



Implementation of Electronic Medical Records: A Qualitative Study of Success Factors Using the HOT-Fit Model

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ABSTRACT

The implementation of Electronic Medical Records (EMR) is a crucial part of the digital transformation of healthcare services, but its success is greatly influenced by the alignment between human, organizational, and technological aspects. This study aims to analyze the success factors and barriers to EMR implementation based on the Human–Organization–Technology Fit (HOT-Fit) model at RSU 'Aisyiyah Ponorogo. This study used a qualitative method with a case study approach. A total of 12 informants, consisting of healthcare workers, IT staff, and management, were selected purposively. Data were collected through in-depth interviews and document reviews, then analyzed using thematic content analysis with a deductive approach based on the HOT-Fit components. The results indicate that the successful implementation of EMR is supported by the integration of three main aspects: (1) adequate technology in the form of an integrated, flexible, and secure system; (2) good user acceptance, demonstrated by ease of use and increased work efficiency; and (3) organizational support through clear policies, structures, and funding. Key success factors include a mandatory EMR policy, the development of adaptive internal systems, a supportive organizational culture, and strong leadership. However, misalignments were still found in the HOT-Fit components, particularly regarding system stability, variations in user adaptation, and suboptimal training and evaluation. In conclusion, the implementation of EMR at RSU 'Aisyiyah Ponorogo has been successful and shows positive results. However, optimal success depends on continuously improving the alignment between human, organizational, and technological aspects.

Keywords: Electronic Medical Records, HOT-Fit, Health Information Systems, Implementation, Hospital.

ABSTRAK

Implementasi Rekam Medis Elektronik (RME) merupakan bagian penting dalam transformasi digital pelayanan kesehatan, namun keberhasilannya sangat dipengaruhi oleh keselarasan antara aspek manusia, organisasi, dan teknologi. Penelitian ini bertujuan menganalisis faktor keberhasilan dan hambatan implementasi RME berdasarkan model Human–Organization–Technology Fit (HOT-Fit) di RSU 'Aisyiyah Ponorogo. Penelitian ini menggunakan metode kualitatif dengan pendekatan studi kasus. Sebanyak 12 informan yang terdiri dari tenaga kesehatan, staf IT, dan manajemen dipilih secara purposive. Data dikumpulkan melalui wawancara mendalam dan telaah dokumen, kemudian dianalisis menggunakan thematic content analysis dengan pendekatan deduktif berdasarkan komponen HOT-Fit. Hasil penelitian menunjukkan bahwa keberhasilan implementasi RME didukung oleh integrasi tiga aspek utama: (1) teknologi yang memadai berupa sistem terintegrasi, fleksibel, dan aman; (2) penerimaan pengguna yang baik ditunjukkan oleh kemudahan penggunaan dan peningkatan efisiensi kerja; serta (3) dukungan organisasi melalui kebijakan, struktur, dan pendanaan yang jelas. Faktor kunci keberhasilan meliputi kebijakan wajib penggunaan RME, pengembangan sistem internal yang adaptif, budaya organisasi yang mendukung, serta kepemimpinan yang kuat. Namun, masih ditemukan ketidaksesuaian (misalignment) pada komponen HOT-Fit, terutama terkait stabilitas sistem, variasi adaptasi pengguna, dan belum optimalnya pelatihan serta evaluasi. Kesimpulannya, implementasi RME di RSU 'Aisyiyah Ponorogo telah berjalan dengan baik dan menunjukkan arah positif, namun keberhasilan optimal sangat bergantung pada peningkatan keselarasan antara aspek manusia, organisasi, dan teknologi secara berkelanjutan.

Kata Kunci: Rekam Medis Elektronik, HOT-Fit, Sistem Informasi Kesehatan, Implementasi, Rumah Sakit.

INTRODUCTION

The adoption of Electronic Medical Records (EMR) has become a global priority in transforming healthcare systems toward improved quality, safety, and efficiency. EMR systems facilitate accurate and real-time documentation, enhance data accessibility, and support clinical as well as administrative decision-making. In many countries, EMR implementation has been associated with reduced medical errors, improved continuity of care, and increased operational efficiency (AlSadrah, 2020; Sudirahayu & Harjoko, 2016). Consequently, healthcare organizations worldwide are increasingly investing in digital health technologies as part of broader health system strengthening efforts.

However, despite its recognized benefits, EMR implementation remains a complex socio-technical process. Evidence from various settings indicates that many EMR initiatives fail to achieve optimal outcomes due to challenges that extend beyond technology itself. These challenges include inadequate user competence, resistance to change, limited leadership support, misalignment between workflows and system design, and insufficient organizational readiness (Boonstra et al., 2014). This suggests that successful EMR implementation requires not only robust technological systems but also strong alignment between human, organizational, and technological components.

In the Indonesian context, the implementation of EMR has been reinforced by the Regulation of the Minister of Health of the Republic of Indonesia Number 24 of 2022 concerning Medical Records, which mandates all healthcare facilities to adopt electronic-based medical records. This policy marks a significant step toward nationwide digitalization of healthcare services. Nevertheless, the transition from paper-based to electronic systems presents substantial challenges for hospitals, particularly in terms of human resource readiness, infrastructure availability, and organizational adaptation. As a result, variations in the success of EMR implementation across hospitals are still evident.

Although previous studies have explored EMR implementation, most have primarily focused on general benefits or barriers without systematically identifying the key success factors that determine implementation outcomes. Furthermore, existing research often examines these factors in isolation, lacking an integrated framework that captures the interaction between human, organizational, and technological dimensions. In addition, there is still limited qualitative evidence that provides in-depth insights into how these factors interact in real-world implementation settings. This indicates a clear research gap: the absence of comprehensive, model-based analyses that specifically examine the success factors of EMR implementation using an integrative approach.

To address this gap, the Human Organization Technology Fit (HOT-Fit) model offers a comprehensive framework for evaluating information system implementation by emphasizing the alignment among human factors (such as user skills and acceptance), organizational factors (such as leadership and policies), and technological factors (such as system quality and usability). The use of this model enables a more holistic understanding of the determinants of successful EMR implementation.

Therefore, this study aims to analyze the success factors influencing EMR implementation using the HOT-Fit model through a qualitative approach. By exploring the interactions among human, organizational, and technological components, this study seeks to provide deeper insights into the mechanisms that support successful EMR implementation and to generate practical recommendations for improving the effectiveness and sustainability of EMR systems in hospital settings.

RESEARCH METHODS

This research was conducted at 'Aisyiyah Ponorogo General Hospital from April to June 2023. The study subjects consisted of healthcare workers and hospital management involved in the implementation of Electronic Medical Records (EMR), including specialist physicians, general practitioners, nurses, midwives, physiotherapists, pharmacists, nutritionists, IT staff, medical recorders, and management personnel.

A total of 12 informants were selected using a purposive sampling technique. Informants came from various professions involved in the use and management of EMR, providing a comprehensive perspective on the system's implementation. Details of the informants are presented in the following table:

Table 1. Research Informant Data at 'Aisyiyah Ponorogo General Hospital.

Number	Informant Code	Profesions	Educations
1	01	Nurse	D3
2	02	Nurse	S1
3	03	Medical Records Officer	S1
4	04	Programmer (IT)	S1
5	05	Pharmacist	S1
6	06	Physiotherapist	3-year diploma
7	07	Midwife	3-year diploma
8	08	Nutritionist	3-year diploma
9	09	Managerial Staff	Bachelor degree
10	10	Specialist	Bachelor degree
11	11	General Practitioner	Bachelor degree
12	12	General Practitioner	Bachelor degree

The inclusion criteria for this study included: (1) active involvement in the use or management of EMRs, (2) a minimum of one year of service, and (3) having used EMRs for at least six months. Exclusion criteria included healthcare workers who were on leave during the study period or unwilling to participate as informants. The number of informants was determined based on the principle of data saturation, which occurs when additional interviews no longer yield new information or themes.

Data collection was conducted through semi-structured in-depth interviews and document review related to the implementation of EMR. Interview guidelines were developed based on the dimensions of the HOT-Fit model: human aspects (system use and user satisfaction), organizational aspects (structure and environment), and technological aspects (system quality, information quality, and service quality). Each interview lasted 30–60 minutes and was conducted face-to-face in a conducive room within the hospital. Interviews were conducted by the principal investigator, who had received training in qualitative research methods. With the informants' consent, all interviews were recorded using a voice recorder and supplemented with field notes to capture context and non-verbal expressions.

Data were analyzed using thematic content analysis with a deductive approach, referring to the HOT-Fit model framework. The analysis stages included: (1) verbatim transcription of interview results, (2) initial understanding of the data (familiarization), (3) initial coding based on predetermined categories from the HOT-Fit model, (4) identification of emerging subthemes, (5) grouping and interpretation of themes, and (6) drawing conclusions. The analysis process was assisted by NVivo 12 software to improve coding consistency, simplify data grouping, and ensure traceability of the analysis results. Although using a deductive approach, the researcher remained open to the possibility of new themes emerging outside the HOT-Fit framework.

Data validity was ensured through the application of the principles of credibility, dependability, and confirmability. Credibility was established through member checking, which involved asking informants to verify the interview summary results. Source triangulation was also conducted by comparing data from various informants and supporting documents. The researcher also compiled an audit trail to systematically document the entire research process.

The researcher recognized the potential for bias due to her knowledge of hospital information systems. Therefore, she conducted ongoing self-reflection through reflective notes and ensured that the resulting interpretations were based on the informants' perspectives.

This research has received approval from the Health Research Ethics Committee of RSU 'Aisyiyah Ponorogo. All informants provided informed consent before the interviews were conducted. Confidentiality and anonymity of informants were maintained by not including personal identification in the research report, and all data was used solely for research purposes.

RESULTS

Technology (System and Infrastructure Quality)

The implementation of the RME at RSU 'Aisyiyah Ponorogo is supported by the availability of adequate infrastructure. All service units, both outpatient and inpatient, are equipped with computers used for inputting and accessing patient data. Furthermore, the server is housed in a dedicated room with limited access, demonstrating attention to system security. The available internet connection generally supports operations, although it does experience disruptions in certain situations.

The RME system was developed internally by the hospital's information technology team. This internal development provides the advantage of flexibility in adapting the system to user needs and service flows. In terms of features, the system is equipped with security mechanisms such as username and password-based login, access rights restrictions based on user authority, and an automatic logout feature to prevent misuse of access.

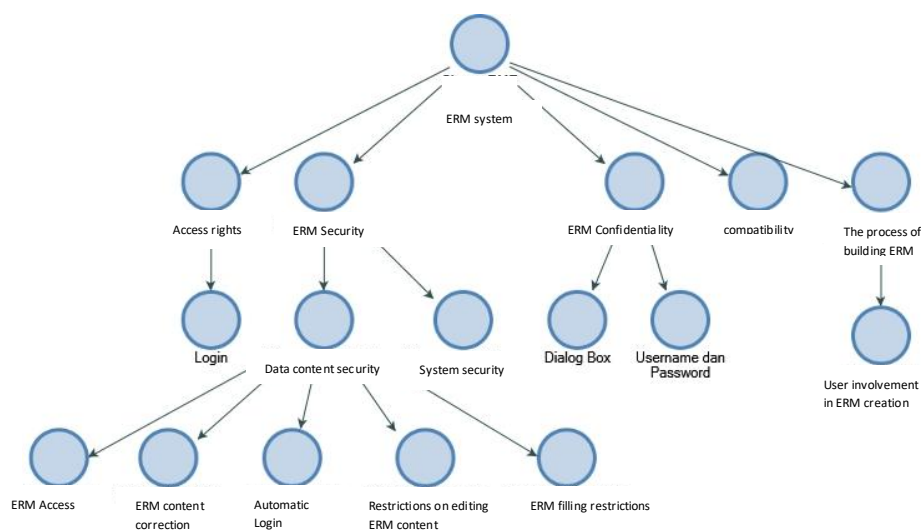


Figure 1. Electronic Medical Record System at Aisyiyah Ponorogo Hospital.

Explanation of Figure 1 shows that the RME system theme is formed from several main components that are interrelated, namely the RME development process, access rights, compatibility, RME security, and RME confidentiality.

In the RME development process, the system was developed by internal hospital programmers, involving users (PPA) from the initial stage. This involvement aimed to ensure the resulting system aligned with clinical needs and existing service flows. This aligns with the informant's statement that "we invited all PPA... and adapted to their wishes" (Inf 09). Furthermore, system development also adhered to medical record standards by transforming manual processes into digital form, as conveyed by "we transformed manual rules into digital" (Inf 04).

Regarding access rights, the RME system implements access restrictions based on the role and authority of each user. Each user has a personal account with a username and password, ensuring individual and controlled access to data. This is supported by the informant's statement that "access rights vary according to authority" (Inf 03) and "login with each account" (Inf 07). Furthermore, access is also granted to non-healthcare personnel directly involved in services, but remains limited by regulations (Inf 09).

In terms of compatibility, the RME system has been able to comprehensively integrate patient data. Users can access patient service histories for both outpatient and inpatient care within a single system. This is reinforced by statements that complete patient histories can be accessed (Inf 12), and that "laboratory results are all displayed in one menu" (Inf 02), indicating integration between service units.

In terms of security, the RME system is equipped with various security mechanisms, such as restricting access to the hospital's internal network (LAN), an automatic logout feature, and restrictions on data editing. Informants stated that "RME can only be accessed through the hospital network" (Inf 03) and "automatically logs out after 30 minutes" (Inf 04). Furthermore, every data change is recorded in detail through an audit trail, as explained by the data change record, which records the time, content of the change, and the reason (Inf 03), thus enhancing system security and accountability.

Regarding confidentiality, the system ensures that access can only be achieved through login with a personal username and password. This aligns with the statement that "each person has their own account and it must not be stored" (Inf 05). Furthermore, a dialog box serves as a form of user agreement to maintain data confidentiality before accessing the system, as stated, "There is a dialog box. it must be kept confidential" (Inf 08).

Overall, the figure illustrates that the RME system is comprehensively designed, with attention to user involvement, access management, data integration, and security and confidentiality as key elements of its implementation.

Human (Users and System Acceptance)

From a user perspective, the implementation of the EMR at RSU 'Aisyiyah Ponorogo shows that most healthcare workers have been able to accept and use the system quite well. This is evident in positive user perceptions of the system's ease of use, speed of access, and simple and easy-to-understand interface. One informant stated that the system was "very easy, fast, and easy to understand" (Inf 12), indicating that the EMR has a good level of usability. This has resulted in increased work efficiency, particularly in the documentation and retrieval of patient data, which previously required more time under manual systems. Furthermore, the availability of internal IT personnel at the hospital provides a distinct advantage because the system is independently developed, making it more flexible and easily adapted to user needs in the field.

However, user acceptance of the EMR is not uniform across all healthcare workers. Some users still experience difficulties adapting to the digital system, especially those unfamiliar with technological devices. These barriers are not only technical but also related to user perceptions of the changes in the work system. As one informant expressed, "some feel that using the EMR increases their work time" (Inf 03). This demonstrates the initial resistance common to digital transformation processes in healthcare.

Furthermore, EMR implementation also faces issues of consistent use. Not all healthcare workers use the system optimally and sustainably in their daily practices. This situation indicates that the success of EMR implementation is not solely determined by the availability of technology, but is also heavily influenced by individual readiness, user competency, and attitudes toward change.

Organization (Management and Policy Support)

From an organizational perspective, the implementation of RME at RSU 'Aisyiyah Ponorogo demonstrates strong managerial support, as reflected in the organizational structure, regulations, funding, human resources, and mechanisms for socialization, training, and system evaluation. All of these components are interconnected in forming integrated RME management.

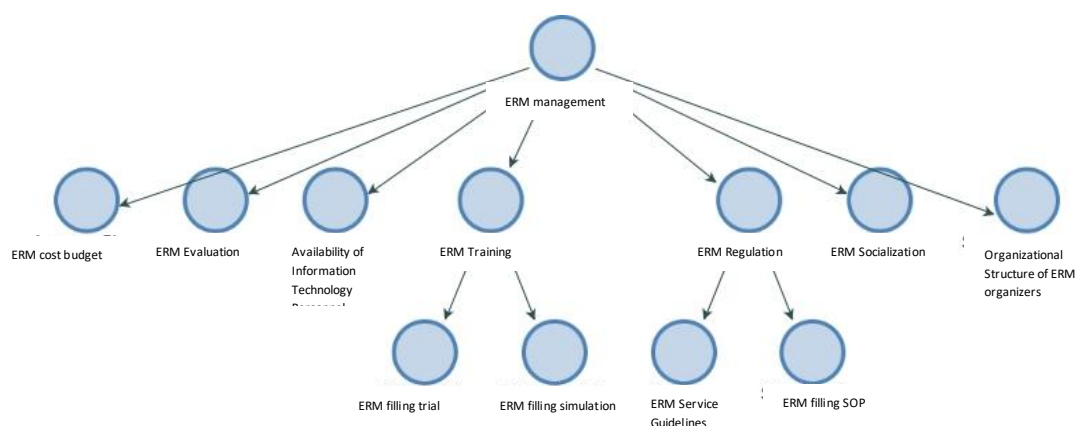


Figure 2. Electronic Medical Record Management at Aisiyiah Ponorogo Hospital.

Explanation of Figure 1 The hospital's EMR organizational structure has been clearly and systematically established. EMR management is coordinated by top management, from the director down to the technical operational units. The EMR system was developed by the Electronic Data Processing (EDP) Subdivision, while its management is carried out by the Medical Records Subdivision, in coordination with the Medical Records Committee (PRM). This is reinforced by an informant's statement that "structurally, the electronic medical record remains within the medical record" (Inf 03). Furthermore, the existence of the SIMRS Development Team, which involves structural elements and IT personnel, demonstrates a collaborative approach to system development.

Regulatory-wise, the hospital already has medical records service guidelines as a basis for implementation, but these regulations are still being adapted to the electronic system. This demonstrates the dynamic nature of policy changes that follow the development of EMR implementation. As one informant stated, "it is currently under revision... because we have already started implementing inpatient EMR" (Inf 09). On the other hand, users also emphasized the importance of standard operating procedures (SOPs) as work guidelines, as expressed by the statement that "it's very important... that there are clear guidelines" (Inf 05) and "they should exist and be socialized in detail" (Inf 07). This situation indicates that regulations play a crucial role in ensuring consistent system use.

Organizational support is also evident in the financing aspect. The implementation of RME has been integrated into the hospital budget through the Revenue and Expenditure Budget Plan (RAPB), specifically in the PDE Subsection. Funding covers system development, IT staff training, and the procurement of infrastructure such as computer and network equipment. Informants stated that "the budget has been prepared there since the beginning of the year" (Inf 03), indicating thorough planning to support RME implementation. This is further reinforced by allocations for increasing device capacity and adding IT staff.

The availability of information technology staff is a critical factor in successful implementation. RSU 'Aisiyiah Ponorogo has an IT team consisting of programmers and network staff, which is considered sufficient to support the current system's operations. However, the ever-increasing need for system development means that the existing workforce still needs to be adjusted. This is reflected in an informant's statement that "it's still sufficient for now, but considering future developments, it's still insufficient" (Inf 09). This situation indicates that the sustainability of the system is highly dependent on the readiness of human resources in the technology sector.

In terms of socialization, the implementation of the RME has been communicated to all users through a hierarchical structure. Socialization was conducted from management down to the implementation level, through the room head or installation head. One informant stated that "the initial socialization was only through the room head" (Inf 02), while another informant added that the IT team also provided presentations and guidance to relevant units (Inf 09). However, this indirect socialization pattern to all users has resulted in differing understandings in the field.

RME training has also been conducted as part of the implementation process, primarily through trials and mentoring before the system was fully deployed. One informant stated that "there was a trial period of about a month before implementation" (Inf 12). Training was conducted in stages through representatives from each profession, who then passed the training on to other colleagues. However, this method was deemed suboptimal by some users, as one expressed that "there should be separate training so that we can improve things together" (Inf 07). This indicates that more comprehensive training is still needed.

In terms of evaluation, the implementation of the RME has been carried out but has not been carried out routinely and in a structured manner. Evaluation is more incidental, based on user needs and feedback. One informant stated that "there are no routine evaluations yet" (Inf 02). Evaluation mechanisms are also implemented through discussion forums and communication groups such as WhatsApp, which are used to directly collect user input. However, there are still complaints that some input has not been followed up, such as the statement that "there are still many shortcomings that have not been accommodated" (Inf 06). This indicates the need for a more systematic and sustainable evaluation system.

The Success of the Electronic Medical Records System

The successful implementation of ERM at 'Aisyiyah Ponorogo General Hospital was supported by nine interrelated key factors: the ERM usage policy, system development by internal programmers, organizational culture, leadership support, internet access, system user-friendliness, flexibility of use, responsiveness of ERM staff, and availability of facilities and infrastructure.

The ERM usage policy served as the primary basis for implementation, demonstrated by the issuance of a decree enforcing ERM for outpatients and inpatients. Informants stated that "the implementation decree already exists" (Inf 03) and that "implementation of ERM for inpatients is mandatory through a Memorandum of Understanding (MoU)" (Inf 09), demonstrating formal commitment from management.

System development by an internal team provided high flexibility in adapting to user needs. This was evident in the statement that the system "is easier to adapt to the wishes of the PPA" (Inf 09), thus supporting the sustainability of implementation.

In terms of organizational culture, success was supported by the commitment and openness of all healthcare workers to change. Informants stated that "all levels work together" (Inf 04) and "the commitment of all employees is very important" (Inf 02), indicating an adaptive work culture.

Leadership support is also very strong, both in the form of policies, funding, and moral support. This is evident in statements such as "leadership support is very supportive" (Inf 09) and leadership actively accommodates user input (Inf 12).

Relatively stable internet access contributes to the smooth operation of the system, despite occasional disruptions. However, this is offset by the rapid response of PDE officers, as stated by the statement that "the problem was immediately addressed and repaired" (Inf 12).

Furthermore, the system's user-friendly features and flexible access across various service units make it easier for users to complete their RME. Informants stated that the system has "convenience features" (Inf 03) and can be accessed from various locations within the hospital (Inf 06).

Finally, the availability of adequate facilities and infrastructure, such as computers, networks, and servers, is a key supporting factor. This is emphasized by the statement that "the facilities are well-stocked" (Inf 09) and "in terms of quantity and quality, they are good" (Inf 07).

Barriers (HOT-Fit Mismatch)

Barriers to EMR implementation at 'Aisyiyah Ponorogo General Hospital fall into three main categories: system barriers, user barriers, and management barriers. These three barriers indicate a mismatch between components in the HOT-Fit model, thus impacting the optimization of EMR implementation.

Regarding the system aspect, emerging barriers relate to technical conditions and ongoing system development. The relatively new EMR system, particularly for inpatient services, means that numerous updates and adjustments are still being made. An informant stated that "because

it's still a new process, these updates are a challenge" (Inf 02). Furthermore, the system's forms are not yet fully available, as expressed by "some forms can't be... the upload menu isn't yet available" (Inf 02), hindering service workflow. Another barrier is that not all service units use EMR, which results in suboptimal patient data continuity, for example when patients move treatment rooms (Inf 02). From a technical perspective, network issues such as slow loading or system freezes during service still occur, "loading gets stuck during service... suddenly stops" (Inf 01). This situation indicates that even though the infrastructure is in place, system stability and readiness still need to be improved.

From a user perspective, barriers are primarily related to behavioral factors, perceptions, and compliance with healthcare workers. There is still a perception that using EMRs actually increases work time, especially for users unfamiliar with the technology. As stated, "using electronic medical records will actually take longer" (Inf 03). Furthermore, not all doctors consistently use EMRs; "some DPJPs haven't filled out the EMRs yet" (Inf 02), resulting in incomplete data. Inconsistencies also occur, with EMRs being filled out by unauthorized personnel, such as nurses filling in doctor's data (Inf 01; Inf 03). Another barrier is the diverse needs and desires of users regarding the system, which poses a challenge for the development team; "each user has different desires" (Inf 04). This demonstrates that the human factor is crucial to the success of EMR implementation.

Meanwhile, from a management perspective, barriers relate to suboptimal implementation governance. The socialization of the RME has not reached all service units evenly, "the initial socialization was only a portion of the space" (Inf 02), thus creating a gap in understanding among users. In addition, maintenance of the system and supporting facilities has not been carried out regularly, "there should be routine checks, but there are not yet" (Inf 02), which has the potential to disrupt the sustainability of the system. Another obstacle is the less than optimal implementation of punishment for non-compliance with filling out the RME. Although there is a policy, its implementation has not been consistent, so the level of user compliance remains low, even "still less than 60%" (Inf 03). This condition indicates that strengthening the monitoring, evaluation, and regulatory functions is very necessary to support the implementation of the RME.

DISCUSSION

Technology (System Quality and Infrastructure)

The findings showed that the implementation of Electronic Medical Records (EMR) at RSU 'Aisyiyah Ponorogo has been supported by adequate technological infrastructure, including computers in all service units, servers with restricted access, and internet connectivity. The availability of these components indicates that the hospital has fulfilled the basic requirements for digital health implementation and information system quality (Yusof et al., 2008). The EMR system was developed internally by the hospital's information technology team, allowing flexibility in adapting the system to clinical workflows and user needs. User involvement during system development, as reflected in the statement "we invited all PPA and adapted to their wishes" (Inf 09), is important because user participation contributes to system quality and implementation success (DeLone & McLean, 2003).

The study also found that the EMR system integrates patient data across service units, allowing healthcare workers to access laboratory results and patient histories through a single platform. Data integration and interoperability are essential elements of electronic medical records because they support continuity of care and improve healthcare efficiency (Kementerian Kesehatan Republik Indonesia, 2022). In terms of information quality, the availability of complete patient information facilitates clinical decision-making and reduces duplication of documentation. Similar findings have shown that integrated electronic health records improve information accessibility and support population health management (Kruse et al., 2018).

The implementation of username-password authentication, automatic logout, audit trails, and restricted network access demonstrates the hospital's commitment to data security and confidentiality. Protection of patient information is a fundamental principle of digital health systems and contributes to user trust in the system (World Health Organization, 2021).

Human (Users and System Acceptance)

Most healthcare workers demonstrated positive acceptance of the EMR system. Users perceived the system as easy to understand, fast, and useful in supporting clinical documentation. These findings are consistent with the Technology Acceptance Model, which states that perceived usefulness and perceived ease of use are the main determinants of technology acceptance (Davis, 1989). The positive perception of system usability suggests that EMR implementation has contributed to improved efficiency in documenting and retrieving patient information. Similar studies have reported that usability significantly influences healthcare professionals' intention to use health information technology (Holden & Karsh, 2010).

The simple interface and accessibility of the system also support user acceptance. According to the Unified Theory of Acceptance and Use of Technology (UTAUT), facilitating conditions and performance expectancy influence technology utilization in healthcare organizations (Venkatesh et al., 2003). However, the findings also revealed variations in user acceptance. Some healthcare workers perceived that EMR increased documentation time and workload. Similar concerns have been identified as barriers to technology adoption among healthcare professionals (Gagnon et al., 2016).

Resistance to change and adaptation difficulties remain common challenges during the transition from paper-based to electronic records. Such barriers are frequently reported during EMR implementation processes, particularly among users with limited digital experience (Boonstra & Broekhuis, 2010).

Organization (Management and Policy Support)

The organizational findings indicate strong management commitment to EMR implementation through governance structures, regulations, funding, human resources, and training mechanisms. Organizational support is essential because successful implementation requires coordination between management and users (Cresswell & Sheikh, 2013).

The hospital has established an EMR governance structure involving management, the medical records unit, and the information technology team. Clear organizational roles contribute to implementation effectiveness and sustainability (McAlearney et al., 2012).

Regulatory support was demonstrated through the development of policies and guidelines, although revisions are still being undertaken to accommodate electronic processes. Policy readiness is a critical factor influencing EMR adoption in healthcare organizations (Ajami & Bagheri-Tadi, 2013). Financial support through the hospital budget reflects institutional commitment to sustaining system implementation. Adequate resource allocation has been associated with successful health information system implementation (Adler-Milstein & Jha, 2017).

Although training and socialization activities have been conducted, several participants indicated the need for more comprehensive training. Previous studies have shown that continuous education and training improve user competence and acceptance of electronic health systems (Alipour et al., 2011).

The Success of the Electronic Medical Records System

The successful implementation of EMR at RSU 'Aisyiyah Ponorogo was supported by policy commitment, internal system development, leadership support, organizational culture, system flexibility, and infrastructure availability. Similar findings indicate that successful implementation requires alignment among organizational, human, and technological factors (Buntin et al., 2011).

Leadership commitment played an important role in providing strategic direction, resource allocation, and support for organizational change. Effective leadership has been identified as a key determinant of successful EMR implementation (Nguyen et al., 2014). The flexibility of the internally developed system enabled continuous adaptation to users' needs and facilitated acceptance among healthcare workers. This adaptability contributes to long-term sustainability of digital health initiatives (Sheikh et al., 2011).

Barriers (HOT-Fit Misalignments)

Several barriers were identified in technological, human, and organizational dimensions. Technological barriers included system updates, incomplete forms, and occasional network disruptions. Similar technical challenges have been reported in previous EMR implementation studies (Kruse et al., 2016). Human-related barriers included perceived increases in workload, inconsistent system use, and adaptation difficulties among healthcare workers. User stress and time pressure have been associated with EMR usability challenges in healthcare settings (Vehko et al., 2019).

Organizational barriers included uneven socialization, limited routine evaluation, and inconsistent policy enforcement. Inadequate organizational support may reduce the effectiveness of information system implementation and contribute to unintended consequences in clinical practice (Ash et al., 2004).

CONCLUSION

The implementation of Electronic Medical Records (EMR) at RSU 'Aisyiyah Ponorogo demonstrates that the system is operating with adequate technological support, good user acceptance, and strong organizational support. The technological aspect is supported by comprehensive infrastructure, an integrated system, and adequate data security and confidentiality features. From a human perspective, most healthcare workers are able to accept and use the system well, although there is still variation in the level of adaptation. Meanwhile, from an organizational perspective, implementation is supported by a clear structure, policies, funding, and training and outreach, although this is not yet fully optimal.

The success of EMR implementation is influenced by various factors, including clear policies, the development of flexible internal systems, a supportive organizational culture, strong leadership, system usability, and the availability of facilities and infrastructure. However, several obstacles remain in the system, user, and management aspects, indicating inconsistencies in the HOT-Fit components.

Overall, the implementation of EMR at RSU 'Aisyiyah Ponorogo has shown positive direction and has the potential to improve the quality of healthcare services. However, improvements are needed in the aspects of alignment between technology, people, and organizations so that implementation can run more optimally and sustainably.

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