G66   MAPS: How a Statewide Pharmaceutical Database Improves Death Investigation

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After attending this presentation, the attendee will have a better understanding of the benefits of using a controlled substance pharmaceutical database such as the Michigan Automated Prescription System (MAPS) when obtaining a decedent's medical history. Attendees will be presented with several case studies illustrating how the MAPS system can provide missing information and potentially change the cause and/or manner of death.

This presentation will impact the forensic science community by raising awareness among all parties involved in death investigation, specifically medical examiners, by describing the Michigan Automated Prescription System (MAPS) and its use in aiding in the investigation of deaths reported to medical examiners.

Accurate patient medical history is essential to the success of every death investigation. However, gaps in patient histories and medical records can sometimes lead to incorrect interpretation of data and may compromise the opinion rendered by the medical examiner. Obtaining accurate information regarding a decedent is critical to a high quality investigation and the interpretation of postmortem toxicology. The Michigan Automated Prescription System allows the medical examiner to gather information regarding controlled substances prescribed to the decedent for months before the death.

MAPS grants physicians with a DEA number the ability to access pharmaceutical dispensing data statewide to determine all controlled substances dispensed to a particular patient. The MAPS requires pharmacists, veterinarians, and dispensing physicians to report electronically (or by mail) all controlled substances dispensed in Schedules 2-5. Michigan launched the service in its current form in January 2003, and any previously existing prescription, patient, and healthcare provider data were entered into the new system. With over 1.2 million prescriptions reported each month, the MAPS system was built for ease of use, fast report generation (average turnaround time for individual reports is less than ten minutes), and prescription trend watching.

In cases of suspected drug overdose due to a controlled substance with "positive" toxicology, the medical examiner makes an inquiry into the database using the name and date-of-birth of the decedent. The report generated may indicate no information is available for an individual with the particular information. More commonly, the report generates a list of the controlled substances(s) prescribed, the quantity dispensed, the date dispensed, the prescribing physician(s), and the dispensing pharmacy(s).

The use of information provided by MAPS led to the prospective review of seventeen deaths since February 2009. Of the seventeen deaths, the MAPS report in three deaths did not change the opinion or assist the medical examiner in the investigation, the report in ten confirmed or supported the medical examiner's opinion, and in four cases, a change of the cause and/or manner of death occurred based on information contained in the MAPS report.

Example cases will be presented in detail to demonstrate how the information available in a database of controlled substances dispensed to patients contributes to the investigation of deaths of individuals with postmortem drug screens "positive" for prescription medications in which drug intoxication may have caused or contributed to the death.

Death investigators should be aware of this advantageous tool. With a better understanding of the patient's history, investigators can paint a more accurate picture of the life of the decedent, which, in turn, gives the medical examiner better tools to properly evaluate the situation and return a more confident ruling regarding cause and manner of death. **Toxicology, Death Investigation, Drug Related Fatalities**