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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 3, 2020. Death counts for specific diseases and may differ from other published sources (see Technical Notes). Counts will be updated periodically. Additional information 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. Number of provisional counts include deaths occurring within the 50 states and the District of Columbia that have been received and coded as of the data cut-off date. Deaths are included in these counts regardless of the extent to which they are submitted to National Center for Health Statistics (NCHS), processed, coded, and tabulated. Therefore, the data shown on this page may be incomplete, and will likely not include all deaths that occurred during a given time period, especially for more recent weeks. Provisional death counts for earlier weeks are continually revised and may increase or decrease as new and updated death certificate data are received from the states by NCHS. COVID-19 death counts shown here may differ from other published sources, as data currently are lagged by an average of 1–2 weeks.

The provisional data presented on this page do not include all COVID-19 deaths to date. Provisional counts do not include COVID-19 deaths from all causes of development of expected deaths (i.e., number of deaths received and coded from all causes, based on data from previous years), presenting deaths (excluding pneumonia deaths involving influenza), and pneumonia deaths involving COVID-19, by week of death, by state, by age, and by sex, and by specific conditions. Future updates to this release may include additional data such as demographic characteristics (e.g., sex), additional causes of death (e.g., acute respiratory distress syndrome or other comorbidities), or estimates based on models that account for reporting delays to generate more accurate predicted provisional counts.

Pneumonia deaths are included in provisional counts to better understand the completeness of COVID-19 mortality data and related trends. Deaths due to COVID may be misclassified as pneumonia deaths 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. Additionally, estimates of completeness 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. However, it is possible that reporting of COVID-19 mortality may be slower or faster than for other causes of death, and that the delay may change over time. Analysis to better understand and quantify reporting delays for COVID-19 deaths and related causes are underway. The list of causes provided in these tables may expand in future releases as more data are received, and other potentially comorbid conditions are determined.

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- CSV Format
- Data CDC.gov Format to CSV, JSON, RDF, N3, XML

Table 1. Deaths involving coronavirus disease 2019 (COVID-19) and pneumonia reported to NCHS by week ending date, United States. Week ending 2/1/2020 to 3/28/2020.*

Data as of 4/3/2020

Week ending date (in which the death occurred)	All COVID-19 Deaths † (UST 1)*	Deaths from All Causes	Percent of Expected Deaths§	All Pneumonia Deaths‖ (J12.0-J18.9)	Deaths with Pneumonia and COVID-19 (J12.0-J18.8 and U07.1)
Total Deaths	**1,150**	46,776	86	24,741	469
02/01/2020	**0**	6,261	91	2,991	0
02/08/2020	**0**	56,209	94	2,985	0
02/15/20	**0**	54,463	92	2,863	0
02/22/20	**0**	54,257	92	2,833	0
02/29/20	**5**	53,697	93	2,831	2
03/07/20	**14**	52,506	91	2,826	5
03/14/20	**141**	48,571	89	2,556	17
03/21/20	**300**	42,750	79	2,042	121
03/28/20	**788**	28,498	50	2,040	324

NOTE: 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 all 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 confirmed or presumed COVID-19, coded to ICD-10 code U07.1
§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. Previous analyses of 2015-2019 provisional data completeness have found that completeness is lower in the most recent weeks than in previous years.
‖Pneumonia death counts exclude pneumonia deaths involving influenza.

Table 2. Deaths involving coronavirus disease 2019 (COVID-19) and pneumonia reported to NCHS by age group, United States. Week ending 2/1/2020 to 3/28/2020.*

Data as of 4/3/2020

Age group	All COVID-19 Deaths † (UST 1)*	Deaths from All Causes	Percent of Expected § Deaths*	All Pneumonia Deaths‖ (J12.0-J18.9)	Deaths with Pneumonia and COVID-19 (J12.0-J18.8 and U07.1)
All ages	**1,150**	46,776	86	24,741	469
Under 1 year	**0**	2,296	91	1,966	0
1–4 years	**0**	469	74	23	1
5–14 years	**0**	713	71	26	0
15–24	**0**	4,036	78	73	0
25–34	**8**	8,424	83	189	3
35–44	**33**	12,076	85	388	8
45–54	**75**	23,299	77	983	25
55–64	**123**	56,398	83	2,824	50
65–74	**265**	87,567	88	4,778	91
75–84	**331**	110,592	88	5,908	145
85 years and over	**314**	140,788	84	6,848	146

NOTE: 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 all 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 confirmed or presumed COVID-19, coded to ICD-10 code U07.1
§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 death counts exclude pneumonia deaths involving influenza.
*Includes New York City.

Table 3. Deaths involving coronavirus disease 2019 (COVID-19) and pneumonia reported to NCHS by jurisdiction of occurrence, United States. Week ending 2/1/2020 to 3/28/2020.*

Data as of 4/3/2020

Jurisdiction of Occurrence	All COVID-19 Deaths † (UST 1)*	Deaths from All Causes	Percent of Expected § Deaths*	All Pneumonia Deaths‖ (J12.0-J18.9)	Deaths with Pneumonia and COVID-19 (J12.0-J18.8 and U07.1)
United States	**1,150**	46,776	86	24,741	469
Alabama	**0**	8,136	85	408	0
Alaska	**0**	589	79	23	0
Arizona	**0**	10,532	85	523	0
Arkansas	**0**	5,390	92	269	0
California	**54**	47,024	93	5,136	22
Colorado	**21**	5,501	94	334	1
Connecticut	**0**	0	0	0	0
Delaware	**0**	1,115	65	50	0
District of Columbia	**0**	556	94	58	0
Florida	**38**	37,346	97	1,899	12
Georgia	**13**	12,725	93	570	6
Hawaii	**0**	1,904	90	118	0
Idaho	**0**	2,389	94	110	0
Illinois	**9**	18,762	96	1,115	4
Indiana	**0**	10,635	87	599	0
Iowa	**0**	5,007	92	205	0
Kansas	**3**	4,441	89	240	1
Kentucky	**0**	6,181	70	389	0
Louisiana	**44**	6,861	82	258	18
Maine	**0**	2,640	99	178	0
Maryland	**5**	8,721	95	592	0
Massachusetts	**5**	5,893	91	663	0
Michigan	**11**	16,019	90	796	1
Minnesota	**4**	5,613	95	447	2
Mississippi	**0**	5,302	92	342	0
Missouri	**6**	10,651	84	496	4
Montana	**0**	1,187	97	67	0
Nebraska	**0**	2,476	79	159	0
Nevada	**2**	4,348	93	292	1
New Hampshire	**1**	2,200	98	109	0
New Jersey	**43**	13,219	88	694	24
New Mexico	**0**	2,765	79	155	0
New York*	**146**	17,731	96	1,343	98
New York City	**579**	16,970	115	1,012	205
North Carolina	**0**	3,860	98	151	0
North Dakota	**0**	1,115	89	74	0
Ohio	**0**	16,942	75	676	0
Oklahoma	**0**	5,781	78	365	0
Oregon	**5**	5,496	93	230	3
Pennsylvania	**0**	21,692	90	1,380	0
Rhode Island	**0**	1,494	78	50	0
South Carolina	**1**	8,428	94	369	0
South Dakota	**0**	1,241	96	78	0
Tennessee	**0**	12,379	92	715	0
Texas	**6**	32,459	84	1,825	2
Utah	**0**	3,365	97	168	0
Vermont	**1**	921	87	42	1
Virginia	**4**	11,757	94	459	1
Washington	**92**	9,845	93	561	39
West Virginia	**0**	2,563	92	140	0
Wisconsin	**0**	9,200	96	376	0
Wyoming	**0**	727	84	42	0

NOTE: 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 all 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 confirmed or presumed COVID-19, coded to ICD-10 code U07.1
§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 death counts exclude pneumonia deaths involving influenza.
*Includes New York City.

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 county health departments. Death counts have been 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. Currently, this includes deaths where COVID-19 is listed as a "contributing cause" or "probable" cause. Some local and state health departments only report laboratory-confirmed COVID deaths. This may partly account for differences between NCHS reported death counts and death counts reported in 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 U.S. (1, 2, 3).

Nature and sources of data

Provisional death counts are based on death records received and processed by NCHS as of a specified cutoff date. National provisional counts include deaths occurring within the 50 states and the District of Columbia. NCHS receives the death records from state vital registration offices through the Vital Statistics Cooperative Program. Provisional counts 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 the most recent period. Distributions of completeness are provided. Therefore, they should not be considered comparable with final data and are subject to change.

Cause-of-death classification and definition of deaths

Mortality statistics are compiled in accordance with World Health Organization (WHO) regulations specified for the 10th Revision of International Classification of Diseases (ICD-10). Beginning with the current revision of the International Statistical Classification of Disease and Related Health Problems (ICD-10), CDC provides the basic guidance used in virtually all countries to code and classify causes of death. It provides not only diseases, injury, and poisoning diagnoses but also the rules used to select the single underlying cause of death for tabulation from the several diagnoses that may be reported on a single death certificate, as well as definitions, tabulation lists, the format of the death certificate, and regulations on use of the classification. Causes of death for data presented in this report were coded according to ICD guidelines described in annual volumes of ICD-10 and the NCHS Instruction Manual (4).

Coronavirus disease deaths are identified using the ICD-10 code U07.1. Deaths are coded to U07.1 when coronavirus disease 2019 or COVID-19 are reported as a cause that contributed to death on the death certificate. These can include laboratory-confirmed cases, as well as cases without laboratory confirmation. If the certifier suspects COVID-19 or determines it 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).

Pneumonia deaths are identified using underlying cause-of-death codes from the 10th Revision of ICD (ICD-10): J12-J18, excluding deaths that involve influenza (J09-J11).

Estimated completeness of data

Provisional data are incomplete, and fewer deaths for recent completeness variesby jurisdiction, week, decedent's 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 Flu/Pneumo Interactive mortality surveillance (6), estimate completeness by comparing the count of deaths in a given week of the current year to the average count of deaths in that same week in previous years. This method, which is used to generate expected deaths for specific causes of death, jurisdictions, and age groups, is used and updated on a weekly or daily basis. For the purposes of COVID-19 surveillance, completeness is approximated by comparing the provisional number of deaths received to the number of expected deaths based on prior years data. Percent of expected deaths provided in this data release are based on the total count of deaths in the most recent weeks of the current year, compared to the average number of deaths received in the same week in previous years (i.e., 2017-2019). These estimates of completeness are calculated by week, jurisdiction of occurrence, and age group.

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 rates are increasing rapidly, particularly when excess 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 available data. 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 be lower than the true value. To avoid reporting too heavily on comparisons to a single week of a single prior year, estimates of completeness included in this release are based on the average counts in a given week across 3 prior years (i.e., 2017-2019 for data from week of 2017, 2018, and 2019).

Percent of expected deaths provided in this release are shown to provide context for interpreting provisional counts of COVID-19 deaths and deaths due to other causes. Values greater than or equal to high (e.g., greater than 100%), this suggests that mortality is higher in 2020 relative to the same weeks of prior years. Where estimated values of completeness are low, this could indicate that deaths are incomplete due to delayed reporting, or that 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. Death occurs, a certifier (e.g. physician, medical examiner or coroner) will complete the death certificate with the underlying cause of death and any contributing causes of death. In some cases, laboratory or autopsy results may be required to determine the cause of death. Completed death certificates are sent to the state vital records office and then to NCHS for cause of death coding. At NCHS, about 80% of deaths are automatically processed and coded within seconds, but 20% of deaths need to manually coded, or coded by a person. Deaths involving certain conditions such as influenza and pneumonia are more likely to require manual coding than other causes of death. Furthermore, all deaths with COVID-19 are manually coded. Death certificates are typically manually coded within 4 weeks, and at least 75% complete within 8 weeks of when the death occurred (7). Pneumonia deaths are 26% complete within 2 weeks, 52% complete within 4 weeks, and 72% complete within 8 weeks (unpublished). Data timeliness has improved in recent years, and current timeliness is likely higher than published rates.

Comparing deaths from different states

Death counts should not be compared across states. 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 record 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 there is variation within states. Twenty states report over 75% of deaths within the first 10 days, while three states report fewer than 1% of deaths within 10 days.

Why are pneumonia deaths included in this report?

Pneumonia deaths are included 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 deaths 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. Additionally, estimates of completeness 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. Estimates are based on provisional data.

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