COVID Updates

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1/12/2022

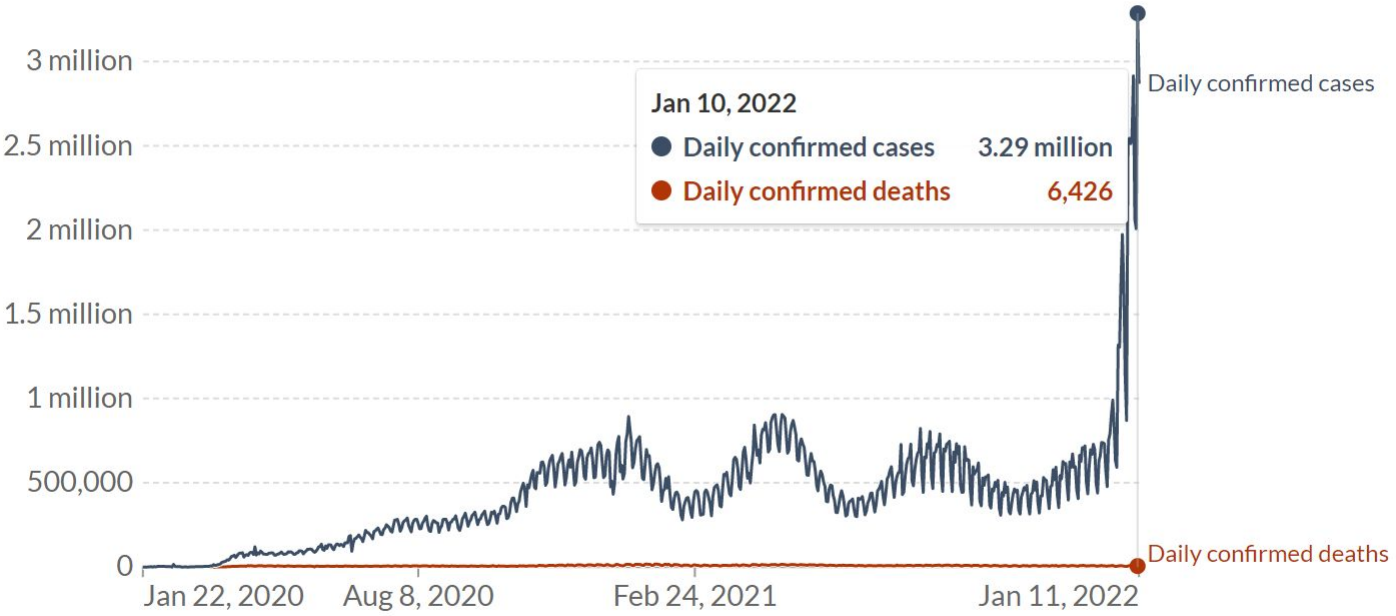
Epi: International

Daily confirmed COVID-19 cases and deaths, World

The confirmed counts shown here are lower than the total counts. The main reason for this is limited testing and challenges in the attribution of the cause of death.

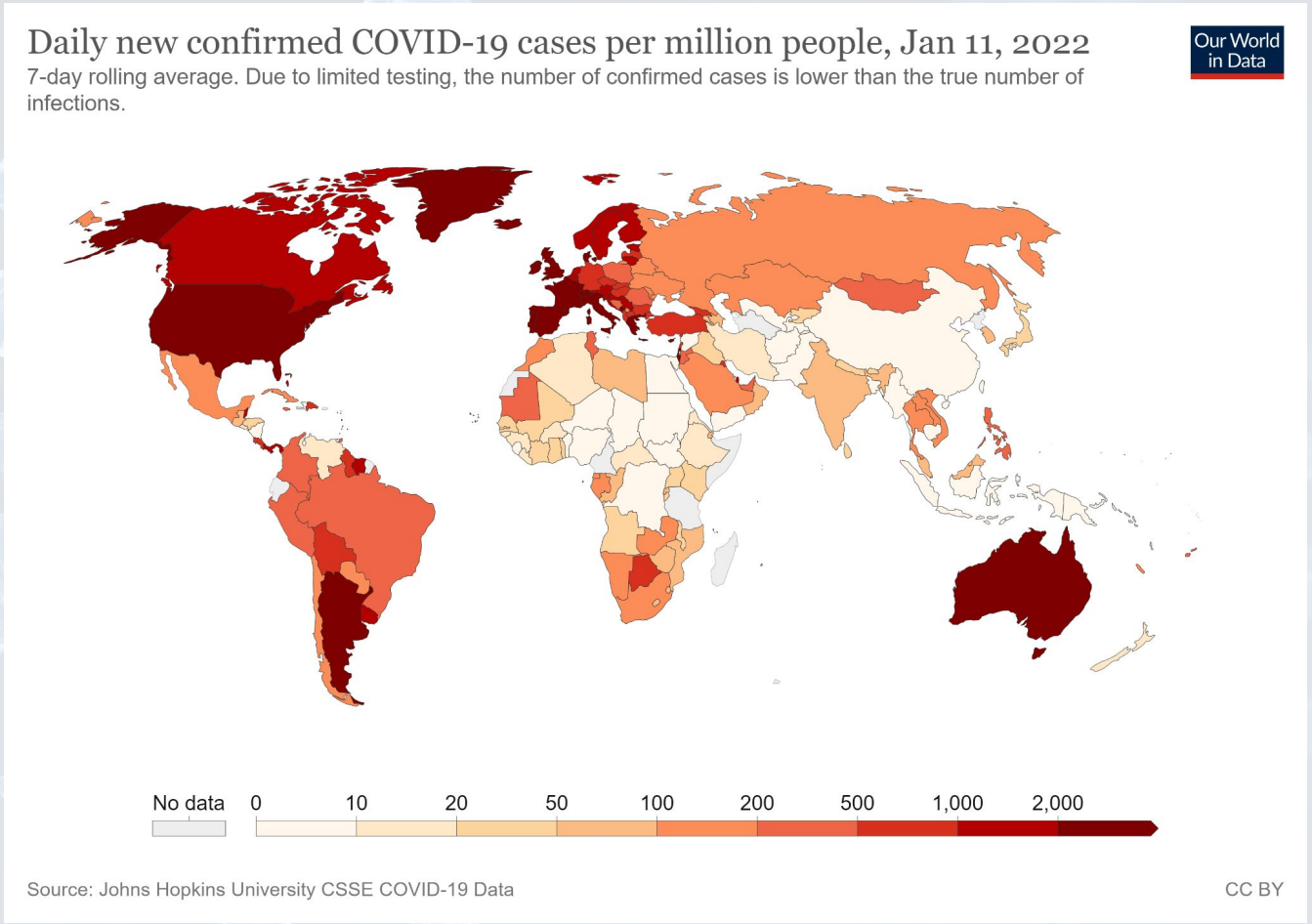
Our World in Data

LINEAR | LOG ⇄ Change country



Source: Johns Hopkins University CSSE COVID-19 Data – Last updated 12 January, 09:05 (London time)
OurWorldInData.org/coronavirus • CC BY

Source: Our World in Data

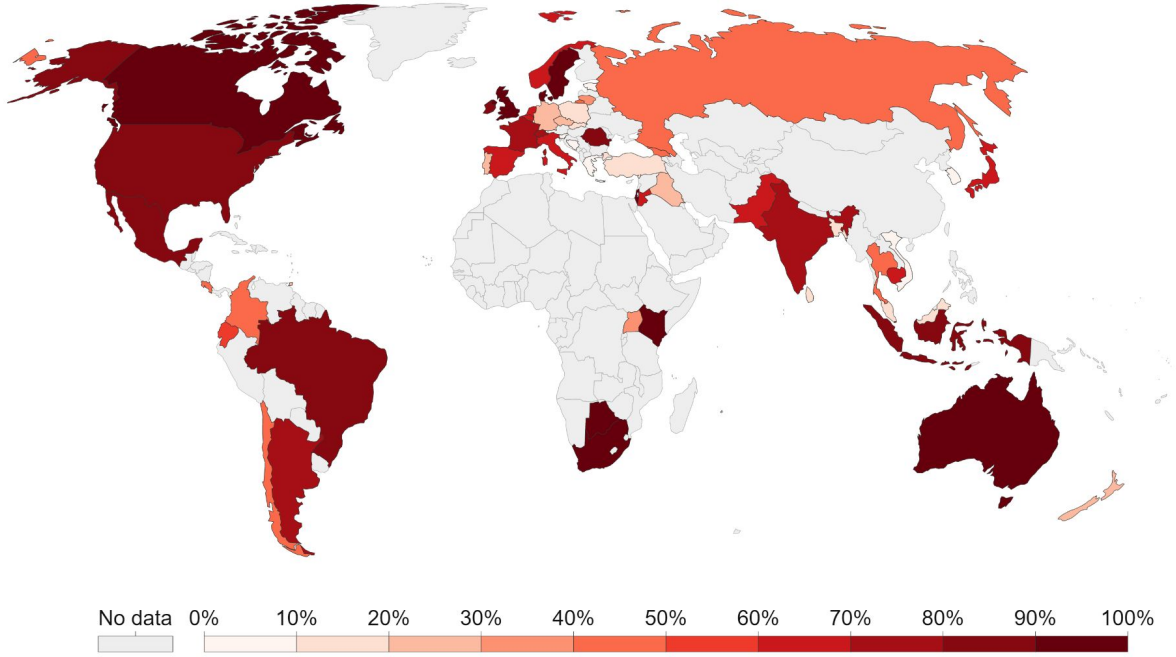


Source: [Our World in Data]

Share of SARS-CoV-2 sequences that are the omicron variant, Jan 10, 2022

Our World in Data

Share of omicron variant in all analyzed sequences in the preceding two weeks.



Source: GISAID, via CoVariants.org – Last updated 11 January 2022, 20:10 (London time)

Note: This share may not reflect the complete breakdown of cases, since only a fraction of all cases are sequenced. Recently-discovered or actively-monitored variants may be overrepresented, as suspected cases of these variants are likely to be sequenced preferentially or faster than other cases.

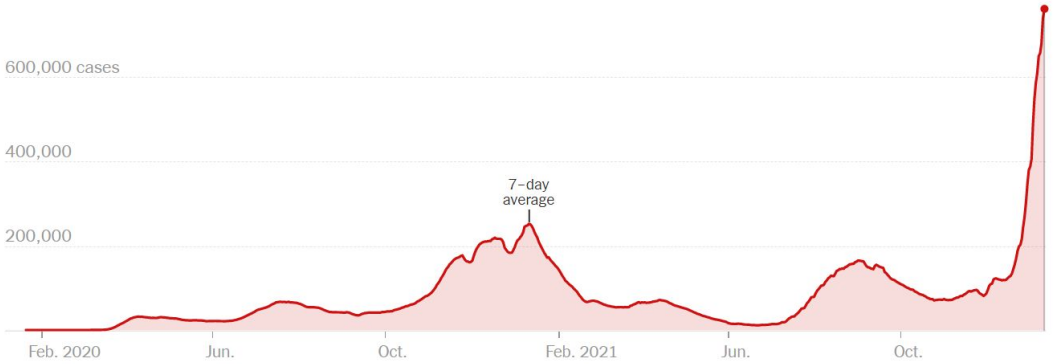
Source: [Our World in Data]

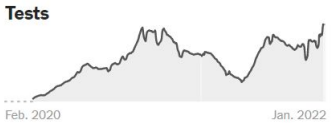
Epi: National

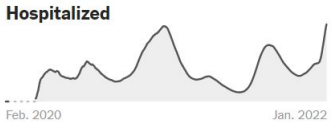
New reported cases

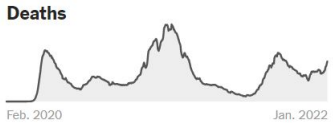
All time | Last 90 days

JAN. 11
Daily average: 761,122
New cases: 767,547



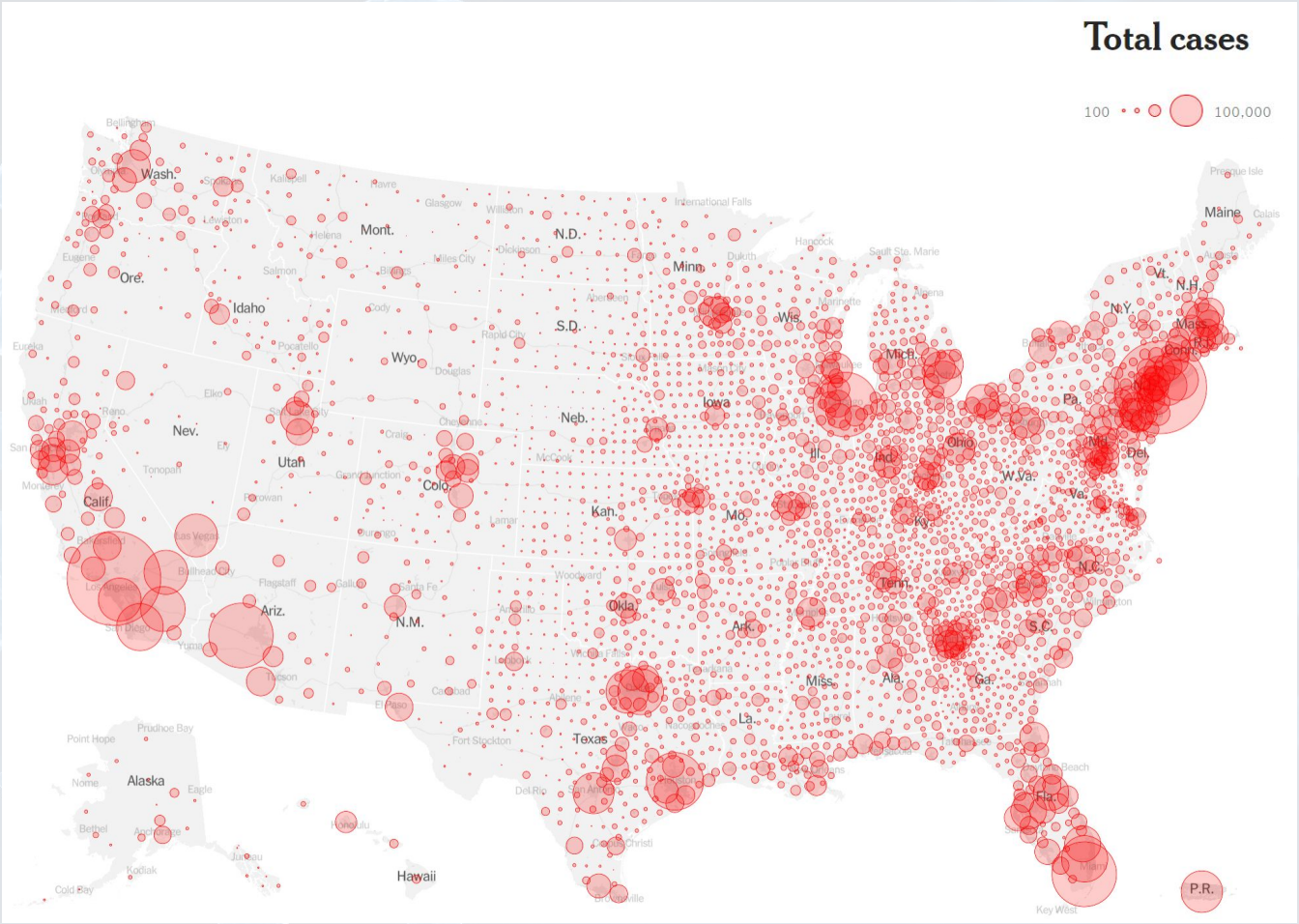




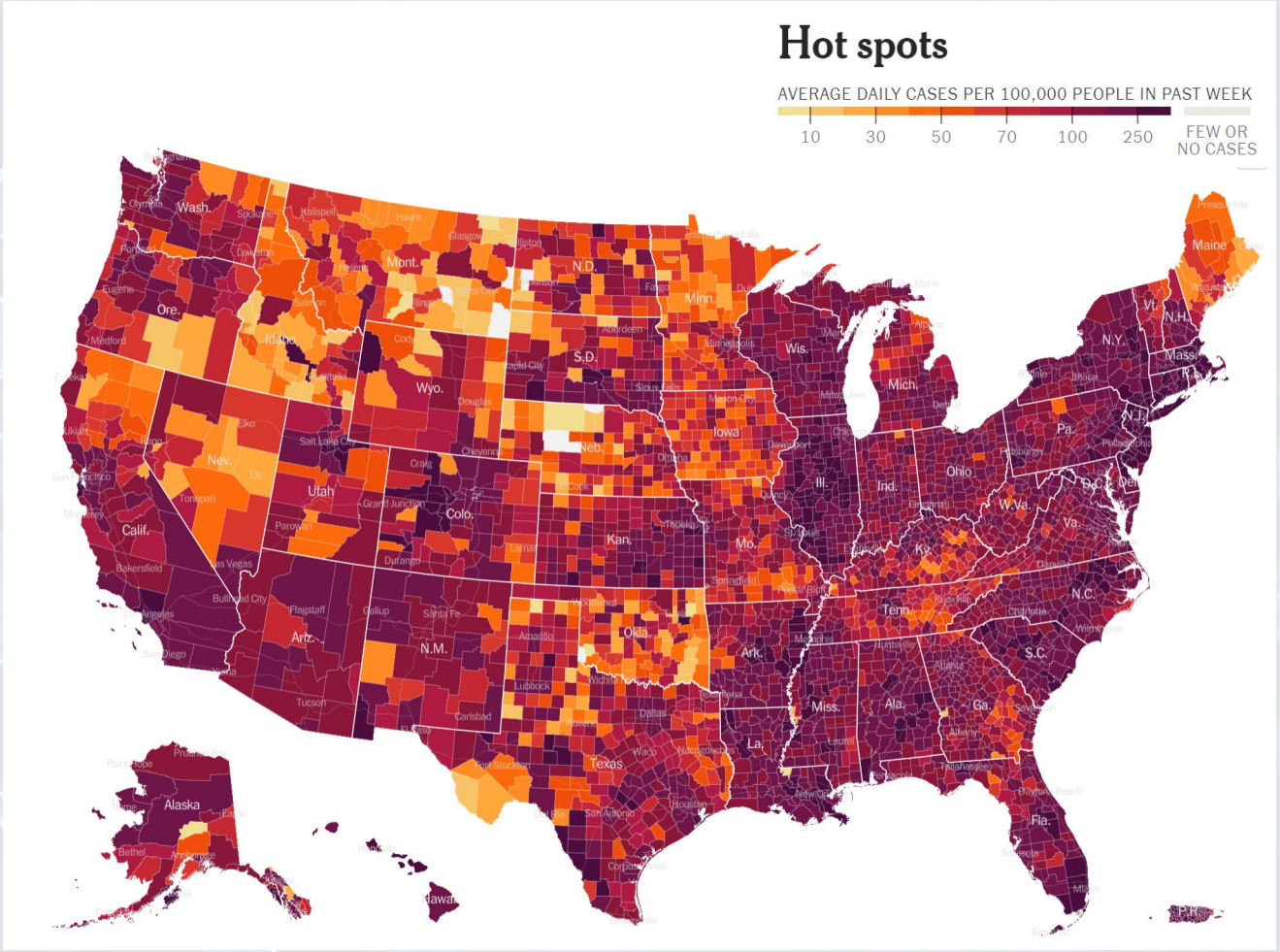


	DAILY AVG. ON JAN. 11	14-DAY CHANGE	TOTAL REPORTED
Cases	761,122	+185%	62,368,446
Tests	1,992,421	+42%	—
Hospitalized	140,641	+84%	—
Deaths	1,736	+40%	840,581

Source: [NYT COVID Dashboard]



Source: [NYT COVID Dashboard]

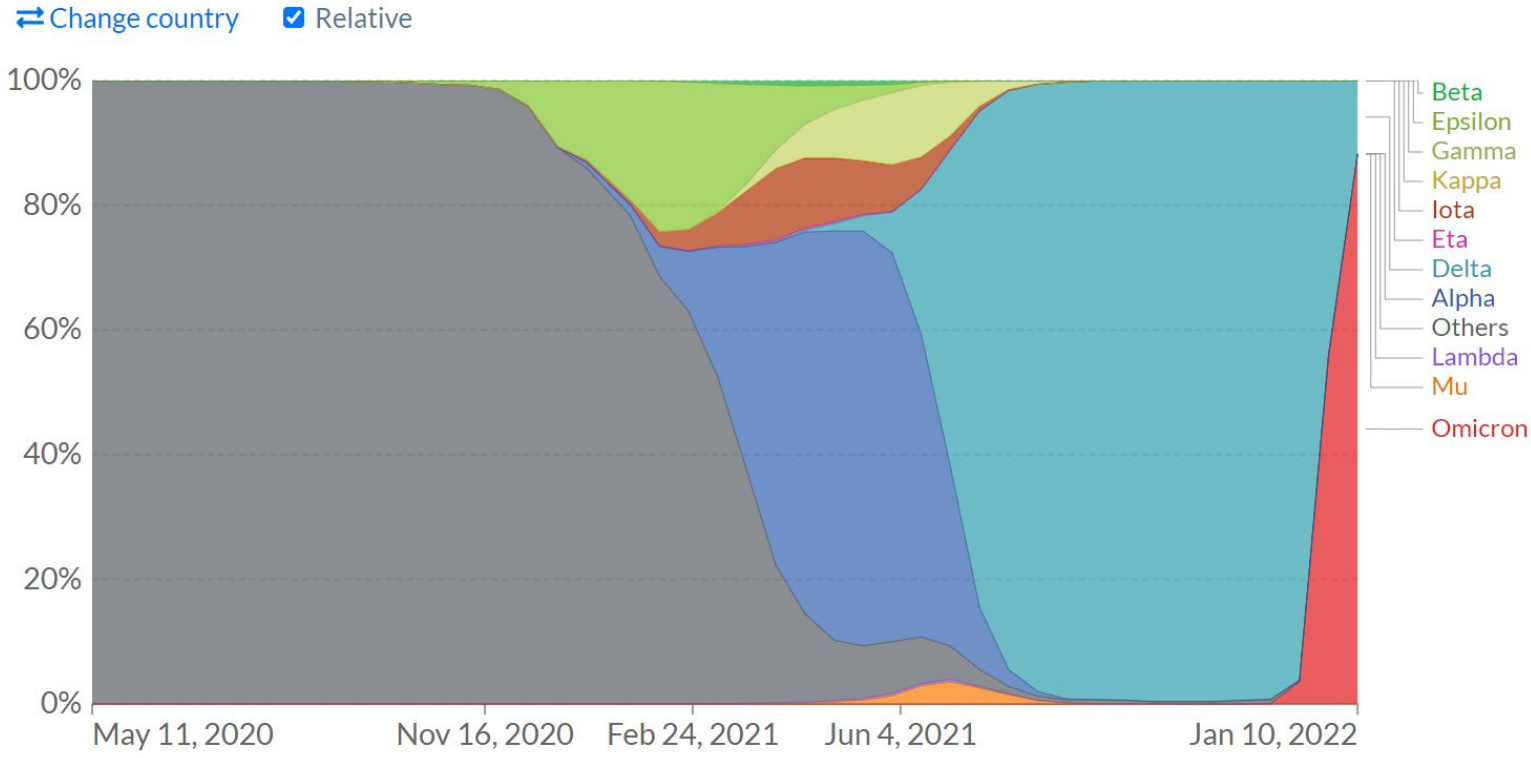


Source: [NYT COVID Dashboard]

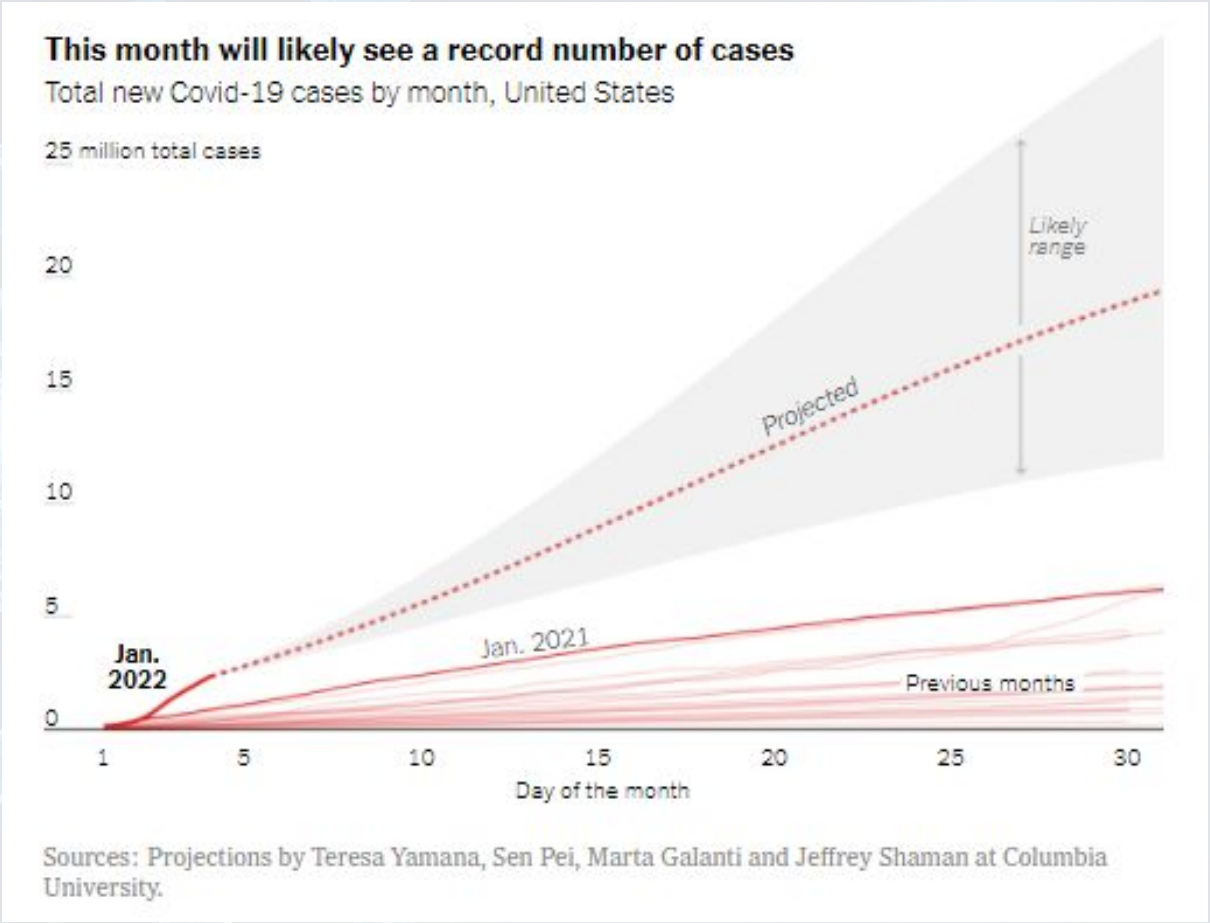
SARS-CoV-2 variants in analyzed sequences, United States

The number of analyzed sequences in the preceding two weeks that correspond to each variant group. This number may not reflect the complete breakdown of cases since only a fraction of all cases are sequenced.

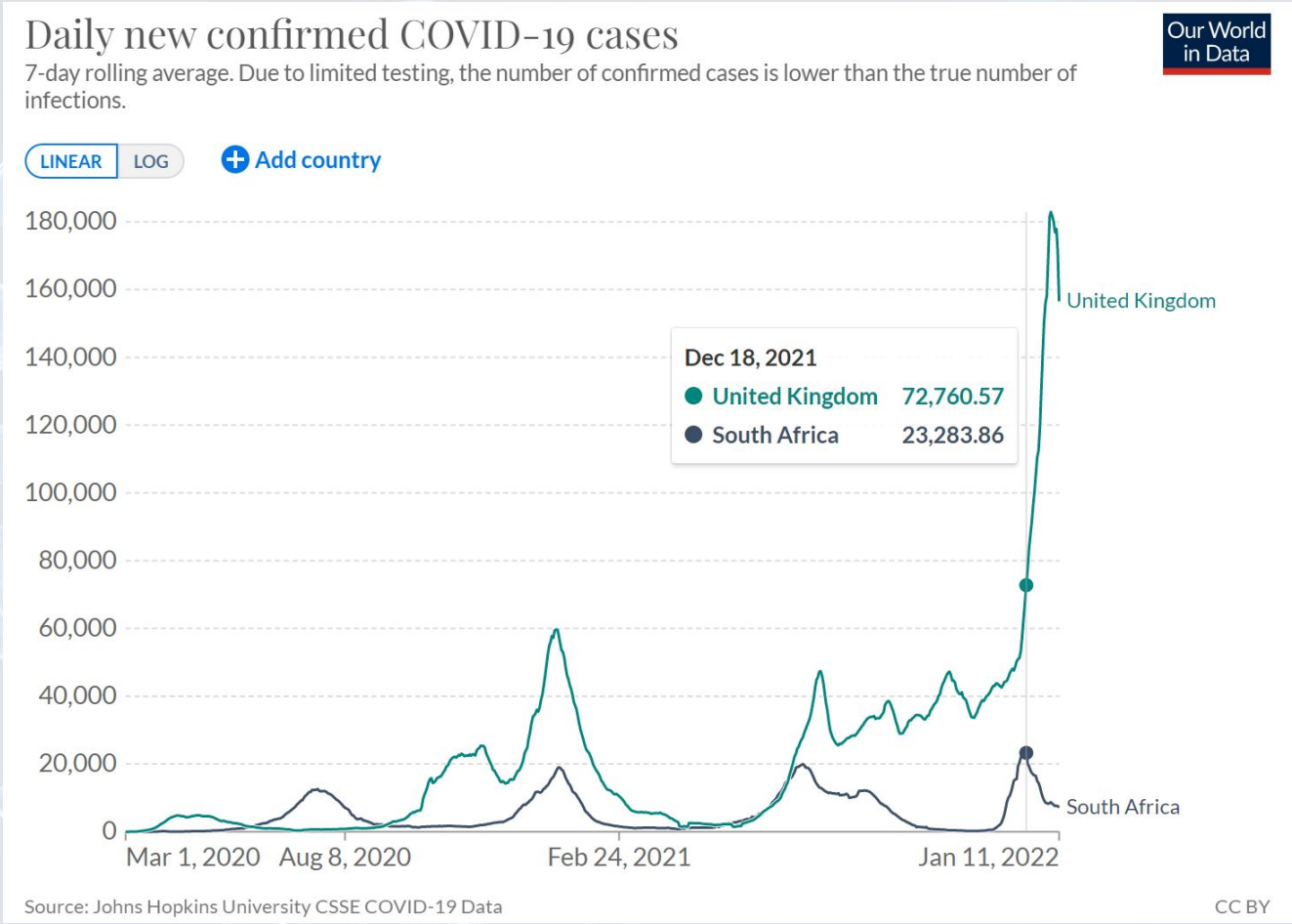
Our World in Data



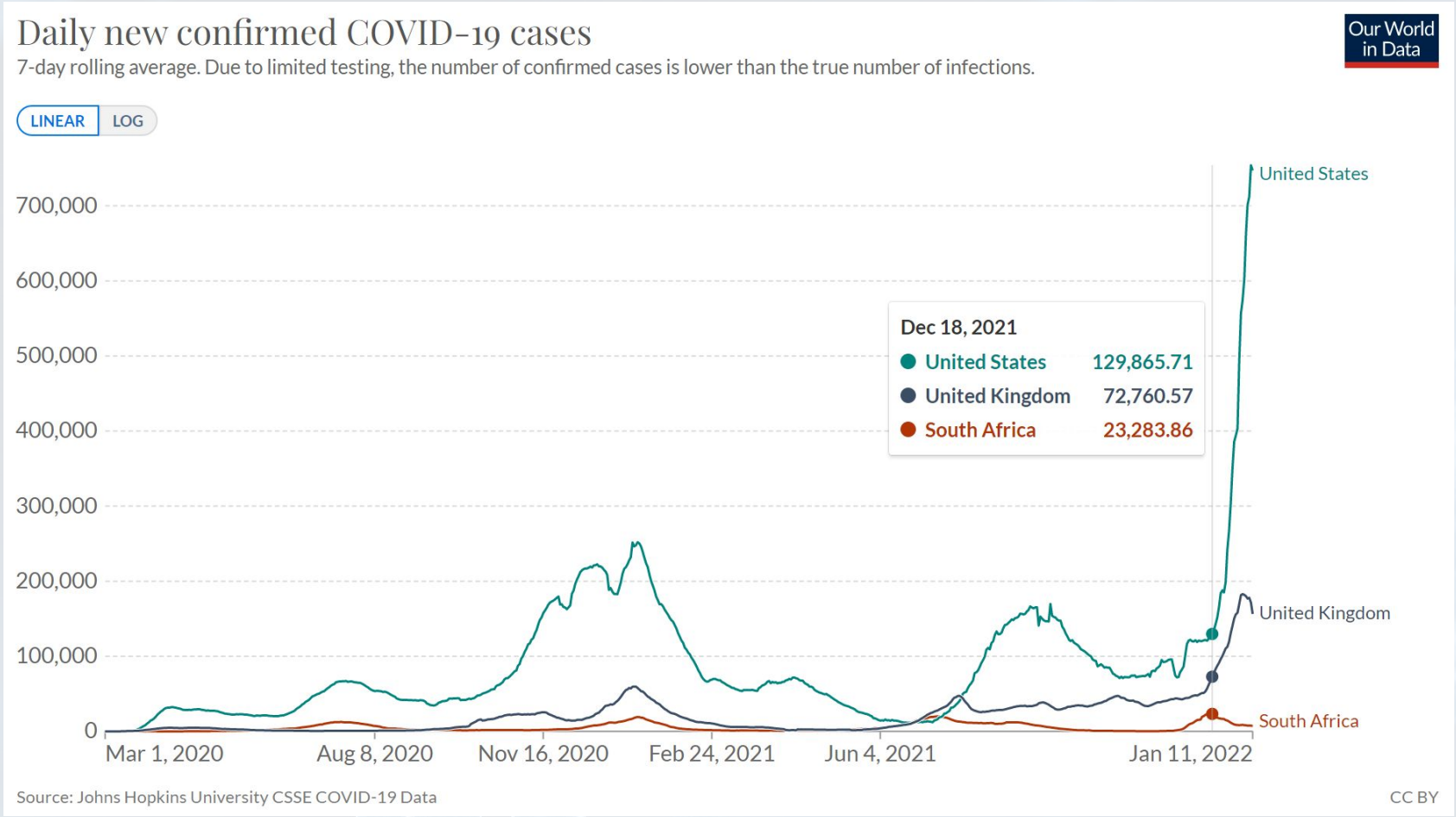
Source: Our World in Data


This month will likely see a record number of cases
Total new Covid-19 cases by month, United States
25 million total cases
20
15
10
5
0
Likely range
Projected
Jan. 2022
Jan. 2021
Previous months
1
5
10
15
20
25
30
Day of the month
Sources: Projections by Teresa Yamana, Sen Pei, Marta Galanti and Jeffrey Shaman at Columbia University.

Source: NYT



Source: [Our World in Data]



Source: [Our World in Data]

Epi: State

Massachusetts Department of Public Health | COVID-19 Dashboard
Today at a Glance

Released on: January 11, 2022
Data as of: January 10, 2022
Caution: recent data may be incomplete

Navigation

- **Today's Overview**
- Overview Trends
- COVID-19 Cases
- COVID-19 Testing
- Hospitalizations
- COVID-19 Deaths
- Higher Ed & LTCF
- Patient Breakdown
- City & Town Data
- Resources
- Data Archive

For data on COVID-19 variants, click here (CDC website)

Cases

Confirmed Cases

Today there were 17,802 new, confirmed cases reported bringing the total to 1,264,925 total confirmed cases.

Probable Cases

Today, there were 3,163 new, probable cases reported bringing the total to 100,683 total probable cases.

Testing

Tests Reported

There were 91,106 new COVID-19 molecular tests reported, bringing the cumulative total to 37,251,747 tests.

Percent Positivity

The 7-day average of percent positivity is 22.78%.

Hospitalizations

Hospitalizations

There are 2,970 patients hospitalized for COVID-19.

ICU & Intubated Patients

There are 452 patients in Intensive Care Units (ICU) and 270 patients are intubated.

Deaths

Confirmed Deaths

There were 116 new, confirmed deaths reported. There have been 20,275 confirmed deaths in total.

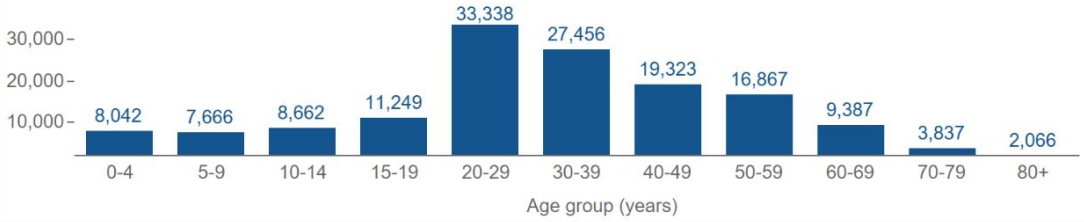
Probable Deaths

There were 4 new, probable deaths reported. There have been 488 probable deaths in total.

Average Age of Deaths

The average age of patients who died of COVID-19 was 73 years old.

Confirmed cases by age during the last two weeks *Data updated weekly



For details on the definitions of each indicator hover over the box or graph. All data included in this dashboard are preliminary and subject to change. Data Sources: COVID-19 Data provided by the Bureau of Infectious Disease and Laboratory Sciences and the Registry of Vital Records and Statistics; COVID-19 Hospitalization Data provided by the MDPH survey of hospitals (hospital survey data are self-reported); Created by the Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences, Division of Surveillance, Analytics and Informatics.

Massachusetts Department of Public Health | COVID-19 Dashboard
Trends: 7-day Averages Over Time

Released on: January 11, 2022
Data as of: January 10, 2022
Caution: recent data may be incomplete

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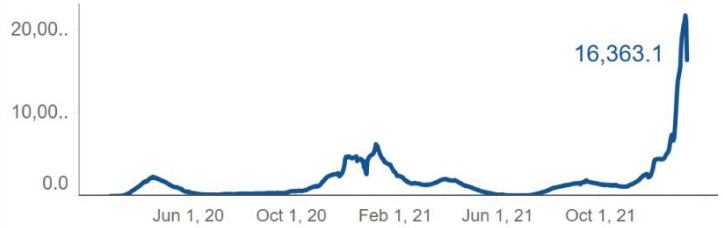
Select dates:
3/1/2020 to 1/10/20..

Cases

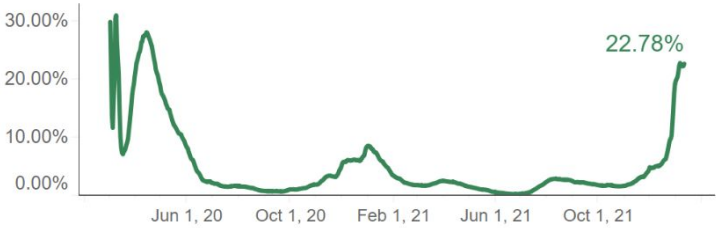
7-day average of COVID-19 confirmed cases



The lowest observed value was 64.1 on 6/25/2021.

Testing

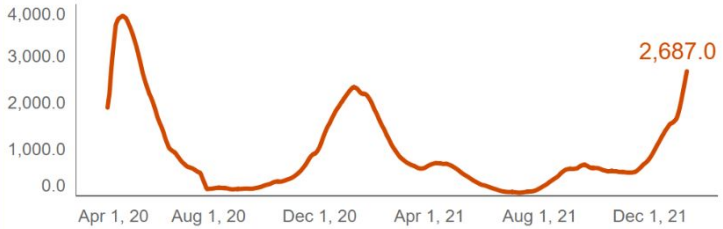
7-day weighted average percent positivity



The lowest observed value was 0.31% on 6/25/2021.

Hospitalizations

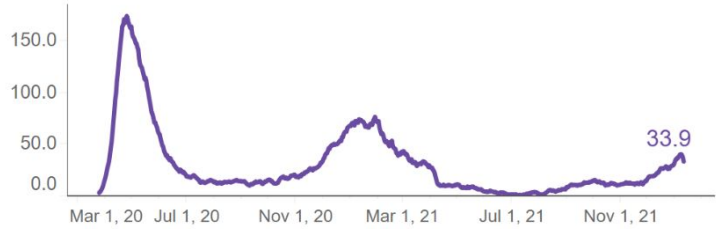
7-day average of hospitalizations



The lowest observed value was 84.8 on 7/9/2021.

Deaths

7-day average of confirmed deaths



The lowest observed value was 1.3 on 7/11/2021.

The lowest observed value is since tracking of the lowest value began on April 15, 2020. For details on the definitions of each indicator please see the corresponding tab for that indicator. All data included in this dashboard are preliminary and subject to change. Data Sources: COVID-19 Data provided by the Bureau of Infectious Disease and Laboratory Sciences and the Registry of Vital Records and Statistics; Created by the Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences, Division of Surveillance, Analytics and Informatics.

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Hospitalizations | ICU & Intubation | Patient Demographics | Bed Occupancy

Select a date*:
1/10/2022

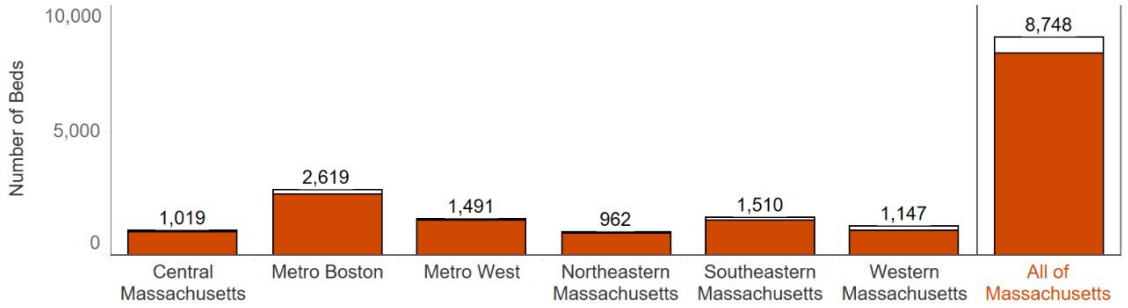
Occupied beds

As of today, 93% of medical/surgical beds are occupied and 87% of ICU beds are occupied.

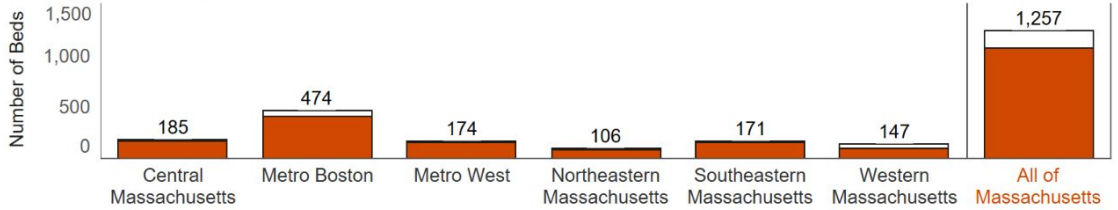
There are currently 0 beds occupied through alternate medical sites.

*The most recent 4 weeks of data are viewable on this page by using the "select a date" menu above. To view data outside of this range, please visit our data archive and download the raw data.

Available and occupied medical/surgical (not ICU) beds by region



Available and occupied ICU beds by region



Hospitalization data provided by the MDPH hospital survey (hospital survey data are self-reported). All data included in this dashboard are preliminary and subject to change. Created by the Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences, Division of Surveillance, Analytics and Informatics.

Figure 1. Percentage of Visits for Influenza-Like Illness (ILI) Reported by Sentinel Provider Sites in Massachusetts October 3, 2021 - January 1, 2022

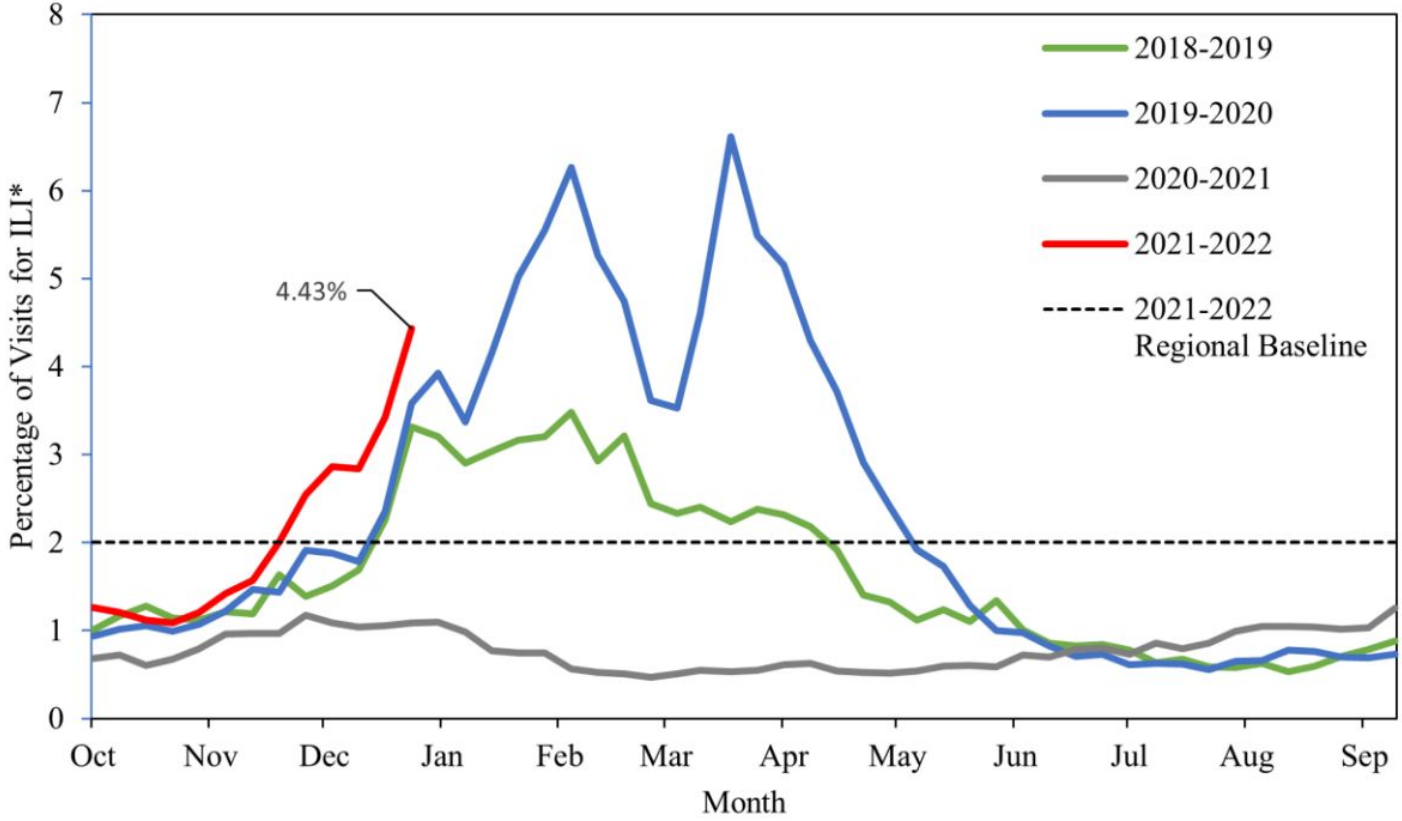
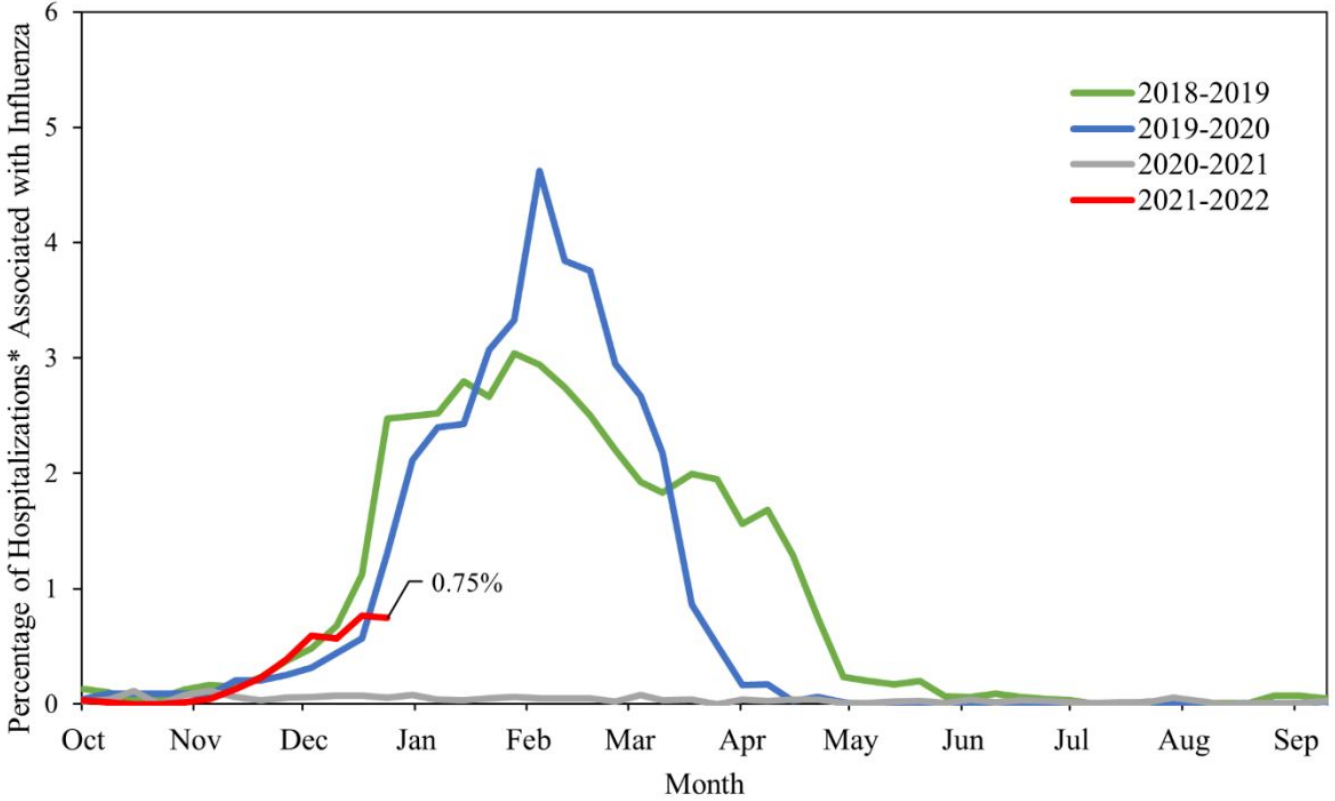


Figure 2. Percentage of Hospitalizations Associated with Influenza in Massachusetts
October 3, 2021 - January 1, 2022



*All patients admitted through hospital emergency departments as captured by syndromic surveillance

Vaccinations

WHO-Approved COVID-19 Vaccines (10)

- **RNA**
  - *mRNA-1273* (Moderna)
  - *BNT162b2* (Pfizer/BioNTech)

- **Nonreplicating viral vector**
  - *Ad26.COV2.S* (Janssen)
  - AZD1222 (Oxford/AstraZeneca)
  - Covishield (Serum Institute of India)

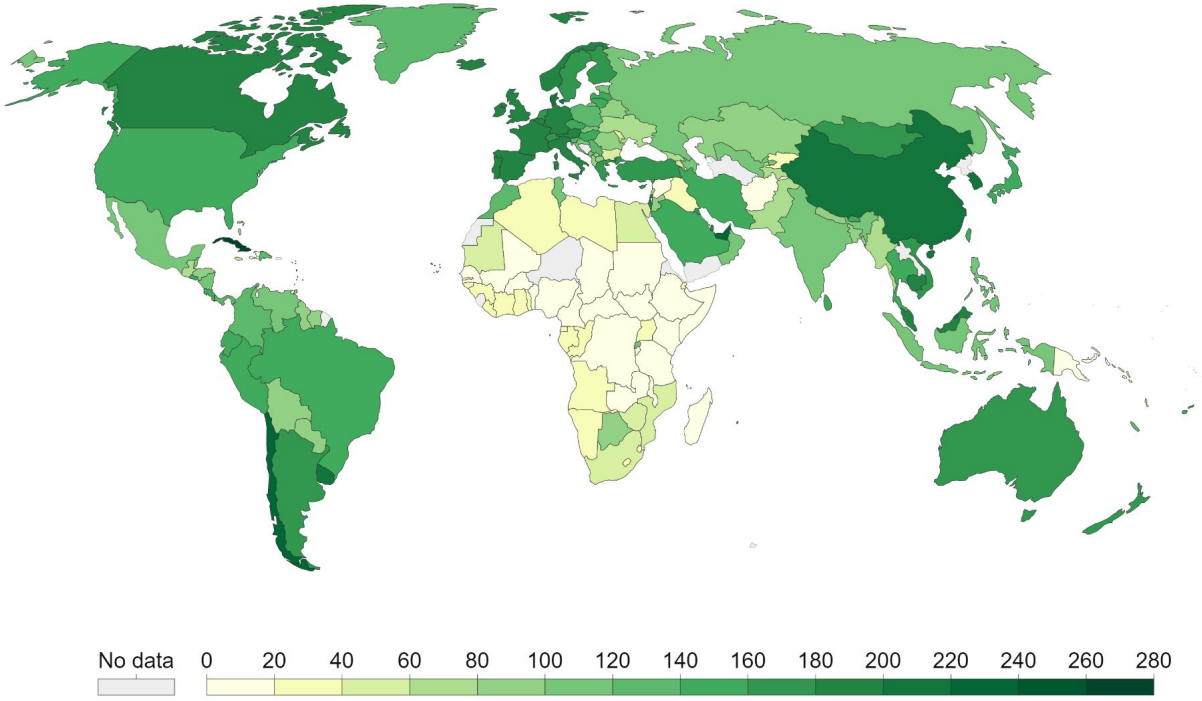
- **Inactivated virus**
  - Covaxin (Bharat Biotech)
  - BBIBP-CorV VeroCells (Sinopharm)
  - CoronaVac (Sinovac)

- **Protein subunit**
  - *NVX-CoV2373* (Novavax)
  - *COVOVAX* (Serum Institute of India)

COVID-19 vaccine doses administered per 100 people, Jan 10, 2022

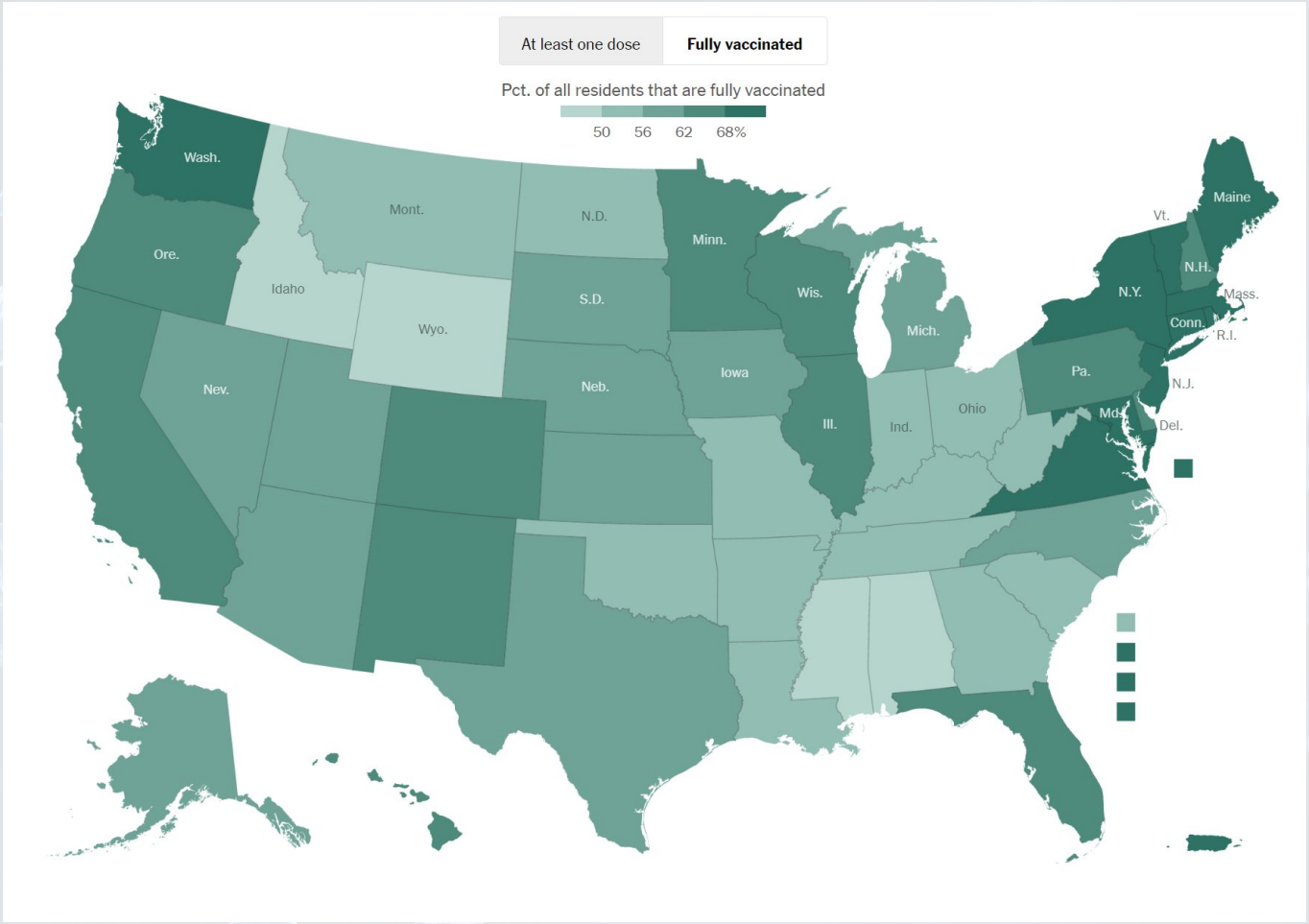
All doses, including boosters, are counted individually. As the same person may receive more than one dose, the number of doses per 100 people can be higher than 100.

Our World in Data



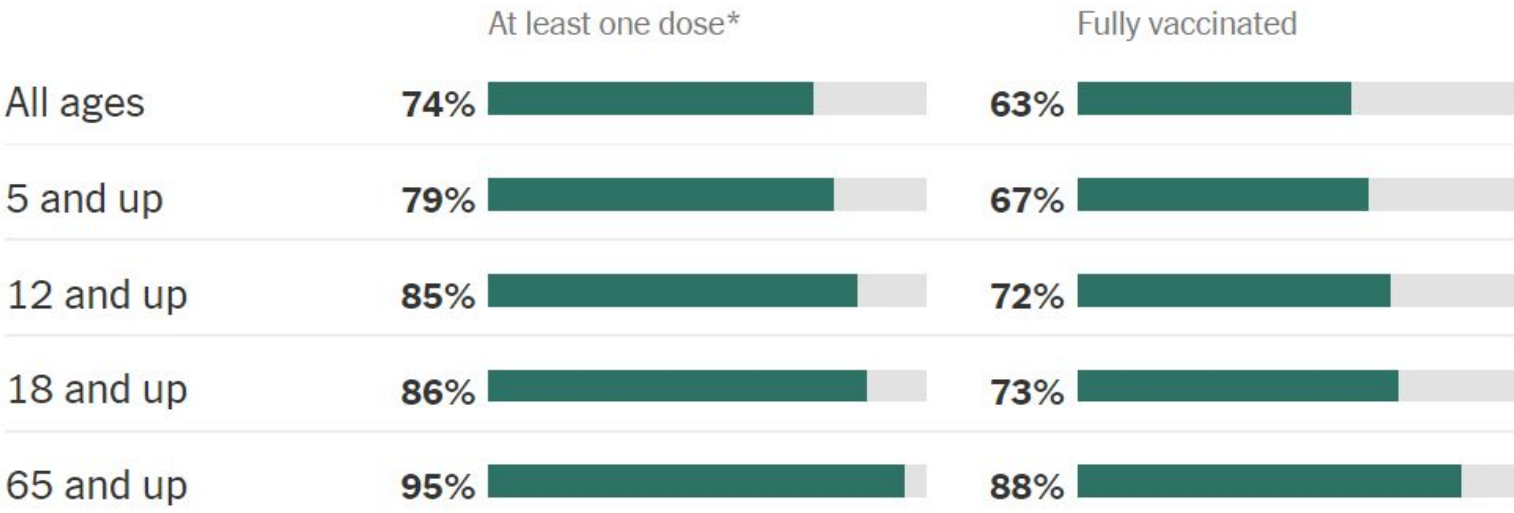
Source: Official data collated by Our World in Data – Last updated 11 January 2022, 10:20 (London time)
OurWorldInData.org/coronavirus • CC BY

Source: [Our World in Data]



Source: [NYT COVID Dashboard]

United States vaccinations



*The C.D.C. reported on Nov. 30, 2021 that booster doses are sometimes misclassified as first doses, which may overestimate first dose coverage among adults.

Sources: Centers for Disease Control and Prevention, U.S. Census Bureau | Note: Figures include the U.S. territories and three countries with special agreements.

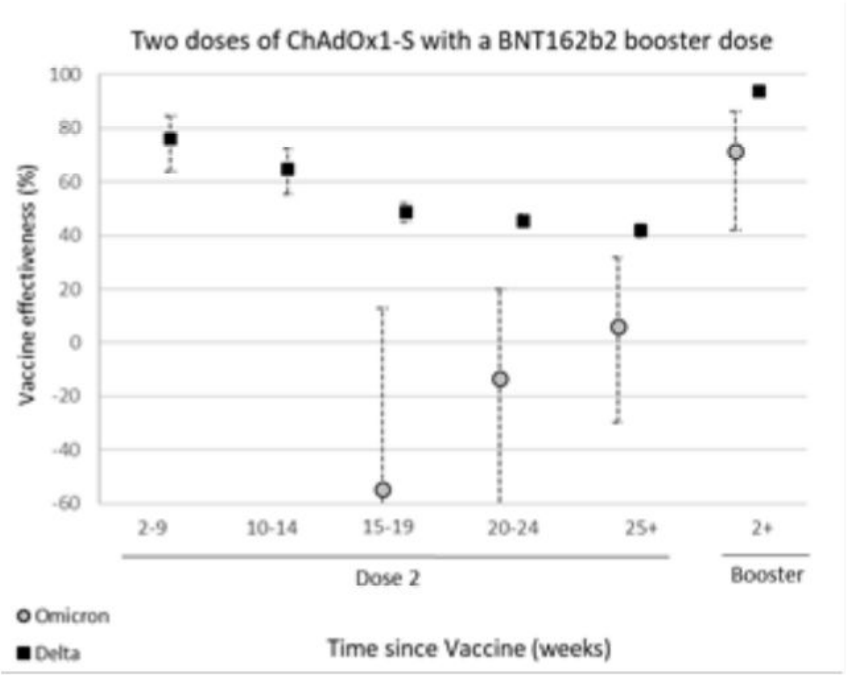
Source: NYT COVID Dashboard

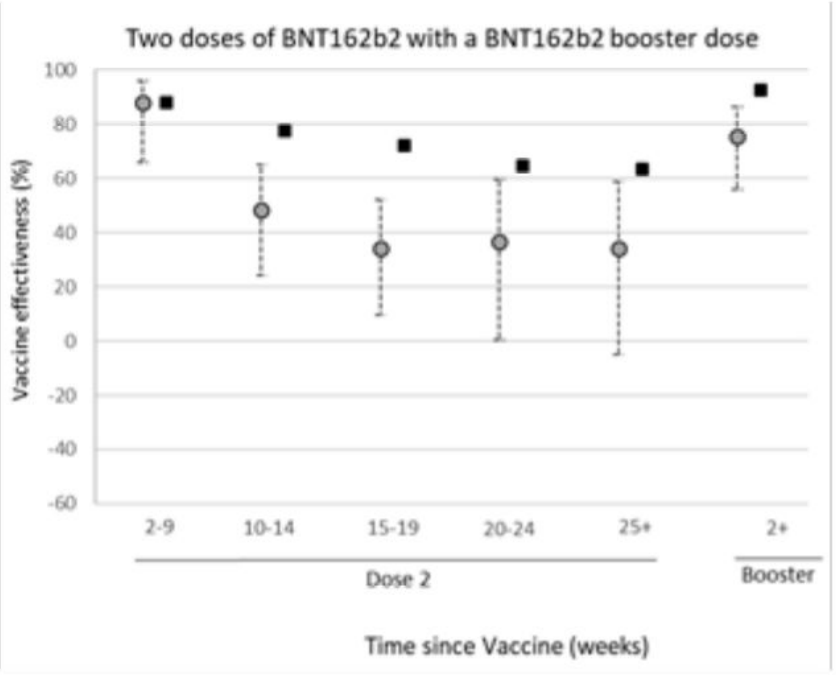
CDC COVID-19 Vaccine Booster Recommendations

IF YOU RECEIVED	Who should get a booster:	When to get a booster:	Which booster can you get:
Pfizer-BioNTech	• Everyone 12 years and older	• At least 5 months after completing your primary COVID-19 vaccination series	• Pfizer-BioNTech or Moderna (mRNA COVID-19 vaccines) are preferred in most* situations • Teens 12–17 years old may only get a Pfizer-BioNTech COVID-19 vaccine booster
Moderna	• Adults 18 years and older	• At least 5 months after completing your primary COVID-19 vaccination series	• Pfizer-BioNTech or Moderna (mRNA COVID-19 vaccines) are preferred in most* situations
Johnson & Johnson's Janssen*	• Adults 18 years and older	• At least 2 months after receiving your J&J/Janssen COVID-19 vaccination	• Pfizer-BioNTech or Moderna (mRNA COVID-19 vaccines) are preferred in most* situations

Mix and Match: people ages 18 years and older who received Janssen primary vaccination should preferably receive an mRNA vaccine booster dose at least 2 months (8 weeks) later

VACCINE EFFICACY - Pfizer





Source: [U.K. Health Security Agency]

Policy

CDC Isolation and Quarantine - Update

- General population
  - **People with COVID-19:** isolate for 5 days and if they are asymptomatic or their symptoms are resolving (without fever for 24 hours), follow that by 5 days of wearing a mask when around others to minimize the risk of infecting people they encounter. The change is motivated by science demonstrating that the majority of SARS-CoV-2 transmission occurs early in the course of illness, generally in the 1-2 days prior to onset of symptoms and the 2-3 days after
  - **COVID-19 Exposure:** For people who are unvaccinated or are more than six months out from their second mRNA dose (or more than 2 months after the J&J vaccine) and not yet boosted, CDC now recommends quarantine for 5 days followed by strict mask use for an additional 5 days. For all those exposed, best practice would also include a test for SARS-CoV-2 at day 5 after exposure. If symptoms occur, individuals should immediately quarantine until a negative test confirms symptoms are not attributable to COVID-19.

CDC Isolation and Quarantine - Update

- **HCW:**
  - HCP with mild to moderate illness who are NOT moderately to severely immunocompromised:
    - At least 7 days if a negative antigen or NAAT is obtained within 48 hours prior to returning to work (or 10 days if testing is not performed or if a positive test at day 5-7) have passed since symptoms first appeared, **and**
    - At least 24 hours have passed since last fever without the use of fever-reducing medications, **and**
    - Symptoms (e.g., cough, shortness of breath) have improved
  - HCP who were asymptomatic throughout their infection and are NOT moderately to severely immunocompromised:
    - At least 7 days if a negative antigen or NAAT is obtained within 48 hours prior to returning to work (or 10 days if testing is not performed or a positive test at day 5-7) have passed since the date of their first positive viral test
  - HCP who are moderately/severely immunocompromised: test-based strategy for RTW
  - HCP with severe to critical illness and are not moderately to severely immunocompromised: 20 days since symptoms first appeared **and** at least 24 hours have passed since last fever without the use of fever-reducing medications **and** symptoms (cough, SOB) have improved (may also utilize test-based strategy to inform duration of isolation)

Mass. DPH Isolation/Quarantine - Update

- HCP **who had COVID-19 symptoms and is isolating** may return to work:
  - after 5 days have passed since the first positive COVID-19 viral test was taken; **AND**
  - **symptoms have substantially improved, including being fever-free, for 24 hours; AND**
  - the HCP is fully vaccinated (meaning it has been at least 14 days since the health care worker has received at least one dose of J&J/Janssen vaccine or two doses of Pfizer or Moderna); **AND**
  - the HCP received a negative viral test (antigen or molecular) on Day 5 or later.
    - At this time, acute-care hospital[=]-based HCP are not required to receive a negative viral test prior to returning to work after Day 5. However, a viral test on Day 5 or later is best practice and is strongly recommended.
- An **isolating health care worker who has been asymptomatic and is isolating** may return to work after 5 days once:
  - the HCP is fully vaccinated (meaning it has been at least 14 days since the health care worker has received at least one dose of J&J/Janssen vaccine or two doses of Pfizer or Moderna)[2,3]; **AND**
  - the HCP received a negative viral test (antigen or molecular) on Day 5 or later.
- At this time, acute-care hospital-based HCP are not required to receive a negative viral test prior to returning to work after Day 5. However, a viral test on Day 5 or later is best practice and is strongly recommended.
- Any health care worker who returns to work prior to 10 days since their first positive COVID-19 diagnostic test was taken should avoid caring for patients who are moderately to severely immunocompromised until after 10 days has passed since their positive viral test.

Source: Mass. DPH

Boston B Together - Mayor Michelle Wu

COVERED LOCATIONS

Starting on January 15, 2022, people will be required to show proof of vaccination against COVID-19 to enter certain indoor spaces in Boston that offer:

- Indoor dining, including bars and nightclubs
- Indoor fitness
- Indoor entertainment

PROOF OF VACCINATION

To enter one of the establishments listed above, you will need to show that you are vaccinated against COVID-19. That verification can be done with:

- a CDC vaccination card
- a digital image of your CDC card
- an image of any official immunization record, or
- a City of Boston app or any other COVID vaccine verification app (Massachusetts Immunization Information System)

DATE	REQUIREMENT
Saturday, January 15	People age 12+ must show proof of one dose of vaccine
Tuesday, February 15	People age 12+ must show proof of full vaccination
Tuesday, March 1	Children age 5-11 must show proof of one dose of vaccine
Sunday, May 1	People age 5+ must show proof of full vaccination

Source: City of Boston

A Word on Humility

- “SARS-CoV-2 continues to persist, evolve, and surprise. In July 2021, with vaccinations apace and infection rates plummeting, Biden proclaimed that “we’ve gained the upper hand against this virus,” and the Centers for Disease Control and Prevention (CDC) relaxed its guidance for mask wearing and socializing.1 By September 2021, the Delta variant proved these steps to be premature, and by late November, **the Omicron variant created concern about a perpetual state of emergency. In delineating a national strategy, humility is essential.** The precise duration of immunity to SARS-CoV-2 from vaccination or prior infection is unknown. Also unknown is whether SARS-CoV-2 will become a seasonal infection; whether antiviral therapies will prevent long COVID; or whether even more transmissible, immune-evading, or virulent variants will arise after Omicron…The “new normal” requires recognizing that SARS-CoV-2 is but one of several circulating respiratory viruses that include influenza, respiratory syncytial virus (RSV), and more. COVID-19 must now be considered among the risks posed by all respiratory viral illnesses combined. Many of the measures to reduce transmission of SARS-CoV-2 (eg, ventilation) will also reduce transmission of other respiratory viruses. Thus, policy makers should retire previous public health categorizations, including deaths from pneumonia and influenza or pneumonia, influenza, and COVID-19, and focus on a new category: the aggregate risk of all respiratory virus infections.”

Source: JAMA

Real-World Ponderings

Omicron Q&A

- Kids: higher rates of infection/hospitalizations compared to other variants but NOT because Omicron is more severe (more a product of increased numbers of infections overall)
- Omicron severity: overall, there seems to be less severe disease, but hospital data show that the vast majority of COVID-19 patients in care are unvaccinated. This means that unvaccinated people should assume that omicron is just as dangerous as other variants
- Rapid antigen testing: FDA advises that these tests were not made for throat swabbing (use as directed). There's some suggestion that these tests could be less likely to catch an infection from omicron—especially if it's early.

Source: Johns Hopkins Bloomberg School of Public Health

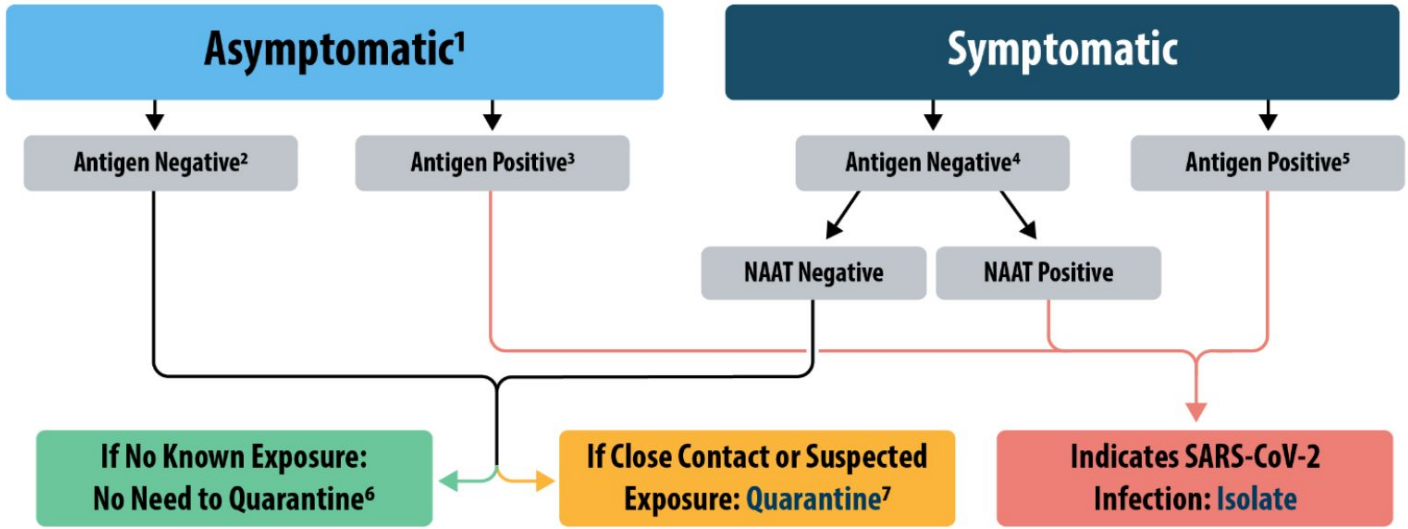
Antigen Testing

- CMS: Beginning January 15, 2022, individuals with private health insurance coverage or covered by a group health plan who purchase an over-the-counter COVID-19 diagnostic test authorized, cleared, or approved by the U.S. Food and Drug Administration (FDA) will be able to have those test costs covered by their plan or insurance. Insurance companies and health plans are required to cover 8 free over-the-counter at-home tests per covered individual per month

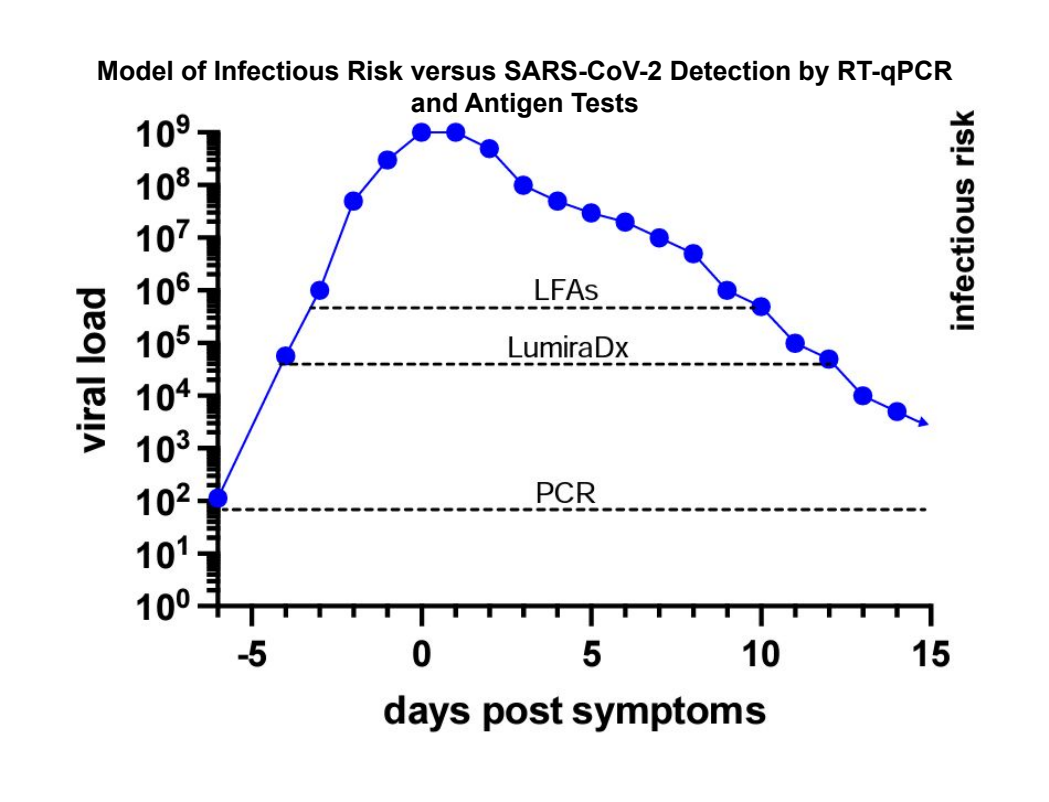
- CDC: “Gold standard” for clinical diagnostic detection of SARS-CoV-2 remains laboratory-based NAATs
    - May be necessary to confirm an antigen test result with a laboratory-based NAAT, especially if the result of the antigen test is inconsistent with the clinical context
    - Evaluating the results of an antigen test for SARS-CoV-2 depends primarily on the clinical and epidemiological context of the person who has been tested (e.g., symptoms, exposure to others with COVID-19, vaccination status, previous infection status, or setting in which they live)

Using Antigen Tests for SARS-CoV-2 in Community Settings

Figure 2. Antigen Test Algorithm for Community Settings

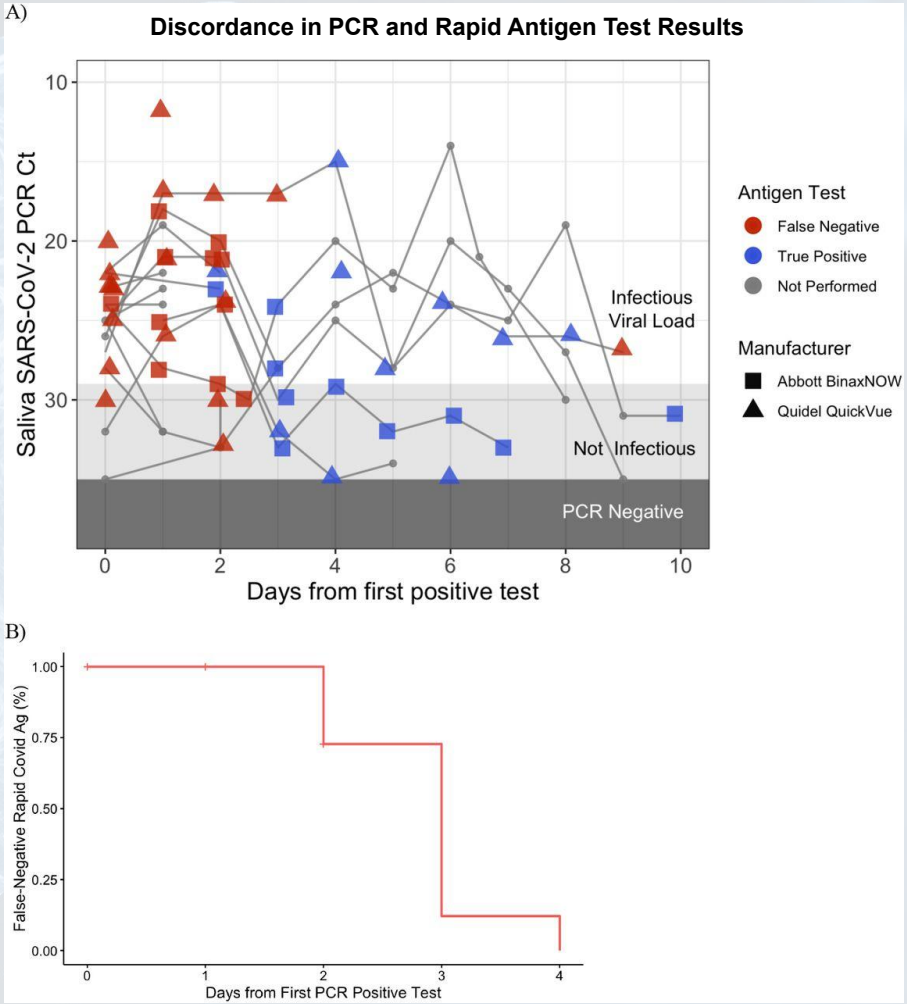


Source: CDC



Both LumiraDx and lateral flow-based antigen tests (e.g., BD Veritor, CareStart, and Oscar Corona) were able to detect individuals with viable, culturable virus and who therefore pose an immediate infectious risk to others. Dotted lines indicate reliable detection threshold predicted for each method. Presumptively, infectious risk is proportional to the amount of culturable virus which is roughly proportional to the viral load in samples.

Source: MedRxIV



Source: MedRxIV

FDA-Authorized Treatment for the Non-Hospitalized

Summary Table of Food and Drug Administration Authorized Treatments for high-risk patients.

Treatments	Example	How is it administered?	When should I take it?	Where can I find it?
Prevention before exposure	EVUSHELD (PDF) (4 pp, 254KB (monoclonal antibodies)	By injection	Every 6 months	Talk to your healthcare provider
Prevention after exposure	Regen-Cov (Monoclonal antibodies (external website))	By injection or infusion	As soon as possible after a person is exposed	Monoclonal Antibodies locator or talk to your healthcare provider
Treatments for mild illness	Sotrovimab, Bam/Ete, Regen-Cov (Monoclonal antibodies (external website))	By injection or infusion	Within 10 days of symptoms starting	Monoclonal Antibodies locator or talk to your healthcare provider
Treatments for mild illness	Molnupiravir (PDF) (5 pp, 232KB) Paxlovid (PDF) (6 pp, 236 KB) (Antivirals)	By oral tablet	Within 5 days of symptoms starting	Select pharmacies, if prescribed by healthcare provider

Source: Virginia Department of Health

Early Remdesivir to Prevent Progression to Severe Covid-19 in Outpatients

- Randomized, double-blind, placebo-controlled trial involving nonhospitalized patients with Covid-19 who had symptom onset within the previous 7 days and who had at least one risk factor for disease progression (age ≥60 years, obesity, or certain coexisting medical conditions). Patients were randomly assigned to receive **intravenous remdesivir (200 mg on day 1 and 100 mg on days 2 and 3)** vs. placebo
  - September 18, 2020, through April 8, 2021
- **562 patients** who underwent randomization and received at least one dose of remdesivir or placebo were included in the analyses: 279 patients in the remdesivir group and 283 in the placebo group. The mean age was 50 years
- Total of 4 of 246 patients (1.6%) in the remdesivir group and 21 of 252 (8.3%) in the placebo group had a Covid-19–related medically attended visit by day 28 (hazard ratio, 0.19; 95% CI, 0.07 to 0.56). No patients had died by day 28. Adverse events occurred in 42.3% of the patients in the remdesivir group and in 46.3% of those in the placebo group

Source: NEJM

Q&A