Journal of Social Research

P-ISSN: 2827-9832
E-ISSN: 2828-335x
http://ijsr.internationaljournallabs.com/index.php/ijsr

REVIEW OF THE IMPLEMENTATION OF THE ELECTRONIC MEDICAL RECORD SYSTEM IN HEALTH FACILITY SERVICES BASED ON THE REGULATION OF THE MINISTER OF HEALTH NUMBER 24 OF 2022 CONCERNING MEDICAL RECORDS

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ABSTRACT

The implementation of electronic medical records in health facility services based on the Regulation of the Minister of Health of the Republic of Indonesia Number 24 of 2022 imposes an obligation on all health service facilities to maintain electronic medical records, including independent practice places run by health workers and medical personnel. The Ministry of Health can impose administrative sanctions or written warnings as well as recommendations for revoking or revoking accreditation status on health service facilities that commit violations. According to Article 32 of Minister of Health Regulation Number 24 of 2022, the contents of medical records are kept confidential by all parties involved in health services. These parties are health workers who provide health services, leaders of Health Service facilities, personnel related to the financing of Health services (insurance parties), pupils or students who are in charge of treatment and/or information management in Health Service facilities and other parties who have access to patient health data and information in Health Service facilities.

Keywords: Medical Records, Patient Personal Data, and Health Service.

INTRODUCTION

Medical records are one of the elements of the "Medical Secrets Trilogy", where the other two elements in the Trilogy are Medical Action Approval and Medical Secrets. The management of Medical Records, including their storage, is very important. Medical Records must be kept and kept confidential by doctors or dentists and leaders of health service facilities. Along with the progress and development of health services, the implementation of medical records is expected not only as a record. Medical Records are also a support of larger activities, namely activities that are on target, effective and efficient must be data-based, which are supported by, among other things, medical records. Medical records must be kept and kept confidential by doctors or dentists and leaders of health service facilities, as mandated in Law No. 29 of 2004 Article 47 paragraph (2).

By looking at the above background, a problem formulation can be taken, including: first, how to apply electronic medical records in health facility services, second, how to secure patient personal data in the implementation of electronic medical records. This study aims to find out about the application of electronic medical records in health facility services and the security of patient personal data in the implementation of electronic medical records.

METHOD

The research method used in this study is a normative research method using various types of primary legal materials in the form of laws and regulations and secondary legal materials in the form of literature materials related to the application of electronic medical records in health facility services as a source of research materials (The Nation, 2001)

(Indonesia, 2004) (State Secretariat, 2008) (Artioko, 2022) (Kesuma, 2024) (Sylvia Anjani & Maulana Tomy Abiyasa, 2023). Johnny Ibrahim argues that normative legal research is a form of scientific research aimed at finding the truth based on legal scientific logic reviewed from the normative part, or which is in the form of legal discovery efforts that are adjusted to a particular case (Ibrahim, 2006).

RESULTS AND DISCUSSION

A. Application of Electronic Medical Records in Health Facility Services

According to the Regulation of the Minister of Health of the Republic of Indonesia number 269/MENKES/PER/III/2008 Article 1, a medical record is a file that contains records and documents about the patient's identity, examination, treatment, actions and other services that have been provided to the patient. Medical records are created immediately and completed after the patient receives the service. The creation of medical records is carried out through recording and documenting the results of examinations, treatments, actions, and other services that have been provided to patients.

Every data contained in the medical record must be given a date, time and read clearly. If there is a delay, the time of the incident and the delay should be noted as well as the delay. Abbreviations should be avoided as they can be ambiguous. Unless the abbreviation is a common and commonly used abbreviation. Medical records should also be made objectively about what the patient did and said directed the doctor when establishing the diagnosis. In addition, documentation should also be included about non-compliance, the patient's failure to follow advice, taking medication, requested consultation, or other actions that may contribute to injury or delay in medical treatment. If there is a telephone consultation regarding the patient, the name, date, content, including the action taken must be documented. (Mathioudakis et al., 2016).

Electronic medical records are files that contain medical record information including treatment, treatment, and actions filled in by one or more health workers in an integrated manner at each meeting between health workers and patients in electronic format. The Institute of Medicine (IOM) is an independent, non-governmental organization that focuses on the development of electronic medical records. The following are the elements of the electronic medical record formulated by IOM in 2013: 1) Ongoing, electronic-based collection of patient-related health information; 2) Electronic medical records are ready at all times to display the information needed both at the personal level and at the management level by the authorities; 3) Electronic medical records are relevant to the need for knowledge and decision support systems that can improve the quality, safety, and efficiency of patient services; 4) Electronic medical records can improve the level of efficiency in the health service process (Fenton et al., 2017).

In terms of the scale of health services, health facilities are very different from hospitals, especially those in remote areas. In fact, not all hospitals are ready to implement a system for recording the total medical history of telemedicine application usage, which increased up to six times during the COVID-19 pandemic in 2022 in Indonesia. This reality is also the opposite of McKinsey data, where 44% of participants switched from face-to-face to virtual during the pandemic. Based on Katadata.com, searches for telemedicine applications also increased by 600% during the pandemic (Rubiyanti, 2023).

Menurut Kemper et al., (Kemper et al., 2006) more than half (58.1%) of physicians have no doubt EMR that EMR can improve patient care or clinical outcomes. Other researchers have stated that those who are unwilling to use such a system are skeptical about claims that ESDM can successfully improve the quality of medical practice. This creates a personal rejection of the adoption of ESDM. However, this is considered a barrier for ESDM, there is a lack of valid statistical data and success stories about ESDM available to non-users. Walter & Lopez concluded that doctors' perception of the threat to their professional autonomy was crucial in their reaction to EMR adoption. Therefore, hospital heads need to convince their doctors and subordinates to get buy-in and achieve a common goal, for effective EMR adoption.

The government, in this case, the Ministry of Health has an obligation to facilitate the implementation of RME in hospitals, especially in remote areas, as stated in Permenkes No. 24 of 2022 concerning Medical Records Article 8 paragraph 1. Meanwhile, Article 13 Number 4 states that if there is a shortage of Medical Records and Health Information personnel in Health Facilities, RME management activities as in paragraph (2) may be carried out by Health Workers only those who have received training on RME services. Thus, the government needs to prepare actions and efforts to force other hospitals that are not ready to implement electronic medical records so that they can implement the policy of Permenkes No. 24 of 2022. One of them is by focusing on mitigation or mapping of all hospitals based on the digital maturity index. The mapping aims to see the readiness of all hospitals in implementing electronic medical record policies (Mathar, 2018).

In addition, health service facilities need to provide non-health personnel for electronic medical records, the government and health service facilities need to overcome other challenges in the implementation of RME, namely providers or internet coverage if the health service facilities in question are located in remote areas and far from urban reach. Many healthcare and non-healthcare workers still complain about poor service from vendors, such as poor follow-up with technical issues and lack of training and support for issues related to electronic human resources (EMR). In addition, doctors struggle to get proper technical training and support for the system from vendors. Because doctors are not technical experts and the system is complicated, doctors feel the need for proper training and technical support, and are reluctant to use ESDM without it. This can be addressed by policymakers who come up with training programs for user groups, adapt the system to existing practices gradually and outsource technical support during its implementation.

Although the facility has made efforts to incorporate IT in some of its activities, there is still a long way to go as far as the adoption of the RME system is concerned. The adoption of RME is a major change that is often felt throughout practice; it demands adaptation and complementary innovation in other aspects such as the structure and culture of a practice. Some challenges are beyond the control of healthcare facility management, such as financial challenges; It is a government-owned hospital, but the leadership of healthcare facilities can influence policy and drive budget allocation. Technical and time challenges are more user-related, and can be overcome by training staff and involving them in the entire change process thus ensuring positive acceptance. To realize the benefits of ESDM adoption, monumental efforts are needed by management and other key stakeholders.

The main stakeholders, namely the central government, local governments, financiers and other management, need to achieve the same goal and agree on a common strategic direction related to the equitable use of electronic medical records in health care facilities. They also need to let representatives of user groups participate during the RME implementation process. Access to capital for initial investment and income can be overcome if included in the annual regional budget. Public, private, and/or donor partnerships can be a resource in raising the funds needed to have the hardware and software and other IT infrastructure needed. This addresses the economic challenges for the adoption of ESDM. In addition, there needs to be communication between the health center and the government regarding the implementation of electronic medical records in community health centers. This will help users understand that while it may take longer to enter individual orders, there will be impressive results downstream. The entire user group needs to be trained on the RME system before use and regular touching. The induction and onboarding of all new staff will also be useful in increasing user acceptance. This training discusses technical and technological challenges.

B. Security of Patient Personal Data in the Implementation of Electronic Medical Records

The Digital Transformation Office (DTO) of the Ministry of Health (Kemenkes) has a main focus on providing integrated health services through the security aspect of One Healthy Mobile. To protect data, the Ministry of Health uses masking and encryption methods so that only interested parties can access it. The security of the Satusehat mobile application will continue to be updated in accordance with the security standards set by BSSN. The Ministry of Health's Digital Transformation Office (DTO) assesses seven aspects of information security in the Satusehat platform, including governance, technology and operations, data protection, third-party management, human resources, crisis management, and compliance. Large health data is vulnerable to data breaches or data leaks, resulting in the spread of sensitive patient personal information. Proper security measures need to be implemented on their systems with several technologies including authentication, access control, and encryption. A three-factor authentication protocol for medical professionals can access data stored on cloud servers.

To improve security, password-based, biometric-based, and smartcard-based authentication principles are used. Biometric-based three-factor authentication protocol for secure communication between the Telecare Medical Information System (TMIS) and the patient. (Kumari & Renuka, 2021) This protocol uses elliptic curve cryptography. Another method used to prevent data breaches or data leaks is access control.

This method provides authentication to healthcare providers based on B2B big data. Each user has multiple access rights that are defined by the access control policy. There are several access controls that can be used, namely rolebased access control, attribute-based access control, policy-based access control, and audit-based access control. Searchable public key encryption method for remote data collection, motion tracking, communication between medical personnel. Searchable encryption schemes for the schema of various electronic health data. In the scheme, electronic health data is stored on a cloud server but the index is stored on the blockchain.

Privacy or confidentiality is the protection of information from parties who do not have the right to access information. Medical record data stored and distributed electronically will be vulnerable to misuse so that it can harm patients. Patient medical record data must be guaranteed to be safe, both in terms of privacy and security. The privacy aspect protects medical record data through patient data management mechanisms starting from the data collection process, data quality, and access control to the data.

The privacy aspect is evidenced by the form of inactivity (automatically log-out) the clinic information system if within 5 (five) minutes there is no activity carried out by the user. This serves as a form of defense or prevention from the misuse of user id. The privacy aspect has been widely applied in ensuring the security of patient data on electronic medical records in health care facilities. With many health facilities that have implemented privacy aspects, the level of data security will be even higher because prevention has been carried out for parties who do not have the right to access information stored in electronic medical records. So that patients as data owners do not need to worry that their data will be accessed by parties who are not entitled or not given permission to access. To avoid access attempts by unauthorized users, it must be controlled by a combination of preventive and detection controls. The information system used has guaranteed the privacy aspect as evidenced by the implementation of login with username and password. Information security is not only a problem in terms of technology, but also a problem of human resources itself.

CONCLUSION

The application of electronic medical records in health facility services based on the Regulation of the Minister of Health of the Republic of Indonesia Number 24 of 2022 imposes an obligation on all health service facilities to organize electronic medical records, including independent practice places organized by health workers and medical personnel. Article 32 of the Regulation of the Minister of Health Number 24 of 2022 concerning Medical Records stipulates that the contents of medical records are kept confidential by all parties involved in health services at health care facilities even if the patient has died.

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