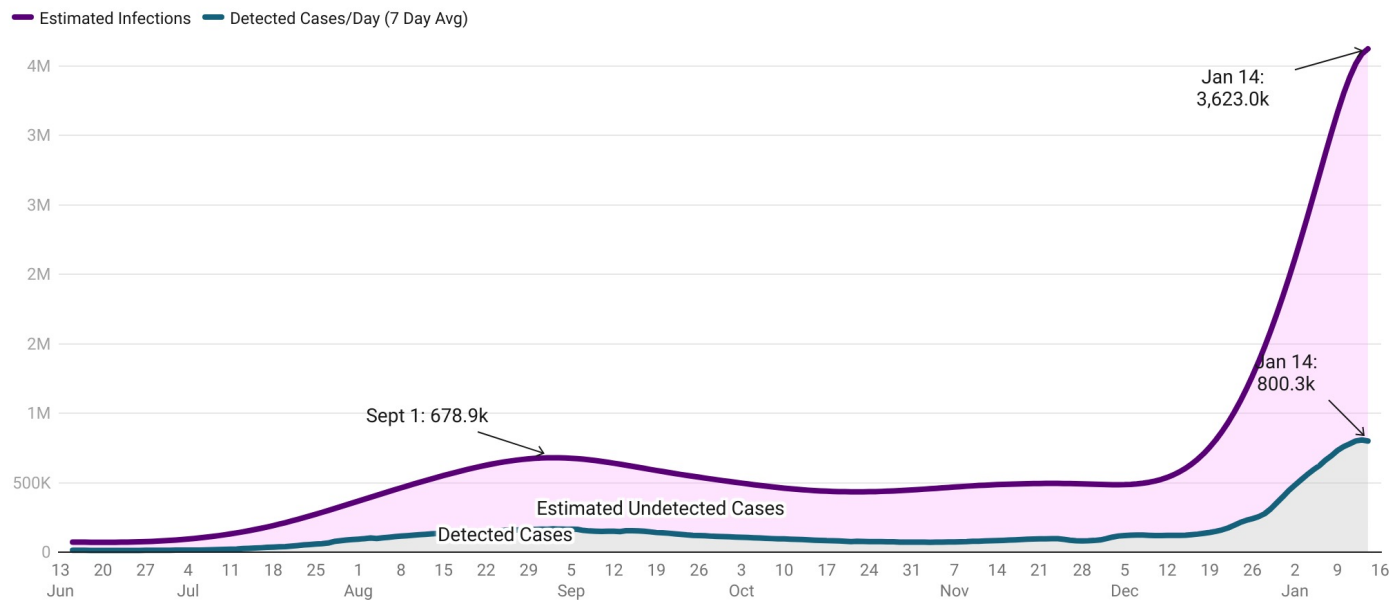
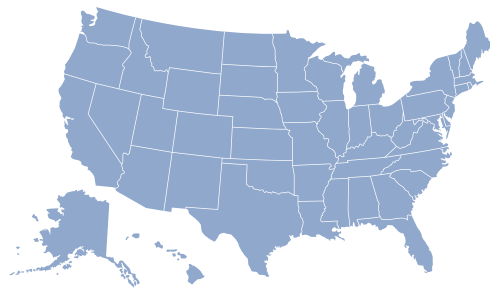


Chart: Health Industry Advisor LLC • Source: Harvard, Stanford & Yale Schools of Public Health • Created with Datawrapper

- ✓ **1.1%** of the U.S. population may have been infected on Friday alone (Harvard/Stanford/Yale Schools of Public Health estimate <https://covidestim.org>)
- ✓ **15.4%** of the population may have been infected since Christmas
- ✓ Estimated infections Friday were nearly **4.5x** higher than reported cases

Covid Infected An Estimated One of Every Six U.S. Residents Since Christmas

Since Christmas, Covid infected one of every four residents in Oregon, Rhode Island, and Utah; One in five in Delaware, Indiana, Kansas, Maryland, South Carolina, and Vermont



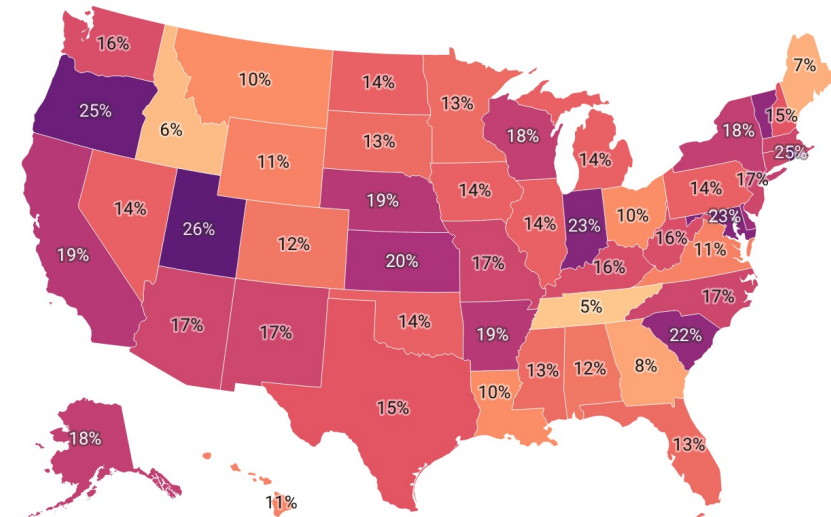
Last Week



Since Christmas

Estimated Infection Prevalence - Since Christmas

Estimated Share of Population Infected Since Christmas

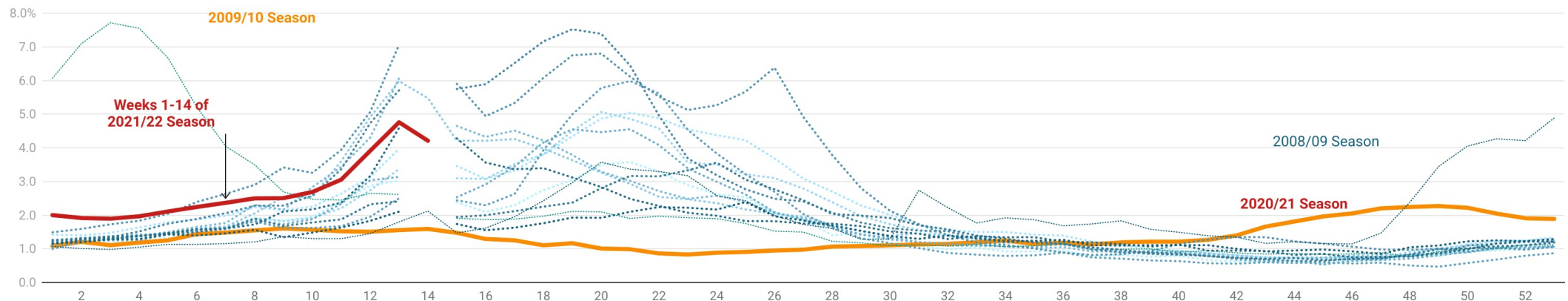


Map: Health Industry Advisor LLC • Source: <https://covidestim.org> • Created with Datawrapper

Flu Visits Dropped Last Week, Without Reaching Typical Seasonal Peaks (Yet?)

Percentage Visits for Influenza-Like Illness, National Summary

Comparison of Last Fifteen Seasons



Reported by: U.S. WHO/NREVSS Collaborating Laboratories and ILINet

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

Timeline: How Many Covid Patients Are in the Hospital?

The average daily census last week exceeded its January 2021 peak

Covid-19 Admissions & Census

7-Day Average, As of January 12

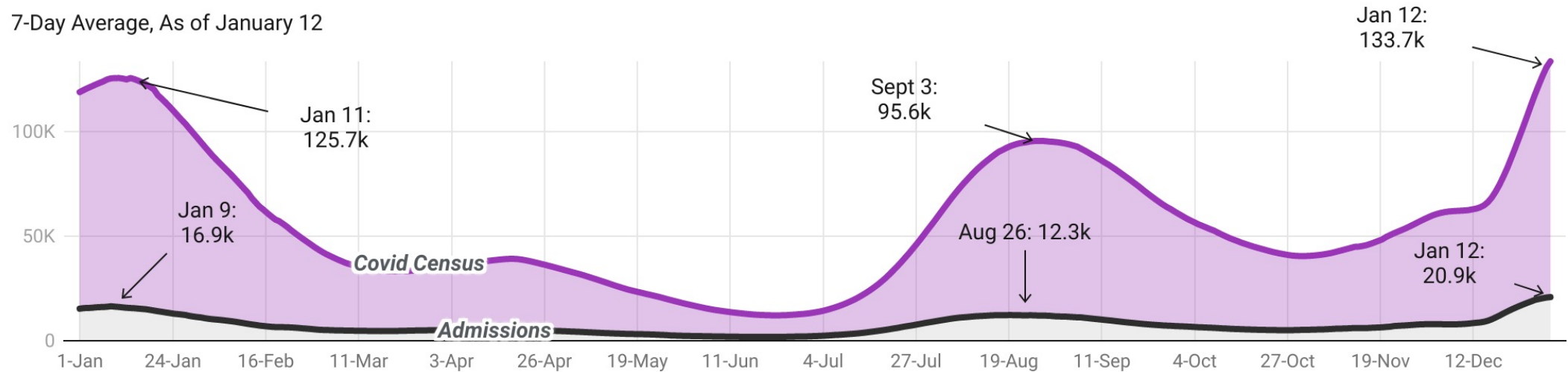
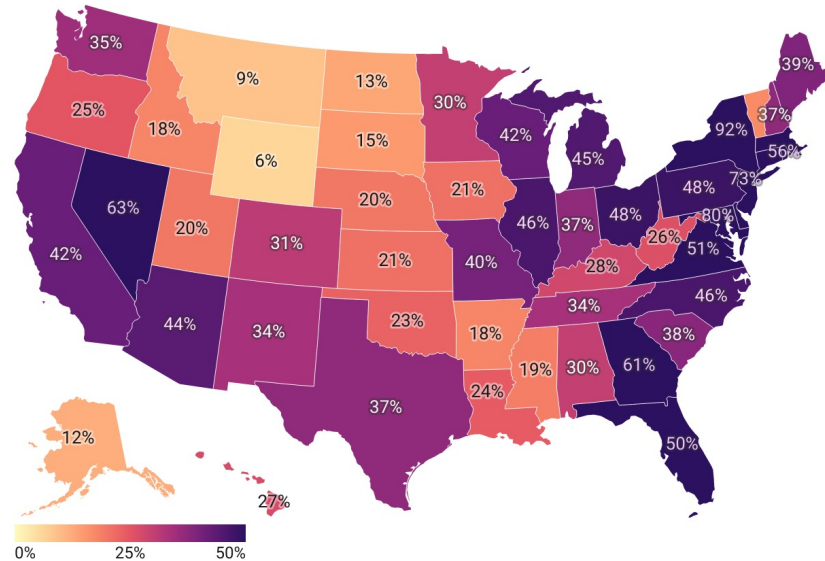


Chart: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

Covid Patients Strain Caregivers and Hospitals Across the Country

Covid-19 Patients As % of All Inpatient Beds

As of January 12

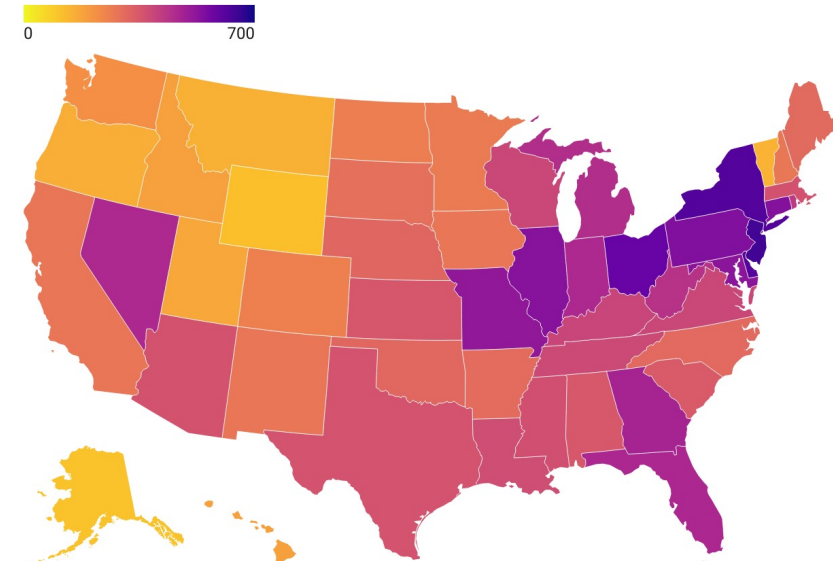


Map: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

New York's Covid Census Per Capita is Double the U.S. Average

Average Daily Census / M

7-Day Average, As of January 4

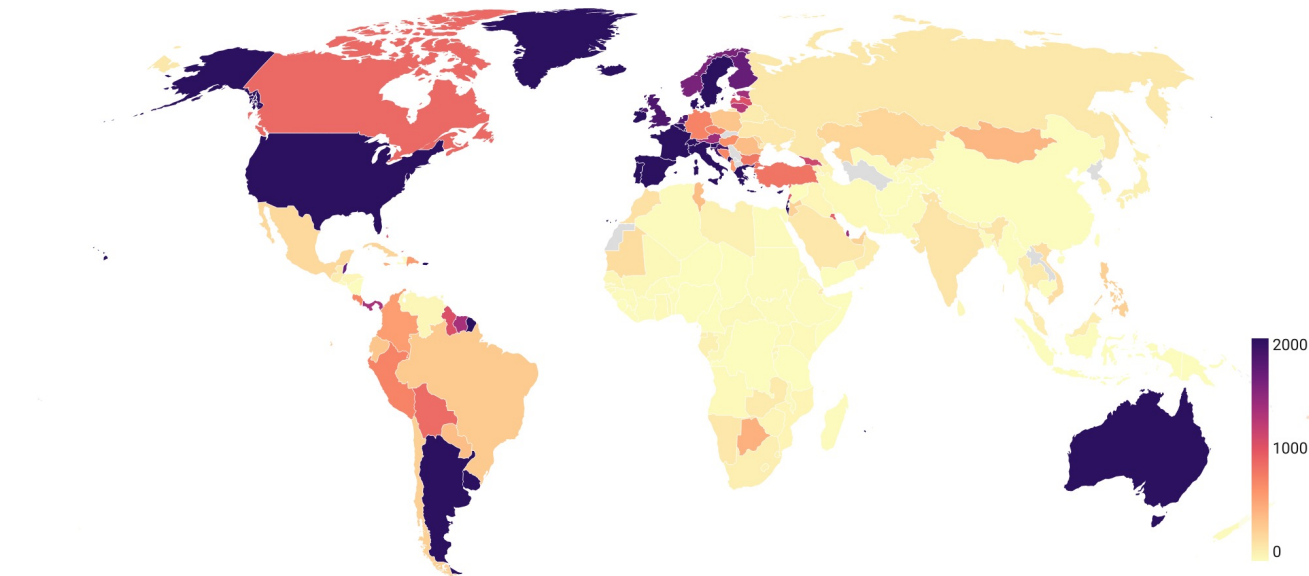


Map: Health Industry Advisor LLC • Source: Centers for Disease Control and Prevention • Created with Datawrapper

New Case Rates Per Capita Are Highest in Argentina, Australia, the United States, and Western Europe

New Daily Cases / Million

7-Day Average, As of January 14

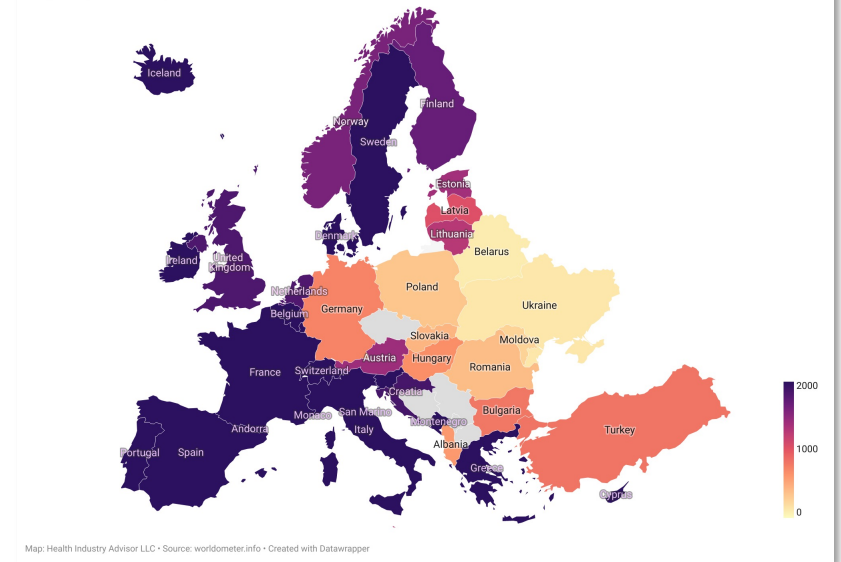


Global View

European View

New Daily Cases / Million

7-Day Average, As of January 14



Omicron Infections Swelled Last Week in Peru, the Philippines, India, Israel, Brazil, and Mexico

7

Weekly Increase% in New Cases

All Countries With 100,000+ Weekly New Cases, As of January 15

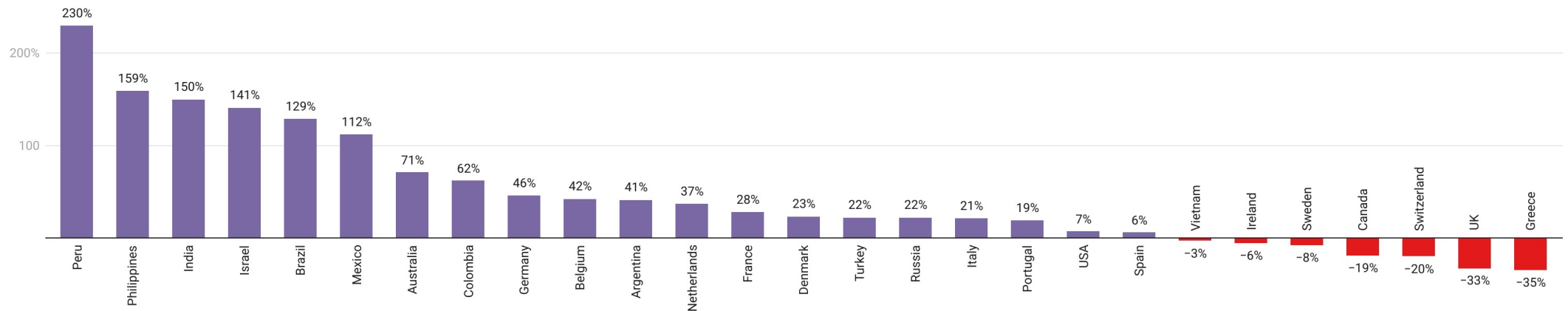
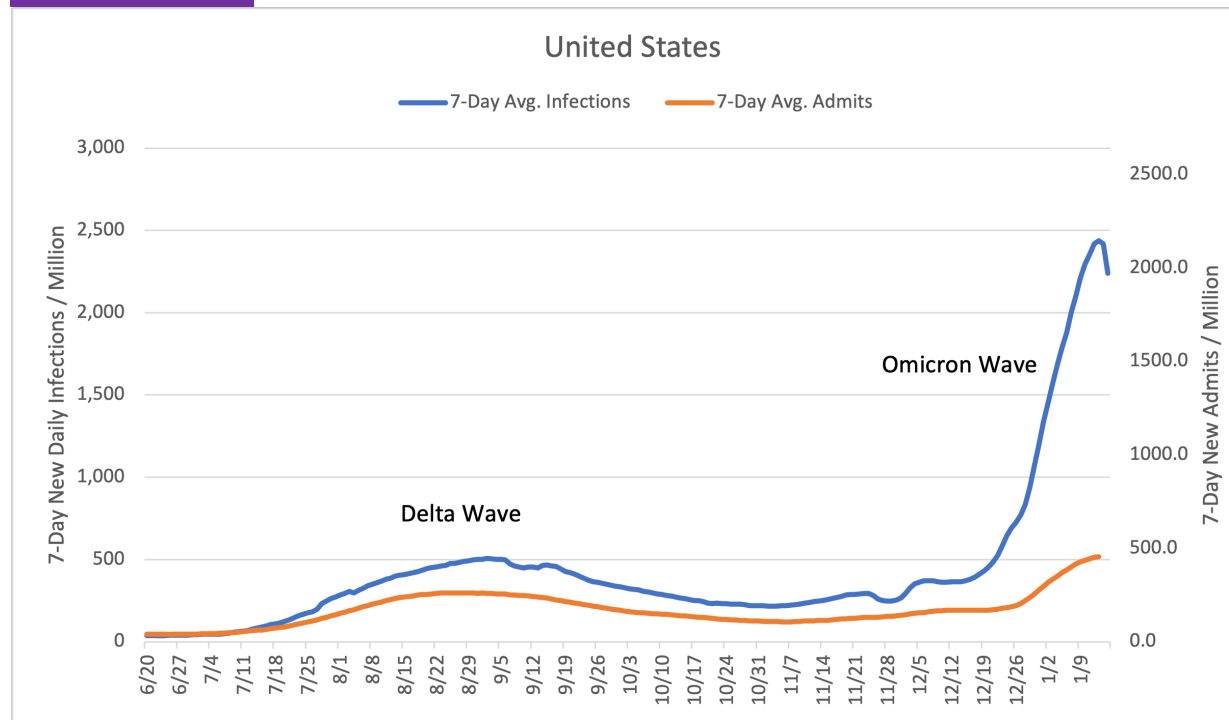


Chart: Health Industry Advisor LLC • Source: worldometer.info • Created with Datawrapper

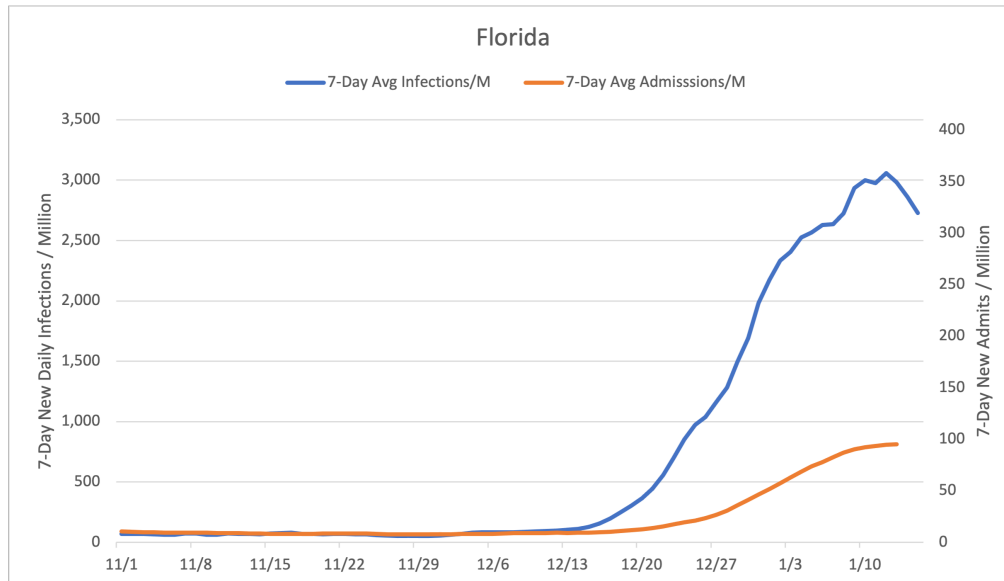
Omicron Cases Are Driving Hospital Admissions to Record Highs; However, Omicron's Mildness Is Tempering Its Impact

United States

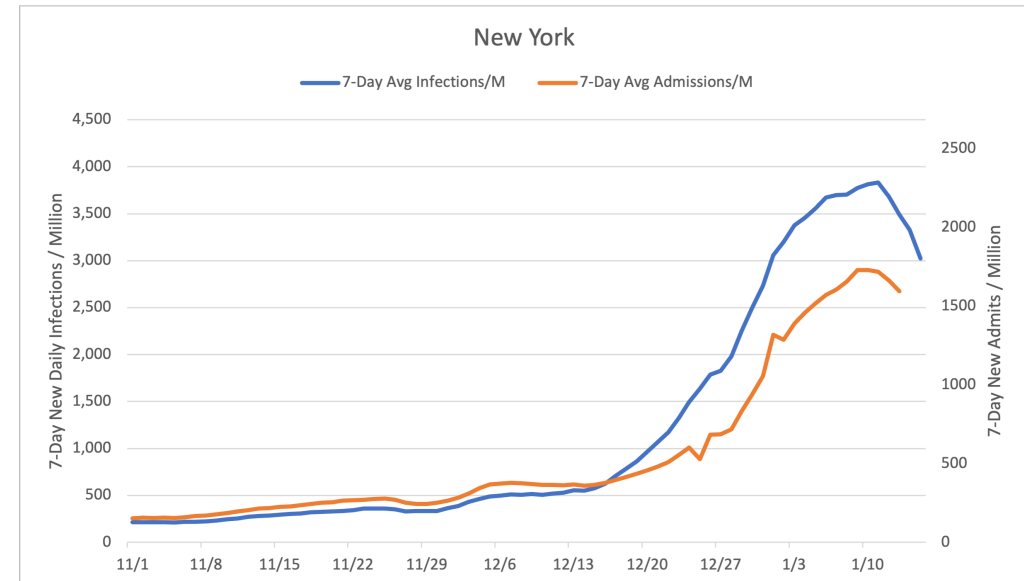


Hard-Hit States Witnessed A Similar Tempering of Omicron's Impact on Admissions

Florida



New York



The Omicron Surge Ebbbed in Canada, Ireland, and the United Kingdom; Cases Surged in France, Israel, and Italy

Timeline: Select Countries With High and Increasing Case Rates

New Daily Cases / Million, 7-Day Average

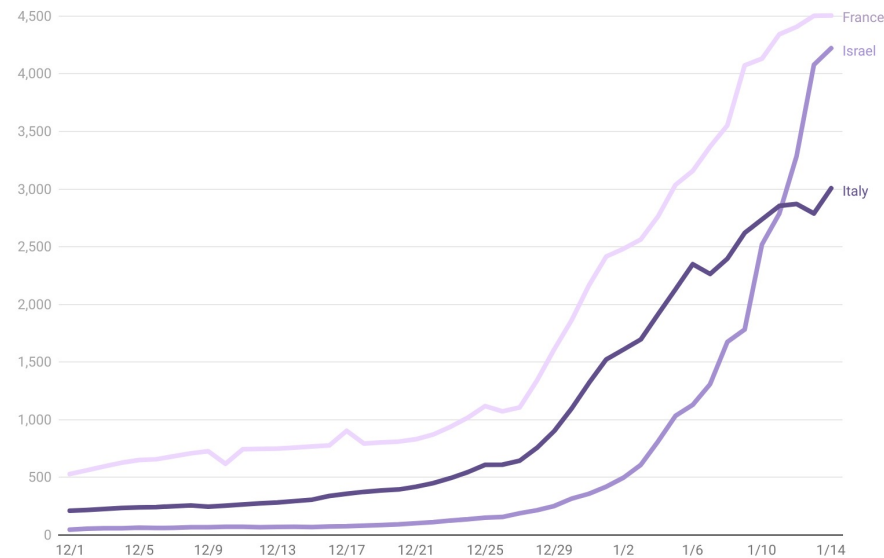


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Timeline: Select Countries With Ebbing Case Rates

New Daily Cases / Million, 7-Day Average

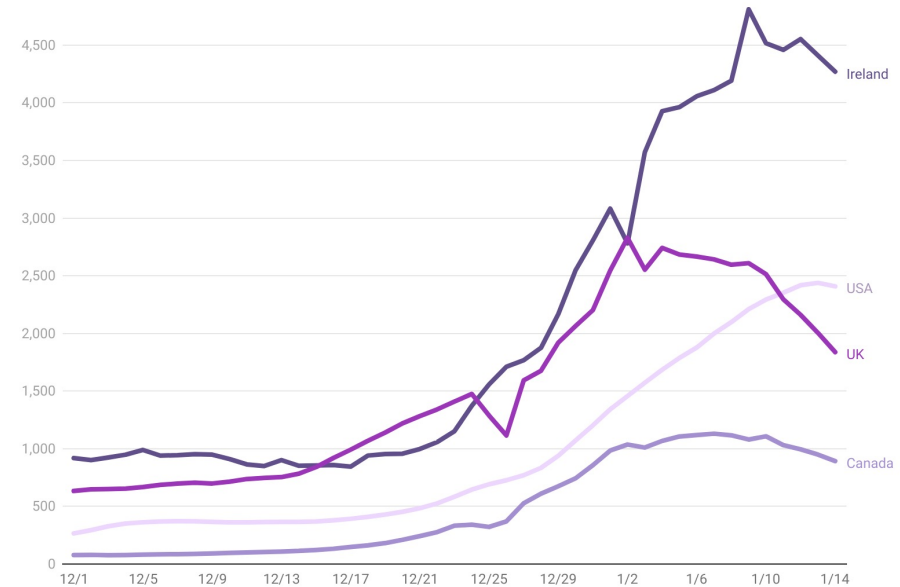


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Cases Ebbbed in Georgia, New Jersey, and New York; Cases Surged in California, Delaware, Louisiana, and Vermont

Timeline: States With High and Increasing Case Rates

New Daily Cases / Million, 7-Day Average

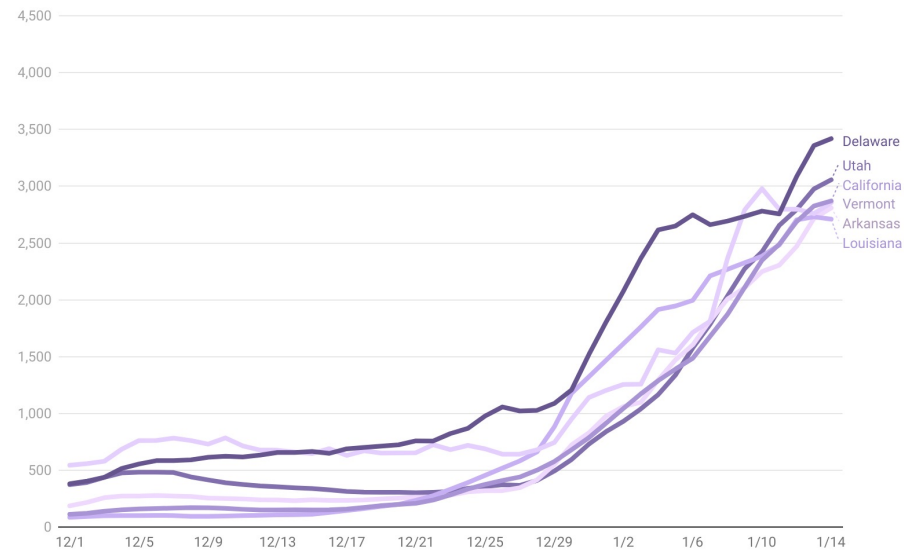


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Timeline: States With Ebbing Case Rates

New Daily Cases / Million, 7-Day Average

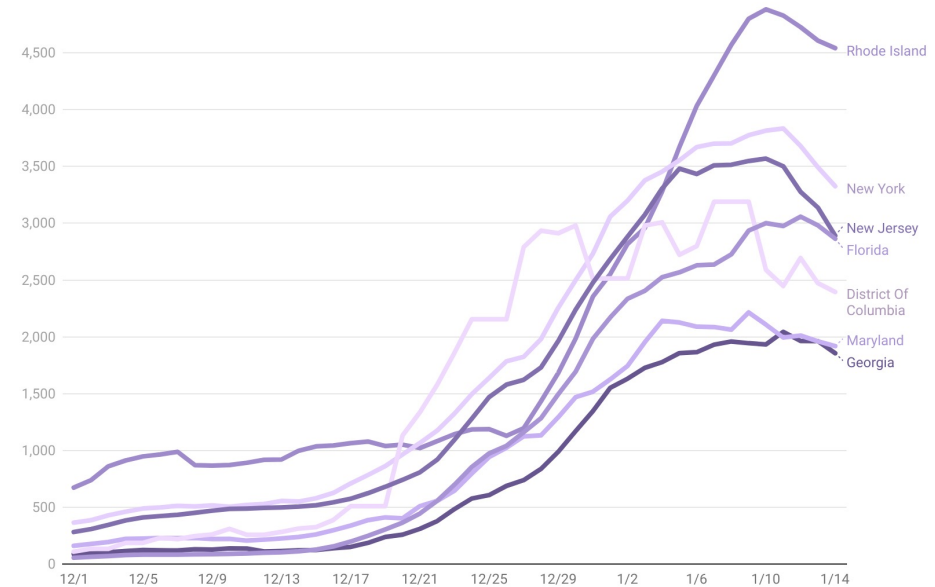


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Cases Ebbbed in New York City; Cases Surged in Los Angeles and San Diego

Timeline: Large Metro Areas With Highest New Case Rates

New Daily Cases / Million, 7-Day Average

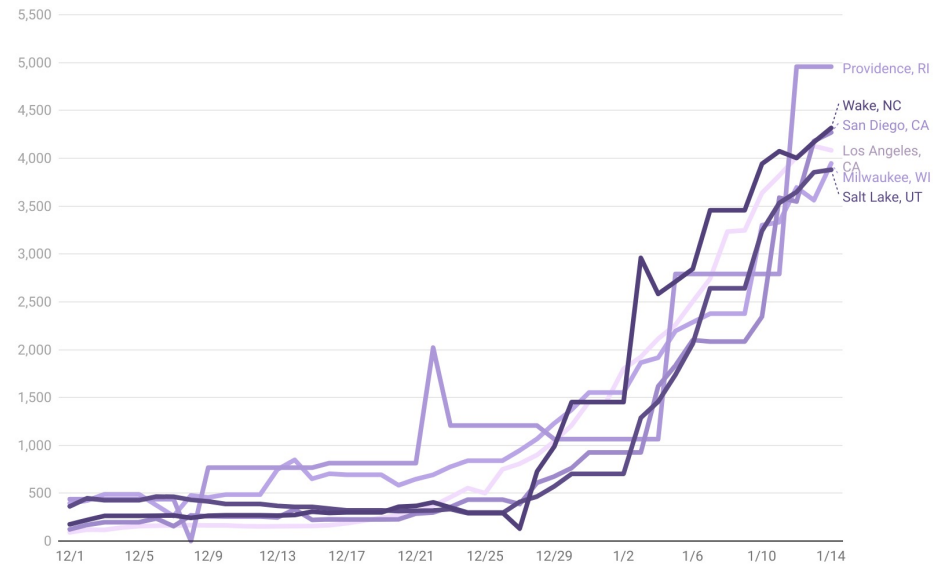


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Timeline: Select Large Metro Areas With Ebbing Cases

New Daily Cases / Million, 7-Day Average

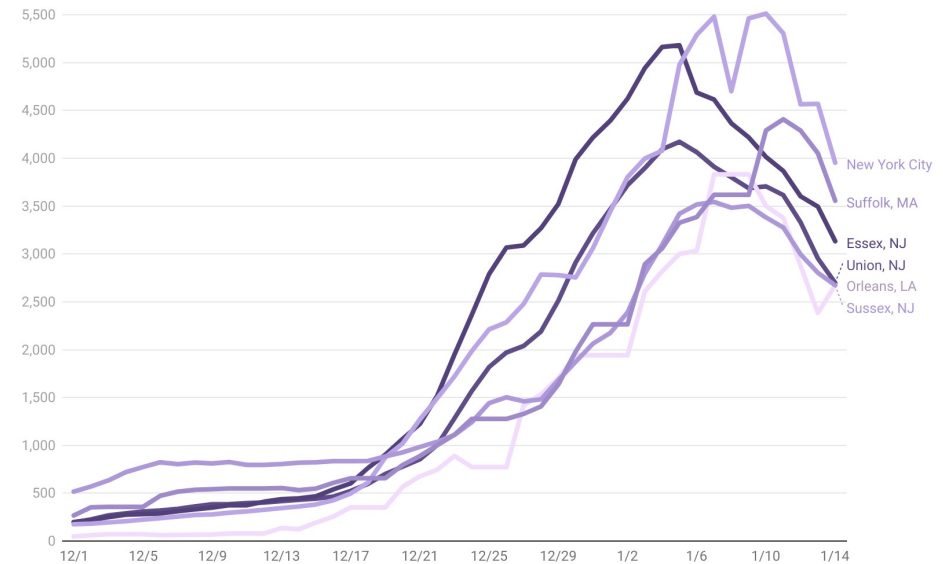


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

Case Growth Slowed Dramatically Since Early January

New Daily Case Trends in the United States

Including "first" and "second derivative"

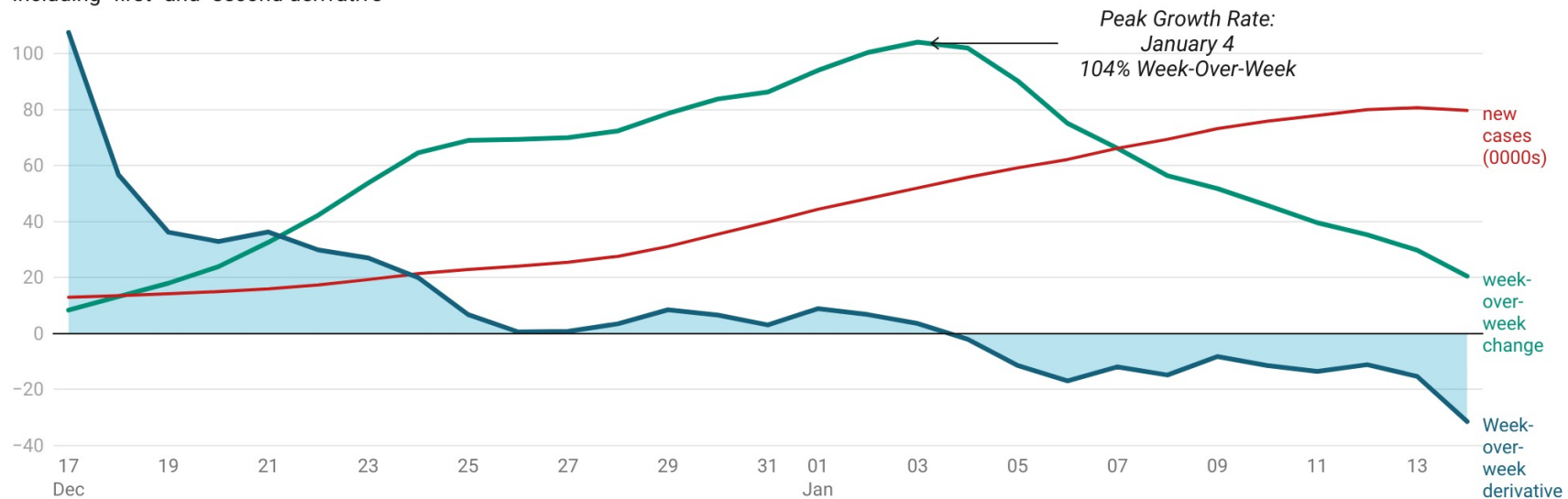


Chart: Health Industry Advisor LLC • Source: worlometers.info • Created with Datawrapper

New Daily Cases v. Same Day, Prior Week Have Trended Lower Throughout January

New Daily Cases v. Same Day, Prior Week

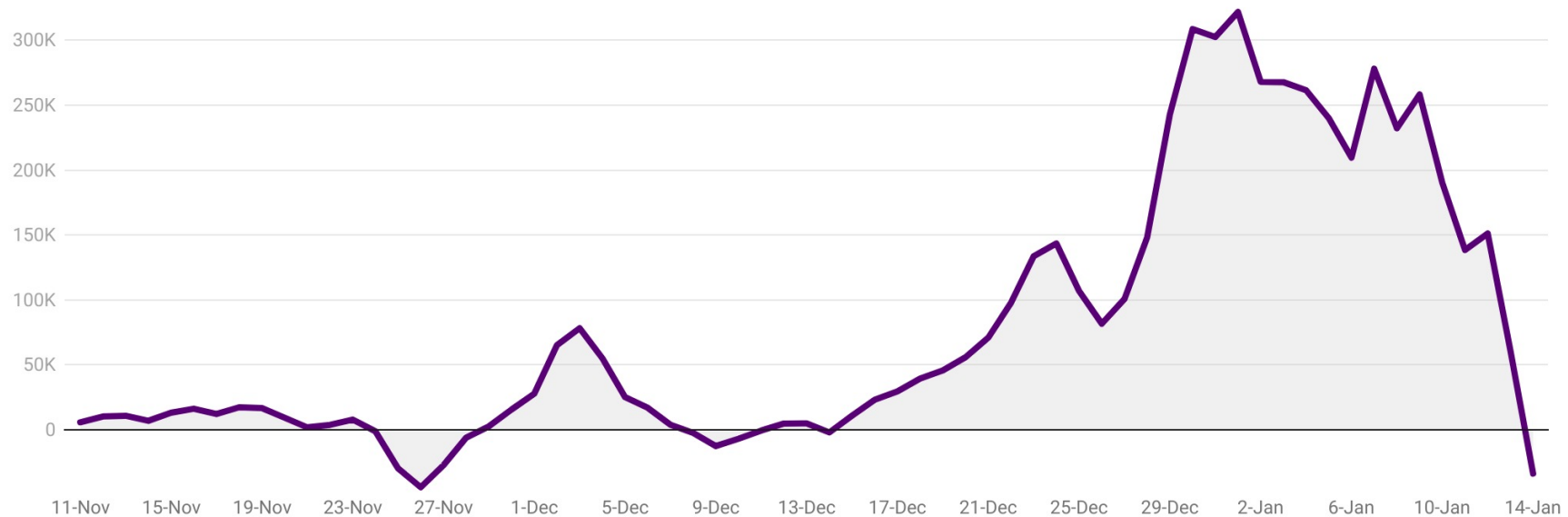


Chart: Health Industry Advisor LLC • Source: worldometers.info • Created with Datawrapper

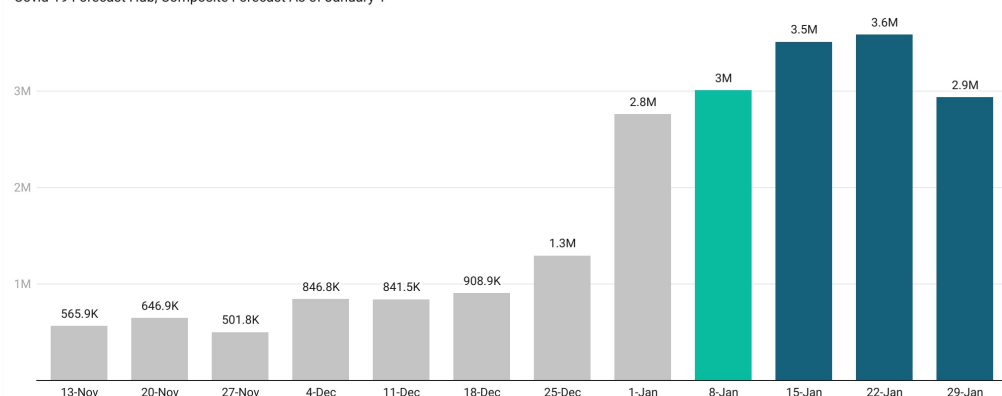
Cases Peak Next Week, Per the Ensemble Forecast; Deaths Continue to Climb

New cases could peak next week . . .

yet, deaths rise sharply for several weeks.

Newly-Reported Cases Per Week

Covid-19 Forecast Hub, Composite Forecast As of January 1

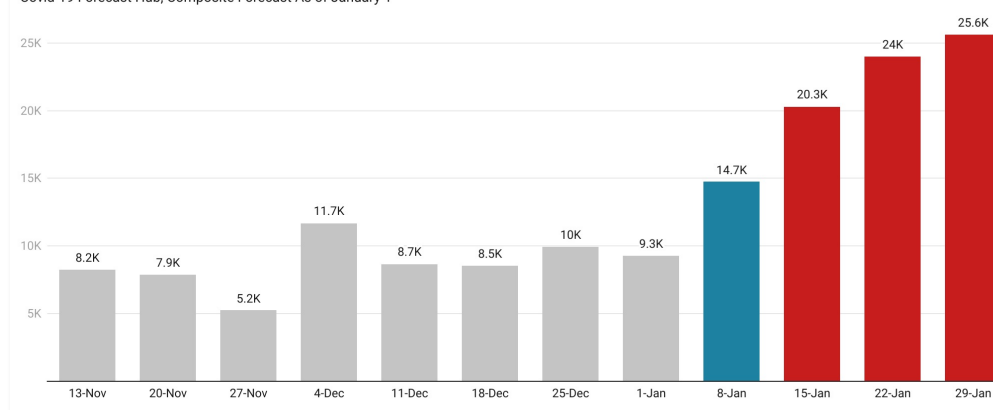


For the week ending on the date shown
Chart: Health Industry Advisor LLC • Source: Covid-19 Forecast Hub • Created with Datawrapper

Actual
 Projection – Last Week
 Projection – Next 3 Weeks

Newly-Reported Deaths Per Week

Covid-19 Forecast Hub, Composite Forecast As of January 1



For the week ending on the date shown
Chart: Health Industry Advisor LLC • Source: Covid-19 Forecast Hub • Created with Datawrapper

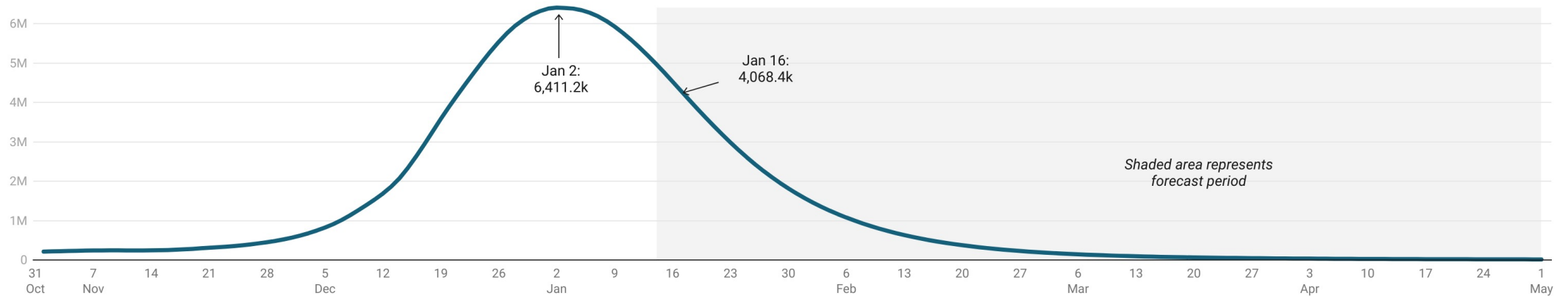
Actual
 Projection – Last Week
 Projection – Next 3 Weeks

Source: Covid-19 Forecast Hub

Daily Infections Peaked Two Weeks Ago, Per the Latest IHME Model

Estimated and Projected Infections - U.S.

Institute For Health Metrics and Evaluation



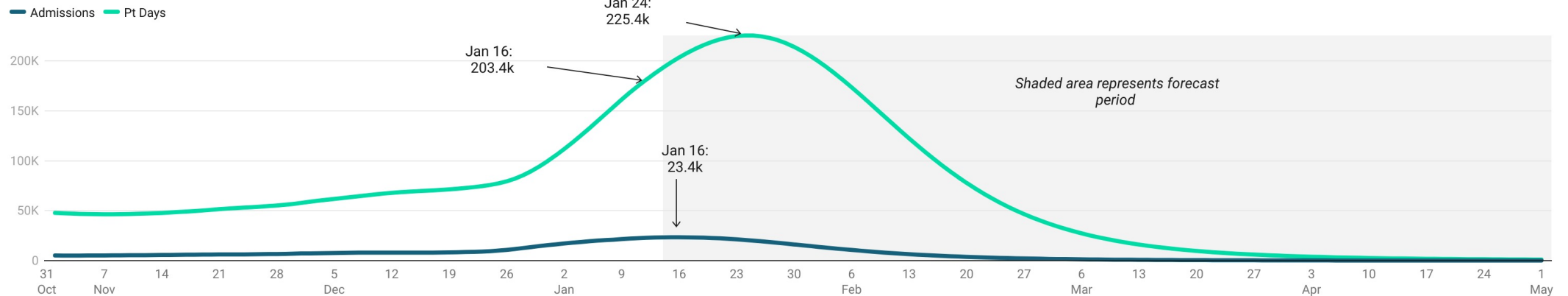
Forecast Date: January 14

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

Hospital Admissions Peaked Yesterday; Census Peaks in Two Weeks (IHME Forecast)

Estimated & Projected Hospital Covid-19 Admissions & Patient Days

Institute for Health Metrics and Evaluation



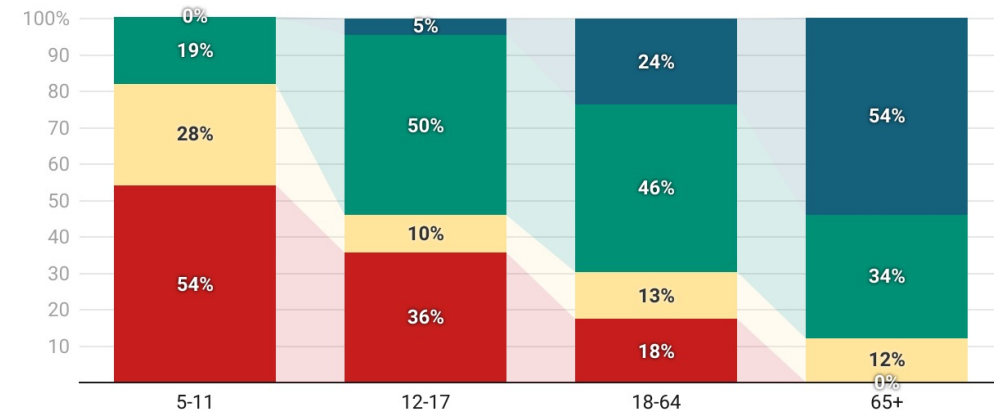
Who is Vaccinated? Who Isn't?

- ▶ More than half of senior citizens are max protected (vaccinated + booster)
- ▶ Nearly one-in-five working age adults have no vaccine protection. One-in-five are max protected.
- ▶ Only half of middle and high school aged persons are double vaccinated
- ▶ Less than half of elementary age children have received a Covid vaccine

Vaccination Status By Age

As of January 13

Unvaccinated Partially Vaccinated Double Vaccinated Boosted



CDC reports more first doses for 65+ year olds than the population of this age group

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

Despite Breakthrough Cases, Vaccines Prevent Many Infections and Most Hospital Stays (New York State Data)

Cases

Daily Cases Per 100,000: Fully Vaccinated v. Unvaccinated

New York State

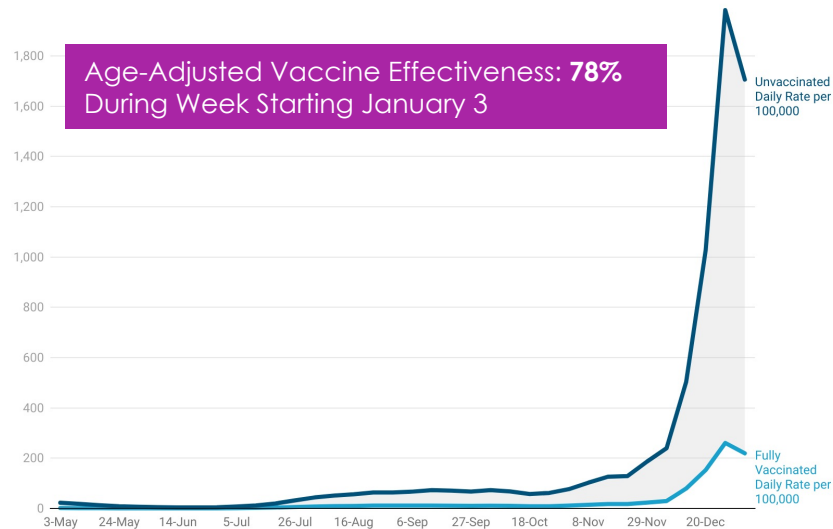


Chart: Health Industry Advisor LLC • Source: New York State • Created with Datawrapper

Week Starting

Hospitalizations

Daily Hospitalizations Per 100,000: Fully Vaccinated v. Unvaccinated

New York State

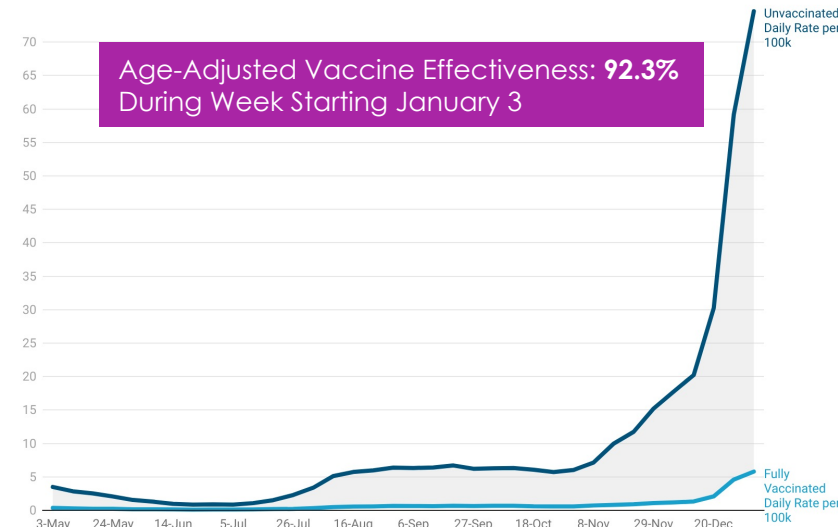


Chart: Health Industry Advisor LLC • Source: New York State • Created with Datawrapper

Week Starting

For the most recently reported week:

- ✓ **1-in-456** vaccinated persons reported a new breakthrough case
- ✓ **1-in-59** unvaccinated persons reported a new case
- ✓ **1-in-17,271** vaccinated persons were hospitalized
- ✓ **1-in-1,340** unvaccinated persons were hospitalized

Vaccine Effectiveness in Preventing Infection Slipped With Delta; Remains High in Preventing Hospitalizations

Vaccine Effectiveness: Cases & Hospitalizations

New York State

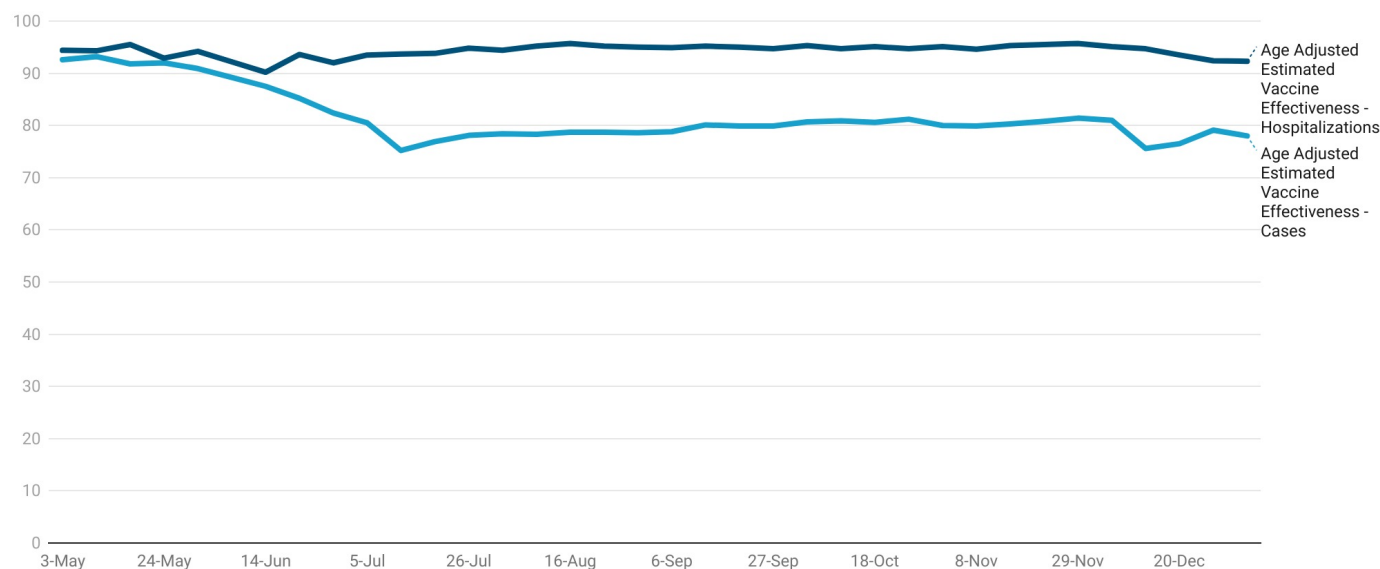


Chart: HealthIndustry Advisor LLC • Source: New York state • Created with Datawrapper

Vaccines have remained **95% effective in preventing hospitalization**, through both Delta and the early stages of Omicron.

Effectiveness in preventing infections slipped with Delta but, has steadied under Omicron.

Test-Positive Rates Stabilized Recently Yet, Remain 5x Higher Than Recommended

Test-Positivity Rate

7-Day Average, Through January 9

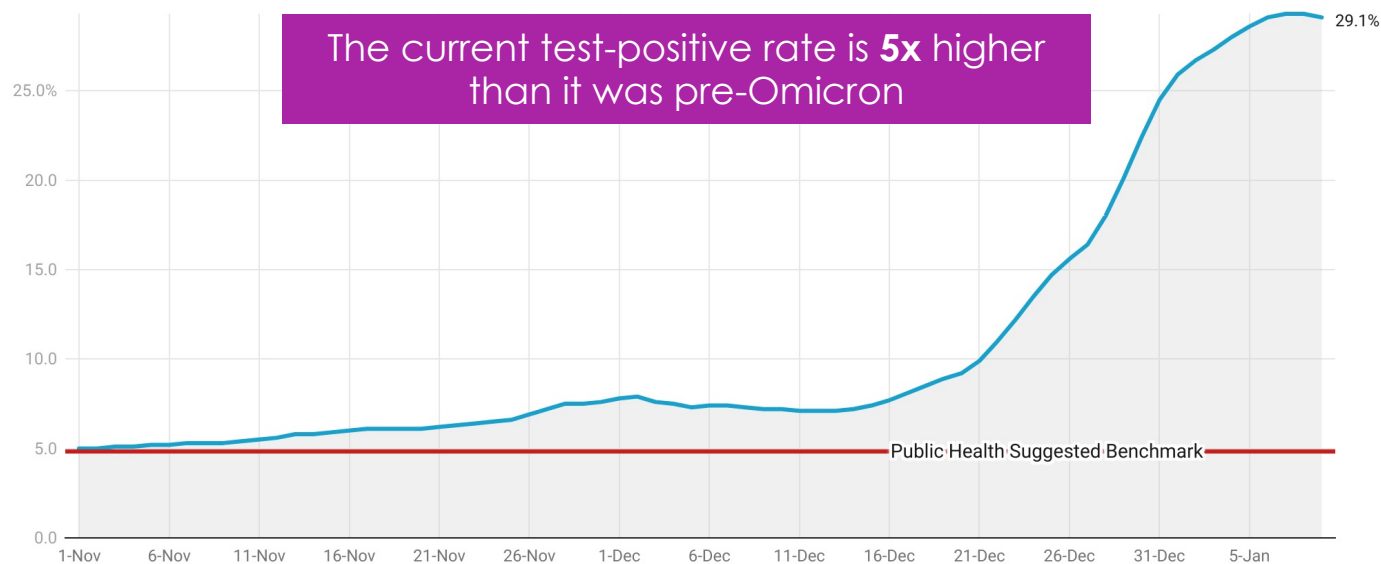
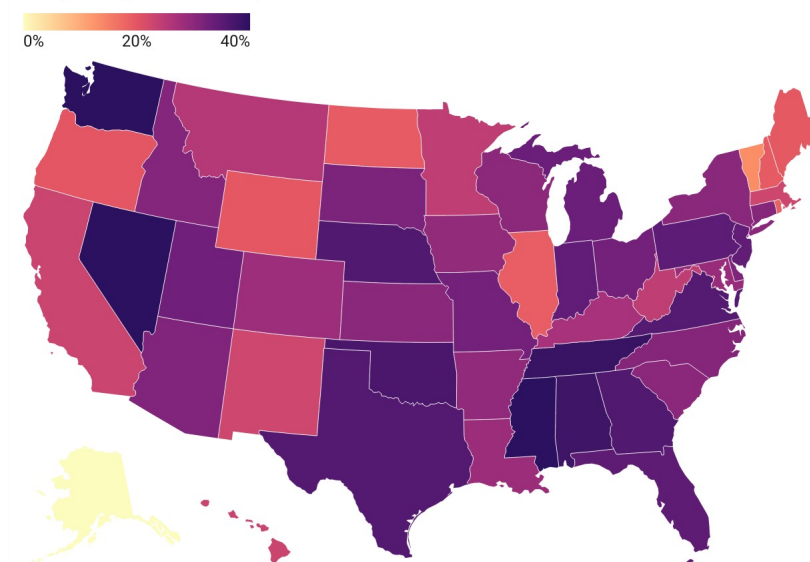


Chart: Health Industry Advisor LLC • Source: U.S. Department of Health & Human Services • Created with Datawrapper

Test Positivity %

7-Day Average, As of January 9

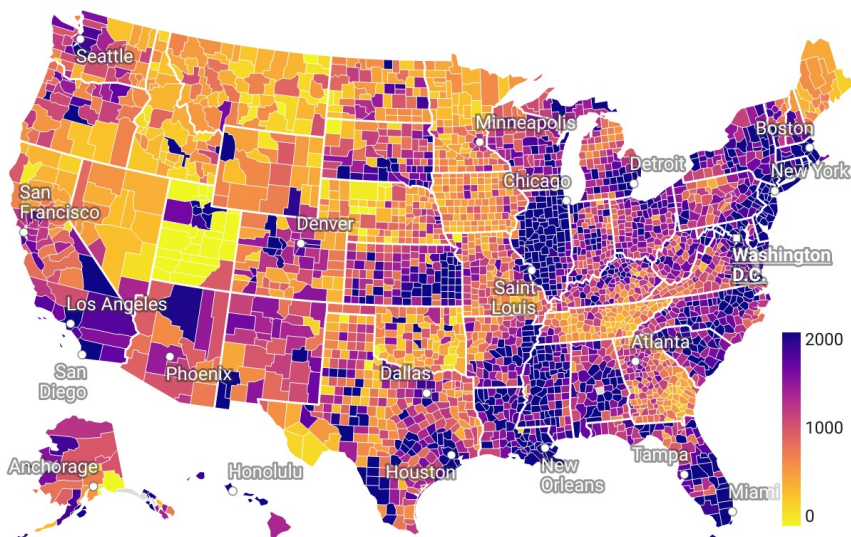


Map: Health Industry Advisor LLC • Source: U.S. Department of Health & Human Services • Created with Datawrapper

The Omicron Surge Raced Across the Country Last Week

New Daily Infections / Million

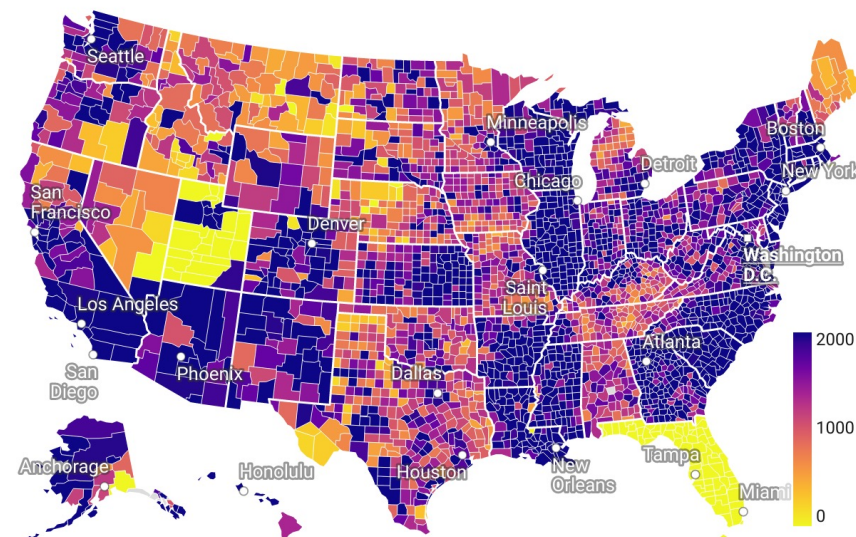
7-Day Average, As of January 7



Map: Health Industry Advisor LLC • Source: Center for Systems Science and Engineering at Johns Hopkins University • Created with Datawrapper

New Daily Infections / Million

7-Day Average, As of January 14



Map: Health Industry Advisor LLC • Source: Center for Systems Science and Engineering at Johns Hopkins University • Created with Datawrapper

Metro-level data for Florida were not reported last week

Sources

- ▶ Bloomberg Vaccine Trackers, <https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/?sref=ZOb6TmH>
- ▶ 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.org>