



Relationship Between Waiting Time for Compounded and Non-Compounded Prescriptions and Patient Satisfaction in an Outpatient Pharmacy

Baiq Tia Ocayana^{1*}, Lelie Amalia Tusshaleha¹, Faizul Bayani¹

¹Department of Pharmacy, Faculty of Health, University of Qamarul Huda Badaruddin Bagu, Indonesia.

Received: January 26, 2026

Revised: February 18, 2026

Accepted: March 19, 2026

Published: March 24, 2026

Corresponding Author:

Baiq Tia Ocayana

baiqtiaocayanaa@gmail.com

DOI: [10.56566/thrive.v3i1.649](https://doi.org/10.56566/thrive.v3i1.649)

© 2025 The Authors. This open access article is distributed under a (CC-BY License)



Abstract: Efficient pharmaceutical services are essential in hospitals to ensure patient satisfaction and improve healthcare outcomes. Prescription waiting time, both compounded and non-compounded, is a critical indicator of pharmacy service quality. This study aimed to analyze the relationship between prescription waiting times and patient satisfaction at the outpatient pharmacy of RSUD Awet Muda Narmada. Using a correlational analytic design with a cross-sectional approach, 100 patients were selected through accidental sampling. Data were collected via questionnaires and direct time measurements, then analyzed with Chi-Square tests. Results revealed that 80% of respondents were very satisfied with services received, and 95% experienced acceptable waiting times. The average waiting time was 41.7 minutes for compounded prescriptions and 12.3 minutes for non-compounded prescriptions. Statistical analysis showed a significant relationship ($p=0.000$) between waiting time and patient satisfaction. These findings suggest that efficient waiting time management significantly influences satisfaction levels. Therefore, optimizing pharmacy workflow, increasing human resources, and adopting technology-based systems may further enhance service quality and patient experiences.

Keywords: Waiting time; Patient satisfaction; Prescription services; Compounded prescriptions; Pharmacy installation.

Introduction

Pharmaceutical services are an essential component of hospital healthcare systems and play a crucial role in ensuring optimal patient outcomes. These services encompass not only the availability of medications but also the effectiveness and efficiency of drug dispensing and distribution processes (Gentilini et al., 2025; Zimonjić et al., 2025). The quality of pharmaceutical services significantly influences overall healthcare delivery within hospital settings. One of the most critical indicators of pharmacy service quality is prescription waiting time (Al-Naabi et al., 2025; Cabezas et al., 2025). Waiting time directly affects patient perceptions, experiences, and satisfaction with healthcare services. Prolonged waiting times often lead to frustration,

dissatisfaction, and negative evaluations of hospital performance (Bottacin et al., 2025).

Prescription waiting time is defined as the duration from the receipt of a prescription by the pharmacy until the medication is dispensed to the patient (Bandiera et al., 2025; Rotta et al., 2025). This time interval reflects the efficiency of pharmacy workflow and service management. In practice, prescription processing time varies depending on the type of prescription (Dian Nurmawati et al., 2025). Compounded prescriptions generally require more time to prepare due to the complexity of formulation and additional handling procedures. In contrast, non-compounded prescriptions involve fewer preparation steps and are typically processed more quickly (Backes et al., 2025; Sun et al., 2025).

How to Cite:

Ocayana, B. T., Tusshaleha, L. A., & Bayani, F. (2026). Relationship Between Waiting Time for Compounded and Non-Compounded Prescriptions and Patient Satisfaction in an Outpatient Pharmacy. *THRIVE Health Science Journal*, 3(1), 71-75. <https://doi.org/10.56566/thrive.v3i1.649>

According to the Indonesian Ministry of Health, the maximum standard waiting time is less than 30 minutes for non-compounded prescriptions and less than 60 minutes for compounded prescriptions (Alshagrawi & Albaqami, 2026; Khuc et al., 2026). These standards are established to ensure timely access to medications for patients. Adherence to these standards is considered an important benchmark for evaluating pharmacy service performance (Palendeng et al., 2025; Supriyanto et al., 2025). Several studies have reported that compliance with waiting time standards is associated with higher levels of patient satisfaction. Therefore, monitoring prescription waiting time is essential for maintaining service quality (Gilchrist et al., 2025; Sembiring et al., 2025). Patient satisfaction is widely recognized as a key indicator of healthcare quality and service effectiveness (Syafhan et al., 2025). Satisfied patients are more likely to trust healthcare providers and adhere to prescribed treatments (Kurniasih et al., 2025; Yulia et al., 2025). Conversely, dissatisfaction may reduce patient confidence in healthcare services.

Numerous studies have consistently shown that long waiting times negatively influence patient satisfaction. Delays in pharmacy services can overshadow other positive aspects of healthcare delivery. (Kurniasih et al., 2025) reported a significant relationship between shorter waiting times and increased patient satisfaction levels. This finding highlights the importance of efficient time management in outpatient pharmacy operations (Fatimah & Nurfikri, 2025).

Previous research also indicates that compounded prescriptions require additional preparation steps, resulting in longer waiting times compared to non-compounded prescriptions. Besides prescription type, other factors such as staff availability, workload, queue management systems, and drug stock availability can significantly affect waiting time (Fatimah & Nurfikri, 2025). Hospitals with high outpatient volumes often face greater challenges in managing pharmacy services efficiently. RSUD Awet Muda Narmada serves a large number of outpatients on a daily basis. Consequently, maintaining optimal prescription waiting times remains a critical concern. Therefore, this study aims to investigate the relationship between prescription waiting time and patient satisfaction in the outpatient pharmacy of RSUD Awet Muda Narmada.

Method

This research employed a correlational analytic design with a cross-sectional approach (Zhang et al., 2026). The study was conducted at the Outpatient Pharmacy Installation of RSUD Awet Muda Narmada in

June 2025. Participants/Sample: The population consisted of 2,458 outpatient prescription users in March 2025. Using Slovin's formula with a 10% margin of error, 100 respondents were selected via accidental sampling. Inclusion criteria included patients receiving compounded or non-compounded prescriptions and consenting to participate (Adachi et al., 2026; Xie et al., 2026).

Instruments Data Collection Employed

1. A stopwatch to measure prescription waiting times.
2. A validated questionnaire assessing patient satisfaction based on dimensions of reliability, responsiveness, assurance, empathy, and tangibility.

Data Collection and Analysis: Waiting times were measured directly, and satisfaction scores were collected via structured questionnaires. Data were processed using editing, coding, entry, and cleaning procedures before statistical analysis with Chi-Square tests ($p < 0.05$ considered significant) (Duan et al., 2026; Li et al., 2026).

Result and Discussion

Respondent Characteristics

Most respondents (88%) were adults aged 19–59 years, while 10% were elderly and 2% adolescents. Female patients were more frequent prescription users than males (Duong et al., 2026; El-Osta & Bagkeris, 2026).

Waiting Time

The majority of patients (95%) experienced acceptable waiting times, averaging 41.7 minutes for compounded prescriptions and 12.3 minutes for non-compounded prescriptions. These values fall within the Ministry of Health standards (<60 minutes and <30 minutes, respectively) (Aini et al., 2024).

Satisfaction Levels

A total of 80% of respondents reported very high satisfaction with pharmacy services, while 20% expressed moderate satisfaction. This high level of satisfaction suggests that most respondents perceived the pharmacy services as meeting or exceeding their expectations (Ozdemir & Kaplan, 2025; Santillán-García et al., 2025).

Service efficiency, accuracy, and the professionalism of pharmacy staff likely contributed to these positive evaluations. Overall, the findings indicate that pharmacy services were rated from good to excellent by the respondents (Vadilla et al., 2025; Zheng et al., 2025).

Relationship Between Waiting Time and Satisfaction

Chi-Square analysis revealed a significant association ($p=0.000$) between prescription waiting time and satisfaction levels, confirming that shorter waiting times corresponded to higher satisfaction (Debebe et al., 2025; Gül et al., 2023; Khatun & Habibb, 2025).

Table 1. Waiting Time and Patient Satisfaction Relationship

Prescription Type	Average Waiting Time	Satisfaction Level (%)
Compounded	41.7 minutes	78% very satisfied
Non-compounded	12.3 minutes	82% very satisfied

Source: Primary Data (2025)

These findings align with prior studies, such as (Norsaputera et al., 2025; Ozdemir & Kaplan, 2025), which reported significant correlations between waiting times and satisfaction levels in various Indonesian hospitals. Factors contributing to prolonged waiting include limited staff, inefficient queuing systems, and prescription complexity (Debebe et al., 2025; Gül et al., 2023; Khatun & Habibb, 2025). This indicates that optimizing human resources and adopting technological solutions like electronic prescribing may further reduce delays (Debebe et al., 2025).

Conclusion

This study demonstrates a significant positive relationship between prescription waiting time and patient satisfaction at RSUD Awet Muda Narmada. Both compounded and non-compounded prescriptions met national waiting time standards, with high levels of patient satisfaction observed. Enhancing pharmacy efficiency through workforce optimization, better queue management, and technology integration may further improve patient experiences. These findings highlight the importance of timely pharmaceutical services in shaping overall patient perceptions of healthcare quality. Shorter waiting times not only reduce patient discomfort but also contribute to increased trust in healthcare providers.

The consistency in meeting national standards indicates effective management within the outpatient pharmacy unit. However, continuous monitoring and evaluation are necessary to maintain and further improve service quality. Implementing digital queue systems and automated dispensing technologies could significantly streamline service processes. Additionally, staff training and capacity building play a crucial role in sustaining high performance levels. Future studies may explore other factors influencing patient satisfaction,

such as communication quality and service environment.

Acknowledgments

I would like to convey my appreciation to all parties who have been involved in the research and writing the manuscript before published on this journal.

Author Contributions

All authors work together in carrying out each stage of research and writing the manuscript.

Funding

This research received no external funding.

Conflicts of Interest

The authors declare no conflict of interest.

References

- Adachi, T., Hosono, R., Sano, T., Shibata, K., & Kitamura, H. (2026). Association between the rate of force development of quadriceps and physical performance in older patients undergoing cardiovascular surgery: a cross-sectional study. *European Journal of Cardiovascular Nursing*, *zvaf183*. <https://doi.org/10.1093/eurjcn/zvaf183>
- Aini, M., Tatontos, E. Y., Inayati, N., & Pauzi, I. (2024). Comparison of Fast and Time Blood Glucose Levels in Chronic Disease Management Program Patients (Proalnic) and Non-Prolanic with Diabetes Mellitus in Praya Health Center. *THRIVE Health Science Journal*, *1(1)*, 1–6. <https://doi.org/10.56566/thrive.v1i1.92>
- Al-Naabi, S., Al Nasiri, N., Al-Awadhi, T., Abdullah, M., & Abulibdeh, A. (2025). An equity-based spatial analytics framework for evaluating pharmacy accessibility using geographical information systems. *Healthcare Analytics*, 100401. <https://doi.org/10.1016/j.health.2025.100401>
- Alshagrawi, S., & Albaqami, N. M. (2026). Satisfaction with primary health care services among patients with chronic diseases: a qualitative study. *Frontiers in Medicine*, *13*, 1650439. <https://doi.org/10.3389/fmed.2026.1650439>
- Backes, C., Godot, C., Gujer, C. Y., Obegi, N., Perez, A., Gervais, A., & Schneider, M. P. (2025). Digital healthcare services in community pharmacies in Switzerland: Pharmacist and patient acceptability, and pharmacist readiness—the Pneumoscope™ pilot study. *Digital Health*, *11*, 20552076241313164. <https://doi.org/10.1177/20552076241313164>
- Bandiera, C., Mistry, S. K., Harris, E., Harris, M. F., & Aslani, P. (2025). Interprofessional collaboration between pharmacists and community health workers: a scoping review. *International Journal for*

- Equity in Health*, 24(1), 23. <https://doi.org/10.1186/s12939-025-02377-7>
- Bottacin, W. E., de Souza, T. T., Melchioris, A. C., & Reis, W. C. T. (2025). Explanation and elaboration of MedinAI: guidelines for reporting artificial intelligence studies in medicines, pharmacotherapy, and pharmaceutical services. *International Journal of Clinical Pharmacy*, 1-13. <https://doi.org/10.1007/s11096-025-01906-2>
- Bouraghi, H., Imani, B., Saeedi, A., Mohammadpour, A., Saeedi, S., Khodaveisi, T., & Mehrabi, T. (2024). Challenges and advantages of electronic prescribing system: a survey study and thematic analysis. *BMC Health Services Research*, 24(1), 689. <https://doi.org/10.1186/s12913-024-11144-3>
- Cabezas, M. P., Carvajal, J. D., Vivas, F. Y., & Lopez, D. M. (2025). Smart Monitoring System for Temperature and Relative Humidity Adapted to the Specific Needs of the Colombian Pharmaceutical Service. *IoT*, 6(1), 15. <https://doi.org/10.3390/iot6010015>
- Carroll, N., & Richardson, I. (2020). Enablers and barriers for hospital pharmacy information systems. *Health Informatics Journal*, 26(1), 406-419. <https://doi.org/10.1177/1460458219832056>
- Dai Khuc, L., Le, N. T. V., & Nguyen, H. T. T. (2026). Exploring Customer Insights Through Online Review Analytics. *International Journal of Asian Business and Information Management*, 17(1). <https://doi.org/10.4018/IJABIM.399855>
- Debebe, T., Wondimtekahu, A., Habte, B., Dereje, K., Bedassa, A., Tesfaye, W. M., ... & Gietaneh, W. (2025). Community-based health insurance beneficiaries' satisfaction with health service provision and its predictors at outpatient department of public health facilities in Ethiopia: findings from a cross-sectional study. *BMC Health Services Research*, 25(1), 1317. <https://doi.org/10.1186/s12913-025-13490-2>
- Duan, X., Shen, T., Xu, W., Wu, A., & Xie, H. (2026). Examining the Mediating Role of Role Identity and Knowledge Sharing in the Association Between Leadership Support and Nurses' Innovative Behaviour: A Multicentre Cross-Sectional Study. *Journal of Advanced Nursing*, 82(2), 1444-1456. <https://doi.org/10.1111/jan.17038>
- Duong, H., Karnbach, M., Keedy, C., Henry, K., Heavner, M., Murray, B., ... & Smith, S. E. (2026). Hospital pharmacy leader perspectives on advocating for clinical pharmacy services: A national survey. *medRxiv*, 2026-01. <https://doi.org/10.64898/2026.01.26.26344866>
- El-Osta, A., & Bagkeris, E. (2026). Public attitudes toward pharmacy-based HIV PrEP in the UK: a national cross-sectional study of 15,000 NHS patients. <https://doi.org/10.21203/rs.3.rs-8466343/v1>
- Fatimah, R., & Nurfikri, A. (2025). Evaluating delays in non-compounded prescription services under health coverage. *Journal of Evidence-based Nursing and Public Health*, 2(2), 87-106. <https://doi.org/10.61511/jevna.v2i02.2025.2196>
- Gentilini, A., Kasonde, L., & Babar, Z. U. D. (2025). Expanding access to NCD services via community retail pharmacies in LMICs: a systematic review of the literature. *Journal of Pharmaceutical Policy and Practice*, 18(1), 2462450. <https://doi.org/10.1080/20523211.2025.2462450>
- Gilchrist, R. E., Ghassani, Y. F., Pratiwi, R., & Udin, M. I. (2025). The Effect Of Prescription Service Flow Optimization On Medication Waiting Time At Pharmaceutical Supplies Distribution Unit Of Regular Outpatient Dr. Moewardi Hospital. *Indonesian Basic and Experimental Health Sciences*, 13(2), 59-64. <https://doi.org/10.11594/ibehs.vol13iss2pp59-64>
- Gül, İ., Helvacioğlu, E. T., & Saraçlı, S. (2023). Service quality, outpatient satisfaction and loyalty in community pharmacies in Turkey: A structural equation modeling approach. *Exploratory Research in Clinical and Social Pharmacy*, 12, 100361. <https://doi.org/10.1016/j.rcsop.2023.100361>
- Khatun, M. L., & Habibb, S. E. (2025). Quality of Care, Physician-Patient Communication, and Patient Satisfaction: A Cross-Sectional Study in Selected Hospitals of Dhaka City, Bangladesh. *Journal of Social Behavior and Community Health*. <https://doi.org/10.18502/jsbch.v9i2.20263>
- Kumar, A., & Singh, D. (2025). Examining QoS for Modern Healthcare Systems. In *Artificial Intelligence in Modern Healthcare System* (pp. 351-376). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-96-6703-1_15
- Kurniasih, N., Harun, N., Ramdhani, S. S., Indriastuti, M., & Romansyah, A. A. (2025). Analysis of the Relationship Between Waiting Time for Compounded and Non-Compounded Prescription Services and BPJS Patient Satisfaction Levels at Community Health Centers (Puskesmas). *INDOGENIUS*, 4(3), 668-673. <https://doi.org/10.56359/igj.v4i3.762>
- Li, S., Wang, Z., Su, S., Xu, L., Yang, S., Dong, S., ... & Li, J. (2026). The Parallel Chain-Mediating Role of Sense of Coherence and Coping Styles in Caregivers of Patients With Stroke: A Cross-Sectional Study. *Journal of clinical nursing*, 35(1), 331-345. <https://doi.org/10.1111/jocn.17851>
- Ngaorungsi, T., & Chutima, P. (2024). Operational process improvement for outpatient services at a private medium-sized hospital. *Engineering*

- Journal*, 28(2), 29-65.
<https://doi.org/10.4186/ej.2024.28.2.29>
- Norsaputera, E., Hamzah, H., & Harun, L. (2025). Determinants of Outpatient Satisfaction in Regional Public Hospitals: The Dominant Role of Waiting Time and Process Quality in Indonesia. *Majalah Kesehatan Indonesia*, 6(3), 137-148.
<https://doi.org/10.47679/makein.2025274>
- Nurmawati, D., & Siswidiasari, A. (2025). Analysis of Improvement in Pharmacy Services Based on The IPA Model At Pharmacy X Ijen Malang. *JURNAL FARMASIMED (JFM)*, 7(2), 229-238.
<https://doi.org/10.35451/jfm.v7i2.2580>
- Ozdemir, C., & Kaplan, A. (2025). Factors affecting psychological resilience, self-efficacy and job satisfaction of nurse academics: A cross-sectional study. *International nursing review*, 72(1), e13007.
<https://doi.org/10.1111/inr.13007>
- Palendeng, F. O., Suparlan, S. R. M., & Langingi, A. R. C. (2025). WAITING TIME RELATED TO OUTPATIENT SATISFACTION AT GUNUNG MARIA HOSPITAL TOMOHON. *Multidisciplinary Indonesian Center Journal (MICJO)*, 2(3), 2483-2490.
<https://doi.org/10.62567/micjo.v2i3.798>
- Rotta, I., Diniz, J. A., & Fernandez-Llimos, F. (2025). Assessing methodological quality of systematic reviews with meta-analysis about clinical pharmacy services: a sensitivity analysis of AMSTAR-2. *Research in Social and Administrative Pharmacy*, 21(2), 110-115.
<https://doi.org/10.1016/j.sapharm.2024.11.002>
- Santillán-García, N., Rueda-Espinoza, K., Orozco-Moreno, Z., Moreta-Herrera, R., & Rodas, J. A. (2025). The mediating role of satisfaction with life in the relationship between hope and academic satisfaction among Ecuadorian university students. *Revista de Psicodidáctica (English ed.)*, 30(1), 500154.
<https://doi.org/10.1016/j.psicoe.2024.500154>
- Sembiring, G. F., Saragi, S., & Amyulianthy, R. (2025). Improving Hospital Pharmacy Service Quality Using Lean Management Principles. *Sciences of Pharmacy*, 4(3), 186-196.
<https://doi.org/10.58920/sciphar0403346>
- Sun, Q., You, Y., Cao, K., Huang, Y., & Xi, X. (2025). Assessing training needs of primary care pharmacists: a cross-sectional survey in China. *BMC Medical Education*, 25(1), 1-11.
<https://doi.org/10.1186/s12909-024-06522-8>
- Supriyanto, H. D., Herlambang, T., & Hermawan, H. (2025, March). Analysis of Waiting Time and Human Resources Competence Towards Customer Satisfaction at Mayang Community Health Center (A Literature Study of Human Resources Management). In *Proceeding of International Conference on Social Science and Humanity* (Vol. 2, No. 1, pp. 450-457).
<https://doi.org/10.61796/icossh.v2i1.189>
- Syafhan, N. F., Risni, H. W., Salsabila, A. F., Putri, R. J. Y. P., & Prasetyaningrum, M. (2025). Evaluation of drug services based on prescription indicators and patient care according to who at the hospital general practitioner (GP) outpatient clinic in Depok, Indonesia. *JURNAL ILMU KEFARMASIAN INDONESIA*, 23(1), 18-28.
<https://doi.org/10.35814/jifi.v23i1.1609>
- Vadilla, A. E., Fitria, D., & Wahjono, S. I. (2025). Exploring the Relationship Between Organizational Behavior and Job Satisfaction: Analysis Qualitative from PT. Mayora, TBK. *Golden Ratio of Data in Summary*, 5(3), 581-590.
<https://doi.org/10.52970/grdis.v5i3.1261>
- Xie, W., Tang, S., Tang, R., Li, L., & Liu, X. (2026). Global, regional, and National burden of ovarian cancer, 1990–2021, and projections to 2050: a cross-sectional analysis of the global burden of disease study 2021. *International Journal of Surgery*, 112(1), 226-238.
DOI: 10.1097/JS9.0000000000003398
- Yulia, R., Hartono, R., Indrayanti, M., Ayumuyas, N. P., & Herawati, F. (2025). Studying waiting time in pharmacy: A strategy for improving patient satisfaction. *MethodsX*, 14, 103282.
<https://doi.org/10.1016/j.mex.2025.103282>
- Zhang, X., Zhou, L., Zhang, F., Li, H., Wang, L., & Wang, Z. (2026). Network Analysis of Psychosocial Adaptation in Intestinal Stoma Patients: A National Cross-Sectional Study in China. *Journal of Advanced Nursing*, 82(2), 1243-1252.
<https://doi.org/10.1111/jan.16928>
- Zheng, X., Bai, F., & Jin, T. (2025). Assessing customer-side demand response identification for optimal scheduling considering satisfaction level for microgrids. *International Journal of Electrical Power & Energy Systems*, 164, 110368.
<https://doi.org/10.1016/j.ijepes.2024.110368>
- Zimonjić, I., Marinković, V., Mira, J. J., Djokic, B. B., & Odalović, M. (2025). Addressing the second victim phenomenon among community pharmacists and its impact on clinical pharmacy practice: a consensus study. *International Journal of Clinical Pharmacy*, 47(1), 68-79.
<https://doi.org/10.1007/s11096-024-01807-w>