Chapter 13
Critical Success Factors in Electronic Health Records (EHR) Implementation:
An Exploratory Study in North India

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ABSTRACT

Electronic Health Records (EHR) has been the subject of much academic discussion in recent times. The impact that a successful implementation of EHR can have on a hospital cannot be overstated. Factors which are crucial to successful implementation of an EHR system are commonly known as Critical Success Factors (hereinafter referred to as CSFs). Purpose: The present study investigates the role of CSFs in implementation process of EHR systems in north Indian multispecialty hospitals. Design: The questionnaire has been distributed to 12 hospitals which have been using EHR technology. Findings: It has been concluded that three out of the five CSFs included in the study, play a more important role than the other two factors. Research limitations: The factors have not been considered separately based upon pre-implementation scenario and post-implementation phase. Originality: The study attempts to outline the impact of EHR systems on successful operational performance of hospitals.

INTRODUCTION

Electronic health records (EHR) represent an essential tool, even a competitive weapon, that can aid in the cost-effective and efficient coordination of care services, including the secured sharing of patient information among multiple healthcare providers. Today, smart deployment of appropriate health in-

formation and communication technologies (ICTs), such as an EHR system, can improve both patient safety and the quality of care delivery. Yet, it is argued that gatekeepers of a country's healthcare systems, including physicians and other caregivers such as nurses and pharmacists, must also be actively engaged with, and consistently use, the technology in order to accrue the intended benefits of EHR systems (Ajami & Bagheri, 2013).

A key challenge, which underlies the present study, is to filter out those critical variables that may affect the successful implementation of EHR systems within a specific workplace environment. In this research, we seek to identify those critical success factors (CSFs), as perceived by the primary gatekeepers (i.e., practicing physicians) to be the most relevant for accruing the benefits of, and positive impact from, EHR implementation efforts in north India hospitals. Accordingly, a key step is to rationalize and operationalize those key variables and their corresponding constructs, expressing them into specific, relevant and easy-to-measure activities or outcomes. Such efforts are warranted if researchers are to quantify more meaningfully (and objectively) how attempts to implement EHR systems may be positively (or negatively) impacted by changes in the various identified CSFs.

Notwithstanding, the implementation of EHR is a non-trivial process. It should not be treated as just a trial-and-error undertaking given that much research on ICT uses has already been conducted. Indeed, unless healthcare professionals consistently utilize the EHR system in direct patient care, the success of any such implementation cannot be asserted (Kaplan & Harris-Salamone, 2009; Pare, Sicotte, & Jacques, 2006). Indeed, failing a timely and non-disruptive roll out of the EHR system can often lead to an undesired risk for the health organization. Moreover, such a risk can range in magnitude from failure to attain desired benefits (such as improving patient safety or gaining competitive market advantage) to threatening the financial viability of the institution.

Prior experiences have shown that vendor consults and institutional leadership often influence EHR implementation outcome (Ludwick & Doucette, 2009). This study attempts to identify the CSFs that may reduce the likelihood of EHR implementation failure in order to encourage hospitals in north India to consider focusing on those key variables that require their most urgent attention (Eni & Tan, 1989). While this study may be seen as being still exploratory, it is hoped that its findings will provide insights to help north India hospitals to achieve more effective utilization of electronic records. As well, the study can also play a role in adding to our understanding of technology diffusion by inspiring both small and medium scale hospitals to implement EHR. Even so, the emphasis on different aspects of the implementation approach (often considered as proprietary marketing tools) may conceivably differ among consultants and contractors in order to propagate a differential and unique competitive advantage (Dearborn Advisors, 2013). Additionally, institutional leadership may take varying approaches to EHR implementation for many reasons, for example, biases acquired in previous experiences, the lack of know-how or technical expertise needed to bring on board care professionals and other significant end-users, or the need to tailor an approach to local conditions. Undoubtedly, although some variation in approach is to be expected due to differences in initial client state, unexplained variation in the adoption of certain practices, which might increase the possibility of inferior outcomes, the use of a consistent, evidence-based approach is advised as it is often the best way to offer continuing support with the potential to result in consistent and successful adoption of EHR among healthcare professionals such as physicians (Stetler, McQueen, Demakis, & Mittman, 2008).

The rest of this paper is organized as follows. In the next section, the extant literature is reviewed with special emphasis on understanding past knowledge acquired about EHR/EHR implementation in a healthcare organizational context as well as the underlying rationale for motivating this research. Next,

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