CASE SCENARIO 1

- The decedent is a 62 year old male with a medical history of hypertension. He is found dead by his wife. He is lying on the kitchen floor. EMS is notified and he is obviously dead. Police arrive with EMS and look for signs of foul play but no foul play exists. The night before the decedent had no complaints. You are prescribing an antihypertensive to the decedent but the prescription was for three months and you have not seen him for two months. The Medical Examiner (ME) calls you to sign the death certificate (DC). What do you do?
  - A) Sign the DC as hypertensive and atherosclerotic cardiovascular disease
  - B) Tell the ME that you do not want to sign the DC because you do not know why he died
  - C) Request an autopsy because you do not know why he died
  - D) Sign the DC as heart failure and contribute hypertension

CASE SCENARIO 2

- The decedent is a 75 year old female with a medical history of congestive heart failure (CHF), hypertension, coronary artery disease, chronic obstructive pulmonary disease (COPD), arthritis, and obesity. She died at home and foul play is not suspected. She was recently admitted two weeks ago for pneumonia. For the last six months, she has been in and out of the hospital for exacerbation of her chronic obstructive pulmonary disease. You are filing the DC. Which of the following would be the best cause of death, what would you put as contributing to her death (Part II of DC)?
  - A) Congestive heart failure; contribute chronic obstructive pulmonary disease
  - B) Hypertensive heart disease; contribute obesity
  - C) Chronic obstructive pulmonary disease; contribute hypertensive and atherosclerotic cardiovascular disease and obesity
  - D) Pneumonia; contribute chronic obstructive pulmonary disease, and congestive heart failure
CASE SCENARIO 3

• All of the following are reasons to report a case to the ME office except:

• A) Decedent sustained a hip fracture 2 months ago and has
declined in health since the hip fracture. The deceased died
terminally with sepsis secondary to decubitus ulcers.

• B) Decedent is 53 years old and has a history of hypertension
and coronary artery disease with stents. His girlfriend states
that he has not used cocaine for one year now.

• C) Decedent is a 45 year old with seizures. He is witnessed to
have a grand mal seizure and dies. You review your records
and see that the decedent has had seizures since birth and
were the result of a congenital brain malformation.

• D) The decedent is a 60 year old who goes to the hospital
complaining of severe abdominal pain for two days. He has a
history of CHF and hypertension. Tests indicate that he has a
bowel obstruction but dies before surgery can be performed.
Reviewing the decedent’s records indicate that he was shot in
the abdomen 35 years ago.

CASE SCENARIO 4

• A 42 year old obese male with no other medical history is playing
football and sprains his knee. He stays home for the next few days
because he cannot walk very well due to the knee sprain. He starts
complaining of chest pain and calls 911. He is admitted to the hospital
and is diagnosed with a pulmonary embolus by CT scan. He
unfortunately dies soon after the scan. He was in the hospital for 1.5
days. You are the attending physician for the decedent. What would
you do in reference to the death certificate?

• A) As the attending physician you would sign the death certificate
as pulmonary embolism

• B) Call the Medical Examiner’s Office or JP and notify them of the
death

• C) Do not sign the death certificate because the decedent sees
a primary care physician regularly so the PCP can sign the DC

• D) Have the ER doctor sign the death certificate

CASE SCENARIO 5

• A 65 year old female is admitted to the hospital for acute renal failure. She has a
medical history of congestive heart failure, chronic renal failure, diabetes mellitus,
hypertension, obesity, below the knee amputation of the right leg, and vascular
dementia. During the hospital course she develops a urinary tract infection and
sepsis. She is treated appropriately and begins to recover. On the fifth day of
admission, she is noticed to have decubitus ulcers on her buttocks. On the seventh
day she develops bilateral pneumonias and the start to decompensate. She is
intubated. Over the next several days, her heart starts to decompensate. Prognosis
is poor and she eventually dies. During the hospital course she had test multiple
electrolyte abnormalities. You are one of 20 doctors that saw her during her
hospitalization. Although you consulted on her 3 times as the nephrologist, you are
not the admitting doctor, but you are approached with the death certificate. What
would you put as the cause of death?

• A) You would not certify the death certificate because you are the
nephrologist and the admitting doctor should sign

• B) The cause of death is multiorgan failure

• C) The cause of death is complications of hypertensive and atherosclerotic
cardiovascular disease

• D) The cause of death is pneumonia due to sepsis due to decubitus ulcers
MEDICAL EXAMINER OFFICE

- Provide medicolegal death investigation to determine the cause and manner of death

DEFINITIONS

- MEDICAL EXAMINER - Any physician licensed to practice medicine and performs autopsies
- FORENSIC PATHOLOGIST - A physician who is licensed to practice medicine and who is board certified in general and forensic pathology
- PATHOLOGIST - A physician who is licensed to practice medicine and who is board certified in general pathology or its subspecialties.
- CORONER - An elected person who is responsible for determining the cause and manner of death (no medical background or degrees needed)

DEATH SYSTEMS

- MEDICAL EXAMINER SYSTEM (ME) - Board certified forensic pathologists only charged with determining cause and manner of death
- CORONER SYSTEM - Elected official runs the office; usually hires forensic pathologists to do the autopsies
- JUSTICE OF THE PEACE (JP)/MEDICAL EXAMINER SYSTEM - Same as ME system but jurisdictions that do not have the criteria to support a ME system uses JPs to determine cause and manner of death
TEXAS STATUTES

- ME offices are governed by Texas Statutes:
  - Chapter 49.25 of the Texas Code of Criminal Procedures
  - Chapter 191, 193, and 195 of the Health and Safety Code

CASES THAT MEDICAL EXAMINER CAN TAKE JURISDICTION

- Criminal Violence
- By Accident (drug overdoses, falls, hip fractures, motor vehicle crashes, etc)
- By Suicide
- By Poison
- By Criminal Abortion
- In Police Custody
- In Any Prison
- In Any Suspicious or Unusual Circumstances
- Unattended By a Practicing Physician
- Suddenly, When In Good Health
- ME Office decides if jurisdiction is warranted; physicians cannot order
MISCONCEPTIONS OF THE MEDICAL EXAMINER’S OFFICE

• We see all deaths
  * About 5,000 deaths in Travis County
• We perform about 775 autopsies and 250 views
• We only do homicides
• We perform autopsies on all our cases
• We police physicians
• Autopsies always give an answer
• CSI affect!!!
CAUSE OF DEATH

- MECHANISM OF DEATH - the final disease or injury resulting in death (mechanisms always have more than one etiology)
- CAUSE OF DEATH - that disease or injury that INITIATES a chain of events irrespective of time that leads to the person’s death (cause of death stands alone does not have any other etiology)

  - This is the most important part of the death certificate: cause of death is what Vital Statistics wants to know and it is the reason why we file death certificates.
  - Mechanisms are not important and not necessary to put on the death certificate but if you know the mechanism it does not hurt to put it on the death certificate

MANNER OF DEATH

- Manner of death is how the death came to be (five categories):
  - Natural
  - Homicide
  - Accident
  - Suicide
  - Undetermined

  - Physicians can only file death certificates on natural deaths only. forensic pathologists and JPs are the only ones that can file death certificates on non-natural and natural deaths.
  - Non-natural deaths trump natural deaths
DEATH CERTIFICATE (DC)

- The death certificate is a medical opinion based on the physician's knowledge of the patient at the time the physician signs the death certificate
- It is not an absolute (just greater than 50%)
- You can be wrong. It is an opinion
- Any licensed physician or justice of the peace can sign a death certificate on anybody (physician assistants cannot sign a death certificate)
- You can always amend a death certificate at any time (i.e. if new information comes up)

IMPORTANCE OF CERTIFYING DEATH CERTIFICATES APPROPRIATELY

- Improved statistics
- Funding for research
- Families may have more money coming to them for double indemnity
- Families get the right answers
- Delays in burial and cremation
- Renest families
- Measure and monitor health (flu deaths)
- Legislative policies
- Establish public health initiatives
- May miss homicides (seizures, quadriplegia)
- Save money and time
Failure to thrive is not an appropriate cause of death. There must be reasons why the person is declining. The vast majority are related to dementia of any type, hypertensive and atherosclerotic cardiovascular disease, metastatic cancers, etc.
Pathologist reviews cremation
- Pathologist requests investigator to get terminal event information and hospital and/or physician medical records
- Call family to get information
- Investigator requests records from physician's office and/or hospital
- Physician's office needs to take time out of their schedule
- If information is not gathered quickly, family cannot cremate their loved one
- Investigator receives records and pathologist reviews records
- If medical records indicate natural death we release the cremation
- If medical records indicate nonnatural death then potentially have to bring in the body for autopsy and/or a new death certificate is certified in our office
MISCONCEPTIONS OF THE DEATH CERTIFICATE

• I only saw the patient once
• I do not know why the patient died
• The patient died at home so I cannot tell you why he/she died
• I have not seen the patient in months
• I have to use all the lines in Part I
• You can be sued for what you put on the death certificate
• I am covering for the decedent’s physician who is on vacation

Patient Dies at Home 65 Year Old Male With Hypertension
Well Controlled; Investigation Occurs No Non-Natural Cause Observed

Physician Signs DC As Hypertensive and Atherosclerotic Cardiovascular Disease
Physician Does Not Sign DC Even After ME Deems It a Natural Death
Physician States That He/She Does Not Know Why Death Occurred

No Issues
No Lawsuit

Family Upset Wants Autopsy How Can He Die You Were Treating Him And Everything Was Fine

Calls ME Office

ME Tells Family To Get Private Autopsy
99% of Time Never Gets Autopsy Too Expensive

No Lawsuit


• Looked at 100 consecutive deaths that based on investigative report were deemed not Medical Examiner (ME) cases but were transported to the ME office. However, families wanted autopsies on those cases so the bodies were performed.
• Compared presumptive diagnosis with postautopsy diagnosis. 91/100 had the same natural cause of death.
The decedent is a 59 year old white male who went outside to check something in his yard. After 20 minutes, the wife was concerned that he did not return and because she is wheelchair bound she called 911. EMS started ACLS protocols to no avail and he was pronounced in the ER. There were no signs of trauma or foul play. His physician was notified and he refused to sign the death certificate because "he believed that his patient was healthy and had no reason to die."
Actual Case 2

- The decedent is a 61 year old white male who was at home with his wife. He had no complaints in the evening of March 28. He and his wife went to bed in separate bedrooms (usual arrangement). The wife woke up on the morning of March 29 and found her husband unresponsive in his bedroom on his bed. EMS arrived and pronounced him dead because he was in rigor mortis. Police arrived and there were no injuries and foul play was not suspected. The decedent’s physician was called and the physician stated that the decedent was in good physical shape, had a recent stress test that was normal, and that he was surprised that the decedent died. The physician did state that he felt it was a natural disease though.

- BMI 47
- Hypertension
- High Cholesterol
- Depression (no suicidal ideations or attempts)
- No illicit drug use; occasional alcohol and cigarettes
- Cause of death: hypertensive and atherosclerotic cardiovascular disease
- Part II: Obesity (BMI 47), Hypercholesterolemia

- Normal BMI
- Hypertension
- Diabetes Mellitus
- High Cholesterol
- Non smoker, no illicit drugs or alcohol
- Physically active recently
• Cause of death: hypertensive and atherosclerotic heart disease
• Part II: diabetes mellitus, hypercholesterolemia

• Do not be surprised if a patient dies and has diseases that are terminal (hypertension, diabetes mellitus, obesity)
BOTTOM LINE

- Know when a case falls under the Medical Examiner’s jurisdiction (most common mistake we see are hip fractures but be aware of people who have spinal cord injury, amputees, brain hemorrhages, and paraplegia).
- Know the proper sequence to put on a death certificate (it is not a list of the person’s conditions but a logical sequence of “due to”)
  * Most death certificates can be done appropriately by using one line
- The cause of death is an opinion (think of it as a USMLE question particularly in nonhospitalized patients)
**BOTTOM LINE**

- Most common causes of death (particularly non-hospital):
  - Hypertensive and Atherosclerotic Cardiovascular Disease
  - Hypertensive Cardiovascular Disease
  - Atherosclerotic Cardiovascular Disease

**CASE SCENARIO 1**

- The decedent is a 62 year old male with a medical history of hypertension. He is found dead by his wife. He is lying on the kitchen floor. EMS is notified and he is obviously dead. Police arrive with EMS and look for signs of foul play but no foul play exists. The night before the decedent had no complaints. You are prescribing an antihypertensive to the decedent but the prescription was for three months and you have not seen him for two months. The Medical Examiner (ME) calls you to sign the death certificate (DC). What do you do?
  - A) Sign the DC as hypertensive and atherosclerotic cardiovascular disease
  - B) Tell the ME that you do not want to sign the DC because you do not know why he died
  - C) Request an autopsy because you do not know why he died
  - D) Sign the DC as heart failure and contribute hypertension

**CASE SCENARIO 2**

- The decedent is a 75 year old female with a medical history of congestive heart failure (CHF), hypertension, coronary artery disease, chronic obstructive pulmonary disease (COPD), arthritis, and obesity. She died at home and foul play is not suspected. She was recently admitted two weeks ago for pneumonia. For the last six months, she has been in and out of the hospital for exacerbation of her chronic obstructive pulmonary disease. You are filing the DC. Which of the following would be the best cause of death? What would you put as contributing to her death (Part II of DC)?
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CASE SCENARIO 4
- A 42 year old obese male with no other medical history is playing football and sprains his knee. He stays home for the next few days because he cannot walk very well due to the knee sprain. He starts complaining of chest pain and calls 911. He is admitted to the hospital and is diagnosed with a pulmonary embolus by CT scan. He unfortunately dies soon after the scan. He was in the hospital for 1.5 days. You are the attending physician for the decedent. What would you do in reference to the death certificate?
  * A) As the attending physician you would sign the death certificate as pulmonary embolism
  * B) Call the Medical Examiner's Office or JP and notify them of the death
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  * C) The cause of death is complications of hypertensive and atherosclerotic cardiovascular disease
  * D) The cause of death is pneumonia due to sepsis due to decubitus ulcers
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