

CDC COVID-NET Interactive: COVID-19-associated Hospitalizations Application Quick Reference Guide

Hospitalization Rates by Demographics, Characteristics, and Underlying Medical Conditions



Introduction

This Quick Reference Guide provides guidance on using the COVID-NET web application on this webpage: https://gis.cdc.gov/grasp/COVIDNet/COVID19_5.html and gives an overview of the COVID-19-associated Hospitalization Surveillance Network (COVID-NET).

This application features data shown in the CDC COVIDView report, which provides a weekly summary and interpretation of key indicators to track the COVID-19 pandemic in the United States. This includes information related to COVID-19 outpatient visits, emergency department visits, hospitalizations, deaths, and laboratory data. The CDC COVIDView report is accessible through the following weblink: <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covidview/index.html>

About the Data

Laboratory-confirmed COVID-19-associated hospitalization rates are monitored through the **COVID-19-Associated Hospitalization Surveillance Network (COVID-NET)**. COVID-NET conducts population-based surveillance for all ages for laboratory-confirmed COVID-19-associated hospitalizations in more than 250 acute care hospitals in 99 counties. These acute care hospitals are located in the 10 Emerging Infections Program (EIP) states (CA, CO, CT, GA, MD, MN, NM, NY, OR and TN) and four Influenza Hospitalization Surveillance Project (IHSP) states (IA, MI, OH and UT). Approximately 10% of the U.S. population is covered by this surveillance system.

Cases must be a resident of a designated catchment area and be hospitalized within 14 days of a positive SARS-CoV-2 test or have a positive test during hospitalization. Testing is performed at the discretion of health care providers or through facility testing policies. Cases are identified through active review of notifiable disease and laboratory databases, hospital admission, and infection control practitioner logs. A minimum set of variables (age, sex, race and ethnicity, hospital admission and discharge dates, outcome, and SARS-CoV-2 testing data) are collected for all patients to generate age-stratified, race and ethnicity-stratified, and sex-stratified COVID-19-associated hospitalization rates each week. COVID-19-associated hospitalization rates by race and ethnicity are calculated using hospitalized COVID-NET cases with complete race and ethnicity data for the numerator

and [NCHS bridged-race population estimates](#) for the denominator. Rates are adjusted for differences in age distributions within race and ethnicity strata in the COVID-NET catchment area; the age strata used for the adjustment are 0–17, 18–49, 50–64, 65–74, 75–84, and 85+ years.

Detailed medical chart abstraction is conducted by trained staff, including information on signs/symptoms on admission, underlying medical conditions, intensive care unit admission, mechanical ventilation and discharge diagnoses. Due to the large number of persons hospitalized with COVID-19, conducting a detailed abstraction of all hospitalizations is not possible. Therefore, a sample is generated as follows: random numbers are autogenerated and assigned to each case as soon as a case identification number is entered into the surveillance database; random samples of cases, stratified by age group and surveillance site, are drawn using these random numbers. Due to the sampling methodology, counts are not shown, and weighted percentages are presented for the sampled variables. The sampling strategy differs by surveillance site and month.

Note: COVID-NET hospitalization data are preliminary and subject to change as more data become available.



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

Accessing the COVID-NET Web-based Application

The COVID-NET application is available online and accessible by the public through the following internet link: https://gis.cdc.gov/grasp/COVIDNet/COVID19_5.html.

Application requirements:

- Preferred browsers are Google Chrome, Edge, Safari or Mozilla Firefox. Internet Explorer 11 is supported, but not a preferred browser due to decreased functionality and visualization of the interactive web application.

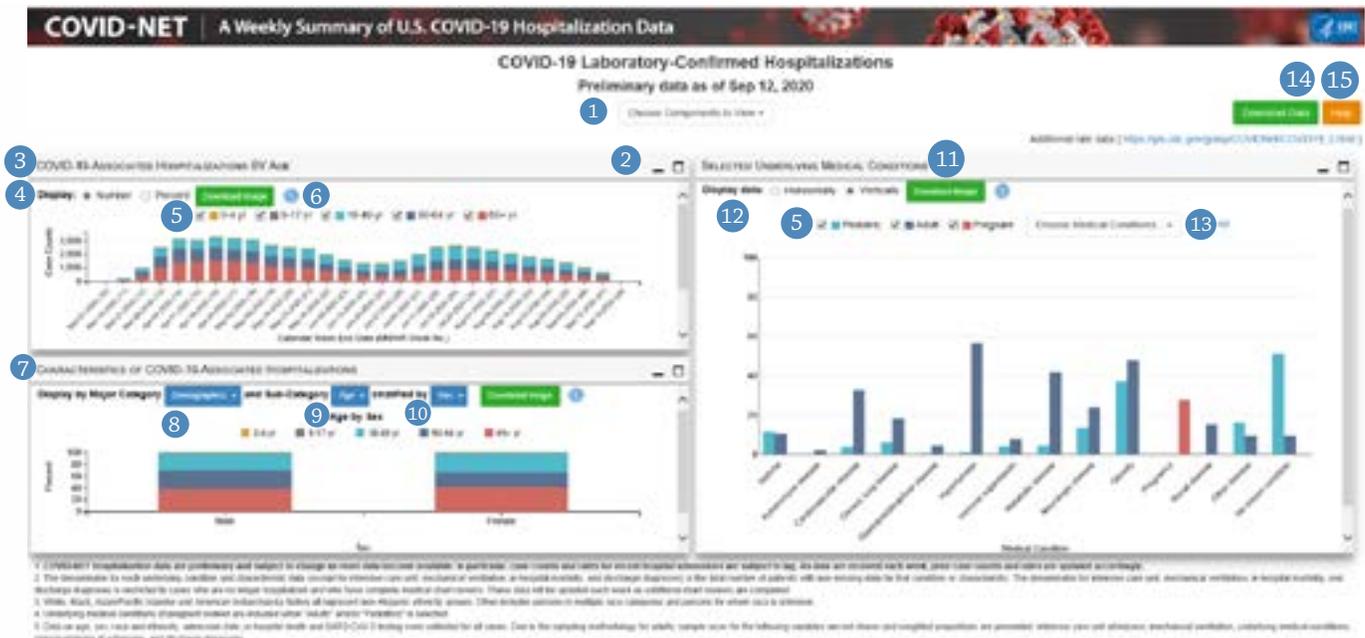
Once the website is loaded, a disclaimer dialog box will appear. Please review the disclaimer for important reference information. Click “OK” to continue to the COVID-NET web application. Clicking on “Cancel” will take you to the CDC Coronavirus Disease 2019 (COVID-19): COVID-NET webpage:

<https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covid-net/purpose-methods.html>.

Application Functions and Tool Overview

Below is an image of the default view of the COVID-NET web application. This interactive tool allows users to display and query information by age group, underlying medical conditions, and other selected characteristics. The numbered blue boxes highlight various functions of the web application, with the corresponding numbered descriptions for each tool function listed below. Data in the screenshot below are preliminary and subject to change.

The screenshot below contains preliminary data that are subject to change. This is an example of the appearance of the interactive web application.



- 1. Choose Components to View** – Click on the drop-down menu to select which bar chart(s) are displayed on the webpage. You can select “Case Counts” to view the COVID-19-Associated Hospitalization by Age Bar Chart, “Medical Conditions” to view the Selected Underlying Medical Conditions Bar Chart, and/or “Characteristics” to view the Characteristics of COVID-19-Associated Hospitalizations Bar Chart.
- 2. Resize Windows** – Each chart window has buttons that will maximize, minimize, and restore the window when clicked.
- 3. COVID-19-Associated Hospitalizations by Age Bar Chart and Table** – The bar chart displays the weekly case counts of laboratory-confirmed COVID-19-associated hospitalizations by age group and the total number of cases to date by age group in the table below the bar chart. The user might need to scroll down to see the table below the bar chart.
- 4. Display as Number/Percent** – Data shown in the COVID-19-Associated Hospitalizations by Age Bar Chart can be displayed as a number or percentage by using these buttons. Selecting “Number” displays the number of cases by age group by week when hovering over the bar chart, while selecting “Percent” displays the percentage of cases in each age group by week when hovering over the bar chart.
- 5. Interactive Legend** – The interactive legend for the COVID-19-Associated Hospitalizations by Age Bar Chart becomes active when data are displayed as numbers. Users can select which age group(s) they would like displayed in the chart.

This interactive legend also appears on the Select Underlying Medical Conditions Bar Chart. Users can select which group(s) they would like displayed in this bar chart: Pediatric, Adult, or Pregnant.
- 6. Download Image Button** – To create an image of the data displayed in the current view, click the “Download Image” button. A file download dialog will appear with options to open, save, or discard (cancel) the currently displayed chart(s).
- 7. Characteristics of COVID-19-Associated Hospitalizations Bar Chart** – This bar chart displays the distribution of selected characteristics (e.g., demographics, interventions/outcomes, underlying medical conditions, signs/symptoms at admission, or discharge diagnoses) of COVID-19-associated hospitalizations by sub-category (e.g., age, sex, or race and ethnicity). The characteristics can be further stratified by additional sub-categories (e.g., age, sex, race and ethnicity, intensive care unit (ICU) admission, in-hospital death, or mechanical ventilation). Hovering over the bar chart will reveal a pop-up box providing information on the sub-category selected, and the percent and count of hospitalizations with that characteristic. Due to the sampling methodology, for the sampled variables counts are not shown, and weighted percentages are presented.
- 8. Display by Major Category drop-down box** – Specific characteristics can be displayed in the Characteristics Bar Chart using this drop-down menu. The options for this drop-down are: demographics, interventions/outcomes, underlying medical conditions, signs/symptoms at admission, and discharge diagnoses.
- 9. Sub-Category drop-down box** - Characteristics available in the Sub-Category will be displayed by the characteristic selected in the Major Category.
- 10. Stratified by drop-down box** - Data can be further stratified by options shown in this drop-down box. Options for this drop-down can include age, race and ethnicity, sex, in-hospital death, intensive care unit (ICU) admission, and mechanical ventilation depending on the Major Category selected.
- 11. Select Underlying Medical Conditions Bar Chart** – This bar chart displays the distribution of selected underlying medical conditions among pediatric, adult, and pregnant COVID-19-associated hospitalizations. Hovering over the bar for each underlying medical condition will reveal a pop-up box providing year, count, and percent for pediatric hospitalizations. For Adult and Pregnant hospitalizations, hovering over the graph for each underlying medical condition will reveal a pop-up box providing year and percent due to sampling methods.
- 12. Display Data Horizontally/Vertically** – These buttons allow users to view the Underlying Medical Conditions Bar Chart as either a horizontal or vertical bar chart.

- 13. Underlying Medical Condition Selector** – Click on the drop-down menu to display the list of available underlying medical conditions. Users can display data associated with one or more of the following 14 conditions by selecting the corresponding checkbox: asthma, autoimmune disease, cardiovascular disease, chronic lung disease, gastrointestinal/liver disease, hypertension, immune suppression, metabolic disease, neurologic disease, obesity, pregnancy, renal disease, other disease, and no known condition. Obesity is defined as body mass index (BMI) ≥ 30 kg/m² in adults aged 18 years and older.; in children, obesity is defined as BMI is indicated in a patient’s medical chart. (kg/m²) ≥ 95 th percentile for age and sex based on CDC growth charts among children aged ≥ 2 years < 18 . Obesity was not evaluated for children aged < 2 years.
- 14. Download Data** – To create a copy of the data in the current view, click the “Download Data” button in the top right-hand side of the screen. A zip file will be created with the data stored in separate comma separated values (*.csv) files
- 15. Help** – The “Help” menu button provides a detailed overview and describes the full functionality of the COVID-NET web application.