NATIONAL COMMISSION ON FORENSIC SCIENCE

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

Subcommittee

Recommendation from the Subcommittee on Medicolegal Death Investigation.

Type of Work Product

Policy Recommendation.

Recommendation

The National Commission on Forensic Science requests that the Attorney General of the United States approve policy that recommends 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 and other federal agencies with interest in medicolegal death investigation.

Recommended Implementation Strategy

The National Institute of Justice 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
- The National Institute of Justice
- The Centers for Disease Control and Prevention'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
- An entity which 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 email address format for every coroner and medical examiner office
- A method to ensure that all medical examiners and corners in the United States have internet access at a minimum, and preferably, an email service provider and address
- A parent entity for the system, which would manage, administrate, maintain the system, 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
- How dissemination of, and requests for information would be controlled.
- In states with a state medical examiner having regional offices or also having coroners, whether information would flow only to the state medical examiner for distribution as needed, and/or directly to the other medicolegal officers in the state.
- A way that the system could be managed by an entity which 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 and communication

The working group would meet in the fall of 2015 and by the end of 2015, complete the above tasks. A system developer would be identified in late 2015 and the system would be implemented by the end of 2016. 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 coroners and/or medical examiners in the state.

Statement of Issue

There is not, and never has been an electronic communication system which 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 medical examiners and coroners 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 Centers for Disease Control and Prevention (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 which covered all coroners and medical examiners in the United States. CDC's National Center for Health Statistics is currently developing a program to promote public health activities in offices of medical examiners and coroners. 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 which provides an avenue of communication with medical examiners and coroners 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/C 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 medical examiners and coroners as an audience. CDC's NCHS has email 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 medical examiners and coroners 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 US 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 that 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 medical examiners and coroners which are not directly related to public health and safety.

There are electronic databases and hardcopy manuals with contact information for medical examiners and coroners in the United States, but email addresses are often lacking (4). Even in states which have on-line coroner or medical examiner association directories, email contact information is often absent (or inaccurate), as in Georgia and Mississippi, for example, and many other states (5,6). The unavailability of email addresses makes it difficult to assemble a complete list of email addresses for all ME/Cs in the United States. Because many coroner offices are in small rural areas, in the not-to-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 and the coroner may change when elections occur, or they may have term limits, thus requiring updates of contact information such as email addresses. Appointed medical examiners may be replaced as well. Even in coroner states which also have a state medical examiner, the ability of the state medical examiner to electronically contact all coroners in the state may be limited. A concerted effort to assemble a list of email addresses for the nearly 3000 ME/Cs in the United States showed that the percent of obtainable email addresses ranged from 20% to 100% among the states with an average of 84% (7). 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, the National Institute of Justice (NIJ), the National Institute of Standards and Technology (NIST), the CDC, US Drug Enforcement Agency (DEA) and its High Intensity Drug Trafficking Area program (HIDTA), US Department of Transportation (which includes the FAA and NHTSA), Federal Emergency

Management Agency (FEMA), Department of Homeland Security (DHS), National Transportation Safety Board (NTSB), Food and Drug Administration (FDA), Consumer Product Safety Commission (CPSC), state health departments, the newly formed Organization of Scientific Area Committees (OSAC) 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 which are directly relevant to medicolegal death investigation. For example, a recent email 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 (8). 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 coroners and medical examiners in the United States which are unfamiliar with the NIJ Guide for the Death Scene Investigator which has existed for 15 years, or 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 which is not subject to survey limitations imposed on federal agencies.

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

1) Dissemination of information which 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 which would be reviewed and addressed
3) A repository for important documents such as guidelines, standards, protocols, and resources which are available to assist in death investigations
4) Facilitation of research involving medical examiners, coroners, and death investigation
5) Announcements of importance 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 email
8) Controlled access to the system via a user registration and verification process
9) Updating of ME/C contact information and profile when a given ME/C is replaced
10) A standardized email and/or username algorithm such that the email address/username is predictable, jurisdiction-based, and permanent even if a given ME/C is replaced by another

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 the National Institute of Justice, was further developed, and now is administered within a health sciences laboratory setting with funded workers and an advisory group.

Review of Public Comment

One public comment was received:

"A model already exists with the NAME LISTSERV managed by Emory University and Randy Hanzlick. It is voluntary and available to NAME members only. If your vision is more comprehensive and includes real time data sharing it would require direct data interface to avoid dual key entry. Otherwise participation would low because of the increase workload of dual data entry."

The Subcommittee's response is as follows:

The MECIN is not envisioned as a listerv and the target audience would be more broad than that of the NAME Listserv. The MECIN would not be intended as a data collection system, so the issue of dual key entry is not relevant. Medical Examiners and coroners would need to access the MECIN system and/or review information which is distributed through the system, but the need for replies or input of information would probably be minimal. With this clarification, we see no need to modify the recommendation in this regard.

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, Michgan. 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
Email server system hardware and software	One time	2,500
Collection and entry of email addresses and standard email addresses	One time	$50,000
Development of on-line database and email server system	One time	$50,000
Overhead	One Time	$17,000
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
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.