# Dissertation at

# Centre for Sight Eye Institute"



"To identify and analyze the root causes of delays in the turnaround time (TAT) in the outpatient department (OPD)"

by

# **PRACHI**

PG/22/074

Under the guidance Of

Ms Anuradha Bhardwaj

PGDM (Hospital and Health Management) 2022-24



International Institute of Health Management Research New Delhi

# Completion of Dissertation from respective organization

The certificate is awarded to

Name: PRACHI

In recognition of having successfully completed her Internship in the department of

#### **OPERATIONS**

And has successfully completed her

Project titled

"TO IDENTIFY AND ANALYZE THE ROOT CAUSES OF DELAYS IN THE TURNAROUND TIME (TAT) IN THE OUTPATIENT DEPARTMENT (OPD)"

Date-4th March 2024 to 04th June 2024

Organization - CENTRE FOR SIGHT EYE INSTITUTE, DWARKA, NEW DELHI

She comes across as a committed, sincere & diligent person who has a strong drive & zeal for learning.

We wish her all the best for future endeavors.

Training & Development

Phone: 8527895888

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This is to certify that **PRACHI** student of PGDM (Hospital & Health Management) from International Institute of Health Management Research, New Delhi has undergone internship training at "Centre for Sight Eye Institute" from 04-03-2024 to 04-06-2024.

The Candidate has successfully carried out the study designated to her during internship training and his/her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish her all success in all her future endeavors.

Dr. Sumesh Kumar

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Associate Dean, Academic and Student Affairs

IIHMR, New Delhi

Mentor

IIHMR, New Delhi

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This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

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Pardans.

Organization Mentor Name Designation,

Organization

ENTRE FOR SIGHT EYE INSTITUTE
Plot No.-9, Sector-9, Dwarks
New Delhi-110078

Phone: 8527895888

CIN:U85120MH2002PLC338742

CENTRE FOR SIGHT - DWARKA (A Unit of New Delhi Centre For Sight Ltd.)

Hoad Office: Plot No. 9, Sector - 9, Dwarks, New Delhi-110077 | Tol: 011-4250-4250 | Website: www.centreforsight.net Registered Office: Rushabh, 18th Road, Near Ambadkar Gardon, Chambur, Mumbal - 400 071, Maharashtra

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This is to certify that the dissertation titled "To identify and analyze the root causes of delays in the turnaround time (TAT) in the outpatient department (OPD)" and submitted by PRACHI Enrollment No PG/22/20024 under the supervision of Ms Anuradha Bhardwaj for award of PGDM (Hospital & Health Management) of the Institute carried out during the period from 04-03-2024 to 04-06-2024 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

Signature Signature



# FEEDBACK FORM



Name of the Student: PRACHI

Name of the Organisation in Which Dissertation Has Been Completed: Certific For Sight

Area of Dissertation: Operations Department

Attendance: 100 1/0

Objectives achieved: Understood patient Journey time, Understood loop areas to bridge the gaps in patient Salisfaction.

Deliverables: Patient Sattsfaction, Fastracking patient as per the needs.

Strengths: - Flexeable, Receptive, talling challenges.

Suggestions for Improvement: Emotional Stabellity, decision malling.

Suggestions for Institute (course curriculum, industry interaction, placement, alumni):

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Date: 25/07/2024 Place: New Delhi Plot No.-9, Sector-9, Dwarka New Delhi-110078 Phone: 8527895888 CIN:U85120MH2002PLC338742

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# INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH (IIHMR)

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# **CERTIFICATE ON PLAGIARISM CHECK**

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#### ACKNOWLEDGEMENT

"It is not possible to prepare a project report without the assistance & encouragement of other people. This one is certainly no exception"

On this very outset of this report, I would like to extend my sincere and heartfelt obligation towards all the people who have helped me in this endeavour. Without their active guidance, cooperation, help and encouragement, I would not have made headway in this project. First and foremost, I want to thank my parents for their unwavering support during the summer training endeavour. I would want to express my gratitude to The Almighty for his kindness. My heartfelt thanks go to **IIHMR**, **Delhi**, for offering this golden opportunity.

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# **Abstract**

#### **Introduction:**

The Out Patient Department (OPD) is the first point of contact in the hospital. The care provided in the OPD indicates the quality of care provided and in turn will reflect by the patient satisfaction. Long waiting hours will lead to the patient satisfaction and which ultimately affect the hospital. This study aim is to investigate the total turnaround time of opd patients and will know the loop holes if any. The study is also called the time motion study. Turnaround time for opd department is the total time the patient enters in the hospital till discharge of the patient. According to Baker B, Rochon J. (1989), "Turnaround time is an important parameter that strongly influences patients and staff satisfaction in the emergency department and there are early reports considering this important issue." According to Harshal Lowalekar and N. Ravichandran (2013), the waiting area of the OPD can be extended by using the space currently being used for vehicle parking.

# Methodology:

A review of literature was conducted, emcompassing research from 1990 to 2024. Data bases included, PubMed, NCBI, Consensus, Google scholar etc. All the articles underwent Title screening, and full text screening. Data extraction included participants characteristics, study characteristics, intervention types, and outcoe measures and a Prisma flowchart is being made based on screened out articles.

#### **Results:**

There are various factors such as staffing levels, appointment scheduling, patient arrivals, and administrative processes can contribute to OPD turnaround time delays, which affects OPD turnaround time delays. Understanding these factors is crucial for improving patient care and operational efficiency.

#### **Conclusion:**

This report provides a foundation for understanding and addressing TAT delays in the OPD. Implementing these recommendations will require commitment and coordination across all levels of the healthcare facility. By analyzing and minimizing OPD Floor Turnaround Time, healthcare facilities can achieve significant improvements in operational efficiency, patient experience, and overall quality of care.

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# **ABBREVAIATIONS**

- CFS- Centre For Sight
- IOL- Intra Ocular Lenses
- NABH- National Accredited Board For Hospital And Healthcare Providers
- RNFL- Retinal Nerve Fiber Layer
- OCT- Optical Coherence Tomography
- FFA- Fundus Florescence Angiography
- HVF- Humprofy Visual Field Analyzer
- PMT- Post Mediatric Test
- FICCI- Federation of Indian Chambers Of Commerce And Industry.
- IPD- Inpatient Department
- OPD- Outpatient Department

# INTRODUCTION

Established in1996 by Dr. Mahipal S Sachdev, an eminent ophthalmologist, and Padma Shri awardee, Centre for Sight (CFS) is a leading eye care provider in India. Centre for Sight is the pioneer in high-quality vision care for over two decades. Driven by the mission to provide the best eye care to all, it is registered in many states under the Nursing Home Act by the Directorate General of Health Services. It is on the panel of many reputed public sector undertakings, corporates, and TPAs.

Centre for Sight offers the entire range of modern ophthalmic treatments to its patients. It is registered in many states under the Nursing Home Act by the Directorate General of Health Services. Centre for Sight has its eye bank at Preet Vihar, Delhi.

Centre for Sight won the prestigious Frost & Sullivan award as the eyecare provider company of the year 2010 & 2014, an affirmation of its values. It was awarded the prestigious FICCI Healthcare Excellence award for operational excellence in 2012. CFS also won the ET Now Leaders of Tomorrow award for business Excellence in 2014. It also received the "Best Single Speciality Hospital Chain 2016" at Business world's 3rd Healthcare Summit & Awards.

CFS Group of hospitals chairman & MD, Dr. Mahipal S Sachdev, received a lifetime achievement award at Times Health Achiever Delhi NCR 2017. Also, the hospital was awarded the best single specialty hospital in the same conclave. These awards are recognition of our committed efforts to make eye care a super specialty in India.



## **ABOUT CENTRE FOR SIGHT DWARKA**

Centre for Sight eye institute, Dwarka, is the largest private comprehensive super speciality eye institute in north India, a one-stop solution for eye-related diseases, and problems. With cutting edge eye care technologies and infrastructure facilities, CFS stands apart. It strives to offer comprehensive treatments, surgical and diagnostic services, including an array of internationally approved ocular specialities.

- It is spread over an area of 90,000 sq. ft.
- It has 6 floors with 17 examination chambers
- It houses more than 20 consultation chambers
- It has 9 state-of-the-art and technologically advanced modular operation theatres

# **AWARDS AND ACCREDIATION**

- Padmashree awarded to Dr. Mahipal Sachdev in year 2007.
- Times Healthcare Achiever's Award for Best Single Specialty Hospital in 2017.
- Trusted Hospital Award by Reader's Digest Summit in 2018.
- Best Eye Care Hospital of North India 2019 & 2020 by "THE WEEK Hansa Research Survey"
- Best Healthcare Brands by "The Economic Times 2021

<u>VISION</u>- To establish the most preferred brand of Super Specialized world class eye care facilities in and around India by 2025.

<u>MISSION-</u> Centre for Sight is committed to deliver best quality care with personalized touch and cutting edge technology, to enhance patient satisfaction and provide continual improvement in our services.

**VALUES-** Guided by patient centric values of efficiency, precision, compassion & integrity.

### **QUALITY POLICY**

- To provide quality of care that exceeds the patient's expectations.
- To adhere to operational protocols of institute, in order to reduce errors and enhance patient safety.
- To comply with all statutory and regulatory requirements.
- To promote on the job training to improve skills and competence of the staff.
- To ensure health and safety of the staff members.

# **SCOPE OF SERVICES**

# TABLE 1.

Anesthesiology	Orbit Surgery
Ophthalmic Emergency (During Working Hours Only)	Ocular Oncology
Comprehensive Ophthalmic Services	Cornea Services
Cataract Services	Refractive Services
Glaucoma Services	Uvea Services
Vitreo Retina Services	Squint Services
Oculoplasty & Reconstructive Surgery	Optical
Pediatric Ophthalmology	Pharmacy

# **DIAGNOSTIC SERVICES**

# TABLE 2.

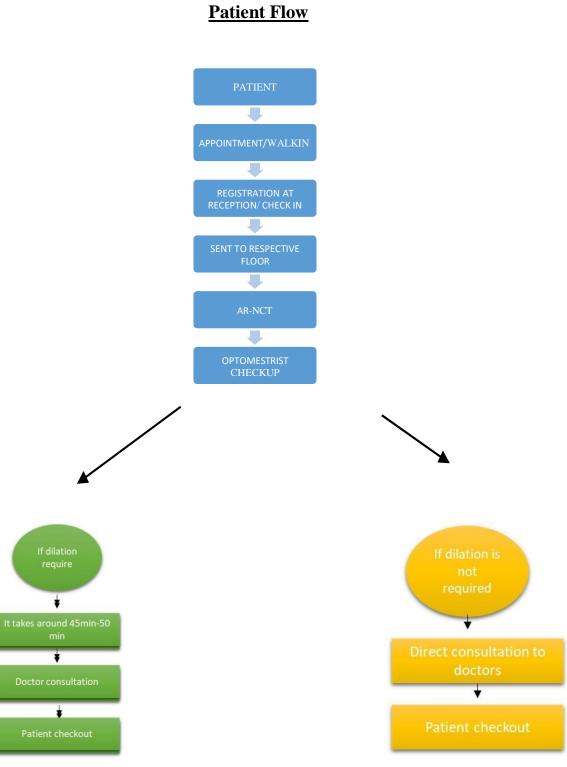
A Scan Biometry	Gonioscopy
IOL Master Biometry	Keratoconus Work Up
OCT	Humphrey Field Analyzer
Fundus Fluorescein Angiography	Auto –Refractometry
Fundus Photography	Diplopia Charting
Keratometry	Squint Work Up
Pachymetry	Anterior Segment photography
Corneal Topography/ Sirius (Corneal work up)	Specular Microscopy
Tonometry	Contact lens/soft lens work up

# **OUT-SOURCED SERVICES AT CENTRE FOR SIGHT**

- Security: Tiger Security Services
- Emergency & Ambulance: Manipal Hospital & Ayushmaan Hospital, Dwarka, New Delhi
- Laundry: Amit Laundry & Dry Cleaners

# **DEPARTMENT WISE OVESERVATIONS (OPERATION)**

- I have been placed as an operation management trainee at Centre for Sight Eye Institute. In the department I have learnt about the basic of the operations.
- Learnt about the staff management which include Doctors, Front desk, opd attendants, Counsellors and Optometrist.
- Block management of Doctors at HMIS system Managing appointments of Doctors at daily basis.
- Rescheduling the appointments as per the Doctors on Leave, OT and emergency cases in IPD. Have brief knowledge of the working of Front desk, Floors, Diagnosis, and Pharmacy, Counselling department, optometrist and IPD.
- Daily Operational Report.
- Work on the MRD audit of the patients. Work on the clinical audit of the patients. NABH Accreditation.
- I have learnt about the admission process and discharge process of the patients.



# To identify and analyze the root causes of delays in the turnaround time (TAT) in the outpatient department (OPD)

#### INTRODUCTION

We have seen that how the healthcare market is growing at very fast pace. To provide a satisfaction to a patient, it is much needed to provide the right information about the procedures and the expected time to complete those procedures. These procedures include initial workup, consultation and diagnosis. This information usually satisfies the patients instead of long waiting hours.

The main aim of the Time motion study to determine the time standards for the efficient operations of the hospital. If there is some standard and accurate time, the hospital might give best outputs. The hospital can best utilize their equipment's and obtain optimum utilization of the workforce.

To get the patient satisfaction and optimum output, there should not be long waiting hours. This study will tell the Turn-around time of dilated and not dilated patients of Centre For sight Eye Institute. If we talk about the TURN AROUND TIME (TAT), it is the standard time in which an operator is allowed to carry out the specified task under the specified conditions.

### **OUTPATIENT DEPARTMENT**

The Out Patient Department (OPD) is the first interaction in the hospital. OPD care in the hospital reflects the quality of the hospital. Long waiting hours will lead to the patient satisfaction and which ultimately affect the hospital. This 3 months study will find out the patient journey analysis. The study is also called the time motion study. The Outpatient Department provides the care and diagnosis that does not require for a patient to overstay at night. To make the hospital output effective, it is much needed that the OPD of the hospital must be qualitative and time effective. It is because patient spent 50-60% of his time at OPD. If I will talk about CFSEI, there are two opd floors. The patient flow at both the floor is same. But the diagnostic procedures are different at both the floors. This is the very reason that there are many cues at second floor in comparison to first floor.

The opd procedure includes-AR-NCT, REFRACTION, DILATION, DOCTOR CONSULATION, DIAGNOSTICS, COUNSELLING, PMT.

### **RATIONALE**

This study will help in describing the key reasons for delay in discharge process of out patient department which is a major challenge faced by many hospitals which ultimately results in patient dis-satisfaction and decreasing their footfall. Thus this study will also propose recommendations for the better operations. Six- sigma Methodology would help in reducing the turn- around/ waiting time of patients.

# **OBJECTIVES**

- To learn about the process flow in OPD
- To find out the TAT of dilated and Non dilated patients in OPD.
- To identify and Analyze the root causes of delays in the Turnaround Time

# **Understanding OPD floor TAT**

- ➤ OPD Floor Turnaround Time refers to the duration between a patient's arrival and departure from the outpatient department. Analyzing this process is crucial for operational efficiency.
- > TAT in hospital increases the effectiveness of hospital industry.
- ➤ It acts as a quality indicators to evaluate the effectiveness and efficiency of process and satisfaction of clinicians and patients.

# **Significance of Turnaround Time**

- Increases patient satisfaction
- Set expectations
- Increases quality of services
- Reduce waiting time
- Better Coordination

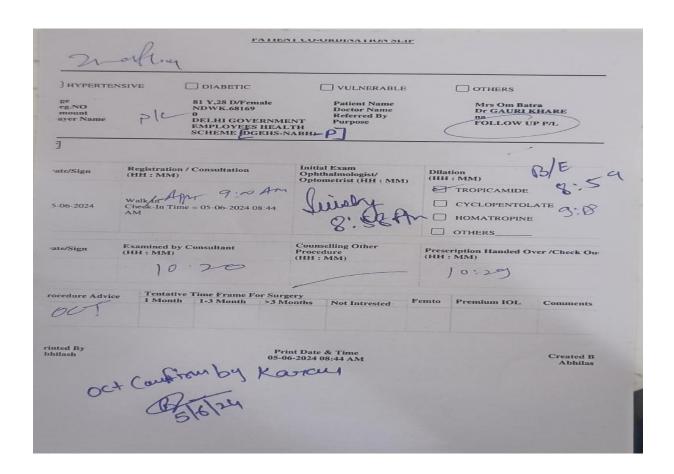
#### LITREATURE REVIEWS

- 1. Study on Turnaround time of Outpatient Billing services at Super speciality Hospital/Ayanabakkam- Chennai, Vigneshwaran S, Mrs. Bhooma Devi. In this study, time and motion both the study has been taken and has been used together to achieve the common results. Through this study we can calculate the estimate waiting time in billing department and can provide the effective way to improve the efficiency of the departments. The main objective of the study is to find out the process flow of the outpatient department and carry out the waiting time and patient satisfaction in the process. The study used 122 sample and used histogram, control chart and Pareto and cause and effect tool to analyses the problem. The major causes for delaying in billing were phone enquiry from other departments, patient prescription, Electronic Data Capture (EDC) machine and the cashier is slow.
- 2. <u>Determinants of patient waiting time in General Outpatient Department of a Territory Health Institution in North Western Nigeria, MO Oche, H Adamu-</u> This is a descriptive cross- sectional study which was carried out at the Nigeria. The study is being done on 100 patients. A structured questionnaire was used and convenience sampling method has been taken. The data collected and entered and then analyzed using Stastical Package for Social Sciences.
- 3. A Time motion study to evaluate the average waiting time in OPD with reference to patient satisfaction in the setting of State Level AYUSH hospital (India), Farah

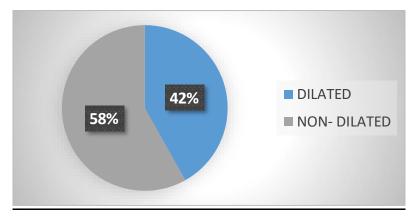
  Naaz, Idris Mohammed- this study conducted among the 100 patients in AYUSH Hospital. This study is about the average waiting time of the patient and their satisfaction level. The study was conducted for 15 days. According to the findings, the patients spent 2 hours in OPD after the arrival to the hospital. The maximum time delay in the study was at the doctor consultation and at the pharmacy. The patients were least satisfied with the OPD waiting timing.
- 4. A study on waiting time at the Outpatient Department of Private Secondary care Hospital, Bharathi Thiyagarajan- the study depicts that Time motion study is the combination of time study work and motion study work. Motion study tells the best way to complete the job and Time study will tell how long will it take to an average worker to complete the task. These two studies are now integrated and are usually done for the improvement and upgrading of work.

# **METHODOLOGY**

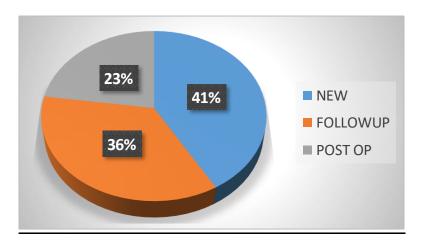
- **STUDY DESIGN-** The study is an observational study with an objective of understanding of reducing turnaround time in outpatient departments.
- **STUDY AREA-** the study has been done in the Outpatient Department of CFSEI, Dwarka, First and second floors.
- **STUDY POPULATION-** The study population includes all the appointments patients. Both categories of Patients, dilated and not-dilated includes in the study
- **STUDY PERIOD-** The study has been conducted for three months from March 2024 to June 2024.
- **SAMPLE SIZE-** The study is conducted among 450 patients. Daily 15 samples are collected for study for 1 month (April).
- **DATA SOURCE-** Primary data through Patient co-ordination slip.
- DATA ANALYSIS TOOL- MS- EXCEL



# **RESULTS**



1. Pie chart showing percentage of dilated and Non-dilated patients.

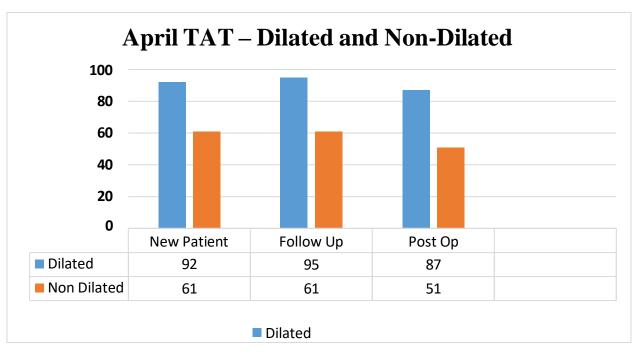


2. Showing percentage of new, follow-up and post- operative patients

# April data

	<b>Dilated Patients</b>	Non- Dilated Patients
New patients	<u>12</u>	<u>139</u>
Follow Up	<u>79</u>	<u>84</u>
Post op	<u>66</u>	<u>70</u>

• We have taken sample of 15 patients each day which makes total of 450 patients containing Post OP, Follow Up and New Patients.



Quality Department has given the benchmark of TAT of OPD for Dilated patient 90 mins whereas for Non-Dilated patients 45 mins

# **INTERPRETATION**

- The benchmark for non-dilated patients is **45 minutes.**
- the benchmark for dilated patients is 90 minutes.
- 39 Patients (Dilated)- More than 90 mins
- 45 Patients (Non-Patients)- More than 45 mins

# **LIMITATIONS**

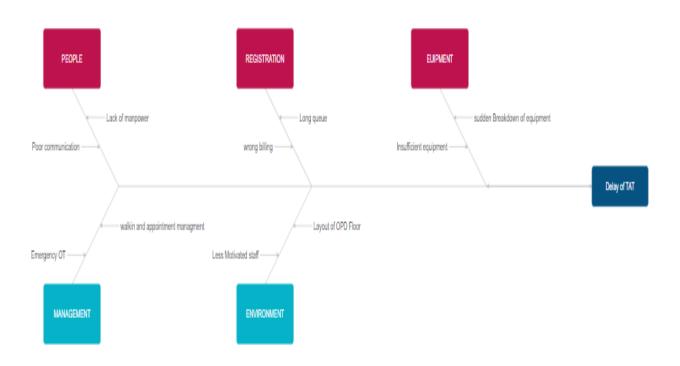
- Only Dilated and Non-dilated patients were considered for this study.
- The study focuses only on the (OPD) Out Patient Department of only two floors of CFSEI.

#### ANALYZING FACTORS CONTRIBUTING TO OPD TURNAROUND TIME DELAYS

There are various factors such as staffing levels, appointment scheduling, patient arrivals, and administrative processes can contribute to OPD turnaround time delays which affects OPD turnaround time delays. Understanding these factors is crucial for improving patient care and operational efficiency

- There are some patients who do not visit on time in hospital.
- Sometimes the patient take appointment in Wrong Speciality.
- > Due to the Extended OT of the Doctors.
- ➤ Procedure advice after Doctor Consultation. Tests also Depends on the Patient how much they are cooperating with the technician while doing the test.
- Same Day Opinions For Other Doctors (Glaucoma opinion, Retina Opinion, Squint opinion, Oculoplasty opinion) also increases the patient journey in the hospital.

# **FISHBONE DIAGRAM**



A **fishbone** diagram is a root cause analysis tool that represents the various causes of a problem and helps to find the suitable solution for that

# PREVENTIVE ACTION TAKEN TO MINIMIZE TAT

- Educating patients about the importance of timely arrival and providing them with clear instructions can help in reducing delays. Patient engagement in the process can contribute to smoother operations.
- Effective communication and coordination among staff members and departments are essential for minimizing delays. Clear protocols and efficient handoffs can expedite patient care.
- When the Doctors OT get extended we distribute the some patients to other same Speciality Doctor and Inform Every patient proper time of total work up in the hospital.
- Technicians make the patient more comfortable so the patient can do the test easily.
- We manage the same day opinions by seeing other doctors waiting if possible then we will
  consider the patient on priority if it is time consuming so we provide the appointment of next
  day to the patient.

# **SUGGESTIONS TO ORGANIZATION**

- Proper availability of staff
- Appointment should be the priority.
- Minimize Physical Movement of file
- Improve communication
- Increase customer feedback
- Continuous training and development
- Optimizing staffing

# **CONCLUSION**

By analyzing and minimizing OPD Floor Turnaround Time, healthcare facilities can achieve significant improvements in operational efficiency, patient experience, and overall quality of care. Implementing the provided recommendations will require commitment and coordination across all levels of the healthcare facility and will help in reducing TAT on floors.

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