

Chapter 8

Overcoming the Digital Frontier: An Examination of Indonesia's NHS E-Health Plan and Medical Revolution

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ABSTRACT

In order to traverse the digital frontier, a socio-technical review of Indonesia's NHS e-health strategy identifies important obstacles and suggests a cutting-edge socio-technical model to direct future initiatives. The research examined technological interoperability issues and socio-organizational hurdles while analyzing the NHS's e-health plan within pre-existing frameworks and international best practices. Significant obstacles were identified by the findings, including budgetary limitations, cybersecurity risks, and clinical opposition. A new socio-technical paradigm was put out that advocates a change in emphasis from EHRs to inter-organizational clinical and social care workflow optimization. The model incorporates elements of "lifecycle" and "purpose." The approach advocated developing national standards and infrastructure in conjunction with government budgetary support, with a focus on interoperability and cybersecurity. This calculated reorientation ensures a comprehensive and long-lasting change in the healthcare environment by offering a path forward for upcoming e-health projects in Indonesia.

DOI: 10.4018/979-8-3693-2141-6.ch008

1. INTRODUCTION

The 2020 launch of the National Health Service (NHS) e-health program is bringing about a radical transformation of Indonesia's healthcare landscape (Bhaskar et al., 2020). With the ambitious goal of becoming paperless at the point of treatment by 2023, the strategy emphasizes interoperability as the electronic glue that ties the transfer of patient data across organizations (Khandelwal et al., 2023). This exploratory socio-technical study fills in important knowledge gaps in the field by illuminating the intricate dynamics driving the development of the approach. This research explores the unexplored realm of socio-technical factors, exposing cultural hurdles, finance issues, and unanticipated changes in program structures. E-health projects are widespread but rife with potential dangers (Stoumpos et al., 2023). The results highlight the need for a "middle-out" strategy but also show how unrealistic the deadline is. Notable operational difficulties, such as delayed financing and unsettling government reorganizations, and cultural barriers, like opposition from physicians, are noted. To improve strategy viability, a unique socio-technical model is developed that adds "Lifecycle" and "Purpose" components. The proposal focuses on interoperability and cybersecurity and advocates for a purposeful shift towards improving the workflow of social and clinical care across organizations. Electronic health records should not be given as much priority as national infrastructure, standards, and procedures. The study signified a substantial shift in the direction of the NHS e-health strategy in Indonesia, urging government financial backing for initiatives across the whole health industry. The complexities of the socio-technical assessment are explained in this chapter, opening the door to a more sophisticated comprehension of the difficulties and a tactical road map for future achievement.

The study findings have particular relevance for the Indonesian National Health Service (NHS) and might be helpful to a wide range of individuals engaged in the planning, execution, and evaluation of e-health projects. The following people or organizations may gain from the findings: The findings may be used by policymakers to improve and modify current e-health policies, making sure they take into account the identified socio-technical factors and remove any obstacles. The study may be used by government officials who oversee healthcare spending and regulations to make well-informed choices about budgeting, resource allocation, and regulatory frameworks. When adopting e-health methods, healthcare managers may get strategic insights into overcoming technological, financial, and cultural hurdles. The data may be used by organizational leaders in the NHS and other healthcare organizations to make well-informed choices on staff training, technology adoption, and the overall digital transformation. Healthcare-focused IT workers and consultants may gain insight from knowing the subtleties of the "middle-out" approach, such as the importance of cybersecurity, interoperability, and the difficulties in choosing IT vendors. Healthcare professionals and clinicians may learn more about the cultural obstacles and concerns related to the adoption of e-health. For technology and healthcare workers to successfully connect and collaborate, it is imperative that these viewpoints be understood. Healthcare technology solution providers may modify their services to better suit the unique needs of the Indonesian market in light of the study's findings. On the basis of the results, scholars and researchers may explore the socio-technical facets of e-health tactics. This adds to the body of knowledge on the use of healthcare technology in an efficient manner. Advocacy organizations and patients may get an indirect advantage as well as effective e-health initiatives enhance the quality of treatment provided. Comprehending the obstacles and suggested remedies enables patients to participate in and endorse digital healthcare endeavors. The findings may be used by international health organizations to make comparisons and provide guidance to other nations or areas that are implementing comparable e-health programs. This encourages inter-

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