

SWOT Analysis Using IFAS and EFAS Methods to Shorten Waiting Times for Pharmaceutical Services at Hospital X, Pekanbaru City

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This study aimed to analyze strategies for improving outpatient pharmacy service waiting time at RS Mesra using a SWOT analysis approach. A qualitative research design was applied by identifying internal and external factors that influence pharmacy service performance. Data were collected through in-depth interviews, observations, and SWOT questionnaires involving the head of the pharmacy unit, pharmacists, pharmacy technicians, and hospital management selected through purposive sampling. Internal and external factors were analyzed using the Internal Factors Analysis Summary (IFAS) and External Factors Analysis Summary (EFAS) matrices. The IFAS results showed that weaknesses outweighed strengths, indicating internal challenges such as limited human resources, long compounding processes, and high patient queues. Meanwhile, the EFAS results revealed that opportunities were greater than threats, highlighting favorable external conditions including national waiting time standards, technological advancements, and managerial support. The SWOT matrix positioned the outpatient pharmacy unit in a condition that requires both improvement and development strategies. Therefore, optimizing internal resources, strengthening information systems, and utilizing external opportunities are essential to reduce waiting time and enhance the quality of pharmacy services in a patient-centered hospital setting.

Keywords: SWOT Analysis, Pharmacy Service, Waiting Time, IFAS, EFAS

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1. Introduction

A hospital is a healthcare institution that provides promotive, preventive, curative, and rehabilitative services supported by professional staff and an integrated management system (Irwan et al., 2024). The concept of a patient-centered hospital emphasizes patient care and family involvement in medical decision-making (Mei Melani & Setyoningrum, 2024). Implementing patient-centered care principles has been shown to increase patient satisfaction and trust in healthcare services (Wardani et al., 2025). Furthermore, the implementation of a patient-centered hospital plays a role in enhancing the competitiveness and image of the institution amidst the competition in healthcare services (Intening et al., 2025). Analysis of service waiting times is an important indicator of service quality because it directly influences patient perceptions and experiences (Safitri et al., 2024). Long waiting times in polyclinics have been shown to decrease patient satisfaction even though medical services are professional (Rusmiyati, 2025). Efficient waiting times, both for registration and pharmacy services, are significantly related to patient satisfaction and the overall image of the hospital (Roliyah, 2025). The Hospital Pharmacy Unit (IFRS) plays a strategic role in drug services and pharmaceutical supply management to improve patient safety (Yulyuswarni, 2025). Patient-focused pharmaceutical care ensures the safe, effective, and rational use of medications (Kusumaningrum et al., 2024). Waiting times for medication services remain a major issue in many hospitals, especially during peak hours, impacting patient satisfaction (Sulistiyowati & Indrawati, 2025). Limited human resources and suboptimal workflows contribute to long waiting times for pharmaceutical services (Mahardieka & Omar,

2025). Effective wait time management helps hospital management plan human resources, improve service systems, and implement pharmaceutical information technology (Fauziyah et al., 2025).

Previous research by Safitri et al. (2024) examined the relationship between outpatient waiting times and patient satisfaction in private hospitals in Jakarta, finding that the longer the waiting time, the lower the patient satisfaction. The strength of this study is its clear quantitative analysis and use of a representative sample, but its limitation lies in its focus on only one hospital, which makes generalizability low. Paramitha et al.'s (2024) study evaluated waiting times for medication services in government hospitals, emphasizing internal factors such as workflow and the availability of pharmacists. The strength of this study is its detailed mapping of operational issues, but its weakness is its lack of direct attention to patient perceptions, thus underexploring the patient experience dimension. Fauziyah et al.'s (2025) study analyzed the implementation of information technology to expedite pharmaceutical services, demonstrating that information system integration can significantly reduce waiting times. The strength of this study is its emphasis on innovative solutions, but its weakness is its secondary and in-depth evaluation of patient satisfaction. Based on previous research, there is a need to conduct research that combines analysis of waiting times for polyclinic and pharmacy services with a more comprehensive approach, including direct evaluation of patient experience, operational effectiveness, and the implementation of patient-centered care strategies (Ratumurun & Manik, 2025). Therefore, this research is expected to serve as a basis for operational improvements, managerial strategy development, and the continuous improvement of the quality of polyclinic and pharmacy services in hospitals. This research is also urgent because it can provide recommendations for hospital management in designing responsive, efficient, and patient-satisfaction-oriented waiting time management strategies, while also supporting institutional competitiveness in the increasingly complex modern healthcare system (Cindy Feronica et al., 2025).

2. Method

This qualitative study, using a SWOT analysis approach, aims to identify and formulate service improvement strategies based on the analysis of waiting times for medication services at the Mesra Hospital Pharmacy Unit. The SWOT analysis approach was used to analyze the internal and external conditions of the pharmacy unit as a basis for determining appropriate strategies to improve service efficiency, patient satisfaction, and the overall quality of hospital pharmaceutical services. The study subjects were the head of the pharmacy unit, pharmacists, pharmaceutical technicians, and hospital management. They were selected using purposive sampling because they were considered to have comprehensive authority and understanding of the medication service process, resource management, and operational policies of the pharmacy unit. These informants were considered capable of providing in-depth and relevant information regarding the actual condition of medication services, particularly regarding prescription wait times.

The research instruments used included an in-depth interview guide, a SWOT analysis questionnaire, and a medication wait time observation sheet. The in-depth interviews were used to obtain information regarding the prescription service flow, human resource availability, facilities and infrastructure, the pharmacy unit's work system, and obstacles affecting medication wait times. The SWOT questionnaire was used to identify internal and external strategic factors that influence the quality and efficiency of pharmaceutical services. Meanwhile, observations were conducted to obtain factual data regarding waiting times for medication services, both for finished and compounded medications.

Internal factors in this study consisted of strengths and weaknesses originating from within the Mesra Hospital pharmacy, such as the competence of pharmacists, service flow, facility availability, and work systems. External factors included opportunities and threats originating from the hospital's external

environment, such as health policies, patient numbers, the health insurance system, and competition between healthcare facilities. Data analysis was conducted using qualitative descriptive analysis supported by a literature review of previous research related to medication service waiting times and the application of a SWOT analysis in hospital pharmacy services. Data from interviews, observations, and questionnaires were then compiled into an Internal Factors Analysis Summary (IFAS) Matrix and an External Factors Analysis Summary (EFAS) Matrix. These two matrices were used to determine the strategic position of the Mesra Hospital Pharmacy and to formulate alternative strategies for improving medication services based on the SWOT analysis results.

Internal and External Factor Weighting

The internal and external factor weighting was calculated to assess the importance of each strategic factor influencing waiting times for medication services at the Mesra Hospital Pharmacy Unit. Each factor was assigned a weight ranging from 0.0 (not important) to 1.0 (very important), with the total weighting in each IFAS and EFAS matrix equaling 1.00. The IFAS matrix was used to analyze the internal strengths and weaknesses of the pharmacy unit, while the EFAS matrix was used to analyze opportunities and threats originating from the hospital's external environment. These weightings reflect the level of significance of each factor in improving the efficiency and quality of medication services.

Rating

Ratings were assigned to indicate the level of influence of each strategic factor on the performance of medication services at the Mesra Hospital Pharmacy Unit. The rating scale used ranged from +3 (very strong) to -3 (very weak). Positive factors, namely strengths and opportunities, are given a value between +1 and +3 according to their contribution to shortening waiting times and improving the quality of drug services. Conversely, negative factors, namely weaknesses and threats, are given a value between -1 and -3 based on the level of obstacles to service efficiency. The obtained values (ratings) are then multiplied by the weight of each factor to produce a weighted score. This weighted score is used as a basis for determining the strategic position of the Mesra Hospital Pharmacy Installation in the SWOT matrix and in formulating alternative strategies for improving waiting times for drug services effectively and sustainably.

3. Results and Discussion

SWOT Analysis Results

Based on in-depth interviews, field observations, and the completion of the SWOT questionnaire, several internal and external factors were identified that influence the performance of outpatient pharmacy services, particularly regarding waiting times for medication services at the Mesra Hospital Pharmacy Unit. These factors were then classified into strengths, weaknesses, opportunities, and threats as the basis for formulating strategies to improve service quality.

Table 1. SWOT Analysis Results

Internal Factor		External Factor	
S	W	O	T
Competent pharmacists	Shortage of pharmacists	National pharmacy waiting time standards	High patient expectations
SOP for pharmaceutical services are available	Long drug dispensing process	Queue technology & e-prescriptions	Increasing patient volume
Integrated pharmaceutical information system	Long queues during peak hours	Hospital management support	Increasing patient volume

Table 2. SWOT Analysis Matrix

Internal / External	Opportunities (O)	Threats (T)
Strengths (S)	<p>SO Strategy</p> <ol style="list-style-type: none"> Utilize research findings as a basis for improving the quality of outpatient pharmacy services. Optimize the role of pharmacists and adherence to standard operating procedures (SOPs) to increase patient satisfaction. Develop pharmaceutical services based on national standards to support hospital quality improvement. 	<p>ST Strategy</p> <ol style="list-style-type: none"> Maintain discipline and compliance with SOPs to meet hospital accreditation requirements. Maintain the trust of internal patients (military/civil servants) in the face of competition with other hospitals. Standardize pharmaceutical services to maintain the hospital's image and reputation.
Weaknesses (W)	<p>WO Strategy</p> <ol style="list-style-type: none"> Restructure the compounding medication service flow to reduce wait times to 60 minutes or less. Increase or redistribute pharmacy staff during peak service hours. Utilize the Hospital Management Information System (SIMRS) and electronic queuing system to improve pharmacy service efficiency. Develop a dedicated pediatric compounding service pathway (children's powders). 	<p>WT Strategy</p> <ol style="list-style-type: none"> Efficiently streamline the medication compounding process without compromising patient safety. Prioritize the procurement of compounding facilities and infrastructure that directly reduce waiting times. Conduct regular patient satisfaction assessments to prevent a decline in the number of visits.

Internal Factor Analysis Using the IFAS Table

After identifying the internal strategic factors of the Mesra Hospital Pharmacy Unit, an Internal Factors Analysis Summary (IFAS) table was compiled as the basis for analyzing the organization's internal conditions. Each internal factor was assessed by assigning an importance score of 1–10 to indicate the level of influence each factor has on performance and service quality, particularly regarding medication waiting times. Based on the IFAS analysis, a total Strengths score of 37 and a total Weaknesses score of 41 was obtained. The difference between the strengths and weaknesses resulted in an IFAS score (S - W) of -4, indicating that internal weaknesses still outweigh the strengths. This situation indicates that the Mesra Hospital Pharmacy Unit, Kampar, faces significant internal challenges, particularly related to the limited number of pharmacists, the lengthy medication dispensing process, long queues during peak hours, limited facilities, and suboptimal coordination between units. Therefore, planned and sustainable internal improvement efforts are needed, leveraging existing strengths, such as the competence of pharmacists, clear service flows, information system support, and commitment from hospital management, to reduce medication wait times and improve the overall quality of pharmaceutical services. The results of this IFAS analysis serve as an important basis for formulating improvement strategies in the subsequent SWOT analysis phase.

Table 3. Internal Factors Analysis Summary (IFAS) Table

No	Internal Factor	Category	Score
S1	Competent pharmacists	Strength	8

No	Internal Factor	Category	Score
S2	Pharmacy service standard operating procedures	Strength	7
S3	Pharmacy information systems	Strength	8
S4	Clear service flow	Strength	7
S5	Hospital management support	Strength	7
Subtotal Strength (S)			37
W1	Shortage of pharmacists	Weakness	9
W2	Long compounding process	Weakness	8
W3	Long queues during peak hours	Weakness	8
W4	Limited facilities	Weakness	8
W5	Lack of coordination between units	Weakness	8
Subtotal Weakness (W)			41

External Factor Analysis Using the EFAS Table

After identifying Mesra Hospital's external strategic factors, an EFAS (External Factors Analysis Summary) table was compiled as a basis for analyzing the external environment that influences the hospital's performance and service quality, particularly outpatient pharmacy services. Each external factor was assessed using an importance score ranging from 1 to 10, reflecting the level of influence each factor has on the sustainability and development of services.

Based on the EFAS analysis, the total Opportunities score was 39 and the total Threats score was 37. The difference between the opportunities and threats resulted in an EFAS score (O - T) of +2, indicating that external opportunities still outweigh the threats facing Mesra Hospital. Key opportunities include the establishment of national standards for pharmacy service waiting times, the use of queuing and e-prescription technology, hospital management support, pharmacist training, and increased awareness of service quality. These factors provide opportunities for Mesra Hospital to improve the efficiency and quality of outpatient pharmacy services. Sharath Kumar and Praveena (2023) explain that opportunities are a crucial element in the external environment that enable organizations to develop growth strategies and strengthen their competitive position. This aligns with Kazanskaia (2025), who emphasized that identifying opportunities helps organizations adapt their strategies to respond to external environmental trends. Therefore, optimally exploiting opportunities is key to creating sustainable excellence through adaptive and proactive strategies.

However, the EFAS results also indicate external threats that need to be addressed, such as high patient expectations, increasing patient visit volumes, inter-hospital competition, patient complaints, and budget constraints. Although the EFAS score indicates relatively favorable external conditions, Mesra Hospital still needs to implement an adaptive strategy oriented toward improving service quality. Optimally exploiting opportunities, particularly through strengthening an effective outpatient pharmacy service system that is responsive to patient needs, is key to addressing existing external challenges.

Table 4. External Factors Analysis Summary (EFAS)

No	External Strategic Factors	Category	Score
O1	National standards for waiting times for pharmaceutical services	Opportunity	8
O2	Utilization of queuing system technology and e-prescriptions	Opportunity	8
O3	Hospital management support for improving service quality	Opportunity	8
O4	Training and competency development for pharmacists	Opportunity	7
O5	Increased awareness of healthcare quality	Opportunity	8
Total Opportunity (O)			39

No	External Strategic Factors	Category	Score
T1	High patient expectations for the speed and quality of service	Threat	8
T2	Increased volume of outpatient visits	Threat	8
T3	Competition between hospitals in pharmaceutical services	Threat	7
T4	Increased patient complaints regarding service	Threat	7
T5	Limited operational budget for pharmaceutical services	Threat	7
Total Threat (T)			37
EFAS Result (O – T)			+2

SWOT Quadrant Position

The SWOT quadrant position was determined based on the IFAS and EFAS scores. An IFAS score of -4 indicates that internal weaknesses outweigh the strengths of the Mesra Hospital Pharmacy Unit, while an EFAS score of +2 indicates relatively greater external opportunities that can still be exploited. Based on this combination of scores, the Mesra Hospital Pharmacy Unit is positioned in Quadrant III (Weakness–Opportunity), as shown in Figure 1.

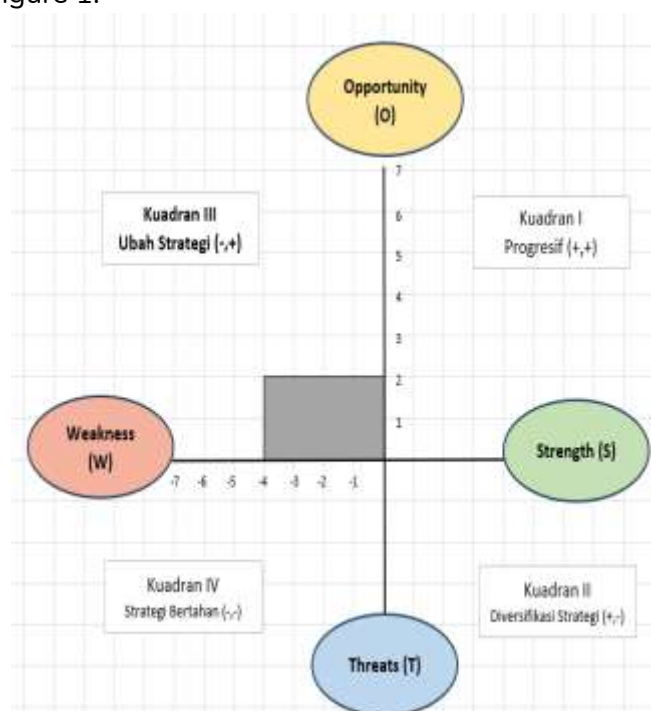


Figure 1. SWOT Analysis Diagram for Mesra Hospital

Quadrant III indicates that the Mesra Hospital Pharmacy Department has significant external opportunities, but still faces various internal weaknesses that require immediate improvement. This situation aligns with Machfudi's (2019) perspective, which states that organizations in Quadrant III need to focus their strategies on internal improvement efforts to optimally capitalize on external opportunities. Therefore, the appropriate strategy to implement is the WO (Weakness-Opportunity) strategy, which minimizes internal weaknesses by capitalizing on available external opportunities. The strategy focuses on increasing service process efficiency, strengthening human resources, and optimizing the use of technology and management support to reduce waiting times for medication services and improve the overall quality of pharmaceutical services.

Weakness-Opportunity (WO) Strategy

Based on the SWOT analysis, which indicates that the Mesra Hospital Pharmacy Unit is in Quadrant III (Weakness-Opportunity), the recommended strategy is the WO strategy, which minimizes internal

weaknesses by capitalizing on available external opportunities (Rizaldi, 2022). The WO strategies that can be implemented by the Mesra Hospital Pharmacy Unit are as follows:

1. Optimizing the use of pharmaceutical information technology, such as electronic queuing systems and e-prescriptions, to reduce queues during peak hours and speed up waiting times for medication services.
2. Arranging and increasing pharmaceutical human resources according to the service workload, especially during peak service hours, to improve efficiency and timeliness of service.
3. Improving and consistently implementing pharmaceutical service SOPs in accordance with national standards for medication service waiting times to improve process uniformity and service quality.
4. Improving the competency of pharmacists through ongoing training, particularly related to patient-centered care-based pharmaceutical services and service time management.
5. Strengthening coordination between service units, particularly between polyclinics and the pharmacy, to streamline prescription flow and minimize delays in medication delivery.

These strategies are expected to address internal weaknesses in the Mesra Hospital Pharmacy Unit while optimally utilizing external opportunities to reduce waiting times for medication and continuously improve the quality of pharmaceutical services.

4. Conclusion

Based on the results of the SWOT analysis supported by the IFAS and EFAS matrix calculations, it can be concluded that the Mesra Hospital Pharmacy Unit faces a strategic situation characterized by the dominance of internal weaknesses compared to strengths (IFAS value -4), but still has relatively greater external opportunities compared to threats (EFAS value +2). This condition indicates that the main problems lie in internal aspects, specifically limited human resources, service process efficiency, and coordination between units that impact the length of waiting times for drug services. On the other hand, the existence of external opportunities such as national standards for waiting times, management support, the use of queuing system technology and e-prescriptions, and increased awareness of service quality provide strategic space for the hospital to make improvements. Therefore, the formulated strategy needs to focus on internal improvements by utilizing existing strengths and optimizing external opportunities, while implementing anticipatory measures against threats so that improvements in quality, efficiency of pharmaceutical services, and patient satisfaction can be achieved sustainably.

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