



PROJECT ECHO: OD-FIT

Overdose Fatality Investigation Techniques

Cause and Manner of Death

February 16, 2022





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of Death

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&

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Sli.do Polls!

1) How many death certificates do you estimate you have signed?

0

<100

100-500

500-1000

1000-2500

2500-5000

5000-10,000

>10,000

2) If you needed to discuss how to sign a specific death certificate, who would you go to for help? specify their (role, not name)?

What is a Death Certificate?

**STATE OF COLORADO
CERTIFICATE OF DEATH** STATE FILE NUMBER

1. DECEDENT'S NAME (First, Middle, Last)		2. SEX	3. DATE OF DEATH (Month, Day, Year)		
4. SOCIAL SECURITY NUMBER	5a. AGE - (Years)	5b. UNDER 1 YEAR Mos Days	5c. UNDER 1 DAY Hrs Mins	6. DATE OF BIRTH Month Day Year	7. BIRTHPLACE (City and State or Foreign Country)
8. WAS DECEDENT EVER IN U.S. ARMED FORCES? <input type="checkbox"/> Yes <input type="checkbox"/> No		9a. PLACE OF DEATH (Check only one) HOSPITAL: <input type="checkbox"/> Inpatient <input type="checkbox"/> ER/Outpatient <input type="checkbox"/> DGA <input type="checkbox"/> Other (Specify)			OTHER: <input type="checkbox"/> Assisted Living/Nursing Home <input type="checkbox"/> Hospice <input type="checkbox"/> Decedent's Residence
9b. FACILITY NAME (If not institution, give street and number)		9c. CITY, TOWN, OR LOCATION OF DEATH		9d. COUNTY OF DEATH	
10a. DECEDENT'S USUAL OCCUPATION (Give kind of work done during most of working life. Do NOT use retired)		10b. KIND OF BUSINESS/INDUSTRY		11. MARITAL STATUS <input type="checkbox"/> Married <input type="checkbox"/> Never Married <input type="checkbox"/> Widowed <input type="checkbox"/> Divorced <input type="checkbox"/> Unknown	12. SPOUSE (If wife, give maiden name)
13a. RESIDENCE - STATE	13b. COUNTY	13c. CITY, TOWN, OR LOCATION		13d. STREET AND NUMBER	
13e. INSIDE CITY LIMITS? <input type="checkbox"/> Yes <input type="checkbox"/> No	13f. ZIP CODE	14. WAS DECEDENT OF HISPANIC ORIGIN? (If "Yes", specify Cuban, Mexican, Puerto Rican, etc.) <input type="checkbox"/> No <input type="checkbox"/> Yes Specify:		15. RACE: American Indian, Black, White, etc. (Specify)	16. EDUCATION: (Specify only highest grade completed) Elementary or secondary (9-12) College (13-16 or 17+)
17. FATHER - NAME (First, Middle, Last)		18. MOTHER - NAME (First, Middle, Maiden)		19. INFORMANT - NAME and relationship to decedent	
20a. METHOD OF DISPOSITION <input type="checkbox"/> Burial/Entombment <input type="checkbox"/> Cremation <input type="checkbox"/> Resomation <input type="checkbox"/> Donation <input type="checkbox"/> Other (Specify)		20b. PLACE OF DISPOSITION (Name of cemetery, crematory, or other place)		20c. LOCATION - City or Town, State	
21a. SIGNATURE OF FUNERAL DIRECTOR OR PERSON ACTING AS SUCH		21b. NAME AND ADDRESS OF FACILITY Evergreen Mortuary 2924 N. Turkey Creek Road Evergreen, CO 80439			
22a. REGISTRAR'S SIGNATURE		22b. DATE FILED (Month, Day, Year)			
23. TIME OF DEATH <input type="checkbox"/> AM <input type="checkbox"/> PM <input type="checkbox"/> Milt		24. DATE AND TIME PRONOUNCED DEAD Month Day Year Time		25. WAS CORONER NOTIFIED? <input type="checkbox"/> Yes <input type="checkbox"/> No	
TO BE COMPLETED BY SIGNING PHYSICIAN 25a. To the best of my knowledge, death occurred at the time, date and place, and due to the cause(s) and manner as stated.			TO BE COMPLETED BY CORONER 27a. On the basis of examination and/or investigation, in my opinion death occurred at the time, date and place, and due to the cause(s) and manner as stated.		
26a. SIGNATURE		26b. DATE SIGNED (Month, Day, Year)		27b. DATE SIGNED (Month, Day, Year)	
26c. NAME, AND MAILING ADDRESS OF SIGNING PHYSICIAN			27c. NAME AND COUNTY		
29. MANNER OF DEATH <input type="checkbox"/> Natural <input type="checkbox"/> Accident <input type="checkbox"/> Suicide <input type="checkbox"/> Homicide <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Undetermined			30. DID TOBACCO USE CONTRIBUTE TO DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Probably <input type="checkbox"/> Unknown		31. IF FEMALE: <input type="checkbox"/> Not pregnant within last year <input type="checkbox"/> Pregnant at time of death <input type="checkbox"/> Not pregnant, but pregnant within 42 days of death <input type="checkbox"/> Not pregnant, but pregnant within the past year
32a. DATE OF INJURY (Month, Day, Year)		32b. TIME OF INJURY <input type="checkbox"/> AM <input type="checkbox"/> PM <input type="checkbox"/> Milt		32c. INJURY AT WORK? <input type="checkbox"/> Yes <input type="checkbox"/> No	
32e. PLACE OF INJURY - At home, farm, street, factory, office building, etc. (Specify)			32f. LOCATION INJURED (Street and Number or Rural Route Number, City, County, State)		
33. IMMEDIATE CAUSE - enter only one cause per line for (a), (b), and (c). Do not enter mode of dying (e.g. Cardiac or Respiratory Arrest) alone.					Interval between onset and death
Part 1. Conditions if any which gave rise to immediate cause stating the underlying cause last (c).					Interval between onset and death
(a) DUE TO OR AS A CONSEQUENCE OF:					Interval between onset and death
(b) DUE TO OR AS A CONSEQUENCE OF:					Interval between onset and death
(c)					
Part 2. OTHER SIGNIFICANT CONDITIONS - Conditions contributing to death but not related to cause in Part 1					34. AUTOPSY <input type="checkbox"/> Yes <input type="checkbox"/> No
					35. If YES, were findings considered in determining cause of death? <input type="checkbox"/> Yes <input type="checkbox"/> No

Cause of Death

An injury or disease which in a natural, unbroken sequence uninterrupted by an efficient intervening cause produces death and in whose absence death would not have occurred.

Cause of Death

CAUSE OF DEATH (See instructions and examples)		Approximate interval: Onset to death
<p>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, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.</p> <p>IMMEDIATE CAUSE (Final disease or condition -----> resulting in death)</p> <p>Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST</p>		
a. _____	Due to (or as a consequence of):	_____
b. _____	Due to (or as a consequence of):	_____
c. _____	Due to (or as a consequence of):	_____
d. _____	Due to (or as a consequence of):	_____
<p>PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I</p>		<p>33. WAS AN AUTOPSY PERFORMED? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
		<p>34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>

Sli.do: Which is the good COD statement?

- 1 A ___ Alzheimer Disease _____
B ___ End Stage Kidney disease _____
C ___ Cerebrovascular Accident _____
- 2 A ___ Aspiration pneumonia _____
B ___ Dysphagia _____
C ___ Alzheimer Disease _____
- 3 A ___ Cardiac Arrest _____
B ___ Multi Organ Failure _____
C ___ Aspiration Pneumonia _____

Part 1- Overdose examples

- A_ Combined effects of Alprazolam, Oxycodone, and_
 - B_ Heroin, and Ethanol_____
 - C _____
 - D _____
-
- A___ Ruptured Berry Aneurysm_____
 - B___ Hypertensive Crisis_____
 - C___ Acute Cocaine Intoxication_____
 - D _____

Part 2

AKA What else was going on?

Contributory CAUSE OF DEATH, Other significant condition(s)

Examples-

- Subdural hematoma due to BFT, head
 - Anticoagulation therapy for atrial fibrillation
- Drug toxicity
 - Significant heart disease

Manner of Death

Natural

Accident

Homicide

Suicide

Could not be determined

Manner of death

Drug related deaths

Natural (chronic use related, not acute)

Accident (most are this)

Suicide

Homicide

Could not be determined

Practice Case

A 22 y/o male is out partying and drinking with friends to celebrate his girlfriend's birthday. After they leave the club, they go to another friend's house where he begins offering the friends some pills he took from his grandfather's medicine cabinet. He said they are Zannies and Oxy from when grandpa broke his hip. He took several and eventually went to sleep, his girlfriend heard him snoring about 3am, then fell back asleep. His friend woke up in the morning and found him cold and unresponsive, called 911 and he was pronounced dead on scene. At the scene, he has a cone of foam and 2 pills in his pocket. Autopsy and toxicology are done, his brain is swollen, his bladder is full and his lungs are heavy and edematous. His blood ethanol level is ,22 and alprazolam and Oxycodone are in high therapeutic levels. Family admits he sometimes uses drugs to party, but does say that grandpa did have a hip fracture and was on some medications that he would have had access to. There were no other recent life stressors.

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Case Scenarios

Case 1 (Kelly)

- A 49-year-old moderately obese (BMI 38) female is found dead at home. Her family says that they think she has high blood pressure based on her checking it once at the pharmacy a few years ago, and possibly seeing a doctor about 10 years ago when she lived in another state, but she never was on medications for it and did not have a regular doctor since she moved here 10 years ago. There is some marijuana found at home, and family says she uses it (it's a state where it is legal) because her back hurts due to her weight and factory job; they deny any other drug use, the scene and history do not suggest differently and her PDMP is clear. They deny any concerns for depression or suicide. Because she does not have a regular physician or confirmed medical history you do an autopsy. At autopsy she is found to have a hemopericardium and ruptured MI, she also had hypertensive changes of the kidneys.

Case 2: Part 1 (Tom)

Jill C, a 22-year old white female, is pronounced dead at the apartment she shares with her boyfriend. In the early morning, her boyfriend called 911 to report that she was unresponsive. EMS responded and pronounced without intervention. On interviewing her boyfriend, he states to police, “Oh my God, I am so sorry. I never meant for this to happen. Last night we bought drugs from a new guy. She was always afraid of needles, so she asked me to shoot her up and I did. The I shot up and we both nodded out. She usually snorted her heroin. When I woke up, she wasn’t breathing.” Jill has a puncture site in her left antecubital fossa.

Case 2: Part 2 (Tom)

An autopsy was done and in addition to the puncture site, mild cerebral edema and moderate pulmonary edema were noted. His toxicology was positive for fentanyl and cannabinoids.

Case 3 (Alfie)

- Police were dispatched to a public laundromat for a person down. Medics find the 39-year-old black male decedent unresponsive on the ground with a bystander performing CPR. The decedent went to visit his girlfriend at work and then they went to do laundry. On the way, the decedent was complaining of a headache. As they were loading laundry into the washing machine the decedent collapsed. The decedent had a past medical history of Hypertension, Tachycardia, Morbid Obesity, Tobacco use. According to family and the girlfriend, the decedent smokes spice, hash, and “Katie” (likely synthetic cannabinoid) daily.
- An autopsy was performed: Cause of death Intracranial hemorrhage due to ruptured berry aneurysm
 - Contributory: Hypertension
 - Toxicology Blood is Positive for Fentanyl and acetyl fentanyl

Case 4 (Kurt)

- This 53-year-old woman was hospitalized with lethargy and fever after transfer from a skilled nursing home where she was a resident for 12 years. She was diagnosed with Staphylococcal sepsis arising from large decubitus ulcers of her back and buttocks. Despite treatment with intravenous antibiotics, she developed worsening hypotension and septic shock and died on the 3rd hospital day.
- She had a remote history of drug abuse. When she was 43 years old she became a resident of the skilled nursing facility after she survived an overdose of alprazolam and oxycodone but was left with anoxic brain damage and was unable to care for herself. She periodically developed pressure ulcers from mostly being confined to bed. Over the 4 months before her death, she developed new pressure ulcers that were unresponsive to treatment because of her poor nutritional status.

Case 5: Part 1 (Tom)

Ernie F, a 60-year-old, white man, crashes his car into another car while driving the wrong way on an interstate. He sustains multiple blunt impact injuries, visible on external examination. His medical history is positive for high blood pressure, alcohol and drug abuse and depression.

Case 5: Part 2 (Tom)

- Toxicology is positive for phencyclidine and cannabinoids
- Additional history prior to certifying the cause and manner of death
 - He was last known alive about one hour before the crash when he was smoking “angel dust” with a friend. He did not express any thoughts of self-harm though the friend said he was pretty “agitated” when he left in his car.

Case 6: Part 1 (Tom)

Joe A, a 30-year-old white man, is found dead in a hotel room after he failed to check out. He has a history of heroin use and a needle, a burnt spoon, and Chore Boy (cotton ball) are found in his room. He has puncture sites in the left antecubital fossa.

Case 6: Part 2 (Tom)

An autopsy was done and just showed moderate to marked pulmonary edema in addition to the puncture sites. Toxicology is positive for fentanyl and morphine in blood with 6-monoacetylmorphine detected in urine. The syringe tests positive for fentanyl.

Case 6: Part 3 (Tom)

18 months later a federal prosecutor calls you about Joe A. As part of an investigation into Michael B, a large-scale drug distributor, an informant recorded a conversation with Michael B in which he stated, “Joe A is a rat working for the cops. I want you to give this to him- it’s pure fentanyl. That’ll fix my Joe A problem.”