



# Telemedicine in Indonesia: Perspective of Ethic, Discipline and Law

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**Abstract.** Today, science and information communication technology in the era of globalization are developing rapidly. The existence of information technology makes the world more easily connected regardless of distance and time. As one of the developing countries in Southeast Asia, Indonesia is trying to catch up with the development of science and technology, including telemedicine, and technological advancement in the field of medical services. Telemedicine services provide an opportunity to practice medicine without distance constraints, especially in remote areas where medical staff are scarce. Although it brings many benefits, the rapid development of telemedicine in Indonesia also creates various problems, especially those related to ethic, discipline, and legal issues. This study aims to determine the implementation of telemedicine in Indonesia in terms of ethics, discipline, and law. The type of research used in this article is normative legal research (normative juridical) and the approach method used is the statutory approach. The data collection technique used in this research is through literature study. From an ethical point of view, health services through telemedicine by doctors to patients do not take into account the principles of medical ethics. Meanwhile, telemedicine services with the purpose of communication or consultation and supervision between medical staff (doctors) generally do not have ethical problems as long as the roles and responsibilities of each party are regulated. From a disciplinary point of view, telemedicine services cannot follow standard operating procedures because doctors do not perform physical examinations directly on patients. In telemedicine services, doctors cannot perform a complete physical examination and *lege artis*. Meanwhile, in terms of legal aspects, the laws and regulations related to the implementation of telemedicine currently still regulate things that are general and considered essential. There are no specific regulations that regulate online health practices, especially regarding the standard of devices used, online prescribing, and protection against malpractice incidents in online health consulting services (telemedicine). Therefore, the government needs to take quick steps to formulate more comprehensive and detailed regulations related to telemedicine services in Indonesia so that in the future, the implementation of telemedicine can run better while still paying attention to the interests and safety of patients, applicable legal signs, as well as protection for medical and health personnel.

**Keywords:** Telemedicine · Ethics · Discipline · Law

## 1 Introduction

“The public interest is the goal of the state of Indonesia established in the Constitution of the Republic of Indonesia in 1945 and must be realized by the government. Efforts that are made in realizing general welfare are to carry out a series of developments, especially in the health sector that is integrated and supported by the national health system. Health is a healthy state, both mentally, spiritually, socially, and physically that allows every individual to live productively both economically and socially. Health is not only physical but also includes mental and even spiritual. Health is a human right, as stated in Article 28 H of the Constitution 1945, Everyone has the right to live in good physical and mental health, to have a place to live, to a good and healthy environment, and to receive medical services. Article 34 paragraph (3) of the Constitution 1945 also imposes responsibility for the health of the Indonesian people on the government which, public’s health care facilities and also proper f the public facilities are the responsibilities of the government.”

“Today, science and information communication technology in this globalization is developing rapidly. The development of technology in the world of globalization plays an important role for all mankind. The existence of information technology makes it easier for humans to connect regardless of distance and time. This has changed the pattern of interaction between humans. Many activities that used to have to be done in person can now be done remotely. Banking, shopping, and even health matters can be completed with just the touch of a hand.”

“The world is now entering the era of the Industrial Revolution 4.0, which is an era marked by the invention of intelligent systems that allow workers to make quality decisions in a short time. This capability is supported by technology and communication that support each other in sharing information [2]. The Industrial Revolution 4.0 with its characteristics, namely the use of internet technology bases and digital databases has penetrated the field of health services [3]. The world of health has also unwittingly entered the Industrial Revolution 4.0. Indonesia as one of the developing countries in Southeast Asia tries to keep up with the development of health services in the era of the Industrial Revolution 4.0, including by providing health services through telemedicine which uses a lot of advances in information and communication technology [4].”

“Telemedicine is derived from the Greek words “tele” meaning “far” and “Medicus” meaning medical services provided by medical practitioners. The term telemedicine has been known in the health world since the 1970s and is interpreted as telemedicine. From the Regulation of the Republic of Indonesia Health Minister No. 20 of 2019 on the performance of telemedicine services between medical institutions, telemedicine refers to the provision of medical services remotely by medical professionals using information and communication technology, including information sharing. It is defined as providing information about a diagnosis, treatment, prevention of disease and injury, research and evaluation, and education of health care providers for the benefit of individual and community health.

Telemedicine services offer opportunities to practice medicine without distance restrictions, especially for health services in remote areas that lack medical personnel [5]. Health consultation services that are usually carried out between patients and doctors face-to-face, can now be done online either through a computer or laptop or

even via a smartphone. This is an advantage of implementing telemedicine in Indonesia, considering that Indonesia consists of thousands of islands with poor infrastructure and transportation, and has a limited number of doctors. With telemedicine, the government of the Republic of Indonesia can reach the health of its people, especially people in remote areas [6].”

“The existence of COVID-19 which was officially designated by the World Health Organization (WHO) as a global pandemic on March 11, 2020, has caused the need and interest in telemedicine to increase rapidly [7]. Telemedicine plays a role as one of the most important strategies to suppress and reduce the increasing rate of the pandemic by implementing social distancing. Currently, most hospitals postpone non-urgent treatments, limit operating hours and limit the number of patient visits, especially in polyclinics. In addition, the emergence of fear and anxiety to visit the hospital led to the innovation of online consultation using telemedicine.”

“However, the convenience of providing health consultation services with doctors by patients online or via telemedicine does not mean that they do not encounter problems or obstacles. Telemedicine as an effort to distribute health in Indonesia still has obstacles and constraints, including: Development of telecommunications infrastructure, the Internet network not being evenly distributed in Indonesia, especially in remote areas, qualitative and quantitative human resources, the technological gap between urban and remote areas, forms of digital usage, authentication, privacy, and inadequate regulatory security regulating data cannot be fully guaranteed, the financing system for services is not yet clear to telemedicine service providers, and the accuracy of transmitted data may affect the diagnostic and treatment process. There are concerns that it is not of sufficient quality to make an impact [8].”

“Technology is like a double-edged sword. Although it offers various conveniences and advantages, technology can also provide disadvantages for its users if it is not handled wisely [9]. The existence of telemedicine technology does not necessarily guarantee the process will run well. Technology exists, but human resources are not ready and will only turn telemedicine into a silent product. Technology is available, and human resources are ready, but agencies and organizations are not ready, which will also make telemedicine not develop well [10]. Based on the introduction above, it can be seen that although it brings many benefits, the rapid development of telemedicine in Indonesia also creates various problems, especially those related to ethics, discipline, and legal issues. Therefore, researchers are interested in discussing more deeply related to telemedicine in Indonesia in terms of ethics, discipline, and law.”

## 2 Method

“This article relies on normative legal research, also known as normative legal research, which examines a variety of formal legal norms, such as laws, regulations, and theoretical concepts in literature. Studies that have to do with the writing of this article. The approach used is a legal approach that investigates various rules, i.e. laws and regulations, and is both the focus and focus of research [11].”

“The main legal sources come from laws and regulations related to telemedicine in Indonesia, including Law of the 1945 Constitution of the Republic of Indonesia, Law

No. 24 of 2009 on Medical Practices, Health Law No. 36 of 2008 on Information and Electronic Transactions No. 11 of 2008; Minister of Health Regulation No. 20 of 2019 on Implementation of Telemedicine Services between Medical Institutions; Minister of Health Decree HK.01.07/MENKES/4829 of the Republic of Indonesia/2021, Indonesian Medical Council Order No. 47 on Guidelines for Medical Services Telemedicine During Coronavirus Disease 2019 (Covid-19) Pandemic, 2020 on Clinical Authority and Medical Practices by Telemedicine During Coronavirus Disease 2019 (Covid-19) Pandemic. Secondary legal sources include books, journals, academic papers, articles, compilations from the Internet, expert (expert) views, and other relevant information related to telemedicine in Indonesia. It can be obtained from a variety of sources, such as literature.”

“The data collection techniques used in this study are from a literature survey. Literary research is done by cataloging and citing literary works on legal science, statutory provisions, as well as scientific articles, and lecture notes related to the issues to be discussed [12].”

### 3 Discussion

#### 3.1 Telemedicine in Indonesia from an Ethic Perspective

“Medical ethics is a translation of ethical principles into pragmatic provisions that contain things that can be done and things that must be avoided. The ethical rules drawn up by professional associations as behavioral guidelines for members of these professions are generally called codes of ethics. The term code comes from the Latin word *codex* which among other things means a book, something is written, or a set of principles or rules. From this understanding, the Code of Medical Ethics can be interpreted as a set of (written) rules regarding ethical regulations that contain commands (what is allowed) and prohibitions (what must be avoided) as pragmatic guidelines for doctors in carrying out their profession. Medical ethics or what is now more commonly known as bioethics has been known for centuries. The principles of bioethics are used as the basis for ethics in the medical field. Principles of medical ethics derived from the four principles of bioethics, namely, beneficence (prioritizing actions aimed at the good of the patient), non-maleficence (*primum non-nocere* or prohibiting actions that harm or worsen the patient’s condition), autonomy (respect patient rights), and justice (concerned with justice in distributing resources). From an ethical point of view, telemedicine in Indonesia does not take into account the principles of medical ethics in health services provided by doctors to patients. Although it was started with good intentions, telemedicine services between doctors and patients are prone to ethical problems, including doctors’ professional confidence in limited information about the patient’s condition, differences in expectations between doctors and patients, and confidentiality issues [13] Telemedicine affects the erosion of the doctor-patient relationship due to the lack of face-to-face conversations. Telemedicine, where there is typically no face-to-face interaction between doctors and patients, makes it difficult for doctors to assess a patient’s honesty regarding current and previous medical history [4].”

Communication is the most important part of a relationship between doctor and patient. Communication using technology (with telemedicine) without face-to-face

makes non-verbal communication impossible. The decision-making process, as the embodiment of patient autonomy, is a more elusive process in which physicians and patients voice their opinions before making decisions [14]. The decision-making process is crucial because it is self-determination, which is a respect for the patient's right to make decisions.

In addition to the problems above, there are several ethics problems in telemedicine including the lack of information exchange, for example, due to inadequate image transmission, lack of agreement between doctors and patients, problems with information confidentiality, informed consent and waning trust in the doctor-patient relationship [15].

Article 2 of the Indonesian Code of Ethics for Doctors 2012 (KODEKI) stipulates that doctors must always make independent and professional decisions and maintain professional conduct to the greatest extent possible. On the other hand, Article 7 of KODEKI 2012 stipulates that doctors are obliged to submit only self-confirmed medical certificates and findings. In medical practice, physicians are taught to perform a thorough physical examination before making a diagnosis and prescribing treatment for a patient. In fact, physical examinations of medical patients cannot be performed by telemedicine. Physicians should be aware that telemedicine services have limitations in providing complete information about a patient's clinical status. Physicians need to assess whether incomplete information about a patient's clinical condition is sufficient to generate adequate professional confidence and follow it to reach a diagnosis and determine the patient's treatment. There is. Limited information could lead to a complete curtailment of health services or even erroneous decisions [16]. There is a possibility that the diagnosis cannot be done accurately and there may even be an error in establishing the diagnosis. According to research, it is stated that there are 33% of cases of online consultation for skin health problems (teledermatology) experience different diagnoses or misdiagnoses with real examinations. This is due to the influence of lighting and contrast in image capture, as well as three-dimensional contours that are difficult to obtain from telemedicine services [9]. This is certainly contrary to the principles of beneficence (prioritizing actions aimed at the good of the patient) and non-maleficence (not harming or doing things that do not harm) the patient.

“Telemedicine services for communication or advice and monitoring between medical personnel. In this type of telemedicine service, one of the medical staff interacts directly with the patient, but also involves other medical staff who are contacted through the telemedicine service. Both health professionals are typically doctors. The simplest example is when an emergency doctor on duty consults a specialist. Consultation between the duty doctor and a more qualified doctor is conducted by Article 14 of the Code of Ethics for Doctors (KODEKI). If the patient is unable to be examined or treated, it is the obligation, with the consent of the patient or her family, to refer the patient to a physician suitable for this purpose. By involving other more qualified or competent physicians through telemedicine services, it is hoped that these physicians will be able to provide better quality medical services to their patients [6].”

This type of telemedicine service generally does not have ethics problems as long as the roles and responsibilities of each party are regulated, and the information provided to patients is clear. In general, the face-to-face doctor remains in charge of the ongoing

service and is the doctor in charge of the patient at least at that time. The thing to note is that this type of telemedicine service should not be misused by giving irresponsible delegation when the doctor who meets face-to-face intends to transfer treatment to the doctor who is being consulted because the patient requires action that is beyond his competence but is instead asked to take such action by the consulted physician [17].

Telemedicine consultation service used by the patient or his family to conduct a second opinion or used as a comparison when the patient is being treated at a hospital, the doctor who is contacted through the telemedicine service must consider that the completeness of the information obtained himself is unbalanced information when compared to the completeness of the information obtained by the doctor who is treating the patient directly. Ethically, the doctor who is contacted through this telemedicine service needs to direct the patient and or his family to ask the doctor or the team of doctors who are treating him.

Doctors who provide telemedicine services also need to remember that it is possible for the patient or family conducting the consultation to keep secret that he or she is being treated to compare the opinion of the doctor providing the telemedicine service with the treating doctor. Therefore, doctors who provide telemedicine services need to be very careful and remember the imbalance of information they have, and stay away from words and opinions that can corner their colleagues [6].

Physicians who provide telemedicine services must also be very careful in providing their medical advice as in real-world practice. Do not let this suggestion be wrong (hoax), or the doctor advertise himself excessively. This is stated in Article 4 of the Code of Medical Ethics (KODEKI), that a doctor is obliged to avoid self-praise. The doctor should also pay attention to the possibility that the patient's suggestions can be used to diagnose himself, or even be used as a tool for certain patients to attack other physicians.

The principle of justice as one of the principles of bioethics must also be considered in the implementation of telemedicine in Indonesia. There must be justice for doctors as telemedicine service providers. This is related to the honorarium or medical services of doctors as telemedicine service providers which are regulated in Article 15 of the Regulation of the Minister of Health of the Republic of Indonesia (Permenkes) Number 20 the Year 2019 and Article 10 of the Regulation of the Indonesian Medical Council (Perkonsil) Number 74 the Year 2020 which states that doctors and dentists who perform medical activities through telemedicine are entitled to remuneration determined by medical institutions by the provisions of the law. As provided for in Article 17 of these Permenkes, it is not possible for a physician as a specialist to be ready to conduct a consultation within 24 hours, not to get proper medical services. However, in the Permenkes and Perkonsil, there is no detailed explanation regarding the procedure for financing telemedicine services and fees for doctors as telemedicine service providers. In addition, from the aspect of service distribution, there is still injustice between doctors and telemedicine service provider platforms. This is because there is no statutory regulation that further regulates in detail the issue of service distribution. For example, during a consultation via telemedicine, the patient is required to pay a consultation fee of Rp. 100,000. The doctor only received an honorarium of Rp. 30,000. It's not fair. Therefore, the rights of doctors as telemedicine service providers must be protected to create justice and equality so that health services through telemedicine can run better. It

is feared that if in the future there is no clear regulation, then this financing system will not work properly and will hamper the implementation of telemedicine because there is no justice in terms of fulfilling the rights of doctors as telemedicine service providers.

### 3.2 Telemedicine in Indonesia from a Discipline Perspective

“The doctor’s duty when performing medical activities is to provide medical services by professional standards and standard operating procedures (Article 51(a) of Law No. 29 of 2004 on medical activities). Furthermore, Article 2 of the Indonesian Code of Ethics for Doctors (KODEKI) stipulates that doctors must always make independent professional decisions and maintain the highest standards of professional conduct. A set of standard operating procedures (hereinafter abbreviated as SOP) by Article 1, paragraph 2 of the Minister of Health Regulation No. 1438/MENKES/PER/IX/2010 on Standards of Medical Services of the Republic of Indonesia. Instructions or standardizations to implement certain routine work processes or appropriate and best steps based on mutual agreements in performing various activities and service functions that medical institutions perform on a professional basis Procedure.”

Article 10 of the Republic of Indonesia’s Minister of Health Regulation No. 1438/MENKES/PER/IX/2010 on Medical Standards states that SOPs are prepared in the form of clinical practice guidelines and can be supplemented by clinical pathways, protocols, procedures, or standing orders. At a minimum, the practice guide should include definitions, history, physical examination, diagnostic criteria, differential diagnosis, supportive assessment, treatment, education, prognosis, and literature.

The problem that becomes the main focus, in this case, is the physical examination. In the Book of the Implementation of Good Medical Practice in Indonesia issued by the Indonesian Medical Council in 2006, when practicing medicine, doctors must perform a physical examination on patients.

In health services through telemedicine, doctors cannot perform a complete physical examination. Although a doctor can only make 2 out of 3 diagnoses based on a good history, a physical examination will provide 20% additional information that may be significant and even change the direction of the diagnosis. Physical examinations that are observational in nature or by sight (inspection) can indeed be facilitated through telemedicine services with the video method, but other physical examinations that are non-observational (palpation, percussion, and auscultation) or require special maneuvers are not possible through telemedicine services. The examples of cases that can take benefit from telemedicine services with video and image-taking methods are skin cases (dermatology) because some of the diagnoses can be confirmed through inspection. However, several things must be considered, such as the effect of lighting and contrast in image capture, as well as three-dimensional contours that are difficult to obtain from telemedicine services alone without direct maneuvering or inspection [6].

Therefore, from a discipline perspective, telemedicine services cannot follow standard operating procedures, because doctors do not perform physical examinations directly on patients. Not all physical examinations can be done only through pictures. So, all doctors who provide health services through telemedicine need to consider encouraging patients to check with the nearest general practitioner or specialist, or sending

doctors to the patient's home for a home visit so that a physical examination can be carried out directly on the patient.

### 3.3 Telemedicine in Indonesia in Terms of Legal Aspects

Telemedicine is a development in the field of health technology. This health technology is regulated in Law Number 36 the Year 2009 concerning Health. Article 42 of Law Number 36 the Year 2009 states that before being circulated to be used for public health, technology and health technology products must be researched first. Health technology in question is all methods and medical devices that can help prevent health problems or treat health problems, and all devices must comply with the general provisions of the relevant regulations.

“For consultations between doctors and patients via telemedicine media in Indonesia, Law No. 29 Year 2004 on Medical Practices, Law No. 44 the Year 2009 on Hospitals, Law No. 11 the Year 2008 on Information and Electronic Transactions. Must comply. Law No. No. 36 of 2009 on Health, Decree No. 46 of 2014 on Medical Information Systems, Decree No. 47 of 2016 on Medical Institutions, Minister of Health Decree No. 269 of 2008 on Medical Records, Minister of Health No. 2052 of 2011 2012, Decree of the Minister of Health No. 36 of 2012 on medical secrets and other relevant laws and regulations.

From a regulatory perspective, the implementation of telemedicine in Indonesia is currently guided by three laws and regulations, including the Minister of Health Regulation No. 20 of 2019 on the Implementation of Telemedicine Services between Medical Institutions, and the Minister of Health Decree. No. HK.01.07/MENKES/4829/2021 Guidelines for Healthcare Services via Telemedicine during Covid-19 Pandemic (Kepmenkes 4829) and Indonesia Medical 2020 on Clinical Institutions and Clinics via Telemedicine during Covid-19 Pandemic Council Regulation No. 74-19 Pandemic in Indonesia (Perkonsil 74/2020).

Minister of Health Regulation No. 20 of 2019 aims to improve the quality of professional medical services and services, especially for remote areas. The telemedicine services that may be provided under this ordinance are medical facility-to-healthcare services. Telemedicine services between medical institutions include teleradiology, remote electrocardiography, remote ultrasound, clinical teleconsultation, and other telemedicine services according to the development of science and technology. In this regulation, it is also limited that the health facilities providing consultations can only be carried out by hospitals. On the other hand, medical institutions seeking consultation may be hospitals, first-level medical institutions, and other medical institutions. Minister of Health Regulation No. 20 of 2019 generally regulates the implementation of telemedicine services between medical institutions. Starting from the type of service provided, costs, rights, and obligations between health service facilities that request consultation and health service facilities that provide consultation, and funding from services telemedicine provided. This Permenkes does not regulate the procedure for conducting telemedicine between doctors and patients personally, which is happening more and more nowadays, including the existence of private telemedicine platforms that hold doctor-patient consultations without going through health facilities. These private telemedicine platforms



are intermediaries, not health service providers. Thus, private telemedicine platforms are only a means to facilitate the search for health services.

Article 11 of the Minister of Health Regulation Number 20 of the Year 2019 states that telemedicine services must have their own space. The article explains that it is not possible to provide telemedicine services through each doctor's electronic device, for example via a mobile phone or an unregistered personal computer. Doctor-patient consultations through telemedicine are mostly done via mobile phones or personal computers [4].

Republic of Indonesia Minister of Health Decree HK.01.07/MENKES/4829/2021 defines telemedicine medical services during the pandemic as telemedicine services, medical information provision, diagnosis, and information and communication technology for diagnosis. Treatment, prevention of exacerbation, assessment of patient health status and/or pharmaceutical services, including physicians and other medical personnel in health care facilities according to their competence and authority, with continued attention to service quality and patient safety. Includes monitoring of Covid-19 patients during self-isolation conducted by workers.

Secondly, Indonesian Medical Association (Perkonsil) Regulation No. 74, 2020, Telemedicine Clinical Authority and Medical Conduct Regulation during Covid-19 Pandemic in Indonesia, aims to provide specific medical services within hospitals to give clinical authority to physicians. Time environment. Additionally, this Perkonsil aims to bring legal certainty to resident physicians during the Covid 19 pandemic.

"The three regulations still regulate things that are general and are considered essential. There are no specific regulations that regulate online health practices, especially regarding the standard of devices used, online prescribing, and protection against malpractice incidents in online health consulting services (telemedicine). In addition, the three regulations described previously have limitations as guidelines for implementing telemedicine services that are currently developing. Minister of Health Regulation No. 20 of 2019 only regulates the implementation of telemedicine between medical institutions. On the other hand, Republic of Indonesia Health Minister Decree HK.01.07/MENKES/4829/2021 and Indonesian Medical Council Decree No. 74 of 2020 restrict the implementation of telemedicine in pandemic situations. Tools to guide telemedicine implementation when government later lifts Covid-19 pandemic situation."

Previously, physicians were required to have a Certificate of Registration (STR) as a sign that they were qualified and licensed to practice (SIP) if they wanted to practice in certain medical facilities. Physicians practicing medicine are limited to three work locations. Article 37 of Law No. 29 of 2004 on Medical Practices provides that a Medical Practice Permit (SIP) may only be granted for a maximum of three locations and is valid for only one location, while in article 38 the second point states that obtaining SIP as referred to doctors must have a place to practice. Meanwhile, with the telemedicine platform, the doctor's practice is not limited and cannot be determined. This becomes a dilemma because currently there is no clear and detailed regulation regarding the independent practice of individual doctors in telemedicine.

Until now, there are no regulations or guidelines regarding doctor's practice permits when providing health services with telemedicine. This can be seen in the applications of telemedicine service providers, there is no limit in terms of the consultation distance

between patients and doctors. Doctors who are domiciled in Bandung can provide health services to patients who are not domiciled in Bandung. In fact, in the provisions of the Regulation of the Minister of Health Number 512/MENKES/PER/IV/2007 concerning Practice Licenses and Implementation of Medical Practices, it is stated that the SIP application is addressed to the Head of the Health Service at the Regency or City level where the medical practice will be carried out. If medical practice is carried out through telemedicine, it is still unclear how and where exactly the medical practice is carried out.

Article 9(a) of Indonesian Medical Association Regulation No. 74 of 2020 states that telemedicine medical practice prohibits direct telephone consultations between medical staff and patients without going through a medical facility. Declaring. This regulation reaffirms the Minister of Health Regulation No. 20 of 2019, which states that teleconsultation can only be conducted in Indonesia if integrated with or cooperating with a medical institution. increase.

The right to information and the right to self-determination are two basic rights that cannot be separated from one another. This can be seen clearly in the implementation of informed consent. Based on these two basic rights, patients and doctors can jointly determine the most appropriate therapy to seek patient recovery. The patient has the right to informed consent, where the patient can give an agreement to the diagnostic/therapeutic action to be carried out on him after receiving the information, has the right to make decisions after receiving the information, has the right to choose diagnostic/therapeutic actions for himself after receiving the information, and has the right to refuse a therapeutic action. The implementation of health services through telemedicine does not necessarily negate informed consent. According to Article 5 of Indonesian Medical Council Regulation No. 74, 2020, patients wishing to receive telemedicine treatment must give general/informed consent by legal regulations. However, this article does not elaborate on whether informed consent is verbal or written. Article 2 (2) of Minister of Health Decree No. 290 of 2008 on Approval of Medical Procedures provides that informed consent can be given orally or in writing. The absence of regulations that specifically regulate informed consent in telemedicine can result in legal uncertainty for both patients and doctors who provide telemedicine services.

Doctors who practice telemedicine are obliged to create charts. Medical records are in the form of written, handwritten medical records or electronic medical records in the form of copies of each patient and are stored in medical facilities by legal requirements (Article 74 of the Regulations of the Indonesian Medical Council). However, until now no legislation specifically regulates the implementation of electronic medical records. This can also result in legal uncertainty for both patients and doctors as telemedicine service providers.

A patient's medical confidentiality obligation is stipulated in Articles 50 and 53 of Law No. 29 of 2004 concerning medical practice. Law No. 36 of 2009 Health Law Article 57 Clause 1 Indonesian Medical Association Regulation No. 74 of 2020 on Medical Practices during the Covid-19 Pandemic by Telemedicine in Indonesia Article 3 Article (2). Furthermore, Article 15 (2) of Law No. 11 of 2008 on Electronic Information and Transactions provides that the operator of the electronic system is responsible for the

operation of the electronic system. These articles indicate that the patient's medical confidentiality is something that must be maintained by all health facilities (as the organizer of the electronic system) to provide health services, including telemedicine because a patient's medical data is a private matter and is a non-derogable right.

In its implementation, telemedicine relies heavily on technologies that are considered high-risk from a data security perspective. Numerous potential cyber threats are closely related to the security and confidentiality of medical data. The transfer of information that is part of the telemedicine service process is very vulnerable to leaking to irresponsible parties (hackers, people who have access to computer instruments, laptops, or cellphones) [1]. In telemedicine, data leakage is not impossible, because medical records that were originally written on paper have been transformed into electronics. Therefore, telemedicine services need enhanced data security (cybersecurity) to minimize attacks (cyberattacks) that may lead to damage or loss of patient data. Additionally, data should be backed up regularly to prevent loss or corruption of patient data [9].”

“Meanwhile, related to prescribing drugs in telemedicine, Physicians issuing electronic prescriptions for medicines and medical devices must be held accountable for the content and effects of the medicines issued via electronic prescriptions. It's better if the doctor gives written informed consent to the patient before administering drugs that have the risk of causing side effects (e.g. allergic reactions). Electronic prescribing of prescriptions is prohibited for narcotics and psychotropic drugs, injectable drugs (except self-administered insulin), and implants for family planning (Minister of Health Decree No. HK.01.07/MENKES/4829/2021).”

## 4 Conclusion

Day by day, the interest and the need of the Indonesian people for health services through telemedicine are increasing rapidly. Although it brings many benefits, the rapid development of telemedicine in Indonesia also creates various problems, especially those related to ethical, disciplinary, and legal issues.

From an ethical point of view, telemedicine in Indonesia does not take into account the principles of medical ethics in health services provided by doctors to patients. Meanwhile, telemedicine services with the purpose of communication or consultation and supervision between medical staff (doctors) generally do not have ethics problems as long as the roles and responsibilities of each party are regulated. From a discipline perspective, telemedicine services cannot follow standard operating procedures because doctors do not perform physical examinations on patients directly. Meanwhile, in terms of legal aspects, the laws and regulations related to the implementation of telemedicine currently still regulate things that are general and considered essential. There are no specific regulations that regulate online health practices, especially regarding the standard of devices used, online prescribing, and protection against malpractice incidents in online health consulting services (telemedicine). Then, when the government later revokes the Covid-19 pandemic situation, there will be a void of instruments that serve as instructions for implementing telemedicine.

## 5 Suggestions

The government needs to take quick steps to formulate more comprehensive and detailed regulations, for example, regulations regarding telemedicine services not only between health facilities but between doctors and patients individually. In addition, the Indonesian Doctors Association (IDI) or the Medical Ethics Honorary Council (MKEK) can work with the government to record and audit all telemedicine services, both in terms of service protocols and internet technicalities, to ensure the quality of health services and patient privacy.

It is hoped that in the future, innovations in the development of information technology and the implementation of telemedicine in Indonesia can be utilized, implemented, and can run better in providing effective and efficient health services for the community while still paying attention to the interests and safety of patients, legal signs that applicable, as well as protection for medical and health personnel.

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## Legislation

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20. Undang-Undang Nomor 11 Tahun 2008 tentang Informasi dan Transaksi Elektronik
21. Undang-Undang Nomor 36 Tahun 2009 tentang Kesehatan
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23. Peraturan Menteri Kesehatan Republik Indonesia Nomor 512/MENKES/PER/IV/2007 tentang Izin Praktik dan Pelaksanaan Praktik Kedokteran
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25. Peraturan Menteri Kesehatan Republik Indonesia Nomor 20 Tahun 2019 tentang Penyelenggaraan Pelayanan *Telemedicine* Antar Fasilitas Pelayanan Kesehatan
26. Peraturan Konsil Kedokteran Indonesia Nomor 74 Tahun 2020 tentang Kewenangan Klinis dan Praktik kedokteran Melalui *Telemedicine* Pada Masa Pandemi Covid-19 di Indonesia
27. Keputusan Menteri Kesehatan Nomor HK.01.07/MENKES/4829/2021 tentang Pedoman Pelayanan Kesehatan Melalui *Telemedicine* Pada Masa Pandemi Covid-19

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