Health Service Standards in The Era of Digitalization

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Abstract

The healthcare industry has experienced profound changes due to the rapid development of digital technology. This transformation affects many aspects of health services, including how services are delivered, accessed, and managed. Digital technology brings many opportunities to improve the quality, efficiency and accessibility of health services. Method: Qualitative methods and literature studies were used to evaluate policies related to the use of digital technology in public health services. Literature studies involve in-depth analysis of scientific journals, research reports, policies, and other documents related to the use of digital technology in health services. Research Results: This research discusses the urgency and challenges of accelerating digital transformation in health services, including quality data integration, standardization, and infrastructure development. The study found that digital technology makes it easier to access services, but presents challenges such as data privacy and information security. The government is trying to overcome these obstacles by developing telecommunications infrastructure, data integration, and implementing electronic-based government systems to expand the digitalization of health services in Indonesia.

Keywords: Digital transformation, health services, digitalization

1. INTRODUCTION

The healthcare industry has experienced profound changes in recent decades driven by the rapid development of digital technology. This transformation has influenced many aspects of healthcare, including how services are delivered, accessed, and managed by providers, patients, and other stakeholders. Digitalization brings many opportunities to improve the quality, efficiency and accessibility of healthcare services. The use of digital technology has changed various aspects of human life, including in the field of public health. Public health services are efforts made by the government and various related institutions to maintain, improve and protect public health as a whole. In this digital era, digital technology provides great potential for optimizing public health services through increasing efficiency, accessibility and service quality. This article aims to conduct a policy analysis review regarding the use of digital technology in public health services (Fahey & Hino, 2020). Advances in digital technology have enabled a transformation in the way we access information, communicate, and interact with the health system. The application of digital technology in public health services includes various innovations such as online platforms, telemedicine, mobile applications, big data analytics, artificial intelligence and the Internet of Things (IoT). With the help of this technology, individuals can easily access health information, conduct remote consultations with medical personnel, manage electronic medical records, and monitor health conditions independently (Firdaus et al., 2021). Technological innovation will impact all aspects of human life. In the health sector, for example, non-formal health institutions/institutions are starting to emerge, changes in patient service patterns in hospitals, and also changes in communication patterns between patients and doctors (Rahim, 2019). With the largest Muslim population, Indonesia needs to look at this more seriously, especially in relation to providing universal health services. Even though digitalization can provide convenience for society. However, in practice, digital-based health services are not completely easy and have several things that are still being debated about the pros and cons.

Appropriate policies need to be formulated to optimize the benefits of digital technology in public health services while maintaining personal data protection and fairness of access. Collaborative efforts between

government, health institutions, the private sector and civil society are key in formulating and implementing these policies. Additionally, it is important to identify and overcome barriers to the implementation of digital technologies, such as lack of digital skills, resistance to change, and infrastructure constraints (Brall et al., 2019). One of the things that needs to be deepened is regarding public health service policies. In its development, health services are not limited to physical health only, but can also include mental health services which involve diagnosis, treatment and psychological support for individuals who experience mental disorders or mental health problems. This includes counseling, therapy, and other psychological interventions. Health care also involves the use of medical technology and medical devices used for diagnosis, treatment, and monitoring of health conditions. This includes medical examinations, laboratory tests, radiology, surgery, and the use of medical aids (Rosyanti & Hadi, 2020). However, the integration of digital technology in health services also presents challenges. Issues such as data privacy, information security, and system interoperability must be addressed to protect patient data and ensure smooth workflow. In addition, gaps in technology access between different societal groups can create inequities in access to quality health services. This research aims to identify and evaluate existing health service standards in the context of digitalization, including how digital technology affects the delivery and quality of health care. Therefore, it is important to develop health service standards that are in line with the era of digitalization. These standards must consider quality of care, data security, information integrity, and inclusivity of technology access. These standards should ensure that digital technologies are used optimally and ethically to improve health services for all parties involved.

2. METHODOLOGY

A qualitative approach and literature study methods were used to answer research questions regarding the use of digital technology in public health services. The literature study method is applied to collect and analyze various sources of information relevant to the research topic. Literature studies involve in-depth analysis of scientific journals, books, research reports, policies, and other documents related to the use of digital technology in public health services. This method allows researchers to evaluate the latest developments and findings in this field, as well as develop a solid theoretical framework.

3. RESULTS AND DISCUSSION

Health Services and Advances in Digital Technology

Advances in digital technology have significantly changed the healthcare sector, enabling patients to consult doctors, order medicines and receive treatment at home through mobile applications. Electronic medical records and electronic decision support systems help doctors provide more appropriate care. However, these advances also pose challenges such as side effects from teleconsultations, access to drugs without a prescription, and lack of adequate regulation. This complexity makes the government slow in making e-Health regulations, even though the Ministry of Health has issued related regulations (Kominfo, 2019). New approaches are needed to accelerate e-Health regulations that are more adaptive to disruptive innovation. Regulators and market players must work together to explore innovative business models and develop regulatory content. Currently, the Ministry of Health has a draft regulation regarding telemedicine based on the experience of testing the Telemedicine Indonesia (Temenin) application. Policy options are in the hands of the Ministry of Health to determine whether to regulate innovations created by the government itself or open opportunities for e-Health industry players outside the government (Kominfo, 2019).

Digitalization of Health Services Based on Fast and Accurate Data

The government is trying to improve the quality of health services for the community through digitalization and information technology-based innovation. The Coordinating Minister for Human Development and Culture (Menko PMK), Muhadjir Effendy, emphasized the importance of expanding the digitalization of health services to attract more people to become National Health Insurance (JKN) participants, in line with the targets of the 2020-2024 National Medium Term Development Plan (RPJMN). At the BPJS Health annual meeting, Muhadjir highlighted the speed and accuracy of data as an important factor in implementing the JKN program to improve the quality of health services. The use of big data and big data analytics during the COVID-19 pandemic shows the potential for developing technology such as the internet of things, artificial intelligence and automation of health services (Coordinating Ministry for Human Development and Culture, 2021). The PMK Minister also emphasized the importance of valid and accurate data to produce reliable information and make the right decisions. Therefore, the Coordinating Ministry for Human Development and Culture will continue to monitor the policies and implementation of the JKN program to ensure the quality of health facilities in Indonesia remains high. The government is committed to supporting the digitalization of health services to provide benefits

to society and maintain the quality and accessibility of health services throughout Indonesia (Coordinating Ministry for Human Development and Culture, 2021).

Digitalization of the Health Sector Makes Public Access Easier

Chief Digital Transformation Office of the Indonesian Ministry of Health, Setiaji, stated that digitalization of the health sector needs to involve cross-sectors to make it easier for people to access health services. In the APL Digital Summit 2022 discussion, he emphasized the importance of cross-sector collaboration to ensure equitable access and distribution of health services. The Ministry of Health released the 2024 Health Digital Transformation Strategy Blueprint to map the path for digitalization of health services in Indonesia, aiming to simplify people's access to health services without reducing quality (Ministry of Health, 2022). Boston Consulting Group (BCG) Managing Director Sumit Sharma highlighted the growth of local health technology due to the COVID-19 pandemic. Use of health apps increased by 57% in Indonesia, making it the third largest market. Digital transformation in the healthcare sector is needed to increase healthcare resilience and fight counterfeit medicinal products with integrated data solutions. eZTracker's blockchain solution helps authenticate products and optimize supply chains. PT Anugerah Pharmindo Lestari supports health digitalization by holding the APL Digital Summit 2022, which connects key players in the health sector. The panel discussion discussed digital hospital trends, the role of AI and machine learning, and technology in the health sector (Ministry of Health, 2022).

Accelerating Service Digitalization, Ministry of Health Issues KMK SPBE and Health Digital Transformation Strategy

The Indonesian Ministry of Health (Kemenkes) has issued Minister of Health Decree (KMK) Number HK.01.07/MENKES/1559/2022 concerning the Implementation of Electronic-Based Government Systems in the Health Sector and the Health Digital Transformation Strategy. This KMK details the technical implementation of the 2024 Health Digital Transformation Strategy Blueprint and regulations regarding medical records. SPBE or e-government is the Ministry of Health's effort to utilize information and communication technology to improve services and government governance (Ministry of Health, 2022). The Ministry of Health has developed the SATUSEHAT platform and community health application (CHA) as part of its health digital transformation strategy. SATUSEHAT integrates individual health data between health service facilities in the form of electronic medical records. SATUSEHAT integration trials have been carried out in Java-Bali, and the target is that 12,000 health service facilities will be ready to be integrated with this platform by the end of the year. CHA was also developed to make it easier for people to monitor their health conditions and encourage more personalized and precise health services. The issuance of KMK can accelerate digital health transformation efforts, encourage health industry synergy, and improve services by utilizing continuously developing technology (Ministry of Health, 2022).

The Urgency and Challenges of Accelerating Digital Transformation in Health Services in Indonesia

The urgency and challenge of accelerating digital transformation in health services in Indonesia is related to the need to increase the efficiency and accessibility of health services for the community through the use of digital technology. Factors driving the urgency of accelerating digital transformation in health services include the growth of primary and secondary health care facilities and increasing demand for access to digital health services. The growth of primary (such as community health centers) and secondary (such as hospitals) health service facilities in Indonesia continues to increase from year to year. This increase requires digitization of services to support the efficiency and quality of health services. Digitalization can help better manage and distribute resources and improve patient experience (DPR RI, 2022). The main challenges in digital transformation of health services in Indonesia include routine and quality data integration. More than 80% of health service facilities have not been integrated with digital technology, resulting in data fragmentation and access difficulties for health workers. In addition, regulatory limitations related to standardization and data exchange hinder the digitalization process. Data fragmentation is increasingly exacerbated by the large number of applications and data being scattered, so that recording health data becomes inefficient. Another challenge lies in pharmaceutical services and medical devices, where the lack of standardization of company codes, products and raw materials results in separate data across various agencies. Health security also faces obstacles with a health surveillance system that is not yet real-time and less responsive, causing difficulties in mapping disease risk. Lastly, the shortage of health workers in hospitals and community health centers affects the accuracy of data analysis and health services as a whole (DPR RI, 2022). The Ministry of Communication and Information supports the digital transformation of health services by providing telecommunications infrastructure, including

the construction of new Base Transceiver Stations (BTS), construction of internet access points, and construction of national data centers. This aims to ensure the availability of access to digital technology in all health service facilities in Indonesia. Overall, accelerating digital transformation in health services in Indonesia requires a holistic approach, including routine and quality data integration, standardization and data exchange, as well as the development of adequate infrastructure. In this way, health services can become more efficient, accurate and easily accessible to the public (DPR RI, 2022).

4. CONCLUSION

Advances in digital technology have brought significant changes to the health sector in Indonesia, allowing patients to consult doctors, order medicine and receive care at home via mobile applications. However, key challenges in the digital transformation of healthcare include routine and quality data integration, as well as regulatory limitations regarding data standardization and exchange. Data fragmentation caused by the large number of applications and scattered data is also an obstacle to the efficiency of recording health data. In addition, there are challenges in pharmaceutical services and medical devices, such as a lack of standardization of company codes, products and raw materials. The government is trying to overcome this challenge through developing telecommunications infrastructure, data integration, and implementing an electronic-based government system in the health sector to expand the digitalization of health services in Indonesia.

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