

Chapter 82

System Upgrade and Integration at a Medium-Sized Dental Clinic

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ABSTRACT

The implementation of electronic health records systems (EHRS) has a major impact on both clinical staff and physicians. However, it is difficult for small and medium sized clinics to adopt EHRS. Without proper mechanisms and methodologies in place, the transition is often slowed down for several reasons. In order to identify what issues and challenges are involved in transitions, this study was conducted to 1) investigate the current issues and perspectives of employees regarding a system upgrade, database integration and managerial efficiency in order to streamline daily business operations at a medium-sized dental clinic, and 2) suggest the best strategy to solve the identified problems and challenges. Interviews were conducted with administrative staff members, a dentist, a dental resident and the director of the clinic. Interviews were transcribed and grouped into two major categories: managerial efficiency and employees' responses toward system upgrade and integration.

1. INTRODUCTION

As information management and technology have recently improved primary health care, hospitals and medical professionals have expressed a significant interest in adopting electronic health records systems (EHRS) as a reform in the health care sector. Electronic health records (EHR) are defined as electronic records of patients' medical information that are created and managed through a system at hospitals, clinics and physicians' of-

fices, health care centers and other institutions in the health care sector (Healthcare Information and Management Systems Society, n.d.). Some examples of this type of information include patient demographics, progress notes, medications, medical history, immunisations, laboratory data and radiology reports (Yoon-Flannery, 2008). EHRS refers to a system which contains, manages, organizes, and uses EHR in the course of medical treatment at hospitals and clinics in the healthcare industry. Some examples of EHRS include Vista

DOI: 10.4018/978-1-4666-8756-1.ch082

(Veterans Health Information Systems and Technology Architecture), VisitA Imaging, Meditech, Kaiser Permanente HealthConnect®, etc. EHRS can support several clinical and administrative functions.

With this major trend in the health care sector, most studies have focused on EHRS implementation issues at large hospitals, where sufficient funding, resources, and personnel are within internal capacities. There are only a few studies that deal with small or medium-sized hospitals and clinics, which seem to be insufficient in most of those factors (Shih et al., 2011; Rao et al., 2011; Carayon, et al., 2009). For example, Rao's study (2011) indicates that providers of small-sized clinics tend to have lower levels of EHR adoption and use these systems less frequently. One of the most significant factors for this is financial barriers, which seem to be a critical factor in the spread of HER systems. Nevertheless, two interesting studies address the advantages of adopting EHRS at small sized providers. Caranyan et al.'s study (2009) illustrates that the work of clinical and office staff has been significantly changed because of decreased time spent distributing charts and on transcription and administrative tasks. In addition, implementing an HERS system and a software upgrade to embed a clinical decision support system can improve comprehensive quality at small primary care practices (Shih et al., 2011).

Therefore, we have conducted a study at a medium-sized dental clinic to assess the feasibility and pre-implementation perspectives of employees regarding a system upgrade, database integration and managerial efficiency in order to streamline daily business operations. The objectives of the study include: 1) investigating the perspectives of employees toward system integration and the current management practices at the dental clinic, and 2) suggesting an implementation strategy to respond to the identified issues and streamline daily business operations at the dental clinic.

Following the introduction, Section 2 reviews literature on relevant topics and Section 3 explains the background of the selected clinic as a case study. Section 4 describes the findings of this study and Section 5 discusses important and relevant issues drawn from the findings and suggests a managerial and implementation strategy for the dental clinic.

2. LITERATURE REVIEW

With technological improvements, information portability and strict legal compliance from the health sector industry in Canada and the United States, many hospitals expressed a significant interest in adopting either partial or full EHRS as a part of health care reforms in the 2000s. Governments began to implement strategies and allocate funds to facilitate the transition from paper records to a digital environment. In Canada, the government has reserved an 800 million dollar Primary Health Care (PHC) Transition Fund to accelerate and facilitate the renewal of its health care system. Among Health Canada's PHC reforms, one of the primary objectives is to create viable Information Management & Technology initiatives and guidelines to assist provincial governments, hospitals, and physicians to meet this challenge (Health Canada, 2007; see details at <http://www.healthcanada.ca>). In the United States, in 2009 the Obama administration launched the Health Information Technology for Economic and Clinical Health Act (HITECH Act) and provided an assistance package to help hospitals and clinic centers buy EHRS and work with other medical centers to create interoperable records. This act aimed to rigorously adopt EHRS and improve the quality of the health care system as a critical national goal (Blumenthal, 2010). As this stimulus package has allocated 10 billion dollars yearly until the year 2014, the rate of adoption of health

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