Effects of Physician-Patient Electronic Communications on the Quality of Care

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ABSTRACT

The article summarizes evidence about the effectiveness of patient–physician electronic communication. The emphasis was on the importance of understanding the potential impact of e-communication on patient satisfaction, and on the quality of health care. A review of literature was performed in the area of patient–physician electronic communication, and references were appraised, and synthesized for an overview of benefits and challenges of this model of communication. Electronic communication is becoming popular, has the potential to transform the health care system, and support the patient–physician interaction. Patients are enthusiastic about this convenience model of communication, and feel strongly embraced in communicating via email & web messaging. Although, there is evidence that electronic communication could increase quality of care due to increased interaction and would extend healthcare efficiency, a variety of potential benefits and challenges is reported. Overall, electronic communication introduces a new model of patient-physician interaction that could supplement and reasonably replace a portion of traditional face-to-face encounters. However, further investigation is required to assess its impact on healthcare process efficiency.

Keywords: E-Health, Electronic Communication, Information and Communication Technology, Patient–Physician Interaction, Web Messaging

INTRODUCTION

The Internet is an extremely fast and timely communication channel, which affects every aspect of everyday life. As a result, there is an increasing interest in connecting with consumers and other interested groups through the Internet using different telecommunication systems (Eysenbach, 2000). However, despite the brilliant impact of electronic communication, and its rapid expansion into everyday life and markets, its proliferation has been limited in health care. The healthcare market has taken a conservative approach in the use of electronic communication in routine health care services (Moyer, Stern, & Dobias, 2002). However, the information and communication technology is a powerful tool for health care systems.

On the other hand, the development of telecommunications in the last decade is a direct result of the increasing pervasive Internet use, advances in technology, and increasing patient

DOI: 10.4018/ijrqeh.2013040105
involvement in medical decision making and self-management of care (Oh, Rizo, Enkin, Jadad, & Phil, 2005). Electronic communications are becoming popular within today’s society and have the potential to transform the healthcare system.

Physicians and other health care providers have strong interests in connecting with their patients while patients are eager to use electronic media for communication with their physician (Hassol, 2004; Katz, 2004). In this context, it is worth mentioning that the term ‘consumer’ is slowly taking the place of term ‘patient’ in the literature (Eysenbach, 2000; Ball, 2001). Internet based interactive tools help patients increase their impact on health care by getting both general and detailed information. Health care accessibility increases when patients can contact health care professionals at any hour or are able to retrieve information and leave messages by the same media. Today, patients require not only influence but also active participation in their care and treatment.

In broad terms, the interaction between patients and their physicians through the use of information and communication technology (ICT), for health-related purposes, has been defined as ‘e-health’. E-health has also been defined as the support and delivery of healthcare with electronic tools and as ‘health-related Internet applications delivering a range of content, connectivity and clinical care’ (Wilson, 2004). However, for the purpose of this study, the definition ‘the use of emerging ICT to improve healthcare delivery’ (Eng, 2001) has been adopted. However, there are some terms in the literature, referring to electronic communication in health systems, such as Medical Informatics, Telemedicine, Telehealth, Telecare, and Consumer Health Informatics. The motivation behind the provision of these services is usually to improve healthcare delivery.

Despite the bright view, concerns remain over the type, scope, and extent of the effects & challenges of electronic health communication. Engagement of physicians and patients in e-communication activities is highly dependent on the availability and cost of information technology, as well as the individual’s literacy level with the technology used.

**BACKGROUND**

A number of studies have assessed the effects of internet-based communication tools on the physician-patient relationship (Liderman, 2003; Oh et al., 2005). Moreover, previous studies of Internet-based patient-provider communication include a randomized controlled trial (Katz et al., 2004) and four descriptive studies (Liederman & Morefield, 2003; Sittig, King, Hazelhurst, 2001; Kleiner et al., 2002; Moyer et al., 2002). These studies showed that online messaging between patients and physicians was a powerful means of communication that was well accepted by patients, but it was infrequently used by physicians. However, many of the studies suggest that there is a need for more comprehensive understanding of costs and benefits.

As a result, we examined the effects of electronic communication to both sides of the physician-patient relationship and on quality of care. Articles for the literature review were gathered by means of an online search of Medline, Pub med, CINAHL, Science Direct, and Cochrane databases. Search terms included e-health, electronic communication, web messaging, email, and online communication.

The focus of search was on asynchronous electronic communications in the healthcare environment while the main intention was to identify existing references describing electronic patient–physician communication. Therefore, we focused on two main ways of physician-patient electronic communication, e-mails and messages sent in a web interface (web messaging). The references (title or abstract) should consider electronic patient–physician communication as one of the e-health activities and e-health communication.

Retrieved references were appraised according to their systematic design and quality while an extensive search was performed in
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