



Coronavirus Disease (COVID-19) Reporting Guidance and Provisional Death Data

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Board of Scientific Counselors Meeting

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COVID-19 Response Timeline

February

26 Decision made to develop certification guidance for COVID-19 deaths

March

4 Preliminary Guidance for Certifying COVID-19 Deaths Released

17-20 NCHS Cause of Death Coding System Updated

25 Launched COVID-19 Death Data and Reporting Guidance
<https://www.cdc.gov/nchs/nvss/covid-19.htm>

27 Prioritized manual coding of cause of death for jurisdictions with a high volume of COVID-19 deaths.

COVID-19 Response Timeline – continued

April

- 2 Final Guidance for Certifying COVID-19 Deaths Released
- 3 First Provisional COVID-19 Death Counts Released
<https://www.cdc.gov/nchs/nvss/vsrr/covid19/index.htm>
- 16 Clinician Outreach and Communication Activity (COCA) webinar on Guidance for Certifying Deaths Due to Coronavirus Disease 2019 (COVID-19)
- 29 Excess Deaths Associated with COVID-19 Visualization Released

May

- 1 Redesigned Provisional COVID-19 Death Counts

Guidance for Certifying COVID-19 Deaths

Vital Statistics Reporting Guidance

Report No. 3 - April 2020



Guidance for Certifying Deaths Due to Coronavirus Disease 2019 (COVID-19)

Introduction

In December 2019, an outbreak of a respiratory disease associated with a novel coronavirus was reported in the city of Wuhan in the Hubei province of the People's Republic of China (1). The virus has spread worldwide and on March 11, 2020, the World Health Organization declared Coronavirus Disease 2019 (COVID-19) a pandemic (2). The first case of COVID-19 in the

Cause-of-Death Reporting

When reporting cause of death on a death certificate, use any information available, such as medical history, medical records, laboratory tests, an autopsy report, or other sources of relevant information. Similar to many other diagnoses, a cause-of-death statement is an informed medical opinion that should be based on sound medical judgment drawn from clinical training and

<https://www.cdc.gov/nchs/data/nvss/vsrg/vsrg03-508.pdf>

Guidance for Certifying COVID-19 Deaths: Key Points

- If COVID–19 played a role in the death it should be mentioned on the death certificate
- Normally abbreviations and acronyms are discouraged, but COVID–19 is unambiguous and is acceptable
- Include pre-existing conditions that complicated death in Part 2 of the death certificate
- It is acceptable to report COVID–19 on a death certificate as “probable” or “presumed” – certifiers should use their best clinical judgement in determining if a COVID–19 infection was likely

Guidance for Certifying COVID-19 Deaths: Example 1

CAUSE OF DEATH (See instructions and examples)		Approximate interval: Onset to death
<p>32. PART I. Enter the <u>chain of events</u>--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.</p> <p>IMMEDIATE CAUSE (Final disease or condition -----> resulting in death)</p> <p style="margin-left: 40px;">a. <u>Acute respiratory acidosis</u> _____ Due to (or as a consequence of):</p> <p style="margin-left: 40px;">b. <u>COVID-19</u> _____ Due to (or as a consequence of):</p> <p style="margin-left: 40px;">c. _____ Due to (or as a consequence of):</p> <p style="margin-left: 40px;">d. _____ Due to (or as a consequence of):</p> <p>Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST</p>		<p>3 days _____</p> <p>1 week _____</p> <p>_____</p> <p>_____</p>
<p>PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I</p> <p style="margin-left: 40px;"><u>Chronic obstructive pulmonary disease, hypertension</u></p>		<p>33. WAS AN AUTOPSY PERFORMED? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>35. DID TOBACCO USE CONTRIBUTE TO DEATH?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> Probably</p> <p><input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown</p>	<p>36. IF FEMALE:</p> <p><input type="checkbox"/> Not pregnant within past year</p> <p><input type="checkbox"/> Pregnant at time of death</p> <p><input type="checkbox"/> Not pregnant, but pregnant within 42 days of death</p> <p><input type="checkbox"/> Not pregnant, but pregnant 43 days to 1 year before death</p> <p><input type="checkbox"/> Unknown if pregnant within the past year</p>	<p>37. MANNER OF DEATH</p> <p><input checked="" type="checkbox"/> Natural <input type="checkbox"/> Homicide</p> <p><input type="checkbox"/> Accident <input type="checkbox"/> Pending Investigation</p> <p><input type="checkbox"/> Suicide <input type="checkbox"/> Could not be determined</p>

Guidance for Certifying COVID-19 Deaths: Example 2

CAUSE OF DEATH (See instructions and examples)		Approximate interval: Onset to death
<p>32. PART I. Enter the <u>chain of events</u>—diseases, injuries, or complications—that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.</p> <p>IMMEDIATE CAUSE (Final disease or condition -----> resulting in death)</p> <p style="margin-left: 40px;">a. <u>Acute respiratory illness</u> Due to (or as a consequence of): _____</p> <p style="margin-left: 40px;">b. <u>Probable COVID-19</u> Due to (or as a consequence of): _____</p> <p style="margin-left: 40px;">c. _____ Due to (or as a consequence of): _____</p> <p style="margin-left: 40px;">d. _____ Due to (or as a consequence of): _____</p> <p>Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST</p>		<p>1 day</p> <hr/> <p>5 days</p> <hr/> <hr/> <hr/>
<p>PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I</p> <p style="margin-left: 40px;">Ischemic stroke</p>		<p>33. WAS AN AUTOPSY PERFORMED? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>35. DID TOBACCO USE CONTRIBUTE TO DEATH?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> Probably</p> <p><input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown</p>	<p>36. IF FEMALE:</p> <p><input checked="" type="checkbox"/> Not pregnant within past year</p> <p><input type="checkbox"/> Pregnant at time of death</p> <p><input type="checkbox"/> Not pregnant, but pregnant within 42 days of death</p> <p><input type="checkbox"/> Not pregnant, but pregnant 43 days to 1 year before death</p> <p><input type="checkbox"/> Unknown if pregnant within the past year</p>	<p>37. MANNER OF DEATH</p> <p><input checked="" type="checkbox"/> Natural <input type="checkbox"/> Homicide</p> <p><input type="checkbox"/> Accident <input type="checkbox"/> Pending Investigation</p> <p><input type="checkbox"/> Suicide <input type="checkbox"/> Could not be determined</p>

COVID-19 Cause of Death Coding: ICD-10 Code

U07.1 -- COVID-19

Excludes: Coronavirus infection, unspecified site (B34.2) Severe acute respiratory syndrome [SARS], unspecified (U04.9)

The WHO has provided a second code, **U07.2**, for clinical or epidemiological diagnosis of COVID-19 where a laboratory confirmation is inconclusive or not available. Because laboratory test results are not typically reported on death certificates in the U.S., NCHS is not planning to implement U07.2 for mortality statistics.

The underlying cause depends upon what and where conditions are reported on the death certificate. However, the rules for coding and selection of the underlying cause of death are expected to result in COVID-19 being the underlying cause more often than not.

COVID-19 Cause of Death Coding: Coding Process

- Update coding systems not set up to code COVID-19 or to accept U07.1
- Establish rules for coding COVID-19 deaths
- Initially all COVID-19 records had to be manually coded
- Managing manual coding
 - Prioritization
 - Increase manual coding capacity
- Systems modified to automatically code some COVID-19 deaths
- Adjust coding rules

Provisional COVID-19 Death Counts

Data as of May 1, 2020

Week ending date in which the death occurred	COVID-19 Deaths (U07.1) ¹	Deaths from All Causes	Percent of Expected Deaths ²	Pneumonia Deaths (J12.0–J18.9) ³	Deaths with Pneumonia and COVID-19 (J12.0–J18.9 and U07.1) ³	Influenza Deaths (J09–J11) ⁴	Deaths with Pneumonia, Influenza, or COVID-19 (U07.1 or J09–J18.9) ⁵
Total Deaths	37,308	719,438	97	64,382	16,564	5,846	90,165
2/1/2020	0	57,266	97	3,688	0	469	4,157
2/8/2020	1	57,615	97	3,672	0	494	4,167
2/15/2020	0	56,878	97	3,693	0	517	4,210
2/22/2020	0	56,806	98	3,557	0	536	4,093
2/29/2020	5	56,843	99	3,626	3	619	4,247
3/7/2020	25	56,212	97	3,719	14	583	4,312
3/14/2020	49	53,968	95	3,676	25	578	4,277
3/21/2020	493	53,979	95	4,150	226	496	4,907
3/28/2020	2,712	57,430	103	5,624	1,235	410	7,463
4/4/2020	8,082	64,313	115	8,724	3,875	432	13,148
4/11/2020	12,262	66,577	120	9,841	5,468	430	16,744
4/18/2020	10,408	55,062	101	7,606	4,402	215	13,663
4/25/2020	3,271	26,489	49	2,806	1,316	67	4,777

Provisional COVID-19 Death Counts: Understanding the Numbers

Things to know about the data

- Provisional counts are not final and are subject to change
- Provisional data are not yet complete
- Death counts should not be compared across jurisdictions

Why these numbers are different

- Death certificates take time to be completed
- States report at different rates
- It takes extra time to code COVID-19 deaths
- Other reporting systems use different definitions or methods for counting deaths

<https://www.cdc.gov/nchs/data/nvss/coronavirus/Understanding-COVID-19-Provisional-Death-Counts.pdf>

Provisional COVID-19 Death Counts: Demographic and Geographic Detail

Tabulated Data (counts and/or percentages)

- COVID-19
- Pneumonia and Influenza
- Other Causes of Death (with and without COVID-19)

Demographic Detail

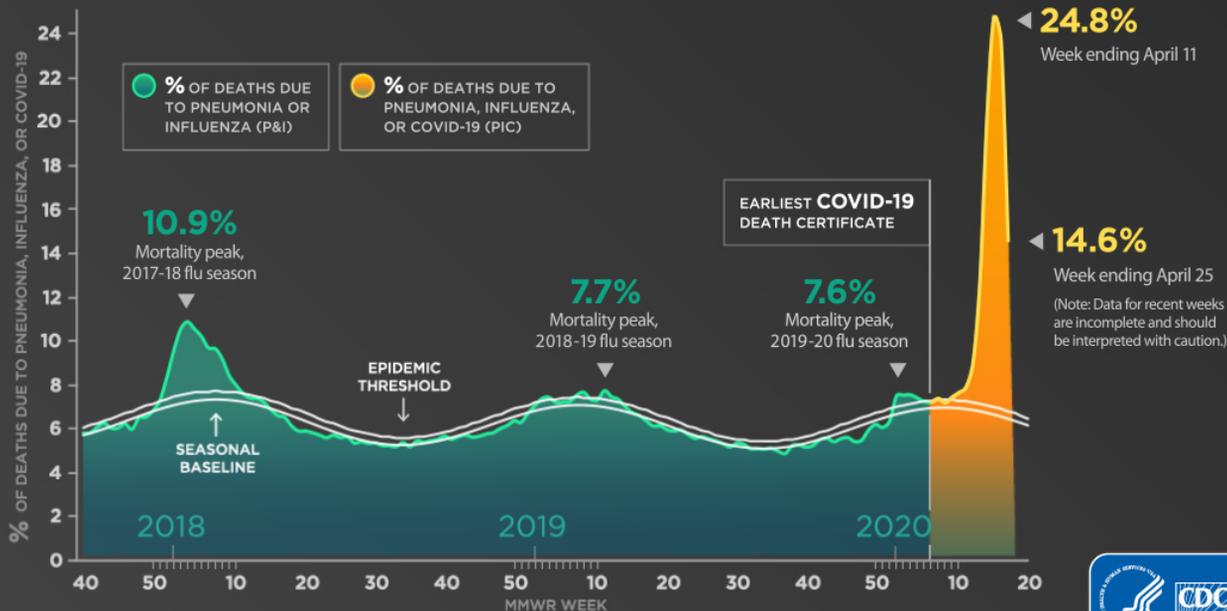
- Sex
- Age
- Race/Hispanic origin

Geographic Detail

- National
 - Jurisdiction/state
 - County
- } Counts 1-9 suppressed

U.S. Mortality: Death Certificates Listing Pneumonia, Influenza, and COVID-19

DATA THROUGH WEEK ENDING APRIL 24, 2020*



Provisional COVID-19 Death Counts: Race and Hispanic Origin

Data as of May 1, 2020

State	Indicator	Non-Hispanic White	Non-Hispanic Black or African American	Non-Hispanic American Indian or Alaska Native	Non-Hispanic Asian	Hispanic or Latino	Other
United States	COVID-19 deaths (%)	52.1	21.2	0.3	6.1	16.5	3.8
	Weighted population (%)	40.4	18.4	0.2	12.1	26.9	1.9
	Unweighted population (%)	60.4	12.5	0.7	5.7	18.3	2.4
New York City	COVID-19 deaths (%)	29.3	24.8	0	8.9	26.4	10.7
	Weighted population (%)	30.3	23.3	0.2	15.7	28.6	1.8
	Unweighted population (%)	32.1	22	0.2	14.7	29.2	1.8

Provisional COVID-19 Death Counts: Where to Find Them

Webpages

- Coronavirus Disease (COVID-19) Death Data and Reporting Guidance
<https://www.cdc.gov/nchs/nvss/covid-19.htm>
- Provisional Death Counts for Coronavirus Disease (COVID-19)
<https://www.cdc.gov/nchs/nvss/vsrr/covid19/>

Download and API Access

- All data is simultaneously posted on data.cdc.gov
 - Export in a variety of formats
 - API for automated

Provisional COVID-19 Death Counts: Modeling and Visualizations

Excess Deaths Associated with COVID-19 - Visualization

https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm

United States

Weekly number of deaths

Comparing excess deaths including/excluding COVID-19

- + indicates observed count above threshold
- Predicted number of deaths from all causes, including COVID-19
- Predicted number of deaths from all causes, excluding COVID-19
- threshold for excess deaths

