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The Pitfalls of Introducing Electronic Medical Records

TO THE EDITOR: The perspective expressed by Dr. Baron and his partners (1) demonstrated the pitfalls associated with the difficult task of implementing an electronic medical record (EMR) system. Our group has had a different experience. Mercy Medical Group, owned by the Sisters of Mercy Health System, comprises 160 physicians and includes internists, family practitioners, pediatricians, and women's health practitioners. With the financial backing of the health system, we researched several EMR vendors and chose Misys EMR (Misys Healthcare Systems, Raleigh, North Carolina) because we had been using their practice management system, which interfaced with their EMR system. Having the health system's support and financing was a significant advantage that an individual group of physicians starting an EMR system does not have.

Our pilot group of 4 general internists went live in March 2003. The physicians and staff each received about 8 hours of training before going live and continued to receive support afterward. Misys provided workflow recommendations, training, and support in our early development of EMR implementation. We redesigned our workflow and had excellent support from the company's information technology department and the EMR project managers throughout this period. To better familiarize themselves with the EMR, the physicians were using the system for office visits and printing the notes for documentation in the paper charts for a few weeks before going live. The physicians also spent time entering patient data into the EMR for several weeks before going live. Entering these data is a major hurdle for making the transition to an EMR, and we have not been able to find a way around it.

We reduced our patient appointments by 50% when we went live; over the next 2 weeks, we were able to increase back to our usual patient load. Our staff was somewhat skeptical at first, but having an effective office manager made the transition easier and now neither the physicians nor the staff would want to return to paper charts. It doesn't take long to forget the frustrations associated with paper charts. The EMR has allowed us to improve our revenue slightly through better documentation and increased efficiency, and we are able to see a few more patients per day. We are working to improve our auditing capabilities and to move forward with pay-for-performance programs.

A complex project of this magnitude has had its frustrating moments. We have experienced power outages and problems with our servers, which our support staff has been quick to correct. The transition would have been much more difficult without their assistance and rapid response. Our goal of making our EMR compatible with our Quest Diagnostics interface was also a difficult process that our support staff was able to make a reality. Misys has also been very receptive to our requests to improve the EMR system, and each version improves its functionality. We have 35% of our physicians using the EMR system, and we add another practice every 3 weeks.

We applaud Dr. Baron and his partners for implementing an EMR and for enduring a difficult transition period. We feel that our experience was less painful because of the financing by our health system and the support provided by Misys and our information technology and EMR staff. Our preparation before going live, which included workflow redesign, training, and data entry, also helped to ease the transition.

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Reference

1. Baron RJ, Fabens EL, Schiffman M, Wolf E. Electronic health records: just around the corner? Or over the cliff? Ann Intern Med. 2005;143:222-6. [PMID: 16061920]

Presentation of Diagnostic Test Accuracy

TO THE EDITOR: We agree with Dr. Puhan and his colleagues (1) that it is essential for physicians to interpret the real value of diagnostic testing to confirm clinical suspicions so that a better practice of medicine can occur. After reading their conclusions, we believe that replication of their results is needed, perhaps with a few modifications. Our suggestions are not intended to diminish the findings of what we consider to be an excellent study.

Although a table for the clinical vignettes was provided, it was not clear if equations to calculate illness probability changes were provided to surveyed physicians. Perhaps physicians are less likely to remember complex equations that are not commonly used in clinical practice. If equations were not available to the physicians, then the authors could have been testing knowledge and recall of biostatistical methods rather than the ability to calculate post-test probability.

Although the researchers were able to determine if actual calculations had been made, we speculate that the authors were not able to determine the reasons why participants were not able to provide the correct post-test probability. Was it because the physicians simply did not know how to do the calculations (and therefore they guessed the answer), or was it because they did not agree with the logic of the diagnostic testing? If the latter is true, then it is likely that the physicians based their answers on what they thought the post-test probability would be regardless of the testing.

Regarding the survey instrument, we suggest that future investigations should avoid mixing test results with the findings of physical examinations or medical histories. The aim of this suggestion is simply to avoid confusing scenarios that could possibly influence the results of any post-test probability calculations. Furthermore, to reduce unexplained errors, we recommend selecting a team of medical experts who are familiar with the medical conditions of interest to help design and validate the instrument before implementation. Similarly, it would be wise to test the validity and reliability of the instrument before administering it to a survey group. Consequently,