

"Trends in the Adoption of Minimally Invasive Surgical Devices in Indian Healthcare"

IIHMR University, Jaipur

Presented By: Ashutosh Kaurav
Roll No: 0486

University Mentor: Dr. Saurabh Kumar Banerjee

Project Mentor: Mr. Anoop Sagar



"Minimally invasive energy devices don't just cut tissue—they cut recovery time, reduce pain, and elevate the standard of surgical care."

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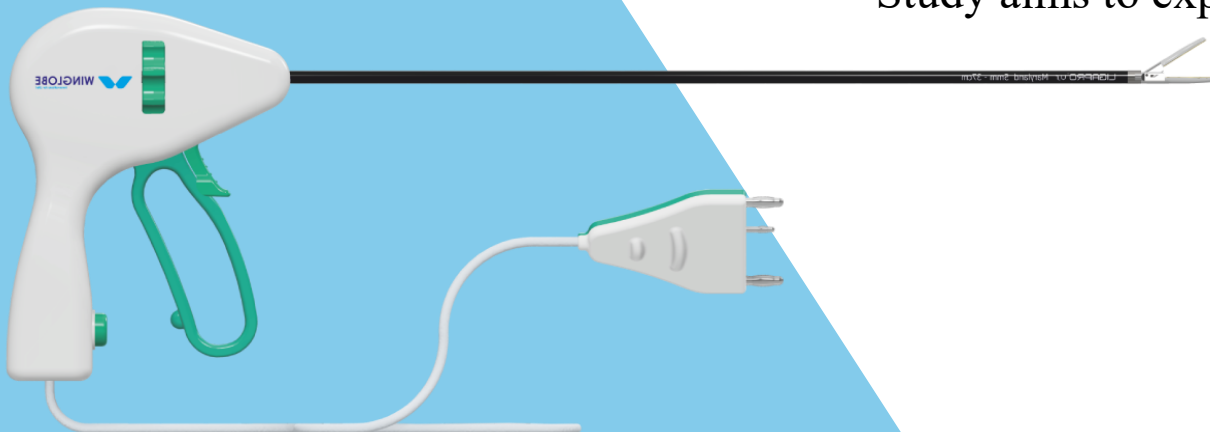
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Introduction



- MIS tools like Electrosurgical Units, Harmonic Scalpels, and Vessel Sealers are transforming surgery.
- Benefits: Less trauma, faster recovery, reduced blood loss.
- Bhopal (Tier-2 city) is experiencing growing adoption.
- Study aims to explore current usage, barriers, and future prospects



Research Objective

1

To analyze trends in energy device usage in Bhopal.

2

To explore drivers and barriers to adoption..

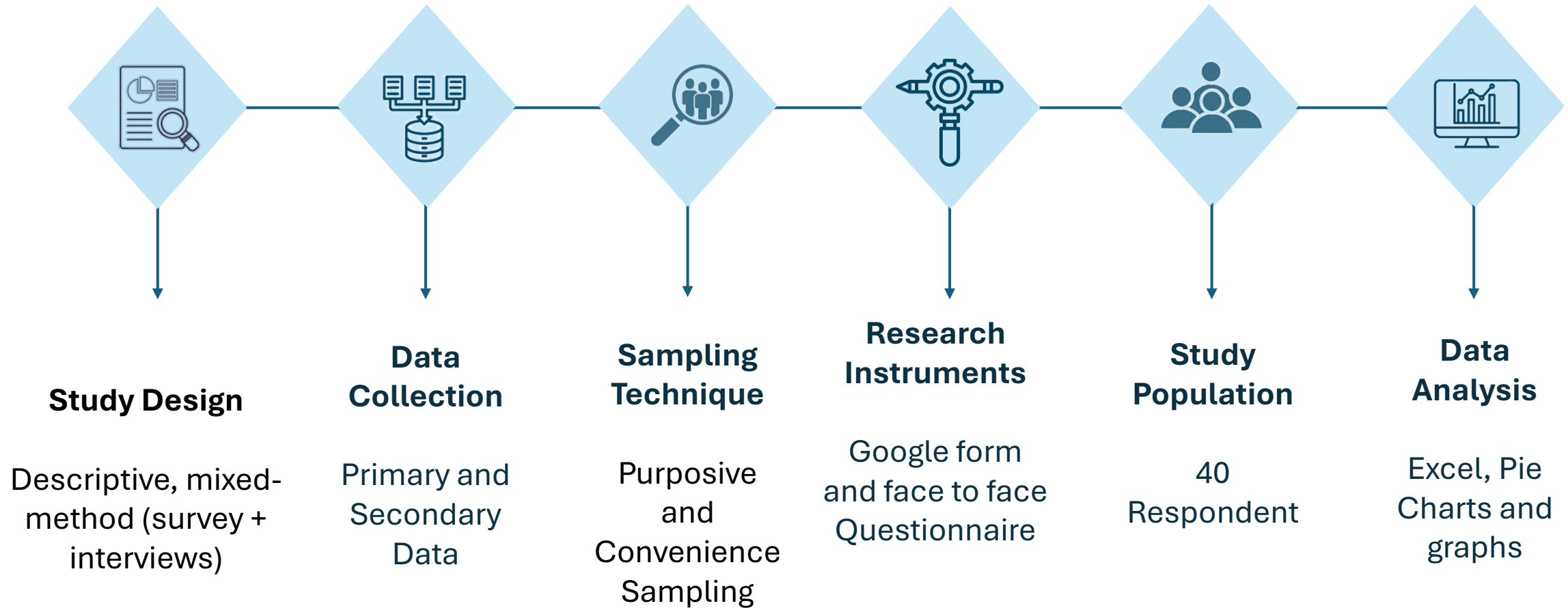
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To understand how marketing empowers patients in their healthcare journey.

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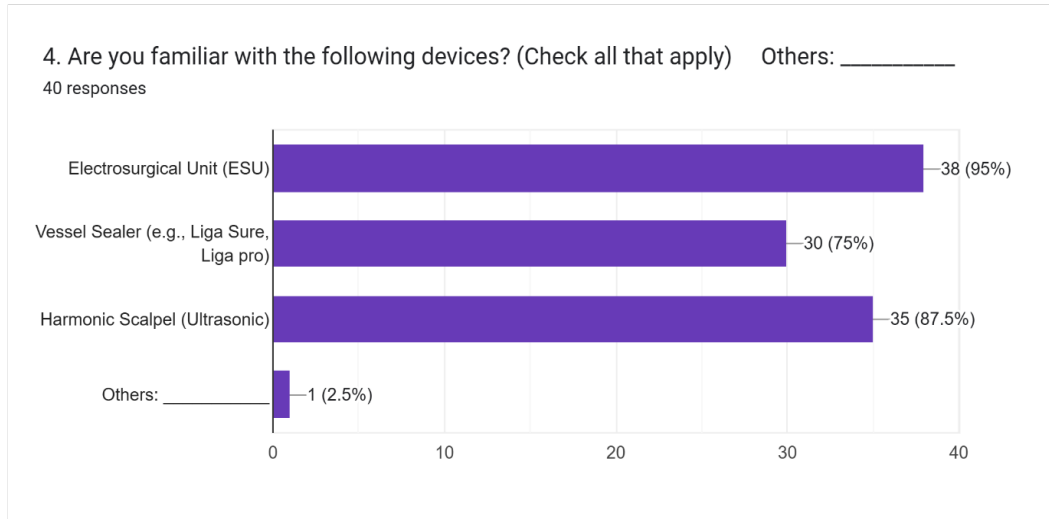
To study multi-stakeholder perspectives: surgeons, engineers, procurement.

Methodology



Result: Survey Analysis

Device Familiarity

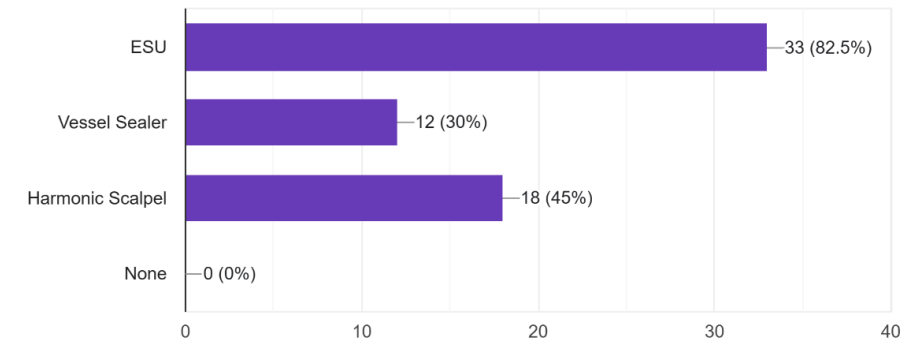


- **Familiarity:**
- ESUs – 95%
- Harmonic Scalpels – 87.5%
- Vessel Sealers – 75%
- Shows high awareness but unequal usage

Current Usage in Hospitals

5. Which of these devices are currently used in your hospital? ESU Vessel Sealer Harmonic Scalpel None

40 responses



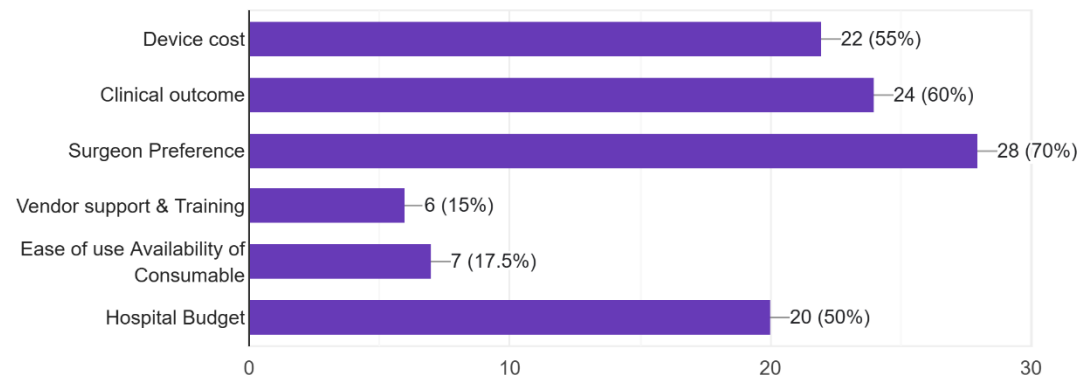
- **ESUs** used in 82.5% hospitals (widely adopted)
- **Harmonic Scalpels** in 45%
- **Vessel Sealers** in 30%
- **Gap** between awareness and actual use due to cost, training needs, etc.

Result: Survey Analysis

Key Factors Influencing Adoption

8. What factors influence your hospital's decision to adopt these devices? (Select top 3)

40 responses



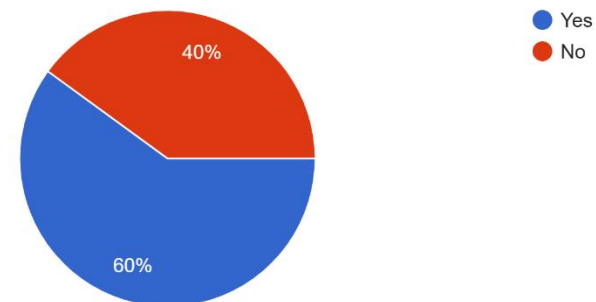
•Top Drivers:

- Surgeon Preference (70%)
- Clinical Outcomes (60%)
- Cost of Device (55%)
- Hospital Budget (50%)
- Vendor Support/Training (15%)
- Suggests need to focus on surgeon engagement and cost rationalization

Training Insights

9. Have you received formal training in the use of energy-based devices?

40 responses



- Formal Training Received: 60%**
- 40% still untrained**, suggesting a major barrier full adoption.
- 92.5% believe further training is essential

Key Findings

Aspect	Key Findings
Most Familiar Device	Electrosurgical Units (ESUs) – 95% awareness
Most Used Device	ESUs – used in 82.5% of hospitals
Adoption in Private vs Public	Higher in private hospitals; limited in public due to budget and training gaps
Top Drivers of Adoption	Surgeon Preference (70%), Clinical Outcomes (60%), Device Cost (55%)
Training Access	60% received formal training; 92.5% felt more training is needed
Barriers Identified	High device cost, procurement delays, limited training, lack of vendor support
Stakeholders Involved	Surgeons, Biomedical Engineers, OT Staff, Procurement Officers
Policy Implication	Need for structured training, localized vendor support, and better procurement models

Challenges in Bhopal

- High equipment cost
 - Lack of structured training programs
 - Dependency on foreign devices
 - Budget constraints in public hospitals
 - Awareness gap among admin staff
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Recommendations

- Strengthen hands-on training programs in Tier-2 cities
 - Subsidized procurement through government schemes
 - Public-private partnerships to improve access
 - Vendor-led workshops & CME for skill-building
 - Promote local manufacturing under "Make in India"
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Conclusion

- MIS devices are critical for modern surgical care.
- Adoption in Bhopal is growing but uneven.
- Surgeons' acceptance and clinical benefit are strong motivators.
- Cost, training gaps, and hospital budgets remain key barriers.
- Strategic policy and training initiatives can help bridge the gap



"Technology must serve not only precision
but also people."

Thank You