

# Chapter 11

## The Impact of Telehealth on the Healthcare Workforce: A Global Perspective

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### ABSTRACT

*The pressures on the health workforce have a profound impact on the quality of care. The solution to health workforce issues is a global concern and governments and health systems around the world are seeking solutions to the problems of worker shortages and access to health services. Education and training of more doctors, nurses, and other health professionals require long-term policy changes, funding, and infrastructure development. Telehealth has been identified as an alternative solution to address some of these critical issues and this chapter outlines the potential of telehealth to address some challenges facing the health workforce. The discussion will provide evidence for feasible and effective adoption of telehealth solutions.*

### INTRODUCTION

The health care sector faces many challenges; in particular the increasing incidence of chronic diseases among a growing aged population has added pressures on healthcare systems worldwide.

The World Health Organization (WHO) predicts that chronic disease will be the leading cause of disability globally by 2020 and will be the most expensive problem facing health care systems (Belfield & Colin-Thome, 2004). For example, caring for people with chronic diseases consumes approximately 78% of all healthcare spending in the United States – more than \$1 trillion annually

DOI: 10.4018/978-1-61520-885-2.ch011

(ITAAe-Health Committee, 2004). Providing care to a rapidly growing aged population has challenged both the developed and developing world.

The healthcare workforce is directly affected by these problems. There is an urgent need for more healthcare workers to meet the increasing demand. However, the difficulty of recruiting and retaining quality healthcare workers has been well documented; for example, there is a consensus that a shortage of doctors is looming in the U.S. and already present in many other countries (Blumenthal, 2004; Cooper, Getzen, Mckee & Laud, 2002). According to the projections of the Health Resources and Services Administration (HRSA) there will be a shortage of approximately 55,000 physicians in the U.S. by 2020. Similarly the shortage of nurses in the U.S. is predicted to escalate to 1 million by 2020 (HRSA, 2006). Australia projects a shortage of 40,000 nurses by 2010 (International Council of Nurses, 2005).

The situation of the health workforce in developing countries is even more critical and dire (Lehmann, Dieleman & Matineau, 2008). A WHO report (2006) indicated that 57 countries (most of them in Africa and Asia) face severe shortages of health workers. More than four million additional doctors, nurses, midwives, managers, and public health workers are urgently needed to fill this gap. According to WHO statistics, sub Saharan Africa is short of 60,000 nurses to meet the Millennium Development Goals (World Health Report, 2003).

An added dimension to this problem is the geographic mal-distribution of the healthcare workforce. The availability of health workers in rural and remote areas is significantly lower compared to their urban counterparts. For example, about 20% of the U.S. population (more than 50 million people) live in rural areas, but only 9% of the country's physicians practice in rural communities (AAMC, 2007).

The World Health Report of 2003 aptly expressed the acuteness of this problem stating "the most critical issue facing health care systems is

the shortage of people who make them work" (World Health Report, 2003, p.1).

The adverse impact of the health workforce shortage cannot be understated. The relationship between the numbers of health workers and population health indicators is well established (WHO, 2006). For example, there is a critical relationship between the number of local health workers and the survival of women during childbirth and children in early infancy (Speybroeck, Kinfu, Dal Poz, & Evans, 2006). An inadequate number of health workers has a profound impact on the quality of care. From the health workers' perspective, the workforce shortage has multiple implications, such as inefficiency, heightened stress levels, and increased medical errors being just a few (Ulrich et al., 2007).

Governments and health systems around the world have been seeking solutions to these problems. Logic dictates that the optimal solution would be the production and training of more doctors, nurses, and other health professionals. However, this requires long-term policy changes, funding, and infrastructure development. Therefore, among alternative solutions, the role of telehealth to address some critical issues has been identified.

## **TELEHEALTH**

Telehealth is an umbrella term used to describe healthcare delivery over distance using information and communication technologies (ICT). A number of terms such as telehealth, telemedicine, online health and e-health are sometimes used interchangeably to describe these ICT applications. Telehealth can be used to perform clinical (i.e., diagnostic and therapeutic) as well as non-clinical (i.e., administrative, education and research) activities.

The evidence shows that if used correctly, telehealth can offer benefits to patients, providers, and health systems (Rosenblatt, 2000; Weiner, 2007).

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