

ANALYSIS OF PUBLIC SERVICE SKILLS IN THE OPERATION OF ELECTRONIC MEDICAL RECORDS (EMR) AT M.M. DUNDA LIMBOTO REGIONAL GENERAL HOSPITAL (RSUD)

Hartati Inaku*

Postgraduate, State University of Gorontalo
Email: inakuhartati@gmail.com

Ansar

State University of Gorontalo
Email: ansar@ung.ac.id

Yanti Aneta

State University of Gorontalo
Email: yantianeta@ung.ac.id

Udin Hamim

State University of Gorontalo
Email: udin.hamim@ung.ac.id

* Corresponding author : inakuhartati@gmail.com

ABSTRACT

This study analyzes the professionalism and service skills related to Electronic Medical Records (EMR) at M.M Dunda Limboto Regional General Hospital (RSUD). Research data were collected through interviews, observations, and documentation and analyzed using an interactive model analysis method consisting of data collection, data presentation, data reduction, data verification, and conclusion drawing. The results indicate that the skills of public service officers in operating EMRs remain inadequate. This is primarily due to the absence of personnel with an educational background in information technology (IT) at RSUD M.M Dunda Limboto. Consequently, the hospital relies on its existing staff and provides them with technical training (*Diklat Teknis*) on EMR usage. However, the training only covers procedural aspects of EMR operation without equipping staff with the necessary knowledge to handle technical disruptions. Consequently, public services based on EMR remain ineffective and cannot be considered optimal.

Keywords: *Service Skills, Service Quality, Public Service, Electronic Medical Records (EMR)*

INTRODUCTION

Public service constitutes a foundational element of government administration, with a government deemed effective when its public services are oriented toward the interests of society. The delivery of high-quality public services engenders greater public satisfaction, as citizens directly assess the performance of the services provided.

The quality of public health services is of particular importance to society, with key aspects including the availability of accessible healthcare services for all social groups, with swift and efficient access. The professionalism of healthcare personnel, from doctors to medical staff, significantly impacts service quality, encompassing patient safety and comfort. Furthermore, the availability of modern medical facilities and technology serves as a key benchmark in evaluating healthcare service quality. Friendly, courteous service that ensures patient confidentiality is also a fundamental factor in building public trust in healthcare services. The quality of public services is heavily influenced by the maturity of internal audit functions, with expertise playing a pivotal role in the audit process to achieve higher public service quality (Sutaryo et al., 2022). These measures aim to establish transparency within organizations.

In general, transparency is one of the most critical components in achieving high-quality public services within organizations (Bauhr & Carlitz, 2020). In the healthcare sector, transparency is defined by the degree of openness and clarity regarding services, procedures, costs, and outcomes. Additionally, technology can serve as a potent instrument in enhancing public service quality across various sectors, including healthcare, particularly concerning Electronic Medical Records (EMR).

In the rapidly evolving digital era, the integration of information technology across multiple sectors, including healthcare, has become imperative. One of the most significant innovations in the healthcare sector is the implementation of Electronic Medical Records (EMR). EMR systems have been shown to enhance efficiency and accuracy in patient data management, with the expectation that they will improve overall healthcare service quality. However, the effectiveness of EMR implementation is contingent on users' perceptions and experiences with the system.

The advent of Electronic Medical Records (EMR) has profoundly impacted the realm of healthcare information management. Fundamentally, EMR encompasses the utilization of electronic methodologies for the collection, storage, processing, and retrieval of patient medical records within healthcare facilities. These records are meticulously stored within a multifaceted database management system, which serves as a nexus for the consolidation of diverse medical data sources. The implementation of EMR within healthcare facilities in Indonesia exhibits notable variations in adoption rates. According to data from the Directorate of Referral Health Services (2020), out of 1,246 hospitals in Indonesia, 92% still use manual record-keeping systems, 5% have implemented basic computerization, and only 3% have adopted advanced computerized systems.

The utilization of manual data management systems is associated with numerous drawbacks. Besides being time-consuming, manually processed data are often less reliable due to a high likelihood of errors. The integration of information technology in data management can significantly minimize these errors, leading to more accurate and reliable data. Additionally, data processing becomes faster and more efficient. Education and training related to EMR play a crucial role in ensuring effective and secure medical information management. Training

materials should encompass a comprehensive understanding of EMR functions, patient data management, health data analysis, as well as medical information security and privacy. Continuous updates on the latest EMR technologies and medical data security regulations should also be incorporated into education and training programs. Furthermore, emphasis should be placed on interdisciplinary collaboration among professionals, enabling doctors, nurses, administrative staff, and IT specialists to work together efficiently in implementing EMR in healthcare practices.

Training programs should include overall objectives and SMART (Specific, Measurable, Achievable, Realistic, Time-bound) training goals, which allow for more rigorous evaluation of training outcomes (Samadbeik et al., 2020). Well-trained healthcare personnel not only enhance the efficiency of healthcare services but also ensure the security and integrity of patient medical information. Through education and training, healthcare workers will gain greater knowledge and experience in utilizing EMR systems (Smailes et al., 2019). This, in turn, will positively impact the quality of public healthcare services, directly benefiting the patients receiving medical care.

The implementation of Electronic Medical Records (EMR) has been shown to offer significant benefits to medical professionals by facilitating access to patient information and thereby supporting clinical decision-making processes. However, a prevailing concern in clinical practice is the absence of integration among healthcare providers with regard to patient medical record information. The absence of integration can lead to redundant examinations occurring whenever a patient transitions between healthcare facilities, and patients have frequently expressed frustration over having to repeatedly answer the same questions during each visit to a different healthcare provider.

Preliminary observations at the research site, M.M. Dunda Regional General Hospital (RSUD M.M. Dunda Limboto), indicate that EMR has been implemented, but its application remains limited to outpatient services and discharge processes for inpatient care.

In light of these observations, the researcher embarked on a study titled "**Analysis of Public Service Skills in The Operation of Electronic Medical Records (EMR) at M.M. Dunda Limboto Regional General Hospital (RSUD).**" This study aims to analyze the professionalism and service competencies related to EMR implementation at RSUD M.M. Dunda Limboto.

METHODS

This study employs a qualitative research approach using a case study methodology. Primary data were collected through interviews and observations, while supporting data were gathered through documentation. The researcher conducted interviews with stakeholders involved in the use of electronic systems in patient medical records. The collected data were then analyzed using the interactive model analysis method proposed by Miles and Huberman (2014). This analytical model consists of data collection, presentation, reduction, and verification, followed by conclusion drawing.

RESEARCH RESULTS AND DISCUSSION

Research Results

Gronroos' (2016) theory posits that one of the key indicators for assessing service quality is Professionalism and Skills. The interviews with several informants indicate that the competency

of staff at RSUD M.M Dunda Limboto in operating the Electronic Medical Record (EMR) system remains insufficient.

Despite the implementation and ongoing utilization of the EMR system at RSUD M.M Dunda Limboto, the hospital is deficient in personnel with expertise in information technology. While the number of staff is relatively adequate, none specialize in IT. The personnel assigned to operate the EMR system are general service staff with undergraduate educational backgrounds who have been provided with training programs related to EMR operations. While they can operate the EMR system following procedural guidelines, they lack the expertise to resolve technical issues.

Public interviews revealed dissatisfaction with the services at RSUD M.M Dunda Limboto. The public perceives that the service personnel lack professionalism, as evidenced by the frequent long queues at service counters. Patients must wait hours to receive a queue number for their designated doctor. Following the allocation of a queue number, patients must wait once more before being admitted to the doctor's office.

The observations conducted by the researcher indicate that the implementation of the Electronic Medical Record (EMR) system at RSUD M.M. Dunda Limboto has been in accordance with the regulations issued by the authoritative body, namely, Minister of Health Regulation No. 24 of 2022 on Medical Records. However, the implementation of EMR-based public services at RSUD M.M. Dunda Limboto has not been fully optimized.

A primary contributing factor to this situation is the absence of adequately qualified human resources capable of operating EMR-based public services. The researcher observed that none of the EMR system personnel had an IT background or educational qualifications in information technology. Instead, the assigned personnel were general service staff required to take on the role and were given limited knowledge through technical training. Consequently, their understanding of EMR operations remains relatively restricted.

The researcher also observed patients requiring healthcare services, and it was generally identified that the public lacked awareness and understanding of EMR-based public services. Many expected that an advanced system would improve service efficiency and reduce waiting times; however, long queues persist at service counters, as patients must still wait for extended periods to obtain queue numbers for their respective doctors. This finding suggests that, in practice, EMR-based public services have not demonstrated a significant improvement over conventional (manual) systems.

Based on the findings from interviews and observations, it can be concluded that the professionalism and skills of the personnel handling EMR-based public services at RSUD M.M. Dunda Limboto remain inadequate. This inadequacy is most evident in the personnel's lack of specialized expertise in Information Technology (IT), even though EMR is an innovative breakthrough in healthcare services that heavily relies on IT. The current EMR service personnel are repurposed staff who have been reassigned to operate the system, and as a result, their effectiveness in carrying out their duties is suboptimal.

Discussion

Professionalism and Skills criteria are outcome-related measures whereby customers recognize that service providers, employees, operational systems, and physical resources possess the necessary knowledge and skills to resolve customer issues professionally. This criterion is

closely related to the performance outcomes of service providers, including operational skills, physical resources, and the ability to apply knowledge in solving consumer problems effectively.

Waworuntu (1997:19) posited that a professional in the field of public administration must understand societal needs and possess the capacity to satisfy and fulfill those needs. Public satisfaction is achieved by addressing their needs and making them feel valued. An organization must know what is best for its clients or customers to enhance professionalism. Internally, this demands a strong work ethic and high employee discipline to foster professionalism as a fundamental work ethic and corporate culture. Externally, the ability to adapt and anticipate changes effectively is crucial.

The results of interviews and observations conducted by the researcher indicate that the Professionalism and Skills criteria among human resources at RSUD M.M. Dunda Limboto are suboptimal. Although the hospital has a sufficient number of personnel, none of them have an educational background in IT. The operational management of the EMR system is predominantly entrusted to service personnel who have undergone technical training (*Diklat Teknis*) in using EMR, leading to a paucity of specialized knowledge. Consequently, these personnel can only perform EMR operations procedurally but encounter challenges in addressing recurrent technical issues. The findings of this study are visually represented in Figure 1.

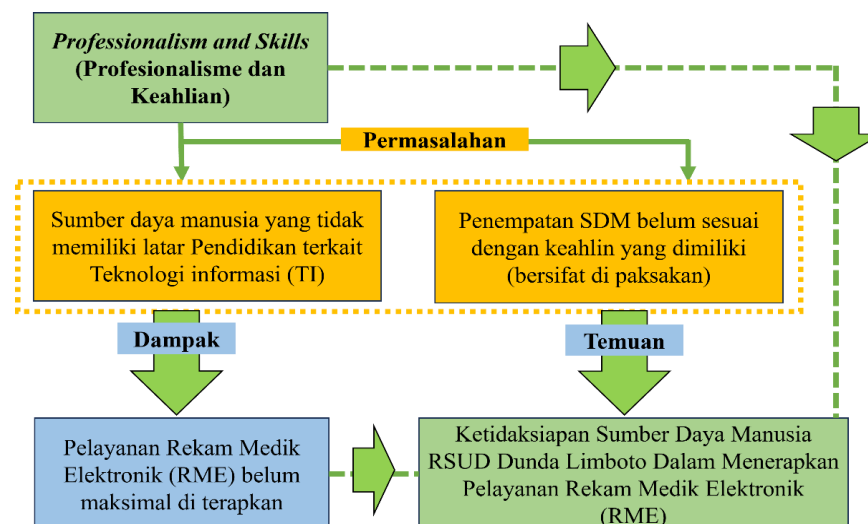


Figure 1. Research Findings on Professionalism and Skills Criteria

The findings from interviews with healthcare service users suggest significant public dissatisfaction with the healthcare services at RSUD M.M Dunda Limboto. Observations indicate a lack of public understanding of Electronic Medical Records (EMR)-based public services, and the public perceives service personnel as lacking in professionalism due to frequent long queues at service counters. The public believes that implementing an advanced system would improve efficiency and service delivery, thereby eliminating long queues at service counters. However, healthcare service users still have to wait in long lines at service counters to receive a queue number for their designated doctor.

In practice, the use of technology, specifically EMR, requires the readiness of healthcare personnel, including doctors, EMR staff, and patients (Heinzer, 2020). The transition from conventional medical records to electronic medical records has not been widely implemented

in Indonesia. The advancement of EMR is contingent upon the availability of human resources, both as active users of the system and as policymakers.

Research conducted by Pribadi et al. (2018) underscores the significance of a readiness analysis for EMR implementation, emphasizing users' pivotal role in determining the system's success. A study by Sudirahayu et al. (2018) underscores the necessity of conducting a readiness assessment before EMR implementation. This process facilitates identifying priorities and optimizing operational functions, thereby ensuring the effective implementation of EMR. A comprehensive readiness assessment should encompass human resources, organizational work culture, governance, leadership, and infrastructure.

According to Praptana et al. (2021), assessing the level of readiness for the implementation of Electronic Medical Records (EMR) is crucial to ensuring that the application operates optimally and does not create problems in the future. The Doctor's Office Quality-Information Technology (DOQ-IT) method is one approach used to analyze the level of readiness for implementing an EMR-based information system. The DOQ-IT method is particularly well-suited for the evaluation of organizational readiness prior to the implementation of electronic-based applications. The DOQ-IT method places emphasis on four fundamental components within an organizational work system: human resources, governance, leadership, organizational culture, and infrastructure.

CONCLUSION

This study aims to analyze the professionalism and skills of public service personnel in operating Electronic Medical Records (EMR) at RSUD M.M Dunda Limboto. The findings indicate that the skills of EMR-based public service personnel remain inadequate, indicating that these personnel are not yet fully prepared to provide healthcare services utilizing EMR technology. This is primarily attributable to the dearth of RSUD M.M Dunda Limboto personnel with a background in information technology (IT). Consequently, the hospital has adjusted its staff by providing them with technical training (*Diklat Teknis*) on EMR usage. However, despite participating in such training, personnel have only acquired limited procedural knowledge of EMR operations and are not equipped with the necessary skills to handle technical issues. Consequently, the efficacy of EMR-based public services remains compromised, and their optimal status remains unattained. To rectify this situation, RSUD M.M Dunda Limboto management should consider recruiting personnel with expertise in IT to ensure the more effective and optimal implementation of EMR-based public services.

REFERENCES

- Abdussamad, Z., Tahir, A., Arsana, I. S., & Abdussamad, S. N. (2021). **Measuring Public Satisfaction with Public Services of the Gorontalo Utara Regional Government**. Sumatera Barat: Insan Cendikia Mandiri.
- Amin, M., Setyonugroho, W., & Hidayah, N. (2021). Implementation of Electronic Medical Records: A Qualitative Study. *JATISI (Jurnal Teknik Informatika dan Sistem Informasi)*, 8(1), 430–442. <https://doi.org/10.35957/jatisi.v8i1.557>
- Arabi, M. Y., Al Ghamdi, A. A., Al-Moamary, M., Al Mutrafy, A., AlHazme, R. H., & Al Knawy, B. A. (2022). Electronic Medical Record Implementation in a Large Healthcare System from a Leadership Perspective. *BMC Medical Informatics and Decision Making*, 22(1), 1–10.

<https://doi.org/10.1186/s12911-022-01801-0>

Bauhr, M., & Carlitz, R. (2020). When Does Transparency Improve Public Services? Street-Level Discretion, Information, and Targeting. *Public Administration*, 99(3), 1–33. <https://doi.org/10.1111/padm.12693>

Depkes RI Direktorat Jenderal Bina Pelayanan Medis. (2006). Guidelines for the Implementation and Procedures of Medical Records in Indonesian Hospitals (Revised II). Jakarta.

Dharma, I. G. N. A., Sukadarmika, G., & Pramaita, N. (2022). Application of DeLone and McLean Methods to Determine Supporting Factors for the Successful Implementation of Electronic Medical Records at Bali Mandara Eye Hospital. *Journal of Applied Science, Engineering, Technology, and Education*, 4(2), 146–156. <https://doi.org/10.35877/454ri.asci1287>

Finka, A., Ahmad, M., & Nia, A. (2020). Implementation of Electronic Medical Records Based on FHIR for Inpatients (Case Study in Two Hospitals in Indonesia). *Journal*, 7(1), April.

Gronroos, C. (2016). *Service Management and Marketing: A Customer Relationship Management Approach*. Chichester: John Wiley & Sons, Ltd.

Hapsari, M. A., & Mubarakah, K. (2023). Analysis of Readiness for the Implementation of Electronic Medical Records (EMR) Using the Doctor's Office Quality-Information Technology (DOQ-IT) Method at Polkesmar Primary Clinic. *J-REMI: Jurnal Rekam Medik dan Informasi Kesehatan*, 4(2), 75–82. <https://doi.org/10.25047/j-remi.v4i2.3826>

Samadbeik, M., Fatehi, F., Braunstein, M., Barry, B., Saremian, M., Kalhor, F., & Edirippulige, S. (2020). Education and Training on Electronic Medical Records (EMRs) for Healthcare Professionals and Students: A Scoping Review. *International Journal of Medical Informatics*, 142(July), 104238. <https://doi.org/10.1016/j.ijmedinf.2020.104238>

Setyadi, D., & Nadjib, M. (2023). The Effect of Electronic Medical Records on Service Quality and Patient Satisfaction: A Literature Review. *Journal Research of Social Science, Economics, and Management*, 2(12), 2780–2791. <https://doi.org/10.59141/jrssem.v2i12.500>

Smailes, P. S., Zurmehly, J., Schubert, C., Loversidge, J. M., & Sinnott, L. T. (2019). An Electronic Medical Record Training Conversion for Onboarding Inpatient Nurses. *CIN - Computers Informatics Nursing*, 37(8), 405–412. <https://doi.org/10.1097/CIN.0000000000000514>

Sutaryo, S., Sahari, S. B., Jakpar, S. B., & Balia, S. S. B. (2022). Internal Audit Function and Public Service Quality: Evidence from Indonesian Local Governments. *Public Administration Issues*, 1(5), 110–133. <https://doi.org/10.17323/1999-5431-2022-0-5-110-133>