



Top Management Support and Technology Infrastructure in Maintaining the Success of Electronic Medical Records

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Abstract

The implementation of Electronic Medical Records (EMR) is an essential part of hospital digital transformation aimed at improving the quality, efficiency, and accountability of healthcare services. The success of EMR implementation is not solely determined by system readiness, but is also strongly influenced by top management support and the readiness of technological infrastructure. This study aims to analyze the role of top management support and technological infrastructure readiness in maintaining the successful use of EMR at Ratu Aji Putri Botung Regional General Hospital, Penajam Paser Utara Regency. This research employed a qualitative approach using a case study method. Data were collected through in-depth interviews, observation, and documentation. The study involved seven informants consisting of hospital leaders, administrative managers, information technology personnel, and healthcare workers as direct users of the EMR system. Data analysis was conducted using descriptive qualitative techniques through data reduction, data display, and conclusion drawing. The results indicate that top management support plays a significant role in maintaining the success of EMR implementation through policy formulation, budget allocation, usage monitoring, as well as training and assistance for users. In addition, the readiness of technological infrastructure has generally supported the use of EMR, although limitations remain in terms of device distribution, network stability, and system development. Overall, the success of EMR implementation at Ratu Aji Putri Botung Regional General Hospital is influenced by the synergy between leadership commitment and sustainable technological infrastructure readiness.

Introduction

The development of information technology in the current digital era has brought significant changes to various sectors, including the healthcare sector (Gopal et al., 2019; Paul et al., 2021; Osipov & Skryl, 2021). The digitalization of healthcare services has become an urgent need for many countries to address the challenges of effectiveness, efficiency, and patient safety. The World Health Organization (WHO) also encourages every country to adopt digital technology in its healthcare system, including in recording patient medical data for fast, precise, and accurate access (Colombo et al, 2020; Mbunge et al., 2021; Senbekov et al., 2020).

In Indonesia, digital transformation in the healthcare sector is becoming a priority in line with the rapid development of technology and the increasing public demand for quality services (Hanifa & Wicaksono, 2025; Aisyah et al., 2024). Hospitals, as the frontline of healthcare services, are required to integrate technology to support service quality. The implementation

of information technology in hospitals is expected to not only simplify administrative processes but also support medical decision-making based on structured and accurate data.

As a manifestation of the government's commitment to supporting digital transformation in the healthcare sector, the Ministry of Health has issued Regulation of the Minister of Health of the Republic of Indonesia Number 24 of 2022 concerning Medical Records. This regulation emphasizes the obligation of all healthcare facilities, including both public and private hospitals, to begin implementing Electronic Medical Records (EMR) as a replacement for manual medical records. The implementation of Electronic Medical Records (EMR) is expected to ensure the quality of patient data, improve service effectiveness, and support national health data integration.

Although the policy for implementing Electronic Medical Records (EMR) has been established, in practice, many hospitals in Indonesia still face various obstacles in its implementation. According to a report by the Indonesian Ministry of Health (2023), many hospitals, especially regional hospitals, have not yet been able to fully implement EMR optimally. Some still use manual medical record systems as a backup due to limited technological facilities and infrastructure to support digital systems.

One of the main challenges often faced is the lack of prepared human resources (HR) skilled in EMR management. Research by Herlina et al. (2023) shows that low digital literacy among healthcare workers, minimal technical training, and a lack of motivation to adapt to new technologies often hinder the operation of EMR. Furthermore, suboptimal support from hospital management, such as unstructured internal policies or limited budget allocation for technology development, also slows down digitalization efforts in the healthcare sector.

Not only human resources and management, but also technological infrastructure readiness plays a crucial role in determining the success of Electronic Medical Records (EMR) implementation. According to Prabowo & Rahayu (2022), the availability of hardware and software, a stable internet network, and a reliable data security system are crucial elements for the smooth operation of an Electronic Medical Records (EMR) system. Without adequate infrastructure support, the risk of system failure, data input delays, and the vulnerability of patient data leaks increases. Therefore, overall organizational readiness is a key factor in ensuring the effective and sustainable implementation of Electronic Medical Records.

As a regional government-owned hospital, Ratu Aji Putri Botung Regional Hospital plays a strategic role in providing healthcare services to the community in Penajam Paser Utara Regency, East Kalimantan Province. The hospital's construction process was a lengthy process, beginning with the issuance of a construction permit on April 17, 2007, and a trial operation on November 8, 2007. On July 21, 2008, the hospital officially obtained a permit to operate as a Regional General Hospital through a Decree from the Minister of Health of the Republic of Indonesia. The name change to Ratu Aji Putri Botung Regional Hospital took place on May 12, 2017. Currently, the hospital holds the status of a type C hospital with a total capacity of 107 beds spread across inpatient wards, intensive care units, and isolation rooms. Services available include medical, medical support, and non-medical support services through outpatient facilities, an emergency room, an intensive care unit, an isolation room, a central surgical installation, a blood transfusion unit, and an obstetrics procedure room. National policy encouraged Ratu Aji Putri Botung Regional Hospital to implement Electronic Medical Records (EMDR) in 2022 through the development of a Hospital Management Information System (SIMRS) involving external information technology experts. By the end of 2024, all outpatient clinics were fully utilizing the EMDR, while inpatient services continued to use manual

medical records while progressing towards full digitization. This step aligns with the national policy target requiring all healthcare facilities to adopt EMDR.

The implementation of EMDR at Ratu Aji Putri Botung Regional Hospital continues to face significant challenges. Some manual medical record features have not been fully integrated into the EMDR, resulting in manual recording being used in some units. Limited computer resources force healthcare workers to share devices in one room. The internet network does not yet fully cover all areas of the hospital, impacting smooth system access. The capacity of only two IT staff is insufficient to support the ongoing development and maintenance of the EMDR, requiring management to collaborate with external experts to meet system development needs.

The Decree of the Director of Ratu Aji Putri Botung Regional Hospital, Number 445/694/RAPB/VII/2024, stipulates mandatory regulations for all Care Professionals (PPA), such as doctors, nurses, midwives, laboratory personnel, x-ray technicians, and other healthcare workers, to complete electronic medical records in accordance with operational standards. This policy is complemented by the establishment of an Electronic Medical Records Compliance Evaluation Team (EME) to monitor the quality of electronic medical record implementation within the hospital.

The issuance of this policy emphasizes that top management support extends beyond the provision of infrastructure and facilities, but also through strengthening internal policies and field oversight. Technical challenges and limited infrastructure remain challenges that must be addressed immediately to ensure optimal and sustainable digital transformation through the implementation of Electronic Medical Records. The various challenges still faced by Ratu Aji Putri Botung Regional Hospital emphasize that the success of Electronic Medical Records (EMR) implementation is not solely determined by the availability of technology, but also depends heavily on management support and the readiness of the supporting technological infrastructure. Previous studies have shown that successful EMR implementation is generally supported by responsive leadership, clear internal policies, budget availability, and adequate infrastructure (Herlina et al., 2023). However, most previous research has focused on the technical aspects and healthcare worker compliance in completing EMRs, while qualitative studies examining how management support and infrastructure readiness interact in regional hospitals are still limited.

The lack of research that explores management and infrastructure aspects in depth at the regional hospital level is one of the important reasons why this study is necessary. Qualitative research is considered relevant because it can describe the dynamics of EMR implementation more comprehensively, especially in the context of regional hospitals that face specific challenges such as limited facilities, human resources, and geographic location. The research results are expected to provide valuable input for other regional hospitals undergoing the process of implementing digital transformation in healthcare services. This research specifically aims to analyze how top management support and technological infrastructure readiness influence the successful implementation of Electronic Medical Records at Ratu Aji Putri Botung Regional Hospital. The focus of this research is expected to clarify the supporting and inhibiting factors, as well as formulate strategic recommendations for strengthening internal policies and improving the hospital's management system. The findings of this study are expected to contribute to the development of digital transformation policies in the healthcare sector, particularly for regional hospitals, to help them achieve the digitalization targets set by the government.

Methods

Research Approach and Type

This study employs a qualitative approach to gain an in-depth understanding of top management support and technological infrastructure readiness in the successful implementation of Electronic Medical Records (EMR) at RSUD Ratu Aji Putri Botung. A qualitative design is considered appropriate because the research seeks to explore processes, perceptions, organizational dynamics, and contextual realities rather than to measure relationships statistically. Through this approach, the researcher is able to capture participants lived experiences, managerial perspectives, institutional policies, and operational challenges in a holistic manner.

The type of research adopted is a case study. The case study design focuses intensively on a single bounded system RSUD Ratu Aji Putri Botung which is currently undergoing digital transformation in medical record management. A case study is particularly suitable when the research aims to examine contemporary phenomena within real-life contexts where the boundaries between phenomenon and context are not clearly evident. According to Creswell and Poth (2021), qualitative case studies involve detailed data collection from multiple sources of information to develop a comprehensive understanding of a case. Similarly, Yin (2023) emphasizes that case studies are appropriate for investigating complex organizational processes in real-world settings. By using this approach, the study seeks to generate rich, contextualized insights into how managerial commitment and infrastructure readiness influence EMR implementation success.

Researcher's Role and Positionality

In qualitative research, the researcher functions as the primary instrument of data collection and analysis. In this study, the researcher is directly involved in designing the research framework, preparing interview guides, conducting in-depth interviews, carrying out field observations, reviewing institutional documents, and interpreting findings. The researcher's active engagement in the field enables the exploration of nuanced organizational behaviors and decision-making processes related to EMR implementation.

To maintain rigor and credibility, the researcher applies principles of reflexivity, transparency, and ethical responsibility throughout the research process. Reflexivity involves continuous self-awareness regarding potential biases, assumptions, and positional influences that may affect interpretation. Creswell and Poth (2021) highlight that qualitative researchers simultaneously act as data collectors, analysts, and interpreters of meaning. Guest, Namey, and Mitchell (2022) further stress that close engagement with participants enhances contextual richness and depth of findings. Therefore, the researcher ensures systematic documentation, careful transcription, and analytical consistency to preserve data integrity and objectivity.

Research Site and Timeframe

The research is conducted at RSUD Ratu Aji Putri Botung, located on Provincial Road Kilometer 09, Nipah-Nipah Subdistrict, Penajam District, Penajam Paser Utara Regency, East Kalimantan Province, Indonesia. The site was selected purposively because the hospital is currently developing and strengthening its Electronic Medical Record (EMR) system as part of its broader hospital information system reform. The institution presents relevant managerial, technological, and operational challenges aligned with the study's focus on top management support and infrastructure readiness.

Purposive site selection is consistent with qualitative research principles, as Sugiyono (2022) explains that research locations are chosen intentionally based on their relevance and richness of information related to the research problem. The fieldwork is scheduled to take place from July 2025 to December 2025, encompassing proposal preparation, data collection, data validation, analysis, and reporting stages. This timeframe allows sufficient opportunity for prolonged engagement and in-depth exploration.

Data Sources

This study utilizes both primary and secondary data sources to ensure comprehensive analysis. Primary data are obtained directly from key informants through in-depth interviews, observations, and field documentation. Informants include the hospital director, administrative leaders, the head of medical records installation, IT personnel, and healthcare providers such as physicians and nurses who directly use the EMR system. These participants are selected purposively based on their roles and involvement in EMR policy formulation, infrastructure management, and daily system utilization.

Secondary data consist of institutional documents such as internal policies, director decrees, EMR and hospital information system evaluation reports, annual hospital reports, hospital profile data, and relevant national regulations, including Permenkes Nomor 24 Tahun 2022 tentang Rekam Medis. These documents complement primary findings and provide contextual validation. Sugiyono (2022) notes that qualitative data may derive from words, actions, written documents, and archival materials relevant to the research focus. The integration of primary and secondary data enhances analytical depth and credibility.

Data Collection Techniques

Data collection is conducted through three main qualitative techniques: in-depth interviews, observation, and documentation review. In-depth interviews are carried out using semi-structured interview guides to allow flexibility while maintaining alignment with research objectives. This technique enables participants to articulate their experiences, perceptions, and insights regarding managerial commitment, policy direction, technical readiness, and operational challenges in EMR implementation.

Observation is conducted to directly examine infrastructure conditions, system utilization practices, workflow integration, and staff interaction with the hospital information system. Observational data provide contextual understanding beyond verbal accounts and help identify discrepancies between policy and practice. Documentation review involves analyzing official documents, meeting minutes, implementation reports, and internal guidelines to verify and support interview and observational findings. The application of methodological triangulation combining interviews, observations, and documentation strengthens data validity and aligns with Creswell and Poth's (2021) assertion that multiple data sources enhance credibility in qualitative studies.

Data Analysis Techniques

Data analysis follows an interactive qualitative model consisting of data reduction, data display, and conclusion drawing/verification. During data reduction, interview transcripts, observation notes, and documents are organized, coded, and categorized according to emerging themes related to management support and infrastructure readiness. Irrelevant information is filtered out to maintain analytical focus.

Data display involves presenting organized findings in narrative form, thematic matrices, and conceptual diagrams to identify patterns and relationships among categories. The final stage

involves drawing and verifying conclusions through continuous comparison between empirical findings and relevant theoretical frameworks. This analytical process is iterative and occurs throughout the research cycle rather than only at the end. The model aligns with the interactive framework proposed by Miles, Huberman, and Saldaña (2020), which emphasizes ongoing analysis during data collection.

Validity and Trustworthiness

To ensure credibility and trustworthiness, several validation strategies are applied. First, source and methodological triangulation are conducted by comparing data from different informants and collection techniques. Second, prolonged engagement and persistent observation are implemented to deepen contextual understanding and minimize superficial interpretation.

Third, peer debriefing is carried out through discussions with supervisors or methodological experts to obtain constructive feedback on analytical interpretations. Fourth, member checking is conducted by returning key findings or interview summaries to participants to confirm the accuracy of interpretations. Creswell and Poth (2021) emphasize that triangulation, peer examination, and participant validation are essential strategies to enhance the credibility of qualitative research findings. Through these procedures, the study ensures that conclusions regarding EMR implementation are empirically grounded and analytically sound.

Research Stages and Timeline

The research is conducted through structured stages to ensure systematic implementation. The first stage involves proposal development, literature review, research instrument preparation, and obtaining research permits from the hospital. The second stage consists of field data collection, including interviews, observations, and documentation gathering.

The third stage involves data analysis and validation through coding, thematic categorization, triangulation, and member checking. The final stage includes thesis writing, revision based on supervisory feedback, and preparation for academic examination. The structured timeline from July to December 2025 allows sufficient time for comprehensive data collection, rigorous analysis, and systematic reporting.

Through this refined methodological framework, the study is expected to provide a comprehensive and contextually grounded understanding of how top management support and technological infrastructure readiness influence the success of Electronic Medical Record implementation in a public hospital setting.

Result and Discussion

Top management support in ensuring the successful implementation and sustainability of the Electronic Medical Records (EMR) system at Ratu Aji Putri Botung Regional Hospital.

Top management support plays a crucial role in ensuring the successful implementation of the Electronic Medical Records (EMR), particularly in terms of system quality. Top management support is crucial in ensuring the EMR system is easily accessible, flexible, and able to meet the needs and expectations of healthcare users at Ratu Aji Putri Botung Regional Hospital.

Interviews indicate that the role of hospital leadership extends beyond policy setting to ongoing monitoring and strengthening of the system. This was conveyed by the Director of Ratu Aji Putri Botung Regional Hospital, Dr. Lukasiwan, in an interview on December 11, 2025, who stated,

"The Director established an EMR compliance evaluation team to ensure the EMR is running smoothly, is accessible 24/7, is flexible to meet service needs, and provides specialist doctors with access to the EMR from outside the hospital."

This statement demonstrates that top management actively ensures the quality of the EMR system by establishing a compliance evaluation team, establishing unlimited system access, and providing flexible access for specialist doctors. This effort reflects the leadership's commitment to maintaining the sustainability and effectiveness of RME use to optimally support medical service processes. This support is also reflected in the provision and maintenance of technological infrastructure. The Hospital's Head of IT, Tamrizal, stated in an interview on December 18, 2025,

"There has been support from the leadership regarding the provision and maintenance of the necessary technological infrastructure, but due to budget constraints, some areas have not been fully met."

This statement indicates that top management has provided policy support and commitment to strengthening the technological infrastructure, although implementation still faces budget constraints that impact system optimization. Nevertheless, leadership support is a crucial factor in ensuring the RME system remains operational and continues to be developed gradually. Top management support is also directly felt by system users at the operational level, particularly nurses. This was conveyed by Sulistini, an inpatient nurse, in an interview on December 16, 2025, who stated, "Currently, management requires and ensures that everyone uses RME for every patient service and ensures that data is recorded in the RME system."

This statement demonstrates that top management policies have a significant influence on the disciplined use of EMR across each service shift. Mandatory EMR use, coupled with oversight of patient data recording, strengthens the consistency of system utilization, ensuring the quality and sustainability of EMR in daily service practices.

The role of top management in ensuring the success of EMR implementation is also evident in the strong administrative coordination established within the hospital. This coordination serves as a crucial tool for bridging the needs of system users with managerial policies. This was conveyed by Elia Mawarni, Acting Head of Administration at Ratu Aji Putri Botung Regional Hospital, in an interview on December 11, 2025.

"To date, top management has ensured clear and open communication channels. Through consistent communication, top management has helped manage resistance to change by explaining the benefits of EMR and listening to staff concerns, thus encouraging wider adoption."

This statement demonstrates that top management focuses not only on the technical aspects of the system but also on organizational communication. Open communication channels allow staff to convey their concerns and concerns, thereby minimizing resistance to change and increasing acceptance of the RME. This effective administrative coordination plays a crucial role in ensuring the RME system's alignment with the needs of users in the field.

In addition to system quality, top management support also plays a role in maintaining the quality of the information generated by the RME. Data accuracy, completeness, and reliability are key factors in ensuring optimal utilization of the RME in healthcare services. This was emphasized by the Director of Ratu Aji Putri Botung Regional Hospital, Dr. Lukasiwan, in an interview on December 11, 2025, who stated,

"In addition to issuing a Director's Decree concerning the RME Evaluation and Compliance Team, a Director's Decree has also been issued concerning the obligation for all PPAs to complete the RME, and the development of existing features within the RME in accordance with standards."

This statement demonstrates that top management is taking strategic action by issuing formal policies to ensure compliance with all PPAs in completing the RME. This policy also serves as a data quality control instrument, ensuring that the information generated by the EMR system is accountable and complies with applicable standards. Top management's support for information quality is also felt by nurses, the direct users of the system. Ms. Sulistini, an inpatient nurse, stated in an interview on December 16, 2025:

"Management provides an EMR system that allows nurses to easily access patient medical records and ensures that the system has an easy-to-use search feature."

This statement indicates that management's attention to system design and features directly impacts the ease of access to clinical information. An easy search feature helps nurses quickly and relevantly retrieve patient medical records, thus supporting the accuracy of care and continuity of patient care.

Furthermore, the quality of EMR information is also maintained through the implementation of clear standards for recording and processing medical data. This was conveyed by Harlina, Head of the Medical Records Unit, in an interview on December 18, 2025, who stated:

"Yes, based on Minister of Health Regulation No. 24 of 2022, which requires the use of standards such as ICD-10 and ICD-9 CM for data exchange, ensuring interoperability, security, and information quality."

This statement indicates that top management ensures the implementation of national standards in the EMR system as an effort to maintain data consistency, security, and interoperability. Compliance with this regulation strengthens the quality of information produced by the EMR and ensures that medical data can be widely used, both for service purposes, reporting, and managerial decision-making.

Top management's support for maintaining the quality of EMR information is also reflected in their attention to the accuracy, completeness, and precision of data managed by the medical records unit. This was conveyed by Harlina, Head of the Medical Records Unit, in an interview on December 18, 2025, who stated:

"There is a lack of routine oversight through quality audits to ensure compliance, identify data gaps, and improve service quality."

This statement indicates that despite policy support, challenges remain in routine oversight that impact the quality of EMR data. This information serves as an important reflection for top management to strengthen ongoing quality audit mechanisms to ensure the quality of EMR information is maintained and improved over time.

In addition to the quality of the system and information, top management support is also evident in the quality of services accompanying the use of the EMR, particularly in responding to facility constraints and technical disruptions. Wawan Sudarsono, Head of the Support Section, stated in an interview on December 15, 2025:

"Management is very responsive to the needs of EMR facilities, such as backup devices and IT tools, and ensuring that technical disruptions can be handled without delaying services."

This statement demonstrates top management's commitment to maintaining smooth services through the readiness of supporting facilities. A quick response to facility and infrastructure needs is crucial for maintaining optimal healthcare services even in the event of technical disruptions to the EMR system.

Support for service quality is also directly felt by medical personnel, particularly doctors, who use the system in clinical services. This was conveyed by Dr. Ruwiyatul, an outpatient clinician, in an interview on December 16, 2025, who stated, "Responding quickly and assisting with any challenges encountered, facilitating the formation of a WhatsApp group for doctors to communicate necessary information so that any issues can be addressed promptly."

This statement demonstrates that top management relies not only on formal mechanisms but also utilizes informal communication channels to expedite the resolution of system issues. The establishment of a dedicated communication group provides adaptive service support, enabling technical issues to be promptly identified and addressed without disrupting patient care.

Top management's support for ensuring the success of the RME implementation is also reflected in the system's use by healthcare workers in daily care. The hospital leadership's commitment to encouraging consistent RME use was conveyed by the Director of Ratu Aji Putri Botung Regional Hospital, Dr. Lukasiwan, in an interview on December 11, 2025, who stated:

"With the Director's Decree on the obligation to complete the RME for all PPA, the leadership provides training, mentoring, and technical support so that healthcare workers can use the RME correctly and consistently. They also reward exemplary employees with indicators for assessing compliance with the RME."

This statement demonstrates that top management is implementing a comprehensive approach, not only through formal policies mandating RME use, but also through strengthening human resource capacity and providing incentives. The combination of regulations, mentoring, and a reward system is a crucial strategy for maintaining consistent RME use in daily care practices.

Efforts to encourage the comprehensive use of EMR are also supported by leadership policies to ensure the readiness of supporting facilities and infrastructure. This was conveyed by Wawan Sudarsono, Head of the Support Section, in an interview on December 15, 2025, who stated:

"Budget policies and ensuring the availability of supporting facilities such as backup power (UPS/generators), ergonomic workspaces, and adequate data input devices are essential for the smooth use of EMR."

This statement demonstrates that top management understands the importance of a prepared work environment and physical facilities as supporting factors for the use of the EMR system. The availability of adequate supporting facilities plays a role in minimizing technical barriers, allowing healthcare workers to optimally utilize EMR without being hampered by facility constraints.

In addition to providing facilities, top management support is also demonstrated through administrative monitoring mechanisms to measure the level of EMR utilization in each service unit. Elia Mawarni, Acting Head of Administration, stated in an interview on December 11, 2025,

"Administrative monitoring conducted to assess the level of RME utilization in units includes automated system usage reports, quantitative and qualitative analysis of

medical records, monitoring of quality indicators, use of monitoring dashboards, regular evaluation meetings, and user surveys and feedback."

This statement demonstrates that top management implements a structured and multi-layered oversight system. Systematic monitoring enables leaders to evaluate the level of compliance with RME usage, identify emerging obstacles, and formulate follow-up actions for continuous improvement.

This policy support impacts user satisfaction, particularly for nurses as front-line service providers. This was conveyed by Ms. Sulistini, an inpatient nurse, in an interview on December 16, 2025, who stated,

"Currently, management has established a policy that all use the RME system to input patient data and information so that patient data is recorded completely and accurately."

This statement demonstrates that the leadership's firm and consistent policy provide clarity for nurses in carrying out their duties. The assurance of using a single recording system promotes work order, increases trust in the RME system, and contributes to user satisfaction because the documentation process is more standardized and controlled.

Consistency in the use of RME in service units is also maintained through direct monitoring by top management and relevant staff. This is evident among inpatient nurses, who operate the system. Ms. Sulistini, an inpatient nurse, stated in an interview on December 16, 2025:

"Yes, management monitors all inpatient units to ensure the RME system is implemented properly and correctly and to identify any problems or obstacles in each unit."

This statement demonstrates that top management not only establishes RME usage policies but also directly supervises their implementation in inpatient units. This monitoring serves as a control mechanism to ensure compliance with the system and as a means of early detection of technical and non-technical obstacles that could hinder the success of RME.

In addition to monitoring usage, top management support is also demonstrated through facilitating evaluations of healthcare worker satisfaction with the RME system. The Director of Ratu Aji Putri Botung Regional Hospital, Dr. Lukasiwan, stated in an interview on December 11, 2025,

"Discussion forums or focus groups (FGDs) with healthcare worker representatives, contracting experts for the development of the Hospital Management Information System (SIMS), and RME development are being implemented in stages."

This statement demonstrates that hospital leadership provides a participatory space for healthcare workers to share their experiences and assessments of the EMR. Through focus group discussions (FGDs) and the involvement of experts, top management strives to ensure that the development of the EMR system is adaptive and sustainable, tailored to user needs.

Top management support in ensuring the success of EMR implementation ultimately benefits the hospital organization. This was conveyed by the Director of Ratu Aji Putri Botung Hospital, Dr. Lukasiwan, in an interview on December 11, 2025, who stated,

"Fast and accurate access to patient information, reduced risk of recording and information errors, reduced waiting times for services, more effective coordination between healthcare workers, and support for data-based decision-making."

This statement demonstrates that the success of EMR not only impacts the technical aspects of medical recording but also improves service efficiency, the quality of coordination between healthcare workers, and supports data-based managerial decision-making. These benefits emphasize the strategic role of top management support in maintaining the sustainability and added value of EMR implementation for the hospital organization.

The impact of top management support is also evident in increased operational efficiency and reduced technical challenges in EMR implementation. This was conveyed by Wawan Sudarsono as Head of the Support Section in an interview on December 15, 2025, who stated.

"The presence of an IT team and its disruption management has resulted in savings in human resources, time, and budget."

This statement demonstrates that the leadership's policy of establishing a technical team and expediting the resolution of system disruptions directly contributes to the efficiency of resource use. More coordinated problem handling not only reduces system downtime but also reduces operational costs and the workload of healthcare workers.

The benefits of top management support for strengthening technology infrastructure are also felt by the information technology unit. Tamrizal, the Hospital's Head of IT, stated in an interview on December 18, 2025,

"There is a policy regarding the use of EMR technology and the provision of infrastructure."

This statement demonstrates that the existence of leadership policies provides a strong foundation for the development and maintenance of technology infrastructure. This policy support provides legitimacy and clear direction for the IT team in managing the EMR system, allowing infrastructure strengthening to be carried out in a planned and sustainable manner.

Furthermore, leadership policies regarding the implementation of EMR also have a direct impact on the efficiency of patient care and the medical decision-making process. This was conveyed by Dr. Ruwiyatul, an outpatient clinician, stated in an interview on December 16, 2025,

"With RME, patient information is available in real time, allowing medical personnel to make clinical decisions quickly and based on comprehensive data."

This statement demonstrates that the successful implementation of RME, supported by top management, can increase the speed of access to clinical information, streamline patient care flows, and support more precise and accurate medical decision-making. This confirms that top management support not only impacts the technical aspects of the system but also provides strategic value in improving the quality of healthcare services.

The results of this study indicate that top management support at Ratu Aji Putri Botung Regional Hospital plays a crucial role in maintaining the success of RME implementation by strengthening system quality, information quality, service quality, consistency of use, increasing user satisfaction, and achieving net benefits for the organization. This support is realized through formal policies, strengthening technological infrastructure, monitoring and evaluation mechanisms, and facilitating user communication and participation. These findings demonstrate that the sustainability of RME is largely determined by the commitment and active involvement of top management in managing change and ensuring the system operates according to service needs.

Readiness and the role of technological infrastructure in supporting the sustainability and effectiveness of Electronic Medical Records (EMDR) use at Ratu Aji Putri Botung Regional Hospital.

The readiness of technological infrastructure in supporting the successful use of Electronic Medical Records (EMDR) at Ratu Aji Putri Botung Regional Hospital. Technological infrastructure readiness is a crucial factor because it determines the smooth operation of the system, ease of access for users, and the sustainability of EMR use in supporting healthcare services. Technological infrastructure in this context includes the availability of hardware and software, network reliability, and the adequacy of system features to meet the work needs of each service unit.

The readiness of technological infrastructure at Ratu Aji Putri Botung Regional Hospital begins with top management policies in planning and budgeting for EMR supporting devices. This was conveyed by Dr. Lukasiwan, Director of Ratu Aji Putri Botung Regional Hospital, in an interview on December 11, 2025, who stated, "Hardware and software requirements are included in the Hospital Work Plan and Budget. Procurement is based on an analysis of unit needs, and a budget is available for system maintenance and development."

This statement demonstrates that top management has prioritized the RME technology infrastructure as part of the hospital's strategic planning. Budgeting based on unit needs analysis reflects management's efforts to ensure the availability of relevant and sustainable equipment, so that the RME system can continue to be used and developed according to service needs. However, the system's functional readiness still faces challenges at the work unit level. Harlina, Head of the Medical Records Installation, stated in an interview on December 18, 2025,

"Several SIMRS features still need to be developed, particularly for retrieving report data from inpatients, as not all doctors are compliant with completing the RME."

This statement indicates that although the RME system is available and in use, there are still feature limitations that impact smooth data management, particularly in report preparation. This situation illustrates that the readiness of the technology infrastructure is determined not only by system availability but also by the suitability of features to operational needs and user compliance in data input. The readiness of the technology infrastructure is also directly felt by nursing staff, who are daily users of the RME. This was conveyed by Ns. Sulistini, an inpatient nurse, stated in an interview on December 16, 2025, "The number of devices is still insufficient, the current computers are in good condition, the network is stable, and the EMR system is easily accessible."

This statement indicates that technically, the network and system support the use of EMR, but the limited number of devices remains a challenge in the field. This situation has the potential to impact the smooth recording of patient data, especially during peak service hours. This demonstrates that the readiness of the technology infrastructure needs to be viewed holistically, including system quality, device availability, and usage intensity.

In addition to device and system availability, the readiness of the EMR technology infrastructure is also determined by the quality of the information produced, particularly regarding data security and integration between service units. This is evident in the administrative coordination carried out by management to maintain security standards for medical documents and data. Elia, Acting Head of Administration, stated in an interview on December 11, 2025, that

"User access rights are determined according to position and duties, the signing of confidentiality integrity pacts, follow-up on security findings and incidents, and administrative coordination to ensure document and data security standards within the EMR are implemented through the establishment of policies and standards, strengthening commitments with formal agreements, regular audits and monitoring, and limited access controls."

This statement demonstrates that technological infrastructure readiness is not only seen from the technical side of the system, but also from the strengthening of administrative governance and data security. Access restriction policies and regular audits reflect management's efforts to maintain the confidentiality and integrity of medical information, ensuring that the data generated by the EMR is reliable and secure. System readiness to support data integration and information security is also strengthened from the perspective of the information technology unit. Tamrizal, Head of Hospital IT, stated in an interview on December 18, 2025,

"The current system is adequate to support data integration between units and the security of medical information."

This statement indicates that the RME system is technically capable of connecting data between service units, allowing integrated access to patient medical information. This demonstrates that the available technological infrastructure meets the basic needs for data integration, although it still requires ongoing maintenance and development to adapt to the complexity of services.

Nurses, the primary users of the RME system in the service units, also felt the support of the technological infrastructure for the completeness and up-to-dateness of information. Ms. Sulistini, an inpatient nurse, stated in an interview on December 16, 2025, "Yes, it's very supportive. It needs to be improved so that everything needed is in the RME system."

This statement indicates that the RME system in use has helped provide the information needed during patient care, but users still have expectations for feature development to comprehensively accommodate all clinical and administrative needs. This confirms that technological infrastructure readiness is dynamic and requires continuous improvement to ensure the quality of the information produced remains complete, up-to-date, and relevant to service needs.

The readiness of the technological infrastructure to support the successful use of EMR is also reflected in the leadership's policies regarding patient data protection and electronic information security. This was conveyed by Dr. Lukasiwan, Director of Ratu Aji Putri Botung Regional Hospital, in an interview on December 11, 2025, who stated:

"ERM access rights are based on duties and authorities. Each user has a personal account and password, there is a prohibition on the use of shared accounts, a data backup system, and the signing of an integrity pact."

This statement demonstrates that top management has established a preventative and multi-layered data security policy. The regulation of access rights and the prohibition on the use of shared accounts aim to maintain the confidentiality of patient data, while the data backup system and integrity pact strengthen information protection from the risk of loss or misuse.

Efforts to improve the quality of information technology services that support EMR are also a priority for top management as part of the hospital's digital transformation. Dr. Lukasiwan stated in an interview on December 11, 2025, that:

"ERM is part of the hospital's digital transformation, including technical and managerial training for the IT team, increased server, network, and device capacity, IT innovations that support service quality, and system integration for service efficiency."

This statement demonstrates that technological infrastructure readiness is not only focused on meeting current needs but also aimed at strengthening long-term capacity. System integration and technological capacity enhancement are management strategies to ensure the stability of RME services and support improvements in the quality of healthcare services.

The readiness of internal information technology services is also felt by work units that interact directly with the RME system. Harlina, A.Mk, Head of the Medical Records Installation, stated in an interview on December 18, 2025:

"For internal services, there are several things that need to be improved or evaluated regarding device repairs, but application updates are already running well."

This statement indicates that although the RME application update has been implemented, challenges remain in the hardware maintenance aspect. This situation illustrates that technological infrastructure readiness requires a balance between system development and physical facility maintenance to maintain service quality. Technological infrastructure support also depends heavily on the readiness of human resources in the information technology field. This was conveyed by Tamrizal, Head of Hospital IT, in an interview on December 18, 2025:

"The existing IT team already has sufficient experience in resolving technical issues, but competency development is necessary given the rapid development of information technology."

This statement demonstrates that although the IT team has been able to handle emerging technical challenges, continuous competency development is still needed to ensure the readiness of the technology infrastructure to keep pace with the dynamic development of the EMR system and digital health technology. The readiness of the technology infrastructure to support the use of EMR is also reflected in its smooth utilization in daily patient care activities. This was conveyed by Dr. Ruwiyatul, an outpatient clinician, in an interview on December 16, 2025, who stated:

"There are still old computers that need to be replaced because some don't support updates to existing applications. Regular maintenance and infrastructure upgrades are also necessary to maintain quality. The network sometimes drops out and slows down, but this happens occasionally."

This statement demonstrates that although EMR has been used in clinical services, hardware limitations and network stability remain obstacles that impact the smooth use of the system. This situation illustrates that technological infrastructure readiness needs to be supported by device updates and routine maintenance so that the system can be used optimally to support patient care.

The readiness of technological infrastructure also influences the intensity of EMR use by various service units. This was conveyed by Tamrizal, Head of Hospital IT, in an interview on December 18, 2025, who stated,

"The infrastructure in the IT unit is sufficient, but some service units require additional or improved infrastructure."

This statement indicates an imbalance in infrastructure readiness across work units. Although the IT unit has adequate facilities, limited infrastructure within each service unit can hinder the

intensity and consistency of EMR use, necessitating equitable distribution of facilities to ensure optimal system utilization across all units. Harlina, Head of the Medical Records Unit, expressed a similar view in an interview on December 18, 2025, who stated,

"It still needs improvement, because service needs continue to evolve, and infrastructure requirements for bridging with partners also continue to grow and change frequently."

This statement demonstrates that the dynamics of service needs and demands for integration with external parties require adaptive technological infrastructure readiness. This situation emphasizes that technological infrastructure readiness is not static but must be continuously developed to support the high frequency of EMR use and the increasingly complex needs for system integration.

The leadership's role in ensuring the adequacy of technology infrastructure facilities is also a crucial factor in supporting the use of EMR across all service units. This was conveyed by Dr. Lukasiwan, Director of Ratu Aji Putri Botung Regional Hospital, in an interview on December 11, 2025, who stated:

"Providing a budget, routine maintenance of devices and networks, and adjusting the number and specifications of devices to the workload."

This statement demonstrates that top management has made systematic efforts to maintain the readiness of the technology infrastructure through budget support and adjusting facilities to meet unit needs. Aligning device specifications with the workload reflects leadership's concern for the sustainability of EMR to ensure it does not hinder the performance of healthcare workers.

Leadership's efforts to improve user experience with EMR technology infrastructure are also evident in policies aimed at improving the quality of facilities and technical services. This was conveyed by Dr. Lukasiwan in an interview on December 11, 2025, who stated:

"The availability of sufficient computers and supporting devices in each unit, a stable and evenly distributed network across all units, reduced waiting times, and a fast response time to disruptions."

This statement demonstrates that user experience is a top management concern in managing technology infrastructure. The availability of adequate facilities and rapid response to disruptions contribute to increased user satisfaction in utilizing RME as part of daily services.

The readiness of technological infrastructure also directly impacts the workflow and satisfaction of nurses in providing RME-based services. This was conveyed by Ms. Sulistini, an inpatient nurse, in an interview on December 16, 2025, who stated:

"If the infrastructure is good, the workflow runs smoothly and nurses can provide excellent service. Conversely, if the infrastructure is poor, nurses become stressed and lose focus on patients."

This statement demonstrates that the condition of technological infrastructure has a direct impact on work comfort and service quality. Adequate infrastructure supports smooth workflow and nurses' focus on patients, while limited infrastructure can create work stress and reduce service quality.

Efforts to improve user comfort in utilizing RME infrastructure are also being implemented through administrative improvements that support alignment between the system and service

workflow. This was conveyed by Elia Mawarni, Acting Head of Administration, in an interview on December 11, 2025, who stated:

"Administrative improvements were made by modifying manual workflows to align with the EMR system, improving the user interface design to make it more intuitive and user-friendly, developing clear policies regarding user access rights, ensuring smooth integration of the EMR system between units, encouraging the use of standard terminology and consistent data elements, and establishing a regular evaluation mechanism for EMR system usage."

This statement demonstrates that technological infrastructure readiness is not only supported by technical aspects, but also by user-oriented administrative adjustments. Restructuring the system's workflow and interface helps reduce barriers to use, improves data consistency, and supports more effective use of EMR in the service process and clinical decision-making.

Technological infrastructure readiness also influences the level of satisfaction of medical personnel working with EMR. This was conveyed by Dr. In an interview on December 16, 2025, Dr. Ruwiyatul, an outpatient clinician, stated:

"Technological readiness must be supported by good human resource readiness. So far, it's relatively good, but the quality of the system and human resource capabilities need to be continuously improved."

This statement demonstrates that user satisfaction is determined not only by the availability of technology, but also by the user's ability to optimally utilize the system. This situation emphasizes that technological infrastructure readiness needs to be accompanied by strengthening human resource capacity so that the use of EMR can provide a comfortable and sustainable work experience.

The contribution of technological infrastructure readiness to the organization's net benefits is also evident in the increase in overall hospital service efficiency. This was conveyed by Dr. Lukasiwan, Director of Ratu Aji Putri Botung Regional Hospital, stated in an interview on December 11, 2025:

"Adequate infrastructure allows information systems, particularly Electronic Medical Records, to be optimally utilized across all service units. With a stable network, adequate equipment, and a reliable system, service processes are faster and more integrated. Healthcare workers eliminate the need for repetitive recording, maximizing patient service time. This impacts work efficiency, faster decision-making, and improved patient care quality."

This statement demonstrates that technological infrastructure readiness provides tangible benefits to the organization, both in terms of operational efficiency, service quality, and the effectiveness of data-driven decision-making. The impact of technological infrastructure readiness is also clearly felt in the smooth running of hospital administrative processes. This was conveyed by Elia, Acting Head of Administration, in an interview on December 11, 2025:

"Technological infrastructure readiness is crucial for the smooth running of hospital administration processes because its impacts include operational efficiency, data accuracy, and improved overall healthcare service quality."

This statement demonstrates that a technological infrastructure ready to support the EMR can simplify administrative processes, minimize recording errors, and accelerate administrative workflows. This contributes to improved administrative order and the overall quality of

hospital data management. The benefits of digital infrastructure readiness are also felt from an information systems management perspective. Tamrizal, the Hospital's Head of IT, stated in an interview on December 18, 2025:

"Data flows into and out of the EMR can run smoothly, increasing the system's data processing speed, which impacts the effectiveness and efficiency of data and information distribution and improves overall service quality."

This statement demonstrates that an optimal technological infrastructure supports the technical performance of the EMR system, particularly in terms of the speed and smoothness of data processing. A stable and integrated data flow strengthens the EMR's function as the primary source of information for service delivery and decision-making. The most significant benefit of technological infrastructure readiness is also felt by physicians, as the direct users of the EMR in clinical services. This was conveyed by Dr. Ruwiyatul, an outpatient clinician, stated in an interview on December 16, 2025, "Reducing the risk of medical and administrative errors, especially in reading handwritten notes, and supporting collaboration and continuity of care because it is integrated into a single service with various professions."

This statement demonstrates that adequate technological infrastructure enables optimal utilization of EMR to support patient safety and collaboration among healthcare professionals. Cross-professional data integration strengthens continuity of care and improves the overall quality of clinical services.

Overall, the results of the second research problem formulation indicate that the readiness of the technological infrastructure at Ratu Aji Putri Botung Regional Hospital plays a crucial role in supporting the successful use of EMR. This readiness is reflected in the availability and maintenance of devices, network reliability, data security, information technology service support, and user-oriented administrative adjustments. Adequate technological infrastructure not only supports the smooth operation of the system but also provides net benefits in the form of increased efficiency, service quality, patient safety, and the effectiveness of data-driven decision-making.

Top management support in ensuring the successful implementation and sustainability of the Electronic Medical Records (EMDR) system at Ratu Aji Putri Botung Regional Hospital.

The results of this study indicate that top management support at Ratu Aji Putri Botung Regional Hospital plays a central role in ensuring the successful implementation of the Electronic Medical Records (EMDR), not only in the initial stages of implementation, but also in ensuring the sustainability and consistency of its use in healthcare services. This support is not symbolic, but is manifested through formal policies, strengthening the organizational structure, supervision, and the active involvement of leaders in directing and evaluating the implementation of the EMDR. Field conditions demonstrate that the success of the EMDR is greatly influenced by the ability of top management to manage organizational change, enforce user compliance, and respond to the technical and operational needs of healthcare workers. This finding reinforces the research of Handayani et al. (2021) in Indonesian government hospitals, which emphasized that top leadership is a key factor in the success of the digital transformation of healthcare services.

Top management support is concretely reflected in the formation of an EMDR evaluation and compliance team and the issuance of a policy requiring all healthcare workers to use the EMDR in every service process. This policy serves not only as an administrative rule but also as a control mechanism to ensure consistent use of the system. Top management also ensures 24-

hour system access and provides flexible access for specialists from outside the hospital. This demonstrates that leadership plays a direct role in ensuring the quality of the EMR system, particularly in terms of ease of access, flexibility, and reliability. This finding aligns with research by Nguyen et al. (2023), which concluded that active leadership involvement in technology decision-making improves the reliability and sustainability of the EMR system.

Interviews with the Head of IT revealed that despite leadership support, budget constraints remain a barrier to optimal infrastructure delivery. This finding reflects the reality of information system implementation in the public sector, where management commitment often clashes with resource constraints. Theoretically, DeLone and McLean (2016) emphasized that system quality is significantly influenced by the availability of supporting resources. Research by Kruse et al. (2022) and Sulaiman et al. (2024) also demonstrated that budget constraints are a major challenge to EMR implementation in regional hospitals, despite strong managerial support.

Management policies requiring EMR use on every shift directly impact system performance. Inpatient nurses reported that all patient services are now required to use EMR, ensuring consistent patient data recording. This demonstrates that top management support is capable of eliminating the dual system (manual and electronic) practices that often contribute to EMR failures. This finding corroborates research by Ifinedo (2021) and Dwivedi et al. (2022), which states that mandatory system use policies are a key determinant of the sustainability of an organization's information system.

Regarding information quality, top management not only demands the use of EMR but also establishes data quality standards through policies and the development of system features in accordance with national regulations. The implementation of ICD-10 and ICD-9 CM standards serves as the primary reference for medical data recording. However, there are still limitations in routine oversight through quality audits. This situation indicates a gap between strategic policy and technical implementation. Research by Alharbi and Drew (2021) and Putri et al. (2023) confirm that without consistent data audits, the quality of EMR information is at risk of declining even when the system is operational.

In terms of service quality, top management is considered responsive to technical challenges faced by users. The provision of backup devices and rapid communication channels demonstrates the existence of adaptive support services. These findings align with research by Kuo et al. (2021) and Zayyad & Toycan (2022), which found that responsive IT services increase user trust and satisfaction with digital health systems.

Regarding user use and satisfaction, mandatory policies, training, technical assistance, and reward systems create an organizational environment that encourages consistent use of EMR. User satisfaction is more influenced by policy certainty and ease of access than by technological sophistication. These findings align with research by Alqahtani et al. (2022) and Rahman et al. (2024), which emphasizes the importance of management communication and user participation in increasing satisfaction with EMR systems.

In terms of net benefits, the implementation of EMR significantly impacted service efficiency, reduced recording errors, accelerated clinical decision-making, and improved coordination among healthcare professionals. These findings support research by Kwon and Johnson (2021), Kruse et al. (2022), and Sulaiman et al. (2024), which concluded that the greatest benefits of EMR are maximized when fully supported by top management and adequate infrastructure.

Synthesis of Findings

Based on interviews, field conditions, and theoretical studies, it can be concluded that top management support at Ratu Aji Putri Botung Regional Hospital plays a key role in the success of EMR implementation. This support is reflected in strategic policies, provision of facilities, monitoring of use, and responses to technical challenges. Although there are still budget limitations and data quality control needs to be improved, overall, the implementation of EMR has been effective and has provided tangible benefits to the organization and patient care.

Readiness and the role of technological infrastructure in supporting the sustainability and effectiveness of EMR use at Ratu Aji Putri Botung Regional Hospital

The study results indicate that the technological infrastructure at Ratu Aji Putri Botung Regional Hospital is generally ready and allows for the use of Electronic Medical Records (EMR) in healthcare services, but is not yet fully optimal and evenly distributed across all units. Field conditions demonstrate a combination of structural readiness established by top management and various technical and operational challenges still experienced by users. The infrastructure, including the EMR system, network, and devices, is actively used, but the limited number of devices, the age of computers no longer compatible with application updates, and occasional network disruptions indicate that technological readiness is still in the development stage, not a mature state. This finding aligns with research by Sari et al. (2022), which states that regional hospitals are generally in the transition phase of digital readiness, where systems are in place but not yet fully capable of accommodating high service loads.

Empirically, in the field, technological infrastructure readiness is heavily influenced by top management planning and budgeting policies. Hardware and software requirements have been included in the Hospital Work Plan and Budget, accompanied by gradual system maintenance and development efforts. However, findings from nurses and doctors indicate that the number of devices in some units is still limited, and some computers no longer support EMR application updates. This situation demonstrates a gap between strategic planning at the management level and operational realities in service units. While infrastructure is available, high-intensity use and dynamic service needs cause existing capacity to quickly reach its limits. This phenomenon is consistent with the findings of Alshahrani et al. (2024), who stated that limited equipment capacity is a major obstacle to the sustainability of EMR in public hospitals.

When linked to the DeLone and McLean Information Systems Success Model (2003/2016), this situation indicates that the system quality and service quality dimensions have been established, but are not yet fully stable. The RME system is considered relatively easy to access and the network is adequately supported, but device limitations and occasional network disruptions impact comfort and smoothness of use. DeLone and McLean emphasized that suboptimal system quality directly impacts usage intensity and user satisfaction. Findings at Ratu Aji Putri Botung Regional Hospital (RSUD) support this proposition, where users reported that when the infrastructure is running well, workflows are smooth, but when disruptions occur, workloads increase and focus on service is disrupted. Research by Petter et al. (2020) and Dwivedi et al. (2022) also confirmed that inconsistent system quality has the potential to reduce the perceived usefulness of the information system.

Regarding the information quality dimension, the results indicate that the RME system supports data integration between units and maintains the security of medical information through access rights management, the use of personal accounts, a data backup system, and security audits. However, challenges remain with data completeness and up-to-dateness, primarily due to non-compliance on the part of some users and limitations in certain features for retrieving

inpatient reports. This situation demonstrates that technological infrastructure readiness does not stand alone but is highly dependent on user compliance and the suitability of system features to service needs. This finding aligns with research by Nguyen et al. (2023), which emphasizes that information quality in EMR is the result of the interaction between system design and user behavior.

Technological infrastructure readiness has also been shown to directly impact user usage and satisfaction. Adequate infrastructure streamlines nurses' workflows, reduces work stress levels, and allows healthcare workers to focus more on patients. Conversely, device limitations and system disruptions increase work pressure and decrease user comfort. These findings reinforce research by Handayani et al. (2021) and Nugroho et al. (2023), which found that basic infrastructure readiness particularly devices and networks is a key determinant of successful EMR implementation in regional hospitals with high service loads.

In terms of net benefits, technological infrastructure readiness has a tangible impact on organizations. These benefits are evident in increased service efficiency, reduced redundant records, accelerated clinical decision-making, and improved coordination among healthcare professionals. Physicians experience a reduced risk of medical and administrative errors, while management gains time and resource efficiencies and improved service quality. From the perspective of information systems success theory, net benefits are the ultimate indicator, demonstrating that the system is not only used but actually adds value to the organization. This finding is consistent with research by Kwon and Johnson (2021), Sari et al. (2022), and Alshahrani et al. (2024), which concluded that technological infrastructure readiness is a key prerequisite for RME to have a significant impact on service quality and patient safety.

However, this study also found that technological infrastructure readiness at Ratu Aji Putri Botung Regional Hospital remains adaptive and requires ongoing strengthening. The need for integration with external partners, changing data standards, and increasing service volumes require a flexible and continuously updated infrastructure. This finding complements previous research by confirming that in the context of regional hospitals, the success of RME is determined not only by the initial availability of infrastructure, but also by the organization's ability to maintain, adapt, and develop that infrastructure sustainably.

Overall, this discussion confirms that the technological infrastructure readiness at Ratu Aji Putri Botung Regional Hospital has supported the successful use of EMR, but still faces challenges in terms of equitable distribution of facilities, equipment updates, and increasing system capacity. EMR success is a dynamic process that requires ongoing commitment from top management, adaptive technical support, and strong synergy between technology and users in the field.

The results of this study indicate that the technological infrastructure readiness at Ratu Aji Putri Botung Regional Hospital is in place and generally enables the use of EMR in services, but is not yet fully optimal and equitable across all units. Field conditions demonstrate a combination of structural readiness established by top management and technical and operational challenges still faced by users. Infrastructure such as the EMR system, network, and devices are in place and actively used, but the limited number of devices, aging computers that are no longer compatible with application updates, and occasional network disruptions indicate that technological readiness is still at a developing stage, not a mature state.

In practice, technological infrastructure readiness is significantly influenced by top management's planning and budgeting policies. Interview findings indicate that hardware and

software requirements have been incorporated into the Hospital Work Plan and Budget, with ongoing system maintenance and development.

However, findings from nurses and doctors revealed that devices in some units are still insufficient, and some computers no longer support RME application updates. This situation highlights a gap between management planning and the reality of use in service units. Infrastructure is available, but high-intensity use and dynamic service needs quickly limit existing capacity.

In relation to the DeLone and McLean Information Systems Success Model (2003/2016), this situation indicates that the system quality and service quality dimensions have been established, but are not yet fully stable. The RME system is considered easy to access and the network is relatively stable, but device limitations and occasional network disruptions impact comfort and smoothness of use.

DeLone and McLean emphasized that suboptimal system quality directly impacts usage intensity and user satisfaction. This aligns with findings at Ratu Aji Putri Botung Regional Hospital, where users stated that when the infrastructure is running smoothly, workflow is smooth, but when disruptions occur, workloads increase and focus on service is disrupted.

The quality of information found in the field indicates that the EMR system is capable of supporting data integration between units and maintaining the security of medical information through access rights management, the use of personal accounts, a data backup system, and regular audits and monitoring. However, challenges remain with data completeness and up-to-dateness due to non-compliance by some users and limitations in certain features, particularly in retrieving inpatient reports.

This situation demonstrates that technological infrastructure readiness is not a stand-alone process but is highly dependent on user compliance and the alignment of system features with service needs. These findings support the view of Petter et al. (2020) that information quality in digital health systems is heavily influenced by a combination of technical factors and user behavior.

The readiness of technological infrastructure has also been shown to directly impact user usage and satisfaction. Research findings indicate that adequate infrastructure streamlines nurses' workflows, reduces work stress, and allows for better patient focus. Conversely, limited infrastructure leads to work pressure and reduces user experience.

These findings align with research by Handayani et al. (2021) and Nugroho et al. (2023), which found that the success of RME implementation in regional hospitals is largely determined by the readiness of basic infrastructure, particularly devices and networks, because users experience high service workloads.

Furthermore, the results of this study indicate that the readiness of technological infrastructure provides net benefits to the organization. These benefits are evident in increased service efficiency, reduced duplicate recordings, accelerated clinical decision-making, and improved coordination among healthcare professionals. Physicians perceived a reduced risk of medical and administrative errors, while management noted savings in time, resources, and service quality. From the perspective of information systems success theory, net benefits are the ultimate indicator confirming that the system is not only used but actually adds value to the organization. These findings are consistent with research by Sari et al. (2022) and Alshahrani et al. (2024), which showed that a ready technological infrastructure is a key prerequisite for RME to have a real impact on service quality and patient safety.

However, this study also found that the readiness of the technological infrastructure at Ratu Aji Putri Botung Regional Hospital remains adaptive and requires ongoing strengthening. The need for integration with external partners, the development of data standards, and increasing service volumes require a flexible and continuously updated infrastructure. This finding complements previous research by confirming that in the context of regional hospitals, the success of RME is not determined solely by the initial availability of infrastructure, but by the organization's ability to maintain and adapt that infrastructure continuously.

Overall, this discussion confirms that the readiness of the technological infrastructure at Ratu Aji Putri Botung Regional Hospital has supported the successful use of RME, but still faces challenges in terms of facility equity, equipment updates, and system capacity enhancement. These findings demonstrate that the success of RME is a dynamic process that requires sustained commitment from top management, adaptive technical support, and synergy between technology and users in the field.

Conclusion

Top management support plays a crucial role in ensuring the successful implementation of Electronic Medical Records (EMR) at Ratu Aji Putri Botung Regional Hospital. This support is demonstrated through formal policies, monitoring of use, training, technical assistance, incentives, and periodic evaluations. Interviews indicate that leadership commitment is able to encourage consistent EMR use, improve data entry compliance, and strengthen accountability and coordination between service units, although some users still encounter challenges in compliance. The readiness of the technology infrastructure generally supports EMR use, but it is not yet fully optimal and evenly distributed across all service units. System, network, and device infrastructure are available and in use, but there are still limitations in the number and specifications of devices, occasional network disruptions, and the need for system development. These conditions impact the smoothness of workflow, user satisfaction, and service efficiency, so ongoing infrastructure strengthening is still necessary.

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