

Exploring Patients' Experiences of Hospital Administrative Services: A Patient Experience Perspective

Asdi Lastari

Department of Hospital Administration, STIKes Sentral, Padangsidimpuan, Indonesia

*Corresponding author email : asdilastari77@gmail.com

ABSTRACT

Background: Hospital administrative services influence accessibility, continuity, trust, and patients' overall perceptions of healthcare. Fragmented procedures, uncertain waiting times, inconsistent information, and unequal digital access may create significant barriers, even when clinical care is adequately delivered.

Research Objective: This study aimed to explore patients' experiences of administrative services at RSUD Daya Makassar from a patient experience perspective.

Methods: A qualitative descriptive study was conducted from May to July 2025. Eighteen patients were recruited through purposive sampling. Data were collected using face-to-face, semi-structured interviews addressing registration, document verification, waiting times, staff communication, digital systems, service coordination, and complaint handling. The data were analysed thematically. Trustworthiness was maintained through triangulation, member checking, peer debriefing, reflexive notes, and an audit trail.

Results: Five themes were identified: administrative services as a complex patient journey; waiting time and procedural uncertainty; the importance of responsive and empathetic communication; unequal experiences with digital services; and expectations for integrated and humane administration. Positive experiences occurred when patients received clear information, respectful assistance, and coordinated services. Negative experiences were associated with repeated procedures, unclear queues, inconsistent information, and limited assistance for older adults and patients with low digital literacy.

Conclusion: Hospital administrative quality is determined by efficiency, communication, integration, and accessibility. RSUD Daya Makassar should simplify procedures, provide transparent queue information, strengthen staff communication, integrate digital and on-site services, and ensure assistance for vulnerable patients.

Keywords: Administrative Services; Patient Experience; Hospital



This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/)

BACKGROUND

Hospital administrative services constitute the first and often the final interface between patients and the healthcare system (Kanga-Parabia et al., 2024). Registration, identity and insurance verification, referral validation, queue management, admission, discharge, billing, medical-record administration, and complaint handling may appear non-clinical; nevertheless, failures at these points can delay treatment, increase anxiety, generate additional costs, and weaken patients' trust in hospitals. Administrative quality must therefore be understood not merely as procedural compliance but as an essential dimension of patient-centred care. A technically competent clinical service may still be perceived negatively when patients encounter unclear information, repeated document checks, fragmented service counters, long waiting times, inaccessible digital systems, or staff communication that is perceived as unresponsive (Diana et al., 2022). Exploring administrative services from the patient experience perspective is thus urgent because it reveals how institutional procedures are actually encountered, interpreted, and negotiated by service users.

Globally, healthcare quality remains a major concern. The World Health Organization reports that approximately one in ten patients experiences harm during healthcare, while more than three million deaths occur annually due to unsafe care (Mekonen et al., 2024). In low- and middle-income countries, approximately 134 million adverse events occur in hospitals each year. Although these figures primarily concern patient safety, they demonstrate that quality problems emerge from interconnected systems, including communication, coordination, documentation, information flow, and organisational procedures not solely from clinical interventions (Brolan et al., 2022). Patient participation also remains limited: an interim WHO survey found that only 13% of responding countries had patient representatives on governing boards or equivalent mechanisms in most hospitals (Xie et al., 2025). WHO consequently emphasises a transformation from services designed *for* patients towards services designed *with* patients and families, making patients' narratives a critical source of quality improvement evidence (Tantri & Amir, 2022).

In Indonesia, the expansion of the National Health Insurance programme has substantially increased interactions between citizens, hospitals, and complex administrative systems. By 30 June 2024, Jaminan Kesehatan Nasional covered approximately 273.5 million people, equivalent to 96.8% of the Indonesian population. In November 2024, the Ministry of Health recorded 3,213 registered hospitals, consisting of 3,143 Class A-D hospitals and 70 Class D Pratama hospitals (Junior Rina Artha et al., 2024). This expansion increases the importance of accurate referrals, eligibility verification, digital registration, queue integration, and transparent communication. However, administrative barriers remain evident (Sambodo et al., 2023). The Indonesian Ombudsman recorded approximately 700 healthcare complaints during 2021-2022, with many involving the rejection of JKN patients by hospitals because of alleged quota limitations (Misransyah et al., 2023). These findings indicate that formal coverage does not automatically guarantee a seamless service experience (Dzakiy et al., 2024).

At the regional level, South Sulawesi comprises 24 regencies and municipalities with differences in geography, infrastructure, and healthcare capacity. Makassar functions as the provincial administrative centre and a major referral destination for patients from surrounding districts. The South Sulawesi Provincial Government's 2024 strategic programme established an 85% target for quality services in healthcare facilities, demonstrating that service quality remains a regional development priority. In Makassar, the latest BPS facility table documents the distribution of hospitals and primary-care facilities across 15 districts; Biringkanaya District, where RSUD Daya is located, had three general hospitals in 2025. This concentration reinforces RSUD Daya's strategic position in serving urban residents and referrals from the northern and surrounding areas of Makassar.

RSUD Daya has implemented public satisfaction surveys as part of its institutional quality monitoring. The latest accessible report for July–December 2025 involved 1,386 respondents and produced a Community Satisfaction Index of 82.70, categorised as “good.” This result indicates generally positive performance but also leaves meaningful room for improvement. More importantly, an aggregate score cannot explain why patients evaluate services positively or negatively, how they move between administrative touchpoints, what forms of confusion or vulnerability they experience, or how staff interactions shape their trust (Pelupessy & Silverman, 2024).

Previous Indonesian studies have predominantly measured satisfaction, service-quality dimensions, and waiting times quantitatively. A qualitative study in a Palembang public hospital explored overall outpatient service quality, while research in Makassar primarily examined statistical relationships between waiting time and satisfaction. Consequently, limited evidence explains the lived administrative journey of patients in a regional public hospital, particularly regarding JKN procedures, digital and manual systems, information continuity, emotional responses, and coping strategies (Tj et al., 2025).

The novelty of this study lies in examining hospital administration as an end-to-end patient journey rather than as isolated service indicators. It positions patients as experiential experts capable of identifying procedural, communicative, digital, and relational barriers that institutional surveys may overlook. Therefore, this study aims to explore patients’ experiences of administrative services at RSUD Daya Makassar, identify the factors shaping positive and negative experiences, and generate patient-informed recommendations for more responsive, accessible, integrated, and patient-centred hospital administration.

METHODS

This study employed a qualitative descriptive design (Wibowo et al., 2025) using a patient experience perspective to explore patients’ experiences of hospital administrative services. The study was conducted at RSUD Daya Makassar, South Sulawesi, Indonesia, from May to July 2025. Participants were recruited using purposive sampling based on their direct experience of accessing hospital administrative services.

A total of 18 patients participated in the study. The inclusion criteria were patients aged 18 years or older, having completed at least one administrative service process—including registration, National Health Insurance (JKN) verification, outpatient or inpatient admission, billing, discharge administration, or complaint submission—and being able to communicate their experiences clearly. Patients in critical condition or experiencing severe cognitive and communication impairments were excluded. Participant recruitment continued until data saturation was achieved, indicated by the absence of substantially new information in subsequent interviews.

Data were collected through face-to-face, in-depth semi-structured interviews lasting approximately 30–60 minutes. The interview guide explored patients’ experiences with service requirements, registration procedures, waiting times, information clarity, staff responsiveness, JKN verification, digital registration systems, coordination between service units, complaint handling, emotional responses, and expectations for service improvement. With participants’ permission, interviews were audio-recorded and supplemented by field notes documenting non-verbal expressions and relevant service contexts.

The data were analysed using thematic analysis. The analysis involved transcribing interviews verbatim, repeatedly reading the transcripts, generating initial codes, grouping related codes into categories, developing themes, reviewing and defining themes, and interpreting the findings within the patient experience framework. Data collection and analysis were conducted concurrently to allow emerging findings to guide subsequent interviews.

Study trustworthiness was maintained through source triangulation, member checking, peer debriefing, reflexive notes, and an audit trail documenting the research process. Ethical principles of autonomy, confidentiality, anonymity, and voluntary participation were applied throughout the study. All participants received information about the research and provided written informed consent before the interviews. Ethical approval was obtained from the relevant Health Research Ethics Committee, while administrative permission was granted by RSUD Daya Makassar.

RESULTS

A total of 18 patients participated in the study, consisting of 10 women and eight men aged 21–67 years. Twelve participants were National Health Insurance (JKN) patients, four were general patients, and two used other health-insurance schemes. Most participants accessed outpatient services, while five had experience with inpatient admission and discharge administration. Thematic analysis identified five main themes: administrative services as a complex patient journey, waiting time and procedural uncertainty, the importance of responsive communication, unequal experiences with digital services, and patient expectations for integrated and humane administration.

Theme 1: Administrative services as a complex patient journey

Participants described hospital administration as a sequence of interconnected processes rather than a single registration activity. Patients were required to move through registration, document verification, referral validation, clinic queues, pharmacy services, and payment or discharge procedures. Several participants experienced confusion because different service stages required different documents or counters.

"I thought that after registering, I could go directly to the clinic, but I was asked to return to another counter because one document had not been verified." (P4)

Patients who had previously visited the hospital generally found the process easier. In contrast, first-time patients and those referred from other healthcare facilities required more assistance to understand the service flow.

Theme 2: Waiting time and procedural uncertainty shaped negative experiences

Long waiting periods were not the only source of dissatisfaction. Participants were more frustrated when they did not know how long they would wait, why the queue had stopped, or whether their documents had been processed. Uncertainty created anxiety, particularly among older patients, patients experiencing pain, and family members accompanying children.

"Waiting is understandable because there are many patients. What makes us anxious is that there is no information about why the queue is not moving." (P7)

Some participants reported arriving early in the morning but still waiting for document verification or confirmation from the intended clinic. Participants suggested that estimated waiting times and real-time queue information would make the process more predictable.

Theme 3: Responsive and empathetic communication reduced administrative difficulties

The attitudes and communication skills of administrative staff strongly influenced patients' overall experiences. Participants appreciated staff who provided clear explanations, repeated information patiently, and directed them to the correct service unit. Friendly communication helped patients feel respected, even when the administrative process took considerable time.

"The officer explained the requirements slowly and showed me where to go. Even though I had to wait, I did not feel abandoned." (P11)

Conversely, brief instructions, unfamiliar administrative terminology, and an unfriendly tone caused patients to feel reluctant to ask questions. Some participants

perceived that staff became less responsive during crowded service hours. These findings demonstrate that interpersonal interactions were as important as procedural speed.

Theme 4: Digital services provided convenience but created unequal experiences

Online registration and electronic queue systems were considered useful because they could reduce repeated data entry and time spent at the registration counter. Younger participants and those familiar with smartphones generally reported positive experiences. However, older adults, patients with limited digital literacy, and patients without stable internet access still depended on family members or hospital staff.

"My child registered me through the application. If I had come alone, I would not have known how to use it." (P15)

Several participants also experienced differences between information displayed in the digital system and instructions received at the hospital. Therefore, digitalisation did not completely eliminate the need for face-to-face assistance. Participants emphasised that conventional services should remain available for patients who cannot independently access digital platforms.

Theme 5: Patients expected integrated, transparent, and humane administrative services

Participants expected administrative procedures to be simplified and better coordinated across hospital units. They recommended establishing a clearly visible information desk, providing complete information about required documents before arrival, integrating registration and JKN verification, improving queue-monitoring systems, and assigning staff to assist older adults and patients with disabilities.

"It would be easier if there were one place where patients could ask about everything instead of moving from one counter to another." (P2)

Participants also expected complaint mechanisms to be accessible and followed by visible responses. Some patients knew that complaint channels were available but were uncertain about how complaints were processed. They believed that feedback should be used to improve services rather than treated merely as a formal requirement.

Overall, patients' experiences of administrative services at RSUD Daya Makassar were shaped by the interaction between procedural efficiency, information clarity, staff responsiveness, digital accessibility, and coordination between service units. Positive experiences emerged when patients received clear guidance and respectful assistance, whereas negative experiences were associated with fragmented procedures, uncertain waiting times, inconsistent information, and limited support for vulnerable patients. These findings indicate that improving hospital administration requires not only faster procedures but also more integrated, inclusive, transparent, and patient-centred service delivery.

DISCUSSION

This study demonstrates that patients' experiences of hospital administrative services are shaped not only by the speed of registration but also by the continuity, clarity, accessibility, and interpersonal quality of the entire administrative journey. The five themes identified in this study indicate that administrative services are closely connected to patients' emotional security, trust, and ability to access clinical care. Consequently, hospital administration should not be treated merely as a supporting function but as an integral component of patient-centred healthcare.

The first finding showed that patients experienced hospital administration as a complex and fragmented journey involving registration, document verification, referral validation, clinic queues, pharmacy services, payment, and discharge procedures. Difficulties at one administrative point affected subsequent stages of care. Repeated document checks and movement between service counters increased patients' physical

and emotional burden, particularly among first-time patients. This finding supports the patient-journey perspective, which views healthcare quality as the cumulative result of multiple service interactions rather than the performance of an individual unit. (Listiwati et al., 2023) similarly found that Indonesian patients evaluated outpatient service quality through their entire encounter with the hospital, including accessibility, staff interaction, physical conditions, and service organisation. Therefore, improvements limited to one administrative counter may have little effect when coordination between service units remains fragmented (Narwadiya & Rao, 2025).

Waiting time was another important factor, but the findings suggest that uncertainty was more distressing than waiting itself. Patients were generally able to tolerate delays when they understood the reasons and received information about the expected duration. In contrast, queues without explanations created anxiety and negative perceptions of service quality (Leung et al., 2024). This result indicates that waiting time has both objective and subjective dimensions. Objective waiting time refers to the actual duration of the process, whereas perceived waiting time is influenced by information, comfort, fairness, and communication. Previous research in Makassar reported that registration waiting time was significantly associated with patient satisfaction, although patients could remain satisfied when services were provided professionally and accurately. Hospitals should therefore combine operational interventions to reduce delays with communication strategies that make unavoidable waiting periods more predictable (Khoirunnisa et al., 2025).

The findings also revealed that responsive and empathetic communication could reduce the negative effects of administrative complexity. Patients appreciated staff who explained requirements patiently, provided clear directions, and recognised their difficulties (Guntur et al., 2025). Conversely, brief explanations, unfamiliar terminology, and an unfriendly tone discouraged patients from asking questions. These results are consistent with the concept of relational quality, in which respect, empathy, and responsiveness influence how patients interpret institutional procedures (Khamnil et al., 2025). Administrative staff are often the first hospital personnel encountered by patients; their communication may therefore shape the initial perception of the hospital as a whole (Lidia et al., 2024). Training should include patient-centred communication, conflict management, cultural sensitivity, and techniques for communicating with older adults and patients with limited health literacy.

Digital registration and electronic queue systems produced both convenience and inequality. Participants familiar with smartphones benefited from faster registration and reduced repetition (Fadilah et al., 2022). However, older patients, individuals with limited digital literacy, and those without stable internet access continued to depend on relatives or hospital staff. This finding shows that digital transformation does not automatically create equitable services (Khamnil et al., 2025). When digital platforms become the dominant gateway without adequate assistance, technology may transfer administrative responsibility from the hospital to patients and their families. Although online registration systems can reduce waiting times and congestion, their implementation must be accompanied by user-friendly interfaces, clear instructions, assisted digital services, and continued availability of conventional registration. A hybrid system is particularly important in public hospitals serving patients with diverse socioeconomic, educational, and technological backgrounds (Siddiqi et al., 2024).

Patients also reported occasional inconsistencies between digital information and instructions received at the hospital (Mustafa et al., 2025). Such inconsistencies may undermine confidence in electronic systems and cause patients to repeat administrative procedures. Effective digitalisation therefore requires integration between information systems, administrative personnel, service schedules, JKN verification, and clinical units. The benefits of technology will remain limited when electronic systems operate separately

from actual service processes. Regular system evaluation involving patients and frontline staff is required to identify technical and organisational barriers that may not be visible to hospital management (Botwright et al., 2025).

Another significant finding was the expectation for integrated, transparent, and humane administrative services (Aisyah et al., 2025). Participants recommended a central information desk, simplified requirements, clearer service-flow information, integrated registration and insurance verification, and special assistance for vulnerable patients. These expectations reflect the principles of patient-centred care, particularly respect, accessibility, information sharing, and responsiveness to individual needs (Hariyanti et al., 2024). The World Health Organization emphasises that healthcare systems should move from services designed merely for patients towards services designed with patients and families. Patient narratives can identify practical barriers that satisfaction scores alone may not detect (Rasheed et al., 2023).

The findings have particular relevance to RSUD Daya Makassar. Although its 2025 Community Satisfaction Survey produced a score of 82.70, categorised as good, an aggregate score cannot explain the specific experiences underlying that evaluation. Qualitative findings complement institutional surveys by revealing where difficulties occur, how patients respond emotionally, and which groups are most vulnerable. Community satisfaction surveys should therefore be combined with interviews, complaint analyses, service observations, and patient-journey mapping to guide targeted quality-improvement interventions.

This study contributes novelty by positioning administrative services as an end-to-end patient experience rather than as isolated indicators of waiting time or satisfaction. It reveals that administrative quality emerges from interactions among procedures, staff communication, digital systems, information continuity, and patients' capacities. From this perspective, improving administrative services requires organisational integration rather than merely increasing service speed (Lisni et al., 2024).

Nevertheless, the findings should be interpreted within the study context. Participants were recruited from one public hospital, and their experiences may not represent patients in private hospitals or other regions. The study also relied on personal accounts that may have been influenced by participants' health conditions, expectations, and recent service experiences. Despite these limitations, the diversity of participants and the depth of the interviews provided meaningful insights into the administrative realities encountered by patients.

Overall, hospital administrative services should be redesigned as an integrated, inclusive, and communicative patient journey. RSUD Daya Makassar may consider strengthening coordination between administrative units, providing real-time queue information, establishing assisted digital services, improving staff communication competencies, and creating accessible feedback mechanisms. These measures could reduce procedural uncertainty, protect vulnerable patients, and transform administration from a bureaucratic obligation into a supportive component of safe and patient-centred care.

CONCLUSION

This study concludes that patients' experiences of administrative services at RSUD Daya Makassar were influenced by procedural clarity, waiting-time certainty, staff communication, service-unit coordination, and digital accessibility. Positive experiences occurred when patients received clear information, respectful assistance, and coordinated services. Negative experiences were associated with fragmented procedures, uncertain waiting times, inconsistent information, and limited support for older adults and patients with low digital literacy.

RSUD Daya Makassar should simplify and integrate administrative procedures, provide real-time queue information, strengthen patient-centred communication among administrative staff, and ensure consistency between digital information and on-site services. Assisted digital registration and dedicated support for older adults, patients with disabilities, and first-time visitors should also be provided. Regular patient feedback should be used as a basis for continuous service evaluation and improvement.

ACKNOWLEDGMENTS

The authors express their sincere gratitude to the management and staff of RSUD Daya Makassar for their support and cooperation throughout this study. Special appreciation is extended to all patients who voluntarily shared their experiences and valuable perspectives. The authors also thank all individuals and institutions who contributed to the completion of this research.

DAFTAR PUSTAKA

- Aisyah, D. N., Setiawan, A. H., Mayadewi, C. A., Lokopessy, A. F., Kozlakidis, Z., & Manikam, L. (2025). Understanding Health Information Systems Utilization Across Public Health Centers in Indonesia: Cross-Sectional Study. *JMIR Medical Informatics*, 13. <https://doi.org/https://doi.org/10.2196/68613>
- Botwright, S., Sittimart, M., Chavarina, K. K., Bayani, D. B., Merlin, T., Surgey, G., Suharlim, C., Espinoza, M. A., Culyer, A. J., Oortwijn, W., & Teerawattananon, Y. (2025). Good Practices for Health Technology Assessment Guideline Development: A Report of the Health Technology Assessment International, HTAsiaLink, and ISPOR Special Task Force. *Value in Health*, 28(1), 1-15. <https://doi.org/https://doi.org/10.1016/j.jval.2024.09.001>
- Brolan, C. E., Körver, S., Phillips, G., Sharma, D., Herron, L.-M., O'Reilly, G., Mitchell, R., Kendino, M., Poloniati, P., Kafoa, B., & Cox, M. (2022). Lessons from the frontline: The COVID-19 pandemic emergency care experience from a human resource perspective in the Pacific region. *The Lancet Regional Health - Western Pacific*, 25, 100514. <https://doi.org/https://doi.org/10.1016/j.lanwpc.2022.100514>
- Diana, Eliyana, A., Mukhtadi, & Anwar, A. (2022). Creating the path for quality of work life: A study on nurse performance. *Heliyon*, 8(1), e08685. <https://doi.org/https://doi.org/10.1016/j.heliyon.2021.e08685>
- Dzakiy, U. N., Matsuura, Y., Simatupang, T. M., & Prasetio, E. A. (2024). Practical model of technology commercialisation at an Indonesian University: A case study from Institut Teknologi Bandung. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(3), 100341. <https://doi.org/https://doi.org/10.1016/j.joitmc.2024.100341>
- Fadilah, I., Djaafara, B. A., Lestari, K. D., Fajariyani, S. B., Sunandar, E., Makamur, B. G., Wopari, B., Mabui, S., Ekawati, L. L., Sagara, R., Lina, R. N., Argana, G., Ginting, D. E., Sumiwi, M. E., Laihad, F. J., Mueller, I., McVernon, J., Baird, J. K., Surendra, H., & Elyazar, I. R. F. (2022). Quantifying spatial heterogeneity of malaria in the endemic Papua region of Indonesia: Analysis of epidemiological surveillance data. *The Lancet Regional Health - Southeast Asia*, 5, 100051. <https://doi.org/https://doi.org/10.1016/j.lansea.2022.100051>
- Guntur, R. D., Lobo, M., Sihotang, D. M., Bria, Y. P., & Kusumaningrum, D. (2025). Health Education Campaign to Improve Malaria Knowledge, Prevention, and Treatment Behaviors in Rural East Nusa Tenggara Province, Indonesia: Protocol for a Cluster-Assigned Quasi-Experimental Study. *JMIR Research Protocols*, 14. <https://doi.org/https://doi.org/10.2196/66982>
- Hariyanti, T., Fitriasari, N., Pradana, E. W., & Lenggono, K. A. (2024). Hospital Customer Competition Issues are being addressed through Confirmation Factor Analysis on Experiential Marketing, Brand Trust, and Loyalty. *The Open Public Health Journal*, 17.

- <https://doi.org/https://doi.org/10.2174/0118749445325128240930144633>
- Junior Rina Artha, I. M., Juzar, D. A., Prana Jagannatha, G. N., de Liyis, B. G., Kosasih, A. M., Juliantara, A. A. P. E., & Kresnayasa, M. M. (2024). Clinico-demographical differences and seven years management performance of acute coronary syndrome in Bali, Indonesia. *Clinical Epidemiology and Global Health*, 30, 101847. <https://doi.org/https://doi.org/10.1016/j.cegh.2024.101847>
- Kanga-Parabia, A., Mitchell, L., Smyth, R., Kapoor, T., Duggal, J., Pearn, A., Williams, R., Courtney, E., Edwards, E., Bowman, M., Belekar, M., Nisselle, A., Pearn, A., Kanga-Parabia, A., Lundie, B., Wong, C., Health, N. S. W., Gaff, C., Genomics, A., ... Nisselle, A. (2024). Genetic counseling workforce diversity, inclusion, and capacity in Australia and New Zealand. *Genetics in Medicine Open*, 2, 101848. <https://doi.org/https://doi.org/10.1016/j.gimo.2024.101848>
- Khamnil, Y., Kao-iean, S., & Pisarnaturakit, P. P. (2025). "A Patient-Centred Care of Dentist Scale: Perceptions of Dentists' in Thai Community Hospitals: A Multi-Group Analysis". *International Dental Journal*, 75(5), 100763. <https://doi.org/https://doi.org/10.1016/j.identj.2025.02.002>
- Khoirunnisa, S. M., Setiawan, D., Postma, M. J., & de Jong, L. A. (2025). Trends in breast cancer in Indonesia from 2017 to 2020: A national-level analysis by age and disease severity. *Cancer Treatment and Research Communications*, 45, 101000. <https://doi.org/https://doi.org/10.1016/j.ctarc.2025.101000>
- Leung, A. S. Y., Pawankar, R., Pacharn, P., Wong, L. S. Y., Le Pham, D., Chan, G., Rengganis, I., Zhao, J., Wang, J. Y., Woo, K. C.-K., Ito, K., Jeong, K., Recto, M., Lucas, M., Nagao, M., Lobo, R. C. M., Munkhbayarlakh, S., Sumadiono, S., Huq, S. R., ... Tang, M. (2024). Perspectives and gaps in the management of food allergy and anaphylaxis in the Asia-Pacific Region. *Journal of Allergy and Clinical Immunology: Global*, 3(2), 100202. <https://doi.org/https://doi.org/10.1016/j.jacig.2023.100202>
- Lidia, T., Widayati, A., & Dewi, P. E. N. (2024). Health Belief Model for Public Acceptance of Implementing COVID-19 Vaccination in Singkawang City, Indonesia. *New Emirates Medical Journal*, 5. <https://doi.org/https://doi.org/10.2174/0102506882279402231223055256>
- Lisni, I., Latarissa, I. R., Andalusia, L. R., & Lestari, K. (2024). Drug interaction detection and glycemic control – telepharmacy's role in diabetes management: before-after study. *PHARMACIA*, 71, 1-8. <https://doi.org/https://doi.org/10.3897/pharmacia.71.e123313>
- Listiowati, E., Sjaaf, A. C., Achadi, A., Bachtiar, A., Arini, M., Rosa, E. M., & Pramayanti, Y. (2023). How to engage patients in achieving patient safety: A qualitative study from healthcare professionals' perspective. *Heliyon*, 9(2), e13447. <https://doi.org/https://doi.org/10.1016/j.heliyon.2023.e13447>
- Mekonen, Z., Jemebere, W., Chekol, A. T., Tadesse, F., Borie, Y. A., Mola, E., Wale, M. A., Tunushe, Y. M., Reta, Y., Aynalem, A., Feleke, B., Gobena, G. G., Beyene, B., & Yeheyis, T. (2024). Utilization of emergency medical service and its associated factors among patients visited public hospitals at Hawassa City, Sidama Region, Ethiopia, 2023. *Heliyon*, 10(11), e31906. <https://doi.org/https://doi.org/10.1016/j.heliyon.2024.e31906>
- Misransyah, Risal, S., Khariry, M., Asmawatiy, C., Saputra, R. W., Sulandjari, S., & Elizabeth, R. (2023). Building trust through quality of service mediated with satisfaction to acceptors of family planning in the province of South Kalimantan. *Heliyon*, 9(2), e13142. <https://doi.org/https://doi.org/10.1016/j.heliyon.2023.e13142>
- Mustafa, N. K., Ibrahim, R., Aljunid, S. M., Aizuddin, A. N., & Awang, Z. (2025). Critical Success Factors Influencing the Acceptance of a Casemix-Based Hospital Information System: Cross-Sectional Study. *Journal of Medical Internet Research*, 27. <https://doi.org/https://doi.org/10.2196/74226>
- Narwadiya, S. C., & Rao, D. R. (2025). Telemedicine in India an impact analysis. *Intelligent*

-
- Hospital*, 1(1), 100004. <https://doi.org/https://doi.org/10.1016/j.inhs.2025.100004>
- Pelupessy, W. V., & Silverman, R. M. (2024). Exploring Indonesian coastal communities' responses to the 2019 Ambon earthquake and preparedness for future disasters. *International Journal of Disaster Risk Reduction*, 114, 104961. <https://doi.org/https://doi.org/10.1016/j.ijdr.2024.104961>
- Rasheed, M. K., Hasan, S. S., Altowayan, W. M., Farooqui, M., & Ud-Din Babar, Z. (2023). Community pharmacist's preparedness to provide patient-centred care in Saudi Arabia. *Saudi Pharmaceutical Journal*, 31(6), 801-807. <https://doi.org/https://doi.org/10.1016/j.jsps.2023.04.014>
- Sambodo, N. P., Bonfrer, I., Sparrow, R., Pradhan, M., & van Doorslaer, E. (2023). Effects of performance-based capitation payment on the use of public primary health care services in Indonesia. *Social Science & Medicine*, 327, 115921. <https://doi.org/https://doi.org/10.1016/j.socscimed.2023.115921>
- Siddiqi, K. O., Rahman, M. H., Esquivias, M. A., & Hutapea, L. M. N. (2024). The effect of perceived organizational and supervisor support on nurses' turnover intention in Bangladesh: Does work-family conflict play a role? *Social Sciences & Humanities Open*, 10, 100992. <https://doi.org/https://doi.org/10.1016/j.ssaho.2024.100992>
- Tantri, F., & Amir, S. (2022). Optimizing Response Strategies of Healthcare System in a Large-scale Disaster. *Journal of Safety Science and Resilience*, 3(4), 288-301. <https://doi.org/https://doi.org/10.1016/j.jnlssr.2022.06.001>
- Tj, H. W., Wibowo, J. M., & Widjaja, B. T. (2025). Human capital, competitive advantage, and business performance: A study of Indonesian hospitals. *Journal of Open Innovation: Technology, Market, and Complexity*, 11(2), 100515. <https://doi.org/https://doi.org/10.1016/j.joitmc.2025.100515>
- Wibowo, M. F., Pyle, A., Lim, E., Ohde, J. W., Liu, N., & Karlström, J. (2025). Insights Into the Current and Future State of AI Adoption Within Health Systems in Southeast Asia: Cross-Sectional Qualitative Study. *Journal of Medical Internet Research*, 27. <https://doi.org/https://doi.org/10.2196/71591>
- Xie, R., Li, H., Fu, H., Xia, P., Ouyang, B., & Shi, H. (2025). Innovation in internet plus pharmaceutical services model in the health 4.0 context: Evidence from a repeated cross-sectional study. *Technological Forecasting and Social Change*, 210, 123881. <https://doi.org/https://doi.org/10.1016/j.techfore.2024.123881>