Chapter 8
Physician Characteristics and EMR Attitudes

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ABSTRACT

Despite the numerous purported benefits of Electronic Medical Records (EMR), the medical profession has been extremely reluctant to embrace the technology. One of the barriers believed to be responsible for the slow adoption of EMR technology is resistance by many physicians who are not convinced of the advantages of using EMR systems. This study examined potential characteristics of physicians that might help identify those individuals that are most likely to pose a threat to the successful implementation of an EMR system in a multi-specialty clinic. The results demonstrated that older physicians and physicians with only minimal computer skills are more likely to have negative attitudes regarding EMR technology. Medical specialists were most likely to have positive attitudes with respects to the use of EMR systems, while primary care physicians were most likely to have doubts regarding the purported benefits of EMR technology.

PHYSICIAN CHARACTERISTICS AND EMR ATTITUDES

An Electronic Medical Record (**EMR)** is a computerized system that contains a patient's long-term legal health record generated by encounters at one particular medical practice. Thus an EMR electronically stores such items as x-rays, prescriptions, physician's notes, structured data, diagnostic images, wave forms, scanned images of paper documents, and other types of medical documentation. EMR technology offers a number

of potential benefits, including improved quality of patient care, more efficient healthcare workflows, and reduced costs (Thompson, Osheroff, Classen, & Sittig, 2007). Improvement in the quality of patient care can be credited to several attributes of an EMR system including superior documentation, flexible data organization, integrated systems, and assisted clinical decision making (Shekelle, Morton, & Keeler, 2006).

Because of the many potential benefits associated with EMR technology, a number of experts believe the market for EMR systems will grow rapidly over the next decade. A recent study projected a 13.5 percent growth rate for EMR technology in the U.S. over the next four years (Pizzi, 2007). This study estimated that the 2005 EMR market of $1 billion will grow to more than $4 billion by the year 2015. The prospects for market growth in the EMR industry are further enhanced by evidence suggesting that the U.S. represents only a small proportion of the market potential for EMR technology. Enormous growth is also anticipated on the global level, making EMR software an exceptional opportunity not only for the current market players, but also for new entrants into the market.

Despite the numerous benefits associated with EMR systems, there is extensive documentation indicating that the healthcare industry in the United States has been extremely reluctant to embrace the technology (Fonkych & Taylor, 2005). As a whole, the healthcare industry is almost 20 years behind the rest of the nation's industries in the adoption of information technology (Ilie, Courtney, & Slyke, 2007). The financial service industry for example spends nearly $200 billion a year on information technology, while the healthcare industry spends only about one-tenth of that amount ("From clipboards to keyboards," 2007). Estimates of the number of hospitals in the U.S. that have adopted the technology range from about 30 to 56 percent depending largely on how EMR systems are defined (Fonkych & Taylor, 2005). The slow growth rate has prompted

possible intervention by the U.S. government to facilitate the implementation of EMR systems. In 2004, the U.S. federal government announced a framework to accelerate the adoption of health information technology, with the goal of having electronically stored medical records for most Americans within the next decade (Health IT Strategic Framework, 2004).

The slow adoption pace for EMR systems has been attributed to a number of barriers, such as privacy concerns and interoperability. In hospital settings, one of the key obstacles to successful EMR implementation is resistance among physicians. Physicians may be reluctant to accept EMR technology for a number of reasons, including the perception that the use of an EMR system requires extensive training and interferes with the quality of physician-patient interaction. Many physicians are skeptical about claims that EMR systems reduce errors, increase productivity and the overall assertion that the benefits of EMR technology outweigh the costs (Handy, Whiddett, & Hunter, 2001). While the validity of these issues have been addressed in a number of previous studies, it is important to note that physician acceptance of EMR technology is dependent on the physicians' perceptions and not necessarily the actual value of EMR technology.

Since physicians must use EMR systems in their day to day work, physician acceptance is crucial to widespread adoption of EMR technology (Mazzoleni et al., 1996). Many unsuccessful attempts to implement EMR technology have been attributed to the physicians' dissatisfaction with the EMR system (Van Der Meijden, Tange, Troost, & Hasman, 2003; Wager, Lee, & White, 2002). This is exemplified by several highly publicized EMR implementation fiascos, including the Cedars Sinai Medical Center in Los Angeles, in which physicians revolted and forced the administration to scrap a $34 million computer system (Connolly, 2005).

On the other hand, instances in which physicians approached the adoption of EMR technol-

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