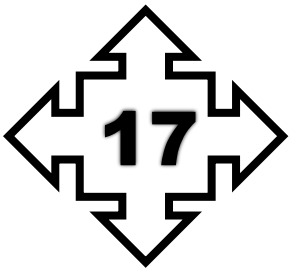

OPERATION THEATRE UTILIZATION AND MOST COMMON CAUSES OF DELAYS OF SCHEDULED SURGERIES WITH A VIEW TO OPTIMIZE THE UTILIZATION 2023

Amoli Kashikar
Student, IIHMR University

Dr. Jagajeet Prasad Singh
Professor, IIHMR University

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INTRODUCTION

The ability of a hospital to provide the best possible quality care is mainly based on how well and optimally the operation rooms are utilized and how resources are efficiently utilized. The purpose of operation theatres is to provide an essential place for surgical procedures, and their effective use is essential for timely and safe surgical procedures without any delays. When operating rooms are used efficiently, this means that the resources of the hospital are being utilized to the most optimal level that is possible and this also helps to Decrease the extended waiting period for patients and improve the delivery of healthcare services.There were delays in initiating surgical lists, instances of under scheduling, interruptions due to emergency cases, and administrative reasons contributing to the inefficient utilization of operating facilities. The primary factors identified for this inefficiency were the policies related to the induction of anesthesia and recovery. The study concluded that addressing these factors could potentially increase the available operating time by nearly 20% [1]. Delays in commencing the use of the operating room (OT) table in the morning result in considerable loss of productive OT time and can lead to the cancellation of surgeries later in the day, negatively impacting overall daily OT utilization. Hence, fostering efficient communication among surgeons, anesthesiologists, and nursing staff the night before surgery can mitigate morning delays. Moreover, enhancing room turnover time by designating a specific theater for emergency procedures can avert the need to reschedule cases caused by the sudden inclusion of emergency situations [2].

RESEARCH OBJECTIVES

1. To describe the process flow of operation theatre.
2. To calculate and determine the utilization rate of operation theatres.
3. To identify the most common reasons behind the delays of scheduled surgeries.

RESEARCH METHODOLOGY

The study design used was descriptive cross-sectional study. The study location is Apollo Hospitals, Hyderabad (550 bedded multi-speciality hospital). Study Duration is 8 weeks (3rd April 2023 to 26th May 2023). Sample size was 527 patients, both insurance and cash patients who have undergone surgical procedures at Apollo Hospitals, Hyderabad under 4 OTs of specific departments such as Orthopaedic OT, General Surgery OT, Oncology OT, and Robotic Surgery OT.

RESULTS & DISCUSSION

The number of surgeries performed during April 2023 to May 2023 is 527. 264 surgeries were performed in the month of April while 263 surgeries were performed in the month of May 2023. Both the months witnessed maximum surgeries being conducted in General OT and minimum surgeries were conducted in Robotic surgery OT. In the period of 8 weeks, it was observed that number of surgeries in Oncology OT and General OT increased whereas number of surgeries in Orthopaedic OT were significantly decreased. Total available hours from April 2023 to May 2023 for all the 4 OTs was 450 hours out of which on an average 315 hours were used. 360 hours were utilised by Orthopaedic OT, 355 hours were utilised by General OT, 303 hours were utilised by Oncology OT and 243 hours were utilised by Robotic surgery OT. Overall utilization percent of 4 OTs in April 2023 to May 2023 was 75 %, 74 %, 63 % and 51 % respectively for Orthopaedic OT, General surgery OT, Oncology OT, and Robotic surgery OT. It is observed that maximum delays are due to housekeeping staff for shifting the patient late inside the operation theatre, followed by insurance delay, patient arriving late for the surgery, medical state of the patient, early close and delay in start of surgery. The minimum delay is due to the surgeon reporting late.

CONCLUSION

April 2023 to May 2023 saw an overall utilisation rate of 4 operation theatres of 75%, 74%, 63%, and 51% for orthopaedic, general, oncology, and robotic surgery, respectively. The largest downtime was

observed in operating rooms for robotic surgery, followed by those for oncology surgery, general surgery, and orthopaedic surgery. This shows that delays for robotic surgery occur most frequently in the operating room, which may be connected to the fact that a smaller number of surgeries are scheduled per day. Oncology operating rooms were also prone to delays, which might occur because of delay in patient's transfer from the wards or delaying the commencement of the treatment. The general and orthopaedic operating rooms see the fewest delays, which could be attributed to either a delay in insurance authorization or a delay in the start of the procedure. Overall, the patient's late relocation into the operating room was blamed for the most delays, followed by insurance delays and patient errors. The following suggestions could aid in boosting the use of operation theatres such as accurate case duration estimations can avoid postponing follow-up surgery, visual dashboards could give real-time patient tracking and status updates in the preoperative setting so that scheduled procedures won't be postponed as a result, a separate operating room should only be used for emergencies, preoperative workups, such as consultations and investigations, could be added to computerised to-do lists, allowing for the tracking of tasks that need to be accomplished before admission on the day of surgery.

REFERENCES

1. *Vinukondaiah, K., Ananthakrishnan, N., & Ravishankar, M. (2000). Audit of operation theatre utilization in general surgery. National Medical Journal of India, 13(3), 118-120.*

2. *Lakshmi Bhaskar, N., & Satish Kumar, S. N. (2015). A study of utilization of operation theatres in a tertiary care teaching hospital, Hyderabad. Indian J Appl Res*