

## Effectiveness Analysis Of Electronic Medical Record Implementation At Wangaya Regional General Hospital, Denpasar

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### ABSTRACT

The implementation of Electronic Medical Records (RME) in hospitals is an important effort to improve the efficiency of public administration and the quality of health services. However, in practice, the implementation of RME in regional hospitals, such as Wangaya Regional Hospital, Denpasar, still faces various challenges, including limited technological infrastructure, resistance from medical personnel, and unclear regulations. This research aims to analyze the effectiveness of implementing RME at Wangaya Regional Hospital from a public administration perspective. The method used is a literature review which summarizes various research in the last five years related to the implementation of RME in hospitals. The research results show that RME has the potential to increase administrative efficiency, transparency and accountability in medical data management, as well as speed up clinical decision making. However, the main challenges are still related to the lack of adequate technological infrastructure and the need for training for medical personnel. Recommended solutions include improving digital infrastructure, providing ongoing training for medical personnel, and strengthening regulations and policies regarding the use of RME. Effective implementation of RME in government hospitals will contribute significantly to improving the quality of health services in Indonesia.

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## INTRODUCTION

The implementation of electronic medical records (RME) is an important innovation in improving the efficiency and quality of health services in various countries. In Indonesia, the medical record digitization initiative is starting to be implemented gradually, especially in large hospitals and urban areas. One of the hospitals that is also implementing this system is Wangaya Regional General Hospital, Denpasar. As a public health service institution, the implementation of RME at Wangaya Regional Hospital not only aims to improve the quality of service to patients, but also optimizes aspects of public administration related to data management, transparency and accountability (Cyganek et al., 2016; Yudhiantara et al., 2019).

However, in practice, implementing RME often faces various challenges, especially in the administrative aspect. Some of the problems that often arise include unprepared information technology infrastructure, limited human resources who master digital

technology, and resistance from some medical personnel to changing manual systems to digital. Apart from that, the lack of clarity in regulations and policies at the public health institution level also slows down the optimization of the implementation of RME in government hospitals. This problem can impact the overall quality of health services, as well as create obstacles in terms of transparency and accountability of public administration (Fahri, 2022; Jabid et al., 2023; Ramli et al., 2022).

Various studies have highlighted the effectiveness of implementing RME in various hospitals. There is a study that compares two case studies of RME implementation and suggests a research-based approach to help implementers overcome implementation challenges and improve IT implementation strategies in the health sector (Norcahyani et al., 2022; Øvretveit et al., 2007; Setiawan et al., 2021; WMS et al., 2024). This study compiles a systematic review of the literature related to RME implementation in hospitals, providing a framework that includes RME context, content, and implementation processes to help address common issues in its implementation (Williams & Boren, 2008). This study describes lessons learned from implementing RME in a hospital in the United States, including challenges and solutions related to staff training and organizational culture change (Maust, 2012). This research assesses the readiness of Bethesda Lempuyangwangi Hospital in implementing RME, highlighting the importance of organizational alignment and management capacity in supporting successful implementation (Pradnyantara et al., 2022). This study describes the experience of RME implementation in a hospital emergency department in Tanzania, underscoring the importance of staff training, IT infrastructure, and management support for successful implementation in resource-limited health facilities (Mashoka et al., 2019).

The urgency of this research lies in the urgent need to evaluate the extent to which the implementation of RME at Wangaya Regional Hospital, Denpasar, contributes to increasing the effectiveness of public administration in the health sector. In the era of digitalization, public hospitals as public service providers have an important role in ensuring transparency, accountability and efficient management of medical data. Therefore, an in-depth study of the implementation of RME from a public administration perspective at Wangaya District Hospital is expected to provide relevant recommendations for public policy in the health sector.

This research aims to analyze the effectiveness of implementing RME at Wangaya Regional Hospital by reviewing various aspects of public administration, such as data management, transparency and accountability. (Antarini et al., 2022). By using a literature review method, this research attempts to summarize previous findings and map the obstacles and potential that arise in the implementation of RME in government hospitals. It is hoped that this research contribution can provide guidance for other government hospitals in optimizing the implementation of RME, especially in the context of public administration. Apart from that, it is also hoped that the results of this research can enrich academic discourse regarding the digitalization of health services in Indonesia, as well as provide input for policy makers in formulating regulations that better support the application of information technology in the health sector.

## METHODS

The research method used in this article is a literature review, which aims to identify, assess and summarize various research that has been published related to the topic of the effectiveness of implementing electronic medical records (RME) in hospitals, especially in the context of public administration. Literature review is a method that is often used to provide a comprehensive overview of the development of a research field by integrating various results of previous studies (Ibrahim et al., 2023; Sirat et al., 2023; Winarko et al., 2024). In this case, the author conducted a search for articles, books, reports and academic studies that were relevant to the application of RME in the health service sector, both nationally and internationally. This literature review process was carried out using academic databases. The selected articles are focused on the main topics related to the implementation of RME, its impact on the efficiency of public administration, as well as the obstacles and opportunities that arise in the implementation process. Each piece of literature identified was then critically analyzed to assess its suitability, the methods used, and the main findings relevant to this research. In the review process, the author also pays attention to the quality of the research studied, such as the methods used, the reliability of the data, and the relevance of the research results to the context of public administration in regional hospitals. The results of this literature review will be synthesized to identify existing research gaps, provide an explanation of the challenges in implementing RME, and offer recommendations based on empirical findings from previous studies. By using this literature review method, the research is expected to provide broader and deeper insight into the effectiveness of implementing RME at Wangaya Regional Hospital, Denpasar, as well as its implications for public administration management in the health sector.

## RESULTS AND DISCUSSION

To compile the results and discussion sections in this research, the process involved collecting, analyzing and compiling findings from the literature that has been reviewed. The first step in compiling the results and discussion is to collect various relevant research and reports related to the implementation of Electronic Medical Records (RME) in hospitals. This literature includes research that discusses the effectiveness of implementing RME, both from technical, clinical and public administration aspects, as well as various challenges and opportunities that arise in its implementation.

After the literature was collected, the author conducted a thematic analysis to identify patterns of findings that were relevant to the topic. The main findings from previous research are then grouped into several major themes, such as increasing administrative efficiency, transparency and accountability, challenges in implementing RME, and the impact on health services. Each of these themes is then discussed in depth in the context of implementation at Wangaya Regional Hospital, Denpasar. The author also highlights how the implementation of RME in regional hospitals such as Wangaya District Hospital is influenced by specific factors, such as technological infrastructure, human resources, and public health policies.

### **Effectiveness of RME Implementation in Increasing Public Administration Efficiency**

The results of the literature review show that implementing RME can significantly increase the efficiency of public administration in hospitals, especially in terms of managing patient data. RME allows centralized data storage, making it easier to access information by medical personnel and administrative staff. Implementing RME can reduce the time needed to search for and access patient data, which previously used manual, paper-based medical records. This efficiency is also reflected in the reduction of administrative errors, such as data duplication or loss of patient information, which often occur in manual systems.

At Wangaya Regional Hospital, Denpasar, the effectiveness of RME in managing patient data can also be seen in increasing the speed of clinical decision making, because patient information can be accessed in real-time by doctors and medical personnel. This contributes to improving the overall quality of health services. In addition, the integration of RME with other hospital management systems, such as payment or insurance systems, also speeds up administrative processes, which previously often experienced delays due to manual data processing.

### **Transparency and Accountability in Public Administration**

One of the main benefits of implementing RME in the context of public administration is increased transparency and accountability in data management. The RME system allows every action or change to patient data to be recorded automatically in the system, making it easier to trace information history. This is very important in increasing the accountability of public administration, where every decision taken by medical personnel or administrative staff can be accounted for

Apart from that, transparency in data management also provides benefits in terms of monitoring and auditing. At Wangaya Regional Hospital, the RME system makes it easier for hospital management to audit patient data, ensuring that the management of health information complies with applicable procedures and regulations. This also contributes to preventing fraud or administrative errors that can have a negative impact on the quality of health services.

However, although RME has great potential in increasing transparency, several challenges still need to be overcome, especially related to data security. In various countries, including Indonesia, the implementation of RME often faces problems related to privacy and patient data protection. Therefore, management of the RME system must be accompanied by strict security protocols to protect data from the threat of leaks or unauthorized access.

### **Challenges of Implementing RME in Government Hospitals**

Despite the many benefits offered by RME, the literature shows that implementation of this system is not always smooth, especially in government hospitals. At Wangaya Regional Hospital, several challenges faced are related to limited technological infrastructure and human resources. Many regional hospitals in Indonesia are not yet fully ready to adopt digital technology such as RME due to budget constraints and lack of technical support

Another challenge faced is resistance from some medical personnel who are still used to manual systems. Many doctors and nurses feel that using RME requires additional time to input data, which can disrupt their workflow. In addition, the lack of adequate training also

makes some medical personnel feel less confident in using this technology effectively. Therefore, ongoing training and technical support is essential to ensure a smooth transition from manual to digital systems.

Apart from internal factors, public health policy also plays an important role in the successful implementation of RME. In some cases, unclear regulations and policies regarding the use of information technology in government hospitals can slow down the RME adoption process. This is exacerbated by the lack of supervision from the authorities in ensuring that hospitals comply with the standards and procedures set in the use of RME (Mammadova & Jabrayilova, 2019).

### **The Impact of Implementing RME on the Quality of Health Services**

The implementation of RME not only has an impact on administrative aspects, but also has a direct effect on the quality of health services provided. The use of RME allows better coordination between various departments in the hospital, thereby speeding up the process of medical decision making and patient treatment. At Wangaya Regional Hospital, the use of RME helps minimize medical errors caused by a lack of access to complete and accurate patient information.

Additionally, RME also facilitates ongoing care management for patients with chronic conditions. Information regarding the patient's medical history, medications consumed, and laboratory results can be easily accessed by the doctor who treats the patient, both in the inpatient room and at the polyclinic. This helps ensure that patients receive care that is consistent and appropriate to their medical needs. This positive impact is not only felt by patients, but also by medical personnel who can work more efficiently due to faster and more accurate access to information.

### **Recommendations to Improve the Implementation of RME in Government Hospitals**

Based on the findings from the literature review, there are several recommendations that can be put forward to increase the effectiveness of implementing RME in government hospitals, especially at Wangaya Regional Hospital. First, improving technological infrastructure must be a top priority. Hospitals must have a stable and secure network system to support the implementation of RME, as well as ensure that the hardware and software used comply with the required standards. Second, ongoing training of medical personnel and administrative staff is essential to ensure that they have the necessary skills to use RME effectively. This training should cover not only the technical aspects of using the system, but also an understanding of the importance of data security and ethics in managing health information. Third, the government needs to strengthen regulations and policies regarding the use of RME in hospitals, and ensure that there is adequate supervision in implementing these policies. In addition, incentives for hospitals that succeed in implementing RME effectively can be an incentive for other hospitals to follow similar steps. Finally, it is important for hospitals to periodically evaluate the RME systems they use. This evaluation can include aspects of efficiency, data security, and the impact on the quality of health services. With regular evaluations, hospitals can identify weaknesses in the system and take necessary corrective steps.



## CONCLUSION

The implementation of Electronic Medical Records (RME) at Wangaya Hospital, Denpasar, has great potential to improve the efficiency of public administration, transparency and accountability in medical data management, as well as the quality of health services. However, challenges in terms of technological infrastructure, human resources and policies are still obstacles that need to be overcome. Therefore, continuous training, infrastructure improvements, as well as stronger regulations are important steps that must be taken to ensure the successful implementation of RME in government hospitals. With adequate support, RME can become an important instrument in improving the quality of health services in Indonesia, as well as providing long-term benefits in terms of efficiency and accountability of public administration.

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