

The use of Electronic Medical Records for Clinical Decision-Making at RSUD Dr. Hasri Ainun Habibie, Gorontalo Regency

Febrianti Prima Putri Halid^{1*}, Moh. Ichsan Arifin Antu², Merlin Abd. Rahman³

¹²³ D-III Medical Records and Health Information Study Program, STIKES Bakti Nusantara Gorontalo, Indonesia

*Corresponding author: febriantihalid25@gmail.com

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ABSTRACT

Electronic Medical Records (EMR) have become an important component of hospital information systems because they provide faster and more integrated access to patient information and may support clinical decision-making. This study aimed to describe the use of EMR in supporting clinical decision-making at RSUD Dr. Hasri Ainun Habibie, Gorontalo Regency, including the level of use, ease of access to patient information, healthcare workers' perceptions, and barriers to implementation. This study employed a descriptive qualitative design conducted in March–April 2026. Five informants were selected purposively, consisting of one information technology staff member as the key informant, one head of medical records as the main informant, two reporting staff members, and one medical support staff member. Data were collected through in-depth interviews, observation, and documentation, and analyzed through data reduction, data presentation, and conclusion drawing. The findings indicate that EMR has been implemented through the Hospital Management Information System (SIMGOS) and is routinely used in patient services. Healthcare workers directly involved in patient care are required to use EMR. Patient data completeness was reported at approximately 75%, categorized as fairly complete, although some system features were not yet fully utilized. EMR facilitated faster access to patient information and supported diagnosis, intervention, and therapy decisions. The main barriers were occasional network or system disruptions and user adaptation. Overall, EMR was perceived as useful for improving work efficiency, service quality, and the timeliness and accuracy of clinical decision-making. Continuous training, infrastructure improvement, system integration, data security, and development of clinical decision-support features are recommended.

INTRODUCTION

Electronic Medical Records (EMR) are digital systems used to store and manage patient health information, including medical history, examination results, prescriptions, and treatment records in an integrated manner. The implementation of EMR is intended to replace conventional paper-based records with a system that provides more efficient, accurate, secure, and accessible information. In Indonesia, the implementation of EMR is regulated by Minister of Health Regulation No. 24 of 2022 concerning Medical Records.

The availability of accurate and timely patient information is important in clinical decision-making. Healthcare workers need relevant information regarding patient complaints, examination results, vital signs, medical history, and treatment to determine diagnoses and appropriate interventions. An integrated EMR system can reduce the time required to retrieve information and facilitate coordination among healthcare units.

The preliminary findings in the study site indicate that EMR has been implemented through SIMGOS and is used by healthcare workers involved directly in patient services. Nevertheless, the implementation process still requires adaptation, particularly in relation to data completeness, system optimization, infrastructure, and network stability. Therefore, this study focused on the use of EMR, ease of access to patient information, healthcare workers' perceptions, and the barriers encountered in supporting clinical decision-making at RSUD Dr. Hasri Ainun Habibie, Gorontalo Regency.

The study aimed to describe how EMR supports clinical decision-making, identify barriers faced by healthcare workers, and describe the perceived benefits of EMR for the speed, accuracy, and quality of clinical decisions.

METHODS

This study used a descriptive qualitative approach. The research was conducted at RSUD Dr. Hasri Ainun Habibie, Gorontalo Regency, located on Jalan Kusno Tongkodu, Dutulanaa, Limboto District. Data collection was conducted in March–April 2026.

Five informants were selected using purposive sampling. The informants consisted of one IT staff member who served as the key informant, one head of medical records as the main informant, two reporting staff members, and one medical support staff member. Data were collected through in-depth interviews, direct observation, and documentation. The interview questions covered the level of EMR use, frequently used features, accessibility and completeness of patient information, contribution to clinical decision-making, benefits for service delivery, technical barriers, and suggestions for system improvement.

Data analysis involved data reduction, data presentation, and conclusion drawing. The analysis focused on identifying recurring themes concerning EMR utilization, access to patient information, perceived benefits, clinical decision-making support, and implementation barriers.

RESULTS

EMR Implementation and Level of Use

The findings show that EMR has been implemented at RSUD Dr. Hasri Ainun Habibie through SIMGOS. The key informant stated that the system had been used since the implementation of Minister of Health Regulation No. 24 of 2022. All hospital units were reported to have used EMR, and healthcare workers directly involved in patient care were required to use the system. EMR was used routinely in daily work for patient documentation and information management.

The use of EMR was generally considered good. However, a small proportion of healthcare workers had not yet optimized the use of the system. The features most frequently used were those related to electronic medical record documentation. The system was also reported to provide good access speed, while technical problems such as network disruptions or system errors occurred only occasionally.

Accessibility and Completeness of Patient Information

EMR facilitated faster access to patient information compared with manual records. Information could be retrieved electronically and used by healthcare workers in providing patient services. The main informant reported that patient-data completeness was approximately 75%, which was considered fairly complete. Nevertheless, some areas still required optimization, including prescription screening data and several components of the electronic medical record.

The findings indicate that the available information supported most clinical service needs, while the hospital continued to improve its management information system to strengthen the quality of clinical services and national information integration.

Support for Clinical Decision-Making

The informants perceived EMR as supporting clinical decision-making by making patient information easier to enter, retrieve, and review. Relevant clinical information, including patient assessments, vital signs, age, complaints, and other clinical records, could be accessed to support the assessment process. The system therefore assisted healthcare workers in determining diagnoses and selecting appropriate interventions and therapies.

The main informant described EMR as contributing to improved access to integrated patient information, coordination between units, work efficiency, and the potential accuracy of diagnosis and therapy. EMR was also perceived as contributing to improved service quality and patient safety.

Barriers and System Improvement

The main barriers identified were network or system disruptions and user adaptation. Although technical problems were reported to occur occasionally, the key informant stated that system problems could generally be handled within a maximum of approximately two minutes. The main recommendations were to strengthen infrastructure and network stability, provide routine training, improve integration among units, strengthen data security, and develop features that can better support clinical decision-making.

The hospital also conducts In-House Training (IHT) periodically, particularly for users who require additional assistance or experience delays in data entry. This training supports continued adaptation to the information system.

DISCUSSION

The findings demonstrate that EMR has become an integral part of patient service activities at RSUD Dr. Hasri Ainun Habibie. The requirement for healthcare workers directly involved in patient care to use EMR indicates that the system is not merely an optional administrative tool but part of routine clinical documentation. This condition

is consistent with the purpose of EMR implementation, namely improving the availability, efficiency, accessibility, and management of health information.

The approximately 75% level of patient-data completeness suggests that implementation has progressed but has not yet reached full optimization. In qualitative terms, the system was considered fairly complete, while certain data elements and features still required improvement. This finding indicates that successful EMR implementation depends not only on the availability of software but also on user compliance, workflow adaptation, infrastructure, and continuous system development.

Faster access to patient information was one of the most important benefits identified by the informants. In clinical practice, rapid access to relevant information can support healthcare workers when assessing patients and determining diagnoses and therapies. The findings therefore support the conceptual relationship between information accessibility and clinical decision-making described in the study framework.

The study also found that EMR was perceived to improve work efficiency and service quality. Integrated patient information can reduce the need to search for physical records and facilitate communication among units. However, these benefits depend on system reliability. Network disruptions, system errors, and incomplete data can reduce the effectiveness of EMR and may interfere with clinical workflows.

The results further indicate that user adaptation remains an important component of EMR implementation. Routine training, including In-House Training, can help users understand system functions and improve data-entry practices. Infrastructure improvement and stronger integration are also needed to ensure that EMR can provide consistent and reliable support for clinical services.

Overall, the findings suggest that EMR at the study site provides practical support for clinical decision-making, particularly through faster access to patient information, improved documentation, and greater work efficiency. However, the system should continue to be optimized through improvements in data completeness, infrastructure, integration, security, and clinical decision-support functionality.

LIMITATIONS

This study involved only five informants, so the findings may not represent all experiences of healthcare workers at the hospital. The descriptive qualitative design also does not provide statistical generalization. The findings primarily describe perceptions and experiences during the research period and therefore should be interpreted within the context of the study setting.

CONCLUSION

The use of Electronic Medical Records at RSUD Dr. Hasri Ainun Habibie, Gorontalo Regency, has supported routine patient services and clinical decision-making. EMR is implemented through SIMGOS, and healthcare workers directly involved in patient care are required to use it. The system facilitates faster access to patient information and supports diagnosis, intervention, and therapy decisions. Patient-data completeness was approximately 75%, indicating a fairly complete level of documentation, although several components still require optimization. The main barriers are occasional network or system disruptions and user adaptation. Continued infrastructure development, routine training, stronger system integration, improved data security, and development of clinical decision-support features are recommended to further optimize EMR utilization.

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