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## **Chapter I**

# **Issues in Clinical Knowledge Management: Revisiting Healthcare Management**

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## **Abstract**

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*The objective of this chapter is to examine some of the key issues surrounding the incorporation of the Knowledge Management (KM) paradigm in healthcare. We discuss whether it would be beneficial for healthcare organizations to adopt the KM paradigm so as to facilitate effective decision-making in the context of healthcare delivery. Alternative healthcare management concepts with respect to their ability in providing a solution to the above-mentioned issue are reviewed. This chapter concludes that the KM paradigm can transform the healthcare sector.*

## Introduction

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In today's information age, data has become a major asset for healthcare institutions. Recent innovations in Information Technology (IT) have transformed the way that healthcare organizations function. Applications of concepts such as Data Warehousing and Data Mining have exponentially increased the amount of information to which a healthcare organization has access, thus creating the problem of "information explosion". This problem has been further accentuated by the advent of new disciplines such as Bioinformatics and Genetic Engineering, both of which hold very promising solutions which may significantly change the face of the entire healthcare process from diagnosis to delivery (Dwivedi, Bali, James, Naguib, & Johnston, 2002b).

Until the early 1980s, IT solutions for healthcare used to focus on such concepts as data warehousing. The emphasis was on storage of data in an electronic medium, the prime objective of which was to allow exploitation of this data at a later point in time. As such, most of the IT applications in healthcare were built to provide support for retrospective information retrieval needs and, in some cases, to analyze the decisions undertaken. This has changed healthcare institutions' perspectives towards the concept of utility of clinical data. Clinical data that was traditionally used in a supportive capacity for historical purposes has today become an opportunity that allows healthcare stakeholders to tackle problems before they arise.

## Healthcare Management Concepts

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Healthcare managers are being forced to examine costs associated with healthcare and are under increasing pressure to discover approaches that would help carry out activities better, faster and cheaper (Davis & Klein, 2000; Latamore, 1999). Workflow and associated Internet technologies are being seen as an instrument to cut administrative expenses. Specifically designed IT implementations such as workflow tools are being used to automate the electronic paper flow in a managed care operation, thereby cutting administrative expenses (Latamore, 1999).

One of the most challenging issues in healthcare relates to the transformation of raw clinical data into contextually relevant information. Advances in IT and telecommunications have made it possible for healthcare institutions to face the challenge of transforming large amounts of medical data into relevant clinical information (Dwivedi, Bali, James, & Naguib, 2001b). This can be achieved by integrating information using workflow, context management and collaboration tools, giving healthcare a mechanism for effectively transferring the acquired knowledge, as and when required (Dwivedi, Bali, James, & Naguib, 2002a).

Kennedy (1995, p. 85) quotes Keever (a healthcare management executive) who notes that "Healthcare is the most disjointed industry...in terms of information exchange... Every hospital, doctor, insurer and independent lab has its own set of information, and ... no one does a very good job of sharing it." From a management perspective, these new challenges have forced healthcare stakeholders to look at different healthcare management concepts that could alleviate the problem of information explosion. The following

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