Legal Protection of Patient's Electronic Medical Record from Indonesian Legal Perspective

Christin Septina Basani
Faculty of Law, Universitas Kristen Maranatha, Jalan Surya Sumantri No. 65, Sukawarna, Kecamatan Sukajadi, Kota Bandung, Jawa Barat 40164
christinseptina@yahoo.co.id

How to cite: Basani, Christin Septina “Legal Protection of Patient's Electronic Medical Record from Indonesian Legal Perspective.” Dialogia Iuridica, Vol. 15, No. 1, 2023, pp. 094-112.

ABSTRACT
Health is the most fundamental factor of every citizen, particularly in Indonesia. Considering that many people need health services, patients’ data are pivotal as they contain Patients’ health and medical records, identity, examination, medication, and other services patients receive in health services. Medical record in Indonesia is regulated by the Minister of Health Regulation No. 269 of 2008 on Medical Records and Minister of Health Regulation No. 22 of 2022 on Electronic Medical Records. The transition to electronic medical records is expected to finish on 31 December 2023. Electronic Medical Records (EMRs), which are now being implemented across the healthcare system in Indonesia, have the potential to fulfill the rights of citizens in the healthcare sector. On the other hand, data security for patients requires protection, as electronic systems may be vulnerable to data breaches and misuse by unauthorized individuals. The objective of this research is to examine the legal protection for patients when their electronic medical record data is misused and to elucidate patients' rights in the realm of healthcare, particularly concerning medical records. The research employs a normative juridical approach with a legislative regulation focus. Article 29 of
Minister of Health Regulation No. 22 of 2022 already addresses data protection for patients' personal information, although continuous monitoring of the implementation of patient's Electronic Medical Records is still necessary. The findings of this study emphasize the necessity of ensuring data protection guarantees for patients stored within electronic systems.

Keywords: Electronic Medical Record; Health Service, Legal Protection

I. INTRODUCTION

The first paragraph of article 28H of the 1945 Constitution states that Every person is entitled to live prosperous physically and spiritually, to have a place to reside, and to acquire a good and healthy living environment as well as be entitled to obtain health care. Article 9 of Law no. 39 of 1999 on Human Rights states that every individual has right to live, survive, and improve their standard of living. They also have rights to live prosperous physically and spiritually, in addition to rights to Good and healthy environments. In other words, Indonesia warrants the right to health of its citizens as a part of human rights. Health is closely related to individuals’ daily life. Health care, medicine, clean and healthy environments, and other health-related Factor are vital to individuals’ sustainability. Without good health, individuals will find it difficult to live in dignity and have longer live expectancy.¹

In addition to its citizen's rights to health, Indonesia also has regulations on health, namely Law No. 36 of 2009 on Health. Article 4 of Law No. 36 of 2009 also mentions the rights to obtain optimal health. Law on health is part of the country's commitment to ensure its citizen’s health by providing competent, nondiscrimination healthcare facilities, regardless of some violations that emerged during its process.

The state should serve as a healthcare provider for its citizens. It should be noted that, when adhering to democratic principles, the government is mandated with powers

¹ LBHM. Buku Saku Hak Atas Kesehatan. LBH Masyarakat, 2019, p.1
to protect every citizen’s rights. The government's power should be used only to promote and fulfill every human right. In Indonesia, the government launched Jaminan Kesehatan Nasional (National Health Insurance), which is administered by BPJS (Badan Penyelenggara Jaminan Sosial/ Social Security Administrative Body), an institution established based on Law no. 24 of 2011 on BPJS, mandated in Law no. 40 of 2004 on National Social Security System (SJSN). The National Health Insurance (JKN) constitutes the government's effort to help poor people who find it difficult to access health services. The term used by the government to protect its citizens is social security. Social security is distinct from insurance. Social security is a government-sponsored program, regulated by the government, and governed by legal procedures outlined in legislation, whereas insurance is a protection program administered by either private entities or state-owned enterprises.

The central and regional government should provide a healthcare facility that contains the necessary tools or spaces to carry out health services. It should also be run by health professionals who are capable of performing medical actions. One of the important aspects of health service is the administration of medical records. A medical record is a pivotal document in any healthcare facility, as it contains any information related to patients’ treatment, personal data, and health history, among others. Due to its importance, every doctor and dentist is obliged to make medical records, either manually or electronically.

The medical record contains important data on patients’ identity, health history, medical actions, and medication. Hence, it should be written in a complete and accurate manner. The medical record has several benefits for administrative, medical, legal, financial, research, educational, and documentary aspects. In addition to supporting

---

health services for patients,\(^6\) the medical record allows tracking of patients’ health history and hospital visits. It helps doctors and nurses understand the patient’s health history when they need further medical treatment. Making a medical record is one of the doctor’s and dentists’ responsibilities when carrying out their medical practices, as explicitly stated in Article 46 of Law No. 29 of 2004 on Medical Practice. To implement article 46 of Law no. 29 of 2004, the Minister of Health Regulation no. 269/MENKES/PER/2008 on Medical Record is issued.\(^7\)

The technological development has provided more efficient systems through digitalization in various sectors, including the health sector. The conventional, paper-based medical record has begun to shift to electronic medical records with its abundant features and simplicity to support health professionals and patients. The electronic medical record is made using an electronic system, which also serves as a digital storage of patient’s health status and the healthcare services they receive throughout their lives.\(^8\) The electronic medical record system also aids staff, doctors, and healthcare professionals in efficiently managing patient data. From the patient’s perspective, they can access their health data, eliminating the need to request data from healthcare providers or provide the same information repeatedly. Manual medical records face challenges in storage, especially in terms of filing, which can be problematic for outpatient care patients, as it necessitates suitable storage space.\(^9\)

On September 12, 2022, the Ministry of Health of the Republic of Indonesia issued regulations pertaining to Electronic Medical Records (EMR) as stipulated in Minister of Health Regulation No. 24 of 2022 concerning Medical Records. This regulation emerges in support of the efforts to align healthcare technology

---


transformation with the 6th pillar of Health Transformation\textsuperscript{10} (Indonesia's six pillars of health transformation include the transformation of Primary Services, Referral Service Transformation, Health Resilience System Transformation, Health Financing System Transformation, Health Workforce Transformation, and Healthcare Technology Transformation).\textsuperscript{11} The government's policy update represents a revision of the previous Minister of Health Regulation, No. 269 of 2008, which adapts to the advancements in science and technology, service requirements, policies, and legal considerations in the field of healthcare for the Indonesian people.

Several challenges are associated with the implementation of Electronic Medical Records (EMR), including the initial phase where not all healthcare professionals are adequately prepared to use it. Additionally, issues may arise when there are internet or network-related constraints. On the flip side, the electronic medical record system significantly benefits healthcare facilities, as it aids in providing faster services, reducing the need for human resources, and cutting down the costs associated with medical record units.\textsuperscript{12}

Patients’ data stored in electronic medical records may include patients’ identity, examination results, medication, medical action, and other treatments received by patients. While this data is essential for healthcare-related information, the completeness of patient data, without the assurance of data security, can be vulnerable to misuse by irresponsible individuals.

The security and confidentiality of patient medical records must be maintained against both internal and external factors. Internal factors often involve files going missing outside designated areas, such as inpatient rooms or the emergency department. External factors frequently lead to files falling due to overcrowded shelves and the

mismatch of file numbers with the intended order. Hence, electronic medical records are essential to minimize these existing challenges.

Indonesia has already regulated personal data protection through Minister Regulation No. 20 of 2016 on Personal Data Protection. The regulation defines personal data as certain individual data that are stored, maintained, validated, and protected to be kept confidential. The owner of personal data is an individual whose information is attached to the data. Every electronic system provider should have internal personal data protection regulations to operate.

Information and Technology development in this era is undeniably helpful in various sectors, including the health sector. Technology allows better, faster, and more efficient management of big data. However, it is also prone to various risks, such as data misuse, personal data theft, personal data transactions, fraud, and other risks. Therefore, it is necessary to further study patients’ personal data protection as the conventional medical record begins to shift to the electronic medical record.

Research related to electronic medical records has been extensively conducted and documented. However, the focus on the protection of patients’ personal data has become crucial, especially as electronic medical records allow patients to input their personal information. This poses a significant concern in case of data breaches and misuse by irresponsible parties.

With regard to the shift to electronic medical records and patients’ personal data protection from misuse, this study specifically aimed to answer the following questions: (1) What forms of misuse can occur with electronic medical records in healthcare services? And (2) What are the legal protections of patients’ data stored in electronic medical records?

This study applied a normative legal approach. It views law as matters written in the regulatory legislation (law in books) and conceptualized as principles and norms used as a standard of human’s appropriate behaviors. This legal study was descriptive and analytical in nature, as it focused on the issue of legal protection of patients’ electronic medical records according to Indonesian law.

It applied statute and conceptual approaches and used primary legal material, namely Minister of Health Regulation No. 24 of 2022 on Electronic Medical Record. This legal material was supported by secondary materials, including books, journals, legal theories, scholars’ statements, and articles. Tertiary legal materials, i.e., legal information and a dictionary, were also used.

II. DISCUSSION

1. Electronic Medical Record and Healthcare Warranty for Indonesian Citizen

The term healthcare refers to acts of maintaining or improving one’s health status through preventive measures, diagnosis, therapy, and recovery from diseases, injury, or physical and mental disorders, among others. It is professionally provided by health professionals including doctors, dentists, nurse, midwife, pharmacists, and their assistants. Health is undeniably one of humans’ primary needs in addition to food, shelter, and clothing, as individuals with poor health conditions will likely find it difficult to do their daily activities, making their lives meaningless.

The 1945 Constitution warrants healthcare for every Indonesian citizen through the first paragraph of article 28H, which reads: Every person is entitled to live prosperous physically and spiritually, to have a place to reside, and to acquire a good and healthy living environment as well as be entitled to obtain health care Indonesia warrants this right as one of the basic rights of its citizen, given that health is one’s primary needs, in

addition to clothing, food, and shelters. A country capable of fulfilling its citizens’ health-related needs will likely be able to present welfare to its people, as healthy people will perform Their daily activities more optimally to fulfill their needs, and eventually achieve welfare.

The government’s effort in developing the health sector is basically aimed at improving people’s awareness, willingness, and ability to live healthily. As one of human basic rights, health should be developed through various efforts in order to provide high-quality, affordable healthcare for the people.\(^{19}\) Since health is one of human’s basic needs, community health could be seen as one of the pillars of the country's development. It is often said that being healthy is everything, without which life would be meaningless.\(^{20}\) Therefore, every effort to improve community health should not be discriminative and should be participative, protective, and sustainable in order to improve the country’s human resource, competitiveness, and national development.\(^{21}\) Since paragraph 1 of article 28H of the 1945 Constitution explicitly stated that every citizen has a right to health care, people’s right to health is officially a right the government should protect and fulfill through real and concrete efforts.

Medical record serves as one of the means of information related to medical and health services. Its archiving process could be done manually or digitally. Regardless of its setting, either manually or digitally managed, medical record management should take legal perspectives into account in order to ensure the legal protection of all involved parties.\(^{22}\)

Some time ago, the Kompas newspaper reported allegations of a breach of personal data of the public occurring in early 2022. According to the information gathered, approximately six million records of Covid-19 patients were allegedly sold on

---

the RaidForums website. These personal data encompassed patient identities, including home addresses, birthdates, phone numbers, national identification numbers (NIK), and medical records. It is expected that the Ministry of Health and other relevant authorities should conduct evaluations and enhance internal policies regarding data protection.\textsuperscript{23}

Article 46 of Law no. 29 of 2004 on Medical Practice stipulates that medical record is one of the obligation of all doctors and dentists should perform when carrying out their medical practice. One’s medical record is conventionally written on papers, and any additional information related to the patient could be written on the paper, and patients and their families should sign on the record. The Minister of Health regulation no. 24 of 2022, which amends the Minister of Health regulation no. 269 of 2008, has explicitly stipulated the obligation, types, and content of medical record, in addition to the administration mechanism, confidentiality, and its benefits for healthcare facilities.

Technological development begins to turn conventional medical record into the electronic one. Electronic medical record allows health professionals and patients see their health history. The digital system allows staffs, doctor, and other workers to manage patients’ data more easily. From patients’ perspectives, the digital system allows them to access their health data and release them from the need of physical data on health history. Electronic medical record is made using an electronic system, which also serves as a digital storage of patients’ health status and healthcare services they receive throughout their lives.\textsuperscript{24}

It is reported to have several benefits for clinics and health facilities as follows:\textsuperscript{25} (a) Efficient and space-saving, conventional medical record system requires paper to record patients’ condition and complaints when visiting healthcare facilities. Furthermore, documents that have been stored for years would be more difficult to find, causing dual document issues as patients should re-register. Addressing these issues, the electronic medical record allows efficient, integrated patients data, preventing data dualism in the future. (b) Practical for patients and healthcare facilities, electronic


\textsuperscript{25} Ibid.
medical record is helpful for patients engaging in interclinic treatments. Patients’ digital registration could help patients to continue the treatment process anytime and anywhere. (c) Accelerating Service, in some conditions, patients need to engage in outpatient care in several places and will have difficulty to bring physical documents related to their health history. Late delivery of patients’ data can cause delayed service and medical actions. In this regard, electronic medical record could potentially help accelerate the service (d) Improved Readability, conventional medical record system sometimes has issues on readability, including the medical receipt that are difficult to read. The digital medical record allows doctors and other health professionals to type the data, thus ensuring high readability and minimizing potential errors. (e) Easier Data Search, electronic medical record system allows easier data search and prevents dual data. It could be done by typing relevant keywords, and related data from previous years may come up. (f) Avoiding misplaced documents, misplaced documents potentially causes more difficult data search and makes the health workers make a new record, resulting in dual medical record. (g) Medical record security, electronic medical record may enhance confidentiality, thus only permitted individuals could access the electronic medical record.

The confidentiality of manual medical records is not well-preserved. Medical records are often transported by distribution personnel to outpatient clinics or healthcare facilities for patient examinations. In some cases, patients themselves have to bring their files to the hospital or healthcare facility they intend to visit. Ideally, medical records should not be solely in the possession of patients but should be transported by distribution personnel, and this responsibility should fall under the purview of healthcare facility management.26

The utilization of information and communication technology to connect community health centers and hospitals through electronic health (e-health) applications has become a global issue. This is an integral part of enhancing healthcare services involving medical service organizations in hospitals, clinics, etc., which engage doctors,

nurses, and other healthcare professionals, collectively constituting the assurance of public healthcare services. The Electronic Information and Transactions Law (UU ITE) in Article 9 explains: “businesses offering products through an Electronic Transaction System must provide complete and accurate information regarding terms, contracts, manufacturers, and the products offered.” Additionally, Article 10 of the UU ITE regulates certification institutions for the reliability of business operators. Furthermore, these regulations are detailed in Article 2 of Minister of Health Regulation No. 269/2008 on Medical Records: “(1) medical records must be made in writing, complete, and clear, or in electronic form; (2) The management of medical records using information technology is further governed by separate regulations. This implies that the Electronic Information and Transactions Law is in alignment with the electronic management of medical records.

Medical record begins to shift to electronic system since the issuance of Minister of Health Regulation No. 22 of 2022 on Medical Record. This regulation obliges healthcare facilities to perform electronic medical recording. The transition from conventional to electronic medical records should be done at the latest in 31 December 2023. Patients’ medical record is one of the fundamental rights of Indonesian citizen the government should fulfill in order to protect citizen’s rights to healthcare. Data breaches of patient medical records that occurred during the COVID-19 pandemic should indeed be the responsibility of the hospital. According to Article 46 of Law No. 44 of 2009 regarding Hospitals, hospitals have a legal obligation for accountability for healthcare professionals' mistakes, meaning they are accountable for any harm caused to the patient. This aligns with Hans Kelsen's theory of legal accountability, which states that someone is responsible for a specific action or that they bear responsibility for a sanction in the event of actions that are in violation. In the case of data breaches of

patient medical records during the COVID-19 pandemic, both the hospital and healthcare professionals should be held accountable.  

As a social control tool, the functions of the law can be divided into two categories: preventive efforts and repressive efforts. Preventive efforts in the case of patient medical record data breaches involve establishing strict regulations for both individuals who disclose patients’ personal data and the entities responsible for inputting patient medical record data containing personal information (in this context, healthcare facility operators using electronic medical records). Repressive efforts that can be undertaken include the immediate protection of patient medical record data containing personal information to prevent further breaches. This is particularly important since patient data will persist as long as electronic medical records continue to be used.

2. Legal Protection of Patients’ Data in Electronic Medical Record

Minister of Health Regulation is the regulatory framework and implementation of health technology, which serves as the sixth pillars of the health transformation. The policy on electronic medical record is issued to amend the minister of health regulation no. 269 of 2008 by considering science, technology, people’s needs, policy, and law amid the community. Ministry of Health realizes that technological development should also be followed by the development and data digitalization in the health sector. In this regard, electronic medical record system could help treating patients more optimally.

Electronic medical record is also related to electronic transactions stipulated in Law no. 11 of 2008 on Electronic Information and Transaction. The law mentions several terms, such as, among others, electronic signature (a signature that consist of attached electronic information, associated with other electronic information for verification and authentication purposes), electronic certificate (an electronic certificate that generates electronic signature and identity, which displays the legal status of

31 Ibid.
individuals in electronic transactions, issued by the electronic certification provider. And electronic certificate provider (a legal entity who serves as a trusted party to give and audit an electronic system).

Electronic medical record provided by healthcare facilities is linked to SATU SEHAT, an application developed by the Ministry of Health. With regard to human resources, Ministry of health facilitates the health facilities’ digitalization, especially Puskesmas (Community health clinics) with limited digital human resources, by Adding human resources for digital department in each Puskesmas. In the hospital setting, the digitalization process does not require additional human resources, as the doctor and the nurse themselves should input the diagnosis result. Patients’ electronic medical record could be accessed through PeduliLindungi. This application is not developed only for Covid-19 cases but also for accessing all health services. Individuals who do not possess smartphones could access their record directly in the healthcare facilities. It is also pivotal to consider data security and prepare a safe, standardized medical record. 33

All healthcare facilities, regardless of the recording system they use, are obliged to protect the medical record data security. Minister of Health of the Republic of Indonesia enacted the Minister of Health Regulation no. 24 of 2022 on medical record. The regulation aims to implement the technological advancement to fulfill the community's needs of single medical data and electronic medical records, which could be accessed through a single application named Satu Sehat It also obliges all healthcare facilities to use electronic medical record by adhering to electronic system standard set by the Ministry of Health.

Considering that there are still risks to patients’ data security, Principles of confidentiality, integrity, and availability are paramount, as stipulated in Article 29 of Regulation of Minister of Health no. 24 of 2022. Electronic medical records need two types of protection: legal and system protections. 34

(a) Legal Protection, legal protection, which is part of repressive efforts, states that if a healthcare facility, including a hospital, is proven to be involved in data breaches or

33 Ibid.
disclosing information to the public, according to Article 58 of the Health Law No. 36 of 2009, the hospital can be sued for damages. If, in civil law, the hospital is proven to be at fault, the hospital must be held accountable In Indonesia, Minister of Health Regulation no. 24 of 2022 could be used to protect the electronic medical record. (b) System Protection, system protection is related to a clinic’s information and management system. The system should prepare a data back up. Several cyber attack cases usually damage patients’ medical data stored in the healthcare facility’s central data storage. Back up data stored separately from the primary system would be significantly helpful when cyber attack occurs. The back up data allows immediate recovery of data. The data should also be encrypted using access key held by authorized individuals.

That is, legal and system protection are important aspects of electronic medical record system. The government, as the healthcare provider, is obliged to warrant the security of patients’ data stored in electronic medical record.

The confidentiality of patient data, including the contents of medical records, is a patient's right. Meanwhile, medical records (in manual form) are the hospital's property, and even in electronic form, they remain the hospital's responsibility. Because of the confidential nature of medical records, several rights emerge as manifestations of this confidentiality, including the right to privacy, patient access rights, the right to medical confidentiality, and the right to refuse the disclosure of medical secrets. This means that the protection of patient data is a shared responsibility, encompassing both the personal data of patients and the contents of their medical records.

Repressive legal protection in the event of healthcare facilities like hospitals being proven to have disclosed information to the public is covered by Article 58 of the Health Law No. 36 of 2009, which states that hospitals can be sued for damages. In terms of legal administrative responsibility, hospitals and healthcare professionals directly involved in data breaches can face administrative sanctions, including permit

revocation or receiving verbal and written warnings, provided that their actions are proven to have led to data breaches related to medical records.  

One effort to protect patients' personal data is the enforcement of the Personal Data Protection Law, as it will create a balanced condition between personal rights and contribute significantly to creating a well-ordered society.  Additionally, the role of information system administrators is crucial as they have a duty to provide education and establish adequate security systems, as outlined in Regulation No. 18 of 2022.

III. CONCLUSION

Every Indonesian citizen holds rights to healthcare facilities. Article 28 of the 1945 Constitution explicitly states that every citizen has the right to health service. In other words, this right is the government’s responsibility to fulfill. Health is one of the basic human rights that should be fulfilled by the government. Medical record is patients’ health history data that begins to shift from conventional to electronic modes. Electronic medical records offer more advantages in terms of recording, storage, and efficiency when compared to conventional ones. Despite its advantages, electronic medical records also possess weaknesses regarding data security. Data stored in the system are potentially misused as it contain detailed personal information of a patient. The Minister of Health Regulation No. 24 of 2022, particularly Article 29, stipulates the protection of patients’ data stored in electronic medical record systems. It is recommended to perform regular evaluation and monitoring of system security in order to protect the patients’ data. It is also important to have a backup data to anticipate any possibility in the future.

References:

BIBLIOGRAPHY

Books

Journals


Law and Regulations
The 1945 Constitution.
Law no. 39 of 1999 on Human Rights.
Law no. 29 of 2004 on Medical Practice.
Law No. 36 of 2009 on Health.
Republic of Indonesia Government Regulation No. 47 of 2016 concerning Health Service Facilities.
Minister of Health Regulation No. 24 of 2022 on Electronic Medical Record.

Thesis and Disertasion

Online Resources


