

**National Committee on Vital and Health Statistics (NCVHS)
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**Written Testimony of
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Background

The National Vital Statistics System provides the most complete and continuous data available to public health officials at the national, state, and local levels, and in the private sector. For public health, death certificates were one of the first sources of surveillance data. When viewed collectively, they help us identify preventable deaths, uncover health disparities, inform policy and funding decisions, improve outbreak and disaster response efforts, and strengthen national security. Despite their clear utility, the full potential for modernizing vital records has not been realized. All vital events are local. Improvements, therefore, require a cooperative effort among local, state, territorial, tribal, and federal partners and stakeholders to meet data quality and timeliness standards. Our federal data assets are only as strong as our state and local resources. Efforts to strengthen the system must offer solutions that are sustained over time.

Leveraging, Technology, and Innovation

Innovation and integration are at the heart of technology solutions. Applying evolving technology depends on connectivity between researchers in computing and the biosciences, practitioner's familiar with the challenges of the medical community, partners who understand the issues private companies face, and engineers and data scientists with expertise in building and operating secure networks and tapping massive databases.

Most physicians do a good job of ascertaining the immediate cause of death, but for public health and planning purposes, we need information about the underlying causes. Electronic health records provide a great opportunity to transfer data between electronic health records and vital registration systems so that physicians can more easily complete cause of death. This linkage will improve the accuracy, completeness and timeliness of vital records data and has the potential to reduce inefficiencies that cost money, time and workforce. Future efforts require enhanced use of standards and harmonization of data for routine data transfer and to increase interoperability; automation with appropriate security; new approaches and tools such as natural language processing and machine learning; and, system approaches to provide greater resource and technical support to stakeholders and partners.

Vital statistics programs depend on other activities and information to have higher quality data. New or improved linkages to relevant data from other sources and partners presents additional opportunities for improving data quality, including cause of death reporting. For example, death records from Medical Examiners and Coroners provide high quality data. However, the Medical Examiner/Coroner system is currently stressed due to the opioid epidemic and efforts must be made so that deaths can be reported more quickly and completely. Improved connectivity and interoperability must be pursued further so that information can be exchanged between electronic health records, Medical Examiner/Coroner systems, and an Electronic Death Registration System. Decision support tools or strategies must be incorporated to aid in completing the cause of death information, as well as the use of mobile technology to enable physicians, Medical Examiners and Coroners to certify the cause of death easily, whether that's from a hospital, hospice care or home.

Improving Timeliness, Quality, and Value

One of the most valuable datasets for undertaking patient-centered outcomes research is the National Death Index. Recent efforts to improve the timeliness of the National Death Index have allowed for an earlier release of the final report, which is important to the research community. Timeliness of data could be achieved through the potential for automated coding systems for cause of death. Natural language processing can reduce manual coding, thus speeding data availability.

Data quality could be improved through outreach and training to those that complete medical and health data for birth and death certificates, such as physicians, medical examiners and coroners. Training must be easily accessible and meet continuing medical education and continuing education requirements. New technologies such as applications for smart phone and tablet computers should be considered for training or decision support. Better and more routine dissemination of information to physicians and the identification of Clinical Champions, to advocate for the importance of complete and accurate information could comprise a national campaign to help promote efforts to improve data quality.

Information from death certificates is increasingly used to expose and address a national crisis—drug-poisoning deaths, and has highlighted the need for faster and better reporting. Solutions range from reporting the specific drug(s) on the death certificate, to automated cause-of-death coding systems for faster reporting, to providing monthly reporting of drug-poisoning deaths.

The value of vital records information must be communicated to stakeholders, partners, appropriators, researchers and others so that there is a clear understanding of how health, public health, and social services benefits from having these data available. We need to improve partnerships across sectors to communicate value, and look for seed projects we can test drive and build to scale if they work. Several examples of this have occurred at CDC and with academic partners at Georgia Tech around Fast Healthcare Interoperability Resources.

Issues and Challenges

Tracking and reporting mortality is a complex and decentralized process with a variety of systems used by more than 6,000 local vital registrars to report death. State, local, and territorial authorities are responsible for the legal registration and record of death. Cross-jurisdictional sharing must be addressed to facilitate fast and secure transmission of records. Systems are complex and must support national standards while meeting the laws and regulations of the jurisdiction. CDC, through the National Center for Health Statistics, finalizes and releases the data once all authorities have reported. Any solutions to the system must respect this reality.

Vital Statistics in the US are funded through fee for services. Most states no longer have appropriated funds to support vital records. In order to survive and make improvements, this must change. The importance of the role of local and state jurisdictions cannot be overstated. Inadequate state funding for electronic systems that are sustainable is at a critical mass. In addition, the significance of death investigations and lack of funding often results in varied accuracy, timeliness and specificity on death certificates. Identifying other ways to fund vital records, such as including language in cooperative agreements and grants, and ensuring that a better understanding of the utility and importance of vital statistics is promoted widely is critical to a sustainable system.

Work must continue to ensure consistent national data standards to transfer data between electronic health records and vital registration systems. It is important that we leverage existing standards while exploring new approaches and innovations for integrating data.

The National Vital Statistics System is a national treasure. There are unlimited needs for these data to be applied and many ways the system could be improved. But we cannot risk extending the system without investing first in its future.