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ANALYZING ELECTRONIC MEDICAL RECORDS: A COMPREHENSIVE EXPLORATION OF LEGAL DIMENSIONS WITHIN THE FRAMEWORK OF HEALTH LAW

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Abstract - *Electronic medical records are electronic records that include patient identity, treatment information, progress of the patient's disease, and other procedures given to patients while in a health facility. The importance of legal aspects in electronic medical records can be explained by their benefits as valid written evidence in handling legal issues, maintaining medical discipline, and implementing medical ethics. This research aims to understand the legal basis of electronic medical records from a health law perspective, as well as assess the position of electronic medical records as legal evidence in the health context. This research method involves reviewing literature related to the legal aspects of electronic medical records by collecting and identifying existing data. The research results show that the legal basis for electronic medical records lies in Law Number 11 of 2008 concerning Information and Electronic Transactions (ITE) Articles 5 and 6, as well as Regulation of the Minister of Health Number 24 of 2022. Thus, electronic medical records are recognized as legal evidence legal, supported by the provisions of the ITE Law.*

Keywords: electronic medical records, patient identity, electronic medicine, health law, written evidence, legal issues, medical discipline, medical ethics.

INTRODUCTION

In the current discourse on healthcare, endeavors to enhance societal well-being have attained heightened significance. Recognizing this pressing need, Darmawan et al. (2022) emphasize the importance of improving the quality of health services across diverse demographic groups. This assertion serves as the foundation for a comprehensive exploration into the pivotal role that enhancing the quality of health services plays in sustaining the overall health of society. A crucial aspect of this initiative involves the provision of adequate supporting facilities, with a specific emphasis on the meticulous maintenance and documentation of medical records within each healthcare facility. This foundational step aims to establish a resilient infrastructure to facilitate the delivery of high-quality health services. The intricate processes encompassing examination, treatment, and care extend beyond the establishment of a purely medical relationship between a patient or family and a healthcare provider. This process intricately forges a comprehensive legal relationship that is systematically documented in medical records. Häyrinen et al. (2017) elucidate the crucial role of medical records, serving not only as repositories of medical information but also capturing the legal nuances in complex interactions among patients, physicians, and hospitals. This comprehensive documentation includes diagnostic information, treatment details, and patient consent, collectively contributing significantly to the continuous improvement of healthcare quality and aligning with the perspectives of Ben-Assuli (2015) and Khayru & Issalillah (2022). Therefore, an in-depth understanding and effective implementation of medical records emerge as critical components in realizing the goal of delivering high-quality health services to the public.

Initially, medical records were recorded conventionally using a piece of paper. However, with the advent of the 21st century which is marked by advances in information technology, this conventional approach has proven to be inadequate (Wahyudi et al., 2021). The evolution of medical records has become a necessity by utilizing technological means. The integration of technology into medical records not only makes it more effective and efficient, but also opens up opportunities to improve health services to patients. The use of technology-based medical records allows faster and easier access to medical information, speeds up the diagnosis process, and improves coordination of patient care between medical personnel. In addition, electronic medical records can also store data in a secure and structured manner, reducing the risk of loss or damage, and supporting more precise clinical decision making (Stafford & Treiblmaier, 2020). Therefore, technology in medical records is a necessity and is a progressive step to improve the quality of health services in this digital era (Khayru, 2022).

Health resources are not only limited to physical infrastructure, such as medical facilities and health personnel, but also involve mastery of health science and technology. In the era of globalization, information technology has become a very relevant element, and electronic medical records have become one of the most important factors in this regard. Electronic medical records make it easy to collect, store, and exchange health information efficiently and securely. By using electronic medical records, health resources can more effectively manage patient data, facilitate collaboration

between health care providers, and support better clinical decision making (Naik & Singh, 2010; Kohli & Tan, 2016; Vos et al., 2020). Where, in the current of globalization, the use of information technology, especially electronic medical records, has become an important basis for optimizing health resources to improve services and responses to public health needs (Hilestad et al., 2005; Linder et al., 2009).

Electronic medical records are in the form of medical records presented electronically, managed by health service providers from time to time. This medical record includes various clinical data regarding the care of a patient under a health service agency. The information contained in electronic medical records involves patient demographic aspects, records of health progress, health problems faced, types of treatment given, monitoring vital signs, history of previous treatment, information regarding immunizations, results of laboratory tests, and radiology reports. Based on the opinion of O'malley et al. (2010), by providing complete and integrated data, electronic medical records help in facilitating efficient management of patient information and improving health care coordination.

The use of electronic-based health information systems in Indonesia is regulated by Law number 19 of 2016, which is an amendment to Law number 11 of 2008 concerning the Electronic Information and Transactions Law. Although this regulation does not specifically regulate medical records, it contains relevant provisions considering that electronic medical records involve information and documents in electronic form. The legal basis for implementation can refer to the Electronic Information and Transactions Law. Along with that, there are regulations related to medical records themselves, such as Law number 29 of 2004 concerning medical practice, Law number 44 of 2009 concerning hospitals, and Minister of Health Regulation number 269/MENKES/PER/III/2008 concerning records. medical, which implements article 47 paragraph (3) of Law number 29 of 2004 concerning medical practice. These regulations regulate the obligation for doctors and dentists to create complete, clear and accurate medical records, creating a strong foundation for maintaining quality electronic medical records and in accordance with applicable legal standards in Indonesia.

The rapid development of information technology requires various sectors, including the health sector, to adapt to changes in digital roles. The Indonesian government responded to this change by issuing Minister of Health Regulation Number 24 of 2022 concerning Medical Records, which replaces the previous regulation, namely Minister of Health Regulation Number 269 of 2008. This new regulation focuses more on regulating electronic medical records in the policy realm to utilize technology in managing health information. The importance of adapting to electronic medical records can be seen from the obligation for all hospitals to implement electronic medical records by December 2023, in accordance with the provisions stated in the regulation. Electronic medical records are considered a development of information system technology that is very useful in documenting a patient's health history. Apart from the documentation function, electronic medical records can also be used for more efficient storage, data processing and exchange of patient health information (Reegu et al., 2023).

The new Minister of Health Regulation reflects an understanding of the urgency of information technology in increasing the efficiency and accuracy of health information management. Implementation of electronic medical records is recognized as having the potential to provide significant benefits to health care providers, patients, and health systems. The impact of the differences between conventional medical records and electronic medical records can be seen in the evidentiary strength of both. Although Minister of Health Regulation number 269/MENKES/PER/III/2008 recognizes the existence of two types of medical records, namely conventional medical records and electronic medical records, this regulation does not provide comprehensive details regarding electronic medical records. Therefore, it is urgent to issue more specific and detailed regulations regarding electronic medical records to ensure implementation that meets standards and meets needs in the era of continuously developing health information technology.

Medical records have an important role, not only as authentic documentation that reflects diagnoses, medical actions and procedures given by health workers to patients, but also as strategic evidence in various contexts. More than just medical records, medical records hold strategic value as evidence that can be used in various aspects, including law enforcement, medical ethics, and medical discipline. In a legal context, medical records are significant evidence in trials to prove or disprove the occurrence of medical errors that may have been committed by health workers against patients. Accuracy and clarity in medical records helps ensure fairness and accountability in health services, and is an important instrument in maintaining integrity and transparency in the relationship between patients and health workers. As an official document, medical records provide an accurate picture of the patient's condition, actions taken, and treatment results. Thus, medical records can be a strong factual basis in discussing and resolving legal cases related to health services. However, in the legal system, the legal position of medical records is not always equivalent to expert testimony presented directly by people at trial. However, medical records still have significant evidentiary power and can be a basis for supporting or refuting the testimony of experts or witnesses presented in the judicial process. Therefore, managing and documenting medical records accurately and transparently is key in ensuring their validity and legal force in various contexts, including in law enforcement for medical errors.

Medical and Health Information Recorders are individuals who have completed medical records and health information education in accordance with applicable regulations, as regulated in the Decree of the Minister of Health Number HK.01.07/MENKES/1424/2022. This education is needed to ensure adequate competency and understanding regarding medical records and health information. In implementing electronic medical records, medical recorders need to

have a strong understanding of the regulations governing electronic medical records, electronic medical record management design concepts, and IT literacy. These three basics are considered the minimum to ensure the success and security of electronic medical record management.

Reviewing laws, regulations, and policies relating to electronic medical records from a Health law perspective, this involves understanding existing regulations and how they cover the health aspects of using electronic medical records. Considering that electronic medical records have the status of legal documents, legal aspects are very important in protecting their security. To this end, the aim of this study is to investigate and understand the legal aspects of electronic medical records from a health law perspective. By analyzing existing regulations, this study seeks to provide a comprehensive understanding of the legal basis governing electronic medical records, as well as the legal implications in the health context.

RESEARCH METHODS

This research utilizes the literature review method as the main approach for collecting research data. The qualitative approach was chosen because the resulting data involves words and descriptions that can describe the legal aspects of electronic medical records from a health law perspective. A qualitative approach allows researchers to collect and identify existing data, as well as create a more accurate understanding of the issue. By using a literature review, this research can detail and analyze various views, approaches and findings regarding electronic medical record law that have been expressed in previous scientific literature. This approach provides a strong framework for constructing a complex understanding of the relevant legal aspects in the implementation of electronic medical records in the health domain.

The data sources in this literature review are research articles related to the legal aspects of electronic medical records from a health law perspective. Therefore, data quality is very dependent on the thoroughness and accuracy of the literature search. The steps in searching, selecting, and evaluating literature are key to ensuring that the data obtained is reliable and relevant. Apart from literature review, this research also uses a qualitative approach to obtain information from informants, especially in terms of medical recorders' understanding of the implementation of electronic medical records in hospitals based on Minister of Health Regulation Number 24 of 2022. Involving informants provides an additional dimension to this research by enriching the interpretation the results of a literature review with direct experience and views from practitioners in the field. It is hoped that the combination of a literature review and a qualitative approach can provide a comprehensive picture of the legal aspects of electronic medical records in health law.

RESULTS AND DISCUSSIONS

Legal Basis for Electronic Medical Records Viewed from a Health Law Perspective

With the issuance of Minister of Health Regulation (PMK) number 24 of 2022 concerning Medical Records, there has been a significant shift in the approach to recording patient medical history. This policy marks the transition towards electronic-based medical records as the norm in health service facilities (Fasyankes). As a response to developments in information technology in the health sector, this Minister of Health Regulation instructs Health Facilities to adopt an electronic recording system.

As a result of this policy, patient health information is not only documented traditionally via paper form, but also via electronic platforms (Buntin et al., 2011). This approach is aimed at improving the efficiency, accessibility and integrity of health data. Health care facilities are required to implement electronic medical records to ensure completeness, accuracy and security of patient health information. This shift reflects the government's efforts to adapt to the digital transformation of the health sector, creating a more modern and effective foundation for the recording and management of medical information.

Minister of Health Regulation Number 24 of 2022 concerning Medical Records establishes the concept of medical records and electronic medical records. Article (1) number 1 states that medical records are documents that contain information regarding the patient's identity, examination records, treatment, medical procedures and other services that have been provided to the patient. It consists of a variety of information relevant to the patient's medical history and forms the basis of traditional medical documentation. Then in Article (1) point 2 of the Minister of Health Regulation, it introduces electronic medical records as a separate entity. Where, electronic medical records are part of medical records that are carried out using an electronic system to carry out the medical recording process. This means that electronic medical records describe the concept of using electronic technology in carrying out medical recording and documentation tasks (Manachemi & Collum, 2011; Jansen, 2012; Moy et al., 2021). With this separation, the regulations provide a clear basis for understanding these two types of medical records. According to Tiorentap (2020), electronic medical records are recognized as an integral element in the context of administering medical records in general, emphasizing the importance of information technology in managing and storing patient health information efficiently and effectively.

Minister of Health Regulation Number 24 of 2022 concerning Medical Records provides an alternative in managing electronic medical records considering the limited number of medical recording personnel. Although basically,

medical recorders have the authority to create electronic medical records in accordance with Minister of Health Regulation Number 55 of 2013, this latest regulation provides space for other health workers who have the relevant competencies and knowledge to also take responsibility for administering electronic medical records. This can help overcome challenges related to the limited number of medical recording personnel, while ensuring that the implementation of electronic medical records continues to meet the quality and security standards set in the health sector. Thus, this regulation creates the flexibility needed to optimize the use of technology in managing electronic health information, without compromising ethical principles and patient data security.

Article 13 point 4 in Minister of Health Regulation Number 24 of 2022 gives the authority to transfer other health workers who have received training in electronic medical record services to carry out electronic medical record administration activities. With this provision, health workers who have competence and knowledge related to electronic medical records, other than medical recorders, can be included in the electronic health information management process. It is hoped that the electronic medical record service training received by health workers will provide an in-depth understanding of applicable health data standards, ethics and security. This can help overcome the limited number of medical recorders and ensure that the administration of electronic medical records is still carried out by health workers who understand and carry out their duties in accordance with applicable standards.

Apart from that, Article 46 paragraph (1) of Law Number 29 of 2004 concerning Medical Practice confirms that every doctor or dentist who carries out medical practice is obliged to keep a medical record. This indicates that doctors and dentists have the authority and responsibility to record patient health information through medical records. In the context of administering electronic medical records, collaboration between doctors, dentists, medical recordists and other health workers is a necessity. This collaborative effort is expected to ensure the completeness and accuracy of electronically documented patient health information. The studies of Enaizan et al. (2020), Janett and Yaracaris (2020), and Keshta and Odeh (2021) show that collaboration between health workers in implementing electronic medical records can contribute to the efficiency, safety and quality of health services.

Electronic medical records include two important aspects, namely administrative documentation and clinical documentation. In the provisions of Article 26 paragraph (6) of Minister of Health Regulation Number 24 of 2022 concerning Medical Records, it is explained that the contents of electronic medical records include patient identity, results of physical and supporting examinations, diagnosis, treatment, health service follow-up plans, as well as names and signs. the hands of health workers providing services. According to these regulations, all information contained in electronic medical records is the patient's full property. Therefore, health workers in health service facilities have an absolute obligation to maintain the purity and confidentiality of the contents of electronic medical records. This emphasizes the importance of ethics and compliance with patient privacy standards. The security and confidentiality of patient health information is guaranteed in the administration of electronic medical records, ensuring that every health interaction between patients and health workers remains in accordance with applicable ethical and privacy standards (Shah et al., 2023).

The importance of maintaining the purity and confidentiality of electronic medical records in health care facilities cannot be underestimated. This includes the obligation for health service facilities to ensure that the authenticity of the information in electronic medical records is maintained and kept confidential. Maintaining the purity and confidentiality of electronic medical records is the basis for the integrity of the health profession (Afzal et. al., 2020). Health workers are expected to actively involve themselves in maintaining patient privacy, as well as taking the necessary steps to prevent unauthorized access or disclosure of personal information. For this reason, professional ethics and applicable regulations must be adhered to firmly, so that every interaction with electronic medical records still prioritizes the patient's right to privacy and security.

The Position of Electronic Medical Records as Legal Evidence Viewed from a Health Perspective

Medical records are recognized as a valid form of evidence, both in letter or written form and in electronic form. This confirmation is based on the provisions regulated in the Minister of Health's regulations, specifically in Article 13 of the Minister of Health's Regulations. According to Article 13, medical records are recognized as documents that have strong evidentiary value in health services. This document consists of examination records, diagnosis, treatment, and follow-up plans for health services for patients. The importance of recognizing medical records as valid evidence reflects the continuity and reliability of patient health information. Whether in written or electronic form, medical records play a central role in supporting evidence in the context of legal issues, medical discipline and enforcing medical ethics. For this reason, the Minister of Health's regulation, through article 13, underlines that medical records have a strengthened position as valid evidence, providing a solid legal basis for their use in legal and professional medical situations.

The position of electronic medical records as legal evidence, when viewed from a health perspective, shows their central role in supporting quality-oriented health service policies and practices. More than just an electronic record of patient identity, diagnosis and treatment, electronic medical records play a strategic role as a legal instrument that strengthens the integrity and accuracy of health information. In its role as a legal document, electronic medical records are not only the basis for clinical decisions and continuity of care, but also become strong evidence in supporting relevant medical facts in the legal realm.

From a health perspective, electronic medical records provide a comprehensive framework for describing a patient's medical history, involving important information such as physical examination results, medical procedures, and follow-up care plans. These documents form the basis for clinical decision making, ensure continuity of care, and provide relevant data for medical research. When considered as legal evidence, electronic medical records make a substantial contribution in proving facts related to medical events and patient care. Data stored in electronic medical records, whether it is information about diagnoses, medical interventions, or treatment plans, can be considered valid evidence in legal proceedings. This not only increases transparency and accountability in health care but also ensures that medical decisions can be explained and accounted for objectively (Cerchione et al., 2023). Thus, electronic medical records, from a health perspective, are not only a vital instrument in patient care management but also a document of evidence that can be trusted in the legal realm, ensuring that ethical principles and health service standards are maintained along with strengthening its legal aspects.

Legal Aspects of the Implementation and Management of Electronic Medical Records in Medical Practice

Implementation and management of electronic medical records in medical practice involves several legal aspects that need to be considered. The following are several legal aspects of the implementation and management of electronic medical records in medical practice:

a. Data Privacy and Security

In the security and privacy of patient health data, the legal aspects underlying the implementation and management of electronic medical records are very crucial. Law Number 11 of 2008 concerning Electronic Information and Transactions and Minister of Health Regulation Number 20 of 2016 concerning Electronic Health Information Standards provide the legal basis that regulates the protection of patient health data. Medical practices, as the entities responsible for electronic medical records, play an important role in ensuring the security and privacy of patient health data. In carrying out their obligations, medical practices must implement proactive measures, such as preventing unauthorized access, implementing data encryption, and implementing strict privacy policies. Success in maintaining data security is not only an ethical responsibility, but is also based on legal provisions that require the protection of patient health information.

Chuma and Ngoepe (2022) explain that preventive measures such as data encryption are key in protecting electronic medical records from unauthorized access or potential security breaches. Meanwhile, implementing a strict privacy policy involves determining who has the right to access data and in what context, regulating use procedures, and setting certain boundaries. This also includes measures to ensure that health personnel who have access to electronic medical records have been trained and understand their obligations in maintaining the confidentiality of health information (Goldstein et al., 2020). By following applicable legal requirements and implementing best practices in data security and privacy, medical practices can ensure that electronic medical records not only comply with regulations, but also build patient confidence in the health care they receive. In this way, ethical and legal principles support each other, creating a safe and trustworthy environment in the management of electronic medical records.

b. Data Integrity and Accuracy

The integrity and accuracy of data in electronic medical records is the main basis for providing quality health services and ensuring that medical records can be relied upon as legal evidence. Minister of Health Regulation Number 24 of 2022 concerning Medical Records provides a legal basis that regulates important aspects related to data integrity and accuracy in managing electronic medical records (Hamama, 2023). In carrying out its practices, medical practices must ensure that all data contained in electronic medical records is accurate and complete. Data accuracy is crucial because inaccurate information can result in incorrect clinical decision making, which in turn can endanger patient safety. Therefore, medical practices have a responsibility to ensure that the data collection process, including diagnosis, medical procedures, and treatment plans, is carried out accurately and thoroughly (Dewi et al., 2020).

Any changes or corrections made to the electronic medical record must also be recorded and explained. This includes additions to information, revisions, or other changes that may occur over time. This not only ensures that medical records remain accurate, but also creates an audit trail that can be followed and accounted for if necessary. By complying with the provisions of the Minister of Health Regulation, medical practices not only maintain the integrity of patient health data but also ensure that electronic medical records can be relied upon as official documents in legal processes. Compliance with these rules creates a foundation for the security and reliability of patient health information, ensuring that the principles of medical ethics and health care standards are properly maintained (Colombo et al., 2020; Jacquemard et al., 2021).

c. Data Access and Use Rights

Access and use of data in electronic medical records is an important aspect regulated by Health Law Number 36 of 2009 and Minister of Health Regulation Number 46 of 2015 concerning the Implementation of the National Health System. This legal basis establishes the provisions that must be followed by medical practices in providing the right

to access and use patient health data contained in electronic medical records. Access rights to electronic medical records must be clearly regulated to ensure that only authorized parties can access and use the data (Mayer et al., 2020). These provisions involve identifying exactly who has the right to access patient health data, and provisions regarding the legitimate medical or legal interest underlying that access (Marelli et al., 2020).

Authorized parties, such as health workers who are directly involved in patient care, may access electronic medical records. In addition, such access must be in accordance with a legitimate medical interest, such as diagnosis, treatment or medical procedure. The entire data access and use process must be carried out in accordance with applicable medical ethics and legal regulations. By following the established legal basis, medical practices can maintain the integrity and confidentiality of patient health data (Thapa & Camtepe, 2021). Implementation of these provisions not only creates a safe environment for health information, but also builds patient confidence in the national health system. Thus, the principles of data access and use rights regulated in law provide accurate guidance for medical practices in carrying out their duties with integrity and legal compliance.

CONCLUSIONS

From the discussion above, it can be concluded that the legal basis for electronic medical records lies in Law Number 11 of 2008 concerning Information and Electronic Transactions (ITE) Articles 5 and 6, as well as Regulation of the Minister of Health Number 24 of 2022. Thus, electronic medical records has the power as valid legal evidence, and this recognition is strengthened by the provisions contained in the ITE Law. The ITE Law establishes the legal framework governing electronic information and transactions in Indonesia, which also includes electronic medical records. Articles 5 and 6 of the ITE Law provide the legal basis for the use of electronic documents, including electronic medical records, as valid evidence.

Apart from the ITE Law, Minister of Health Regulation Number 24 of 2022 more specifically regulates electronic medical records in the context of health services. This provides more specific guidelines related to the management, storage and use of electronic medical records in health care facilities. With this legal basis, electronic medical records are recognized as valid legal evidence. This recognition strengthens the role of electronic medical records as accountable and reliable documents in the context of law, medical discipline and enforcing medical ethics.

The suggestions put forward based on the discussion regarding the legal aspects of electronic medical records are as follows:

a. For health service institutions (hospitals), it is recommended that hospitals include medical record officers in training related to the legal aspects of electronic medical records. This will help medical records officers understand more deeply the applicable legal provisions and increase compliance with related regulations.
b. For the medical recording profession, medical recordists should better understand and develop knowledge about laws or laws related to electronic medical records. This increase in knowledge will strengthen their role in carrying out their duties, especially in the context of managing electronic medical records.
c. Educational institutions should improve facilities and infrastructure, such as learning book references, related to the legal aspects of electronic medical records. In this way, students will be better prepared and skilled in facing challenges in the world of work, especially in managing electronic medical records.
d. It is hoped that future researchers will be able to develop further research on the legal aspects of electronic medical records, especially in the context of a health law perspective. This further research can provide in-depth insights and solutions to problems that may arise.
e. It is hoped that the government and related parties will immediately prepare separate regulations regarding the administration of electronic medical records. The existence of this regulation can provide more specific guidance and accommodate the dynamics of technological development and health practice needs.

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