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# Provisional Death Counts for Coronavirus Disease (COVID-19)

**Note:** Provisional death counts are based on death certificate data received and coded by the National Center for Health Statistics as of April 5, 2020. Death counts are delayed and may differ from other published sources (see Technical Notes). Counts will be updated weekly. Additional fields will be added to this site as available.

The provisional counts for coronavirus disease (COVID-19) deaths are based on a current flow of mortality data in the National Vital Statistics System. National provisional counts include deaths occurring within the 50 states and the District of Columbia that have been received and coded as of the date specified. It is important to note that it can take several weeks for death records to be received from the jurisdictions and to be coded and processed to ensure data quality. Therefore, the data can change as new records are received, and will likely not include all deaths that occurred during a given time period, especially for the more recent time periods. Death counts for earlier weeks are continually received and may increase or decrease as new death records or death certificate data are received from the states by NCHS. COVID-19 death counts shown here may differ from other published sources. Data currently are lagging by an average of 1 week.

The provisional data presented on this page include the weekly provisional count of deaths in the United States due to COVID-19, deaths from all causes by week, percent of expected deaths (i.e., number of deaths received over number of deaths expected based on data from previous years), provisional COVID-19 deaths by age group, and provisional COVID-19 deaths by week and by state (including pending COVID-19 deaths received by reporting date, first day of death, by state, and 122 cities jurisdictions. Future updates to this release may include additional detail such as demographic characteristics, additional causes of death (including underlying and multiple or other non-coronavirus comorbidities) or estimates based on models that account for reporting delays to generate more accurate predicted provisional counts.

Pneumonia deaths are included to provide context for understanding the completeness of COVID-19 mortality data in the National Vital Statistics System. Pneumonia deaths occurring in the absence of positive test results and pneumonia may appear on death certificates as a comorbid condition. Thus, increases in pneumonia deaths may be an indicator of excess COVID-19-related mortality. Additional analyses of comparisons for pneumonia deaths may provide context for understanding the lag in reporting for COVID-19 deaths, as it is anticipated that these causes have similar delays in reporting, processing, and coding. Deaths with COVID-19 as a contributing cause of COVID-19 mortality may be slower or faster than for other causes of death, and that the delay may vary over time. Weekly counts of deaths from all causes are based on the date the death was received in the National Center for Health Statistics. Not all causes provided in these tables are used in COVID-19 related releases as more data are received, and other potentially comorbid conditions are determined.

## Download Datasets

- CDC/Vitalnet
- Data CDC.gov (Export.txt,Tab,JSON,XML,RDF)

NOTES: Number of deaths reported in this table are the total number of deaths received and coded as of the date of analysis and do not represent deaths that occurred in that period.
*Data during the period are incomplete because of the lag in time between when the death occurred and when the death certificate is completed, submitted to NCHS and processed for reporting purposes. This delay can range from 1 week to 8 weeks or more, depending on the jurisdiction, age, and cause of death.
†Deaths with Coronavirus (COVID-19) as a contributing cause of death.
‡Percent of expected deaths is the number of deaths for all causes for the week in 2020 compared to the average number across the same week in 2017-2019.
§Pneumonia deaths include deaths pneumonia and influenza and deaths with pneumonia, influenza, or COVID-19 listed as a cause of death.
¶Pneumonia death counts exclude pneumonia deaths involving influenza.
#Influenza death counts exclude deaths with pneumonia or COVID-19 listed as a cause of death.

### Table 2. Deaths involving coronavirus disease 2019 (COVID-19), pneumonia, and influenza reported to NCHS by age group, United States. Week ending 2/1/2020 to 4/4/2020.*

Data as of April 9, 2020

| Age group | All COVID-19 Deaths† | Deaths from All Causes* | Percent of Expected Deaths‡ | Pneumonia Deaths§ | Deaths with Pneumonia and COVID-19 Deaths§ | Influenza Deaths# |
|---|---|---|---|---|---|---|
| All Ages | **4,065** | 501,444 | 99 | 26,258 | 1,879 | 4,467 |
| Under 1 year | 15 | 2,048 | 68 | 75 | 15 | 6 |
| 1-4 years | 5 | 543 | 75 | 25 | 5 | 34 |
| 5-14 years | 7 | 793 | 73 | 26 | 7 | 34 |
| 15-24 years | 8 | 4,545 | 82 | 87 | 2 | 35 |
| 25-34 years | **38** | 9,429 | 95 | 246 | 15 | 103 |
| 35-44 years | **192** | 15,043 | 90 | 575 | 34 | 156 |
| 45-54 years | **504** | 33,284 | 95 | 1,468 | 97 | 324 |
| 55-64 years | **1,024** | 63,267 | 96 | 4,111 | 212 | 799 |
| 65-74 years | **895** | 90,435 | 91 | 5,168 | 374 | 962 |
| 75-84 years | **1,135** | 124,242 | 91 | 5,804 | 567 | 1,088 |
| 85 and over | **1,158** | 157,860 | 87 | 11,873 | 571 | 968 |

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*Data during the period are incomplete because of the lag in time between when the death occurred and when the death certificate is completed, submitted to NCHS and processed for reporting purposes. This delay can range from 1 week to 8 weeks or more, depending on the jurisdiction, age, and cause of death.
†Deaths with Coronavirus (COVID-19) as a contributing cause of death.
‡Percent of expected deaths is the number of deaths for all causes for the week in 2020 compared to the average number across the same week in 2017-2019.
§Pneumonia deaths include deaths pneumonia and influenza and deaths with pneumonia, influenza, or COVID-19 listed as a cause of death.
¶Pneumonia death counts include deaths pneumonia and influenza.
#Influenza death counts include deaths with pneumonia or COVID-19 listed as a cause of death.

### Table 3. Deaths involving coronavirus disease 2019 (COVID-19), pneumonia, and influenza reported to NCHS by sex. United States. Week ending 2/1/2020 to 4/4/2020.*

Data as of April 9, 2020

| Sex | All COVID-19 Deaths† | Deaths from All Causes* | Percent of Expected Deaths‡ | All Pneumonia Deaths§ | Deaths with Pneumonia and COVID-19 Deaths§ | All Influenza Deaths# |
|---|---|---|---|---|---|---|
| Total Deaths | **4,065** | 501,444 | 99 | 26,258 | 1,879 | 4,467 |
| Male | **2,047** | 257,451 | 99 | 14,467 | 1,097 | 2,214 |
| Female | **1,848** | 243,993 | 99 | 11,763 | 782 | 2,253 |
| Unknown | **0** | 19 | 82 | 0 | 0 | 0 |

NOTES: Number of deaths reported in this table are the total number of deaths received and coded as of the date of analysis and do not represent deaths that occurred in that period.
*Data during the period are incomplete because of the lag in time between when the death occurred and when the death certificate is completed, submitted to NCHS and processed for reporting purposes. This delay can range from 1 week to 8 weeks or more, depending on the jurisdiction, age, and cause of death.
†Deaths with Coronavirus (COVID-19) as a contributing cause of death.
‡Percent of expected deaths is the number of deaths for all causes for the week in 2020 compared to the average number across the same week in 2017-2019.
§Pneumonia deaths include deaths pneumonia and influenza and deaths with pneumonia, influenza, or COVID-19 listed as a cause of death.
¶Pneumonia death counts include deaths pneumonia and influenza.
#Influenza death counts include deaths with pneumonia or COVID-19 listed as a cause of death.

### Table 4. Deaths involving coronavirus disease 2019 (COVID-19), pneumonia, and influenza reported to NCHS by jurisdiction of occurrence, United States. Week ending 2/1/2020 to 4/4/2020.*

Data as of April 9, 2020

| Jurisdiction of Occurrence | All COVID-19 Deaths† | Deaths from All Causes* | Percent of Expected Deaths‡ | All Pneumonia Deaths§ | Deaths with Pneumonia and COVID-19 Deaths§ | All Influenza Deaths# |
|---|---|---|---|---|---|---|
| United States¶ | **4,065** | 501,444 | 99 | 26,258 | 1,879 | 4,467 |
| Alabama | **18** | 8,872 | 85 | 514 | 3 | 72 |
| Alaska | **1** | 327 | 77 | 5 | 1 | 0 |
| Arizona | **41** | 12,268 | 94 | 748 | 13 | 85 |
| Arkansas | **3** | 5,540 | 97 | 317 | 3 | 42 |
| California | **169** | 51,828 | 94 | 4,115 | 10 | 507 |
| Colorado | **16** | 7,626 | 97 | 482 | 30 | 77 |
| Connecticut | **8** | 8,900 | 94 | 1,032 | 8 | 53 |
| Delaware | **1** | 1,203 | 72 | 65 | 1 | 9 |
| District of Columbia | **2** | 1,052 | 87 | 89 | 2 | 5 |
| Florida | **97** | 42,690 | 92 | 2,432 | 97 | 267 |
| Georgia | **46** | 16,711 | 84 | 771 | 28 | 83 |
| Hawaii | **3** | 2,163 | 91 | 101 | 3 | 14 |
| Idaho | **9** | 2,710 | 96 | 145 | 1 | 24 |
| Illinois | **75** | 21,128 | 99 | 1,241 | 46 | 150 |
| Indiana | **36** | 15,190 | 98 | 1,035 | 36 | 102 |
| Iowa | **5** | 5,501 | 92 | 405 | 2 | 75 |
| Kansas | **3** | 5,007 | 89 | 432 | 2 | 47 |
| Kentucky | **3** | 7,149 | 95 | 606 | 2 | 67 |
| Louisiana | **98** | 7,397 | 83 | 396 | 35 | 54 |
| Maine | **2** | 2,917 | 93 | 150 | 2 | 22 |
| Maryland | **30** | 9,761 | 97 | 712 | 17 | 89 |
| Massachusetts | **68** | 17,258 | 94 | 1,754 | 56 | 185 |
| Michigan | **132** | 16,258 | 94 | 1,154 | 56 | 185 |
| Minnesota | **15** | 8,939 | 91 | 584 | 9 | 96 |
| Mississippi | **24** | 5,264 | 89 | 355 | 19 | 46 |
| Missouri | **11** | 11,123 | 85 | 661 | 7 | 130 |
| Montana | **1** | 1,265 | 91 | 101 | 1 | 20 |
| Nebraska | **3** | 2,992 | 87 | 231 | 2 | 24 |
| Nevada | **9** | 5,966 | 89 | 405 | 9 | 56 |
| New Hampshire | **3** | 2,426 | 98 | 159 | 2 | 29 |
| New Jersey | **344** | 16,230 | 94 | 1,058 | 167 | 81 |
| New Mexico | **2** | 3,283 | 90 | 205 | 2 | 30 |
| New York | **1,380** | 74,211 | 131 | 4,393 | 693 | 187 |
| New York City | **1,150** | 44,911 | 157 | 2,848 | 577 | 116 |
| North Carolina | **8** | 16,226 | 91 | 1,098 | 8 | 156 |
| North Dakota | **1** | 1,256 | 91 | 108 | 0 | 15 |
| Ohio | **14** | 19,121 | 94 | 1,358 | 14 | 192 |
| Oklahoma | **14** | 6,592 | 89 | 559 | 14 | 79 |
| Oregon | **10** | 6,178 | 85 | 323 | 12 | 68 |
| Pennsylvania | **70** | 19,751 | 95 | 1,573 | 70 | 158 |
| Rhode Island | **5** | 1,678 | 79 | 80 | 2 | 9 |
| South Carolina | **3** | 8,571 | 90 | 597 | 3 | 61 |
| South Dakota | **2** | 1,426 | 87 | 107 | 1 | 18 |
| Tennessee | **15** | 13,909 | 94 | 1,013 | 15 | 116 |
| Texas | **75** | 51,268 | 91 | 3,128 | 75 | 329 |
| Utah | **2** | 3,650 | 98 | 212 | 2 | 36 |
| Vermont | **1** | 1,055 | 92 | 120 | 1 | 12 |
| Virginia | **24** | 13,165 | 96 | 691 | 12 | 86 |
| Washington | **573** | 14,855 | 94 | 1,455 | 573 | 102 |
| West Virginia | **0** | 2,846 | 93 | 198 | 0 | 30 |
| Wisconsin | **21** | 10,215 | 98 | 579 | 5 | 130 |
| Wyoming | **1** | 833 | 94 | 58 | 1 | 9 |
| Puerto Rico | **11** | 3,247 | 56 | 455 | 9 | 24 |

NOTES: Number of deaths reported in this table are the total number of deaths received and coded as of the date of analysis and do not represent deaths that occurred in that period.
*Data during the period are incomplete because of the lag in time between when the death occurred and when the death certificate is completed, submitted to NCHS and processed for reporting purposes. This delay can range from 1 week to 8 weeks or more, depending on the jurisdiction, age, and cause of death.
†Deaths with Coronavirus (COVID-19) as a contributing cause of death.
‡Percent of expected deaths is the number of deaths for all causes for the week in 2020 compared to the average number across the same week in 2017-2019.
§Pneumonia deaths include deaths pneumonia and influenza and deaths with pneumonia, influenza, or COVID-19 listed as a cause of death.
¶United States death counts include the 50 states, plus the District of Columbia and New York City.
#Pneumonia death counts include deaths pneumonia and influenza.

## Technical Notes

### Comparing data in this report to other sources

Provisional death counts in this report will not match counts in other sources, such as media reports or numbers from state health departments. Death data, once received and processed by National Center for Health Statistics (NCHS), are tabulated by the state or jurisdiction in which the death occurred. Death counts are not tabulated by the decedent's place of residence. COVID-19 deaths may also be classified or defined differently in various reporting and surveillance systems. Death counts in this report are based on the National Vital Statistics System (NVSS) mortality data standard. This includes death's where COVID-19 is reported as a contributing cause of death. Some state and state health departments only report laboratory-confirmed COVID deaths. This may partly account for differences between NCHS reported death counts and death counts from other sources. Provisional counts reported here track approximately 1-2 weeks behind other published data sources on the number of COVID-19 deaths in the US (Fig. 1,2).

### Nature and sources of data

Provisional death counts are based on death records received and processed by NCHS as of the date of analysis. Death certificates are completed by physicians, medical examiners, or coroners and the Standard Certificate of Death for Deaths with Pending Testing of Novel Coronavirus Disease (COVID-19) of the Vital Statistics Cooperative Program. Provisional data are based on available records that meet certain data quality criteria at the time of analysis and may not include all deaths that occurred during a given time period especially for more recent periods. Estimates of completeness are provided. Therefore, they may be conservative or incomplete and may be revised as more data are received.

### Cause-of-death classification and definition of deaths

Mortality statistics are compiled in accordance with World Health Organization (WHO) regulations and rules that specify the cause of death to be tabulated for public health purposes. The International Statistical Classification of Diseases and Related Health Problems (ICD). It provides the basis guidance used in virtually all countries to code and classify causes of death. It provides not only disease, injury, pathogenic agent or condition that gave rise to the sequence of events resulting in cause of death for tabulation from the several diagnoses that may be reported on a single death certificate, as well as definitions, classification lists, and rules for selecting the underlying cause for tabulation. In cases of the classification. Cases of death for provisional data in this report were coded according to ICD guidelines described in annual issues of Part 2a of the NCHS instructions for classifying.

Coronavirus disease deaths are identified using the ICD-10 code U071. Deaths are coded to U071 under conditions specified by the WHO to be used temporarily and assigned to COVID-19 regardless of the death certificate. These include laboratory-confirmed COVID-19 deaths, probable COVID-19 deaths, or suspected COVID-19 or dementias is was likely (e.g., the circumstances were compelling within a reasonable degree of certainty), they can report COVID-19 as "probable" or "presumed" on the death certificate (5, 6).

Provisional deaths are identified using underlying cause of death codes from the 10th Revision of ICD (ICD-10) (10, 11), including deaths that involve influenza (J09-J11). Influenza deaths are identified from the ICD-10 codes J09-J11. Deaths with pneumonia or COVID-19 listed as a contributing cause of death.

### Estimated completeness of data

Provisional data are incomplete, and the level of completeness varies by jurisdiction, week, decedent age, and cause of death. Until data for a calendar year are finalized, typically in December of the following year, completeness of provisional data cannot be determined. However, completeness can be estimated in a variety of ways. Surveillance systems that rely on weekly monitoring of provisional mortality data, such as CDC's FluNet/ Interactive mortality surveillance (1), estimate completeness by comparing the number of deaths received to the number of deaths for average cause of deaths in that same week of the previous 3 years. These estimates can be generated for all causes of death or specific causes of death, such as pneumonia and influenza deaths or deaths for the purpose of COVID-19 surveillance, completeness is estimated by comparing the number of deaths received to the number of expected deaths based on prior years data. Percent of expected deaths provided in this release are based on the total number of deaths in the week with recent weeks of the current year, compared with an average across the same weeks of the three previous years (2, 3). Because of the lag in time between when a death occurs and when it is reported, completeness of occurrence, and lag time, vary by cause of death.

It is important to note that the true levels of completeness are unknown, and the estimates provided here are only a proxy. In cases where mortality data are received in a timely manner, the reported deaths due to a novel cause are occurring, values for completeness for recent weeks may exceed 100% even when NCHS has yet to receive all death records. Conversely, if the number of deaths was elevated in prior years due to a severe flu season, for example, estimated completeness in the most recent weeks may have been lower than the true value. To avoid relying too heavily on estimates for single weeks of a single prior year, estimates of completeness included in this release are based on the average counts across the past several years (e.g., the 3 years used in this report, 2017, 2018, and 2019).

Percent of expected deaths provided in this release are shown to provide context for interpreting mortality data. Because of the lag in time between when a death occurs and when it is reported and lag (e.g., greater than 8 weeks), reported deaths are unlikely to falsely increase or decrease the number of prior years. Where estimated values of completeness are, low, this could indicate that data are incomplete due to delayed reporting, or, mortality is lower in 2020 compared with prior years, or some combination of these factors.

### Delays in reporting

Provisional counts of deaths are underestimated relative to final counts. This is due to the many steps involved in reporting death certificate data. When a death occurs, a certifier (e.g. physician, medical examiner, coroner) completes the death certificate. Depending on the cause of death, laboratory or contributing cause of death, in some cases, laboratory results may be needed to inform and determine the cause of death. Completed death certificate are sent to the state vital records office and then to NCHS. In cases of a death, delays in any of these steps can lead to incomplete or processed and coded within seconds, but 20% of deaths need to manually coded, or coded by a nosologist (cause of death coding specialist). Manual coding of death certificates sometimes may require manual coding other cause of death. Provisional COVID-19 deaths are COVID-19 are manually coded. Death certificates are typically manually coded within 7 days of receipt, although the coding delay can vary if there is a large increase in the number of deaths. Delays in the ascertainment of the number of deaths may be greater for certain causes of death than others.

Previous analyses of provisional death counts from 2015 suggested that 80% of deaths are approximately 27% complete within 2 weeks, 54% complete within 4 weeks, and at least 75% complete within 8 weeks. Data are more complete for more distant weeks, for example, by 18 weeks 5.2% complete within 4 weeks, and 72% complete within 8 weeks (unpublished). Data completeness has improved in recent years, and current timeliness is likely better than previous years.

### Comparing deaths from different states

Death counts should not be compared by jurisdiction. Data timeliness varies by state. Some states report deaths on a daily basis, while other states report deaths weekly or monthly. Furthermore, health departments and state vital records offices may be affected by COVID-19 related response activities, which could further delay death certificate reporting. Currently, 63% of U.S. deaths are reported within 10 days of the date of death, but some jurisdictions report fewer than 1% of deaths within 10 days.

### Why are pneumonia and influenza deaths included in this report?

Pneumonia and influenza deaths are included in tables to provide context for understanding the completeness of COVID-19 mortality data and related trends. Deaths due to COVID-19 may be misclassified as pneumonia in the absence of positive test results, and pneumonia may appear on death certificates as a comorbid condition. Additionally, COVID-19 symptoms can be similar to influenza illness, thus deaths may be misclassified. Additionally, trends in pneumonia and influenza deaths may be an indicator of excess COVID-19-related mortality. Additional analyses of comparisons for pneumonia deaths may provide context for understanding the lag in reporting for COVID-19 deaths, as it is anticipated that these causes would have similar delays in reporting, processing, and coding.

### Source

NCHS, National Vital Statistics System, Administrative Data.

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