

USER SATISFACTION ANALYSIS ON THE IMPLEMENTATION OF ELECTRONIC MEDICAL RECORDS AT KATOBENGKE HEALTH CENTER USING *THE END USER COMPUTING SATISFACTION (EUCS) METHOD*

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A B S T R A C T

User satisfaction is an important indicator in assessing the success of the implementation of Electronic Medical Records (RME) in healthcare facilities. At the Katobengke Health Center, RME has been implemented since 2024, but there are still obstacles, one of which is the unavailability of drug prescription features in the pharmacy section. This study aims to analyze the level of satisfaction of health workers with the implementation of RME using *the End User Computing Satisfaction (EUCS)* method which includes five dimensions: *content, accuracy, format, ease of use, and timeliness*. This study uses a quantitative approach with a survey method. The research sample was all health workers using RME at the Katobengke Health Center as many as 17 people with total population sampling techniques. The research instrument is in the form of an EUCS questionnaire that has been tested for validity and reliability. The data was analyzed using the Respondent Achievement Rate (TCR) formula and presented in a frequency distribution. The results showed that the level of user satisfaction was in the good category in all dimensions, with an average TCR: *content* 86.35%, *accuracy* 87.05%, *format* 88.23%, *ease of use* 88.23%, and *timeliness* 87.05%. These findings indicate that the implementation of RME at the Katobengke Health Center has provided real benefits for users although there are still aspects that need to be improved. In conclusion, the implementation of RME at the Katobengke Health Center has succeeded in improving the quality of administrative services and patient documentation.

INTRODUCTION

The development of information and communication technology has brought significant changes in various sectors, including the health sector. Digital transformation in healthcare is an urgent need to improve efficiency, quality, and patient safety. One form of such transformation is the implementation of Electronic Medical Records (RME), which is a digital-based medical recording system that replaces paper-based manual medical records (Permenkes No. 24, 2022). RME enables the recording, storage, and management of patient data in a more structured, easily accessible, and supporting integration between healthcare facilities.

In Indonesia, the implementation of RME is in line with the Ministry of Health's vision in One Health Data to strengthen the national health information system. With RME, it is hoped that health services can take place faster, more accurately, and more efficiently, especially in first-level health care facilities such as health centers. Puskesmas play a strategic role in providing promotive, preventive, curative, and rehabilitative services to the community, so that the implementation of RME at this level greatly determines the success of the national health system as a whole.

However, the implementation of RME still faces various challenges. Some of the common obstacles encountered in the field include limited internet network infrastructure, lack of human resource training, limited features in the system, and user resistance to changes from manual to digital systems (Herisasono, 2024). This condition also occurs at the Katobengke Health Center, which has started implementing RME since 2024. Although the system includes registration counters and services at each poly, there are still limitations, such as the unavailability of drug prescription features in the pharmacy section.

The success of an RME implementation is determined not only by technical aspects such as infrastructure and software, but also by user satisfaction. Health workers as the main users are a key factor, because their level of satisfaction will affect the sustainability of the system's utilization. Satisfied users will tend to use the system optimally, while dissatisfaction can lead to resistance and even implementation failures (Sukendro *et al.*, 2025). Therefore, evaluation of user satisfaction is crucial to ensure the effectiveness of RME.

One of the widely used methods in measuring information system user satisfaction is End User Computing Satisfaction (EUCS) developed by (Doll and Torkzadeh, 1988). The model assesses user satisfaction based on five key dimensions, namely:

1. Content – completeness and relevance of the content of the information,
2. Accuracy – the accuracy of the information produced,
3. Format – display and presentation of information,
4. Ease of Use – ease of use of the system, and
5. Timeliness – timeliness in the presentation of information.

The EUCS approach provides a comprehensive overview of the quality of the user experience in interacting with information systems. Several previous studies support the effectiveness of this method.(Ginting, Sihombing and Purba, 2024), showing that although the level of satisfaction of health workers with RME at Santa Elisabeth Hospital Medan is high, there are weaknesses in the aspect of ease of use. Other research by (Golo, Subinarto and Garmelia, 2021), also found that there was a variation in user satisfaction with the health center information system, especially in accuracy and ease of use.

Based on a preliminary study at the Katobengke Health Center, the implementation of RME since 2024 has indeed brought significant benefits, but there are still limitations in features and the need for increased training for health workers. So far, research on the satisfaction of RME users in first-level health facilities in Baubau City, especially at the Katobengke Health Center, is still very limited. Thus, this research is important to be carried out to provide an empirical picture of the level of satisfaction of RME users.

This study aims to analyze user satisfaction with the implementation of RME at the Katobengke Health Center using the EUCS method. The results of the research are expected to be the basis for evaluation and recommendations for health center managers in developing a more effective RME system, as well as contributing to the literature related to the implementation of electronic medical records in first-level health facilities in Indonesia.

METHOD

The type and design of this research uses quantitative research methods with a descriptive approach. According to (Aiman, Abdullah and Jannah, 2022). Quantitative research is a systematic scientific study of parts and phenomena and the causality of their relationships. This quantitative and descriptive research method aims to systematically describe the facts or characteristics of a particular population or a particular field factually and carefully (Aiman, Abdullah and Jannah, 2022). The design in this study uses a cross-sectional design, according to (Keshri, 2017). Cross Sectional is a study to study the dynamics of the correlation between risk factors and effects, by way of approach, observation or data collection at the same time (point time approach).

A population is a group of individuals who have certain characteristics and can be distinguished from other groups that also have certain characteristics. Population is not only in the form of humans, but can also be in the form of objects and other natural objects (Eric, 2016). Population also includes not only the number of objects/subjects studied, but also includes all the characteristics/traits possessed by the subject or object. The population in this study is all health workers who use RME at the Katobengke Health Center totaling 17 people.

The sample is part of the population taken and is considered to represent the characteristics of the overall population of 17 people. In this study, the sampling technique used is *Total Pupulation Sampling*. *Total Population Sampling* is a sampling technique in which the entire population is relatively small and fully reachable (Eric, 2016).

Data collection techniques are the most important part of research design, because if the title of the scientific paper of the research design has been approved for research, then the researcher can start collecting data (Mulyah, 2020). The data collection technique in this study used a questionnaire. The questionnaire is structured based on five main dimensions in the EUCS method developed by (Doll and Torkzadeh, 1988).

The research instrument used in this study was in the form of a questionnaire prepared based on the End User Computing Satisfaction (EUCS) method. EUCS is an evaluation model used to measure user satisfaction with computer-based systems, including Electronic Medical Records (RME). This research questionnaire is designed based on instruments that have been tested for validity and realism in various previous studies.

RESULTS & DISCUSSION

1. Content (Isi Informasi)

The average TCR of the content dimension is 86.35% (good category). This shows that the information presented by the RME is considered complete and relevant to the needs of health workers. These findings are in line with research Nirmawati, Wulandari and Widiyoko (2024), which confirms that the completeness of the content supports the accuracy of the diagnosis as well as the efficiency of the service. The level of satisfaction of respondents of Electronic Medical Record Users is dimensional. *Content* at the Katobengke Health Center

NO	Content Dimension	SP	P	CP	TP	STP	JML	SCORE	TCR
1	The information displayed in the RME system is according to my needs	5	12	0	0	0	17	73	85,88
2	The information available in the system is easy to understand and does not confuse	5	12	0	0	0	17	73	85,88
3	Information in the complete RME system to support my task	5	12	0	0	0	17	73	85,88
4	The RME system displays accurate and trustworthy information	5	12	0	0	0	17	73	85,88
5	I am satisfied with the content of the information provided by the RME system	7	10	0	0	0	17	75	88,23
Average								73.4	86,35

Based on table 4.3, it can be seen that in terms of *content* or content of the Electronic Medical Record system, the majority of respondents are in the Satisfied category (P) with a total of 12 respondents while in the Very Satisfied (SP) category as many as 5 people, no value was found in the CP, TP, or STP categories, thus the average value in the *Content* dimension or content of the Electronic Medical Record System is 85.88 (Good).

2. Accuracy (Akurasi Informasi)

The TCR dimension accuracy is 87.05% (good category). Patient data is considered accurate and has minimal errors. However, some respondents considered that there were still shortcomings, especially in data synchronization between units. This corroborates the findings (Ginting,

Sihombing and Purba, 2024), which emphasizes the importance of data validity in the RME to avoid the risk of medical errors. The level of satisfaction of respondents of Electronic Medical Record Users is dimensional. *Accuracy* at the Katobengke Health Center.

NO	Dimension	SP	P	CP	TP	STP	JML	SCORE	TCR
<i>Accuracy</i>									
1	The interface of the RME system is easy to use and visually appealing	6	11	0	0	0	17	74	87,05
2	The lethal arrangement of information in the RME system is neatly arranged	6	11	0	0	0	17	74	87,05
3	The colors, font sizes, and icons in the system make it easy for me to work	6	11	0	0	0	17	74	87,05
4	Important information is easy to find and not hidden	6	11	0	0	0	17	74	87,05
5	System display format makes it easy to record or search for data	6	11	0	0	0	17	74	87,05
Average								74	87,05

Based on the table above, it can be seen that in terms of *Accuracy* or Accuracy of the Electronic Medical Record system, the majority of respondents are in the Satisfied category (P) with a total of 11 respondents while in the Very Satisfied (SP) category as many as 6 people, no values were found in the CP, TP, or STP categories, thus the average value in the *Accuracy* dimension or accuracy of the Electronic Medical Record System is 87.05 (Good).

3. Format (Display and Presentation)

The appearance of the application interface is considered easy to understand and informative. Good display improves user comfort as described by (Amalia et, al., 2024) that *User Interface* which clearly supports work efficiency. The level of satisfaction of respondents of Electronic Medical Record Users is dimensional. *Format* at the Katobengke Health Center.

NO	Format	SP	P	CP	TP	STP	JML	SCORE	TCR
<i>Dimensions</i>									
1	The interface of the RME system is easy to use and visually appealing	6	11	0	0	0	17	74	87,05
2	The lethal arrangement of information in the RME system is neatly arranged	6	11	0	0	0	17	74	87,05

NO	Format Dimensions	SP	P	CP	TP	STP	JML	SCORE	TCR
3	The colors, font sizes, and icons in the system make it easy for me to work	6	11	0	0	0	17	74	87,05
4	Important information is easy to find and not hidden	6	11	0	0	0	17	74	87,05
5	System display format makes it easy to record or search for data	6	11	0	0	0	17	74	87,05
Average								74	87,05

Based on the table above, it can be seen that in terms of *the format* or appearance of the Electronic Medical Record system, the majority of respondents are in the Satisfied category (P) with a total of 10 respondents while in the Very Satisfied (SP) category as many as 7 people, no value was found in the CP, TP, or STP categories, thus the average value in the *Format* or display dimension of the Electronic Medical Record System is 88.23 (Good).

4. 4. Ease of Use

Respondents stated that RME is relatively easy to operate although some require initial training. This is consistent with research (Golo, 2021) that ease of use is an important factor in the sustainability of the implementation of the system. Satisfaction level of respondents of Electronic Medical Record Users in the dimension category *Ease of Use* at the Katobengke Health Center:

NO	Ease of Use Dimensions	SP	P	CP	TP	STP	JML	SCORE	TCR
1	The interface of the RME system is easy to use and visually appealing	6	11	0	0	0	17	74	87,05
2	The lethal arrangement of information in the RME system is neatly arranged	6	11	0	0	0	17	74	87,05
3	The colors, font sizes, and icons in the system make it easy for me to work	6	11	0	0	0	17	74	87,05
4	Important information is easy to find and not hidden	6	11	0	0	0	17	74	87,05
5	System display format makes it easy to record or search for data	6	11	0	0	0	17	74	87,05

NO	Ease of Use Dimensions	SP	P	CP	TP	STP	JML	SCORE	TCR
Average								74	87,05

Based on table 4.6, it can be seen that in terms of *Ease of Use* or the convenience of the Electronic Medical Record system, the majority of respondents are in the Satisfied category (P) with a total of 10 respondents while in the Very Satisfied (SP) category of 7 people, no value was found in the CP, TP, or STP categories, thus the average value in the *Ease of Use* dimension or the ease of use of the Electronic Medical Record System of 88.23 (Good).

5. Timeliness (Timeliness)

The system is considered to be able to present information in a timely manner despite occasional network problems. These findings support the results of the study (Ramadan et, al 2023) which confirms that real-time access is the key to user satisfaction in RME. The level of satisfaction of respondents of Electronic Medical Record Users is dimensional. *Timeliness* at the Katobengke Health Center.

NO	Timeliness Dimensions	SP	P	CP	TP	STP	JML	SCORE	TCR
1	The interface of the RME system is easy to use and visually appealing	6	11	0	0	0	17	74	87,05
2	The lethal arrangement of information in the RME system is neatly arranged	6	11	0	0	0	17	74	87,05
3	The colors, font sizes, and icons in the system make it easy for me to work	6	11	0	0	0	17	74	87,05
4	Important information is easy to find and not hidden	6	11	0	0	0	17	74	87,05
5	System display format makes it easy to record or search for data	6	11	0	0	0	17	74	87,05
Average								74	87,05

Based on table 4.7, it can be seen that in terms of *Timeliness or timeliness* of the Electronic Medical Record system, the majority of respondents were in the Satisfied category (P) with a total of 12 respondents while in the Very Satisfied (SP) category of 5 people, no values were found in the CP, TP, or STP categories, thus the average value in the *Timeliness* dimension or Timeliness of the Electronic Medical Record System of 85.88 (Good).

COVER

The implementation of Electronic Medical Records (RME) at the Katobengke Health Center is considered successful in increasing user satisfaction with good achievements in five dimensions of EUCS: content (86.35%), accuracy (87.05%), format (88.23%), ease of use (88.23%), and timeliness (87.05%). This system provides real benefits for healthcare workers in accelerating services, improving

data accuracy, and improving patient information management. However, additional feature development and ongoing training are still required for service optimization. **Düssel**

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