NATIONAL COMMISSION ON FORENSIC SCIENCE

Electronic Networking of Medical Examiner and Coroner Offices in the United States

Subcommittee

Medicolegal Death Investigation

Commission Action

On August 11, 2015, the Commission voted unanimously to adopt this proposal.

Type of Work Product

Policy Proposal

Recommendation

The National Commission on Forensic Science requests that the Attorney General of the United States establish the implementation of an electronic communication network for all medical examiner and coroner offices in the United States, to be developed and implemented by 2017 in conjunction with the Centers for Disease Control and Prevention (CDC) and other federal agencies with interest in medicolegal death investigation.

Recommended Implementation Strategy

The National Institute of Justice (NIJ) and CDC would establish and fund a working group in 2015 to prepare a specific plan to develop a Medical Examiner and Coroner Electronic Information Network (MECIN). The working group would include at least one representative from each of the following, including a sufficient number of members from the medical examiner and coroner communities:

- National Association of Medical Examiners;
- International Association of Coroners and Medical Examiners;
- NIJ;
- CDC's National Violent Death Reporting System;
- The Organization of Scientific Area Committees MDI Subcommittee;
- The Department of Homeland Security;
- The National Center for Health Statistics;
- The International Association of Chiefs of Police and/or other law enforcement organizations; and
- An entity that has developed on-line databases, preferably familiar with medical examiners and coroners and their work.

The working group would identify:

- The major goals for the system.
- A standard, permanent e-mail address format for every coroner and medical examiner office.
- A method to ensure that all medical examiners and coroners in the United States have Internet access at a minimum, and preferably, an e-mail service provider and address.
- A parent entity that would manage, administrate, maintain, and develop policy for system use and access. Developing a method for keeping the MECIN current is a critical component of the system's success.
- A method to obtain necessary computer hardware and to develop needed software.
- A policy on how dissemination of, and requests for information would be controlled.
- In states that have a state medical examiner with regional offices as well as coroners, determining whether information would flow only to the state medical examiner for distribution as needed or whether it would flow directly to the other medicolegal officers in the state.
- A way that the system could be managed by an entity that is not subject to survey and information collection limitations imposed on federal agencies.
- Funding sources to support development, implementation, and ongoing administration and maintenance of the system once up and running.
- How social media and other emerging technology might be utilized to facilitate the system.

The working group would meet within three months of approval by the Attorney General, would identify a system developer within the following three months, and the system would be implemented within 6 months of naming the system developer. The Appendix contains a breakdown of costs, which would total approximately $130,000 in the first year and then approximately $62,000 per year thereafter. States would bear the cost of ensuring Internet access for all their coroners and/or medical examiners.

Statement of Issue

There is not, and never has been, an electronic communication system that would allow communication with all medical examiners and coroners (ME/Cs) in the United States. Such a system would be valuable for disseminating relevant information to ME/Cs and for collecting information when needed. An electronic communication system has great potential for the public health, public safety, justice, legal, and medical communities.

Background

The CDC once had a Medical Examiner/Coroner Information Sharing Program (MECISP). One of the many goals of the original program was to facilitate communication among death investigators, the public health community, federal agencies, and other interested groups (1). As such, the MECISP published a directory that described the structure of death investigation systems by state, and listed names and contact persons for all medicolegal jurisdictions in the

United States. The MECISP did not include an electronic communication system that covered all medical examiners and coroners (ME/Cs) in the United States. CDC's National Center for Health Statistics is currently developing a program to promote public health activities in ME/C offices (2). The goals are envisioned to be participating in the development and promotion of standards for death investigation, for the collection and automation of death investigation data, and for death certificate reporting; and to coordinate efforts with other interested agencies to accomplish these goals and to avoid duplication of effort. As it was for its predecessor program, facilitating communication among death investigators, the public health community, and federal agencies is critical to the goals. This program currently lacks funds to fully realize the goals of the envisioned program.

Currently, CDC maintains a Health Alert Network (HAN) for sharing cleared information about urgent public health incidents that provides an avenue of communication ME/Cs on issues related to public health (3). The HAN collaborates with federal, state, territorial, and city/county partners to develop protocols and stakeholder relationships for distributing the information. Currently, all ME/Cs can voluntary sign onto HAN and receive messages. ME/Cs may also receive messages when the content is deemed appropriate by the state or local HAN coordinator. CDC's Clinical Outreach and Communication Activity (COCA) is also available to provide information to stakeholders about public health threats and emergency preparedness (4). To date, very few COCA activities and HAN alerts have been specifically targeted to ME/Cs as an audience. CDC's NCHS has e-mail contacts for state and local vital records registrars who process death certificates as part of their duties, and in turn, most vital records registrars maintain contact with ME/Cs in their jurisdiction to facilitate communication around death certification, including the quality of medical information reported on the death certificate (2). The information from death certificates is used to compile statistics on the causes of death in the United States and is used for medical and public health research and prevention.

Each of the CDC networks serves a very specific purpose and limits the messages sent to those who are scientifically or otherwise vetted. The systems are designed around public health and safety communication and around maintaining the high quality mortality data needed for public health. However, there are many issues of relevance to ME/Cs that are not directly related to public health and safety.

There are electronic databases and hardcopy manuals with contact information ME/Cs in the United States, but e-mail addresses are often lacking (4). Even in states that have on-line coroner or medical examiner association directories, e-mail contact information is often absent (or inaccurate), as in Georgia and Mississippi, for example, as well as many other states (5-7). This makes it difficult to assemble a complete list of e-mail addresses for all ME/Cs in the United States. Because many coroner offices are in small rural areas, in the not too distant past, some such offices lacked computers (some may still be in this situation) or reliable internet access, also posing obstacles to wide spread electronic communication with ME/Cs.

Most coroners are elected, so they could be voted out or be subject to term limits, thus requiring updates of contact information including e-mail addresses. Appointed medical examiners may be replaced as well. Even in coroner states that also have a state medical examiner, the ability of the state medical examiner to electronically contact all coroners may be limited. A concerted effort to assemble a list of e-mail addresses for the nearly 3,000 ME/Cs in the United States showed that the percent of obtainable e-mail addresses ranged from 20% to 100% among the states, with an average of 84% (8). All of these obstacles

explain why a global electronic communication system for ME/Cs has not yet emerged. These obstacles can be overcome, however, with thoughtful planning and would need to be addressed during development of the MECIN system

If there were an electronic communication system for all ME/Cs in the United States, important information could be disseminated to the ME/Cs by multiple entities. Such entities include, but are not limited to, NIJ; the National Institute of Standards and Technology; the CDC; the U.S. Drug Enforcement Agency and its High Intensity Drug Trafficking Area program; the U.S. Department of Transportation (which includes the FAA and NHTSA); the Federal Emergency Management Agency; the Department of Homeland Security; the National Transportation Safety Board; the Food and Drug Administration (FDA); the Consumer Product Safety Commission; state health departments; the newly formed Organization of Scientific Area Committees , which will be developing guidelines and standards; the National Commission on Forensic Science and its subcommittees; the National Association of Medical Examiners (NAME); the International Association of Coroners and Medical Examiners (IAC&ME); and other such agencies and organizations. All of the aforementioned conduct activities that are directly relevant to medicolegal death investigation. For example, a recent e-mail was sent through the CDC's HAN regarding the death of an infant due to a fatal fungal infection resulting from ingestion of a dietary supplement product (9). This information is important for ME/Cs to know, but the number of ME/Cs receiving the advisory nationwide undoubtedly varied by state and probably did not reach all ME/Cs in the United States. There are many other instances in which quick and/or global communication with ME/Cs would be helpful. For example, there are probably ME/Cs unfamiliar with the NIJ Guide for the Death Scene Investigator, which has existed for 15 years; the concept of excited delirium; or the emergence of fentanyl produced by clandestine labs in overdose cases involving heroin. Many more examples could be cited.

If an electronic communication system for ME/Cs were to emerge, it is foreseeable that the system could be used not only to disseminate important information but also to collect information from ME/Cs for public health, public safety, and other purposes. For example, it could provide a vehicle to conduct national or regional short-term surveillance for conditions of public health or public safety importance. Thus, the system could be used to conduct what might be regarded as surveys. Federal regulations limit surveys. Thus, it would be preferable to have the communication system managed by an entity that is not subject to these survey limitations.

The MDI-Subcommittee envisions an electronic communication system that would enable the following:

1) Dissemination of information that is important to ME/Cs. This would include public health and safety alerts; guidelines; standards; information to facilitate training, accreditation, and certification; and other useful procedural alerts and information;
2) Ability for ME/Cs to make inquiries that would be reviewed and addressed;
3) A repository for important documents such as guidelines, standards, protocols, and resources that are available to assist in death investigations;
4) Facilitation of research involving medical examiners, coroners, and death investigation;
5) Important announcements such as grant and funding opportunities;

6) A controlled, limited-access directory of contact information for all ME/Cs in the United States;
7) Access by all ME/Cs via the Internet and/or e-mail;
8) Controlled access to the system via a user registration and verification process;
9) Updating of ME/C contact information and profile when a ME/C is replaced; and
10) A standardized e-mail and/or username algorithm so that the e-mail address/username is predictable, jurisdiction-based, and permanent even if a ME/C is replaced.

The National Missing and Unidentified Persons System (NamUs) could serve as a model for MECIN development and management. NamUs started as a pilot project of a working group through a volunteer effort, eventually became funded by NIJ, was further developed, and now is administered within a health sciences laboratory setting with funded workers and an advisory group.

References

1) Hanzlick R. The Centers for Disease Control and Prevention's Medical Examiner/Coroner Information Sharing Program (MECISP). J Forensic Sci 1997;42:531-2.
2) Personal communication. Margaret Warner. National Center for Health Statistics. October 14, 2014.
3) CDC Health Alert Network. Available at http://www.bt.cdc.gov/han/
4) CDC. Clinical Outreach and Communication Activity http://emergency.cdc.gov/coca/calls/
5) National Directory of Law Enforcement Administrators. National Public Safety Information Bureau. Stevens Point, Wisconsin. 2014. See also safetysource.com
6) Georgia Coroners Association Coroner Directory. See http://georgiacoronersassoc.org/coroner-directory
7) Mississippi Coroner-Medical Examiner Association Coroner Directory. See http://mscoroner.com/coroners.pdf
8) Personal Communication. Steve Clark. Occupational Research and Assessment. Big Rapids, Michigan. November 26, 2014.
9) CDC Health Advisory. Fatal Gastrointestinal Mucormycosis in an Infant Following Ingestion of Contaminated Dietary Supplement – Connecticut, 2014. Distributed by the CDC Health Advisory Network. November 25, 2014.

APPENDIX: Estimated Costs of the Proposed MECIN system

Task	Frequency	Estimated Cost ($)
Initial 2-3 day meeting of working group	One time	$10,000
E-mail server system hardware and software	One time	2,500
Collection and entry of e-mail addresses and standard e-mail addresses	One time	50,000
Development of on-line database and e-mail server system	One time	50,000
Overhead	One Time	17,000
Total one-time costs		129,500
Data storage	Ongoing	200/year*
IT Support and Help Desk	Ongoing	12,000/year
System and user management (1 FTE)	Ongoing	50,000/year
Total ongoing costs		62,200/year

*This could approximately double each year.

Thus, first year costs would approximate $130,000 and subsequent annual costs would be about $62,000.