Rethinking ICTs and E-Health:
A Focus on Issues and Challenges

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INTRODUCTION

A major driver of e-health involves the significant advances in information communication technologies (ICTs). These advances allow for information collection, dissemination, and general use or application by healthcare providers, patients and or consumers. Collectively, this phenomenon has led to a new buzzword or terminology referred to as e-health. Despite the technology advances and enthusiasm about what e-health can do to improve quality of healthcare at large, the enthusiasm should be tempered with caution, because without careful planning and systematic consideration in policy, e-health may not achieve its lofty expectations and goals (see Viswanath & Kreuter, 2007).

BACKGROUND

Furthermore, e-health creates a race to digitize health information in an easily accessible digitized format or platform (e.g., Online). This paper presents theoretical arguments about factors affecting e-health adoption and usage. Specifically, we plan to explore the nature of e-health and factors that makes it attractive while exploring other factors that pose challenges to e-health.

MAIN FOCUS OF THE ARTICLE

We argue that while e-health may help with issue of efficiency, such as cost-cutting, and instant access to healthcare information and records, its adoption and effectiveness is not as clear cut and may threaten the survival of certain medical practices (i.e., complementary or alternative medicine [CAM] that characterizes some of the non-western medical or health care services). In order to explore issues relating to adoption and use of e-health, we looked at the dimension of cultural variability (i.e., Hofstede, 1996, 2001) as a general framework given its wide appeal and established record in literature, especially in the adoption of an innovation such as e-health. In particular, the collectivism and individualism dimension of cultural variability is useful in exploring the difference between oral tradition and digital tradition cultures in terms of how they might adopt and use e-health. Specifically, we argued that the disparity between oral tradition and digital traditional cultures is such that information in oral tradition culture simply cannot be easily translated into written or digital one because of the art form implied within the

DOI: 10.4018/978-1-4666-9978-6.ch078

oral tradition. Hence, the failure to recognize this important challenge may very well makes oral tradition cultures and their embedded medical practices extinct and consequently may hinder adoption and usage decision. This problem is not limited to e-health consumers, but may impact e-health practices altogether (Olaniran, 2012). First, however, it is necessary to provide an overview of e-health.

Overview of E-Health

e-health represents a method by which health information is collected and disseminated through information communication technologies (ICTs). More importantly, e-health allows for storage and exchange of health information among consumers, providers, government and other entities (Dominguez-Mayo, et al., 2015). In the U. S. A., the race to comply with government mandated e-health policy is at a feverish pace. As healthcare providers might miss out on incentives for compliance and in certain situations can be penalized for noncompliance. Thus, the mandate to reshape healthcare infrastructure crystallized a commitment by the United States to make patients' medical records universally available through ICTs further fueling the growth of e-health and its capabilities (US Department of Health and Human Services, 2004).This idea is not unique to U. S. A., as other governments around the globe are also pushing to join the race in e-health. Some see e-health as way to address the needs of the underserved, or to reach individuals in rural areas where access to established medical centers may not be possible. Some see e-health as a way to bridge the disparities in the quality of healthcare services for different population groups (e.g., Obasola, Mabawonku, & Lagunju, 2015, Wald, Dube, & Anthony, 2007).

At the same time, certain e-health platforms such as web available information (e.g., medical forums, WebMD) offer advantages that include assisting patients in making informed health care choices. It also offers healthcare providers the opportunity to collaborate with other providers (Scholl & Olaniran, 2013) and/or patients in a team environment either by supplementing physician provided information or engaging in an online support groups along with providers who have access to patient medical records (Dominguez-Mayo, et al., 2015; Wald, et al., 2007). E-Health also promise safe storage of information along with accuracy of information that safeguards against error while promising increase efficiency and effectiveness of healthcare (Dominguez-Mayo et al., 2015). On the other hand, e-health is compounded by certain factors that may impact the extent which e-health promises are attained. For instance, there is greater level of information and misinformation due to information found on the Internet, along with possible exacerbation of socioeconomic health disparities, and the shifting nature of the traditional physician–patient relationship in terms of *medical authority* (Visnawath & Kreuter, 2007; Wald, et al., 2007). Specifically, Visnawath and Kreuter (2007) points to the fact that not all providers have the ability to install new technologies to foster their e-health goals and their operational needs. These authors also questioned whether making the investments in these technologies are worthwhile or cause organizations to shift limited resources from other important areas and whether the deployment and use of the technologies can be sustained given the required recurring expenditures. At the same time, when e-health hardware is universal, the use and content of the programs may pose a barrier to certain user groups (Abel & Obeten, 2015; Visnawath & Kreuter, 2007).

Dominguez-Mayo et al (2015) discuss the *interoperability* challenge-which refers to ability of two or more different platforms to exchange information or communicate (see also, Shiferaw & Zolfo, 2012). Similarly, majority of the websites or portals aiding e-health in spite of being designed for easy navigation still require certain level of literacy (i.e., for individuals with above an 8th grade education reading level) and language proficiency which may further creates divide in access, information processing, and overall competency of the e-health system in what is now known as digital illiteracy (Obasola et al.,