



**DISSERTATION**

**At**

**EYE-Q SUPERSPECIALITY EYE HOSPITAL ,KANPUR**

**TO ANALYZE AND REDUCE TAT OF OPD FLOOR**

**BY**

**RENU GUPTA**

**PG/21/081**

**Under the guidance of**

**DR. SUMESH KUMAR**

**PGDM (Hospital & Health Management)**



**2021-23**

**International Institute of Health Management Research New Delhi**



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**International Institute of Health Management Research New Delhi**

**Completion of dissertation print**

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that **RENU GUPTA** student of PGDM (Hospital & Health Management) from International Institute of Health Management Research; New Delhi has undergone internship training at **EYE-Q SUPERSPECIALITY HOSPITAL, KANPUR** from **16<sup>th</sup> January 2023** to **30<sup>th</sup> APRIL 2023**

The Candidate has successfully carried out the study designated to him during internship training and his/her approach to the study has been sincere, scientific and analytical. The Internship is in fulfilment of the course requirements.

I wish her all success in all his/her future endeavors.

Dr. Sumesh Kumar  
Associate Dean  
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IIHMR, New Delhi

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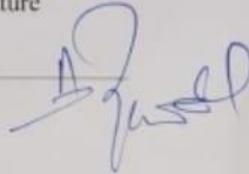
The following dissertation titled "TO ANALYSE THE WAITING TIME OF OPD " is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of PGDM (Hospital & Health Management) for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

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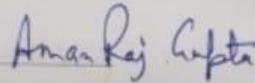
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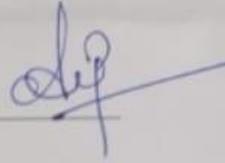
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Institute Mentor Name,

Dr. Sumesh kumar

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Department of

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“To ANALYSE AND REDUCE THE WAITING TIME OF OPD

Date -7<sup>th</sup> February 2023- 7<sup>th</sup> April 2023

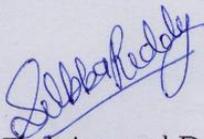
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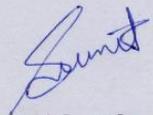
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She comes across as a committed ,sincere & diligent person who has a strong  
zeal for learning

We wish her all the best in future



Training and Development



Zonal head – Human Resources

## **FEEDBACK FORM**

**Name of the student:** Renu Gupta

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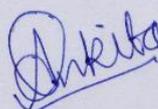
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**Suggestions for improvement:** More area of growth

**Suggestions for institute:** Satisfactory



**Signature of organization mentor(dissertation)**

AnkitaDAs Gupta

Operations manager

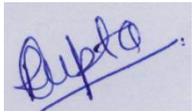
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RESEARCH, NEW DELHI**

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This is to certify that the dissertation titled "**To analyse and reduce the waiting time of opd**" at EYE-Q superspeciality hospital .

and submitted by Renu Gupta Enrolment No. PG/21/081 under the supervision of Dr. Sumesh Kumar forward of PGDM (Hospital & Health Management) of the Institute carried out during the period from 16<sup>th</sup> January to 30<sup>th</sup> April, 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.

A handwritten signature in blue ink, appearing to read 'Renu Gupta', is written over a light blue rectangular background.

Signature

## **ACKNOWLEDGEMENT**

Summer training is a fantastic chance for education and personal growth. I feel myself fortunate to have had the chance to complete my summer training at EYE-Q vision pvt.LTD.Kanpur I had the good fortune to get to know a lot of people in this institute who kindly offered their knowledge and experiences with me. I would like to convey my deep gratitude to Mrs. Ankita Das Gupta (CENTRE MANAGER) in the Operations Department for her ongoing assistance. Despite being busy with her other responsibilities, she made the time to listen to me and advise me and provided me with valuable suggestions and constructive criticism throughout the project. Her crucial contributions made this endeavour a success.I would like to offer my sincere gratitude to the administrative team at the hospital for their tremendous assistance.

I also want to express my gratitude to my mentor, Dr. Sumesh Kumar, for his guidance throughout the entire dissertation process.

**RENU GUPTA**

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## ABBREVIATIONS

- **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
  
- **PHACO**- Phacoemulsification
  
- **YAG** - Yttrium-aluminium -garanet laser
  
- **IOP** -Intraocular pressure

## **ABSTRACT**

The eye hospital outpatient department (OPD) is a dedicated facility that offers comprehensive and specialized medical services for patients with various eye conditions. Staffed by a team of ophthalmologists, optometrists, and other healthcare professionals, the OPD serves as the first point of contact for individuals seeking eye care. Patients visit the OPD for a wide range of services, including general eye examinations, visual acuity assessments, diagnosis and management of ocular diseases such as cataracts, glaucoma, and retinal disorders, prescription of corrective eyeglasses or contact lenses, and follow-up appointments for ongoing treatment. The Out Patient Department (OPD) is the hospital's main point of contact. The care given in the OPD reflects the calibre of treatment given, which will then be reflected in the level of patient satisfaction. Long wait times can negatively effect patient satisfaction, which will therefore have an impact on the facility. The purpose of this study is to look into the overall turnaround time for OP patients and identify any gaps. The investigation is also known as a time motion investigation. The length of time from the patient's admission to their discharge at the hospital is known as the turnaround time for the opd department.

Turnaround time is a crucial factor that significantly affects patient and staff satisfaction in the emergency room, and there are early reports taking this crucial problem into account, according to Baker B. and Rochon J. (1989). According to Harshal Lowalekar and N. Ravichandran (2013), the space now being used for parking cars might be utilised to expand the OPD's waiting area. This study will assist in listing and characterising the main causes of delays in the outpatient department's discharge procedure, a problem that many hospitals deal with since it affects patient satisfaction and reduces patient traffic. Primary data is collected with the help of EMR. The study was conducted for 3 months from February 23 to April 23. Sample size was considered to be 250. The MS.Excel tool was used to analyse the result.

# **EYE-Q HOSPITAL**

## **INTRODUCTION**

Eye-Q Hospital is a leading healthcare institution dedicated to providing comprehensive eye care services and improving the visual health and well-being of individuals. With a strong focus on patient-centric care, cutting-edge technology, and a team of highly skilled professionals, Eye-Q Hospital has established itself as a trusted name in the field of ophthalmology.

At Eye-Q Hospital, the patient experience is of utmost importance. The hospital's compassionate and dedicated staff strive to create a welcoming and comfortable environment, ensuring that patients feel supported and well-informed throughout their journey. The hospital values open communication, actively involving patients in their treatment decisions and educating them about their eye health.

One of the hallmarks of Eye-Q Hospital is its state-of-the-art infrastructure and advanced technology. The hospital is equipped with modern diagnostic equipment and surgical tools, enabling accurate diagnoses and precise surgical interventions. This commitment to technological innovation ensures that patients receive the highest standard of care, with access to the latest advancements in ophthalmic treatment.

The team at Eye-Q Hospital consists of renowned ophthalmologists, optometrists, and support staff who bring a wealth of experience and expertise to the table. With their specialized knowledge and skills, they provide comprehensive evaluations, effective treatments, and compassionate care to patients. The hospital fosters a culture of continuous learning and professional development, ensuring that its staff stays updated with the latest advancements in the field of ophthalmology.

Eye-Q Hospital is committed to serving the community and making eye care accessible to all. Through various outreach programs, collaborations with NGOs, and initiatives aimed at underserved populations, the hospital endeavors to raise awareness about eye health, provide screenings, and offer treatment options to those in need.

## **OBSERVATIONAL LEARNING**

### **VISION**

To be India's foremost chain of eye hospitals in terms of both Quality of eye care and the Number of patients handled.

### **MISION**

To make every patient an Ambassador for Eye-Q through a combination of

- Exceptional personal care.
- Highest level of quality and technology in eye care.
- Complete integrity to the patient and his/her needs.

### **VALUES**

- honest and open in my communication and do what I say I will do
- I accept our individual & team responsibility and meet my commitments each & Be every time
- Our clinical & non-clinical team is supportive of each other's efforts and care for each other
- Give care, compassion & respect to patients and colleagues as I expect for myself
- I Will make a conscious effort to contribute in creating a social impact
- Will embrace and drive positive change
- Proud of Eye-Q

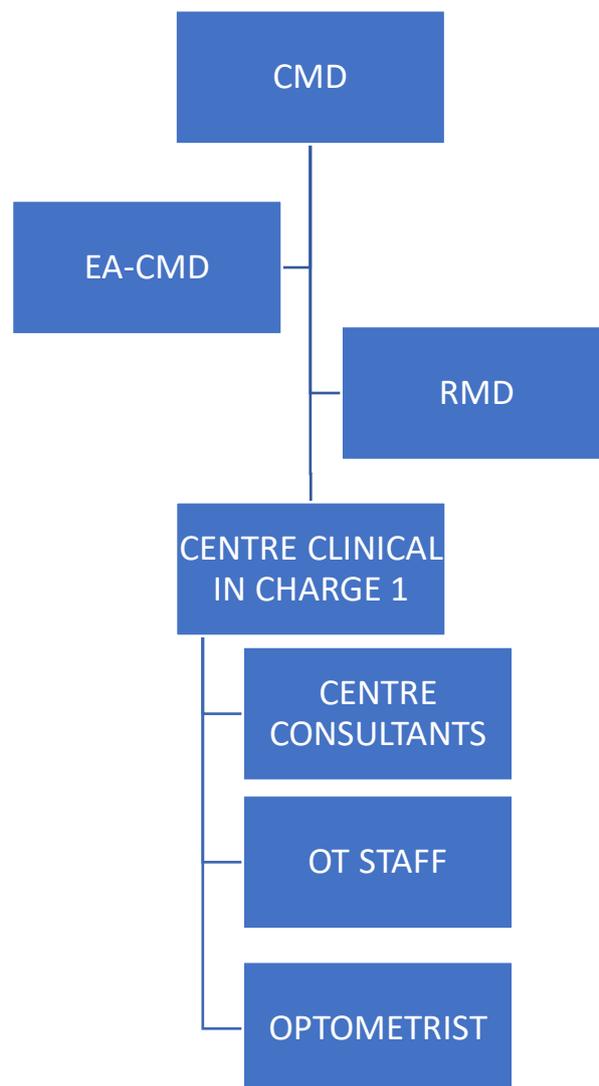
## SCOPE OF SERVICES

Comprehensive Eye Care	Pediatric Services
Cataract Service	Visual Aid Services
Refractive Services	Occuplasty Services
Retina Services	Optical Services
Glucoma Services	Pharmacy

## DIAGNOSTIC SERVICES

IOL master biometry	A scan
Auto-Refractometry	B-scan
Non =contact tonometer	YAG laser
OCT	Gonioscopy
Humfrey field vision	FFA
Keratomaetry	Pachymetry

## EYE -Q -Clinical Organization Structure



## EYE-Q Management Organization Structure

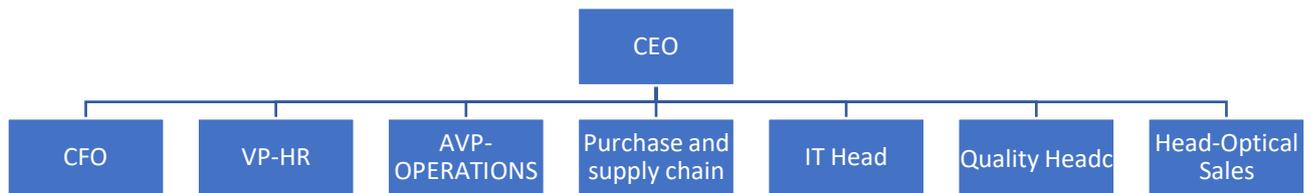
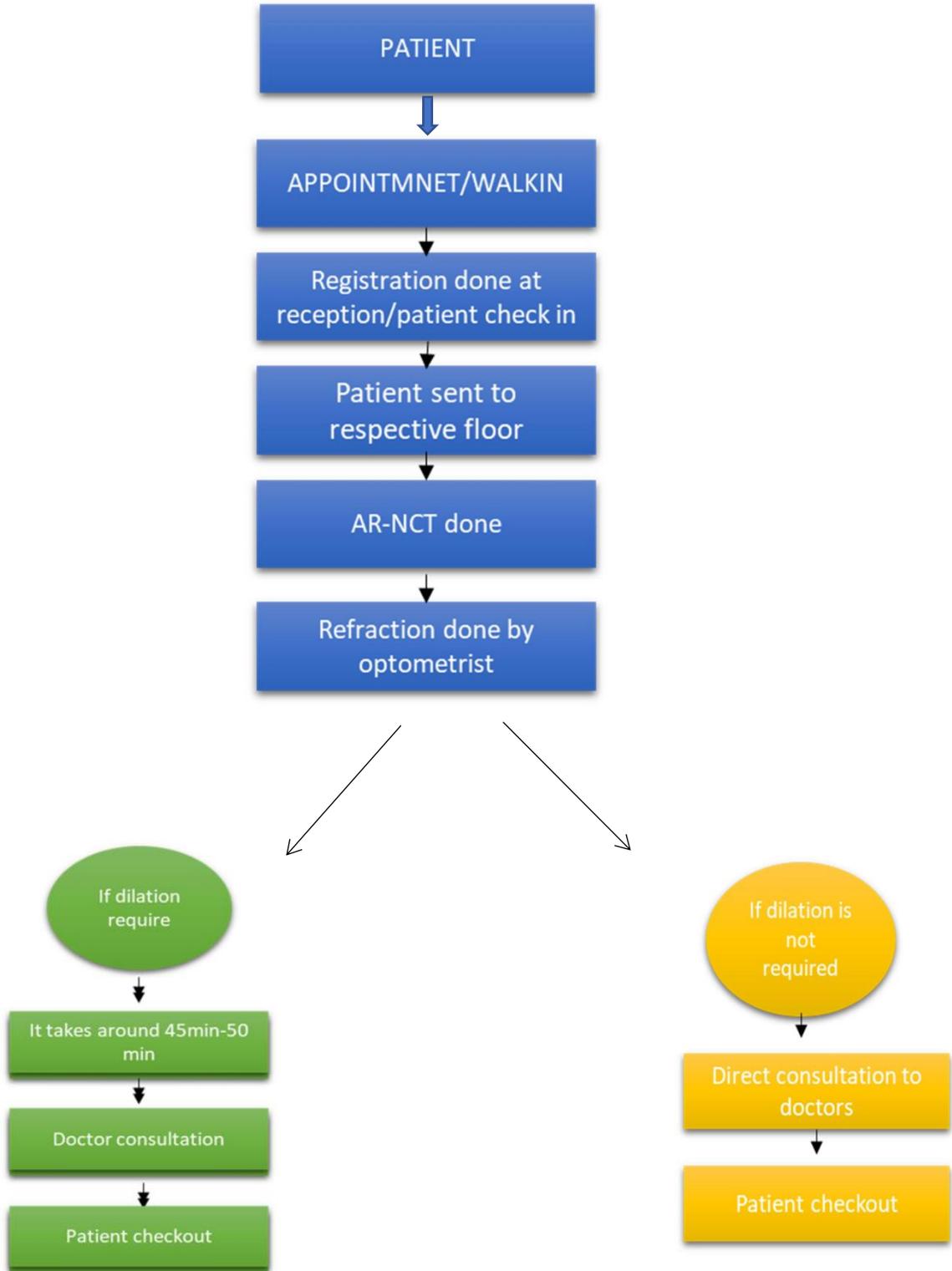


Figure 2

## PATIENT FLOW



# DISSERTATION REPORT

## TO REDUCE AND ANALYSE THE WAITING TIME OF OPD

### INTRODUCTION

The prolonged Turnaround Time (TAT) of OPD is one of the many everyday administrative issues facing today's modern hospitals and negatively impacts patient satisfaction and care.

The long waiting time in the outpatient clinic is a major cause of dissatisfaction in Eye care services. This study aimed to assess patients' waiting and service times in the outpatient Ophthalmology clinic. It is the time difference between when the patient arrives at the entrance door and exits the health facility.

The Out Patient Department (OPD) is the hospital's main point of contact. The care given in the OPD reflects the caliber of treatment given, which will then be reflected in the level of patient satisfaction. High waiting times can negatively affect patient satisfaction, which will therefore have an impact on the facility. Turnaround time is a crucial factor that significantly affects patient and staff satisfaction in the emergency department, according to Baker B. and Rochon J. (1989).

The primary goal of the Time Motion Study was to establish the timing requirements for the hospital's effective operations. If there was a set and precise time, the hospital might produce the best results. The hospital can make the most use of its tools and get the most out of the workforce.

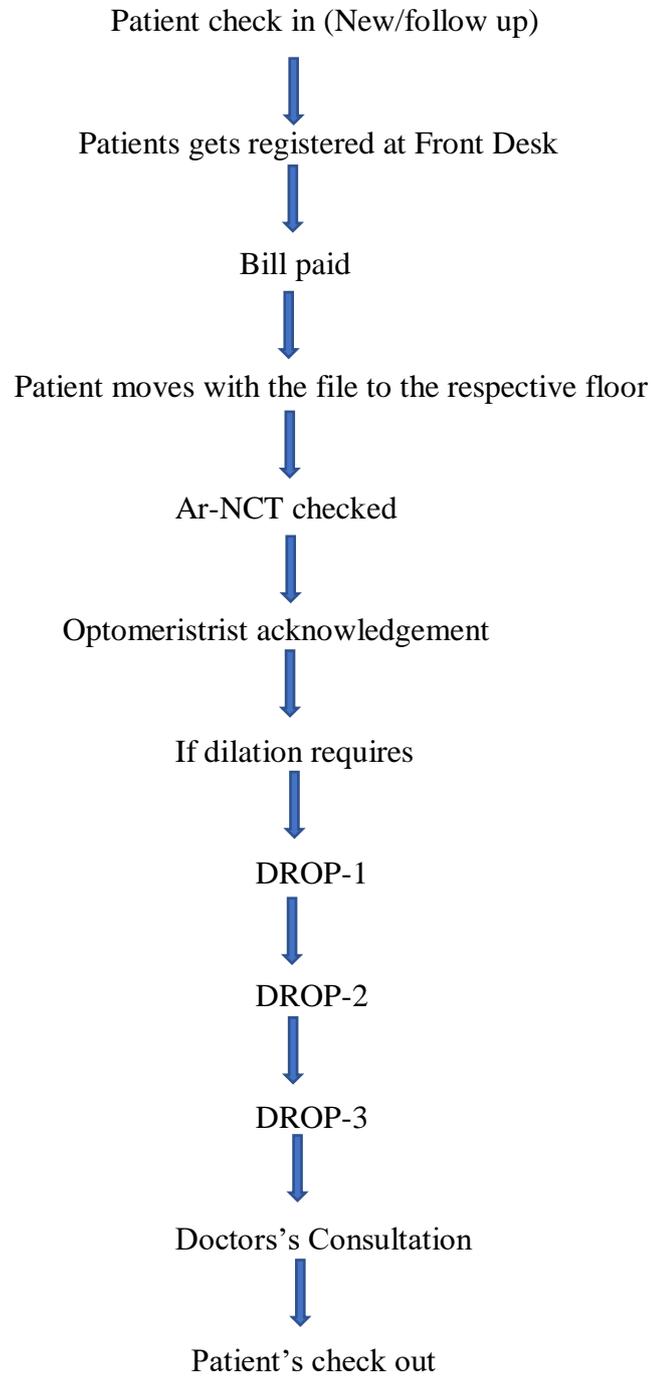
## **OUT PATIENT DEPARTMENT**

The initial encounter in the hospital is with the Out Patient Department (OPD). Hospital OPD treatment shows the calibre of the facility. Long wait times can negatively effect patient satisfaction, which will therefore have an impact on the facility. The patient path analysis will be discovered by this three-month investigation. The investigation is also known as a time motion investigation. The outpatient department offers treatment and diagnostics without necessitating an overnight stay for the patient. The hospital's OPD must be high-quality and time-efficient in order for the hospital output to be effective. It is as a result of the patient's 50–60% time spent in the OPD.

AR-NCT, REFRACTION, DILATION, DOCTOR CONSULTING, DIAGNOSTICS, COUNSELLING, and PMT are all parts of the OPD method.

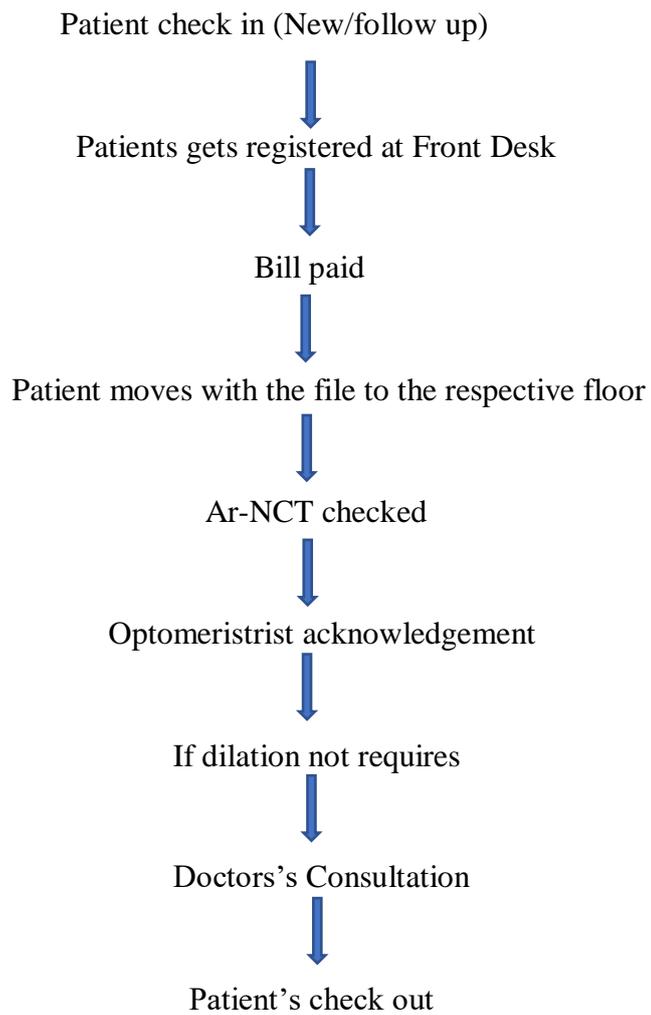
**Figure 3**

**FLOW CHART FOR DILATED PATIENT IN OPD**



**Figure 4**

**FLOW CHART FOR NON-DILATED PATIENT IN OPD**



## **RATIONALE**

This study will assist in identifying the primary factors that contribute to the outpatient department's discharge procedure being delayed. This issue affects many hospitals and eventually lowers patient satisfaction and foot traffic. As a result, this study will also offer suggestions for improved operations. The use of the Six-Sigma Methodology would aid in lowering patient wait times,

## **OBJECTIVES**

- To analyze and reduce the waiting timing of the OPD.
- To identify the factors that are responsible for high waiting time in the OPD.

## 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 were both used in conjunction with one another to get the same outcomes. We can estimate the waiting time in the billing department using the results of this study, and we can suggest practical ways to increase departmental efficiency. Finding out the outpatient department's process flow and measuring waiting times and patient satisfaction are the study's key goals. The study included 122 samples, and to examine the issue it used a histogram, control chart, Pareto diagram, and a cause-and-effect tool. The main reasons for billing delays included phone calls from different departments, patient prescriptions, slow cashiers, and Electronic Data Capture (EDC) machines.
2. **Determinants of patient waiting time in General Outpatient Department of a Territory Health Institution in North Western Nigeria, MO Oche, H Adamu-** This study was a descriptive cross-sectional one that was done in Nigeria. On 100 patients, the trial is being conducted. Convenience sampling was utilised together with a structured questionnaire. Statical Package for Social Sciences was used to analyse the data that was gathered, entered, and collected.
3. **A study on waiting time at the Outpatient Department of Private Secondary care Hospital, Bharathi Thiyagarajan-**According to the study, time motion study is a blend of motion study work and time study work. The optimal technique to do the task is revealed by the motion study, and the time study reveals how long it will take an average worker to complete the activity.

These two investigations have been combined and are typically conducted to upgrade and improve work.

4. **To identify caregiver's perceptions of reasons for patient journey delay at MoffittLong Hospital, Cristina Masello, Andrew D. Aurebach, Robert M. Watcher**-Files pile up at the ARNCT process as a result of poor communication between optometrists, which is more likely to be the cause of patient waiting. Patient waiting times are also impacted by personnel unavailability. The hospital staff members said there are a variety of explanations for why patients put off being checked out. It is important for hospital employees to communicate effectively with one another and to rethink established morning rituals in order to shorten patient journey TAT.
  
5. **Assessment of patient waiting time in Radiology Department (X-ray) in Avbrh Hospital, Sawangi (M), Wardha, Shivam Bahe, and Deepika Kanyal**- The primary goal of this prospective cross-sectional study research was to evaluate the length of time patients had to wait in the radiology department. The results were expected to show that the waiting time should be reduced, and the study was successful because it did not result in patient dissatisfaction.

## **METHODOLOGY:**

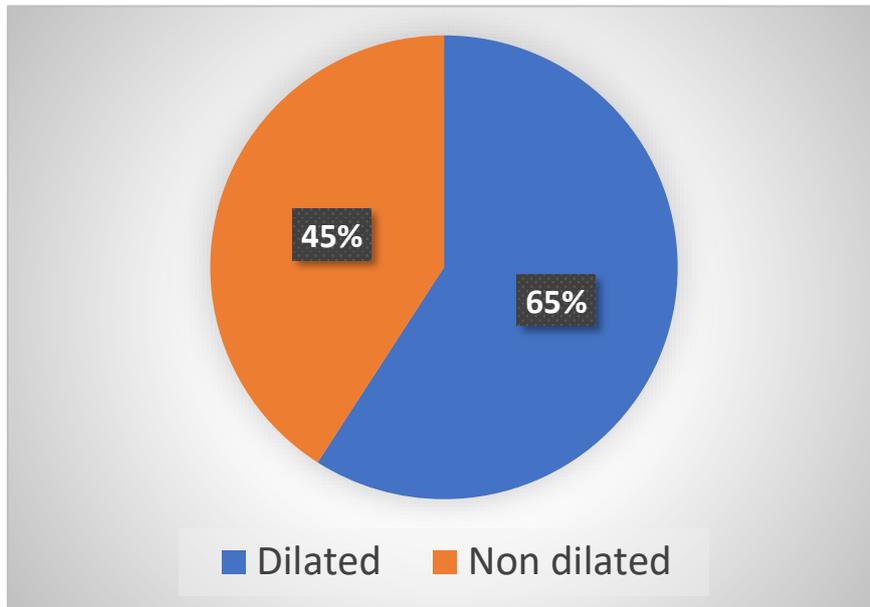
- **STUDY DESIGN**- The study is an observational study with the objective of understanding of reducing turnaround time in outpatient departments

- **STUDY AREA-** The study has been done in the Outpatient Department of EYE-Q Hospital, Kanpur First and second floors.
- **STUDY POPULATION-** The study population includes all the appointment patients. Both categories of Patients, dilated and not-dilated includes in the study.
- **STUDY PERIOD-** The study has been conducted for two months from February 2022 to April 2022.
  
- **SAMPLE SIZE-** The study is conducted among 250 patients. Daily 8 to 10 samples are collected for study for 1 month (April).
- **DATA SOURCE-** Collects the primary data with the help of EMR.
- **DATA ANALYSIS-** MS- EXCEL

## RESULTS

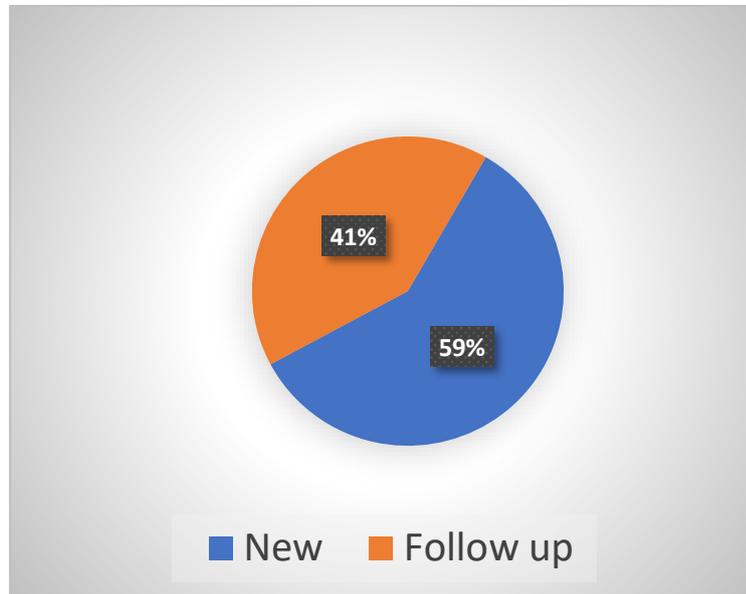
The study was conducted among the 250 patients both dilated and non - dilated. Among which 45% are non-dilated and 65% are dilated.

**Figure5. Pie chart showing the percentage of dilated and Non-dilated patients.**

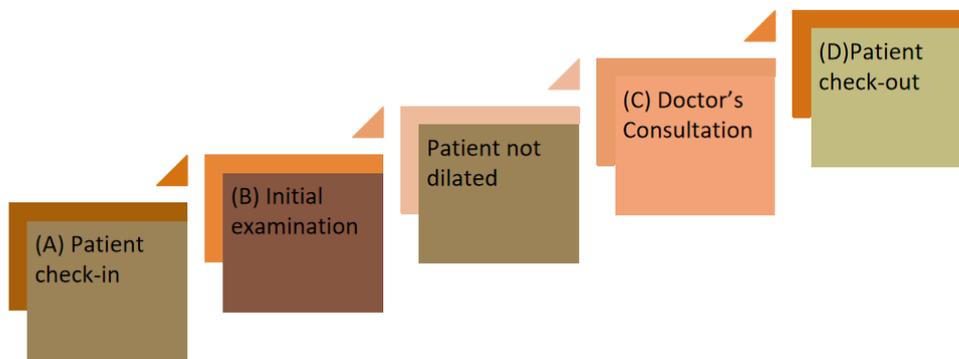


There are two types of patients visit the hospital. These are new patients and follow -up patients. In our study, there is 59% are New Patient and 41% are review patients.

**Figure 6. Pie chart showing the percentage of new, follow-up patients**



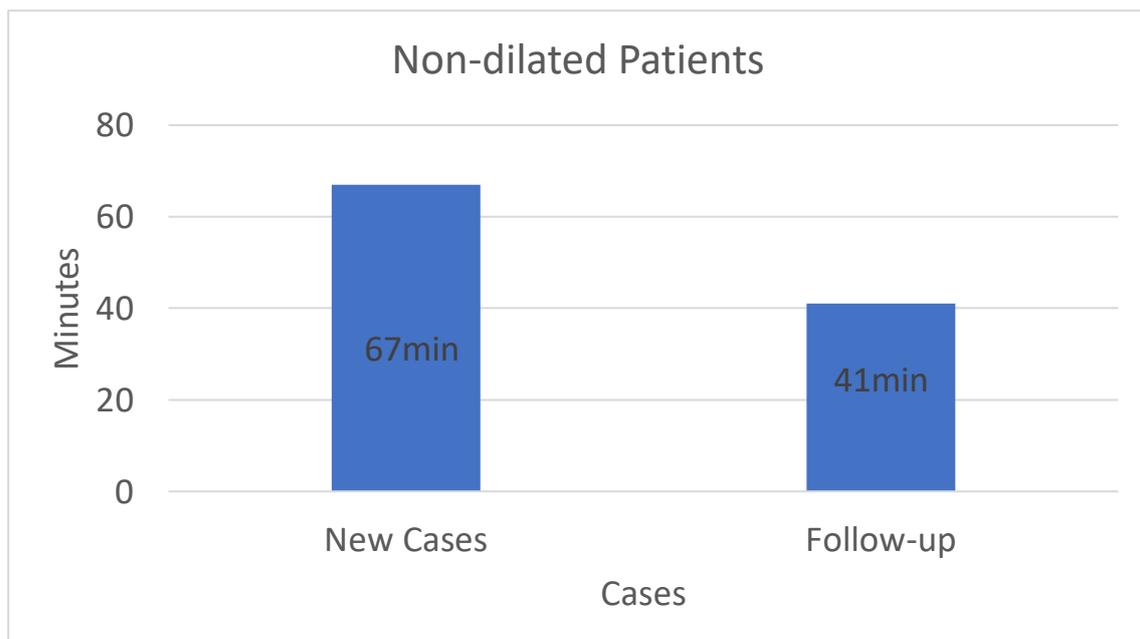
**Figure7. Patient Journey TAT: Non-Dilated Patients**



### TAT OF NON-DILATED PATIENTS

Figure 8- Depicts the average time of new and follow -up non-dilated patients. Among 65% non -dilated patients 41% are the follow up and 59% are the new patients. The average time for the new patients and follow up has minor difference.

**Figure8. Showing average time among new & follow-up patient non-dilated Patients.**



**Figure 9 . Patient TAT journey: Dilated Patients**

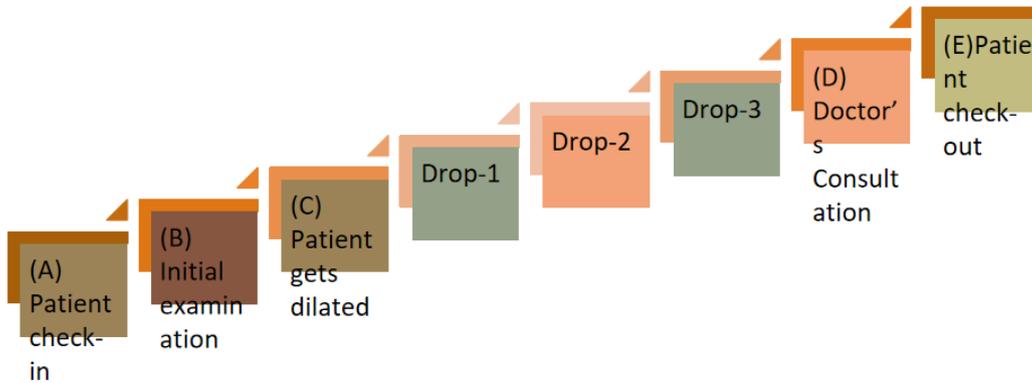


Figure 10 - Depicts the average time of new and follow -up dilated patients. Among 65% dilated patients 59% are the follow up and 41% are the new patients. There is huge difference in average time of follow -up patients and in new patients.

**Figure10. Showing average time among new patient & follow-up patient dilated patients.**

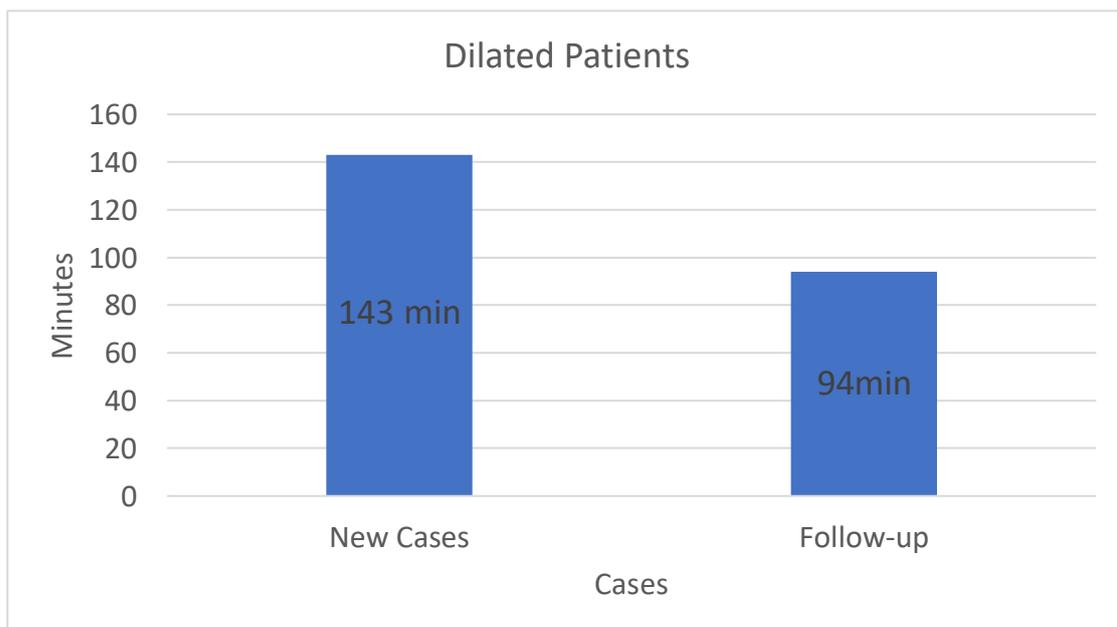
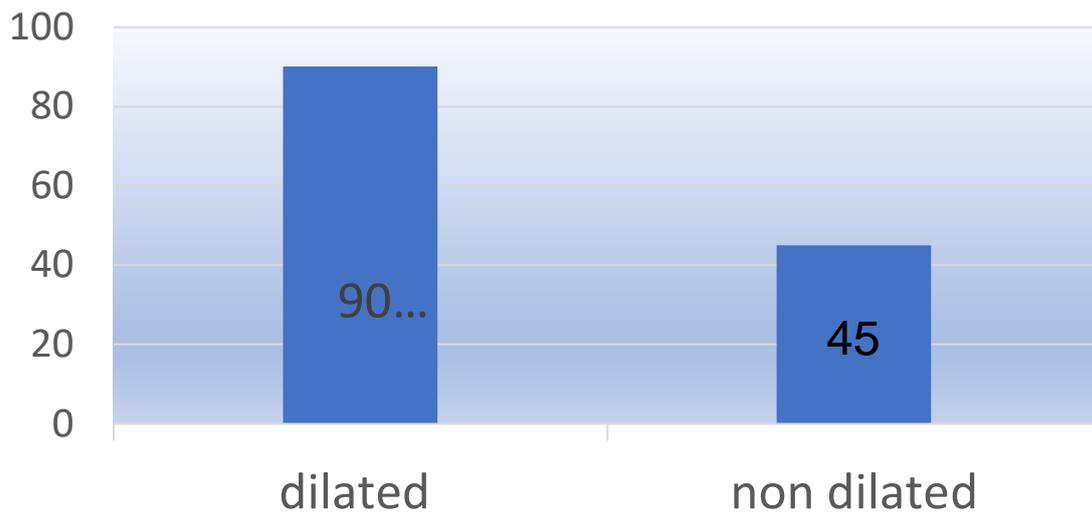


Figure 11 - Showing the ideal time for the Dilated and Non- Dilated patients. Dilated patients take around 45 min more than the Non-dilated patients.

**Figure11 .Ideal timing of Dilated and Non-dilated patients**



## OBSERVATIONS

According to the study, both patients with and without dilated pupils have typical wait times that are within the standard. The benchmark is 45 minutes for non-dilated patients and 90 minutes for dilated individuals. In addition, it has been noted that the majority of patients in hospitals experience excessive wait times. The length of time varies depending on the technique and the main complaints.

While some other findings cause patients to have a timing lag

- **High Patient Load:** A significant number of patients seeking eye care services can lead to longer waiting times. If the hospital is understaffed or lacks resources to handle the volume of patients, it can contribute to delays.
- **Inadequate Appointment Scheduling:** Poor appointment scheduling practices can result in overbooking or uneven distribution of patients throughout the day. This can lead to congestion and longer waiting times for patients.
- **Complex Cases and Specialized Services:** Some patients may require more time and attention due to complex eye conditions or the need for specialized services, such as retinal examinations or surgeries. These cases can cause delays for other patients waiting to be seen.
- **Delays in Initial Assessments:** If there are delays in conducting initial assessments, such as eye tests or preliminary examinations, it can prolong the waiting time for patients. Limited availability of diagnostic equipment or shortage of trained staff can contribute to such delays.
- **Doctor Availability and Efficiency:** Insufficient number of eye specialists or inefficient time management by doctors can result in longer waiting times. If a doctor is running behind schedule or spends excessive time with each patient, it can cause delays for subsequent patients.

- **Lack of Communication and Information Flow:** Inefficient communication among healthcare staff, delays in relaying information or test results, or poor coordination can contribute to prolonged waiting times.

## RECOMMENDATIONS

- **Improve appointment scheduling:** Implement an efficient appointment scheduling system that accurately estimates the time required for each appointment. Avoid overbooking and ensure that the schedule allows for adequate time with each patient. Consider using technology solutions like online appointment booking systems or mobile apps to streamline the process.
- **Increase staffing levels:** Assess the current staffing levels and determine if there is a need to hire additional doctors, nurses, or support staff. Sufficient staffing can help manage patient flow more effectively and reduce waiting times.
- **Optimize workflow and processes:** Conduct a thorough analysis of the OPD workflow to identify bottlenecks and areas of improvement. Streamline administrative processes, such as registration and insurance verification, to minimize waiting times. Implement electronic health record (EHR) systems to enhance efficiency and accessibility of patient information.
- **Regularly review and monitor performance:** Continuously evaluate and monitor the OPD's performance metrics, including waiting times and patient satisfaction surveys. Identify areas that require improvement and implement necessary changes based on feedback and data analysis.

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