

Chapter XX

From Theory to Practice: Healthcare Technology Management (HCTM) Conceptualization, Measures, and Practices

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Introduction

The challenge of conceptualizing healthcare technology management (HCTM) construct begins with an extensive literature content analysis to generate a set of definitions and attributes of the technology management (TM) concept, which was eventually extended to HCTM. To move from a theoretical framework to understanding best practices in HCTM, a critical step is the development of an instrument through a formal design process involving expert panel review, pilot testing, and instrument refinement and field-testing in order to extract and measure HCTM performance indicators. This metric that was generated for its formalization was then used to assess HCTM best practices. This chapter, which discusses the flow of HCTM theoretical framework into best practices, provides insights into the status of HCTM practices in Canadian teaching hospitals.

Business strategists, analysts and researchers as well as economists have pointed to technology innovation as a catalytic change agent in the structure of industries and competition. Indeed, technological innovation can shift the competitive balance within an industry and create opportunities for growth. A technology management (TM) problem arises when business strategy development does not fully incorporate technology-based threats and opportunities. Countries around the world are recognizing that the global competitiveness of their industries depends on their focus on TM. Technology has become a competitive tool in national and corporate survival, especially in an environment of global and more intense competition (Perrino & Tipping, 1989; Sharif, 1994).

Until today, the history of digital computing and automated information processing technology has only been with us for a brief period of about six decades. In the last decade, we witness a gradual convergence of computing, telecommunications, and web-based services. This trend has now been augmented by high-speed global access to an explosion of information on the Internet and increased global competition (Ramanathan, 1990; Ulhoi, 1996; Geisler, 2000). A key challenge here is to unravel how the management of technology innovation can impact on business and operational performance of healthcare organizations in today's competitive environment. Andersen et al. (1994), for instance, noted that the issues are similar in the public service arena in that, "Public expectations for the level and quality of government services... have grown while satisfaction with their fulfillment has steadily declined. In the past few years, it has become evident that cutting fat, eliminating waste, and preventing abuse is not nearly enough. Government needs to rethink its methods and restructure its approach to public services."

As identified by Canadian healthcare CEOs, for the health services sector, the task of managing healthcare organizations and systems is particularly complex. It demands that the healthcare executive masters many different skills, including, government relations, community liaison, human resources, finances, patient care, research, and teaching. Communication skills, culture management, creativity, shared leadership, and alliance building rank among the top (Armstrong, Brunelle, Angus & Levac, 2001). HCTM, therefore, adds another dimension to these challenges.

Background

More recently, increasing attention has been focused on the need to diffuse HCTM practices and expertise in developed countries (e.g., Japan and countries in Europe and North America) as well as developing nations (e.g., Singapore and China). The World Health Organization (WHO), for example, had alluded to serious shortcomings in the performance of health systems around the globe (WHO, 2000). Unfortunately,

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