

## Electronic Medical Record Use in Real-World Practices

During the next decade the implementation of electronic information management tools, especially the electronic medical record (EMR, also called the computerized patient record or CPR), into ambulatory primary care settings will result in a profound change in the quality and operation of our clinical activities. These tools will be absolutely essential in our efforts to practice high-quality, error-free medicine. In their qualitative-analysis-based article in this issue of *JABFP*, Wager et al<sup>1</sup> begin to explore issues regarding implementation of these systems into ambulatory primary care practice sites.

In American industry quality is now taken for granted. Without quality, one cannot begin to compete, much less hope to compete successfully. One definition of quality is the ability of the product or service to meet the consumers' expectations every time, without variation. The quality described by this definition is now present in much of American industry, but such has not always been the case. If one considers automobile manufacturing as an example, we can easily recall that, in the 1960s, 1970s, and early 1980s, imported vehicles gained ever-increasing segments of the US market. Only when the American automobile industry focused on meeting consumer expectations every time the consumer purchased a car, without variation, did this situation begin to change. An industry in which US primacy had been assumed almost left the North American continent. Is medicine on the same trajectory?

Are we consistently practicing high-quality medicine in our ambulatory primary care practices? Are we sure that our patients' (consumers') expectations are always, without fail, being met? Can we be confident that we are not seeing excessive variation or error in our clinical operations? The evidence suggests that the answers to these questions might not be reassuring. Although the recently

released Institute of Medicine (IOM)<sup>2</sup> report on errors focused on hospital care, there is little reason to suspect that the ambulatory situation will be better. Indeed, it could be worse.

In 1991 the IOM committee that would evolve into the Computer-based Patient Record Institute (CPRI) made the following recommendation: "The committee recommends that healthcare professionals and organizations adopt the computer-based patient record [EMR or CPR] as the standard for medical and all other records related to healthcare." A computer-based patient record was defined as "electronically stored information about an person's lifetime health status and health care."<sup>3</sup> The group went on to suggest that the conversion to EMRs should be completed within a decade from 1991. Among the major reasons provided to support this recommendation was that the EMR or CPR would improve health care quality and would decrease variation of care.

The decade described in the IOM recommendations has passed, and we are not using EMRs in most of our hospitals or in most of our ambulatory practice sites (or even in a substantial minority). Because systems of care in ambulatory sites are less complex than those in hospitals, primary care in general, and family practice in particular, has an important leadership opportunity to study and to implement the use of EMRs in our ambulatory practices. In taking this step, we will improve the quality of our care, and we will decrease the potential for variation. By doing these things, we will also decrease the chance of error.

The article by Wager and her colleagues<sup>1</sup> is a qualitative study with many limitations. It evaluates only one EMR product in one network of practices using nonquantitative evaluation tools. It is, however, an important step in the right direction. It reports the feasibility of EMRs in multiple community-based primary care practices, and it assists in the development of a research agenda on this topic.

If we are to improve the quality of our practices, we must promptly adopt and implement these tools. To know how to implement them and to find out which ones are worthy of implementation, our

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From the School of Medicine, University of Washington, and the UW Physicians Network, Seattle. Address reprint requests to Thomas E. Norris, MD, School of Medicine, University of Washington, A-300 Health Sciences, Box 356340, Seattle, WA 98195.

discipline needs to develop rapidly a comprehensive research program on this topic, and our practices need to begin implementing these critically important systems.

Thomas E. Norris, MD  
University of Washington, Seattle

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