

Evaluation of the Hospital Information Management System (SIMRS) in the Medical Records Unit Using the Hot-Fit Method at RSUD Welas Asih

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ABSTRACT

This study aims to evaluate the effectiveness of the implementation of the Hospital Management Information System (SIMRS) in the Medical Records Unit of Welas Asih Regional Hospital using the HOT-Fit model, which includes the Human, Organization, Technology, and Net Benefit aspects. The research method is a descriptive quantitative survey with a total sampling technique, involving all 41 medical record officers as active SIMRS users. The data collection instrument was a Likert scale questionnaire that has been tested for validity and reliability. Analysis was carried out descriptively by calculating the average value of each component. The results show that the implementation of SIMRS is in the very good category with an overall average value of 4.68. The highest value is found in the Net Benefit aspect, namely 4.73, which confirms that SIMRS provides direct benefits in accelerating service flow and improving data accuracy. The Organization aspect obtained a value of 4.70, Human 4.68, and Technology 4.62, which overall indicate user readiness, organizational support, and system reliability. However, respondents still noted the need to improve network stability and feature development to optimize SIMRS utilization in supporting the medical records service process.

Keywords: HOT-Fit, SIMRS, medical records, system evaluation.

INTRODUCTION

Advances in information technology in the healthcare sector have significantly impacted hospital management systems, particularly in the management of patient data and information. As providers of public healthcare, Regional General Hospitals (RSUD) are required to have effective, efficient, and integrated information systems to ensure optimal service delivery. One important implementation of this advancement is the use of the Hospital Management Information System (SIMRS) in medical records units.

Medical records are a crucial source of information that serves as the basis for medical and administrative decision-making. In practice, various obstacles remain, such as delays in recording, data redundancy, and low information accuracy. Based on research by Sali Setiatin and Yuda Syahidin (2020) on the design of an electronic-based inpatient medical record storage information system, implementing a digital system has been shown to accelerate structured data access and storage. However, its effectiveness still depends on infrastructure readiness, user competence, and hospital organizational support.

Another study by TA Kusuma and Y. Yunengsih (2021) analyzing the effectiveness of implementing a hospital management information system in the medical records unit of the West Java Provincial Occupational Health Hospital (RSUD Kesehatan Kerja) showed that technical constraints and human factors, such as resistance to change, also influenced the success of SIMRS implementation. This is in line with the findings of Rian Rusmana and Irdi Sari (2022) who highlighted the implementation of the Generic Regional Health Information System (SIKDA) at the Campaka Community Health Center (UPTD), where system integration and user training were key factors in supporting the effectiveness of electronic medical records.

The digitalization of healthcare services requires hospitals to adopt information systems capable of supporting fast, accurate, and integrated service processes. The Hospital Management Information System (MISRS) is a crucial tool for improving service quality through more efficient patient data management and administrative processes. However, the adoption of this system in various healthcare facilities has not yet fully demonstrated optimal results, both in terms of technology and user utilization.

The HOT-Fit model is widely used in information systems evaluation because it illustrates the relationship between human, organizational, and technological aspects in generating system benefits. Previous studies have shown that the success of a SIMRS is strongly influenced by user convenience, management support, information quality, and the system's technical stability. Differences in results between hospitals indicate that SIMRS implementation is heavily influenced by internal organizational conditions.

In the context of the Welas Asih Regional Hospital Medical Records Unit, information systems play a crucial role in ensuring smooth data flow, accurate reporting, and efficient service delivery. Therefore, a HOT-Fit-based evaluation is necessary to map the current state of the SIMRS implementation, identify strengths and weaknesses, and provide guidance for continuous improvement.

METHOD

This study employed a descriptive qualitative survey design to capture the state of SIMRS implementation based on user perceptions. The study population comprised all Medical Records Unit employees who use SIMRS in their operational activities. The study population comprised all 41 medical records officers who used SIMRS, and all were sampled (total sampling because all members of the population met the criteria for active use and a minimum work period of six months).

The research instrument was a Likert-scale questionnaire structured around four HOT-Fit dimensions: user, organizational, technological, and system benefits. The instrument was validated by experts and tested for reliability. Data collection involved direct questionnaire distribution, limited observation of work activities, and the collection of supporting documents. Data were analyzed descriptively by calculating the average value, percentage, and distribution of scores for each indicator. The study also addressed ethical aspects through respondent consent and ensuring confidentiality of personal data.

RESULTS

This study involved 41 respondents, employees of the Medical Records Unit of Welas Asih Regional Hospital who use SIMRS in their daily work activities. Data were collected using a questionnaire based on the HOT-Fit model, which consists of four components: Human, Organization, Technology, and Net Benefit.

Human Aspect (User)

Respondents' average perception of the Human aspect was in the very good category. The item "I feel comfortable using SIMRS" received an average score of 4.78, indicating that most users are familiar with and find it easy to operate. Understanding of SIMRS features was also high, with an average score of 4.58. This indicates that training or daily experience has made users quite competent.

Organizational Aspect (Organizational Support)

The organizational component was also rated very good, particularly in terms of management support and availability of work facilities. The item related to management support had an average score of 4.78, while the clarity of operational procedures received a score of 4.61. However, several respondents still included complaints in the suggestions section, particularly regarding the need for network strengthening and consistent system maintenance.

Technology Aspects (System Quality, Information, and Services)

The technology aspect showed positive results. SIMRS's ease of use received an average score of 4.68, while access speed was 4.63. Regarding information quality, patient data accuracy scored 4.61. These scores indicate that SIMRS is considered reliable and capable of supporting medical record operations effectively.

Net Benefit Aspect (System Benefits)

In terms of benefits, SIMRS was assessed as having a significant impact on work efficiency. The item "SIMRS helps speed up the service process" had an average score of 4.73, while the overall benefit rating for the medical records unit was 4.70. This indicates that users perceive a tangible benefit from SIMRS in improving workflow.

Hot-Fit Components	Satisfaction Value	Convenience Value	Category
Human	4.68	4.58	Very good
Organization	4.70	4.61	Very good
Technology	4.62	4.61	Very good
Net Benefit	4.73	4.70	Very good

With an overall average value of 4.68, the implementation of SIMRS is in the very good category.

Qualitative Findings

In the open-ended questions section, respondents most often complained about the following problems:

1. Unstable internet connection
2. Needs certain feature improvements
3. Fix the application so that it doesn't error
4. Need further training

However, most respondents still gave the system high marks overall.

DISCUSSION

The evaluation results showed that the implementation of SIMRS in the Medical Records Unit of Welas Asih Regional Hospital has been very successful, with an average score of 4.68. This achievement indicates that the four HOT-Fit components mutually support and influence the system's utilization in the medical records service process.

The Human aspect received a score of 4.68, indicating that staff felt comfortable, were capable of operating the system, and had a sufficient understanding of the features. This finding suggests that training and work experience have positively impacted user readiness in operating SIMRS. High scores on this component align with the increased work efficiency reported by respondents.

The Organization aspect received a score of 4.70 and is one of the strongest indicators. Strong organizational support, provision of facilities, and clear operational procedures indicate that management has played an active role in supporting system implementation. However, complaints regarding network stability indicate that organizational support still needs to be strengthened, particularly in terms of technical infrastructure.

In the Technology aspect, a score of 4.62 indicates that information quality, access speed, and ease of use are considered good, although not yet fully optimal. Respondents identified network disruptions and feature enhancements as priority needs. This emphasizes that the system's success depends not only on users but also on the readiness of supporting technical facilities.

The Net Benefit dimension received the highest score of 4.73, reflecting that the system truly provides tangible benefits for the implementation of medical records tasks. Improved service speed, recording efficiency, and patient data accuracy are direct impacts of SIMRS use. This finding confirms that SIMRS implementation is not only technically acceptable but also has significant benefits in the service flow.

Overall, the relationship between the quantitative results and the qualitative findings indicates that although the system has performed well, network infrastructure improvements and feature development are still needed so that the already high system benefits can be maintained and enhanced.

CONCLUSION

Based on the evaluation results using the HOT-Fit model, the implementation of SIMRS in the Medical Records Unit of Welas Asih Regional Hospital showed performance in the very good category with an average score of 4.68. This achievement confirms that the

system has been utilized effectively by users and is supported by the organization's readiness to provide facilities, work procedures, and a conducive operational environment. The Net Benefit dimension obtained the highest score, namely 4.73, which illustrates that SIMRS has provided real benefits for officers in accelerating service flow, improving data accuracy, and facilitating information access. Meanwhile, organizational support and user competence also show significant roles in ensuring the system runs stably and according to service needs.

Although the majority of indicators showed positive results, the research findings revealed that technological challenges remain, particularly related to network stability and the need for feature development to adapt to the dynamics of medical record operations. This situation indicates that system optimization still requires strengthening through technical infrastructure improvements and regular user training to maintain and expand the system's benefits. Overall, SIMRS functions not only as an electronic record-keeping tool but also as a strategic instrument that supports improving service quality, data accuracy, and work effectiveness in medical record management at Welas Asih Regional Hospital.

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