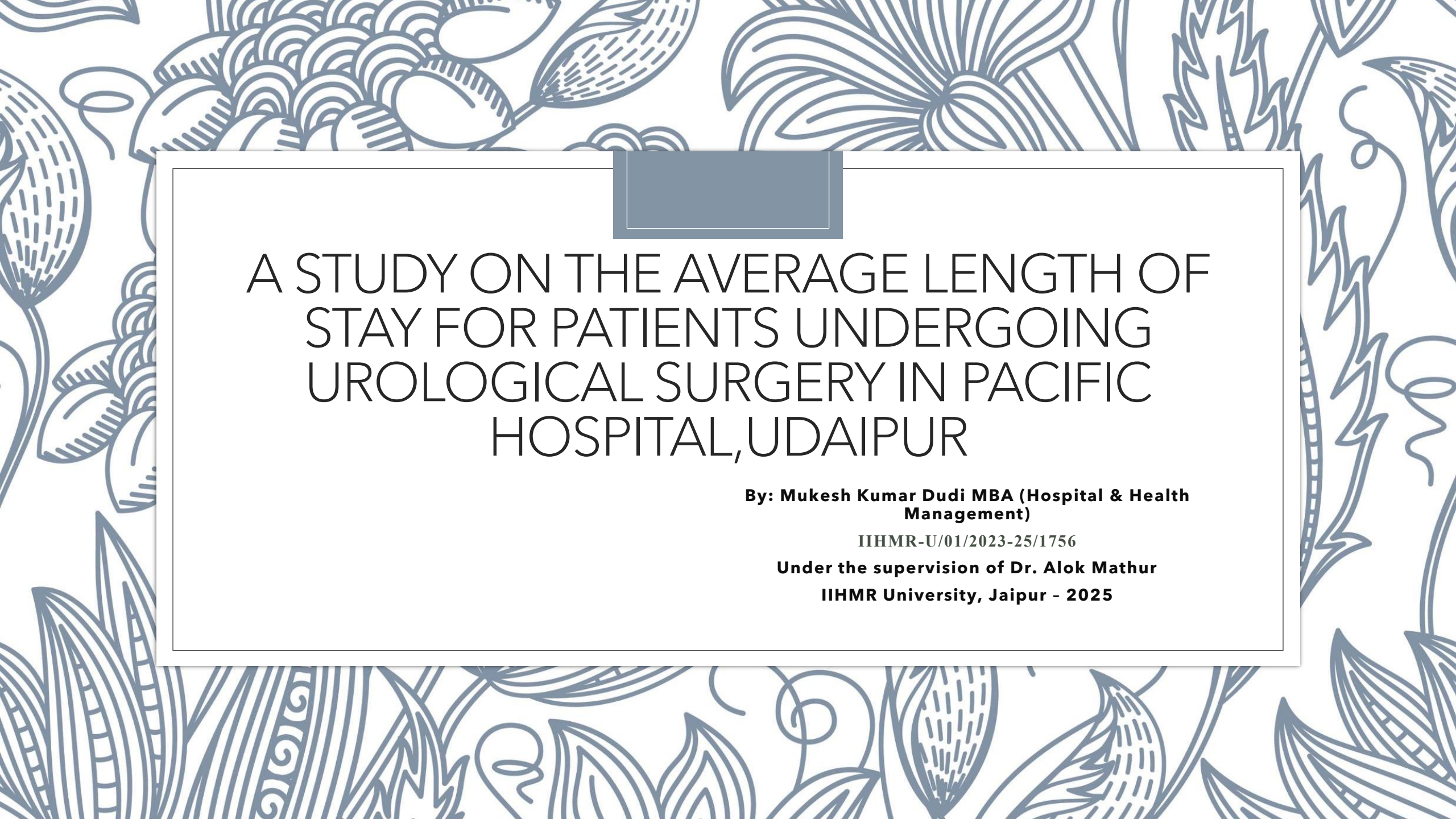




A STUDY ON THE AVERAGE LENGTH OF STAY FOR PATIENTS UNDERGOING UROLOGICAL SURGERY IN PACIFIC HOSPITAL, UDAIPUR

**By: Mukesh Kumar Dudi MBA (Hospital & Health
Management)**

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Under the supervision of Dr. Alok Mathur

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Introduction

- Length of Stay (LOS) is a critical indicator of healthcare efficiency.
- Urological surgeries cover a wide range from minor day-care to major inpatient procedures.
- Evaluating LOS helps identify systemic delays and clinical inefficiencies.
- This study focuses on LOS for urology patients at Pacific Institute of Medical Sciences, Udaipur.

Background & Rationale

- Hospital LOS impacts both patient outcomes and hospital costs.
- Unnecessarily prolonged stays can lead to increased risks (e.g., infections, bed-block).
- Identifying causes of variation helps improve quality and reduce costs.
- No recent localized data was available from tertiary care centers in Rajasthan—hence this study.

Study Objectives

1. Determine the average LOS for various urological procedures.
2. Identify demographic and procedural factors affecting LOS.
3. Compare LOS across different modes of payment.
4. Propose strategies to reduce avoidable inpatient durations.

Hospital Profile – PIMS Udaipur

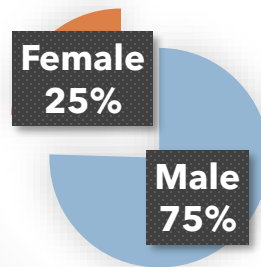
- 900+ bedded multi-specialty teaching hospital.
- Offers specialized services including urology, nephrology, and critical care.
- Equipped with modular OTs, ICU/NICU/PICU, CT, MRI, and pathology.
- Known for handling high surgical volumes across various specializations.



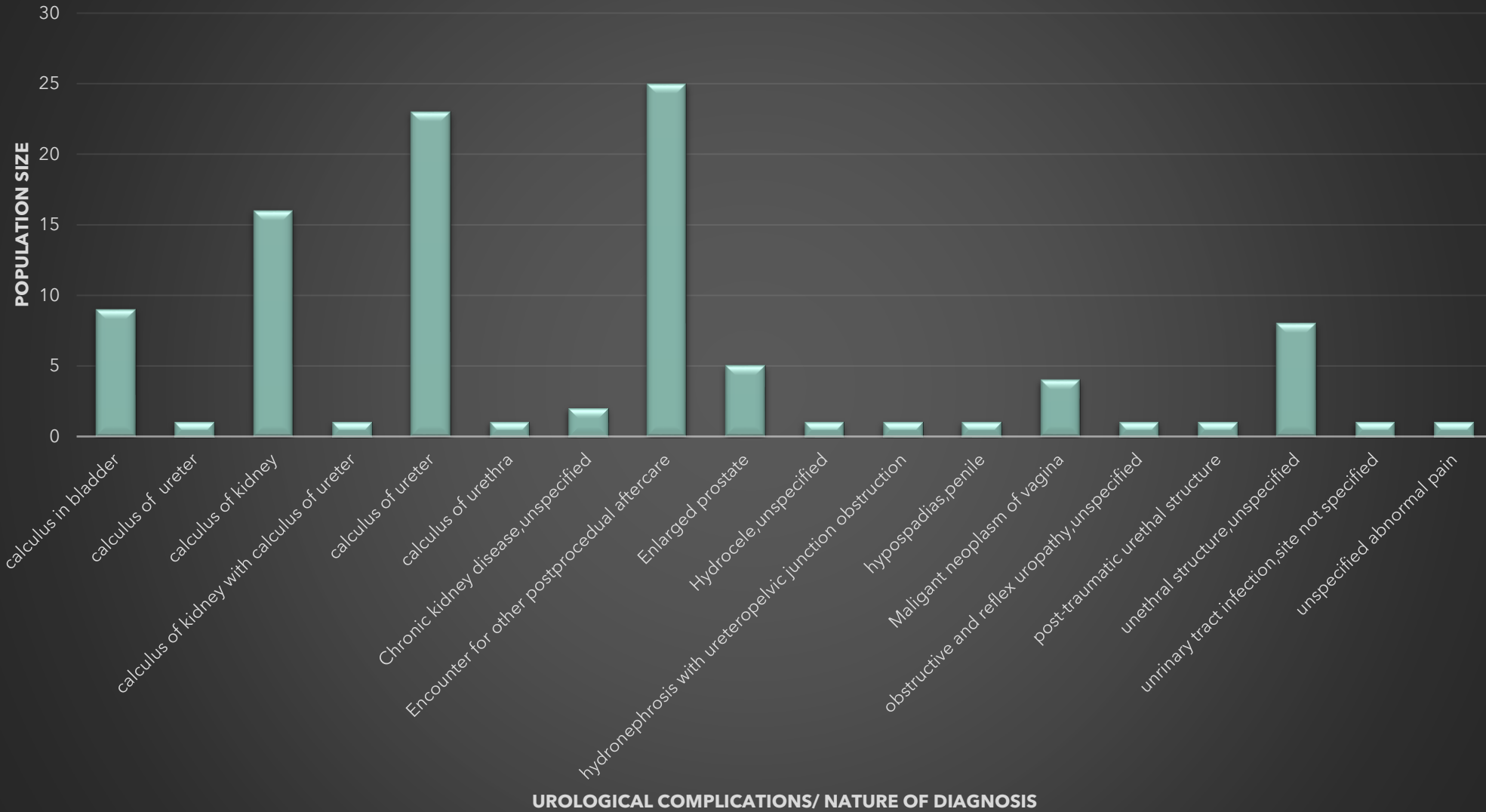
Methodology

- • Design: Cross-sectional Descriptive, Retrospective Study
- • Period: March to June 2025
- • Sample Size: 102 patients undergoing urological surgery
- • Data Sources: Bed head tickets, MRD, discharge summaries

Gender based distribution of the cases



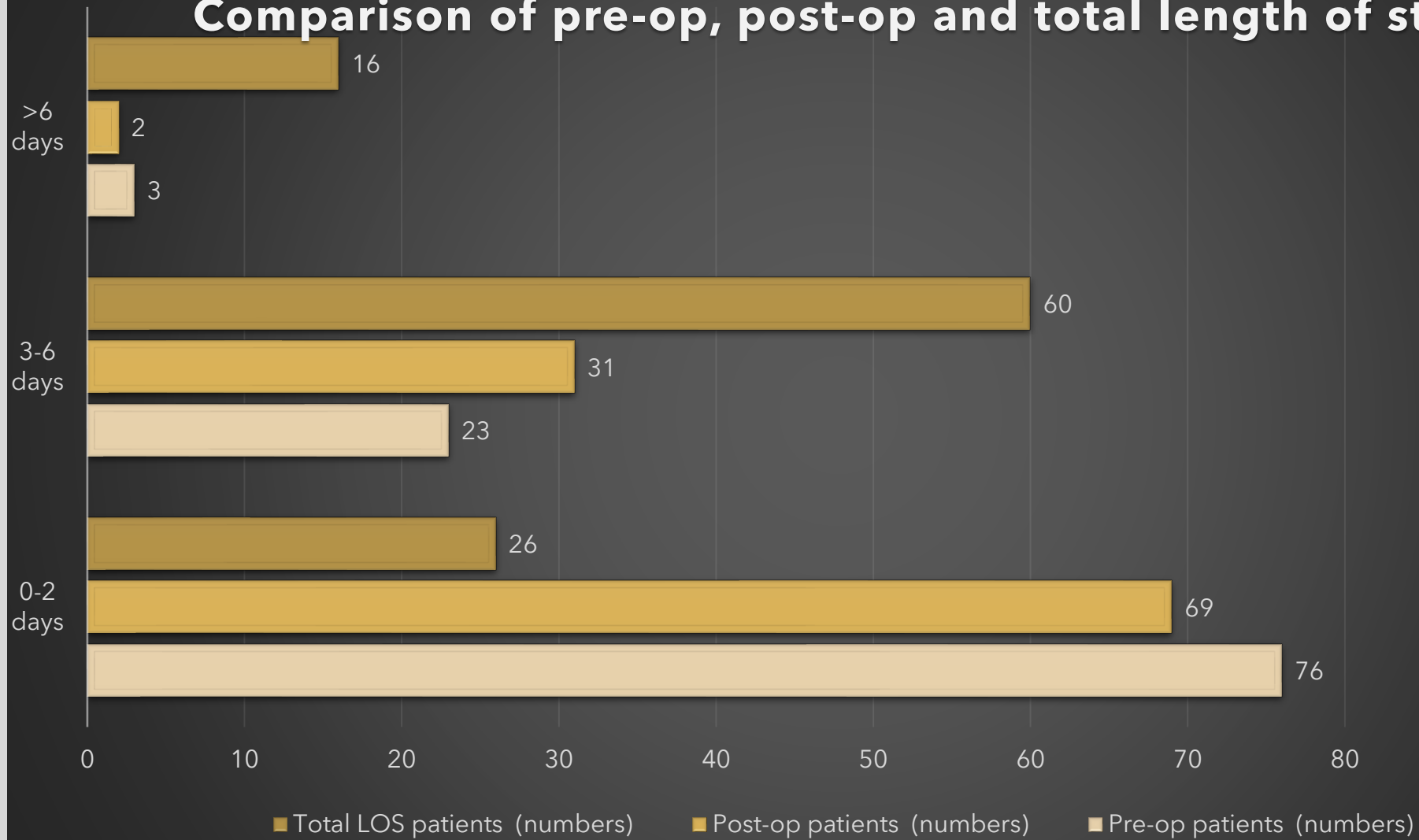
Diagnosis of urologic conditions



Demographics

- Most patients were in age group 46–60 years (28.4%)
- Majority were male (75.5%), reflecting higher prevalence of urologic issues
- Aging population showed higher LOS due to complexity of care and delayed recovery

Comparison of pre-op, post-op and total length of stay



Inclusion/Exclusion Criteria

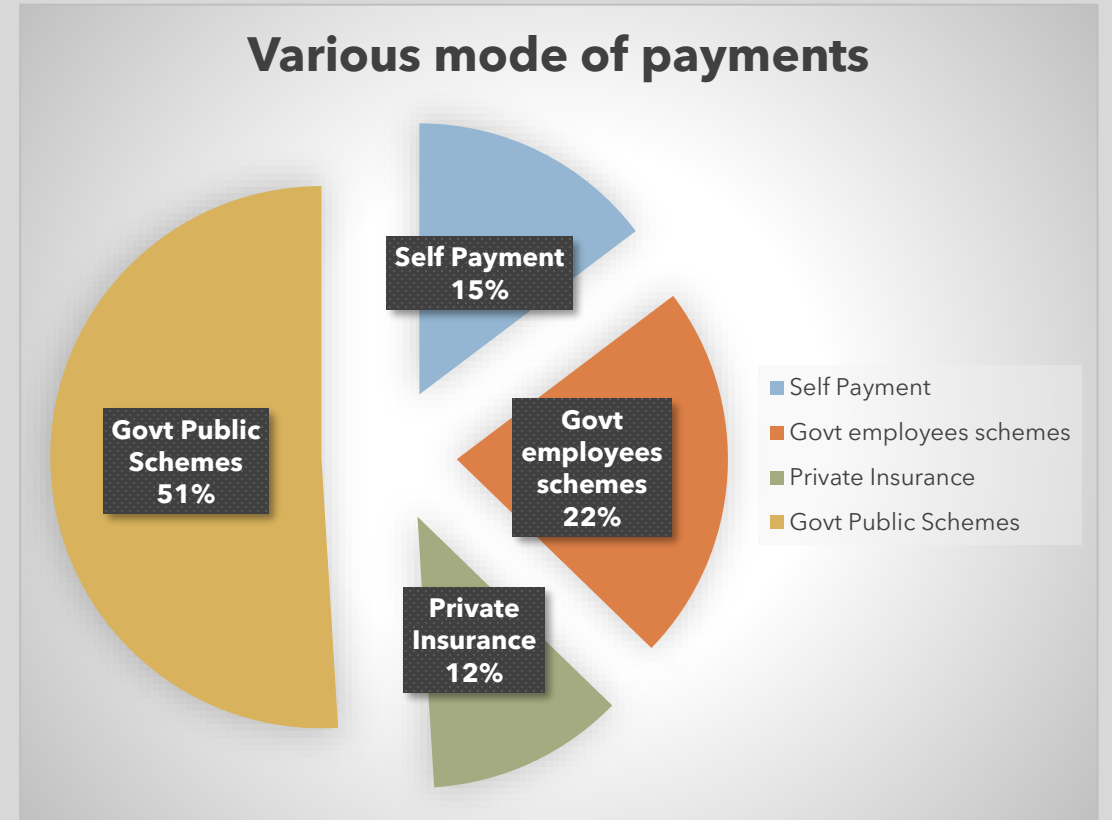
Inclusion: Urological surgical patients with confirmed clinical & radiological evidence.

Exclusion:

- Age below 12 years
- Patients with major comorbidities (e.g., uncontrolled diabetes, CKD)

Mode of Payment

- Govt. public health schemes (e.g., Chiranjeevi Yojana): 51%
- Govt. employee schemes (e.g., CGHS, RGHS): 22.5%
- Private insurance: 11.8%
- Self-pay: 14.7%
- LOS significantly longer in government scheme beneficiaries due to procedural delays.



Statistical Analysis

Diagnosis	% of Cases	Average LOS (days)
Post-procedural Aftercare	24.5%	4.5
Ureteric Calculi	22.5%	4.1
Renal Calculi	15.7%	3.8
BPH	12.7%	4.6
Nephrectomy	10.8%	5.5
Others	13.8%	3.5

- Chi-square test shows significant association between stay duration and payment/diagnosis.
- Patients with LOS >6 days: primarily under public health schemes or complex diagnoses
- LOS strongly affected by post-op recovery delays, discharge coordination

FINDINGS

AVERAGE LOS

- Pre-operative LOS: 1.98 days
- Post-operative LOS: 2.18 days
- Total LOS: 4.16 days

Highest LOS by Age

Total LOS highest in **31-45 years** age group (5.0 days)

LOS is higher in males aged 31-35 due to:

- Higher incidence of complicated ureteric/renal calculi.
- Tendency to delay seeking care, leading to worsened conditions.
- Need for multiple procedures like stenting, PCNL.
- Occupational constraints delaying discharge readiness

GENDER ANALYSIS

Males had slightly higher LOS (4.19 days) than females (4.08 days); not statistically significant

DIAGNOSIS DISTRIBUTION

- Most common: Post-procedural aftercare (24.5%), Ureteric calculi (22.5%), Renal calculi (15.7%)

PAYMENT MODE AND LOS

- Govt Public Schemes: Highest LOS (4.82 days)
- Self-payment: Lowest LOS (3.0 days)

STATSTICAL RESULTS

- No statistically significant differences by age or gender ($p > 0.05$)

LOS TRENDS

- 76 patients had ≤ 2 days pre-op stay
- 69 had ≤ 2 days post-op stay

◦ **Recommendations Based on Findings:**

- High LOS in Govt. Scheme Patients → Streamline and automate approval processes.
- Higher LOS in Complex Surgeries → Implement Enhanced Recovery After Surgery (ERAS) protocols.
- Pre-op and Diagnostic Delays → Allocate dedicated diagnostic slots for surgical patients.
- Underutilization of Day-care Surgeries → Establish Short-Stay and Day-Care Units.
- LOS Higher in Males (31-35) → Promote community awareness for early diagnosis and treatment.

Conclusion

- Average LOS: 4.16 days; within acceptable norms, but improvable.
- Delays largely avoidable with better systems and perioperative protocols.
- Resource optimization possible by reducing unnecessary inpatient days.
- Study supports integrating clinical and administrative reforms in surgical pathways.