How Does Your EHR Affect Quality and Outcomes?

Use of electronic health records (EHR) systems, even beyond minimum meaningful use (MU) requirements, does not necessarily correspond to increased hospital efficiency, patient satisfaction, and safety.

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These new findings, based on a Johns Hopkins-led study (Murphy et al. 2020), highlight the need to rethink criteria by which EHR implementation is measured and incentivised. In addition, healthcare leaders should pay more attention to how the different features of EHR solutions may lead to differential outcomes.

Although increased use of computerised provider order entry (CPOE) for medications, for instance, was associated with improved patient satisfaction in some areas, researchers noticed that increased CPOE use for laboratory tests correlated with lower satisfaction in all areas.

This particular finding suggests that "studies of CPOE must look at these distinct order types rather than CPOE as a single entity," the researchers point out. Note that CPOE for medication and laboratory orders is commonly unified by the EHR, however, "the workflows for each activity diverge almost immediately," the researchers said, adding that more research is necessary to explain these contrasting associations.

For this study, the Johns Hopkins team performed cross-sectional analysis of 2,362 acute care hospitals using data from 2016. The aim was to evaluate associations between MU performance measures and Hospital Value-Based Purchasing (HVBP) Program measures of patient satisfaction, spending and safety. MU measures include medication and laboratory orders placed through the EHR, medication reconciliation through the EHR, online health information availability and access rates, and electronic health information exchange.

The HVBP Program, which is operated by the Centers for Medicare & Medicaid (CMS), awards or penalises acute care hospitals for safety and quality outcomes using payment adjustments.

Other important findings from the study are:

- There was no association found between patients accessing their information online and cost savings.
- Electronic health information exchange was positively associated with patient satisfaction, in particular communication with nurses and responsiveness of hospital staff.
- Medication reconciliation was associated with several dimensions of patient satisfaction related to admission and discharge, when medication reconciliation would be performed.

Mixed associations observed in this study, the Johns Hopkins team notes, varied depending on whether the hospital was in the lower, middle, or upper quantiles of the HVBP Program outcome.

Furthermore, some of the results are associated with significant interaction terms based on an EHR vendor, which either removed or reversed the main effects, the researchers explain. This finding suggests that the particular solutions offered may vary between vendors and warrant more

research.

Overall, the study's findings "suggest that the current [MU] criteria may not be focusing on the right metrics to improve patient satisfaction, efficiency, and some measures of safety as measured by HVBP at all hospitals," the research team concludes.

With the heterogeneity of health systems and EHR products, as well as other factors contributing to the healthcare environment, it is imperative that the CMS and other relevant agencies must continually assess whether they are incentivising the proper metrics to fully realise EHRs as a driver of quality and safety.

Source: JAMA

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