The eHealth Arena and Online Virtual Worlds: A New Paradigm for Internet Delivered Health Care

Jacquelyn Ford Morie, All These Worlds, LLC, Los Angeles, CA, USA
Eric Chance, All These Worlds, LLC, Los Angeles, CA, USA

ABSTRACT

Virtual Worlds, a recent addition to Internet offerings, are connected social spaces that have geographies and are populated by people using avatar representations. These spaces hold a great deal of promise as part of a future portfolio of eHealth offerings. Utilizing virtual worlds, health care can be widely distributed and accessible via the Internet. They have particular affordances that lend themselves to achieving and supporting many types of health care. This paper describes some of the current applications that use virtual worlds as part of eHealth care, as well as future research that will factor into the way these activities develop. These examples are paving the way for virtual worlds to be part of the way people access health care in the future.

Keywords: Avatars, eHealth, Healthcare, Internet, Telehealth, Virtual Worlds

INTRODUCTION: DEFINING EHEALTH CARE

When the Internet was created, it is unlikely anyone would have predicted it might become an important aspect of health care. Yet, along with hundreds of other unsuspected uses, the Internet is serving as an important component of our medical methodologies. Its use for these purposes is diverse and growing, and the number of offerings makes it no easy task to find one word that describes its full scope. However, the term eHealth is often used as a comprehensive label, and it will be used throughout this paper to refer to medical services delivered via computers and devices connected to the Internet.

eHealth has become one of the newest buzzwords in the pantheon of techniques related to 21st Century health care. As early as 2001, Bauer, Deering and Hsu (2001) enumerated a large number of eHealth offerings, including online reference pages and databases, plan and provider sites for information and scheduling, video conferencing for doctors to provide patient consultation and referrals, self-help websites for support groups, and even for point of purchase

DOI: 10.4018/jgcms.2013070103
portals for health related product and services. In this chapter, we adopt a more practice-based definition of eHealth as health care practices that can be delivered effectively through the Internet. These practices can include educational activities, patient monitoring (e.g. gathering data from sensor devices), social connectivity with other patients who have similar complaints, interaction with health care providers, and some forms of physical and mental-health therapy. While researchers and stakeholders note that a comprehensive eHealth definition in this rapidly evolving field is far from settled, they all agree that using the Internet as a tool for increasing the efficiency and efficacy of treatment is an increasingly important trend for modern health care practices (Oh et al., 2005).

CURRENT FORMS OF EHEALTH CARE

A defining characteristic of eHealth care is that a participant can access services from their home or other place where they use the Internet. The current primary eHealth functions include video conferences between a physician and their patient, web sites devoted to information and reference materials, and support groups linked to each other through social media. These modalities are differentiated from other forms of care delivered via computers that are not typically delivered online. For examples of these, we note computer-based activities such as rehabilitation games that must be done in an outpatient clinic (Kato, 2010, 2012; Lange et al., 2009), or complex health interventions such as Graduated Exposure Therapies provided by a Virtual Reality simulation that must be monitored and controlled by a therapist (Gerardi et al., 2008; Gerardi et al., 2010; Rizzo et al., 2010). Even though extremely beneficial and in growing use, these activities are not included within the scope of this paper.

Oh, et al. (2005) state that not only is today’s eHealth technology considered a tool in and of itself, it is generally considered a helpful expansion for the human-to-human connection, not as a replacement for this interaction. Eisenbach (2001) goes even further in describing eHealth as “a state-of-mind, a way of thinking, an attitude, and a commitment for networked, global thinking, to improve health care locally, regionally, and worldwide by using information and communication technology.”

Being so new, eHealth is not without questions and issues. For example, are people really ready to embrace it? (van Deursen et al., 2011). Is it really safe? (Black et al., 2011). Can it be standardized and controlled for quality? (Danaher & Seeley, 2009; Koch, 2006). How can we monitor compliance with Internet-delivered regimens? (Andersson & Cuijpers, 2009). Several additional questions were identified in a recent publication in the Journal of Medical Internet Research: What connections will eHealth have with traditional health care methods and systems? Are there ethical and legal considerations of its use? How will we evaluate the effectiveness of eHealth activities? What new policies will need to be devised as people start to use it heavily? (Khoja et al., 2012). These concerns need to be discussed, debated and worked out. In the meantime, what is increasingly true is that people are using these activities more and more everyday.

As previously mentioned, the most prevalent uses of eHealth center around three main areas: Video conferencing between professional care providers and remote patients (Wade et al., 2010), self-help web sites that allow people to research their symptoms and find common interventions that exist (King & Moreggi, 1998; Cline & Haynes, 2011), and social support networks that allow people with similar issues to learn from and support each other (van Uden-Kraan et al., 2010).

More recently, the rise in quantity and quality of socially shared virtual spaces known as Virtual Worlds, or VWs, has added new functionality to online activities, including for health care (Gorini et al., 2008; Boulos, et al., 2007). In this chapter, we will define the most advanced of these socially connected programs and explain how they can support health care.
Optimizing the Psychological Benefits of Choice: Information Transparency and Heuristic Use in Game Environments
[www.igi-global.com/article/optimizing-psychological-benefits-choice/56336?camid=4v1a](www.igi-global.com/article/optimizing-psychological-benefits-choice/56336?camid=4v1a)

Game/Write: Gameplay as a Factor in College-Level Literacy and Writing Ability
[www.igi-global.com/chapter/gamewrite/157626?camid=4v1a](www.igi-global.com/chapter/gamewrite/157626?camid=4v1a)