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Chapter IX

e-Health with Knowledge Management: The Areas of Tomorrow[1]

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ABSTRACT

The main purpose of this chapter is to bring out and discuss the central facts pertaining to the importance of incorporating knowledge management in the area of e-health. This is accomplished by focusing on the application of knowledge management in e-health and its effects.

INTRODUCTION

The evolution of the "Information Age" in medicine is mirrored in the exponential growth of medical web pages, increasing number of online data sources, and growing services and publications available on the World Wide Web. The Internet started with a few computers linked by the predecessor in 1969 and has grown to more than six million web sites today, of which at least 2% have health-related content. More than 150 million people currently communicate over the Internet with medical information being amongst

the most retrieved information on the web. Health information providers on the web mostly consist of private companies offering medical information, individual patients and health professionals, patient self-support groups, non-governmental organizations, universities, research institutes and governmental agencies. Thus, the importance of e-health has grown tremendously these days and providing e-health coupled with the concept of knowledge management will only serve to enhance the efficiency of e-health initiatives.

e-HEALTH

E-health is a very broad term that encompasses many different activities related to the use of the Internet for healthcare. The rate at which health professionals are using the Internet as a source of consumer information about health and medicine is rapidly increasing. It has been reported by healthcare professionals that large numbers of patients arrive at their offices either with questions related to online medical information or a large variety of health products on the Internet. Some of this content may prove extremely helpful to the health and recovery of a patient. Prior to 1999, e-health was barely in use. Now it seems to be a general "buzzword," used to characterize not only "Internet medicine," but also virtually everything related to computers and medicine (E-Health in the Medical Field, 2003).

Intel, for example, has referred to e-health as "a concerted effort undertaken by leaders in healthcare and hi-tech industries to fully harness the benefits available through convergence of the Internet and healthcare." As the Internet has created new opportunities and challenges to the traditional healthcare information technology industry, the use of this new term to address these issues seems appropriate. The latest challenges for the healthcare information technology industry with respect to e-health fall primarily into the following categories:

1. Institution-to-institution data transmission possibility (B2B = "business to business");
2. Consumers' capability to interact with their systems online (B2C = "business to consumer"); and
3. Peer-to-peer consumer communication possibility (C2C = "consumer to consumer").

E-health can be described as an emerging field at the intersection of medical informatics, public health and business, referring to health services and information delivered or enhanced through the Internet and related technologies (Eysenbach, 2001). In a broader sense, the term characterizes not only a technical development, but also a state-of-mind, a way of thinking, an attitude, and a commitment for networked, global thinking to improve healthcare locally, regionally, and worldwide by using information and communication technology (ibid).

The E's in e-Health

The preceding definition of e-health is broad enough to apply to the dynamic environment of the Internet and at the same time acknowledge that e-health encompasses

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