Examples of Cause-of-Death Certification

Case history #1

Shortly after dinner on the day before admission to the hospital, a 48-year-old male developed a cramping epigastric pain, which radiated to his back, followed by nausea and vomiting. The pain was not relieved by positional changes or antacids. The pain persisted and, 24 hours after its onset, the patient sought medical attention. He had a 10-year history of excessive alcohol consumption and a 2-year history of frequent episodes of similar epigastric pain. The patient denied diarrhea, constipation, hematemesis, and melena. The patient was admitted to the hospital with a diagnosis of an acute exacerbation of chronic pancreatitis. Radiological findings included a duodenal ileus and pancreatic calcification. Serum amylase was 4,032 units per liter. The day after admission, the patient seemed to improve. However, that evening he became disoriented, restless, and hypotensive. Despite intravenous fluids and vasopressors, the patient remained hypotensive and died. Autopsy findings revealed many areas of fibrosis in the pancreas, with the remaining areas showing multiple foci of acute inflammation and necrosis.

CAUSE OF DEATH

32. **Part I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. Do not enter terminal events such as cardiac arrest or respiratory arrest. Do not use abbreviations.

Approximate interval between onset and death:

Immediate Cause (final disease or condition resulting in death)	a.	Duodenal ileus	3 days
		Due to (or as a consequence of):	
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.	b.	Chronic pancreatitis	2 years
		Due to (or as a consequence of):	
	c.	Chronic alcoholism	10 years
		Due to (or as a consequence of):	
	d.		

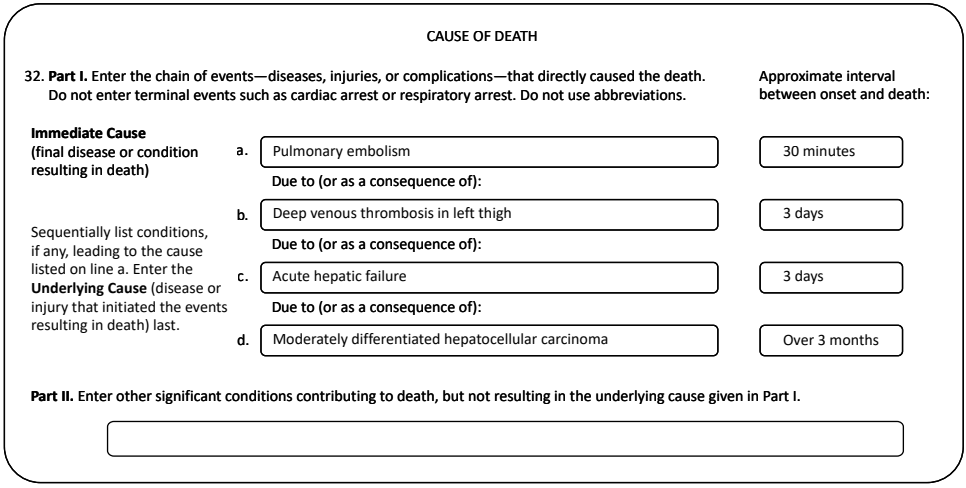
Part II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in Part I.

NOTE: This figure represents a cause-of-death section in a typical electronic death registration system based on the 2003 U.S. Standard Certificate of Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Notes on death certification: Duodenal ileus and pancreatic calcification are nonspecific processes, and neither should be listed as an underlying cause of death.

Case history #2

A 68-year-old male was admitted to the hospital with progressive right lower quadrant pain of several weeks' duration. The patient had lost approximately 40 pounds and had experienced progressive weakness and malaise. On physical examination, the patient had an enlarged liver span that was 4 fingerbreadths below the right costal margin. Rectal examination was normal, and stool was negative for occult blood. Routine laboratory tests were within normal limits. A chest x-ray and barium enema were negative. His EKG showed a right bundle branch block. CT scan showed numerous masses within both lobes of the liver. A needle biopsy of the liver was diagnostic of moderately differentiated hepatocellular carcinoma, and the patient was started on chemotherapy. Three months after the diagnosis, the patient developed sharp diminution of liver function and a deep venous thrombosis of his left thigh and was admitted to the hospital. On his third day, the patient developed a pulmonary embolism and died 30 minutes later.



CAUSE OF DEATH

32. **Part I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. Do not enter terminal events such as cardiac arrest or respiratory arrest. Do not use abbreviations.

Approximate interval between onset and death:

Immediate Cause (final disease or condition resulting in death)

a. Pulmonary embolism — 30 minutes

Due to (or as a consequence of):

b. Deep venous thrombosis in left thigh — 3 days

Due to (or as a consequence of):

c. Acute hepatic failure — 3 days

Due to (or as a consequence of):

d. Moderately differentiated hepatocellular carcinoma — Over 3 months

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.

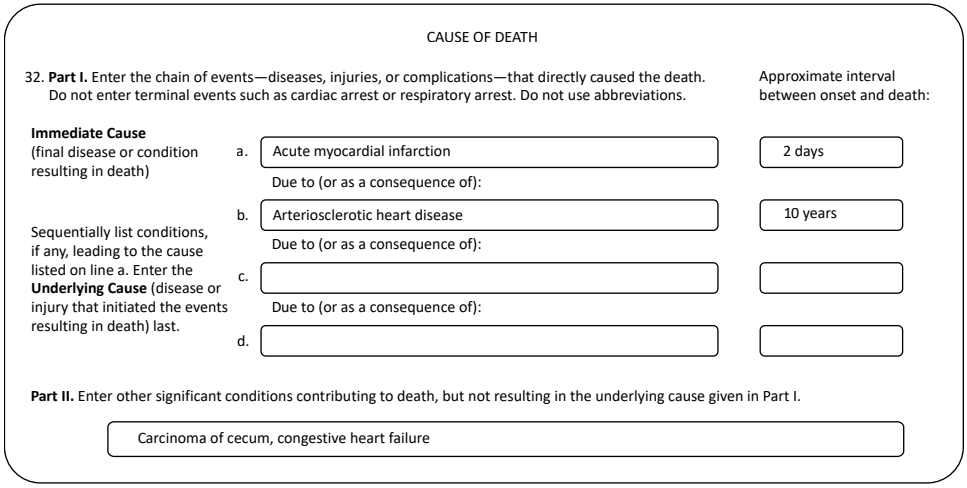
Part II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in Part I.

NOTE: This figure represents a cause-of-death section in a typical electronic death registration system based on the 2003 U.S. Standard Certificate of Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Case history #3

A 75-year-old male was admitted to the hospital complaining of severe chest pain. He had a 10-year history of arteriosclerotic heart disease with EKG findings of myocardial ischemia and several episodes of congestive heart failure controlled by digitalis preparations and diuretics. Five months before this admission, the patient was found to be anemic, with a hematocrit of 17, and to have occult blood in the stool. A barium enema revealed a large polypoid mass in the cecum diagnosed as carcinoma by biopsy.

Because of the patient's cardiac status, he was not considered to be a surgical candidate. Instead, he was treated with a 5-week course of radiation therapy and periodic packed red cell transfusions. He completed this course 3 months before this hospital admission. On this admission, the EKG indicated an acute anterior wall myocardial infarction. He died 2 days later.



CAUSE OF DEATH

32. **Part I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. Do not enter terminal events such as cardiac arrest or respiratory arrest. Do not use abbreviations.

Approximate interval between onset and death:

Immediate Cause (final disease or condition resulting in death)

a. Acute myocardial infarction — 2 days

Due to (or as a consequence of):

b. Arteriosclerotic heart disease — 10 years

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.

Due to (or as a consequence of):

c.

Due to (or as a consequence of):

d.

Part II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in Part I.

Carcinoma of cecum, congestive heart failure

NOTE: This figure represents a cause-of-death section in a typical electronic death registration system based on the 2003 U.S. Standard Certificate of Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Notes on death certification: Acute myocardial infarction, listed in Part I line a. as the immediate cause of death, is a direct consequence of arteriosclerotic heart disease, the underlying cause listed in Part I line b.

Carcinoma of cecum is listed in Part II because it caused anemia and weakened the patient, but it did not cause arteriosclerotic heart disease.

Congestive heart failure is listed in Part II because it also weakened the patient. Although it was caused by the arteriosclerotic heart disease, it was not part of the causal sequence leading to the acute myocardial infarction.

Case history #4

A 68-year-old female was admitted to the ICU with dyspnea and moderate retrosternal pain of 5 hours' duration, which did not respond to nitroglycerin. Patient had a history of obesity, noninsulin-dependent diabetes mellitus, hypertension, and for 8 years, episodes of nonexertional chest pain diagnosed as angina pectoris. Over the first 72 hours, she developed a significant elevation of troponin I, confirming an acute myocardial infarction. A Type II second-degree atrioventricular block developed, and a temporary pacemaker was placed. She subsequently developed dyspnea with fluid retention and cardiomegaly on chest radiograph. She improved with diuretics. On the seventh hospital day, during ambulation she suddenly developed chest pain and increased dyspnea. An acute pulmonary embolism was suspected, and intravenous heparin was started. The diagnosis of pulmonary embolism was confirmed by a ventilation–perfusion scan as well as arterial blood gas measurements. One hour later, she became unresponsive and resuscitation efforts were unsuccessful.

CAUSE OF DEATH

32. **Part I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. Do not enter terminal events such as cardiac arrest or respiratory arrest. Do not use abbreviations.

			Approximate interval between onset and death:
Immediate Cause (final disease or condition resulting in death)	a.	Pulmonary embolism	1 hour
		Due to (or as a consequence of):	
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.	b.	Acute myocardial infarction	7 days
		Due to (or as a consequence of):	
	c.	Chronic ischemic heart disease	8 years
		Due to (or as a consequence of):	
	d.		

Part II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in Part I.

Noninsulin-dependent diabetes mellitus, obesity, hypertension, congestive heart failure

NOTE: This figure represents a cause-of-death section in a typical electronic death registration system based on the 2003 U.S. Standard Certificate of Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Notes on death certification: In this case, noninsulin-dependent diabetes mellitus, obesity, hypertension, and congestive heart failure would all be considered factors that contributed to the death. However, they would not be in the direct causal sequence of Part I, so they should be reported in Part II.

Case history #5

A 78-year-old female with a temperature of 102.6° F was admitted to the hospital from a nursing home. She first became a resident of the nursing home 2 years earlier, following a cerebrovascular accident that left her with a residual left hemiparesis. Over the next year, she became increasingly dependent on others to help with her activities of daily living, eventually requiring an in-dwelling bladder catheter 6 months before the current admission. For the 3 days before admission, she was noted to have lost her appetite and to have become increasingly withdrawn.

On admission to the hospital, her leukocyte count was 19,700, she had pyuria, and gram-negative rods were seen on a gram stain of urine. Ampicillin and gentamicin were administered intravenously. On the third hospital day, admission blood cultures turned positive for *Pseudomonas aeruginosa*, which was resistant to ampicillin and gentamicin. Antibiotic therapy was changed to ticarcillin clavulanate, to which the organism was sensitive. Despite the antibiotics and intravenous fluid support, the patient's fever persisted. On the fourth day in the hospital, she became hypotensive and died.

CAUSE OF DEATH

32. **Part I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. Do not enter terminal events such as cardiac arrest or respiratory arrest. Do not use abbreviations.

Approximate interval between onset and death:

Immediate Cause (final disease or condition resulting in death)

a. Pseudomonas aeruginosa sepsis — Days

Due to (or as a consequence of):

b. Pseudomonas aeruginosa urinary tract infection — Days

Due to (or as a consequence of):

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.

c. In-dwelling bladder catheter — 6 months

Due to (or as a consequence of):

d. Left hemiparesis due to old cerebrovascular accident — 2 years

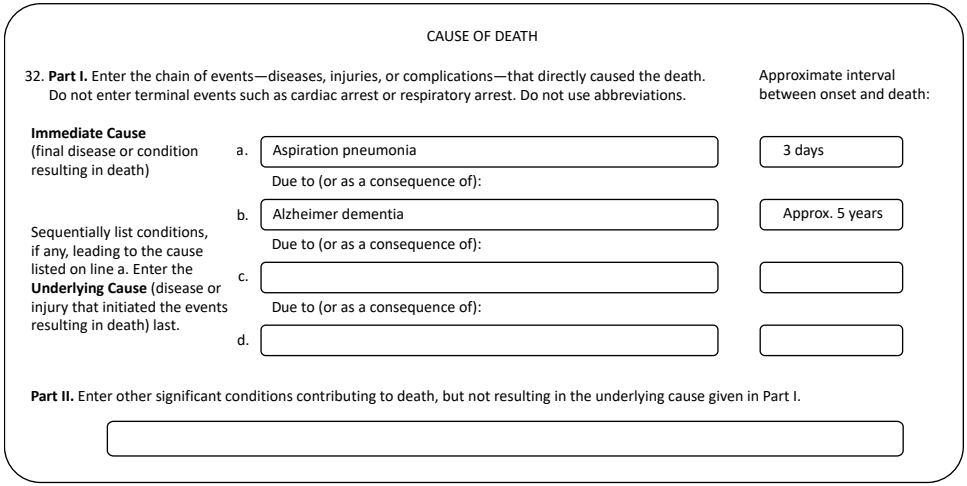
Part II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in Part I.

NOTE: This figure represents a cause-of-death section in a typical electronic death registration system based on the 2003 U.S. Standard Certificate of Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Notes on death certification: This case illustrates how to use the phrase "due to" between conditions on the same line, which is equivalent to adding an additional line to Part I.

Case history #6

A 69-year-old female with a history of progressive dementia consistent with Alzheimer dementia was admitted from a hospice care facility for fever and dyspnea. She had been bedridden due to dementia for approximately 5 years. Six months earlier, she was noted to have increasing difficulty with swallowing and handling oral secretions. At that time, a gastrostomy tube was placed for nutritional support. The transfer report indicated that for 3 days before admission, the patient's oral secretions had become thicker and more copious, and she had been coughing incessantly. A chest radiograph obtained on admission demonstrated probable pneumonia in the lower lobes of the lungs. She was severely dyspneic, and an arterial blood gas test showed marked hypoxemia. Based on an advanced directive, mechanical ventilation was not instituted. The patient worsened over the next several hours and died.



CAUSE OF DEATH

32. **Part I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. Do not enter terminal events such as cardiac arrest or respiratory arrest. Do not use abbreviations.

Approximate interval between onset and death:

Immediate Cause (final disease or condition resulting in death)

a. Aspiration pneumonia — 3 days

Due to (or as a consequence of):

b. Alzheimer dementia — Approx. 5 years

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.

Due to (or as a consequence of):

c.

Due to (or as a consequence of):

d.

Part II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in Part I.

NOTE: This figure represents a cause-of-death section in a typical electronic death registration system based on the 2003 U.S. Standard Certificate of Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Notes on death certification: As with all deaths, certifiers of deaths for those in hospice should review the medical records of the decedent, if possible. For hospice deaths specifically, the medical certifier should also review the clinical narrative in the hospice certification because the documentation likely contains information that is relevant to the cause-of-death statement.

Case history #7

A 34-year-old male was admitted to the hospital with severe shortness of breath. He had a 9-month history of unintentional weight loss, night sweats, and diarrhea. The patient had no history of any medical condition that would cause immunodeficiency. An ELISA test and confirmatory Western blot test for HIV were positive. T-lymphocyte tests indicated a low T helper-suppressor ratio. A lung biopsy was positive for pneumocystis carinii pneumonia (PCP), indicating a diagnosis of AIDS.

The patient's pneumonia responded to pentamidine therapy, and the patient was discharged. The patient had two additional admissions for PCP. Seventeen months after the patient was first diagnosed as HIV positive, he developed PCP again but did not respond to therapy. He died 2 weeks later.

CAUSE OF DEATH

32. **Part I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. Do not enter terminal events such as cardiac arrest or respiratory arrest. Do not use abbreviations.

Approximate interval between onset and death:

Immediate Cause (final disease or condition resulting in death)	a.	Pneumocystis carinii pneumonia	2 weeks
		Due to (or as a consequence of):	
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.	b.	Acquired immunodeficiency syndrome	17 months
		Due to (or as a consequence of):	
	c.	Human immunodeficiency virus infection	Over 17 months
		Due to (or as a consequence of):	
	d.		

Part II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in Part I.

NOTE: This figure represents a cause-of-death section in a typical electronic death registration system based on the 2003 U.S. Standard Certificate of Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Notes on death certification: By definition, AIDS is due to HIV infection; even though it may seem redundant to specify HIV infection in the causal sequence, it is best to do so. HIV infection and AIDS are not synonymous, and there is a variable clinical course between the time of HIV infection and onset of AIDS.

Case history #8

A 75-year-old male had a 10-year history of chronic bronchitis associated with smoking two packs of cigarettes per day for more than 40 years. When seen by his physician approximately 2 years before his terminal episode, he had moderately reduced FEV_1 and FVC, with no response to bronchodilators. During his last year, he required corticosteroids to prevent wheezing and coughing at night; however, he was unable to reduce his smoking to less than one pack of cigarettes per day. When seen 3 months before his terminal episode, he had significantly reduced FEV_1 and FVC, with no response to bronchodilators. He awoke one evening complaining to his wife about coughing and worsening shortness of breath. He was taken to the emergency room where he was found to have an acute exacerbation of obstructive airway disease. He was admitted to the hospital. At the patient's request, no mechanical ventilation was employed, and he died 12 hours later in respiratory arrest.

CAUSE OF DEATH

32. **Part I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. Do not enter terminal events such as cardiac arrest or respiratory arrest. Do not use abbreviations.

Approximate interval between onset and death:

Immediate Cause (final disease or condition resulting in death)

a. Acute exacerbation of obstructive airway disease — 12 hours

Due to (or as a consequence of):

b. Chronic bronchitis — 10 years

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.

Due to (or as a consequence of):

c.

Due to (or as a consequence of):

d.

Part II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in Part I.

Cigarette smoking

NOTE: This figure represents a cause-of-death section in a typical electronic death registration system based on the 2003 U.S. Standard Certificate of Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Notes on death certification: In this case, respiratory arrest is considered a mechanism of death, and it would not be listed as the immediate cause of death.

Case history #9

A 75-year-old female had a 15-year history of noninsulin-dependent diabetes mellitus, a 13-year history of mild hypertension treated with thiazide diuretics, and an uncomplicated myocardial infarction 6 years before the present illness. She was found disoriented in her apartment and brought to the hospital. On admission, she was noted to be unresponsive, without focal neurologic signs, severely dehydrated, and with a blood pressure of 90/60. Initial laboratory tests showed severe hyperglycemia, hyperosmolarity, azotemia, and mild ketosis without acidosis. A diagnosis of hyperosmolar nonketotic coma was made.

The patient was vigorously treated with fluids, electrolytes, insulin, and broad-spectrum antibiotics, although no source of infection was documented. Within 72 hours, the patient's hyperosmolar hyperglycemic state was resolved. However, she remained anuric with progressive azotemia. Attempts at renal dialysis were unsuccessful, and the patient died on the eighth day in the hospital in severe renal failure.

CAUSE OF DEATH

32. **Part I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. Do not enter terminal events such as cardiac arrest or respiratory arrest. Do not use abbreviations.

Approximate interval between onset and death:

Immediate Cause (final disease or condition resulting in death)

a. Acute renal failure — 5 days

Due to (or as a consequence of):

b. Hyperosmolar nonketotic coma — 8 days

Due to (or as a consequence of):

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.

c. Diabetes mellitus, noninsulin-dependent — 15 years

Due to (or as a consequence of):

d.

Part II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in Part I.

Hypertension, previous myocardial infarction

NOTE: This figure represents a cause-of-death section in a typical electronic death registration system based on the 2003 U.S. Standard Certificate of Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Notes on death certification: In this case, hypertension and a previous myocardial infarction would both be considered factors that contributed to the death. However, they would not be in the direct causal sequence of Part I, so they should be reported in Part II.

Case history #10

A 53-year-old male was admitted to the hospital after 2 days of intermittent midepigastric and left-sided chest pain. The pain radiated to his left arm and was accompanied by nausea and vomiting. He reported a history that included 2 years of occasional chest discomfort, a near-syncopal episode 6 months earlier, hypertension, a 30-year history of smoking one pack of cigarettes per day, congenital blindness, and insulin-dependent diabetes mellitus. He was noted to be markedly obese and to have severe hypercholesterolemia.

At the time of admission, his enzyme studies were normal, but the EKG suggested myocardial ischemia. Two days later, he experienced an episode of severe chest pain that did not respond to nitroglycerin and was accompanied by ST-segment elevation. A cardiac catheterization demonstrated severe multivessel coronary artery stenosis. He underwent quadruple coronary artery bypass surgery. Shortly after being taken off the cardiopulmonary bypass machine, he went into cardiac arrest. A resuscitation by open cardiac massage was attempted, during which a rupture developed in his left ventricular wall, resulting in rapid exsanguination and death.

CAUSE OF DEATH

32. **Part I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. Do not enter terminal events such as cardiac arrest or respiratory arrest. Do not use abbreviations.

Approximate interval between onset and death:

Immediate Cause (final disease or condition resulting in death)	a.	Rupture of left ventricle	Minutes
		Due to (or as a consequence of):	
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.	b.	Myocardial infarction	2 days
		Due to (or as a consequence of):	
	c.	Coronary atherosclerosis	2 years
		Due to (or as a consequence of):	
	d.		

Part II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in Part I.

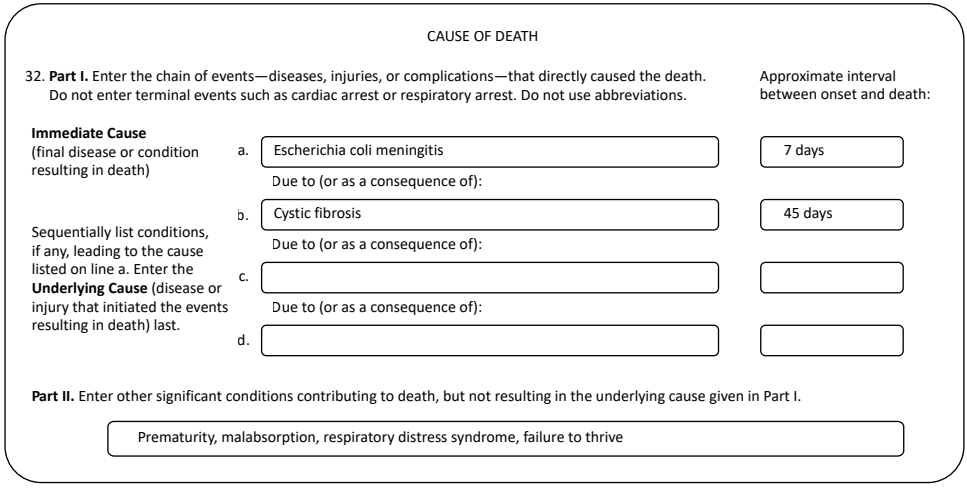
Insulin-dependent diabetes mellitus, cigarette smoking, hypertension, hypercholesterolemia, coronary bypass surgery

NOTE: This figure represents a cause-of-death section in a typical electronic death registration system based on the 2003 U.S. Standard Certificate of Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Notes on death certification: In this case, insulin-dependent diabetes mellitus, cigarette smoking, hypertension, and hypercholesterolemia would all be considered factors that contributed to the death. However, they would not be in the direct causal sequence of Part I, so they should be reported in Part II. The surgery probably played a role in death, but it did not cause the coronary artery disease, so it is also listed in Part II.

Case history #11

A 1,480-gram male infant was born at 32 weeks gestation to a 20-year-old primiparous woman. Newborn screening found elevated levels of immunoreactive trypsinogen in the blood. The infant developed respiratory distress syndrome and required mechanical ventilation for 7 days. Despite receiving adequate calories for growth, the infant gained weight poorly and had persistent diarrhea. Steatorrhea was confirmed upon microscopic examination. Results from a sweat chloride test given on the 21st day after birth were negative, but the patient had an elevated sweat chloride concentration of 85 millimoles per liter when the test was repeated at 35 days of age. On the 37th day after birth, the infant became lethargic and was noted to be edematous. *Escherichia coli* was cultured from the infant's cerebral spinal fluid, total serum proteins were reported to be low, and clotting studies were prolonged. The infant died at 45 days of age despite appropriate life-saving efforts. Gross autopsy confirmed the clinical impression of cystic fibrosis.



CAUSE OF DEATH

32. **Part I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. Do not enter terminal events such as cardiac arrest or respiratory arrest. Do not use abbreviations.

Approximate interval between onset and death:

Immediate Cause (final disease or condition resulting in death)

a. Escherichia coli meningitis — 7 days

Due to (or as a consequence of):

b. Cystic fibrosis — 45 days

Due to (or as a consequence of):

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.

c.

Due to (or as a consequence of):

d.

Part II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in Part I.

Prematurity, malabsorption, respiratory distress syndrome, failure to thrive

NOTE: This figure represents a cause-of-death section in a typical electronic death registration system based on the 2003 U.S. Standard Certificate of Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

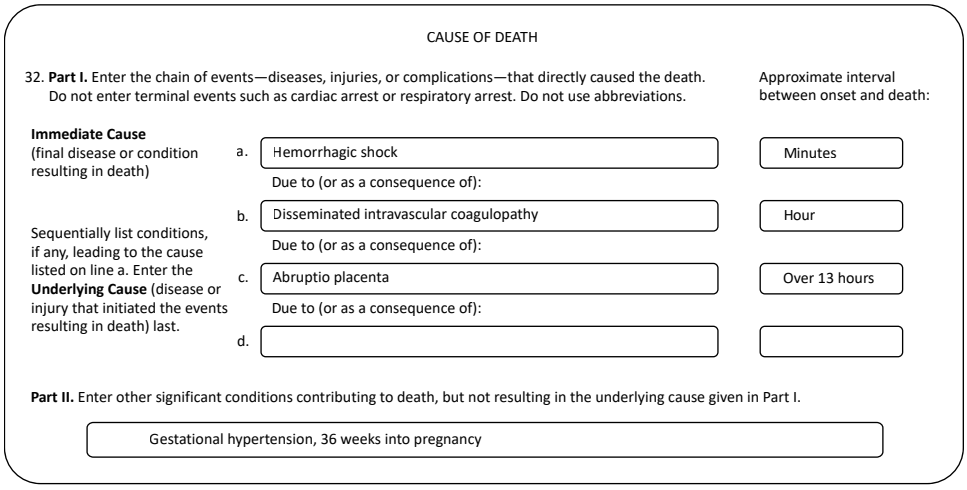
Notes on death certification: In this case, prematurity, malabsorption, respiratory distress syndrome, and failure to thrive would all be considered factors that contributed to the death. However, they would not be in the direct causal sequence of Part I, so they should be reported in Part II.

Case history #12

A 30-year-old, gravida 6, para 5, with a history of gestational hypertension reported to the emergency room at 36 weeks gestation with complaints of abdominal cramping and light vaginal bleeding during the past 12 hours. At the time of first assessment, fetal heart tones were detected. The uterus was tense, irritable, and tender. The mother was hypotensive with tachycardia. A presumptive diagnosis of abruptio placenta was made, and an emergency cesarean section was performed under general anesthesia. The baby was stillborn. The mother continued to bleed from her uterus and phlebotomy sites and went into profound shock secondary to disseminated intravascular coagulation. Despite administration of blood and clotting factors, intravascular pressure could not be maintained, and the mother died on the operating table. Maternal autopsy confirmed the clinical diagnosis.

A death certificate would be completed for the mother and a fetal death report for the fetus. The cause of fetal death is reported using a different format. Refer to the *Medical Examiners' and Coroners' Handbook on Death Registration and Fetal Death Reporting* for more information.

Maternal death certificate:



CAUSE OF DEATH

32. **Part I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. Do not enter terminal events such as cardiac arrest or respiratory arrest. Do not use abbreviations.

Approximate interval between onset and death:

Immediate Cause (final disease or condition resulting in death)

a. Hemorrhagic shock — Minutes

Due to (or as a consequence of):

b. Disseminated intravascular coagulopathy — Hour

Due to (or as a consequence of):

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.

c. Abruptio placenta — Over 13 hours

Due to (or as a consequence of):

d.

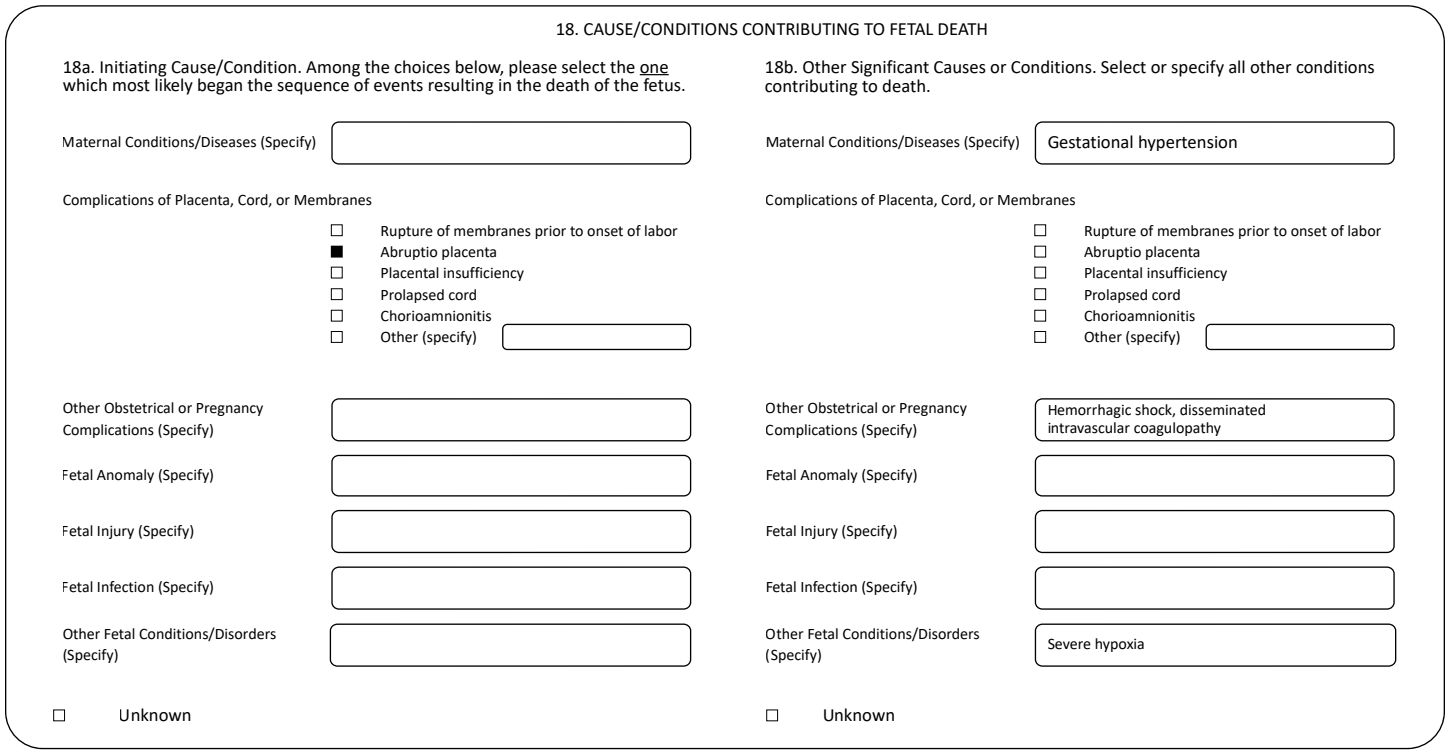
Part II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in Part I.

Gestational hypertension, 36 weeks into pregnancy

NOTE: This figure represents a cause-of-death section in a typical electronic death registration system based on the 2003 U.S. Standard Certificate of Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Notes on death certification: In this case, gestational hypertension would be considered a factor that contributed to the death. However, it would not be in the direct causal sequence of Part I, so should be reported in Part II.

Fetal death report:



18. CAUSE/CONDITIONS CONTRIBUTING TO FETAL DEATH

18a. Initiating Cause/Condition. Among the choices below, please select the one which most likely began the sequence of events resulting in the death of the fetus.

Maternal Conditions/Diseases (Specify)

Complications of Placenta, Cord, or Membranes

- ☐ Rupture of membranes prior to onset of labor
- ■ Abruptio placenta
- ☐ Placental insufficiency
- ☐ Prolapsed cord
- ☐ Chorioamnionitis
- ☐ Other (specify)

Other Obstetrical or Pregnancy Complications (Specify)

Fetal Anomaly (Specify)

Fetal Injury (Specify)

Fetal Infection (Specify)

Other Fetal Conditions/Disorders (Specify)

☐ Unknown

18b. Other Significant Causes or Conditions. Select or specify all other conditions contributing to death.

Maternal Conditions/Diseases (Specify): Gestational hypertension

Complications of Placenta, Cord, or Membranes

- ☐ Rupture of membranes prior to onset of labor
- ☐ Abruptio placenta
- ☐ Placental insufficiency
- ☐ Prolapsed cord
- ☐ Chorioamnionitis
- ☐ Other (specify)

Other Obstetrical or Pregnancy Complications (Specify): Hemorrhagic shock, disseminated intravascular coagulopathy

Fetal Anomaly (Specify)

Fetal Injury (Specify)

Fetal Infection (Specify)

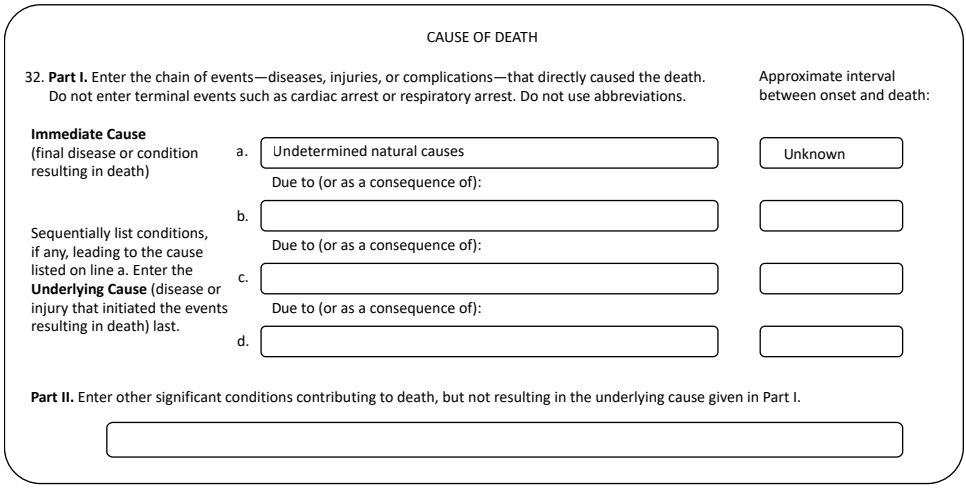
Other Fetal Conditions/Disorders (Specify): Severe hypoxia

☐ Unknown

NOTE: This figure represents a fetal death report in a typical fetal death registration system based on the 2003 U.S. Standard Report of Fetal Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Case history #13

A 92-year-old male was found dead in bed. He had no significant medical history. Autopsy showed minimal coronary disease and generalized atrophic changes commonly associated with aging. No specific cause of death was identified. Toxicology was negative.


CAUSE OF DEATH

32. **Part I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. Do not enter terminal events such as cardiac arrest or respiratory arrest. Do not use abbreviations.

Approximate interval between onset and death:

Immediate Cause (final disease or condition resulting in death)

a. Undetermined natural causes — Unknown

Due to (or as a consequence of):

b.

Due to (or as a consequence of):

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.

c.

Due to (or as a consequence of):

d.

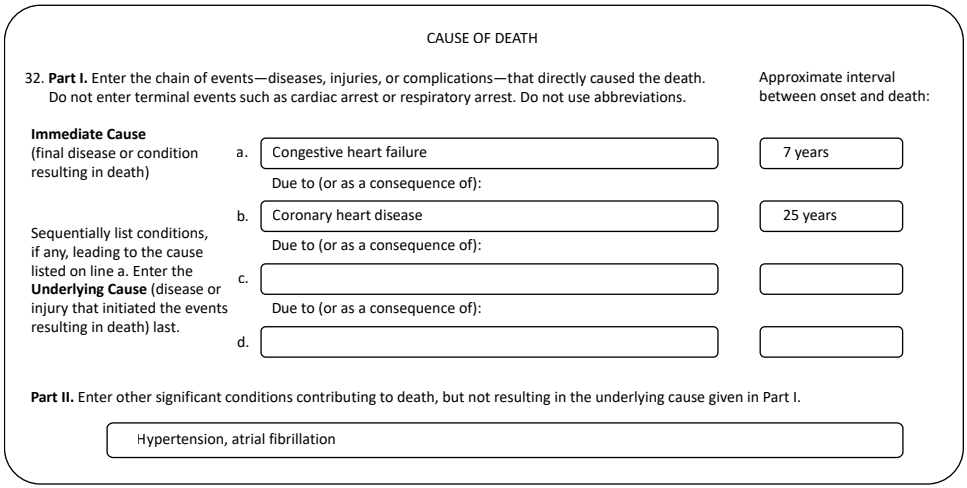
Part II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in Part I.

NOTE: This figure represents a cause-of-death section in a typical electronic death registration system based on the 2003 U.S. Standard Certificate of Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Notes on death certification: In some cases, no compelling cause presents itself. It is acceptable to indicate that a thorough investigation was performed but no cause could be determined.

Case history #14

A 102-year-old female was brought to the hospital because her word combinations were not comprehensible. However, at admission, her sentences were lucid. She was placed on blood anticoagulants. She had a history of arthritis, hypertension, blocked arteries, coronary thrombosis (25 years before), stroke (10 years before), periodic TIAs (8-year period), and congestive heart failure (hospitalized 6 years before). On the fourth day in the hospital, a colonoscopy indicated internal bleeding, so the anticoagulants were discontinued. She was released from the hospital after 7 days. After discharge, language and motor skills were impaired, although functioning was better earlier in the day. Additionally, her leg coloration started changing. After a week at home, the woman was readmitted to the hospital after a spell of vomiting. Vascular imaging indicated that circulation was blocked at the groin, language did not improve, ability to eat and keep food down deteriorated, and heart rate was periodically arrhythmic with periods of third-degree heart block. After 11 weeks of hospitalization, she was sent home under hospice care and died 2 days later.



CAUSE OF DEATH

32. **Part I.** Enter the chain of events—diseases, injuries, or complications—that directly caused the death. Do not enter terminal events such as cardiac arrest or respiratory arrest. Do not use abbreviations.

Approximate interval between onset and death:

Immediate Cause (final disease or condition resulting in death)

a. Congestive heart failure — 7 years

Due to (or as a consequence of):

b. Coronary heart disease — 25 years

Due to (or as a consequence of):

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.

c.

Due to (or as a consequence of):

d.

Part II. Enter other significant conditions contributing to death, but not resulting in the underlying cause given in Part I.

Hypertension, atrial fibrillation

NOTE: This figure represents a cause-of-death section in a typical electronic death registration system based on the 2003 U.S. Standard Certificate of Death.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Citation: National Center for Health Statistics. Physician's handbook on medical certification of death. Hyattsville, MD: National Center for Health Statistics. 2023.
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Go to the Center for Disease Control and Prevention: https://www.cdc.gov/nchs/data/nvss/handbook/2023-Physicians-mcod-handbook.pdf to obtain a free copy

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