Chapter 4.2
Perceived Level of Benefits and Risks of Core Functionalities of an EHR System

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ABSTRACT

The need to adopt an electronic health record (EHR) system in United States (U.S.) hospitals seems to be more and more obvious when evaluating the benefits of improved patient safety, quality of care, and efficiency. The purpose of the study was to identify the status of EHR systems in U.S. hospitals in regard to the core functionalities implemented (as identified by the Institute of Medicine) and to determine if there was a significant relationship between perceived level of benefit and risk with the use of each core functionality, as well as if there was a significant relationship between the status of the EHR system and size of hospital. A national survey of U.S. hospitals was conducted to answer the research questions. The results showed that 37% had some components in **all** of the core functionalities of an EHR system, while 27% were using at least **some** functionalities. Health information and data, administrative processes, and results management were the three core functionalities that a majority of hospitals had as a part of their EHR system. A significant positive correlation between perceived benefits and risks was found in all of the eight core functionalities. There was no significant relationship found between status of EHR system and size of hospitals.

INTRODUCTION

With the growing need to provide the right information to the right person anywhere at anytime in today's global interconnected world, the U.S. healthcare industry has been moving toward an electronic health record (EHR) system. The need

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to adopt an EHR system in U.S. hospitals comes primarily from concerns regarding the quality of healthcare. Results of two studies of large samples using 1984 and 1992 data "imply that at least 44,000 and perhaps as many as 98,000 Americans die in hospitals each year as a result of medical errors" (Kohn, Corrigan, & Donaldson, 2000, p. 26). According to Aspden (as cited in Rippen & Yasnoff, 2004), universal availability of healthcare information and decision support through the national health information infrastructure can bring substantial improvements in patient safety and quality of care. The EHR, which is defined as "a secure, real-time, point-of-care, patient-centric information resource for clinicians" (HIMSS, 2003) is designed to provide this point of access to patient health information where and when it is needed by medical professionals.

EHR systems could save up to $81 billion in healthcare costs annually and improve health care quality (Hillestad et al., 2005). Financially sound hospitals and physician offices are leaping into adopting EHR systems (Goldschmidt, 2005). At the same time, some small hospitals and small physician offices are lagging behind in the use of EHR systems creating a digital divide (Goldschmidt, 2005). This may be due to lack of significant return on investment (ROI) in the short term, considering the high costs associated with the adoption of EHR systems.

Currently there are various initiatives carried out by governing agencies and healthcare associations in the area of promoting EHRs. David Brailer, national coordinator for health information technology, emphasized the important role EHR systems play in improving quality, increasing patient safety, increasing operational efficiency, and reducing costs. In his report on "The Decade of Health Information Technology: Delivering Consumer-centric and Information-rich Health Care: Framework for Strategic Action," Brailer said that reimbursing physicians for using EHR systems and reducing their risk of investing in them should accelerate the adoption of EHR systems in physicians offices (as cited in Mon, 2004).

At a conference in Baltimore on April 27, 2004, President Bush announced that most Americans will have EHRs within the next 10 years to allow doctors and hospitals to share patient records nationwide. To build upon the progress already made in the area of health information technology standards over the last several years, he proposed the FY2005 budget to include $100 million for demonstration projects (Cassidy, 2004). This will help test the effectiveness of health information technology and establish best practices for more widespread adoption in the healthcare industry (Administration Unveils 10 Year Health Information …., 2004).

Many organizations are working to develop initiatives and goals to help meet the needs of the healthcare industry. One initiative is Electronic Health Information Management (e-HIM) by the American Health Information Management Association (AHIMA). E-HIM goals are to: (1) promote the migration from paper to an electronic health information infrastructure, (2) reinvent how institutional and personal health information and records are managed, and (3) deliver measurable cost and quality results from improved information management ("AHIMA Mobilizes to Meet the e-HIM Call," 2003).

The Department of Health and Human Services (DHHS) charged a committee established by the IOM in May 2003 to:

- Provide guidance to DHHS on a set of "basic functionalities" that an electronic health record system should possess to promote patient safety.

The IOM committee considered functions, such as the types of data that should be available to providers when making clinical decisions (e.g., diagnoses, allergies, laboratory results); and the types of decision-support capabilities that should be present (e.g., the capability to alert providers

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