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Analysis of Readiness for the Implementation of Electronic Outpatient Medical Records at Mitra Siaga Hospital, Tegal Using the DOQ-IT Approach

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ABSTRACT

Electronic Medical Records (EMR) are a component of the hospital management information system (SIMRS) that is currently being developed. The complexity of the challenges in implementing EMRs necessitates a readiness assessment before they are fully implemented. This is an important step to help identify procedures, levels of importance, and to accommodate the formation of operational functions that support the optimization of EMR implementation. One of the methods that can be used to analyze the readiness for implementing information systems based on EMRs is the Doctor's Office Quality-Information Technology (DOQ-IT) method. The implementation of EMRs at Mitra Siaga Hospital in Tegal began in April 2024, but it has not yet been fully executed. This study aims to determine the readiness for implementing outpatient EMRs at Mitra Siaga Hospital Tegal using the DOQ-IT approach. This is a descriptive quantitative study with 32 subjects, consisting of IT staff, medical record officers, doctors, and nurses. The results of the study indicate that the readiness for implementing outpatient EMRs at Mitra Siaga Hospital Tegal using the DOQ-IT approach falls into the "very ready" category. Based on the research findings, it is recommended that Mitra Siaga Hospital Tegal continue to monitor, evaluate, and periodically review the implementation of EMRs, as there may still be challenges or obstacles during the implementation process.

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1. INTRODUCTION

A hospital is an institution that provides healthcare services on an individual basis, including inpatient, outpatient, and emergency services. In providing healthcare services, every hospital is required to maintain archives regarding the patient's medical history, known as medical records[17]. Medical records are documents containing personal information, examination results, therapies, and all activities related to the services provided to the patient. Each hospital is obligated to continuously improve the quality of its healthcare services by leveraging advancements in technology to remain competitive. Additionally, the Ministry of Health's Strategic Plan for 2020–2024 states that every healthcare facility must innovate by utilizing information technology[3].

Currently, information and communication technology is rapidly advancing in all sectors, especially in healthcare. In healthcare facilities, information technology has become beneficial in simplifying the complex process of managing health data. One of the technological advancements that can be integrated into healthcare is the use of Electronic Medical Records (EMRs). EMRs are a component of the hospital

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management information system (SIMRS) that is continuously being developed. Currently, most hospitals worldwide have adopted EMRs as part of the transformation from manual to digital medical records. Similarly, in Indonesia, the transformation from conventional medical records to electronic medical records is being introduced, but the implementation of EMRs is not yet fully executed. However, with the issuance of the Indonesian Ministry of Health Regulation Number 24 of 2022 on medical records, it mandates that all healthcare facilities, including hospitals, implement electronic medical records no later than December 2023[9].

Research indicates that there are still barriers to the implementation of EMRs at Gambiran General Hospital, such as the lack of understanding of computer use among human resources, insufficient IT staff capabilities, and the absence of a program analyst[14]. Similarly, research shows that at Airlangga University Hospital, frequent barriers such as system errors were encountered in the implementation of EMRs[1,2]. The complexity of the challenges in implementing EMRs necessitates a readiness assessment before full implementation. This assessment is an important step as it helps identify procedures, the level of importance, and supports the formation of operational functions for the optimal execution of EMRs. Furthermore, this evaluation also aims to recognize potential errors in the application of the new technolog[2].

The development of information systems in healthcare facilities requires an assessment to measure the level of readiness for implementing EMRs. In order for the application to function optimally without causing future errors, an analysis of the readiness for EMR implementation is fundamental. One of the methods that can be used for analyzing the readiness level for implementing EMRs is the Doctor's Office Quality-Information Technology (DOQ-IT) method. This method is highly effective for analyzing readiness levels by focusing on four primary components related to the organization's work system: human resources, governance leadership, organizational culture, and infrastructure. If the analysis indicates that these components are not yet ready, the EMR implementation cannot operate optimally. Therefore, the readiness analysis using the DOQ-IT method is expected to help identify existing problems and provide appropriate solutions based on the findings[5].

Previous research at Haji Surabaya Hospital regarding the readiness analysis of EMR implementation with the DOQ-IT approach showed that all four key elements in the DOQ-IT approach were in the "very ready" category[1]. Furthermore, research by indicated that in terms of human resources, there was insufficient understanding of EMRs and their benefits. However, in other aspects, the readiness level for EMR implementation at Dr. H. Abdul Moeloek Hospital in Lampung Province was categorized as moderately ready[11]. Mitra Siaga Hospital in Tegal is one of the private hospitals located in Tegal Regency, which is currently undergoing digital innovation in healthcare services, including the implementation of Electronic Medical Records. The implementation of EMRs at Mitra Siaga Hospital in Tegal started in April 2024 but has not yet been fully implemented. Additionally, during the transition from conventional medical records to electronic medical records, there has been no readiness analysis for the implementation of EMRs using the DOQ-IT method at Mitra Siaga Hospital in Tegal. Based on this background, the author is interested in conducting a study titled "Analysis of Readiness for Implementing Outpatient Electronic Medical Records (EMRs) at Mitra Siaga Hospital Tegal using the DOQ-IT Approach."

2. RESEARCH METHOD

The main variable in this research is the level of readiness for implementing Electronic Medical Records (EMR), which is assessed using the DOQ-IT (Doctor's Office Quality-Information Technology) method. The evaluation is based on four aspects: human resources, organizational work culture, leadership governance, and infrastructure. The object of this study is the Electronic Medical Records system implemented at Mitra Siaga Hospital in Tegal. The subjects of this research include the IT team, medical record officers, doctors, and nurses who are directly involved with the EMR system at the hospital.

The operational definitions used in this study are as follows: human resources refer to the involvement of users in applying EMR, including the ability of medical staff to use the system effectively; organizational work culture involves the readiness of healthcare workers to accept information technology;

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leadership governance assesses the commitment of leadership in preparing for EMR implementation; and infrastructure refers to the availability and adequacy of IT infrastructure and financial resources required to support EMR implementation. These variables will be measured using a Likert scale from 0 to 5.

Data collection for this research began with obtaining permission from Mitra Siaga Hospital in Tegal. Once permission was granted, the researcher selected a random sample of respondents. Before data collection, each respondent was provided with an informed consent form to ensure voluntary participation. Upon agreement, respondents were given a questionnaire based on the variables being studied.

The instrument used to collect data is a questionnaire, which is a modified version of the DOQ-IT questionnaire validated and tested for reliability[7]. The questionnaire consists of 28 questions, and each question is scored on a scale from 0 to 5. The tool is designed to assess human resources, organizational work culture, leadership governance, and infrastructure. The items were found to be valid (rhitung > rtabel) and reliable, with a Cronbach's alpha value of 0.6, indicating good reliability. The scoring method follows the EHR Assessment and Readiness Starter Assessment by DOQ-IT, with answers scored as follows: 0, 1, 2, 3, 4, and 5. The higher the score, the higher the readiness for EMR implementation. The results will be categorized into three levels of readiness: Very Ready (4-5), Moderately Ready (2-3), and Not Ready (0-1). Additionally, overall readiness is divided into three categories: Category I (Not Ready), Category II (Moderately Ready), and Category III (Very Ready) based on the total score.

Data analysis consists of several stages. First, data editing will ensure that all responses are complete and correct. Next, coding data will assign specific codes to each data item for easier analysis. Afterward, data will be entered into an analysis program (SPSS) for further analysis. The data analysis will generate results that are presented in a narrative format.

In terms of ethics, prior to the research, the respondents were fully informed about the purpose and benefits of the study. If they agreed to participate, they signed an informed consent form, ensuring their voluntary involvement. Respondents' privacy is protected, and their identities will remain anonymous in the report; only initials or codes will be used.

This methodology ensures that data collection is systematic, and the analysis is both valid and reliable, guaranteeing robust results for understanding EMR readiness at Mitra Siaga Hospital in Tegal.

3. RESULT AND DISCUSSIONS

3.1 Overview of Mitra Siaga Hospital Tegal

Mitra Siaga Hospital in Tegal began as a hospital for employees of Perusda TEXIN in the 1960s. Over time, Perusda merged into the state-owned PT. INSAN, and the hospital was later leased to the Yayasan RS Islam and renamed RSI. Texin. On October 22, 2004, a sale and purchase agreement was signed, and the hospital became PT. Texin Permata Husada, officially established on October 29, 2004. On September 13, 2005, the hospital received a permit under the name "Mitra Siaga" according to the Ministry of Health's decree. It is located in Tegal, Central Java, and was accredited with the "Paripurna" status from SNARS Edition 1, valid until September 4, 2022. The hospital's mission is to provide high-quality healthcare services, ensure efficient and accessible patient care, develop qualified human resources, and maintain strong partnerships with external entities. The hospital emphasizes professional behavior, enthusiasm, innovation, teamwork, integrity, and sincerity in its values. Its goals include improving the health status of the community, ensuring the hospital's growth, and providing affordable healthcare for all. Mitra Siaga Hospital also aims to be a comprehensive healthcare provider, contributing to health services, training, education, and research. The outpatient services at the hospital are organized based on the type of care provided.

3.2 Karakteristik Responden Penelitian

The respondents in this study were 32 individuals who worked in the outpatient department and had access to electronic medical records as part of their duties. The characteristics of the respondents examined in this study include gender, age, and education level, which are presented in the table below:

Table 1. Respondent Characteristics Based on Occupation and Education Level

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Characteristic	Number (n)	Percentage (%)
Occupation		
▪ Doctor	2	6,3
▪ Nurse	11	34,4
▪ Medical Record Staff	15	46,9
▪ IT Staff	4	12,5
Education		
▪ Bachelor's Degree	10	31,3
▪ Nursing Degree	2	6,3
▪ Diploma 3	14	43,8
▪ High School	6	18,8

Based on Table 1, it can be seen that the majority of respondents work as medical record staff, with 15 respondents (46.9%), followed by nurses with 11 respondents (34.4%), IT staff with 4 respondents (12.5%), and doctors with 2 respondents (6.3%). Regarding education level, most of the respondents have a Diploma 3 degree, with 14 respondents (43.8%), followed by Bachelor's degree holders with 10 respondents (31.3%), High School graduates with 6 respondents (18.8%), and Nursing degree holders with 2 respondents (6.3%).

Table 2. Respondent Characteristics Based on Age

Characteristic	Min	Max	Mean
Age	19 Years	40 Years	28 Years

Based on Table 2, it is known that the youngest respondent is 19 years old, the oldest is 40 years old, and the average age of the respondents is 28 years.

3.3 Analysis of Readiness for the Implementation of Electronic Medical Records (EMR)

a) Human Resources (HR) Aspect

Table 3. Readiness for EMR Implementation Based on HR Aspect

Variabel	Min	Max	Mean
HR Aspect	**Score 0**	**Score 5**	**3.74**
Clinical and Administrative Staff			
▪ Question 1	Score 0	Score 5	3.75
▪ Question 2	Score 1	Score 5	4.03
▪ Question 3	Score 0	Score 5	3.63
Training			
▪ Question 4	Score 1	Score 5	3,88
▪ Question 5	Score 0	Score 5	3,44

From Table 3. the analysis of the readiness for implementing EMR in Mitra Siaga Hospital Tegal based on the HR aspect shows a minimum score of 0 and a maximum score of 5, with an average score of 3.74, indicating that the HR readiness for EMR implementation is categorized as "moderately ready." The lowest score was for question 5, with a mean of 3.44, and the highest score was for question 2, with a mean of 4.03.

b) Organizational Work Culture Aspect

Table 4. Readiness for EMR Implementation Based on Organizational Work Culture Aspect

Variable	Min	Max	Mean

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Aspek Budaya Kerja Organisasi	Score 0	Score 5	3.85
Budaya			
▪ Question 1	Score 2	Score 5	4.53
▪ Question 2	Score 3	Score 5	4.87
▪ Question 3	Score 0	Score 5	4.03
▪ Question 4	Score 0	Score 5	2.63
Keterlibatan			
▪ Question 5	Score 0	Score 0	Score 0
▪ Question 6	Score 0	Score 0	Score 0
▪ Question 7	Score 1	Score 1	Score 1
Alur Kerja Proses			
▪ Question 8	Score 0	Score 5	3.50
▪ Question 9	Score 1	Score 5	3.78
Manajemen Informasi			
▪ Question 10	Score 0	Score 5	3.75
▪ Question 11	Score 1	Score 5	4.13

Based on Table 4, the analysis of the readiness for EMR implementation at Mitra Siaga Hospital Tegal from the organizational work culture aspect shows a minimum score of 0 and a maximum score of 5, with an average score of 3.85. This indicates that the readiness for EMR implementation at Mitra Siaga Hospital Tegal, based on the organizational work culture aspect, is in the "moderately ready" category. Additionally, the analysis of the questions shows that the lowest score in the organizational work culture aspect was for question 4, with an average score of 2.63, while the highest score in the governance and leadership aspect was for question 2, with an average score of 4.87.

c) Governance and Leadership Aspect

Table 5. Readiness for EMR Implementation Based on Governance and Leadership Aspect

Variable	Min	Max	Mean
Governance and Leadership Aspect	Score 0	Score 5	3.85
▪ Question 1	Score 0	Score 5	3.47
▪ Question 2	Score 1	Score 5	3.78
Strategy			
▪ Question 3	Score 1	Score 5	3.84
▪ Question 4	Score 2	Score 5	3.97
IT Management Support			
▪ Question 5	Score 0	Score 5	3.91
▪ Question 6	Score 3	Score 5	4.47
▪ Question 7	Score 1	Score 5	4,16
Accountability			
▪ Question 8	Score 0	Score 5	3,19

Based on Table 5, the analysis of the readiness for EMR implementation at Mitra Siaga Hospital Tegal from the governance and leadership aspect shows a minimum score of 0 and a maximum score of 5, with an average score of 3.85. This indicates that the readiness for EMR implementation at Mitra Siaga Hospital Tegal from the governance and leadership aspect is categorized as "moderately ready." Additionally, the analysis of the questions shows that the lowest score for the governance and leadership aspect was for question 8, with an average score of 3.19, while the highest score for the organizational work culture aspect was for question 6, with an average score of 4.47.

d) Infrastructure Aspect

Table 6. Readiness for EMR Implementation Based on Infrastructure Aspect

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Variable	Min	Max	Mean
Infrastructure Aspect	Score 0	Score 5	3.64
IT Infrastructure			
▪ Question 1	Score 1	Score 5	3.84
▪ Question 2	Score 1	Score 5	2.81
Finance and Budget			
▪ Question 3	Score 0	Score 5	3.94
▪ Question 4	Score 0	Score 5	3.81

Based on Table 6, the analysis of the readiness for EMR implementation at Mitra Siaga Hospital Tegal from the infrastructure aspect shows a minimum score of 0 and a maximum score of 5, with an average score of 3.64. This indicates that the readiness for EMR implementation at Mitra Siaga Hospital Tegal from the infrastructure aspect is categorized as "moderately ready." Additionally, the analysis of the questions shows that the lowest score in the infrastructure aspect was for question 2, with an average score of 2.81, while the highest score was for question 3, with an average score of 3.94.

e) Readiness for EMR Implementation Across All Components

Table 7. Readiness for EMR Implementation Across All DOQ-IT Components

Variable	Sum	Min	Max	Mean
Readiness for EMR Implementation	Skor 106	Skor 0	Skor 5	3.80

Based on Table 7, the analysis of the readiness for EMR implementation at Mitra Siaga Hospital Tegal across all DOQ-IT components shows a minimum score of 0 and a maximum score of 5, with an average score of 3.80. Additionally, the overall score for Mitra Siaga Hospital Tegal is 106, which falls into Category III (score 97-140), indicating that the hospital is very ready for the implementation of EMR.

4. DISCUSSION

4.1 Readiness for the Implementation of Electronic Medical Records (EMR) in Outpatient Services at Mitra Siaga Hospital Tegal Based on the Human Resources (HR) Aspect

The analysis of the readiness for EMR implementation at Mitra Siaga Hospital Tegal, based on the HR aspect, indicates that the hospital is moderately ready, with an average score of 3.74. This assessment considers the involvement of users, including the ability of medical staff to operate or apply the EMR system, meeting two key standards: the engagement of clinical and administrative staff in the decision-making process regarding EMR and the participation of medical staff in training programs for EMR implementation.

Mitra Siaga Hospital Tegal's HR is considered moderately ready to implement EMR. This is supported by the analysis of the respondent characteristics, which shows that 26 out of 32 respondents are highly educated, with 14 respondents (43.8%) holding a Diploma III, 10 respondents (31.3%) with a Bachelor's degree, and 2 respondents (6.3%) with a Nursing degree. Additionally, the hospital employs 4 IT staff members responsible for supporting IT activities, including the maintenance of the hospital's information management system (SIMRS). The hospital's HR, consisting of staff with varying education and professional backgrounds, is involved in using EMR, including data entry and storage, particularly by medical record staff.

The findings are in line with previous studies which also showed that HR readiness for EMR implementation is categorized as moderately ready, with trained staff available for using computers and the hospital's information systems to support administrative functions[15].

Regarding specific questions in the HR aspect, the lowest score was for question 5, regarding training programs for project managers and IT staff involved in EMR adoption, with an average score of 3.44. This

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indicates that the training program for project managers and IT staff has been identified based on management needs. The highest score was for question 2, regarding the staff requirements for EMR implementation and usage, with an average score of 4.03, indicating that the staffing needs for EMR implementation are well-defined both currently and in the future.

To support the EMR implementation process, Mitra Siaga Hospital Tegal has identified training needs, such as training on EMR data distribution, data processing, input and storage for billing claims, data transfer, access management, backup and recovery, classification of data, and online information management for healthcare facilities. Additionally, the hospital has incorporated staffing needs for EMR implementation into the organizational structure, ensuring the required staff is available both now and in the future. HR is a strategic factor in enabling other resources to function effectively and achieve goals efficiently[6].

HR, as the users of the EMR system and policy makers, plays a crucial role in the success of EMR development[5]. The success of EMR implementation depends largely on the HR aspect, particularly on the ability of staff to operate computers and provide input on the implementation process.

4.2 Readiness for the Implementation of Electronic Medical Records (EMR) in Outpatient Services at Mitra Siaga Hospital Tegal Based on the Organizational Work Culture Aspect

The analysis of the readiness for EMR implementation at Mitra Siaga Hospital Tegal, based on the organizational work culture aspect, shows that the hospital is moderately ready, with an average score of 3.85. This assessment evaluates the organization's readiness for technology adoption, focusing on four indicators: culture, patient involvement, workflow processes, and information management, all of which are crucial for the successful implementation of EMR.

The results are consistent with previous studies, which found that the readiness for EMR implementation at RS Condong Catur Sleman was also categorized as moderately ready, highlighting a shift in culture during the initial stages of implementation[5]. Additionally, research showed that the organizational culture aspect at RSUD Kota Yogyakarta also required better knowledge of EMR planning and the involvement of stakeholders in developing policies related to EMR[6].

From the analysis of specific questions related to each indicator, the lowest score was for question 4, regarding the framework for prioritizing EMR, with an average score of 2.63. This suggests that while the topic has been discussed, it has not yet been fully integrated into the decision-making process. The highest score was for question 2, related to the planning process for EMR, with an average score of 4.87. This indicates that the planning process is actively conducted by top management, the head of planning, and a selected team. Moreover, all standard operating procedures (SOPs) related to the EMR workflow in outpatient services are available, supporting the implementation process.

However, the hospital has not yet implemented a reward and punishment system for EMR adoption, as the staff is still in the adaptation phase. Ongoing training is necessary to ensure the success of EMR implementation.

Organizational culture plays a crucial role in shaping behavior and influencing how users respond to the EMR system. There are 11 components evaluated within four readiness areas: culture, patient involvement, workflow processes, and information management. The success of EMR development depends not only on the system created but also on its alignment with user needs. Successful implementation relies on involving both clinical and administrative staff in the design and planning process[2]. Additionally, the involvement of patients, through evaluating the services provided to them, is essential for the development of EMR[6].

4.3 Readiness for the Implementation of Electronic Medical Records (EMR) in Outpatient Services at Mitra Siaga Hospital Tegal Based on Governance and Leadership Aspect

The analysis of the readiness for EMR implementation at Mitra Siaga Hospital Tegal, based on the governance and leadership aspect, indicates that the hospital is moderately ready, with an average score of 3.85. This assessment focuses on the leadership commitment and governance, covering four key indicators: leadership, strategy, IT management support, and accountability in the EMR implementation process.

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The findings align with the research, which also categorized the readiness for EMR implementation in the governance and leadership aspect as moderately ready[12]. The study showed that leadership had a vision for EMR implementation, but a dedicated team had yet to be formed to accelerate its deployment. Similarly, found that in the governance and leadership aspect at RSUD Kota Yogyakarta, there was a need for a strategic plan to develop the information system as a sign of commitment to EMR development[6].

To support the EMR implementation process, Mitra Siaga Hospital Tegal has thoroughly discussed the framework for prioritizing EMR. However, this framework has not yet been used in decision-making. The planning process for EMR implementation is carried out by top management, the head of planning, and a special team that has been formed. One of the key supports from the leadership is the establishment of a dedicated team responsible for managing the hospital's information system (SIMRS). The team consists of 10 members, including healthcare representatives (doctors, nurses, medical record staff) and IT staff.

Leadership and governance are crucial factors that significantly influence the speed of EMR implementation. There are 8 components evaluated within four readiness areas: leadership, strategy, management support, and accountability. Leadership, in essence, is the ability to influence employees to achieve shared goals. The role of leadership and governance is critical in the development of EMR, as leaders are the highest decision-makers[6]. Furthermore, research also emphasizes that the success of EMR implementation depends on involving both clinical and administrative staff in the design and planning process[12].

4.4 Readiness for the Implementation of Electronic Medical Records (EMR) in Outpatient Services at Mitra Siaga Hospital Tegal Based on the Infrastructure Aspect

The analysis of the readiness for EMR implementation at Mitra Siaga Hospital Tegal, based on the infrastructure aspect, indicates that the hospital is moderately ready, with an average score of 3.64. This assessment evaluates the readiness and availability of IT infrastructure for the implementation of EMR, focusing on two key indicators: infrastructure and financial budget[13].

The findings align with the research which also categorized the readiness for EMR implementation in the infrastructure aspect as moderately ready. At RS Undaan Surabaya, the available application meets the needs of staff, but some features are difficult to use, and budget limitations for IT infrastructure remain a challenge. Similarly, the research found that in RSUD Kota Yogyakarta, the infrastructure readiness for EMR implementation was moderately ready, with the need for further planning in the form of a strategic document that involves multiple professions[6].

From the analysis of specific questions related to the infrastructure aspect, the lowest score was for question 2, concerning the technical infrastructure plan using a high availability platform, with an average score of 2.81. This indicates that the platform is still under development and does not yet meet the HL7 (Health Level Seven International) standards. The current system used for EMR implementation, SIMRS-MS, was developed in-house by the hospital, and it is still in development. As a result, it will take time to meet the HL7 standards. Additionally, the system is reported to support EMR implementation, but data security is a concern, as it uses free SSL (Secure Socket Layer) and does not yet utilize NAS (Network Attached Storage) servers

The highest score was for question 3, regarding the budget for technology used in EMR implementation, with an average score of 3.94. This indicates that the investment required for EMR implementation is expected to have a return on investment within less than a year. The budget for both EMR implementation and ongoing maintenance has been prepared using discretionary funds that are allocated annually.

The adoption of EMR requires significant investment and a lengthy process. Therefore, readiness in terms of both IT infrastructure and budget is crucial. The infrastructure evaluation area includes both IT infrastructure and financial considerations, with two important components: the investment for EMR and the ongoing maintenance budget. When hospitals understand the importance of EMR, it is seen as an investment[6].

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The infrastructure built by the hospital for EMR implementation must consider privacy, security requirements, health insurance, and accountability. For EMR implementation, only the application software needs to be added, but user involvement in the design process is essential. Users' perspectives and expectations must be considered to ensure the application simplifies their tasks. Additionally, due to variations in users' work speeds and data entry times, the EMR system must be flexible in navigation, personalization, customization, access to multiple patients at once, delegation of responsibilities among medical staff, data variation, and visualization[11].

5. CONCLUSION AND RECOMMENDATION

In conclusion, the readiness for the implementation of Electronic Medical Records (EMR) in outpatient services at Mitra Siaga Hospital Tegal, based on various aspects assessed using the DOQ-IT approach, is as follows:

1. The readiness based on the Human Resources (HR) aspect is categorized as moderately ready. The hospital has taken steps to support the EMR implementation by identifying management needs, including ensuring staff participation in training programs related to EMR adoption.
2. The readiness based on the organizational work culture aspect is also categorized as moderately ready. While all standard operating procedures (SOPs) related to the workflow of implementing EMR in outpatient services are in place, the hospital has yet to implement a reward and punishment system due to the ongoing adaptation phase of its staff to the EMR system.
3. The readiness based on the governance and leadership aspect is also in the "moderately ready" category. The leadership has shown support by forming a dedicated team responsible for the implementation and ongoing maintenance of the EMR system. This team includes 10 members, consisting of healthcare professionals such as doctors, nurses, medical record staff, and IT staff.
4. Finally, the readiness based on the infrastructure aspect is categorized as moderately ready. While the technical infrastructure required for EMR implementation is being developed by a specialized team within the hospital, it is still in the development phase and has not yet met the HL7 standards.

Mitra Siaga Hospital Tegal is encouraged to continue monitoring, evaluating, and periodically reviewing the implementation of EMR, as challenges or obstacles may arise during the process. Additionally, the hospital should provide feedback to users regarding suggestions and input, as the success of EMR implementation relies heavily on the involvement of human resources (HR), who play a crucial role as the system's users. Future researchers are also encouraged to explore EMR implementation readiness using different research designs, such as mixed methods, to gain deeper insights into assessing the readiness of healthcare facilities for EMR adoption.

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