

Title of Dissertation:

"Reducing Patient Waiting Time: A Comprehensive Analysis of OPD Turnaround Time"

Introduction

The Outpatient Department (OPD) is vital in delivering healthcare services without requiring hospital admission. However, prolonged waiting times remain a major challenge, often leading to patient dissatisfaction, reduced treatment compliance, and poor health outcomes. Patients frequently spend a considerable amount of time waiting for consultations and services, which impacts their overall experience and perception of care.

This study emphasizes the importance of measuring and improving OPD Turnaround Time (TAT), as patient satisfaction is closely linked to their waiting experience. Efficient OPD management not only enhances patient satisfaction but also reduces the burden on inpatient services. The study aims to identify challenges faced by patients, such as delays and navigation difficulties within the hospital, and to gather feedback on OPD services to recommend improvements.

Review of Literature

Efficient management of OPDs is essential for improving patient satisfaction and optimizing healthcare delivery. Process mapping is a key tool that helps visualize workflows, identify inefficiencies, and implement targeted improvements. Factors contributing to increased turnaround time (TAT) in OPDs include poor resource coordination, long processing times, and delays in patient movement. To reduce these delays, strategies like Lean healthcare, Kaizen, and bottleneck analysis have proven effective. Studies show that Lean and Kaizen can significantly reduce cycle time and improve patient flow. Recent research also highlights the benefits of granular process modeling and automated workflow diagnosis in identifying bottlenecks and improving scheduling, ultimately leading to reduced waiting times and better resource utilization.

Theoretical/Conceptual Framework

The conceptual framework for this study is based on Donabedian's Model of Healthcare Quality and the Lean Healthcare Framework. Donabedian's model categorizes healthcare quality into three components: structure, process, and outcome. In the context of OPD services, *structure* includes infrastructure, staff availability, and equipment; *process* refers to the steps a patient goes through such as registration, waiting, consultation, and investigations; and *outcomes* include patient satisfaction, reduced turnaround time (TAT), and overall service quality. Complementing this is the Lean Healthcare approach, which emphasizes the elimination of waste and enhancement of workflow efficiency. Tools like Value Stream Mapping (VSM), Kaizen (continuous improvement), and bottleneck analysis are applied to identify inefficiencies and improve patient flow. Together, these frameworks provide a structured way to assess how hospital resources and

processes influence OPD performance and patient satisfaction, with the goal of reducing delays and optimizing healthcare delivery.

Research Gap

While numerous studies have addressed patient satisfaction and healthcare quality, limited research has specifically focused on the **Turnaround Time (TAT)** in Outpatient Departments (OPDs), particularly in the Indian healthcare context. Most existing literature highlights general service delays but lacks a detailed time-motion analysis across multiple specialties. Additionally, there is insufficient use of process mapping and lean methodologies in OPD settings to identify and address inefficiencies. The integration of patient feedback, workflow analysis, and turnaround time metrics is often missing in current research. Therefore, this study aims to fill the gap by analyzing TAT across selected specialties, identifying specific delay points, and recommending practical interventions to improve OPD service delivery.

Research Questions:

1. What is the average turnaround time (TAT) for patients in the selected OPDs?
2. Which stages of the OPD process contribute most to patient delays?
3. Are there significant differences in TAT among various specialties (e.g., Cardiology, Gynecology, Internal Medicine, Neuromedicine)?
4. What are the key factors affecting TAT in the outpatient departments?
5. How does OPD TAT impact patient satisfaction and perceived quality of care?
6. What process improvement strategies can be recommended to reduce TAT in OPDs?

Research Objectives:

1. To measure the average turnaround time of patients in selected outpatient departments.
2. To identify and analyze the key factors contributing to delays in OPD services.
3. To compare turnaround times across different specialties such as Cardiology, Obstetrics & Gynecology, Internal Medicine, and Neuromedicine.
4. To assess the impact of turnaround time on patient satisfaction in the OPD.
5. To suggest process improvement strategies aimed at reducing turnaround time and enhancing patient experience in OPDs.

Methodology

Study Design: Descriptive and analytical case study

Setting: Eternal Hospital, Jaipur

Sample Size: 200 Patients

Data Collection Tools: Manual observations, HIS data logs, and staff/patient interviews

Data Analysis: Descriptive statistics, ANOVA, Pearson correlation, and root cause analysis using SPSS and Excel.

Plan of Analysis:

- Clean and verify collected data.
- Calculate descriptive statistics (mean, median, etc.) for waiting times.
- Compare turnaround times across specialties using statistical tests.
- Analyze correlations between waiting time and influencing factors.
- Thematically analyze interview and observation data.
- Develop recommendations based on findings.

Tentative Chapter Plan:

- Abbreviations
- Acknowledgement
- Abstract
- Introduction
- Review of Literature
- Methodology
- Process flow
- Result and Analysis
- Conclusion
- References