

**ASSESSMENT OF TURNAROUND TIME FROM TOKEN
GENERATION TO BILLING COUNTER ARRIVAL FOR
OUTPATIENT CONSULTATIONS AT RUKMANI BIRLA
HOSPITAL, JAIPUR**

Submitted to



The IIHMR University, Jaipur

for the partial fulfillment for the award of the degree of

Master of Business

Administration (MBA) in

Hospital and Health Management

by

Bhawana Prakash Naware

Under the Supervision and Guidance of

Dr. Seema Mehta

Professor IIHMR University Jaipur

2025

1. INTRODUCTION

Efficient patient flow and minimal waiting times are critical indicators of quality healthcare delivery. Long waiting durations, especially during billing for consultations and diagnostics, can adversely affect patient satisfaction and hospital reputation. Turnaround Time (TAT) is a key performance metric that reflects the efficiency of service delivery processes. In outpatient departments, delays in billing after token generation can create congestion, reduce throughput, and increase patient dissatisfaction.

This study focuses on calculating the TAT from the moment a patient collects a billing token until the billing counter arrival for outpatient consultations. The findings will help to identify bottlenecks in the billing process and recommend strategies to streamline operations and enhance patient experience.

2. RESEARCH QUESTION

What is the average turnaround time from token generation to billing counter arrival for outpatient consultations at Rukmani Birla Hospital, Jaipur?

3. OBJECTIVES

Primary Objective:

- To determine the turnaround time for billing services from token generation to billing counter arrival for outpatient consultations at Rukmani Birla Hospital, Jaipur.

Secondary Objectives:

- To identify the peak hours of billing activity.
- To compare turnaround times between the morning and afternoon shifts.
- To suggest process improvements for reducing billing turnaround time.

4. MATERIAL AND METHODS

STUDY DESIGN: Descriptive cross-sectional study

SETTING: Rukmani Birla Hospital, Jaipur – a multispecialty hospital catering to a wide range of outpatient services.

STUDY POPULATION: Patients visiting the outpatient department (OPD) for consultation who have taken a billing token.

Inclusion Criteria:

- Patients who have collected a billing token for consultation.
- Patients providing informed consent.

Exclusion Criteria:

- Patients not completing the billing process.
- Emergency or inpatient billing cases.

STUDY TOOLS:

Structured data collection form capturing:

- Token generation time.
- Billing counter arrival time.

DURATION OF STUDY: 2 months (1ST April to 31st May 2025)

SAMPLE SIZE: 255 patients.

SAMPLING TECHNIQUE: Convenience sampling

DATA COLLECTION PROCEDURE:

Hospital staff or researcher will record the token time and billing completion time for each patient. Data will be entered in Excel for analysis.

OPERATIONAL DEFINITIONS:

- Turnaround Time: Time interval (in minutes) between token generation and billing counter arrival.
- Consultation Billing: Billing for OPD consultation services.

5. DATA ANALYSIS PLAN

The data was entered and analysed using Microsoft Excel. The analysis included:

Descriptive Statistics:

- Mean, median, and standard deviation of TAT across all patients.
- Frequency distribution of TAT by shift (morning vs afternoon).

- Peak hour identification through time-based grouping.

Comparative Analysis:

TAT comparison between morning and evening shifts using appropriate statistical charts and tabular summaries.

6. ETHICAL CONSIDERATIONS

- Informed verbal consent will be obtained from all participants.
- No personal identifiers will be recorded to ensure anonymity.
- Data will be stored securely in password-protected systems and used solely for research purposes.
- Ethical approval will be obtained from the hospital's Institutional Ethics Committee (IEC) if required.

7. IMPLICATIONS OF RESEARCH

The findings of this study will help hospital administrators understand delays in the billing process and guide interventions to improve service efficiency and patient satisfaction. It may contribute to designing optimized workflows and resource allocation during peak times.

8. REFERENCES

1. WHO. Quality of care: a process for making strategic choices in health systems. World Health Organization, 2006.
2. Kumar S, et al. Reducing patient waiting time and improving outpatient care. Journal of Health Management. 2017.
3. Sharma R. Operational efficiency in healthcare systems: A study on hospital turnaround times. International Journal of Health Services 2020.