

Chapter 7.8

E-Health and Ensuring Quality

Prajesh Chhanabhai

University of Otago, New Zealand

Alec Holt

University of Otago, New Zealand

INTRODUCTION

The Internet is one of the most utilized resources for obtaining information, learning, communication, and as a source of advice. The most sought after advice and information are related with health matters. In the United States, for example, over 16 million people per year visit WebMD (http://my.webmd.com/webmd_today/home/default), an online portal dedicated to providing health information and services (Sass, 2003). Health information on the Internet has grown exponentially, with up to 88 million adults predicted to access medical information online in 2005 (Ansani et al., 2005). This merging of medical knowledge and information knowledge has given birth to e-health.

Despite the growth and application of information and communications technology (ICT) in health care over the last 15 years, e-health is a relatively new concept, with the term being introduced in the year 2000 (Pagliari et al., 2005).

Its use has grown exponentially, and as Pagliari et al. (2005) reported, there are over 320,000 publications addressing e-health listed in MEDLINE alone. However, there is still no clear definition of e-health. There have been two international calls, in 2001 and 2004, for a clear and concise definition of e-health, but both failed to produce an internationally acceptable definition. In the same paper, Pagliari et al. (2005) found 24 different definitions, highlighting the fact that this is a gray area. Hence, without a clear and standardized definition, the opportunities to conduct unethical behavior are made easier.

In this article Eysenbach's (2001) definition will be used, as it provides a comprehensive overview of the term e-health. It has also been used, as Eysenbach is regarded as an expert in the area of e-health and consumer informatics. He has defined e-health as:

An emerging field in the intersection of medical informatics, public health and business, referring

to health services and information delivered or enhanced through the Internet and related technologies. In a broader sense, the term characterizes not only a technical development, but also 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. (Eysenbach, 2001, p. 1)

This phenomenon has led to consumers becoming more educated and aware of their health condition. This advice is not only accessed by people who may be suffering from a health condition, but also those who are healthy and want to remain so. E-health is being used as a tool for preventive and predictive treatment, as well as a means of locating others in a similar situation and sharing various experiences. In most developed countries e-health is seen to be the first step that one will take towards healing themselves, and if not avoiding the doctor, it is a useful second opinion.

However, the quality of the information on medical Web sites is highly variable and thus some users are reluctant to utilize the information given on mainstream sites. Through social engineering, some Web sites exploit the public's weakness for trusting information on the Web. There are numerous cases of online financial transactions in which unsuspecting members of the public have lost large amounts of money as they have been victims of exploitation. As with a financial setting, there is a great potential for good use and misuse for health information. With e-health experiencing rapid growth, it is becoming increasingly important to consider the various ethical issues that are involved with this form of health information. Unlike financial transactions, inaccurate and unethical information on health informing Web sites could lead to greater complications and even death (Theodosiou & Green, 2003).

Medicine and those that practice it have always had ethics as a core component of their field. There should be no difference when the more traditional

aspects of medicine are modernized and utilized as e-health. All those involved with the running of online health care sites have to realize that they are running a site that could potentially mean the difference between life and death for those who access it. It is imperative that such Web sites follow codes and guidelines to prevent individuals' personal medical information, including patterns of use and interests, from involuntarily entering the hands of unauthorized people.

This article focuses on a number of privacy issues that are associated with e-health. Among these are concerns about determining the quality of technologically mediated care, ensuring and managing privacy, and allowing freedom of choice. It is well known that the Internet has the potential of exposing the public to unregulated volumes of misleading information on health and illness. This article will give a short summary of the various regulatory bodies that have been set up to try and ensure that any health information that is put up on the Internet is accurate and in no manner misleading. The *Codes of Conduct* proposed by the Health on the Net Foundation, *URAC* guidelines, and the *e-Code of Ethics* are examples of some regulatory ventures. It has to be made clear that medicine is a practice in which the interests of the patient are the priority rather than the exception, and with rules and regulations e-health can be as "safe" as going to one's local general practitioner. With the exponential growth of e-health, the need to determine the safety, security, and ethical behavior in relation to the traditional services is of paramount importance.

BACKGROUND

The Impact of E-Health

The Internet is seen as the primary medium for the expansion of e-health (Maddox, 2002). This has already resulted in a shift away from the traditional health care delivery model. Patients need not rely on their health care provider for

9 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/health-ensuring-quality/26350

Related Content

Recordings of Impedance and Communication Between Defibrillator and Pacemaker Electrodes

Anders Jarløv, Anne Elisabeth Jarløvand Tim Toftgaard Jensen (2019). *International Journal of Biomedical and Clinical Engineering* (pp. 45-68).

www.irma-international.org/article/recordings-of-impedance-and-communication-between-defibrillator-and-pacemaker-electrodes/233542

Bioengineering/Biomedical Engineering Education

Ziad O. Abu-Faraj (2012). *Handbook of Research on Biomedical Engineering Education and Advanced Bioengineering Learning: Interdisciplinary Concepts* (pp. 1-59).

www.irma-international.org/chapter/bioengineering-biomedical-engineering-education/63389

Clinical Trials of Functional Nucleic Acids: Antisense Oligonucleotides and Aptamers

Martina Traykovska, Sjoerd Miedemaand Robert Penchovsky (2018). *International Journal of Biomedical and Clinical Engineering* (pp. 46-60).

www.irma-international.org/article/clinical-trials-of-functional-nucleic-acids/204400

Relationship Between Speed of Performing Leg Extension With 30 RM Load and the Selected EMG Variables of Selected Quadricep Muscles

Dhananjoy Shaw, Deepak Singh, Umesh Kumar Ahlawat, Manvinder Kaurand Dinesh Bhatia (2021). *International Journal of Biomedical and Clinical Engineering* (pp. 61-76).

www.irma-international.org/article/relationship-between-speed-of-performing-leg-extension-with-30-rm-load-and-the-selected-emg-variables-of-selected-quadricep-muscles/272063

A WBAN-Based Framework for Health Condition Monitoring and Faulty Sensor Node Detection Applying ANN

Koushik Karmakar, Sohail Saif, Suparna Biswasand Sarmistha Neogy (2021). *International Journal of Biomedical and Clinical Engineering* (pp. 44-65).

www.irma-international.org/article/a-wban-based-framework-for-health-condition-monitoring-and-faulty-sensor-node-detection-applying-ann/282494