Chapter 16

Managing E-Health in the Age of Web 2.0:
The Impact on E-Health Evaluation

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ABSTRACT

The use of Web 2.0 internet tools for healthcare is noted for its great potential to address a wide range of healthcare issues or improve overall delivery. However, there have been various criticisms of Web 2.0, including in its application to healthcare where it has been described as more marketing and hype than a real departure from previous medical internet or eHealth trends. Authors have noted that there is scant evidence demonstrating it as a cost efficient mechanism to improve outcomes for patients. Moreover, the investments in Web 2.0 for health, or the wider concept of eHealth, are becoming increasingly significant. Hence given the uncertainty surrounding its value, this chapter aims to critically examine the issues associated with emerging use of Web 2.0 for health. The authors look at how it not only distinguishes itself from previous eHealth trends but also how it enhances them, examining the impact on eHealth investment and management from a policy perspective, and how research can aid this management.

INTRODUCTION

Many authors are excited by the potential impact of Health or Medicine 2.0® (e.g., Guistini, 2006: Sandars & Schroter, 2007; Boulos & Wheeler, 2007; McLean, Richards & Wardman, 2007). The terms denote the use of Web 2.0 tools in healthcare and medicine, and is part of a wider eHealth trend that is becoming increasingly important in health

decisions. As more people go online, they rely on the Internet for important health information. Reports estimate that 80% of Internet American users have searched online for health information at some point in their lives (Fox, 2006; Ferguson, 2007), and a large percentage of "health seekers" indicate the web has a direct effect on the decisions they make and on their interactions with doctors (Madden & Fox, 2005). However there have been major criticisms of Medicine or Health 2.0, and policy makers need to understand how its distinct

features allow improvement in patient outcomes. They are also very new concepts that are hard to define and delineate, both from eHealth in general and between the two terms themselves (Hughes, Joshi, Wareham 2008). For this reason this chapter principally uses the term Medicine 2.0 to denote both terms (Health 2.0 and Medicine 2.0), and examines it through its critical issues. Scholars note that an issues focus can potentially address the gap between research and actual practice in eHealth (Potts, 2006), and that it allows an effective common agenda between researchers, practitioners or policy makers (Amabile et al., 2001).

Although distinct in their reach and pace of change, many of the key issues associated with Web 2.0 in Medicine 2.0® are similar to that of eHealth (Hughes, Joshi, Wareham, 2008). Four such major tensions are identified with the emergence of Web 2.0 tools in healthcare (Hughes, Joshi, Wareham, 2008): 1) Doctors' concerns with patients' use of Web 2.0 in Medicine, even if the information is accurate; 2) Information inaccuracy and potential risks associated with inaccurate Web 2.0 generated information; 3) The consequences of the new methods of creating eHealth, such as privacy and ownership issues with Web 2.0–generated information, or the alternative paths to achieve them and; 4) the delineation of what makes Medicine 2.0, that is not a policy instrument separate to that of eHealth, where Web 2.0's participatory nature may imply that previous outcome measures may become misleading. While this chapter examines all four of these issues, mechanisms for dealing with the first two have already begun to emerge within the wider eHealth domain.

However, elements of the final two issues still pose a concern, not in clarifying the vagueness of the definition of Medicine 2.0, but in understanding: 1) the alternative investment pathways for Web 2.0 within eHealth, and 2) if and how it actually improves patient outcomes. In the first case, Medicine 2.0 opens up alternative pathways for eHealth investment through user contribution or Web 2.0 business models. This is demonstrated by a wide range of free resources online which perform similar functions to traditional ICT in health. A number of both Web 2.0 investment paths are highlighted in this chapter (such as Facebook, Linux, Patientslikeme.com or similar, eMedicine.com or Medical wikis, Wikipedia.com®, Google Health® or Microsoft HealthVault®), challenging the current orthodoxy on eHealth implementation. They introduce new complexities in eHealth investment decisions, where determining overall eHealth financing is already a key question (European commission, 2008).

In the second case, many authors note Web 2.0's potential through engaging users for creating encyclopedic medical resources, improving medical education or clinical collaboration or providing health information to all types of stakeholders in varying contexts (Guistini, 2006; McLean, Richards & Wardman, 2007; Sandars & Schroter, 2007; Boulos & Wheeler, 2007; Sandars & Haythornthwaite, 2007). While it is understood that eHealth and Web 2.0 tools are used extensively by healthcare companies (Hughes & Wareham, 2008), patients (Ferguson, 2007) and doctors (Manhattan Research, 2008; Sandars & Schroter, 2007; Hughes, Joshi & Lemonde, 2008), Web 2.0 has also been associated with hype rather than a real opportunity to improve health (Skiba, 2006; Hughes, Joshi, Wareham, 2008; Versel, 2008), and in eHealth in general there have been mixed reports of its impact, itself being associated with "hope and hype" (Curry, 2007). For instance, previous research has suggested a great potential in using eHealth to address specific healthcare issues, such as enhanced patient-provider communication (Smedley & Stith, 2003), and applications that are tailored to the individual (Neuhauser & Kreps, 2003) that can tackle socio-economic and health inequalities (Dutta et al., 2008; Wangberg et al., 2008). However, other authors have made contrary suggestions, that eHealth is ineffective (Cashen, Dykes & Gerber, 2004; Korp, 2004), and that it

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