DSC530 Project

CDC reports aggregate counts of COVID-19 cases and death numbers daily online. Data on the COVID-19 website and CDC’s COVID Data Tracker are based on these most recent numbers reported by states, territories, and other jurisdictions. This data set of “United States COVID-19 Cases and Deaths by State over Time” combines this information. However, data are dependent on jurisdictions’ timely and accurate reporting.

Separately, CDC also regularly reports provisional death certificate data from the National Vital Statistics System (NVSS) on data.cdc.gov. Details are described on the NCHS website. Reporting the number of deaths by using death certificates ultimately provides more complete information but is a longer process; therefore, these numbers will be less than the death counts on the COVID-19 website.

Accuracy of Data

CDC tracks COVID-19 illnesses, hospitalizations, and deaths to track trends, detect outbreaks, and monitor whether public health measures are working. However, counting exact numbers of COVID-19 cases is not possible. COVID-19 can cause mild illness, symptoms might not appear immediately, there are delays in reporting and testing, not everyone who is infected gets tested or seeks medical care, and there are differences in how completely states and territories report their cases.

COVID-19 is one of about 120 diseases or conditions health departments voluntarily report to CDC. State, local, and territorial public health departments verify and report cases to CDC. When there are differences between numbers of cases reported by CDC versus by health departments, data reported by health departments should be considered the most up to date. Health departments may update case data over time when they receive more complete and accurate information. The number of new cases reported each day fluctuates. There is generally less reporting on the weekends and holidays.

CDC reports death data on three other sections of the website: U.S. Cases & Deaths, COVID Data Tracker, and NCHS Provisional Death Counts. The U.S. Cases and Deaths webpages and COVID Data Tracker get their information from the same source (total case counts); however, NCHS Death Counts are based on death certificates that use information reported by physicians, medical examiners, or coroners in the cause-of-death section of each certificate. Data from each of these pages are considered provisional (not complete and pending verification) and are therefore subject to change. Counts from previous weeks are continually revised as more records are received and processed. Because not all jurisdictions report counts daily, counts may increase at different intervals.

Confirmed & Probable Counts

As of April 14, 2020, CDC case counts and death counts include both confirmed and probable cases and deaths. This change was made to reflect an interim COVID-19 position statement issued by the Council for State and Territorial Epidemiologists on April 5, 2020. The position statement included a case definition and made COVID-19 a nationally notifiable disease. Nationally notifiable disease cases are voluntarily reported to CDC by jurisdictions. Confirmed and probable case definition criteria are described here:

https://wwwn.cdc.gov/nndss/conditions/coronavirus-disease-2019-covid-19/case-definition/2020/. Not all jurisdictions report probable cases and deaths to CDC. When not available to CDC, it is noted as N/A. Please note that jurisdictions may reclassify probable cases at any time to confirmed cases (if confirmatory laboratory evidence is obtained) or withdraw probable case reports entirely if further public health investigation determines that the individual most likely did not have COVID-19. As a result, probable case counts can fluctuate substantially. A jurisdiction might even report a negative number of probable cases on a given day, if more probable cases were disproven than were initially reported on that day.

Number of Jurisdictions Reporting

There are currently 60 public health jurisdictions reporting cases of COVID-19. This includes the 50 states, the District of Columbia, New York City, the U.S. territories of American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, Puerto Rico, and the U.S Virgin Islands as well as three independent countries in compacts of free association with the United States, Federated States of Micronesia, Republic of the Marshall Islands, and Republic of Palau. New York State’s reported case and death counts do not include New York City’s counts as they separately report nationally notifiable conditions to CDC.

Public use line level case data set is available at https://data.cdc.gov/Case-Surveillance/COVID-19-Case-Surveillance-Public-Use-Data/vbim-akqf

Restricted use detailed data set is available to researchers willing to enter a "Registration Information and Data Use Restrictions Agreement (RIDURA)" by emailing a request to eocevent394@cdc.gov.

COVID-19 data will be made available to the public as summary or aggregate count files, including total counts of cases and deaths by state and by county. These and other data on COVID-19 are available from multiple public locations:

https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html

https://www.cdc.gov/covid-data-tracker/index.html

https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covidview/index.html

https://www.cdc.gov/coronavirus/2019-ncov/php/open-america/surveillance-data-analytics.html

Less

United States COVID-19 Cases and Deaths by State Over Time

<https://data.cdc.gov/Case-Surveillance/United-States-COVID-19-Cases-and-Deaths-by-State-o/9mfq-cb36/data>

https://data.cdc.gov/NCHS/Conditions-contributing-to-deaths-involving-corona/hk9y-quqm/data