Chapter XVI

E-Health Systems: Their Use and Visions for the Future

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Abstract

E-health refers to use of information and communication technologies to improve or enable health and healthcare. E-health broadens the scope of healthcare delivery; citizens are in the center of services and services are offered by information systems often via the Internet. In this chapter e-health systems are classified on the basis of their use and their functionality and the use is discussed from the viewpoints of citizens and health professionals. Citizens are increasingly using Internet and e-health systems to search for medicine or health-related information, and they become better informed and may take more responsibility of their own health. Health professionals are more reluctant to use the Internet and e-health systems in physician-patient communication due to the power and responsibility problems of decisions. In the future the sociotechnical nature of e-health should be considered and future systems developed for real use and user environment with user acceptable technology.
**Introduction**

In the information society it is important to develop and apply technologies in such a way that we empower citizens to play a full role. An essential part of the information society, healthcare services are needed by citizens and should be provided efficiently and made accessible to all (Haglund, 2002). With the information society a new concept, e-health, has been introduced to refer to the use of emerging information technology to improve or enable health and healthcare. Silber (2003) defined e-health as “application of information and communication technologies (ICT) across the whole range of functions that affect health” (p. 3). Eysenbach (2001) gave a broader definition for e-health: An emerging field in the intersection of medical informatics, public health and business, referring to health services and information delivered or enhanced thorough the Internet and related technologies. Alvarez (2002) emphasised the consumer-viewpoint when he defined e-health as a consumer-centered model of healthcare where stakeholders collaborate, utilising ICT and Internet technologies to manage health; arrange, deliver, and account for care; and manage the healthcare system. All these definitions support the conception that e-health means application of information technologies to promote health, and to support healthcare services delivery and use. E-health covers all health strategies: Prevention, treatment, and rehabilitation. It is essential that e-health applications meet the needs of citizens, patients, healthcare professionals, and policy makers. Therefore, evaluation studies are needed to assess the benefits, effects, and impacts of e-health on citizens, professionals, healthcare systems, and healthcare outcomes.

E-health conceptualization broadens the scope of healthcare delivery; citizens are placed at the centre of services, services are in many situations offered to be used through the Internet (e.g., at home) and citizens can have interaction with health professionals who look after their health needs (Silber, 2003; Wilson, Leitner, & Moussalli, 2004). E-health is expected to contribute to development of new ways of delivering health services and to impact on the organisation and structure of the healthcare delivery system. E-health is not only a technological improvement, it is a reengineering of healthcare processes and is of consideration of the sociotechnical aspects of design and development of applications.
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