



H49 A Novel Adaptation of Electronic Health Records (EHR) for Medical Examiner Use

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Learning Overview: After attending this presentation, attendees will understand a new way of integrating public health information with clinical information while improving the efficiency of a Medical Examiner's Office (MEO). Epic is an EHR system capable of combining two different health platforms (patient care and postmortem care), providing information sharing capabilities, computer-generated reports, and improved ease of documentation.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by introducing a new information management source for medical examiners that improves access to clinical health information and by exploring the capabilities Epic has to offer the medical examiner community.

Epic is an integrated information management system that can be manipulated to accommodate user's workflow, thereby allowing for improved efficiency in all areas of an MEO: report generation times, processing efficiency, and distribution tracking. The development of a medical examiner module within the Epic system allows for secure sharing of data between clinical care teams and the MEO, both locally and nationally (Epic is widely used throughout the country). Epic's security features limit information sharing to only that which is deemed permissible and appropriate by the involved clinical care system and the involved MEO.

The Genesee County Medical Examiner's Office (GCMEO) in Flint, MI, partnered with Hurley Medical Center, Flint's Level One Trauma Center, to create the first medical examiner/morgue module within Epic, the electronic health record system used by Hurley. The GCMEO had two main objectives when choosing to use Epic: (1) improve the efficiency of the office as a whole, and (2) more seamlessly integrate autopsy data and clinical care information.

There are three main ways Epic can improve efficiency: (1) automatic report generation, (2) specialized notes, and (3) all-in-one storage. The automatic report generation feature can be used as a tool for the National Association of Medical Examiners (NAME) accreditation by pulling together specific information, such as cause of death or manner of death, within a user-specified time range. Specialized notes can be created based on job type (e.g., medical examiner investigators, pathology assistants, medical examiners, etc.); additionally, case reports/notes can be automatically generated based on entered information. Epic provides an all-in-one storage for cases including, but not limited to, images, notes/reports, and past medical history/previous encounters with physicians.

There are three main ways Epic is able to integrate public health information with clinical information: (1) MEO access to clinical health information, (2) clinical physician access to certain MEO information (if permitted), and (3) automatic report generation based on information provided from the MEO. Clinical health information already in Epic for a patient is readily available. Clinical health information may include demographics, diagnoses, surgical history, current medications, lab results, imaging, and encounter notes. Clinical physicians, such as emergency department providers, may be given clearance to view information obtained from performed autopsies on certain patients; case-specific information, such as a trauma report, can be provided in a quick manner through report generation and Epic access. Automatic reports can be generated from the clinical information and the MEO information entered into the system. General information, such as age, sex, and the amount/type of causes of death and manners of death, can be generated for a user-specified time span. Generated reports can be produced from a combination of different information.

In order to quantify efficiency, medical examiner report turnaround time was analyzed from two different time periods: before Epic and with Epic. Additionally, Epic allows for an additional service, a scribe, to aid in report generation at the time of autopsy; therefore, report turnaround time was also analyzed from a period without Epic and a scribe and with Epic and a scribe. It was concluded that report turnaround time was improved (decreased case completion time) with the use of Epic and showed further improvement with the use of Epic and a scribe. Epic provides both enhanced functionality/efficiency and information integration.

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