Chapter XXXIV
The Role of Information Technology for Knowledge Exchange amongst Healthcare Stakeholders

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ABSTRACT

This chapter summarizes the current state of practice in the application of information technology (IT) for knowledge exchange amongst key health care stakeholders: healthcare consumers, health service providers, and researchers. The objectives are to review the practices that facilitate collaboration amongst stakeholders, the role of new technologies in facilitating exchange of information amongst key stakeholders, and the role of three key stakeholders as creators, consumers, and/or translators of information. The emphasis is on exploring an increasingly collaborative exchange of knowledge online.

INTRODUCTION

Over the past decades, the health care field has increasingly emphasized empowerment of patients/consumers, shared decision-making amongst health care providers, and practice that is based on applying up-to-date evidence. These three trends together have led to an increasingly collaborative approach to providing health care, with the patient/consumer being considered to play a key role. Research is being transformed from a relatively isolated endeavour carried out by academic researchers, published in peer-reviewed journals with relatively little real world application to an endeavour that is more engaged with the beneficiaries of research and that emphasizes the application of findings in practice settings. At the same time, the Internet is playing an ever-expanding role in the sharing of health information. New technologies are rapidly

increasing the opportunities for many individuals to participate in that role. These changes in how health information is created, shared and applied pose a significant challenge but also a significant opportunity.

COLLABORATIVE RESEARCH STRATEGIES

Three key emerging collaborative research strategies seem to offer the best fit for meeting the challenge. These are knowledge exchange strategies, Community Based Research (CBR) (Flicker & Savan, 2006) and Communities of Practice (CoPs) (Lave & Wenger, 1991). Each of these three strategies involves a greater degree of collaboration amongst producers and consumers of knowledge than has been traditional in research.

Knowledge Transfer and Exchange

This concept is a complex one, with a variety of terms being used to refer to a range of strategies for the "transfer of research findings into practice" (p. 13, Graham et al., 2006). In 2004 the WHO identified this activity as central to health (World Health Organization, 2004). Graham et al. distinguish between a number of different ways in which this is being done, defining the terms knowledge transfer, research utilization, implementation, dissemination, and diffusion. Other terms being used are knowledge translation and brokering. It can be argued that the terms reflect the dimension of interactivity and whether the focus is on the producer (transfer, dissemination) or the audience (implementation, utilization) or the role of connecting the two (knowledge broker) (Canadian Health Services Research Foundation, 2005). Lomas situates diffusion, dissemination and implementation on the dimension of active application of findings (1993). Transfer (KT) or dissemination tends to refer to researchers ensuring that their research findings are used while knowledge exchange (KE) refers to a more collaborative process. The transfer of knowledge is increasingly understood to be most effective in the context of collaboration between those who produce it and those who use it (Kerner, Rimer, & Emmons, 2005; King, Hawe, & Wise, 1998; Lavis et al., 2003). Several models suggest that researchers and decision makers should work together from developing the research question to implementing the findings (Graham et al., 2006). Chunharas has suggested building a "learning organization" that utilizes interaction and integration (the "interactive-integrative approach") (2006). This entails the involvement of both research producers and consumers on an ongoing basis, with regular interactions. In order for knowledge to be used, there must be effective ways to translate it into usable form, and finally, there must be a way to transmit that information in a sustainable way. Further, Chunharas suggests the need to be aware that decisions are made on the basis of different types of information at different times and that this entails the interaction of knowledge from various sources, including research, trusted sources or personal experience, and management information systems. This model fits with a structure that combines the practices of CoP and CBR with knowledge exchange. The Canadian Institutes for Health Research (2006), a major funder and driver of health research in Canada, has clarified that, for it, knowledge means primarily scientific research. However 'knowledge' can be considered to include both knowledge created through such research and also expertise developed through experience or from trusted sources. It is important to distinguish these as 'research' (referring to new information created through a process of organized enquiry and largely peer-reviewed) and 'expertise' (referring to information based on the experiences of oneself or trusted others, including the expertise of patients with their own health problems). These have also been identified as 'knowledge' (i.e. research-based information) and 'know-how'