Near-real time surveillance of COVID-19 mortality using data from the National Vital Statistics System

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2020 FCSM Fall Conference

September 21, 2020

National Vital Statistics System (NVSS)

The NVSS is the mechanism by which NCHS collects and disseminates the Nation's official vital statistics on births, deaths and fetal deaths. These data are provided through contracts between NCHS and the 57 vital registration jurisdictions (50 States, the District of Columbia, New York City and 5 territories).

Final Data
- Annual Final Micro-data files
- Analytic Reports

Provisional Data
- Tabulated counts and estimate based on incomplete data
    - Quarterly Provisional Estimates
    - Weekly Surveillance of Flu and Pneumonia Deaths
    - Monthly Provisional Counts of Drug Overdose Deaths

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

Guidance for Certifying COVID-19 Deaths

Vital Statistics Reporting Guidance — NVSS

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

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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

- 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 and if the infection contributed to death

- Include pre-existing conditions that complicated death in Part 2 of the death certificate

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

- Coding systems not set up to code COVID-19 or to accept U07.1
- Establish coding rules
- 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 by week

Data as of September 8, 2020

Week ending date in which the death occurred	COVID-19 Deaths (U07.1)	Deaths from All Causes
Total	174,626	1,881,375
2/1/2020	0	58,568
2/8/2020	1	59,282
2/15/2020	0	58,688
2/22/2020	5	58,723
2/29/2020	9	59,149
3/7/2020	35	59,507
3/14/2020	52	58,303
3/21/2020	571	58,966
3/28/2020	3,151	62,853
4/4/2020	10,007	72,108
4/11/2020	16,160	78,837
4/18/2020	17,039	76,505
4/25/2020	15,401	73,569
5/2/2020	13,114	68,960
5/9/2020	11,141	66,521
5/16/2020	9,143	64,162

Week ending date in which the death occurred	COVID-19 Deaths (U07.1)	Deaths from All Causes
5/23/2020	7,136	61,266
5/30/2020	6,090	59,283
6/6/2020	4,961	58,406
6/13/2020	4,163	57,481
6/20/2020	3,771	57,301
6/27/2020	3,728	57,683
7/4/2020	4,383	58,557
7/11/2020	5,518	59,842
7/18/2020	6,820	60,431
7/25/2020	7,676	60,670
8/1/2020	7,393	59,372
8/8/2020	6,799	57,887
8/15/2020	5,535	54,280
8/22/2020	3,504	46,411
8/29/2020	1,192	30,152
9/5/2020	128	7,652