Chapter 97
Examining the Influence of Information Technology on Modern Health Care

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ABSTRACT

Health care costs continue to rise at a level that far exceeds the rate of inflation. IT will be necessary in the computation and organization of complex algorithms presented in bundled payments and other initiatives. Currently in health care, a patient's medical history is not easily accessible by physicians and other medical personnel. IT can play the pivotal role in rectifying this problem in tracking the record in a universally designed environment. Advanced databases are needed to integrate facilities within health care systems. This chapter is to explore the current framework of Information Technology in the U.S. health care industry and to examine the topic covering the following areas: (a) IT's influence on the Affordable Care Act, (b) the emergence of the Electronic Health Record (EHR), also known as the Electronic Medical Record (EMR), and (c) the integration of databases across health care organizations through advanced systems like Epic.

INTRODUCTION

The road to change in the health care industry is being paved currently by Health Care Reform. More specifically, the framework of the Patient Protection and Affordable Care Act (PPACA) has held stakeholders in the health care industry accountable for implementing IT modification within their organizations, government bodies, and society as a whole. Health care has an abundance of concentrations, all of which require some form of information technology resource in order for these bodies to achieve the highest service quality of patient care (Rosenbaum, & Margulies, 2011). The purpose of this chapter paper is to explore numerous avenues in the field of health care and to examine the impact that IT has on the U.S. health care industry.

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The advancement of information technology in health care is pivotal to the guidelines set in the Patient Protection and Affordable Care Act. As health care organizations have become clinically data driven, the need for information systems and IT is imperative (Vo & Bhaskar, 2012). Analysts in IT departments at hospitals play the role in maintaining and implementing systems. Clinical staff members, such as nurses and physicians, play the role of end users and require the skills needed to effectively operate these systems and forms of technology in order to carry out their clinical duties (Najaftorkaman, Ghapanchi, Talaei-Khoei, & Ray, 2015). Key developments in IT include the transformation of the medical record from paper to digital, the use of mobile devices, and the emergence of integrated health care systems that have the capacity for handling the many complexities that the industry has to offer.

Equally impacted are all U.S. employers who offer health insurance to their employees and the dependents of their employees. While employers attempt to contain the trend of health insurance expense, information systems are needed to pinpoint conditions that prove to be the most costly and implement benefit redesign plans to reduce costs and promote wellness. Employers also keep their staff productive by keeping them healthy. In the same light, information systems help employees examine disease management programs that are geared towards steering employees to engage in healthy behavior and seek preventive care regularly. If health care was once described as being technically challenged when compared with other industries, that notion is being put to rest by the progression of IT in the industry (Vo & Bhaskar, 2012).

For health care to withstand the winds of change, innovation must be at the forefront of the movement. The industry has endured recent developments in IT, but new ideas and expansion in IT staff are imperative for Information Technology to continue to positively impact the health care industry. Ultimately, the goal of a health care organization should be to provide the best possible care to the patient and ensure the well-being of its surrounding community (Ku, Jones, Finnegan, Shin, & Rosenbaum, 2009).

RECENT GOVERNMENT DEVELOPMENTS ON HEALTH CARE IT

The Patient Protection and Affordable Care Act (PPACA) was signed by President Barack Obama on March 3, 2010 and upheld by Congress on June 28, 2012. The act mandates that all Americans are required to be insured with health coverage or pay a penalty to the government beginning in 2014. Another provision includes the expansion of Medicaid to adults whose incomes are at a defined rate at or below the federal poverty limit. Furthermore, the act seeks to decrease the cost of health care (Nussbaum, Tirrell, Wechsler, & Randall, 2010; Rosenbaum, & Margulies, 2011).

Exchanges have been established in the majority of the states either on their own or with the assistance of the Federal Government. The exchanges represent online marketplaces where participants can shop for health insurance plans. The exchanges also provide online resources that allow users to determine their eligibility for a federal subsidy (Carey & Appleby, 2013; Najaftorkaman, et al., 2015).

Healthcare.gov

Many organizations that offer medical insurance as an employee benefit to their staff have adopted online self-service enrollment options. Employees simply log in to an HR system, such as PeopleSoft, and enroll in coverage during their open enrollment period, as new hires, or in lieu of experiencing a qualifying event. Enrolling in coverage through an exchange works in a similar manner. A participant