

Chapter 4

Remote Healthcare

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ABSTRACT

In this chapter, a comprehensive evaluation of remote healthcare is presented, beginning with the definition of the concept and a detailed explanation of the key terms associated with it. Subsequently, the historical background of remote healthcare is examined and then the major benefits and the potential risks of remote healthcare are discussed. Furthermore, the possible challenges that may arise during the integration of remote healthcare services into national healthcare systems are addressed, alongside proposed solutions to these challenges. Afterward, future trends in remote healthcare are analyzed, with a particular focus on emerging issues likely to become prominent in the near future. The chapter concludes with a general evaluation, summarizing the main interests and insights. It is intended that this chapter will serve as a valuable resource for policymakers involved in decision-making processes related to remote healthcare, researchers conducting academic studies in this field, and all stakeholders engaged in the provision, utilization, and financing of remote healthcare.

INTRODUCTION

Advances in remote control and monitoring technology such as wireless connectivity, sensors, and identification along with the Internet of Things (IoT) have changed the way to provide healthcare services enabling remote healthcare, that is e-healthcare, to emerge (Boric-Lubecke et al. 2014). Remote healthcare can be defined as provision and utilization of healthcare services through technology without the necessity of healthcare services providers and users to come together

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physically, and it refers to a broad range of health care aspects including electronic medical records, electronic prescriptions, remote monitoring, and health knowledge management (Jordanova & Lievens, 2011).

Remote healthcare is poised to significantly transform healthcare delivery soon. The worldwide remote healthcare market was thought to value at about 69 billion United States of America (U.S.) dollars in 2024 and is expected to expand at a compound annual growth rate of 21.3% from the beginning of 2025 to the end of 2030. This growth is largely a result of the increasing use of tele-medicine and advancements in digital health tools (Acumen Research and Consulting, 2024; Grand View Research, 2025).

In addition to its expanding economic footprint, the growing role of remote healthcare services in the overall provision of healthcare services is increasingly significant. The proportion of remote healthcare services within total global healthcare delivery varies by region and medical specialty. Nevertheless, recent scientific literature suggests a steady rise in the adoption of these services. Key drivers of this growth include positive consumer attitudes and substantial investments in digital health infrastructure. Furthermore, the SARS-CoV-2 / COVID-19 pandemic has served as a major catalyst, dramatically accelerating the adoption of remote healthcare (Keesara et al. 2020). For instance, it is estimated that the use of remote healthcare increased by a factor of 38 during the pandemic compared to pre-pandemic levels (Bestsenny et al., 2021a). While usage rates have stabilized in the post-pandemic period, remote healthcare is expected to remain a central element of national healthcare strategies. In light of its sustained relevance, policymakers are increasingly called upon to critically assess the benefits and limitations of remote healthcare. This chapter seeks to explore these dimensions and contribute to an informed understanding of remote healthcare's implications for future healthcare policy and practice.

This chapter provides a comprehensive exploration of issues related to remote healthcare. Initially, it offers a detailed definition of remote healthcare and presents key concepts that form the foundation of this emerging field. This is followed by a subsection that focuses on the historical development of remote healthcare, offering insights into how the concept has evolved over time and gained significance in contemporary health systems.

Subsequently, the chapter examines both the advantages and the challenges associated with the implementation of remote healthcare practices. The benefits are considered from various perspectives, including patient accessibility, cost-effectiveness, and healthcare system efficiency, while the challenges are discussed in terms of technological limitations, data security concerns, and the need for regulatory frameworks.

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