

## Chapter 4.5

# Key Considerations for the Adoption and Implementation of Knowledge Management in Healthcare Operations<sup>1</sup>

**Nilmini Wickramasinghe**  
*Illinois Institute of Technology, USA*

**Elie Geisler**  
*Illinois Institute of Technology, USA*

### ABSTRACT

The importance of knowledge management (KM) to organizations in today's competitive environment is being recognized as paramount and significant. This is particularly evident for healthcare both globally and in the U.S. The U.S. healthcare system is facing numerous challenges in trying to deliver cost effective, high quality treatments and is turning to KM techniques and technologies for solutions in an attempt to achieve this goal. While the challenges facing the U.S. healthcare are not dissimilar to those facing healthcare systems in

other nations, the U.S. healthcare system leads the field with healthcare costs more than 15% of GDP and rising exponentially. What is becoming of particular interest when trying to find a solution is the adoption and implementation of KM and associated KM technologies in the healthcare setting, an arena that has to date been notoriously slow to adopt technologies and new approaches for the practice management side of healthcare. We examine this issue by studying the barriers encountered in the adoption and implementation of specific KM technologies in healthcare settings. We then develop a model based on empirical data and using this model draw some conclusions and implications for orthopaedics.

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## **INTRODUCTION**

The industrial economy has given way to the electronic economy creating an entirely new set of rules, opportunities, threats, and challenges (Accenture). The growth of electronic commerce (e-commerce) is vast, complex, and rapidly expanding. The evolution of the 'Information Age' in medicine is mirrored in the exponential growth of medical web pages, increasing number of online databases, and expanding services and publications available on the Internet. In order to make sense of the mass of data and information that is now being generated, organizations are turning to knowledge management techniques and technologies.

The healthcare sector is no exception to this. What we believe is not only interesting but also critical to understand is the adoption and implementation of knowledge management techniques and technologies in the healthcare sector—an industry that has to date been very slow to embrace new information technologies to benefit the administrative, as opposed to the clinical, aspect of medical practice (Battista and Hodge, 1999). To date, little has been written about knowledge management (KM) in healthcare, and even less on the phenomenon of the adoption and implementation of KM technologies and systems (Shakeshaft and Frankish, 2003).

In this chapter we address the void in the literature by presenting some results from a study of KM adoption in a select healthcare setting. This is a case of KM in an orthopedics practice in the United States. We analyze this case with a model that identifies the barriers to the process of adoption and implementation of KM in healthcare organizations. We believe that this type of research may lead to a better understanding of what it is about KM that is so crucial for healthcare today, and a better understanding of the processes and mechanisms that would help in its implementation (Eger et al., 2003).

## **The Healthcare Industry**

Healthcare is not only a growing industry but it is also the biggest service business across the globe. Between 1960-1997 the percentage of Gross Domestic Product (GDP) spent on healthcare by 29 members of the Organizations for Economic Cooperation and Development (OECD) nearly doubled from 3.9 to 7.6% with the US spending the most—13.6% in 1997 (OECD Health Data 98). Hence, healthcare expenditures are increasing exponentially and reducing them; i.e., offering effective and efficient quality healthcare treatment, is becoming a priority globally. Technology and automation have the potential to help reduce these costs (Institute of Medicine, 2001; Wickramasinghe, 2000).

In their continuing effort to increase the role of technology in their operations, healthcare providers are exploring many opportunities that incorporate IT and telecommunications with e-commerce strategies to improve service and cost effectiveness to its key stakeholders. Many such e-initiatives, including the e-medical record, are currently being implemented in various countries; however, these alone have been found to be inadequate for achieving the desired performance and economic goals without also concurrently incorporating KM techniques and technologies into clinical and administrative practices (Wickramasinghe and Mills, 2001).

## **KEY FACTORS INFLUENCING THE US HEALTHCARE SECTOR**

In the US, two key factors are leading the various stakeholders throughout the healthcare industry to adopt various new technologies with the aim to enable these organizations to practice better management. These factors are: (i) managed care and (ii) the Health Insurance Portability and Accountability Act (HIPAA, Public Law 104-191).

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