

Evaluation of Outpatient Queue Management System at Rasyida Specialized Kidney Hospital

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ABSTRACT

An efficient and systematic outpatient queue system plays a critical role in ensuring patient satisfaction and service quality in hospitals. The Indonesian Ministry of Health recommends that outpatient waiting times should not exceed 60 minutes, from registration to completion of consultation. Hospitals must therefore continuously monitor and improve their queue management systems to meet this standard and enhance patient experience. This study aimed to evaluate the outpatient queue system at Rasyida Specialized Kidney Hospital. A qualitative research approach was used, incorporating data triangulation through observations, in-depth interviews, and document analysis. Of 81 outpatient visits analyzed, only 2 patients (2.5%) experienced waiting times of ≤ 60 minutes, while the remaining 79 patients (97.5%) exceeded this standard. Factors contributing to prolonged waiting times included limited human resources, physician schedule inconsistencies, patient behavior, and infrastructure constraints. Overall, outpatient services at Rasyida Specialized Kidney Hospital currently do not meet the national outpatient waiting time standard of ≤ 60 minutes.

Keywords: Queue system, waiting time, queue barriers, outpatient services

INTRODUCTION

The quality of hospital services is influenced by the availability of healthcare professionals and the efficiency of patient flow through various service stages. In outpatient care, patients typically undergo several steps, beginning with registration and concluding with the completion of medical consultation and treatment. According to the Indonesian Ministry of Health Decree No. 129/Menkes/SK/II/2008 on Minimum Service Standards for Hospitals, outpatient waiting times should not exceed 1 hour. Hospitals are therefore required to implement service delivery processes that are both efficient and patient-centered, ensuring timely access to care for all population groups. A well-functioning queue system is fundamental in optimizing outpatient service delivery. It is

particularly crucial in outpatient departments where patients must wait to register, consult with physicians, and collect medications. Extended waiting times can negatively impact patient satisfaction and perception of care quality. Therefore, hospitals must pay close attention to designing and managing their outpatient queue systems. An effective queue system not only improves operational efficiency but also enhances the hospital's reputation and fosters long-term patient loyalty. Previous studies have demonstrated various approaches to queue management. Building on these insights, this study aims to evaluate the outpatient queue system at Rasyida Specialized Kidney Hospital, from the point of patient registration to the completion of medical services.

METHODS

This study employed a qualitative descriptive case study design. The research was conducted at Rasyida Specialized Kidney Hospital in Medan, Indonesia, from October 10 to November 9, 2024. The study population comprised BPJS-insured patients utilizing outpatient services in the BTKV, KGH, Internal Medicine, and Urology departments during October 2024. A simple random sampling method was used to select a minimum of 81 outpatient visits. Data collection involved in-depth interviews with key informants, structured observations, and document analysis. Primary data were collected through interviews guided by validated instruments from previous studies. Secondary data were obtained from hospital administrative records. Data analysis employed triangulation and univariate methods to ensure validity and provide a comprehensive understanding of the outpatient queue system.

RESULTS

Service availability varied across departments, with Internal Medicine operating six days per week, KGH and BTKV four days, and Urology two days. KGH recorded the highest outpatient volume (48%), followed by BTKV (29%), Internal Medicine (15%), and Urology (8%). All departments exceeded the national outpatient waiting time standard of ≤ 60 minutes. Registration and initial queue times were the primary contributors to prolonged waiting periods, particularly in Internal Medicine and BTKV. In Urology, consultation times contributed most significantly to total service time.

Table 1. Outpatient Service Schedule

Department	Days of Operation
BTKV	Monday, Tuesday, Thursday, Saturday
KGH	Monday, Wednesday, Thursday, Friday
Internal Medicine	Monday to Saturday
Urology	Tuesday, Thursday

Table 2. Outpatient Visit Statistics (October 2024)

Department	Visits	Percentage
BTKV	337	29%
KGH	565	48%
Internal Medicine	180	15%
Urology	96	8%
Total	1178	100%

Table 3. Average Waiting Time by Department

Department	Average Waiting Time (minutes)	Compliance with Standard
BTKV	174	No
KGH	194	No
Internal Medicine	268	No
Urology	160	No

Table 4. Detailed Waiting Time Analysis

Department	Average Registration-to-Consultation Time (minutes)	Average Consultation Time (minutes)
BTKV	106	57
KGH	157	12
Internal Medicine	115	132
Urology	50	103
Overall Average	107	76

DISCUSSION

Rasyida Specialized Kidney Hospital offers two registration pathways for BPJS-insured patients: online registration via the Mobile-JKN application and in-person registration. Online registration allows patients to schedule appointments in advance, while in-person registration requires the presentation of a BPJS card or referral letter. The hospital operates a four-shift registration system with five registration staff members. However, staffing is limited during night shifts, which contributes to service bottlenecks during peak hours. Additionally, increased patient volumes, particularly during dialysis scheduling overlaps, further strain the registration process. Human errors, such as data entry mistakes or patient-related issues (e.g., incorrect appointment times), also contribute to delays. The study found that only 2 of 81 patients (2.5%) experienced waiting times compliant with the ≤ 60 -minute standard, while 97.5% of patients waited longer. Factors contributing to prolonged waiting times at Rasyida Hospital included early patient arrivals, late physician start times, insufficient registration staff, and infrastructure limitations. Key

contributing factors were human resources, physician schedules, patient behavior, and infrastructure constraints.

CONCLUSION

This study evaluated the outpatient queue system at Rasyida Specialized Kidney Hospital and identified significant gaps in meeting national service standards. Although the hospital provides flexible registration options through Mobile-JKN and in-person services, operational bottlenecks persist. Only 2.5% of patients experienced waiting times within the recommended ≤ 60 -minute threshold. The majority faced prolonged waiting periods due to staff limitations, physician schedule inconsistencies, patient arrival patterns, and infrastructure constraints. Recommendations include optimizing staff allocation during peak service hours, enhancing IT systems and server capacity, implementing patient education initiatives, and conducting further research to explore advanced queue management strategies and improve overall service quality.

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