



COVID-19



Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET)

Updated Sept. 9, 2022

Purpose and Methods

Population-based surveillance is the collection, analysis, and interpretation of data on a population in a specified area.

COVID-NET is a population-based surveillance system.

About COVID-NET

Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET) is a population-based surveillance system that collects data on laboratory-confirmed COVID-19-associated hospitalizations among children and adults. The current network is comprised of over 300 acute-care hospitals in 13 states.

Why COVID-NET Data Is Important

COVID-NET is CDC's source for important data on hospitalization rates associated with COVID-19. Hospitalization rates are updated weekly. COVID-NET also provides important clinical information on COVID-19-associated hospitalizations, including age group, sex, race/ethnicity and underlying health conditions.



Hospitalization Rates



Patient Characteristics



Hospitalization Rates by Vaccination Status

COVID-NET Data Collection, Timeliness and Interpretation

Cases are identified in COVID-NET if they test positive for SARS-CoV-2 (the virus that causes COVID-19 disease) through a test ordered by a health care professional and are hospitalized within 14 days of the positive test. Clinical data are collected using

a standardized case reporting form by trained surveillance officers, so the data are collected in a standardized and uniform way.

COVID-NET is expected to collect the following data for each case:

- age
- sex
- surveillance site
- date of hospital admission
- evidence of positive SARS-CoV-2 test
- demographic information (e.g., race, ethnicity)
- clinical (medical) history (underlying health conditions)
- clinical course (progression of the illness such as admission to an intensive care unit)
- medical interventions (medical care for the illness such as need for mechanical ventilation)
- outcomes (e.g., released from the hospital, death)

How COVID-NET Hospitalization Data Is Different from Hospitalizations Reported in National and State Case Counts

COVID-NET differs from hospitalizations reported in national and state case counts in two ways. First, state and national COVID-19 case reporting are based on all people who test positive for COVID-19 in the United States. COVID-NET is limited to COVID-19-associated hospitalizations captured in the COVID-NET surveillance area. Second, COVID-NET reports rates and not just counts. These rates show how many people are hospitalized with COVID-19 in the surveillance area, compared to the entire number of people residing in that area.

How COVID-NET Calculates Hospitalization Rates

Hospitalization rates are calculated by the number of residents of a defined area who are hospitalized with a positive SARS-CoV-2 laboratory test divided by the total population within that defined area.

COVID-NET coverage

COVID-NET comprises 98 counties in the 13 states participating in the [Emerging Infections Program \(EIP\)](#) and the Influenza Hospitalization Surveillance Project (IHSP). Participating states include: California, Colorado, Connecticut, Georgia, Maryland, Michigan, Minnesota, New Mexico, New York, Ohio, Oregon, Tennessee, and Utah.

COVID-NET covers approximately 10 percent of the U.S. population. The counties covered are located in 9 of the 10 [Health and Human Services \(HHS\) regions](#) [↗](#). The designated COVID-NET surveillance area is generally similar to the U.S. population by demographics; however, the information might not be generalizable to the entire country.

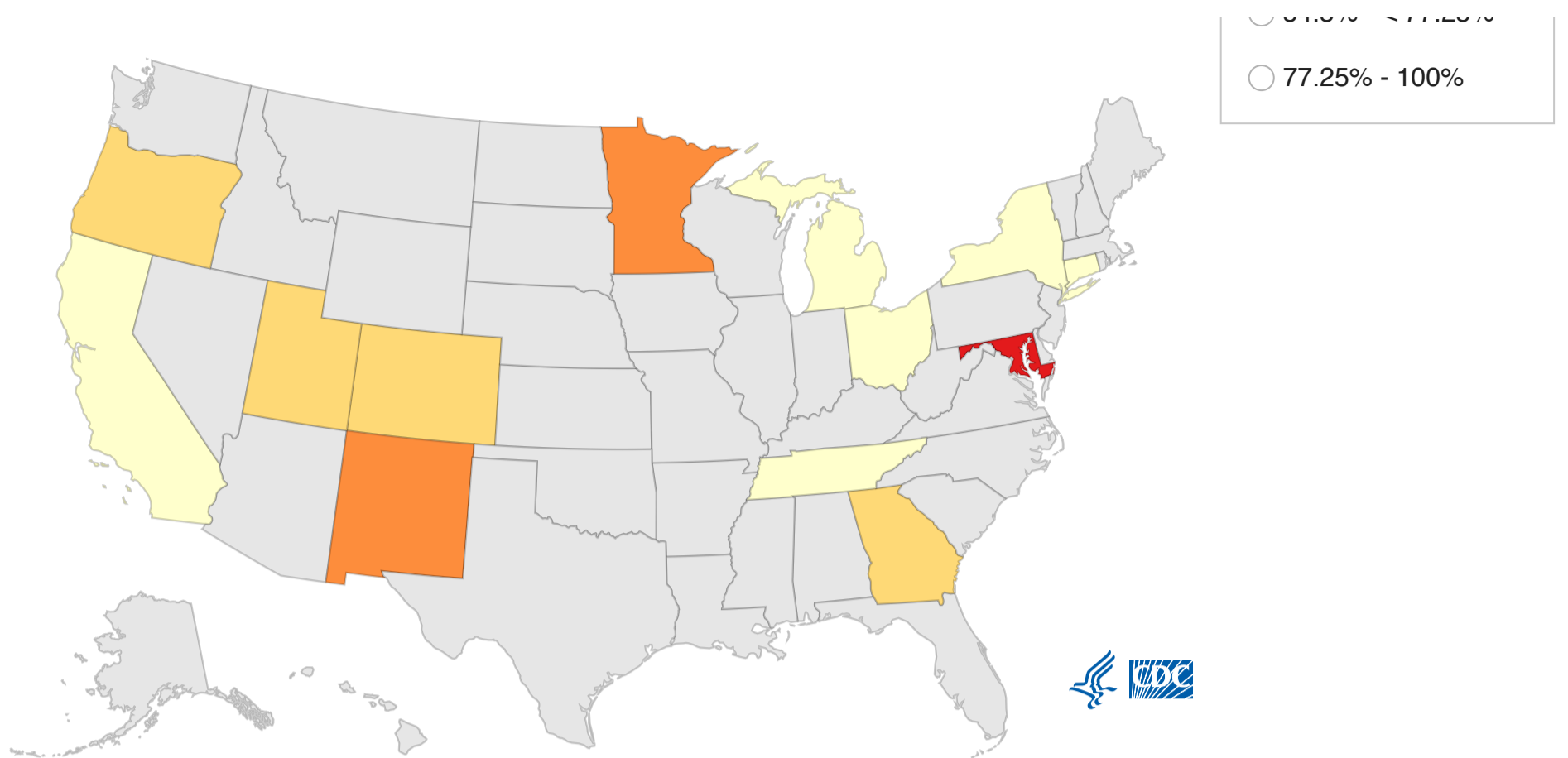
COVID-NET Surveillance Area

Percentage of state population represented by participating COVID-NET counties

9% - < 31.75%

31.75% - < 54.5%

54.5% - < 77.25%



COVID-NET Sites		
Location	% of State Populatio...	Number of Participati...
<input type="radio"/> California	9%	3
<input type="radio"/> Colorado	49%	5
<input type="radio"/> Connecticut	29%	2
<input type="radio"/> Georgia	39%	8
<input type="radio"/> Maryland	100%	24
<input type="radio"/> Michigan	13%	5
<input type="radio"/> Minnesota	55%	7
<input type="radio"/> New Mexico	61%	7
<input type="radio"/> New York	11%	15
<input type="radio"/> Ohio	18%	10
<input type="radio"/> Oregon	44%	3
<input type="radio"/> Tennessee	26%	8
<input type="radio"/> Utah	36%	1

[Download Data \(CSV\)](#)

Accessing COVID-NET Data

COVID-19-associated hospitalization rates are reported to CDC on a weekly basis. COVID-NET data, including [hospitalization rates for different age groups](#) and [data on patient characteristics](#), are available on [COVID Data Tracker Weekly Review](#).


COVID-NET hospitalization data are preliminary and may change as more data is received. In particular, case counts and rates for recent hospital admissions are subject to lag. As data are received each week, prior case counts and rates are updated accordingly.










COVID-NET Publications

2022







- Havers FP, Pham H, Taylor CA, et al. COVID-19-Associated Hospitalizations Among Vaccinated and Unvaccinated

Adults 18 Years or Older in 13 US States, January 2021 to April 2022. *JAMA Intern Med*. Published online September 8, 2022. doi: <https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2796235> 

- Havers FP, Patel K, Whitaker M, et al. Laboratory-Confirmed COVID-19–Associated Hospitalizations Among Adults During SARS-CoV-2 Omicron BA.2 Variant Predominance — COVID-19–Associated Hospitalization Surveillance Network, 14 States, June 20, 2021–May 31, 2022. *MMWR Morb Mortal Wkly Rep* 2022;71:1085–1091. DOI: <http://dx.doi.org/10.15585/mmwr.mm7134a3> 
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- Couture A, Iuliano D, Chang H, et al. Estimating COVID-19 Hospitalizations in the United States with Surveillance Data Using a Bayesian Hierarchical Model: A Modeling Study. *JMIR Public Health Surveill*. 2022 Apr 21. doi: [10.2196/34296](https://doi.org/10.2196/34296)  . Epub ahead of print. PMID: 35452402.
- Shi DS, Whitaker M, Marks KJ, et al. Hospitalizations of Children Aged 5–11 with Laboratory-Confirmed COVID-19 — COVID-NET, 14 States, March 2020–February 2022. *MMWR Morb Mortal Wkly Rep*. ePub: 2022 Apr 19. DOI: <http://dx.doi.org/10.15585/mmwr.mm7116e1> 
- Taylor CA, Whitaker M, Anglin O, et al. COVID-19–Associated Hospitalizations Among Adults During SARS-CoV-2 Delta and Omicron Variant Predominance, by Race/Ethnicity and Vaccination Status — COVID-NET, 14 States, July 2021–January 2022. *MMWR Morb Mortal Wkly Rep*. ePub: 2022 Mar 25; 71(12):466-473. DOI: <http://dx.doi.org/10.15585/mmwr.mm7112e2> 
- Marks KJ, Whitaker M, Agathis NT, et al. Hospitalization of Infants and Children Aged 0–4 Years with Laboratory-Confirmed COVID-19 — COVID-NET, 14 States, March 2020–February 2022. *MMWR Morb Mortal Wkly Rep*. 2022 Mar 18;71(11):429–436. DOI: <http://dx.doi.org/10.15585/mmwr.mm7111e2> 
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2021



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Resources

[Data Visualization](#)

[COVID Data Tracker Weekly Review](#)

[FAQ: COVID-19 Data and Surveillance](#)

[Cases, Data, and Surveillance](#)

[Emerging Infections Program](#)

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