An Overview of Medical Examiner/Coroner Systems in The United States

-Development, Current Status, Issues, and Needs-

Randy Hanzlick, MD
Atlanta, GA

The National Academies: Forensic Science Needs Committee
Topics to be Discussed

• Medicolegal Death Investigation
• Medical Examiner & Coroner Systems
• People (the Workers)
• Funding
• Training and Education
• Quality of Services
• Availability of Services
• Needs
Medicolegal Death Investigation

- Performed in accordance with state law
- "Official" death investigations on behalf of the government and the public
- Conducted by Coroner Systems or Medical Examiner Systems
- Not all systems are the same
- There are commonalities
Deaths Investigated, in general:

Fairly uniform among states:
- Known or suspected as having been caused by injury or poisoning, regardless of interval
- Sudden, unexpected, and unexplained
- Unusual or suspicious
- No physician to certify the death
- In-custody deaths

Some variation by state
- Special categories such as anesthetic deaths, public health threats, etc

HOWEVER:
The extent of investigation and postmortem examination varies based on law, tradition, and resources. For example, apparent suicides may be routinely autopsied in some areas and not in others. There are many such examples.
Medicolegal Death Investigation in the US is conducted by:

- Coroner Systems (titular head = Coroner)
- Medical Examiner Systems (titular head = Medical Examiner)

Serving the 3137 Counties are ~2342 separate death investigation “systems”
Thus……

- There is room for more standardized practice in medicolegal death investigation.
- Large numbers of systems hamper communication and standardized practices.
Death Investigation is not new
Recognition of Need is **not** new

- 1928: NRC Report: The Coroner and Medical Examiner
- 1932: NRC Report: Possibilities and Needs for Development of Legal Medicine in the United States
- 1954: Uniform Law Commission: Model Postmortem Examinations Act
- 1968: NRC Committee on Forensic Pathology
- 1985: Wingspread Symposium (NACo and others)
- 2003: IOM Workshop on the Medicolegal Death Investigation System
Coroners alluded to in the Talmud?

Coroners alluded to as far back as Alfred the Great (871-910 AD)

Formalized in 1194 AD
Richard the Lionhearted
“Articles of Eyre”

Custos placitorum coronae
“Keepers of the pleas of the crown”

Still around in 2007 AD

Similar system alluded to in the Talmud?
Coroners go way back in history. Colonists brought the concept from England. English Common Law was utilized.
Georgia’s 1st Constitution-1777

“In absence of the chief justice, the senior justice on the bench shall act as chief-justice with the clerk of the county, attorney for the State, sheriff, coroner, constable, and the jurors.”

-Article XI, 1777 Georgia Constitution

The 1777 Constitution did not explain what coroners were. Everyone already knew.
Coroners are historically an integral part of government and politics and partially explains their continued existence.
Coroners

- Usually elected
- Usually NOT physicians
- Requirements may be minimal
- Usually must rely upon the help of a pathologist to perform autopsies
- They often have other jobs that take priority

Oddities:
- [Appointed in HI, KS, ND]
- [Physicians in KS, ND, LA, OH]
- [Sheriff in parts of CA]
- [Prosecutor in NE, some of WA]
- [2 per County in NY]
- [JP in TX]
To serve as Coroner in Georgia....

Registered voter
At least 25 years old
No felony conviction
High school diploma or equiv
Attest to above with Affidavit
Annual training (1 week)

Regardless of the state, many coroners have another main job or source of income. Being a coroner is only part of what they do.
Less than 1/3 of states with coroners require training.
Medical Examiners

- Almost always physicians
- Appointed
- Usually pathologists
- Often forensic pathologists
“Medical Examiner:” Variations

- In some states, a physician, not necessarily a pathologist, who assists in death investigation or functions like a coroner (MI)
- In some states, not necessarily a physician (VT, WV, WI)
- People who do insurance physicals or job related physicals are also referred to as “medical examiners” which can cause confusion.

So, the meaning of “medical examiner” and requirements to hold that job vary. One must be familiar with state law.

Ideally, a “Medical Examiner” would be a forensic pathologist.
The Birth of Medical Examiners

1. 1860 Maryland. Laws allowed coroner to require MD presence at inquest.
2. 1868 Maryland. Physician appointed as Coroner of Baltimore.
3. 1877 Massachusetts. Physician “Medical Examiners” replaced Coroners.
4. 1890 Baltimore. Physician “Medical Examiners” perform autopsies for Coroner.
5. 1918 New York City. First formal “Medical Examiner System” in the US.
Medical Examiner Concept Spreads

As people trained in the Northeast and left, they took the medical examiner concept with them. Laws gradually changed to implement ME systems in many areas. Training centers emerged, and spread continued.
Some counties have a Medical Examiner and some have a Coroner
State Medical Examiner, Coroner in each county
State Medical Examiner with various types of non-coroner, regional or local assistance
State Medical Examiner assisting Coroner of most counties; autonomous County Medical Examiner in some counties

Death Investigation System Type: Current Status

Population served is about 50% Coroner, 50% ME
System Funding

County Systems per capita

$ 0.62 - $5.54
Mean $2.16

2007 = $1.31 - $9.19
$2.89

State Systems per capita

$ 0.32 - $3.20
Mean $1.41

2007 = $ 0.64 –$2.81
$1.76

Comparisons are difficult because service scope varies

Less than 1% of budget is allocated for training.
Organizational Oversight

- Government Office: 43%
- Public Safety/Law Enforcement: 33%
- Health Dept: 14%
- Forensic Lab: 10%

% US Population Served
Remember: Medicolegal Death Investigation is governed by state law.

States vary in the extent to which they have adopted the recommendations in the Model Postmortem Examinations Act of 1954 which laid out guidelines for medical examiner system development.

Victor Weedn will discuss this further.
Conversion from Coroner to Medical Examiner Systems by Decade

1954 Model Postmortem Examinations Act

A “Spurt” followed the 1954 Model Act

A “Lull in the Action” exists since 1980s
Lull in the Action: Reasons

- Legislative/Statutory/Constitutional
  - State Constitutions may need to be changed
  - Laws may need to be changed
- Political/Elective
  - As elected officials, coroners have political ties
  - It's nice to have local services and the coroner is a local
- Geographical/Local
  - A given population base may not have enough deaths or enough tax dollars to support a system
- Population-based
  - Medical examiners cost more than coroners
  - There aren't enough forensic pathologists to go around
- Financial
  - There may be no local interest or person with impetus and interest to change the system
- Manpower availability
- Lack of interest
- “Market” saturation
<table>
<thead>
<tr>
<th>Counties served by a medical examiner system</th>
<th>Counties</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Medical Examiner System; No Coroners (19 states)</td>
<td>697</td>
</tr>
<tr>
<td>AK CT DE IA MA MD ME NC NH NJ NM OK OR RI TN UT VT VA WV</td>
<td></td>
</tr>
<tr>
<td>Medical Examiner System in every County (2 states)</td>
<td>98</td>
</tr>
<tr>
<td>AZ MI</td>
<td></td>
</tr>
<tr>
<td>District Medical Examiner System; No Coroners (1 state)</td>
<td>67</td>
</tr>
<tr>
<td>FL (24 Districts)</td>
<td></td>
</tr>
<tr>
<td>Sporadic County Medical Examiner Systems (14 states)</td>
<td>98</td>
</tr>
<tr>
<td>AL CA CO GA HI IL MN MO NY OH PA TX WA WI</td>
<td></td>
</tr>
<tr>
<td>Total Counties in the United States</td>
<td>3137</td>
</tr>
<tr>
<td>Total Counties Served by a Medical Examiner System</td>
<td>960* (31%)</td>
</tr>
</tbody>
</table>

* These 960 counties are served by 239 ME Systems.
What is a Forensic Pathologist?
The Birth of Forensic Pathologists

• “Legal Medicine” Programs emerged at Harvard, in Virginia, and other places in the 1940s-1950s
• The pathologists and other physicians who did medicolegal autopsies had no common training or subspecialty area
• In 1959, the American Board of Pathology first offered certification in Forensic Pathology, recognizing it as a subspecialty area of pathology.
Forensic Pathology

- *Forensis* (public, forum)
  (of the courts, open to debate/argument)
- *Pathology* (*pathos*; suffering) (study of)
  (suffering is due to disease and injury)
- *Forensic Pathology*
  (the study of disease and injury that is of interest to the public and courts)
What do Forensic Pathologist’s do?

- **Medical Examiner**
- **Medicolegal Death Investigation**
- **Coroner**
- **Coroner’s Pathologist**
Requirements

- Medical school (4 years)
- Pathology Residency (3 years minimum)
- Forensic Pathology Fellowship (1 year)

Most are 30 or 31 years old when training is completed and in big time debt.

Not all persons who practice forensic pathology are board certified forensic pathologists.
These are in busy metropolitan death investigation offices for the most part.
So……

If we have forensic pathologist physicians specifically trained to do death investigations and autopsies, why should (or can) they not be available in, or even manage/run, every death investigation system in the U.S?

Answer: Aside from the political……
There are only about 70 positions available per year. Some are not funded. Recent data indicated that only 70% of slots are filled.
Doctor Facts

Each Year:

- New medical students 15,000
- Internal Medicine Residents 5,000
- Radiology Residents 1,000
- Pathology Residents 500
- Forensic Pathology Residents 40*

*39 Programs, approximately 70 positions approved.

Only 19 FPs certified in 2005 and 25 in 2006.
About 1300 total persons certified in FP since 1959. Many have retried, died, or stopped practicing FP.
About Forensic Pathologists

• About 400-500 currently practice full time
• National need is about 1000 FTE*
• About 10% of positions are vacant
• Many FPs move once or twice per decade
• Pay is low compared with other physicians
• Work conditions often not good

*Based on total autopsy need and a maximum annual autopsy load of 250/FP
Medicolegal Death Investigation

Must have them all.
Much of this is medically oriented.
Trained physicians must be involved.
Broad Roles of ME/Cs

Medical Examiners
And Coroners

Criminal Justice

Public Health

Medicine

Public Safety

Fatality Review
Death investigation also impacts on:

- Personal liberty and freedom
- Financial well being
- Injury Prevention and Control
- Mortality analysis
- Assessment of medical care
Other Issues
Medical Examiner and Coroner Information Sharing Program

Announcements

The Epidemiology Program Office ceased to exist after September 30, 2004, due to a CDC reorganization process. Funding for the support of the Medical Examiner and Coroner Information Sharing Program (MECISP) ended on August 31st, 2004. Until further notice: a) the MECISP website will not routinely be updated, b) e-mails addressed to MECISP will not receive a response from MECISP.

You will find helpful information at the National Association of Medical Examiners website http://www.ThaNaME.org/ for inquiries about wanting to be a forensic pathologist or learning more about forensic pathology. Select the option "So you want to be a medical examiner".

The Medical Examiner and Coroner Information Sharing Program’s (MECISP), MMWR Recommendations and Reports publication of "Medical Examiners, Coroners, and Terrorism - A Guidebook for Surveillance and Case Management" is available as MMWR Vol. S3, No. RR-B. The report is posted on MMWR’s website where it can be downloaded and distributed electronically.

MECISP: 1986 - 2004
Everyday deaths in US (Yearly)

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homicides</td>
<td>17,732</td>
</tr>
<tr>
<td>MVA’s</td>
<td>44,767</td>
</tr>
<tr>
<td>Accidents</td>
<td>64,510</td>
</tr>
<tr>
<td>Suicides</td>
<td>31,647</td>
</tr>
</tbody>
</table>

158,656

Add the “Undetermined” and “Sudden and Unexpected” and the number at least doubles. Recent funding has emphasized terrorism and disaster preparedness, but there are huge numbers of ongoing, routine death investigation cases for which funding and support are inadequate.
Forensic Autopsy
Performance Standards

Prepared by:
Garry F. Peterson, M.D. (Committee Chair)
Steven C. Clark, Ph.D. (NAME Consultant)

Amendments Approved October 16, 2005
N.A.M.E. Annual Meeting, San Antonio, Texas

NATIONAL ASSOCIATION OF MEDICAL EXAMINERS*

ACCREDITATION CHECKLIST

FIRST REVISION
ADOPTED SEPTEMBER 2003

*Amended 11 September 2004
Amended 15 October 2005
Amended 20 February 2017

Effective Date: January 2004
Date of Expiration: January 2009
NAME Accredited Offices

54 NAME Accredited Offices. Most are county based. Shaded states have state-wide or near state-wide services.
Why so few accredited offices?

- Some offices cannot qualify
- Many offices cannot meet Inspection and Accreditation Standards
- Must have written Policy-Procedure
- Must have a facility
- Preparation takes time and lots of work
- Inspection costs money
- Must be renewed every 5 years
- Caseload is too high
- Lack of perceived benefit
Non-compliance by many offices

Compliance precluded because of case load, staffing, lacking equipment, non-availability of required services, or contradictory policies or practices
Other Issues:

• Only 1/3 of offices have in-house histology
• Only 1/3 of offices have in-house toxicology
• 1/3 do not have x-ray services in house

This can result in short cutting or delays in case work completion.
Death Investigation Personnel
-Organizations, Priorities-

- Coroners
- Medical Examiners
- Forensic Pathologists
- Death Investigators
- Police (in some areas)

Although these groups work together in death investigation, each group has its own agendas, priorities, and organizations with different, sometimes conflicting missions.
Needs
Each state should do an assessment of its death investigation system to determine status and needs using as a benchmark and goal, compliance with current professional standards, guidelines, and accreditation requirements.
Raise the bar. Make the requirements to hold any job in death investigation progressively more stringent with time.
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<tr>
<td>Pathology Residents</td>
<td>500</td>
</tr>
<tr>
<td>Forensic Pathology Residents</td>
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</tr>
</tbody>
</table>

Find ways to recruit more medical students into pathology and then into forensic pathology, and improve pay and job conditions to attract and keep them.
Strive to have full death investigations services locally…. scene response and investigation at a minimum…and trained forensic pathologists available to all jurisdictions at least regionally.
Reverse the lull in conversion to medical examiner systems, where feasible. Strive to have all systems led by trained medical professionals.
MODEL POSTMORTEM EXAMINATIONS ACT

Drafted by the

NATIONAL CONFERENCE OF COMMISSIONERS ON UNIFORM STATE LAWS

at its

Annual Conference
Meeting in its Sixty-Third Year
At Chicago, Illinois
August 9-14, 1954

Revisit and Modernize the 1954 Model Postmortem Examinations Act
Review and follow up on the recommendations of the past century.
Needs

- Ensure access to needed lab services
- Effect more even per-capita funding
- Plan and fund training
- Upgrade and Improve facilities
Re-instate a MECISP-like entity to bridge gaps and facilitate research, programs, and improvement in death investigation.

Coordinate ME/C activities with:
- State Associations
- NAME
- IACME
- Government agencies
- Universities/Researchers
- Other partners
Contact Points

Randy Hanzlick, MD
Chief Medical Examiner, Fulton County, GA
Professor of Forensic Pathology
Emory School of Medicine, Atlanta, GA

430 Pryor St SW
Atlanta, GA 30312
404-730-4400
randy.hanzlick@co.fulton.ga.us
Further Reading
-Hanzlick R. Medical Examiners, Coroners, and Public Health: A Review and Update. Arch Pathol Lab Medicine 2006; 130:12744-1282