

Chapter 4

Realizing the Value of EHR Systems Critical Success Factors

Elizabeth A. Regan

University of South Carolina, USA

Jumee Wang

University of South Carolina, USA

ABSTRACT

Now that a majority of hospitals and primary care physicians have made the transition to electronic health record (EHR) systems, realizing value from this investment has become a major issue. The issue raises two key questions: Why do so many EHR implementations continue to fall short of achieving intended healthcare outcome goals? What differentiates those that succeed from those that fall short? This article builds on prior research using a systems framework to analyze the EHR implementation process. It focuses on ten common themes (CSFs) that appear to differentiate institutions which achieve positive healthcare outcomes from those that do not. Results are highly relevant for healthcare institutions now seeking to focus on realizing the value of their EHR systems.

INTRODUCTION

Now that a majority of hospitals and primary care physicians have made the transition to electronic health record (EHR) systems, realizing the full value from this investment has become a major issue. A recent College of Healthcare Information Management Executives (CHIME) survey indicates that optimization of EHRs will be a top priority in the next year for over 70 percent of respondents (Leventhal, 2015). This is hardly surprising since health IT implementation projects frequently fall short of achieving their potential. In fact this result is true of IT implementations across all industries; research indicates that half or more of IT projects continue to fall short of target goals (Aguirre, 2014). The key question for EHR implementation is what differentiates initiatives that succeed from those that fall short? This article builds on the authors' earlier research examining organizational EHR implementation from a systems framework to identify factors that differentiate institutions that achieve positive outcomes from

DOI: 10.4018/978-1-5225-3168-5.ch004

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those that report little to no impact and sometimes negative results. The primary aim is to identify what healthcare organizations that achieve the best results share in common that may account for their success in ‘meaningfully using’ health IT to improve care delivery.

A publicly subsidized demonstration project that implemented comprehensive, point-of-care, clinician-centric health IT systems in 20 New York city-area nursing homes illustrates the problem. The research findings reported considerable variation in outcomes:

Despite the fact that each home implemented the same software and hardware via the same vendor, there have been variations observed both by early research findings and by the 1199 Training Fund coordinators about how the adoption of HIT has affected, and has been used by, homes. Examples of these differences range from how homes responded to bugs in the HIT system, to whether the technology was fundamentally perceived as a means of improving clinical indicators, financial outcomes, employee efficiency, or the entire culture of a home and perceived time savings. Variation was also reported in use of available health IT data. The quality improvement possibilities inherent in these capabilities are very rich, but not all homes have engaged in these types of analyses and customizations, and those that did, pursued different strategies. (Klinger & White, 2010)

Although there is a growing consensus that health information technology and exchange play foundational roles in addressing cost, quality, and access challenges of the United States healthcare system, prescriptions for how to get there successfully vary widely. Frequent failure to achieve intended healthcare outcomes is evident in the growing attention being placed on EHR “optimization” and “realizing the value of health IT.” Despite well-established methodologies and recommendations for managing health IT implementation initiatives, the same lessons continue being learned through trial and error by clinicians, health IT specialists, and healthcare systems of every ilk. The cost is significant in dollars and results, with some experts reporting failure to achieve intended results 50 percent or more of the time (Keshavjee, 2006; Leviss, 2010; Goroll, Simon, Tripathi, Ascenzo, & Bates, 2009). Studies assessing the impact of EHRs tend to focus on technical factors, overlooking the possibility, as systems theory would suggest, that lack of results may be attributable to people, process, and other dynamics of the healthcare setting rather than the technology itself.

Systems theory provides a framework for viewing health IT implementation holistically as opposed to reductionistically. It recognizes the extremely complex dynamics of the healthcare environment. The objective is not just to look at individual factors, but to also look at the complex interaction of people, process, and technology to gain better insight into differences in outcomes.

Our initial study findings (Regan & Wang, 2015) identified ten context, process, and technology variables that appear to differentiate institutions which have been most successful in achieving *meaningful use* (i.e., optimizing or achieving the value of EHRs). In order to further validate and clarify previous findings, this second phase of the study compared additional examples of EHR implementation and related research on the systemic nature of innovation and change. Results are highly relevant for healthcare institutions now seeking to focus on realizing the value of their EHR systems. The intent is to move beyond basic questions of whether health IT creates value to focus more on understanding *how* the technology can be “meaningfully” used to transform care delivery to achieve the primary aim of increasing patient access and improving quality of patient care at reduced costs (Jones, 2014, p.52).

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