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Discourse and politics in Alberta's Health System: An analysis of mobile technology policy ☆

Kari Krell[1]

MacEwan University, Robbins Health Learning Centre, Rm 9-205A, 10700-104 Ave, Edmonton, Alberta, Canada T5J 4S2

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Abstract
Advances in technology are changing the way healthcare professionals communicate with peers and with patients. Although healthcare professionals are increasingly utilizing mobile health technologies to successfully support their practices, healthcare organizations are slow to embrace and support the use of mobile technologies in the provision of health services. This paper uses a case study to highlight how the adoption and use of mobile technologies in clinical practice is impacted when there is a paucity of clear polices to provide direction. The localized approach is limited in its generalizability but is useful to provide a deeper understanding of the roles organizational discourse and politics have in technology acceptance. By reframing the circumstances present in the case study and analyzing the underlying issues of power and discourse, the goal is to better understand barriers to HIT approval and diffusion within a health system.

Introduction

Technology is changing the way healthcare professionals communicate with other healthcare practitioners and with their patients. Increasingly, healthcare professionals are using mobile health technologies to effectively and efficiently support their health practices. Health information technology (HIT) is broadly defined as the exchange of health information in an electronic environment. A review of articles published from 2000 to the present, from health, technology, and social science databases (CINAHAL, Google Scholar, ProQuest and PubMed/Medline) support widespread adoption of HIT to improve the health of individuals and the performance of healthcare providers [1]. However, regardless of supportive research findings and the ubiquity of mobile devices, healthcare organizations have been slow to adopt and endorse HITs [2]. Though many studies have examined acceptance of HIT in organizations, there is little

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E-mail address: krellk@macewan.ca
[1]Fax: +1 (780) 497 5720.

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attention focused on the influence of power and communication and the role these factors play in worker response to technological interventions in practice settings. This paper looks at the political, policy, and communication challenges faced when accepting and adopting mobile technologies in a clinical health setting.

Through the lens of French and Raven's [3] seminal work on power in relationships and Fairhurst and Putnam's [4] original framework on communication as constitutive of organization, the author illustrates how an agency's ambiguous mobile device policy, results from organizational power struggles and unclear communication. A historical account of the province's politics provides background to the policy and a case study of nursing students, instructors and preceptors experience in trying to use mobile phones in the clinical setting as part of the learning process provides real-life context. The aim is to generate greater understanding of the barriers to adoption, acceptance and use of new technologies in a large healthcare system.

Review of the literature

Health information technology (HIT)

The widespread proliferation of mobile devices is indicative of the consumerization of information technology (IT) in today's organizations. It also reflects the global adoption trend of smartphones as being the greatest and fastest of any other technology in history [5]. Mobile devices, including smartphones and tablets, are increasingly being adopted across several industries for greater organizational capacity and overall success. The growth of technology and scale of its usage predicates a continued rise in individuals having already used mobile technology, and specifically smartphones, in their learning and communication practices, with an expectation that they will continue to do so [6]. Smartphone adoption has resulted in an increasing "mobilization" of information and resources as mobile technology has become ubiquitous and its applications culturally normalized within organizations.

Advancements in health information technologies provide the potential to revolutionize healthcare by enabling improved healthcare service provisioning. In recognition of the important transformative role that HIT systems have in healthcare, governments across the globe have implemented initiatives to support its implementation and foster adoption [7]. For example, in Canada to support clinical practitioners and to build on its existing national HIT initiative (*Canada Health Infoway)*, the Canadian government formed the Clinical Council in 2011. This group brings together physicians, nurses and pharmacists in an interdisciplinary effort to improve the clinical value for Canadians and healthcare providers using information and communication technologies [8]. As part of their mandate, the Clinical Council has partnered with the respective schools of these professional groups to engage faculty to prepare future health practitioners for practice in modern technology enabled clinical environments [8]. However, despite the abundant research and perceived benefits of HIT adoption, many challenges persist for organizations in optimizing the development, adoption, and effective use of information and communication technologies in the delivery of healthcare [9].

Technology acceptance and adoption

There is a need for increased use of IT in hospitals to make practices more efficient and to improve the quality of healthcare but managers acknowledge there is little more than anecdotal evidence for what implementation method works best [10]. Adopting new procedures in health organizations, such as information and communication technologies is often difficult due to the disruption of several interdependent and coordinated processes involved in the provision of care (i.e. information exchange and communication relationships) [11]. Studies also find that staff perceptions, organizational identity, communication styles and professional training are all elements in successful HIT implementation. These factors along with a lack of coherent organizational polices for staff training and utilization can undermine HIT integration and adoption in clinical practice [11,12].

The process of accepting and adopting new innovations has been studied for many years. Understanding the factors that influence user acceptance of IT is vital in determining the success of its uptake as projects routinely fail without user acceptance [13]. Thus organizations, managers and information specialists are extremely motivated to gain insight into user's uptake of new technology. For this discussion, user acceptance of new technology is defined as the demonstrateable willingness within a user group to employ the technology for its intended use, such as patient care [14]. The extant literature on IT acceptance has yielded numerous models of user acceptance, which focuses to a large extent on the antecedents of adoption and usage of new technologies [15]. These models include the technology acceptance model (TAM) [16], the unified theory of acceptance and use of technology (UTAUT) [13] innovation diffusion theory (IDT) [17], decomposed theory of planned behaviour (DTPB) [18], and task-technology fit (TTF) [19]. These models are mostly concerned with the how and why of user adoption of new information technologies [13]. The goal of this paper is to extend this research by focusing on the determinants of power and discourse as barriers to user acceptance.

Healthcare communication practices

Efficient and coordinated communication strategies are imperative to timely, safe, and quality patient care in clinical practice. Strong interpersonal communication skills and tools are required for delivery of timely and relevant clinical data and evidence, which improves clinical decision-making. Hospital communication modes have evolved and expanded over time with advances in technology. Face-to-face meetings, stationary telephones, and numeric paging systems are traditional methods of communication. However, known contributing factors of clinical errors are substandard communication sharing practices and miscommunication [20]. In fact, miscommunication is considered as one of the major preventable causes of all identified clinical

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