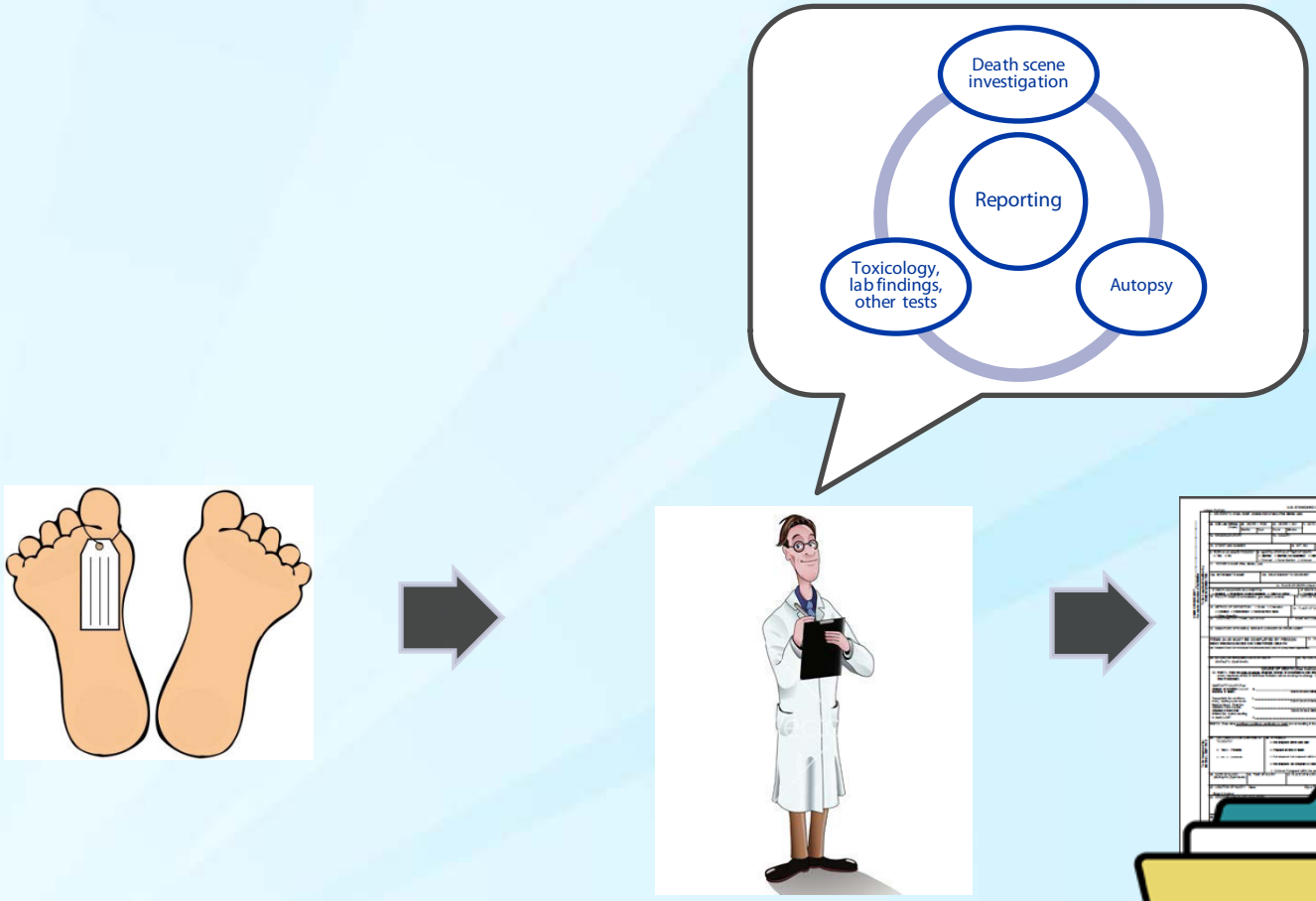
Medical Examiner/Coroner Projects and Initiatives

Margaret Warner PhD

Division of Vital Statistics, Mortality Statistics Branch

NCHS Board of Scientific Counselors Meeting
Hyattsville, September 2015

Death investigation data from the Medical Examiner /Coroner



Medicolegal Death Investigation Systems

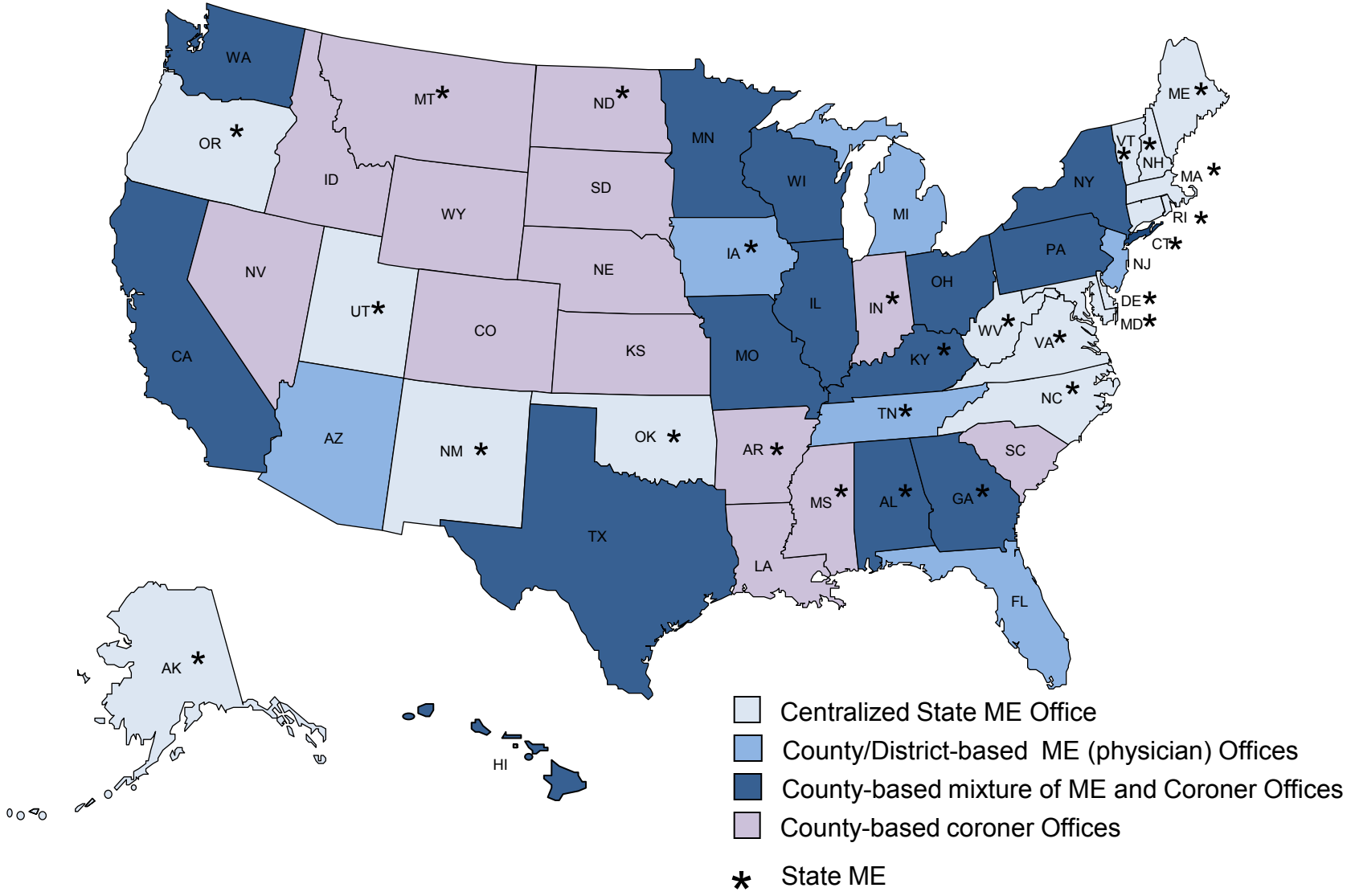
Types of deaths investigated

- Sudden unexpected deaths
- Unattended deaths
- Non-natural deaths (i.e. unintentional, homicides, suicides)
- Variation & restrictions by jurisdiction (e.g. <65 years old)

Organization

- Over 2,300 medical death investigation jurisdictions
- Systems and procedures are governed by state and local laws and regulations
- Centralized at state-level or organized by county (or district or parish)
- Chief medicolegal death investigation officer: Coroner or medical examiner

Death investigation systems



Sources:
National Institute of Justice, Scientific Working Group on Medical Death Investigation, Death Investigation Systems, 2011
Bureau of Justice Statistics, Census of Medical Examiner and Coroner Offices, 2004

Public Health Law Program

Public Health Law
About Us
Technical Assistance
Publications and Resources
Publications by Topic
Asthma
Coroner/Medical Examiner Laws
Emergency Preparedness
Environmental Health Law
Heart Disease and Stroke
Healthcare-Associated Infections
Health System Transformation
Injury & Violence Prevention
Multisector Coordination
Mutual Aid
Nutrition, Physical Activity, and Obesity

CDC > STLT Gateway Home > Public Health Law > Publications and Resources > Publications by Topic

Coroner/Medical Examiner Laws, by State

A medicolegal investigation is conducted by a coroner's or medical examiner's office to determine the circumstances under which someone died. Medicolegal investigations combine a scientific inquiry into a death under a coroner's or medical examiner's legal jurisdiction.

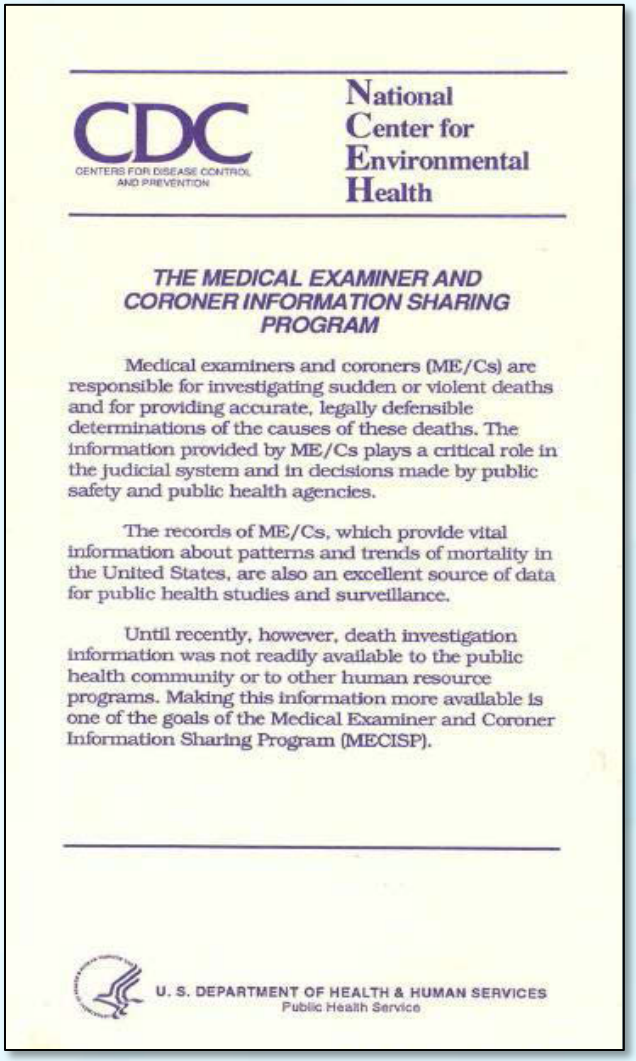
At the request of the National Center for Health Statistics, CDC's Public Health Law Program assessed coroner and medical examiner laws across the 50 states and the District of Columbia. Each state sets its own standards for what kinds of deaths require investigation and its own professional and continuing education requirements for individuals carrying out these investigations. These different standards can have a broad-reaching public health impact as variations in the collection and reporting of cause-of-death data could hinder public health officials' ability to conduct accurate mortality surveillance.

The links below lead to profiles of each state's coroner and/or medical examiner death investigation laws. Published January 15, 2015.

Alabama	Georgia	Maryland	New Jersey	South Carolina
Alaska	Hawaii	Massachusetts	New Mexico	South Dakota
Arizona	Idaho	Michigan	New York	Tennessee
Arkansas	Illinois	Minnesota	North Carolina	Texas
California	Indiana	Mississippi	North Dakota	Utah
Colorado	Iowa	Missouri	Ohio	Vermont
Connecticut	Kansas	Montana	Oklahoma	Virginia
Delaware	Kentucky	Nebraska	Oregon	Washington
District of Columbia	Louisiana	Nevada	Pennsylvania	West Virginia
Florida	Maine	New Hampshire	Rhode Island	Wisconsin

http://www.cdc.gov/phlp/publications/topic/coroner.html

Medical Examiner Coroner Information Sharing Program



CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

National Center for Environmental Health

THE MEDICAL EXAMINER AND CORONER INFORMATION SHARING PROGRAM

Medical examiners and coroners (ME/Cs) are responsible for investigating sudden or violent deaths and for providing accurate, legally defensible determinations of the causes of these deaths. The information provided by ME/Cs plays a critical role in the judicial system and in decisions made by public safety and public health agencies.

The records of ME/Cs, which provide vital information about patterns and trends of mortality in the United States, are also an excellent source of data for public health studies and surveillance.

Until recently, however, death investigation information was not readily available to the public health community or to other human resource programs. Making this information more available is one of the goals of the Medical Examiner and Coroner Information Sharing Program (MECISP).

U. S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Public Health Service

- **Established by the CDC in 1986 to promote:**
  - Uniformity in national death investigation policies
  - Communication between medicolegal jurisdictions
  - Wide-spread distribution of death investigation data
- **Program terminated during reorganization in September 2004**
- **Missed by many, including ME/C community**

Current outreach efforts by NCHS

- Promoting quality and consistency in death investigations
- Developing and promoting standards for death certificate reporting
- Enhancing the efficiency of data collection
- Facilitating information sharing among ME/C
- Coordinating efforts with federal partners and other stakeholders

Coordinating with CDC programs and other federal partners

- Violent deaths
- Drug related mortality
- Sudden unexpected infant death
- Infectious diseases pathology
- Disaster related mortality
- Sudden unexplained death in epilepsy
- Consumer product related death
- Deaths in custody

Presentations and booths at professional meetings

National Association of Medical Examiners (NAME)

International Association of Coroners and Medical Examiners (IAC&ME)

State Medical Examiners and Coroners Organizations

Drug overdose deaths

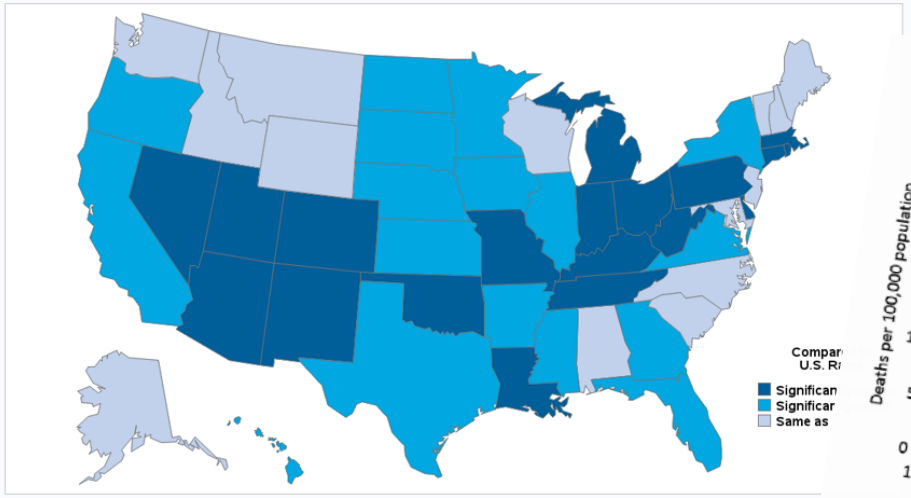
NCHS Data Brief ■ No. 190 ■ March 2015

Drug-poisoning Deaths Involving Heroin: United States, 2000–2013

Holly Hedegaard, M.D., M.S.P.H.; Li-Hui Chen, M.S., Ph.D.; and Margaret Warner, Ph.D.

...ning (overdose) is the number one cause of injury-relat... ...082 deaths occurring in 2013 (1). W... ...oid analgesics (...

Age-adjusted drug poisoning death rates by state, 2013



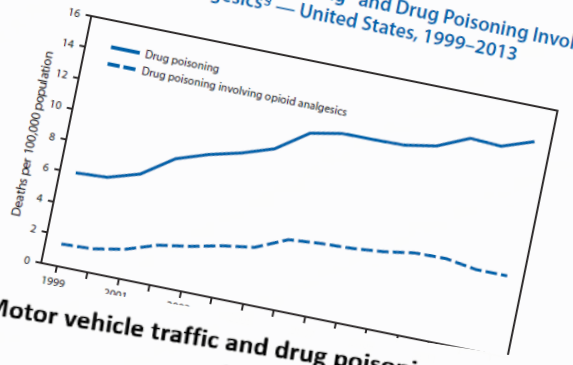
U.S. rate is 13.8 per 100,000 population

QuickStats

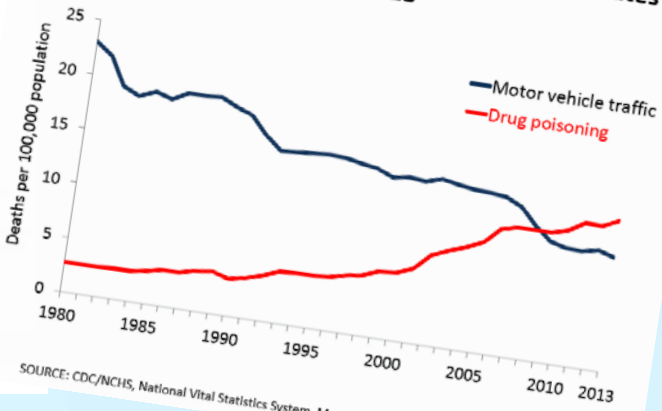
Morbidity and Mortality Weekly Report

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Rates* of Deaths from Drug Poisoning† and Drug Poisoning Involving Opioid Analgesics§ — United States, 1999–2013

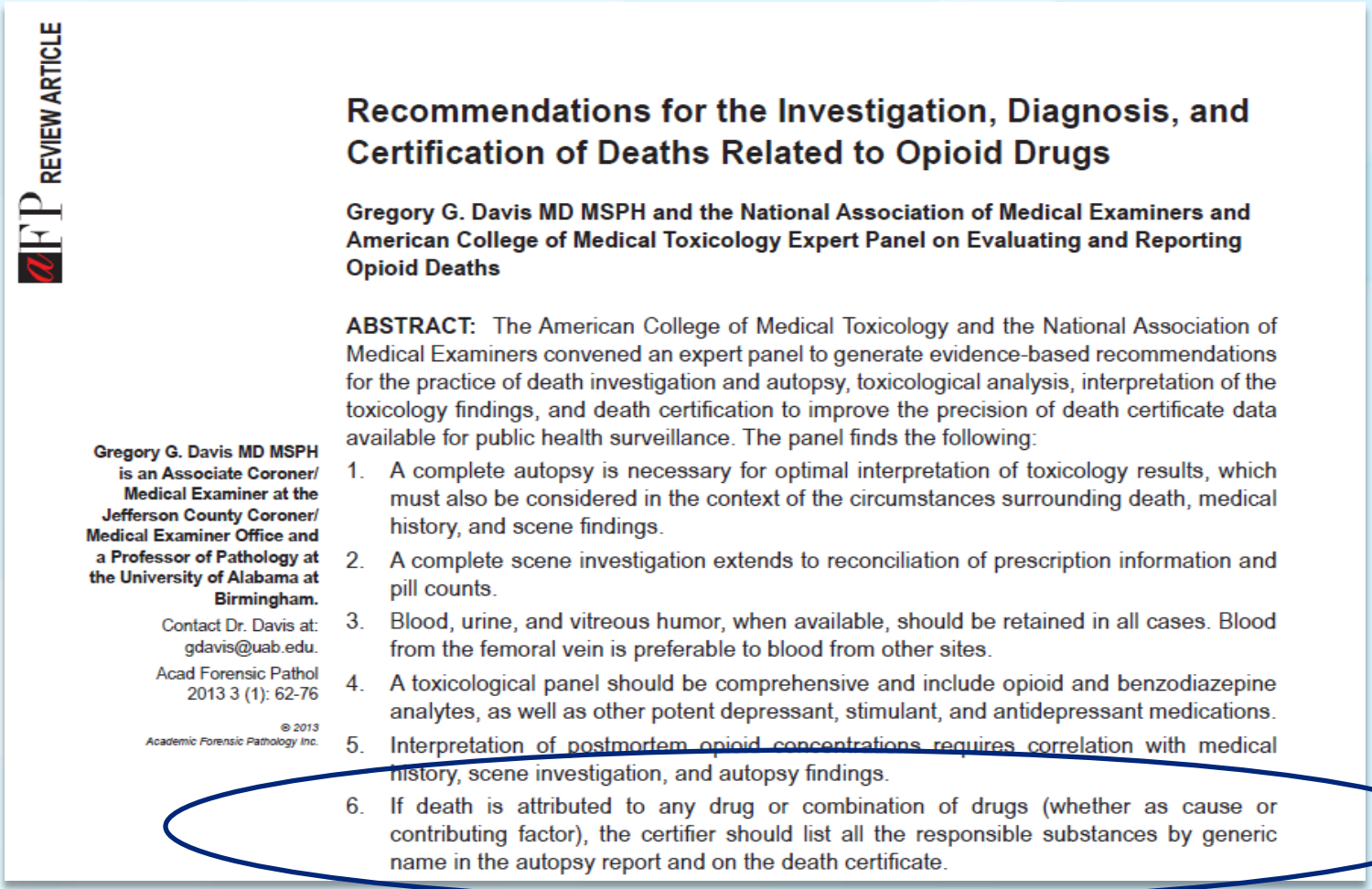


Motor vehicle traffic and drug poisoning death rates 1980-2013



SOURCE: CDC/NCHS, National Vital Statistics System, Mortality File

Drug overdose deaths: Investigation, diagnosis, and certification



REVIEW ARTICLE

Recommendations for the Investigation, Diagnosis, and Certification of Deaths Related to Opioid Drugs

Gregory G. Davis MD MSPH and the National Association of Medical Examiners and American College of Medical Toxicology Expert Panel on Evaluating and Reporting Opioid Deaths

ABSTRACT: The American College of Medical Toxicology and the National Association of Medical Examiners convened an expert panel to generate evidence-based recommendations for the practice of death investigation and autopsy, toxicological analysis, interpretation of the toxicology findings, and death certification to improve the precision of death certificate data available for public health surveillance. The panel finds the following:

1. A complete autopsy is necessary for optimal interpretation of toxicology results, which must also be considered in the context of the circumstances surrounding death, medical history, and scene findings.
2. A complete scene investigation extends to reconciliation of prescription information and pill counts.
3. Blood, urine, and vitreous humor, when available, should be retained in all cases. Blood from the femoral vein is preferable to blood from other sites.
4. A toxicological panel should be comprehensive and include opioid and benzodiazepine analytes, as well as other potent depressant, stimulant, and antidepressant medications.
5. Interpretation of postmortem opioid concentrations requires correlation with medical history, scene investigation, and autopsy findings.
6. If death is attributed to any drug or combination of drugs (whether as cause or contributing factor), the certifier should list all the responsible substances by generic name in the autopsy report and on the death certificate.

Gregory G. Davis MD MSPH is an Associate Coroner/ Medical Examiner at the Jefferson County Coroner/ Medical Examiner Office and a Professor of Pathology at the University of Alabama at Birmingham.

Contact Dr. Davis at: gdavis@uab.edu.

Acad Forensic Pathol 2013 3 (1): 62-76

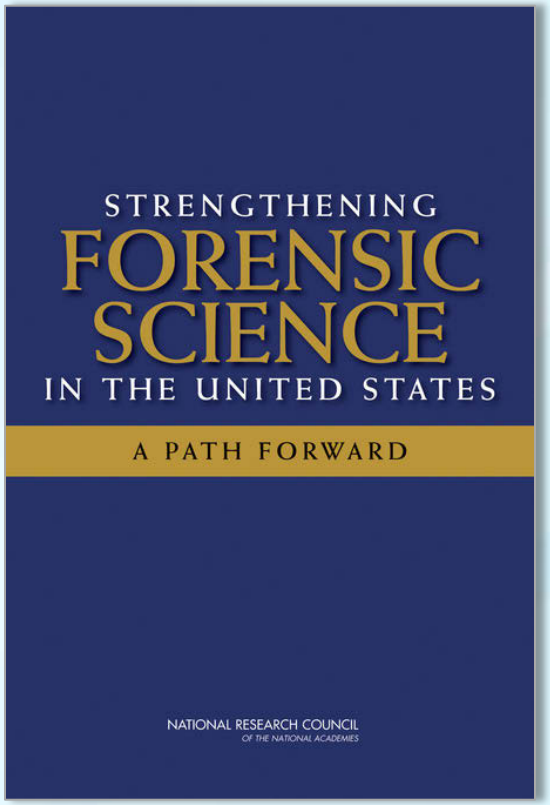
Davis GG et al, Acad Forensic Pathol, 3(1), 77-83. 2013.

Drug overdose deaths with drugs specified on death certificates by state death investigation system

Medicolegal Death Investigation System	Drugs specified	
	Percent	Range
US, average	75 %	35-99 %
Centralized state medical examiner	92 %	69-99 %
Decentralized county or district medical examiner (physician)	71 %	43-94 %
Hybrid system: county coroner and medical examiners (state and/or county)	73 %	60-94 %
Decentralized county coroner	62 %	35-98 %

National initiatives

National Academy of Sciences report, 2009
Strengthening Forensic Science: A Path Forward



"…individual certification of forensic science professionals should be mandatory"

"All medicolegal autopsies should be performed or supervised by a board certified forensic pathologist."

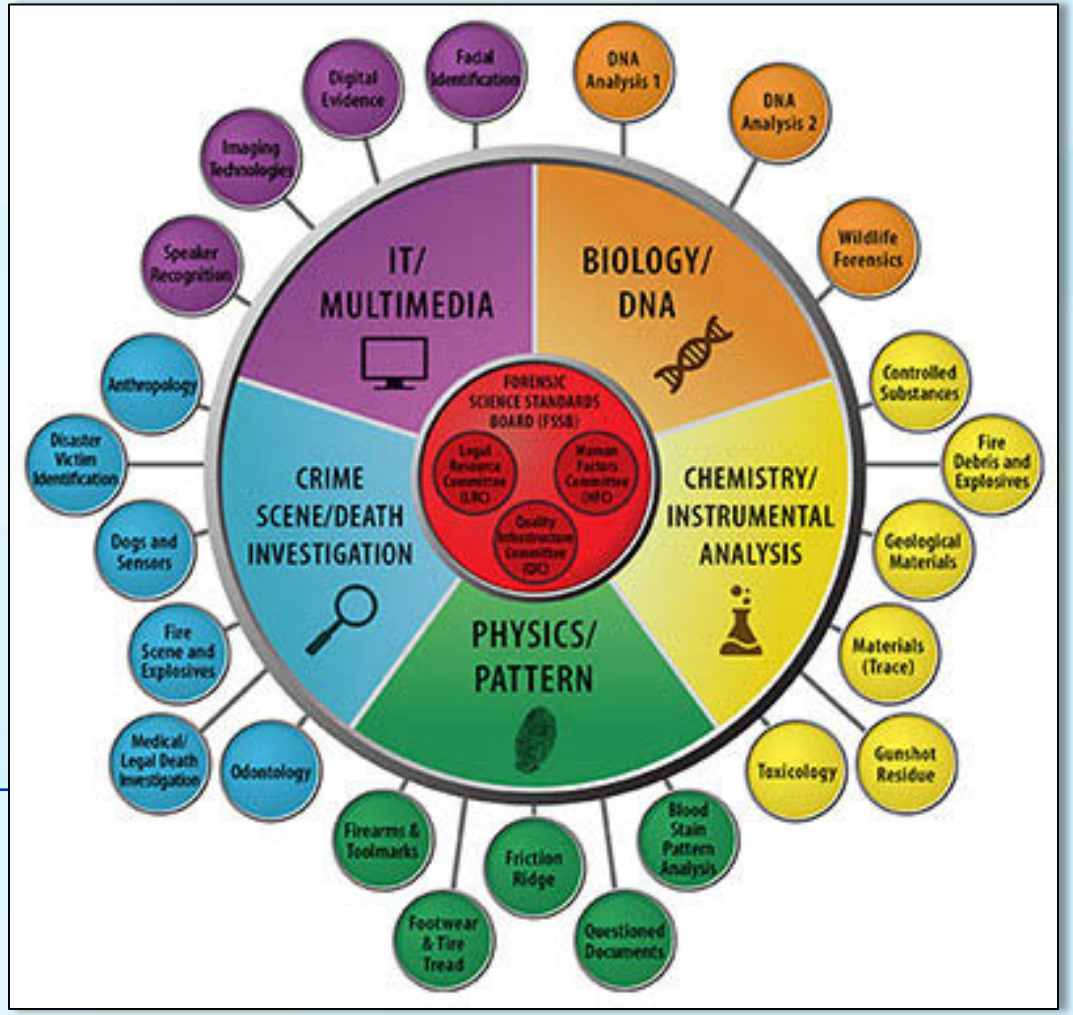
- **National Commission on Forensic Sciences**

  The objectives and scope of activities of the Commission are to provide recommendations and advice to the Department of Justice concerning national methods and strategies for: strengthening the validity and reliability of the forensic sciences (including medico-legal death investigation)….

NIST FORENSIC SCIENCES

Organization of Scientific Advisory Committees

Medicolegal Death Investigation



Office of Science and Technology Policy

CHARTER
of the
FAST-TRACK ACTION COMMITTEE ON STRENGTHENING THE MEDICOLEGAL DEATH INVESTIGATION SYSTEM
COMMITTEE ON SCIENCE
NATIONAL SCIENCE AND TECHNOLOGY COUNCIL

"Let conversation
cease, let laughter
flee, for this is the place
where death delights to help the
living."

Inscribed on the wall of the NYC Medical Examiner's Office,
Translated from Latin, Giovanni Morgagni

Questions?

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Disaster related deaths

Number of Disaster-related Deaths Identified					
	Red Cross	FEMA	NOAA-NWS Storm Data	Other Agency (EOC, ME)	Vital Statistics (Search without names)
Hurricane Ike – TX (2009)	38	?	20	74	4
April 27 Tornado – GA (2011)	15	?	15	15	6
Hurricane Sandy – NJ (2012)	34	~300	12	75	8

Death certification: Disaster related deaths

A Reference Guide for Certification of Deaths in the Event of a Disaster

Table of Contents

Determination of Disaster-related Deaths

Death

Did the Death Occur During One of the Following?

Weather Events	Associated Events	Human Induced Events*
• Snow or Ice Storm • Cold, Extreme • Heat, Extreme • Hurricane • Earthquake • Tornado • Thunder • Tsunami • Volcanic Activity	• CO Exposure • Power Outage • Wind Chill • Wildfire • Drought • Duststorm • Storm Surge • Wind • Flooding • Landslide • Mudslide • Flying Debris • Lightning • Flash Floods • Hail • Tidal Wave • Debris Flow • Ash • Gases • Lava Flow	• Radiation Emergency • Chemical Spill • Bombing or Blast Incident • Transportation Incident * Intentional and Unintentional Events

ASK YOURSELF

Was death caused by the **direct physical forces** of the event?

OR

Was death caused by the **consequences** of the disaster such as **unsafe or unhealthy conditions** during the event, pre-event (e.g., prep), or post-event (e.g., clean up)?

DIRECT Causes	INDIRECT Consequences
• Blunt Force Trauma • Burns • Carbon Monoxide Poisoning • Crushed • Drowning • Electrocution • Falls • Fire/Smoke Inhalation • Hypothermia (cold) • Hyperthermia (heat) • Suffocation • Traumatic Injury • Radiation/Chemical Poisoning	• Preparation for the disaster • Exacerbations of Chronic Disease • Evacuation • Motor Vehicle Crash • Loss/Disruption of Health Care • Loss/Disruption of Utilities • Loss/Disruption Transportation • Repair or Clean Up Activities • Psychosocial Stress/Anxiety • Exposure to Industrial Hazards • Returning to Unsafe/Unhealthy Environments or Structures

If YES

Record disaster type AND event name (e.g., Hurricane Sandy) on death certificate