

## Chapter 33

# The Importance of Information and Communication Technologies in Establishing Healthcare Services with a Universal Coverage

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### ABSTRACT

*One of the most important challenges faced by the healthcare system is the organization of healthcare services to cope with the increase in population and aging of citizens. Especially in developing countries, demographic movements of the population, regional disparities, political concerns, and increasing expectations of health services have led to a search for new ways to serve all of the population with healthcare services. With traditional methods, it is not possible to increase the supply of health services because of inadequate infrastructure and shortcomings in quantity and quality of healthcare staff. This new health system called e-health and uses all of the possibilities provided by information and communication technologies that aim to improve public health. In this chapter, the effects of e-health practices on the quality and accessibility of healthcare services are assessed and the extent of e-health practices in Turkey are evaluated.*

DOI: 10.4018/978-1-4666-9814-7.ch033

## **INTRODUCTION**

One of the most important problems occurring in offering healthcare services is that the organization of healthcare services becomes difficult due to increase in population and aging effect. Especially in the developing countries, such reasons as demographical waves in population, geographical distribution of population, regional development differences and political concerns and increase in expectation from the healthcare services have lead developing countries into looking for ways of re-structuring the healthcare services to include everybody. In reality, these countries don't have an established healthcare services system and this structure is not possible due to increasing demand of healthcare services via traditional methods, inefficient health infrastructure, and lack of qualified healthcare staff and inefficient funds of these countries.

At this point, technological developments present new solutions offering to meet the mentioned inefficiencies. The use of information and communication technology, which is rapidly developing especially since the beginning of the 21st century in the field of healthcare services, helped eliminate many problems related to the offering of healthcare services and also enabled people living in the developing countries to reach healthcare services. Communication opportunities provided by these technologies have important functions in eliminating the disadvantages resulting from geographical distances, regional development differences and health infrastructure. Especially the increased use of mobile telephones and internet in the last decade resulted in the healthcare services being re-organized via using these technological infrastructures. This increase has also enabled governments and non-governmental organizations to reach disadvantaged regions and people living in these regions via using these opportunities of information and communication technologies.

The new understanding of healthcare services, referred to as e-health, aims to improve individual

and public health by means of using all the opportunities provided by the information and communication technologies. Especially the applications of tele-medicine and m-health increase the quality of healthcare services in the developed countries and also these applications are presenting a role model to realize a universal healthcare system in the case of developing countries.

## **UNIVERSALISM IN HEALTHCARE SERVICES**

The most important issue discussed in the field of healthcare services is whether it is possible to develop a system from which every person is able to benefit. Especially, in many of the developing countries, which do not have an established healthcare system, a significant rate of the population cannot reach the healthcare services or they have to pay for the use of healthcare services due to not having efficient social security. This situation causes the poor and disadvantaged people to be deprived of the healthcare services and also harms public consensus.

The main equity principle for the use of healthcare services is to enable all the citizens to access the healthcare services equally through the existent health institutes (public and private) of the country (NERA, 2009, p. 8). The concept of health is of equal importance for all people. The fact that people are poor or rich and they live in rural or urban area does not create a difference in their needs of health services. However, especially in the developing countries people living in urban areas with a high financial ability benefit from healthcare services much further compared to people living in the rural areas. People living in urban areas also know the procedure to reach the healthcare services better and so they can easily reach both public and private healthcare services. In fact, low cost investments on basic healthcare services made by governments can increase the general healthcare conditions and healthcare

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