

Operational Assessment of the Operating Theatre Complex in a Healthcare Facility

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Introduction

- The study focuses on a improve OT performance in Wish2 care Multispecialty Hospital Mumbai
- Operation Theatre (OT) contributes 50–60% of total hospital revenue.
- Efficient OT utilization is vital for hospital profitability and patient care.
- Current challenges include low surgical volume and underutilization of OT in hospital.
- Aim is to assess operational performance and identify improvement areas, Findings will help enhance OT efficiency and overall hospital revenue.

Introduction to the Case



PPP healthcare model context



OT complexes' significance



Goal: Improve surgical volume



Case: Multispeciality hospital, Mumbai

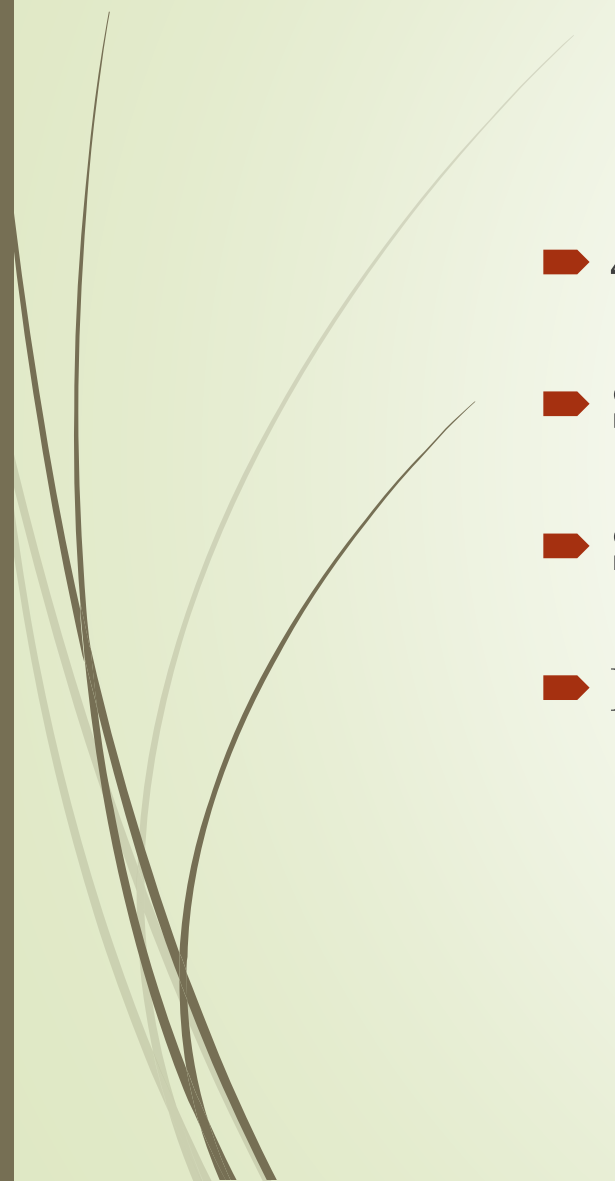


Objectives

- To assess the current utilization of the Operation Theatre (OT) complex in the hospital.
- To identify operational gaps and inefficiencies affecting OT performance.
- To understand stakeholder perspectives through focused group discussions.
- To analyze the factors contributing to underutilization using the DMAIC framework.
- To recommend practical and sustainable strategies for improving OT efficiency and hospital revenue.

Methodology

- Study design: cross-sectional Study
- Study Type: Qualitative + Quantitative Type
- Data collection:
 - Quantitative: OT surgical data
 - Qualitative: FGD with 10 stakeholders
- Tools: Excel for analysis, Coding tree for themes, DMAIC methodology.

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- 4 modular OTs + 1 Cardiac OT
 - Sample Size : 10
 - Staff: 2 Nurses, 1 consultants, Biomedical , managers, 2 Surgeons.
 - Period: 10th March – 31st May 2025

DMAIC Framework

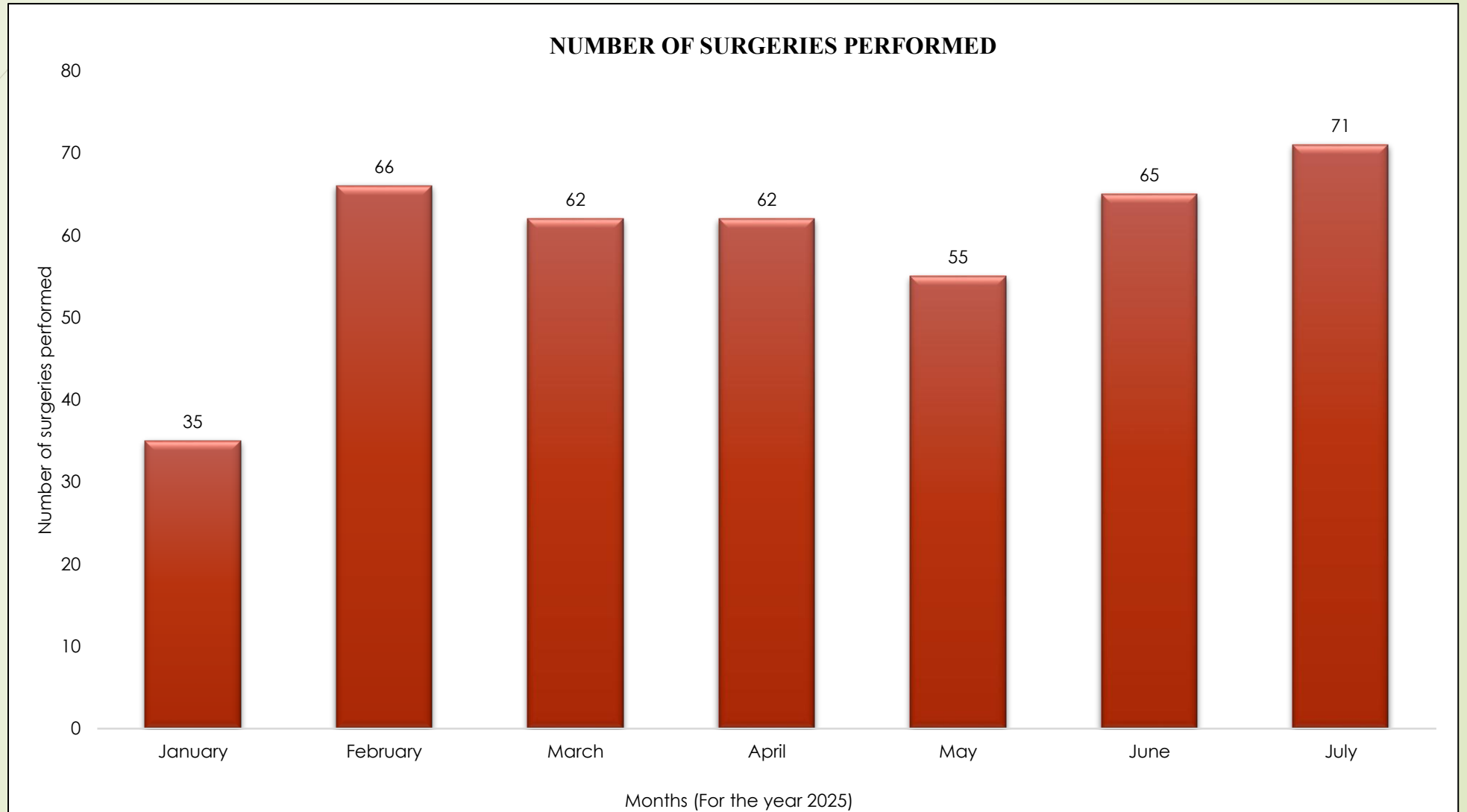


Define Phase

- Problem: Low OT utilization impacting revenue
- Goal: Improve OT utilization to $\geq 60\%$
- Stakeholders involved

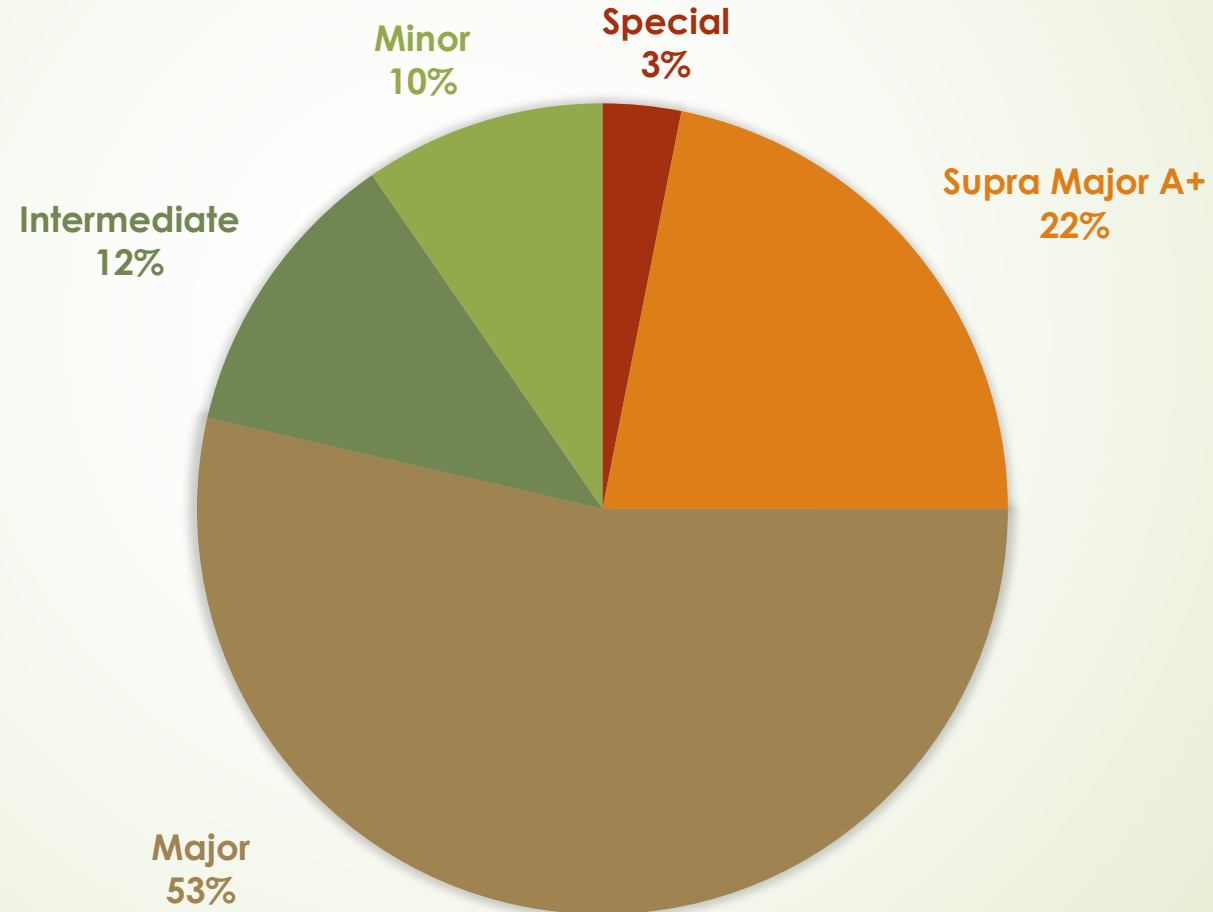
PROJECT CHARTER			
Name	Operational Assessment of the Operating Theatre Complex in a Healthcare Facility: A Case Study		
Date	March 10,2025	Project Sponsor	Study Hospital
End date	May 31,2025	Project manager	parikshit pathrikar
Project propose		Stakeholders	
The management of the hospital wants to increase the OT utilization as it is the major revenue generating department challenges, So the goal is to identify the challenges and concerns limiting the utilization of the OT complex		Surgical consultants OT muses Biomedical Engineer OT Manager Hospital Managemient Hospital management consular	
Scope			
Deliverables: List of causes leading to inadequate utilization of the OT complex		Deliverables: Strategies to improve the surgical volume of the OT complex of the hospital	

Measuring Phase



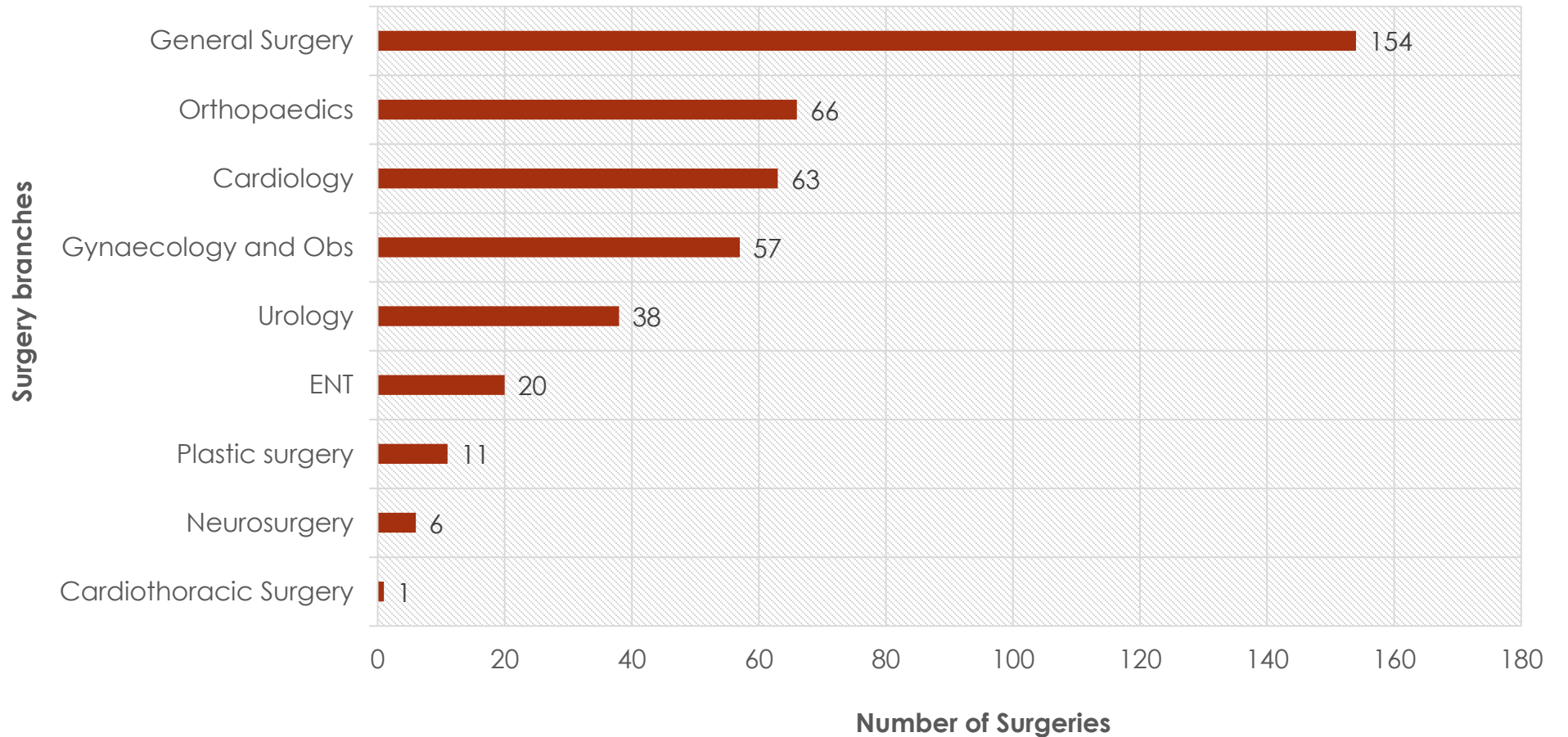
Measuring Phase

TYPES OF SURGERIES PERFORMED



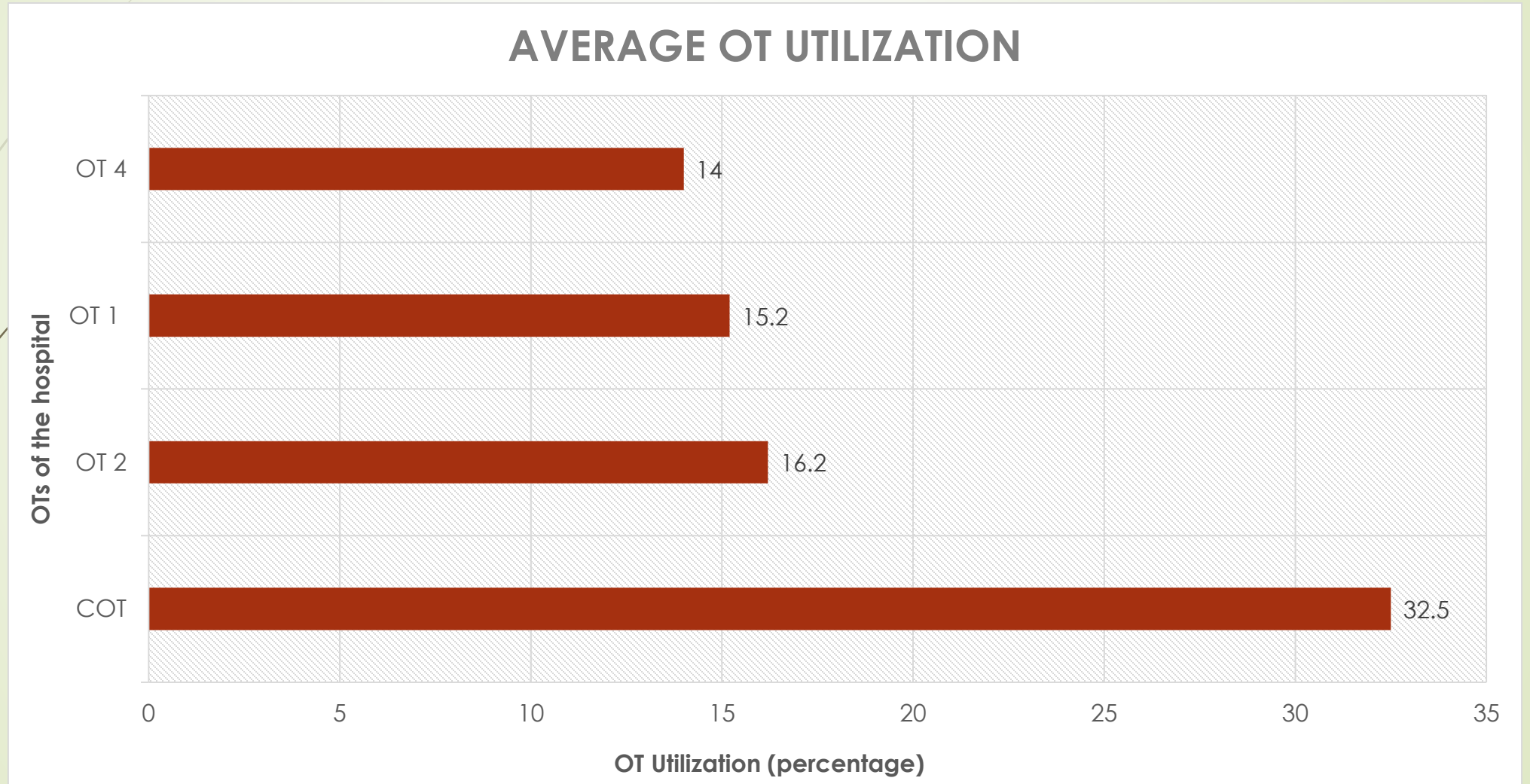
Measuring Phase

SURGERIES PERFORMED AS PER DEPARTMENT



Measuring Phase

➤ OT 3 Under Maintenance



Analyzing Phase

FGD Questions

QUESTIONS

1. Please briefly describe the demographic and socio-economic status of the patients visiting this hospital.
2. What, according to you, are the influencing factors for the patients to visit this hospital?
3. How are the infrastructure of this hospital and the OT complex?
4. Do you find the existing SOPs used in the OT complex comprehensive?
5. What are the driving factors for rendering your services to this hospital?
6. What are the challenges or concerns you face while rendering the services in the OT complex?
7. What improvement areas can be of focus to improve the hospital's patient flow?

Descriptive details of the FGD participants

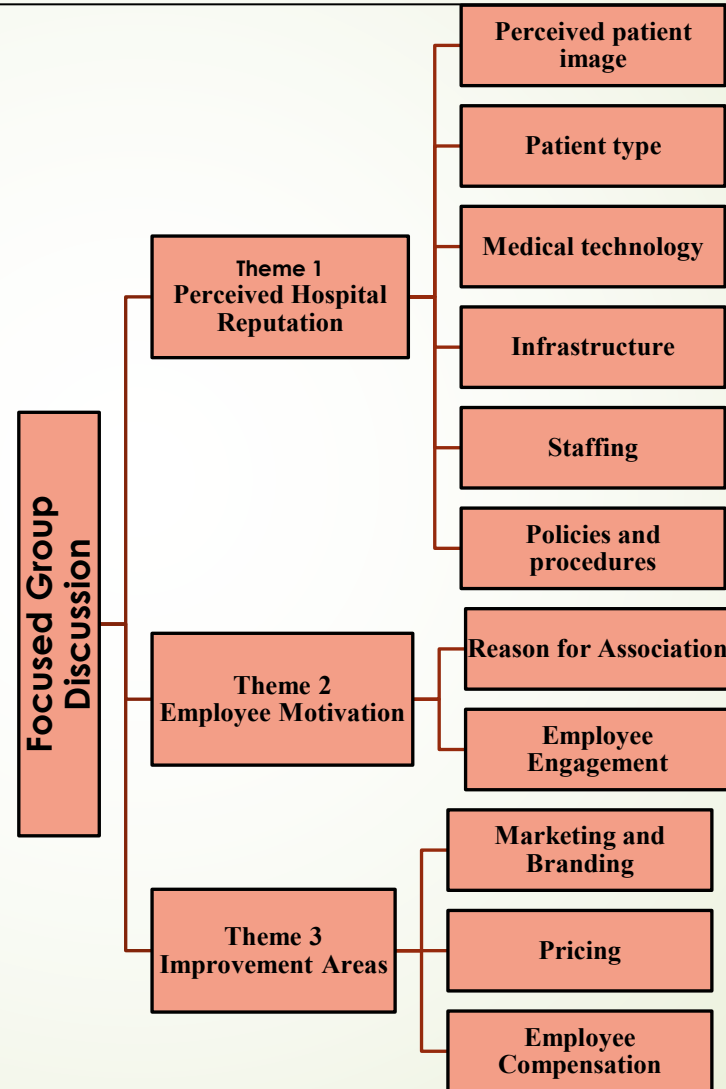
Sr. no.	Role in hospital	Qualification	Employment duration with this organization
1	Visiting Consultant-Ophthalmologist and eye surgeon	MBBS, DNB-Ophthalmology	6 months
2	Visiting Consultant- ENT Surgeon	MBBS, DNB-ENT	12 months
3	Visiting Consultant-General Surgeon	MBBS, MS-gen. surgery	6+ years
4	Visiting Consultant-Urologist and Urosurgeon	MBBS, MS- gen. surgery, MCh-urology and kidney transplant	6+ years
5	Visiting Consultant-Obstetrician and Gynecologist	MBBS, MD, FCPS, DGO, DFP	6+ years
6	Visiting Consultant- Cardiothoracic and vascular surgeon	MBBS, DNB	5 years
7	OT Nurse	GNM	4 years
8	OT Nurse	GNM	5 years
9	Biomedical Engineer	BE- biomedical engineering	7 months
10	OT Manager	BSc, MHA	6 months



Analyzing Phase

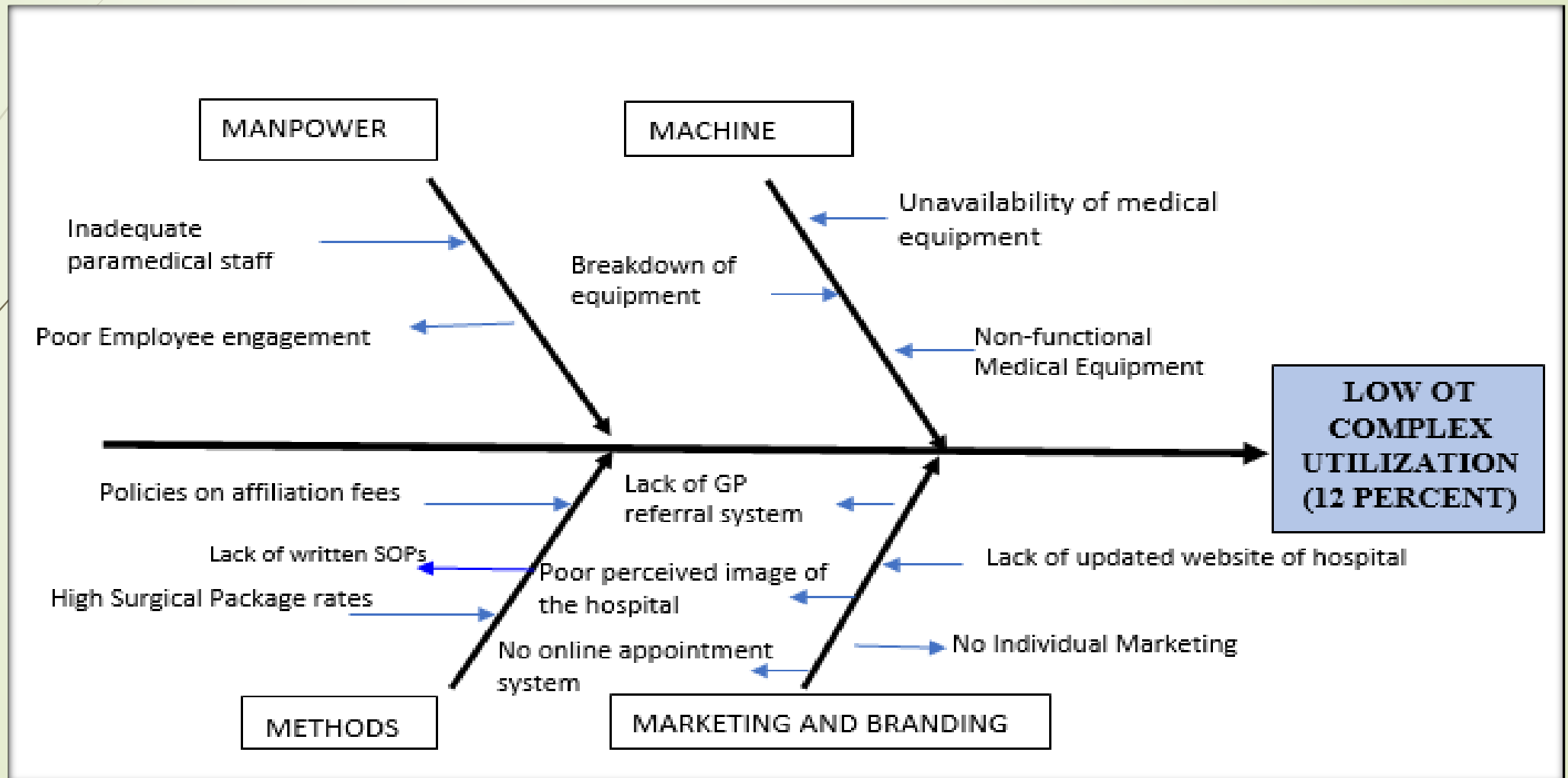
- **FGD Results**
- Stakeholder concerns:
 - OT equipment outdated
 - SOPs unclear
 - Low marketing visibility
 - Poor staff motivation

Conceptual Framework



Cause and Effect Diagram

Key Issues:



Improvement Strategies

Issues	Priority	Potential solutions
Issue 1 Marketing and branding strategies	High	<u>To change the perceived image of the hospital</u> • Website Updation of the hospital and promote the services provided by the hospital • Online appointment feature on the website • Advertise the hospital through pamphlet's in newspaper • Make use of patient and doctor testimonials • Design an E-marketing strategies • The hospital should try for entry-level accreditation • Design a suitable service mix to be differentiated in the market <u>To increase the patient flow of the hospital</u> • General practitioner referral system • Medical camps • Awareness sessions and seminars • Employee marketing strategies • Coupons or discount strategies could be looked up
Issue 2 Employee Engagement	High	• Interdisciplinary team meets where the employees could interact and also discuss learnings, concerns, best practices • CMEs • Achievement board could be set up where the best-performing employees are recognized and acknowledged for their hard work • Having more focus group discussions to address concerns of the surgeons, nurses
Issue 3 Employee compensation	High	• One-on-one conversation with the top performing surgeons, consultants, and try to understand their perspective on the affiliation fees and come to a middle path where it is beneficial both to the hospital and the employees




Issue 4 Policies and SOPs	Moderate	• Design the written SOPs to be followed in the department. • Training sessions to explain each stakeholder's role • Compliance check
Issue 5 Tariff Rates	Moderate	• Tariff rationalization
Issue 6 Medical equipment	High	• All the AMC/CMC records must be maintained in a file for easy access • The equipment that has a buyback offer must be considered a priority and replaced • There should be a defibrillator in each major OT, so the purchase should be made for the same • Equipment refurbishment, replacement, and decommissioning policies should be clearly defined. • Medical equipment calibration must be performed regularly
Issue 7 Manpower	High to moderate	• The hospital must plan to onboard full-time surgeons and consultants • A few BSc nurses should be hired • Hire new staff

Discussion

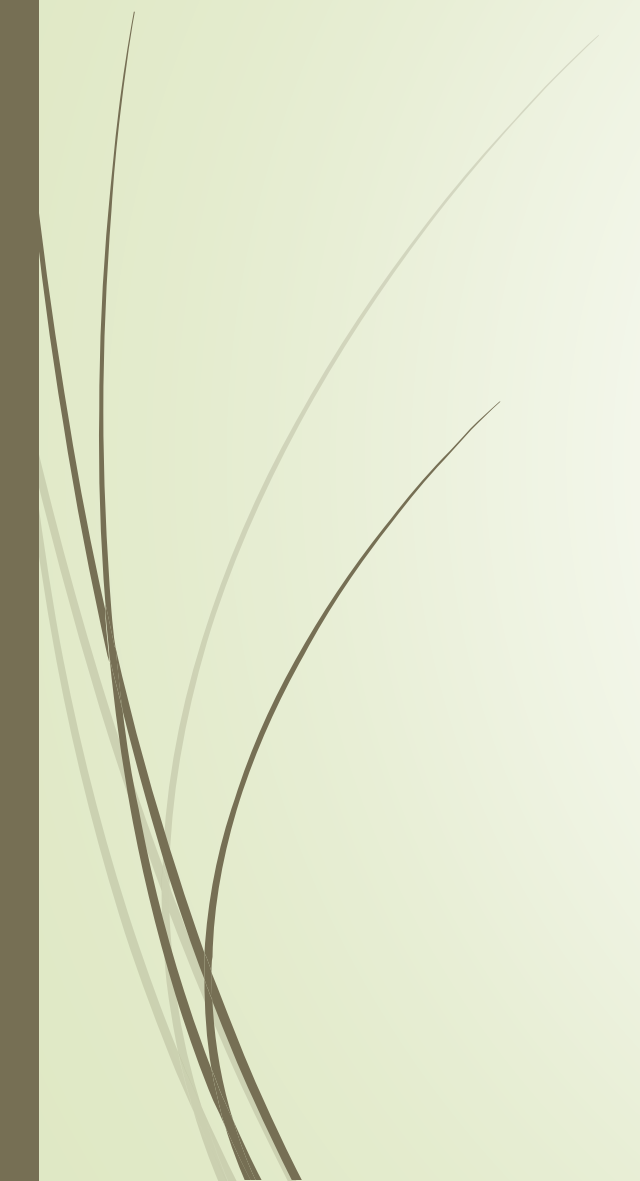
- OT utilization was significantly below the global benchmark of 80%; the highest was only 32.5%.
- Major causes of underutilization included poor marketing, outdated equipment, and lack of SOP adherence.
- Stakeholders highlighted low employee engagement and dissatisfaction with compensation structures.
- Patients perceived the hospital as a government/COVID facility, affecting trust and patient inflow.
- Marketing strategies like health camps, GP referrals, and social media were found lacking.
- The pricing of surgical packages was seen as non-competitive, affecting surgery conversion rates.
- Focused group discussions revealed that all identified causes were controllable with targeted interventions.

Conclusion

- The study revealed significant underutilization of the OT complex, affecting hospital revenue.
- Key challenges included poor marketing, ineffective pricing, low staff engagement, and outdated equipment.
- A mixed-method approach (DMAIC and FGD) effectively identified operational gaps and stakeholder concerns.
- All identified issues were found to be controllable with appropriate strategies and leadership focus.
- Improving branding, SOPs, staff motivation, and equipment management can boost OT utilization.
- Regular stakeholder engagement and continuous monitoring are essential for long-term improvement.

References

- Pandit A.P. et al. (2018) – Identified scheduling delays and staff shortages impacting OT utilization.
- Nitin R.V. et al. (2016) – Emphasized the role of marketing mix in attracting hospital patients.
- Sarma A. (2020) – Highlighted challenges and strategies in healthcare marketing in India.
- Shanafelt T.D. et al. (2016) – Addressed physician burnout and organizational strategies for engagement.
- Bakker A.B. et al. (2011) – Discussed work engagement and its impact on employee motivation.
- Bhangale V. (2011) – Reviewed marketing and branding approaches of major hospitals in Mumbai.
- Wallace L. et al. (2021) – Linked team motivation and familiarity to efficient OT operations.



THANK YOU