

A Guide for
Manner of Death Certification
Second Edition



National Association of Medical Examiners

Prepared by the Ad Hoc Manner of Death Guidelines Committee

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Preface

The National Association of Medical Examiners (NAME) first approved its Guide for Manner of Death Classification in 2002. At that time, it was anticipated that the Guide would evolve as medicolegal death investigation practices changed and experience accumulated regarding the application of its recommendations. More than two decades later, changes in practice, emerging circumstances, and continued variation in the classification of certain deaths prompted a comprehensive reconsideration of the Guide.

This second edition was undertaken to update, expand, and clarify the recommendations and rationale for manner of death determination in circumstances that may present challenges to certifiers. Particular attention was given to situations in which variation in practice has persisted or in which evolving medical, investigative, or societal circumstances warranted additional guidance. The intent was not to develop a rule for every conceivable circumstance, but to provide clear recommendations for commonly encountered or particularly challenging situations and to promote greater consistency in manner of death determination.

Development of the second edition included review and discussion of individual scenarios by a committee representing differing medicolegal death investigation systems and jurisdictions. Recommendations were considered in the context of current practice, experience, and the principles underlying manner of death determination. Where differing approaches existed, the committee sought to identify a recommended approach that could promote consistency while preserving the professional judgment necessary to evaluate the circumstances of an individual death.

These recommendations are guidelines rather than standards. They are intended to assist certifiers in reaching well-reasoned and consistent manner of death determinations while recognizing that individual cases may present circumstances that warrant professional judgment. Jurisdictions may also establish policies regarding manner of death certification in particular circumstances.

Adoption of a recommendation in this edition does not, by itself, require amendment of deaths previously certified using a different approach. A change in certification practice may appropriately be implemented prospectively. When a significant change in practice is adopted, communication with appropriate jurisdictional stakeholders, such as vital records officials, fatality review teams, attorneys, and law enforcement agencies, may be helpful in explaining the rationale for the change and differences between earlier and subsequent certifications.

As with the original Guide, these Guidelines may be revised or supplemented in the future as medicolegal death investigation and manner of death certification continue to evolve.

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Introduction

All states utilize a death certificate based on the U.S. Standard Certificate of Death. Although individual certificates may differ slightly, they are substantially similar. Depending upon jurisdictional law, the individual responsible for certifying a death may be a medical examiner, coroner, physician, physician extender, tribal authority, Justice of the Peace, or other authorized individual.

In 1910, a requirement to record manner of death for deaths not due to natural causes was added to the U.S. Standard Certificate of Death to provide additional information regarding the circumstances of death and how an injury was sustained, thereby assisting in the classification and coding of mortality statistics for public health surveillance.¹ These data have been used to identify patterns of injury and death and to develop interventions and safety measures intended to prevent future deaths.¹ Accurate and consistent determination of manner of death is therefore important to the integrity of mortality statistics and public health surveillance.¹

Manner of death is an opinion based on the circumstances surrounding the death as known at the time of certification. Consequently, the certifier should have access to all relevant information available. Restricting or withholding such information prevents the certifier from fully evaluating the circumstances of the death and may result in an inaccurate manner of death determination. If additional information becomes available after certification, the manner of death may be amended when appropriate.

The manner of death recorded on the death certificate serves important public health, statistical, and administrative purposes and should not be interpreted as a judicial determination of criminal responsibility or civil liability. A manner of Homicide does not indicate that an individual should be criminally charged, just as a manner of Accident does not indicate that criminal charges could not be appropriate. Legal determinations and manner of death determinations serve different purposes and should be considered independently.

Variation in manner of death determination occurs among certifiers and jurisdictions, particularly in complex or unusual cases. Some offices and jurisdictions may establish policies for manner of death certification in specific circumstances. Such policies may promote consistency within a jurisdiction, but the certifier should be able to articulate a clear, well-reasoned rationale for the manner selected.

These Guidelines were developed to promote greater consistency in manner of death determination while recognizing the role of professional judgment. They are intended to provide practical guidance to medical examiners, coroners, physicians, and others responsible for certifying deaths, as well as to forensic pathology fellows, pathology residents, and others learning the principles of death certification. The recommendations are guidelines rather than standards and should be applied in the context of the circumstances of the individual death.

The U.S. Standard Certificate of Death recognizes five manners of death: **NATURAL**, **ACCIDENT**, **SUICIDE**, **HOMICIDE**, and **UNDETERMINED**. Some jurisdictions additionally recognize **THERAPEUTIC COMPLICATION** as a manner of death.

The chapters that follow address general principles and commonly encountered circumstances in which determination of manner of death may be challenging. The recommendations are intended to serve as a practical reference and to encourage consistent application of manner of death principles while preserving the professional judgment necessary to evaluate the circumstances of each death.

Section I. General Principles of Manner of Death Determination

The determination of manner of death is based on the circumstances surrounding the death and the available investigative and medical information. Although each case is unique, consistent application of fundamental principles promotes consistency in certification and improves the quality of mortality statistics, public health surveillance, and medicolegal death investigation.

The following principles provide the foundation for the recommendations presented throughout these Guidelines.

A. Natural versus Non-natural Death

One of the first steps in manner of death assessment is to determine whether the death is natural or non-natural. A **NATURAL** death is one that is due solely to disease or the aging process. Non-natural deaths involve an injury, intoxication, or other external factor causing or contributing to death, even if the death is temporally remote from the event or exposure. When death involves a combination of natural processes and external factors, preference is given to the non-natural component for determination of manner of death, regardless of its location on the death certificate (Part I versus Part II).

The four non-natural manners of death are **ACCIDENT**, **SUICIDE**, **HOMICIDE**, and **UNDETERMINED**.

NATURAL — Death due solely to disease or the aging process.

ACCIDENT — Death resulting from an injury or intoxication occurring without evidence of intent to cause harm or death.

SUICIDE — Death resulting from a self-inflicted act that occurred with intent to cause harm or death.

HOMICIDE — Death resulting from a volitional act or act of omission committed by another person to cause fear, harm, pain or death. The classification of homicide is a neutral medicolegal determination and does not require intent to cause harm or death.

UNDETERMINED — Death for which there is insufficient information to determine the manner, the remains are incomplete or skeletonized, or there are competing manners of death and the available information is no more compelling for one manner than another.

Note: Some states, as well as the U.S. Standard Certificate of Death, use the term “Could Not Be Determined” for this manner of death. This designation is commonly referred to as “Undetermined,” which is the terminology used in this guide.

B. General Principles

Access to Information — Because manner of death determination is predominantly circumstance dependent, the certifier should have access to all available relevant investigative, medical, and scene information. Restricting or withholding relevant information may prevent the certifier from fully evaluating the circumstances surrounding the death and may result in an inaccurate manner of death determination.

Objective Determination — Manner of death should be determined objectively using the available evidence, independent of personal beliefs, public opinion, or potential legal consequences.

The "But-for" Principle — The "but-for" principle may be useful in manner of death determination: "But for the injury, intoxication, or other external factor, would the person have been expected to die when they did?" This principle may assist in differentiating between natural and non-natural deaths. When an injury, intoxication, or other external factor contributes to or hastens death, the manner of death is non-natural, even when the individual has significant or potentially life-threatening natural disease.

Time Interval — There is no maximum time interval between an injury and death that, by itself, changes the manner of death. The determining factor is whether the injury or intoxication initiated the fatal sequence of events. When an injury or intoxication initiated the chain of events leading to death, the manner of death follows the initiating event, regardless of the length of time between the injury and death. For example, complications of quadriplegia years after a diving incident with cervical spinal cord injury should be classified as ACCIDENT. Similarly, when death results from a post-traumatic seizure disorder, the manner of death should follow the circumstances of the injury that caused the seizure disorder, regardless of the interval between the injury and death.

Injury Superimposed on Natural Disease — The presence of significant natural disease does not change the manner of death when an injury, intoxication, or other external factor initiated or materially contributed to the fatal outcome.

C. Legal Considerations

Manner of death is a medicolegal classification for death certification and public health purposes. It is independent of criminal statutes, civil liability, or judicial findings. The determination of Homicide does not imply criminal responsibility, nor should criminal charges dictate the manner of death certification. Similarly, statutory offenses such as vehicular homicide or negligent homicide do not automatically require certification of the manner of death as Homicide. The manner should be determined by the circumstances of the death and the principles outlined in these Guidelines.

D. Therapeutic Complication

Some jurisdictions recognize Therapeutic Complication as a sixth manner of death. This designation refers to recognized complications arising from appropriate diagnostic or therapeutic interventions performed for a disease.

It generally does not include:

- Errors in diagnosis
- Failure to diagnose
- Errors of omission
- Errors in clinical judgment
- Medical neglect

When a therapeutic complication results from treatment of an injury, the manner of death should follow the manner assigned to the initiating injury.

E. Risk-taking Behavior

Risk-taking behavior may pose challenges in manner of death determination. Participation in an activity involving a recognized risk of severe injury or death does not, by itself, determine the manner of death. The circumstances of the activity, the actions of the participants, and the rules governing participation should be considered.

F. Volition and Intent

Volition refers to whether an act was consciously undertaken. Intent refers to a person's plan, aim, or purpose in performing the act. A volitional act does not necessarily indicate intent to cause harm or death.

Intent should be evaluated from the circumstances surrounding the event and may be established through direct or circumstantial evidence.

Section II. Poisoning and Intoxication Deaths

Deaths involving drugs, alcohol, medications, or other toxic substances are commonly encountered in medicolegal death investigation. Determination of manner of death should consider whether the death resulted from acute toxicity, chronic substance use and its complications, appropriate therapeutic use, or intentional poisoning. The circumstances surrounding the exposure, including the actions and intent of the individual or another person, should be considered.

A. Acute Drug or Toxin Toxicity

Deaths directly due to the acute toxic effects of a drug or toxin should generally be classified as **ACCIDENT** when there is no evidence of intent to cause harm or death. Examples include fentanyl toxicity, acute cocaine intoxication, and fatal acute alcohol intoxication in a non-tolerant or non-chronic alcohol user.

When acute intoxication precipitates an otherwise natural disease process, the manner of death should be classified as **ACCIDENT** when the intoxication contributes to death and toxicology findings support acute intoxication. Examples include rupture of a cerebral artery aneurysm associated with acute cocaine intoxication or an acute myocardial infarct associated with methamphetamine intoxication.

B. Chronic Substance Use and Related Disease

Chronic drug and alcohol use disorders are diseases.² Deaths resulting from the chronic medical consequences of substance use should generally be classified as **NATURAL**. Examples include alcoholic cirrhosis, alcohol withdrawal-related seizures, endocarditis secondary to chronic intravenous drug use, and emphysema associated with smoking.

The presence of a substance at the time of death does not, by itself, establish acute intoxication or require a non-natural manner of death. Toxicology findings should be interpreted in the context of the circumstances, history of substance use, and other findings.

C. Acute and Chronic Alcohol-Related Deaths

Chronic alcohol use disorder is a disease, and medical complications such as cirrhosis and pancreatitis are natural sequelae. Ethanol may be detected in individuals who chronically use alcohol, and chronic users may tolerate blood alcohol concentrations that could produce significant toxicity in non-tolerant individuals.

By convention, a chronic alcohol user who dies from complications of chronic alcohol use and has an amount of ethanol in the blood typical for that individual, in the absence of other contributing substances, should generally be classified as **NATURAL**.

In contrast, when a non-chronic or non-tolerant individual dies from the acute toxic effects of excessive alcohol ingestion without intent to cause self-harm, the manner of death should be classified as **ACCIDENT**.

When other drugs are present, or another toxic substance such as ethylene glycol is determined to have caused or contributed to the death, a non-natural manner of death should be considered.

D. Drug Administration by Another Person

An unintentional death from drug toxicity in which the drug was administered by another person with the consent of the decedent should be classified as **ACCIDENT**, provided there is no evidence that the drug was administered with intent to cause harm.

The possibility of criminal prosecution should not determine the manner of death. As discussed in Section I, manner of death is a medicolegal classification and is independent of criminal responsibility or legal culpability.

E. Therapeutic Drug Toxicity

Deaths resulting from recognized toxic effects or complications of appropriate drug therapy for a natural disease should generally be classified as **NATURAL**, or **THERAPEUTIC COMPLICATION** when that manner is available in the jurisdiction.

Examples include digoxin toxicity during treatment of severe congestive heart failure, fatal infection resulting from bone marrow suppression during chemotherapy, and complications of immunosuppressive therapy following organ transplantation.

F. Intentional Self-Poisoning

When a drug, medication, or other toxic substance is intentionally used by an individual to cause their own death, the manner of death should be classified as **SUICIDE**.

G. Intentional Poisoning by Another Person

Death resulting from the intentional administration or exposure to a drug, chemical, biological agent, or other toxic substance by another person should be classified as **HOMICIDE** provided the agent was not administered with the consent of or at the request of the decedent, as in section II-D.

H. Psychogenic Polydipsia

Psychogenic polydipsia, a condition typically associated with underlying mental health disorders such as schizophrenia, may result in significant electrolyte dilution and death. Because the fatal electrolyte disturbance results from the exogenous ingestion of water, the manner of death should be classified as **ACCIDENT**.

I. Pediatric Intoxication Deaths

When an infant or toddler ingests a loose or dropped pill (prescribed or over the counter medication) that results in death, the manner of death should be classified as **ACCIDENT**, provided there is no evidence of neglect or intent to cause harm.

When an infant or toddler dies from the toxic effects of an illicit substance, the manner of death should be classified as **HOMICIDE** due to the neglect associated with illicit drugs in the presence of children/infants.

Section III. Firearm-Related Deaths

Firearm-related deaths may present challenges in manner of death determination when the person who discharged the firearm did not intend to cause the resulting injury or death. The distinction between a volitional act and intent to cause harm or death may be particularly relevant in these cases. The circumstances of the firearm discharge, including whether the firearm was intentionally operated, should be considered in determining manner of death.

A. Hunting-Related Deaths

When a person is unintentionally shot and killed by a hunter who intentionally fires a firearm at a target, the manner of death should be classified as **HOMICIDE**.

Although the shooter did not intend to strike a person, the acts resulting in discharge of the firearm were volitional. The firearm was intentionally aimed at a perceived target and the trigger was intentionally pulled. The absence of intent to strike a person does not change the fact that the fatal injury resulted from the volitional act of another person.

Jurisdictional variation exists in the classification of these deaths, with some jurisdictions preferring Accident or Undetermined. Classification as **HOMICIDE** is recommended to promote consistency in manner of death determination.

B. Unintentional Mechanical Discharge

When a firearm is confirmed to have discharged without an intentional trigger pull, the resulting death should be classified as **ACCIDENT**, provided the circumstances and investigation support an unintentional mechanical discharge.

Examples include a firearm that discharges when dropped or picked up without the trigger being intentionally pulled.

C. Ricochet Injuries

Death resulting from a projectile that ricochets after a firearm is intentionally discharged by another person should be classified as **HOMICIDE**, regardless of whether the person intended to strike or injure another person.

As with hunting-related deaths, the fatal injury resulted from the volitional discharge of a firearm by another person, although injury or death was not intended.

D. Russian Roulette

Deaths resulting from Russian roulette should be classified as **SUICIDE**. The act of placing a loaded firearm to the head and intentionally pulling the trigger is inherently dangerous and carries a considerable risk of severe injury or death.

Determining the individual's precise state of mind or intent at the moment the trigger was pulled may be difficult. Jurisdictional variation exists in the classification of these deaths, with some jurisdictions preferring Accident or Undetermined. Classification as **SUICIDE** is recommended to promote consistency in manner of death determination.

E. Firearm Discharge by a Young Child

When a young child points a normally functioning firearm at another person and intentionally pulls the trigger, resulting in death, the manner of death should be classified as **HOMICIDE**, regardless of the age of the child.

The classification reflects that the fatal injury resulted from the volitional act of another person and does not imply criminal responsibility or legal culpability.

Jurisdictional variation exists in the classification of these deaths, with some jurisdictions preferring Accident or Undetermined. Classification as **HOMICIDE** is recommended to promote consistency in manner of death determination.

F. Drone- or Robot-Related Firearm Discharges

Deaths resulting from firearm discharges by a remotely controlled drone, robot, or similar device should be classified as **HOMICIDE**. Although the firearm is discharged through a mechanical device, the device is remotely controlled by another person, and the fatal injury results from the volitional act of that person.

Section IV. Motor Vehicle Deaths

Deaths resulting from motor vehicle incidents should generally be classified according to the circumstances of the event and whether there was intent to cause harm or death. Potential criminal charges, traffic violations, negligence, or other legal consequences should not determine the manner of death.

A. Motor Vehicle Collisions

Deaths resulting from motor vehicle collisions should generally be classified as **ACCIDENT** when there is no evidence that the collision occurred with intent to cause harm or death.

A collision does not need to be witnessed for the manner of death to be classified as **ACCIDENT**. The manner should be determined from the totality of the available investigative and medical information.

B. Intentional Motor Vehicle Collisions

When another person is killed as the result of a driver's intentional act to cause harm or death, the manner of death should be classified as **HOMICIDE**.

When a driver intentionally causes a collision or otherwise uses a motor vehicle with the intent to cause their own death, the driver's manner of death should be classified as **SUICIDE**.

C. Pedestrians Struck by Motor Vehicles

The death of a pedestrian struck by a motor vehicle should generally be classified as **ACCIDENT** when there is no evidence that the driver or pedestrian intended to cause harm or death.

The classification remains **ACCIDENT** when the driver is intoxicated, negligent, or leaves the scene following the collision, provided there is no evidence of intent to cause harm or death. Such circumstances may have significant legal consequences but do not, by themselves, change the manner of death to Homicide.

When a pedestrian intentionally gets struck by a motor vehicle with the intent to cause their own death, the pedestrian's manner of death should be classified as **SUICIDE**.

The death of a pedestrian that is intentionally struck and killed by a driver of a motor vehicle, the manner of death should be classified as **HOMICIDE**.

Section V. Environmental, Exposure, and Envenomation-Related Deaths

Deaths involving environmental, biologic, or other external exposures may require consideration of whether the external factor caused or contributed to death or merely provided the setting in which a natural death occurred. When an external factor contributes to or hastens death, a non-natural manner of death should generally be favored.

A. Natural Disease Occurring in a Hostile Environment

When a natural event occurs in a hostile environment and the environment contributes to death, the manner of death should generally be classified as **ACCIDENT**.

For example, when an individual experiences a seizure while swimming and is alive when the face becomes immersed, the water contributes to the fatal outcome. The "but-for" principle may be useful in these circumstances: but for the hostile environment, would the person have been expected to die when they did?

If the available evidence establishes that death occurred from underlying natural disease before exposure to the hostile environment, the manner should be classified as **NATURAL**.

B. Vector-Borne Disease

Deaths resulting from vector-borne diseases should generally be classified as **NATURAL**, even though transmission may involve a bite or puncture. These deaths generally have a more prolonged and variable clinical course than deaths resulting from toxic envenomation.

Examples include Rocky Mountain spotted fever and malaria. In these circumstances, the vector transmits a disease that subsequently causes illness and death.

C. Toxic Envenomation

Deaths resulting from toxic envenomation should be classified as **ACCIDENT**.

Examples include fatal snake bites and spider bites. These events are typically acute, and the fatal response results from the effects of the toxin.

D. Anaphylaxis and Anaphylactoid Reactions

Deaths resulting from drug-, medication-, or food-induced anaphylaxis or anaphylactoid reactions should generally be classified as **ACCIDENT**, even when the individual has a known history of an allergic reaction to the implicated agent.

Although anaphylaxis represents a pathophysiologic response by the individual, these deaths involve an external factor and may occur suddenly and unpredictably.

When anaphylaxis or an anaphylactoid reaction results from appropriately administered medication or contrast material during medical treatment, **THERAPEUTIC COMPLICATION** may be appropriate when that manner is available in the jurisdiction.

E. Hyperthermia and Hypothermia

Deaths resulting from environmental hyperthermia or hypothermia should generally be classified as **ACCIDENT** when the thermal exposure causes or contributes to death.

Section VI. Suicide-Related Deaths

Classification of a death as **SUICIDE** requires evidence that the fatal self-inflicted act occurred with intent to cause harm or death. Intent should be determined from the circumstances surrounding the death and the available investigative and medical information.

A. Delayed Death Following an Intentional Self-Inflicted Act

A delayed death resulting from a self-inflicted act undertaken with intent to cause harm or death should be classified as **SUICIDE**, regardless of the period of survival.

A subsequent change in intent does not alter the manner of death when the original act was undertaken with intent to cause harm or death. For example, death from acute liver failure following an intentional acetaminophen overdose should remain classified as **SUICIDE**, even when the individual subsequently expresses that they no longer wish to die.

B. Active Assistance with Suicide

Deaths involving active euthanasia or active assistance with suicide should be classified as **HOMICIDE**, unless applicable legislation dictates otherwise. Although these actions may be done with the individual's consent, this differs from II-D because the intent is to cause death.

Active assistance occurs when another person performs or participates in the fatal act. An example includes turning on a helium tank and securing a bag around the head of a suicidal individual at that individual's request.

C. Passive Assistance with Suicide

Deaths involving passive assistance to a suicidal individual should be classified as **SUICIDE**, unless applicable legislation dictates otherwise and the investigation confirms that the assistance was passive rather than active.

Examples include providing medication or a toxin subsequently used by the individual, without administering it, or providing information or instructions used by the individual to cause their own death.

D. Self-Inflicted Death While Under the Influence of a Mind-Altering or Hallucinogenic Drug

Self-inflicted deaths occurring while an individual is under the influence of a mind-altering or hallucinogenic drug may be classified as **ACCIDENT**, **SUICIDE**, or **UNDETERMINED**, depending upon the available evidence.

Scene photographs, investigative information, medical records, and other relevant circumstances may assist in determining whether the self-inflicted act occurred with intent to cause harm or death.

E. Deaths of Others Resulting from a Suicidal Act

When an individual's intentional suicidal act inadvertently causes the death of another person, the death of the other person should be classified as **HOMICIDE**.

For example, when an individual intentionally runs a motor vehicle in an attached garage in order to die by suicide and carbon monoxide enters the residence and causes the death of another occupant, the other occupant's manner of death should be classified as **HOMICIDE**.

Section VII. Law Enforcement and Restraint-Related Deaths

Deaths occurring during restraint, physical altercation, or interactions with law enforcement may involve multiple contributing factors. Manner of death should be determined from the circumstances and the acts that caused or contributed to death. The classification should not depend upon whether the individuals involved are law enforcement personnel, medical personnel, or civilians.

A. Restraint and Other Measures Used to Subdue

Deaths resulting from positional restraint, choke holds, electrical conduction devices, or other measures applied by another person to subdue an individual should be classified as **HOMICIDE** when those acts cause or contribute to death.

In these circumstances, the death results from one or more acts by another person that cause or contribute to death.

B. Delirium and Physical Altercation

Deaths due to delirium should be classified according to the underlying cause of the delirium. Acute delirium resulting from drug intoxication should generally be classified as **ACCIDENT**. Delirium resulting from disease, such as hypoglycemia, alcohol withdrawal, or schizophrenia, should generally be classified as **NATURAL**.

When a physical altercation occurs, the contribution of the altercation to the death should be evaluated. If neck compression, restraint asphyxia, pepper spray, a punch, or another act by another person causes or contributes to death, the manner should be classified as **HOMICIDE**.

In some circumstances, the stress of the physical altercation may trigger a fatal cardiac arrhythmia and support classification as **HOMICIDE**. Death may result from a combination of sympathomimetic stimulation, physical stress, and underlying conditions such as heart disease or obesity.

The manner should not be influenced by whether the physical altercation involves law enforcement personnel, medical personnel, or civilians.

C. Law Enforcement Firearm Deaths Involving Suicidal Individuals

Deaths resulting from firearms discharged by law enforcement personnel during an interaction with a suicidal individual who is brandishing a weapon should be classified as **HOMICIDE**.

“Shot by law enforcement personnel,” or similar terminology, should be documented in the description of how the injury occurred on the death certificate. The phrase “suicide by cop” is strongly discouraged on the death certificate.

D. Natural Death During Law Enforcement Activity

The death of a law enforcement officer from cardiovascular or other natural disease during a pursuit should be classified as **NATURAL**, provided no physical altercation, restraint, or other external factor caused or contributed to the death.

E. Judicial Execution

Deaths resulting from judicial execution should be classified as **HOMICIDE**.

“Judicial electrocution,” “judicial lethal injection,” or other appropriate terminology should be documented in the description of how the injury occurred on the death certificate.

Section VIII. Pediatric and Vulnerable Person Deaths

Manner of death determination in infants, children, and other vulnerable persons may be particularly challenging when the cause of death is unexplained or when environmental or caregiving factors may have contributed to the death. The circumstances surrounding the death should be carefully evaluated, and the absence of a definitive cause of death should not, by itself, establish a natural manner.

A. Sudden Unexplained Pediatric Deaths

The terminology used to describe sudden unexplained deaths in infants and children has evolved over time. Deaths previously classified as Sudden Infant Death Syndrome (SIDS) are now more commonly described using terminology that recognizes that the cause of death may remain unexplained despite a complete investigation.³ The current recommendation for cause of death is to use Unexplained Sudden Death, with or without intrinsic and/or extrinsic factors.³

Sudden unexplained infant deaths should not be assumed to be natural solely because a complete autopsy and investigation fail to identify a cause of death. The sleep environment of infants and young children is an important consideration in manner of death determination; therefore, scene investigation is required.³ Manner of death should be determined from the totality of the available medical, investigative, autopsy, and scene information.

B. Intrinsic and Extrinsic Factors

Intrinsic and extrinsic factors may be identified during the investigation of a pediatric death. Intrinsic factors are underlying natural or developmental conditions that may have contributed to death but are insufficient to establish the cause of death.³ Their presence does not, by itself, indicate a natural death. Examples include mild bronchiolitis and otitis media.

Extrinsic factors are conditions in the child's immediate environment that pose a potential threat to life but cannot be established as the cause of death.³ When extrinsic factors are identified, the manner of death should be classified as **UNDETERMINED**. Examples include bedsharing or prone sleep position in an infant. Such factors may raise concern for an asphyxial contribution to death.

C. Placement in a Potentially Hazardous Environment

Deaths of infants, young children, or other vulnerable persons resulting from placement in a potentially hazardous environment may be classified as **ACCIDENT** when there is no evidence of neglect or intent to cause harm.

When the circumstances demonstrate neglect or intent to cause harm, **HOMICIDE** should be considered. Deaths involving caregiver neglect are addressed further in Section X.

D. Deaths due to Starvation/Malnutrition and/or Dehydration

Deaths of infants, young children, or other vulnerable persons who are unable to obtain food and drink independently, due to starvation/malnutrition and/or acute dehydration should be certified as **HOMICIDE** when there is evidence that another person was responsible for providing adequate sustenance and neglected to do so.

If the death of an elderly person or other adult occurs from starvation/malnutrition and/or acute dehydration resulting from self-neglect, manner of death should be certified as **NATURAL**.
(See also Section X-G below.)

Section IX. Asphyxial and Airway-Related Deaths

Deaths involving airway obstruction or aspiration should be classified according to the circumstances that produced the obstruction or aspiration. The mechanism of asphyxia, by itself, does not determine the manner of death.

A. Choking on Food

Deaths resulting from upper airway obstruction by food should generally be classified as **ACCIDENT**.

Choking should be distinguished from aspiration of gastric contents occurring during the agonal period. The presence of food or gastric contents within the airway does not, by itself, establish choking as the cause of death.

B. Aspiration of Oral Secretions or Gastric Contents

Deaths resulting from aspiration of oral secretions or gastric contents due to chronic natural disease should generally be classified as **NATURAL**.

When aspiration results from an underlying non-natural event or condition, the manner of death should follow the circumstances of the initiating event.

C. Tracheostomy Obstruction

When death results from obstruction of a tracheostomy, the manner of death should generally follow the condition that necessitated the tracheostomy. When the tracheostomy was required to treat natural disease, the manner should generally be classified as **NATURAL**. When the tracheostomy was required as a consequence of a non-natural injury, the manner should follow the circumstances of the initiating injury.

Section X. Medical Care, Medical Neglect, and Self-Neglect

Deaths occurring during or following medical care may present challenges in manner of death determination. The occurrence of death during a diagnostic or therapeutic procedure does not, by itself, establish a non-natural manner of death. The underlying condition for which treatment was provided, the nature of the treatment or procedure, and whether the fatal complication was a recognized consequence of appropriate medical care should be considered.

A. Expected Complications of Appropriate Medical Care

Deaths resulting from reasonably foreseeable complications of accepted therapy for natural disease should generally be classified as **NATURAL** or **THERAPEUTIC COMPLICATION** when available. Bleeding is a recognized complication of many procedures; therefore, the certifier should determine whether the bleeding represents a reasonably foreseeable complication of the procedure.

Examples include bone marrow suppression with fatal infection resulting from chemotherapy and digoxin toxicity during treatment of severe congestive heart failure. Therapeutic drug toxicity is addressed further in Section II.

B. Medical and Procedural Errors

Deaths resulting from diagnostic or therapeutic procedures involving circumstances beyond the realm of reasonably acceptable complications should generally be classified as **ACCIDENT**.

An example is setting the intravenous administration of a pain medication at the wrong rate.

Deaths resulting from grossly negligent medical care should generally be classified as **HOMICIDE** when the circumstances demonstrate intent to cause harm, gross and wanton disregard for the patient's safety, or callous disregard for human life.

Examples may include intentional medication dosing errors or procedures performed by an unlicensed or non-medical individual under circumstances demonstrating such disregard.

C. Medical Equipment-Related Deaths

Deaths resulting from the improper use of medical equipment, in the absence of intentional misuse, or from defective or malfunctioning medical equipment should generally be classified as **ACCIDENT**.

Examples include inadequately secured dialysis tubing resulting in fatal hemorrhage, breakage and embolization of a guidewire during catheterization, or inadvertent instillation of air during an endoscopic procedure resulting in fatal air embolism.

D. Death During or Following Treatment of Natural Disease

When a high-risk patient dies during or soon after a diagnostic or therapeutic procedure performed for an underlying natural disease, the manner of death should generally be classified as **NATURAL**, or **THERAPEUTIC COMPLICATION** when available, if the death results from the normal and unavoidable stress of the procedure in combination with the underlying disease.

Deaths occurring during emergency procedures performed for life-threatening natural disease should similarly be classified as **NATURAL**.

E. Treatment of a Non-natural Condition

When medical or surgical treatment is required because of an injury or other non-natural condition, the manner of death should follow the circumstances of the initiating event. A complication occurring during treatment does not ordinarily supersede the manner associated with the initiating injury.

For example, when a person sustains an accidental hip fracture in a fall and subsequently dies following hemiarthroplasty performed to treat the fracture, the manner of death should remain **ACCIDENT**.

F. Delay or Limitation of Medical Care and Medical Neglect

Delay or limitation of medical care, including circumstances involving possible medical neglect, may contribute to death and should be evaluated in the context of the underlying condition and the circumstances surrounding the lack of, delay in, or limitation of treatment. This is particularly important in individuals who rely on others for care, such as infants and children, as well as individuals who are disabled, debilitated, or incarcerated.

When necessary care is available but is intentionally withheld by a caregiver, **HOMICIDE** should be considered. Because these cases are highly circumstance dependent, the certifier should determine whether the acts or omissions of the caregiver caused or contributed to death.

Examples include an elderly person left alone in bed for days without food, water, or medications while the caregiver is away, or a diabetic inmate who dies from diabetic ketoacidosis after not receiving insulin while in an isolation cell.

G. Self-Neglect and Refusal of Care

Deaths involving self-neglect, refusal of medical care, or voluntary limitation of food or fluid intake may present challenges in manner of death determination. These deaths should be classified as **NATURAL**, provided the circumstances are consistent with self-neglect or voluntary refusal of care rather than neglect by a caregiver. An individual may knowingly refuse medical care, food, or water even when such refusal may result in death.

Examples include an individual with end-stage renal disease who elects to discontinue hemodialysis or a patient with cancer who declines further chemotherapy.

Section XI. Special Circumstances

Certain deaths present circumstances that do not readily fall within the categories addressed elsewhere in these Guidelines. The following recommendations address selected situations that may present challenges in manner of death determination.

A. Sports and Recreational Activities

Deaths resulting from injuries sustained by athletes or spectators during organized sporting activities should generally be classified as **ACCIDENT**, provided the injury occurred during normal participation in the activity.

This represents an exception to the general principle that death resulting from an injury caused by the act of another person may be classified as Homicide. When the fatal injury results from aggression or conduct clearly outside the rules of the activity, **HOMICIDE** may be appropriate.

B. Infection Following a Work-Related Injury

Deaths resulting from infection acquired as a consequence of a documented work-related injury should be classified as **ACCIDENT** when there is no competing source of infection.

An example is death from a blood-borne infection acquired following an occupational needlestick injury.

C. Pregnancy-Related Deaths

Deaths resulting from complications of pregnancy should generally be classified as **NATURAL** in the absence of injury or an illicit procedure contributing to the death.

When an injury or other non-natural event causes or contributes to death, the manner should be determined according to the circumstances of that event.

D. Deaths Associated with Sexual Activity

Deaths resulting from injury sustained during autoerotic sexual activity should generally be classified as **ACCIDENT** when there is no evidence of intent to cause harm or death.

When death during consensual sexual activity or masturbation results exclusively from natural disease, the manner should be classified as **NATURAL**.

When an asphyxial death occurs during sexual activity with neck compression by another person, the manner should be classified as **HOMICIDE**, regardless of the individual's consent.

E. Intentionally Set Fires

Deaths resulting from intentionally set fires should be classified as **HOMICIDE**, regardless of whether the person who set the fire knew that another person was present or intended to cause injury or death.

This classification also applies to emergency personnel who die while responding to an intentionally set fire.

F. Fear, Emotional Stress, and Takotsubo Cardiomyopathy

Death resulting from the physiologic effects of fear caused by verbal threats or aggressive actions of another person should be classified as **HOMICIDE** when there is a close temporal relationship between the threatening event and the death.

When it is documented that the decedent initiated the confrontation or there is insufficient evidence that fear caused or contributed to the death, **NATURAL** or **UNDETERMINED** may be appropriate depending on the circumstances.

Takotsubo cardiomyopathy associated with an acute stressor should be classified according to the circumstances of the precipitating event. For example, Takotsubo cardiomyopathy precipitated by the stress of a motor vehicle collision should be classified as **ACCIDENT**, whereas Takotsubo cardiomyopathy precipitated by grief following the death of a loved one should generally be classified as **NATURAL**.

G. Animal-Related Injury and Infection

Deaths resulting directly from animal-inflicted injuries should generally be classified as **ACCIDENT** in the absence of circumstances supporting another manner of death.

Death from an infection resulting from an animal bite should similarly be classified as **ACCIDENT**.

H. Non-Medical Cosmetic Procedures

Deaths resulting from cosmetic procedures performed under circumstances demonstrating gross and wanton disregard for the individual's safety or callous disregard for human life should be classified as **HOMICIDE**.

An example is death resulting from the injection of silicone by an unlicensed individual under such circumstances.

Quick-Reference Guide

This Quick-Reference Guide summarizes selected principles and recommendations from *A Guide for Manner of Death Certification, Second Edition*. It is intended as a practical reference and should be used with the applicable sections of the Guidelines when circumstances are complex or do not fit clearly within the summarized recommendations.

Manners of Death at a Glance

Manner	General guidance
NATURAL	Death due solely to disease or the aging process.
ACCIDENT	Death resulting from an injury or intoxication occurring without evidence of intent to cause harm or death.
SUICIDE	Death resulting from a self-inflicted act that occurred with intent to cause harm or death.
HOMICIDE	Death resulting from a volitional act or act of omission committed by another person to cause fear, harm, pain or death. Homicide is a neutral medicolegal classification and does not require intent to cause harm or death.
UNDETERMINED	Death for which there is insufficient information to determine the manner, the remains are incomplete or skeletonized, or competing manners are equally supported.
THERAPEUTIC COMPLICATION	Recognized complications arising from appropriate diagnostic or therapeutic interventions for disease or injury. Available as a manner only in some jurisdictions.

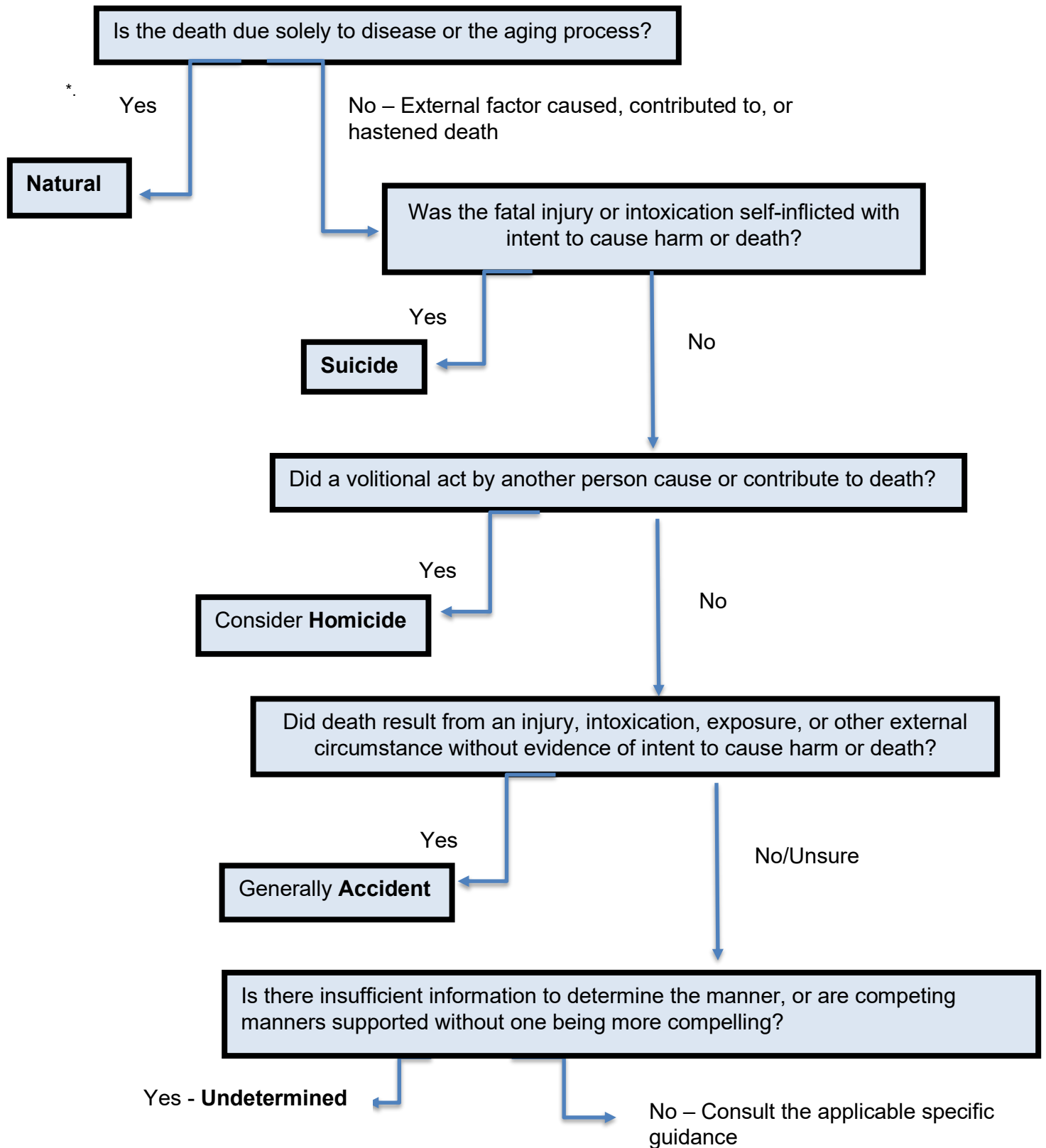
Recommended Manner by Circumstance

Circumstance	Recommended manner	See
POISONING & INTOXICATIONS		
Acute drug or toxin toxicity without evidence of intent to cause harm or death	ACCIDENT	II-A
Chronic medical consequences of substance use	NATURAL	II-B
Intentional self-poisoning	SUICIDE	II-F
Intentional poisoning by another person	HOMICIDE	II-G
Psychogenic polydipsia	ACCIDENT	II-H
Pediatric illicit drug toxicity	HOMICIDE	II-I

Circumstance	Recommended manner	See
FIREARM-RELATED		
Hunting death from intentional firearm discharge by another person	HOMICIDE	III-A
Confirmed unintentional mechanical firearm discharge	ACCIDENT	III-B
Ricochet following intentional firearm discharge by another person	HOMICIDE	III-C
Russian roulette	SUICIDE	III-D
Young child intentionally pulls trigger of normally functioning firearm, killing another	HOMICIDE	III-E
Remotely controlled drone, robot or similar device	HOMICIDE	III-F
MOTOR VEHICLE		
Motor vehicle collision without intent to cause harm or death	ACCIDENT	IV-A
Driver intentionally uses vehicle to cause harm or death	HOMICIDE	IV-B
Pedestrian struck without evidence of driver's intent to cause harm or death	ACCIDENT	IV-C
ENVIRONMENTAL & ENVENOMATIONS		
Death in a hostile environment that contributes to death	ACCIDENT	V-A
Toxic envenomation	ACCIDENT	V-C
Anaphylaxis from drugs or food	ACCIDENT	V-D
SUICIDE-RELATED		
Delayed death from intentional self-inflicted act	SUICIDE	VI-A
Active assistance with suicide	HOMICIDE , unless legislation dictates otherwise	VI-B
Passive assistance with suicide	SUICIDE , unless legislation dictates otherwise	VI-C
LAW ENFORCEMENT-RELATED		
Restraint and other measures used to subdue	HOMICIDE	VII-A
Death due to delirium	Follow the underlying cause of the delirium	VII-B

Circumstance	Recommended manner	See
Judicial execution	HOMICIDE	VII-E
ASPHYXIA-RELATED		
Upper airway obstruction by food	ACCIDENT	IX-A
Aspiration of gastric contents due to natural disease	NATURAL	IX-B
Aspiration of gastric contents due to non-natural disease	Follow the underlying non-natural initiating event	IX-B
MEDICAL CARE & NEGLECT		
Diagnostic or therapeutic procedure involving circumstances beyond the realm of reasonably acceptable complications	Generally ACCIDENT	X-B
Necessary care, food/water intentionally withheld by caregiver and act or omission caused or contributed to death	Consider HOMICIDE	VIII-D and X-F
Self-neglect or voluntary refusal of medical care, food, or water	NATURAL when circumstances support self-neglect/refusal rather than caregiver neglect	VIII-D and X-G
SPECIAL CIRCUMSTANCES		
Injury during normal participation in organized sporting activity	ACCIDENT	XI-A
Fatal injury resulting from aggression or conduct clearly outside the rules of sporting activity	HOMICIDE may be appropriate	XI-A
Takotsubo cardiomyopathy associated with an acute stressor	Follow circumstances of precipitating event	XI-F
Death from intentionally set fire	HOMICIDE	XI-E

General Manner of Death Decision Tree



This decision tree provides a general framework. Consult the applicable specific recommendation in the Guidelines.

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1. National Center for Health Statistics. Medical Examiners' and Coroners' Handbook on Death Registration and Fetal Death Reporting: 2003 Revision. Hyattsville, MD: National Center for Health Statistics; 2003.
2. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed, text rev. Washington, DC: American Psychiatric Association Publishing; 2022.
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