

Juridical Review of the Implementation of Security and Data Protection Aspects of Electronic Medical Records in accordance with Pmk Number 24 of 2022 concerning Medical Records (Research Study at Adam Malik Hospital Medan)

Danne Maryana, Henry Aspan, Yasmirah Mandasari

Abstract

The Ministry of Health of the Republic of Indonesia is carrying out a digital health transformation to accelerate a more advanced and equal health sector. This commitment is demonstrated by the Minister of Health Regulation Number 21 of 2020 concerning the Ministry of Health's Strategic Plan, which directs government health reform including the information integration system. With the issuance of Regulation of the Minister of Health of the Republic of Indonesia Number 24 of 2022 concerning Medical Records, all Health service facilities must maintain electronic medical records in accordance with the provisions of this Ministerial Regulation no later than December 31, 2023. In this regulation electronic medical records must comply with security principles. and data protection includes confidentiality, integrity and availability. Adam Malik Hospital has implemented electronic medical records starting from outpatient medical record services since December 10, 2021. This research focuses on juridical insight into aspects of security and data protection in electronic medical records at Adam Malik Hospital. This research is empirical juridical research, the data sources use primary and secondary data. Data collection through field observations and interviews and document study. Data will be analyzed qualitatively. The conclusion of this research is that the implementation of electronic medical records at Adam Malik Hospital has fulfilled the principles of security and data protection stated in Article 29 of the Minister of Health Regulation Number 24 of 2022 concerning Medical Records. However, several things were found that could hinder the fulfillment of security and data protection principles in the implementation of electronic medical records, namely employee discipline in changing passwords regularly and not giving users and passwords to other officers.

Keywords: Implementation, Security and Data protection, Electronic Medical Records

Maryana Danne

Master of Health Law Study Program Universitas Pembangunan Panca Budi, Indonesia

e-mail: maryanadanne@gmail.com

Henry Aspan, Yasmirah Mandasari

e-mail: henryaspan@yahoo.com

e-mail: yasmirahmandasari@gmail.com

Master of Health Law Study Program Universitas Pembangunan Panca Budi, Indonesia

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INTRODUCTION

The Indonesian government has launched a digital transformation starting in 2020 in all government sectors, including the health sector. The Ministry of Health of the Republic of Indonesia is implementing digital health transformation to accelerate a more advanced and equal health sector. This commitment is demonstrated by the Minister of Health Regulation Number 21 of 2020 concerning the Ministry of Health's Strategic Plan, which directs health government reform including the integration of information systems, health research and development (MOH, 2022).

One of the digital transformation programs in the Health sector is the digitization of the Health service system related to patient data through the transition of manual medical records to electronic medical records. The implementation of medical records was previously regulated in the Minister of Health Regulation Number 269/MENKES/PER/III/2008 concerning medical records. This regulation explains how medical records are made, ownership of medical records and what is the content of the medical record itself. Medical records this year are still done manually and use paper media in recording them. Patient medical records began to transition to electronic-based with the issuance of the Minister of Health Regulation Number 24 of 2022 concerning Medical Records. Through this policy, health facilities (fasyankes) are required to run an electronic patient medical history recording system. The transition process is carried out until no later than December 31, 2023 (Ministry of Health, 2023).

One of the important factors in transactions and activities through information technology facilities is the protection of personal and confidential data. Personal data includes: data concerning very private matters such as medical records, family data and other very personal information that has the potential to be used by others for criminal acts and seeking illegal profits (Aspan Henry, 2021).

The implementation of electronic medical records has a very positive impact on health care facilities that implement it. Various conveniences and speed of service access can be felt after implementing electronic medical records. However, behind the convenience and acceleration offered by electronic medical records, there are things that are important and must be considered, namely the security and protection of electronic medical record data.

In the Minister of Health Regulation No. 24 of 2022 concerning medical records, article 29 states:

- 1) *Electronic Medical Records must fulfill the principles of data and information security, including:*
 - a. *Confidentiality*
 - b. *integrity; and*
 - c. *availability.*
- 2) *Confidentiality as referred to in paragraph (1) letter a is a guarantee that the security of data and information contained in Electronic Medical Records is protected for use and dissemination.*
- 3) *Integrity as referred to in paragraph (1) letter b is a guarantee of the accuracy of the data and information contained in the Electronic Medical Record, and changes to the data may only be made by persons granted access rights to make changes.*
- 4) *Availability as referred to in paragraph (1) letter c is a guarantee that the data and information contained in the Electronic Medical Record can be accessed and used by people who have access rights determined by the head of the Health Service Facility. (Ministry of Health, 2022)*

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In adopting electronic medical records, hospitals should ensure that the system has robust data protection mechanisms and security protocols to address these risks.

Adam Malik Hospital started implementing electronic medical records on December 10, 2021. The transition from manual medical records to electronic medical records is carried out in stages, starting with outpatient medical record services including emergency room installations and continuing with inpatient medical record services. Until now, Adam Malik Hospital has fully switched to using an electronic medical record system. (Interview Adam Malik Hospital, 2024)

The problem formulations in this research are: 1. What are the legal provisions on security and data protection of Electronic Medical Records? 2. What are the aspects of data security and protection in Electronic Medical Records at Adam Malik Hospital, 3. What are the obstacles to the implementation of Electronic Medical Records at Adam Malik Hospital?

RESEARCH METHODS

This research with the title "Juridical Review of the Implementation of Security and Data Protection Aspects in Electronic Medical Records in accordance with PMK Number 24 of 2022 concerning Medical Records" adopts an empirical juridical approach, namely research that refers to the enactment or implementation of normative legal provisions in action on electronic medical records in terms of security and data protection aspects. The data is analyzed using analytical descriptive method.

The data collection technique used is *field research*, namely research conducted by collecting data and information directly from *users*, both by observation and interview methods conducted at Adam Malik Hospital.

The types of data used are primary data and secondary data. Primary data consists of government regulations and data obtained directly from the source. Meanwhile, secondary data is obtained from library research and the management of others in the form of books or journals.

RESEARCH RESULTS AND DISCUSSION

1. Legal Provisions on the security and protection of Electronic Medical Record data.

The security and protection of Electronic Medical Record data is regulated in the Minister of Health Regulation No. 24 of 2022 article 29. This article states that the security and protection of Electronic Medical Record data must fulfill the principles of Confidentiality, integrity and availability.

a. Confidentiality

Confidentiality Ensures that only certain parties can access information in electronic medical records. Confidentiality of Medical Records is very important for Ensure patients are assured that their personal data and health details are confidential.

b. Integrity

Integrity indicates that data can only be changed legitimately, including the right person to change it, the right way and the appropriate time to change the data. Integrity is a guarantee of data accuracy, ensuring that the data is not changed, deleted, added and duplicated according to predetermined rules.

c. Availability

Availability means the availability of data when needed by related service providers in terms of interests for management decisions, continuity of service to patients and even if needed as legal evidence by the authorities.

2. Security and Data Protection in the Implementation of Electronic Medical Records at Adam Malik Hospital

The discussion on data security and protection cannot be separated from the concept of privacy. The law has recognized the concept of privacy in relation to physical intrusion in the form of trespass (entering another person's yard without permission) known in criminal law. In its development, the law also provides protection for human emotional and intellectual (Yuniarti Siyi, 2019).

According to Samuel D. Warren and Louis D. Brandeis stated that: "*Privacy is the right to be left alone and this development of the law was inevitable and demanded of legal recognition*". Privacy is a right of everyone to enjoy life and demand its privacy to be protected. (Samuel Warren and Louis D Brandies, 2019)

According to them, privacy restrictions are not absolute, but there are limits. Namely:

- a. It is possible to publish one's personal information for the public interest;
- b. There is no privacy protection if no harm is suffered;
- c. There is no privacy when the person concerned has consented that their personal information will be shared publicly;

Consent and privacy deserve legal protection because the harm suffered is difficult to assess. Because it involves a person's mental state, the loss is felt to be much greater than the physical loss because it has disrupted personal life. (Ibid, 196)

Alan Westin defines privacy as "*Privacy is the claim of individuals, groups, or institutions to determine for themselves when, how and to what extent information about them is communicated to others*". Privacy is the claim of individuals, groups, or institutions to determine for themselves when, how, and to what extent information about them is communicated to others. This definition is referred to as *information privacy* because it concerns personal information (Mardiana Nela, 2023).

Data is any information that is processed through a device that functions automatically in response to instructions on a specific part of health, social work, education records, or that is stored as part of a relevant storage system. (Mandasari Yasmirah, 2020)

Data and information security is a very necessary thing to be concerned about in electronic medical records. According to Harold F. Tipton, Security is usually described as freedom from harm or as a condition of safety. Computer security in detail is the protection of data in a system against unauthorized authorization, modification or destruction and the protection of computer systems against unauthorized use or modification. Information security is a branch of study of information technology that specializes in studying methods and techniques for protecting information and information systems from access, use, dissemination, destruction, alteration and destruction without valid authorization. (Setiawan Wawan, 2017)

There are four main aspects to data and information security, namely:

- a. *Privacy/Confidentiality* is an effort to protect information data from people who do not have the right to access (ensuring that our personal data or information remains private).
- b. *Integrity* is an attempt to keep data or information from being altered by unauthorized persons.
- c. *Authentication* is an attempt or method to determine the authenticity of information, for example whether the information sent is opened by the correct person (original) or the service from the server provided actually comes from the server in question.
- d. *Availability* is the availability of information when needed (Samuel Warren Warren and Brandeis, Louis D.).

In accordance with the Regulation of the Minister of Health of the Republic of Indonesia Number 24 of 2022 concerning Medical Records, Article 29, Hospitals that organize Electronic Medical Records must fulfill the principles of data security and protection, namely confidentiality, integrity and availability.

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Based on the author's observations on the implementation of Electronic Medical Records at Adam Malik Hospital, the author gets an overview of data security and protection as follows:

a. Principle of Confidentiality

On the principle of confidentiality, the implementation of Electronic Medical Records at Adam Malik Hospital already provides:

1) Login facility with *username* and *password*

This means that only employees who have a username and password can use the Electronic Medical Records application.

2) *Automatic Logout*

This means that the system will automatically log out the user if the user does not use the application within 10 minutes. This is to anticipate the use of the application, if the user forgets to close the application.

3) Facility to change passwords periodically.

This is to keep the username and password from being used by parties who may have known the user's username and password.

However, automatic blocking if the user enters the wrong username and password 3X has not been provided. According to the author, this is important so that users are more careful when logging in, as well as a way to prevent the application from being used by users who try to log in.

From the author's observations in terms of *users*, it can be said that it is not good. This is because there are still officers who share usernames and passwords with others. Officers also still often leave the computer in a state that has not been logged out. Although there is an automatic log-out facility within 10 minutes. In that time can only the system is accessed by unauthorized parties. Officers also have not changed passwords regularly. And there are officers/users who deliberately store usernames and passwords on the computer, to make it easier when logging back in. This is very unsafe, because non-users can easily enter the Electronic Medical Record system.

b. Principle of Integrity

Fulfillment of the principle of integrity in the implementation of Electronic Medical Records at Adam Malik Hospital through the feature to edit the system. And the date and time of editing will be displayed. The editing time will be colored (yellow). and this editing must be verified by the Patient's Responsible Doctor. All forms of changes that occur in the system are well documented so that their integrity is maintained.

However, in terms of the principle of integrity in the implementation of Electronic Medical Records at Adam Malik Hospital, not all forms have been facilitated with certified signatures as a form of legal force in the implementation of Electronic Medical Records. This is forced to still use manually signed forms such as informed consent and refusal of action forms.

c. Availability Principle

In this principle, it is known that the availability of data and information needed is easily accessible and can display the contents of the Electronic Medical Record as a whole, with the permission of the Medical Records Installation. Information that can be provided to patients is limited to the patient's medical resume. There is also a Standard Operating Procedure (SOP) for the release of information. So that the release of information can be given according to the procedure and its needs. For example, for the needs of insurance claims or even if the court requests it to be evidence in court. The distribution of Electronic Medical Records has also fulfilled the principle of availability. Where every service post addressed by the patient, the service data that will be carried out on the patient can be easily accessed on the Electronic Medical Record system.

In fulfilling this availability principle, the Electronic Medical Record system at Adam Malik Hospital also provides access to filling in Electronic Medical Records for caregivers such as doctors, nurses and other health workers anywhere, provided that it can only be accessed on one computer. This means that if a user opens the application again on another computer, the application that was open on the previous computer will be logged out automatically. This ensures that the person using the application is actually the one who has login access and is in the place where the application was opened....

3. Obstacles to the Implementation of Electronic Medical Records at Adam Malik Hospital
 Implementation of Electronic Medical Records at Adam Malik Hospital provides

significant benefits, including:

- a. Cost Efficiency
 The switch from manual medical records to electronic medical records has proven to save on expenses such as the allocation of funds for paper procurement.
- b. Speed of Service
 With Electronic Medical Records the response time for patient care is faster.
- c. Writing that is easier to read and minimizes errors in writing.
- d. Better collaboration
- e. Electronic Medical Records make good collaboration between professions that serve patients.
- f. Complete and efficient documentation

This will facilitate data collection to be processed into useful information for patient services and as material for management in making decisions.

Despite the many benefits that have been provided with the implementation of Electronic Medical Records at Adam Malik Hospital, Electronic Medical Records also face barriers that need to be overcome, to ensure success in its implementation. Some of the barriers faced by Adam Malik Hospital in the implementation of Electronic Medical Records are:

- a. Technical and Connectivity Constraints
 The Electronic Medical Record system requires adequate technological infrastructure, including the network and system used. Based on the author's observations in the field, there are still errors in the Electronic Medical Record system so that the system cannot be run. This will cause a buildup of patients and services to patients will be delayed. Network problems from the BPJS system also occur, when BPJS conducts maintenance on its application system.
- b. High financing
 At the beginning of the transition from manual medical records to Electronic medical records will require large funds for Electronic Medical Records infrastructure. It requires high costs for hardware fulfillment, such as the need for many computer units, cables and other devices, and also for the fulfillment of software that will support the running of the system to be created. Costs for training for employees in using the Electronic Medical Record system application must also be prepared.
- c. Data Security and Protection

Hospital patient data is very sensitive data, as it includes identity information, health history, and patient examination results. Therefore, the leakage of patient data that occurs will have various negative impacts, such as interference with patient privacy, financial losses and damage to the hospital's reputation. Disruption of patient privacy can cause patients to become vulnerable to forms of privacy violations. Patient data leakage can also cause patients to lose money due to fraud. From the hospital's side, data leakage cases can also damage its reputation because it can make patients reluctant to use the

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hospital's services.

d. Users who are not ready for Electronic Medical Records

At the beginning of the Electronic Medical Record implementation, employees who play a role in using the Electronic Medical Record system experienced pros and cons. Those who understood the benefits of Electronic Medical Records were happy to embark on this change. However, some employees who found it difficult to use computers saw this as slowing down their work. However, at the time of this study, all *users* were already familiar with the Electronic Medical Record system and found it useful. This was because guidance and training for all *users* had been conducted at the start of the Electronic Medical Record system being ready for use.

e. Easy to click *Copy* and *Paste* text on doctor and nurse notes and other caregivers...

CONCLUSIONS

Based on the author's analysis in the field regarding data security and protection in the implementation of Electronic Medical Records at Adam Malik Hospital, basically it has fulfilled the principles of data security and protection as stated in the Minister of Health Regulation Number 24 of 2022, namely fulfilling the principles of confidentiality, integrity and availability. However, there are several things found that can hinder the fulfillment of the principles of data security and protection in the implementation of electronic medical records, namely employee discipline to change passwords regularly and not give users and passwords to other officers.

ADVICE

1. Provide an automatic blocking feature if the *user* makes a mistake in entering the username and password three times. To minimize the occurrence of login attempts for unauthorized users.
2. The save username and password mode should be removed. It is unsafe to store usernames and passwords on a computer, as it makes it easy for unauthorized users to log in to the application.
3. *Users* should always ensure that they are logged out of the application when leaving the computer and should also be disciplined to change passwords regularly...

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