

ME-101

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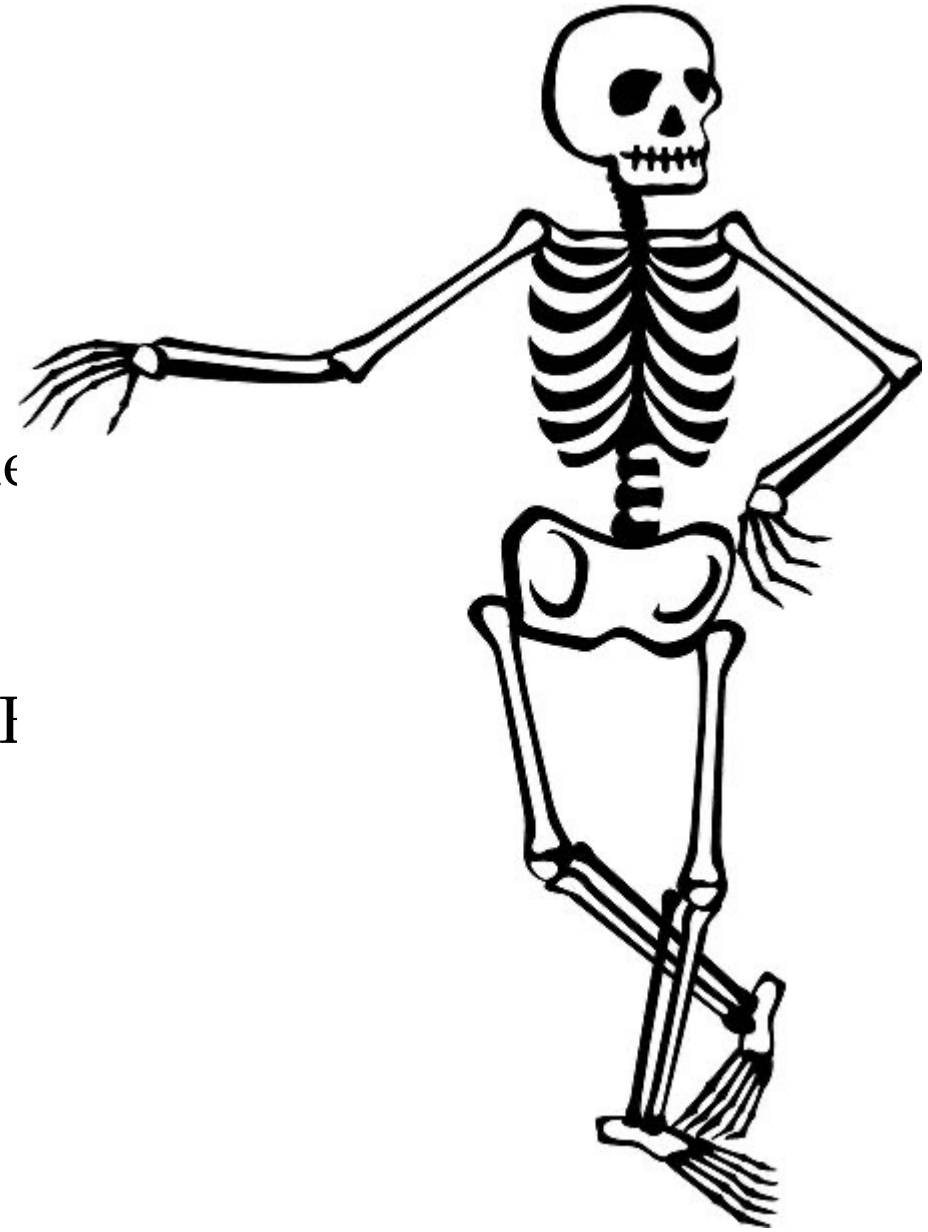
Mark Bethel, F-ABMDI

Disclosure

I have no financial relationships to disclose for this presentation

Objectives

- Identify what constitutes a medical examiner case
- Identify best practices for death scene investigations
- Describe the investigative process after jurisdiction is granted to IOSMI
- Discuss the importance of forensic statistics



ME-101 Outline

- Part 1
 - Iowa's medical examiner system
 - Death scene investigation
 - IVES
 - How IOSME function
- Part 2
 - Iowa Donor Network
- Part 3
 - Case studies



Repetition through the years

- ME-101 is given every year at IACME
- New content
- New photos
- New cases

DISCLAIMER

Iowa's medical examiner system

- **County Medical Examiner**
 - Must be an MD or DO
 - Most are not Forensic Pathologists
 - Appointed by the county board of supervisors
 - Deputy Medical Examiners
- **Medical Examiner Investigators (MEIs)**
 - Education and training are variable
 - Must be approved by the Iowa Office of the State Medical Examiner (IOSME)
- **IOSME**
 - Provides consultation, training, and autopsy services

Jurisdiction

- Determined by where the decedent is pronounced dead
 - Out-of-state deaths require a release and acceptance of jurisdiction prior to autopsy
- To decline jurisdiction:
 - Death must occur in a hospital, nursing home, or under hospice care
 - Be natural

What is a medical examiner case?

- What qualifies as an ME case?

(Iowa Code 331.802)

- ALL unwitnessed deaths occurring outside of a hospital, nursing home, or under hospice care
- Non-natural MOD
- Unknown circumstances

Required autopsies

- Homicides
- MOD undetermined
- ID undetermined
- Children under 2
- Deaths due to poisoning
- Natural disasters
- Drownings
- Pilots
- In-custody deaths
- On-the-job deaths
 - Farmers included

Recommended autopsies

Consider decedent's medical history, social history and all circumstances surrounding their death

- Adolescents less than 18 (non-natural)
- MVA's (unless single-vehicle MVA with no potential for litigation)
- Any transportation injury involving all-terrain vehicles and watercraft
- Suicides
- Electrical
- Fire deaths
- Deaths due to exposure (hypo or hyperthermia)
- Sports-related deaths

Pronouncing death

- Every death requires a formal pronouncement of death
- For organ recovery cases, use time of brain death (2 doctors)
- Iowa Code 702.8
 - Physician
 - Physician Assistant
 - Registered Nurse
 - Licensed Practical Nurse

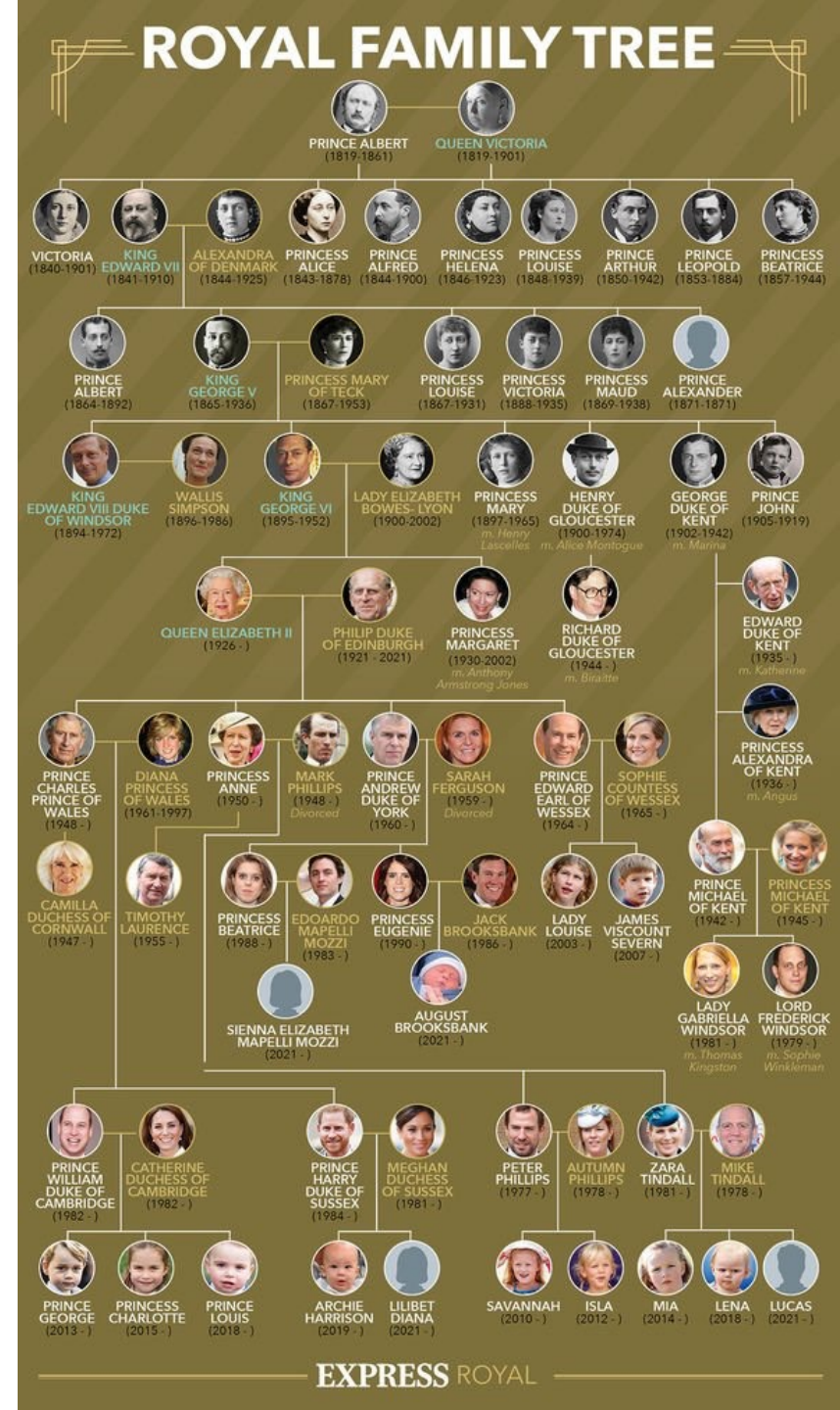
What about the obvious deaths?

- Skeletonized, decapitation, or decomposition



Next of kin hierarchy

- POA ends at death
- Hierarchy
 - Designee
 - Spouse
 - Adult children
 - Parents
 - Grandchildren
 - Siblings
 - Grandparents
 - “Next degree of kinship”

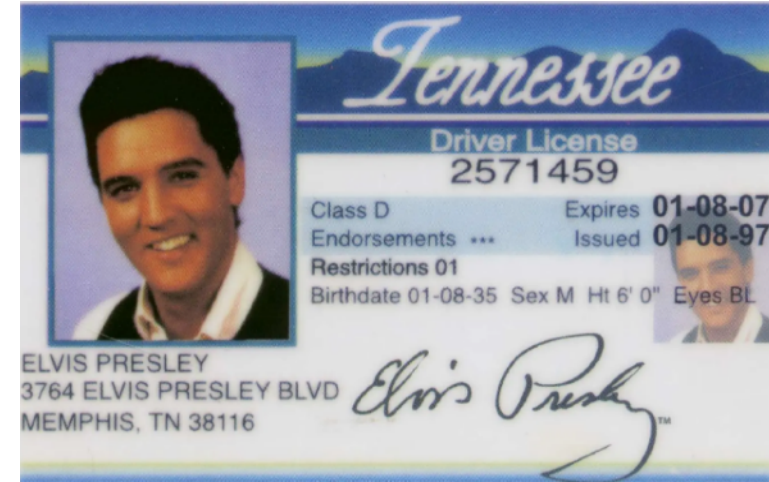


Identification

- **First major step** in the death investigation process
- Visual
- Circumstantial
- Scientific



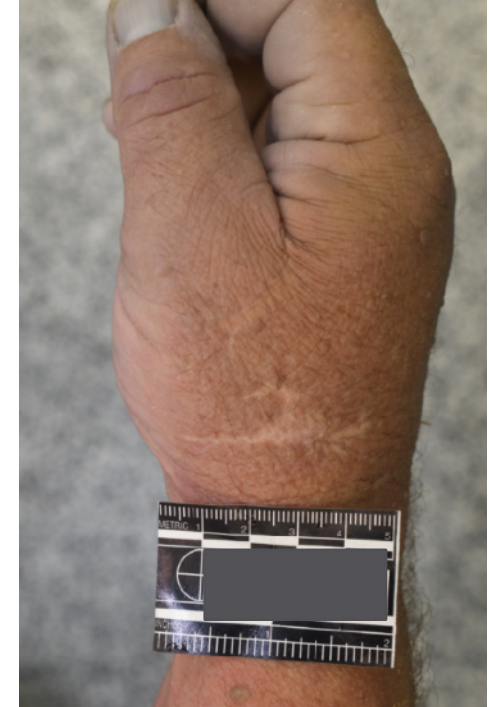
Visual identification



- Only use if decedent's face is recognizable.
 - Limited use with disfiguring injuries (e.g. burn victims, gunshot wounds of the head) and severe decomposition.
- Methods:
 - Have a friend or relative directly view the body.
 - Obtain a photograph of the decedent (e.g. driver's license, student I.D., passport) for comparison.

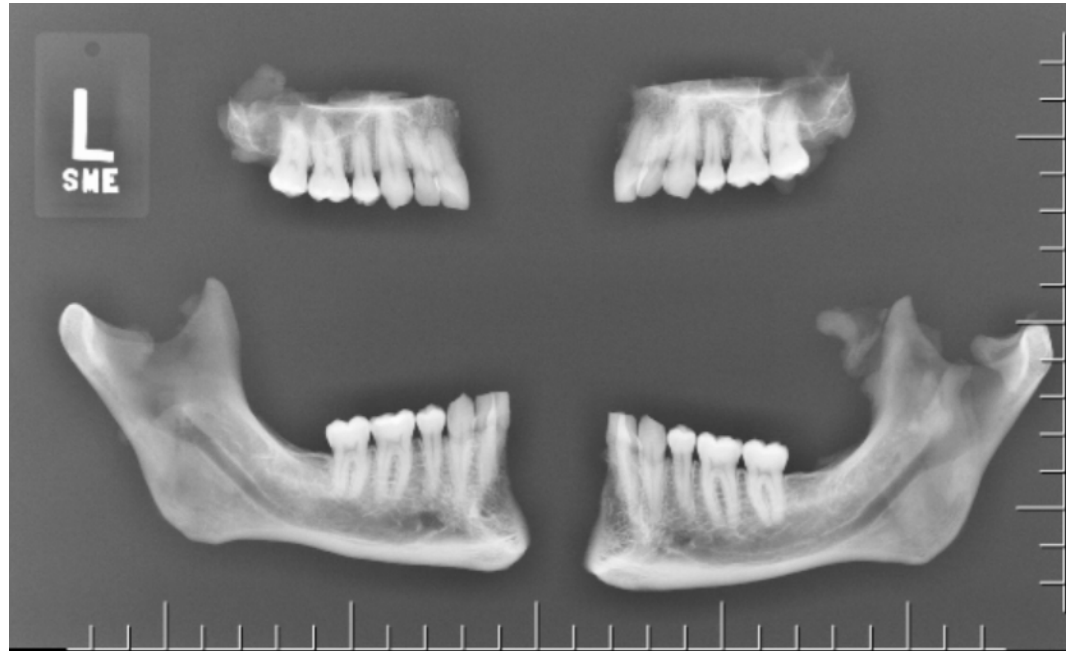
Circumstantial identification

- Body habitus
- Tattoos/scars
- Circumstances placing them at the scene
- Surgical history



Scientific identification

- Dental records
- X-rays/medical imaging
- Fingerprints
- DNA

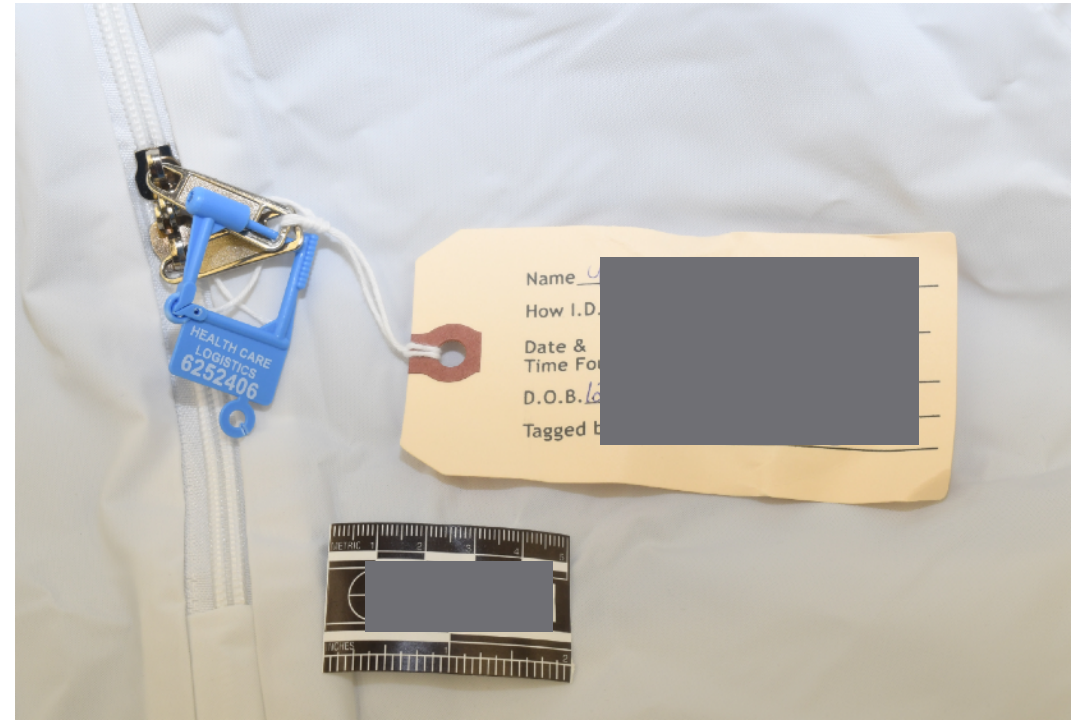
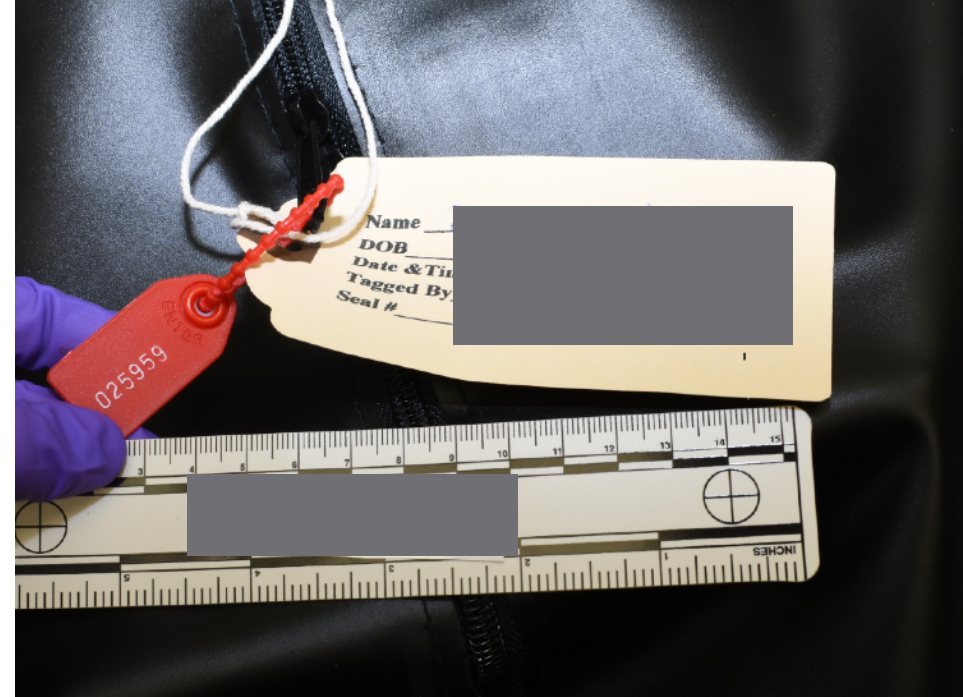


Medical image comparison



Bag, tag & seal

- Always place body into body bag in a **supine** position
- Tag body
- Tag body bag
- Seal body bag – photograph!!



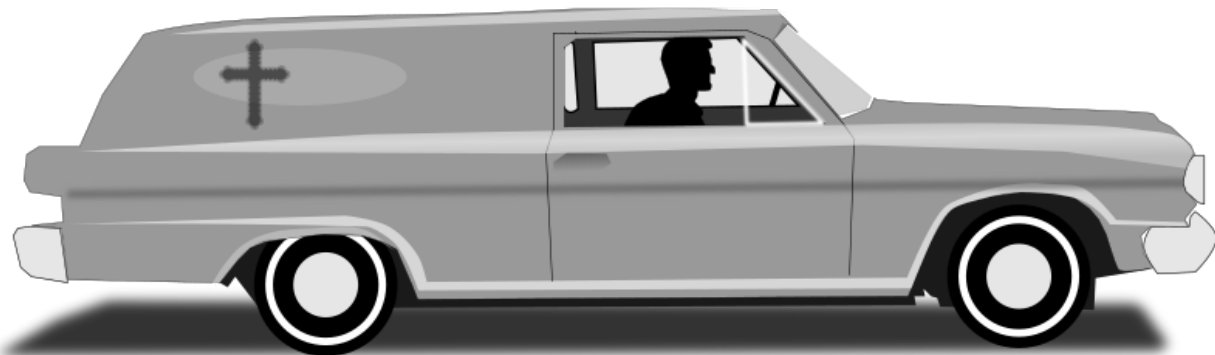
Skeletal remains

- Send photos with scale
- Loose bones can be collected into paper bags
- Burned remains in aluminum foil



Transporting decedents

- Transportation to the Medical Examiner's office can be performed by anyone under the direction of the County Medical Examiner.
 - Funeral home
 - Ambulance/EMS
 - Private vehicle



Scene Photography

- Scene photos can be essential for a medical examiner when determining cause and manner of death.
- Photos should:
 - Emphasize the relationship of the decedent to the scene
 - Record physical evidence as it is first encountered
 - Document any other objects or evidence that may be pertinent in the investigation process

Big Picture / Full Range

- Wide-angle photographs depicting the general scene and relationships between the decedent and various pieces of evidence.
 - Depending on the type of scene, this can be accomplished in one or a few photos.



Mid-range

- Photographs showing the position of the body and greater detail of its relationship to relevant evidence present at the scene.
- If the decedent is found lying on top of any objects, a photograph of the area where the decedent was lying after they have been moved is helpful in interpreting any artifacts seen at autopsy.



Close-up

- Detailed photographs emphasizing important pieces of evidence:
 - Firearm
 - Drug paraphernalia (do not send with decedent)
 - Prescription medication bottles (do not send with decedent)
 - Suicide note
- Do *not* need to take multiple close-up photographs of decedent.
 - Unless they contain evidence that might be distorted during transportation such as:
 - Livor mortis pattern (babies)
 - Presence of soot or gunpowder



Another example





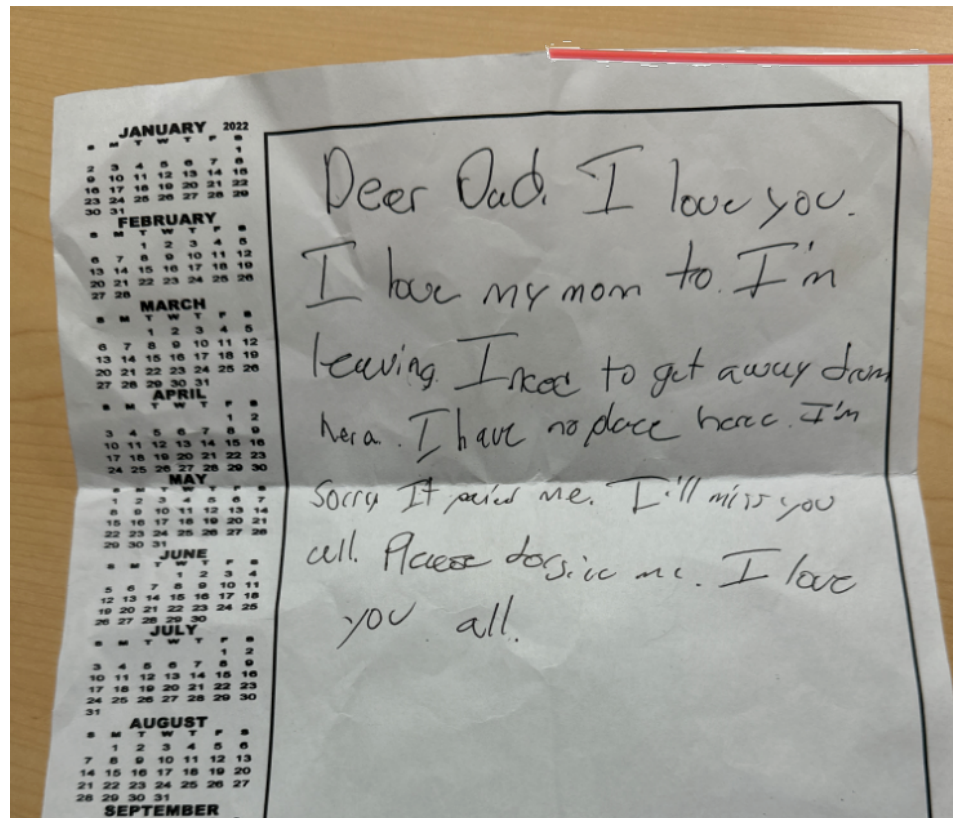
Scene photos can answer future questions





Platforms





Photography during extrication



Doll Reenactments

- Infant or adult
- Obvious front/back on doll
- Clarity on laid down vs found



IVES

IVES – Who starts the death record?

- ME/MEI
 - Non-natural MOD
 - Death occurred outside hospital, nursing home, or hospice
- Funeral director
 - Natural MOD
 - Death occurred in hospital, nursing home, or hospice
 - Certifier not a medical examiner

IVES – cases that require EMER details

- All out of hospital deaths, including natural deaths
- Non-natural deaths
- A natural death within a hospital, nursing home or under hospice care when a ME is contacted

IVES – Tips & tricks

- Chrome
- Using the “tab” key
- Save vs. Save Without Edits



A screenshot of the IVES web application interface. The top navigation bar is dark blue with white text for 'Home', 'File', 'Search', 'Documents', 'Requests', 'Action', 'Tools', 'Batch', 'Administration', and 'Help'. Below this, the 'File' menu is open, showing options: 'New', 'Save CTRL+S', 'Save Without Edits CTRL+2', 'Relogin', and 'Log Out'. The 'Save' and 'Save Without Edits' options are highlighted with a red rectangular box. The main content area shows a 'Death' record for 'Star' with 'Middle Name' 'State ME' and 'Last Name' 'Fish'. There are also buttons for 'Image count: 0', 'Notes count: 0', 'Alerts: 0', and a 'Save' button. The interface includes various tabs and links for navigation, such as 'Disposition', 'Certifier', 'Manner/Cause', 'Injury', 'Signatures', 'Flags', and 'ME Decedent Info'.

IVES – Colored boxes

- Colored boxes
 - Yellow –
 - Orange –
 - Dark gray –
 - Light gray –

Decedent

*First Name: Star
Middle Name: State ME
*Last Name: Fish

Last Name Prior To Any Marriage:
Suffix:
Alias On This Record?: N
Alias First Name:
Alias Middle Name:
Alias Last Name:

Sex: F
Social Security Number: 456-45-6456
SSN Missing Reason:
*Date of Death: 08/19/2024

Dark gray

Light gray

Place of Death

Place where death was PRONOUNCED: Accident Scene

Hospital Or Other Institution - If Not A Facility
Enter Street Address: 2250 S Ankeny Blvd

City, Town or Location of Death: Ankeny
*County of Death: Polk
Zip Code: 50023

Inside City Limits?: Y

IVES – Timeout

The screenshot shows a web browser with two tabs: "VRS-NX Iowa - Search (Death)" and "VRS-NX Iowa - Death: 87". The address bar shows the URL: `idohvrstrain.netsmartcloud.com/NXTRAIN/event/edit?selection=eventedit%3DDEATH-87-false`. The browser's bookmark bar includes "IOSME Fam Request", "Documents", "ISP Crash Report", "EPIC", "[State of Iowa] IDPH...", "IVES", "Pill ID", "New Tab", and "IowaCourts".

The application interface features a dark blue navigation bar with the following menu items: Home, File, Search, Documents, Requests, Action, Tools, Batch, Administration, and Help. The main content area is titled "Death: 87" and includes a summary bar with "Image count: 0", "Notes count: 0", and "Alerts: 0", along with a "Save" button. Below this are several tabs for navigation: "Decedent pg 1" (active), "Decedent pg 2", "Decedent pg 3", "Disposition", "Certifier", "Manner/Cause", "Injury", "Signatures", "Flags", and "ME Decedent Info". There are also sub-tabs for "Suicide/Hanging/CO", "Vehicle/Pedestrian", "ME All Others", "ME Infant (0-3)", "ME Child/Teen (4-17)", "ME Dependent Abuse", "ME Med. History", "ME Medication", and "ME Death Factors".

The "Duplicate Check" section contains the following fields and controls:

- First Name:
- Last Name:
- Suffix:
- Date of Death:
- County of Death:
- Check for Duplicate:

The "System" section displays the following information:

- State File Number:
- Fact of Death Number:
- Date Created:
- Record Status:
- Record Status for Filing:
- Record Status for Medical Info:
- Fact of Death Cert Status:
- Filed Date:
- Create UserName:

IVES – Vocab – “Tabs”

Home File Search Documents Requests Action Tools Batch Administration Help

Death: 87 Image count: 0 Notes count: 0 Alerts: 0 Save

Decedent pg 1 Decedent pg 2 Decedent pg 3 Disposition Certifier Manner/Cause Injury Signatures Flags ME Decedent Info

Suicide/Hanging/CO Vehicle/Pedestrian ME All Others ME Infant (0-3) ME Child/Teen (4-17) ME Dependent Abuse ME Med. History

ME Medication ME Death Factors

Duplicate Check

First Name Last Name Suffix

Date of Death County of Death Check for Duplicate

Check for Duplicate

System

State File Number	Fact of Death Number	Date Created
	CNTRL-2024000087	10/07/2024
Record Status	Record Status for Filing	Record Status for Medical Info
PENDING	PENDING	PENDING

IVES – Vocab – “Paragraphs”

Home File Search Documents Requests Action Tools Batch Administration Help

Death: 87 Image count: 0 Notes count: 0 Alerts: 0 Save

Decedent pg 1 Decedent pg 2 Decedent pg 3 Disposition Certifier Manner/Cause Injury Signatures Flags ME Decedent Info

Suicide/Hanging/CO Vehicle/Pedestrian ME All Others ME Infant (0-3) ME Child/Teen (4-17) ME Dependent Abuse ME Med. History

ME Medication ME Death Factors

Duplicate Check

First Name Last Name Suffix

Date of Death County of Death Check for Duplicate

Check for Duplicate

System

State File Number	Fact of Death Number	Date Created
	CNTRL-2024000087	10/07/2024
Record Status	Record Status for Filing	Record Status for Medical Info
PENDING	PENDING	PENDING

IVES – Vocab – “Fields”

Home File Search Documents Requests Action Tools Batch Administration Help

Death: 87 Image count: 0 Notes count: 0 Alerts: 0 Save

Decedent pg 1 Decedent pg 2 Decedent pg 3 Disposition Certifier Manner/Cause Injury Signatures Flags ME Decedent Info

Suicide/Hanging/CO Vehicle/Pedestrian ME All Others ME Infant (0-3) ME Child/Teen (4-17) ME Dependent Abuse ME Med. History

ME Medication ME Death Factors

Duplicate Check

First Name	Last Name	Suffix
<input type="text"/>	<input type="text"/>	<input type="text"/>
Date of Death	County of Death	Check for Duplicate
<input type="text"/>	<input type="text"/>	<input type="button" value="Check for Duplicate"/>

System

State File Number	Fact of Death Number	Date Created
<input type="text"/>	CNTRL-2024000087	10/07/2024

IVES – Completing your part

Home File Search Documents Requests Action Tools Batch Administration Help

Death: 65 Image count: 0 Notes count: 0 Alerts: 0 Save

Decedent pg 1 Decedent pg 2 Decedent pg 3 Disposition Certifier Manner/Cause Injury **Signatures** Flags ME Decedent Info

Suicide/Hanging/CO Vehicle/Pedestrian ME All Others ME Infant (0-3) ME Child/Teen (4-17) ME Dependent Abuse ME Med. History

ME Medication ME Death Factors

State Registrar

Registrar Name	Sign?	Date Signed
Ellis, Melissa A.	N	

Signed By

Save Signatures Info

Save Signatures Info

ME/MEI Entry & Approval

ME/MEI Entry Complete?	ME/MEI Entry Complete Date	ME/MEI Entry By
Y	08/19/2024	Barnes, Terri

First Name	Last Name	County of Appointment
Terri	Barnes	Central Location

LOAD ME Preliminary Report VIEW ME Preliminary Report

LOAD ME Preliminary Report VIEW ME Preliminary Report

IVES – Completing your part

Message from webpage

Please complete the missing ME related fields.
Missing Data:
ME Decedent Info -> ME/MEI Conducting Investigation -> Contact Number
ME Decedent Info -> At Scene -> Iowa Donor Notified

Ok

Death: 2057145

Decedent pg 1 Decedent pg 2 Decedent pg 3

Vehicle/Pedestrian ME All Others ME In

SuperMICAR

Demographics

Fact Of Death Info Complete? Y

Complete Date 10/23/2024

Completed By Williams, Paige

Funeral Director

Date Signed

Completed By

State Use Only

State Use Only X

Validation Errors

ME Decedent Info > Death - Pronounced > County
Entry doesn't exist. Please select a value from the list.
Bypass: 1 2 3 4

ME Decedent Info > Death - Pronounced > City
Entry doesn't exist. Please select a value from the list.
Bypass: 1 2 3 4

ME Decedent Info > Death - Pronounced > Zip Code
Entry doesn't exist. Please select a value from the list.
Bypass: 1 2 3 4

IVES – Printing your report

Home File Search **Documents** Requests Action Tools Batch Administration Help

Death: 65 Image count: 0 Notes count: 0 Alerts: 0 Save

Decedent pg 1 Decedent pg 2 Decedent pg 3 Disposition Certifier Manner/Cause Injury Signatures Flags ME Decedent Info

Suicide/Hanging/CO Vehicle/Pedestrian ME All Others ME Infant (0-3) ME Child/Teen (4-17) ME Dependent Abuse ME Med. History

ME Medication ME Death Factors

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Registrar Name	Sign?	Date Signed
Ellis, Melissa A.	N	

Signed By

Save Signatures Info

Save Signatures Info

ME/MEI Entry & Approval

ME/MEI Entry Complete?	ME/MEI Entry Complete Date	ME/MEI Entry By
Y	08/19/2024	Barnes, Terri

First Name	Last Name	County of Appointment
Terri	Barnes	Central Location

LOAD ME Preliminary Report VIEW ME Preliminary Report

LOAD ME Preliminary Report VIEW ME Preliminary Report

IVES – Upcoming changes

- November 3rd – Means section mandatory

Means of Death (Required - Check All That Apply)

<input type="checkbox"/> Natural	<input type="checkbox"/> Suicide	<input type="checkbox"/> Hanging	<input type="checkbox"/> Carbon Monoxide - Vehicle	<input type="checkbox"/> Carbon Monoxide - Dwelling
<input type="checkbox"/> Vehicles	<input type="checkbox"/> Pedestrian	<input type="checkbox"/> Firearm	<input type="checkbox"/> Instrument	<input type="checkbox"/> Drowning
<input type="checkbox"/> Fire/Thermal	<input type="checkbox"/> Falling	<input type="checkbox"/> Asphyxiation	<input type="checkbox"/> Drug/Alcohol/Poison	<input type="checkbox"/> Suspected Abuse/Neglect
<input type="checkbox"/> Means Of Death Other	<input type="text" value="Specify:"/>			

IVES – Upcoming changes

- 6-8 months down the road
 - Streamlined/user friendly
 - Chronological order of scene processing
 - Non-redundant
 - 3 tabs
 - 6 page report
 - SUIDI form instead of infant section

How IOSME functions

How does your work impact IOSME?

1st Call (intake)

- (515) 725-1400
- County giving jurisdiction to the State
 - Why we cannot accept bodies that have not been called in
- FileCloud links
 - Required to set permissions & expiration



Body arrival

- Morgue attendant receives body – stays sealed until time of autopsy
- Given a case number
- Investigator assigned



Investigator Role

- Pre-autopsy work
- Morning conference call
- Report collection
- Afternoon conference call
- Post-autopsy work
 - Evidence packaged & sealed

Task List

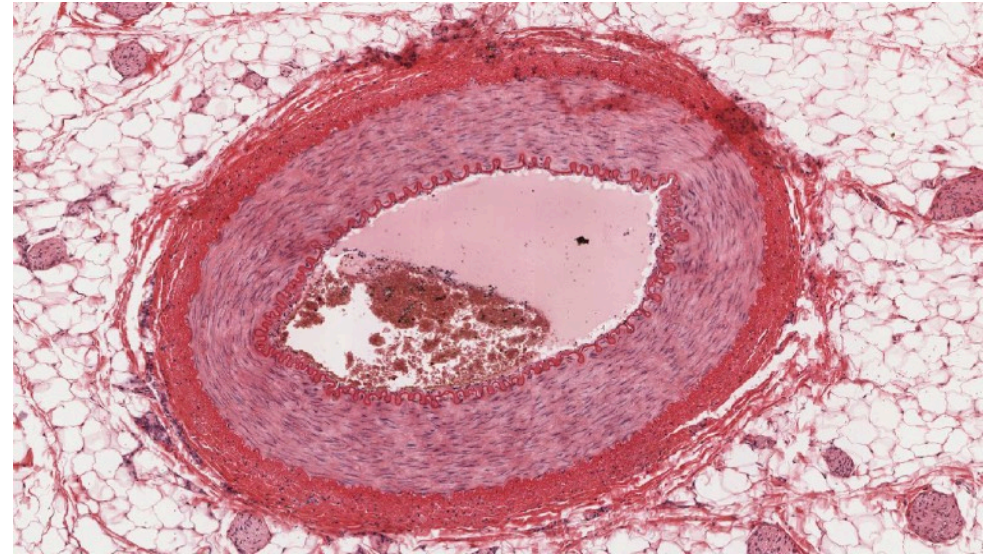
- Antemortem specimens
- ME-1
- EMS report
- Next of Kin
- Law enforcement: reports & scene photos
- Medical Records
- ID entered
- Funeral home notified
- DC info verified

Autopsy

- Typically in order of arrival
 - Exceptions include infants & homicides
- External exam
- Internal exam
- Document personal effects – typically released to funeral home with decedent

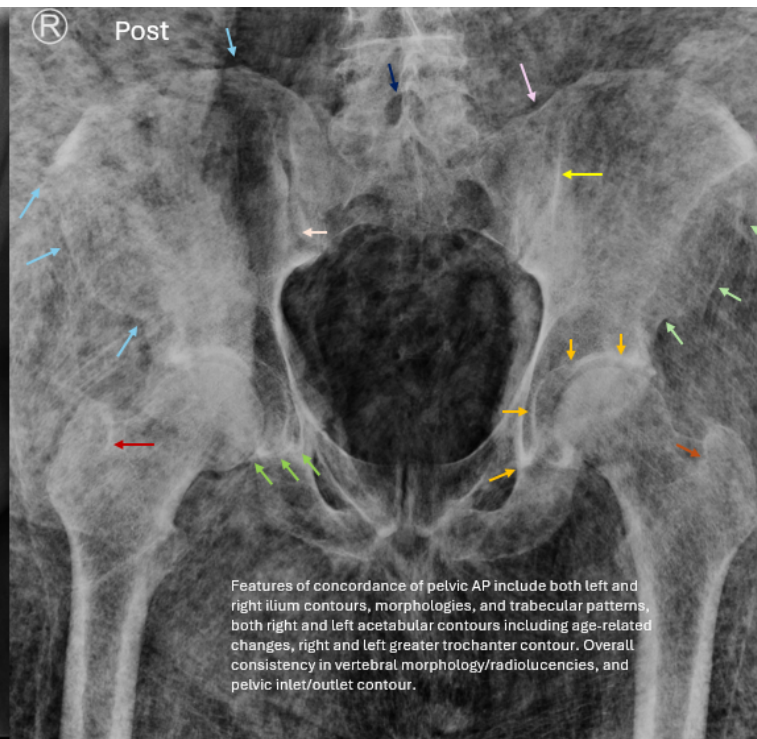
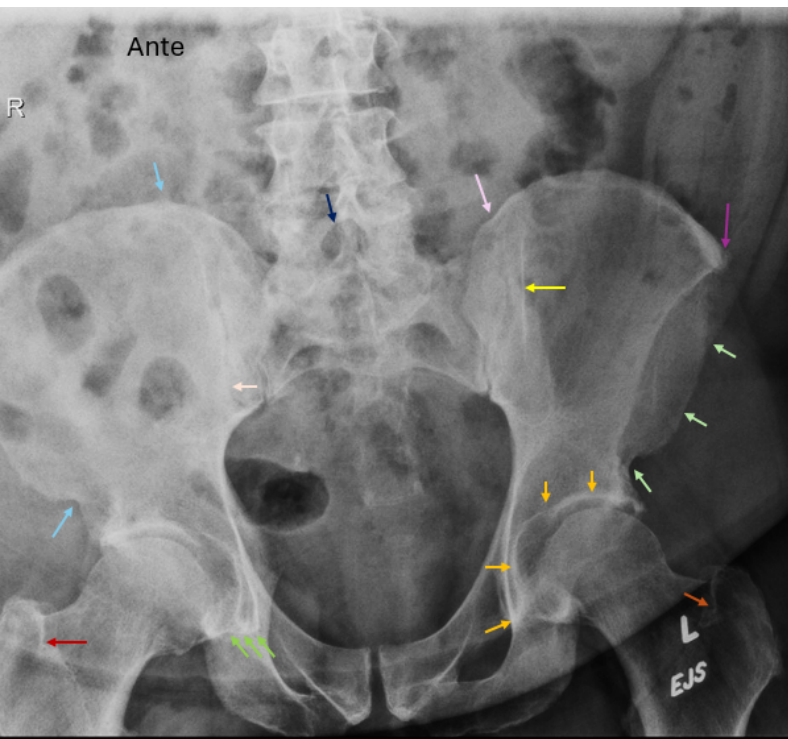
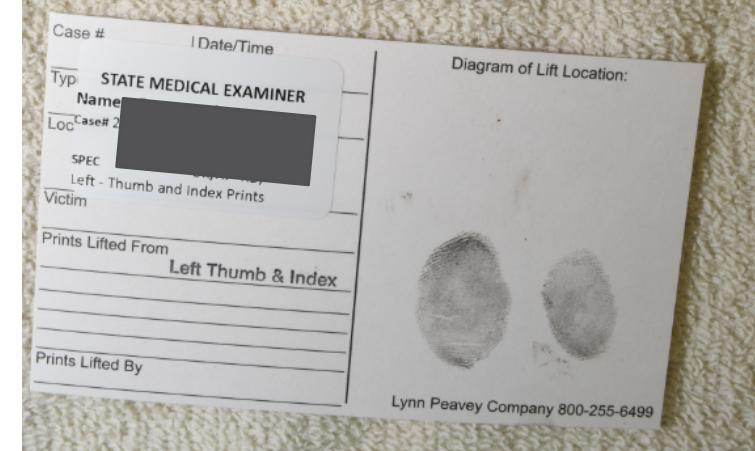
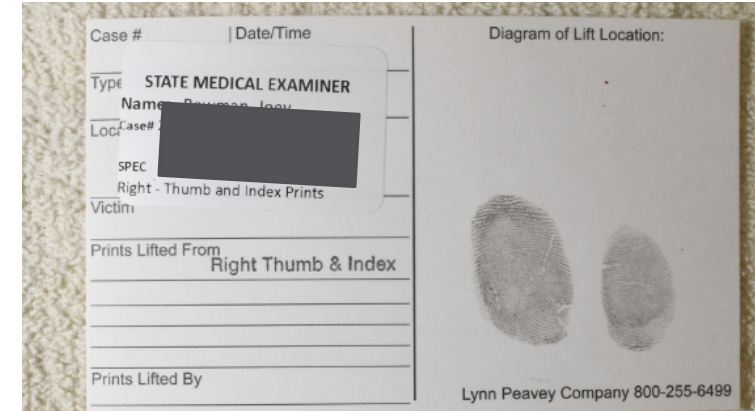
Testing & Timelines

- Microbiology
- Histology
- Toxicology (4-6 weeks)
- Cardiac pathology
- Neuropathology (3 months)
- Genetic studies



Identification Assistance

- Forensic anthropologist
- Iowa Department of Criminal Investigation (DCI)
- Homeland Security
- National Missing and Unidentified Persons System (NamUs)



Features of concordance of pelvic AP include both left and right ilium contours, morphologies, and trabecular patterns, both right and left acetabular contours including age-related changes, right and left greater trochanter contour. Overall consistency in vertebral morphology/radiolucencies, and pelvic inlet/outlet contour.



Autopsy Report

- Automatically sent to:
 - County Medical Examiner
 - County Attorney
- Can be requested by:
 - Immediate next of kin
 - Law enforcement
 - Insurance companies
 - Attorneys
 - Primary care doctors

Enclosed is a final autopsy report.

Please do not hesitate to contact the Iowa Office of the State Medical Examiner with any questions or concerns at (515)725-1400.

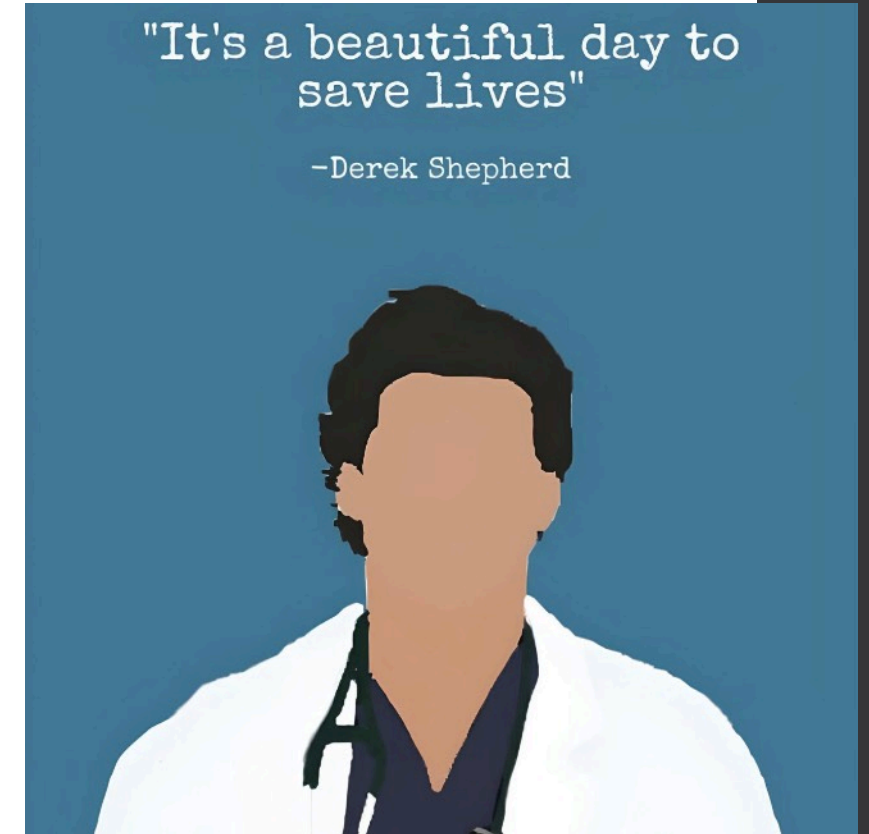


Reporting Statistics

- Our job is not just determining cause & manner of death, but also preventing future deaths
- Review teams
 - Child death
 - Domestic violence
 - Violent death
 - Drug overdose
- Law enforcement agencies
- Elected officials

Your work matters!

- Safe sleep campaign (formerly back to sleep campaign)
- Naloxone for the public
- Increased grant funding to fight opioid epidemic
- Seatbelts = mandatory
- Helmets on mopeds = mandatory
- Illegalization of synthetic marijuana
- Passing a stopped school bus = misdemeanor
- Warning label on ladders not to stand on top of ladder
- Banning of corded blinds/shades



End of Part 1:
Questions?

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(515) 721-2294

