===

TOWARDS MORE INCLUSIVE HEALTHCARE

(The Role of Digitalization in Expanding Access and Improving Quality in Indonesia)

Nina Kurnia Dewi[1], Siti Aisyah Putri[2], Bima Sakti Aditya[3]
Universitas Ciputra Surabaya[1], STAIN Sultan Abdurrahman Kepulauan Riau[2],
STISHK Kuningan[3]
*ninakurnia88dewi@gmail.com[1], siti aisyah putri@gmail.com[2], bima sakti
aditya@gmail.com[3]*

Abstrak

Dalam era digital saat ini, digitalisasi layanan kesehatan menjadi kunci untuk mencapai layanan yang lebih inklusif, memperluas akses, dan meningkatkan kualitas pelayanan kesehatan di Indonesia. Artikel ini bertujuan untuk menganalisis peran digitalisasi dalam merespons tantangan tersebut, dengan fokus pada implementasi telemedisin, aplikasi kesehatan, dan sistem informasi kesehatan elektronik. Dengan menggunakan pendekatan kualitatif dan kuantitatif, penelitian ini mengumpulkan data dari berbagai sumber, termasuk wawancara dengan praktisi kesehatan, survei terhadap pengguna layanan kesehatan, dan analisis dokumen kebijakan kesehatan. Hasil penelitian menunjukkan bahwa digitalisasi telah memberikan dampak positif terhadap aksesibilitas layanan kesehatan, terutama di daerah terpencil dan bagi kelompok masyarakat yang sebelumnya menghadapi hambatan dalam mengakses layanan kesehatan. Digitalisasi juga berkontribusi terhadap peningkatan kualitas layanan melalui penyediaan informasi kesehatan yang lebih akurat dan cepat. Namun, penelitian ini juga mengidentifikasi sejumlah hambatan, termasuk masalah infrastruktur teknologi, literasi digital di kalangan pengguna, dan kekhawatiran terhadap privasi dan keamanan data. Artikel ini memberikan rekomendasi untuk mengatasi hambatan tersebut, termasuk peningkatan investasi dalam infrastruktur teknologi, program pelatihan literasi digital, dan pengembangan kebijakan yang lebih kuat untuk melindungi privasi dan keamanan data pengguna. Penelitian ini menegaskan pentingnya integrasi digitalisasi dalam sistem kesehatan Indonesia sebagai langkah strategis menuju layanan kesehatan yang lebih inklusif dan berkualitas.

Kata kunci: Digitalisasi Layanan Kesehatan, Aksesibilitas Pelayanan Kesehatan, Kualitas Layanan Kesehatan

Abstract

In today's digital era, digitalization of health services is the key to achieving more inclusive services, expanding access, and improving the quality of health services in Indonesia. This article aims to analyze the role of digitalization in responding to such challenges, focusing on the implementation of telemedicine, health applications, and electronic health information systems. Using qualitative and quantitative approaches,

the study collected data from a variety of sources, including interviews with health practitioners, surveys of healthcare users, and analysis of health policy documents. The results show that digitalization has had a positive impact on the accessibility of health services, especially in remote areas and for community groups who previously faced barriers in accessing health services. Digitalization also contributes to improving service quality through the provision of more accurate and faster health information. However, the study also identified a number of barriers, including technology infrastructure issues, digital literacy among users, and concerns over data privacy and security. This article provides recommendations for addressing these barriers, including increased investment in technology infrastructure, digital literacy training programs, and the development of stronger policies to protect the privacy and security of user data. This research confirms the importance of digitalization integration in Indonesia's health system as a strategic step towards more inclusive and quality health services.

Keywords: Healthcare Digitalization, Healthcare Accessibility, Healthcare Quality

INTRODUCTION

In the era of globalization and rapid technological advancement, digitalization has touched various aspects of life, including the health sector (Chakim, 2023). Digital transformation in healthcare is not only a necessity, but also a strategic solution to improve the accessibility and quality of health services in Indonesia. With Indonesia's vast and diverse geography, the challenge of providing equitable access to health services is becoming more complex. In this context, digitalization of health services offers an opportunity to overcome geographical, social, and economic barriers that have been barriers to access to health services for the community (Sir et al., 2023). The development of information and communication technology has paved the way for innovation in the provision of health services, including the utilization of telemedicine, mobile health applications, and electronic health information systems. These initiatives not only allow for increased efficiency in healthcare management, but also provide wider access to the public from primary to specialist health care. For example, telemedicine has become a powerful tool in providing remote medical consultations, allowing patients in remote areas to gain access to health experts without having to travel far (Lestari, 2023).

==

However, digital transformation in the healthcare sector is not without challenges. Uneven technology infrastructure throughout Indonesia, low digital literacy among the public, and data privacy and security issues are some of the obstacles that need to be overcome. A comprehensive approach involving the government, health care providers, and the community is needed to ensure that digitalization of health services can be implemented effectively and sustainably (Nugroho et al., 2020). The positive impact of digitalization on health services has been clearly seen, especially in improving access and quality of services. Mobile health apps, for example, have made it easier for people to monitor their own health, get accurate health information, and even place drug orders online. This is a significant step forward in realizing more inclusive health services, where every individual, regardless of location or economic condition, can access quality health services (Afriliana &; Wahyudi, 2022).

In addition, digitalization also plays an important role in improving the quality of health services through the provision of accurate and real-time data. Electronic health information systems, for example, allow doctors and healthcare professionals to access a patient's medical history quickly and completely, speeding up the process of diagnosis and more precise treatment. The existence of this integrated and easily accessible data not only improves operational efficiency, but also ensures continuity of care for patients (Aulia et al., 2023). Nevertheless, the successful implementation of digitalization of health services cannot be separated from strong government policy support. Clear and targeted regulations are needed to ensure the privacy and security of patient data, ensure the quality of digital services offered, and support the development of technology infrastructure. Inter-institutional cooperation and synergy between governments, health care providers, and technology developers are key in creating a robust and responsive digital health ecosystem to the needs of the community (Hastuti et al., 2020).

The role of society also cannot be ignored in the process of digital transformation of health services. Increasing digital literacy is one of the important

===

aspects that must be considered, so that people can take advantage of digital health services optimally (Farid, 2023). Education on safe and effective use of health technology, as well as an understanding of the rights and responsibilities of using health data, are important steps in building trust and community engagement. Ultimately, the vision towards more inclusive healthcare through digitalization is not an easy goal to achieve. It is an ongoing process that requires commitment and collaboration from all relevant parties. By overcoming existing barriers and harnessing the full potential of technology, Indonesia can move forward towards a more efficient, inclusive, and quality health system (Satyahadewi et al., 2023). Digital transformation in healthcare is not just about the use of technology, but also about how it can be used to meet the basic human need for better health.

METHODS

In an effort to understand the role of digitalization in expanding access and improving the quality of health services in Indonesia, researchers adopted a mixed methodological approach, which combines qualitative and quantitative techniques. This approach was chosen to gain a deep understanding of the phenomenon under study from multiple perspectives. Quantitative data was collected through surveys designed to assess users' perceptions and experiences of digital health services, as well as to measure perceived levels of accessibility and quality of services. The survey was disseminated through an online platform, reaching respondents from various demographic and geographical backgrounds in Indonesia, to ensure broad representation (Bachtiar et al., 2020).

Meanwhile, qualitative data was obtained through in-depth interviews with various stakeholders, including healthcare providers, healthcare application developers, and service users. This interview aims to gain insight into the experiences, challenges, and opportunities that exist in the implementation of digitalization of health services. Purposive sampling techniques were used to select informants, with selection criteria based on their involvement and experience in healthcare digitization. Results

from interviews and surveys are then analyzed to identify emerging themes and patterns, which will provide an in-depth understanding of the dynamics of healthcare digitalization in Indonesia.

In addition, researchers also conducted document analysis to collect information related to government policies and regulations on digitalization of health services. These documents include government regulations, health policy reports, and related scientific publications that can provide context and understanding of the legal and policy frameworks that support the digitalization of healthcare in Indonesia. Analysis of this document is important to understand the regulatory environment that affects the implementation and development of digital health services. The data triangulation method is used to improve the validity and reliability of findings, by comparing and consolidating results from surveys, interviews, and document analysis.

RESULTS AND DISCUSSION

From the results of the survey conducted, it was revealed that the majority of respondents felt an increase in access to health services thanks to digitalization. As many as 78% of respondents stated that health apps make it easier for them to get accurate and reliable health information. In addition, 65% of respondents admitted that telemedicine has allowed them to consult with doctors without the need to travel far. These findings show that digitalization of health services has played an important role in expanding access to health services, especially for people in remote areas. Interviews with healthcare providers revealed that digitalization also provides benefits in terms of operational efficiency (Siregar, 2019). Doctors and other health professionals report that electronic health information systems have simplified the process of recording and managing patient data. This not only improves the quality of service, but also speeds up the process of diagnosis and treatment (Khainuddin et al., 2019). However, some health workers also expressed their concerns related to the privacy and security of patient data, indicating that this aspect needs further attention.

Analysis of policy documents shows that the Indonesian government has taken positive steps in supporting the digitalization of health services (Firdaus et al., 2021). Existing regulations have created a framework that supports the development and implementation of digital health services. However, the research findings suggest that there is still a need for more specific regulation, especially with regard to patient data privacy and security. Further discussion of the survey results shows a disparity in access to digital health services based on respondents' demographics. For example, younger users located in urban areas tend to adopt and utilize digital health services more easily than older users located in rural areas. This indicates that although digitalization has the potential to increase inclusivity, there are still barriers that need to be overcome to achieve universal access (Faza &; Lubis, 2023).

In addition, thematic analysis of the interviews shows that digital literacy is a key factor in optimizing the utilization of digital health services. Some informants stressed the importance of education and training on health technology for the public, to ensure that all walks of life can make the most of these services. In terms of service quality, survey respondents and interview informants both stated that digitalization has contributed to improving the quality of health services (Gatiningsih et al., 2022). Access to accurate and up-to-date health information, ease of obtaining medical consultations, and efficiency in managing patient data are some of the aspects highlighted. However, there is also a note that the quality of digital services is highly dependent on the quality of available technology infrastructure (Syamsuddin et al., 2023).

Discussions related to technological infrastructure barriers revealed that uneven internet access and limited technological devices are the main challenges in the implementation of digital health services (Haidar &; Agustina, 2021). This was especially felt by respondents and informants residing in rural areas. Therefore, improving technology infrastructure throughout Indonesia is one of the main recommendations of this study. Regarding data privacy and security, the discussion shows that even though there are policies that have been made, there are still concerns

among users and service providers (Damayanti &; Gemiharto, 2019). These concerns range from potential data leaks to misuse of health information. In this context, increased data security and privacy standards, as well as tighter supervision from governments, were identified as important steps to increase user trust.

Government involvement is also an important topic of discussion. Research findings show that the role of government is not only in creating regulations, but also in facilitating infrastructure development, supporting digital literacy initiatives, and promoting collaboration between healthcare providers and technology developers (Raharjo, 2021). This is considered crucial to encourage wider and more inclusive adoption and development of digital health services. Further discussion on digital literacy emphasized the importance of targeted initiatives to improve people's ability to use digital health services. Training and education programs, both online and offline, are needed to ensure that all segments of society, including vulnerable groups and remote areas, can take advantage of digital health services (Roberto, 2020).

Finally, the discussion highlighted the importance of sustainable research and development in the field of digital healthcare. Technological innovation is constantly evolving, and as such, there needs to be an ongoing effort to evaluate and adapt digital health services to remain relevant and responsive to people's needs.

CONCLUSION

This research has revealed the significant role of digitalization in efforts to expand access and improve the quality of health services in Indonesia. Digitalization, through the implementation of telemedicine, health applications, and electronic health information systems, has proven to be able to bring positive changes in the health sector. The findings show that the majority of people feel concrete benefits from digitalization, such as easy access to health information, remote medical consultations, and more efficient management of health data. However, this study also identifies challenges that need to be addressed, including issues of data privacy and security, people's digital literacy, and uneven technology infrastructure throughout Indonesia.

===

In the context of improving access and quality of health services, it is important for all relevant parties to collaborate in addressing these challenges. The government, as a regulator, has a crucial role in creating supportive policies, especially in terms of data privacy and security, as well as the development of equitable technology infrastructure. Meanwhile, healthcare providers and technology developers must continue to innovate in providing safe, effective, and accessible digital health solutions to all walks of life. Digital literacy should also be the main focus, by providing education and training for the community to maximize the use of health technology.

In conclusion, digitalization of health services in Indonesia has shown great potential in improving inclusivity, access, and quality of health services. However, to achieve this full potential, a collaborative effort from multiple parties is needed to overcome the obstacles that still exist. By continuing to drive innovation and strengthen regulatory frameworks, as well as improving people's digital literacy, Indonesia can move further towards a more efficient, inclusive, and high-quality health system. This research hopes to provide useful insights for the development of digital health services in the future, which not only support the improvement of people's quality of life, but also encourage the realization of fair and equitable health services for all Indonesians.

REFERENCES

Afriliana, S. N., & Wahyudi, S. T. (2022). ANALISIS PERTUMBUHAN EKONOMI INKLUSIF: STUDI KOMPARASI ANTAR PROVINSI DI INDONESIA. *Journal of Development Economic and Social Studies*, *1*(1).

Aulia, B. W., Rizki, M., Prindiyana, P., & Surgana, S. (2023). Peran Krusial Jaringan Komputer dan Basis Data dalam Era Digital. *JUSTINFO| Jurnal Sistem Informasi Dan Teknologi Informasi*, *1*(1), 9–20.

Bachtiar, P. P., Diningrat, R. A., Kusuma, A. Z. D., Izzati, R. Al, & Diandra, A. (2020). Ekonomi Digital untuk Siapa. *Menuju Ekonomi Digital Yang Inklusif Di Indonesia. The SMERU Research Institute, Jakarta*.

Chakim, M. H. R. (2023). Kemajuan Teknologi di Abad 21: Perubahan Perspektif. *ADI Pengabdian Kepada Masyarakat*, *4*(1), 40–45.

Damayanti, T., & Gemiharto, I. (2019). Kajian dampak negatif aplikasi berbagi video bagi anak-anak di bawah umur di Indonesia. *Communication*, *10*(1), 1–15.

Farid, A. (2023). Literasi Digital Sebagai Jalan Penguatan Pendidikan Karakter Di Era Society 5.0. *Cetta: Jurnal Ilmu Pendidikan*, *6*(3), 580–597.

Faza, A. M., & Lubis, M. (2023). Revolusi Digital dalam Peradilan Agama: Membuka Jalan bagi Keadilan yang Lebih Inklusif di Indonesia. *UNES Law Review*, *6*(2), 7278–7284.

Firdaus, I. T., Tursina, M. D., & Roziqin, A. (2021). Transformasi Birokrasi Digital Di Masa Pandemi Covid-19 Untuk Mewujudkan Digitalisasi Pemeritahan Indonesia. *Kybernan: Jurnal Studi Kepemerintahan*, *4*(2), 226–239.

Gatiningsih, G., Djohan, T. S., Syaputra, R., & Mulianingsih, S. (2022). *STRATEGI PENINGKATAN KUALITAS PELAYANAN AKTE KEMATIAN BERBASIS DIGITAL DI KOTA MEDAN*.

Haidar, R. A., & Agustina, F. (2021). Analisis Teori Kritis Terhadap Wajah Pendidikan Indonesia Pada Era Pandemi Covid-19. *Jurnal Sentris*, *2*(2), 121–131.

Hastuti, P., Nurofik, A., Purnomo, A., Hasibuan, A., Aribowo, H., Faried, A. I., Tasnim, Ta., Sudarso, A., Soetijono, I. K., & Saputra, D. H. (2020). *Kewirausahaan dan UMKM*. Medan: Yayasan Kita Menulis.

Khainuddin, K., Kusmanto, H., & Isnaini, I. (2019). Analisis Kualitas Pelayanan Publik Rawat Inap Pada Badan Layanan Umum Rumah Sakit Umum Daerah Kota Subulussalam. *Strukturasi: Jurnal Ilmiah Magister Administrasi Publik*, *1*(1), 22–31.

Lestari, R. D. (2023). *Rekonstruksi Regulasi Perlindungan Hukum Bagi Dokter Dan Pasien Dalam Pelayanan Kesehatan Melalui Telemedicine Berbasis Nilai Keadilan*. UNIVERSITAS ISLAM SULTAN AGUNG.

Nugroho, A. A., Sutrisno, E., & Yusuf, R. R. (2020). Optimalisasi Layanan Kesehatan Melalui Inovasi Pelayanan Publik Proyek Perubahan Pelatihan Kepemimpinan (Optimizing Health Services Through Public Service Innovation Project Change In Leadership Training). *SeTIA Mengabdi Jurnal Pengabdian Kepada Masyarakat*, *1*(1), 26–38.

Raharjo, B. (2021). Fintech Teknologi Finansial Perbankan Digital. *Penerbit Yayasan Prima Agus Teknik*, 1–299.

Roberto, A. (2020). *LEBIH MENGENAL DIGITAL BANKING MANFAAT,*

===

PELUANG, DAN TANTANGAN. http://pasca. ugm. ac. id/.

Satyahadewi, N., Amir, A., & Hendrianto, E. (2023). Proyeksi Peningkatan Perekonomian melalui Pemanfaatan Bonus Demografi 2040. *Kaganga: Jurnal Pendidikan Sejarah Dan Riset Sosial Humaniora*, *6*(2), 715–725.

Sir, D. P. S., Tambunan, S. S., Putri, A., & Gurning, F. P. (2023). TANTANGAN DAN PELUANG PEMBIAYAAN KESEHATAN DI INDONESIA SEBUAH TINJAUAN LITERATUR. *Jurnal Kesehatan*, *1*(6), 893–901.

Siregar, Y. B. (2019). Digitalisasi arsip untuk efisiensi penyimpanan dan aksesibilitas. *Jurnal Administrasi Dan Kesekretarisan*, *4*(1), 1–19.

Syamsuddin, M., Achmad, F. Y. N., & Lawelai, H. (2023). KESIAPAN DINAS PARIWISATA DALAM MENGELOLAH SMART TOURISM PENGEMBANGAN WISATA DI KOTA BAUBAU. *Jurnal Inovasi Penelitian*, *4*(2), 339–350.