Inquests: Death Investigations & Reporting

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American Forensics

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Inquests: Death Investigations & Reporting

- Be able to define and differentiate:
 - Pronouncement of death
 - Mechanism of death
 - Cause of death
 - Manner of death
- Required reporting of cases.
- TMORT mass fatality

Inquests: Death Investigations & Reporting		
 Investigations of specific types of cases Death in custody Delayed deaths Child deaths Other case studies. 		
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Reporting Requirements



Inquests Deskbook

Revised November 2023. This deskbook covers procedure and resources for conducting inquests, including ordering autopsies and formal inquest hearings.

https://www.tjctc.org/tjctc-resources/deskbooks.html

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Inquests: Death Investigations & Reporting

- 2nd half
- · Case studies
- · Questions/cases from you
 - Fill out papers with questions.

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History of Death Investigation

- · Coroner Latin word corona "Crown"
- Representative of the Monarchy
- 11th century England
- If someone died investigated to determine if money should be paid to the monarchy.
 - Homicide and suicide forfeited all the estate to the Monarchy.

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Pronouncement of Death

- Time pronounced may not be actual time of death.
- Time found.
- Don't guess backward.
- No scientific way to determine actual time of death if not observed.

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Mechanism of Death

- Biochemical or physical process leading to death
 - Exsanguination bleeding
 - Cardiac arrest heart stops
 - Respiratory arrest stops breathing

None of these can be listed on Death certificate!

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Cause of Death

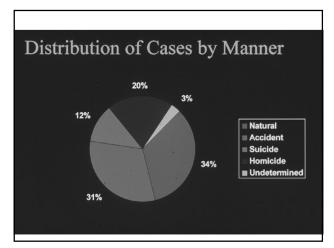
- Actual disease process or injury that causes death
 - Gunshot wound to the chest
 - Injury to the brain
 - Pneumonia
 - Cancer
 - Blunt force trauma

Manner of Death

- Investigation helpful and important.
- Natural
- Suicide
- Accident
- Homicide
- Undetermined

Always medical examiner/JP cases

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Death Investigation

- Autopsy is an important tool
- If COD is not known
 - Decedent without chronic illness that threatens life
 - may need autopsy

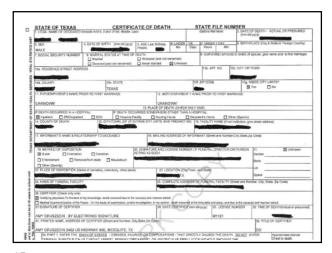
JP or ME

- Do not need permission for autopsy
- If declined by JP, permission from Next of Kin needed.
 - if performed by the hospital, usually no charge to the family.
 - Also families can hire to get an autopsy by private provider.

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Death Certification

- · Vital statistics collected at state level.
- Federal involvement began in 1900
 - National Center for Health Statistics (NCHS).
- Nationally recommended standards voluntarily adopted by states.



Proper Causes of Death

- Cause-of-death section consistently vague.
- Vagueness usually caused by failure to take causal chain to its starting point.
- · "Proximal" cause of death.

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Cause of Death section

• If you send for Autopsy – write what your Forensic Pathologist suggests.



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Examples - Proper COD

Poor

COD: Cancer

- lacks specificity -What organs? What type?

Better

COD: Metastatic squamous cell carcinoma of lung.

Examples - Proper COD

Just wrong

COD: Cardiac Arrest *or* Respiratory Arrest - describes state of being dead.

Better

COD: Acute Myocardial infarction

DUE TO: Coronary artery atherosclerosis.

or

COD: Emphysema

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Death Certification

- Concise narrative of how injury occurred – can write full sentences.
- Place injury occurred
- · Work-related?
- · Information needed for public health

41, DESCRIBE HOW INJURY	OCCUPPED	
42a REGISTRAR FILE NO.	42s. DATE RECEIVED BY LOCAL REGISTRAR	42c REGISTRAR

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Death Certification

- Documentation of injuries by JPs and medical examiners vital for injury prevention.
- Examples
 - Bicycle helmet laws and campaigns for kids
 - Ordinances for fencing swimming pools

Census of Medical Examiners and Coroners (CMEC)

- · Bureau of Justice Statistics (BJS) in 2004
- Nationwide data collection effort to capture crucial information from Coroners.
- cmec@rti.org email to get log-in info.
- Most recent survey results 2018 https://bjs.ojp.gov/content/pub/pdf/meco18.pdf

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Describing Fatal MVA

- Person injured
 - Driver, passenger, pedestrian, cyclist?
- · Type of vehicle
 - Car, truck, bus, motorcycle, four-wheeler?
- · Object vehicle collided with
- Did accident occur on a public road?
- · Was safety gear being used?

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Describing Fatal MVA

- What was person doing when injury occurred?
 - Engaged in organized sports
 - Engaged in leisure activity
 - Working for income

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-	

D	escribing	firearm	deaths
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- What general type of gun was used?
- What was person doing when injury occurred?

Manner of Death

- Undetermined
 - Insufficient information about the circumstances surrounding death
 - Drug overdose—accidental or suicide?
 - -Cause of death unknown
 - Skeletonized remains
 - No anatomical/toxicological explanation

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Cause of death

- · Proximal cause of death
 - condition or injury that starts the chain reaction to death
- · Immediate cause of death
 - condition that directly leads to death

Cause of Death

- Atherosclerosis \Rightarrow MI/arrhythmia
- GSW chest \Rightarrow pneumonia 1 week later
- MVA ⇒ repair of aortic laceration ⇒ aneurysm at site 10 years later
- Blunt force injury of head ⇒ altered mental function ⇒ bedridden ⇒ pulmonary embolism

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Cause of Death

- Drug overdose ⇒ anoxic encephalopathy days later
- Rib fractures from a fall \Rightarrow pneumonia \Rightarrow sepsis



Cause of death

- Remember to follow chain of events to starting point.
- If hospitalized GET ADMISSION BLOOD especially if suspected drug overdose.
- Often hospital doctors don't follow chain of events backward.

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Manner in Delayed deaths		
Elderly individual falls ⇒ subdural		
hematoma⇒ nursing home, develops pneumonia, dies 6 months later		
- Accident		
GSW to spinal cord, 2 years later dies of complications of paralysis		
- Homicide		
Fractures in Elderly		
Hip, ribs etc.		
Considered independent risk factors for death		
At least within the year		
Especially if they don't return to their "baseline"		
Manner - Accident		
	•	

Manner on Death Certificate

If anything listed in either the Part 1 or the Part 2 is anything other than natural, the manner changes with it.

For example, Hip fracture in the elderly 3 months before death – Manner becomes Accident.

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You are notified of a decedent

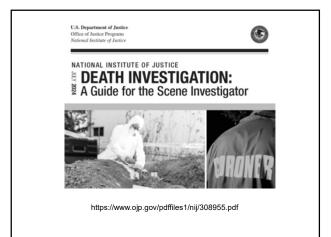
- Begin your investigation
- · Find out medical history
- Interview family members.

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Scene Investigation

- Identity
- Evidence/clues to circumstances surrounding death
 - Secure residence
 - Signs of struggle
 - Position of body/clothing
 - Suicide notes
 - Trash contents

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Cause/Manner Decision Process

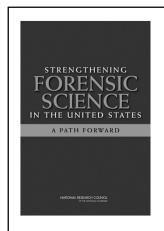
- Natural Sign DC
- Other than natural need autopsy?
- If drug OD need autopsy.
 If draw tox at scene and comes back negative then what?

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Send for Autopsy



- Body bag
- Bag hands
- · Chain of custody



- 2009
- Found wide disparity in forensic practices

Accreditation

 Accreditation is the external recognition of your adherence to a set of standards to perform an activity or hold a certain status.

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Accreditation

 Accreditation is usually a voluntary program in which trained external peer reviewers evaluate a healthcare organization's compliance and compare it with pre-established performance standards.

Accreditation

- Hospitals The Joint Commission
- Laboratories CLIA/ COLA/CAP others
- If they don't get accredited they cannot received funding from Medicare/Medicaid/Insurance

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Accreditation of Autopsy Providers

- · Onsite inspections
- · Review of reports
- · Staff certifications
- Some ME offices and American Forensics in Texas





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Forensic Pathologists

- Medical Doctor (Medical school MD, DO)
- · License to practice Medicine
- Board Certified Anatomic Pathology
- Board Certified Forensic Pathology

Medicolegal Death Investigators

- "Field Agents"
- ABMD

 American Board of Medicologal Death Investigato
- ABMDI certified
- May go to scenes if primary jurisdiction.
- · Ask questions that are medical and legal

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Specific types of deaths

And reporting requirements

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TxDot report

- Report MVA or bridge collapse
- Information includes Name, pedestrian, passenger, County
- Where autopsy is being performed.
- · Toxicology results.
- By the 11th of the month.
- https://www.txdot.gov/government/enforce ment/crash-records.html

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Motor Vehicle Accident deaths

- · Know cause of death is Blunt force trauma
- What exactly caused the death?
- How quick was the death?
- Was there "conscious pain and suffering?
- Need autopsy to get closer to answering

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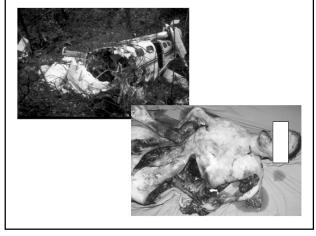
Blunt force – may show patterned injury





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Plane, Train, Large bus accidents NTSB National Transportation Safety Board www.ntsb.gov NTSB Start Research New & Events Adocacy Family Assistance Acceletes NTSB Start a Transportation Acceletes Report a Transportation Acceletes To report a Transportation Acceletes To report a Transportation Cocident (PCC) in Visualizaçion. Dic (247): Downland A Oxide to Responding to a Transportation Accelete.



FAA tox box



Work Related Deaths

- · Send for autopsy and toxicology
- · Document injuries
- · Document natural disease
- · Document drug use
- · Insurance/civil lawsuits involved

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OSHA JP not required to report



https://www.osha.gov/report

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Texas EMS & Trauma Registry

- Injury.web@dshs.Texas.gov
- · Must report within 90 days of death.
- Best to report monthly
 - Submersion injuries (drowning)
 - Traumatic brain injuries
 - Includes suffocation, drowning, blunt force trauma
 - Spinal Cord injuries

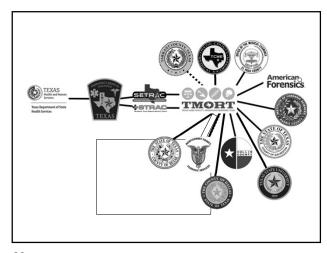


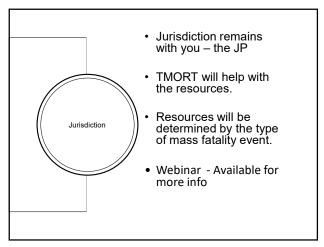
TMORT

- Active group
- Meet monthly via Zoom
- We have a GroupME for immediate communication
- Actively engaging contracted partners for all the regions of Texas



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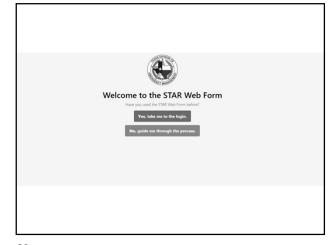




Access TMORT

- County Office of Emergency Management via STAR request
- https://star.tdem.texas.gov/
- When the county can't fill it, they'll pass to the state

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Deaths in Custody

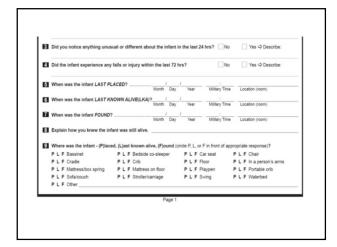
- · Death in a penal institution
- · Death while involved with police
 - Serving warrant
 - Car chase
 - Responding to a call
- Autopsy
- Notify Texas Rangers
- Reported by penal institution to Attorney General within 30 days

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Child deaths

 Scene investigation important – even if child taken to hospital





Child Abuse

- Must notify law enforcement agency
- Appropriate child fatality review team within 120 days of death.

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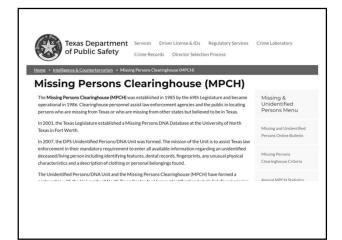
Fetal Death/Stillborn

- · Death occurs prior to delivery
- Death occurs during delivery and not live born
- Fetal death certificate.
- If pregnant woman dies and (unborn) fetus dies– no fetal death certificate.

Unidentified Person

- Report to Missing Person's Clearing House
- https://www.dps.texas.gov/section/intellige nce-counterterrorism/missing-personsclearinghouse-mpch
- 10th working day after investigation begins

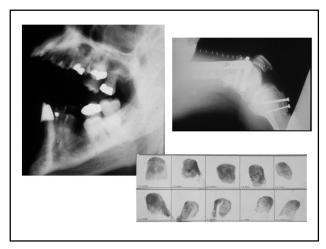
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Info needed

- Fingerprints
- · Hair, eye color, height, weight
- · Deformities
- Scars
- Tattoos
- Photographs
- Forensic pathologist will provide this info and can also report

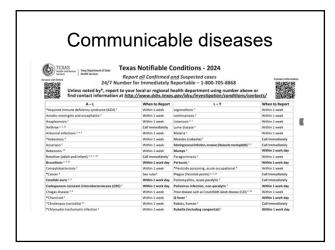


NamUs

- National Missing and Unidentified Person's System
- www.namus.gov
- Shares resources and info with MPCH



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Write down your questions and cases!



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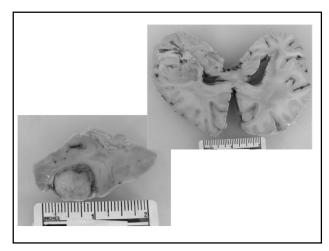
Case 1

- 45-year-old female
- Found on the floor in her bedroom having a 'seizure'
- What do we need to think about with this case?

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Seizure

- Non-specific finding
- Need more history
- Possible causes:
 - Heart/lung disease (lack of oxygen)
 - Drug abuse
 - Ethanol abuse
 - Known seizure disorder (epilepsy).
 - Tumor



Seizure disorder

- · History of seizures? Or first seizure?
- Why?
 - Epilepsy
 - All other possible causes drugs, natural disease, ethanol abuse
 - need to be ruled out by an autopsy.
 - Previous trauma
 - Accidental?
 - Inflicted injury? (homicide)

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Molecular Autopsy

- Genetics -carry a gene for disease.
- Cancer, Neurology, cardiology, Seizures, pediatrics, musculoskeletal diseases, dementias.
- BRCA1 or BRCA2, Breast, Ovarian colon cancer

Dementia

• 5% of Alzheimer's disease is genetic



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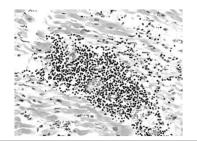
Case 2

- 13-year-old boy
- Hunting, suddenly dropped dead.
- While walking in the woods
- Witnessed by family

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Myocarditis

• Cardiac exam showed myocarditis of cardiac conduction system



Molecular autopsy

• RYR2 gene mutation associated with sudden death.



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Case 3

- 95-year-old male
- In car with daughter, complaining about chest pain
- Goes to hospital
- History of hypertension and Coronary artery disease.
- Taken to cath lab for testing

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Cardiac catheterization

- Inject dye he has an allergic reaction.
- Becomes unresponsive and dies





Figure 1: Coronary angiogram depicting the right and left coronary arteries.

What are cause and manner of death?

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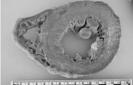
What is the cause of death?

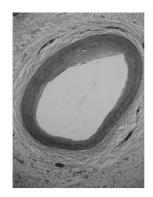
- Complications of Hypertensive and atherosclerotic cardiovascular disease.
- If Testing done and troponin increased or EKG signs acute myocardial infarction.
- Contributory allergic reaction to dye
- Manner of death natural

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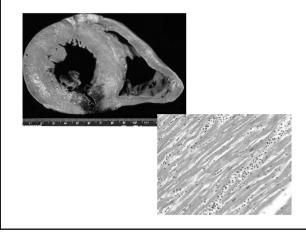
Hypertensive cardiovascular disease











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Therapeutic misadventure

- Most common manner is Natural
 - If the death is a reasonable, recognized complication of treatment for the disease.
 - Rarely is considered accident unless the misadventure is very much outside the expected complications.

Allergic reactions

- Generally considered natural
- Drugs, bee stings, food allergies etc.

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Anaphylactic Deaths

Most common food allergies – peanuts and shellfish





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Anaphylactic Deaths

- Antibiotics
 Penicillin
- · lodine contrast agents
- Chemotherapy agents



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Anaphylactic Deaths





Second most common cause of fatal anaphylaxis in United States.



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Case 4

- 85-year-old female died in nursing home.
- History of dementia, Hypertension, emphysema.
- Reported to you, you decline jurisdiction.
- Nursing home doctor signs DC as natural death

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Case 4 continued.

- Family ordered a private autopsy.
- Finding subdural hematoma and history hip fracture 3 months prior
- Forensic pathologist has duty to report.
 recommends Accidental manner of death.

Subdural hematoma



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Oh no, now what?

- Open an inquest.
- Death certificate needs to be changed.
 - Decertify the death certificate
 - Physicians cannot sign accident, suicide, homicide and undetermined.

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Case 5

- Deceased came to hospital 1 week ago.
- ICU admission
- Died with "anoxic encephalopathy"
- Now what?

Anoxic encephalopathy

- State of brain disfunction because of lack of oxygen to the brain.
- This is an immediate case of death.
- Big Question what is the <u>proximal</u> cause?

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Anoxic encephalopathy

- Cardiovascular disease? Lung disease?
- · Drug overdose?
- Infection? from the hospital or before?
- Asphyxia hanging, choking, strangulation?

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Anoxic encephalopathy

- Need to open inquest.
- · Investigate events
- · Get admission blood for testing
 - Hospitals usually use urine.
 - Test for substances and get true level

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