Training on the Legal Aspect of Electronic Medical Record Systems: A Community Service Initiative at Universitas Muhammadiyah Yogyakarta (UMY) Pharmacy

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Abstract. By December 31, 2023, the transition period for migrating to the electronic medical records system was concluded. Historically, the vast number of pharmacies made the conventional medical record systems inadequate, with not all pharmacy transactions being documented as required. Today, every healthcare transaction within a pharmacy, including those at Universitas Muhammadiyah Yogyakarta (UMY) pharmacy, must be recorded electronically. Addressing the challenge, the main discussion problem centered on how pharmacy personnel at UMY could be effectively trained and conversant with the new system's intricacies. In order to address this matter, a community services program using a discussion-based socialization method was initiated. Additionally, a training methodology involving mini-lectures paired with pre and post-tests was employed. These tests aimed to assess participants' existing knowledge and the training's efficacy. The findings were promising. Post the mini-lecture, there was a notable improvement in the post-test scores compared to the pre-test. This improvement signified the enhanced understanding and readiness of the UMY pharmacy personnel to use the electronic medical record system. Their heightened confidence in electronically managing and recording healthcare transactions was evident. With the evolving landscape, pharmacies, as fundamental pillars of healthcare facilities, have the onus to digitally record all healthcare transactions and services. A testament to the program's effectiveness was that 31.25% of the participants were well-versed with the contents of the Ministry of Health Regulation Number 24/2022 on Medical Records by the end of the training.

Keywords: electronic, medical record, health record

1 Introduction

The update of healthcare's health information systems has included efforts to enhance the implementation and management of digital and integrated medical records. These efforts are consistent with the Indonesian government's primary program to initiate the Unified Data Indonesia initiative. The one data policy is a government data governance policy that aims to produce accurate, up-to-date, integrated, and accountable data that is
easily accessible and shareable between central and regional agencies by ensuring compliance with data standards, metadata, data interoperability, and the use of reference codes and master data (1–3).

The Unified Health Data Sector in Indonesia refers to the Unified Health Data that pertains to the healthcare sector or healthcare services. The Unified Health Data Sector is an integral element of the Indonesian Unified Data, as stipulated by the regulations. The governance policy for the health data sector seeks to generate accurate, current, integrated, and accountable data that is readily accessible and shareable among central and regional agencies. It is accomplished through adherence to data standards, metadata, data interoperability, and the utilization of reference codes and master data. The program can be implemented via the administration of medical records, including the strengthening of healthcare facility sectors in order to implement electronic medical recordkeeping via electronic systems [2].

Medical records are documents that contain patient identification information, as well as examinations, remedies, procedures, and other services provided to patients. In the context of electronic medical records, these documents are generated using an electronic system designed for managing medical records. The obligation to record this health information, also known as medical records, is governed by Articles 46 and 47 of Law No. 29 of 2004 concerning Medical Practice, which mandates that physicians and dentists provide health services. It is followed by Article 70 of Law Number 36 of 2004 on Health Workers, which mandates that every health worker who provides individual health services must create medical records for Health Service Recipients (4,5).

The Minister of Health's Regulation No. 69/MENKES/PER/III/2008 on Medical Records specifies the technical guidelines governing previous medical records. According to these provisions, healthcare facilities can record information about healthcare services (medical records) using electronic information systems. With the development of information technology, rapid and superior services, and the efficient administration of information documents, many healthcare facilities have begun implementing electronic information systems. However, these systems have not yet established standards and management protocols. In response to this technological development, the government has enacted the Ministry of Health Regulation No. 24 of 2022 on Medical Records (6).

Pharmacies are among the categories of healthcare facilities outlined in Articles 2 and 3 of Government Regulation No. 47 of 2016 on Healthcare Facilities and Article 1, number 5 of Minister of Health Regulation No. 24 of 2022 on Medical Records. Article 1, paragraph (1) of Minister of Health Regulation No. 9 of 2017 on Pharmacies defines a pharmacy as "a pharmaceutical service facility where pharmacists perform pharmaceutical practices." The pharmacy is a vital healthcare facility that plays a vital role in the pharmaceutical aspect. As healthcare facilities, pharmacies strive to satisfy the public's needs for medications, pharmaceutical ingredients, and medical devices. It is closely related to the growing public awareness of the significance of health, which makes the presence of pharmacies-crucial for facilitating access to healthcare for individuals and families. Essentially, pharmacies serve two primary purposes: providing healthcare services and conducting commerce. It indicates that pharmacies serve not only as a location for pharmaceutical practices, such as medication compounding or prescription services but also as a distribution center for pharmaceutical preparations and medical devices, such as the sale of medicines and medical equipment to the general public and even to institutions such as community health centers or hospitals (7), (8)

All healthcare facilities, including pharmacies, are required by Minister of Health Regulation Number 24 of 2022 regarding Medical Records to maintain health service records. A pharmacy is a facility where pharmacists exercise their profession and provide pharmaceutical services. Pharmacies play a vital role in the pharmaceutical aspect of
healthcare facilities, serving as essential instruments. They seek to satisfy the public's demand for pharmaceuticals, drug ingredients, and medical apparatus. On Sunday, October 3, 2021, Universitas Muhammadiyah Yogyakarta inaugurated UMY Pharmacy at Firdaus Pratama Clinic, Jl. Kapten Piere Tendean No. 56 Wirobrajan, Yogyakarta City. The SIA number for UMY Pharmacy is 91201073623240004. This pharmacy, under the management of PT. Umat Mandiri Berkemajuan, or UMB, is a new pharmaceutical enterprise. The inauguration of UMY Pharmacy demonstrates a commitment to Yogyakarta's public health.

On the other hand, based on observing all activities associated with patient medical records, they are still performed manually, resulting in a significant amount of time spent processing all patient data and causing storage media to fill up progressively. Implementing Electronic Medical Records (EMR) as a replacement or supplement to conventional paper-based medical records, as outlined in Ministry of Health Regulation No. 269 of 2008 concerning Medical Records, is essential for an immediate transition to electronic medical records. By the end of 2023, all healthcare facilities must switch from paper-based to digital medical records (9).

Electronic medical records can also be defined as an application environment that includes clinical data storage, clinical decision support systems, standardization of medical terminology, computerized data entry, and medical and pharmaceutical documentation. Electronic medical records are also advantageous to paramedics for documenting, monitoring, and managing the healthcare services provided to hospitalized patients. Legally, the data contained within electronic medical records constitutes a lawful record of the services rendered to patients, and hospitals have the right to retain such data. If a hospital employee uses a patient's information for tangential, non-healthcare-related purposes, he or she violates the law (9).

According to the observations of the service team of UMY Pharmacy, not all customers who visit the pharmacy and purchase medications have their medical records documented or updated. There is a system in existence for routinely collecting data on prescription-based purchases. Several concrete issues have been identified contextually, as follows:

1) The management, pharmacists, assistant pharmacists, and pharmaceutical staff of UMY Pharmacy have a limited comprehension of the Minister of Health Regulation No. 24 of 2022 regarding Medical Records.

2) The management, pharmacists, assistant pharmacists, and pharmaceutical employees of UMY Pharmacy struggle to transition from paper-based (conventional) to electronic medical records.

In light of these findings, it is necessary to provide assistance and direction to the UMY Pharmacy management in order for them to comprehend Health Regulation No. 24 of 2022 on Medical Records ((7,10,11)).

2 Methodology

Pharmaceutical services are the direct and accountable administration of pharmaceutical preparations to patients to enhance their quality of life. In the meantime, pharmaceutical service facilities, such as pharmacies, hospital pharmacy installations, public health centers, clinics, drug stores, and collaborative practices, are used to organize pharmaceutical services. Under the Domestic Institution Collaboration Scheme between the Universitas Muhammadiyah Yogyakarta and Universitas Siber Muhammadiyah, the Community Service Program concentrates on the legal facets of implementing electronic medical records in Muhammadiyah pharmacies. This motif indicates that UMY Pharmacy is this program's companion or accompanying object (7).
The selection of discussion and question-and-answer methods, included in the Electronic Medical Record Socialization activities for management and administrators of UMY Pharmacy, is deemed more appropriate to allow participants and speakers/resource persons to directly address issues in greater depth and communicate information more profoundly and contextually. The selection of partners is based on the intention or effort of UMY Pharmacy to provide in-kind support for the implementation of activities, such as providing venues, LCDs, and screens, and promoting the activities to other Muhammadiyah Pharmacies in Yogyakarta City, such as AMC Pharmacy and RSU PKU Muhammadiyah Yogyakarta Pharmacy (6,8).

Fig.1. Pharmacy of Universitas Muhammadiyah Yogyakarta (UMY)

On Sunday, October 3, 2021, Universitas Muhammadiyah Yogyakarta inaugurated UMY Pharmacy at the Firdaus Primary Clinic on Jl. Kapten Pierre Tendean 56, Wirobrajan, Yogyakarta. The number of licenses UMY Pharmacy holds are 91201073623240004 under the auspices of PT. Umat Mandiri Berkemajuan (UMB), this pharmacy, represents a novel venture in the pharmaceutical industry. The establishment of UMY Pharmacy demonstrates a commitment to meeting the Yogyakarta community's healthcare requirements. The UMY Pharmacy building features functional areas for prescription reception, prescription services, compounding, distribution of pharmaceutical preparations and medical devices, counselling, storage of pharmaceutical preparations and medical devices, and recordkeeping. The UMY Pharmacy's infrastructure consists of pure water installations, electrical installations, air conditioning systems, and fire protection systems. Apt. Andy Eko Wirbo, M.Sc., is the current manager of UMY Pharmacy. UMY Pharmacy receives approximately 80 visitors per day. It provides services such as medical device provision, a comprehensive range of medications, baby supplies, 24-hour availability, assistance in procuring necessary medications for the community and disseminating helpful medication and health information, especially for Wirobrajan residents (9)

In order to improve the quality of health services, provide legal certainty in the administration and management of medical records, ensure the security, confidentiality, integrity, and availability of medical record data, and realize a digitally based and integrated administration and management of medical records, the goal is to increase the capacity of pharmacy management at UMY to implement electronic medical records. Following this, pharmacists' role and responsibility in implementing pharmaceutical practices for promotive, preventative, curative, and rehabilitative purposes for individuals, groups, and communities should be acknowledged. It is essential to distinguish between
Care (provided by nurses), Cure (provided by physicians), and Pharmaceutical Care (provided by pharmacists) within the healthcare services. In terms of pharmaceutical care, pharmacists, physicians, and patients constitute a healthcare team. Therefore, in this context, a pharmacist, as a barrier to evidence-based medicine (EBM), should also be involved in providing or deciding whether the selected therapy is appropriate in the clinic (12,13).

Observations indicate, however, that all activities related to patient medical records are still performed manually, resulting in a significant amount of time spent processing patient data and causing storage media to fill up over time. Utilizing Electronic Medical Records (EMR) as a replacement or supplement to traditional paper-based medical records is a viable option for optimizing healthcare services and preventing future problems. Based on several descriptions of the urgency to improve and prevent problems in pharmaceutical services, especially in documenting services in medical records, it is essential to improve the quality of UMY Pharmacy's management in implementing electronic medical records for pharmaceutical services. It is consistent with the government's efforts to implement and administer digitally-based and integrated Medical Records (11).

Before the facilitators conducted educational outreach (discussions and question-and-answer sessions), initial observation was conducted to identify the issues or challenges. Following the observation, subsequent activities involve disseminating information regarding the Minister of Health Regulation No. 24 of 2022 concerning Medical Records. To assess the effectiveness and attainment of these activities, the facilitation team arranged preliminary events, including administering a pre-test to the target group in attendance. After the approach, socialization, and training sessions had concluded, the facilitators administered a post-test. It was intended to measure the target group's level of comprehension of the conducted activities.

This community service activity provided education through Socialization, Discussions, and Question and Answer sessions on the Legal Aspects of Electronic Medical Record Implementation at UMY Pharmacy. The service took place on Thursday, February 23, 2023, for approximately 6 hours. The event was opened with a welcome address from Ahdiana Yuni Lestari, S.H., M. Hum., as the Chairperson of the Community Service Implementation Team, and a welcome address from Apt. Mia Audita, S. Farm., as a partner of UMY Pharmacy. After the opening ceremony, the event organizers conducted a pre-test before the speaker presented the material, followed by discussions and question-and-answer sessions. Subsequently, 16 participants took part in the pre-test, which consisted of several questions formulated through Google Forms and had to be promptly answered by the participants once the official event was closed. The pre-test was necessary to ascertain the participants' initial abilities or knowledge as a guide in understanding the material on the legal aspects of electronic medical record implementation at UMY Pharmacy.
Fig. 2. Flowchart of the Support Program for the Improvement of Understanding Quality of Pharmacy Management of Pharmacy Management of UMY towards Electronic Medical Records.

The details of this socialization event were carried out with the following sequence of speakers:

1. Afriansyah Tanjung, S.H., M.Kn., CSA, serving as a lecturer from Universitas Siber Muhammadiyah.

Afriansyah explained that medical records contain patient identification data, examinations, treatments, procedures, and other services provided to the patient. Electronic medical records are created using an electronic system designed explicitly for managing medical records. An electronic system comprises a series of electronic devices and procedures that prepare, collect, process, analyze, store, display, announce, transmit, and disseminate electronic information. Healthcare facilities are tools and places used to provide healthcare services, including promotive, preventive, curative, and rehabilitative efforts by the government, regional governments, and the community. The objectives of regulating medical records (amendments) are to improve the quality of health services, provide legal certainty in the implementation and management of medical records, ensure the security, confidentiality, integrity, and availability of medical record data, and realize the implementation and management of digital and integrated medical records.

Medical records are regulated under the Minister of Health Regulation Number 24 of 2022 concerning Medical Records, which came into effect on August 31, 2022. With the implementation of this regulation, the Minister of Health Regulation Number 69/MENKES/PER/III/2008 is result of this repealed and declared no longer in effect. The new regulation consists of four chapters (General Provisions, Implementing Agency, Supervision and Guidance, and Closing Provisions), 47 Articles, and 133 Sections. Furthermore, the regulation stipulates that all Health Service Facilities must implement Electronic Medical Records following the provisions of this Ministerial Regulation by December 31, 2023.

The implementation of electronic medical record storage is mandated for all healthcare facilities. If a healthcare facility encounters difficulties, it may collaborate with a domestic data storage provider (PSE). However, the chosen PSE must previously obtain a recommendation from the Data and Information Management Department of the Ministry of Health of the Republic of Indonesia.
2. Ahdiana Yunilestari, S.H., M.H., a lecturer from the Faculty of Law at Universitas Muhammadiyah Yogyakarta.

Ahdiana stated that health law consists of legal provisions concerning the implementation of various health efforts. The parties involved in these efforts are healthcare professionals who carry out health measures and individuals/communities who receive health services. The aspects of health efforts are diverse, including the promotive aspect (improving health); the preventive aspect (preventing the emergence of diseases); the curative aspect (healing diseases); and the rehabilitative aspect (restoring health) (14, 15).

Within the realm of health law, the principles of civil law, administrative law, criminal law, and international law are applied. The sources of health law include national legal provisions; national medical guidelines; international medical guidelines; customary law; jurisprudence; and medical science and literature.

One essential component of health law is PHARMACY LAW. The objective of Health Law is to establish order in the health field. According to Fred Ameln, the functions of Health Law are Legal certainty for both health service providers and recipients; and Legal protection for both health service providers and recipients (16).

The legal relationship between pharmacists and patients can be observed through the pharmaceutical service agreement. In such an agreement, Article 1320 of the Civil Code applies, which entails: Consensus between the parties; Legal capacity of the parties; A specific subject matter; and Lawful authority. Rights and obligations arise for each party from the pharmaceutical service agreement, constituting a meeting between the offer and acceptance.

Pharmacists conducting the pharmaceutical practice in a pharmacy must display a practice sign. Pharmacists must install the sign, and upon the arrival of patients, they must offer their services for fulfilling doctor's prescriptions or assisting patients in selecting appropriate medications (self-medication) after hearing their complaints. Patients have certain rights within the pharmaceutical sphere, including the right to consent. For example, whether or not to take all prescribed medications, requesting generic drugs, and accepting or rejecting the pharmacist's
recommendations. Additional rights include the right to medical confidentiality, obligating the pharmacy to maintain the secrecy of a patient's illness and other privacy-related matters, and the right to a second opinion, allowing patients to consult with other pharmacists (13).

3. Dr. apt. MT Ghozali, M.Sc., a lecturer from the School of Pharmacy, Faculty of Medicines and Health Sciences, Universitas Muhammadiyah Yogyakarta.

A pharmaceutical information system in pharmacies is crucial for ensuring the safe and effective use of medications. This information system comprises several components, such as a drug database, drug search system, prescription processing system, drug stock monitoring system, and reporting system. Benefits of a pharmaceutical information system include increased efficiency and accuracy, enhanced safety and quality of medications, simplified drug stock monitoring, and improved service quality and customer satisfaction. Examples of pharmaceutical information system applications in pharmacies encompass integrated drug information systems, drug search applications, and prescription processing applications. However, there are challenges in implementing a pharmaceutical information system in pharmacies, such as costs, staff training, and technology availability. By addressing these challenges, a pharmaceutical information system in pharmacies can enhance the effectiveness and efficiency of pharmaceutical services, thereby facilitating patients in obtaining the medications they need and preventing errors in medication usage (6,10).

3 Results and discussion

Participants’ understanding of the Ministry of Health Regulation No. 24 of 2022 concerning Medical Records prior to the socialization through discussion forums and Q&A sessions concerning electronic medical records was found to be 36.25%. However, after listening to the presentation of information and engaging in discussions and Q&A sessions, their understanding increased to 67.5%. Based on the above, an optimal transformation of information and knowledge was found regarding implementing electronic medical records in pharmacies through socialization mechanisms balanced with discussions and Q&A sessions between participants and speakers.

Participants’ understanding before and after the socialization activity could be measured with the data that had been collected, which showed an increase by 31.25%. The activity effectively provided a comprehensive understanding and had the potential to apply the conveyed material. In line with this, participants’ understanding regarding the requirement to apply medical records electronically by December 31, 2023, could be measured before the participants attended the socialization activity, which was 41.25%, and after the participants attended the socialization activity, a figure of 68.75% was obtained. Based on this, there was an increase in understanding by 27.5% among the participants regarding the obligation to implement electronic medical records.

Subsequently, participants' understanding of the types of medical records before attending the socialization was obtained from the pre-test data, which showed a score of 42.5%. After the socialization, the understanding increased to 66.25%, as calculated from the post-test score. Therefore, there was an improvement in knowledge regarding the types of medical records in Indonesia, as demonstrated by a 23.75%. The participants' understanding of the procedures for implementing electronic medical records was obtained from pre-test data, which showed a score of 38.75%. After the socialization, the score increased to 67.5% based on the post-test result. Thus, the participants' understanding increased by 28.75%.
Lastly, the participant's understanding of the responsibility of electronic medical record-keeping before socialization was obtained from pre-test data which showed a score of 37.5%. After the participants attended the socialization, discussions, and question-and-answer sessions, the post-test scored 65%, indicating a 27.5% increase in knowledge regarding the responsibility of creating and managing medical records.

The increase in knowledge of each participant who participated in the discussion and question-and-answer sessions during the socialization activity serves as a benchmark for the success of the commitment to society involving the management and administration of the UMY Pharmacy. It is evidenced by statistical data obtained before and after the activity and contextually relevant questions posed to the speakers during the event which revealed that the participants had a better understanding of the legal aspects of implementing electronic medical records in Muhammadiyah pharmacies.

In the future, the community service team and other parties who wish to provide assistance still have opportunities. The author recommends focusing more on technical assistance for the management of electronic medical records in pharmacies, such as assisting in submitting electronic medical record system proposals to the Ministry of Health, conducting studies, and providing assistance to healthcare facilities that wish to independently manage electronic medical records or use electronic system service providers who must register their system with the Ministry of Health, as well as preparing agreement documents between healthcare facilities and electronic system service providers regarding the obligation to store and maintain the confidentiality of medical record documents.

4 Conclusion

Based on the community service activities conducted regarding the legal aspects of electronic medical record management in Muhammadiyah pharmacies by UMY and Partner Community Service Team, it can be concluded that: the participants' understanding of the Ministry of Health Regulation No. 24 of 2022 concerning Medical Records before the socialization is 36.25%, and after socialization, discussion, and question and answer sessions, it increases to 67.5%, indicating an increase in understanding by 31.25%. The participants' understanding of electronic medical records to make by December 31, 2023 before the socialization is 41.25%. After socialization, discussion, and question and answer sessions, it increases to 68.75%, indicating an increase in understanding by 27.5%. The participants' understanding of the types of medical records before the discussion is 42.5%, and after socialization, it increases to 66.25%, indicating an increase in understanding by 23.75%. The participants' understanding of the procedures for managing electronic medical records before the panel discussion is 38.75%, and after socialization, it increases to 67.5%, indicating an increase in understanding by 28.75%. The participants' understanding of the person responsible for electronic medical records before the panel discussion is 37.5%, and after socialization, it increases to 65%, indicating an increase in understanding by 27.5%. The socialization method with extended time allocation for discussion and question and answer sessions between participants and speakers is more and more optimal because participants better understand the legal aspects of electronic medical record management in Muhammadiyah pharmacies.

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