

## Chapter 6.2

# Entrepreneurial IT Governance: Electronic Medical Records in Rural Healthcare

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### ABSTRACT

Governance is traditionally viewed as a formal authority structure. Information Technology (IT) governance parallels this in that it refers to the patterns of authority over IT. However, traditional control theories of governance, particularly those applied to IT, may not apply in rural healthcare settings. Healthcare has significantly underinvested in IT. Even today, the vast majority of healthcare transactions occur via telephone, fax, paper, and EDI; much data is not captured, is captured incorrectly or inefficiently, and is difficult to retrieve and use. Employing an established IT governance framework, and working from the

fundamental assumption that IT is a vital tool in the capture and use of healthcare data, the authors explore the appropriateness of the traditional IT governance framework within a rural healthcare setting. We present an innovative, non-authoritative, relationship-oriented approach for those seeking successful adoption of IT as a means of improving healthcare in rural settings.

### INTRODUCTION

Healthcare is arguably the most transaction-intensive industry in our society. Yet compared to other industries, healthcare has significantly

underinvested in information technology (IT). Even today, the vast majority of healthcare transactions occur via telephone, fax, paper, and electronic data interface (EDI). The result of this archaic information communication system is that much data is not captured, is captured incorrectly or inefficiently, and is difficult to retrieve and use (Barber, Caillouet, Ciotti, & Lohman, 1994; Wager, Lee, & Glaser, 2005).

Health information is typically spread throughout the healthcare organization and held in incompatible legacy systems with little or no interconnectivity or interoperability (Pendharkar, Khosrow-pour, & Rodger, 2001). Healthcare executives are focused on improving the quality, reducing the cost, and expanding access to healthcare, but cannot improve what cannot be measured and cannot measure inconsistently captured or inaccessible information that is reported and held in non-compatible homegrown systems and databases.

In an industry where the paper medical record has been considered the “gold standard,” Electronic Medical Record systems (EMR) are believed to be an increasingly vital facet for improving patient safety and quality of care, operational efficiency, and compliance with regulations while reducing medical errors and decreasing the risk of lawsuits. Still, EMR is perceived by many to be a money pit rather than a source of efficiency, income, and enhanced quality of care.

United States healthcare is struggling with decision-making, implementation, standardization, and connectivity surrounding the EMR. This is indicative of the unsystematic and independent nature of healthcare organizations in the United States. “The medical industry still has no clear common goals for IT and very few universally accepted standards” (Sobol & Prater, 2006, p. 74). Fewer than one in five hospital information technology (IT) executives report that their organizations have a fully operational EMR. Only 8% of physicians report using computerized order entry systems (CPOE) and only about one-third of U.S.

hospital emergency and outpatient departments use EMR (“Study Shows Limited”, 2005). In fact, the number of healthcare organizations reporting a functional EMR actually decreased from 19% in 2004 to 18% in 2005 (Lawrence, 2005).

Perhaps no single industry is as complex and convoluted in its structure, process, and “product” as the U.S. healthcare industry. It is constituted from a tremendously diverse set of public, private, and quasi-public organizations and agencies ranging in size from very small (i.e., solo physician offices) to very large (i.e., integrated health systems), cost reimbursement governmental programs (Medicare and Medicaid), and private organizations (Blue Cross/Blue Shield, and other private insurers). Additionally, it is often said that only the nuclear power industry is more heavily regulated than U.S. healthcare. In this schizophrenic environment, other healthcare organizations are both partners and competitors. Yet, within this complicated and multifaceted industry, organizations strive to meet their missions and serve their patients, constituents, and communities. How are decisions made in such an environment? More specifically, given the expected benefits of modernizing healthcare with information technology, how are IT governance decisions made in what is often referred to as a constant state of chaos?

This manuscript describes a rural family practice residency program that implemented an EMR. The residency program, which trains primary care physicians and provides primary care services to widely disbursed rural communities, received a federal grant for the acquisition and implementation of the EMR, with the simple initial goal of enhancing the practice’s clinical research capabilities. As the purchase and implementation of the EMR progressed, however, the practice’s simple research goal mutated and morphed into a much larger goal of extending the system throughout rural clinics and providers in the region.

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