

Computerized surveillance of adverse drug events in hospital patients.

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<https://psnet.ahrq.gov/issue/computerized-surveillance-adverse-drug-events-hospital-patients>

The authors report on an extension of the HELP clinical information system at LDS Hospital, Salt Lake City, to provide automated detection of [adverse drug events](#) (ADEs) from clinical data. The authors describe a rule-based approach wherein certain medications (such as naloxone or diphenhydramine), laboratory values (such as leukopenia or a positive *C. difficile* toxin assay), or unanticipated stop orders for medications are reported daily to a clinical pharmacist, who investigates the report by chart review and provider interview. Concurrently, the authors provided an enhanced online system for traditional voluntary incident reporting to supplement the existing paper-based methods. The authors describe a 60-fold increase in detection of ADEs with the automated system relative to voluntary reporting and provide a detailed breakdown of the types of ADEs detected. This study was among the first to demonstrate the value of real-time computerized analysis of clinical data to intervene on patient safety in a widely deployed, operational information system.