

Guidance for Identifying and Certifying Disaster-Related Deaths

This document provides guidance on recognizing disaster-related deaths and recording them on the death certificate. Accurate and uniform disaster mortality data are critical to assessing the scope of an event, identifying common risk factors, and informing prevention strategies to reduce morbidity and mortality.

Defining Disaster-Related Deaths

A disaster is an event that severely disrupts the functioning of society, exceeds local response capacity, and prompts the need for external assistance. Disasters may be human-induced (e.g., chemical plant explosion, act of terror, mass violence) or natural (e.g., hurricane, tornado, flood). The disaster does not need to be formally declared to be treated as such for determining cause of death.

Understanding the circumstances surrounding and leading to a death helps determine if a death is disaster-related. Deaths can be directly or indirectly related and occur before, during, or after the event.

- **Directly related:** *Was the death caused by actual forces or a direct consequence of the forces?*
- **Indirectly related:** *Did unhealthy or unsafe conditions related to the disaster (before, during, or while recovering from an event) contribute to the death? Did forces (natural or human-induced) lead to temporary or permanent displacement, property damage, or personal stress that contributed to death?*

Use the “But for Principle” to aid in defining a disaster-related death

“But for the [disaster], would they have died when they did?” Could exposure to environmental heat associated with lack of power after a tropical storm have contributed to the onset of the fatal heart attack? Could lack of medical services such as dialysis have led to kidney failure? If unsure, but probable that the death is related to the disaster, then it should be recorded as disaster-related on the death certificate.

Examples of Disaster-Related Fatalities

Before the Disaster

- Preparation for disaster (e.g., fell while putting up storm windows)
- Evacuation (e.g., motor vehicle crash while evacuating before tropical storm)

During the Disaster

- Escaping or fleeing the disaster (e.g., drowned while driving through flooded street)
- Sheltering in place (e.g., crushed by tree that fell through roof; drowned in flood waters in attic)

During or After the Disaster

- Exposure to industrial or chemical hazards (e.g., chemical release from industrial plant explosion)
- Loss or disruption of public utilities (e.g., hyperthermia due to no power in home post-hurricane)
- Loss or disruption of transportation-related services (e.g., lack of medical transport to dialysis)
- Loss or disruption of usual access to medical services (e.g., oxygen, medications)
- Psychosocial stress or anxiety (e.g., death by suicide)
- Mass Violence/Terrorism/Riots (e.g., death by homicide, traumatic injury)

After the Disaster

- Return to unsafe, unhealthy structures or environment (e.g., electrocution)
- Cleanup after disaster (e.g., chainsaw injury, electrocution)
- Use of temporary sheltering, provisions, or displacement (e.g., carbon monoxide poisoning)

Certification of Disaster-Related Deaths

1. Filling out Part I

The immediate disease or conditions that directly caused death are sequentially entered in this section.

- Document the chain of events that best explains death, with the oldest underlying condition that began the sequence listed last
- This may include non-clinical information, like the circumstance of death, disaster type and name

Manner of Death: ACCIDENT	
CAUSE OF DEATH 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, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line.	APPROXIMATE INTERVAL: Onset to Death
IMMEDIATE CAUSE - (Condition resulting in death) a Thoracic Aorta Rupture	
Sequentially list conditions, if any, leading to the cause listed on line a. b Blunt Chest Trauma	
Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST c. MVC while evacuating for Hurricane Laura	
d.	
PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I.	

In this example, the most immediate cause of death, thoracic aorta rupture, is listed first, with underlying causes subsequently listed. Evacuating during Hurricane Laura, the initiating event, is listed last.

2. Filling out Part II

Document other significant conditions that may have contributed to the death, but were not part of the causal sequence reported in Part I.

- If disaster-related details are not listed in Part I, report them in this section as a significant condition contributing to death, with any predisposing medical conditions
- If you are uncertain, then conditions may be qualified with “presumed” or “probable”

Manner of Death: NATURAL	
CAUSE OF DEATH 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, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line.	APPROXIMATE INTERVAL: Onset to Death
IMMEDIATE CAUSE - (Final disease or condition resulting in death) a ACUTE MYOCARDIAL INFARCTION	MINUTES TO HOURS
Sequentially list conditions, if any, leading to the cause listed on line a. b ATHEROSCLEROTIC CORONARY ARTERY DISEASE	YEARS
Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST c.	
d.	
PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I. DIABETES, ROAD BLOCKAGES DUE TO JULY 2023 TORNADO DELAYED RESPONSE	

In this example, delays in emergency response due to road blockages from a tornado were a significant condition contributing to death. The predisposing medical condition - diabetes - is also listed.

3. Filling out the Injury Section

If the death was an injury, complete:

- **Place of injury:** general description of where the injury occurred (e.g., inside of own home, road)
- **Injury at work:** consider if the person was engaged in work activities – including emergency response and recovery - and situations where the injury occurred at work, but the person died in a different location
- **Location of injury:** provide full address when available. If not, an approximate location
- **Describe how injury occurred:** include specific details describing the circumstances of the injury or external cause of death. This can include disaster type and name

Summary:

- Be aware of natural and human-induced disasters
- Consider causes of deaths that are indirectly-related to the disaster; they can occur before, during, and after a disaster
- Consider work-related deaths; these may occur onsite after the initial incident, or at another location following an exposure at the worksite
- Record the disaster type, name, and circumstance of death in either Part I, Part II, or “Describe How Injury Occurred” box (if applicable).

Resources

Louisiana Department of Health. [Guidance for Identifying and Certifying Death from Environmental Heat Exposure](#). 2025

Free, online training: National Center for Health Statistics [Guidance for Certification of Deaths in the Event of a Natural, Human-Induced, or Radiological/Chemical Disaster](#)

National Center for Health Statistics. [A reference guide for certification of deaths in the event of a natural, human-induced, or chemical/radiological disaster](#). Hyattsville, MD. 2017

Centers for Disease Control and Prevention. [Death Scene Investigation After Natural Disaster or Other Weather-Related Events Toolkit](#): First edition. Atlanta (GA): CDC; 2017

National Associations of Medical Examiners [Position Paper. Recommendations for the Documentation and Certification of Disaster-Related Deaths](#). 2023

Randy Hanzlick et al. [Cause of Death and the Death Certificate: Important Information for Physicians, Coroners, Medical Examiners, and the Public](#). College of American Pathologists. 2006

Centers for Disease Control and Prevention. [Medical Examiners and Coroners Handbook on Death Registration and Fetal Death Reporting](#). Atlanta (GA): CDC; 2003



For more info, visit ldh.la.gov/heat

Examples of Medical Certification

This section contains examples for guidance on certification of disaster-related fatalities.

Case Scenario 1: Loss or disruption of usual access to medical services. A nursing home experienced power outages during Hurricane Ida that caused malfunction of generators and failure of their oxygen cylinders. An 87-year-old man died after lack of access to oxygen. He had a documented history of being terminally ill with end-stage idiopathic pulmonary fibrosis.

Manner of Death: NATURAL	
CAUSE OF DEATH 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, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line.	APPROXIMATE INTERVAL: Onset to Death
IMMEDIATE CAUSE - (Final disease or condition resulting in death) a ASPHYXIA	MINUTES
Sequentially list conditions, if any, leading to the cause listed on line a. b SEQUELAE OF END STAGE IDIOPATHIC PULMONARY FIBROSIS	YEARS
Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST c	
d	
PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I. HYPOXEMIA RELATED TO NON-OPERATIONAL OXYGEN CYLINDERS DURING POWER OUTAGE CAUSED BY HURRICANE IDA	

Case Scenario 2: Loss or disruption of public utilities. A 69-year-old woman was found dead in her home by her sister who performed a welfare check after returning from evacuation from Hurricane Ike. There were power outages in the area. A generator was found running in the home.

Manner of Death: ACCIDENT				
CAUSE OF DEATH 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, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line.				APPROXIMATE INTERVAL: Onset to Death
IMMEDIATE CAUSE - (Final disease or condition resulting in death) a CARBON MONOXIDE POISONING				MINUTES TO HOURS
Sequentially list conditions, if any, leading to the cause listed on line a. b INHALATION OF GENERATOR FUMES				MINUTES TO HOURS
Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST c POWER OUTAGE				HOURS TO DAYS
d				
PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I. HURRICANE IKE				
WAS AN AUTOPSY PERFORMED?		FINDINGS USED IN DETERMINING CAUSE?		
NO		NOT APPLICABLE		
DATE OF INJURY	TIME OF INJURY	PLACE OF INJURY	INJURY AT WORK	IF TRANSPORTATION INJURY, SPECIFY:
Approx 9/12/2008		INSIDE DECEDENT'S HOME	N	
LOCATION OF INJURY - (STREET ADDRESS, CITY, STATE, ZIP CODE, COUNTRY)				PARISH/COUNTY
212 GARDEN LN, EDGARD. LA 70049 UNITED STATES				ST. JOHN THE BAPTIST
DESCRIBE HOW INJURY OCCURRED INHALED FUMES FROM A GENERATOR INSIDE THE HOME DURING POWER OUTAGE AFTER HURRICANE IKE				

Case Scenario 3: Escaping the disaster. A 46-year-old man drowned in his car during the Great Flood of 2016. He drove into deep standing water and his car filled with water.

Manner of Death: ACCIDENT				
CAUSE OF DEATH 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, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. IMMEDIATE CAUSE - (Final disease or condition resulting in death) a ASPHYXIA Sequentially list conditions, if any, leading to the cause listed on line a. b WATER INHALATION Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST c SUBMERSION IN WATER d TRAPPED IN VEHICLE PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I.				APPROXIMATE INTERVAL: Onset to Death MINUTES
WAS AN AUTOPSY PERFORMED?		FINDINGS USED IN DETERMINING CAUSE?		
NO		NOT APPLICABLE		
DATE OF INJURY	TIME OF INJURY	PLACE OF INJURY	INJURY AT WORK	IF TRANSPORTATION INJURY, SPECIFY:
08/11/2016	04:42pm	INSIDE VEHICLE	N	DRIVER
LOCATION OF INJURY - (STREET ADDRESS, CITY, STATE, ZIP CODE, COUNTRY) INTERSECTION OF MAIN ST AND GREEN DR . DENHAM SPRINGS. LA 70726 UNITED STATES				PARISH/COUNTY EAST BATON ROUGE
DESCRIBE HOW INJURY OCCURRED CAR DROVE INTO A FLOODED ROADWAY DURING THE GREAT FLOOD OF 2016				

Case Scenario 4: Work-related cleanup after disaster: A 37-year-old construction worker died after developing heat stroke at work. He was an out-of-state contractor who was in Louisiana to assist with post-storm recovery.

Manner of Death: ACCIDENT				
CAUSE OF DEATH 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, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. IMMEDIATE CAUSE - (Final disease or condition resulting in death) a HEAT STROKE Sequentially list conditions, if any, leading to the cause listed on line a. b EXPOSURE TO ENVIRONMENTAL HEAT Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST c d PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I.				APPROXIMATE INTERVAL: Onset to Death MINUTES TO HOURS HOURS
WAS AN AUTOPSY PERFORMED?		FINDINGS USED IN DETERMINING CAUSE?		
YES		NO		
DATE OF INJURY	TIME OF INJURY	PLACE OF INJURY	INJURY AT WORK	IF TRANSPORTATION INJURY, SPECIFY:
08/06/2010	01:37pm	I- 80 NEAR LAPLACE	Y	
LOCATION OF INJURY - (STREET ADDRESS, CITY, STATE, ZIP CODE, COUNTRY) I- 80 NEAR LAPLACE. LAPLACE. LA 70068 UNITED STATES				PARISH/COUNTY ST. JOHN THE BAPTIST
DESCRIBE HOW INJURY OCCURRED COLLAPSED CLEANING DEBRIS FROM A HIGHWAY AFTER TROPICAL STORM BONNIE. BODY TEMPERATURE RECORDED AT 105				

Case scenario 5: Sheltering in place. A 20-year-old man died 6 months after Hurricane Katrina in a LTAC facility. He was receiving care for traumatic injuries that occurred when a tree fell through his house during Hurricane Katrina.

Manner of Death: ACCIDENT				
CAUSE OF DEATH 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, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line.				APPROXIMATE INTERVAL: Onset to Death
IMMEDIATE CAUSE - (Final disease or condition resulting in death)				HOURS
a PULMONARY EMBOLISM Sequentially list conditions, if any, leading to the cause listed on line a.				HOURS TO DAYS
b DEEP LEG VEIN THROMBOSIS				
Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST				6 MONTHS
c MULTIPLE FRACTURES OF BILATERAL LOWER EXTREMITIES				6 MONTHS
d BLUNT FORCE TRAUMA				
PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I. FACTOR V LEIDEN. CRUSH INJURY DURING HURRICANE KATRINA				
WAS AN AUTOPSY PERFORMED?			FINDINGS USED IN DETERMINING CAUSE?	
NO			NOT APPLICABLE	
DATE OF INJURY	TIME OF INJURY	PLACE OF INJURY	INJURY AT WORK	IF TRANSPORTATION INJURY, SPECIFY:
08/29/2005	02:30pm	INSIDE HOME	N	
LOCATION OF INJURY - (STREET ADDRESS, CITY, STATE, ZIP CODE, COUNTRY)				PARISH/COUNTY
14683 TULIP ST NEW ORLEANS, LA 70126 UNITED STATES				ORLEANS
DESCRIBE HOW INJURY OCCURRED				
TREE FELL THROUGH HIS ROOF DURING HURRICANE KATRINA, MULTIPLE CRUSH INJURIES				

Case Scenario 6: Terrorist event. A 28-year-old man died from traumatic injuries after he was struck by a car. He was one of 14 individuals killed during a terrorist attack on Bourbon Street on New Year's Day.

Manner of Death: Homicide				
CAUSE OF DEATH 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, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line.				APPROXIMATE INTERVAL: Onset to Death
IMMEDIATE CAUSE - (Final disease or condition resulting in death)				
a Blunt Force Injury Sequentially list conditions, if any, leading to the cause listed on line a.				
b Pedestrian Struck by Vehicle				
Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST				
c				
d				
PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I. Pedestrian, Bourbon St Attack on New Years				