



Article

OVERVIEW OF THE ACCEPTANCE OF ELECTRONIC MEDICAL RECORDS (EMR) WITH THE TECHNOLOGY ACCEPTANCE MODEL (TAM) APPROACH BY NURSES

Darin Paminta Wati¹, Eva Supriatin²
STIKep PPNI West Java¹; STIKep PPNI West Java²;
E-mail: darinpaminta89@gmail.com

ARTICLE INFO

Received: Dec 26, 2025
Revised: Jan 10, 2026
Accepted: Jan 14, 2026
Published: Feb 28, 2026

IJHE is licensed under a
Creative Commons Attribution
4.0 International Public License
(CC-BY 4.0)

Website:

<https://journal.img.co.id/index.php/ijhe>

Keywords: *EMR, TAM, Acceptance Technology, Nursing*

ABSTRACT

Background: Development technology in service health encourage the implementation of EMR as a system recording patient information . This technology requires optimal acceptance of users , especially nurses as implementers main documentation .

Objective: To find out description EMR reception by nurses use TAM approach which includes *Perceived Usefulness* , *Perceived Ease of Use* , *Attitude Toward Using* , and *Actual Usage* .

Methods: Descriptive quantitative with 111 respondents. Purposive sampling technique. Instrument in the form of TAM questionnaire that has been tested for validity and reliability . Data analysis using distribution Frequency and percentage interpretation .

Results: EMR acceptance is categorized as quite good with the proportions : *Perceived Usefulness* (68.5%), *Perceived Ease of Use* (71.2%), *Attitude Toward Using* (71.2%), and *Actual Usage* (77.5%).

Conclusion: Acceptance EMR technology by nurses is considered sufficient. It is recommended improvement training and infrastructure.

INTRODUCTION

Development technology information in the sector global health brings transformation significant, especially through implementation *Electronic Medical Record* (EMR) as a replacement record paper- based medical manual . EMR allows storage, management, and access patient information in proven electronics increase work efficiency health, especially nurses, and reduce the risk of error medical and expedited taking decision clinical [1] In addition, EMR also supports cross- data integration hospital system, reducing need room archives, and improve patient satisfaction [2] In Indonesia, the government, including in West Java Province, has active push implementation of EMR in order to improvement quality service health. Acceptance power health, in particular nurses as implementers main documentation nursing, to become key the success of the implementation of this system in Bandung City as one of the main areas show progress, but Still face challenges such as needs training intensive and adaptation workflow [3] Data from the United States show trend improvement use of EMR by the public from year to year, reflecting growth reception to This system [4] Other studies also state that the use of EMR can increase communication between power health as well as coordination service [5] obstacles are still found, one of which is is perception users to complexity a system that can hinder efficiency [6]

Limijati Bandung Maternity Hospital is one of the hospitals that has implementing EMR since December 2024 and provide training for all nurses related use system However, technical training does not guarantee successful implementation if it is not accompanied by acceptance and willingness from users.

Previous research used approach *Technology The Acceptance Model (TAM)* concludes that perceived usefulness and ease of use *Perceived Ease of Use* has an effect significant to intention EMR usage [7] Based on this this study aims to describe reception EMR technology by nurses at Limijati Bandung Hospital through TAM approach, includes aspect usefulness, convenience, attitude to usage, and actual implementation. The results of this study are expected can become the basis for taking decision strategic to improve acceptance and success of EMR implementation in hospitals

METHODS

Study Design

This research uses quantitative descriptive design that aims describe reception technology *Electronic Medical Record (EMR)* by nurses

Sample

The population in this study was all nurses working in the inpatient unit. hospitalization and care road, because they directly use EMR system in activities documentation daily. The sample is determined using the technique *purposive sampling*

Instrument

and The instruments used in the form of questionnaire consisting of of five parts, namely respondent characteristics and four main parts adapted from the research instrument of Intan Sari (2023) based on the TAM components . based on four aspect main in *Technology model Acceptance Model (TAM)*, namely usefulness (*Perceived Usefulness*), ease of use *Perceived Ease of Use* , attitude to usage (*Attitude Toward Using*), and actual implementation (*Actual Usage*).

Procedure

The research was conducted from May to June 2025 at the installation care hospitalization and care RSIA Limijati Bandung road, located at Jl. LLRE Martadinata No. 39, Bandung City.

Data Analysis

the amount counted use G*Power application version 3.1.9.4 with t-test method for couples in pairs (*matched-pairs*), so a total of 111 nurses were obtained, consisting of of 105 nurses care inpatients and 39 nurses care road

Ethical Consederation

This research states worthy ethics with Number III/081/KEPKSLE/STIKEP/PPNI/JABAR/V/2025.

RESULT

Characteristics	F	%
Age		
Mean ± SD		
(30.60± 4.18)		
Min Max		
(23-40)		
Position		
Nurse Executor	28	25.2
Nurse Person responsible	83	74.8
Education		
D3 Nursing	90	81.1
Nursing Profession	14	12.6
Bachelor of Nursing	7	6.3
Length of working		
Min Max		
(1-12)		
<5 Years	63	56.8
5–10 years	41	36.9
>10 years	7	6.3

Respondent characteristics show majority nurse aged 30.60 years (SD ± 4.18), is nurse guarantor Responsible (74.8%), had a D3 Nursing education (81.1%), and had less than 5 years of work experience (56.8%).

Perception Overview Nurse To EMR Acceptance Based on Aspects *Perceived Usefulness* (n= 111)

Variables	Median±SD	Min Max	Category (Mean ± SD)	F	(%)
<i>Perceived Usefulness</i>)	28 ± 2.86	21-35	Less (<25,048)	16	14.4
			Enough (25,048 ≤ X < 30,772)	76	68.5
			Good (≥30,772)	19	17.1

part big nurses (68.5%) have sufficient perception of EMR usefulness , with an average score of 28±2.86.

Perception Overview Nurse To EMR Acceptance Based on Aspects Convenience (*Perceived Ease of Use*) (n=111)

Variables	Median±SD	Min Max	Category	F	(%)
<i>Perceived Ease of Use</i>	26 ± 3,241	18-34	Less (<22,319)	21	18.9
			Enough (22,319 ≤ X < 28,801)	79	71.2
			Good (≥28,801)	11	9.9

Most of the nurses (71.2%) have sufficient perception of convenience EMR usage , with an average score of 26 ± 3.24.

Perception Overview Nurse To EMR Acceptance Based on Aspects User Attitude (*Attitude Toward Using*) (n=111)

Variables	Median±SD	Min Max	Category	F	(%)
<i>Attitude Toward Using</i>	16 ± 1,689	12-20	Less (<14,481)	13	11.7
			Enough (14,481 ≤ X < 17,859)	79	71.2
			Good (≥17,859)	19	17.1

part big nurses (71.2%) have quite positive attitude towards EMR usage , with an average score of 16 ± 1.69.

Perception Overview Nurse To EMR Acceptance Based on Implementation Aspects (*Actual Usage*) (n=111)

Variables	Median±SD	Min Max	Category	F	(%)
<i>Actual Usage</i>	8± 0.926	5 - 10	Less (<6,994)	7	6.3
			Enough (6.994 ≤ X < 8.846)	86	77.5
			Good (≥8,846)	18	16.2

Almost all nurses (77.5%) were in the sufficient category in EMR implementation, with an average score of 8 ± 0.93.

Reception Overview EMR Technology with TAM Approach (n=111)

Variables	Median±SD	Min Max	Category	F	(%)
EMR acceptance of TAM approach	78±7.13	60-99	Less (<70.87)	16	14.4
			Enough (70.87 ≤ X < 85.13)	83	74.8
			Good (≥85.13)	12	10.8

The results of the analysis show majority nurses (74.8%) have level adequate acceptance of EMR, with a median of 78, deviation standard 7.13, and score range 60–99.

DISCUSSION

Perception Overview Nurse To EMR Acceptance Based on Aspects Perceived Usefulness

The results of the study show that perception nurse to reception *Electronic Medical Record* (EMR) from aspect Perceived Usefulness has an average score of 27.91 ± 2.862 with a minimum score of 21 and a maximum of 35. Most of the nurses (68.5%) have sufficient perception of the benefits of EMR, while 14.4% have less perception, and 17.1% have perception Good. This finding is in line with a study by [8] which identified that perception nurse to EMR is influenced by skills computer, self-confidence, and training received and appropriate as in the previous study Wisnu Rafi Oktariyanto (2024) ease perceived use (3.08), perceived usefulness (2.87) both emphasized that the increase competence computers and adequate training can increase positive perception towards EMR.

In addition, research by [9] found that almost all nurses (98%) had positive perception towards EMR system, especially among those who have accept training and have access to computer personal. This shows that factors such as training and access technology plays an important role in shaping positive perception towards EMR benefits.

Furthermore, a study by [10] shows that the quality systems, information and services from EMR in a way significant influence perception benefits and convenience use by nurses. They emphasize importance collaboration between administrators, providers service health, and researchers to improve EMR quality.

Researchers assume that perception nurse to the benefits of EMR can improved through continuous training, improvement access to technology, and engagement active nurses in the development and implementation of EMR systems are expected EMR reception by nurses will increases, which in the end will contribute to the improvement quality service health.

Perception Overview Nurse To EMR Acceptance Based on Aspects Perceived Ease of Use

Research result show that perception nurse to reception *Electronic Medical Record* (EMR) from aspect convenience Perceived Ease of Use has average value of 25.56 ± 3.241 , with minimum score 18 and maximum 34. Most of the nurses (71.2%) have perception Enough to convenience EMR usage, while 18.9% included in category less, and 9.9% have perception Good. This matter show that majority nurse evaluate EMR system is sufficient easy used, even though Still there is part small judge not enough and very Good.

Findings This in line with study by [11] which examined perception nurse to convenience use of EMR in several House sick in Saudi Arabia The study find that perception convenience use contribute significant to EMR reception by nurses. As many as 24% of nurses very agree and 9.4% agree that EMR is easy used, shows that perception convenience use play a role important in adoption technology this by nurse.

Previous studies Alharthi, H, Youssef, A., & Khoja, T. (2015) nurses willing For use record medical electronically. In general found that nurse satisfied with EMR, with 40.9% agreeing and 24.4% strongly agreeing. agree that EMR is very help task they 9.4% In addition, research by [12] in Egypt showed that perception convenience EMR usage is related close with reception system by nurses. This study emphasize importance training and improvement skills computer For increase perception positive to convenience EMR usage.

More furthermore, a study by [13] in Turkey found that perception convenience use of EMR by nurses influenced by factors like quality systems, information, and services. They emphasize that improvement quality EMR system can increase perception positive to convenience use by nurses.

Researchers assume that all over nurses who become respondents has own experience direct in use system *Electronic Medical Record* (EMR) during activity nursing everyday. This is allows they give objective assessment based on experience actual, not just assumptions or understanding theoretical. In addition, research this also assumes that all over nurse has follow training use of home - hosted EMR sick, so own knowledge adequate basis For evaluate to what extent the system the easy used. With Thus, the perception captured in study This reflect experience real as well as competencies that have been equipped previously, which became runway important in evaluate aspect convenience Perceived Ease of Use of EMR system.

Perception Overview Nurse To EMR Acceptance Based on Aspects User Attitude (Attitude Toward Using)

Based on results research, perception nurse to reception *Electronic Medical Record* (EMR) from aspect attitude user (Attitude Toward Using) shows the average value was 16.17 ± 1.689 , with minimum score 12 and maximum 20. Most of the nurses, namely 79 people (71.2%), have sufficient attitude to EMR usage. Temporary that, 13 people (11.7%) have poor attitude, and 19 people (17.1%) had good attitude. With thus, it can concluded that part big nurse own sufficient attitude positive to use of EMR, although Still there is part little one who behaves not enough and very positive.

Findings This in line with study by [2] factors that influence use Record Medical Electronic Measuring Instrument (RME) by nurses at Dr. Soetomo General Hospital. Kariadi. Study the show that perception usefulness, perception convenience, and influence social influential significant to attitude nurse in using RME. Attitude positive towards RME contributed

to the increase use system mentioned by nurses and previous studies Naveen kumar & Amrit (2016) 75% of population study feel comfortable Work with record medical electronics.

Another study by [8] in Malaysia and Indonesia revealed that attitude nurse to EMR usage is influenced by preferences in documenting data, with Lots nurse more choose record at the station nurse compared on the side place Sleep patient . Demographics nurses were also found own correlation significant with the attitude domain, indicating that factors like age and experience Work influence attitude to EMR usage In addition, research by [9] in Malaysia shows that almost all nurses (98%) have perception positive to EMR system, perception This varies depending on the work unit, ownership computer or laptop, and time daily spent use system . Nurse who receives training report level more satisfaction tall to EMR system.

In research this, Researcher assume that attitude nurse to use system *Electronic Medical Record* (EMR) is influenced by experience real they in use system the as well as by internal factors such as perception to benefits and convenience usage. Researchers also assume that nurses who become respondents own level sufficient understanding to benefit digitalization in service health, as well as own trend For accept innovation technology if system the considered support efficiency work and improvement quality service. In addition, it is assumed that training that has been given by the party House Sick participate form attitude more nurses open to use of EMR. With existence sufficient attitude positive from majority nurses, it is expected EMR acceptance can Keep going enhanced and supports the sustainable implementation process in the environment House Sick.

Perception Overview Nurse To EMR Acceptance Based on Implementation Aspects (*Actual Usage*)

Based on the data obtained, nurses' perceptions of the acceptance of *Electronic Medical Record* (EMR) from the implementation aspect (*Actual Usage*) showed an average value of 7.92 ± 0.926 , with a minimum score of 5 and a maximum of 10. Most nurses, namely 86 people (77.5%), were in the sufficient category in terms of EMR implementation. Meanwhile, 7 people (6.3%) were included in the less category, and 18 people (16.2%) were in the good category. Thus, it can be concluded that almost all nurses have implemented the use of EMR quite well, although there are still a small number who are not optimal or very good in their use.

This finding is in line with research by [14] at Jemursari Islamic Hospital in Surabaya, which shows that there is a significant relationship between perceived ease and usefulness with user attitudes and behavior, as well as between attitudes and behavioral intentions, which ultimately influence actual EMR usage. This study emphasizes the importance of evaluating and monitoring existing EMR features so that users can accept EMR usage well.

Previous research shows that Intan Sari (2023) believes that attitudes use of EMR (*Attitude Toward Using*) and significant to use of EMR Actual Usage.

In addition, a study by [15] at Undaan Eye Hospital Surabaya using *the Technology Acceptance Model* (TAM) method showed that the perception of the actual conditions of system use had a sufficient level of relationship with the implementation of EMR, with a correlation value of 0.537. This indicates that user perceptions of the actual conditions of system use have an effect on the implementation of EMR.

Study by [16] At Mojosongo 2 Karanganyar Regional Hospital, the actual use of EMR was found to be adequate, with a value of 64%. Researchers assumed Obstacles faced by users include computer units and networks that often have problems, as well as the absence of written policies and clear standard operating procedures (SOPs), which indicate that technical factors and institutional policies influence the implementation of EMR.

Overview of EMR Acceptance Based on the TAM Approach

Based on the research results, the level of nurses' acceptance of *Electronic Medical Record* (EMR) based on *the Technology Acceptance Model* (TAM) approach has a median value of 78 with a standard deviation of 7.13 and a score range between 60 and 99. The majority of respondents (74.8%) are in the sufficient acceptance category, while 14.4% are in the less than adequate category, and only 10.8% show acceptance in the good category. These findings indicate that in general, nurses have a sufficient level of acceptance of the use of EMR in healthcare facilities.

This result is in line with research by [17] which states that EMR acceptance is strongly influenced by perceived ease of use and system usefulness, two key components in the TAM model. When users perceive an EMR system as easy to use and beneficial in improving work efficiency, their acceptance of the system will increase.

Similar research by [18] at Tanjungpinang Regional General Hospital showed that perceived ease and user attitudes had a significant relationship with behavioral intentions to use EMR. This supports that although acceptance is not yet at an optimal level, a fairly positive perception has begun to form among health workers. Research by [7] at Undaan Eye Hospital Surabaya used the TAM model and found a correlation of 0.537 between perceptions of actual use of the

system and the implementation of EMR. This confirms that the level of user acceptance is an important predictor in the successful adoption of electronic information systems in hospitals.

Factor Technical and institutional policies are also important determinants in increasing the acceptance of EMR. As explained by [16] In RSB Mojosongo 2 Karanganyar, the actual use of EMR only reached 64% due to limited devices, networks, and the absence of policies and SOPs that support optimal system use. , increasing EMR acceptance depends not only on individual user factors, but also on infrastructure readiness and managerial support.

Researchers While assuming that the dominant acceptance rate in the "fair" category reflects nurses' initial understanding and positive attitudes toward EMR system use, there are still obstacles to achieving optimal acceptance. These obstacles are likely caused by technical factors such as limited infrastructure, uneven training, and policy support that has not yet fully encouraged comprehensive system adoption. Perceptions of ease of use and perceptions of less than optimal benefits can influence nurses' attitudes and behavioral intentions towards using the system, as explained in the *Technology Acceptance Model (TAM)* .

CONCLUSION

The results of the study show that acceptance nurse against EMR is in the fairly good category, reflecting readiness to adopt technology. From the aspect benefits, some big nurse assess EMR support work efficiency, although part small Still experience limitations features. From the aspect convenience usage, system considered quite easy, but training and habituation still needs to be improved. In the aspect attitude, majority nurse show positive attitude towards use of EMR, while part small need improvement digital literacy. From an implementation perspective, the use of EMR is quite consistent, but Still constrained infrastructure in several units. Overall, EMR reception was quite good, but needed strengthening training, infrastructure, and change management to improve adoption optimally and sustainably.

Saying Thank You

The author would like to express his gratitude sincere love to all individuals and institutions who have contribute to the resolution this article. Greetings accept special love to institutions our affiliates for the facilities and support provided during the research process.

Funding

n't any funding in this research

Contribution Writer

Conflict Interest

n't any conflict interests expressed by any author.

Data Availability

Contact writer correspondence, [DPW], to obtain data used to support research conclusions. Statistics cannot accessible public Because load information that can endanger privacy research participants .

REFERENCES

- X. Zhang and P. Yu, . "Barriers to the Adoption of *Electronic Medical Record s* in Developing Countries: A Systematic Review. *JMIR Medical Informatics*, 10(1), e29314.," 2022.
- S. Sugiharto, F. Agushybana, and MS Adi, "Factors Influencing the Use of Outpatient Electronic Medical Records by Nurses," *J. Health Sciences. Society.* , vol. 11, no. 2, 2022, doi: 10.33221/jikm.v11i02.1085.
- M. Ladang, "Challenges of EMR Implementation in Regional Hospitals: A Qualitative Study. *Journal of Health Information Systems*, 11(1), 35–42.," 2023.
- RS Janett and PP Yeracaris, " *Electronic Medical Records* in the American Health System: Challenges and Lessons Learned," *Cienc. e Saude Coletiva* , vol. 25, no. 4, 2020, doi: 10.1590/1413-81232020254.28922019.
- H. C. Wang *et al.* , "Clinical characteristics and outcomes of neonates with polymicrobial ventilator-associated pneumonia in the intensive care unit," *BMC Infect. Dis.* , vol. 21, no. 1, 2021, doi: 10.1186/s12879-021-06673-9.
- AZM Harbi, "Health care expert's readiness to implement national unified medical records (numr) system in the united arab emirates; a qualitative study," *Inform.* , vol. 45, no. 5, 2021, doi: 10.31449/inf.v45i5.3358.
- A. Rizqullah, "Analysis of EMR System Acceptance with the TAM Approach at Undaan Eye Hospital, Surabaya," *J. Health Sciences. and Inform.* , vol. 5, no. 1, pp. 30–38, 2024.
- WM Wan Ismail, N. Majid, and A. Fatmawati, "Nurses' Attitudes and Preferences towards usage of *Electronic Medical Records* ," *Environ. Proc. J.* , vol. 7, no. 21, 2021, doi: 10.21834/ebpj.v7i21.3579.
- V. Ramoo, A. Kamaruddin, WNFN Nawawi, CC Che, and R. Kavitha, "Nurses' Perception and Satisfaction Toward *Electronic Medical Record Systems*," *Florence Nightingale J. Nurs.* , vol. 31, no. 1, pp. 2–10, 2023, doi: 10.5152/FNJJN.2022.22061.

- MYK Yujeong Kim, "Factors affecting household disaster preparedness in South Korea," *PubHealth J. Health. Masy.*, vol. 4, no. 17, 2022, doi: 10.1371/journal.pone.0275540. eCollection 2022.
- AA Alhur, "An Exploration of Nurses' Perceptions of the Usefulness and Easiness of Using EMRs," *J. Public Heal. Sci.*, vol. 2, no. 1, pp. 20–31, 2023, doi: 10.56741/jphs.v2i01.263.
- M. Nour El Din, "A Cross-sectional Study of Nurses' Perception Toward Utilization of *Electronic Medical Records* in Egypt," *Makara J. Heal. Res.*, vol. 26, no. 3, pp. 136–143, 2022, doi: 10.7454/msk.v26i3.1369.
- M. Top and Ö. Gider, "Nurses' Views on *Electronic Medical Records* (EMR) in Turkey: An Analysis According to Use, Quality and User Satisfaction," *Open Nurs. J.*, vol. 6, pp. 106–114, 2012, doi: 10.2174/1874434601206010106.
- Q. A'yun, "Analysis of the Use of Electronic Medical Records with the *Technology Method Acceptance Model* (TAM) at Jemursari Islamic Hospital in Surabaya," 2023. [Online]. Available: <https://repository.stikes-yrsds.ac.id>
- F. Rizqullah, "Evaluation of the Implementation of Electronic Medical Records Using the *Technology Method Acceptance Model* at Undaan Eye Hospital Surabaya," 2024. [Online]. Available: <https://repository.stikes-yrsds.ac.id>
- ID Purwandi, "Evaluation of User Acceptance of the Implementation of Electronic Medical Records with a *Technology Approach Acceptance Model* (TAM) in Hospital Outpatient Units," 2018. [Online]. Available: <https://repository.umy.ac.id>
- Syahrizal and N. Wulandari, "Acceptance of Electronic Medical Record Information Systems Based on *Technology Acceptance Model* (TAM)," *J. Health Inf. Sist.*, vol. 10, no. 1, pp. 45–52, 2022.
- L. Putri, N. Hidayati, and D. Ramadhan, "The Influence of Perceived Ease of Use and Attitude on Behavioral Intention to Use EMR at Tanjungpinang Regional General Hospital," *J. Manaj. Inf. Health. Indones.*, vol. 11, no. 2, pp. 101–108, 2023.