

IMPLEMENTATION OF ELECTRONIC MEDICAL RECORDS IN HEALTH SERVICES

Siti Ayu Rachmahwati, Aila Karyus*, Kodrat Pramudho

Magister of Public Health, Universitas Mitra Indonesia, Jl. ZA. Pagar Alam No.7, Gedong Meneng, Rajabasa, Bandar Lampung, Lampung 40115, Indonesia

*ailakaryus65@gmail.com

ABSTRACT

The medical record documentation system at the Class I Health Quarantine Center (BKK) in Panjang for the embarkation/disembarkation clinic for the Hajj pilgrimage, routine outpatient care, and special situations is still conducted manually. This leads to various issues such as delayed reporting, potential data duplication, and service inefficiency, thereby hindering the quality of healthcare services and medical decision-making. This study aims to identify needs and formulate strategies for implementing an integrated Electronic Medical Record System (EMR) tailored to the operational requirements of the Class I Panjang Health Quarantine Office, thereby enhancing the efficiency of record-keeping and the accuracy of reporting. The methods used in this research involved data collection through interviews, observations, and Focus Group Discussions (FGDs) with various stakeholders at BKK Class I Panjang. The collected data was analyzed to identify the root causes of the problems and formulate alternative solutions. One proposed solution is the development of a pilot project for a simple desktop-based electronic medical record application. This research concluded that digital transformation toward EMR is highly needed and has received positive support from various internal stakeholders. A pilot project for a simple EMR application has been developed as a proof of concept. Strategic recommendations for EMR implementation include developing Standard Operating Procedures (SOPs), training human resources (HR), developing the application, advocating for internal policies, and strengthening infrastructure. The implementation of EMR has significant potential to improve the quality of healthcare services, efficiency, and data accuracy at BKK Class I Panjang. The success of implementation requires the commitment of agency leadership to integrate the recommendations into work plans, establish internal policies mandating the use of EMR, allocate budgets, and continue system development and HR capacity building on an ongoing basis.

Keywords: digital transformation; electronic medical records; health efficiency; health information system; health quarantine office; health services

INTRODUCTION

This report examines the issue of medical record keeping at the Class I Panjang Health Quarantine Center (BKK), which is still done manually for embarkation/disembarkation hajj outpatient services, routine outpatient care, and special situations. This manual method poses various challenges, including delays in data reporting, the risk of information duplication, and inefficiency in healthcare services. These conditions hinder the quality of services provided and affect the speed and accuracy of medical decision-making. Therefore, a transition to an Electronic Medical Record System (EMR) is urgently needed to address these challenges and improve the overall quality of healthcare services at the Class I Panjang Health Quarantine Center.

METHOD

In order to address the issues of manual medical record keeping, this research proposes various alternative solutions. The methods used to formulate these alternatives include:

Interviews: Conducting in-depth interviews with several informants/sources related to the existing medical record system.

Focus Group Discussion (FGD): Conducting an FGD to obtain a comprehensive perspective from various parties.

Policy Brief Development: Developing a policy brief outlining the issues and potential solutions.

Development of a Pilot Project for an Electronic Medical Record Application: Developing a pilot project

for a simple desktop-based electronic medical record application as a concrete example of the proposed digital solution. This is part of an effort to demonstrate the practical implementation of electronic medical records.

RESULT AND DISCUSSION

The results of the research activities show that manual medical record keeping systems are still in use in various service units of BKK Class I Panjang, as seen in the medical record registers of the Radin Inten Airport and Bakauheni Work Areas, as well as the embarkation and disembarkation records for Hajj pilgrims. The process of compiling medical records for Hajj pilgrims is also still done manually. This research activity received positive responses from various internal parties regarding the importance of digital transformation of electronic medical records. The creation of a pilot project for an electronic medical record application is one of the tangible results of the efforts to address the identified issues.

The discussion in this report highlights the urgency of transforming from a manual to an electronic medical record system. The implementation of EMR will not only improve the efficiency of recording and reporting, but also minimize data errors, reduce duplication, and accelerate access to accurate medical information. Support from various internal parties, as demonstrated during the research activities, is a crucial asset for the success of this implementation. Challenges that may arise during the transition process, such as human resource adjustments and infrastructure requirements, are also discussed. The importance of synergy between policy, technology, and human resources is emphasized to ensure that the EMR can be optimally integrated with existing systems, such as Sinkarkes or other healthcare service systems.

CONCLUSION

The transition to the Electronic Medical Record System (EMR) is highly necessary and has received positive support from internal stakeholders at the Class I Panjang Health Quarantine Office (BKK). The implementation of EMR can enhance the quality of healthcare services, improve the efficiency of record-keeping, and ensure the accuracy of reporting and medical decision-making. To achieve an integrated EMR system tailored to the institution's needs, it is necessary to develop EMR Standard Operating Procedures (SOPs), train human resources (HR), develop appropriate applications, advocate for internal policies, and strengthen infrastructure.

ACKNOWLEDGMENTS

The author extends gratitude to the Lampung Provincial Health Office, the leadership and entire staff of the Class I Health Quarantine Office in Panjang, the Program and IT Team, and all parties who provided support, data, and cooperation throughout this research process. Gratitude is also expressed to the academic advisors and faculty of the School of Public Health at Universitas Mitra Indonesia for their valuable guidance and direction. May the results of this activity contribute positively to improving the quality of health services through the implementation of electronic medical records.

REFERENCES

- Andayani, T. M., Wulandari, S., & Prasetya, R. (2022). Kesiapan manajemen dalam penerapan RME. *Jurnal Administrasi dan Kebijakan Kesehatan*, 14(2), 91–98.
- Aicia, S. (2021). Faktor-faktor penghambat implementasi rekam medis elektronik. *Jurnal Teknologi Kesehatan*, 10(2), 56–64.
- Asih, R., & Indrayadi, R. (2023). Integrasi RME dalam sistem manajemen rumah sakit. *Jurnal Administrasi Rumah Sakit Indonesia*, 5(2), 35–43.

- Depkes RI. (2019). *Pedoman penyelenggaraan pelayanan kesehatan*. Jakarta: Departemen Kesehatan Republik Indonesia.
- Handiwidjojo, A. (2015). *Sistem informasi kesehatan: Prinsip dan praktik*. Jakarta: EGC.
- Herasevich, V., Pickering, B. W., Dong, Y., Peters, S. G., & Gajic, O. (2020). The role of electronic medical records in clinical decision support. *BMJ Health & Care Informatics*, 27(3), Article e100140. <https://doi.org/10.1136/bmjhci-2020-100140>
- Hikmah, S. (2012). Organizational change in implementing electronic health records. *Journal of Public Health Studies*, 3(2), 88–94.
- Kementerian Kesehatan Republik Indonesia. (2022). *Peraturan Menteri Kesehatan Republik Indonesia Nomor 24 Tahun 2022 tentang Rekam Medis*. Jakarta: Kemenkes RI.
- Kementerian Kesehatan Republik Indonesia. (2023). *Transformasi digital kesehatan nasional 2023–2024*. Jakarta: Direktorat Jenderal Pencegahan dan Pengendalian Penyakit.
- Khasanah, U. (2020). Tantangan dan peluang implementasi RME di puskesmas. *Jurnal Kesehatan Komunitas*, 9(1), 14–22.
- Kruse, C. S., Kristof, C., Jones, B., Mitchell, E., & Martinez, A. (2018). Barriers to electronic health record adoption: A systematic literature review. *JMIR Medical Informatics*, 6(2), e10480. <https://doi.org/10.2196/10480>
- Kurniawati, L. R., Yuliani, M., & Setiawan, A. (2022). Efektivitas sistem RME dalam meningkatkan mutu dokumentasi medis. *Suara Forikes*, 14(2), 115–124.
- Mathar, M. (2018). *Rekam medis dan manajemen informasi kesehatan*. Jakarta: Sagung Seto.
- Nasution, D. (2017). *Manajemen rekam medis di pelayanan kesehatan primer*. Bandung: Refika Aditama.
- Nurfitria, L., Rania, H., & Rahmadiani, Y. (2022). Manfaat dan tantangan RME dalam layanan kesehatan primer. *Jurnal Kesehatan Masyarakat Andalas*, 17(4), 298–306.
- Permenkes RI No. 269 Tahun 2008 tentang Rekam Medis. (2008). Jakarta: Kementerian Kesehatan Republik Indonesia.
- Putra, A. W., Hidayat, R., & Permana, Y. (2022). Evaluasi sistem informasi kesehatan berbasis digital di pelayanan publik. *Jurnal Teknologi dan Informasi Kesehatan*, 9(1), 30–37.
- Putri, N. W., & Mulyanti, T. (2023). Dampak RME terhadap efisiensi pelayanan kesehatan di faskes tingkat pertama. *Jurnal Manajemen Pelayanan Kesehatan*, 13(1), 55–62.
- Ramadhani, A., Mulyono, A., & Siregar, M. (2022). Review implementasi RME di fasilitas kesehatan di Indonesia. *Jurnal Manajemen Kesehatan Indonesia*, 10(1), 1–10.
- Rubiyanti, A. (2023). Isu keamanan data dalam penerapan RME. *Indonesian Journal of Health Policy*, 4(1), 12–21.
- Sari, N., & Irnawati, I. (2021). Digitalisasi layanan kesehatan berbasis RME di Indonesia. *Jurnal Informasi Kesehatan Indonesia*, 9(3), 77–86.
- Simbolon, R., Haryanti, F., & Prasetyo, D. (2021). Manual vs electronic medical records: Review of service efficiency. *Journal of Health Informatics*, 5(1), 20–29.
- Suraja, M. (2019). *Rekam medis dan aspek legalnya di Indonesia*. Yogyakarta: Andi.

- Wahyuni, R., & Kusumawardhani, D. (2020). Electronic medical record implementation and challenges in Indonesian healthcare services. *Jurnal Administrasi Kesehatan Indonesia*, 8(2), 45–53.
- World Health Organization. (2016). *Electronic health records: Manual for developing countries*. Geneva: WHO Press.