

Chapter 6

Examining the Influence of Information Technology on Modern Health Care

Edward T. Chen

University of Massachusetts – Lowell, USA

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.

DOI: 10.4018/978-1-4666-9961-8.ch006

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.

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, Talaie-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

25 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/examining-the-influence-of-information-technology-on-modern-health-care/147829

Related Content

The Modeling of the Capacity of the Moroccan Healthcare System in the Context of COVID-19: The Relevance of the Logistic Approach

Mohamed Merzouki, Mostafa Bentahir, Fatiha Chigr, Mohamed Najimi and Jean-Luc Gala (2022). *Handbook of Research on Pathophysiology and Strategies for the Management of COVID-19* (pp. 17-26).

www.irma-international.org/chapter/the-modeling-of-the-capacity-of-the-moroccan-healthcare-system-in-the-context-of-covid-19/287300

Towards Secure Off-Label Drug Prescribing and Improved Drug Supply

(2018). *Advanced Systems for Improved Public Healthcare and Disease Prevention: Emerging Research and Opportunities* (pp. 101-134).

www.irma-international.org/chapter/towards-secure-off-label-drug-prescribing-and-improved-drug-supply/202936

On Health Expenditure and Income Inequality

Orhan Torul (2020). *Multidimensional Perspectives and Global Analysis of Universal Health Coverage* (pp. 117-151).

www.irma-international.org/chapter/on-health-expenditure-and-income-inequality/247162

Study of the Structure and Properties of Nanoparticles Cynara scolymus L. Encapsulated With Sodium Carboxymethyl Cellulose Polysaccharide

Muborak A. Tulyasheva, Sobitjan Y. Inagamov and Gafur I. Mukhamedov (2021). *International Journal of Applied Nanotechnology Research* (pp. 1-10).

www.irma-international.org/article/study-of-the-structure-and-properties-of-nanoparticles-cynara-scolymus-l-encapsulated-with-sodium-carboxymethyl-cellulose-polysaccharide/287586

A Preliminary Study on the Correlation Factor Analysis of Language Cognitive Assessment System Based on Scale Construction

Zhou Yu Yu (2023). *International Journal of Applied Research on Public Health Management* (pp. 1-10).

www.irma-international.org/article/a-preliminary-study-on-the-correlation-factor-analysis-of-language-cognitive-assessment-system-based-on-scale-construction/315610