

# Readiness Analysis for the Implementation of Electronic Medical Records in Private Medical and Dental Practices



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## Abstract

**Background:** The implementation of Electronic Medical Records (EMR) is part of the digital transformation of the healthcare system in Indonesia. However, the readiness of primary healthcare facilities, such as private medical and dental practices, varies. The purpose of this study is to analyze the readiness for Electronic Medical Records (EMR) implementation in terms of human resources, work culture, governance and leadership, and infrastructure in private medical and dental practices in Pasuruan City. **Method :** The research design used a qualitative approach with a case study approach. Informants were selected through observation and interviews with 20 general practitioners and doctors practicing independently at private medical practices and private dental practices located in the city of Pasuruan. This study used purposive sampling techniques. The research instrument used an interview guide. Data collection was conducted in June 2025. **Results:** The research findings revealed that most respondents understood the basic concepts of Electronic Medical Records (EMR) and had adequate equipment to support its use. Work culture exhibits adaptive characteristics, although there are still barriers in the form of limited training and manual work habits, particularly among senior medical staff. Decision-making regarding Electronic Medical Records (EMR) implementation tends to be top-down, with the practice owner playing a central role. Basic infrastructure such as hardware is available, but internet connectivity and application interoperability remain the primary challenges. **Conclusion:** In general, the readiness for Electronic Medical Records (EMR) implementation in private medical and dental practices in Pasuruan City is already at a positive early stage. However, full success requires strengthening human resource capacity through continuous training, improving the stability of digital infrastructure, and policy synergy between the government and professional organizations so that EMR implementation runs optimally and sustainably.

**Keywords:** Implementation Readiness, Electronic Medical Records (EMR), Private Practice, General Practitioners, Dentists

## 1. Introduction

The development of information technology in the health sector has become part of the global transformation towards the digitization of healthcare systems. One of the most significant innovations in this process is the implementation of Electronic Medical Records (EMR), a digital patient information recording system that replaces manual paper-based systems. Electronic Health Records (EHR) are designed to enhance operational efficiency, improve the accuracy of medical documentation, facilitate access to information, and enable data integration across healthcare facilities (Ahmed et al., 2020).

The importance of implementing Electronic Medical Records (EMR) has been accommodated in the Strategic Plan of the Ministry of Health of the Republic of Indonesia 2020–2024, and further strengthened through Minister of Health Regulation No. 24 of 2022 on Medical Records, which mandates all healthcare facilities, including private medical and dental practices, to adopt an Electronic Medical Record (EMR) system and integrate it with the SATUSEHAT platform (Kemenkes, 2020). The government aims for all health care facilities to complete the implementation of Electronic Medical Records (EMR) by December 31, 2023, as outlined in Circular Letter Number HK.02.01/MENKES/1030/2023 on the Implementation of Electronic Medical Records in Health Care Facilities and the Application of Administrative Sanctions in Supervision and Monitoring, these medical records must be implemented by Health Care Facilities (HCFs) by December 31, 2023. The creation of Electronic Medical Records (EMR) is carried out through software development using the waterfall model, spiral model, or prototype approach (Asih & Indrayadi, 2023).

However, the reality on the ground shows that the level of adoption and readiness of health care facilities for the Electronic Medical Record (EMR) system still faces various challenges. According to a survey conducted by the Indonesian Hospital Association (PERSI) in 2022, only around 50% of facilities have implemented Electronic Medical Records (EMR), and only 16% are considered to have implemented EMR optimally. Previous studies have also revealed that a significant number of hospitals and community health centers are not yet ready to implement Electronic Medical Records (EMR) due to technical, financial, and human resource constraints (Hapsari et al., 2023; Izza & Lailiyah, 2024).

Medical record keeping is mandatory for doctors and dentists who perform medical procedures on patients, in accordance with regulations, so there is no excuse for doctors not to create medical records. This is especially true in privatemedical and dental practices, which are primary care units not directly affiliated with large hospitals, where the implementation of Electronic Medical Records (EMR) faces more complex challenges. Private practices are often operated individually, meaning that all administrative, technical, and clinical responsibilities rest on one or two healthcare professionals. Challenges include limited budgets for hardware and software procurement, unstable internet access, and insufficient technical training and support for system operation (Asih & Indrayadi, 2023).

In the city of Pasuruan, there are 28 private Doctor Practice Facilities, 17 private Dentist Practice Facilities, and 17 private Specialist Doctor Practice Facilities. According to data from the Pasuruan City Health Department as of October 2024, only 23 practice locations have completed the implementation stages of the Electronic Medical Record (EMR) system, while 14 have not yet been registered on the SATUSEHAT platform, and 20 other practice locations have not yet begun the implementation process at all. The initial survey results also indicate that most private practices face challenges in the form of insufficient socialization and training, as well as limitations in human resources and operational funds.

The effective implementation of Electronic Medical Records (EMR) requires comprehensive readiness, which not only includes the provision of technological infrastructure, but also encompasses human resource readiness, organizational work culture, governance and leadership, as well as regulatory and technical support. One commonly used approach to assess this readiness is the DOQ-IT (Doctor’s Office Quality Information Technology) framework, which emphasizes four key parameters in system readiness: human resources, infrastructure, work culture, and governance. (Mahdiyyah, 2024). Pre-implementation readiness assessment not only provides an overview of the actual conditions, but also helps identify improvement priorities and supporting strategies that need to be prepared to ensure optimal implementation (Rusdi & Suwito, 2021).

Considering the urgency of government regulations, the importance of digital transformation in the health sector, and the complexity of challenges faced by private practices, it is necessary to conduct research to identify the extent of readiness of health care facilities in implementing Electronic Medical Records (EMR). Therefore, this study aims to analyze the readiness for the implementation of Electronic Medical Records (EMR) in private medical and dental practices in Pasuruan City, by examining key factors such as human resources, infrastructure, work culture, and leadership management.

**2. Materials and Methods**

The research design uses a qualitative approach with a case study approach. Informants were selected through observation and interviews with 20 general practitioners and dentists practicing independently in private clinics in the city of Pasuruan. This study used purposive sampling. The research instrument consists of interview guidelines. Data collection was conducted in June 2025. Data management involved data reduction techniques, data presentation, and drawing conclusions.

The aspects of questions in analyzing the readiness of Electronic Medical Records (EMR) are shown in the table below:

**Table 1.** Interview Guidelines

No	Aspect	Interview Structure
1	Human resources	<ol style="list-style-type: none"> <li>1. What do you know about Electronic Medical Records (EMRs)?</li> <li>2. Are Electronic Medical Records (EMRs) easy to apply?</li> <li>3. What experience have you had and or what training have you received related to the Electronic Medical Record (EMR) application?</li> <li>4. What obstacles are faced in applying Electronic Medical Records (EMR)?</li> </ol>
2	Socio-Cultural	<ol style="list-style-type: none"> <li>1. Can Electronic Medical Records (EMR) be applied appropriately in daily practice?</li> <li>2. What is the connectivity between the owner/dr/drg.praktijk and the medical record officer (nurse/admin/etc.) who handles Electronic Medical Records (EMR) in patient registration?</li> <li>3. How to overcome obstacles in the Electronic Medical Record (EMR) application?</li> </ol>
3	Governance and Leadership	<ol style="list-style-type: none"> <li>1. How is the readiness of the owner as a practice leader related to the Electronic Medical Record application (EMR)?</li> <li>2. What is the owner’s responsibility for the Electronic Medical Record (EMR) data that has been input by the nurse/admin of the Electronic Medical Record (EMR)?</li> </ol>

4	Infrastructure	1. How to prepare the device and the cost in the application of Electronic Medical Record (EMR)? 2. What are the capabilities, interoperability and data recovery?
5	Government policy	1. What do you think about the government's policy in the implementation of Electronic Medical Records (EMR)? 2. Is it good or does it still need a lot of changes?

### 3. Results

#### 3.1 Field Study Results

**Table 2.** General Demographic Data of Respondents (n=20)

No	Initial	Age	Gender	Long Time Working	Final Education
1	Yh	40	Man	10 years 3 month	S1
2	SH	64	Woman	38 years	S1
3	PK	62	Man	1 years	S1
4	SW	47	Man	21 years 2 month	S1
5	PN	44	Woman	21 years	S1
6	MN	33	Woman	5 years	S1
7	DP	29	Woman	1 years	S1
8	Set	45	Man	15 years	S1
9	NS	27	Man	2 years	S1
10	Nugs	45	Man	16 years	S1
11	Far	59	Woman	30 years	S1
12	AW	50	Man	21 years	S2
13	Angg	29	Woman	2 years	S1
14	MN	34	Man	8 years	S1
15	AM	33	Man	7 years	S1
16	SA	50	Man	25 years	S1
17	SW	44	Woman	15 years	S1
18	Dw	57	Woman	30 years	S1
19	RA	58	Woman	30 years	S2
20	JHA	40	Man	14 years	S2

Based on Table 1, the results of the characteristics of the research subjects based on age, gender, length of work and last education. In the age category of respondents, 35% of respondents were of medium productive age (41 – 50 years). The gender of the respondents was mostly male, namely 11 respondents (55%). In the length of service category, most of them are in the middle category, namely doctors who have worked between 10 and less than 20 years, there are 5 doctors (25%). The last education of most respondents was S1 Education (Bachelor of Medicine) with 17 respondents (85%).

The analysis process of all the resulting themes is partially illustrated in the schemas below. The theme will be explained in the description accompanied by an explanation of the description of each theme and category with several quotes from the participants.

**Table 3.** Analysis of Interview Results

Bab	Sub Bab	Theme Conclusion
Human Resources	1.1	What you know about Electronic Medical Records (EMR)? The researcher asked about the meaning of Electronic Medical Record (EMR) according to the informant, and on average had an answer that Electronic Medical Record (EMR) is an electronic medical record in the form of data input.
	1.2	Is Electronic Medical Record (EMR) easy to apply? The researcher asked about the ease of application of Electronic Medical Records (EMR), and on average had an answer that Electronic Medical Records (EMR) were easy to apply. Even so, there are also some informants who state that Electronic Medical Records (EMR) are too complicated, because they have to work twice, namely manual and data input.
	1.3	What experience have you had and or what training have you received related to the Electronic Medical Record (EMR) application? The researcher asked about the training obtained related to the Electronic Medical Record (EMR) application, and on average had an answer that there had been socialization from the health office in the form of direct socialization and facilitated by zoom. However, there is still no training, only in the form of a brief explanation through professional organizations such as PDGI for dentists and ASRI for general practitioners

Bab	Sub Bab	Theme Conclusion
	1.4	What obstacles are faced in applying Electronic Medical Records (EMR)? The researcher asked about the obstacles faced in applying Electronic Medical Records (EMR), and on average had answers to internet and network constraints.
Sosial budaya	2.1	Can Electronic Medical Records (EMRs) be applied appropriately in daily practice? The researcher asked about the application of Electronic Medical Records (EMR) appropriately in daily practice, and on average had a possible and smooth answer as long as the internet network was smooth.
	2.2	What is the connectivity between the owner/dr/drg.praktijk and the medical record officer (nurse/admin/etc.) who handles Electronic Medical Records (EMR) in patient registration? The researcher asked about the connectivity between the owner and the medical record officer who <i>handles the</i> Electronic Medical Record (EMR) in patient registration, and on average had an easy answer to the connection between the owner and the medical record officer.
	2.3	How to overcome obstacles in the Electronic Medical Record (EMR) application? Peneliti menanyakan tentang kendala aplikasi Rekam Medis Elektronik (EMR), dan rata-rata memiliki jawaban tidak ada kendala asalkan jaringan internet lancar. Namun, ada juga yang memiliki kendala dalam pemahaman memasukkan data di Rekam Medis Elektronik (EMR), karena belum ada pelatihan hanya berupa sosialisasi saja.
Governance and leadership	3.1	How is the readiness of the owner as a practice leader regarding the Electronic Medical Record (EMR) application? The researcher asked about the readiness of the owner as a practice leader related to the Electronic Medical Record (EMR) application, and on average had a ready answer, because they already had facilities such as laptops and tablets.
	3.2	What is the owner's responsibility for the Electronic Medical Record (EMR) data that has been inputted by the Electronic Medical Record (EMR) nurse/admin? The researcher asked about the owner's responsibility for the Electronic Medical Record (EMR) data that had been input by the nurse/Electronic Medical Record (EMR) admin, and on average had a fully responsible answer. This is because the medical record card with the data entered is the same.
Infrastructure	4.1	How is the preparation of devices and costs in the application of Electronic Medical Records (EMR)? Researchers asked about the preparation of devices and the cost of applying Electronic Medical Records (EMR), and on average had the answers ready.
	4.2	What are the capabilities, interoperability and data recovery? The researcher asked about the capability, interoperability and recovery of the data and on average had no problems as long as the internet network was smooth. However, there are also those who have problems because they do not have <i>data backup</i> .
Government policy	5.1	What do you think about the government's policy in the implementation of Electronic Medical Records (EMR)? The researcher asked about government policies in the implementation of Electronic Medical Records (EMR), and on average, they still had answers that needed improvement. This is because there is not much training held by the government, only in the form of socialization.
	5.2	Is it good or does it still need a lot of changes? The researcher asked about government policies in the implementation of Electronic Medical Records (EMR), and on average, they still had answers that needed improvement. This is because there is not much training held by the government, only in the form of socialization.

Based on table 3 shows that Human Resources in general have a basic understanding of Electronic Medical Records (EMR) and show initial readiness, but still need more intensive technical training support for optimal implementation. Socially and culturally, the work environment is quite open to the use of Electronic Medical Records (EMR). However, technical understanding and more systematic communication support are still needed so that it does not depend solely on internet stability. Leadership in the implementation of Electronic Medical Records (EMR) is quite good, with the commitment and responsibility of practice owners. This is an important capital in the successful transition from manual to digital systems. Physical infrastructure is already quite supportive, but it is necessary to improve the aspects of data security and information recovery systems to anticipate technical risks. The implementation of government policies in the implementation of Electronic Medical Records (EMR) is considered not optimal, especially in terms of providing continuous training. More concrete and operational regulatory support is needed at the service level.

## 4. Discussion

### 4.1 *The Condition of Human Resources in the Readiness to Implement Electronic Medical Records*

The findings of this study show that the readiness of human resources (HR) is one of the main determining factors in the successful implementation of Electronic Medical Records (EMR). Most general practitioners and dentists in Pasuruan City have understood Electronic Medical Records (EMR) as a form of digitization of conventional medical records. This understanding reflects a good initial readiness conceptually for technological innovation in the healthcare sector.

The ease of use of Electronic Medical Records (EMR) was felt by respondents, especially those who are younger or have a habit of using digital devices. In contrast, respondents who are elderly or have worked in manual systems for decades show a tendency to experience obstacles in the process of data input and system adaptation. This is in line with the findings Maharani (2024) and Haleem et al. (2022) which shows that age and work habits are important factors in the acceptance of new technologies.

Demographically, respondents ranged in age from 27–64 years, with the majority being in the middle productive age until retirement. However, the age gap creates a gap in the speed of adaptation to digital systems. Young doctors show greater flexibility and openness in operating Electronic Medical Records, while doctors with longer work experience require training support to optimize the use of the system effectively (Rahal et al., 2021).

The majority of respondents have a final education of S1, with a small number having taken S2 education. The level of education is generally quite supportive in understanding health information systems, but these findings also indicate that the level of education alone does not guarantee technical skills in the use of Electronic Medical Records (Zakerabasali et al., 2021). The lack of technical training and mentoring is the main factor in the limited understanding of operational aspects, such as patient data input or integration into national systems such as Satu Sehat.

The factor of long working also affects the readiness of implementation. Respondents with long work experience are more familiar with manual systems and show resistance to digitalization. However, with the right training, their experience in medical data management can be an asset to integrate digital systems. On the other hand, new doctors tend to not have an attachment to manual systems, making it easier to accept new technologies (Zhang et al., 2022).

Gender factors did not show a significant difference in implementation readiness. However, social roles and access to training may differ depending on the structure of the respective practice venue (Baiduri et al., 2023). Training and socialization are important aspects, as it was found in this study that the majority of respondents only received basic socialization, without in-depth technical training. This is the main obstacle in the process of transitioning the system from manual to digital.

On the other hand, awareness of the importance of data accuracy and integrity has been formed among respondents, as shown by the high sense of responsibility in the data input and verification process. This is a positive indicator that professionally, human resources have been committed to the implementation of a reliable health information system (Abdullah & Almaqtari, 2024).

These results support previous research by Hastuti et al. (2023), which emphasizes the importance of training, age, and technological understanding in the successful implementation of Electronic Medical Records. This research is also in line with the findings Sukadana & Lestari (2023) which states that positive attitudes towards Electronic Medical Records (EMR) are influenced by the perception of benefits, ease of use, and infrastructure support.

Overall, the readiness of human resources in Pasuruan City in adopting Electronic Medical Records is at a fairly good level, but still faces significant challenges in terms of technology adaptation, availability of technical training, and supporting operational policies. Therefore, a human resource strengthening strategy is needed that not only emphasizes basic knowledge, but also practical training that is sustainable and based on the demographic needs of existing health workers.

### 4.2 *Work Culture Conditions in the Readiness for the Implementation of Electronic Medical Records*

Work culture plays an important role in the successful implementation of health information technology, including Electronic Medical Records (EMR). Based on the results of this study, the work culture at the private practice of doctors and dentists in Pasuruan City shows relatively adaptive characteristics, but still faces a number of challenges in the transition process to the digital system.

Most respondents stated that Electronic Medical Records (EMRs) can be applied in daily practice, with the main note being the stability of the internet network. This shows the flexibility of a work culture that is open to change. However, there are still many manual and digital double recording practices that indicate that the old work culture has not been completely replaced. This cultural transition requires time and consistent mentoring (Westerman et al., 2019).

In terms of employment relations, there is good collaboration between practice owners and administrative officers. Active communication and clear division of roles indicate that a functional work structure is already in place. However, uneven technical understanding and lack of training have led some medical personnel to rely on informal communication such as WhatsApp groups to resolve technical issues, reflecting the limitations of formal support systems.

Work experience also affects the readiness of the work culture for change. Senior respondents, especially those who have worked for more than 30 years, show a tendency to retain manual methods, while younger medical personnel are more likely to adapt to digital technology. However, most senior personnel still show a desire to learn, as long as it is accompanied by a gradual approach and adequate guidance (Edo et al., 2023).

High workload, limited equipment, and minimal budget are also obstacles in forming a work culture that supports the implementation of Electronic Medical Records (EMR). Some respondents stated that despite being mentally prepared, the devices and infrastructure at the practice site have not supported the implementation of Electronic Medical Records (EMR) optimally (Tsai et al., 2020).

In addition, the attitude of complying with government policies is the main motivation for some medical personnel in running the Electronic Medical Record (EMR) system, even though they are not fully aware of the technical benefits. This reflects a work culture that is responsive to regulations, but not yet entirely based on professional initiative or work efficiency.

The researcher argues that the overall work culture at private practice places in Pasuruan City can be said to be still in the transition stage towards full digitalization. Good collaboration and openness to innovation have been seen, but they need to be strengthened through ongoing technical training, systematic communication, and adequate infrastructure and budget support. This is in line with previous research Sari (2023) and Ariani (2023) which emphasizes the importance of organizational culture and training support in the successful implementation of health information systems.

#### *4.3 Governance and Leadership in Readiness for Electronic Medical Record Implementation*

Governance and leadership have a central role in the process of implementing Electronic Medical Records (EMR) in the private practice of doctors and dentists. The results of this study show that most practice owners show readiness in structural aspects, such as the provision of devices (laptops/tablets) and supervision of the data input process. This readiness was largely fueled by regulatory pushback from the Ministry of Health, reflecting a leadership style based on compliance with rules, rather than mere awareness of the benefits of digital systems (Foss et al., 2023).

In terms of responsibility, practice owners are generally active in ensuring the accuracy of data, and are even directly involved in the input verification process. This shows a high commitment to health data integrity. Demographically, the majority of practice owners are at a mature productive age and have long work experience, which is an important capital in decision-making and organizational structure. However, training limitations and technical constraints such as unstable internet networks are still challenges in the implementation process (Mahrinasari et al., 2021).

Decision-making in the implementation of Electronic Medical Records is highly dependent on the managerial capacity and direct involvement of the leader in the operational process. tend to be top-down, carried out directly by the practice owner. However, the participation of medical personnel in the planning process is still needed so that the system can be adjusted to the needs of the field (Fauzi et al., 2025). The lack of detailed planning, especially related to training schedules and handling of technical obstacles, is one of the weaknesses of governance in several practice places.

Kepemimpinan yang kuat dan proaktif terbukti mempercepat kesiapan implementasi Rekam Medik Elektronik sangat bergantung pada kapasitas manajerial dan keterlibatan langsung pemimpin dalam proses operasional.. Responden yang bekerja di bawah kepemimpinan yang mendukung menyatakan merasa lebih siap secara teknis maupun mental. Namun, tempat praktik yang minim pengawasan dan arahan dari pimpinan menunjukkan hambatan yang lebih besar dalam proses transisi digital. Dukungan perangkat keras dan alokasi anggaran yang tepat juga menjadi bagian penting dari tata kelola yang efektif (Desy Tantri & Heltiani, 2024).

In addition to internal leadership, support from external parties such as the Health Office and professional organizations also plays an important role. Although some support is already available, communication between the practice and relevant agencies still needs to be improved, especially in terms of policy socialization and the provision of structured technical training. Periodic evaluation of implementation has also not been carried out systematically, even though this is necessary to identify obstacles and formulate follow-ups. These findings are in line with transactional leadership theory (Bass & Avolio, 1993) dalam the context of self-practice, where owners tend to act on regulations to maintain operational stability (Yanti & Mursidi, 2021). Leadership readiness is also affected by external pressures and infrastructure support, as revealed in the research Rumbay et

al. (2022) and Yilma et al. (2023), which emphasizes that the successful implementation of Electronic Medical Records is highly dependent on managerial capacity and direct involvement of leaders in operational processes.

The researcher argues that good governance and leadership have a key role in the readiness for the implementation of Electronic Medical Records (EMR) in private practice places in Pasuruan City. Leaders who support digital change and technology, accompanied by careful planning and adequate resource allocation, will go a long way in helping a successful implementation process. However, challenges such as lack of financial support, inadequate infrastructure, and lack of evaluation after implementation, need to be addressed in order for Electronic Medical Records (EMRs) to be implemented effectively and efficiently. For this reason, it is important for private practice venues to strengthen internal governance and improve coordination with relevant external parties to support the successful implementation of Electronic Medical Records (EMR).

#### *4.4 Infrastructure Conditions in the Readiness to Implement Electronic Medical Records*

Infrastructure is a fundamental aspect in the readiness of the implementation of Electronic Medical Records (EMR), especially in first-level healthcare facilities such as private practice of doctors and dentists. The results of this study show that most practices already have basic infrastructure, especially hardware such as computers and tablets, which are generally considered adequate to support the operation of the Electronic Medical Record (EMR) system. However, there are variations in device quality and limited number of units in some places, which impacts the efficiency of data input.

The most dominant problem found is the instability of the internet network, which directly affects the smooth access of the system, the storage of patient data, and the effectiveness of services. Connection disruptions, especially during peak hours, cause delays in data input and potential loss of information, as conveyed by a number of respondents. This shows that a reliable network infrastructure is a crucial component in the optimal implementation of Electronic Medical Records (EMR) (Javaid et al., 2024).

In addition to hardware and networking, Electronic Medical Record (EMR) software is also a concern. Although most respondents had taken basic training, there were still obstacles in the navigation of the system that were considered complicated or unintuitive. Some respondents proposed the need for interface updates and feature adjustments to better suit the needs of self-practice. Periodic evaluation and updates of the system are essential for the software to truly support the work efficiency of medical personnel (Ştefan et al., 2024).

The security and sustainability aspects of data are also still a challenge. Some practices do not have adequate backup systems, so there is a risk of losing important data in the event of a technical glitch. Concerns about potential medical data leaks were also expressed by respondents, demonstrating the importance of strengthening security systems and reliable data recovery procedures.

Selain itu, dukungan teknis pasca-pelatihan masih belum memadai. Banyak tenaga medis merasa kesulitan ketika menghadapi kendala teknis, tanpa adanya tim pendukung yang responsif. Hal ini memperlihatkan bahwa dukungan teknologi tidak hanya berhenti pada pelatihan awal, tetapi juga harus mencakup layanan bantuan teknis yang berkelanjutan, sebagaimana disarankan oleh Quintary et al. (2025).

Although most of the respondents are from the middle to senior productive age group, with more than 10 years of work experience, adaptation to digital technology remains highly dependent on the availability of technical support and training, not just on individual psychological readiness. Theoretically, this condition is in accordance with the HOT-Fit Model framework, which emphasizes the importance of compatibility between human, organizational, and technological aspects in the implementation of health information systems (Sinaga et al., 2025). In this context, technology-fit has not been fully met, as constraints on network and application infrastructure still hinder the optimal use of Electronic Medical Records (EMR).

These findings are reinforced by research Fida Pratama et al. (2024) which states that the successful implementation of Electronic Medical Records (EMR) is highly dependent on the readiness of infrastructure, especially internet networks and hardware. The same thing is also affirmed by Tajirian et al. (2022), that without adequate infrastructure, Electronic Medical Records (EMRs) will only serve as administrative formalities and fail to support clinical practice effectively.

The researcher argues that the infrastructure condition at the private practice venue in Pasuruan City shows that although there are several adequate facilities, there are still shortcomings that need to be corrected to support the effective implementation of Electronic Medical Records (EMR). Some of the main challenges found include internet network instability, hardware limitations, and lack of technical support after training. For this reason, improvements need to be made in terms of providing more adequate hardware, improving the quality of the internet network, and ensuring the sustainability of training

and technical support. By improving this infrastructure, the implementation of Electronic Medical Records (EMR) at private practice venues in Pasuruan City can run more smoothly, improve the efficiency of medical services, and ensure the security and sustainability of patient data management.

## 5. Conclusions

The conclusion of this study is that the readiness of human resources, work culture, leadership governance, and infrastructure have an important role in supporting the implementation of Electronic Medical Records (EMR) in private medical and dental practices in Pasuruan City. This study recommends that practice owners and policymakers improve technical training, strengthen infrastructure, and build a work culture that is more adaptive to digital technology. In addition, proactive and collaborative leadership support needs to be enhanced to drive an effective transition from manual to digital systems. Further research is suggested to expand the scope of variables, for example by considering organizational factors, policy support, and patient perceptions of the use of Electronic Medical Records (EMRs), in order to gain a more comprehensive understanding of the successful implementation of these systems.

## Conflict of Interest

There is no conflict of interest

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