

# Chapter 23

## Knowledge Management in Healthcare

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### ABSTRACT

*While knowledge management (KM) is becoming an established discipline with many applications and techniques, its adoption in health care has been challenging. Though, the health care sector relies heavily on knowledge and evidence based medicine is expected to be implemented in daily health care activities; besides, delivery of care relies on cooperation of several partners that need to exchange their knowledge in order to provide quality of care. In public health decision is mainly based on data and a shift is needed towards evidence based decision making. It is obvious that health care can profit from many advantages that KM can provide. Nevertheless, several challenges are ahead, some are proper to KM and other particular to the health care field. This chapter will overview KM, its methods and techniques, and provide and insight into health care current challenges and needs, discuss applications of KM in health care and provide some future perspectives for KM in health care.*

### INTRODUCTION

In service base companies, knowledge is a central intangible asset; knowledge management deals with the creation, use, reuse, dissemination of Knowledge. Knowledge Management (KM) became a discipline during the 80's, and the growing role of information technologies enabled the development of efficient KM tools using databases and collaborative software.

As an interdisciplinary discipline, KM regroups concepts from Information Technology Management, Philosophy, Cognitive Sciences, and Organization Studies. The result is the existence of several schools and approaches in the practice of KM.

Health care delivery relies heavily on knowledge and evidence based medicine; besides, delivery of care relies on cooperation of several partners that need to exchange their knowledge in order to provide quality of care. This is particularly true in clinical setup, but also in public health where

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the decision making is mainly based on data and evidence generated by knowledge. In health care, KM is being developed mainly in the domain of electronic health record management and health organization management; in this context, previous researches in the business domain have been adapted and applied to the Healthcare Knowledge Management. But Health care KM raises different challenges and issues due to the own nature its Knowledge.

This chapter is organized in two parts; in the first part we will overview the knowledge management domain, beginning with several definitions of KM and a brief history. We will also discuss the different models and frameworks used in KM, introduce different techniques their advantages and drawbacks; and then discuss KM hardware requirements. In the second part we will look into health care knowledge management providing an overview of its applications, the advantages they provide and the challenges they face; then we will end with a discussion of health care knowledge management perspectives.

## **KNOWLEDGE MANAGEMENT**

### **A Brief History**

Knowledge management had always been a central question in human societies. Indeed, its roots are to be found in the early history of human societies. Philosophers, Western as well as Eastern, have focused their attention on the question of knowledge; already in ancient Greece, 'scientific' discussions often lead to philosophical debates, especially on the concept of knowledge. The creation of epistemology has finally formalized the question of knowledge; indeed, epistemology addresses primarily the question of "what is knowledge?" and discusses its creation and adoption. In the current discipline of knowledge management, philosophical considerations from several schools are taken into account, especially

in the ontological knowledge management field (Grenon, 2003).

On the other hand, practical knowledge management has always taken place in the society, and transmission of knowledge was much related to the technical progress. Beginning in the middle age, knowledge transmission occurred under what was called "Wandergesellen" in Germany and "Compagnonnage" in France, where craftsmen and artisan take a tour of the country for 6 months or one year to learn from several masters. This was one of the first structured methodologies for tacit knowledge transmission. Knowledge first spread orally, then in writing; but it was restricted to a low circle of educated people till the development of printing. If the first printing focused on religious and literature purpose, technical and specialized books began to spread after the wide adoption of the printing press.

In the 20th century, management as well as cognitive sciences and psychology led to today's Knowledge Management (KM) (Wiig, 1999). The current situation of KM started in the 1980s with the wide use of information technologies in companies; the focus was on the intangible asset that knowledge represents. The word KM itself appeared in the 80s and the academic discipline was created in 1995 (Stankosky, 2005).

Goals and challenges of KM are many; for companies, KM should increase their performance, help to develop partnerships, evaluate risks, organize management and enhance their economic value. Development of corporate memory and measurement tools also aims at assessing intangible assets in the companies. Besides, knowledge transfer enhancement and companies' performance evaluations became issues of major importance.

After twenty productive years in KM, the first criticisms appeared in 2002. T.D. Wilson (Wilson, 2002) discussed the foundation of KM, mainly because of the difficulty to distinguish information from knowledge in most KM theories. He drew the conclusion that KM was a management fad and

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