

THE USE OF ELECTRONIC MEDICAL RECORDS

Pomarida Simbolon*, Arjuna Ginting, Jev Boris

STIKes Santa Elisabeth Medan, Jl. Bunga Terompet No.118, Sempakata, Medan Selayang, Medan, Sumatera Utara
20131, Indonesia

*pomasp@yahoo.com

ABSTRACT

Electronic medical records are concrete evidence of the increasingly developed world of health. After paper-based medical records, the Ministry of Health requested that all health services in Indonesia be able to use electronic medical records. The use of electronic medical records is one indicator of providing good performance for health workers. The use of electronic medical records (EMR) greatly influences the achievement of health workers' work results. The aim of the research is to identify the use of electronic medical records in the Inpatient Room at Santa Elisabeth Hospital Medan in 2023. This type of research is descriptive. The sample in the study consisted of 40 respondents using a proportional stratified random sampling technique. Data collection was carried out using a questionnaire. Data were analyzed using univariate analysis. The research results showed that 33 people (82.5%) were satisfied with the use of electronic medical records. It is hoped that Santa Elisabeth Hospital Medan can improve the electronic medical record (sphaira) application and carry out socialization every 2 months if there is an application update so that the use of electronic medical records is even better.

Keywords: EMR; satisfaction; usage

INTRODUCTION

Hospitals have several tasks apart from providing complete individual health services, namely recording and reporting on all hospital management activities in the form of a hospital management information system. These obligations must be carried out by the hospital by maintaining medical records. A medical record is a file that contains notes and documents regarding the patient's identity, examination, treatment, procedures and other services that have been provided to the patient. Good medical records contain complete data and can be processed into information so that it is possible to carry out objective evaluations of the quality of health services (Permenkes, 2022). Usage of electronic medical records, where users feel happy or unhappy with the use of electronic medical records (Rahmatulloh, 2017). Electronic medical records are concrete evidence of the increasingly developed world of health. After paper-based medical records, the Ministry of Health requested that all health services in Indonesia be able to use electronic medical records. use of electronic medical records is the process of using electronic records containing health information for medical record administrators (Permenkes, 2022).

Based on research results (Al Alawi et al., 2017) All 23 physician respondents preferred the use of electronic medical records and considered that this system reduced paperwork and improved the methods by which they monitored their patients' progress. Where, electronic medical record technology offers many benefits, such as easy to read, completeness of medical information and documentation, direct access to information anywhere and at any time, large clinical databases and decision support techniques. The use of electronic medical records with quality information systems greatly influences the achievement of work results or what is often referred to as performance. The higher the satisfaction with using electronic medical records, the higher the quality of the information system.

Based on research result (Rahmatulloh, 2017) that the variable use of electronic medical records has a relationship with health worker satisfaction, the relationship between these two variables is positive and quite strong. This explanation is proven by the Spearman test results of 0.392, where the use of electronic medical records as many as 65% of respondents agree that electronic medical records must always be ready to be used at any time and 58% of respondents predominantly disagree that electronic medical records are rarely used in any hospital setting. Cempaka Putih always uses electronic medical records. The relationship between the use of electronic medical records and the satisfaction of health workers shows quite good results where as many as 54 (67%) health workers are satisfied that electronic medical records can make it easier for health workers to provide services while the dominant do not agree with the statement that the information produced by medical records is of very high quality (36%). Based on the results of a survey conducted by researchers at Santa Hospital Elisabeth Medan, there is a percentage of 20% of health workers who do not satisfied with the use of electronic medical records. This is because there are still health workers who feel that the features in electronic medical records are not yet available according to the officer's needs, and using electronic medical records unpleasant for health workers.

METHOD

The type of research used in this research is a descriptive research design (Sugiono, 2020). This research is to find out an overview of the use of Electronic Medical Records in the Inpatient Room at Santa Elisabeth Hospital, Medan in 2023. The population in this study was all 159 inpatient room nurses and medical recorders who used electronic medical records at Santa Elisabeth Hospital in Medan. The sample in the study was 40 people using a proportional stratified random sampling technique. The type of data collection carried out in this research is primary data, namely data obtained directly by researchers from research subjects through questionnaires. Univariate analysis aims to explain the characteristics of each research variable (Denise F. Polit, 2017). In this study, univariate statistical methods were used to identify age, profession, gender, highest level of education, length of service, and dependent variable for use of electronic medical records.

RESULTS AND DISCUSSION

Tabel 1, it was found that the majority of the 40 respondents were female, 38 people (95.0%) and the minority male, 5 people (12.5%). The educational level found was that the majority were at the Bachelor's level as many as 23 people (57.5%) and the minority were at the D3 level as many as 17 people (42.5%). Based on age, data was obtained that the most respondents were aged 26-35 (early adulthood) as many as 17 people (42.5%), aged 36-45 (late adulthood) as many as 11 people (27.5%), and the least aged 17-25 (late adolescence) as many as 10 people (25.0%), aged 46-55 (early old age) as many as 2 people (5.0%). Based on the length of service, the most respondents with a working period of >10 (new working period) were 18 people (45.0%), with a working period of 1-5 years (long working period) as many as 12 people (30.0%) and the least with work 6-10 (medium work period) as many as 6 people (25.0%).

Table 1.
Frequency Distribution and Percentage of Respondent Characteristics

Characteristics	f	%
Gender		
Male	5	12.5
Female	35	87.5
Profession		
Nurse	32	80.0
Midwife	4	10.0
Team Head	1	2.5
CI	1	2.5
Head of Room	1	2.5
Administration	1	2.5
Education		
D3	17	42.5
S1	23	57.5
Age		
17-25 (Late adolescence)	10	25.0
26-35 (Early adulthood)	17	42.5
36-45 (Late adulthood)	11	27.5
46-55 (Early old age)	2	5.0
Years of service		
1-5 Years (New working period)	12	30.0
6-10 Years (Medium working period)	10	25.0
>10 Years (Long working period)	18	45.0

Table 2.
Frequency Distribution and Percentage of Satisfaction with Use

Use of EMR	f	%
Satisfied	33	82.5
Not satisfied	7	17.5

Table 2, research results show that 33 people (82.5%) use EMR in the satisfied category and 7 people (17.5%) are dissatisfied.

Use of Electronic Medical Records at Santa Elisabeth Hospital Medan in 2023

The results of research conducted by researchers at Santa Elisabeth Hospital in Medan in 2023 regarding the use of electronic medical records using a questionnaire categorized as dissatisfied and satisfied showed that 33 people (82.5%) were satisfied with the use of electronic medical records. Based on research obtained by researchers at Santa Elisabeth Hospital in Medan, the majority of electronic medical record users are in the satisfied category. This is because respondents in the respondent questionnaire stated that they agreed that the facilities and features available at EMR were in line with their needs, respondents also agreed that all the features and functions available at EMR were running according to their needs, and the information produced was accurate and consistent in accordance with their needs and EMR helps in getting the job done

The results of this study are in line with (Andini et al., 2022) User satisfaction in this variable is because the EMR system at Siloam Balikpapan Hospital produces information that can meet user expectations. This makes it easier for officers to provide various types of reports requested by

hospital management. Complete reports can also make staff's daily work easier. However, sometimes the EMR system still has system errors in producing information. Research results (Achmadi & Siregar, 2021). This shows that e-learning system users will feel satisfied if the e-learning system provided by the university has good system quality. This means that users will be satisfied if the e-learning system comes with easy-to-understand guidelines, presents material according to learning needs, supports the learning process, is easy to operate, makes communication between teachers and students more intensive, and has easy access to e-learning system features. . Conversely, when the e-learning system provided by a university has poor system quality, it will result in a lower level of user satisfaction. The use of Electronic Medical Records in supporting the effectiveness of outpatient registration is an activity of computerizing the contents of health records and the electronicization process which produces a system that is specifically designed to support users with various easy facilities for completeness and accuracy of data, providing alerts, warnings, system alerts. clinical decision support and linking data with medical knowledge and other tools (Apriliyani, 2021)

Apart from that, the results of research conducted by researchers at Santa Elisabeth Hospital in Medan in 2023 regarding the use of electronic medical records, there were still 7 health workers who were in the dissatisfied category (17.5%). This is because respondents in the respondent's questionnaire stated that they did not agree regarding being satisfied with the appearance of the EMR where the appearance of the EMR was less attractive, and stated that they did not agree regarding being satisfied with the information produced. Research result (Achmadi & Siregar, 2021) This shows that e-learning system users will feel satisfied if the e-learning system provided by the university has good system quality. This means that users will be satisfied if the e-learning system comes with easy-to-understand guidelines, presents material according to learning needs, supports the learning process, is easy to operate, makes communication between teachers and students more intensive, and has easy access to e-learning system features. Conversely, when the e-learning system provided by a university has poor system quality, it will result in a lower level of user satisfaction.

The results of this study are in line with (Andini et al., 2022) stated that 38 respondents (50%) felt satisfied and 38 respondents (50%) felt dissatisfied. These comparable results were found because users felt that the EMR system at Silaom Balikpapan Hospital was still lacking in displaying clear instructions for its use. Users also feel helped because the system is easy to learn how to use. However, despite the ease of use of the system, there are system shortcomings where the system does not have a help manual (help menu) that can help officers if they need help. So it is necessary to improve the EMR system so that it is easy for users to use it.

CONCLUSION

The use of Electronic Medical Records at Santa Elisabeth Hospital in Medan in 2023 showed that the majority of EMR users were satisfied, namely 33 people (82.5%). It is hoped that the Santa Elisabeth Hospital in Medan can improve the application of electronic medical records (sphaira) and carry out socialization every 2 months about the use of electronic medical records at the Santa Elisabeth Hospital in Medan.

REFERENCES

- Apriliyani (2021) Use of Electronic Medical Records to Support the Effectiveness of Outpatient Registration at Dr. Clinic. Ranny. *Cerdika: Indonesian Scientific Journal*, October 2021, 1(10), 1399-1410p-ISSN: 2774-6291e-ISSN: 2774-6534
- Achmadi, A., & Siregar, AO (2021). The Effect of System Quality, Information Quality and Service Quality on User Satisfaction of E-Learning Systems. *The International Journal of Business Review (The Jobs Review)*, 4(2), 103–120. <https://doi.org/10.17509/tjr.v4i2.40483>
- Adiputra, IMS, Trisnadewi, NW, Oktaviani, NPW, & Munthe, SA *Health Research Methodology*. 2021
- Al Alawi, S., Al Dhaheri, A., Al Baloushi, D., Al Dhaheri, M., & Prinsloo, E.A.M. (2017). Physician user satisfaction with an electronic medical records system in primary healthcare centers in Al Ain: A qualitative study. *BMJ Open*, 4(11), 1–8. <https://doi.org/10.1136/bmjopen-2014-005569>
- Al-Mujaini, A., Al-Farsi, Y., Al-Maniri, A., & Ganesh, A. (2017). Satisfaction and perceived quality of an electronic medical record system in a tertiary hospital in Oman. *Oman Medical Journal*, 26(5), 324–328. <https://doi.org/10.5001/omj.2011.81>
- Andini, H., Widodo, A., Aula Rumana, N., & Indawati, L. (2022). Review of User Satisfaction in Using Electronic Medical Records (EMR) at Siloam Balikpapan Hospital. *Tambusai Health Journal*, 3(4), 534–540. <https://journal.universitaspahlawan.ac.id/index.php/jkt/article/view/8021>
- Arifin, NF (2017). Job satisfaction of medical personnel in the era of national health insurance at the Sinjai Regional General Hospital in 2017. *Digilib.Unhas.Ac.Id*, 1–282.
- Asriati, Y. (2019). Analysis of Human Resource Planning Using the Wisn Method for Medical Records Officers at Hospital X in Surakarta, Central Java. *Journal of Information Management and Health Administration (JMIAK)*, 2(2). <https://doi.org/10.32585/jmiak.v2i02.628>
- Chang, F., & Gupta, N. (2015). Progress in electronic medical record adoption in Canada. *Canadian Family Physician*, 61(12), 1076–1084.
- Danardono, I., & Pribadi, F. (2018). Satisfaction and motivation of medical personnel: a case study of income, compensation and work environment at RSUD Dr. Soediman, Kebumen Regency. *Journal of Medicoeticolegal And Hospital Management*, 5(1), 63–72. <https://doi.org/10.18196/jmmr.5108>
- Dubale, A.T., Mengestie, N.D., Tilahun, B., & Walle, A.D. (2023). User Satisfaction of Using Electronic Medical Record System and Its Associated Factors among Healthcare Professionals in Ethiopia: A Cross-Sectional Study. *BioMed Research International*, 2023. <https://doi.org/10.1155/2023/4148211>
- El Mahalli, A. (2015). Adoption and barriers to adoption of electronic health records by nurses in three governmental hospitals in eastern province, Saudi Arabia. *Perspectives in Health*

Information Management, 12, 1–8.

- Hadiyanto, M., Purnami, CT, & Mawarni, A. (2020). The Relationship between Information Quality of the Electronic Outpatient Medical Record System and User Satisfaction at RSUD Dr. (HC) Ir Soekarno. *Journal of Public Health*, 8(6), 739–745.
- Joos, D., Chen, Q., Jirjis, J., & Johnson, K. B. (2016). An electronic medical record in primary care: impact on satisfaction, work efficiency and clinical processes.
- Kabu khadka, S. maharjan. (2014). Customer satisfaction and customer loyalty. *Marketing for Entrepreneurs and SMEs*, November, 21–36. <https://doi.org/10.4337/9781781955970.00008>
- Khamlub, S., Harun-Or-Rashid, M., Sarker, MAB, Hirosawa, T., Outavong, P., & Sakamoto, J. (2016). Job satisfaction of health-care workers at health centers in Vientiane capital and Bolikhamsai province, Lao pdr. *Nagoya Journal of Medical Science*, 75(3–4), 233–241.
- Kirana, AC (2022). The Influence of System and Information Quality on EMR User Satisfaction at Tangerang City Regional Hospital.
- López-Robledo, Y.M., López-Robledo, D.M., & Torres-García Michelle Santiago-Medina, V. (2014). Electronic medical records: exploring benefits and barriers perceived by mental health providers. *American International Journal of Contemporary Research*, 4(11), 51–57.
- Masturoh, I., & T, NA (2018). *RMIK Health Research Methodology*. 59.
- Msiska, KEM, Kunitawa, A., & Kumwenda, B. (2017). Factors affecting the utilization of electronic medical records system in Malawian central hospitals. *Malawi Medical Journal*, 29(3), 247–253. <https://doi.org/10.4314/mmj.v29i3.4>
- Muninjaya, Gde AA, (2011). *Health Service Quality Management*, Jakarta, EGC
- Muslim. (2008). Ethics and Research Approaches in the Philosophy of Communication Science (A Conceptual Review and. *Kurnal of Communicology*, 4 (2), 82–91. <https://komunikologi.esaunggul.ac.id/index.php/KM/article/download/38/38>.
- Nugrahani, F. (2014). *Qualitative Research Methodology in Language Education Research*. 1(1), 305.
- Nursalam. (2015). Population, Sample, Sampling, and Sample Size. In *Nursing Science Research Methodology*.
- Park, Y. T., & Lee, J. (2014). Factors affecting electronic medical record system adoption in small Korean hospitals. *Healthcare Informatics Research*, 20(3), 183–190. <https://doi.org/10.4258/hir.2014.20.3.183>
- Pawirosumarto, S. (2016). Pawirosumarto 416 - 433 MIX: *Scientific Journal of Management*, Volume VI, No. 3, Oct 2016. *Management Science*, VI (3), 416–433. <https://core.ac.uk/reader/293654210>
- Minister of Health Regulation, 24. (2022). Regulation of the Minister of Health of the Republic of

- Indonesia No. 24 of 2022. PERMENKES 24 OF 2022, 8.5.2017, 2003–2005.
<https://www.who.int/news-room/fact-sheets/detail/autism-spectrum-disorders>
- Polit, D.F. (2017). Nursing research generating and assessing evidence for nursing practice 9th edition. In MCN The American Journal of Maternal/Child Nursing (Vol. 34, Issue 6).
<https://doi.org/10.1097/01.NMC.0000363684.43186.fe>
- Rahal, R.M., Mercer, J., Kuziemy, C., & Yaya, S. (2021). Factors affecting the mature use of electronic medical records by primary care physicians: a systematic review. BMC Medical Informatics and Decision Making, 21(1), 1–15. <https://doi.org/10.1186/s12911-021-01434-9>
- Rahmatulloh, Aji. (2017). The relationship between the use of electronic medical records and the satisfaction of health workers in the outpatient unit of the Jakarta Cempaka Putih Islamic Hospital. in-outpatient-unit-Islamic-hospital-jakarta-cempaka-putih-11863.html.
- Be patient, Boy Subirosa. Environmental and Building Sanitation Supports Hospital Patient Satisfaction. Jakarta: Salemba Medika, 2011.
- Samuel, F. (2016). Analysis of customer satisfaction in Abyssinia Bank. May.
- Septianita, Wi., Agus Winarno, W., & Arif, A. (2014). The Influence of System Quality, Information Quality, Rail Ticketing System (RTS) Service Quality on User Satisfaction (Empirical Study at PT. KERETA API INDONESIA (PERSERO) DAOP 9 JEMBER). 1(1), 53–56.
- Setyawan, D. (2017). Electronic health record design. Republic of Indonesia Ministry of Health. Physical Therapy Directorate of Nursing and Medical Engineering Director General of Medical Services.
- Widowati. (2019). The influence of the speed of filing electronic medical records and outpatient manual medical records on the timeliness of collecting JKN files at the Bethesda Hospital Internal Clinic. 1996, 1–9.

