Chapter 7.5
Healthcare Ethics in the Information Age

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ABSTRACT

This chapter reviews key debates about the meaning of telehealth and also considers how new and emerging systems in telehealth work to protect patient confidentiality, improve healthcare relationships, and diminish instances of compromised access and equity in the healthcare system. This chapter also looks at how these same telehealth systems could undermine those goals, making it important to assess the way in which these emerging technologies are implemented. Various technologies are examined to show how their implementation can ensure that their benefits outweigh their risks.

INTRODUCTION

The growing use of information and communication technology (ICT) is producing widespread changes in society. One area in particular that is quickly being transformed by ICT is the field of healthcare. This is evident in the relatively new field of telehealth, which utilizes the Internet, electronic patient records systems, hand-held computers, among other types of ICT. Telehealth has great potential to improve the quality and provision of healthcare services, but there are a number of subtle ethical issues that should be considered as society moves forward with its use. The aim of this chapter is, therefore, to provide an ethical assessment of telehealth. The specific questions this chapter addresses are as follows:

1. What are the distributive justice implications of telehealth? Will medically underserved populations gain greater access to healthcare services? If so, what sorts of tradeoffs, if any, between access and quality will be required?
2. What are the implications of telehealth for provider-patient relationships? For example, will an increase in the quantity of provider-patient interactions lead to a corresponding increase or reduction in the quality of those interactions?
3. What are the implications of telehealth for medical privacy and patient confidentiality?
4. What are the future trends in telehealth and how will they affect patient care and the healthcare system in general?

BACKGROUND

In order to understand what telehealth is, it is necessary to understand its history and its meanings. The literal meaning of the word *telehealth* is *health from a distance*. Combining the word *health* with the Greek prefix *tele*, which means end, far off, or distance, produces this definition. We see similar combinations in the words *telephone*, which literally means, *sound from a distance*, and *telegraph*, which literally means *writing from a distance*.

Various definitions of telehealth are currently in circulation within the healthcare community. One common view of telehealth makes it synonymous with two-way audio-video systems that allow for interactive consults between patients and healthcare professionals. However, other definitions are equally common and may include the use of ICTs (e.g., computers) that capture, store, manipulate, and display medical data but not include the use of interactive communications between patients and healthcare providers. Consequently, a fax machine used to transmit patient medical information or the telemonitoring of a cardiac patient would not count as telehealth under the first definition but would under the second definition (Denton, 1993; Preston, 1994).

Although no universally accepted definition of telehealth exists, there is agreement that any definition of it must include at least three elements: (1) the use of ICT, (2) geographic distance between the participants, and (3) health or medical uses. On the basis of these three characteristics, the Institute of Medicine (IOM) defines telehealth/telemedicine in the following manner:

Telemedicine [telehealth] is the use of telecommunications and information technologies to share and to maintain patient health information and to provide clinical care and health education to patients and professionals when distance separates the participants. (Field, 1996, p. 27)

The IOM's definition can be made more specific, depending on whether (a) emphasis is given to a particular technology (e.g., video conferencing or Internet) (b) a distinction is made between clinical and non-clinical applications, and (c) whether telehealth is conceived of as an integrated system of healthcare delivery rather than a mere collection of electronic tools.

Non-clinical applications of telehealth typically include professional education, healthcare administrative duties, management meetings, research, and the aggregation of health data, but usually exclude medical treatments and decisions for specific patients. Clinical applications of telehealth involve patient care and include medical decisions, diagnostics, and treatments for particular patients. This distinction, however, can be difficult to maintain because some ICT allow for the convergence of non-clinical and clinical activities, for example, when e-mail communications between patients and providers are automatically stored in a computerized record system.

In addition, there are a number of ways in which clinical telehealth can be subdivided. One way is to classify clinical applications by the point of service or the patient's location, for example, rural, correctional, and home. Another classificatory scheme common to clinical telehealth is to organize services by specialization, for example, telepsychiatry and telepathology (Peredina & Allen, 1995; Peredina & Brown, 1995). A third approach is simply to categorize telehealth services in terms of present and future healthcare reimbursement policies, for example, emergency care, follow-up care, consultation, and the transmission of diagnostic images (Grigsby & Kaehny, 1993).

The IOM's tripartite definition of telehealth--geography, ICT, and medicine—can be expanded upon when it is conceived as a system of healthcare rather than as the use of a particular ICT in a healthcare setting. According to one view, a *telehealth or telemedicine system* can be defined as follows: