

Perception of Health Workers in the Use of Electronic Medical Records with Unified Theory Acceptance and Use of Technology Method at Wajo Health Center

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ABSTRACT

Community Health Center (Puskesmas) is a primary health care facility required to adapt to the digital transformation era through the utilization of health information technology, one of which is the implementation of Electronic Medical Records (EMR). EMR aims to improve efficiency, accuracy, and quality of health services in accordance with the Regulation of the Minister of Health Number 24 of 2022. Wajo Community Health Center has implemented EMR through the e-Puskesmas application since 2024, but its utilization has only been effectively running for the last three months and still faces obstacles such as server disruptions and limited devices. This study aims to determine the perception of health workers in the use of EMR with the Unified Theory Acceptance and Use of Technology (UTAUT) method, including performance expectancy, effort expectancy, social influence, and facilitating conditions. The type of research is descriptive quantitative with a cross-sectional design. The research population is all health workers who use EMR at Wajo Community Health Center as many as 34 people, consisting of nurses, midwives, doctors, pharmacists, and medical record officers. Data were collected using a 5-point Likert scale-based questionnaire and analyzed descriptively through percentage index calculation. The results indicate that the perception of health workers is in the high category in all constructs, including performance expectancy (90.59%), effort expectancy (87.05%), social influence (89.2%), and facilitating conditions (89.2%). It is concluded that health workers assess the implementation of EMR at Wajo Community Health Center as supporting performance improvement, relatively easy to use, obtaining strong social support, and supported by adequate infrastructure and technical assistance.

INTRODUCTION

Community Health Centers (Puskesmas) are primary health care facilities tasked with organizing and coordinating promotive, preventive, curative, rehabilitative, and/or palliative services in their working areas (Permenkes No.19, 2024). In the provision of primary health care services, particularly individual health care efforts, Puskesmas are required to adapt to the era of digital transformation through the use of health information technology, one of which is the implementation of Electronic Medical Records (EMR). EMR itself is a form of development from manual medical records to an electronic information system designed to support the process of recording patient data from the administrative stage, medical services, provision and distribution of medical record documents, to the storage of medical record archives (Fauziah & Fadly, 2023).

Electronic Medical Records (EMR) are implemented in healthcare facilities with objectives that must be aligned with the needs and experiences of their users. The role of users is a crucial factor in the successful implementation of EMR, because without user support, the information system cannot function optimally. Therefore, analyzing user perceptions of the benefits gained from using EMR in patient service management is important. In addition, user perceptions are also needed to describe the extent to which the benefits of EMR are felt and their suitability to organizational objectives (Rika Andriani *et al.*, 2022).

Perceived ease of use is a measure that indicates a person's belief that a particular technology can be used clearly and does not require excessive effort, and must have a level of ease in its use and operation. A person's perception of the ease of using a system is the degree to which they believe that using the system requires less effort, thereby improving their performance when using the technology. This is because ease of use is an effort that is not burdensome or does not require high skills when a person uses the system (Gaol *et al.*, 2024).

The evaluation of technology system implementation from the user's perspective plays an important role, because they are the ones who directly feel the needs and benefits of the system. Venkatesh *et al.*, (2003), one of the instruments that can be used to assess user perceptions in the

implementation of information technology is (UTAUT). This model is designed to evaluate the overall acceptance of information systems with the aim of understanding how users accept and use electronic medical records. UTAUT integrates various theories of human behavior and has four main constructs that directly influence the acceptance and use of technology, namely performance expectancy, effort expectancy, social influence, and facilitating conditions (Risdiyanti & Wijayanti, 2020).

According to research by Rosyada *et al.*, (2016), healthcare workers' perceptions of the implementation of electronic medical records in healthcare facilities still face obstacles, especially in the data entry process and implementation. Therefore, optimization of the application and utilization of electronic medical records from the perspective of user behavior needs to be carried out. Improvements in these behavioral aspects can be achieved by addressing the factors that influence them, including the development of guidelines for filling out electronic medical records and the dissemination of regulations, rules, and guidelines for the use of electronic medical records to all health workers (Amrina Rosyada, Lutfan Lazuardi, 2017).

Research conducted by Gueye *et al.*, (2022), on new users who had been using RME for three months showed that the system was designed to be easy to use and suited to work needs. However, some users reported that they still needed more time to operate the system, experienced limitations with their computer equipment, and encountered system disruptions. Nevertheless, the majority of respondents considered the implementation of RME to have a positive impact, as evidenced by high levels of satisfaction because the system was able to improve time and space efficiency and facilitate access to information.

Based on preliminary studies conducted at the Wajo Community Health Center on March 6, 2025, it was found that electronic medical records (EMR) had been in use for one year, but had only been utilized for three months using the E Puskesmas application. The units that have implemented EMR include registration, maternal and child health clinic, dental clinic, general clinic, emergency room, laboratory, pharmacy, and inpatient care. Based on information from staff, the electronic medical record system sometimes experiences server downtime, and when this occurs, staff perform tasks manually. In accordance with Ministry of Health Regulation No. 24 of 2022, EMR refers to medical records created using an electronic system, and all healthcare facilities, including community health centers, are required to implement it by December 31, 2023, at the latest. Information from the Wajo Community Health Center indicates that the use of EMR has only been in operation for three months.

Based on the above background, we are interested in examining healthcare workers' perceptions of electronic medical records based on performance expectancy, social expectancy, social influence, and facilitating conditions.

METHOD

This study is a quantitative descriptive study that aims to examine the perceptions of health workers regarding the use of Electronic Medical Records (EMR) using the Unified Theory of Acceptance and Use of Technology (UTAUT) method at the Wajo Community Health Center. The research population consisted of 34 health workers who use EMR, comprising 12 nurses, 6 midwives, 7 doctors, 4 pharmacists, and 5 medical recorders. Sampling was conducted using the Proportionate Stratified Random Sampling technique. The study was conducted at the Wajo Community Health Center, Jl. Dr. Wahidin No. 137, Lamangga, Murhum District, Baubau City, Southeast Sulawesi, from March to June 2025. Data were collected through a survey using a Likert scale questionnaire and analyzed univariately to describe the respondents' perceptions.

RESULTS & DISCUSSION

1. Health Workers' Perceptions Based on Performance Expectations

Table 1. Frequency Distribution and Percentage of Performance Expectations

Statement	STS		TS		RG		S		SS		Number of respondents	Total score	Average Score (%)
	F	%	F	%	F	%	F	%	F	%			
RME enables staff to access patient information more quickly	0	0	0	0	1	2.94	13	38.2	20	58.8	34	155	91.18%
The use of RME helps officers provide better service to patients.	0	0	0	0	1	2.94	13	38.24	20	58.82	34	155	91.18%

Statement	STS		TS		RG		S		SS		Number of respondents	Total score	Average Score (%)
	F	%	F	%	F	%	F	%	F	%			
Officials believe that RME will improve my work efficiency.	0	0	0	0	2	5,9	14	41,2	18	52,9	34	152	89,41%
Performance Expectation Index													90,59%

The results of the study show that the majority of health workers have a positive perception of performance expectations in the use of Electronic Medical Records (EMR). The three indicators analyzed, namely work efficiency, speed of access to patient information, and improvement in service quality, all received high scores. The distribution data shows that 58.8% of respondents strongly agree that EMR speeds up access to information, 58.8% strongly agree that EMR helps service delivery, and 52.9% strongly agree that EMR improves work efficiency.

The total index score for the three indicators was in the range of 90.59%, which indicates a high category based on the Likert scale interpretation. The correlation between indicators shows a very strong and significant relationship (Pearson value > 0.88, significance value less than 0.01 ($p < 0.01$)). This indicates that a positive perception of one indicator is usually accompanied by positive perceptions of the other indicators.

The findings of this study are consistent with the results obtained in a previous study by Mata et al., (2024), which examined the acceptance of RME in various health facilities and found that performance expectation indicators had the strongest contribution to users' positive attitudes toward the system. Similarly, according to Handiwidjojo, (2009), the implementation of RME can provide clear operational benefits such as speed in recording, data accuracy, labor efficiency, and ease of medical reporting. The three indicators used in this study directly reflect these aspects. Support for these findings can also be found in the study by Rika Andriani *et al.*, (2022), which states that healthcare workers' perceptions of health information systems are closely related to their direct experience in using them. In the context of the Wajo Community Health Center, the RME system has been used in various units such as general clinics, maternal and child health, dentistry, pharmacy, inpatient care, and laboratories, providing real experiences that support the formation of positive perceptions of the system.

2. Health Workers' Perceptions of Effort Expectancy

Table 2. Frequency Distribution and Percentage of Effort Expectation Variables

Statement	STS		TS		RG		S		SS		Number of respondents	Total score	Average Score (%)
	f	%	f	%	f	%	f	%	f	%			
Officers found that RME was easy to use in their daily work.	0	0	0	0	2	5,9	14	41,2	18	52,9	34	152	89,4
I had no trouble using RME.	1	2,9	0	0	3	8,8	17	50,0	13	38,2	34	143	84,1
The training I received on RME has been quite helpful in its use.	1	2,9	0	0	0	0	18	52,9	15	44,1	34	148	87,1
Officers often have difficulty using the RME	8	23,5	23	67,6	2	5,9	1	2,9	0	0	34	140	82,3
Working with RME is so complicated that it makes it difficult for officers to understand what is happening.	18	52,9	16	47,1	0	0	0	0	0	0	34	50	92,3
Health workers' perception index of Effort Expectancy													87,05%

Effort Expectancy describes the perception of ease in using the RME system. Based on five statements in the questionnaire, the majority of respondents showed a high level of agreement. A total of 52.9% of respondents strongly agreed that RME was easy to use, and 50% agreed that they did not experience any difficulties. In addition, 52.9% of respondents agreed that the training provided was helpful, and more than 90% disagreed or strongly disagreed that RME was difficult to use.

The index score shows that perceptions of business expectations are in the very high category (87.05%). The correlation between indicators shows a significant relationship, especially between perceptions of ease and effectiveness of training ($r = 0.792$, $p < 0.01$). Meanwhile, the “RME complexity” indicator shows a negative correlation with other indicators.

These findings indicate that positive perceptions of Effort Expectancy are also influenced by other variables such as training, interface ease, and system stability. Research by Gueye et al., (2022) states that although most users find RME easy to use, challenges arise when the system experiences high loads (overload) or when the server connection is unstable. However, in the context of this study, the level of complaints about system complexity was very low, indicating that the majority of health workers did not encounter significant technical obstacles.

3. Health Workers' Perceptions Based on Social Influence

Table 3. Frequency Distribution of Respondents' Answers Regarding Social Influence

Statement	STS		TS		RG		S		SS		Number of respondents	Total score	Average Score (%)
	f	%	f	%	f	f	%	f	%	f			
My coworkers support the use of EMR in our work.	0	0	0	0	2	5.9	15	44.1	17	50.0	34	151	88.82
I feel that the use of EMR has become standard in my workplace.	0	0	0	0	0	0	18	52.9	16	47.1	34	152	89.41
My supervisor supports the use of electronic medical records at the community health center.	0	0	0	0	0	0	16	47.1	18	52.9	34	152	89.41
Social Influence Expectancy Perception Index													89,2%

The social influence aspect relates to the extent to which support from superiors, coworkers, and work culture influences the acceptance of RME. The data shows that 50% to 52.9% of respondents strongly agree with the three indicators (coworker support, superior support, and organizational standards). No respondents disagreed or strongly disagreed.

The correlation values between indicators were very high, ranging from 0.775 to 0.935 ($p < 0.01$), indicating that perceptions of social support were very solid and consistent across sources of support. This shows that healthcare workers feel surrounded by a work environment that supports the use of RME.

These findings support the argument in the UTAUT model, which emphasizes that social influence factors play a significant role, especially in the early stages of technology adoption. At this stage, health workers are greatly influenced by the opinions, encouragement, and examples provided by colleagues and leaders, especially when the technology being adopted is still new and has not yet become a work habit. In the context of the Wajo Community Health Center, the RME system is still relatively new (less than 6 months), so perceptions of the success of its implementation are greatly influenced by social pressure and support in each work unit.

This finding is also consistent with the research by Rosyada *et al.*, (2016), which emphasizes the importance of interpersonal communication and guidance on system usage in forming a work culture that is adaptive to service digitalization. In such conditions, social support is not only a psychological factor, but also acts as a mediator in reducing resistance to change.

4. Health Workers' Perceptions Based on Facilitating Conditions

Table 4. Frequency Distribution of Health Workers' Perceptions of Facilitating Conditions

Statement	STS		TS		RG		S		SS		Number of respondents	Total score	Average Score (%)
	f	%	f	%	f	%	f	%	f	%			
Technical assistance is available if I encounter	1	2.9	0	0	1	2.9	17	50	15	44,1	34	147	86.47

Statement	STS		TS		RG		S		SS		Number of respondents	Total score	Average Score (%)
	f	%	f	%	f	%	f	%	f	%			
difficulties.													
I have received adequate training on the use of electronic medical records.	0	0	0	0	4	11.8	16	47.1	13	38.2	34	141	82.94
The community health center provides adequate equipment and infrastructure for the use of electronic medical records.	0	0	0	0	1	2.9	17	50	16	47.1	34	149	87.64
The conditions at the community health center are very conducive to the use of electronic medical records.	0	0	0	0	1	2.9	17	50	16	47.1	34	149	87.64
The staff are skilled in using computers.	0	0	1	2.9	2	5.9	17	50	14	41.2	34	146	85.88
Indeks Persepsi Kondisi Yang Memfasilitas												86,1%	

Technical facilities and organizational readiness play a significant role in supporting the use of RME. Of the five statements tested, most respondents rated the availability of technical assistance, infrastructure, and training as agreeable or strongly agreeable. Between 50% and 52.9% of respondents agreed, and between 38.2% and 47.1% strongly agreed on each indicator. The correlation between indicators was also high and significant ($r > 0.70$), indicating that perceptions of one aspect of facilities tended to influence other aspects. For example, the availability of devices was closely related to computer skills and the availability of training.

The majority of respondents agreed or strongly agreed with all indicators of facilitating conditions. This shows that, in general, health workers consider the available infrastructure and technical resources to be adequate in supporting the implementation of EHR. For example, on the technical assistance indicator, 94.1% of respondents agreed or strongly agreed that they received assistance when encountering technical difficulties. Only two people were neutral or strongly disagreed.

The level of training was also rated positively, with more than 85% of respondents feeling that the training provided was adequate. This reinforces the importance of training support in strengthening the readiness of new system users, as highlighted by Fauziah & Fadly, (2023), who emphasize the importance of consistent technical coaching.

These findings indicate that the Wajo Community Health Center has met most of the facility requirements as stipulated in Minister of Health Regulation No. 24 of 2022. Research by Fauziah & Fadly, (2023), also states that training and infrastructure are key to the successful implementation of health information technology. In general, the four constructs in the UTAUT model show that the perceptions of health workers at the Puskesmas are very positive and supportive of the implementation of RME. This condition is an indicator of the institution's readiness to maintain and develop this system in the future.

CLOSING

Based on the results of the study, health workers' perceptions of the use of electronic medical records (EMR) at the Wajo Community Health Center showed high ratings on all UTAUT indicators. In terms of performance expectancy, the majority of respondents were in the strongly agree category, with 20 people (58.8%) and an average perception index of 90.59%, which is in the high category. In terms of effort expectancy, 18 respondents (52.9%) strongly agreed and agreed, with an average perception index of 87.05%, which is also in the high category. Furthermore, in terms of social influence, 18 respondents (52.9%) agreed and strongly agreed, with an average perception index of 89.2%, which indicates a very high category. Meanwhile, in terms of facilitating conditions, 18 respondents (47.1%) agreed and strongly agreed, with an average perception index of 89.2%, which is also in the very high category. Overall, this shows that health workers have a positive perception and a good level of acceptance of the use of RME.

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REFERENCES

- Amrina Rosyada, Lutfan Lazuardi, K. (2017). *Persepsi Petugas Kesehatan Terhadap Peran Rekam Medis Elektronik Sebagai Pendukung Manajemen Pelayanan Pasien Di Rumah Sakit Panti Rapih. Volume 2 N*, 29–36.
- Fauziah, U., & Fadly, F. (2023). Gambaran Persepsi Tenaga Kesehatan Dalam Penggunaan RME di RSUD Singaparna Medika Citrautama. *J-REMI : Jurnal Rekam Medik Dan Informasi Kesehatan*, 4(4), 257–264. <https://doi.org/10.25047/j-remi.v4i4.3846>
- Gaol, H. L., Boris, J., Jaya, M., & Gulo, K. (2024). *Jurnal Kesehatan dan Ilmu Medis Gambaran Persepsi PEetugas Pada Penggunaan Rekam Medis Elektronik Rawat Jalan di Rumah Sakit Santa Elisabeth Medan Jurnal Kesehatan dan Ilmu Medis*. 8, 19–32.
- Gueye, M., Ndiya, M. D., Diouf, A. A., Diallo, M., Wade, M., Mbodji, A., Diallo, A. K., Diouf, A., Thiam, O., Gassama, O., & Mbaye, M. (2022). Using the Diffusion-of-Innovation Theory to Examine Factors Influencing the Implementation of an Electronic Medical Record in Obstetrics. In *Integrative Journal of Medical Sciences*. <https://doi.org/10.15342/ijms.2022.619>
- Handiwidjojo, W. (2009). Rekam medis elektronik. *Jurnal EKSIS, Vol 02*, 36–41.
- Mata, S., Surabaya, U., Andriyana, A., Astuti, W., Faida, E. W., & Apriliansyah, U. (2024). *Tingkat Penggunaan Rekam Medis Elektronik dengan Metode Unified Theory of Acceptance and Use of Technology (UTAUT)*. 12(2), 109–116. <https://doi.org/10.47007/inohim.v12i2.586>
- Rika Andriani, Wulandari, D. S., & Margianti, R. S. (2022). Rekam Medis Elektronik sebagai Pendukung Manajemen Pelayanan Pasien di RS Universitas Gadjah Mada. *Jurnal Ilmiah Perekam Dan Informasi Kesehatan Imelda (JIPIKI)*, 7(1), 96–107. <https://doi.org/10.52943/jipiki.v7i1.599>
- Risdianty, N., & Wijayanti, C. D. (2020). Evaluasi Penerimaan Sistem Teknologi Rekam Medik Elektronik Dalam Keperawatan. *Carolus Journal of Nursing*, 2(1), 28–36. <https://doi.org/10.37480/cjon.v2i1.9>
- Rosyada, A., Lazuardi, L., & Kusri, K. (2016). Persepsi Petugas Kesehatan Terhadap Peran Rekam Medis Elektronik Sebagai Pendukung Manajemen Pelayanan Pasien Di Rumah Sakit Panti Rapih. *Journal of Information Systems for Public Health*, 2(1), 29. <https://doi.org/10.22146/jisph.6659>
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly: Management Information Systems*, 27(3), 425–478. <https://doi.org/10.2307/30036540>