

OPERATION THEATRE: EVALUATING THE FACTORS ASSOCIATED WITH CANCELLATION AND RESCHEDULING OF ELECTIVE SURGERIES

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in

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by

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Under the Supervision and Guidance of

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2025

14th June 2025

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Dr. Kalva Dharani studying at IIHMR University 2nd Year MBA in Hospital and Health Program has completed her internship in the department Quality Department at Bhagwan Mahaveer Jain Hospital from 14th March 2025 to 14th June 2025.

We wish her all success in her future endeavors.



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CERTIFICATE

This is to certify that dissertation titled **“Operating Theatre: Evaluating The Factors Associated With Cancellation And Rescheduling Of Elective Surgeries”** is a record of the research work undertaken by Dr Kalva Dharani in partial fulfillment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and her approach to the research study has been sincere, scientific, and analytical.

A handwritten signature in blue ink, appearing to be 'S. Sengupta'.

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School Dean
IIHMR University, Jaipur

Date 16/6/2025

DECLARATION BY STUDENT

I hereby declare that this dissertation titled “**Operating Theatre: Evaluating Factors Associated With The Cancellation And Rescheduling Of Elective Surgeries**” at Bhagwan Mahaveer Jain hospital, Bengaluru is the Bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.


Signature

Dr Kalva Dharani

Date – 16/06/2025

Abstract

Submitted By: Dr. Kalva Dharani

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Enroll no – 1726

OPERATION THEATRE: EVALUATING THE FACTORS ASSOCIATED WITH CANCELLATION AND RESCHEDULING OF ELECTIVE SURGERIES

BACKGROUND:

The need to manage the operating rooms efficiently is vital for any hospital that aims to improve and provide timely and high-quality care. The proper usage of the facilities includes the surgical teams, anesthesiologists, and equipment in proper coordination, which helps minimise the patients' waiting times and makes the best use of hospital resources. But rescheduling and cancellations of surgeries can disrupt this balance, leading to the wastage of resources and patient dissatisfaction

To address these issues, it is important to understand how the operating theatre functions, assess how the operating rooms are being used and identify the main reasons for the rescheduling of surgeries. By analysing these factors, the hospital can improve its scheduling and resource management, which ultimately enhances patient care and operational efficiency. This study focuses on examining the workflow in the operating theatre and finding the key causes of rescheduling at Bhagwan Mahaveer Jain Hospital.

PROBLEM STATEMENT:

In spite of the careful planning, the elective surgeries are being frequently cancelled or rescheduled, which in turn impacts the patient care, increases costs and reduces the efficiency of the OT. By understanding the root cause, there is a scope for improvement.

PURPOSE OF THE STUDY:

OBJECTIVES:

- To identify the primary reasons for cancellations and rescheduling, which include patient-related, administrative and medical-related
- To determine the rate of rescheduling in the hospital's OTs
- To assess the impact of rescheduling and cancellations on the operating theatre utilisation, workload, etc.
- To recommend measures and strategic interventions aimed at reducing cancellations and, in turn, enhancing productivity.

METHOD:

The study design used is a descriptive cross-sectional study to assess the frequency and reasons for cancellations and rescheduling of elective surgeries, which in turn focuses on identifying gaps in the preoperative processes or communication and scheduling systems.

The study is done at Bhagwan Mahaveer Jain Hospital, a multispecialty tertiary care hospital with 16 functioning operating theatres, used for both elective and emergency procedures.

The study duration is 8 weeks, from 27th March 2025 to 21st May 2025.

The sample size is 100 patients, both insurance and cash have been scheduled for surgical procedures at Bhagwan Mahaveer Jain Hospital, Bangalore, under its departments, including general, vascular, gynae, and Smile Train.

The inclusions are regularly scheduled cases, which are handled from 9:00 to 5:00 on all business days. Sundays and public holidays, and emergency cases beyond 6:00 pm are excluded.

RESULTS:

During the study period at Bhagwan Mahaveer Jain Hospital, Bangalore, an analysis of the scheduled elective surgeries was conducted to see and determine the frequency, causes and the impact of cancellations and rescheduling in the operation theatre. The study focuses on the surgeries that have been scheduled from 9:00 am to 5:00 pm on working days over the period of eight weeks.

The total number of surgeries performed during April 2025 to May 2025 is 1385. 756 surgeries were performed in the month of April, while 629 surgeries were performed in the month of May 2025. Of the total number of cases, 62 of the surgeries were cancelled and 47 have been rescheduled, leading to 1276 surgeries actually being performed as they were planned initially.

It has been seen that of the total number of cases that have been cancelled and rescheduled, the main reasons were identified as patient not admitted, constituting for about 32 of the cases, and patient not being fit for the scheduled procedure, constituting for about 21 cases, while insurance problems, clearance from the hospital and willingness of the patient constituted for about 9, 8 and 5 cases respectively.

These findings highlight the significant impact on the utilization of the operating theatre, with over 12% of the scheduled OT time affected by the cancellations and rescheduling. The most common and frequent causes are administrative and patient-related factors, which need further interventions to streamline the pre-operative processes and improve the efficiency.

CONCLUSION:

The study conducted at the hospital analysed the common causes for the cancellation and the rescheduling of the elective surgeries in the operating theatre over a period of eight weeks was done. With the data collection and analysed, it was seen that a significant proportion of the scheduled surgeries cancelled and rescheduled did not go as planned, resulting in 92.1% of surgeries being performed.

The key reasons included patient-related factors like not being admitted (3.6%), not fit for the surgery (2.4%) and unwillingness of the patient (0.6%), with administrative issues like insurance clearance (0.1%). The impact of the changes in the OT utilisation was notable and with over 8% of the scheduled OT time being underutilised and inefficiently managed, which led to increased workload, wastage of resources and reduced patient satisfaction.

This study indicates the importance of pre-operative processes, clear communication and streamlined administrative workflows in turn minimising cancellations and rescheduling. The results suggest interventions like implementing a pre-admission checklist, improved patient counselling, and enhanced coordination for the clearance and insurance. Measures like this not only optimise the utilization but also the operational efficiency

In conclusion, a regular audit and review of the scheduling and by adopting corrective and preventive strategies, will improve the quality and efficiency of surgical services.

ACKNOWLEDGEMENT

Words of thanks can't fully capture the depth of my gratitude towards the people who have supported me throughout the journey of completing this dissertation. This path of finishing the research has been both an effort and a challenge, and I am thankful to everyone who contributed to the success.

Firstly, I would extend my thanks to Mr. Arun Kumar, Head of the Department of Quality at Bhagwan Mahaveer Jain Hospital, Bengaluru, for being my mentor and providing me with guidance and encouragement during my internship.

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Finally, I would like to express my appreciation to my friends and family who have been my pillars of strength in this journey. Their patience and encouragement have made it possible for me to overcome the challenges and remain focused on my goals.

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CHAPTER 1

INTRODUCTION

The operation theatre stands as the heart of modern healthcare, in turn serving as the area which is critical where lifesaving and life-enhancing surgical interventions take place. In spite of planning meticulously, the rescheduling and cancellations of surgeries remain a constant challenge faced by hospitals worldwide. These disruptions and changes not only compromise the care for patients and their satisfaction but also strain the healthcare resources, increase the operational costs and reduce the efficiency.

An Understanding of the common causes behind the cancellation and rescheduling of the surgeries is essential for development of effective strategies in order to minimise their occurrence. Factors like inadequate pre-operative preparation or unavailability of equipment or people, changes in the clinical status of patients and also administrative inefficiencies can contribute to the setbacks. Each of the cancellations indicates an issue with an impact on patients and their families, leading to increased anxiety, prolonged suffering and delay in recovery.

1.1 SCOPE OF SERVICES OF THE ORGANISATION

- Anesthesiology
- Interventional Cardiology
- Non-Interventional Cardiology
- Cardiothoracic and Vascular Surgery
- Psychiatry (OPD only)
- Renal Transplant
- Bone Marrow Transplant
- Critical Care (MICU, SICU, CCU, CSICU, NICU, PICU)
- Dental surgery and Aesthetic dentistry

- Oral and Maxillofacial Surgery
- Dermatology and Venereology
- Emergency Medicine
- Endocrine Surgery
- Endocrinology
- General Surgery
- Laparoscopic Surgery
- Hand & Microsurgery
- Hepatology
- Internal/ General Medicine
- Radiology
- Interventional Radiology
- Medical Gastroenterology
- Surgical Gastroenterology
- Medical Oncology
- Surgical Oncology
- Gynecology Oncology
- Haemato Oncology
- Head & Neck Oncology
- Neonatology
- Nephrology (Including Dialysis)
- Neurology
- Neurosurgery
- Obstetrics & Gynecology (Including High Risk Obstetrics Cases)
- Fetal Medicine

- Ophthalmology
- Orthopedic Surgery (Including Joint Replacement surgery)
- Sports Medicine
- Otorhinolaryngology
- Pediatrics
- Pediatric Surgery
- Pain Medicine
- Palliative Medicine
- Physical Medicine and Rehabilitation
- Plastic and Reconstructive Surgery
- Pulmonary Medicine
- Rheumatology
- Urology

1.2 ABOUT THE DIFFERENT DEPARTMENTS OF O.T

14 Ultra-Modern Modular Operation Theatres with laminar flow for all Super Speciality Surgeries.

- Vascular Surgery
- Neurosurgery and Oncosurgery
- Smile Cleft Surgeries (Cleft Leadership Centre)
- Cardiac Surgery
- Joint and Spine Surgery
- Obstetric Surgeries
- The Operation Theatre Complex and certified as "C-Green OT" by the Bureau Veritas Certification Agency.
- All Operating Rooms are designed to be 100% sterile with dedicated separate Air Handling Units.

The Peripheral "Hi-Brid" Cath Lab is located in the Old Block and is primarily used for Peripheral and Endovascular Procedures by the Jain Institute of Vascular Sciences (JIVAS).

1.3 ABOUT BHAGWAN MAHAVEER JAIN HOSPITAL, BANGALORE



In the year 1975, to mark the 2500th anniversary of lord Bhagwan Mahaveer, a group of people from the Jain community in Bangalore, had registered a charitable institution in the name of Bhagwan Mahaveer memorial Jain trust and laid the foundation stone on 23rd May 1976 by His Excellency Late Sri Mohanlal Sukhadia, Governor of Andhra Pradesh and late Sri Uma Shankar Dixit, Governor of Karnataka.

The main objective was to help the poor and needy of all castes and creeds at a very affordable cost. However, no compromise is ever made in the quality of healthcare provided. It has grown to a reputed and big hospital with over 500 + beds with all modern facilities.



VISION

- Service to people with continual upgradation of technology and professional knowledge.

MISSION

- To offer the best health care services by well-qualified personnel.
- To ensure uniform care to all patients and ensure the safety of our patients, attenders and the staff.
- To develop state-of-the-art infrastructure to make this hospital a preferred health care destination for all patients.

VALUE SYSTEM

- Quality: The Hospital is committed to the continuous evaluation and improvement of all processes related to delivering comprehensive medical treatment and superior patient care.
- Integrity: The Hospital will ensure that transparency among systems and physician practices will be maintained at all times.
- Excellence: The Hospital will strive to foster teamwork, innovation, personal responsibility, and trust in every aspect.
- Dignity: The Hospital will always uphold the patient's dignity, safety, and respect.

EVALUATION OF THE FACTORS ASSOCIATED WITH CANCELLATION AND RESCHEDULING OF ALL ELECTIVE SURGERIES

1.4 BACKGROUND AND CONTEXT

Elective surgeries are planned procedures that are not emergencies and can be scheduled in advance. However, cancellations and rescheduling of these surgeries are common issues faced by hospitals, impacting both patient care and hospital efficiency. At Bhagwan Mahaveer Jain Hospital, Bengaluru, a descriptive cross-sectional study was conducted over 8 weeks to evaluate the factors leading to the cancellation and rescheduling of elective surgeries

1.5 ABOUT OPERATING THEATRE RESCHEDULING

O.T. (Operating Theatre) rescheduling refers to the process of adjusting the planned surgery schedule due to disruptions on the day of surgery. Cancellations are defined as planned elective surgeries that are not performed on the intended date. These disruptions can be due to patient-related, administrative, or medical reasons, and they directly affect the utilisation of operating theatre resources.

1.6 PROBLEM STATEMENT

The cancellation and rescheduling of elective surgeries result in unused overtime (OT) slots, an increased workload for staff, delays for other patients, and financial losses for the hospital. During the study period, 4.48% of scheduled elective surgeries were cancelled, and 3.3% were rescheduled. These disruptions highlight the need to analyse underlying causes and implement strategies to minimise avoidable cancellations and improve OT efficiency.

1.7 PURPOSE OF THE STUDY:

To optimise the operating theatre efficiency: analysing the causes and solutions for the rescheduling and cancellation of surgeries.

1.8 OBJECTIVES:

- To identify the primary reasons for cancellations and rescheduling, which include patient-related, administrative and medical-related
- To determine the frequency and rate of rescheduling in the hospital's Ots
- To assess the impact of rescheduling and cancellations on the operating theatre utilization, workload, etc.
- to evaluate the effectiveness of current preoperative planning and communication among the surgical team
- to recommend measures and strategic interventions aimed at reducing cancellations and, in turn, enhancing productivity.

CHAPTER -2

REVIEW OF LITERATURE

NAME OF THE AUTHOR	TITLE OF THE STUDY	SALIENT FEATURES
Shrivastava R, Kumar S, Kapoor K, Mishra K	Evaluation of surgical case cancellation: a prospective study	Assesses the reasons for surgical cancellations, and highlights patient factors, administrative factors and medical factors in the cancellations.
Neeraj K, Bhardwaj R, Sharma A, Mahajan A, Raina SK	Incidence and causes of cancellations of elective surgeries in a teaching hospital	It identifies the incidence and the main causes of elective surgery cancellations in a teaching hospital.
Ahmad K, Khan SA, Ahmad N	Incidence and factors responsible for the cancellation of elective surgical procedures: a retrospective study	It is a retrospective analysis of the factors leading elective surgery cancellations including patient readiness and systemic issues.
Lima MADS, Magalhães AMM, Cezar-Vaz MR, Borges AMF, Ceron MD	Challenges in surgical scheduling and cancellations.	It discusses the role of preoperative nursing in managing the surgical schedules and minimizing the cancellations.

Ahmed A, Alkaid M, Alkatant K, AlSaif F	Reducing the surgery cancellations through simulation mode.	It demonstrates how a simulation model can reduce the cancellations by optimizing scheduling and allocation of resources.
Wallace L, Muir M, Romano M, Wyllie L, Gyomber D, Hodgson R	Assessing the operating theatre efficiency: a prospective cohort study to identify intervention targets to improve efficiency.	It identifies the inefficiencies in the OT process and suggests interventions to improve the utilization and reduce the cancellations.
Bhaskar L	A prospective study on operation theater utilization times and most common causes of delays and cancellations.	It is a prospective study that analyses the OT utilization , delays and the causes of cancellations in the hospital setting.
Vinukondaiah K, Anantha Krishnan N, Ravishankar M	Operation theater utilization in a teaching hospital.	It examines the utilization rate of the OT and factors affecting the efficiency in a teaching hospital.
Stavrou G, Panagiotakopoulos T, Tsoufilas G	A surgeon-led model to improve operating theatre efficiency: a prospective audit.	it evaluates the impact of a surgeon led approach on improving the OT efficiency and reducing the cancellations.
Parker C, Allen K, Loveleock K, Esmail A, Griffin A	A discrete event simulation to improve operating theatre efficiency.	It uses a discrete event simulation to model and improve the OT efficiency , reducing the delays and cancellations.

CHAPTER - 3

METHODOLOGY

3.1 INTRODUCTION: It outlines the design of the research and also investigates the factors that are associated with the cancellation and rescheduling of elective surgeries at the hospital. The study also adopts a descriptive cross-sectional approach, which aims to systematically assess the frequency and the causes of cancellations and rescheduling in the hospitals' operating theatres.

3.2 MATERIAL AND METHODS:

- **STUDY DESIGN:** A descriptive cross-sectional study design was used.
- **SETTING:** Bhagwan Mahaveer Jain Hospital, Bangalore (500-bedded multi-speciality hospital)

3.3 STUDY SAMPLE:

Inclusion criteria: all elective surgeries scheduled between the hours 9:00 am to 5:00 pm on working days. surgeries listed on the OT schedule for the given study period.

Exclusion criteria: surgeries scheduled on Sundays and public holidays. emergency surgeries that are not prescheduled and require immediate attention.

Study tools: The data is collected using the daily operating theatre schedule and case list, informal discussions with the OT staff, management, and clinical departments to gather the data, OT logbooks and records that are maintained by the department.

3.4 DURATION OF STUDY: MARCH- JUNE

3.5 SAMPLE SIZE: A total of 100-150 rescheduled or cancelled surgeries during the defined period will be included in the study. The final sample size will depend on the number of cases meeting the inclusion criteria within the time frame

SAMPLING TECHNIQUE: A Descriptive cross-sectional study was the technique used. During the study period, data have been collected for all scheduled surgical procedures in the departments from 9:00 am to 5:00 pm.

3.6 DATA COLLECTION PROCEDURE:

- ☐ Data was collected by using the approved OT list, rescheduled surgeries, cancelled surgeries data and the factors associated with delay and cancellations of surgeries.
- ☐ Data has been monitored and discussed with the OT in charge reasons for rescheduling and cancellation of surgeries

3.7 DOCUMENTATION

- Total number of scheduled elective surgeries
- Number of surgeries conducted per schedule
- Number of rescheduled surgeries and reasons
- Number of cancellations and their reasons

3.8 DATA ANALYSIS PLAN:

- ☐ The total number of surgeries in the operating theatres
- ☐ Calculate the number of cancelled surgeries department-wise
- ☐ Calculate the number of rescheduled surgeries department-wise
- ☐ Analyze and segregate the most common reasons for the respective departments.
- ☐ The most common reason for cancellation and rescheduling of surgeries were investigated and examined. A comparative analysis on the total number of actual surgeries taken place vs the total number of surgeries cancelled, rescheduled was done.
- ☐ Using MS excel for the analysis and interpretation of the data, ppt for graphical representation of the data and data visualisation techniques such as histograms have been used to visually explore relationships and identify the patterns in the data.

3.9 ETHICAL CONSIDERATIONS:

- ☐ Ethical approval and administrative permission have been obtained from the hospital management
- ☐ As the study involves secondary data and non-identifiable observations, patients' informed consent is not required
- ☐ All the collected data will be handled confidentially, and no personal patient information will be used

3.10 IMPLICATIONS OF RESEARCH:

- ☐ The implications of the research could be significant for hospital administration, patients and surgeons. The hospital can take steps to address them, which would ultimately lead to the more efficient use of the operating theatre, better scheduling and patient outcomes by identifying the common causes of cancellation and rescheduling of surgeries.

CHAPTER- 4

ANALYSIS AND RESULTS

STUDY POPULATION

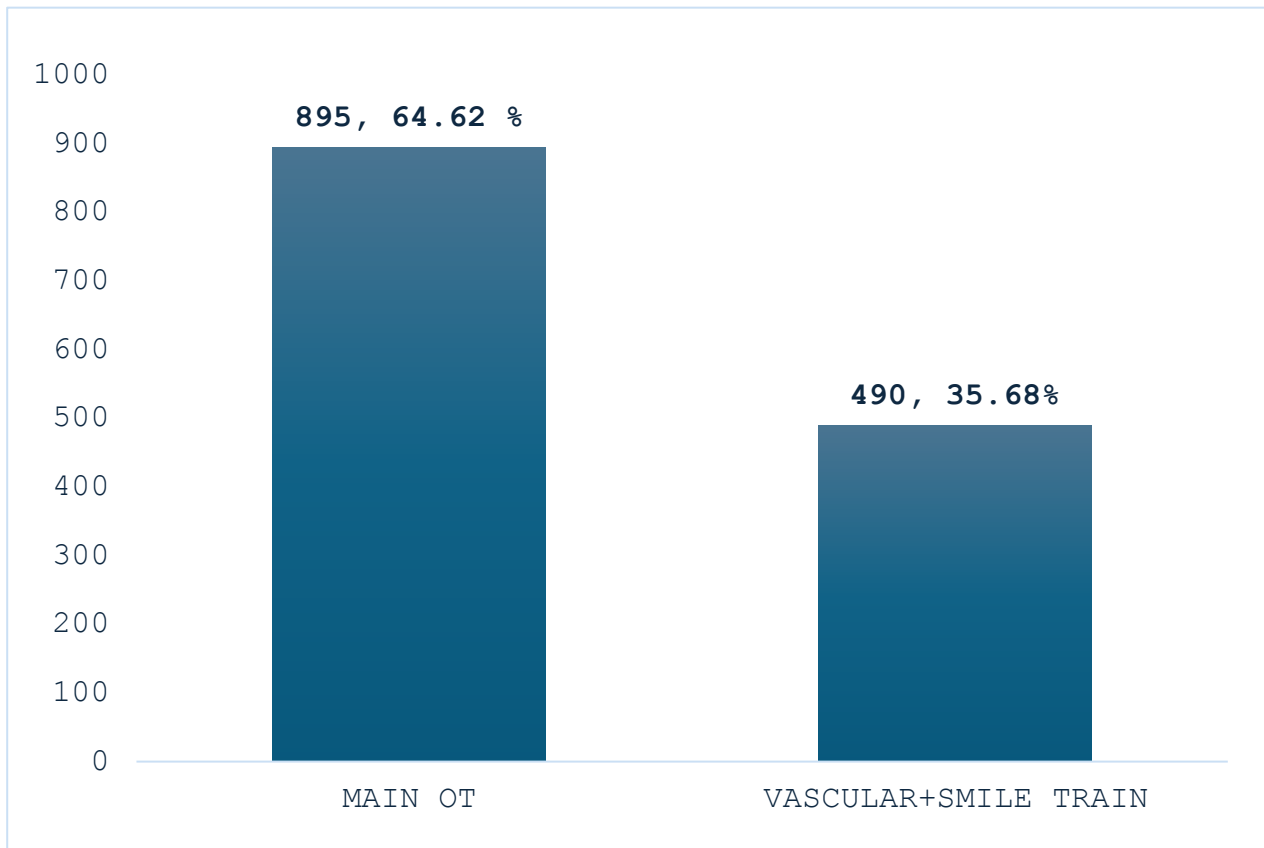


FIGURE 1.1

The graph shows that 64.62% (895 cases) of elective surgeries were performed in the Main OT, while 35.68% (490 cases) took place in the Vascular and Smile Train OTs. This indicates that the Main OT handled nearly twice as many cases as the specialised OTs, highlighting its primary role in surgical operations at the hospital

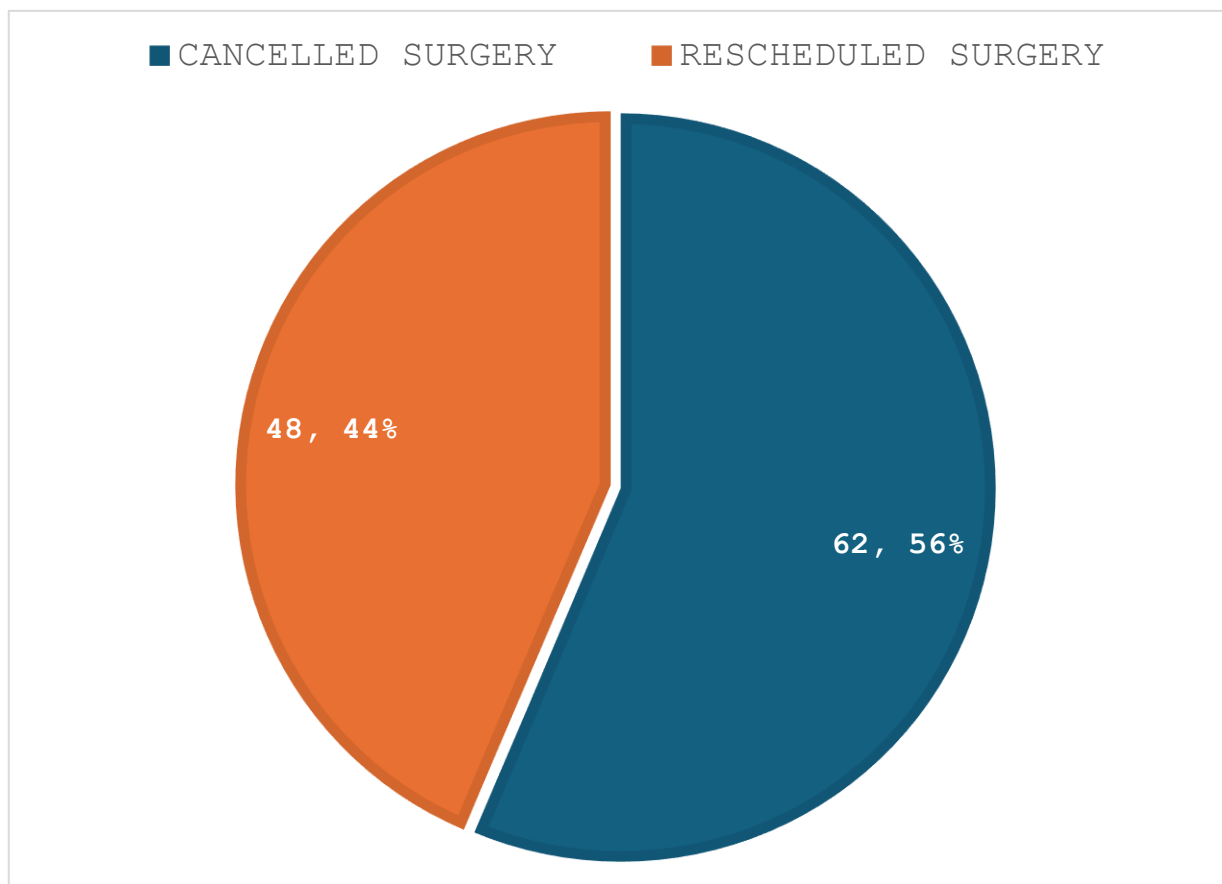


FIGURE 1.2

The study population was 1385, out of which 110 patients were considered by following the Descriptive cross-sectional methodology, and it was noticed 48 patients were rescheduled and 62 patients were cancelled.

DEPARTMENT WISE RESCHEDULING DATA

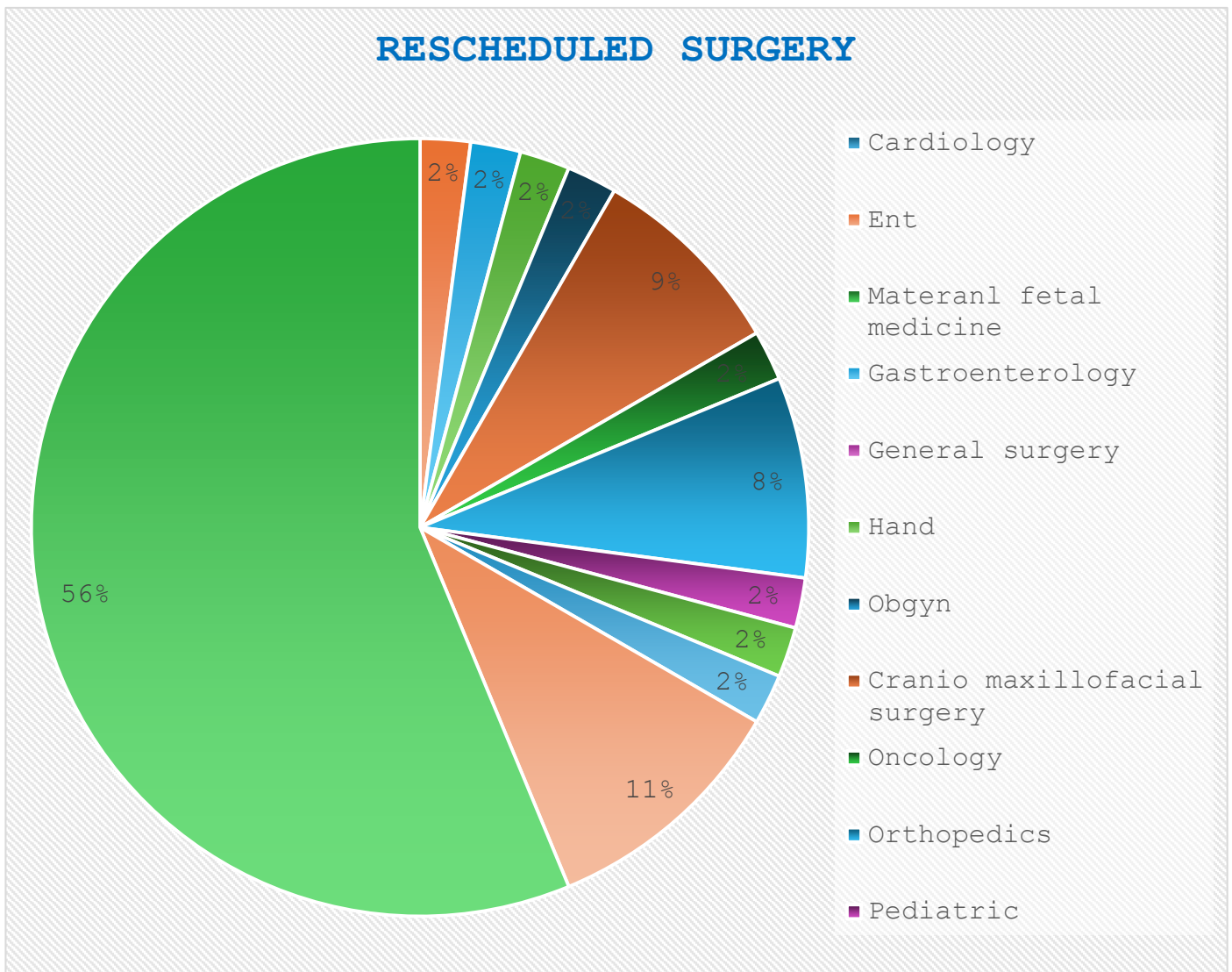


FIGURE 1.3

The highest proportion of rescheduled surgeries (56%) belongs to the Maternal Fetal Medicine Department. ENT (11%) and cranio-maxillofacial surgery (9%) also account for a notable share. Cardiology (8%) and gastroenterology (2%) follow next. Other specialities like general surgery, oncology, and orthopaedics each contribute 2% to the reschedules.

CANCELLED SURGERY

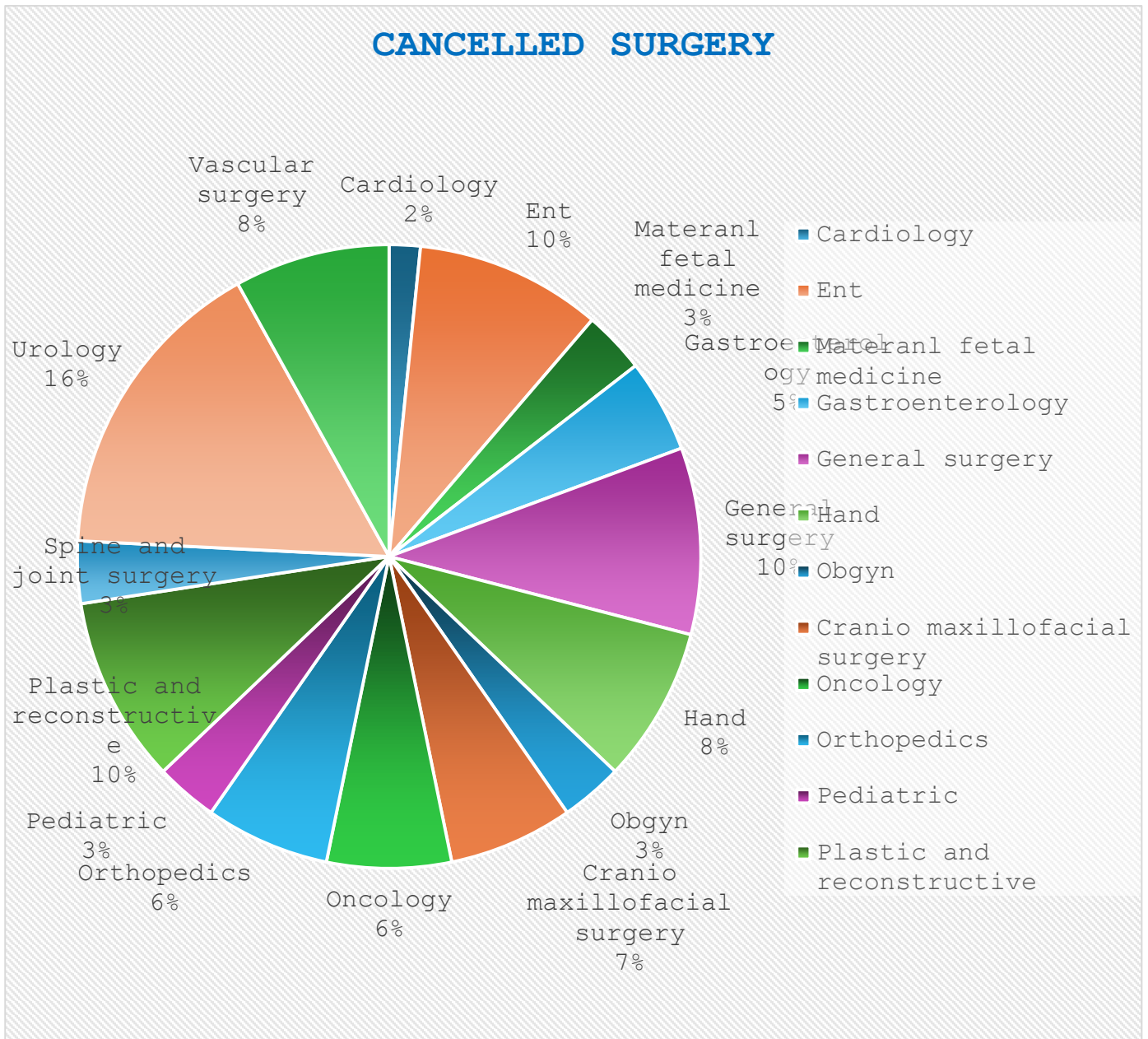


FIGURE 1.4 Urology accounts for the highest percentage of cancelled surgeries at 16%, followed by ENT, general surgery, and plastic & reconstructive surgery at 10% each. Vascular surgery, hand, and cranio-maxillofacial contribute around 7–8%. Maternal fetal medicine, cardiology, and pediatric surgeries saw the least cancellations, each around 2–3%.

COMPARISON OF CANCELLED AND RESCHEDULED SURGERY

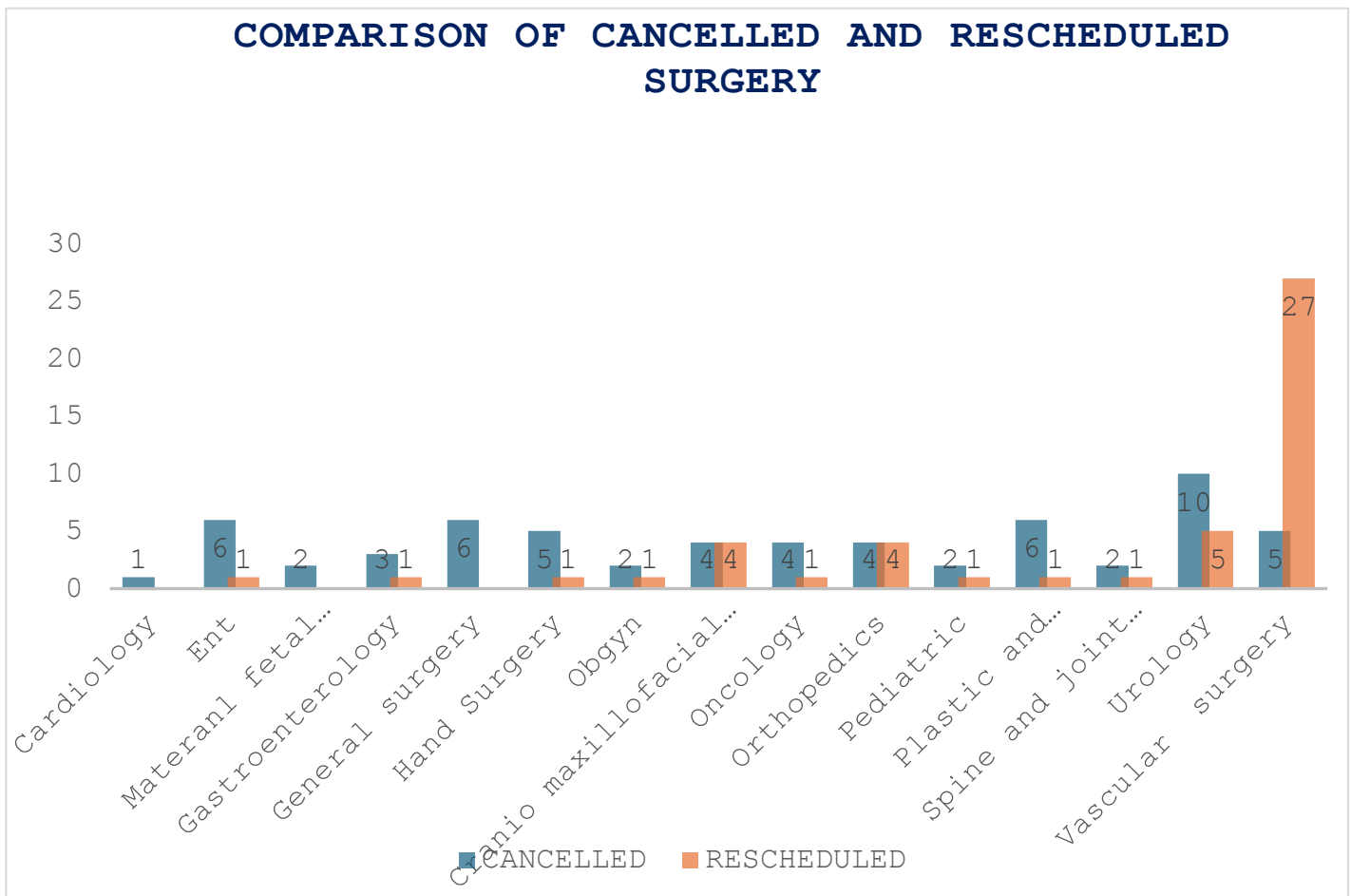


FIGURE 1.5

The chart shows a comparison of cancelled and rescheduled surgeries across departments. Vascular surgery had the highest number of rescheduled surgeries (27), while urology had the most cancellations (10). ENT and hand surgery had relatively high cancellations but minimal rescheduling. Most departments show a trend of higher cancellations than rescheduling, except vascular surgery, where rescheduling was dominant.

REASONS FOR CANCELLATION AND RESCHEDULING OF SURGERY AT MAIN OT

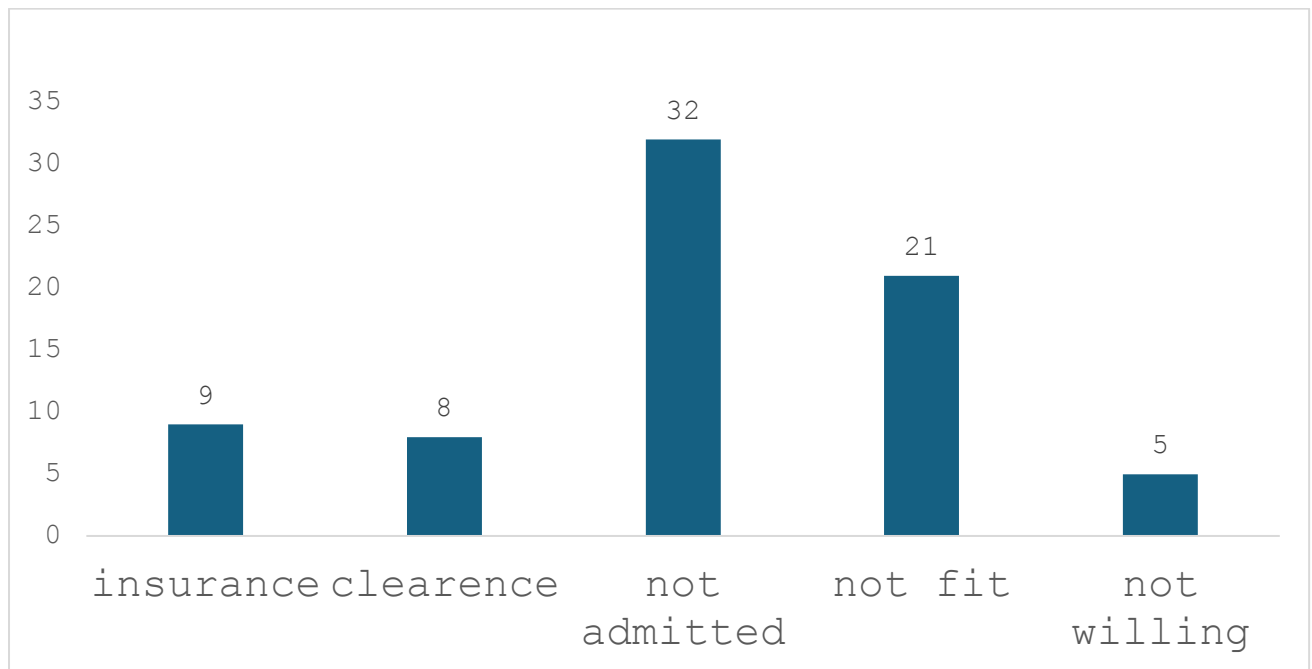


FIGURE 1.6: This chart highlights the primary reasons for surgery cancellations. The most common reason was patients not being admitted (32 cases), followed by patients being medically unfit (21 cases). Insurance issues (9 cases) and lack of necessary clearances (8 cases) were less frequent causes. Only 5 patients cancelled due to being unwilling to proceed with the surgery.

REASONS FOR CANCELLATION AND RESCHEDULING OF SURGERY AT VASCULAR OT

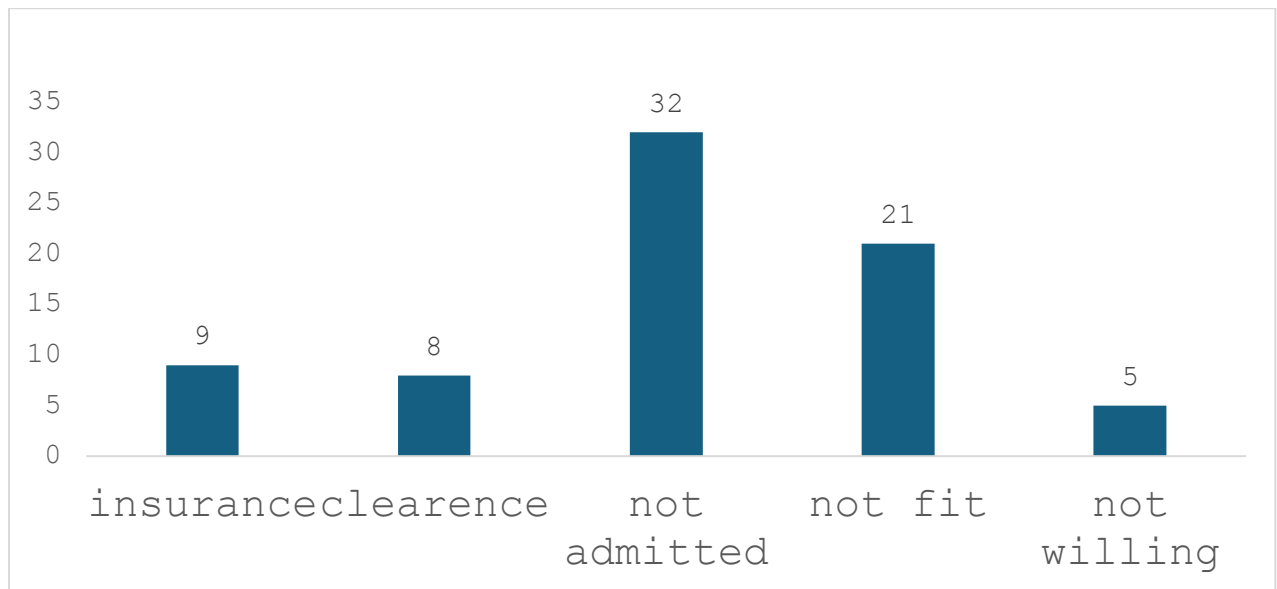


FIGURE 1.7 The chart highlights the key reasons behind surgery cancellations. The most common reason was patients not being admitted, accounting for 32 cases, which points to a significant gap in the pre-operative admission process. This was followed by 21 cases where patients were found medically unfit for surgery, indicating the need for better pre-surgical assessments. Insurance-related issues led to 9 cancellations, while delays in obtaining necessary clearances caused 8. Only 5 cancellations occurred due to patients being unwilling, suggesting that most cancellations were driven by administrative or clinical factors rather than personal choice.

DEPARTMENTAL COMPARISON ON CANCELLATION OF SURGERY:

DEPARTMENT	INSURANCE	CLEARANCE	NOT ADMITTED	NOT FIT	NOT WILLING	DAMA	EQUIPMENT ISSUES
CARDIOLOGY	1						
ENT			7				
FETAL MEDICINE			2				
GASTROENTEROLGY	1		2				
GEN SURGERY	1	1	2	1	1		
HAND SURGERY			2	3			
OBGYN			1	1			
CRANIOMAXILLO FACIAL SURGERY			3	1			
ONCOLOGY		1	2		1		
ORTHOPAEDICS			2	2			
PEDIATRIC		1			1		
PLASTIC			5		1		
SPINE				2			
UROLOGY	1		5	3	1		
VASCULAR						3	

FIGURE 1.8 The major reason for surgery cancellations across departments is “Not Admitted,” especially in ENT, Urology, and Plastic Surgery. “Not Fit” is another key issue, mostly in Urology, Hand Surgery, and Orthopaedics. Minor reasons include insurance issues, clearance delays, and patient unwillingness. Urology also recorded DAMA and equipment issues, suggesting departmental review may be needed. Overall, improving admission processes and pre-surgical fitness checks can significantly reduce cancellations.

DEPARTMENTAL COMPARISON ON RESCHEDULING OF SURGERY:

DEPARTMENT	INSURANCE	CLEARANCE	NOT ADMITTED	NOT FIT	NOT WILLING	DAMA	EQUIPMENT ISSUES
CARDIOLOGY							
ENT				1			
FETAL MEDICINE							
GASTROENTEROLGY	1						
GEN SURGERY							
HAND SURGERY				1			
OBGYN				1			
CRANIOMAXILLO FACIAL SURGERY	2	1		1			
ONCOLOGY				1			
ORTHOPAEDICS				4			
PEDIATRIC	1						
PLASTIC		1					
SPINE				1			
UROLOGY	1	2		2			
VASCULAR	1	10	16				1

FIGURE 1.9 The main reason for surgery cancellations is "Not Admitted", particularly in the Vascular department (16 cases) and Urology. The Vascular department also had the highest issues overall, including 10 clearance delays and 1 equipment issue. Other frequent reasons include "Not Fit" (notably in Orthopedics and Urology) and insurance or clearance issues in departments like Craniomaxillofacial Surgery and Gastroenterology. Focus should be placed on improving admission processes and pre-op clearances, especially in Vascular and Urology.

ROOT CAUSE FOR THE CANCELLATION AND RESCHEDULING OF SURGERY

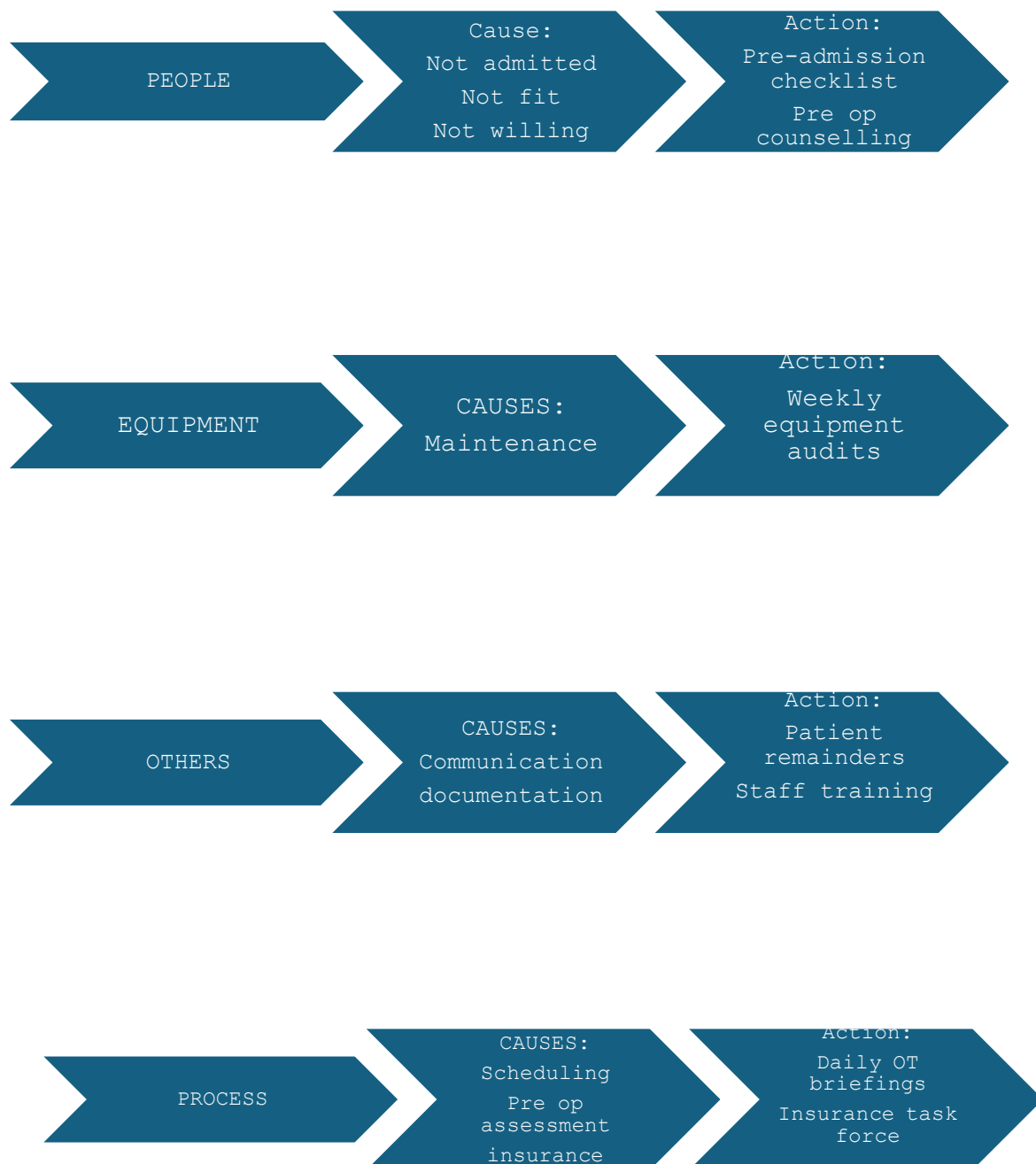


FIGURE 1.10: The root cause analysis identifies the patient-related issues as the major contributing factor for the cancellations of surgery. The equipment maintenance problems also lead to disruptions and highlight the need for regular audits. Communication gaps and incomplete documentation contribute to cancellations, too. Administrative delays in the scheduling, pre op assessment and insurance clearance are the significant process-related causes. Actions like preadmission checklists, equipment audits, patient reminders and daily briefings at the OT can address these root causes and also improve efficiency.

RESULTS

During the 8-week study period, 4.48 % of the scheduled elective surgeries were cancelled and 3.3% were rescheduled together; these disruptions affected operating theatre efficiency, leading to unused time slots, increased staff workload and delays for other patients. Using this information, the two-tailed p-value is calculated, and the result shows 0.1164. Since this p-value is less than 0.05 and it is considered statistically significant.

The two-tailed p-value equals: **0.1164**

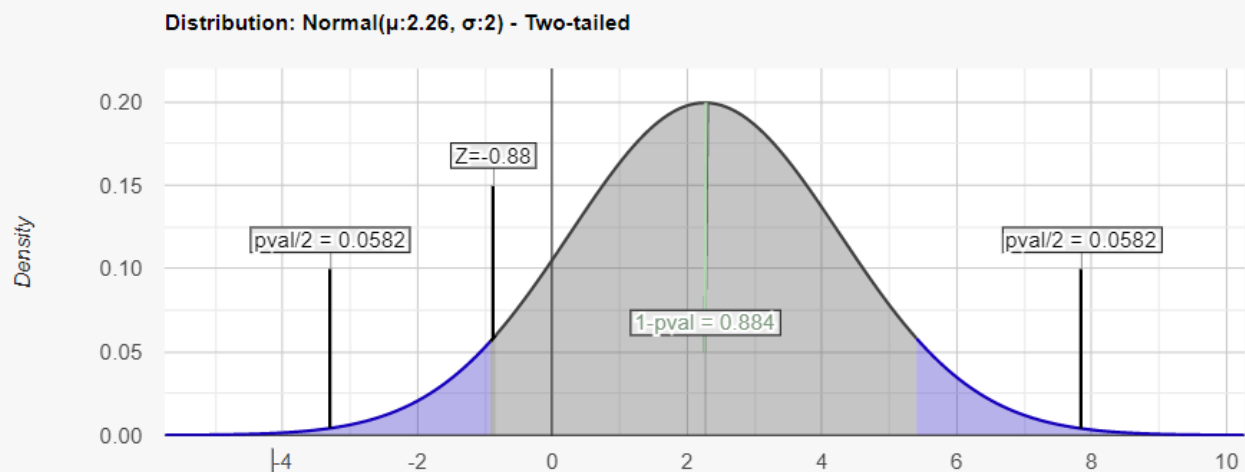


FIGURE 1.11: This graph shows the two-tailed test with a Z score of -0.88 and a p value of 0.1164. Since the p-value is above 0.05, the result is not statistically significant. Each tail has a p-value of 0.0582

Solution

$$P = P(Z < 0.5) = 0.05821$$

$$1 - P = P(Z > 0.5) = 0.9418$$

$$P\text{-value} = 2 * \text{Min}[P, 1-P]$$

$$P\text{-value} = 2 * \text{Min}[0.05821, 0.9418]$$

$$P\text{-value} = 2 * 0.05821 = 0.1164$$

$$p(Z < -0.88) + p(Z > 0.88) = 0.1164$$

Since the p-value (0.1164) is greater than α (0.05), H_0 is not rejected. (0.1164 > 0.05)

FIGURE 1.12: The p-value is calculated as 0.1164 using the two-tailed test. Since it is greater than the significance level, the null hypothesis is not rejected.

CHAPTER- 5

SUGGESTIONS AND DISCUSSIONS

5.1 SUGGESTIONS

1. Identify and Address Root Causes:

Conduct regular reviews to identify the specific reasons behind surgery cancellations and rescheduling, focusing on patient, administrative, and medical factors.

2. Enhance Pre-operative Preparation:

Improve patient education and pre-operative assessment protocols to minimise cancellations due to patient-related issues.

3. Streamline Administrative Processes:

Optimise scheduling systems and improve communication between departments to reduce administrative errors and delays.

4. Monitor and Evaluate OT Utilisation:

Implement ongoing monitoring of OT utilisation to identify patterns and opportunities for further efficiency improvements.

5. Staff Training and Awareness:

Provide regular training for staff on best practices for scheduling, communication, and handling unexpected disruptions.

6. Better financial counselling

7. Involvement of OT in charge for follow-up

8. Streamline prior authorisation

9. A systemic approach needs to be identified to reduce the medical cancellations

These steps will help reduce the incidence of cancellations and rescheduling, ultimately leading to better patient outcomes and more efficient use of hospital resources

5.2 IMPACT DURING CANCELLATIONS AND RESCHEDULING OF SURGERIES:

- ☐ With each cancellation, the slot for that particular OT is left unused
- ☐ The OT slot is not used as it was planned originally, which can cause gaps or overtime on the other days
- ☐ Overload on the surgeons, anaesthetists and nurses, when the procedures are rescheduled
- ☐ Patient Flow: Other patients may face delays, longer waiting lists, or rushed care when cases are rescheduled.
- ☐ Revenue Loss: Each cancelled/rescheduled surgery is a direct loss of potential income and increases per-case cost
- ☐ Not Admitted/Not Fit: They cause last-minute cancellations, making it hard to fill the slot.
- ☐ Equipment Issues: Lead to sudden cancellations, disrupting the entire OT schedule for the day.

CHAPTER – 6

CONCLUSION

In conclusion, surgery cancellations and rescheduling can have significant impacts on patients, the healthcare system, and the overall healthcare landscape.

While some cancellations may be unavoidable due to medical reasons, many are potentially avoidable with better planning, communication, and resource management.

The study highlights that a significant portion of elective surgeries at Bhagwan Mahaveer Jain Hospital are concentrated in the Main OT, with a noticeable proportion of cases also managed in specialised OTs. However, the cancellation and rescheduling rates of 4.48% and 3.3%, respectively, indicate that there are areas for improvement in OT efficiency. Addressing the causes behind these disruptions is essential to optimise resource utilisation, reduce delays, and improve overall patient care.

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