

Computerised physician order entry-related medication errors: analysis of reported errors and vulnerability testing of current systems.

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This study used a two-stage approach to analyze the effectiveness of [computerized provider order entry \(CPOE\)](#) at preventing medication errors in real-world settings. The investigators analyzed data from the [MEDMARX](#) database in order to identify the types of [medication errors](#) caused by computerized order entry. From these data, the researchers developed 21 examples of problematic orders and tested whether they could be entered in a range of commercial CPOE systems. The majority of orders were entered successfully and quickly, without the CPOE system generating any alerts or requiring clinicians to use only minor workarounds to enter the order. Even when the CPOE system did generate an alert, these could generally be overridden by clinicians without changing the order. The study findings mirror those of a prior [simulation study](#) and highlight the importance of real-world [usability testing](#) for health information technology. Although CPOE systems have been shown to [reduce prescribing errors](#), this study's results indicate that the safety benefits of CPOE may not be achieved without careful implementation and ongoing evaluation.