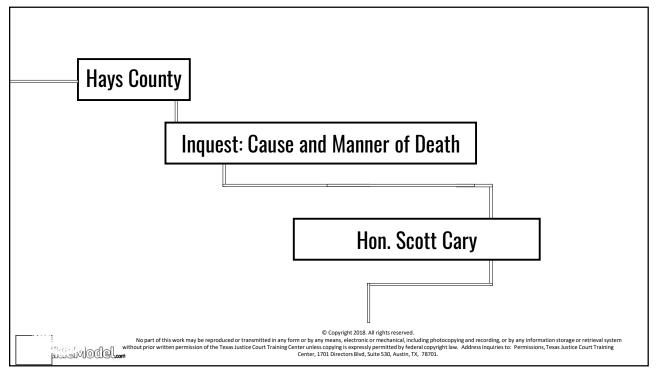
"No greater honor will ever be bestowed on a Justice of the Peace or a more profound duty imposed on him or her than when he or she is entrusted with the investigation of the death of a human being. It is his or her duty to find the facts, regardless of color or creed, without prejudices and to let no power on earth deter him or her from documenting these facts without regard to personality ..."

1



The History

- Medical

 investigations of
 death have been
 happening from
 ancient Greece to
- Over 800 years ago, England established the practice of an 'inquest' that could be ordered by the court.

FUN FACT

There is record of a coroner's inquest in Plymouth in 1635.

3

Why Are Inquest Performed?

oLegal Requirements

ORecords Keeping Purposes

oChecks on Other Agencies

OThe Voice of the Deceased

oTo Determine What Happened

When are inquests required?

- Homicide/unlawful means
- Unnatural death
- Children under 6
- Suicide
- Body parts
- Jail or prison death
- No attending physician/physician unable to certify

5

Subchapter B. Duties Performed By Medical Examiners: Art. 49.25. Medical Examiners

o Sec. 6. DEATH INVESTIGATIONS. (a) Any medical examiner, or his duly authorized deputy, shall be authorized, and it shall be his duty, to hold inquests with or without a jury within his county, in the following cases: 1. When a person shall die within twenty-four hours after admission to a hospital;

o The 24 hours does NOT apply to you

There is no requirement to perform an inquest within 24 hours of admission just because a person dies at a hospital

Why do we use the death certificate and TxEver system that we do?

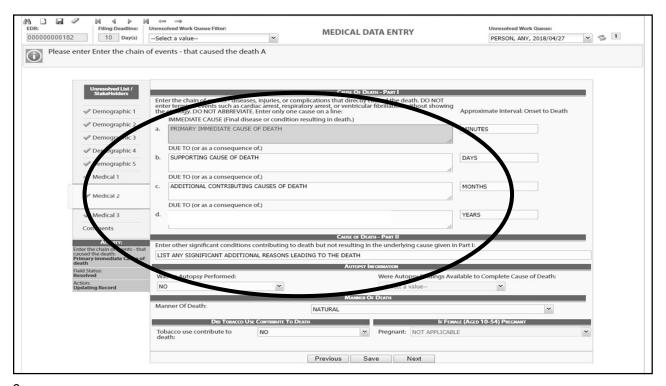
7

Why Do We Use the Death Certificate That We Do?

- The certificate is of similar to an international standard set in the 1940s.
- The CDC updates and reviews the US version every 10-15 years

FUN FACT

Unlike laws that change, the body works the same when you cross a county or country line.





What are we looking for when completing the death certificate?

11

Manner of Death

Category of Death

(Natural, accident, suicide, homicide, and underdetermined)

Why Someone Died

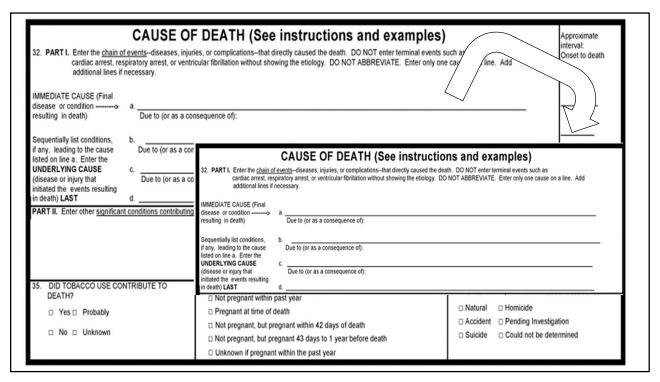


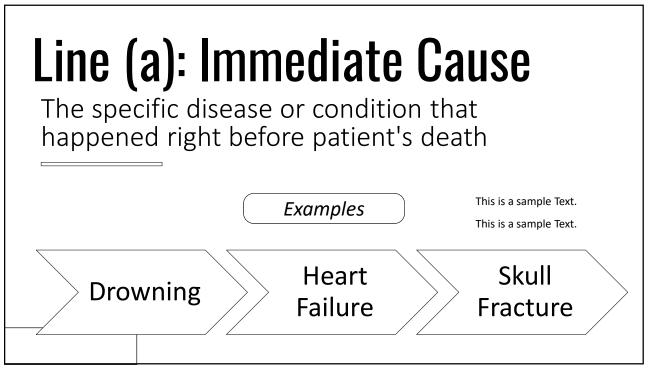
Cause of Death

The chain of events that killed someone

13

Part 1 (a) – (d) Death Certificate





Lines (b)-(d): The Steps That Lead to Line (a)

- Don't have to use all lines, only MUST use (a)
- The chain of events in reverse chronological order It should read like a story
- Each condition listed should have caused the condition listed on the line above

17

Tell The Story

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. Finish IMMEDIATE CAUSE (Final disease or condition -resulting in death) Due to (or as a consequence of): Sequentially list conditions. if any, leading to the cause Due to (or as a consequence of): listed on line a. Enter the **UNDERLYING CAUSE** Due to (or as a consequence of): (disease or injury that Start initiated the events resulting in death) LAST

Tell The Story : Example

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. Has heart failure IMMEDIATE CAUSE (Final disease or condition --resulting in death) Due to (or as a consequence of): The cancer spreads (metastases) Sequentially list conditions, if any, leading to the cause Due to (or as a consequence of): Decedent had breast cancer listed on line a. Enter the **UNDERLYING CAUSE** Due to (or as a consequence of): (disease or injury that initiated the events resulting in death) LAST

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Line (d): Underlying Cause of Death

- Might not exist in every case
- The underlying cause is NOT the result of another condition
- This is the condition that started the chain of events leading to death -Underlying cause drives mortality statistics for leading cause of death

<u>Examples</u> Diabetes Fall Alcoholism

Is this properly completed?

A. Yes

B. No

	pira	ents-diseases, injuries, or complications-that directly caused the death. DO NOT enter terminal events such as tory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add essary.
IMMEDIATE CAUSE (Final disease or condition>	a.	Hypertension (low blood pressure)
resulting in death) Sequentially list conditions.	b.	Due to (or as a consequence of): Cardiopulmonary Arrest (Heart Stops)
if any, leading to the cause listed on line a. Enter the		Due to (or as a consequence of):
UNDERLYING CAUSE (disease or injury that	C.	Due to (or as a consequence of):
initiated the events resulting	ď	

21

NO!

•Low blood pressure should not be the last condition reported because something must cause it - like a heart attack from cardiovascular disease.

The Way Someone Died

(Heart Failure or Respiratory Failure)
Needs to have information on the other
lines explaining why the heart stopped

World Health Organization ICD-10 Training

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How can we improve death certificate reporting?

Theme of This Class

- oWe want to do the best and most helpful job we can filling out the death certificate.
- oThis is because what we choose to write has a lasting impact on research and data.
- oWhat is wanted from us by state and national agencies is to pick the best words/descriptions and give enough information.
- olt's not just us JP's. Some of the examples we're using come from education directed at doctors and medical examiners. We can all keep trying to improve.

25

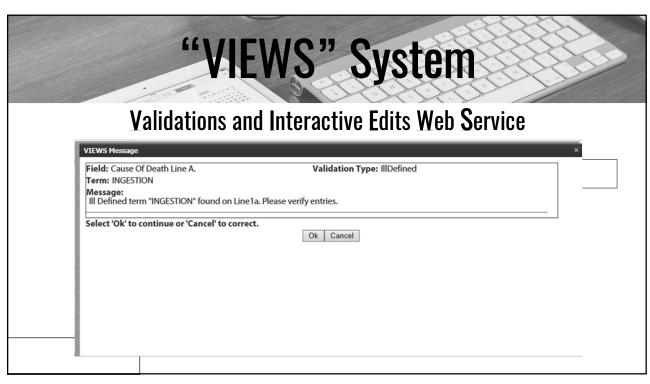
A word about physicians

- 080% of death certificates are signed by medical doctors
- oPhysicians get NO training in medical school regarding death certificates
- oThey do not like to complete death certificates, because:
 - They blame it on lack of staff and training
 - oThey do not have the time
 - oThey are not actually "attending" at the time of death
 - oThey are not at the scene of the death
- Once a person is a dead:
- oThe decedent is no longer the doctor's patient!
 - job ends at the time of death!

How Can We Improve Death Certificate Reporting?

- oBetter ways to state causes of death
 - -VIEWS system
- oWhat not to include
- oTry to be as specific as possible about a disease
 - -More specific disease names
 - -Include other helpful information
- oMake sure to include injury information

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"VIEWS" System

- An online service from National Center for Health Statistics and Centers for Disease Control
- Suggest better quality data during use of electronic death registration systems
- Can call your attention to spelling errors or be suggesting to use a more descriptive term

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You Can Hit "OK" Through It But...

- o...VIEWS it is meant to make you stop and think about the word/s you are choosing
- oVIEWS not telling you are 'wrong'
- oVIEWS telling you that there might be a better word to describe the events
- oVIEWS telling you make sure you explain the term further

The National Group That Monitors Causes of Death Pull Data By A "Search Term"

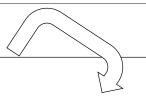
- What you are entering goes directly into a data base HOW you entered it – it only enters the terms you use
- That's why using descriptive and specific terms is so important

Example: If they are searching the flu or specific illness, your death certificate needs to state that illness

31

This is on the "Blue Form" of the Death Certificate

It's Really The Same As "VIEWS"



additional information about the etiology should be reported:

Examples From the Blue Form

- Some should never be used: Old age obviously not a medical condition;
 sometimes people use failure to thrive these terms should not be used
 anywhere on the death certificate
- o Some would be great to include on part Part II (we'll talk about that in a bit)
 - -Bed ridden that is a situations that may have cause or worsened a medical condition; like getting a bedsore that gets infected and the person has sepsis
 - -Anorexia or Dementia may contribute to another medical condition& could go onto line (d)
- olf you are going to say "sepsis" or "renal failure" it should only be if you are againg to include WHY they happened

33

If you are going to use a term like "cardiac arrest", "my arct" or "respiratory arrest"...

- oYou MUST include the underlying cause in the chain of events.
- oThese terms are mechanisms of death and need further information.
- oA cancer patient and a drug addict might both die of a heart attack. These are very different deaths and the underlying information needs to be recorded.

Example

What Kinds of Terms Would You Need to Include?

This is a sample Text.

Myocardial Infarct Severe Coronary Artery Disease

Respiratory Arrest Chronic Bronchitis

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Try To Be As Specific As Possible

• Cancer example:

- o Instead of "cancer"
 - o Or "cancer of the glands"
- o Write: "Adenocarcinoma of the right upper lung with metastases to the brain"
- o This let's the data record the KIND of cancer (lung) and that it ultimately spread (metastases) to the brain

OAbbreviation example:

- o Instead of STD
- o pneumocystis carinii pneumonia & acquired immunodeficiency syndrome (this



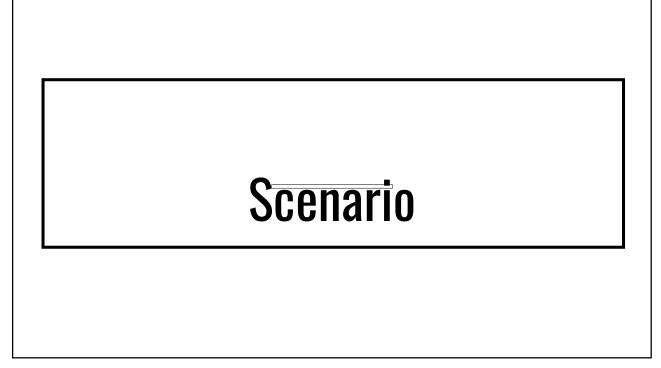
37

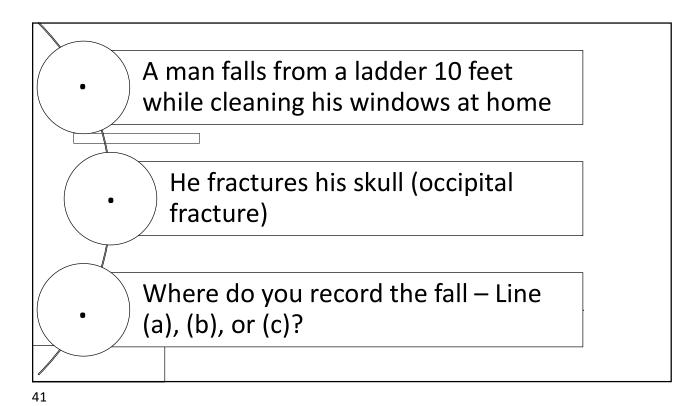
Was There An Injury Involved?

- State if the injury was related to transportation (including role of decedent)TxDOT reporting requirement!
- o Report other injury information (date, time, location, work related)
- o Describe how injury occurred
- o Helps to effectively report disaster related deaths
- <u>A Dravidac valuable details about circumstances of death</u>

More Best Practices 1. • Don't report multiple conditions per line 2. • Don't continue the sequence in Part II 3. • Don't provide a list of every single ailment

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A man falls from a ladder 10 feet while cleaning his windows at home

He fractures his skull (occipital fracture)

Where do you record the fall – Line (a), (b), or (c)?

(a) occipital fracture

(b) fall 10 feet onto ground while cleaning windows at home

Bonus points! Who wrote the proper terminology instead of

Spent 2 days staying at a friend's house drinking heavily. Friend claimed no drug use. Dies His friend says that earlier in the afternoon, after a full day of heavily consuming alcohol, the decedent was extremely intoxicated, passed out in the recliner in the living room. It initially appeared that he was highly intoxicated, passed out and aspirated on vomit.

Autopsy Toxicology Report Findings:

oFemoral blood concentration of:

- -Ethanol= .114 g/dL
- -Morphine (active metabolite of heroin) = 125 ng/mL
- -Codeine (active metabolite of heroin) = 14 ng/mL
- -Methadone = 471 ng/mL
- -EDDP (inactive metabolite of methadone) = 34 ng/mL
- oUrine drug screen positive for 6-momacetyl morphine (metabolic of heroin)

44

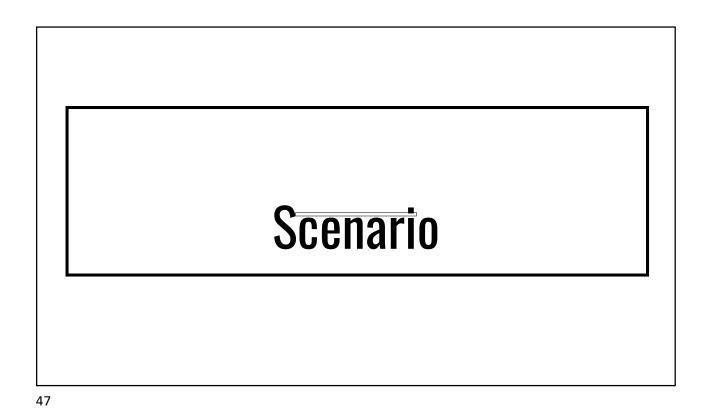
Autopsy Report & Death Certificate

	TERMINAL EVENTS SUCH A	AIN OF EVENTS - DISEASES, INJURIES, OR COMPLICATIONS - THAT DIRECTLY CAUSED THE DEA'S S CARDIAC ARREST, RESPIRATORY ARREST, OR VENTRICULAR FIBRILLATION WITHOUT SHOWIN- VIATE, ENTER ONLY ONE CAUSE ON A EACH.	TH. <u>DO NOT</u> ENTER G THE	Approximate interval Onset to death
ATH	IMMEDIATE CAUSE (Final disease or condition> resulting in death)	a. ACUTE MIXED DRUG INTOXICATION HEROIN, METHADONE AND ALCOHOL. Due to (ot as a consequence of):		MINUTES
USE OF DE	Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE	b		
	(disease or injury that initiated, the events resulting in death) LAST	C. Due to (or as a consequence of):		
	TA CUTCO OTUGO OLONIO	d		
AL	USE GIVEN IN PART I.	CANT CONDITIONS CONTRIBUTING TO DEATH BUT NOT RESULTING IN THE UNDERLYING	34. WAS AN AUTOPSY P	ERFORMED?
UI	BSTANCE ABUSE		35. WERE AUTOPSY FIN COMPLETE THE CAUSE	

USE OF DEATH: ACUTE MIXED DRUG INTOXICATION (HEROIN, METHADONE AND ETHANOL)

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What Are The Important Words To Include For Data Collection?



Women was found deceased in a lake.

It was ruled a suicide after interviewing family who said recent events made her say she was going to drown herself in this lake.

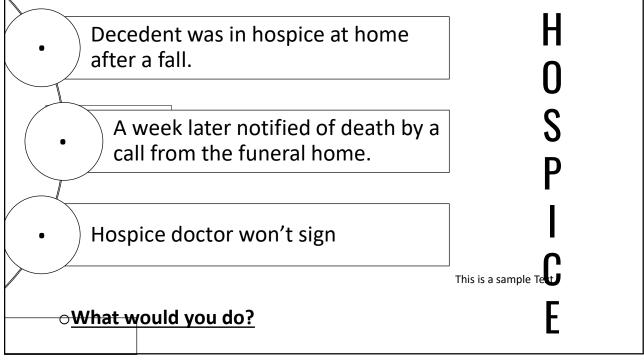
She was also found to have been recently evaluated and released in a mental health faculty after a crisis call.

E

How To Give Good Data?

- oCause?
- -Drowning
- oManner?
- -Suicide
- OWhat can we include about the underlying mental health issues?
- -Part II
- OWhere would we include this?
- <u>-Could say:</u> recent mental health intervention <u>or</u> recent mental health crisis call and evaluation

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Scenario

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Scenario

Man went into traumatic shock after being hit by a truck while crossing the road and fracturing his ribs, femur, and skull.

ANSWER!

Scenario

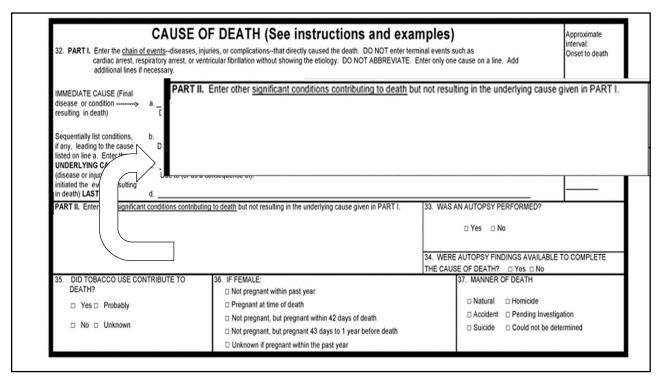
Man went into traumatic shock after being hit by a truck while crossing the road and fracturing his ribs, femur, and skull.

• (a) blunt force trauma

- (b) fracture of ribs, skull and right femur
- (c) pedestrian hit by a truck

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Part II Death Certificate



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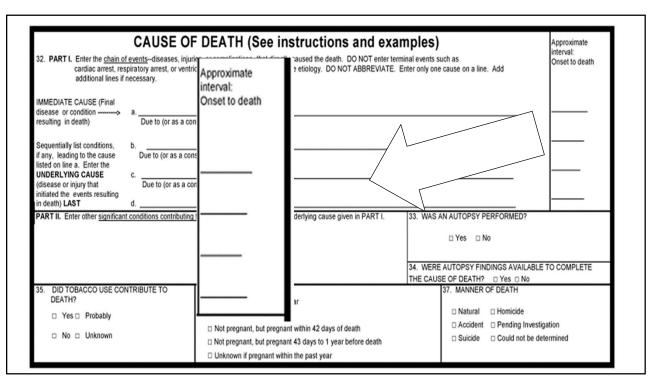
"Other Significant Conditions"

- oDisease or condition which contributed to the death, but which was not part of the sequence in Part I.
 - oExamples:
 - oObese
 - oSmoker
 - oAlcoholic
 - oAnorexia

This is the correct place for some of the terms from the 'blue form'

Order and Duration of Events Death Certificate

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Interval Between Presumed Onset of the Condition and Time of Death (not the date of diagnosis)

- Reporting the duration or the time interval between the onset of each condition entered on the certificate and the date of death.
- 15 minutes, 5 hours, 4 days, 12 years
- Minutes, hours, days, years
- Unknown, approximately ____

Example: MVA or cannot be not years for immediate cause of death

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A 49 year old male was brought to the ER with an infected wound of the right foot.

His wife reported that working in the field two week ago, he stepped on a nail. He treated the cut by himself.

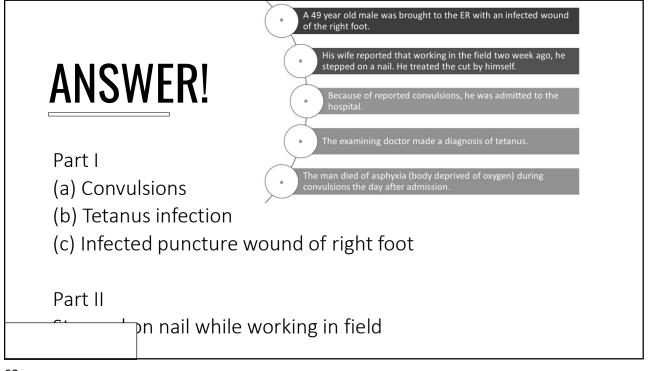
Because of reported convulsions, he was admitted to the hospital.

The examining doctor made a diagnosis of tetanus.

This is a sample Text.

The man died of asphyxia (body deprived of oxygen) during convulsions the day after admission.

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Disaster Related Deaths

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What Is A Disaster?

- "An occurrence that has resulted in property damage, deaths, and/or injuries that overwhelms the community resources"
 - Federal Emergency Management Association

Examples

Wildfires

Flooding

Hurricanes

Why Include Disasters in a Death Certificate?

- Like other data pulled nationally or statewide, can help with funding
- •Can help with other issues, like road repair
- No harm in including but could end up helping

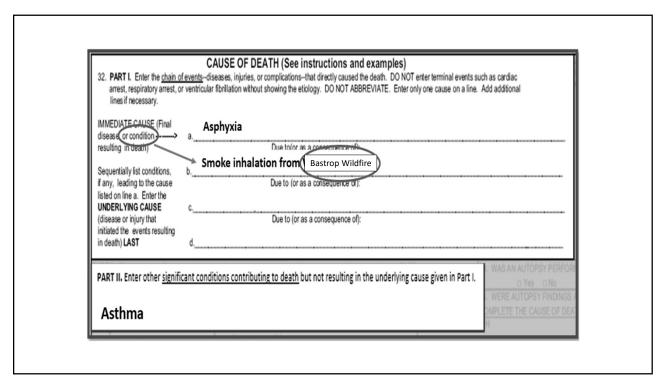
65

Where To Report Disaster?

- oPart I or Part II of the cause of death can contain Disaster type and name
 - -Can include in **Part I** if it was part of the causal chains of events directly leading to death
 - -Can include in **Part II** if it contributed to death, but was not part of causal chain of events listed in Part I
- o"Describe How Injury Occurred" field can contain a clear, brief statement referencing the disaster and circumstances surrounding the death.

Examples of Death Certificate Including Disaster

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 PART I. Enter the <u>chain of</u> arrest, respiratory arrest, or lines if necessary. 	CAUSE OF DEATH (See instructions and example events-diseases, injuries, or complications-that directly caused the death. DO rentricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Er	NOT enter terminal events such a	as cardiac Ons et to death
IMMEDIATE CAUSE (Final disease or condition>	_a Acute or exacerbated chronic kidney fa	ilure	
resulting in death)	Due to (or as a consequence of):		
Sequentially list conditions.	b. Type II Diabetes		
if any, leading to the cause	Due to (or as a consequence of):		
listed on line a. Enter the	and to fee up a solutedania h.		
UNDERLYING CAUSE	C		
(disease or injury that initiated the events resulting	Due to (or as a consequence of):		
in death) LAST	d.		
			HERO
PART II. Enter other signification	ant conditions contributing to death but not resulting in the underlying o	ause given in PART I	POT PERFURMED?
Unable to receiv	e dialysis for 6 days due to Hurricane Ma	ria related nower	SY FINDINGS AVAILABLE TO
		la leiateu powei	AUSE OF DEATH? Yes No
outage at local t	reatment center.		
1, 11, 1	□ Not pregnant within	37. MANNER	OF DEATH
		XNatural	□ Homicide
□ No □ U I n			
		□ Accident	□ Pending Investigation

 PART I. Enter the <u>chain o</u> arrest, respiratory arrest, o lines if necessary. 	CAUSE OF DEATH (See instructions and exam fevents—diseases, injuries, or complications—that directly caused the death or ventricular fibrillation without showing the elology. DO NOT ABBREVIATI	. DO NOT enter terminal events such as cardiac
IMMEDIATE CAUSE (Final disease or condition>	a Strangulation due to hanging	
resulting in death)	Due to (or as a consequence of):	
Sequentially list conditions, if any, leading to the cause	b Due to (or as a consequence of):	********
listed on line a. Enter the	bue to (or as a consequence or).	
UNDERLYING CAUSE (disease or injury that	c Due to (or as a consequence of):	
initiated the events resulting in death) LAST	d.	
	and an altitude and the standards of the standards by the standards of the standards of	in a source of the DART I
_	n antipsychotic medication after evacuations are also proposed to the support of	□ No
_	n antipsychotic medication after evacua	ating for Hurricane Katrina String for Hurricane Katrina String for Hurricane Katrina
Unable to obtai	n antipsychotic medication after evacual	ating for Hurricane Katrina 37. MANNER OF DEATH Natural Homicide
Unable to obtai	n antipsychotic medication after evacual Not pregnant within	ating for Hurricane Katrina 37. MANNER OF DEATH Natural Homicide

 PART I. Enter the <u>chain of ever</u> arrest, respiratory arrest, or ver lines if necessary. 	CAUSE OF DEATH (See instructions and example ents—diseases, injuries, or complications—that directly caused the death. DO intricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Er	NOT enter terminal events such a	as cardiac d additional	Approximate interval: Onset to death
	Myocardial Infarction			*******
resulting in death)	Due to (or as a consequence of):			
	Atherosclerosis			
if any, leading to the cause listed on line a. Enter the	Due to (or as a consequence of):			
UNDERLYING CAUSE c. (disease or injury that	Due to (or as a consequence of):			
initiated the events resulting	bue to (or as a consequence or).			
in death) LAST d.			Travelermen	andMFD?
PART II. Enter other significant	conditions contributing to death but not resulting in the underlying opposed to 911 call due to flooded roads a	fter Hurricane Ma	AUSE OF D	S AVAILABLE TO EATH? Yes No
PART II. Enter other <u>significant</u> EMS unable to res			atthew TY FINDING	
PART II. Enter other significant	pond to 911 call due to flooded roads a	fter Hurricane Ma	atthew TY FINDING	
PART II. Enter other <u>significant</u> EMS unable to res	pond to 911 call due to flooded roads a	37. MANNER	DF DEATH Homicide	S AVAILABLE TO EATH? □ Yes □ No
PART II. Enter other significant EMS unable to res	pond to 911 call due to flooded roads a	37. MANNER	DF DEATH Homicide	S AVAILABLE TO EATH? □ Yes □ No

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Scenario

A 28-year old male died when a tree fell on him during Hurricane Sandy. He suffered multiple trauma, including a fractured skull causing cerebral contusion. Emergency medical service and police reports indicated he thought the hurricane had passed and was walking his dogs.

ANSWER!

- (a) Cerebral contusion (bleeding in the brain)
- (b) Fractured Skull
- (c) Blunt impact to head
- Other significant conditions: N/A
- Injury Info: Decedent was struck by a falling tree during Hurricane Sandy

Scenario

A 28-year old male died when a tree fell on him during Hurricane Sandy. He suffered multiple trauma, including a fractured skull causing cerebral contusion. Emergency medical service and police reports indicated he thought the hurricane had passed and was walking his dogs.

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Let's Look At Another Example of Disaster Reporting

Example: Flood

On Memorial Day 2015, a 24-year-old male drowned when attempting to walk across a bridge to get to his house.

- Part I (a) Drowning
- Part II: Decedent drowned in a river when attempting to cross a bridge during the Memorial Day Floods

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COVID-19

CDC webinar information

LIVE 0 429 ying Deaths Due to COVID-19

- If COVID-19 is determined to be a cause of death, it should be reported on the death certificate, likely as the underlying cause of death.
 - Testing should be conducted, if possible.
 - If a definitive diagnosis cannot be made, but it is suspected or likely, it can be reported as "probable" or "presumed."
- Generally, it is best to avoid abbreviations and acronyms, but COVID-19 is unambiguous, so it is OK to report it.
- Pre-existing conditions that may increase susceptibility to infection or exacerbate the disease, such as COPD or asthma, should be reported in Part II.



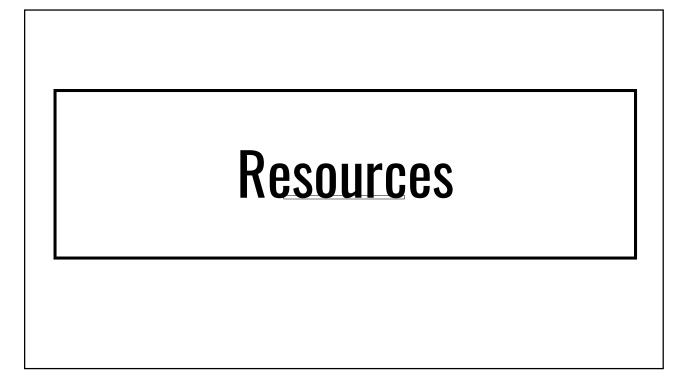
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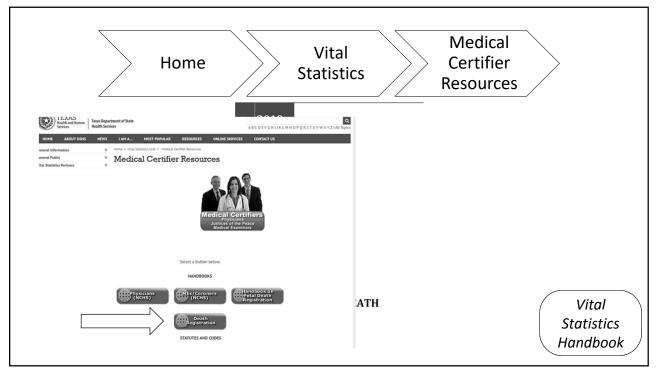
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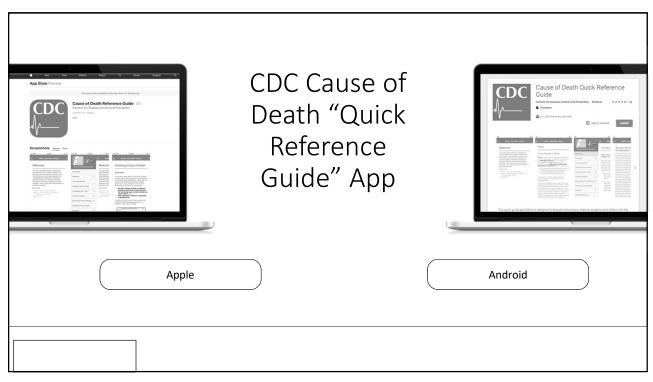
- Use any information available to you, such as:
 - Medical history,
 - Medical records,
 - Laboratory tests,
 - Autopsy report, and
 - Other relevant sources of information.

 Use your best medical opinion regarding the causes and circumstances of death.

Da ama







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References

- oWorld Health Organization ICD-10 training tool
- oTxEver Improving Disaster-Related Death Registration presentation
- o Centers for Disease Control and Prevention National Center for Health Statistics "Improving Cause of Death Reporting"
- o Texas Vital Statics Handbook on Death Registration
- o "Physicians' handbook on medical certification of death"
 - o https://www.cdc.gov/nchs/data/misc/hb_cod.pdf
- o "ME and Coroners handbook on death registration and fetal death reporting"
 - o https://www.cdc.gov/nchs/data/misc/hb me.pdf



COVID-19

https://www.cdc.gov/coronavirus/2019-nCoV/index.html

COVID-19 Testing Guidance

https://www.cdc.gov/coronavirus/2019-nCoV/hcp/clinical-criteria.html

https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-postmortem-specimens.html

NVSS COVID-19 Alerts and Information

https://www.cdc.gov/nchs/nvss/covid-19.htm

Provisional Death Counts for COVID-19

https://www.cdc.gov/nchs/nvss/vsrr/COVID19/

FluView

https://www.cdc.gov/flu/weekly/index.htm

Cause of Death Mobile App

 $\frac{https://itunes.apple.com/us/app/cause-of-death-reference-guide/id1363232296?mt=8 \\ \frac{https://play.google.com/store/apps/details?id=gov.cdc.iiu.anubis}{}$

Improving Cause of Death Reporting Online Training Module (Free CMEs and CNEs)

https://www.cdc.gov/nchs/nvss/improving cause of death reporting.htm



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Thank you!