

The Influence of Medical Record Officers' Perceptions of the Quality of Medical Records On The Completeness of Filling Out Electronic Medical Resumes at RSUD Ajibarang

Arum Astika Sari^{1*},Desi Purwati²,Budi Marini³

^{1,2} Health Information Management Universitas Muhammadiyah Purwokerto Central Java, Indonesia

³Medical Record & Health Information RSUD Ajibarang Central Java, Indonesia

*Correspondence author: arumastika.md@gmail.com

Abstract. Medical record officers play an important role in improving the quality of medical records, officers must have good knowledge and understanding in the medical record unit. Completeness of medical resume filling is an aspect that can have an impact on the quality of medical records. Health professionals, including doctors, nurses, and other medical staff, use medical resume sheets to record patient information. Incomplete medical resumes can cause major problems for medical records, which must fill out medical resumes thoroughly in their capacity as health service providers. This study aims to determine how the influence of medical record officers' perceptions of the quality of medical records on the completeness of filling out electronic medical resumes at RSUD Ajibarang. This research method is descriptive quantitative with a cross sectional approach and the test conducted with the Chi Square test. The population and sample were medical record officers totaling 32 respondents and inpatient medical resume forms totaling 32 medical resumes. The results showed that 32 respondents had a good perception of 31 people and an unfavorable perception of one person. The results of the analysis showed that the perception of medical record officers about the quality of medical records on the completeness of filling out electronic medical records showed that the p-value of $0.000 < 0.05$, so that H_0 was rejected and H_1 was accepted. It can be concluded that there is an influence between the perception of medical record officers about the quality of medical records on the completeness of filling out electronic medical resumes at RSUD Ajibarang.

Keywords: Medical Record Quality, Electronic Medical Resumes, Staff's Perception

I.BACKGROUND

According to Permenkes RI No. 24 of 2022 concerning Medical Records, a medical recorder and health information must pass medical record education in accordance with the provisions regulated by law. Medical Records are documents that contain information on patient identity data, examination, treatment, actions, and other services that have been provided to patients [1]. Electronic Medical Records (EMR) are medical records made using an electronic system intended for organizing medical records. Medical record identity data contains at least the medical record number, patient name, and Population Identification Number. In recording and documenting medical records, it must contain complete and accurate data such as patient identity, disease progression while the patient is receiving medical care, patient diagnosis, therapy options, actions taken and the results of documentation of patient actions [2].

Every hospital and other health care facility needs medical records to function properly. Medical records serve as records that document clinical information about patients, such as history of illness, examination findings, and treatment that has been given. Completeness of medical records is very important because it affects patient care, hospital administration, and compliance with regulations and serves as a basis for making wise medical decisions [3]. In previous research, the perceptions of health workers in the use of electronic medical records, it was stated that the completeness of filling out medical resumes could be influenced by the perceptions of medical record officers regarding the quality of medical records [4]. The perception of medical record officers about the quality of medical records includes the understanding of medical record officers about documentation standards, the importance of completeness of medical records and concern for errors or gaps in medical records.

Completeness of medical resume filling is one aspect that can have an impact on the quality of medical records. Incomplete filling of medical resumes can cause major problems with medical records, such as confusing information, possible errors during medical diagnosis, treatment, or surgery, and violations of relevant health laws and standards [5]. Therefore, medical resumes should be complete and summarized, as well as include the name and signature of the doctor treating the patient and be able to clarify any important information, especially with regard to the patient's diagnosis. Doctors

should fill out medical resumes thoroughly in their capacity as healthcare providers. As the level of medical record completeness has a significant impact on the quality of medical records, a complete medical resume can prove the hospital's compliance with one of the requirements to complete medical records in a complete and accurate manner [6].

RSUD Ajibarang is a hospital in Banyumas Regency that has completely transferred manual medical records to electronic medical records in October 2023. In the implementation of electronic medical records in the service section, the completeness of medical record documents at RSUD Ajibarang in 2023 in December had reached 91.4% of the minimum service standards determined in Kepmenkes No. 129/MENKES/SK/II/2008 concerning Minimum Hospital Service Standards. Based on the previous study, the researcher was interested in conducting research on "The Effect of Medical Record Officer Perceptions of Medical Record Quality on Completeness of Electronic Medical Resume Filling at RSUD Ajibarang".

II.METHOD

This study was conducted at RSUD Ajibarang in December 2023 - July 2024. This study used quantitative research with descriptive research design with a cross sectional approach. The variables of this study are the perception of medical record officers about the quality of medical records as an independent variable and the completeness of filling out electronic medical resumes of hospitalized patients as the dependent variable. Respondents in this study were total sampling of medical record officers at RSUD Ajibarang totaling 32 respondents. In this study using a total of 32 medical resumes taken by random sampling, because in this study using bivariate analysis with the Chi Square test which requires the same number of samples in each variable.

III.RESULTS AND DISCUSSION

Characteristics of Medical Record Officer Respondents at RSUD Ajibarang

This research questionnaire was distributed to 32 respondents directly. In this study, the following data were obtained:

Table 1. Frequency Distribution of Respondent Characteristics

Respondent Characteristics	Classification	Frequency	Percentage (%)
Gender	Male	8	25,0
	Female	25	75,0
	Total	32	100,0
Age	20-30 Years	20	62,5
	31-40 Years	6	18,8
	41-50 Years	6	18,8
	Total	32	100,0
Education	SMA/K	3	9,4
	1-year degree	1	3,1

Source: Primary data, processed 2024

Based on table 1, the characteristics of the respondents of medical record officers at RSUD Ajibarang are 32 respondents, in the gender item female medical record officers dominate with a percentage of 75%, the age item of medical record officers who are in the age *range of* 20-30 years has the highest number of 20 people with a percentage of 62.5%, the highest education item for medical record officers at 3rd Diploma in Medical Record and Health Information level is 62.5%, while for the tenure of medical record officers dominant in the range of 1-5 years with a percentage of 56.3%.

Data Analysis of Medical Record Officers' Perception of Medical Record Quality

Based on the research conducted for the variable perception of medical record officers about the quality of medical records obtained by questionnaires given to all medical record officers at RSUD Ajibarang, the following results were obtained:

Table 2. Frequency Distribution of Medical Record Officers' Perception of Medical Record Quality

		F	Percent (%)	Valid Percent (%)	Cumulative Percent
Valid	Good Perception	31	96,9	96,9	96,9
	Unfavorable Perception	1	3,1	3,1	100,0
Total		32	100,0	100,0	

Source: Primary data, processed 2024

The results of the analysis of table 2 variable perception of medical record officers about the quality of medical records found that of the total medical record officers of 32 officers who had a good perception of 31 people and 1 person had an unfavourable perception.

Data Analysis of Completeness of Electronic Medical Resume Filling

The analysis of the completeness of medical records in this study used electronic medical resume forms on inpatients at RSUD Ajibarang. This analysis aims to determine the completeness of medical resumes based on 4 aspects of quantitative analysis, namely patient identification components, important report components, authentication components and good documentation components.

Table 3. Frequency Distribution of Completeness of Electronic Medical Resume Filling Aspects

No.	Aspects of Completeness of Electronic Medical Resume Filling	Average Percentage of Completeness	Average Percentage of Incompleteness	Percentage of Total
1	Patient identification	100%	0%	100%
2	Important reporting	99.6%	0,4%	100%
3	Authentication	66.6%	33.3%	100%
4	Good documentation	100%	0%	100%

Source: Primary data, processed 2024

The results of table 3 in research with observations on 32 medical resume forms in 2024 at RSUD Ajibarang obtained the results of incomplete medical record completeness in the important reporting component of 0.4% and good documentation of 33.3%.

Data Normality Test

Normality test is used to determine whether data is normally distributed or not, the normality test can be done using the Shapiro Wilk test. Data is said to be normally distributed (symmetrical) in the shapiro wilk test if the sig value is > 0.05 [7].

Table 4. Data Normality Test

	EMR Completeness	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Medical record officers' perception of medical record quality	Incomplete	.539	32	.000	.172	32	.000

a. Lilliefors Significance Correction

Source: Primary data, processed 2024

Based on table 4 The magnitude of the Shapiro Wilk test at a significance of 0.000. Because the significance result is 0.000 <0.05, it can be concluded that the data distribution in this study is not normally distributed data.

Influence of Medical Record Officers' Perception of Medical Record Quality on Completeness of Electronic Medical Resume Filling Aspects

Based on the analysis that has been done on the effect of the perception of medical record officers about the quality of medical records on the completeness of the patient identification component at the RSUD Ajibarang using the *chi square* test on 32 medical resume forms in each aspect, the following results are obtained:

Table 5. Influence of Medical Record Officers' Perception of Medical Record Quality on Completeness of Electronic Medical Resume Filling Aspects

No.	Aspects of Completeness of Electronic Medical Resume Filling	P value
1	Patient identification	.002
2	Reporting that matters	.000
3	Authentication	.000
4	Good documentation	.008

Source: Primary data, processed 2024

The Effect of Medical Record Officers' Perceptions of Medical Record Quality on Completeness of Electronic Medical Resumes

Analysis conducted on the effect of medical record officers' perceptions of the quality of medical records on the completeness of electronic medical resumes with the *chi square* test on 32 medical resume forms obtained the following results:

Table 6. The Effect of Perception of Medical Record Officers on the Quality of Medical Records on Completeness of Electronic Medical Resumes

Completeness Electronic Medical Resume	MR Officer's Perception of MR Quality				Total		P value
	Good Perception		Unfavorable Perception		F	%	
	F	%	F	%			F
Complete	0	0%	0	0%	0	0%	.000
Incomplete	31	96,9%	1	3,1%	32	100%	

Source: Primary data, processed 2024

Based on table 6, there are incomplete medical records with good perceptions as many as 31 medical records having a p value of 0.000 <0.05, which means that the good perception of medical record officers regarding the quality of medical records affects the completeness of electronic medical resumes.

Characteristics of Medical Record Officer Respondents at RSUD Ajibarang

The study focused on medical record officers at RSUD Ajibarang and their characteristics. The respondents in the study were a total of 32 medical record officers, with the majority being female at 75%. The age range of the officers was between 20-30 years, with 20 individuals falling within this range. In terms of education, the majority of the officers had a

D3 RMIK education, accounting for 20 people. When looking at the length of service, 18 officers had a service period of 1-5 years, which made up 56.3% of the total. The length of service was found to have a significant impact on the completeness of filling out medical resumes, as experience gained over time influenced this factor. This finding aligns with previous research by Pratiwi et al. that emphasized the significance of a long working period in relation to the completeness of medical records [8].

Perception of Medical Record Officers About the Quality of Medical Records

The perception of medical record officers about the quality of medical records was analyzed, and the results show that out of 32 officers, 31 had a good perception while 1 had an unfavorable perception. The education level of the officers influenced their perception, as those without a medical record education background had less understanding of the completeness of filling out medical records. It is recommended that these officers increase their knowledge by attending trainings on this topic. Previous research has found that higher education leads to greater knowledge and easier information absorption, while lower education levels can hinder attitude development. However, knowledge is not solely derived from formal education, but can also be acquired through non-formal education [9].

Influence of Medical Record Officers' Perception of Medical Record Quality on Completeness of Electronic Medical Resume Filling Aspects

a. The Effect of Medical Record Officers' Perceptions of Medical Record Quality on Completeness of Patient Identification Aspect

Based on the review of the patient identification component, there is the highest completeness, namely 100% of the documents filled in completely. This has met the criteria for medical record quality indicators, namely that medical records must meet the requirements of legal aspects in accordance with Permenkes HK.01.07/Menkes/1424/2022 concerning Work Competency Standards for Medical Records and Health Information. The results of table 3 in the study found complete medical records with good perceptions as many as 32 medical records have a p value of $0.002 < 0.05$, which means that the good perception of medical record officers about the quality of medical records affects the completeness of medical records on the patient identification component. This is reinforced by Nurhaidah et al. which states that the completeness of patient identification in medical record documents is very important because it can affect the quality of medical records from the services of a hospital [10].

b. The Effect of Perceptions of Medical Record Officers on the Quality of Medical Records on Completeness of Important Reporting Aspect

According to the findings of a study, there is a significant relationship between the perceptions of medical record officers and the quality of medical records, specifically regarding the completeness of important reporting components. Table 3 in the study shows that there were 30 medical records with good perceptions that had complete medical records having a p value of $0.000 < 0.05$. Another source affirms the importance of filling in these components, states that filling in the completeness of medical records in the important reporting component is very important because it can facilitate officers in carrying out further treatment for patients by looking at the patient's medical record [11]. The results of the analysis obtained one incomplete medical record on laboratory examination, this occurred because the medical record was for a new-born patient who did not undergo such laboratory examination.

c. The Influence of Medical Record Officers' Perceptions of Medical Record Quality on the Completeness of the Authentication Aspect

Authentication is a process of proving a person's identity, in this case a doctor who has the authority to fill out a patient's medical record file. The study explored the impact of medical record officers' perceptions of medical record quality on the completeness of the authentication component. Based on the results of table 3 in the study, there were incomplete medical records with good perceptions as many as 31 medical records having a p value of $0.000 < 0.05$, which means that the good perception of medical record officers about the quality of medical records affects the completeness of medical records on the authentication component. Specifically, incomplete filling in the authentication component was due to the doctor's signature not being signed, as the BPJS requires a wet signature for verification of claims. To address this issue, hospitals would print the patient's medical resume and have the responsible doctor sign it. The authentication process is crucial for protecting healthcare workers in legal matters. Incomplete signatures on medical resumes can have implications on the quality

of medical records. Another research study mentioned that the importance of complete authentication for both patients and doctors, as it serves as evidence in cases of legal problems related to malpractice allegations [12].

d. The Influence of Medical Record Officers' Perceptions of the Quality of Medical Records on Completeness of Good Documentation Components

Based on the results of table 3 in the study, there were complete medical records with a good perception of 31 medical records having a p value of $0.008 < 0.05$, which means that there was a significant correlation between a good perception of medical records and the completeness of medical records. In other words, when medical record officers had a good perception of the quality of medical records, the completeness of the documentation improved. In filling out the medical resume, it must be thorough and accurate in order to make it easier for other health workers to analyze the diagnosis, medical history and other supporting examination results for diagnosis and action coding. This was reinforced in the research of Fauzan Alfarizi et al. which states that inaccurate medical records can cause diagnoses, medical histories, and other examination results to be unreadable during the diagnosis or action coding process [12]. In addition, having accurate medical records can be beneficial for parties such as health insurance providers.

Influence of Medical Record Officers' Perception of Medical Record Quality on Completeness of Electronic Medical Resumes

In this study, the influence of medical record officers' perception of medical record quality on the completeness of electronic medical resumes is examined. The researchers found that although medical record officers had good perceptions of the quality of medical records, there were 31 incomplete medical records out of the 32 observed. The completeness of medical resumes is crucial for ensuring good quality medical records. The perception of medical record officers is very influential on the completeness of medical resumes, filling out medical resumes must be complete so that the quality of medical records is good. This is reinforced by research by Hapsari, which states that the more incomplete the filling of medical resumes by medical record officers, the quality of medical records will decrease [13]. The study looked at the relationship between the completeness of medical resumes and the quality of medical records and the rest was influenced by other variables. The perception of medical record officers about the quality of medical records has three aspects of quality, namely: accuracy of recording, timeliness of returning medical records, and fulfillment of legal requirements. In this study, it was found that of the total medical record officers at RSUD Ajibarang of 32 people, there were 31 people with good perceptions and 1 person with unfavorable perceptions of the quality of medical records. As for the completeness of filling out inpatient medical resumes, incomplete medical resumes were found in the important reporting and authentication components. Completeness in filling out medical resumes greatly affects the quality of medical records. Medical resumes are said to be complete if the filling of patient identification data, important reporting, authentication and good documentation are completely filled in. This is reinforced in the research of Tuti et al., which states that incomplete filling of medical resumes can cause information in medical resumes to be incorrect, inaccurate, invalid or illegal [14]. In addition, incompleteness in filling out medical resumes can have an impact on the usefulness of medical records for administrative, legal, financial, research, educational, and documentation purposes.

The perception of medical record officers is a person's understanding that will determine something important, which is the basis for attitudes and actions in accepting or rejecting something new. This is reinforced by Notoadmojo describes that understanding is the result of knowing and this occurs after people have sensed a certain object [15]. Perception or understanding of documentation must be possessed by various health professionals, one of which is medical record personnel. The use of electronic-based medical resumes is very effective for all medical and non-medical staff. The development of knowledge is so fast, if medical recorders do not take advantage of various things to update the latest developments, they will be left behind. A person's perception or understanding affects the way each individual think. Research by Yulida et al. found that there are several problems with the use of electronic medical records based on human resources including users who do not understand using electronic medical records [16]. Research by Fatmawati, provides an assessment of the readiness of medical recorders regarding electronic medical records including human resources, clinical and administrative staff, ability to operate computers, knowledge of electronic medical records and training [17].

IV. CONCLUSIONS AND SUGGESTIONS

Conclusions

The analysis of the completeness of the medical resume at RSUD Ajibarang revealed that the patient identification component is 100% complete, the important reporting component is 99.6% complete, the authentication component is 66.7% complete, and the good documentation component is 100% complete. Furthermore, the perception of medical record officers about the quality of medical records has an influence on the completeness of filling out the electronic medical resumes. Specifically, it was found that the perception of medical record officers affects the completeness of the patient identification component, the important reporting component, the authentication component, and the components of good documentation. In all these cases, the p-values were less than 0.05, indicating a significant effect. Therefore, the perception of medical record officers regarding the quality of medical records plays a crucial role in ensuring the completeness of electronic medical resumes at RSUD Ajibarang.

Suggestions

- a. Completeness of filling out electronic medical resumes must be maintained so that the minimum medical record unit service standard indicators are still achieved.
- b. In this study only used a sample of medical resume forms, for that in future studies can conduct completeness research on all medical record forms.
- c. Hospitals facilitate the creation of Electronic Signatures of certified patient responsible doctors so that medical resumes have legal value.

The need to make Standard Operating Procedures regarding the filling of electronic medical resumes and the completeness of electronic medical resumes to improve the completeness of electronic medical records at RSUD Ajibarang.

ACKNOWLEDGMENT

Thanks to Universitas Muhammadiyah Purwokerto and the 2024 ISMOHIM committee for organizing international conference activities so that this article can be published.

REFERENCES

- [1] Republik Indonesia, "Menteri Kesehatan Republik Indonesia No. 129/MENKES/SK/II/2008 tentang Standar Pelayanan Minimal Rumah Sakit," Jakarta, 2008.
- [2] D. F. Septiani, *Perlindungan Hukum Terhadap Hak Pasien Atas Rekam Medis Elektronik Yang Hilang* (Doctoral Dissertation, Universitas Islam Lamongan), 2023.
- [3] I. Mathar, *Manajemen Informasi Kesehatan: Pengelolaan Dokumen Rekam Medis*. Yogyakarta: Deepublish, 2018.
- [4] U. Fauziah and F. Fadly, "Gambaran Persepsi Tenaga Kesehatan Dalam Penggunaan RME di RSUD Singaparna Medika Citrautama," *J-REMI: Jurnal Rekam Medik dan Informasi Kesehatan*, vol. 4, no. 4, pp. 257–264, 2023, doi: 10.25047/j-remi.v4i4.3846.
- [5] R. M. Fajarini, *Pengaruh Pelaksanaan SPO Terhadap Kelengkapan Formulir Ringkasan Masuk Keluar RS TNI AU Soemitro Surabaya (Studi Literatur)* (Doctoral Dissertation, Stikes Yayasan RS Dr. Soetomo Surabaya), 2021.
- [6] L. N. Aeni and I. Sari, "Pengaruh Kelengkapan Formulir Resume Medis Rawat Inap Terhadap Mutu Rekam Medis di RSUD Majalaya," *Health Information: Jurnal Penelitian*, p. e1088, 2023.
- [7] S. Santoso, *Mahir Statistik Parametrik*. Jakarta: Elex Media Komputindo, 2019.
- [8] M. A. Pratiwi, R. A. Wijayanti, E. T. Ardianto, and E. Rachmawati, "Faktor Penyebab Ketidakefektifan Pengisian Resume Medis Guna Penunjang Akreditasi di RS Bhayangkara Lumajang," *J-REMI: Jurnal Rekam Medik dan Informasi Kesehatan*, vol. 2, no. 4, pp. 481–496, 2021, doi: 10.25047/j-remi.v2i4.2328.

- [9] Z. A. Ritonga, "Pengaruh Kinerja Petugas Rekam Medis Terhadap Ketidaklengkapan Resume Medis di RSUD Imelda Pekerja Indonesia Medan," **Jurnal Ilmiah Perekam dan Informasi Kesehatan Imelda**, vol. 1, no. 1, pp. 7–12, 2016.
- [10] N. Nurhaidah, T. Harijanto, and T. Djauhari, "Faktor-Faktor Penyebab Ketidaklengkapan Pengisian Rekam Medis Rawat Inap di Rumah Sakit Universitas Muhammadiyah Malang," **Jurnal Kedokteran Brawijaya**, vol. 29, no. 3, pp. 258–264, 2016, doi: 10.21776/ub.jkb.2016.029.03.4.
- [11] M. Hidayati and R. M. Dewi, "Pengaruh Kelengkapan Formulir Resume Medis Rawat Inap Terhadap Mutu Rekam Medis di RSUD Kabupaten Sumedang," **INFOKES (Informasi Kesehatan)**, vol. 2, no. 2, pp. 72–82, 2018.
- [12] M. Fauzan Alfarizi, A. I. Suryani, and P. D. Studi, "Analisis Kelengkapan Pengisian Ringkasan Pasien Pulang Guna Menunjang Mutu Rekam Medis Di Rs X," **Jurnal Kesehatan**, vol. 4, no. 3, pp. 3512–3521, 2023.
- [13] N. I. Hapsari and L. R. Ilmi, "Pengaruh Kelengkapan Pengisian Lembar Resume Medis di Bangsal Anak dan Pengembalian Rekam Medis Terhadap Mutu Rekam Medis di Rumah Sakit Bethesda Yogyakarta," **Jurnal Kesehatan**, vol. 36, 2016.
- [14] S. O. Tuti, W. W. Freddy, and V. D. D. Diana, "Faktor-Faktor yang Mempengaruhi Kelengkapan Pengisian Rekam Medis Elektronik Instalasi Rawat Jalan RSUP Prof Dr. R. D. Kandou Manado," **Jurnal Kesehatan Tambusai**, vol. 4, no. 2, pp. 1210–1223, 2023.
- [15] S. Notoatmodjo, **Metodologi Penelitian Kesehatan**. Jakarta: PT Rineka Cipta, 2018.
- [16] R. Yulida, L. Lazuardi, and A. A. P. Pertiwi, "Tantangan Implementasi Rekam Medis Elektronik Berdasarkan Dimensi Sumber Daya Manusia di RSGM Prof. Soedomo Yogyakarta," in **Prosiding Diskusi Ilmiah Inovasi dan Teknologi Informasi untuk Mendukung Kinerja PMIK dalam Masa Pandemi Covid 19**, 2021.
- [17] 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, 2022.