# Analysis of Electronic Medical Record Implementation in The Administrative Process of the Beauty Clinic X

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**Abstract**

In the rapidly advancing era of globalization, the healthcare sector is increasingly integrating information technology to enhance operational efficiency. This research investigates the implementation of Electronic Medical Records (EMRs) in the administrative processes of Beauty Clinic X. The study aims to understand the extent of EMR usage, identify obstacles encountered during implementation, and explore efforts to overcome these challenges. Data were collected through interviews, observations, and documentation, with both primary and secondary sources providing comprehensive insights. The findings reveal that the transition from manual to electronic systems presents significant challenges, stemming from both human resource and systemic factors. Despite these obstacles, the study highlights the potential benefits of EMRs in facilitating the preparation of financial reports, enabling online delivery of receipts, and allowing patients to access their own medical information through the SATUSEHAT platform.This research contributes to the existing literature by focusing on beauty clinics, providing insights and recommendations for optimizing EMR use in similar healthcare facilities.

**Keyword:**

*Electronic Medical Records, Administration, Beauty Clinic*

## 1. Introduction

In the era of globalization, technology is rapidly advancing, prompting many organizations, including those in the healthcare sector, to implement information technology in their operations. One of the widely used information technology implementations in healthcare is the electronic medical record (EMR) system. EMRs can help store and process patient data digitally, thereby expected to improve the efficiency and effectiveness of services.

However, based on a survey by the Indonesian Hospital Association (2022), out of 3,000 hospitals in Indonesia, only 50% have implemented electronic medical record systems, and only 16% have properly managed them. This fact indicates that many hospitals still need to transition to electronic systems and optimize the systems that have been implemented. Not only in hospitals, but the implementation of electronic medical records is also becoming a necessity for other healthcare facilities, including beauty clinics. This is in line with a circular letter from the Ministry of Health requiring all healthcare facilities to use electronic medical records integrated with SATUSEHAT by December 31, 2023, at the latest. The government, through the Minister of Health, will impose administrative sanctions on healthcare facilities that do not implement electronic medical records (EMR). These sanctions can range from written warnings to license revocation. The implementation of EMRs is essential because it can reduce workload, costs, and medical errors, as well as improve the efficiency of healthcare services for patients.

Previous research has shown that the use of EMRs in hospitals can increase service quality by 1.84 times compared to those not fully utilizing EMRs. However, another study in 27 countries found concerns related to data quality, financial and resource barriers, and system integration difficulties. Factors influencing EMR implementation include human resource support, hardware, financial support, leadership, training, and technical support.Pre-research results at Beauty Clinic X show that half of the respondents experienced difficulties in using EMRs. This is due to the transition period from manual to electronic systems and the presence of many unnecessary buttons for clinic administrative activities. Additionally, 75% of respondents stated that the use of EMRs did not expedite the patient administration process.

Previous research generally focused on hospital and general clinic environments, while this study will focus on the use of EMRs in beauty clinics, which is rarely found in previous studies. This presents an opportunity to develop appropriate solutions and recommendations for optimizing the use of EMRs in the administrative processes of Beauty Clinic X.

The research questions are:

1. How is the implementation of EMR usage in the administrative processes of Beauty Clinic X?
2. What are the obstacles encountered in the use of EMRs in the administrative processes of Beauty Clinic X?
3. What efforts are being made to overcome the obstacles in the use of EMRs in the administrative processes of Beauty Clinic X?

The objectives of this research are:

1. To understand the implementation of EMR usage in the administrative processes of Beauty Clinic X.
2. To identify the obstacles encountered in the use of EMRs in the administrative processes of Beauty Clinic X.
3. To determine the efforts made to overcome the obstacles in the use of EMRs in the administrative processes of Beauty Clinic X.

## 2. Literature Review

### 1.1 Definition of Electronic Medical Record (EMR)

Electronic Medical Records (EMRs) represent a systematic collection of patients' medical information in electronic form, playing a crucial role in enhancing the quality of care, ensuring ease of information access, and increasing patient satisfaction. EMRs are connected and integrated with the information systems within the hospital network.

According to Setyadi & Nadjib (2023), EMRs are an essential system to implement as they can reduce the workload, costs, and errors of physicians. EMRs can also benefit patients through efficiency in the healthcare service process. Furthermore, as per Jeyakodi (2016), EMRs provide a means to create clear and organized records, as well as enable access to patients' clinical information. EMRs are a vital tool for improving the safety and quality of healthcare services.

Based on these statements, it can be concluded that EMRs are a patient medical information system that plays a crucial role in healthcare services. EMRs can enhance the quality of care, facilitate access to information, and increase patient satisfaction. The use of EMRs can also help reduce the workload, costs, and errors of medical personnel, as well as improve the efficiency of services for patients

### 1.2 Electronic Medical Record Feature

Electronic Medical Records (EMRs) represent a system with numerous benefits. At Beauty Clinic X, EMRs are implemented to facilitate the management of patient data and replace the manual recording system. EMRs are a multifunctional document that contains patients' electronic health records, which are updated in real-time, thereby extending the lifespan of patient data.

Although EMRs offer a wide range of features, Beauty Clinic X does not require complex features as it is not a general clinic or hospital. Therefore, Beauty Clinic X is more selective in utilizing the EMR features that are most suitable for its administrative needs. The following are the EMR features used by Beauty Clinic X:

1. Registration Dashboard: Used to view patient visit graphs, monthly patient visit data, as well as monitor, analyze, and manage the patient registration and visit processes. This information can assist in decision-making and improving the quality of service.
2. Patient Data Feature: Used to input new patient data, update the data of registered patients, and facilitate the registration process and patient data management.

3. Patient Action Feature: Simplifies the recording and documentation of medical actions provided to patients, as well as automatically integrates the action data with the electronic Medical Record system.
4. Patient Prescription Feature: Used to manage and record the list of prescribed medications given to patients, as well as structurally integrate the prescription data with the electronic Medical Record system.
5. Cashier Feature: Used as a patient payment method, can print payment receipts, and provide certainty and transparency to patients regarding the payments made.

### 1.3 Benefits of Electronic Medical Records

Electronic Medical Records (EMRs) are a system that offers numerous benefits to its users. Firstly, their usage can enhance archiving efficiency by digitally storing all patient medical records, while also reducing the need for physical document storage. Moreover, EMRs can help mitigate manual recording errors, ensuring more accurate and comprehensive patient data. In a study conducted by Janett & Yeracaris (2020), EMRs have been proven to improve the quality and reliability of healthcare services when implemented effectively.

Furthermore, hospitals or healthcare providers that utilize EMRs can enhance the quality of healthcare by 1.84 times compared to those not using EMRs (Windari et al., 2023). Additional advantages of EMRs include enabling real-time access to patient medical information by various healthcare providers, providing clinicians with quick access to patient medical data, and saving the storage space previously required for paper-based medical records (Alpert, 2016).

In conclusion, EMRs offer a multitude of benefits for both healthcare professionals and patients. For healthcare professionals, EMRs facilitate easy access to patient information, which enhances patient safety and clinical decision-making. For patients, EMRs can improve the efficiency of the healthcare process.

### 1.4 Disadvantages of Electronic Medical Records

The utilization of electronic medical records (EMRs) indeed offers numerous benefits to its users and patients. However, there are several drawbacks or obstacles in the use of this system. According to Risnawati & Purwaningsih (2024), the barriers in the use of EMRs can be divided into four categories: man factors, machine factors, method factors, and money factors.According to Ariffin et al. (2018),most developed countries have increasingly adopted EMRs to enhance their work processes. Nevertheless, many developing countries face significant challenges in utilizing this system. One of the primary challenges is the issue of patient data privacy and confidentiality. In open networks, patient information can be easily found, requested, and obtained by unauthorized parties.

Additionally, there are organizational and social barriers in the use of EMRs. Some staff members feel burdened by the demand to input and document all patient information into the system, which can lead to a decrease in productivity. This can create a negative perception among patients who feel they are not receiving adequate attention. The implementation of EMRs also requires adequate training programs and consistent practices.

Technological limitations also pose a challenge in the adoption of EMRs. The EMR software systems used in various hospitals are not yet standardized across the

country. Moreover, when the system experiences disruptions, healthcare staff must revert to paper-based systems, which can result in the loss of critical information that may impact patient care. Overall, the use of EMRs has many benefits in improving the efficiency of healthcare services, but it also faces several challenges that need to be addressed. These challenges include inadequate preparation in terms of technology and healthcare worker education, as well as limited budgets. Furthermore, data privacy and security issues, organizational barriers, and technological limitations are significant hurdles in the adoption of electronic medical records.

### 1.2 Success Factors of Electronic Medical Records

In the process of implementing the electronic medical record (EMR) system, there are several benefits as well as barriers that can be encountered. However, there are also several supporting factors that determine the success in the use of this system. The factors that determine the success of EMR implementation are technical factors, organizational factors, political factors, financial factors, training factors, and ethical factors (Amin et al., 2021; Fritz et al., 2015).

The technical factor includes the readiness of adequate infrastructure to support the effective use of the EMR system. Organizational factors include managerial issues related to changes in work processes and organizational culture due to the adoption of EMR. The political factor is related to health policies and regulations that form the basis for the implementation of EMR. The financial factor is related to adequate funding for the initial investment and operational costs of the EMR system.The training factor is carried out to ensure that healthcare personnel have adequate capabilities in using the EMR system. The ethical factor includes compliance with legal regulations related to the protection of patient data and privacy. The balance and proper management of these six factors can determine the success of EMR implementation in healthcare services.

Ritonga & Ayuningtyas (2019) also noted that the success factor in implementing EMR is the use of accurate, complete data, and effective management. This can certainly be a reference for healthcare organizations in designing and implementing effective, efficient, and sustainable EMR implementation strategies. Thus, the optimal benefits of the EMR system can be achieved.

## 2. Material and Method

### 2.1 Design Study

Researcher used a qualitative research design with a case study approach supported by data collection methods with interviews, observation, and documentation which in this study aims to investigate the extent of the impact from the implementation of Electronic Medical Records (EMR) in Beauty Clinic X, as well as Beauty Clinic X's efforts in supporting its patients' daily administrative activities. The purpose is to gain a comprehensive understanding of the effectiveness of EMR application within the context of Beauty Clinic X's operations. Furthermore, the data sources and research sample can be described as follows:

**a.** Primary Data Sources

By utilizing primary data through interviews and direct observation, the researchers can certainly obtain more accurate, relevant, and up-to-date information related to the focus of their study. This primary data can provide a more realistic and factual depiction of the phenomena or issues being examined, thereby strengthening the analysis and conclusions of the research.

**b.** Secondary Data Sources

The collection of secondary data, according to the researchers, involves data that is obtained indirectly, which is acquired through books, journals, and previous studies that are related to the problem being investigated

## 2.2 Data Analysis

In the data analysis process, there are stages that the researcher must go through. These stages include the following:

1.) Data Collection

The data and information obtained by the researcher have been obtained by the informants through interviews, observations, and documentation, which are combined into a research note containing two aspects: descriptive notes, which are natural records containing what has been heard, experienced, recorded, seen, and felt without any response from the researcher to the phenomena that occurred in the field, and reflective notes, which contain the impressions, messages, comments, and interpretations of the researcher regarding the things they have encountered, obtained from the results of interviews with informants.

2.) Data Reduction

Data reduction is the process of transforming the raw data obtained from the field into important data needed in the research. Part of this process is summarizing, selecting the main things, and focusing on the important things. The data resulting from interviews and documentation are data that have not been well-structured, which still needs a selection process, where it will be simplified and presented by selecting relevant data that can answer the research problem.

3.) Data Presentation

Data presentation is the process of organizing the information obtained from the data reduction process and then presenting it in a systematic and easily understandable report. This is intended to make it easier for researchers to see the results of the research, as the large amount of data obtained can make it difficult for researchers to see the overall picture of the research results or the process of concluding, as the research results are still in the form of stand-alone data.

4.) Conclusion Drawing/Verification

The last step in data analysis is concluding. Concluding is an effort to search for or understand the meaning of patterns, clarity, cause and effect, or propositions. Concluding research is done by connecting and comparing existing theories with the results in the field as answers to research related to

the implementation of electronic medical records in the administration of the Beauty Clinic X.

## 4. Result

To achieve a comprehensive understanding of the implementation of the EMR system in the administrative processes of Beauty Clinic X, the researchers collected data through interviews, observations, and literature studies. The interview questions were developed based on indicators from previous research, which were then further adjusted to address the research questions of this study. In this research, the indicators utilized by the researchers include system usage, technological knowledge, and system functionality (Fritz et al., 2015; Ngugi et al., 2021). the results of the interviews that have been obtained are described as follows:

### a. Implementation of Electronic Medical Records (EMR)

Based on the interview results, all staff members at Beauty Clinic X feel they are proficient and do not experience any difficulties in using the EMR system, and have experienced several benefits from the utilization of this system. The perceived benefits include facilitated financial reporting, online issuance of receipts, and the ability for patients to access their own medical information through the SATUSEHAT platform.

### b. Barriers in the Implementation of Electronic Medical Records (EMR)

Based on the interview results, the staff of Beauty Clinic X faced several challenges in the use of the EMR system in the administrative processes of Beauty Clinic X. The majority of the staff experienced difficulties during the initial adaptation stage of using this system. Additionally, there were also constraints in the administrative processes that took a considerable amount of time due to the numerous buttons and features that were not being utilized, as well as signal disruptions that caused the system to load slowly. These obstacles indicate that while the EMR system provides numerous benefits to its users, there are still challenges that need to be addressed to improve the efficiency and convenience of the administrative processes.

### c. Efforts to Overcome Barriers in the Implementation of Electronic Medical Records (EMR)

Based on the previous interview findings, it can be concluded that Beauty Clinic X has undertaken several efforts to address the challenges in the implementation of the Electronic Medical Records (EMR) system. The clinic has provided guideline steps for usage and initial training with the assistance of the IT team from the EMR vendor to help the staff adapt to the new system. Additionally, efforts have been made to call in experts to resolve the issues with the constrained network connectivity.

However, it is important to note that there are still some unresolved challenges, such as the constraint that the available time is often insufficient due to the numerous features within the EMR system that remain unused. Although there have been efforts to enhance the patient experience by offering beverages and

explanations during delays, more effective long-term solutions may be required to improve the efficiency and convenience of the patient administrative processes

## 2. Discussion

### a. Implementation of Electronic Medical Records (EMR)

Beauty Clinic X has implemented an electronic medical records (EMR) system in its administrative processes, in line with technological advancements. The implementation of EMR at Beauty Clinic X has progressed smoothly and provided numerous benefits to the staff, such as facilitating the preparation of financial reports, enabling online delivery of receipts, and allowing patients to access their own medical information through the SATUSEHAT platform. The research findings indicate that the implementation of EMR at Beauty Clinic X has proven to enhance the quality and reliability of healthcare service delivery

### b. Barriers in the Implementation of Electronic Medical Records (EMR)

Based on the observations and interviews, it was found that the implementation of the electronic medical records (EMR) system at Beauty Clinic X faced several significant barriers. Participants reported challenges in adapting to the new system, primarily due to the presence of numerous unused features and buttons. This was exacerbated by the limited technological knowledge of the clinic staff. Additionally, signal disruptions resulted in slow system loading, which disrupted the smooth operation of tasks. Although the implementation of EMR has provided benefits, efforts are required to address the identified barriers to ensure more optimal utilization.

### c. Efforts to Overcome Barriers in the Implementation of Electronic Medical Records (EMR)

The implementation of a new system, such as the Electronic Medical Records (EMR), in an organization requires a process of adaptation that is not easy. Beauty Clinic X has undertaken several efforts to overcome the barriers in implementing EMR, including providing training for employees to familiarize them with the features of the new system, engaging network expert consultants to address technical issues, and offering welcome drinks for patients to ensure their comfort during the administrative process, which may take longer due to system adjustments. These efforts are aimed at supporting the smooth delivery of clinic services to patients amid the ongoing system changes.

## 3. Conclusion, Implication, and Recommendation

### a. Conclusion

1. The Implementation of Electronic Medical Records (EMR) in the administrative processes of Beauty Clinic X has progressed smoothly, and the staff have experienced the benefits of implementing this system. The perceived benefits include facilitating the preparation of financial reports, enabling online delivery of receipts, and allowing patients to access their own medical information through the SATUSEHAT platform.
2. There are several barriers that need to be addressed in the Implementation of Electronic Medical Records (EMR) in the administrative processes of Beauty

Clinic X. The barriers arise from various factors, such as the initial adaptation challenges, the presence of numerous unused buttons and features, as well as signal disruptions that cause the system network to become slow.

3. Beauty Clinic X has undertaken several efforts to mitigate the barriers encountered in the Implementation of Electronic Medical Records (EMR) in its administrative processes. The efforts include providing training to support the staff's adaptation process, engaging network experts to ensure the smooth delivery of clinic services to patients, and offering welcome drinks for patients to help them wait calmly and avoid frustration due to the potentially longer administrative process through EMR.

**b. Implication**

1. Theoretical Implications

   The research findings support previous studies conducted by Ritonga & Ayuningtyas (2019), Janett & Yeracaris (2020), Windari et al. (2023), Amin et al. (2021), A.Novita, A.Farid (2023), Setyadi & Nadjib (2023), Sapriadi (2023), and Jeyakodi (2016). The research results indicate that the implementation of Electronic Medical Records (EMR) in the administrative processes of Beauty Clinic X has progressed smoothly, and the staff have experienced the benefits of implementing this system.

2. Practical Implications

   The research findings suggest that the implementation of Electronic Medical Records (EMR) in the administrative processes of Beauty Clinic X has a positive impact on its users, although there are some aspects that need to be improved. This statement is based on the participants' statements that the application brings several benefits in its implementation.

**c. Recommendation**

Based on the research that has been conducted, there are several recommendations for future research:

1. The researcher had time constraints in completing this study, and it is recommended that future research be conducted over a longer period, which will allow the researcher to deepen the analysis and achieve more comprehensive results.
2. To improve data representation, future research should involve a larger number of participants. With a wider sample, the research findings can be generalized to a more representative population.
3. It is recommended that future researchers expand the scope by examining several variables to obtain more diverse and comprehensive results.

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