



Instructions for Completing the Cause-of-Death Section of the Death Certificate

Accurate cause-of-death information is important:

- To the public health community in evaluating and improving the health of all citizens, and
- Often to the family, now and in the future, and to the person settling the decedent's estate.

The cause-of-death section consists of two parts. **Part I** is for reporting a chain of events leading directly to death, with the **immediate cause** of death (the final disease, injury, or complication directly causing death) on Line a and the **underlying cause** of death (the disease or injury that initiated the chain of morbid events that led directly and inevitably to death) on the lowest used line. **Part II** is for reporting all other significant diseases, conditions, or injuries that contributed to death but which did not result in the underlying cause of death given in **Part I**. **The cause-of-death information should be YOUR best medical OPINION.** A condition can be listed as "probable" even if it has not been definitively diagnosed.

Examples of properly completed medical certifications

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) → a. <u>Rupture of myocardium</u> 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>b. <u>Acute myocardial infarction</u> Due to (or as a consequence of):</p> <p>c. <u>Coronary artery thrombosis</u> Due to (or as a consequence of):</p> <p>d. <u>Atherosclerotic coronary artery disease</u></p>		<p>Minutes</p> <p>6 days</p> <p>5 years</p> <p>7 years</p>
<p>PART II. Enter <u>other significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I.</p> <p><u>Diabetes, Chronic obstructive pulmonary disease, smoking</u></p>		<p>33. WAS AN AUTOPSY PERFORMED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>35. DID TOBACCO USE CONTRIBUTE TO DEATH?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Probably <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>

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<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) → a. <u>Acute renal failure</u> 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>b. <u>Hyperosmolar nonketotic coma</u> Due to (or as a consequence of):</p> <p>c. <u>Diabetes mellitus, noninsulin dependent</u> Due to (or as a consequence of):</p> <p>d. _____</p>		<p>5 days</p> <p>8 weeks</p> <p>15 years</p>
<p>PART II. Enter <u>other significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I.</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 checked="" type="checkbox"/> No</p>
<p>35. DID TOBACCO USE CONTRIBUTE TO DEATH?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Probably <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>

ITEM 32 - CAUSE OF DEATH

Take care to make the entry legible. Use a computer printer with high resolution, typewriter with good black ribbon and clean keys, or print legibly using permanent **black** ink in completing the cause-of-death section. **Do not abbreviate** conditions entered in section.

Part I (Chain of events leading directly to death)

- Only **one** cause should be entered on each line. Line a **MUST ALWAYS** have an entry. **DO NOT** leave blank. Additional lines may be added if necessary.
- If the condition on Line a resulted from an underlying condition, put the underlying condition on Line b, and so on, until the full sequence is reported. **ALWAYS** enter the **underlying cause of death** on the lowest used line in Part I.
- For each cause indicate the best estimate of the interval between the presumed onset and the date of death. The terms "unknown" or "approximately" may be used. General terms, such as minutes, hours, or days, are acceptable, if necessary. **DO NOT** leave blank.

- The terminal event (e.g., cardiac arrest or respiratory arrest) should not be used. If a mechanism of death seems most appropriate to you for **Line a**, then you must always list its cause(s) on the line(s) below it (e.g., cardiac arrest **due to** coronary artery atherosclerosis *or* cardiac arrest **due to** blunt impact to chest).
- If an organ system failure such as congestive heart failure, hepatic failure, renal failure, or respiratory failure is listed as a cause of death, always report its etiology on the line(s) beneath it (e.g., renal failure **due to** Type I diabetes mellitus).
- When indicating neoplasms as a cause of death, include the following: 1) primary site *or* that the primary site is unknown, 2) benign or malignant, 3) cell type *or* that the cell type is unknown, 4) grade of neoplasm, and 5) part or lobe of organ affected. Example: a primary well-differentiated squamous cell carcinoma, lung, left upper lobe.

Part II (Other significant conditions)

- Enter all diseases or conditions contributing to death that were not reported in the chain of events in Part I and that did not result in the **underlying cause of death**. See examples.
- If two or more possible sequences resulted in death, or if two conditions seem to have added together, report in Part I the one that, in your opinion, most directly caused death. Report in Part II the other conditions or diseases.

CHANGES TO CAUSE OF DEATH

If additional medical information or autopsy findings become available that would change the cause of death originally reported, the original death certificate should be amended by the certifying physician by **immediately** reporting the revised cause of death to the State Vital Records Office.

ITEMS 33 and 34 - AUTOPSY

- 33 - Enter "Yes" if either a partial or full autopsy was performed. Otherwise enter "No."
- 34 - Enter "Yes" if autopsy findings were available to complete the cause of death; otherwise enter "No." Leave item blank if no autopsy was performed.

ITEM 35 - DID TOBACCO USE CONTRIBUTE TO DEATH?

Check "Yes" if, in your opinion, the use of tobacco contributed to death. Tobacco use may contribute to deaths due to a wide variety of diseases; for example, tobacco use contributes to many deaths due to emphysema or lung cancer and some heart disease and cancers of the head and neck. Check "No" if, in your clinical judgment, tobacco use did not contribute to this particular death.

ITEM 36 - IF FEMALE, WAS DECEDENT PREGNANT AT TIME OF DEATH OR WITHIN PAST YEAR?

If the decedent is a female, check the appropriate box. If the female is either too old or too young to be fecund, check the "Not pregnant within past year" box. If the decedent is a male, leave the item blank. This information is important in determining pregnancy-related mortality.

ITEM 37 - MANNER OF DEATH

- Always check Manner of Death, which is important: 1) in determining accurate causes of death, 2) in processing insurance claims, and 3) in statistical studies of injuries and death.
- Indicate "Could not be determined" **ONLY** when it is impossible to determine the manner of death.

Common problems in death certification

The **elderly decedent** should have a clear and distinct etiological sequence for cause of death, if possible. Terms such as senescence, infirmity, old age, and advanced age have little value for public health or medical research. Age is recorded elsewhere on the certificate. When a number of conditions resulted in death, the physician should choose the single sequence that, in his or her opinion, best describes the process leading to death, and place any other pertinent conditions in Part II. If after careful consideration the physician cannot determine a sequence that ends in death, then the medical examiner or coroner should be consulted about conducting an investigation or providing assistance in completing the cause of death.

The **infant decedent** should have a clear and distinct etiological sequence for cause of death, if possible. "Prematurity" should not be entered without explaining the etiology of prematurity. Maternal conditions may have initiated or affected the sequence that resulted in infant death, and such maternal causes should be reported in addition to the infant causes on the infant's death certificate (e.g., Hyaline membrane disease **due to** prematurity, 28 weeks **due to** placental abruption **due to** blunt trauma to mother's abdomen).

When processes such as the following are reported, additional information about the etiology should be reported:

Abscess	Carcinogenesis	Diarrhea	Hyponatremia	Pulmonary arrest
Abdominal hemorrhage	Carcinomatosis	Disseminated intravascular coagulopathy	Hypotension	Pulmonary edema
Adhesions	Cardiac arrest	Dysrhythmia	Immunosuppression	Pulmonary embolism
Adult respiratory distress syndrome	Cardiac dysrhythmia	End-stage liver disease	Increased intracranial pressure	Pulmonary insufficiency
Acute myocardial infarction	Cardiomyopathy	End-stage renal disease	Intracranial hemorrhage	Renal failure
Altered mental status	Cardiopulmonary arrest	Epidural hematoma	Malnutrition	Respiratory arrest
Anemia	Cellulitis	Exsanguination	Metabolic encephalopathy	Seizures
Anoxia	Cerebral edema	Failure to thrive	Multi-organ failure	Sepsis
Anoxic encephalopathy	Cerebrovascular accident	Fracture	Multi-system organ failure	Septic shock
Arrhythmia	Cerebellar tonsillar herniation	Gangrene	Mycocardial infarction	Shock
Ascites	Chronic bedridden state	Gastrointestinal hemorrhage	Necrotizing soft-tissue infection	Starvation
Aspiration	Cirrhosis	Heart failure	Old age	Subarachnoid hemorrhage
Atrial fibrillation	Coagulopathy	Hemothorax	Open (or closed) head injury	Subdural hematoma
Bacteremia	Compression fracture	Hepatic failure	Pancytopenia	Sudden death
Bedridden	Congestive heart failure	Hepatitis	Paralysis	Thrombocytopenia
Biliary obstruction	Convulsions	Hepatorenal syndrome	Perforated gallbladder	Uncal herniation
Bowel obstruction	Decubiti	Hyperglycemia	Peritonitis	Urinary tract infection
Brain injury	Dehydration	Hyperkalemia	Pleural effusions	Ventricular fibrillation
Brain stem herniation	Dementia	Hypovolemic shock	Pneumonia	Ventricular tachycardia
	(when not otherwise specified)			Volume depletion

If the certifier is unable to determine the etiology of a process such as those shown above, the process must be qualified as being of an unknown, undetermined, probable, presumed, or unspecified etiology so it is clear that a distinct etiology was not inadvertently or carelessly omitted.

The following conditions and types of death might seem to be specific or natural but when the medical history is examined further may be found to be complications of an injury or poisoning (possibly occurring long ago). Such cases should be reported to the medical examiner/coroner.

Asphyxia	Epidural hematoma	Hip fracture	Pulmonary emboli	Subdural hematoma
Bolus	Exsanguination	Hyperthermia	Seizure disorder	Surgery
Choking	Fall	Hypothermia	Sepsis	Thermal burns/chemical burns
Drug or alcohol overdose/drug or alcohol abuse	Fracture	Open reduction of fracture	Subarachnoid hemorrhage	

REFERENCES

For more information on how to complete the medical certification section of the death certificate, refer to tutorial at <http://www.TheNAME.org> and resources including instructions and handbooks available by request from NCHS, Room 7318, 3311 Toledo Road, Hyattsville, Maryland 20782 or at www.cdc.gov/nchs/about/major/dvs/handbk.htm.