Research Article

Digital Healthcare Development for Global Citizenship: Equality of Access to Health Facilities and Services During the COVID-19 Pandemic in Indonesia

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Abstract.
The COVID-19 pandemic in Indonesia requires government efforts to provide health service technology in addition to maximizing health protocols. Digital Healthcare is used to provide digital data and facilitate access to health services for patients and health workers. The government has formed a policy regarding digital technology for health services that seeks to improve digital technology. However, there are still issues related to manual data entry, the lack of equal distribution of internet access, and user trust issues that affect the equality of access to healthcare facilities. Based on these problems, the paper assesses how the development of digital healthcare has affected the equality of access to health facilities and services during the COVID-19 pandemic by using the conceptual approach of Digital Healthcare and Global Citizenship. Qualitative research methods are used in a descriptive-analytical manner with analyzed literature sources. The results of this study found that the Indonesia Health Service (IHS) system, New All Record, was already available in Indonesia along with Digital Healthcare such as Citizen Health App, Peduli Lindungi, and Halodoc. However, there is a need for government collaboration in developing digital systems and monitoring health services for the community, outreach to the public, and maximizing online data entry via the web and existing applications for the challenges of manual data entry and digital healthcare equality in Indonesia.

Keywords: digital healthcare, global citizenship, equality of health facilities, equality of health services, the COVID-19 pandemic

1. Introduction

This research focused on the other facilities of Digital Healthcare during COVID-19 in Indonesia and analyzed by the Global Citizenship perspective. Whereas the previous research just explained about information system based on websites and new all record system, which is stated in Conflict of Interest. The development of COVID-19 in Indonesia is currently meeting a new point. The latest data from the COVID-19 Handling Task

Force which is always updated by the National Disaster Management Agency (BNPB) recorded 5,253 new COVID-19 cases in Indonesia from March 2022 to 6,297,484 cases. Therefore, this increase indicates that COVID-19 cases in Indonesia are still in a volatile situation [14]. Therefore, the government always urges citizens to obey the health protocols to prevent COVID-19.

With the high level of the COVID-19 pandemic, Indonesia needs technology as a service from the government during the COVID-19 pandemic. For this reason, the development of digital healthcare itself or can be said in general is to expand and develop the concept of using telecommunications that can provide information and health services with a broad scope to increase public health efforts. Digital healthcare itself is a development phenomenon in the world of health because as a means of technological transformation it provides objective digital data that can be accessed by both health workers and patients. Thus, the use of digital healthcare can help increase opportunities for the quality and quantity of information, as well as become a driver of public health or self-care. In terms of health workers, digital healthcare helps the task of workers, lightening their duties. Thus, health workers can focus more on treating and treating patients [13].

In the COVID-19 treatment scheme, digital healthcare functions as a digital tool to assist the treatment process during the pandemic. Just as COVID-19 patients who undergo self-isolation with the presence of digital healthcare can make it easier to access these digital health services and get medicines according to doctor's prescriptions, this is by the Indonesian Ministry of Health has ordered for patients who are isolated independently. Digital healthcare also helps provide access to results from PCR tests and positive antigens from laboratories that have collaborated with the Ministry of Health under the New All Record system [12]. Therefore, the importance of digital healthcare in handling the COVID-19 pandemic shows that digital healthcare can help doctors and other medical personnel to be more proactive and focus on treatment. This can simplify and ease the treatment process because patients are under the COVID-19 treatment program.

The use of digital technology or digital healthcare in Indonesia has been applied since 1985 by utilizing computers and satellites in exchanging information. Then Indonesia began to recognize health information in 1999 which became the beginning of the formation of a health website. Continued in 2001, Indonesia began to use telecommunications to deal with medical problems between islands. Then, in 2003, he carried out the treatment process using the internet to communicate with general practitioners in remote areas. Then, in 2004 its use was used to focus on Puskesmas in Indonesia

by introducing applications to accommodate digital from the consultation, diagnosis, coordination, education, and drug database processes. After that in 2005, digital healthcare technology was designed to support all reporting and monitoring processes with an easier epidemic management system. Then in 2007, mobile telemedicine was updated for an emergency process that provides health services in remote areas which includes patient data and location information. In 2010, technology began to develop as well as digital healthcare which also experienced developments in the process of handling patients. Some of the digital healthcare problems faced by Indonesia are the implementation of policies to the extent that there is not yet widespread user trust in the security and protection of digital data in the application of digital healthcare itself [7].

One of the problems faced in this digital era is the implementation and optimization of policies related to health technology. This then becomes one reason for the use of digital healthcare that has not been carried out optimally. Where it is also felt globally in the use of digital healthcare which is an urgency in loading policies related to technology. Another problem related to digital healthcare is information from digital medical devices or online sources where some of the information is still not reliable which can then become a misunderstanding if it does not involve professional health workers and can harm patients. Through the digital healthcare arena remotely and in remote areas, patients can experience digital care by professional medical personnel. Therefore, it is important for digital healthcare to further develop its security and trust in the community and its use needs to be distributed thoroughly so that it can be reached by all patients and medical personnel to be able to handle digital safely, comfortably, and precisely [13]. Therefore, digitizing healthcare is needed in Indonesia because it plays an important role in accelerating and encouraging universal health coverage (Universal Health Coverage). Because by utilizing digital technology health services become more qualified and effective. So that the services provided are wider, more affordable, more responsive, and more scalable.

Along with the times, creating a global identity that develops with the influence of the power of modern information, communication, and transportation, technology, based on togetherness in achieving common goals. Where the global community puts forward its identity as a global community that is the same as one another. Whereas legally, this term citizenship can denote a constitutionally defined relationship between the individual and the nation-state, in which the individual receives certain civil rights guarantees in exchange for certain civic duties and responsibilities [5].

To the concept of global citizenship, and awareness of global responsibility, an individual is required to have a real contribution to the sustainability of the lives of global citizens [8]. For example, with the outbreak of the COVID-19 virus pandemic which initially spread in China to hit the whole world, it can be seen that the resolution of this pandemic is not only China's responsibility even though this virus originated in China. However, it is the responsibility of all parties to help each other and find solutions for the existing COVID-19 pandemic. Carrying out the principles of global citizenship, it can be done with an awareness of the role of the individual, assessing the positive and negative potential in the process of social integration [5].

The COVID-19 pandemic has caused a humanitarian crisis, especially in areas where access to medical equipment is still difficult. Incomplete and maximal health facilities can reduce the chance of recovery for COVID-19 patients, especially when the virus first appears. This is in line with the concept of global citizenship which can be interpreted to extend full rights and privileges of citizenship to every human being so that all people can participate equally in collective governance with the emerging global community characterized by unity in diversity [5].

The digitalization of healthcare can facilitate various health activities so that they can be carried out from the home or residence of those who are lying sick without assistance and minimize the transmission of diseases or viruses through contact or distance. With the existence of digital healthcare itself, it is hoped that it can be a solution and create equal access to health facilities and equipment in all areas that can be widely reached. Based on the importance of digital healthcare itself, it can be seen the benefits that will be obtained to answer the anxiety and problems that exist in society. And, preparing Indonesia to be more alert in facing global challenges, especially in the health sector which is part of the real role of global citizenship. Therefore, the development of digital healthcare and the equality of health facilities and services are important during the COVID-19 pandemic in Indonesia.

2. Method

Qualitative research method with descriptive type of research that examines an event, process, or group of individuals. Which is limited by time and activity, and collects complete information using various data collection procedures based on a predetermined time [1]. The collection techniques used are literature studies, data collection such as books, scientific journals, to official sources from the internet. Such as the 2024 Digital

Health Transformation Strategy book to the Discourse, Identity, and Global Citizenship journals.

3. Results and Discussion

3.1. Provision of Digital Healthcare for the Community during the COVID-19 Pandemic

The provision of digital healthcare for the community during the COVID-19 pandemic is needed to accelerate and encourage wider health coverage. Due to the vulnerability of direct and face-to-face activities due to the COVID-19 pandemic, making the community and medical personnel use digital technology makes health services more quality and effective. So that the services provided are wider in scope, more affordable, more responsive, and more measurable during the current COVID-19 pandemic. In addition to providing digital healthcare during the Covid- 19 pandemic, the Indonesian Ministry of Health has also formulated a Blueprint for the 2024 Digital Health Transformation Strategy which is based on the spirit of realizing a healthy Indonesia in a collaboratively manner with the entire ecosystem of the health industry players and the public, which is called the Indonesia Health Service (IHS) platform [2].

The IHS platform is a digital health ecosystem platform that provides connectivity, data, analysis, and services to support and integrate various health applications in Indonesia. That way, this step is also a government policy for its support related to digital healthcare in Indonesia. The rules of the policy have also been stated in the Regulation of the Minister of Health of the Republic of Indonesia No. 21/2020 concerning the Strategic Plan of the Ministry of Health for 2020-2024 which has required efforts to change the governance of health development which includes information systems and health development. Therefore, the process of health development efforts has its priority scale, namely the Development of the Health Technology Ecosystem, which involves the expansion and development of health digital innovations between health actors, the government, and the community [2]. This expansion and development are carried out through the development of big data including an integrated pandemic-based health system. The Indonesian Ministry of Health has a New All Record (NAR) application that is connected to the Indonesian Ministry of Communication and Informatics' Peduli Lindungi application for various policy purposes, terms or conditions for general travel, control, and prevention of the spread of the COVID-19 virus. To control the spread of the COVID-19 virus, both the private sector and the government prioritizes health

facilities as support for government programs in controlling the Covid-19 pandemic with Testing, Tracking, and Treatment (3C). Unfortunately, the COVID-19 sample screening test service still uses manual methods such as a patient registration form containing a NIK, full name, and KTP address. Data that is filled in by hand, the accuracy and speed of data processing will take time, and the gradual dissemination of data has not been carried out online through the system [9].

Therefore, this can ensure that the implementation of digital health transformation in Indonesia is directed. It should be noted that data integration is important to be implemented to order to improve the quality of health policies based on data analysis. This program will target stakeholder components starting from the level of health services and national institutions. Especially during a pandemic, data analysis is needed to make it easier for health actors to connect remotely and the authenticity of patient data can be maintained properly according to the treatment process and patient care needed during the COVID-19 pandemic [2].

Not only that, the development of health integration in applications or Digital will focus on digitizing emergency response services, referrals, and COVID-19 vaccinations. In implementing digital healthcare, it is not only the government that plays a role in contributing to developing the service process. However, the community or Indonesian citizens also take part in supporting and developing the realization of this digital-based health service. Therefore, the development of digital healthcare services creates leading innovations for the entire community. Hospitals or health care centers that experienced an increase in patients during the COVID-19 pandemic resulted in not optimal care for COVID-19 patients, while the number of patients continued to grow and many of them needed special services.

The convenience of digital healthcare can be felt by the general public in getting health services and information in an application that can be accessed easily with various features available and easy to use. Digital healthcare is through the Citizen Health App, which the application stores complete personal data. The application is connected to IHS which is a digital health ecosystem from the Indonesian Ministry of Health. Therefore, global citizenship in the development of digital healthcare has a significant impact on medical personnel and the wider community who can do their health checks as well as online health services or consultations, as well as health education that can be easily accessed anywhere and anytime by the general public. Not only that, applications that are also programmed through collaboration between Kominfo and the Ministry of Health, such as Peduli Lindungi, where the application is not only a bridge connecting health services between the community and medical

personnel but the application is made to track the spread of the corona disease with tracking and tracking features. People whose movements are positive are affected by COVID-19 [2].

Then, an application that also helps us to find out people who are infected with the Covid- 19 virus, the maximum capacity, and the number of people in a place we are visiting so that restrictions and crowd reduction can be carried out optimally, and also remote digital health services such as online consultations. With a doctor according to the disease category will then be given a prescription that can be redeemed online also through a start-up stakeholder application, namely Halodoc. As explained by the CEO of Halodoc, this application can be used as consultation for patient health services during the COVID-19 Pandemic where their work is carried out for 24 hours and will be connected online with patients for consultation.

This is what later becomes a real contribution to Global Citizenship, namely when the Indonesian people, in general, can use an activity or problem such as the COVID-19 pandemic, easily and the community can receive guarantees of their rights in a digital health service, and most importantly can be implemented and felt by all circles of society in digital healthcare, which can also be felt in the nation-state based on togetherness in achieving a common goal, namely the goal of facilitating health services during the COVID-19 pandemic through a digital application that does not recognize a difference in identity either ethnicity, religion, class, or race, meaning that the digital application service can be enjoyed by all patients affected by COVID-19 at this time. For this reason, the optimization of digital healthcare in the future must continue to be developed, because the potential possessed by digital health can reduce directly or indirectly the number of patients during a pandemic. In particular, optimal cooperation and support from the government, NGOs, and the community will contribute to using the application, which will help medical personnel in reducing the number of patients due to COVID-19 by providing prompt assistance. Therefore, digital healthcare must continue to be optimized so that it can be accessed by all people in all regions of Indonesia [2].

3.2. Challenges faced by Indonesia in Equitable Distribution and Provision of Digital Healthcare during the COVID-19 Pandemic

For Indonesia, the health sector is one of the important sectors in accelerating Indonesia's digitalization where the COVID-19 pandemic has limited people to carry out mobility and physical interaction. While efforts to strengthen digital healthcare services continue to be carried out by the government and other collaborating institutions, there are also

challenges faced by Indonesia in the distribution and provision of digital healthcare during the pandemic. Although the released applications such as Peduli Lindungi, Halodoc, and the Citizen Health App are developmental innovations that make it easier for medical personnel and the public to need medical services, the optimization of their utilization is still not stable. Indonesia ranks 6th with the most internet access from 2013 to 2018 with a growth of 50.2 million users in the last 5 years. With the island of Java being the majority of its users. However, internet users in Indonesia only reach about 53% or part of the total population of Indonesia with 143.26 million out of 269.54 million people [6].

Limited access to remote areas of Indonesia, which have not yet been covered by the internet, is a government effort that must be handled more quickly so that the distribution of healthcare digitalization can be comprehensive. Then, the increasing number of COVID-19 cases also has an impact on the decreasing capacity of health facilities and also the quality of health services, and the delivery of health services. Not only that, the simpler process of integrating health service data has challenges [3]. Despite the existence of digital healthcare applications such as the Citizen Health App, Peduli Lindungi, and Halodoc, there is still some data that is manually documented. Health data in several areas are still manually integrated, where more than 80% of health service facilities do not have access to digital technology in Indonesia [2].

Challenges such as the obstruction of access to health services and health facilities need to be overcome by developing digital health services. The implementation of regulations that allow this service to run more optimally needs to be improved, such as the division of each responsibility between health facilities and services, digital medical record connectivity to intensive rules that can be given to the professional personnel involved so that health facilities and services are equal. For the community, it can be handled and the use of digital healthcare applications can be realized properly [2].

3.3. Equality of Health Facilities and Services through Digital Healthcare during the COVID-19 Pandemic

Health services carried out through digital healthcare also have the data analysis needed for information management sources and targets during the pandemic. Therefore, data management is needed to determine the extent to which the use of equality of health facilities and services through digital healthcare is carried out. Based on data disclosed by Kominfo at the Indonesia Digital Medic Summit 2021, efforts will continue

to be made to strengthen the digitization of access to health services during the COVID-19 pandemic. This is done through the equality of health facilities and services such as infrastructure, supporting technology to digital literacy which is continuously carried out. In terms of users, the Ministry of Health, which is also collaborating with Kominfo to focus on users and services, stated that out of 83,218 villages or sub-districts throughout Indonesia, 3,126 points of health service facilities have been realized. This also coincides with ongoing collaboration between stakeholders (public and private) [11].

The development of digital health user data was also mentioned by Kominfo, since the beginning of the COVID-19 pandemic in 2020 until now, there has been an increase in the use of medical applications in Indonesia. Applications such as Halodoc which increased to 20 million users during the pandemic and applications made by the government such as the Citizen Health App and Peduli Lindungi which increased 10 times during the COVID-19 pandemic that occurred in Indonesia. This shows that public trust is increasing in line with the development of digital healthcare services because of the convenience that this option makes. So, to realize the target of the Indonesian government in reducing the number of COVID-19 affected, equality in both facilities and health services must be considered because this is important in digital collaboration in the medical sector, such as using it in a non-discriminatory manner and implementing governance and security. Data is implemented with the principle of protecting personal data for users, and the implementation of Indonesia's digital transformation must be based on the principles of digital sovereignty and independence and open up opportunities for collaboration with the principle of a win-win solution between the government as good governance and the community [11].

The utilization that must be considered cannot be separated from the concept of global citizenship which is carried out with an awareness of the role of the individual where in the process of social integration the community must pay attention to positive solutions that can be carried out in digital transformation based on data security and governance of the application of digital healthcare itself. Moreover, the positive potential for the development of digital healthcare is the full right of the community in efforts to handle COVID-19 so that all people can participate in an equal portion in the level of equality of health facilities and services through digital healthcare in Indonesia.

4. Conclusion

During the COVID-19 pandemic, Indonesia needed digital healthcare to facilitate the service of health facilities in Indonesia. Digital healthcare that developed during the COVID-19 pandemic, such as the Citizen Health App, Peduli Lindungi, and Halodoc. Therefore, there is the Indonesia Health Service (IHS) platform is a digital health ecosystem platform that provides connectivity, data, analysis, and health application services in Indonesia, which is the government's policy to support digital healthcare in Indonesia. For example, the Blueprint for the Health Digital Transformation Strategy 2024 to create a healthy Indonesia collaboratively with the entire ecosystem of health industry players and the public. Then, the Regulation of the Minister of Health of the Republic of Indonesia No. 21/2020 concerning the Strategic Plan of the Ministry of Health for the Year 2020-2024. The Indonesian Ministry of Health also has a New All Record (NAR) application that is connected to the Indonesian Ministry of Communications and Informatics' Peduli Lindungi application for various purposes of controlling and preventing the spread of the COVID-19 virus.

Digitalization of healthcare is needed in Indonesia because it plays an important role in accelerating and encouraging broad or universal health coverage by utilizing digital technology so that health services will be more qualified and effective. Manually filling in handwritten data is still often found in big cities and in rural areas which can be more efficient and effective with digital healthcare. Digitizing healthcare requires an active role from the global community to support the creation of digital healthcare optimally and maximally with social integration that includes unity in diversity. The development of digital healthcare for global citizenship or global citizenship during a pandemic is very necessary to see the urgency that exists based on togetherness in achieving a common goal, namely getting out of the COVID-19 pandemic situation experienced by the world. The existence of digitalization of health services as an implementation of government duties to the community by fulfilling certain community rights and responsibilities, and reflecting good governance.

With the existence of digital healthcare, it is hoped that it will be a solution and create equal access to health facilities and equipment in all regions at affordable prices. Therefore, equality of facilities and data management from health services is important during the COVID-19 pandemic in Indonesia so that people can participate in an equal portion in the level of equality of health facilities and services through digital healthcare.

In addition, while efforts to strengthen digital healthcare services are continuously being carried out by the government and other collaborating institutions, there are also

challenges faced by Indonesia in the distribution and provision of digital healthcare. The existence of developing innovation is also in line with the optimization of unstable utilization. This utilization is included in internet access in Indonesia, which only reaches about 53% or only part of the total population in Indonesia. In addition, digital healthcare applications are also still manually documented until the gradual dissemination of data that has not been implemented online through the system. Therefore, this challenge makes more than 80% of health service facilities that do not have access to digital technology exist in Indonesia.

Based on the existing challenges, it is important to note that here the government's collaboration in developing digital systems and coordinating health services for the community must continue to be monitored. Especially, when a patient registers as a positive person for Covid- 19 through a digital application, it is also necessary to prioritize as previously explained that the use of digital healthcare for general patients or COVID-19 patients who register is equally prioritized. Manual data entry and distribution can be minimized by maximizing the online data entry feature that can be accessed via the web and existing applications. Comprehensive internet access to remote areas will increase the distribution of digital healthcare in Indonesia.

For this reason, it is necessary to provide digital health services evenly and fulfill health facilities both directly and in healthcare applications. Socialization to the public must be widely carried out by the government through advertising communication media or other publication platforms that reach all levels of society. The digitization of healthcare makes it very easy for patients to get health services both in hospitals and at other health service centers, such as the location of the COVID-19 vaccination, easier, faster, more efficient access to drug purchases, as well as special care for handling COVID-19.

Conflict of Interest

The previous research that has explained health care systems and facilities is the Journal written by Sudartono, in 2022, entitled to the COVID-19 Test Information System for Health Service Facilities (FASYANKES)-Based Websites. His focus of the journal has discussed the health service system such as the New All Record and operational analysis. However, a critical review of the differences between this journal and the author's research in this journal has not discussed these facilities in Indonesia and other Digital Healthcare during COVID-19 and does not analyze the Global Citizenship perspective.

Acknowledgement

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