

STRENGTHENING THE MEDICOLEGAL-  
DEATH-INVESTIGATION SYSTEM:  
ACCREDITATION AND CERTIFICATION  
A PATH FORWARD

National Science and Technology Council

Committee on Science

Medicolegal Death Investigation Working Group (MDI WG)



December 2016

## About the National Science and Technology Council

The National Science and Technology Council (NSTC) is the principal means by which the Executive Branch coordinates science and technology policy across the diverse entities that make up the Federal research and development (R&D) enterprise. One of the NSTC's primary objectives is establishing clear national goals for Federal science and technology investments. The NSTC prepares R&D packages aimed at accomplishing multiple national goals. The NSTC's work is organized under five committees: Environment, Natural Resources, and Sustainability; Homeland and National Security; Science, Technology, Engineering, and Mathematics (STEM) Education; Science; and Technology. Each of these committees oversees subcommittees and working groups that are focused on different aspects of science and technology. More information is available at [www.whitehouse.gov/ostp/nstc](http://www.whitehouse.gov/ostp/nstc).

## About the Office of Science and Technology Policy

The Office of Science and Technology Policy (OSTP) was established by the National Science and Technology Policy, Organization, and Priorities Act of 1976. OSTP's responsibilities include advising the President in policy formulation and budget development on questions in which science and technology are important elements; articulating the President's science and technology policy and programs; and fostering strong partnerships among Federal, state, and local governments, and the scientific communities in industry and academia. The Director of OSTP often serves as Assistant to the President for Science and Technology and manages the NSTC. More information is available at [www.whitehouse.gov/ostp](http://www.whitehouse.gov/ostp).

## About the Medicolegal-Death-Investigation System Working Group (MDI WG)

The Co-chairs of the Committee on Science chartered the MDI WG to: (1) evaluate and identify ways for Federal agencies to support and implement the recommendations from the National Commission on Forensic Science entitled "Accreditation of Medicolegal Death Investigation Offices" and "Certification of Medicolegal Death Investigators"; and, (2) develop and transmit recommendations to the NSTC Committee on Science on actions Federal agencies can take to support improvements in the practice of medicolegal-death investigation (MDI) and professionalization of MDI personnel, and other ways to strengthen the MDI system.

## About this Document

This document was developed by the Medicolegal-Death-Investigation Working Group. The document was published by OSTP.

## Acknowledgements

This document was developed through the contributions of numerous technical experts from across the Federal government.

## Copyright Information

This document is a work of the United States Government and is in the public domain (see 17 U.S.C. §105). Subject to the stipulations below, it may be distributed and copied with acknowledgement to OSTP. Copyrights to graphics included in this document are reserved by the original copyright holders

or their assignees and are used here under the government's license and by permission. Requests to use any images must be made to the provider identified in the image credits or to OSTP if no provider is identified.

Printed in the United States of America, 2016.

**NATIONAL SCIENCE AND TECHNOLOGY COUNCIL  
COMMITTEE ON SCIENCE**

**MEDICOLEGAL-DEATH-INVESTIGATION WORKING GROUP**

**National Science and Technology Council**

*Chair*

**John P. Holdren**

Assistant to the President for Science  
and Technology and Director, Office of  
Science and Technology Policy

*Staff*

**Afua Bruce**

Executive Director

**Committee on Science**

*Co-Chairs*

**Jo Handelsman**

Associate Director for Science  
Office of Science and Technology Policy

*Staff*

**Sarah Mazur**

Executive Secretary  
Committee on Science

**France Córdova**

Director, National Science Foundation

**Francis Collins**

Director, National Institutes of Health

## Medicolegal-Death-Investigation System Working Group

### *Co-Chairs*

**Eleanor Celeste**

Office of Science and Technology Policy

**Christopher M. Jones**

Department of Health and Human Services

**Victor Weedn**

Department of Justice

### *Staff*

**Jennifer Vallee**

Executive Secretary

Armed Forces Medical Examiner System

### *Members*

**Jason Bannan**

Federal Bureau of Investigation

**Julie Dingley**

Office of Management and Budget

**Rebecca Ferrell**

National Science Foundation

**COL Lou Finelli**

Armed Forces Medical Examiner System

**David Kleiner**

National Institutes of Health

**Gerald Laporte**

National Institute of Justice

**Jonathan McGrath**

National Institute of Justice

**MJ Menendez**

Organized Crime Drug Enforcement Task Force

**Jayne Morrow**

National Institute of Standards and Technology

**Douglas Poole**

Drug Enforcement Agency

**Kate Flanigan Sawyer**

Department of the Interior

**Margaret Warner**

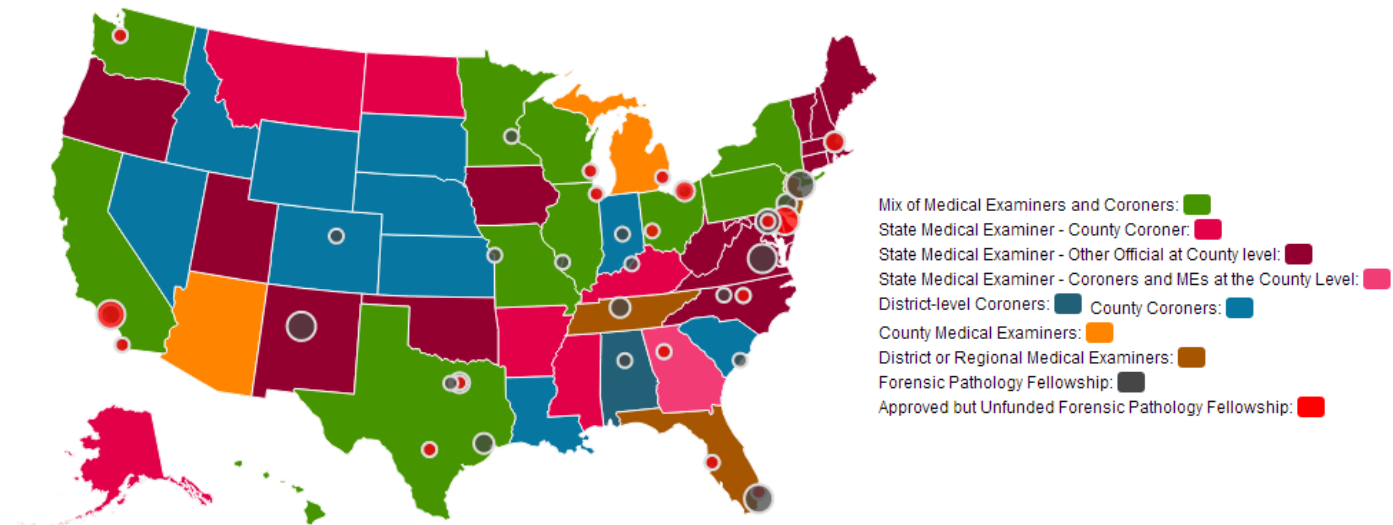
Centers for Disease Control and Prevention

**Terry Zobeck**

Office of National Drug Control Policy

## I. INTRODUCTION

Each year, approximately 2.6 million people (1% of the U.S. population) die in the United States.<sup>1</sup> Thirty to forty percent (approximately 1 million) of these deaths are referred to the Nation’s approximately 2,400 medical examiner or coroner (ME/C) jurisdictions, which accept about half of these requests (500,000).<sup>2</sup> ME/C offices provide death investigation services, which include death scene investigations, medical investigations, reviews of medical records, medicolegal autopsies, determination of the cause and manner of death, and completion of the certificate of death.<sup>3</sup> ME/C function and organization vary by state (Figure), but generally, ME/Cs investigate deaths that are sudden and unexpected, deaths that have no attending physician, and all suspicious and violent deaths. These may include homicides, suicides, and deaths that occur as a result of accident or circumstance, as well as unexpected deaths that are from natural causes.



Adapted from Hanzlick, Randy “A Perspective on Medicolegal Death Investigation in the United States: 2013” *Academic Forensic Pathologist*, 2014 4 (1): 2-9 and Hanzlick, Randy Report of Forensic Pathology Fellows in the United States 2011-12 Academic Year”

ME/C offices serve the public good by providing information regarding cause and manner of death to a decedent’s family members. They serve fundamental roles in ensuring justice by contributing to the investigation of suspicious or violent deaths, including those related to terrorism and mass fatality incidents. ME/C offices must provide credible answers to families and to courts. An incorrect determination may allow a possible drug overdose to be overlooked, allow for a homicide to go undetected, or cause a wrongful conviction. ME/C offices also serve a fundamental role in protecting public health and combating emerging threats. They surveil for index cases of infection or toxicity that may herald biological or chemical terrorism, identify diseases with epidemic potential, and document injury trends. They collect, produce, and report data to inform the development of public health interventions to treat or mitigate diseases or conditions, and prevent deaths.

Strengthening the medicolegal-death-investigation (MDI) system is critical for improving the accuracy and reliability of death investigations and assisting in the development of public health surveillance and interventions. As documented by the National Science and Technology Council Fast Track Action Committee report on *Strengthening the Medicolegal-Death-Investigation System: Improving Data Systems*, the Federal Government has a need for accurate, comparable, and timely data on the causes and manners of deaths occurring in the United States to inform public health and public safety policy.<sup>2</sup> This need has become increasingly urgent given the sharp rise in deaths involving prescription medications and illicit drugs. Many parts of the country are experiencing deaths in epidemic proportions as a result of the opioid and heroin crisis, while mortality data to inform government policy and programmatic response remain inadequate. Since the mortality data on which the Federal Government relies is gathered by state and local ME/C offices, improving the MDI system is not only a foundational role for state and local governments – it is a shared interest for the Federal Government.

## II. ACCREDITATION AND CERTIFICATION

Accreditation and certification are two independent processes for an organization to meet established quality assurance standards and help ensure staff competence. On January 30, 2015, the National Commission on Forensic Science (NCFS) approved recommendations calling for accreditation of ME/C offices and for certification of medicolegal death investigators.<sup>4-5</sup> These recommendations present an opportunity to take a substantial step toward strengthening the MDI system in the United States by ensuring that offices are operating competently and that staff are qualified and have obtained the requisite knowledge, skills, and abilities to perform their jobs. In addition to the NCFS recommendations, other bodies have recommended that all ME/C offices seek accreditation and that medicolegal death investigators obtain certification. These groups include the National Academies of Science (2003<sup>6</sup>, 2009<sup>2</sup>), the NSTC, Committee on Science, Subcommittee on Forensic Science (2014<sup>7</sup>), and the Scientific Working Group for Medicolegal Death Investigation (2012<sup>8</sup>, 2014<sup>9</sup>).

Currently, accreditation and certification are voluntary efforts in the medicolegal death investigation community. There are two organizations that offer accreditation for ME/C offices and one organization that offers certification for medicolegal death investigators.<sup>10</sup>

### (1) Accreditation

Accreditation provides recognition by an impartial external observer that an office meets established quality assurance standards. Accreditation can be particularly valuable where organizational failure or incompetence have substantial, tangible consequences or would undermine public trust and confidence in the system. Accreditation processes ensure that quality control measures are in place and operating, and that there is documentation of compliance to management, to the courts, and to the public at large. Accreditation can provide insights and opportunities for leadership to more effectively manage their organizations and provide assurance to policymakers and oversight agencies of the quality of services delivered and appropriate resourcing of the office.

As noted above, two accreditation programs exist for ME/C offices:

1. The National Association of Medical Examiners (NAME)<sup>11</sup> inspection and accreditation program consists of over 300 checklist questions, to which a trained inspector will answer yes, no, or not applicable. The questions cover the following areas: general (facilities, security, administrative space, safety, maintenance, organ and tissue donations, mass disaster plan, quality assurance, annual statistical report), investigations, morgue operations, histology, toxicology, reports and record keeping, personnel and staffing, and support services and consultants. The questions are divided into two phases, up to 15 phase I deficiencies will not prevent a program from becoming accredited because those individual deficiencies are considered minor and it is only when combined at scale that they prevent an office from reaching accreditation; on the other hand, phase II deficiencies are more serious and a single phase II deficiency will result in provisional or loss of accreditation. Inspections are conducted once every 5 years and self-inspections are usually conducted in the intervening years. Eighty-two ME/C offices in 41 states are accredited by NAME. These offices cover approximately 130 million residents. NAME has entered into an agreement with the American National Standards Institute-American Society for Quality's National Accreditation Board to convert their legacy accreditation program to an internationally recognized accreditation program based upon the International Organization for Standardization (ISO) 17020 standard.<sup>12</sup>
2. The International Association of Coroners and Medical Examiners (IACME)<sup>13</sup> accreditation program has more than 130 standards, which are based generally upon the NAME program standards. Twenty-one ME/C offices in 12 states are IACME accredited.

## **(2) Certification**

Certification is a credential of a person that proves they are qualified and have obtained the requisite knowledge, skills, and abilities to perform their job. Non-certified personnel require significant on-the-job training and even then, new cases and situations may arise that challenge those without the education and training to appropriately handle them. There is one certification program for medicolegal death investigators in the United States.

The American Board of Medicolegal Death Investigators (ABMDI)<sup>14</sup> certification board offers two levels of certification for medicolegal death investigators: (1) Registry certification (diplomat status), and (2) Board certification (fellow status). Registry certification requires a high school education, employment in a medical examiner's, coroners, or equivalent office, a minimum of 640 hours of experience, adoption of the ABMDI Code of Ethics, and passage of the Registry Examination. Board certification requires registry certification, an Associate degree, a minimum of 4,000 hours experience, and successful passage of the Board Certification Examination. The examinations are based upon the National Institute of Justice (NIJ) publication *Death Investigation: A Guide for the Scene Investigator* (1998, revised 2011<sup>15</sup>), which covers general investigation procedures; investigations of multiple fatality incidents, atypical death scenes, and institutional deaths; leadership skills; communication skills; legal knowledge; and knowledge of forensic science. Approximately 75 percent of the applicants pass the examination on their first attempt. Certificants must recertify every five years. The ABMDI is pursuing ISO 17024 recognition and is currently close to achieving this goal.<sup>16</sup>

Of an estimated 5,000 to 8,000 medicolegal death investigators in the United States, including coroners, 1,657 investigators are registry certified and an additional 295 are board certified by the



ABMDI. Currently, Tennessee is the only state that requires all medicolegal death investigators working in the State to be ABMDI certified. Tennessee supports this effort by paying the associated certification costs.<sup>17</sup>

### III. BARRIERS TO IMPLEMENTING ACCREDITATION AND CERTIFICATION

There are a number of barriers to implementing accreditation and certification requirements, including an inadequate availability of qualified forensic pathologists and inadequate resources to maintain or invest in facilities.

Forensic pathology is the subspecialty of medicine devoted to the investigation and physical examination of persons who die a sudden, unexpected, suspicious, or violent death. A forensic pathologist matriculates through college, four years of medical school, four years of pathology residency, and one year of forensic pathology fellowship. The forensic pathologist must successfully pass basic medical licensure examinations as well as anatomic and forensic pathology board examinations administered by the American Board of Pathology.<sup>18</sup> Several groups have identified a shortage of forensic pathologists in the United States, and it is estimated that the current supply is approximately half of the capacity needed to autopsy all cases that ought to be autopsied in the United States.<sup>3, 19-22</sup> The number of medical trainees that go into a forensic pathology career every year is not sufficient to keep pace with the attrition of forensic pathologists in the field due to death, retirement, or leaving the field. Because forensic pathology residents do not traditionally practice in a hospital setting, some residencies are not subsidized by the Federal government through Centers for Medicare and Medicaid Services (CMS). Forensic pathologists, as government workers, also make substantially less (\$100,000+/year less) than hospital pathologists. Overwhelming workload, including weekend duty, is a further disincentive to go into the field.

The Federal Government's role in medicolegal death investigation is limited by the fact that ME/C offices fall under state and local jurisdictions. In addition, no single Federal agency has the responsibility for overseeing the system, even though several Federal agencies have a clear interest in improving the ME/C system. Currently, there are some Federal funding opportunities to directly support high-quality medicolegal death investigation, including through programs administered by the National Institute of Justice (NIJ)<sup>23</sup>, Centers for Disease Control and Prevention, and a small number of other Federal agencies. State and local ME/C offices lack uniformity with respect to death investigation procedures and reporting requirements. The National Institute of Standards and Technology has established the Organization of Scientific Area Committees (OSAC) Subcommittee on Medicolegal Death Investigation to help facilitate development of the needed standards and guidance.<sup>24</sup>

### IV. THE URGENT NEED FOR A PATH FORWARD

The epidemic of licit and illicit opioid overdoses has led to a sudden and substantial upsurge in the caseload of ME/C offices throughout the Nation. Within the last year it is estimated that there has been an increase of approximately 10 percent of cases requiring autopsies, but in some jurisdictions it has been far worse (e.g., Connecticut has experienced a quadrupling of its caseload).<sup>25</sup> The surge in drug use comes at the same time as an increase in homicides, suicides, and motor vehicle accidents.<sup>26</sup>

The increase in fatalities has resulted in an acute exacerbation of the workload of forensic pathologists across the country.

Both NAME and IACME accreditation programs include workload restrictions in order to ensure that death investigations are done completely and competently. The NAME program holds that a forensic pathologist performing more than 250 autopsies per year is a phase I deficiency, but a forensic pathologist performing more than 325 autopsies per year is a phase II deficiency, which would result in the office not being fully accredited. The IACME further stipulates that a forensic pathologist may only perform 325 autopsies per year, including cases performed both in their medical examiner or coroner office as well as any autopsies performed outside the office in a consulting capacity. Increased workload during the recent epidemic has resulted in a loss of accreditation (e.g. Connecticut on September 28, 2016) and threatens other offices.<sup>27-30</sup>

There are a number of actions that Departments and Agencies could consider, in a coordinated effort, in order to ensure and possibly accelerate the accreditation and certification of ME/C offices and MDI practitioners, and retention of existing ME/Cs, including:

- Support dedicated funding for improving MDI systems through new or existing Federal programs and initiatives;
- Establish death investigation as a high priority topic in appropriate agencies, including, but not limited to HHS and DOJ;
- Support additional research on the current and desired capacity of the MDI system;
- Support Federally-financed Fellowships in forensic pathology and loan forgiveness programs;
- Develop initiatives to recruit and retain qualified individuals to build professional workforce infrastructure;
- Continue to work with stakeholder efforts to support and/or host workshops on MDI and the MDI system;
- Consider implementing new requirements for non-MDI public health and public safety Federal-funding programs, such as State Administering Agencies, to require proof of ME/C accreditation and MDI certification for offices under their jurisdiction.

Consideration of the proposed actions, appropriations to support their implementation, and prioritization and execution of the actions are necessary to provide the United States with a modern, professional, and efficient MDI system that can provide accurate, comparable, and timely data to policymakers, researchers and public health and safety officials. These efforts could have profound impacts on the public health and public safety of the Nation.

## BIBLIOGRAPHY

1. CDC WONDER Online Database, Multiple Cause of Death 2013-2014, Accessed December 21, 2015. (Available online at: <http://wonder.cdc.gov/mcd-icd10.html>)
2. National Science and Technology Council, White House Office of Science and Technology Policy, Strengthening the Medicolegal Death Investigation System: Improving Data Systems, 2016, [https://www.whitehouse.gov/sites/default/files/microsites/ostp/NSTC/strengthening\\_the\\_medicolegal\\_death\\_investigation\\_system\\_final.pdf](https://www.whitehouse.gov/sites/default/files/microsites/ostp/NSTC/strengthening_the_medicolegal_death_investigation_system_final.pdf)
3. National Research Council of the National Academies, Strengthening Forensic Science in the United States: A Path Forward. The National Academies Press: 2009, p. 244. (Available online at: [http://www.nap.edu/download.php?record\\_id=12589](http://www.nap.edu/download.php?record_id=12589))
4. National Commission on Forensic Science, Department of Justice and National Institute of Standards and Technology. Medicolegal Death Investigation Subcommittee Accreditation of Medicolegal Death Investigation Offices, 2015, <https://www.justice.gov/ncfs/file/787236/download>
5. National Commission on Forensic Science, Department of Justice and National Institute of Standards and Technology. Medicolegal Death Investigation Working Group, View of the Commission, Certification of Medicolegal Death Investigators, 2015, <https://www.justice.gov/ncfs/file/788026/download>.
6. Institute of Medicine (NAS), Medicolegal Death Investigation System: Workshop Summary, 2003 <https://www.nationalacademies.org/hmd/Reports/2003/Medicolegal-Death-Investigation-System-Workshop-Summary.aspx>
7. National Science and Technology Council, White House Office of Science and Technology Policy, Strengthening the Forensic Sciences, 2014 [https://www.whitehouse.gov/sites/default/files/microsites/ostp/NSTC/forensic\\_science\\_may\\_2014.pdf](https://www.whitehouse.gov/sites/default/files/microsites/ostp/NSTC/forensic_science_may_2014.pdf)
8. Scientific Working Group for Medicolegal Death Investigation (SWGMDI, DOJ), Increasing the Supply of Forensic Pathologists in the United States, 2012 <http://swgmdi.org/images/si4.fpsupplyreportpublisheddecember2012.pdf>
9. Scientific Working Group for Medicolegal Death Investigation (SWGMDI, DOJ), A Report and Recommendations Prepared by the Accreditation, Certification, Education, and Training Committee of the Scientific Working Group for Medicolegal Death Investigation (SWGMDI), 2014 <http://swgmdi.org/images/ACET3.PRC10.RecommendationCertificationMDIPersonnel.Published.6.5.14.pdf>
10. The National Association of Medical Examiners (NAME) has an inspection and accreditation program, which was established in 1999. The International Association of Coroners and Medical Examiners (IACME) later modified the existing NAME program and also provides accreditation services to ME/C offices. The American Board of Medicolegal Death Investigation (ABMDI) was established in 1998 specifically to certify medicolegal death investigators.
11. National Association of Medical examiners. Inspection and Accreditation Policies and Procedures manual. Available at: <https://netforum.avectra.com/public/temp/ClientImages/NAME/9b95da84-095a-4823-af04-ee62aac4d13a.pdf>
12. International Organization for Standardization/International Electrotechnical Commission. ISO/IEC 17020, 2012. Conformity assessment—Requirements for the operation of various types of bodies performing inspection. Available at: [http://www.iso.org/iso/catalogue\\_detail?csnumber=52994](http://www.iso.org/iso/catalogue_detail?csnumber=52994)
13. International Association of Coroners & Medical Examiners, IAC&ME Accreditation <http://www.theiacme.com/accreditation>; 10. Scientific Working Group for Medicolegal Death Investigation (SWGMDI, DOJ), SWGMDI's Accreditation, Certification, Education and Training Committee's Report of the Comparison of the NAME and the IAC&ME Accreditation Standards, 2012 <http://swgmdi.org/images/acet-1.accreditationstandardcomparisonreportpublished11.30.12.pdf>
14. American Board of Medicolegal Death investigators Policy and Procedures Manual, available at: <http://www.abmdi.org/documents/PolicyAndProcedures.pdf>.
15. National Guidelines for Death Investigation, NIJ Research Report, Nov 1999, NCJ 167568, <http://www.crime-scene-investigator.net/deathinvestigationNIJ.pdf>; Death Investigation: A Guide for the Scene Investigator, A Technical Update, NIJ Research Report, June 2011, NCJ 234457, <https://www.ncjrs.gov/pdffiles1/nij/234457.pdf>.
16. International Organization for Standardization/International Electrotechnical Commission. ISO/IEC 17024, 2012. Conformity assessment -- General requirements for bodies operating certification of persons. Available at: [http://www.iso.org/iso/catalogue\\_detail?csnumber=52993](http://www.iso.org/iso/catalogue_detail?csnumber=52993)

17. Tenn. Code Ann. § 38-7-104 (g) (1), “A medical investigator shall be a licensed emergency medical technician (EMT), paramedic, registered nurse, physician's assistant or a person registered by or a diplomate of the American Board of Medicolegal Death Investigators and approved by the county medical examiner as qualified to serve as medical investigator.”, [https://www.tn.gov/assets/entities/health/attachments/TCA\\_38-7-104.pdf](https://www.tn.gov/assets/entities/health/attachments/TCA_38-7-104.pdf).
18. The American Board of Pathology, 2015, <http://www.abpath.org/>
19. The National Association of Medical Examiners, Preliminary Report on America’s Medicolegal Offices, Prepared for National Institute of Justice Forensic Summit, May 18-19, 2004, Washington, DC, <https://www.ncjrs.gov/pdffiles1/nij/grants/213421.pdf>
20. Scientific Working Group for Medicolegal Death Investigation (SWGMDI, DOJ), Increasing the Supply of Forensic Pathologists in the United States, 2012 <http://swgmdi.org/images/si4.fpsupplyreportpublisheddecember2012.pdf>
21. National Commission on Forensic Science, Department of Justice and National Institute of Standards and Technology. Increasing the Number, Retention, and Quality of Board-Certified Forensic Pathologists. 2015. <https://www.justice.gov/ncfs/file/787356/download>
22. Weinberg M, Weedn VW, Weinberg S, Fowler D (2013). Characteristics of Medical Examiner/ Coroner Offices Accredited by the National Association of Medical Examiners. Journal of Forensic Sciences. 58(5): 1193–9
23. The National Institute of Justice (NIJ) administers the Paul Coverdell Forensic Science Improvement Grants Program, which does not dedicate funds strictly to the MDI system, as its formula and competitive components provide funding to improve the quality and timeliness for all forensic science services.
24. National Institute of Standards and Technology, Department of Commerce. Medicolegal Death Investigation Subcommittee, Updated December 05, 2016, <https://www.nist.gov/topics/forensic-science/medicolegal-death-investigation-subcommittee>
25. David Fowler, Letter from the NAME President, Academic Forensic Pathology, June 2016, X-XII.
26. Ahmad, FB. Quarterly provisional estimates for selected indicators of mortality, 2014–Quarter 1, 2016. National Center for Health Statistics. National Vital Statistics System, Vital Statistics Rapid Release Program. 2016. <http://www.cdc.gov/nchs/products/vsrr/mortality.htm>
27. Brooke Murphy, Drug Overdose overwhelm US medical examiners, coroners, Boston Globe, June 27, 2016, <http://www.beckershospitalreview.com/quality/drug-overdose-deaths-overwhelm-us-medical-examiners-coroners.html>
28. Dave Collins, Overdose deaths overwhelm medical examiner, coroner offices, AP News, June 23, 2016, <http://www.norwichbulletin.com/news/20160623/overdose-deaths-overwhelm-medical-examiner-coroner-offices>
29. Steve Orr & Gary Craig, County flies in pathologists as overdose deaths surge, Rochester County Democrat & Chronicle, June 26, 2016, <http://www.democratandchronicle.com/story/news/2016/06/24/county-flies-pathologists-overdose-deaths-surge/85837274/>
30. Spencer Platt, Overdose deaths stressing limits of medical examiner, coroner offices, STAT, June 23, 2016, <https://www.statnews.com/2016/06/23/overdose-deaths-medical-examiner-coroner/>