Chapter 12
Electronic Readiness of Saudi Health Organizations

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ABSTRACT

In this chapter, the author uses a questionnaire as an instrument s to evaluate the use of Information and Communications Technologies (ICT) in Saudi health organizations. Information and Communication Technology has become an important tool for improving the efficiency of health organizations. E-Health applications are increasingly being drawn into evaluating the Internet as a useful source of information on health by end-users. This chapter is an attempt to explore E-Health applications and related implementations issues in developing countries, and in particular Saudi Arabia.

INTRODUCTION

Electronic health or e-health is increasingly becoming an important factor in our daily lives. E-health is an emerging technology that benefits from the emergence of new powerful databases capable of storing, retrieving and managing different health-related information, the effectiveness of the Internet as a tool for communication and collaboration within and beyond the hospital premises, and the high-tech medical and disease diagnosing equipment. These advancements represent the main pillars for innovative new technology applications in the health industry. The availability of technology investment funds and the adoption of appropriate ICT health-strategy are considered vital to promote ICT in the health sector. There are several studies (CSPP, 2000a; Edward, 2003; Al-Omari, 2004) that examined different e-health variables in specific countries' contexts using statistical data from international organisations rather than real data. In contrast this study adapted several e-health variables or indicators to assess the direct use of ICT in health organisations.

The ICT and Development in the Arab countries report (2002) states that e-heath needs a proper infrastructure, with adequate institutional arrange-

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ments and long-range planning, ICT applications can help advance health services in terms of the quality and the extent of dissemination. Notable efforts have been made in Saudi Arabia, where one of the channels on a communication satellite has been employed in setting up a decentralised health information system linking a number of health centres. Several telemedicine initiatives have also been launched in most Arab countries but the majority still lack maturity. In Saudi Arabia, the first organisation to introduce the Internet service was King Faisal Specialists Hospital and Research Centre (KFSHR).

In order to assess the e-health status in a specific country, it is essential to use a comprehensive e-readiness assessment framework that can examines the availability of a range of services and strategies, such as:

- Internet connection at the hospital/health centre
- Databases for use by employees to support the dissemination of telemedicine in health centers
- Internet to communicate/collaborate with other local hospitals
- Internet to communicate/collaborate with other external hospitals
- Telehealth/telemedicine services in hospitals/health centres
- Digital databases to be used in maintaining records
- Websites for major health care facilities
- Interactive websites for major health facilities
- On-line health services for doctors and patients needs
- The Internet to provide on-line consultation service with doctors using e-mail
- ICT health standards and strategies

In this study the author explores key issues or services that are related to electronic health implementations, and specifically investigates critical factors that have potential impact on e-health applications and implementations. The study had the following objectives:

- Evaluate the level of use Information and communications technologies at health organizations in Saudi Arabia as a developing country by examining the above services
- Provide some recommendations for those who are involved in the design or use e-health applications.

BACKGROUND

There is no doubt that Internet creates new opportunities for both public and private sectors. The Internet has the potential to revolutionize healthcare by providing unprecedented access to information as well as health products and services on "e-health sites". Electronic Health applications utilizing Internet websites should be given high priority. E-Healthcare applications are increasingly being drawn into evaluating the Internet as a source of end-user information for health and medicine. World Health Organization defines electronic health as "digital data transmitted, stored and retrieved electronically in support of health care, both at the local site and at a distance" (WHO, 2004).

E-Health as a term is commonly used to describe the application of information and communications technologies for health purposes and when it is used in the context of hospitals' services.E-Health also refers to electronic patient administration system laboratory and radiology information systems, electronic messaging systems, telemedicine, telepathology and teledermatology. While at the domestic end, e-health refers to teleconsults and remote monitoring systems used for diabetes medicine, asthma monitoring and home dialysis systems. The term e-health when used with primary health and clinics refers to the use of computer systems by general practitioners and