

Chapter 16

Exploring Telemedicine Scope: A Deep Dive Into Malaysia's Landscape

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ABSTRACT

The integration of current technology and medical practices continuously delivers positive impacts directly to the community. The synergy between these two contexts also directly opens up numerous potentials for usage towards the public. One technology that is gaining attention nowadays is telemedicine. Telemedicine has the potential to revolutionize healthcare delivery, but its effectiveness and impact are still questioned in terms of positive outcomes and suitability for specific countries. Therefore, this study focuses on exploring the extent of usage and its impacts on telemedicine in the context of Malaysia. This study will delve deeply and comprehensively into various aspects such as constraints, progress, and opportunities of

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telemedicine in Malaysia. This study's findings will offer a comprehensive overview of telemedicine use in Malaysia, benefiting many stakeholders. Additionally, these results can provide insights into telemedicine in neighboring ASEAN countries.

INTRODUCTION

Telemedicine? This term is not new when considering its historical usage. Telemedicine is defined as the delivery of healthcare services using information and communication technology (ICT) (Intan Sabrina & Defi, 2021). Various services can be performed through telemedicine, including treatment, diagnosis, prevention of disease or injuries, and education (Pengput & Schwartz, 2022; Zailani et al., 2014). Other terms for telemedicine include telehealth or eHealth (Intan Sabrina & Defi, 2021). Additionally, examples of technologies used to implement telemedicine include telephones, the internet, or computers. In other words, medical practitioners and patients use technologies like computers or telephones to discuss or disseminate information in a healthcare context over certain distances.

The development of telemedicine can be traced back conceptually to the Civil War in the 1860s (Sun et al., 2021). During this time, practitioners used the telegraph to transmit and convey medical information from one location to another (Zundel, 1996). Examples of such medical information include medical supplies and casualty lists (Zundel, 1996). The use of the telegraph can be considered an early prototype of telemedicine (Sun et al., 2021). Additionally, an interesting fact is that the concept of telemedicine was discussed as early as 1879, with the possibility of using the telephone to reduce unnecessary visits to hospitals or treatment centers (Mun & Turner, 1999). This clearly shows the longstanding need for telemedicine. Relatively, the development of telemedicine has progressed rapidly to the present day.

In the 1940s, a significant milestone in telemedicine occurred when radiology photographs were used to transfer medical data between two districts in Pennsylvania, 24 miles apart (Hisan et al., 2022). This marked the world's first example of telemedicine (Hisan et al., 2022). This is achieved by using telephone lines (Hisan et al., 2022). In the 1950s, the history of telemedicine recorded further development when a Canadian radiologist used telemedicine in and around Montreal (Sun et al., 2021). The radiologist conducted telemedicine using telephone lines to transport radiologic images (Sun et al., 2021). In 1959, the University of Nebraska implemented telemedicine by using two-way interactive television to transmit neurological examination results to medical students (Hisan et al., 2022). This was successfully carried out across the entire University of Nebraska campus (Hisan et al., 2022). The success at the University of Nebraska was related to advancements in television technology and the space flight program in the United States (Sun et al., 2021).

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