

# Child Death Investigation and the Office of the Chief Medical Examiner



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# Objectives



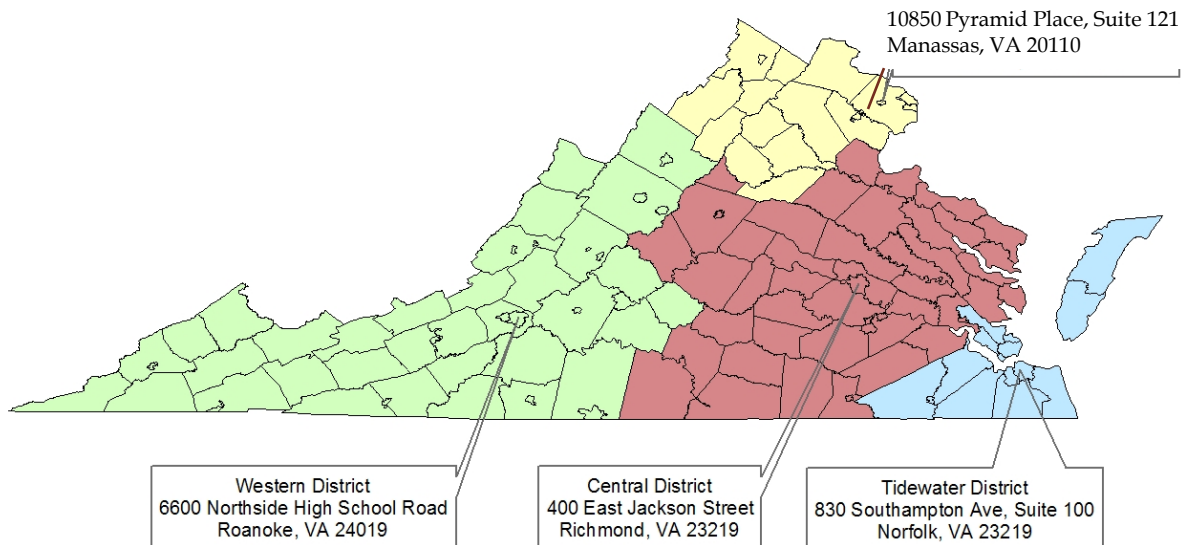
- ❧ OCME – roles and responsibilities
- ❧ Cause/Manner of death
- ❧ Scene response
- ❧ Challenges for child death investigation
- ❧ Working with families



# OCME



Commonwealth of Virginia  
Department of Health  
Office of the Chief Medical Examiner



- ❧ VDH
- ❧ §32.1-283
  - ❧ Trauma
  - ❧ Unattended
  - ❧ Sudden in apparent good health
  - ❧ In custody
  - ❧ “SIDS” / unexpected deaths in children 18 mos. or younger

# Roles at the OCME



- ❧ Assistant Chief Medical Examiners
- ❧ Medicolegal death investigators
- ❧ Forensic autopsy technicians
- ❧ Local Medical Examiners

# Who is the Assistant Chief Medical Examiner?

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- ❧ Licensed physician with special forensic training and experience.
- ❧ Medical school – 4 years
- ❧ Minimum of 4 years of Pathology Residency training
- ❧ 1 year of forensic fellowship.
- ❧ Board certification by the American Board of Pathology.

# Who is your Local Medical Examiner?



- ❧ Local physicians, NPs or PAs appointed for three years.
- ❧ Mix of practicing and retired
- ❧ External exam with tox collection – if no autopsy needed
- ❧ May respond to death scenes.
- ❧ Do most “cremation views”
- ❧ Part time job, paid by the case
- ❧ Appointed (i.e. not an employee of OCME)

# Autopsy technicians?



- ❧ Individual who assists the doctor in performing autopsies
  - ❧ Take out organs, move and clean bodies, release bodies to funeral home
  - ❧ Assist with radiology, collecting samples for testing
  - ❧ Usually some funeral home/medical experience
  - ❧ May be trained on the job

# Medicolegal death investigators?



- Assist doctors by collecting scene information, personal info, history of deceased, medications?, police info
- Take case calls – work with Local ME/police
- Coordinate with DFS and police to ID body
- Represent the OCME at scenes – 24/7 coverage
- Coordinate with Organ/Tissue Donor agencies
- Teach – police, first responders, hospital staff
- ABMDI certified



# What is an autopsy?



- ❧ Exam of body inside and out
  - ❧ Dissection of organs
  - ❧ Collect samples – toxicology, microscopic exam
  - ❧ Interpret wounds and collect evidence
  
- ❧ “Death investigation” = Autopsy or external exam taken in context of decedent’s history and scene

# What comes next?



- ❧ Complete DC and write report
- ❧ Talk to families, police, attorneys, DSS, etc.
- ❧ Finalize report once all lab results done – tox, micro, cultures, etc.
- ❧ Amend DC if necessary
- ❧ Testify if necessary

# Cause vs. Manner



- ❧ Cause = Original medical/anatomic condition that initiates the lethal chain of events ending in death
- ❧ Manner = HOW the cause of death occurred
  - ❧ Natural – no external factors
  - ❧ Accident – external factor without intent (by self or others) to cause harm
  - ❧ Suicide – intent to cause self harm
  - ❧ Homicide – intent by other(s) to cause harm
  - ❧ Undetermined – unable to reasonably determine between two or more of the other choices

# Causes of death in children?



- ⌘ Depends on the age
- ⌘ In hospital vs. at home?
  
- ⌘ In forensics – two main categories:
  - ⌘ Eventually explained
  - ⌘ Unexplained

# Possibilities

<b><u>Child's age</u></b>	<b><u>Explained</u></b>	<b><u>Unexplained</u></b>
Birth to few weeks	Overlying Congenital Infections Homicide	Too early for SIDS – possibly SUID, genetic arrhythmias
SIDS range (few weeks to 6 months)	Homicide Unsafe sleep/asphyxia Infections	SIDS, SUID
7 mos – 1 year	Homicide, Asphyxia	SIDS, SUID, undetermined
Over 1 year	Unusual natural diseases, homicide, infection, accidental trauma (MVC, drowning)	SUDC

# Manner of Death



- ❧ Natural - any natural disease process unrelated to trauma.
- ❧ Accident - unforeseeable consequence.
- ❧ Suicide - intent to die or self-harm with foreseeable consequence.
- ❧ Homicide - at the hands of another with intent
- ❧ Undetermined - not sure despite complete autopsy and thorough police investigation
- ❧ Pending - we haven't decided yet!

# Does “Natural” or “Accident” mean no one committed a crime?



- ❧ NO!
- ❧ Accident = Hit & Run, DUI, drug overdose and many more!
- ❧ Natural may include medical neglect
  - ❧ Allowing someone to die from their natural processes without intervening is a natural death
  - ❧ Not providing the care someone needs (and you are responsible for) to prevent that death = NEGLIGENCE

# Does “homicide” mean someone’s going to jail?



- ❧ Not necessarily
- ❧ “Homicide” (ME term) does not always equal “Murder” (legal term)
- ❧ Homicides that may not result in charges:
  - ❧ Self defense
  - ❧ Hunting accidents
  - ❧ Police involved shootings



# Types of homicide?



- ❧ Blunt trauma – beatings
- ❧ Asphyxial – suffocation, strangulation, drowning
- ❧ Poisoning
- ❧ Neglect with intention of causing death (starvation, dehydration, hyperthermia/hypothermia)
- ❧ Pretty much any type of external trauma!



So, what is SIDS?



**THE SUDDEN DEATH OF AN  
INFANT**

**WHICH REMAINS UNEXPLAINED**

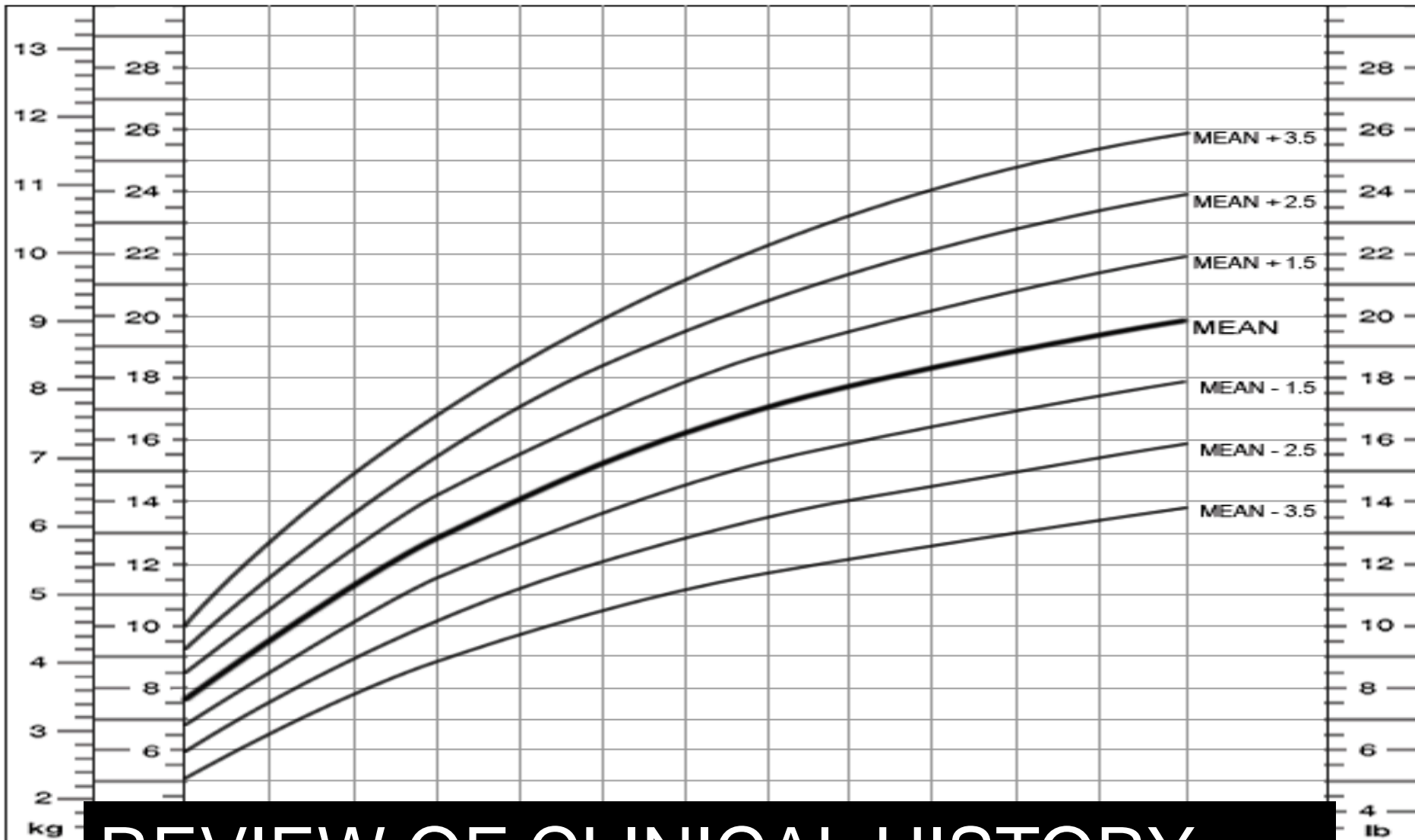
**AFTER A CASE INVESTIGATION . . . . .**



**EXAMINATION OF THE DEATH  
SCENE...**

# Average Growth of Breastfed Girls

From WHO data for a small set of infant girls who were breastfed for at least 12 months (see reference below).



**REVIEW OF CLINICAL HISTORY...**

Source:

**Figure 15: Weight-for-age of girls in the "12-month breast-fed pooled data set" from:** WHO Working Group on Infant Growth. An Evaluation of Infant Growth: a summary of analyses performed in preparation for the WHO Expert Committee on Physical Status: the use and interpretation of anthropometry. (WHO/NUT/94.8). Geneva: World Health Organization, 1994, p. 60.



**AND PERFORMANCE OF A  
COMPLETE AUTOPSY**

# Problems with “SIDS”?



- ❧ Mistaken belief that it is a true “syndrome” with single cause
- ❧ Little research into potential causes/risks until 1990s when “Back to Sleep” – accepted as a natural event
- ❧ Diagnosis of exclusion? Autopsies not required until 1994
  - ❧ Can we ever really exclude suffocation (accidental or homicidal)? Do families always tell us the truth about sleep environment?

# §32.1-285.1



☞ “An autopsy shall be performed in the case of any infant death which is suspected to be attributable to Sudden Infant Death Syndrome (SIDS). For the purposes of this section, “Sudden Infant Death Syndrome” (SIDS), a diagnosis of exclusion, means the sudden and unexpected death of an infant less than eighteen months of age whose death remains unexplained after a thorough postmortem examination which includes an autopsy.”



# SUID – when can you not call it “SIDS”?

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- ❧ Natural disease at autopsy sufficient to cause death
- ❧ Toxicology positive?
- ❧ Adverse historical factors –
  - ❧ ?Munchausen’s by proxy
  - ❧ Prior/remote injury
  - ❧ Prior child/infant death in family?
- ❧ Suspicious circumstances by investigation
  - ❧ Smothering?
- ❧ Risk factors for non-natural death
  - ❧ Unsafe sleep environment

# What is a “safe” sleep environment?



- ❧ No pillows
- ❧ No bumper
- ❧ No toys
- ❧ No loose clothing
- ❧ No adult bedding  
(blankets, comforters)
- ❧ Firm mattress/sleep  
surface
- ❧ FACE UP

# What is an “unsafe” sleep environment?



- ❧ EVERYTHING ELSE
- ❧ Co-sleeping
- ❧ Sleeping on non-firm surface
  - ❧ Adult bed, couches, pillows
- ❧ Prone
- ❧ Unsecured in car seats, swings, etc.

**Step 1**

Life-threatening event

Asphyxia and brain hypoperfusion



Head lifting or turning

**Step 2**

Failure of arousal

Progressive asphyxia



**Step 3**

Hypoxic coma

**Step 4**


Bradycardia and gasping

**Step 5**

Failure of autoresuscitation resulting in death

# What is a “thorough postmortem examination”?

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- ❧ Autopsy
- ❧ Full microscopic examination
- ❧ Pan-culture
- ❧ Toxicology testing
- ❧ Electrolytes or retinal examination (depending on case)
- ❧ Metabolic screen
- ❧ Full skeletal survey
- ❧ COMPLETE scene investigation and review of birth, pediatrician and ER/EMS records, DSS records, police reports

# SUIDI Form



- ❧ Why do we ask so many questions?!
- ❧ Why is the sleeping situation so important?
- ❧ Why is the medical history and birth history important?

# Scene



TURN OVER TO MLDI to demonstrate scene re-enactment and provide district specific case examples

# Cases



- Pathologist can present district specific cases demonstrating similar sounding/ appearing cases with differing CODs after autopsy/ investigation
- (WHY is the SUIDI, scene and other info needed)



# What can law enforcement do to help us?

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- ❧ COMPLETE investigation – all child deaths have potential to be homicide
- ❧ Scene photos and witness statements
  - ❧ Do stories change? Are explanations reasonable?
- ❧ Admission blood and urine samples on hold?
- ❧ Any other family history that would be significant?
  - ❧ SUIDI form – sleep environment, medical history (or at least treating doctors names)
  - ❧ Past abuse or child deaths
- ❧ Scene RE-ENACTMENT with photos

# What can DSS do to help us?



- ❧ Any past interactions with DSS and what type?
- ❧ DSS reports – may have different information from LEA
- ❧ Admission blood and urine samples on hold?
- ❧ You are also entitled to come to the autopsy to find things out asap.

# What can the Commonwealth Attorney's office do to help us?



- ❧ Ask questions! Don't wait until the trial.
  - ❧ Meet with us, call us, we are happy to help.
- ❧ Yes, you too can come to the autopsy.
- ❧ Remember, for however long we have to sit in a witness room, it takes away from our finishing your other cases! Please be mindful of the pathologist's time when scheduling testimony.

# What can we do to help you?



- ❧ Talk to you! Call at any time for info on the case.
  - ❧ ASK TO SPEAK TO PATHOLOGIST! All other staff can only relay COD/MOD and if its “pending” that doesn’t help you!
  - ❧ DO NOT try to “guess” what our report means
- ❧ Education – what do you think we’re doing today?
- ❧ Explain to families the process of a death investigation and our findings so you don’t have to interpret.
- ❧ Scene investigation and re-enactments
- ❧ If you need reports for prelim hearings – call us! We can provide a provisional report if needed.



Questions?