G122   Information System of the Allegheny County Medical Examiners' System

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The goal of this presentation is to illustrate to the attendees the need and utility of a modernized, electronic information management system in a medical examiner's office.

This presentation will impact the forensic science community by demonstrating how a modern electronic information management system can reduce error and improve communication in the office and between related agencies outside the office.

Background: The medical examiner's office is a complete death-investigation facility, including a fully equipped autopsy suite and state-of-the-art forensic laboratories. The complete operation consists of many investigation and autopsy personnel, where forensic investigators investigate death calls and retrieve bodies from death cases, and forensic pathologists and autopsy technicians perform postmortem examinations. The complete forensic laboratory consists of forensic biology, drug chemistry, toxicology, firearms and tool marks, trace evidence, latent fingerprints, the mobile crime unit, and the mobile laboratory. These laboratories utilize the expertise of dozens of additional specialists. In recent years, the increased complexity and sophistication of the system necessitated a more streamlined system of communication and data sharing between the various branches and personnel. Part of this initiative involved implementing an electronic information management system which, at a minimum, needed to be able to assign case numbers, track the evidence associated with the case, and provide a printable chain of custody for the evidence. Ultimately, this information system has evolved into a more comprehensive system of data management and communication.

Methods: Over the course of three to four years, the medical examiner's office implemented a Porter Lee's Barcode, Evidence, Analysis, Statistics, and Tracking (BEAST) information management system. The BEAST has two components: a Laboratory Information Management System (LIMS) and the Medical Examiner Information Management System (MEIMS). The BEAST is used to maintain basic case information, track the location and custody of items recorded into the system, record results of laboratory analysis and death investigations, store external/outside documentation related to the case (medical records, third-party test results, etc), create notes, reports, and forms for each case, generate statistics, track courtroom activity, interface with instruments to export information to the instrument and import results from the instruments, and host links to other laboratory information areas, such as Photov Vault$^®$ and SharePoint$^®$. Photo Vault$^®$ is used to store scene images and autopsy photos. Outside investigating agencies have limited access to the Photo Vault$^®$ to view scene and autopsy photos. SharePoint$^®$ is used to store the policy and procedure manuals for the entire office. It is separated into sections to allow each department to have their own workspace, calendar, document storage, and reference storage.

The BEAST also has a web portal hosted by Pennsylvania Justice Network (JNET) that allows police agencies to enter evidence they wish to submit to the laboratory, view the progress of their case through the laboratory, and download approved copies of laboratory reports. The district attorney's office has been granted access to the portal to allow for the download of reports. This is done from a computer that has JNET access and a user that has an authorized user ID and password.

Results: Pathologists now have the capability of accessing all relevant forensic data regarding each case from their office workstation. This has resulted in time-reduction of case signout as well as more comprehensive reviews of complex cases without the need to communicate personally with other divisions. Furthermore, personnel from all medical examiner office divisions, as well as those from some outside agencies, now have direct access to needed information without significant loss of time.

Conclusions: The implementation of this information management system has proved beneficial in many respects. The medical examiner's office has improved the tracking of files and evidence, increasing the productive efficiency and allowing rapid and efficient sharing of information within the office and with outside agencies as well.

Information System, SharePoint$^®$, Beast