COMMENTARY

Any discussion of patient safety usually begins with citations from the report of the Institute of Medicine (IOM) *''To Err is Human''*[1] released in 1999. However, there were core articles that preceded *To Err is Human* which were used to form the basis of this landmark study. The paper by Classen *et* al[2] published in *JAMA* in 1991 is one of those articles. Classen and colleagues described how adverse drug events could be identified in an integrated hospital information system using a computer program to detect a variety of indicators of harm associated with adverse drug events.

At the time the article was written in 1991, most of the attention in patient safety was being directed to determining the rate of adverse medical events, and adverse drug events in particular. Classen *et al* compared the rate of detection using the computerized protocols with the integrated hospital information system (now referred to as the electric health record (EHR)) with traditional spontaneous event reporting. The use of the EHR to detect events produced a nearly tenfold increase in the number of events identified. Similar results using computerized record systems were reported by others in subsequent years.[3 4] The use of protocols and algorithms to identify patient harm associated with clinical care has continued to mature. These protocols have become known as triggers which can be used as tools with either conventional medical records or with the EHR.[5]

During the early days of patient safety a good deal of effort was spent on trying to determine which form of identification of events was most effective. However, it is now being recognized that there is a need to use multiple methods for the detection of harm including spontaneous event reporting, triggers from records, and patient safety indicators using administrative data.[6] The IOM in its most recent report ''*Patient Safety: Achieving a New Standard of Care*''[7] has recommended using multiple approaches for the identification of harm. One of the factors limiting the acceptance and use of the methods outlined by Classen and colleagues has been the availability of computerized health records systems in most institutions. The IOM has also called for the development of standard triggers to be used as part of new EHR systems.

With the growing emphasis being placed on the use of health information technology (HIT) solutions to patient safety, there is a need to deploy common sets of triggers that can be built directly into EHR systems. National agencies such as AHRQ in the US and the NPSA in the UK should begin to develop universal triggers for the detection of harm that can be used by any vendor of EHR systems.

Classen and colleagues gave us the way forward in 1991; it is up to us today to fully implement the computerized surveillance systems in every healthcare institution worldwide. With today's emphasis on HIT and EHR systems we cannot lose the opportunity to build such systems into our daily practice, just as was done in Utah in 1991.

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The opinions and assertions contained herein are the private views of the author and are not to be construed as official or as reflecting the views of the Agency for Healthcare Research and Quality.

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