

Electronic health record patient safety issues persist long after 'go live' date

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Patient safety issues related to electronic health records (EHRs) persist long after the 'go live' date, concludes research published online in the *Journal of the American Medical Informatics Association*.

Sophisticated monitoring systems are needed to unearth the complex mix of human and technological causes behind these problems, say the authors.

EHRs can improve the quality of patient care, but recent evidence suggests that their use can also prompt new patient safety concerns, such as when computer glitches cause clinical decision support to suddenly stop working or when network outages occur.

Many of these problems are complex and multifaceted, and difficult to detect and prevent, say the authors.

In a bid to better understand the nature of these patient safety concerns, they reviewed 100 closed investigations involving 344 technology-related incidents arising between 2009 and 2013 at the Department of Veterans Affairs (VA).

The VA adopted EHRs in 1999 and is a leader in patient safety and the use of health information technology. It runs a voluntary reporting system for [health information technology](#) safety reporting and analysis.

The authors looked at safety concerns related to technology itself as well

as human and operational factors such as user behaviours, clinical workflow demands, and organisational policies and procedures involving technology.

Three quarters of the investigations involved unsafe technology while the remainder involved unsafe use of technology. Most (70%) investigations identified a mix of two or more technical and/or non-technical underlying factors.

The most common types of safety concerns were related to the display of information in the EHR; software upgrades or modifications; and transmission of data between different components of the EHR system.

More often than not, the concerns arose as a result of the complex interaction between non-technical dimensions, such as workflow, and technical dimensions, such as software/hardware and the user interface.

"Safety concerns we identified had complex sociotechnical origins and would need multifaceted strategies for improvement," write the authors.

And they suggest that organisations with longstanding EHR systems as well as those just starting to implement them, should ensure they have good monitoring and risk assessment protocols in place to detect and mitigate these sorts of [patient safety](#) incidents.

[An analysis of electronic health record-related patient concerns Online First [DOI: 10.1136/amiajnl-2013-002578](https://doi.org/10.1136/amiajnl-2013-002578)]

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