Investigating the Role of Technology Adoption in Sustainable Healthcare Management for Non-Communicable Disease Patient in Malaysia

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ABSTRACT

The integration of technology in healthcare offers transformative potential, particularly in managing Non-Communicable Diseases (NCDs) among the elderly. However, elderly populations in Malaysia face challenges in adopting digital health solutions due to factors such as limited digital literacy, healthcare accessibility issues, and policy constraints. Understanding these barriers is crucial to enhancing patient engagement and improving health outcomes. While technology adoption can improve healthcare efficiency, it also raises concerns about environmental sustainability, including carbon emissions from telemedicine and the management of electronic waste (e-waste). Addressing these challenges requires a comprehensive approach that considers both the benefits and potential drawbacks of technology integration in healthcare. Malaysia is undergoing a significant demographic shift toward an aging population. In 2024, individuals aged 65 and above constituted approximately 7.7% of the total population, equating to about 2.6 million people (Malay Mail, 2024). This aging trend is expected to accelerate, making elderly healthcare management a pressing concern. At the same time, the prevalence of NCDs in Malaysia has escalated. Recent data indicates that nearly 2.3 million adults suffer from three major NCDs, including diabetes, hypertension, high cholesterol, or obesity. Specifically, 16% of adults have diabetes, 29% have hypertension, and 33% have high cholesterol (CodeBlue, 2024). Alarmingly, NCDs account for approximately 72% of all premature deaths in the country (World Health Organization, 2024).

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