

Review

Health Workers' Knowledge about The Use of Electronic Medical Records: A Literature Review



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Article Info	Abstract
Article history: Received: 18 May 2024 Accepted: 20 July 2024	<i>Introduction:</i> The knowledge of health workers will affect their skills in carrying out the quality of medical records. The development of knowledge is so fast that health workers will quickly fall behind if they do not take advantage of various things to update the latest developments. The purpose of this study was to identify the knowledge of health workers about the use of electronic medical records (EMR). <i>Methods:</i> This study used a literature review design with a qualitative approach to the data obtained in the form of literature review study data collection. Researchers collected 15 articles or scientific journals that have been published to analyze the knowledge of health workers in using EMR. <i>Results:</i> The percentage of health workers who knew about the use of EMR was more than 50% in 10 articles and less than 50% in 5 articles. <i>Conclusion:</i> The percentage of health workers who know about the use of EMR is relatively high. The level of knowledge is still low due to the lack of training and computer skills for officers and the lack of understanding by officers regarding the benefits of EMR for health facilities.
Keywords: electronic medical record, health workers, Knowledge	

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INTRODUCTION

One of the services in healthcare facilities that can be integrated with information technology is medical records. An electronic medical record (EMR) is a computerized health information system that contains demographic and medical data and can be equipped with a decision support system. Healthcare facilities implement EMR in an effort to improve service quality, increase patient satisfaction, improve documentation accuracy, reduce clinical errors, and speed up data access [1].

In using computerized EMR, many obstacles are encountered, and the implementation of Electronic Medical Records experiences many obstacles, including unplanned organizational work culture, infrastructure whose needs have not been identified, and human resources, both IT and medical recorders, which are not sufficient [2].

Users are an essential aspect of realizing the ideal EMR. Users are the primary key to the success or failure of an information system. By understanding user perceptions, the proper recommendations can be found to maximize the adoption of EMR in improving the quality of patient care [1].

Given the importance of medical records, it is necessary to make progress in terms of knowledge in the application of EMR. In line research conducted by Audina (2020) shows the results that nurses' knowledge nursing documentation 29 respondents found seven respondents with poor nursing documentation knowledge, while for the completeness of data in electronic medical

records, 11 incomplete documents were obtained [3]. The knowledge of health workers will affect their skills in carrying out the quality of medical records [4].

The development of knowledge is so fast that health workers will quickly fall behind if they do not take advantage of various things to update the latest developments. Knowledge is the result of knowing, and it occurs after someone senses a specific object [5]. Therefore, this research aims to determine the knowledge of health workers regarding the use of EMR from various aspects, including education level, level of knowledge, and skills in using computerization.

METHODS

This study used a literature review design where researchers collected, selected, and examined various national-level scientific articles or journals to produce scientific work [6]. Researchers analyzed previous journals so that they found similarities in the journals, and then they gave their own opinions and drew conclusions about the journals that had been read [7]. The journals obtained are then screened for eligibility and then re-selected based on the critical appraisal journal [8].

Types and Design of Research

The research method used in this research was analytical research with qualitative methods. It used a literature study data collection strategy by collecting secondary data from previous research that is relevant to the topic raised in this research in order to determine the knowledge of health workers in the use of medical records. Electronics and

journals will be selected by adjusting predetermined criteria. The database used is Google Scholar based on the themes or keywords used in this research, namely the knowledge of health workers regarding the use of Electronic Medical Records, with a total of 15 articles or scientific journals with four international level journals and 11 national level journals. The journal used has been published for the last ten years, 2014-2024.

Manuscript Inclusion Criteria

The criteria used in this research are within the scope of medical records and health

information with health workers as research subjects. Research locations are hospitals, health centers and clinics. The articles were in Indonesian or English and have a publication period of the last ten years, from 2014 to 2024, with the theme of health workers' knowledge about the use of electronic medical records. Keywords used in journal searches are knowledge, health workers, and electronic medical records. The research designs are qualitative, quantitative, cross-sectional, and mixed methods.

Manuscript Screening Stages

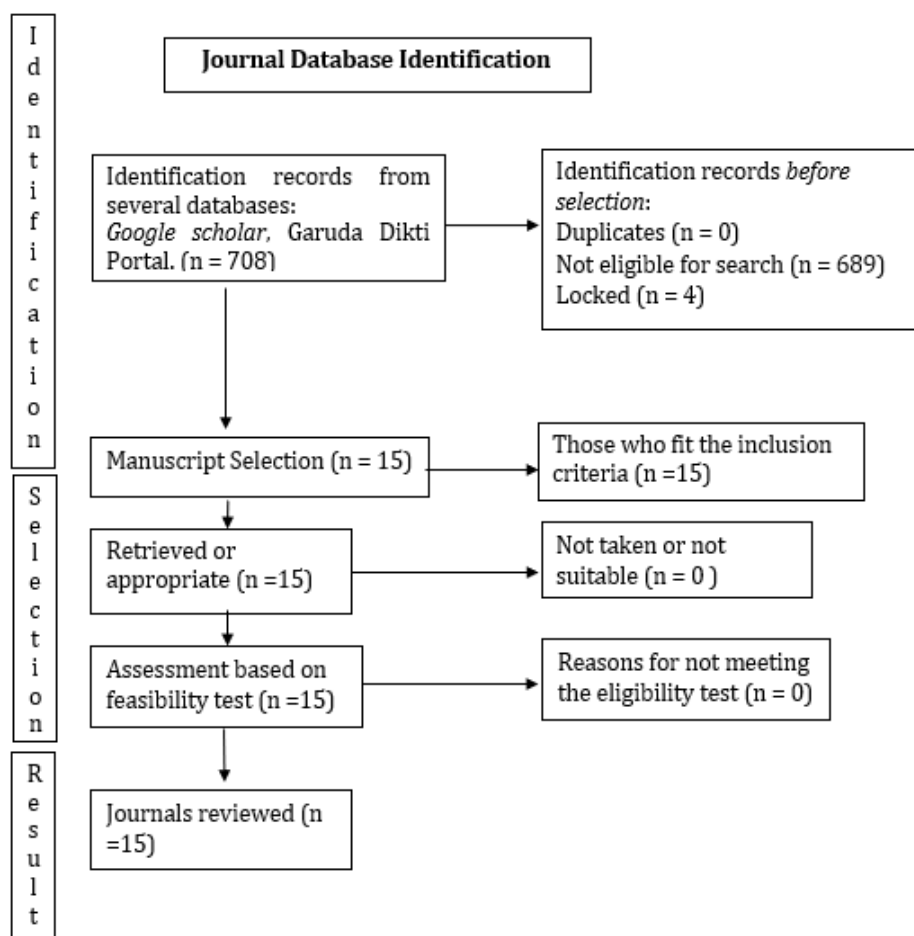


Fig. 1. Manuscript Screening Stages

RESULT

Based on the table 1, journal numbers 1,2,9,12,14 (5 journals) show that the knowledge of health workers in hospitals,

health centers and clinics is more than 50%, while journal numbers 3,4,5,6,7,8,10,11 13,15 (10 journals) found that the knowledge of health workers was less than 50%.

Table 1

Result of this study

No	Author Name & Year	Title	Research design	Research subject	Place of research	Research result
1.	Birhanu Berihun, Desta Debalkie Atnafu, and Getachew Sitotaw (2020)[9]	Willingness to Use Electronic Medical Record (EMR) System in Healthcare Facilities of Bahir Dar City, Northwest Ethiopia.	cross-sectional	healthcare professionals	hospitals: Adinas, Gamby, and Felege-Hiwot; public health centers: Bahir Dar and Han health centers; and clinic: Marie Stopes International Clinic,	The result of the technical factor of willingness to use the Electronic Medical Record system is 45.9%, where health workers have good knowledge about using the Electronic Medical Record system.
2.	Ika Sudirahayu, Ayu Harjoko (2016)[10]	Readiness Analysis of Electronic Medical Record Implementation Using DOQ-IT at Dr. H. Abdul Moeloek Lampung Hospital.	qualitative	Doctors, nurses, medical record officers and technicians	RSUD Dr.H.Abdul Moeloek	Of the 31 total staff available, only 14 (45%) staff knew about Electronic Medical Records. HR readiness is in range I, where there is no strong understanding of Electronic Medical Records.
3.	Indah Kurniawati, Yayuk Fatmawati (2022) [11]	Overview of the Level of Knowledge of Nurses on the Use of Electronic Medical Record (EMR) Methods in the Inpatient Room of Mardi Rahayu Kudus Hospital	quantitative	Nurses	Mardirahayu Kudus Hospital	According to the results showed that 34 respondents (55.7%) knew the use of RME.
4.	Michael Malvin	Overview of the Knowledge and	qualitative	Health workers	RSGM FKG USAKTI	51.7% of health workers were

No	Author Name & Year	Title	Research design	Research subject	Place of research	Research result
	Witarsa (2020) [12]	Attitudes of Health Workers Towards the Use of Electronic Medical Records at USAKTI FKG RSGM				highly knowledgeable, and 48.3% did not understand how to use Electronic Medical Records.
5.	Made Karma Maha Wirajaya, Ni Made Umi Kartika Dewi (2020) [13]	Analysis of Readiness of Dharma Kerti Tabanan Hospital to Implement Electronic Medical Records	quantitative and qualitative	Director, Head of Finance, Head of medical services, Head of IT, Medical Officer, Doctor, Nurse	Dharma Kerti Hospital	From the total score of 87, there is 16.6 for HR readiness; namely, in terms of training, it is found that there is still no training that is directly related to Electronic Medical Records. However, in terms of knowledge, almost all respondents understand the importance of electronic medical records and the benefits gained from the implementation. There were 62.3% of health professionals who were ready to use the electronic medical record system, 62.6% of participants who had good knowledge related to Electronic Medical Records, 60.1% of participants who had attitudes that supported Electronic Medical
6.	Shekur Mohammad Awol, Abreham Yeneneh Birhanu, Zeleke Abebaw Mekonnen, Kassuhan Dessie Gashu, Atsede Mazengia Shiferaw, Berhanu Fikadie Endehabtu, Mulugeta Haylom Kalayou,	Health Professionals' Readiness and Its Associated Factors to Implement Electronic Medical Record Systems in Four Selected Primary Hospitals in Ethiopia	cross-sectional	health professionals	primary hospitals were Assosa, Hidar 11, Sanja, and Wogera	

No	Author Name & Year	Title	Research design	Research subject	Place of research	Research result
	Habtanu Alganah Guadie, and Binyam Tilahun (2020)[14]					Records, 56.8% of participants had computer literacy and 16.9% of participants who had attended Electronic Medical Record training.
7.	Senafekesh Biruk, Tesfahun Yilma, Mulusew Andualem, and Binyam Tilahun (2014)[15]	Health Professionals Readiness to Implement Electronic Medical Record System At Three Hospitals in Ethiopia: a Cross-Sectional Study	cross-sectional quantitative	health professionals	Hospitals	Out of 606 study participants, only 328 (54.1%) were found to be aware of the use of electronic medical record systems. The overall knowledge and readiness of health workers for electronic medical records and their utilization were 54.1% and 46.5%, respectively.
8.	Meilinda Asrining Hapsari, Kismi Mubarokah (2023)[16]	Analysis of Readiness for Implementing Electronic Medical Records (RME) Using the Doctor's Office Quality-Information Technology (DOQ-IT) Method at the Pratama Polkesmar Clinic	Quantitative	11 respondents consisting of the leadership and all Pratama Polkesmar Clinic officers	Pratama Polkesmar Clinic	Based on the results of the analysis using DOQ-IT in the human resources aspect, it is considered very ready with a score of 4.69. Officers at the Pratama Polkesmar Clinic are very enthusiastic about the change from the manual medical record system to RME. In terms of knowledge about RME, almost all respondents

No	Author Name & Year	Title	Research design	Research subject	Place of research	Research result
9.	Nurvita Wikansari, Nanda Surya Febrianta (2024) [17]	Analysis of Readiness for Implementing Electronic Medical Records at the Pajangan Community Health Center, Bantul Regency	Qualitative	Medical record officers, doctors, nurses, and heads of administration	Pajangan Health Center, Bantul Regency	<p>understand the importance of RME and also the benefits obtained from implementing it. Most officers are also proficient in operating computers.</p> <p>Based on research results, the Pajangan Community Health Center only has 1 () medical recorder with an educational background in medical records and health information. One of the factors that inhibits the use of RME is the Human Resources (HR) factor. Medical records officers must have an educational background in medical records. If not, it will hinder the implementation of RME due to a lack of understanding and knowledge regarding electronic medical records.</p>
10.	Dody Arief Rahman, Ni Wayan Kurnia Widya Wati, Try Wahyu Qur'ana, Khairunnisa (2023) [18]	Analysis of Readiness of Medical Records Officers in Transitioning Conventional Medical Records to Electronic	Mix methods	One outpatient registration officer, one inpatient registration officer, and two outpatient filling officers. And one Head of Medical	Bhayangkara Hospital Tk. III Banjarmasin	Based on the results of the study of 5 respondents who have excellent knowledge of 3 people 60 (%) and respondents

No	Author Name & Year	Title	Research design	Research subject	Place of research	Research result
11.	Teguh Putri Anggari (2023) [19]	Medical Records at Bhayangkara Tk Hospital. III Banjarmasin Overview of Knowledge and Attitude of Medical Record Officers About Electronic Medical Records in Banjar City RSU Blood 2023	Quantitative	Records Installation. 30 medical records officers.	BLUD RSU Kota Banjar	with good knowledge of 2 people 40 (%). Based on the results of the Knowledge study, the majority of respondents were categorized as 60.0%, while the sufficient and low categories were 16.7% and 23.3%, respectively.
12.	Sri Siswati, Tuty Ernawati, Muthia Khairunnisa (2024) [20]	Analysis of the Challenges of Preparedness for Implementation of Electronic Medical Records in Puskesmas Padang City	Mixed method	69 samples, that is, doctors, medical recorders, and nurses, while the qualitative was done on 46 informants, 23 heads of the puskesmas and 23 medical records.	Puskesmas of the City of Padang	Based on the results of Univariat's analysis of the level of knowledge and perception, the majority of respondents had poor knowledge (53.6%) and a positive perception (53.6%).
13.	Riskiyya Amalia (2023) [21]	Review of Preparedness for Implementation of Electronic Medical Records of Road Care at RSUD Dr. MUHAMMAD ZYN SAMPANG	Qualitative	Head of medical records, registration officer, poly nurse	RSUD dr. MUHAMMAD ZYN SAMPANG	Based on the research results, officers already have knowledge of outpatient electronic medical records. Officers are competent in operating computers. Registration of outpatients has been carried out at SIMRS.
14.	Lakhmudien, Rano Indradi, Ega Nugraha,	Medical Recorders' Understanding of the	Qualitative	6 D3 Medical Records background officers	Kudus Regency Hospital	Based on research results from respondents

No	Author Name & Year	Title	Research design	Research subject	Place of research	Research result
	Imam Agus Setiyono (2023) [22]	Implementation of Electronic Medical Records Based on Minister of Health Regulation Number 24 of 2022				showed that the majority of medical recorders do not understand and have not received proper socialization about electronic medical records. Regarding the EMR design concept, most of the informants stated that they still haven't mastered it because it requires a lot of human resources involved, namely doctors, IT, medical recorders, nurses, and hospital directors.
15.	Mu'awiyah BS, Hussein AT, Abdulazeez AO, Istifanus AJ (2021) [23]	Knowledge, Attitude and Perception of Healthcare Workers on the Use of Electronic Medical Records in Ahmadu Bello University Teaching Hospital, Zaria, Kaduna State Northwest Nigeria	Cross-sectional study	128 healthcare workers that were randomly selected	Ahmadu Bello University Teaching Hospital, Zaria.	The majority of respondents have at least fair knowledge and good perception regarding EMR despite all of them having good attitudes towards it.

DISCUSSION

From the results of the study, it was found that the percentage of health workers who knew about the use of EMR was more than 50 % in 10 journals and less than 50 % in 5 journals.

Tenure affects officers because someone who works longer will have more knowledge than those who have just worked. Length of work is a process of building knowledge or skills about work methods with employee involvement in carrying out their duties so that with hard work, they can improve techniques and work methods [24]. The level of knowledge is influenced by several factors, namely education, occupation, age, interest, experience (tenure), environmental culture, and information [25]

One of the factors determining the success of EMR implementation is the attitude of users in using the EMR system, so it is necessary to conduct socialization and training to system users gradually to increase user knowledge and competence in operating the system. One of the challenges in implementing EMR is the lack of knowledge and experience of health workers in using computers [26]. In 2023, the implementation of the EMR program was complex and expensive; only 47% of countries that have a digital health strategy will have implemented an EMR system. Middle and high-income countries have implemented this EMR system only in the last five years, which are called (*upper-middle - and high-income countries*)[27]. Additionally, there is inadequate infrastructure, inadequate resources and regulatory frameworks. Human resource factors are also categorized as significant challenges in the use of

Electronic Medical Records, especially regarding the level of knowledge, level of education, work experience, and perceptions, which also influence the readiness of health workers to use Electronic Medical Records [28].

The reasons and challenges for using Electronic Medical Records in Indonesia are related to low knowledge of Electronic Medical Records because officers do not receive training on this matter, lack of computer skills of health workers, and lack of knowledge about computers and the benefits of Electronic Medical Records for medical facility [22]. The level of education is also an obstacle in the use of electronic medical records; medical record officers must have an educational background in medical records. Otherwise, it will hinder the implementation of Electronic Medical Records due to a lack of understanding and knowledge regarding Electronic Medical Records [29]. This is in line with research by [17] that in the Pajangan Community Health Center, Bantul Regency, there is still one medical records officer with a D3 medical records background. In contrast, the average of 4 officers who assist in the medical records section are high school graduates.

Solutions used to increase officer knowledge can be done through seminars, training, workshops, or other scientific activities. Knowledge about EMR is an entity that resides in EMR user officers. Thus, knowledge about EMR is related to the speed and accuracy of using EMR [30]. Education, training, skills, motivation, and experience can affect a person's characteristics at work. Training is a series of activities that provide

opportunities to gain and improve job-related skills [31].

Dessler said that there are three main aspects in shaping human resource competence. The first is the knowledge of officers in carrying out duties and responsibilities in accordance with their fields. The second aspect is the skill in carrying out the duties and responsibilities assigned to the officer. The last aspect is the attitude of officers in carrying out their duties and responsibilities in accordance with the regulations. Training can be interpreted as a planned effort to facilitate learning about work related to employee knowledge, skills, and behavior [6].

STUDY LIMITATIONS

The study was not without its limitations. A broad view is essential to get as much depth of the topic as possible. The study was limited by limited references regarding health workers' knowledge of electronic medical records and a lack of specific issues and subjects in research regarding who the health workers in question are.

Nursing Implication

Our research can be used as input in patient care services for nursing sessions and discussions with other health workers when using electronic medical records. Nurses who provide care in documenting care must be documented in electronic medical records so that the care provided can be integrated with other healthcare providers to avoid errors in medical diagnoses and care actions.

CONCLUSION

Based on the conclusions of this research, the knowledge level of EMR use in health facilities is still low due to a lack of training and computer skills and a lack of understanding regarding the benefits of EMR for health facilities. Various aspects of forming health workers' knowledge in using EMR include human resources, skills aspects, and officers' attitude aspects in carrying out their duties and responsibilities. Based on the results of analysis of scientific articles or journals conducted by researchers, it was found that the percentage of health workers' knowledge regarding the use of EMR in health facilities was relatively high.

Researchers suggest improving the quality of human resources by enhancing health workers' knowledge regarding the use of Electronic Medical Records (EMR) through regular training and seminars. Additionally, thorough screening of human resources based on their educational levels should be conducted, ensuring that 3rd Year Diploma graduates in medical records and health information, as well as other relevant majors, are placed in appropriate positions within hospitals, clinics, and health centers. To ensure the effective utilization of EMR systems, it is essential to maintain and implement regular monitoring and evaluation of human resources, focusing on their knowledge and education levels in EMR usage within health facilities.

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CONFLICT OF INTEREST

Any authors have declared no conflict of interest

AUTHOR CONTRIBUTION

Each author significantly contributed to the following aspects of the paper: formulating and planning the study, reviewing the article's content and conducting research.

ETHICAL APPROVAL

No ethics approval is required as this is an Article Review.

REFERENCES

- [1] R. Andriani, H. Kusnanto, and W. Istiono, "ANALISIS KESUKSESAN IMPLEMENTASI REKAM MEDIS ELEKTRONIK DI RS UNIVERSITAS GADJAH MADA," *Jurnal Sistem Informasi*, vol. 13, no. 2, p. 90, Oct. 2017, doi: 10.21609/jsi.v13i2.544. <https://doi.org/10.21609/jsi.v13i2.544>.
- [2] M. H. Pratama and S. Darnoto, "Analisis Strategi Pengembangan Rekam Medis Elektronik Di Instalasi Rawat Jalan Rsud Kota Yogyakarta," *Jurnal Manajemen Informasi Kesehatan Indonesia*, vol. 5, no. 1, p. 34, 2017, doi: 10.33560/v5i1.146. <https://doi.org/10.33560/v5i1.146>.
- [3] I. Sudirahayu and A. Harjoko, "Analisis Kesiapan Penerapan Rekam Medis Elektronik Menggunakan DOQ-IT di RSUD Dr. H. Abdul Moeloek Lampung," *Journal of Information Systems for Public Health*, vol. 1, no. 3, 2017, doi: 10.22146/jisph.6536. <https://doi.org/10.22146/jisph.6536>.
- [4] H. nunuik maya Nurajanah sari dewi intan, "Gambaran Pengetahuan Petugas Rekam Medis Tentang Rekam Medis Berdasarkan Standar Mki 19 Di Rsud Dr. Soediran Mangun Sumarso Wonogiri," vol. 11, no. 1, 2017.
- [5] S. Notoatmodjo, *Promosi kesehatan dan Perilaku Kesehatan*. Jakarta: Rineka cipta, 2012.
- [6] A. S. Denney and R. Tewksbury, "How to Write a Literature Review," *Journal of Criminal Justice Education*, vol. 24, no. 2, pp. 218–234, Jun. 2013, doi: 10.1080/10511253.2012.730617. <https://doi.org/10.1080/10511253.2012.730617>.
- [7] Sugiyono, *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif Dan R&D*. Bandung: CV Alfabeta, 2013.
- [8] Muh. Fuad Suharto, "Hubungan Pengetahuan Koder Tentang Terminologi Medis dengan Keakuratan Kode Diagnosis Penyakit," 2021.
- [9] B. Berihun, D. D. Atnafu, and G. Sitotaw, "Willingness to Use Electronic Medical

- Record (EMR) System in Healthcare Facilities of Bahir Dar City, Northwest Ethiopia,” *Biomed Res Int*, vol. 2020, pp. 1–9, Aug. 2020, doi: 10.1155/2020/3827328. <https://doi.org/10.1155/2020/3827328>.
- [10] I. Sudirahayu and A. Harjoko, “Analisis Kesiapan Penerapan Rekam Medis Elektronik Menggunakan DOQ-IT di RSUD Dr. H. Abdul Moeloek Lampung,” *Journal of Information Systems for Public Health*, vol. 1, no. 3, Sep. 2017, doi: 10.22146/jisph.6536. <https://doi.org/10.22146/jisph.6536>.
- [11] I. Kurniawati and Y. Fatmawati, “Gambaran Tingkat Pengetahuan Perawat terhadap Penggunaan Metode Electronic Medical Record (EMR) Di Ruang Rawat Inap Rumah Sakit Mardi Rahayu Kudus,” *Indonesian Journal of Nursing Research (IJNR)*, vol. 5, no. 1, pp. 1–8, Dec. 2021, doi: 10.35473/ijnr.v5i1.1426. <https://doi.org/10.35473/ijnr.v5i1.1426>.
- [12] Michael M W, “Gambaran Pengetahuan dan Sikap Tenaga Kesehatan Terhadap Penggunaan Rekam Medis Elektronik di RSGM FKG USAKTI,” 2020.
- [13] M. K. Maha Wirajaya and N. Made Umi Kartika Dewi, “Analisis Kesiapan Rumah Sakit Dharma Kerti Tabanan Menerapkan Rekam Medis Elektronik,” *Jurnal Kesehatan Vokasional*, vol. 5, no. 1, p. 1, Feb. 2020, doi: 10.22146/jkesvo.53017. <https://doi.org/10.22146/jkesvo.53017>.
- [14] S. M. Awol et al., “Health Professionals’ Readiness and Its Associated Factors to Implement Electronic Medical Record System in Four Selected Primary Hospitals in Ethiopia,” *Adv Med Educ Pract*, vol. Volume 11, pp. 147–154, Feb. 2020, doi: 10.2147/AMEP.S233368. <https://doi.org/10.2147/AMEP.S233368>.
- [15] S. Biruk, T. Yilma, M. Andualem, and B. Tilahun, “Health Professionals’ readiness to implement electronic medical record system at three hospitals in Ethiopia: a cross sectional study,” *BMC Med Inform Decis Mak*, vol. 14, no. 1, p. 115, Dec. 2014, doi: 10.1186/s12911-014-0115-5. <https://doi.org/10.1186/s12911-014-0115-5>.
- [16] M. A. Hapsari and K. Mubarakah, “Analisis Kesiapan Pelaksanaan Rekam Medis Elektronik (RME) Dengan Metode Doctor’s Office Quality-Information Technology (DOQ-IT) di Klinik Pratama Polkesmar,” *J-REMI: Jurnal Rekam Medik dan Informasi Kesehatan*, vol. 4, no. 2, pp. 75–82, 2023, doi: 10.25047/j-remi.v4i2.3826. <https://doi.org/10.25047/j-remi.v4i2.3826>.
- [17] Nurvita Wikansari and N. Febrianta, “Analisis Kesiapan Implementasi Rekam Medis Elektronik di Puskesmas Pajangan Kabupaten Bantul,” *Journal Health Information Management Indonesian (JHIMI)*, vol. 3, no. 1, pp. 72–76, 2024, doi: 10.46808/jhimi.v3i1.169. <https://doi.org/10.46808/jhimi.v3i1.169>.

- [18] A. R. DODY, "Analisis Kesiapan Petugas Rekam Medis Dalam Peralihan Rekam Medis Konvensional ke Rekam Medis Elektronik di Rumah Sakit Bhayangkara Tk. III Banjarmasin," no. January, 2023, [Online]. Available: <http://repository.stikeshb.ac.id/605/>
- [19] Teguh Putri Anggari, "Gambaran Pengetahuan dan Sikap Petugas Rekam Medis Tentang Rekam Medis Elektronik Di BLUD RSUD Kota Banjar Tahun 2023," 2023.
- [20] S. Siswati, T. Ernawati, and M. Khairunnisa, "Analisis Tantangan Kesiapan Implementasi Rekam Medis Elektronik di Puskesmas Kota Padang," *Jurnal Kesehatan Vokasional*, vol. 9, no. 1, p. 1, 2024, doi: 10.22146/jkesvo.92719. <https://doi.org/10.22146/jkesvo.92719>
- [21] Riskiya Amalia, "Tinjauan Kesiapan Pelaksanaan Rekam Medis Elektronik Rawat Jalan DI RSUD dr. MUHAMMAD ZYN SAMPANG," 2023.
- [22] L. Lakhmudien, Rano Indradi S, Ega Nugraha, and Imam Agus Setiyono, "PEMAHAMAN PEREKAM MEDIS TERHADAP PENERAPAN REKAM MEDIS ELEKTRONIK BERBASIS PERMENKES NOMOR 24 TAHUN 2022," *Jurnal Cakrawala Ilmiah*, vol. 2, no. 9, pp. 3601–3606, Jun. 2023, doi: 10.53625/jcijurnalcakrawalailmiah.v2i9.5803. <https://doi.org/10.53625/jcijurnalcakrawalailmiah.v2i9.5803>.
- [23] M. B. Sufyan, H. T. Ahmed, A. A. Olasinde, and I. A. Joshua, "Knowledge, Attitude and Perception of Healthcare Workers on use of Electronic Medical Records in Ahmadu Bello University Teaching Hospital, Zaria, Kaduna State Northwest Nigeria," *Journal of Medical & Basic Scientific Research*, vol. 2, no. 1, pp. 1–12, 2021, [Online]. Available: <https://doi.org/10.46912/jmbsr.53>.
- [24] N. Risdianty and C. D. Wijayanti, "EVALUASI PENERIMAAN SISTEM TEKNOLOGI REKAM MEDIK ELEKTRONIK DALAM KEPERAWATAN," *Carolus Journal of Nursing*, vol. 2, no. 1, pp. 28–36, May 2020, doi: 10.37480/cjon.v2i1.9. <https://doi.org/10.37480/cjon.v2i1.9>.
- [25] A. T. S. F. H. Aisyah Ayuningtyas. N.I., "Hubungan Tingkat Pengetahuan Tentang Rekam Medis Dengan Kelengkapan Lembar Anamnesa Oleh Bidan Di Bangsal Kebidanan Rumah Sakit Nur Hidayah Bantul," *Jurnal Permata Indonesia*, vol. 6, no. 2, pp. 1–9, 2015.
- [26] L. L. A. A. P. P. Rina Yulida, "Tantangan Implementasi Rekam Medis Elektronik Berdasarkan Dimensi Sumber Daya Manusia Di Rsgm Prof. Soedomo Yogyakarta," 2022.
- [27] Anzany Tania Dwi Putri, "Challenges in implementing electronic medical record in Indonesia healthcare facilities," *Jurnal Medika Hutama*, vol. 4, no. 3, 2023.
- [28] A. F. Abdulai and F. Adam, "Health providers' readiness for electronic health records adoption: A cross-sectional study of two hospitals in northern Ghana," *PLoS One*, vol. 15, no. 6, pp. 1–11, 2020, doi: 10.1371/journal.pone.0231569.

<https://doi.org/10.1371/journal.pone.0231569>.

- [29] R. Silalahi and E. J. Sinaga, "Perencanaan Implementasi Rekam Medis Elektronik Dalam Pengelolaan Unit Rekam Medis Klinik Pratama Romana," *Jurnal Manajemen Informasi Kesehatan Indonesia*, vol. 7, no. 1, p. 22, Mar. 2019, doi: 10.33560/jmiki.v7i1.219. <https://doi.org/10.33560/jmiki.v7i1.219>.
- [30] Niko Tesni, "Hubungan Antara Pengetahuan Terminologi Medis Petugas

Rekam Medis dengan Ketepatan Kode Diagnosis di RS PKU Muhammadiyah Yogyakarta," 2016.

- [31] N. Fanny, K. Adi, and S. P. Jati, "Penerapan Model Hot Fit pada Evaluasi Sistem Informasi Keselamatan dan Kesehatan Kerja di RSUD Dr. Moewardi," *MEDIA KESEHATAN MASYARAKAT INDONESIA*, vol. 19, no. 1, pp. 19–25, Feb. 2020, doi: 10.14710/mkmi.19.1.19-25. <https://doi.org/10.14710/mkmi.19.1.19-25>.