

A Study on Utilization Rate in Operation Theaters at HCG Cancer Hospital, Jaipur

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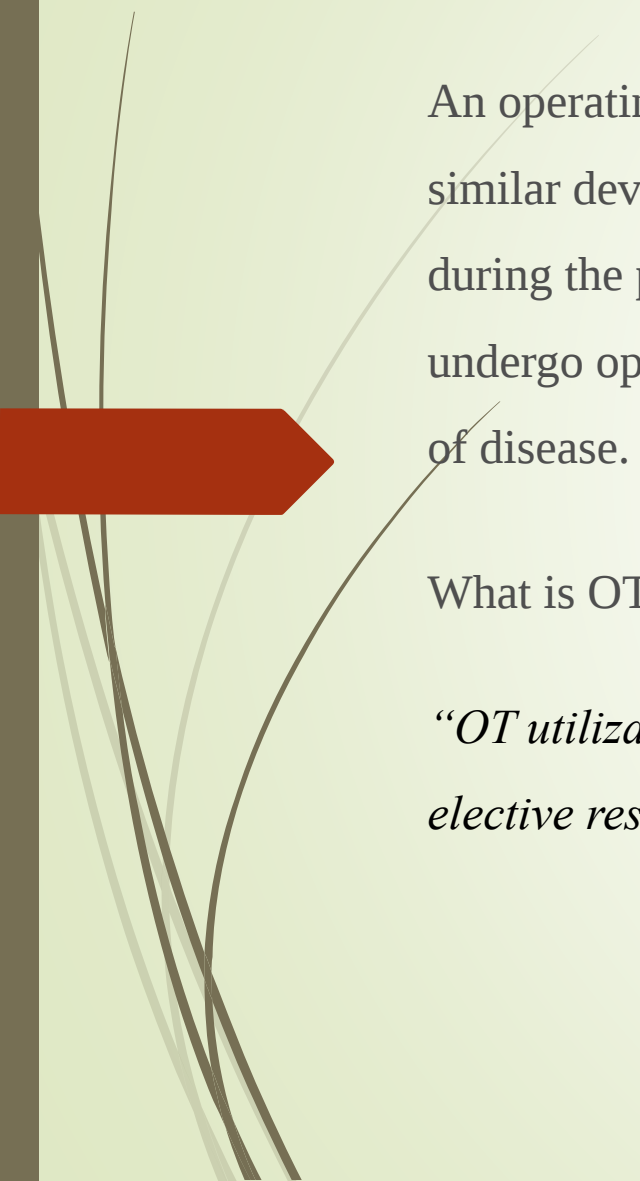
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INTRODUCTION



An operating theatre (OT) is a room in the hospital site with one or two operating tables or other similar devices. An operating theatre accommodates one or two patients at a time, during and only during the period in which, under the direct supervision of a medical practitioner, the patients can undergo operative treatment in pregnancy or childbirth or for the prevention, cure, relief or diagnosis of disease.

What is OT Utilisation?

“OT utilization is defined by Donham et al. as the quotient of hours of OT time actually used during elective resource hours and the total number of elective resource hours available.”



AIM AND OBJECTIVES OF THE STUDY:

Aim:

The study aims at access time Utilization rate of Operation Theatres in HCG Hospital, Jaipur.

Objectives:

To analyse OT Utilisation rate in HCG Hospital, Jaipur

To identify the scope for improvement of OT utilization rate in HCG Hospital, Jaipur



METHODOLOGY:

Study area: The study was conducted at HCG Hospital, Jaipur. HCG Cancer Center, Jaipur.

Study Design: Descriptive study was undertaken at HCG Hospital, Jaipur from April to May 2021 to assess the utilization rate of Operation Theaters of the hospital.

Sampling and Sample Size: Non-probability convenience sampling was carried out in OT. OT utilization is examined in relation to its working hours (08:00am to 06:30pm). Total available time was used as total working hours of the OT to estimate the OT utilization rate. Two OT are available in the hospital. On a daily basis, data was collected from both OT.

Tools and Techniques of Data Collection:

Primary as well as Secondary data was collected for this study.

Observation: - Data was collected using observation Proforma to observe the Quality and time utilization in OT.



Secondary data related to specifications of operation theatre, also operation theatre NABH manuals and Internet search engines and HIS System of the Hospital were used to collect secondary information.

Data Analysis: Analysis of the collected data was done using MS excel.

Inclusion Criteria: Surgeries/cases scheduled from 08:00am to 06:00pm during working days.

Exclusion Criteria: Surgeries scheduled after 06:00pm

Approach:

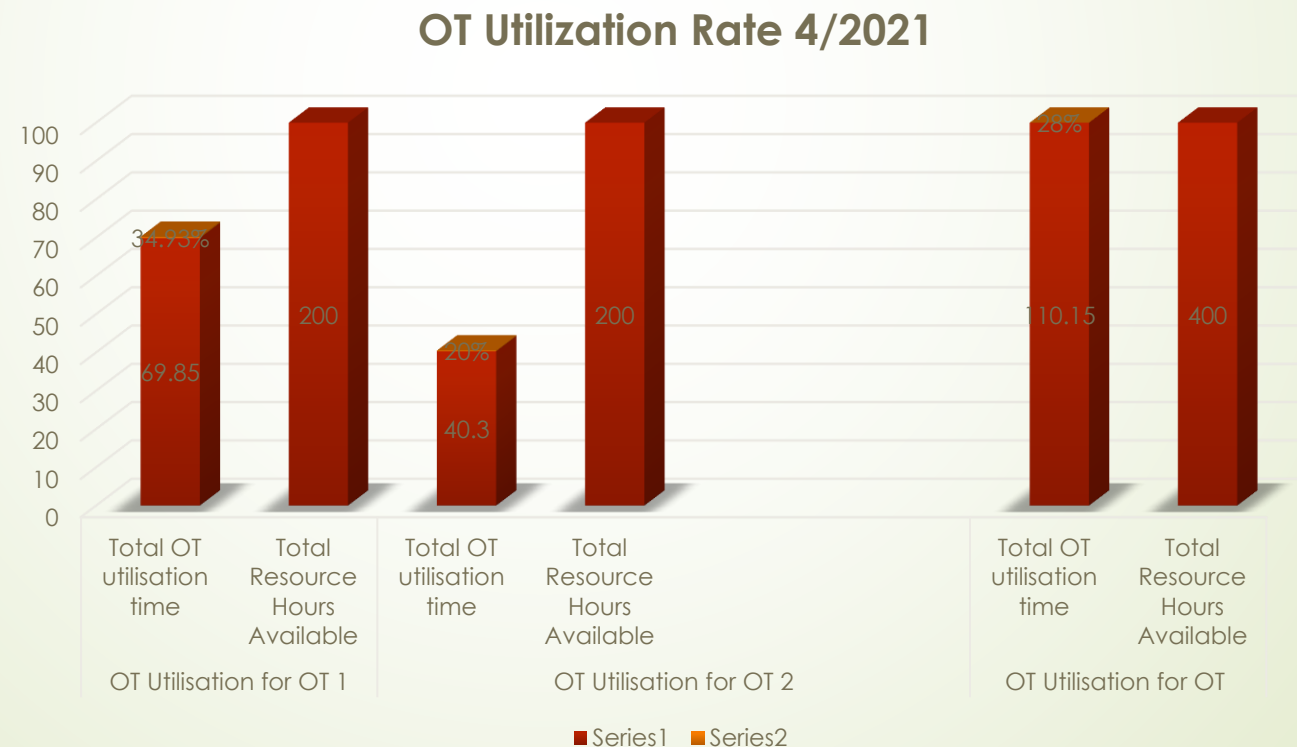
According to NABH, OT Utilisation Rate can be calculated as:

$$= \frac{\text{Number of hours when OT is being utilized}}{\text{Maximum number of hours the OT can be utilized}} \times 100$$

RESULTS: *For the month of April, the OT utilisation rate was:*

It was emerged from the analysis that in month of April, For OT-1, total 200 resource hours were available. However, only 69.85 hours were utilized implying the OT-1 was 34.93 percent efficient. Similarly, the analysis suggests that the OT-2 was 20 percent efficient.

Overall, both the OTs in the month of April 2021, were utilized for around one fourth (28 percent) of their capacity.

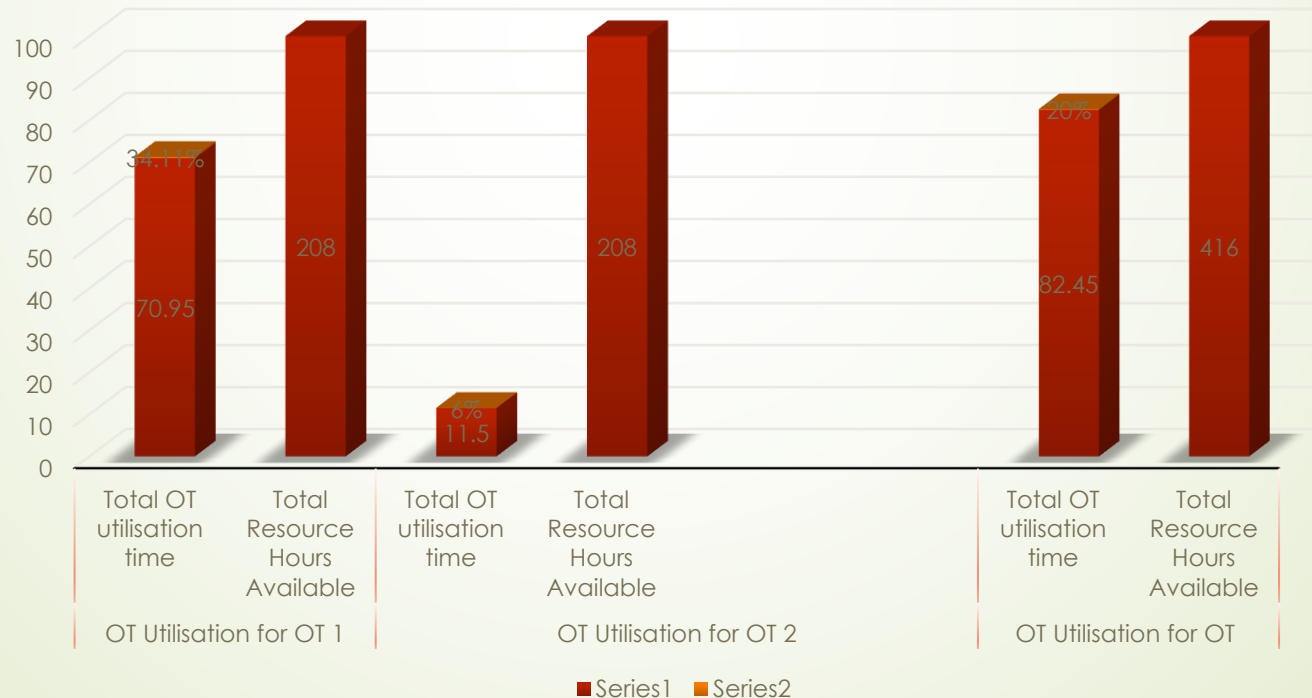


For the month of May, the OT utilisation rate was:

It was emerged from the analysis that in month of May, For OT-1, total 200 resource hours were available. However, only 70.95 hours were utilized implying the OT-1 was 34.11 percent efficient. Similarly, the analysis suggests that the OT-2 was 6 percent efficient.

Overall, both the OTs in the month of May 2021, were utilized for around one fifth (20 percent) of their capacity.

OT Utilisation Rate 5/2021





DISCUSSION:

Many studies found that 20% of the total time spent on the procedure was spent on support services, 30% on OR cleaning, and the remaining 50% on the actual surgery. In this study during the month of April, average Utilization efficiency for both OT-1 and OT-2 was only 28 percent whereas during the month of May average Utilization efficiency for both OT-1 and OT-2 was only 20 percent.

The results of this study will also inform us about the many areas like complete implementation of HIS and maintenance of register that have been overlooked Which will go a long way toward establishing a consistent link between the beneficiary and those who have benefited.



CONCLUSION:

If operation theatre usage is less than 80 percent then there is space for improvement, no matter how you analyse it.

So, from this study, it can be concluded that Operation Theatre utilization rate in HCG Hospital, Jaipur during the month of April and May was 28 percent and 20 percent respectively, which is very less and needs the improvement to meet quality standards.





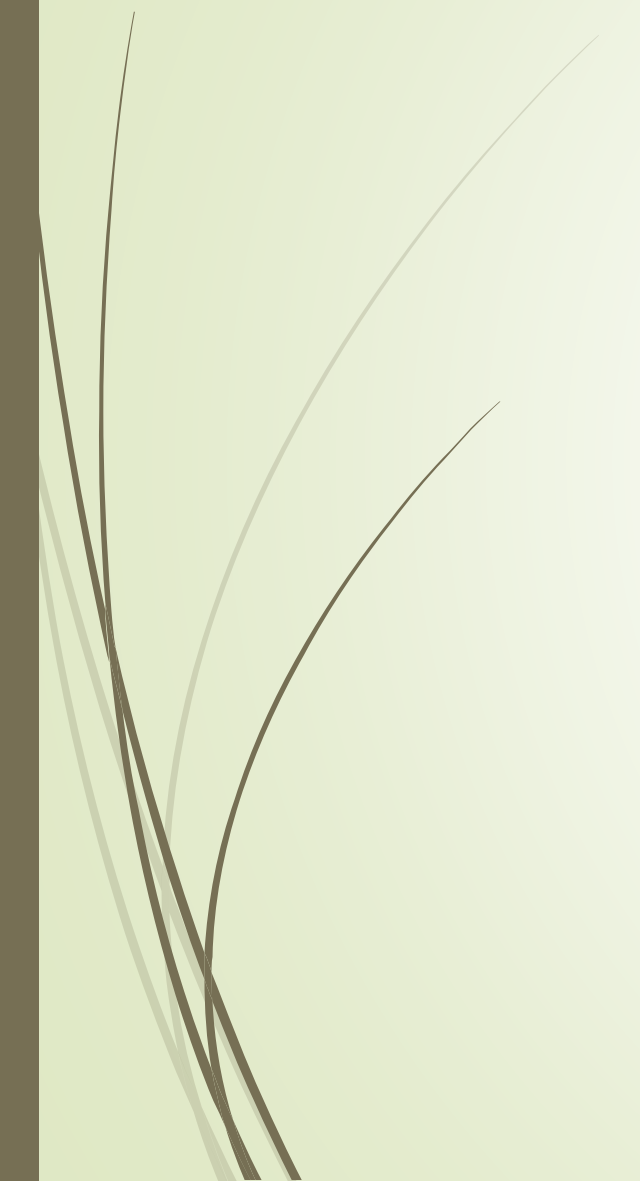
Scope for Improvement of OT Utilization Rate:

- Efficiency of OT -1 and OT-2 came out to be 34.11 percent and 6 percent this may be due to delay in admission process resulting in patients going to any other facility. This can be increased by improving admission and discharge process.
- Internal assessment can be done to check what's the reason for the underperform of OT.
- 3. Planning can be done one day prior to and admissions can be made in the evening a day before surgery to increase the OT performance.
- For Operation Theater, a proper register should be kept.
- The utilization rate of OT will be maximized if surgeries are scheduled properly.
- Proper roster of the OT staff should be made.
- A training session for personnel on planned and unplanned procedures, should be held.
- Cleaning the OT should take 10-20 minutes.



Limitations of the Study:

- HCG is a single speciality hospital because of which it caters to a niche group of patients resulting in less patient number.
 - Due to COVID-19, patient footfall was low in the hospital.
 - There is no information or data available on surgeries cancellations, rescheduling.
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THANK YOU