

## Review of Legal Digitalization Aspects from Using Telemedicine for Health Management in Indonesia

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### ABSTRACT

Telemedicine is the practice of providing health services online or remotely using communication and information technology to connect patients with health service providers. Telemedicine is a form of health digitalization transformation and regulation which aims to provide health facilities with a wide coverage in overcoming various health service problems in Indonesia. Health services by utilizing digitalization influence the legal aspects of digital health. Thus, this article aims to discuss a review of the legal aspects of digitalization law with the use of telemedicine health services in Indonesia as well as the positive and negative impact of telemedicine on health problems in Indonesia. The method used in making this article is a review of literature in Indonesian and English published from the last 10 years to 2024. The results found are that there is a link between the legal aspects of digitalization in the health sector and long-distance digital service technology or what is called telemedicine. Indonesia currently has regulations and policies regarding digital health services and in their implementation the government still needs to develop and adapt the applicable laws.

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## INTRODUCTION

Now, Indonesia in Society 5.0 era, where everything is connected to the internet. Society 5.0 era is focuses on humans to implement the innovations creates in the 4.0 industrial revolution. The main focus of this era is to make humans the users and the driving component to implement various innovations that collaborate with artificial intelligence, robots, and the Internet of Things (IoT) to minimize the gaps in various aspects of future, especially aspects in the law of digitalization.

However, in fact, Indonesia still has unequal health services. Health services in remote areas are still limited to shortage of facilities, limited medicines, supplies, health equipment, health resources, and inadequate in terms of quality of service.<sup>2</sup> One solution to meeting inequal needs of health services is telemedicine dispensation. Telemedicine comes from Greek which means tele which means far away and medicus which means the service performed by health care.<sup>3</sup> In general, telemedicine is health care provided remotely by health professionals using communication and information technology, including treatment, diagnosis, disease prevention, evaluation, as well as sustainable education of health care to improve public health by providing comprehensive and equitable service.<sup>4</sup> The use of telemedicine is considered easier and more effective by the public because the services do not care about distances so that patients have not to come existing health care facilities directly.

According to Machurs (2022), telemedicine is the best way to help health care, in terms of the workload of both medical personnel and patients, so that both sides are expected to be able to provide information more quickly, efficiently, safely, and confidentially.<sup>3,5</sup> The World Health Organization (WHO) states that telemedicine is a health service that distances are an important factor, health officials perform remote services using information and communication technology to exchange valid information on diagnosis, treatment, disease prevention, and sustainable education for health service providers that are useful to the public.<sup>6</sup> The telemedicine brings about changes in therapeutic transaction, that is the legal relation between a doctor and a patient that is carried out with the patient's trust in the doctor, which is usually done in person or face-to-face will replace using remote consultation. Therefore, a certain enforcement of the law is needed that explicitly regulates the liability and legal protection of doctors, health workers, and telemedicine service providers in healthcare in Indonesia. Thus, this article aims to discuss how a review of the legal aspects of digitalization law with the use of telemedicine health service in Indonesia as well as the positive and negative impact of telemedicine on health problems in Indonesia.

## LITERATURE REVIEW

### *Transformation and Regulation Digitalization of Health Service*

In the era of society 5.0, the application of technology in the health sector involves websites and digital applications in the form of a type of medical practice. Where this technology can be used by patients over long distances to contact health service facilities without meeting face to face. Health facilities can monitor patient progress, treatment and education regarding complaints that patients experience. Digital transformation has an impact on health services,

conventional industry, as well as increasing social problems in society and threatening security risks due to the negative aspects of the emergence of this digital transformation.

Telemedicine has been around since before the Covid-19 pandemic in Indonesia. The existence of sari telemedicine At that time it was not yet a concern of the Indonesian people and service health use telemedicine is within the scope of health service facilities but does not yet involve the general public. The development of regulations that provide access for the implementation of telemedicine in Indonesia has started since 2015, based on Minister of Health Regulation (Permenkes) Number 90 of 2015 concerning the Implementation of Health Services in Health Service Facilities in remote and very remote areas. It is explained in Article 15 of the Minister of Health Regulation that public health services via telemedicine are a form of health service in health service facilities in remote and very remote areas. Using telemedicine can help reduce the workload on health workers and patients so they can provide information quickly, effectively and safely.<sup>5</sup> Then, in 2019, health regulation No. 20 of 2019 was issued which contains the provision of telemedicine services between health services with the basic consideration of approaching specialist health services and improving the quality of health services in health service facilities, especially remote areas, through telemedicine in the form of consultations between health service facilities. This also explains that health services are only provided to health facilities via telemedicine. This service includes teleconsultation, teleradiology, cardiology technology, and so on in accordance with the developing field of clinical science. Then Minister of Health Regulation no. 20 of 2019 provides regulations on the types of services available, costs to be covered, as well as the rights and obligations of each health facility that provides consultations, and provides security supervision.<sup>11</sup> This regulation has not regulated the implementation of medical practice through telemedicine between doctors and patients privately through health applications which are currently rife by the public.

### *Telemedicine Use of Health Services in Indonesia*

Currently, Indonesia is entering the Society 5.0 era, where almost everything uses digital-based technology. The rapid development of information and communication technology has caused changes in people's lifestyles which were usually done in person, but can now be done remotely. It can be seen from technological developments in the health sector, namely the digitalization of health services, called telemedicine. Terminologically, telemedicine comes from the words "tele" which means long distance and "medic" means "medicine". Telemedicine as a whole is defined as the use of communication and information technology in the form of electronics, computers, telecommunication to send and receive information related to medicine and health as an improvement in clinical services in the form of diagnosis, treatment and education for patients.<sup>7</sup>

According to Leila (2020), Telemedicine is defined as the application of clinical medicine where the development utilizes long-distance communication technology, such as the internet, and other communication networks to provide

medical information.<sup>8</sup> Telemedicine is a health service that involves doctors, dentists, pharmacists and psychiatrists who communicate using audio, visuals and data. This concerns consultation, diagnosis, treatment, treatment, and exchange of patient data with health services and treating doctors. According to Masa (2014), telemedicine is a health support system that cannot stand alone, this is also defined as the use of information and communication technology where there are parts that play a supporting role as well as a basis for implementation that cannot be replaced by another information system. Telemedicine applications must also be integrated well with the government, other institutions, specialist/doctor/dentist associations, drug manufacturers, and software system development experts.<sup>11</sup>

Alvandi (2017), states that the concept of telemedicine applications can be divided into four forms, namely:<sup>9</sup>

1. Real-time interactive (real-time relationship between medical personnel and patients). This requires the availability of an expert to evaluate patient data so that the data is safe and neat. A personal computer with a telephone line connection and an adequate internet network is necessary to allow people to meet simultaneously, even if they are not in the same location.
2. Store-and-forward (patient information in the form of data shared with fellow doctors or other health workers in other locations). This ensures that all information, including video, audio, photos and data can be stored electronically to specialists or doctors at other facilities for interpretation and feedback.
3. Remote patient monitoring (remote monitoring of chronic patients with tools such as blood pressure, blood sugar, lipid levels, etc).
4. Communication using the smartphone.

In using telemedicine in health services in the current era, there are benefits for both doctors/health care workers and patients. The use of telemedicine remotely utilizes various technologies, smart surveillance cameras, and analytical software so that it can be used for all ages of patients. Apart from that, in terms of costs, patients do not need to worry about transportation, meals and operational costs for direct consultations. Then in terms of time, the time spent during consultation is fast so it can save time and is much more efficient.

## **METHODOLOGY**

The method used in compiling this scientific article uses the literature review method. The information needed is obtained through several media, such as Google, Google Scholar, Scopus, and Researchgate. Literature review is a systematic method of analyzing the basic knowledge and theory of research by identifying and evaluating, as well as synthesizing various research works. The aim of this literature review is to find things that have never been done before or areas of research that will be done and answer various questions based on the results of the research carried out. In this method, researchers will collect various information related to the selected topic using data that is not directly obtained from the researcher (secondary data). The required secondary data will be sourced from various scientific articles related to the specified topic, namely regarding the legal aspects of digitalization of using telemedicine

as health management in Indonesia with the keywords, namely "Telemedicine, law, digitalization".

## RESEARCH RESULT

### *Telemedicine Use Reviewed from the Legal Aspects of Digitalization Law*

Health can be defined as a healthy condition both physically, mentally and spiritually in which everyone lives productively. Health is important for human life in living life in order to achieve prosperity, ideals and hopes. In Indonesia itself, one of the human rights and elements of welfare in society is health which must be realized in Indonesia's national development goals. In the aspect of health law, it is stated that every person has the right to health, in fact everyone has the same right to obtain access and resources in the health sector. The importance of human rights (HAM) is in line with Article 3 paragraph (3) of the 1945 Constitution, above. health is also included in article 34 paragraph (3) of the 1945 Law, stating that; "The state is responsible for providing adequate health service facilities and public service facilities." However, in reality, health services in Indonesia are still not optimal, because there are still many health facilities in Indonesia that do not meet standards and people receive minimal health care due to the long distance between health service facilities.<sup>12</sup>

There are several legal bases in Indonesia for implementing technology-based health aspects, namely:

1. Regulation of the Minister of Health of the Republic of Indonesia (Permenkes RI) No. 21 of 2020 concerning the Strategic Plan of the Ministry of Health for 2020-2024.
2. Law Number 36 of 2009 concerning Health.
3. Regulation of the Minister of Health of the Republic of Indonesia Number 46 of 2017 concerning the National E-Health Strategy.
4. Regulation of the Minister of Health of the Republic of Indonesia Number 20 of 2019 concerning the Implementation of Telemedicine Services between Health Service Facilities.
5. Decree of the Minister of Health of the Republic of Indonesia Number Hk.01.07/Menkes/4829/2021 concerning Guidelines for Health Services Via Telemedicine During the Corona Virus Disease 2019 (Covid-19) Pandemic.
6. Government Regulation No. 46 of 2014 concerning Health Information Systems.
7. Medical Council Regulation (Perkonsil) No. 74 of 2020 concerning Clinical Authority and Medical Practice via Telemedicine during the Corona Virus Disease/Covid-19 Pandemic in Indonesia.

Patients who use telemedicine are required to provide general/informed consent in accordance with statutory provisions. Judging from Law no. 29 of 2004 which regulates Medical Practice, explains that every medical or dental action that will be carried out by a doctor or dentist on a patient must obtain approval. Apart from this article, it is also explained that consent is given after the patient receives an explanation which includes the following;

- a) Medical history and diagnosis

- b) Purpose of medical action
- c) Alternatives and risks of action
- d) Possible complications
- e) Prognosis for the actions taken

## **DISCUSSION**

Based on the importance of general/informed consent, telemedicine services also uphold the importance of therapeutic agreements, which must be in line with the legal requirements of agreements as regulated in Article 1320 of the Civil Code. Therefore, if there is a civil error or malpractice in practice, civil liability can be applied either by default (Pasal 1239 KUHPerdata) or unlawful act (Pasal 1365 KUHPerdata).. Apart from that, it is stated in the Minister of Health Circular No. 303 of 2020, where the results of telemedicine services are recorded in digital or manual records that are used by doctors as medical record documents and are the doctor's responsibility, their confidentiality must be maintained and used in accordance with statutory provisions. It should also be noted that if medical records are recorded using electronic information technology, the obligation to complete the data and signature can be replaced by using a personal identification number.

However, because in telemedicine services, doctors are also included in one of the electronic system providers as regulated in pasal 1 ayat (6) letter a of Law no. 19 of 2016 concerning Amendments to Law no. 11 of 2008 concerning Electronic Information and Transactions (UU ITE), then the next obligation of doctors as electronic system operators is that every electronic system operator must operate the electronic system safely and be responsible for the electronic system running as it should. The electronic system operator is responsible for the implementation the electronic system, and the provisions as intended in paragraph (2) do not apply if it can be proven that force majeure, error and/or negligence on the part of the electronic system user can be proven. However, if in practice the doctor as an electronic system operator causes harm to patients, then in connection with this the doctor's responsibility as an electronic system operator must be limited only to responsibilities related to his professional obligations or those only related to the health sector in online medical services. Therefore, it is the doctor's legal responsibility to provide online health services if the patient suffers a loss, whether due to an error made by the doctor in a state of negligence or careless attitude, then the patient must first prove that there was indeed a doctor's mistake in providing the service. . However, because most of the actions taken by doctors in online medical services only involve online consultations, there are difficulties in proving that there has been a professional error in these online medical services.

## **CONCLUSIONS AND RECOMMENDATIONS**

Telemedicine is a solution in the field of digitalization in the form of technological advances in the health sector that are effective and efficient. Telemedicine has a strong and useful communication aspect in the gap in health services in society. By understanding the law of digitalization in the use of telemedicine as an implication of the development of communication media. The use of telemedicine has a positive impact on increasing the effectiveness

and efficiency of health services in Indonesia, reducing unnecessary referrals. However, telemedicine has limitations in carrying out physical examinations and challenges with uneven internet access in remote areas in Indonesia. Therefore, there is a need for cooperation with the government and the ministry of health regarding developing telemedicine in Indonesia. Collaboration and synergy need to be formed for the purposes of legal regulations that contain practitioner regulations in the field of telemedicine in order to organize better medical practices in the field of digitalization. It is hoped that this will be able to accommodate the implementation of telemedicine in Indonesia so that there is legal certainty and mutual security for both health workers as health service providers and patients.

## REFERENCES

- Putra IK, Wibawa IP, Subawa IM, Sutrisni NK. The Role of Z Generation in Realizing the SDGs in The Era of Society 5.0. *PILAR* 2022; 2: 426-433
- Renstra Kemenkes 2015-2019 Rev-1 2017. (2017). Kementerian Kesehatan RI.
- Dewayanti I, Suryono A. Review of Ethics and Law of Medical Practice Through Telemedicine Post-Pandemic COVID-19. *JHPE* 2023; 11: 27-40
- Kesuma SI. Legal Aspects of Telemedicine Use in Hospital Services in Indonesia. *JFJ* 2023; 1: 18-27
- Machrus BR, Budiarsih. Telemedicine Patient Protection for Doctor's Fault. *SOSIALITA* 2022; 1: 6-7
- Lengkong SG, Adisasmito WBB. Telemedicine Optimization to Enforce Diagnosis as Innocation of Hospital Servants During the Covid-19 Pandemic: Systematic Review. *JKesV* 2022; 7: 111-118
- Andrianto w, Amira BA. Telemedicine (Online Medical Services) in the New Normal Era Defined by Health Law (Study: Indonesia's Telemedicine Program/Temenin in the Patient Home DR. Cipto Mangunkuso). *JHP* 2022; 52: 220-250
- Ganiem ML. The Effects of Telemedicine on Society (Mrluhan Media Law Review: Tetrad). *JK* 2020; 9: 87-97
- Alvandi M. Telemedicine and its Role in Revolutionizing Healthcare Delivery. *The American Jurnal of Accountable Care* 2017; 5: e1-5
- Masa AM. Telemedicine Implementation Development Strategy in South Sulawesi. *JTK* 2014; 5: 227-229
- Communication and Public Service Bureau of the Ministry of Health of the Republic of Indonesia. (2023, July 11). Knock the hammer! Health Bill Act. kemkes.go.id. <https://sehatnegeriku.kemkes.go.id/baca/rilis-media/20230711/4643487/ketok-palu-ruu-kesehatan-sah-jadi-undang/>.
- Sianipar BH, Tele-Medicine Development of policy in Indonesia. *Aerospace Policy and law Review*: 42-42
- Negriero M. The Rise of Digital Health Technologies During the Pandemic. *EPRS*: 9-10
- Budiarto S. Telemedicine in Legal Aspect in Indonesia. delivered in a Webinar by Muhammadiyah University: Development and Future of Telemedicine in Indonesia in the Covid-19 "New Normal" Era, (July 16,

2020).

Indonesia, Minister of Health of the Republic of Indonesia, Circular Letter on the Implementation of Health Services through the Utilization of Information and Communication Technology in the Framework of Preventing the Spread of Corona Virus Disease 2019 (COVID-19), SE Number HK.02.01/MENKES/303/2020, Explanation Number 4.