



# Effectiveness of Standard Operating Procedures on Elective Surgery Waiting Time at Bhayangkara TK II Medan Hospital

Sri Lestari Ramadhani Nasution<sup>1</sup>, Zulhilmi<sup>1</sup>, Ermi Girsang<sup>1</sup>

<sup>1</sup>Faculty of Medicine, Dentistry and Health Sciences, Universitas Prima Indonesia

Email correspondence: [ermigirsang@unprimdn.ac.id](mailto:ermigirsang@unprimdn.ac.id)

<p><b>Track Record Article</b></p> <p>Revised: 08 January 2026 Accepted: 20 March 2026 Published: 31 March 2026</p> <p><b>How to cite:</b> Nasution, S. L. R., Zulhilmi, &amp; Girsang, E. (2026). Effectiveness of Standard Operating Procedures on Elective Surgery Waiting Time at Bhayangkara TK II Medan Hospital. <i>Contagion: Scientific Periodical Journal of Public Health and Coastal Health</i>, 8(1), 478–491.</p>	<p style="text-align: center;"><b>Abstract</b></p> <p><i>Background: Inefficient implementation of Standard Operating Procedures (SOPs) can prolong waiting times for elective surgeries, which can lead to decreased service quality, increased risk of postoperative complications, and decreased patient satisfaction in hospitals. Objective: To evaluate the impact of Standard Operating Procedure implementation on reducing waiting times for elective surgeries in hospitals. Methods: This study used a qualitative approach with a descriptive case study design and data collection techniques through observation and in-depth interviews with one specialist doctor, one nurse, and one administrative staff member. The results were analyzed using the thematic method from Braun and Clarke (2021). Results: The study showed that the implementation of Standard Operating Procedures (SOPs) had a positive impact on managing waiting times for elective surgeries at Bhayangkara Hospital Level II Medan. SOPs helped accelerate the service process through a more structured workflow, clear division of tasks, and increased coordination and administrative efficiency. Based on the results of the study, the average waiting time for elective surgeries at Bhayangkara Hospital Level II Medan after the implementation of SOPs was less than one week from the time the patient was scheduled for surgery, demonstrating the effectiveness of SOP implementation in accelerating service. Conclusion: SOP plays an important role in reducing waiting times for elective surgery by increasing the effectiveness of medical and administrative services and strengthening communication between service units.</i></p> <p><b>Keywords: Standard Operating Procedures, Waiting Time, Elective Surgery, Service Efficiency, Hospital.</b></p>
---	---

## INTRODUCTION

Efficient hospital service delivery remains a critical component of healthcare quality, particularly in the management of elective surgical procedures. Globally, prolonged waiting times for elective surgeries have been widely recognized as a major challenge in healthcare systems, contributing to decreased patient safety, increased risk of clinical deterioration, and reduced patient satisfaction. Delays in elective surgical care are associated with increased morbidity, prolonged hospital stays, and inefficient resource utilization within healthcare systems (Hole et al., 2022).

In response to these challenges, many healthcare systems have established benchmarks for acceptable waiting times. In Indonesia, the Ministry of Health recommends that elective surgical procedures should be performed within 7–14 days after patients are declared medically and administratively ready. However, empirical evidence indicates that many hospitals still fail

to meet this standard, with waiting times often exceeding recommended thresholds due to inefficiencies in administrative processes and inter-unit coordination (Kemkes RI, 2022).

Previous studies have identified several key determinants of prolonged waiting times, including incomplete administrative documentation, weak coordination between clinical and non-clinical units, limited operating room capacity, and suboptimal scheduling systems. These inefficiencies not only affect operational performance but also increase patient anxiety and reduce trust in healthcare services (Dolly, 2023). To address these issues, healthcare organizations increasingly adopt Standard Operating Procedures (SOPs) as a strategic approach to standardize workflows, improve coordination, and enhance service efficiency (Setiyawan Didik, 2023).

Despite the recognized importance of SOPs, a critical gap remains in the literature. The mere existence of SOPs does not guarantee effective implementation. Several studies have shown that SOP implementation is often hindered by limited staff compliance, inadequate training, resistance to change, and insufficient technological support (Rahman, 2024). Moreover, most prior research has primarily focused on identifying the causes of delays rather than evaluating how SOP implementation transforms workflow dynamics and reduces waiting times in real-world hospital settings, particularly in referral hospitals in developing countries.

This study addresses this gap by examining the implementation of Standard Operating Procedures in elective surgical services at Bhayangkara TK II Medan Hospital. As a referral hospital, this institution has undergone significant workflow restructuring since 2023 through the implementation of SOP-based service systems. Preliminary data indicate a reduction in elective surgery waiting times from approximately two weeks to less than one week following SOP implementation. However, challenges remain, including staff resistance, infrastructure limitations, and variability in adherence across service units. Therefore, this study aims to provide an in-depth evaluation of the effectiveness of SOP implementation in improving workflow organization and reducing waiting times for elective surgery. By identifying both facilitating and inhibiting factors, this research contributes to the development of evidence-based strategies to enhance hospital efficiency, strengthen health system performance, and improve patient-centred care in referral hospital settings.

## **METHODS**

This study employed a qualitative research approach, utilizing a descriptive case study design, to explore the effectiveness of Standard Operating Procedure (SOP) implementation in reducing elective surgery waiting times. A qualitative design was considered appropriate to

gain an in-depth understanding of workflow dynamics, inter-unit coordination, and contextual factors influencing the implementation of SOPs in real-world hospital settings. The study was conducted at Bhayangkara TK II Medan Hospital, a referral hospital in North Sumatra, Indonesia, between June and July 2025. This setting was purposively selected due to the implementation of SOP-based workflow restructuring in elective surgical services since 2023, providing a relevant context for evaluating changes in service efficiency.

Participants were selected using a purposive sampling technique to ensure the inclusion of key informants directly involved in elective surgical services. The inclusion criteria included healthcare professionals or administrative staff who were directly involved in the elective surgery process, had a minimum of one year of work experience, and had experienced both pre- and post-SOP implementation periods. A total of three informants participated in this study, consisting of an anaesthesiologist, an operating room nurse, and an administrative officer. The sample size was determined based on the principle of data saturation, where data collection continued until no new information or themes emerged, ensuring the adequacy and depth of the data obtained.

Data collection was carried out through semi-structured in-depth interviews, supported by field observations and document review. The interview guide was developed based on the research objectives and relevant literature, covering aspects such as administrative workflow, patient preparation, inter-unit coordination, and elective surgery scheduling processes. Interviews were conducted face-to-face in a private setting within the hospital to ensure confidentiality and encourage open responses, with each session lasting approximately 30–60 minutes. All interviews were audio-recorded with participants' consent, and field notes were taken to capture contextual information and non-verbal expressions. In addition, document analysis was conducted on the hospital's Standard Operating Procedure (SOP) document related to elective surgery services (SOP No. 01/02), which had been implemented since 2023, to triangulate findings and assess the consistency between formal procedures and actual practices.

Data analysis was performed using thematic analysis following the six-phase approach proposed by Braun and Clarke, which includes familiarization with the data, generation of initial codes, identification of patterns, development of themes, review and refinement of themes, and final definition and naming of themes. This approach enabled the identification of key themes related to workflow consistency and reduction of waiting times and supporting and inhibiting factors, as well as the role of management and information technology in SOP implementation. To ensure the rigor and trustworthiness of the study, several strategies were

applied, including source triangulation through the use of multiple data sources (interviews, observations, and documents), member checking by validating findings with participants, and maintaining a detailed audit trail of the research process. The study also adhered to ethical principles by ensuring voluntary participation, obtaining informed consent, and maintaining participant confidentiality through the use of coded identifiers (Inf1, Inf2, Inf3), with all data securely stored and used solely for research purposes.

## **RESULTS**

### **Informant Characteristics**

This study involved three informants who were purposively selected based on their direct involvement in the elective surgery process at Bhayangkara TK II Hospital, Medan. The informants consisted of an anesthesiology specialist (Inf1), an operating room anesthesia nurse (Inf2), and an administrative officer (Inf3). All three informants had more than one year of work experience and had gone through the periods before and after the implementation of the Standard Operating Procedure (SOP). Each informant played a crucial role in the elective surgery service system. The anesthesiology specialist was responsible for the clinical readiness of patients and coordination of medical actions; the anesthesia nurse assisted in patient preparation and the execution of procedures in the operating room, while the administrative officer managed the completeness of documents, validation of surgery schedules, and coordination between service units. All three provided complementary perspectives on the effectiveness of implementing SOPs on elective surgery waiting times.

The most influential characteristic in this study was not demographic factors such as age or gender, but rather the strategic position of the informants within the elective surgery service workflow and their work experience before and after the implementation of SOPs. The three informants, an anesthesiologist, an operating theatre nurse, and an administrative officer, held key roles at critical points in the SOP workflow, from determining patient clinical readiness, preparing for and performing procedures in the operating theatre, to completing documentation and scheduling operations. Furthermore, all informants had worked for over a year and had directly experienced the service conditions before and after the SOPs were implemented, enabling them to provide a clear comparative picture of changes in workflow, inter-unit coordination, and elective surgery waiting times. The combination of a strategic role in the service system and direct cross-period experience is what makes the characteristics of the informants highly decisive for the depth and quality of the research findings.

**Table 1. Characteristics of the Informants**

<b>Informant Code</b>	<b>Position</b>	<b>Unit/Section</b>	<b>Primary Role in Elective Surgery Services</b>	<b>Work Experience</b>	<b>Involvement with SPO</b>
<b>Inf1</b>	Anesthesiology Specialist	Operating / Anesthesia Room	Responsible for the clinical readiness of patients, pre-anesthesia assessment, and coordination of medical procedures	1 year	Involved before and after the implementation of SOP
<b>Inf2</b>	Anesthetic Nurse	Operating Room (OR)	Preparing patients, performing anesthesia procedures, and supporting the execution of operations in the operating theatre	1 year	Involved before and after the implementation of SOP
<b>Inf3</b>	Administrative Officer	Administration/Surgery	Managing document completeness, entering patient data, validating surgery schedules, and coordinating administration between units	1 year	Involved before and after the implementation of SOP

The determining factor in this study was not demographic variables such as age or gender, but rather the strategic position of the informants within the elective surgery service workflow and their work experience before and after the implementation of SOPs. The three informants, an anesthesiologist, an operating theater nurse, and an administrative officer, held key roles at critical points in the SOP workflow, from determining patient clinical readiness and performing procedures in the operating theatre to completing documentation and scheduling operations. Furthermore, all informants had worked for over a year and had directly experienced the service conditions before and after the SOPs were implemented, enabling them to provide a clear comparative picture of changes in workflow, inter-unit coordination, and elective surgery waiting times. The combination of a strategic role in the service system and direct cross-period experience is what makes the characteristics of the informants highly decisive for the depth and quality of the research findings.

### **Research Findings**

Based on in-depth interviews and thematic analysis, four main themes were identified that describe the effectiveness of SPO implementation on elective surgery waiting times, namely

(1) workflow regularity and clarity of roles, (2) reduction of surgery waiting times, (3) supporting and hindering factors of implementation, and (4) the role of management and information technology.

### **1. Workflow Regularity and Role Clarity**

Before the implementation of the SOP, the workflow for elective surgery services was not standardized and often relied on individual habits, leading to unpredictable delays. After the SOP was implemented, the workflow became more consistent and structured. This improvement in regularity significantly impacted efficiency, successfully reducing the average waiting time from approximately two weeks (pre-SOP) to less than one week (post-SOP). Regarding this change, the doctor (Inf1) stated that:

*“Before the SOP, administrative procedures were often unclear and inconsistent, depending on who was on duty. After the SOP, the process became more stable and predictable.”*

Supporting this view, the nurse (Inf2) added that:

*“The SOP makes procedures more consistent and easier to follow, so all staff know what to do.”*

### **2. Reduction of Elective Surgery Waiting Time**

The implementation of the SOP has directly accelerated operation scheduling, resulting in a measurable reduction in waiting times. Specifically, the average waiting period for elective surgery decreased from approximately two weeks in the pre-implementation phase to less than one week following the full adoption of the SOP. Previously, patients often experienced delays due to administrative unpreparedness or unsynchronized inter-unit communication. After the SOP was implemented, the process became significantly more efficient. Regarding this improvement, the doctor (Inf1) mentioned that:

*“The waiting time for surgery feels shorter than before because everything is clearly scheduled.”*

Supporting this observation, the administrative officer (Inf3) added:

*“With SOP, patients no longer have to wait long because schedules are more organized and patient data can be processed more quickly.”*

### **3. Supporting Factors and Barriers to SPO Implementation**

Factors supporting the implementation of SOPs include the regularity of workflows, administrative efficiency, management support, and the use of hospital information technology. The management team actively conducts supervision, training, and routine evaluations of SOP implementation. However, several obstacles were found, such as

resistance from some staff to changes, limitations in administrative support facilities, and differences in understanding of the SOP contents. Administrative staff (Inf3) stated, *"The limitations of facilities sometimes hinder the smooth running of SPO, especially administrative support tools," while the doctor (Inf1) expressed, "There are still staff who are reluctant to adapt to the new procedures."*

#### **4. The Role of Management and Information Technology**

Hospital management support plays a major role in the successful implementation of SOPs. Doctor (Inf1) mentioned that

*"Active management provides supervision and training for staff," while the nurse (Inf2) added that routine monitoring strengthens the consistency of procedure implementation. In addition, the use of a hospital-based electronic system speeds up administrative processes and reduces data errors. The administrative officer (Inf3) stated that "the electronic system helps to accelerate administrative processes and minimize patient data errors."*

Overall, the implementation of SOPs at Bhayangkara TK II Medan Hospital has been proven to enhance efficiency and order in workflow, reduce elective surgery waiting times, and strengthen coordination between service units. The success of the implementation is supported by management commitment and the use of information technology, although there are still obstacles in the form of individual resistance and limited facilities. This study confirms that consistent application of SOPs can be an effective strategy for reducing elective surgery waiting times and improving hospital service quality.

## **DISCUSSION**

This study, using a qualitative case study approach, demonstrates that the implementation of SOPs improves workflow consistency and coordination and reduces elective surgery waiting times, highlighting the importance of managerial support, training, and digital integration for sustainable implementation. The findings imply that hospitals should integrate SOPs within a Continuous Quality Improvement (CQI) framework to ensure long-term effectiveness. However, the study has limitations, including a small number of informants and reliance on subjective data, which may restrict generalizability. Additionally, the lack of quantitative measurement limits the ability to assess the magnitude of the impact. Future studies are recommended to use a mixed-methods approach and include larger samples to strengthen the evidence.

## **Workflow Consistency and Operational Efficiency**

The results of this study indicate that the implementation of Standard Operating Procedures (SOP) at Bhayangkara TK II Hospital Medan can create an orderly workflow, clear role distribution, and increased operational efficiency in elective surgery services. Before the SOP was implemented, inter-unit coordination was often unstructured and reliant on individual habits. This caused work variation and delays in scheduling and performing surgeries. After the SOP was implemented, each healthcare worker had a standard work guide, making communication and coordination flow more consistent.

This finding is in line with the research by Novitri (2024), which states that at Fatmawati Central General Hospital Jakarta, one of the main causes of elective surgery delays is irregular administrative procedures and weak coordination between service units. The study explains that delays in patient preparation, delays in equipment provision, and administrative errors are logistical factors that often hinder the smooth running of the surgery schedule. Thus, the pre-SPO conditions at Bhayangkara TK II Medan Hospital reflect classic problems also faced by many other hospitals in Indonesia, namely the suboptimal cross-unit work system in supporting the efficiency of elective surgical services.

These findings are in line with the research of Immanuel et al. (2024), which states that at Bhayangkara Ruwa Jurai Hospital in Lampung, the use of the Root Cause Analysis (RCA) method showed that one of the root causes of elective surgery delays was the lack of integrated coordination between units. The implementation of the Standard Operating Procedure (SPO) proved to improve this workflow and reduced patient waiting times by up to 50%.

This research is also supported by Astanto et al. (2026), who stated that there is a relationship between pre-anesthesia waiting time and patient anxiety. They found that a preoperative service flow that does not comply with SOPs increases the risk of patient delays and stress. With the implementation of SOPs, patient waiting time and anxiety decrease significantly.

With the implementation of SOPs, patient waiting times and anxiety decreased significantly. Overall, the findings of this study confirm that the implementation of SOPs at Bhayangkara Hospital TK II Medan plays an important role in establishing a more consistent and efficient workflow in elective surgery services. Standardization of procedures, clarity in task allocation, and better-coordinated cross-unit collaboration directly contribute to reduced service variation and lowered potential delays. Thus, workflow consistency supported by SOPs not only improves operational efficiency but also serves as a foundation for enhancing the quality and safety of elective surgical services in a referral hospital.

## Impact on Elective Surgery Waiting Times

The results of this study show that the implementation of Standard Operating Procedures (SOPs) has a significant impact on accelerating the waiting time for elective surgery at Bhayangkara TK II Medan Hospital. Before the implementation of SOPs, patients often experienced surgical delays due to unstructured inter-unit coordination, incomplete administrative processes, and unprepared supplementary examination results. After the SOP implementation, surgery scheduling became more systematic and planned, reducing the average waiting time for elective surgery to less than one week from the time the patient is deemed administratively and clinically ready.

Research by Novitri (2024) states that RSUP Fatmawati Jakarta found that delays in elective surgeries are generally caused by administrative and logistical factors, such as incomplete patient documents and unsynchronized coordination between departments. With the proper implementation of standard operating procedures, the rate of surgical delays significantly decreases as the process of checking and verifying documents becomes faster.

Furthermore, a study by Immanuel et al. (2024) stated that an operating scheduling system based on SOPs and electronic checklists can reduce patient waiting times by 30–40%. The study highlighted that the use of integrated SOPs allows doctors, nurses, and administrative staff to work within a unified information flow, thereby minimizing communication errors.

Similar results were reported by Astanto et al. (2026), stating that at Bhayangkara Ruwa Jurai Hospital in Lampung, they found that after implementing SOPs and evaluating workflow using the Root Cause Analysis (RCA) method, the average waiting time for elective surgeries decreased from 10 days to 4 days. The most significant improvements occurred in the preoperative administration and operating room scheduling stages.

Research by Anggreni et al (2022) stated that incorporating the patient perspective by linking pre-anesthesia waiting times to anxiety levels. The results showed that the waiting time in accordance with SOP not only accelerates procedures but also reduces stress and increases patient comfort before surgery. Thus, the implementation of SOP affects not only service efficiency but also the psychological aspects of patients.

Conceptually, this study also reinforces the Hospital Efficiency Model theory, which states that waiting time efficiency in surgical services is determined by three main factors: (1) coordination of work between service units, (2) implementation of standard operating procedures, and (3) a realistic surgical scheduling system. When these three factors are implemented in an integrated manner, patient waiting times can be reduced without compromising service quality and safety.

Thus, this study emphasizes that the consistent implementation of standard operating procedures significantly contributes to the acceleration of elective surgery services. Waiting time efficiency not only reflects the performance of the hospital organization but also serves as an indicator of the successful implementation of a quality system based on patient safety. These results are relevant to the objectives of public health services, namely providing fast, effective, and patient satisfaction-oriented services.

### **Supporting and Inhibiting Factors: Implications for Sustainable SPO Implementation**

The results of this study indicate that the success of implementing Standard Operating Procedures (SOPs) at Bhayangkara TK II Medan Hospital depends not only on the existence of procedural documents but also on organizational support, management commitment, the availability of resources, and the readiness of the implementing individuals. Proper SOP implementation requires synergy between policy aspects, work culture, and the behavior of healthcare personnel to ensure sustainable implementation.

The main supporting factors in this study include:

1. Regularity of workflow and clarity of roles.

Standard Operating Procedures help each unit understand its responsibilities, making coordination more effective and reducing the risk of overlapping tasks.

2. Hospital management support.

The management team actively conducts supervision, training, and routine evaluations to ensure compliance with the SOPs.

3. Utilization of information technology.

Digital administrative systems and electronic checklists accelerate the scheduling process and reduce data entry errors.

4. Culture of discipline and effective inter-unit communication.

A collaborative work culture strengthens staff adherence to procedures.

Research by Novitri (2024) at Fatmawati General Hospital also emphasizes the importance of management support and continuous training in ensuring compliance with SOPs. The results show that regular training and supervision by the head of the installation can improve SOP implementation effectiveness by 38%. at Fatmawati General Hospital also emphasizes the importance of management support and continuous training in ensuring compliance with SOPs. The results show that regular training and supervision by the head of the installation can improve SOP implementation effectiveness by 38%.

Furthermore, Immanuel et al. (2024) found that the integration of hospital information systems is a key factor in strengthening the consistent implementation of SOPs. The use of

digital-based systems reduces delays in information between units and accelerates patient administration processes. A study by Astanto et al. (2026) at Bhayangkara Ruwa Jurai Hospital Lampung also reinforces this finding, where the role of management in conducting root cause analysis on the obstacles to SPO implementation helps improve cross-unit coordination and optimize limited resources.

Finally, the study by Anggraini et al. (2020) shows that good interpersonal communication between doctors, nurses, and administrative staff is an important psychosocial factor in ensuring the continuity of SOP implementation, particularly in the pre-anesthesia and pre-operative phases. Open communication prevents miscommunication and delays in action.

Although the implementation of SOPs at Bhayangkara TK II Medan Hospital is running quite well, there are still some obstacles that hinder its effectiveness, including:

1. Staff resistance to changes in work procedures.

Some healthcare workers are still reluctant to abandon old habits deemed more practical.

2. Limited facilities and infrastructure.

Administrative facilities and digital devices are not yet evenly distributed across all units, so some processes are still carried out manually.

3. Gaps in understanding the content of SOPs.

Not all staff receive comprehensive training, resulting in differing interpretations of the steps in the SOP.

These obstacles are in line with Rahman (2024) who states that the success of SPO implementation is highly influenced by the readiness of human resources and technology infrastructure. Without regular training and adequate facility support, the sustainability of implementation is difficult to achieve.

Furthermore, A. D. Anggraini et al. (2024) also found that individual resistance to change is often caused by a lack of understanding of the benefits of SOPs and weak evaluation mechanisms from management. Therefore, involving healthcare personnel in the formulation and evaluation of SOPs is important to enhance their sense of ownership of the policy.

Based on research findings and supporting literature, it can be concluded that the sustainable implementation of the Standard Operating Procedures requires a managerial, structural, and cultural approach simultaneously. The managerial approach includes policy, supervision, and periodic evaluation. The structural approach involves the provision of adequate human resources and information technology. Meanwhile, the cultural approach focuses on developing disciplined work behavior and collaborative communication among staff.

Thus, the success of SPO is not only measured by short-term effectiveness, such as reduced operation waiting times, but also by its ability to create a consistent, accountable work culture focused on quality healthcare services. Hospitals need to adopt continuous quality improvement (CQI) strategies to ensure that SPO implementation remains adaptive to policy changes and organizational dynamics.

## CONCLUSIONS

The implementation of Standard Operating Procedures (SOP) at Bhayangkara Hospital TK II Medan is effective in improving the organization of workflow and the operational efficiency of elective surgery services. SOPs can standardize administrative processes, patient preparation, medical team coordination, and surgery scheduling so that service flows become more consistent, the division of roles among healthcare workers and administrative staff becomes clearer, and the potential for procedural errors and miscommunications can be minimized.

The implementation of SOPs also has a direct impact on reducing elective surgery waiting times. Once SOPs are consistently applied, the average waiting time for elective surgery drops to less than a week from the moment the patient is administratively and clinically ready, approaching the theoretical ideal waiting time for elective surgery. This improvement is primarily supported by enhanced cross-unit coordination, the use of information technology in data and schedule management, and the hospital management's commitment to providing ongoing supervision and training for staff.

In addition, this study identified that the main obstacles in implementing SPO include resistance from some staff to change, limitations in supporting facilities and infrastructure, and uneven understanding of the SPO content. Nevertheless, overall, these findings confirm that SPO plays an important role as a managerial tool to reduce elective surgery waiting times, improve the effectiveness of medical and administrative services, and strengthen communication between service units in referral hospitals.

## REFERENCES

- Anggraini. (2024). *Manajemen Kebijakan Pelayanan Kesehatan*.
- Anggraini, N., Saputri, S., Prayogi, A. S., Mardalena, I., & Kunci, K. (2020). Waiting Time Pre Anestesi Berhubungan dengan Tingkat Kecemasan Pasien Pre Operasi. *Jurnal Teknologi Kesehatan (Journal of Health Technology)*, 16(1), 16–22. <https://doi.org/10.29238/jtk.v21i1.2810>
- Anggreni, D., Lubis, L. A., & Kusmanto, H. (2022). Implementasi program pencegahan stunting di puskesmas Dolok Sigompulon Kabupaten Padang Lawas Utara. *Histeria Jurnal: Ilmiah Soshum Dan Humaniora*, 1(2), 91–99. <https://doi.org/10.55904/histeria.v1i2.281>

- Astanto, T., Sunadi, A., & Yoshida, E. (2026). Analisis Waktu Tunggu Pasien Operasi Elektif di Instalasi Bedah Sentral (IBS) dengan Metode Root Cause Analysis (RCA) di RS Bhayangkara Ruwa Jurai Lampung Tahun 2025 diri dengan meningkatkan kualitas dan kuantitas pelayanan Instalasi Bedah sentral. *Klinik: Jurnal Ilmiah Kedokteran Dan Kesehatan*, 5(September 2025), 97–109. <https://doi.org/https://doi.org/10.55606/klinik.v5i1.5532>
- Dolly, D. (2023). The Efficiency Patient Service Time With Lean Management : Literature Review. *MPPKI Media Publikasi Promosi Kesehatan Indonesia The Indonesian Journal of Health Promotion*, 6(12), 2357–2364. <https://doi.org/DOI:https://doi.org/10.56338/mppki.v6i12.4059> Review Articles 2357
- Fladyan Grace Wulur, Ida Fitriyani, & Vip Paramarta. (2023). Analisis Pengaruh Pemanfaatan Sistem Informasi Manajemen Pada Layanan Kesehatan Rumah Sakit: Literature Review. *Jurnal Ilmu Kedokteran Dan Kesehatan Indonesia*, 3(2), 187–202. <https://doi.org/10.55606/jikki.v3i2.1725>
- Haryo Wahyu Hatmoko, & Dewi Susilowati. (2025). Narrative Literature Review : Efektivitas Penggunaan Anggaran Operasional dalam Meningkatkan Kinerja Pelayanan Rumah Sakit. *Jurnal Ekonomi Bisnis Dan Akuntansi*, 5(3), 449–461. <https://doi.org/10.55606/jebaku.v5i3.5980>
- Hole, G., Baheerathan, J., Martinussen, P. E., & Magnussen, J. (2022). Financial incentives and patient selection : Hospital physicians ' views on cream skimming and economic management focus in Norway. *Elsevier B.V. This Is an Open Access Article under the CC BY License*, 125, 98–103. <https://doi.org/10.1016/j.healthpol.2020.10.011>
- Immanuel, T., Yudi, S., & Dhamanti, I. (2024). Elektif di rumah sakit. *Jurnal kesehatan tambusai*, 5(1), 2159–2166. <https://doi.org/DOI:10.31004/jkt.v7i1.51287>
- Kemkes RI. (2022). Peraturan Menteri Kesehatan Republik Indonesia no. 34 tahun 2022 tentang Akreditasi Pusat Kesehatan Masyarakat, Klinik, Laboratorium Kesehatan, Unit Transfusi Darah, Tempat Praktik Mandiri Dokter, dan tempat praktik mandiri dokter gigi. *Kemkes RI*, 1207, 1–16.
- Kraus, M., Stacherl, B., Czypionka, T., & Mayer, S. (2024). Equal waiting times for all? Empirical evidence for elective surgeries in the Austrian public healthcare system. *Public Health*, 236, 216–223. <https://doi.org/10.1016/j.puhe.2024.08.007>
- Laila, L., Sulistyawati, S., Syamsu Hidayat Magister Kesehatan Masyarakat, M., & Ahmad Dahlan, U. (2024). *JURNAL PROMOTIF PREVENTIF Evaluasi Penerapan Sistem Informasi Manajemen Rumah Sakit (SIMRS): Studi Literatur Evaluation of the Implementation of Hospital Management Information Systems (SIMRS): Literature Study (Vol. 7)*. <http://journal.unpacti.ac.id/index.php/JPP>
- Lazetti, G. A., & Setiawan, S. A. (n.d.). *Integrasi rekam medis elektronik (rme) dengan sistem informasi manajemen rumah sakit (simrs) terkait data kesehatan pasien di indonesia integration of electronic medical record (emr) with hospital management information system (simrs) related to patient health data in indonesia*.
- Noor, A., Akbar, I. Z., Husaini, Panghiyangan, R., & Marlinae, L. (2018). Analysis factor influence with waiting time for elective surgery in general surgical outpatient clinic. *Indian Journal of Public Health Research and Development*, 9(8), 233–237. <https://doi.org/10.5958/0976-5506.2018.00726.X>
- Novitri, S. (2024). Faktor Penyebab Penundaan Operasi Elektif di Rumah Sakit Umum Pusat Fatmawati, Jakarta Factors. *MPPKI Media Publikasi Promosi Kesehatan Indonesia The Indonesian Journal of Health Promotion*, 7(2), 472–479. <https://doi.org/DOI:https://doi.org/10.56338/mppki.v7i2.4910> Research Articles MPPKI
- Oudhoff, J. P., Timmermans, D. R. M., Knol, D. L., Bijnen, A. B., & Van Der Wal, G. (2007). Waiting for elective surgery: Effect on physical problems and postoperative recovery.

- ANZ Journal of Surgery*, 77(10), 892–898. <https://doi.org/10.1111/j.1445-2197.2007.04268.x>
- Prasetyo, H. & Wijayanto, S. (2022). *Evaluasi Pengelolaan Waktu Tunggu Pasien Operasi di Rumah Sakit*. *Jurnal Pelayanan Kesehatan*, 19(2), 124-131.
- Pratama, R., et al. (2022). *Koordinasi Tim Medis dalam Penerapan SPO di Rumah Sakit Umum*. *Jurnal Medis*, 23(2), 89-97.
- Quercioli, C., Cevenini, G., Messina, G., Carta, G. A., Becattini, G., & Sancasciani, S. (2022). Reducing waiting times of elective surgical procedures: effectiveness evaluation of a multi-interventions approach. *Annali Di Igiene Medicina Preventiva e Di Comunita*, 34(6), 635–649. <https://doi.org/10.7416/ai.2021.2495>
- Rahman, S. (2024). *Penilaian kesiapan sistem informasi rumah sakit untuk implementasi activity based costing : studi kasus di rumah sakit pusat otak nasional tahun 2024 tesis*.
- Rocha, M. C., Damous, S. H. B., Costa, R. A., & Utiyama, E. M. (2025). Impact of implementing a prioritization process on waiting time for non-scheduled surgeries in a tertiary emergency unit. *Clinics*, 80. <https://doi.org/10.1016/j.clinsp.2025.100712>
- Santosa, I., & Desy Purnama, E. (n.d.). *Pengaruh Waktu Tunggu Pelayanan dan Fasilitas Rumah Sakit Terhadap Loyalitas Pasien yang Dimediasi Kepuasan Pasien Rawat Jalan di Rumah Sakit Pelita Anugerah Demak*. <https://doi.org/10.38035/jimt.v6i4>
- Setiyawan Didik. (2023). Dampak penerapan standar operasional prosedur (sop) terhadap kinerja karyawan rumah sakit umum radjak hospital salemba. *Jurnal Ekonomi, Manajemen, Dan Akuntansi*, Vol 2(2). <https://doi.org/https://doi.org/10.572349/mufakat.v2i4.835>
- Sukarno, A., Yoshida, E., & Kridawati, A. (n.d.). *Analisis Faktor-faktor Yang Mempengaruhi Waktu Tunggu Pasien Di Poli Penyakit Dalam RS Bhayangkara Surabaya Tahun 2024*. <https://ejournal.urindo.ac.id/index.php/MARSI>
- Teguh Astanto, Apri Sunadi, & Eka Yoshida. (2025). Analisis Waktu Tunggu Pasien Operasi Elektif di Instalasi Bedah Sentral (IBS) dengan Metode Root Cause Analysis (RCA) di RS Bhayangkara Ruwa Jurai Lampung Tahun 2025. *Jurnal Ilmiah Kedokteran Dan Kesehatan*, 5(1), 97–109. <https://doi.org/10.55606/klinik.v5i1.5532>