

Healthcare Workers' Perception of the Implementation of Electronic Medical Records Reviewed from the 5M Aspect at Faga Husada General Hospital

Olga Samwit Asmara Ningtias^{*1}, Niska Salsiani Sinta², Ahmad Amirdduin j³

^{1,2,3} Politeknik Baubau, Kota Baubau, Indonesia

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CORRESPONDING AUTHOR

Nama : Olga Samwit Asmara Ningtias

Address: Jl. Limbo Wolio Kel. Tanganapada Kec.

Murhum, Kota Baubau

E-mail : olgasamwit@gmail.com

A B S T R A C T

Electronic Medical Records (EMR) are medical records organized through digital systems as part of healthcare service delivery. This study aims to identify the factors influencing healthcare workers' perceptions of EMR implementation at Faga Husada General Hospital, Baubau City. Conducted in 2025, the research applied a qualitative approach with a phenomenological design. Data were collected through in-depth interviews and observations, using interview guidelines and observation sheets as instruments. The findings revealed that, in terms of the Man aspect, staff perceived themselves as competent and supported in using EMR. The Machine aspect showed that hardware and network facilities were adequate. From the Material perspective, the SIMRS application was considered stable and effective. The Method aspect was supported by well-structured standard operating procedures (SOPs). Meanwhile, the Money aspect indicated the availability of funding, although training was not yet evenly distributed. Overall, healthcare staff expressed positive perceptions of EMR across all aspects, contributing significantly to the efficiency and effectiveness of patient service management, with recommendations to improve training coverage and ensure financial transparency.

INTRODUCTION

Hospitals are healthcare institutions that provide medical services to the community with the aim of improving health standards. In their operations, hospitals always interact with the surrounding environment to maintain balance in meeting patients' needs. (Jayanthi L., 2023) emphasizes that hospitals have a strategic role in realizing quality services, particularly through the use of health information systems that support service effectiveness. An important aspect of hospital service delivery is medical records, which serve as official documents containing patient identity, examination history, diagnosis, procedures, and treatments. According to national regulations, every hospital is required to manage medical records as a basis for service administration as well as a source of health data. It highlights that medical records play an important role in ensuring the completeness of clinical information needed by healthcare professionals to improve service quality. (Widayanti *et al.*, 2023).

Advancements in information technology have led to the creation of Electronic Medical Records (EMR) as a replacement for paper-based medical documents. (Permenkes RI No 24, 2022) Regulate the obligations of all health facilities to implement EHRs integrated with the Satu Sehat application. (Hidayatuloh D., 2023) stating that the digitization of medical records provides benefits in the form of service efficiency, faster access to patient data, and improved accuracy in medical recordkeeping. The implementation of EHR essentially aims to organize health administration more systematically while improving the quality of services. (Husni D. A. and Widodo, R. and Cahyani, P. R., 2025) explaining that the utilization of EHR directly impacts the completeness of clinical data and contributes to user satisfaction. Thus, an optimally managed EHR system can add value to the quality of service and patient satisfaction.

The benefits of implementing RME have been proven through various studies. (Perwirani G. A. and Hidayat, T., 2023) found that the use of RME can shorten patient waiting times while also increasing their satisfaction. (Alfitasari R. and Pertiwi, J., 2024) also added that the implementation of EHR can improve the efficiency of healthcare workers and strengthen coordination between service units. These findings emphasize that EHR plays an important role in supporting safety pasien dan efektivitas hospital management. Nevertheless, the process of implementing EMR is not without challenges. Research

conducted by (Siswati T. and Khairunnisa, M., 2023) At the Padang City Health Center, it was shown that the biggest obstacles were related to limited infrastructure, the readiness of human resources, as well as resistance to change. This indicates that both technical and non-technical aspects must be considered to ensure optimal implementation of RME.

Initial observations at Faga Husada General Hospital in February 2025 showed that although outpatient services have fully implemented the Electronic Medical Record (EMR) system, there were still challenges such as data entry errors due to network disruptions and a lack of training for the staff. Therefore, this study focuses on exploring healthcare workers' perceptions regarding the role of EMR as a support for patient service management at Faga Husada General Hospital in Baubau City. Understanding these perceptions is expected to provide practical recommendations for improving EMR implementation and the quality of healthcare services.

METHOD

This study uses a qualitative method with a phenomenological approach aimed at thoroughly exploring the experiences and perspectives of healthcare workers regarding the implementation of Electronic Medical Records (EMR). The research informants consisted of five individuals, namely the head of the medical records room, administrative staff, a nurse, a midwife, and a doctor. The research focus was directed at healthcare workers' perceptions of EMR implementation based on the 5M aspects at Faga Husada General Hospital in Baubau City in 2025. The research location was at Faga Husada General Hospital, Baubau City, Southeast Sulawesi Province, with data collection occurring from April to July 2025. Data collection techniques included field observation, in-depth interviews, and document review, with instruments consisting of interview guides, observation checklists, writing tools, and voice recorders. Data validity was maintained through source triangulation by comparing information from various informants to obtain the findings' validity.

RESULTS AND DISCUSSION

Health Workers' Perception of the Role of Electronic Medical Records as Support for Patient Service Management from the Human (man) factor.

Research results at Faga Husada General Hospital indicate that healthcare workers have a positive perception of the role of Electronic Medical Records (EMR) from a human perspective. Most of the staff have education relevant to their field of work and have undergone training related to EMR usage. They feel confident and capable of operating the system smoothly because EMR facilitates access to patient data, speeds up service processes, and reduces workload. Technical support from the IT team is also perceived as very helpful, especially when facing system issues. Overall, the staff demonstrate adequate readiness and competence in utilizing EMR as a tool to support patient service management.

Table 1. Observation Results on the Man Aspect			
Aspect	Observation Indicators	There is	None
<i>Man</i>	The staff has an appropriate educational background		√
	The officer appeared to operate the RME smoothly		√
	There is interaction or guidance from IT staff		√

Source: Primary Data, 2025

Based on observations, healthcare workers in the service unit have relevant educational backgrounds, such as nursing, midwifery, administration, and general medicine. These findings are consistent with the results of interviews, which show that almost all staff have formal education supporting their field of work. Furthermore, the staff appear proficient in operating the RME application, demonstrated by their speed and accuracy in data entry and patient information retrieval. There is also active interaction with the IT team, especially when encountering technical issues, with support provided quickly and responsively. Temuan ini sejalan dengan penelitian (Rosyada, Lazuardi and Kusri, 2021) yang menyatakan bahwa persepsi positif petugas terhadap RME berpengaruh signifikan towards the success of the implementation of the electronic medical record system. This is also

reinforced by (Yanuar Pribadi, Sandra Dewi, 2018), which emphasizes that user readiness is the main factor determining the success of RME implementation.

Thus, it can be concluded that healthcare workers demonstrate a positive perception of the human aspect in the implementation of EMR. They feel competent because they have appropriate education, have received training, and have obtained adequate technical support. This indicates the readiness of human resources to support the implementation of EMR as a tool for managing patient services.

Health Workers' Perception of the Role of Electronic Medical Records as a Support for Patient Service Management: Machine Factor.

Research results at Faga Husada General Hospital show that from the machine aspect, supporting facilities such as computers, printers, and internet connections are adequate and stable to support RME operations. Most service units are equipped with devices that function optimally, although some units still require additional devices such as scanners. The RME system is also supported by a smooth internet network, as well as the presence of UPS and generators as a contingency against power outages, ensuring that services continue to run without obstacles..

Table 2. Observation Results on the Machine Aspect

Aspect	Observation Indicators	There is	None
<i>Machine</i>	Computers and printers are available in the service room	√	
	Stable internet connection during service	√	
	The device uses the latest Windows system	√	
	UPS or backup generator is available	√	

Source: Primary Data, 2025

In terms of machines, observations show that computers and printers are available in most service rooms, the internet connection is stable during service, and computer devices use the latest Windows system. The availability of UPS and generators ensures that the system remains operational during power outages, thereby maintaining the continuity of patient services.

These findings are consistent with the research (Delfina Darianti, and Leni Herfiyanti, 2021) which states that the Machine element includes the availability of facilities such as digitization rooms, scanners, and adequate computers to support medical record digitization. Good infrastructure is an important factor in the successful implementation of EHR because it ensures smooth operations and effectively supports the digitization of patient data. In addition, research (Izza and Lailiyah, 2024) It also emphasizes the importance of infrastructure readiness in supporting the implementation of EHR. In the literature review conducted, it was found that the availability of adequate hardware, such as computers and scanners, as well as stable internet network support, are key factors in the successful implementation of EHR in healthcare facilities. A strong infrastructure enables the digitalization of medical records to run smoothly and supports the efficiency of healthcare services. Thus, it can be concluded that in terms of the Machine aspect, the readiness of infrastructure and information technology devices is a primary factor in supporting the effectiveness and success of EHR system implementation in hospitals.

Health Workers' Perception of the Role of Electronic Medical Records as a Support for Patient Service Management from the Material (substance) factor.

Based on the research findings at Faga Husada General Hospital, the material aspect shows that the Hospital Information System (SIMRS) being used is adequate, stable, and effective in supporting the patient service process. This finding is in line with previous research by (Yanuar Pribadi, Sandra Dewi, 2018), which emphasized that before implementing EMR, the readiness of health facilities and infrastructure needs to be considered.

Table 3. Observation Results on the Material Aspect

Aspect	Observation Indicators	There is	None
Material	The SIMRS application is actively used	√	
	Digital forms are available in the system	√	
	The SIMRS application displays complete patient data	√	

Source: Primary Data, 2025

Based on the observations in the table above, the material aspect shows that the SIMRS application in use is fairly complete, stable, and capable of effectively supporting the patient service process. The SIMRS application is actively used in the service area, with features that support the implementation of electronic medical records. Digital forms are available and utilized, such as birth certificates and medical leave letters, although some documents have not yet been fully digitized. The SIMRS application is also able to display complete patient data, for both new and existing patients, which greatly aids the service process. These findings are reinforced by the triangulation statements from the head of medical records and staff, indicating that this application significantly supports work efficiency.

In addition, the available digital forms have helped document patient data more efficiently and in a structured manner, and are considered more complete compared to the manual version. Previous research conducted by (Delfina Darianti, and Leni Herfiyanti, 2021) states that the material element, namely media transfer (digitization), serves as a support for the implementation of Electronic Medical Records (EMR). This is in line with previous research by (Meylani and Hastuti, 2024), Material Aspect (Materials) readiness for RME implementation in the inpatient unit already includes software to support electronic medical records such as the SIMRS Khanza application. In addition, there are modules in the RME implementation consisting of modules A to T, RME forms, and RME data backup. Thus, it can be concluded that system readiness and module completeness are important factors in supporting the success of medical record digitization.

Healthcare Workers' Perception of the Role of Electronic Medical Records as a Support for Patient Service Management from the Method (procedure) factor.

Based on the research results at Faga Husada General Hospital, the aspect **method** It shows that the use of Electronic Medical Records (EMR) in healthcare facilities is supported by the existence of SOPs and written procedures that serve as guidelines for service implementation. Staff stated that the workflow follows the established SOPs, making medical data recording more structured, traceable, and accurate.

Table 4. Observation Results on the Method Aspect

Aspect	Observation Indication	There is	None
Method	The SOP for using RME is available in the work unit	√	
	There is a policy board or RME implementation decree		√
	The implementation of the system is evaluated regularly	√	

Source: Primary Data, 2025

Based on the observations, the SOP for RME usage is available in the work units, although not all units display it on boards. Staff stated that they have been working according to the established workflow and written procedures. However, policy boards or the RME implementation decree are not explicitly visible throughout all units. On the other hand, the evaluation of the system implementation is carried out regularly by management and the IT team, both quarterly and monthly, to ensure the system runs properly and in accordance with procedures. This observation reinforces the interview results from staff and department heads who stated the importance of SOPs and regular evaluations in the implementation of RME..

These results are in line with previous research (Azzahra *et al.*, 2023), which states that the implementation of RME provides efficiency, reduces the workload of staff, and enhances space utilization that benefits healthcare services in hospitals. In addition, Ekotama's (2015) research in (Ulfa, and M. Rizki Raafi, 2023) emphasizes that in the implementation of electronic medical records, a method is needed that can serve as a guide or reference. In this case, an SOP is required, which is prepared to facilitate, organize, and streamline the work.

Thus, it can be concluded that in supporting the implementation of EHR, there must be clear SOPs that are consistently applied. Well-organized work procedures not only enhance the efficiency and accuracy of medical record keeping but also strengthen the overall quality of service.

Health Workers' Perception of the Role of Electronic Medical Records as a Support for Patient Service Management from the Money (financial) factor.

Based on research conducted at RSU Faga Husada, the financial aspect indicates that the hospital has allocated a specific budget to support the implementation of the Electronic Medical Record (EMR) system. This financial support includes the procurement of new equipment, system maintenance, and other operational needs that sustain the continuity of the system.

Table 5. Observation Results on the Money Aspect

Aspect	Observation Indicators	There is	None
<i>Money</i>	There are new devices resulting from the hospital's procurement	√	
	There is a system budget/procurement information board		√

Source: Primary Data, 2025

The observation results found that the new equipment is available as a result of hospital procurement and is used to support the implementation of RME. However, no information boards regarding the budget or system procurement were found to be openly displayed in the work unit. From the triangulation interviews, it was concluded that training and equipment procurement are indeed carried out due to hospital budget support, although the budget details are not known in detail by all staff.

Although some officers have not participated in training funded directly by the hospital, they consider financing to be very important for ensuring the effectiveness and smooth implementation of the EHR system. Observations also confirm that most of the equipment used is procured by the hospital, although there is not yet transparency in the form of a budget information board. Overall, the availability of funds is considered quite supportive of the efficiency and sustainability of the EHR system in the hospital.

These findings are consistent with the research (Azzahra *et al.*, 2023), which emphasizes that budget preparation plays an important role as a tool for planning and controlling activities to be more directed. In line with that, (Dwi *et al.*, 2025) It is stated that the budget for equipment procurement must be available in detail, so that any deficient needs can be properly addressed. Previous research by Sinta *et al.* (2024) also emphasized that the financial aspect is the main support for the successful implementation of RME in the inpatient unit, where the funds provided are directed to support hardware needs as well as other infrastructure related to the system.

Thus, it can be concluded that well-planned fund availability not only ensures the operational sustainability of the MSE system but also enhances service quality through optimal infrastructure and technology support.

CLOSING

Based on the research results at Faga Husada General Hospital, it can be concluded that the implementation of Electronic Medical Records (EMR) receives positive support from various aspects. From the human resources (man) perspective, healthcare workers demonstrate good readiness as they have relevant educational backgrounds, received training, and obtained technical support from the IT team. This reflects a positive perception and sufficient competence to support the implementation of EMR. From the machine aspect, the availability of infrastructure such as computers, printers, internet networks, and backup devices (UPS and generators) has been adequate, thus supporting the continuity

of the system. Furthermore, the material aspect shows that the HIS (Hospital Information System) used is quite comprehensive, stable, and integrated, thereby capable of accelerating the documentation process and improving service efficiency. In terms of methods, the implementation of EHR has been supported by clear standard operating procedures that are consistently applied, making medical record-keeping more accurate, organized, and of higher quality. Finally, from the financial aspect, the hospital has prepared a specific budget for the procurement of devices, system development, and operational maintenance. This planned financial support is an important factor for the effectiveness, efficiency, and sustainability of EHR implementation at Faga Husada General Hospital.

EXPRESSION OF GRATITUDE

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