

Legal Protection for Online Healthcare Patients: Risks and Challenges in the Digital Era

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Abstract

The rise of online healthcare services presents significant legal challenges. This research examines how legal protection for patients is provided, the risks and obstacles in safeguarding patients in the digital era, and how health law should adapt to technological developments. Using a normative legal research method, the study highlights that legal protection is essential to ensure patients' rights in rapidly evolving digital healthcare. Drawing on Philipus M. Hadjon's theory, both preventive and repressive protections must work synergistically within regulations governing online healthcare. While digital services offer benefits such as faster and easier access, they also pose risks. Key issues include the absence of clear telemedicine regulations, potential misuse of personal data, limited service quality standards, and weak supervision. Dispute resolution between patients and providers further complicates protection. Health law must evolve to address these challenges, ensuring adequate safeguards while maintaining fairness and quality. Legal adaptation should regulate telemedicine practices, uphold ethical and professional standards for medical personnel, and protect patient data from misuse or breaches. Reputation and trust in healthcare depend on balancing innovation with the protection of fundamental rights. Therefore, health law must establish an adaptive and responsive framework that integrates technological progress with patient protection. Such a framework should guarantee ethical conduct, transparency, and accountability in digital healthcare, enabling the sector to grow safely and fairly. Ultimately, protecting patients' rights while embracing innovation is crucial for building trust and legitimacy in healthcare services in the digital era.

Keywords: legal protection, patients, healthcare, digital era

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INTRODUCTION

In the current digital era, healthcare services in Indonesia have entered a phase of electronic adoption that includes telemedicine services, medical records, health applications, and the use of technology to improve diagnosis and facility management (hospitals, health clinics, etc.). Currently, in Indonesia, there is the Halodoc application that functions as an online health reference that is widely used by the Indonesian public. The main facilities provided by Halodoc include consultations with doctors (via chat, voice calls, or video), a Health Shop for purchasing medicines and health products, and Homecare (including lab tests and vaccinations at home). The government has also shown its visible support through a program to procure internet infrastructure for healthcare facilities and the establishment of a Digital Transformation Office (DTO) at the Ministry of Health. The purpose of establishing this DTO is to accelerate the adoption of technology in healthcare services (Adinda, 2024).

Healthcare service is among the important factors that influence the degree of public health. The regulation of Jurnal Ilmu Kepolisian Vol. 19, No. 3, 2025, pp. 1-14

Indonesia's healthcare service, philosophically, is rooted in Chapter 34 section (1) of the 1945 Constitution (UUD), the 4th amendment, stating that healthcare services are the state's responsibility, and Chapter 28 H section (1) that decrees the right of every citizen to receive healthcare services. Both chapters are the manifestation of Indonesia's moral principle (*sila*) of "just and civilized humanity" and "social justice for the people of Indonesia." The provision of healthcare services is highly related to the value of human dignity, whereas the establishment of rights to receive healthcare services is the manifestation of *sila*, "social justice for the people of Indonesia," to achieve equality.

As a developing country, Indonesia is still fighting for an adequate quality of healthcare for its people. According to the Human Development Growth Index of 2010, Indonesia is ranked 111. Ratio of physicians to citizens is at 1 to 5000, significantly behind Malaysia, with 1 to 700. This issue is caused by the considerable interest of Indonesians in receiving medical care overseas instead of locally, indicating a considerably low trust among Indonesians toward local physicians. In his article, Anwar quoted the statement of the head of IDI, which is that nearly one million Indonesians seek medical treatment overseas, and around IDR 20 trillion is spent annually. For that, the state needs to keep up with the advancement of informatics in healthcare services to compete with other countries that are capable of utilizing such technology to provide long-distance healthcare service (telemedicine) and even long-distance surgery (telesurgery).

Technology of information is not something difficult to reach nowadays because it has now penetrated every aspect of daily life. Such technology is ever-innovating as well as ever-advancing, and the advancements could provide public convenience. The convenience is also felt within the scope of the economy, particularly in trading. At this point, trading is inseparable from informatics. The synergy of trading and informatics gave birth to the term e-commerce. The advancement of online healthcare consulting firms provides several benefits. In terms of practicality, online consulting eases patients to interact with doctors virtually anywhere without the need to be physically present in a medical facility. Patients only need to possess communication tools connected to the internet to be able to consult with doctors. This obviously provides significant help to those living in places with minimal infrastructure as well as inadequate healthcare facilities. Moreover, patients with physical limitations will be able to consult without needing to leave home or even bed.

Online applications providing healthcare consultations have been among the trends that were born from the advancement of informatics. Alodokter and Halodoc are among the many online applications recognized in Indonesia. Online health consultation is supported by physicians with medical backgrounds who provide the ability to analyse and provide a diagnosis to patients. However, it is undeniable that the existence of online consulting applications does not come without issues. Among the more serious issues would be an occasional irrelevance of medical information produced, which in turn will decrease the quality of service and ultimately the patient's trust. According to reports from Indonesia's Ministry of Health, during 2023, more than 10 million Indonesians have utilized telemedicine applications to gain health consultation services; moreover, an annual growth of up to 20-25% was expected from the sector of digital health within the next 5 years. Even with these positive numbers, legal issues within such applications are not few, from issues of personal information protection to professional responsibilities of medical personnel providing virtual services. One of the most relevant legal issues related to online healthcare services is the void of jurisdiction in regulating such online services. Even with several health-related regulations, such as Constitution No.17, 2023 of alteration of Constitution No.36, 2009 of health and Constitution No.1, 2024 of the alteration of Constitution No.11, 2008, of Information and Electronic Transactions (ITE), these regulations have not specifically controlled legal protection for patients in the context of online healthcare service. This causes vagueness in patients' rights, responsibilities of service providers, as well as legal procedures that need to be taken should a dispute occurs. This void of jurisdiction opens up a pathway to potential abuse and injustice towards patients in terms of

personal information, quality of service, and responsibilities of medical personnel.

The use of online healthcare services gives a rise to several legal issues and ethical concerns, such as licensing, accreditation, privacy of medical information, and even accountability for malpractices. Some ethical challenges are comprised of limited patients' information, as well as disparities of expectations and confidentiality. Data leakage risk is on the rise due to third-party access, such as internet providers, technicians, and even hackers, who are able to gain medical information without the knowledge of physicians and patients alike.

Online healthcare services not only bring benefits but also come with their own negative outcomes, such as medical record confidentiality that is not adequately secured, as well as the risk of misdiagnosis from the lack of face-to-face meetings in which physicians are supposed to be accountable even for such mistakes. This condition generates serious medicolegal issues. Therefore, a clear regulation within the national law is mandatory in order to ensure legal assurance and the protection of patients' rights amidst the advancement of medical technology. Leaving this issue to drag on will negatively impact healthcare services, which in turn will harm the public as a whole. It is of everyone's knowledge that a doctor is ultimately a human, prone to mistakes and neglect. Therefore, ethics violations or even breaches of legal norms are not an impossibility. This research is of high significance because it can contribute to the comprehension of legal protection for patients within digital healthcare services that are ever-advancing. Highlighting the existing void of jurisdiction, this research may provide recommendations for a more comprehensive update towards existing regulations in line with the technology progression, so as to provide optimal protection for patients.

This research holds a significant novelty for it covers the rarely explored legal aspect, which is the aspect of online healthcare service, particularly in Indonesia. This research will also identify and analyse the existing void of jurisdiction within the regulation of digital healthcare, as well as offer more concrete legal solutions relevant to the advancement of technology. This research is of high importance to be studied further, given the increasing number of people using online healthcare services and the potential they hold to become the primary choice in the future. The existence of this research is expected to bring a deeper understanding of legal protection for patients, as well as to stimulate the development of clearer and more precise guidelines in order to protect patients' rights and ensure the safety and trustworthiness of online healthcare services.

Based on the previous introduction, several research probes are to be elaborated, such as: (1) How do legal protections work for patients of online healthcare services? (2) What are the risks and challenges to be faced in providing legal protection for patients of healthcare services in a digital era? (3) How is the medicolegal system supposed to adapt to the advancement of digital technology?

Theoretical Framework

Theorem of Health Law

The health law, including the "*lex specialist*" constitution, protects the responsibility of healthcare providers to achieve the common goal of "health for everyone" within the framework of human healthcare, as well as providing special protection for patients seeking healthcare services.¹⁰ The aforementioned constitution regulates the rights and responsibilities of every healthcare provider as well as users, an individual (a patient) or a group of people. According to H.J.J. Lennen, the health law covers all legal clauses that are directly related to health care, as well as the implementation of civil law, legal administration of the state, and criminal law within this context. As a result, the health law can be defined as a total series of regulations that cover health-related issues. Sources of such regulations include contract of jurisprudence, consensus, and notions of legal and medical experts, aside from textual constitutions (including doctrines).

directly related to the maintenance or service of healthcare and its implementation as well as the rights and responsibilities of an individual and the entirety of the public as recipients of healthcare service as well as providers of healthcare in every single aspect within the organization; national and international guideline vehicle, laws in medical field, jurisprudences, as well as science within medical field and health. The medical law is part of health law related to medical care." In essence, the purpose of law is to produce public order and balance. Then, in order to achieve a well-functioning society, human well-being must be preserved. With that, it is noticeable that the purpose of a health constitution isn't far apart from the general purpose of a constitution as a whole. This is observable through the lens of the healthcare sector, which covers the dimensions of both social and communal, and is required to accommodate various interests. Recalling the first purpose of the law, which is to create order, healthcare sectors have held legal frameworks to carry out their duties accordingly.

This is achievable if legal clauses are implemented accordingly, which in turn fosters understanding between professionals within every department that supports the enactment of healthcare operations. The existing legal authority has pictured the responsibilities and rights of each professional actor. Therefore, it is hoped that order and balance will be achieved in the implementation of the rights and responsibilities of each profession. There are various theories applicable to gain a considerable comprehension of the purpose of law as well as achievements within the healthcare sector. Ethics and jurisdictions within healthcare service are highly important for medical personnel in order to understand their ethics, morals, and the regulations, as well as their implementation in their study, and in performing their duties within healthcare facilities. The medical personnel will be prevented from charges of ethics, morals, and even legal violations should they operate according to the rules of ethics, morals, and the law itself. With that, within a healthcare service, a doctor, dentist, nurse, or even a toxicologist needs to make the correct decision. Any action performed is according to each field of competence, standard of care, and authority based on the principles of ethics, morals, and law.

Ethics as moral philosophy is related to what is considered good and bad by the people within a certain timeframe, according to shifts and growth of norms and values within the aforementioned society. It is specifically stated "of a certain timeframe" because ethics and morals are subject to change as time passes. Actions that are done according to the existing ethics and morals will be praised, but as a consequence, any action violating said norms will be denounced. Compared to the rule of law, the rule of ethics holds an obligation for each person within its scope, and should it not be implemented, it will entail repercussions as a consequence. Whereas in the rule of law, an obligation is treated as a mandatory requirement to materialize the right that comes with it. This will lead to a punishment should it not be fulfilled. Therefore, obligations become an enforcement tool to carry out one's burden. In the present globalization, ethical rules need to be preserved, for without them and the law, one man becomes another man's adversary. The field of healthcare service needs to be firmly held by ethics and law as a consequence of humans' potential for greed, which in turn will lead to conflicts between patients and providers or even among fellow providers. Without the aforementioned rules holding the leash, one party might be willing to do whatever it takes in order to achieve its own interest, even at the expense of the other.

Theory of Legal Protection

Legal protection is defined as providing protection to one's human rights from violations by other people. Such protection is bestowed upon the public so that they can benefit from every right given by the law, or in other words, legal protection is a series of legal efforts that need to be done by law enforcers to provide a sense of security, both physical and in mind, from various threats from any party.

According to Muchsin, legal protection is an action to protect an individual by harmonizing between rules and values toward one's actions, to create order and civil interaction between fellow humans. On the other hand,

according to Setiono, legal protection is an action or effort to protect society from the arbitrary actions of those in power to manifest order and peace, to enable the people to enjoy their dignity as humans.

According to Hetty Hasanah, legal protection means any effort that ensures legal certainty, and thus is able to provide legal protection towards related parties or those performing legal actions. Fitzgerald explained Salmond's theory of legal protection, in which its purpose is to integrate and coordinate various interests within a society, for within the traffic of interests, a protection to one interest can only be done by restricting another one. Legal protection is required to view the steps in which legal protection is born from legal provisions, and all legal regulations enacted by the people are, in essence, a public agreement in order to regulate relations and interactions among the members or between an individual and a governmental body that represents the people's interest.

According to the notion of Phillipus M. Hadjon, legal protection for the people is among the governmental acts that are both preventive and repressive in nature. Preventive legal protection serves the purpose of preventing disputes, which leads the government to act cautiously in decision-making based on discretion; on the other hand, the repressive kind of legal protection solves disputes, including how they are handled in a judicial institution.

This research is a normative legal research focusing on the study of the currently applied legal norms, such as those stated in the statutory law, legal doctrine, related to legal protection for patients of online healthcare service: analysis towards risks and challenges of healthcare services in a digital era. To answer the primary issue in this research, the writer employs the qualitative approach as the research method so as to descriptively elaborate, as explained by Bogdan and Taylor, quoted by Lexy Moleong, that the qualitative method as a research procedure produces descriptive data comprised of written or verbal statements from the observed group of people. This approach is directed to both the individuals and their backgrounds holistically.

A descriptive method in research is utilized to provide an objective and subjective picture explaining an event or phenomenon by presenting data of factual value, which in turn results in a detailed conclusion to an issue, event, or phenomenon as the subject of research. Within this thesis, the writer endeavors to elaborate on subjects related to legal protection for patients of online healthcare services: analysis of risks and challenges of healthcare services in a digital era.

DISCUSSION

Legal Protection for Patients of Online Healthcare Services

Health is one of the indicators of social well-being, and plays an important role in improving the quality of manpower, management development, and poverty within Indonesia. A healthy individual will make an impact on the performance of the aforementioned individual. The health quality of people is, among the many factors, determined by the quality of healthcare service, either from the availability of healthcare facilities or an adequate amount of medical staff. Healthcare service becomes a primary factor in achieving the physical and psychological well-being of the people. Therefore, the Indonesian government continues its effort to improve the quality of healthcare services in terms of the distribution and availability of both healthcare facilities and medical personnel throughout the country. This is done to manifest and raise the quality of life as well as the well-being of Indonesian citizens.

The government holds the obligation to fulfill and provide healthcare services to every citizen of Indonesia without any prejudice. This is regulated in the 'Chapter 28H section (1) Constitution of the Republic of Indonesia 1945, which states "every citizen has the right to live both physically and mentally in prosperity, to

reside, and to receive a good and healthy environment as well as receive healthcare service." In essence, healthcare services are implemented in order to prevent the proliferation of disease. Aside from that, it is meant to cure diseases, which includes medical care provided based on an individual relationship between one patient in need of cure and a physician taking the role in providing a solution to health issues suffered by the patient. Healthcare service becomes a responsibility of the government in maximizing quality, as well as the rapid and appropriate availability of healthcare services for the public. Along with the advancement of technology, medical equipment is rapidly improving as well, as indicated by the emergence of various modern and advanced devices.

The aforementioned devices have recently become widely used in various modern hospitals in Indonesia. Even so, the availability of adequate devices is not enough to improve the public health quality if not accompanied by the availability of adequate human resources. Moreover, the health of the people does not rely only on the availability of existing facilities and medical personnel, but also on other factors such as the health condition and willpower within the patient. Healthcare services done either individually or by a group are considered an activity of promotive, preventive, curative, and rehabilitative approaches that are implemented according to the people's needs as patients. Healthcare service is also meant to provide diagnosis to patients, to cure diseases, as well as support recovery in patients from certain ailments, either as an individual or family aggregate, as well as serving the purpose to maintain and improve service and health quality to prevent the emergence of diseases within the society, either individually or in groups.

One of the most fundamental aspects of online healthcare is the security of the patient's personal information. Within this context, Indonesian Law Number 11 of 2008 regarding ITE (Information and Electronic Transaction), as well as Indonesian Law Number 28 of 2022 regarding the Security of Personal Information, are of high relevance. Both regulations provide legal frameworks that regulate how personal information, including medical records, is supposed to be managed and protected. Patients have the right to know how their data is being used, accessed, and kept by providers of online healthcare services. Without adequate protection, the personal information of patients is at risk of falling into the wrong hands, which would lead to abuse of medical information. On the flipside, Indonesian Law Number 36 of 2009 regarding Health regulates the rights and responsibilities of medical staff in providing medical services, though it does not specifically rule over technology-based healthcare services. Because of that, even with the aforementioned regulation obliging medical personnel to keep the confidentiality of patients and provide a professionally standardized healthcare service, the implementation of the regulation within online services remains unclear. This results in legal uncertainties that threaten patients should there be violations in the service.

Examining the legal protection for patients in online health consultations, it is necessary to understand that the decree of Chapter 3 Section (2), Regulation of the Council of Medical Doctors Number 47 of 2020 regarding the Clinical Authority and Medical Practice via Telemedicine During the Period of Coronavirus Disease Pandemic 2019 (Covid-19) in Indonesia, states, "medical practice via electronic system of application in the form of telemedicine, as it was intended in section (1), is a service of consultation or teleconsultation provided by physicians and dentists under the principle of patient confidentiality." Online healthcare service poses a higher risk compared to their physical counterparts, particularly in terms of accuracy in diagnosis. Patients have the right of legal protection against potential medical error. Even with the Regulation of the Council of Medical Doctors Number 47 of 2020, which provides a guideline towards online practices, this regulation has not tapped into direct services to patients. The nonexistence of operational standards in the supervision of telemedicine platforms deteriorates legal protection and the quality of service for patients.

As aforementioned, online healthcare service poses a higher risk compared to their physical counterparts,

particularly in terms of accuracy in diagnosis. Diagnosis produced without direct examination holds the potential for errors that can lead to the endangerment of patients' health. Therefore, it is of great importance for the patients to receive legal protection when using digital healthcare services. The Regulation of the Council of Indonesian Medical Doctors Number 47 of 2020 regarding Clinical Authority does provide guidelines for physicians in online healthcare practices. However, the regulation is still confined to direct services toward patients. Moreover, the aforementioned regulation has not provided comprehensive guidelines related to operational standards that must be met by telemedicine platforms or the legal responsibilities of online service providers in ensuring the quality of service and the rights of the patient. The nonexistence of a firm and thorough regulation worsens the situation for it opens up an opportunity for online healthcare platforms to operate without adequate supervision, thereby endangering the safety of patients.

Based on the author's analysis, if connected to the theory of legal protection from Phillipus M. Hadjon, preventive legal protection, as explained by Hadjon, is a form of legal protection that is meant to prevent any violation or public loss before they happen. Preventive legal protection in online healthcare service is supposed to be present from the start, through clear and firm regulations to prevent the proliferation of issues in the future. This encompasses regulations of service quality standards, platform accreditation, and professional responsibilities of medical personnel. The Regulation of Health Ministry Number 20 of 2019 does provide a legal framework for telemedicine between healthcare facilities; however, the same regulation has not covered direct services to patients. The legal void in operational standards and protection of confidentiality shows the frailty in the preventive legal protection towards the rights of patients of digital services. On the other hand, a repressive kind of legal protection focuses on the management of disputes after they have already happened. In the context of online healthcare service, this encompasses mechanisms of settlement in disputes between patients and service providers when loss occurs, such as misdiagnosis or data breach. However, as of the current time, there is no regulation firm enough in the aforementioned mechanism. According to Hadjon's theory, a repressive protection needs to come with sanctions and a more effective legal system. Therefore, the regulation of legal complaint procedure and mediation in legal justice becomes crucial in ensuring justice for patients.

Moreover, within the context of medical malpractice, which could occur in telemedicine, repressive protections are required to involve sanctions toward medical staff who are proven guilty. The Indonesian Law Number 29 of 2004 regarding Medical Practice regulates medical responsibility; however, the implementations against medical violations frequently become arduous due to the difficulty in enforcing the law against medical procedures that are done without a face-to-face meeting. Therefore, it is important for the law to assert and impose strict sanctions against medical malpractices that occur in telemedicine services.

Both preventive and repressive legal protection within healthcare services should go along in synergy to create an integrated and effective legal system. Preventive protections serve the purpose of preventing losses by means of strict regulation in accrediting online healthcare platforms, competency requirements of medical personnel, as well as protection of patients' confidentiality. Alongside the advancement of digital technology, regulations that accommodate preventive aspects have become of utmost importance to maintain the quality of service and to prevent potential violations against the rights of patients from the start of the aforementioned service. On the other hand, the repressive kind functions as a restorative mechanism to patients' rights that have suffered a violation, such as malpractices or breach of personal information. The system of dispute settlement needs to be just as well as easily accessible, with firm implementation of sanctions against any violation. Hadjon's theory of legal protection is significantly relevant to be applied, because it emphasizes the importance of balance between prevention and countermeasure. Therefore, the country requires a comprehensive regulation encompassing both aspects to ensure maximum protection for patients of online healthcare.

Risks and Challenges Faced in Providing Legal Protection for Patients of Healthcare Services in the Digital Era

The advancement of digital technology, particularly within the scope of health, has created a series of conveniences for patients to gain medical services via online platforms or telemedicine. Even though this brings significant benefits in improving accessibility and quality of healthcare service, it also comes with major challenges and risks in relation to legal protection for patients. In this context, it is important to understand various risks and challenges to be faced in ensuring an effective legal protection for patients in the digital era. Urges to generate a clear regulation as well as a strong legal mechanism have become more demanding along with the flourishing of telemedicine practices and the utilization of electronic medical records. The following sections discuss several risks and challenges to be faced in providing legal protection for patients of healthcare services in the digital era, as stated in Table 1.

Table 1. Risks and Challenges Faced in Providing Legal Protection for Patients of Healthcare Services in the Digital Era

No.	Risk/Challenge	Description	Potential Impact
1	Void of Jurisdiction	The lack of a specific regulation to rule over online healthcare services, including the rights of patients, as well as the responsibilities of medical personnel.	Uncertainty of patients' rights, risks of abuse of service, and medical malpractice.
2	Inappropriate use of medical records	Management of patients' medical records that are prone to breach or abuse by irresponsible parties.	Violation of patients' privacy, financial loss, and damage to reputation.
3	Limited quality standard of service	The nonexistence of a consistent standard in relation to the quality and procedure of healthcare service in telemedicine, which could lead to inadequate service.	Abuse by unaccredited providers as well as potential medical error.

According to the aforementioned table, among the primary challenges in providing legal protection for patients of online healthcare services is the void in jurisdiction that specifically rules over telemedicine practices. Even though there is a presence of a regulation in relation to electronic transactions, a comprehensive regulation that elaborates legal connections between patients, doctors, and digital platforms is yet to be seen. This uncertainty elevates the risk of misuse and injustice due to undefined rights for the patients as well as responsibilities of service providers within the existing legal system. Moreover, abuse of personal information has become a serious risk within online healthcare services. Medical records that are very sensitive in nature may leak or be inappropriately used without strict protection. Even with the already established Constitution of Personal Data protection, the implementation still faces several challenges. Even further, the lack of standardized quality of service leads to an abundance of unaccredited platforms in operation without any supervision, risking misdiagnosis and imposing therapies that bring detriments to patients. The government needs to establish strict standards and accreditation.

Table 2. Risks and Challenges Faced in Providing Legal Protection for Patients of Healthcare Services in the Digital Era

No.	Risk/Challenge	Description	Potential Impact
4	Lack of effective supervision	A constrained supervision of medical practices in online healthcare services due to the lack of regulation that covers the aforementioned supervision.	Substandard medical practices, an increased risk of malpractice, and loss for patients.
5	Issues in dispute settlement	Vagueness in the mechanism for settling disputes between patients and service providers, either through civil law or administrative law.	Patients are having difficulty in achieving justice, and there are legal uncertainties in establishing patients' rights.

Supervision of medical practice done online is relatively more complicated compared to medical practices that are done face-to-face. Without adequate surveillance, there is a possibility of violations done by service providers or medical staff, either in diagnosis, treatment, or in terms of medical ethics. The inability to directly oversee medical practices elevates the risk of malpractice, which would lead to patients being exposed to unprofessional and unsafe medical care. Speaking of settlement of disputes, in an ever-digitalized world, vagueness within the system of settlement in disputes between patients and healthcare service providers frequently becomes a serious issue. Patients who feel taken advantage of by online medical care, either from misdiagnosis or breach of personal information, are likely to face difficulty in fighting for their rights. The lack of a clear and transparent procedure in solving disputes may lead to injustice towards patients and break the trust of people in digital healthcare services.

The Health Law Needs to Adapt to The Advancement of Digital Technology

The advancement of digital technology has had a major impact on almost every aspect of human life, including in the health sector. One of the primary examples of this change is the emergence of telemedicine, which utilizes digital platforms to provide healthcare services without the need for face-to-face meetings. With this progression, the health law must adapt to provide adequate protection for patients, medical personnel, and service providers. However, the rapid shift in technology within the health sector frequently outpaces the progression of the regulation itself. Therefore, it is important to analyse how the health law must adapt to the advancement of digital technology.

Among the primary challenges is how the health law is able to generate a regulation that is responsive to the demands of technology-based healthcare services. The currently existing regulations, such as the Indonesian Law Number 38 of 2009 regarding Health and the Indonesian Law Number 11 of 2008 regarding ITE, only regulate a partial aspect of digital healthcare service and focus more on the traditional healthcare system. Even with the ITE Article ruling over electronic transactions, this regulation is yet to adequately accommodate maintaining the quality and standard of medical service within the context of telemedicine. For that reason, legal revisions and adjustments are required to be able to encompass a more detailed regulation related to digital healthcare services.

The health sector is no longer able to overlook digital technology as an integral element of a healthcare system as a whole. On one side, the progression in technology brings forth the possibility to improve accessibility of healthcare services among people, particularly within secluded areas or among those with limited resources and time. However, on the flipside, there is a potential for medical errors, violations of personal information, and vagueness related to the responsibilities of medical staff within digital services, which requires the health law to provide more clarity in regulating such issues. Therefore, the development of special regulations toward

telemedicine and other digital healthcare technologies becomes a crucial step in ensuring a safe and proven service for patients.

These shifts require not only adjustments within the substance of law, but also in its procedure. One of the elements that needs to be carefully regulated is the use of patients' personal information. In an online healthcare service, medical records are generally gathered, saved, and analysed via digital means, which leads to them being very prone to inappropriate use. The Indonesian Law regarding PDP (Protection of Personal Data) that was established in 2022 made a good start; however, there remain several challenges that need to be addressed in implementing the protection effectively, particularly within the healthcare sector. For that reason, the health law must reaffirm that the capability of the regulation that oversees medical records is adequate in strictly and thoroughly maintaining the confidentiality of patients.

Aside from that, within the context of medical responsibilities, the health law also needs to adapt to ensure that the medical staff providing services via digital platforms stay professional and responsible. In several countries, medical practices by means of telemedicine are regulated by certain ethical codes that require physicians to ensure an identical standard of service within face-to-face medical practices. That being said, in Indonesia, the regulation in relation to doctors' responsibilities within the scope of digital service has not been explicitly established. This becomes important, considering that within telemedicine, physicians and patients are incapable of performing any meaningful physical examination, which increases the potential of misdiagnosis or faulty treatments. Therefore, the health law must ensure that the physicians providing online services remain confined to the established medical standard.

Alongside the advancement of technology such as Artificial Intelligence (AI) and data analytics, which are more frequently used in medical practices to help provide diagnosis or treatment, the health law must also be able to accommodate this development. AIs within the medical scope have the potential to improve accuracy in diagnosis and, at the same time, minimize human errors, but also open up new legal issues. For example, should an AI-based system produce an error that leads to misdiagnosis or faulty treatment, who would be responsible? For that reason, the health law must develop a regulation that has the capacity to determine who should be accountable for the utilization of technology in diagnosis and treatment, as well as how to effectively and safely integrate a technology-based system with the wider healthcare system.

Licensing as well as accreditation have also become an important issue within the context of digital healthcare services. In the meantime, medical personnel who provide services through online platforms must possess an official license to operate. That being said, a challenge to the regulation emerges as the medical staff providing online service might have the possibility of not being registered within the same region as the patient or even within the same country. This leads to jurisdiction issues, of which the established regulation is unable to clearly determine who would be responsible should there be any legal issue in relation to digital healthcare services. For that reason, it is of high importance for the health law to rule over cross-border licenses for medical personnel providing healthcare by means of digital platforms, either at the national level or internationally.

According to the writer's analysis, if connected to the theories of health law, its concluded to be aligned with this particular theory, the health law must ensure that the rights of patients, including the rights to receive proper and clear information related to medical treatments taken, the right of informed consent, as well as the right of confidentiality must be preserved even against the ever-changing system. This is the point of which the adaptation of health law becomes important so that the existing regulation will be able to accommodate the ever-advancing technology, as it was explained within the Indonesian Law Number 36 of 2029 regarding Health and The Indonesian Law regarding PDP which already encompass several aspects of legal protection for

patients; rights, though still need to be perfected with new, more relevant regulations.

Based on the theory of a sustainable healthcare system, the healthcare legal system must be able to adjust itself to changes within the context of social, technological, and economic factors, to ensure that healthcare services remain fair and effective. A sustainable healthcare system not only prioritizes wide-ranging and well-distributed access for the people, but also ensures the quality of service remains unaffected by the advancement of technology. Within this context, the health law must provide an adequate legal framework for regulating technologies used in the healthcare system. For example, telemedicine must be regulated in ways that ensure the consistency of the quality of services according to the established standard. However, adaptation towards new technologies, such as the involvement of AI in providing medical diagnosis or utilizing the assistance of an algorithm in making medical decisions, needs to be counterbalanced with regulations that oversee legal responsibilities should there be an inappropriate use of technology. The health law must be able to respond by establishing a guideline to ensure the aforementioned technology actually provides assistance instead of completely overtaking medical decision-making.

Besides that, data security is a critical issue within digital healthcare services. In the theory of the health law, protection of personal data is regulated as one of the fundamental rights of patients that must be strictly guarded by every entity involved within the aforementioned healthcare service. Digital technology provides convenience in managing medical records, but it also increases the risk of breaches as well as abuse of data. The health law needs to adapt by developing a more potent regulation related to the management and security of medical data, which encompasses regulations that decide who has the right to access the aforementioned data, how they are supposed to be stored and guarded, and what the consequences would be should a violation occur. The recently published PDP constitution must be strictly applied within the digital healthcare sector to ensure not only the technical safety of patients' data but also that it is managed according to the principles of ethics and law itself.

As a whole, the health law must adapt rapidly and be responsive to the very quickly advancing digital technology. In dealing with the challenge, theories of health law, such as the theory of human rights protection, the theory of sustainable healthcare system, and the theory of justice in healthcare access, may provide a strong foundation in the development of relevant regulations. That being said, in order to ensure optimal use of technology without sacrificing the rights of patients, the Indonesian health law needs to immediately make adjustments, particularly in terms of regulation of telemedicine, security of personal data, and professional responsibilities of medical personnel. With the appropriate legal adaptation, we will be able to ensure technology to provide not only improved access and quality of healthcare service, but also to remain operating within legal frameworks that protect the fundamental rights of patients.

CONCLUSION

According to the analysis, it is concluded that legal protection for patients of online healthcare services is very important to ensure the protection of patients' rights in the ever-flourishing digital era. According to Hadjon's theory of legal protection, both preventive and repressive protection must be applied in synergy in regulating online healthcare services. Preventive legal protection is applicable by means of clear regulation within standards of service, management of personal data, as well as imposing obligations on medical personnel of online services in order to prevent the potential loss and violation. On the other hand, repressive protection functions as a pathway for patients who have suffered losses to achieve justice by means of effective legal mechanisms, such as settlement of disputes and enforcement of sanctions against medical malpractice or inappropriate use of data. By integrating both aspects of legal protection, the Indonesian legal system will be able to ensure that the online healthcare service functions with safety, fairness, and is aligned with patients' rights that must be protected. Even though online healthcare service offers an abundance of benefits, such as

easier and quicker access, they also come with several risks and significant challenges in providing legal protection for patients.

The void of jurisdiction in relation to the regulation overseeing telemedicine, potential for inappropriate use of personal data, limitations in the standard of service quality, as well as a deficiency of effective supervision, have become a primary issue that needs to be overcome immediately. Moreover, issues in the settlement of disputes between patients and online healthcare service providers worsen the whole ordeal. For that, it is necessary for the government and any involved parties to quickly develop thorough and clearer regulations able to protect the rights of patients, to strictly regulate personal data management, and to ensure the quality of online healthcare services is in accordance with the established medical standard. Without the aforementioned actions, risks to the rights and safety of patients might be exacerbated in the present digital era.

The health law must adapt to the rapid progression of digital technology to ensure adequate protection for patients, as well as maintain quality and justice within healthcare services. The aforementioned adaptation is crucially important in regulating practices of telemedicine, ensuring ethical and professional standards for medical personnel providing digital service, as well as protecting personal data from the potential of breach and inappropriate use. Therefore, the health law must have the capacity to maintain a balance between innovation of technology and the protection of fundamental rights of patients, as well as to create an adaptive and responsive legal framework that enables the healthcare sector to flourish safely and with fairness in the digital era.

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Jurnal Ilmu Kepolisian

Vol. 19, No. 3, 2025, pp. 1-14

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