**Methodology and Definitions**

The data is the product of dozens of journalists working across several time zones to monitor news conferences, analyze data releases and seek clarification from public officials on how they categorize cases.

It is also a response to a fragmented American public health system in which overwhelmed public servants at the state, county and territorial level have sometimes struggled to report information accurately, consistently and speedily. On several occasions, officials have corrected information hours or days after first reporting it. At times, cases have disappeared from a local government database, or officials have moved a patient first identified in one state or county to another, often with no explanation. In those instances, which have become more common as the number of cases has grown, our team has made every effort to update the data to reflect the most current, accurate information while ensuring that every known case is counted.

When the information is available, we count patients where they are being treated, not necessarily where they live.

In most instances, the process of recording cases has been straightforward. But because of the patchwork of reporting methods for this data across more than 50 state and territorial governments and hundreds of local health departments, our journalists sometimes had to make difficult interpretations about how to count and record cases.

For those reasons, our data will in some cases not exactly match with the information reported by states and counties. Those differences include these cases: When the federal government arranged flights to the United States for Americans exposed to the coronavirus in China and Japan, our team recorded those cases in the states where the patients subsequently were treated, even though local health departments generally did not. When a resident of Florida died in Los Angeles, we recorded her death as having occurred in California rather than Florida, though officials in Florida counted her case in their own records. And when officials in some states reported new cases without immediately identifying where the patients were being treated, we attempted to add information about their locations later, once it became available.

* "Probable" and “Confirmed Cases and Deaths

Cases and deaths can be reported as either “confirmed” or “probable.” Our total cases and deaths include both. The number of cases includes all cases, including those who have since recovered or died.

On April 5, the Council of State and Territorial Epidemiologists [advised states](https://int.nyt.com/data/documenthelper/6908-cste-interim-20-id-01-covid-19/85d47e89b637cd643d50/optimized/full.pdf) to include both confirmed cases, based on confirmatory laboratory testing, and probable cases, based on specific criteria for testing, symptoms and exposure. The Centers for Disease Control adopted these definitions and national CDC data began including confirmed and probable cases on April 14.

Some governments continue to report only confirmed cases, while others are reporting both confirmed and probable numbers. And there is also another set of governments that is reporting the two types of numbers combined without providing a way to separate the confirmed from the probable.

The Geographic Exceptions section below has more details on specific areas. The methodology of individual states changes frequently.

* Confirmed Cases

Confirmed cases are counts of individuals whose coronavirus infections were confirmed by a laboratory test and reported by a federal, state, territorial or local government agency. Only tests that detect viral RNA in a sample are considered confirmatory. These are often called molecular or RT-PCR tests.

* Probable Cases

Probable cases count individuals who did not have a confirmed test but were evaluated by public health officials using criteria developed by states and the federal government and reported by a health department.

Public health officials consider laboratory, epidemiological, clinical and vital records evidence. Tests that detect antigens or antibodies are considered evidence towards a “probable” case, but are not sufficient on their own, according to the Council of State and Territorial Epidemiologists.

* Confirmed Deaths

Confirmed deaths are individuals who have died and meet the definition for a confirmed Covid-19 case. Some states reconcile these records with death certificates to remove deaths from their count where Covid-19 is not listed as the cause of death. We follow health departments in removing non-Covid-19 deaths among confirmed cases when we have information to unambiguously know the deaths were not due to Covid-19, i.e. in cases of homicide, suicide, car crash or drug overdose.

* “Probable” Deaths

Probable deaths are deaths where Covid-19 is listed on the death certificate as the cause of death or a significant contributing condition, but where there has been no positive confirmatory laboratory test.

Deaths among probable cases tracked by a state or local health department where a death certificate has not yet been filed may also be counted as a probable death.

For more on how states count confirmed and probable deaths, see this [article](https://www.nytimes.com/interactive/2020/06/19/us/us-coronavirus-covid-death-toll.htmlhttps:/www.nytimes.com/interactive/2020/06/19/us/us-coronavirus-covid-death-toll.html).

* Dates

For each date, we show the cumulative number of confirmed cases and deaths as reported that day in that county or state. All cases and deaths are counted on the date they are first announced.

Each date includes all cases and deaths announced that day through midnight Eastern Time. As the West Coast and Hawaii tend to release all of their new data early enough in the day.

* Declining Counts

In some cases, the number of cases or deaths for a state or county will decline. This can occur when a state or county corrects an error in the number of cases or deaths they've reported in the past, or when a state moves cases from one county to another. When we are able, we will historically revise counts for all impacted dates. In other cases, this will be reflected in a single-day drop in the number of cases or deaths.

* Counties

In some instances, we report data from multiple counties or other non-county geographies as a single county. For instance, we report a single value for New York City, comprising the cases for New York, Kings, Queens, Bronx and Richmond Counties. In these instances the FIPS code field will be empty. (We may assign FIPS codes to these geographies in the future.) See the list of [geographic exceptions](https://github.com/nytimes/covid-19-data#geographic-exceptions).

Cities like St. Louis and Baltimore that are administered separately from an adjacent county of the same name are counted separately.

* “Unknown” Counties

Many state health departments choose to report cases separately when the patient’s county of residence is unknown or pending determination. In these instances, we record the county name as “Unknown.” As more information about these cases becomes available, the cumulative number of cases in “Unknown” counties may fluctuate.

Sometimes, cases are first reported in one county and then moved to another county. As a result, the cumulative number of cases may change for a given county.

**Geographic Exceptions**

* New York

All cases for the five boroughs of New York City (New York, Kings, Queens, Bronx and Richmond counties) are assigned to a single area called New York City. The number of deaths in New York City also includes probable deaths reported by the New York City health department. Deaths are reported by county of residence, except for certain periods described below.

We have changed the way we have counted deaths in New York State a few times in response to changes in how the state and New York City report their data. See this [note](https://github.com/nytimes/covid-19-data/blob/master/NEW-YORK-DEATHS-METHODOLOGY.md) for an explanation and timeline.

* Kansas City, Mo.

Four counties (Cass, Clay, Jackson and Platte) overlap the municipality of Kansas City, Mo. The cases and deaths that we show for these four counties are only for the portions exclusive of Kansas City. Cases and deaths for Kansas City are reported as their own line.

* Joplin, Mo.

Starting June 25, cases and deaths for Joplin are reported separately from Jasper and Newton counties. The cases and deaths reported for those counties are only for the portions exclusive of Joplin. Joplin cases and deaths previously appeared in the counts for those counties or as Unknown.

* Alameda County, Calif.

Counts for Alameda County include cases and deaths from Berkeley and the Grand Princess cruise ship.

* Douglas County, Neb.

Counts for Douglas County include cases brought to the state from the Diamond Princess cruise ship.

* Chicago

All cases and deaths for Chicago are reported as part of Cook County.

* Guam

Counts for Guam include cases reported from the USS Theodore Roosevelt.

* Puerto Rico

Data for Puerto Rico's county-equivalent municipios are available starting on May 5. This data was not available at the beginning of the outbreak and so all cases and deaths were assigned to Unknown. Puerto Rico does not report deaths at the municipio level.

**Probable Cases and Deaths and Anomalies**

For details on which individual state counts include probable cases and deaths and on anomalous days of data reporting, please see the list of individual state pages linked to from our [main tracking page](https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html).