A STUDY ON SANITATION ERROR AND TURNAROUND TIME OF PATIENTS IN OPERATING THEATRE

- Third Party Administrator
- Safety Reporting Survey

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P. D. HINDUJA HOSPITAL
& MEDICAL RESEARCH CENTRE

OVERVIEW of HOSPITAL

The P.D. Hinduja National Hospital and Medical Research Centre is a multi-speciality, tertiary care hospital in Mumbai. It was founded by PARMANAND DEEPACHAND HINDUJA. Opened in the year of 1951. It's Chief Executive Officer is Gautam Khanna. It is ranked the 6th best hospital in India, and 3rd best among the private hospitals in India.

It is a 400 bed ultra-modern multi-speciality tertiary care hospital. The hospital represents three strong pillars of healthcare – academics, research and clinical work. The hospital has been at the forefront of adapting new technology being the first hospital in India to acquire Gamma Knife and start a NAT Blood testing.

ACCREDITATION/ CERTIFICATION

- CAP Accreditation
- NABL Certificate of Accreditation
- HACCP
- NABH
- ISO 27001:2005 Information Certification

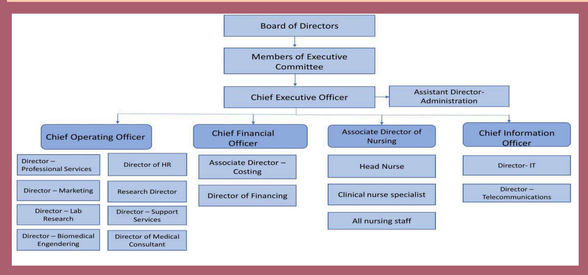
MISSION

To create Hinduja Hospital as a world class medical institution by delivering quality medical care to all patients, as well as counting medical education to all the doctors and training to nurses and by undertaking basic and clinical research with a focus on the needs of the country.

VISION

To provide affordable and Quality Healthcare services in all medical specialties to the local, national and international community.

ORGANIZATIONAL STRUCTURE



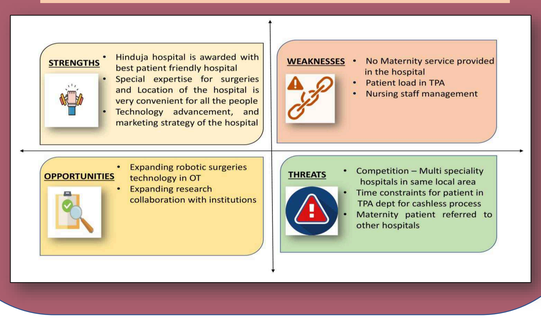
LEARNING AND VALUE ADDITIONS

- Along with academic study, an internship opportunity helped me to put the skills and knowledge into practice.
- internship in the Hospital Management field gave me a chance to develop the professional network within an intended career field, and opportunity to work in the hospital under experienced professionals.
- To study the turnaround time (TAT) between surgical cases.

THEORETICAL WORK VS PRACTICAL EXPOSURE

- Theoretical work helped to understand the concepts and how it exactly works while practical exposure, working in the hospital helped me to apply my skills and knowledge in certain situations.
- Practical Exposure helped me to focus on day-to-day activities in the hospital project which also, helped me to be confident in what work I'm doing. While, theoretical work helped me to understand the concepts, information, and facts about a subject.

SWOT ANALYSIS

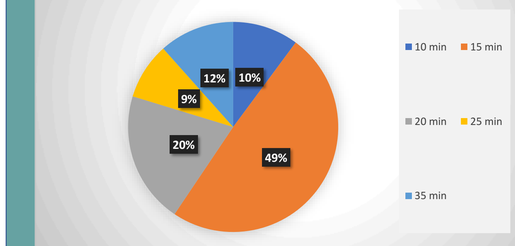


USEFULNESS OF INTERNSHIP

- This summer internship gave me an access to a variety of projects and departments of the hospital.
- The induction process during the internship provided me with the depth knowledge of every department in the hospital.
- To understand the overall process of operation theatre, and sanitation steps to be followed in each operating rooms.
- To better understand the Third Party Administrator functioning of the department, and why the delay is happening in the dept.
- Conducted a Safety Reporting Survey for technicians, Nurses, and jr. Doctors.
- To understand the responsibilities of clinical and Administrative staff of the hospital.

OPERATING THEATRE (RESULTS)

Turnaround Time (TAT)



Sanitation Errors

- Surgeon's demand for some specific instrument, which is not in the prepared tray.

1. Surgery ending in two OTs at the same time.
2. Use of 2 bucket system.
3. Availability of only two bucket trolleys for 9 OT'S

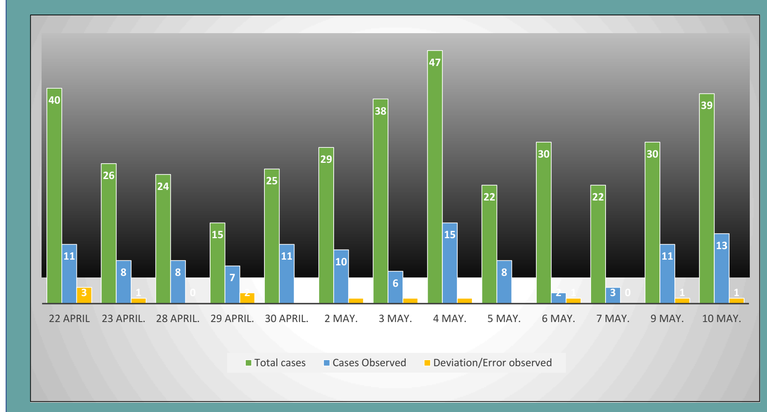
1. Due to less time in between two surgeries in same OT.
2. Passive pressure by the Surgeon / Nurse

- OT not prepared.
- Accidental spillage.

INFERENCE

- In 49% cases cleaning was performed within the standard time (i.e 15 mins).
- In 10% cases cleaning was performed much below the standard time (i.e in 10mins)

OT (OBSERVED CASES)



OPERATING THEATRE TURNAROUND TIME (TAT)

Time Gap Between cases	Total cases
10 min	7
15 min	34
20 min	15
25 min	8
35 min	10

SANITATION FINDINGS

- Use of two bucket system.
- Frequent door opening in between surgeries.
- Negligence in cleaning OT table.
- Random placements of antiseptics solutions and sanitation supplies.
- Speedily cleaning of OT's due to next lined up surgery and sometimes due to passive pressure.

TURNAROUND TIME (TAT) FINDINGS

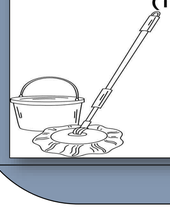
- Delay in cleaning of OT's due to surgeries ending at the same time.
- Delay due to unavailability of some instrument during the surgery.

RECOMMENDATIONS FOR SANITATION

- Use of three bucket system should be implemented.
- All the instruments required for surgery should be available in the OT to avoid later running around of staff for the same.
- Baccishield /Alcoholic wipe should be used to clean the OT table after every surgery.

Use of 3 Bucket system

Bucket 1- Hygienol + Water
Bucket 2- Clean water
Bucket 3 - Water + Baccishield (terminal cleaning)
Or
Water + Sodium Hypochlorite (floor cleaning)



REOMMENDATIONS FOR (TAT)

Designating the task	• Following a procedure flowchart
Diagnosing & understanding the current scenario	• Instruments and equipment's strategy • Sanitation supplies
Designing for future	• Organising instruments • Taking feedback • Motivation of Employee

INTRODUCTION

- P D Hinduja hospital possess 11 operation theatres, 9 OT's on 3rd floor and 2 Ots on 4th floor. All the OT's have been equipped with Guided Air Flow Ventilation System (GAF) that filters and delivers ultra-clean air in the operation theatre. Each OT has an air handling unit, with independent temperature and humidity control, fitted with machines to monitor the quality of air continuously .
- All these high end equipment are aimed at reducing or eliminating infections during surgeries. The OT's also have an Picture Archival and Communication System (PACS) which enable operating surgeons to view any investigational detail anytime during the course of the surgery.
- The OT's also have Audio Visual Conferencing facility for research, demonstration and procuring specialist opinion from other surgeons. The OT's are also equipped with High Efficiency Particulate Air (HEPA) filters for ultraclean ventilation.
- Average number of surgeries conducted in a day is about 35 and to avoid the confusion the OT manager, and Chief Anaesthesiologist makes the Operations list prior a day. And displays the list on notice board for smooth functioning of OT.

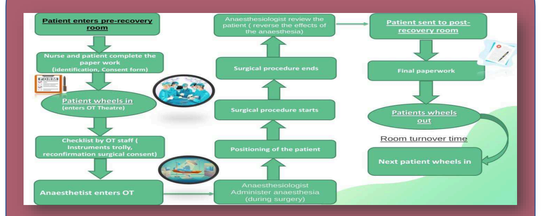
OBJECTIVES

- To comprehend the sanitation and hygiene in Operation theatres to determine any fault in the process.
- To evaluate the patient turnaround time (TAT) in OT and suggestions to improve it.
- To study effective time not utilized for conducting surgery due to sanitation delays.

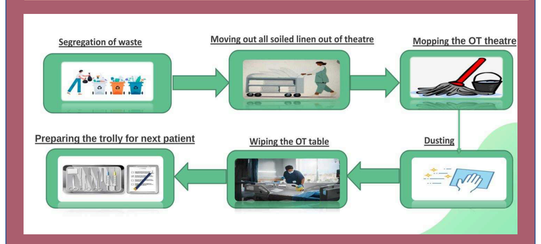
METHODOLOGY

- It was a prospective observational study conducted over 13 working days from 22 April 2022 to 10 May 2022 (except April 25, 26 & 27). Sanitation procedures and time involved was observed.
- A total of 387 surgeries were performed during the study period. Total number of surgeries observed were 113. The recorded variables in our study involved observation of 11 OT's, steps followed in cleaning was monitored and time was calculated.
- The turnaround time was also calculated with patient wheels in and wheel out set as ranges.

TURNAROUND TIME (TAT) FLOWCHART



SANITATION / CLEANING FLOWCHART



FOLLOWING OBSERVATION DONE IN OPERATING THEATRE (OT)

1. Time at which room is ready for First Usage
2. Time at which induction of patient is done
3. Time at which the surgery starts
4. Time at Which the surgery ends
5. Time at which the first patient wheels out of the OT
6. Turnaround Time (TAT) (from one patient wheels in to second patient wheels in)
8. Sanitation Steps done after patient is out of the OT
9. Time Delay in Sanitation steps

CONCLUSION

This project was aimed to identify the errors in the sanitation process and the turnaround time with patient wheels in and wheel out. It was observed that the turnaround time vary between different Ots and depending upon different surgeons. In 42% cases cleaning was performed speedily and in 33% cases there was delay in cleaning the OT, which can directly affect TAT (Turnaround Time),which can be improvise by following the suggested 3 D's system. A well planned working routine should be provided to all the cleaning staff to assure a better standard of cleanliness during the processing. Also, In order to reduce the turnaround time, prior five minutes of warning should be given to the cleaning staff.