Conference Abstract

Development of a scheduled drug diversion surveillance system based on an analysis of atypical drug transactions.

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Abstract

Drug diversion in the operating room (OR) by anesthesia providers is a recognized problem with significant morbidity and mortality. Use of anesthesia drug dispensing systems in ORs, coupled with the presence of anesthesia or OR information management systems, may allow detection through database queries screening for atypical drug transactions. Although such transactions occur innocently during the course of normal clinical care, many are suspicious for diversion.

METHODS:
We used a data mining approach to search for possible indicators of diversion by querying our information system databases. Queries were sought that identified our two known cases of drug diversion and their onset. A graphical approach was used to identify outliers, with diversion subsequently assessed through a manual audit of transactions.

RESULTS:
Frequent transactions on patients after the end of their procedures, and on patients having procedures in locations different from that of the dispensing machine, identified our index cases. In retrospect, had we been running the surveillance system at the time, diversion would have been detected earlier than actually recognized.

CONCLUSIONS:
Identification of the frequent occurrence of atypical drug transactions from automated drug dispensing systems using database queries is a potentially useful method to detect drug diversion in the OR by anesthesia providers.

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