Summer Training at
Kokilaben Dhirubhai Ambani Hospital &Medical Research Institute, Mumbai
(April 3 to June 2, 2017)

Study and Evaluation of Turn Around Time Between Surgeries in Operation Theater

By
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Under the guidance of
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MBA Hospital & Health Management
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Institute of Health Management Research
The IIHMR University, Jaipur
2017

INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

CERTIFICATE

This is to certify that **Dr. Prachi Dhingra** has undergone summer training in **Kokilaben Dhirubhai Ambani Hospital, Mumbai,** from 3rd April to 2nd June 2017.

The candidate herself completed the project assigned to her during summer training. Her approach to the project was sincere and proactive. This summer training is in partial fulfillment of the course requirement recommended for the award of MBA in Hospital and Health Management.

I wish her success in all her future endeavors.

Col. (Dr.) Ashok Kaushik

Dean (Academic & Student Affair)

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Kokilaben Dhirubhai Ambani
hospital & medical research institute

Every Life Matters

02nd June 2017

To whomsoever it may concern

This is to certify Ms. Prachi Dhingra from IIHMR Jaipur has successfully completed an internship with the clinical administration department at Kokilaben Dhirubhai Ambani Hospital from 01/04/2017 to 02/06/2017.

During her tenure, she has worked on the following projects:

- " Study & Evaluation of Turn Around Time between surgeries in OT"
- "Study of Infection related indicators in the Intensive Care Unit"

Her performance was satisfactory and we wish her success in her future endeavors.

Dr Ram Narain
Executive Director

for

Dr.Milind Khadke
GM (Clinical Administration)

DECLARATION BY THE CANDIDATE

I hereby declare that the project entitled **"STUDY AND EVALUATION OF TURN-AROUND TIME BETWEEN SURGERIES IN OPERATION THEATER"** is the original work done by me at **Kokilaben Dhirubhai Ambani Hospital**, Mumbai. This work in part or full has not been submitted to any other Hospital.

ACKNOWLEDGEMENT

First and foremost I am grateful to the **Almighty** for blessing me to complete this project successfully.

I am extremely thankful to my College President, **Dr. Vivek Bhandari** and my mentor **Dr. Anoop Khanna** for their inspiration, time to time knowledge and valuable support.

I am extremely thankful to all the professionals at Kokilaben Dhirubhai Ambani Hospital for sharing their knowledge and precious time which inspired me to give my best during my summer internship.

I am extremely thankful to esteemed Executive Director of Kokilaben Dhirubhai Ambani Hospital, **Dr. Ram Narain** for his unwavering encouragement, valuable advice and expert guidance with patience and perseverance over this project. He has inspired me to never cease to seek knowledge and understanding.

I would also like to acknowledge **Dr. Milind Khadke** and **Dr. Nilesh Gumardar** for their valuable support, without whom the project would not have seen the light of the day.

Lastly, I thank all my friends for their help and co-operation throughout the project.

Acronyms/Abbreviations:

A&E- Accident and Emergency

LAMA – Leave against medical Advice

HCA-Health Care Assistant

ALOS- Average Length of Stay

CMD-Chief Medical Director

COO-Chief Operating Officer

CGHS-Central Government Health Scheme

CSSD-Central Sterile and Supply Department

CT-Computerized Tomography

ECG-Electro Cardiogram

TMT-Trade Mill Test

EEG-Electro Encephalography

EMG-Electro Myography

HOD-Head of Department

HRD-Human Resources Department

ICU-Intensive Care Unit

SICU-Surgical Intensive Care Unit

MICU-Medical Intensive Care Unit

HDU-High Dependency Unit

NICU-Neonatal Intensive Care Unit

IPD- In-Patient Department

KDAH-Kokilaben Dhiruben Ambani Hospital

MRD-Medical Records Department

History of Kokilaben Dhirubhai Ambani Hospital

In January 2007, an invigorating voyage begun with the opening of Kokilaben Dhirubhai Ambani Hospital and Medical Research Institute in Mumbai. A tribute by Mr. Anil Ambani and Mrs. Neeta Ambani to their dad in-law Mr. Dhirubhai Ambani, and devoted to their relative Mrs. Kokilaben Ambani. The aim was to make exhaustive and world-class social insurance accessible, open, and moderate to Indians; connect the crevices in the current human services texture; and engage patients and their families to settle on educated restorative decisions. Briefly, to change the way India sees medicinal services.

The healing center venture was started in 1999 by Dr. Nitu Mandke as a huge scale heart doctor's facility. Dr. Nitu Mandke was conceived in 1948 in a white-collar class family. He was the principal part in his family, to pick pharmaceutical as a calling with an assurance to wind up plainly a heart specialist.

He joined B. J. Therapeutic College, Pune from where he passed his M.B.B.S. in 1970, came to Mumbai for additionally thinks about and finished his Super Specialty course in Cardiovascular Surgery. He put in near 8 years working with widely acclaimed figures in Cardiac Surgery like Dr. Magdi Yacoub in England and Dr. Kirklin and Dr. Pacifico at the University of Alabama in the United States. He was an all-rounder with commendable capability in sports, expressions, dialects, arithmetic et cetera.

With extraordinary enthusiasm Dr. Mandke manufactured a significant bit of the healing center building. Tragically, his fantasy was stopped by destiny when he surrendered to an enormous heart assault in May 2003; leaving a fantasy unfulfilled and incomplete.

The administration of Mandke Foundation moved toward Reliance Group, who charitably assumed control over this venture and formed it into a standout amongst the most current and best in class multi-forte tertiary care doctor's facilities; naming the organization as – Kokilaben Dhirubhai Ambani Hospital and Medical Research Institute.

Out of appreciation for the initiator, the healing facility's Medical Convention Center has been apropos committed to the memory of Dr. Nitu Mandke.

PROFILE OF KOKILABEN DHIRUBHAI AMBANI HOSPITAL

Kokilaben Dhurubhai Ambani Hospital and Medical Research Institution is India's freshest most progressive tertiary care office. As the lead, social activity of Anil Dhirubhai Ambani gathering, it is intended to raise India's worldwide remaining as a human services center point, with accentuation on greatness in clinical administrations, symptomatic offices and research.

The healing facility is huge CSR activity from Reliance Anil Dhirubhai Ambani gathering. It is intended to raise India's worldwide remaining as a social insurance center point, with accentuation on brilliance in clinical administrations, symptomatic offices and research exercises.

It is the main clinic in Mumbai to work with a Full-Time Specialist System that guarantees the accessibility and survey to the best restorative ability all day and all night. The 750-beded healing facility has 103 full time specialists, 520 medical caretakers and around 200 paramedical and developing.

Kokilaben Dhirubhai Ambani Hospital is completely outfitted as far as ability, innovation structure and soul to reshape recognitions with respect to healing facilities and reclassified the idea of minding. Undoubtedly, this all inclusive benchmarked establishment denotes the start of another time in Indian social insurance.

VISSION

We expect to be a worldwide medicinal services foundation that joins the best in therapeutic treatment with solid moral standards and a culture of care and sympathy.

MISSION

To be a foundation that offers exhaustive quality social insurance benefits under one rooftop through straightforward patient-driven care guaranteeing understanding wellbeing, security and pride. An establishment where **Every Life Indeed Matters**.

VALUES

- **INTEGRITY:** To deal with all stakeholders in a spirit of fairness and integrity
    - Patients
    - Partners
    - Employees
    - Vendors
    - Community
- **TRANSPARENCY:** To regard the patient's rights to know at each touch point by giving data that is clear, succinct, significant and straightforward.
- **MAXIMUM CARE:** To re-assess each doctor's facility framework, process and system to guarantee that patient and their friends and family get most extreme care and solace.
- **SELF IMPROVEMENT:** To ingrain a procedure of learning and self-change at each level through constant preparing, centered research and companion survey.
- **PATIENT DIGNITY:** To shield the pride of patients by securing their distinction and protection consistently.
- **SOCIAL RESPONSIBILITY:** To devote itself to satisfying its duty in social administration, group wellbeing, and natural security.

- **PATIENT SAFETY:** To assume liability in building a culture of wellbeing and to impart a "Simply" culture elevates understanding security to make social insurance more secure for everybody.

- **PASSION FOR EXCELLENCE:** To have faith in having an enthusiasm for perfection in each part of the work we do; in the general conveyance of administration to our clients, in guaranteeing that we meet the most astounding universal guidelines.

QUALITY COMMITMENT

The Kokilaben Dhirubhai Ambani Hospital is accredited by the **Joint Commission International (JCI)** and the **National Accreditation Board for Hospitals & Healthcare Providers (NABH)** as a commitment to quality and safety, which are the core mission and vision.

Under the direction of the Executive Director, the Office of Clinical Quality designs and leads safety and quality programmes throughout the hospital. Kokilaben Dhirubhai Ambani Hospital's authority uniquely aim to achieve highest levels of quality and safety by engaging doctors, nurses, therapists and other staff as well as partnership with the patient and their family members. A culture of continuous quality improvement is cultivated and encouraged to provide the patients a safe environment to receive the highest quality care. The methodology used to achieve this includes:

- Identification, development and strengthening of policies, procedures and protocols.
- Maintenance of ethical medical and nursing practices.
- Practice of evidence-based medicine of the highest standard.
- Practice of safe medication practices.
- Identification and prevention of errors.
- Performance review through well-defined key indicators.
- Respect and protection of patient rights.
- Quantification and measurement of patient satisfaction.
- Stringent hospital infection control guidelines.
- Compliance with bio-medical waste management rules.
- Constructive dialogues with the patients and their families to encourage participation and compliance in the treatment process.
- Engagement of the patients and their families in safety.

- Effective use of resources.
- Cost-effectiveness management.
- Antimicrobial stewardship programmes and monitoring antibiotic use.

Kokilaben Dhirubhai Ambani Hospital is committed to the patient as well as the community at large, by delivering the best possible care every time while dedicating themselves to continuously improving the way to do things driven by evolving data, benchmarks, and best practices.

Kokilaben Dhirubhai Ambani Hospital's success as an institution depends on the quality of care provided to each and every patient. Their expert team of doctors, nurses, therapists, and staff is committed to providing safe, quality and cost-effective care to all, maximizing potential and exceeding expectations.

ACCREDITATIONS

- **Joint Commission International (JCI) Accreditation, USA**

Kokilaben Dhirubhai Ambani Hospital is proud to be in the league of the world's leading JCI accredited healthcare providers. JCI is a benchmark for quality healthcare worldwide. Kokilaben Dhirubhai Ambani Hospital has met the international set of standards laid by JCI covering patient safety, continuity of care, continuous quality improvement, patient and family education and medication management. This accreditation stands testimony to our commitment towards patient safety and continuous quality improvement.

Organization Accredited
by Joint Commission International

- **National Accreditation Board for Hospital and Healthcare Providers (NABH) Accreditation, India**

Kokilaben Dhirubhai Ambani Hospital, has attained NABH accreditation. NABH (accredited by ISQua, International Society for Quality in Healthcare) has been set up to bring the world's best healthcare quality standards to India by focusing on patient care &, safety, and continuous quality improvement. The hospital is committed to establish a culture of quality, patient safety, efficiency, and accountability. It is protocol-driven and reflects global practices.

STUDY AND EVALUATION OF TURN-AROUND TIME IN OPERATION THEATER

INDEX

INTRODUCTION

- Delays in the working room negatively affect its effectiveness and the workplace and they contrarily influence both, patients and the social insurance specialists.
- Although, not all postponements specifically influence understanding wellbeing, they frequently increment nervousness for patients and their families and are a wellspring of disappointment for specialists and other staff.
- Peri-agent delays happen upon the arrival of the planned operation and incorporate deferrals getting to the working room and postponements amid the operation.
- Peri-agent delays are seen to be wasteful and undesirable since they go about as boundaries to ideal patient stream and are a wellspring of disappointment, yet their causes and effect on understanding consideration and asset use are not all around characterized.
- However, answers for wasteful aspects in the working room can't be contrived unless the postpones that happen upon the arrival of surgery are better caught on.

SIGNIFICANCE

- The time saved can be used for other purposes by surgeons and anesthetists, such as extra-operative patient care, teaching and research.
- For operating room staff, the additional free time can be used to help with other aspects of overall operating room function.
- For patients, performing operations on time would improve satisfaction with their experience at the hospital.

CURRENT STATUS

- Currently in the health sector, there is no accord about how best to screen delays or arrange their causes.
- A examine on working room productivity looked at the pervasiveness and reasons for peri-operative delays previously, then after the fact instructive mediations.
- Sophisticated quantitative models have likewise been utilized to distinguish streamlining methodologies for working room proficiency.
- Other ponders have endeavored to measure working room delays, concentrating on delays coming about because of turnover between surgeries, induction into the post-operative care unit and non-operative time.
- Hospital records may give data about the predominance of deferrals getting into the working room, yet they don't archive the heap postpones that happen amid surgery, nor do they record the reasons for the postponements.
- Hence, in spite of the way that peri-agent delays are experienced day by day by both specialists and patients, these deferrals and their causes still can't seem to be consistently and altogether archived.

AIM

To Reduce the waiting time of patients in Operation Theatre in Kokilaben Dhirubhai Ambani Hospital.

OBJECTIVES

- To study the patient flow in Operation Theatre.
- To study the average time spent by the patient in wards/ICU/Recovery Room before the commencement of Operation.
- To study the determinants of patient's delay in Operation Theatre in KDAH.
- To analyse and prioritize the causes which are leading to increase in waiting time of patients in OT.
- Based on the analysis, suggesting measures to reduce the waiting time of OT which are economically viable, environmentally sound and socially responsible.

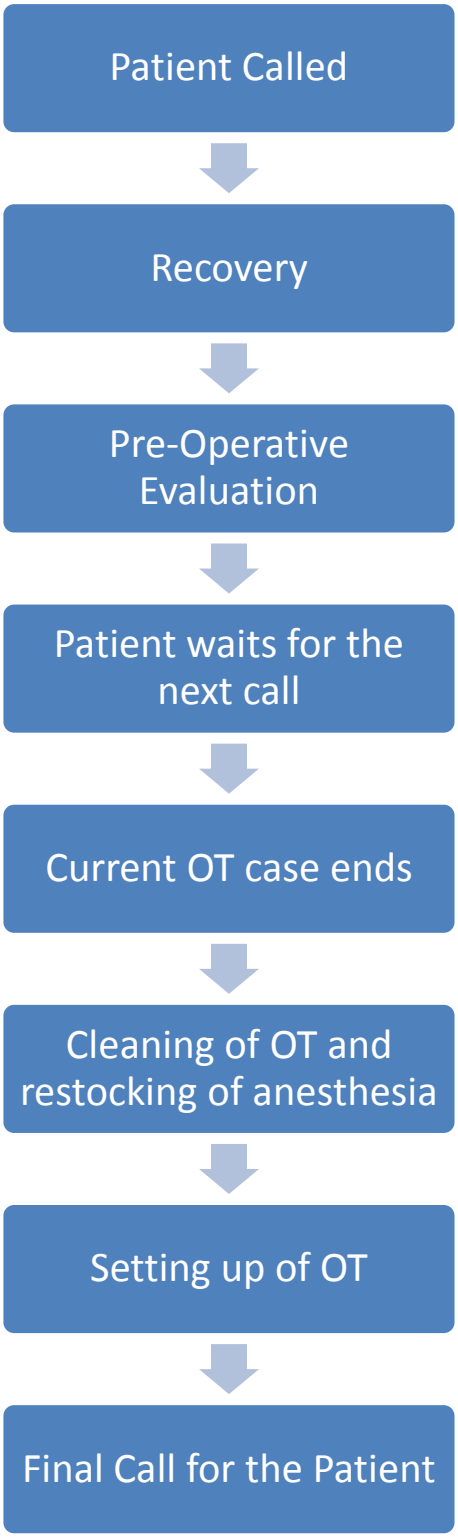
REVIEW OF LITERATURE

- **Janice wong; et al** in their study of **Delays in the Operating Room, signs of an imperfect system** concluded that delays frequently occur in the operating room and have a major effect on patient flow and resource utilization. Thorough documentation of perioperative delays provides a basis for the development of solutions for improving operating room efficiency and illustrates the principles underlying the causes of operating room delays across surgical disciplines.

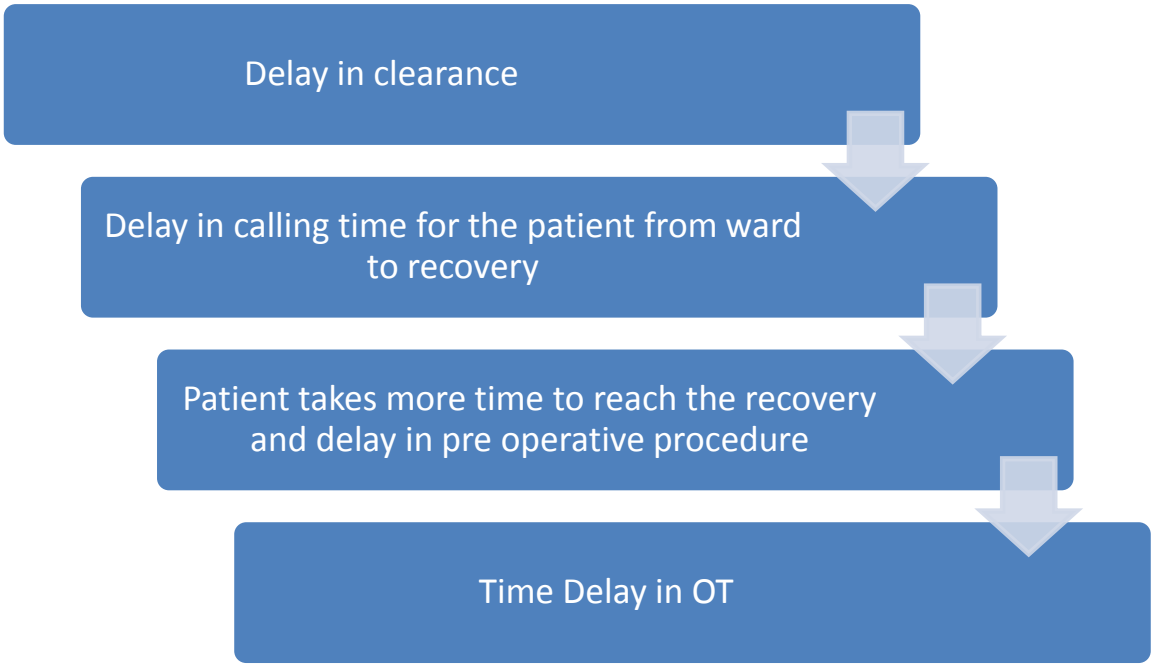
- **Higgins VJ; et al** in their study of **Managing and Avoiding Delays in Operating Theatres: a qualitative, observational study** concluded that strategies aimed at addressing operating theatre delays are unlikely to achieve their desired aims without a more detailed understanding of medical decision making and work practices, and the intra- as well as inter-professional hierarchies underpinning them. While the nature of surgical work poses some challenges for measures designed to address delays, it is also necessary to focus on surgical practice in devising workable solutions.

- **Harvey SC; et al** in their study of **Successful Strategies for improving Operating Room Efficiency** concluded that significant improvements in operating room efficiency is achieved by analyzing operating room data on causes of delays, devising strategies for minimizing the most common delays, and subsequently measuring delay data. Personal accountability, streamlining of procedures, interdisciplinary team work, and accurate data collection are all important contributors to improved efficiency.

PROCESS FLOW IN OPERATION THEATRE



ANALYSIS

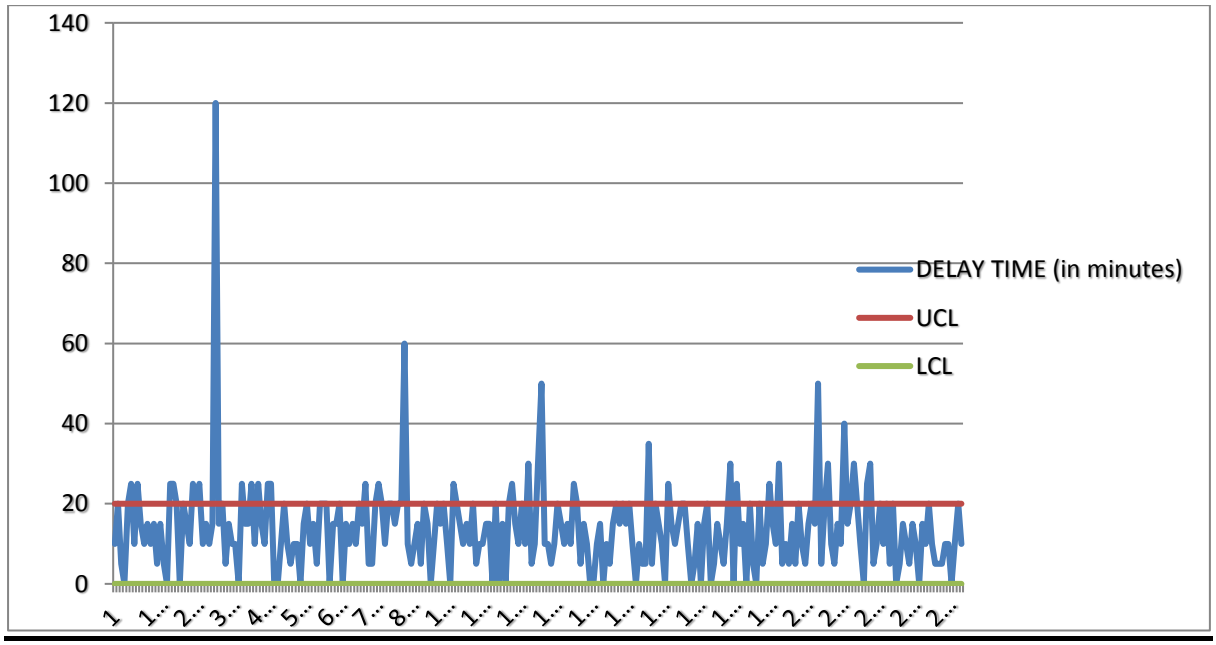


- Significant number of non-conceded cases in the OT planned rundown prompts more possibilities for the cancelations of systems that bit by bit gets all the more rescheduling the booked rundown which is a considerable measure of tedious and time squandering process.
- A part of disorder at the nursing station.
- Maximum number of first surgeries don't begin on genuine planned time which prompts delay for the successive surgeries.

PROBLEM DESCRIPTION

Project Title: To study and evaluate the turn-around time between surgeries in operation theater		
PROBLEM	**CUSTOMER IMPACT**	**BUSINESS IMPACT**
Delay between surgeries	Customer Dissatisfaction	Decrease in trust value.

CONTROL CHART

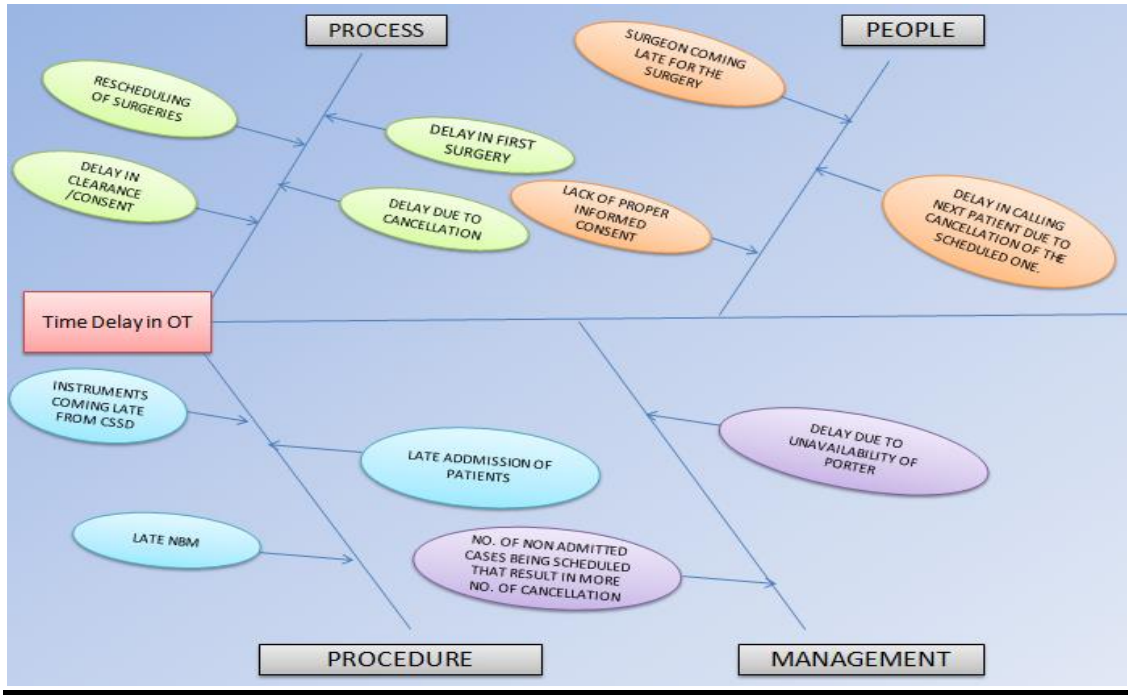


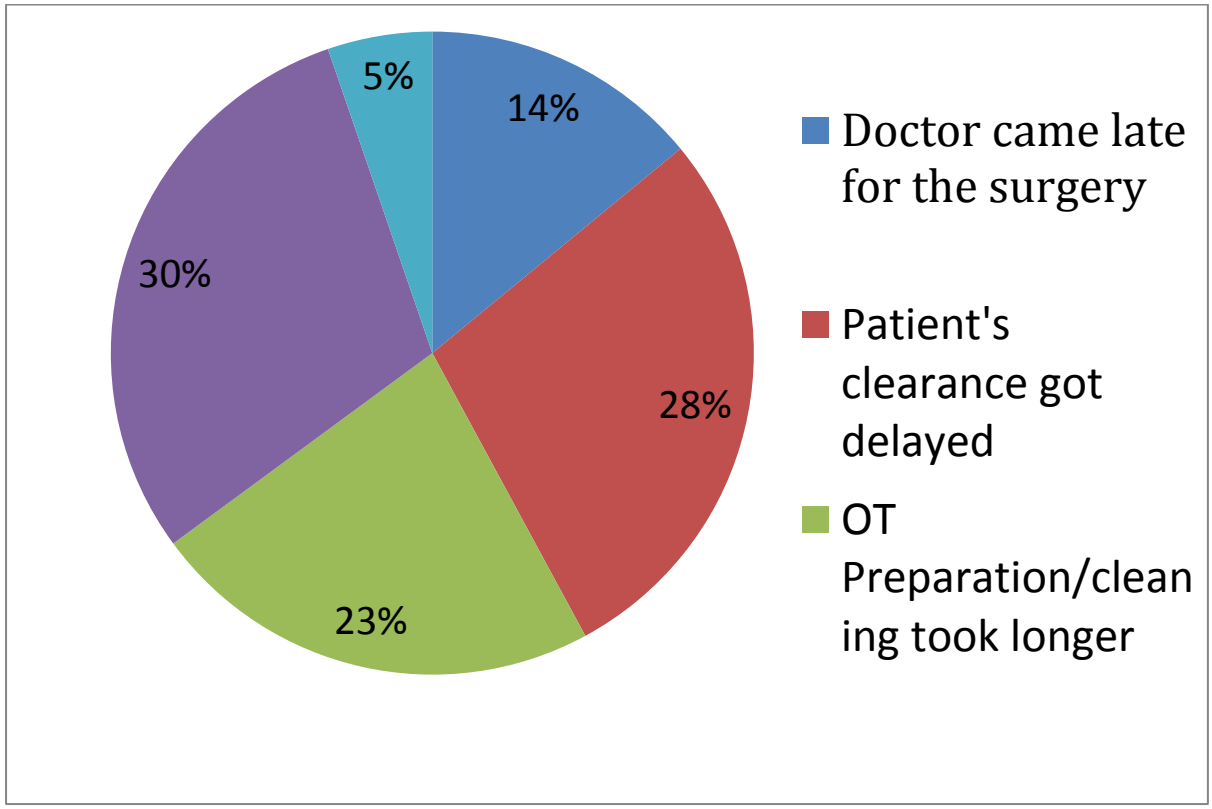
OBSERVATIONS AND FINDINGS

- The Turnover Range deviates between 0-20 minutes.
- Considering 20 mins as the ideal turnover time, the opportunity would be all those cases that take more than 20 minutes.
- 78.3% of cases are above 20 minutes.

CAUSES	***SOLUTIONS***
Rescheduling of Cases	Proper Planning and work up of cases before scheduling of cases.
Unavailability of Accessories	Increase the number of accessories which have multiple uses and planning of accessories between stores and theatre staff.
Delay in preparing OT	Availability of proper cleaning crew for faster TAT.

ROOT CAUSE ANALYSIS





RECOMMENDATIONS

- Patient clearance ought to be done prior to the surgery.
- Reducing the quantity of cancelation by diminishing the defer time that happens close by hand-overing of patient's clearance.
- Limiting the quantity of non-admission cases that in the long run falls into cancelation and that prompts rescheduling of the surgeries.
- Can limit some time from the Opthalmic surgeries.
- A digitalized screen in the OT that shows which surgery will be performed or occur in which of the OT with legitimate data about the patient, calling time and patient clearance status.
- The research findings recommend that there are two key difficulties required in tending to working theater delays:
  - unanticipated issues in the clinical state of patients, and
  - the limit of specialists to control their own time.
- These challenges make unavoidable delays because of the possibilities of surgical work and compeding demand on specialists' time.
- The results also found that surgical staff also plays a major part in deflecting and suspecting delays.
- Differences in proficient specialist are huge in affecting how working theater time is overseen.
- Strategies gone for tending to working theater delays are probably not going to accomplish their coveted points without a more nitty gritty comprehension of therapeutic basic leadership and work hones, and the intra-and in addition

between proficient progressions supporting them.

- Perioperative framework delays are a typical sort of mistake in the working room.

- Furthermore, an underlying deferral is related with extra ensuing postponements, spreading an endless loop.

- Thorough documentation of perioperative deferrals and their causes in various surgical subspecialties might be a helpful approach to begin planning answers for enhance working room effectiveness.
