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IIHMR University, Jaipur

**LABORATORY SERVICES FOR PREGNANT
WOMEN IN A MATERNITY HOSPITAL:
A STUDY**

Student

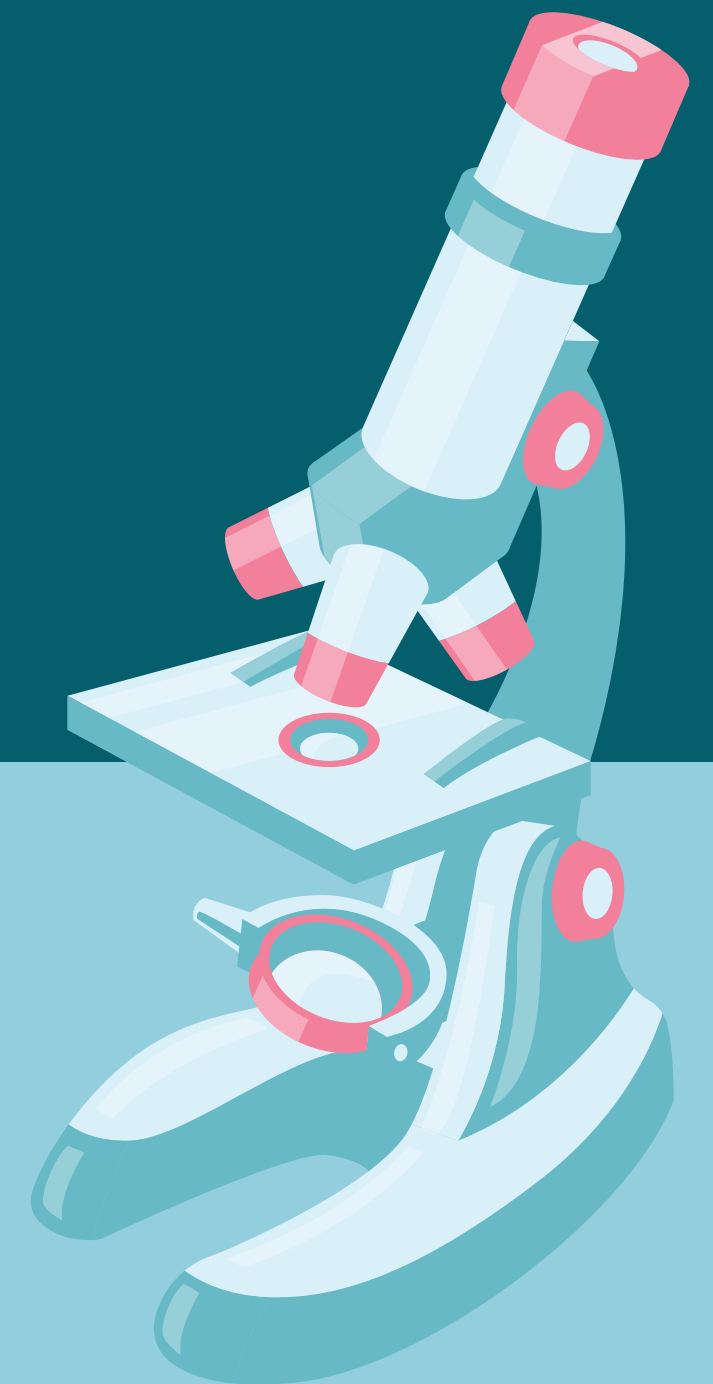
Dr. Swarandeep Kaur

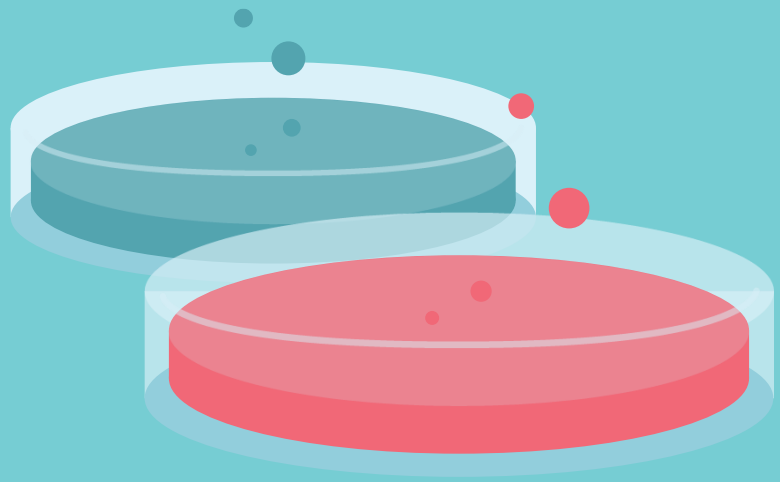
Hospital Management – 27

IIHMR-U/01/2022-24/1638

Mentor

Dr. Nutan P. Jain





INTRODUCTION

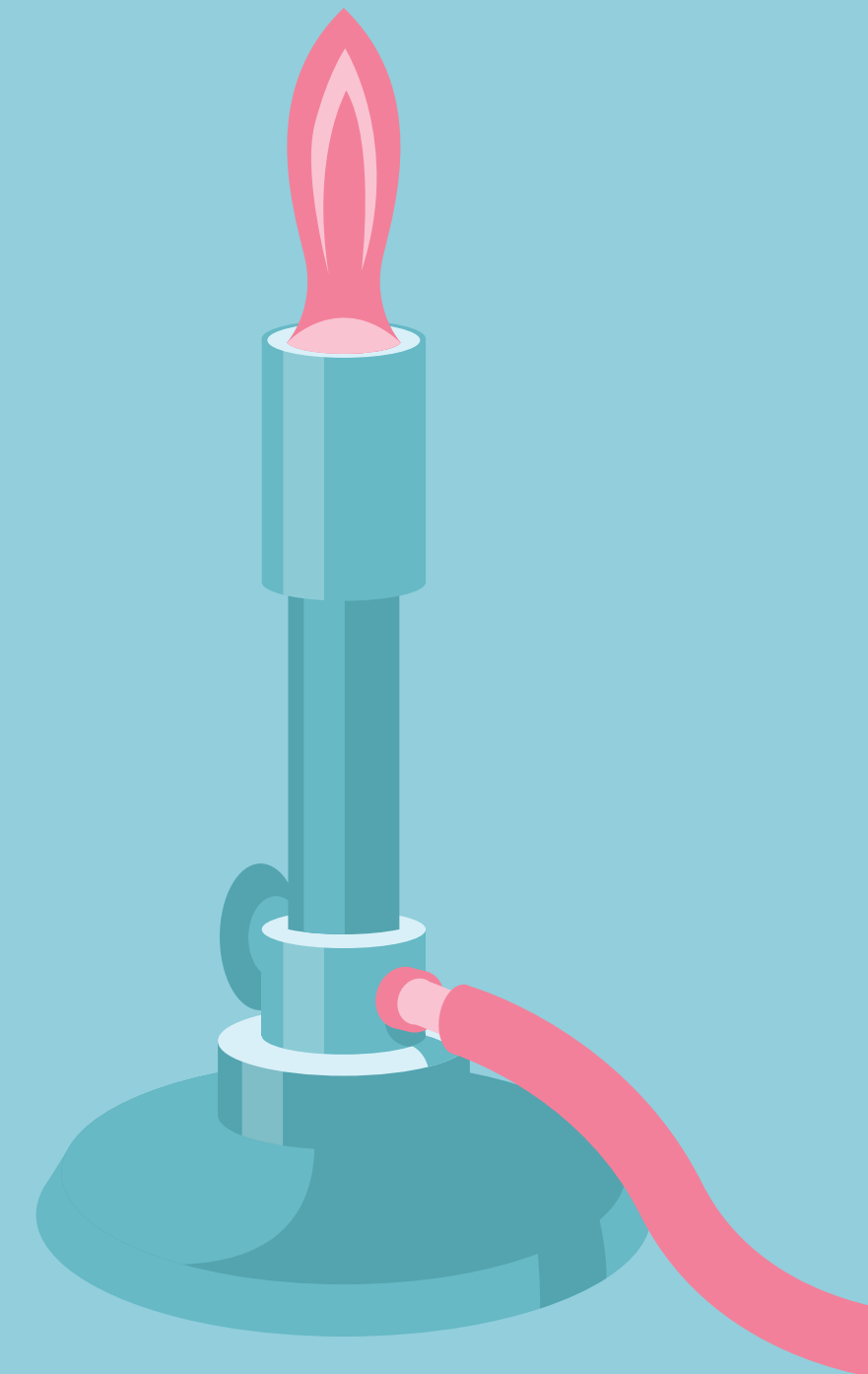
During pregnancy, laboratory services play a crucial role of diagnosing the health status of both mother and foetus in order to avail appropriate intervention.

Nevertheless, some gaps in current practices work as a barrier to the achievement of the best standards.

- **The focus of the study is to improve the laboratory on service delivery to pregnant woman in a maternity hospital.**
- **Acknowledging the importance of laboratory in prenatal care.**
- **Purpose of this study is to investigating systemic issues.**

OBJECTIVE

1. To review the guidelines and standard operating procedures of the hospital laboratory services meant for pregnant women.
2. To study of the current status of laboratory services availed at the hospital or at home.
3. To study the strengths, weakness, opportunity and threats (SWOT) of the Laboratory Services at the hospital.
4. To develop strategies to enhance the laboratory services both in-house (hospital based) and home sample collection services.



LITERATURE REVIEW

Authors (Year)	Study Location	Sample Size	Sampling Techniques	Salient Features
Rao et al. (2018) “Impact of Laboratory Service Delays on Prenatal Care in Delhi.” Journal of Maternal Health	Delhi	300	Random sampling	Investigated the impact of laboratory service delays on prenatal care. Found significant correlations between delayed lab results and adverse outcomes.
Singh & Gupta (2019) "Communication Gaps Between Lab Staff and Healthcare Providers in Mumbai." International Journal of Clinical Practice, 33(7), 345-352.	Mumbai	250	Stratified random sampling	Analyzed communication gaps between lab staff and healthcare providers. Highlighted the need for standardized communication protocols.
Kumar et al. (2020) "Advanced Diagnostic Technologies and Lab Service Efficiency in Chennai." Clinical Laboratory Innovations, 28(2), 89-97	Chennai	500	Convenience sampling	Examined the role of advanced diagnostic technologies in improving lab service efficiency. Recommended the adoption of point-of-care testing (POCT).
Patel et al. (2021) "Patient Satisfaction with Lab Services in Bangalore." Healthcare Quality Journal, 15(5), 412-420	Bangalore	200	Systematic sampling	Assessed patient satisfaction with lab services. Found that timely results and professional staff behaviour are key to high patient satisfaction.
Sharma & Mehta (2022) "Barriers to Efficient Lab Services in Kolkata." Public Health Reports, 137(1), 50-59.	Kolkata	400	Cluster sampling	Explored barriers to efficient lab services, including equipment shortages and inadequate staffing. Suggested increasing investment in lab infrastructure.

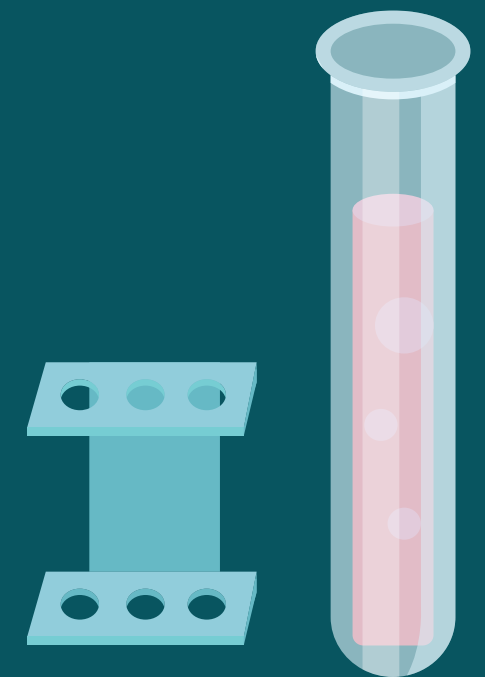
METHODOLOGY

Study Design

Cross-Sectional Observational Study (Mixed-Methods)

Research Questions

1. What are the guidelines, and standard operating procedures of the laboratory services for pregnant women?
2. What is the current status of availing laboratory services?
3. What are the facilitating and hindering factors for availing the laboratory services by its type?

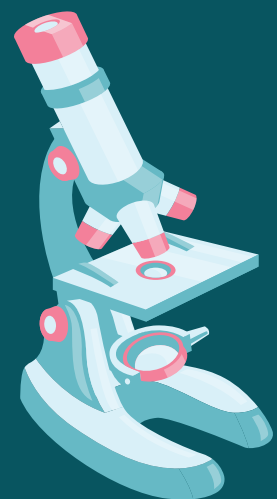


Study Setting

50 bed maternity hospital in India catering to pregnant women

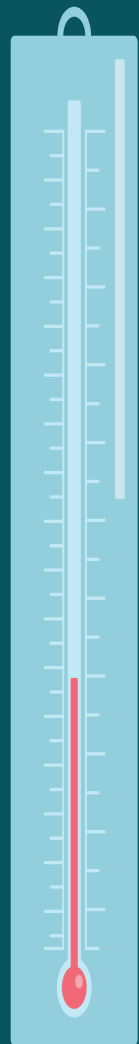
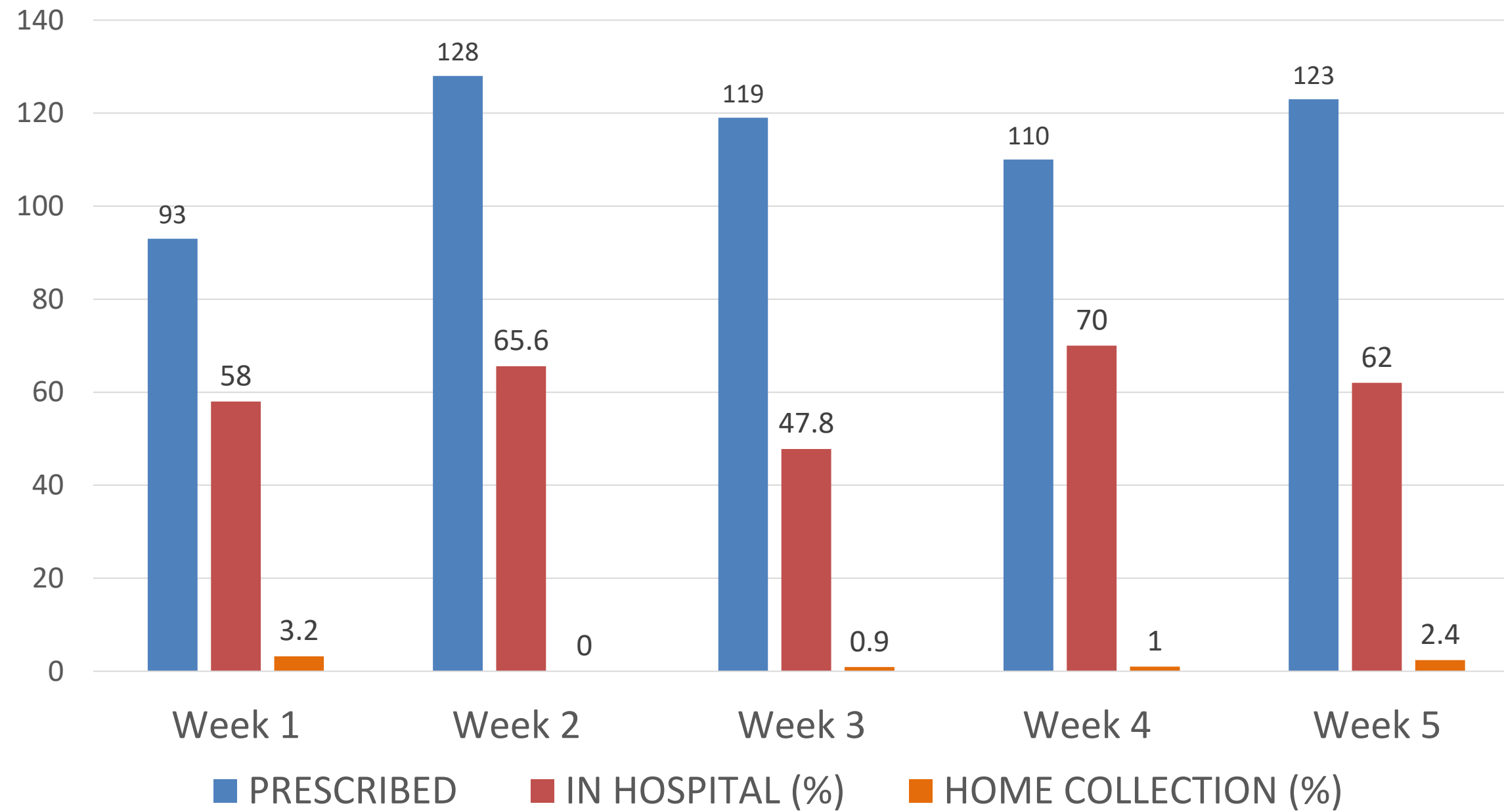
Data collection methods and tools:

- Review of conversion data sheet
- Review of the Hospital feedback form
- In-depth interviews with the laboratory staff
- Exit interview with pregnant women who had availed the lab services



RESULT

Week-wise Distribution of Laboratory services to the Pregnant women by its types (hospital or homebased)



Current status of the laboratory services prescribed and availed by its types

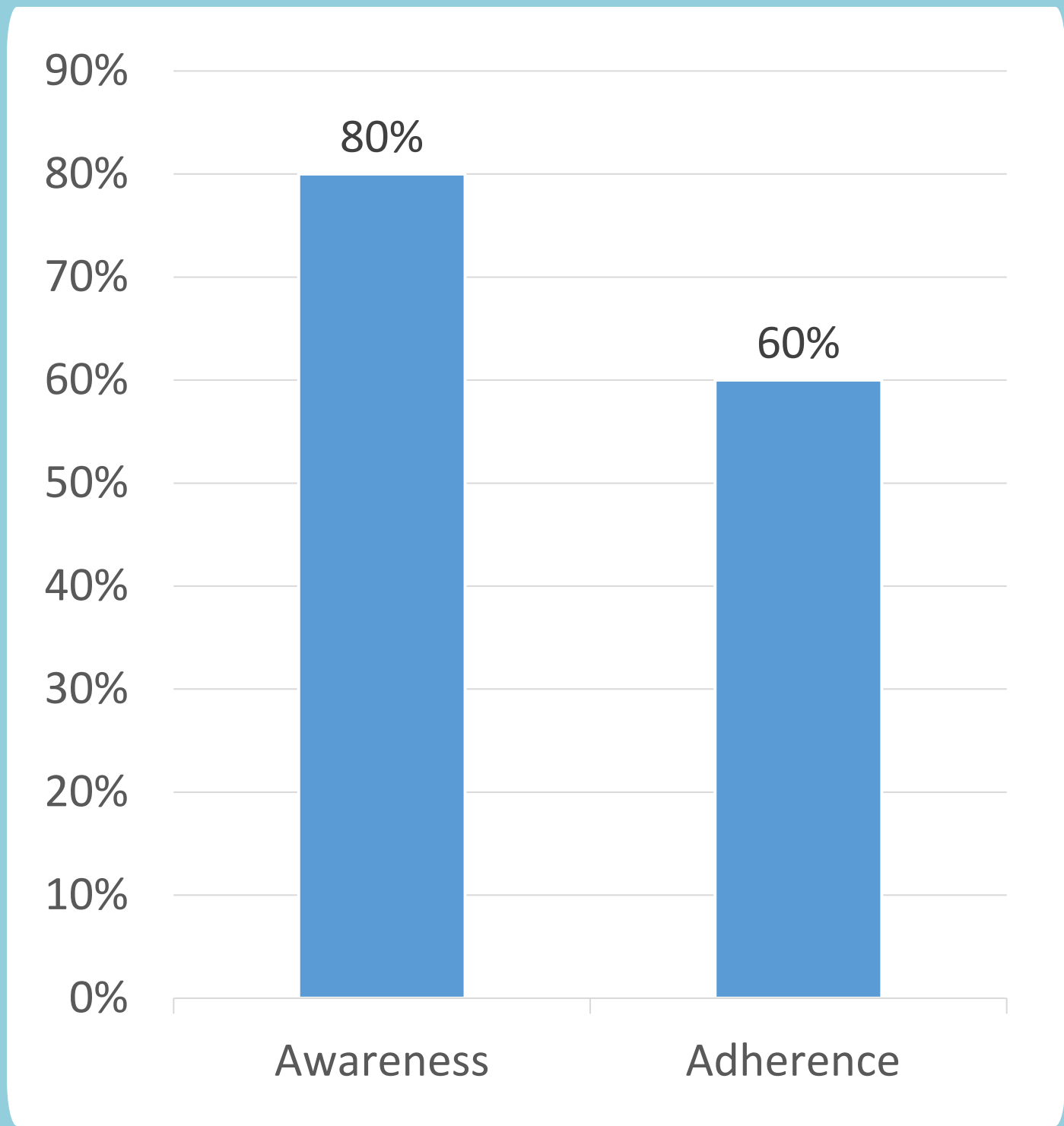
Total Prescribed (n=551)			
Lab investigation prescribed and done within the hospital	Lab investigation prescribed and done through home sample collection	Did not turn up to the hospital services	Proportion of Total Conversion
336 (61%)	12 (2%)	203 (37%)	348 (63%)

Difference in results between 2 months before and after

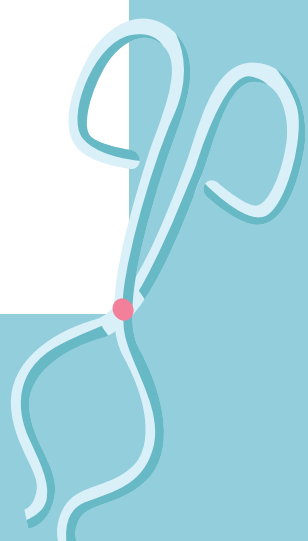
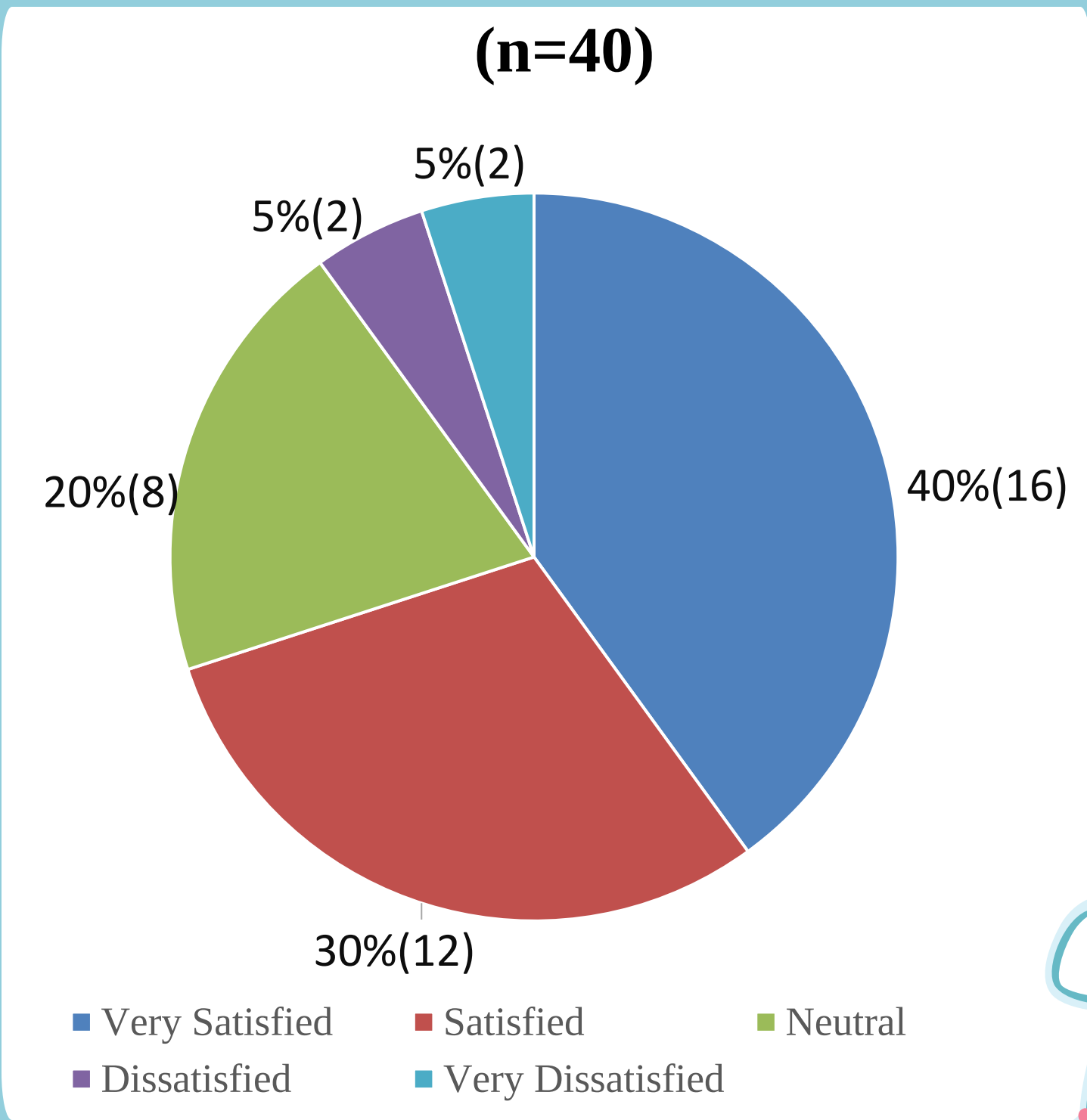
Date	Conversion
14.04.2024 to 13.04.2024	29%
15.05.2024 to 14.06.2024	63%



Lab staff awareness and adherence of SOPs



Patient Satisfaction with Laboratory Services



SWOT Analysis: Hospital Lab Services

STRENGTHS	WEAKNESS
• State of the art equipment • Accreditation and compliance (NABL)	• Shortage of trained personnel • Charges are high (compared with 1 mg) • Frequent errors (3 errors in past one month)
OPPORTUNITIES	THREATS
• Super specialised hospital for maternity care	• Competition from 1mg (located in the same vicinity)

SWOT Analysis: Home Lab Sample Collection

STRENGTHS	WEAKNESS
• State of the art equipment • Accreditation and compliance (NABL) • No additional charges for Home Sample collection	• Shortage of trained personnel • Charges are high (compared with 1 mg) • Delay in providing the service due to various unforeseen reasons.
OPPORTUNITIES	THREATS
• Proactively approach the neighbourhood as maternity care is very frequent event in general	• Competition from 1mg and other independent labs who have also started Home Lab Sample Collection



CONCLUSION

Strategies to enhance the laboratory services for home sample collection services.

- Customized Training and dedicated Guidelines for home based services
- Advocacy for Patient-Centred Care during home visit: networking and advocacy for more contacts can be approached during home visits.

Strategies to enhance the laboratory services for hospital services

- Optimization of Service Efficiency: Measures that can be taken to eliminate the causes of prolonged waiting for test results and guarantee the effectiveness of necessary tests at the right time of pregnancy.





Thank You!

The image features a variety of scientific equipment icons in a flat, stylized design. In the top row, from left to right, there is a digital scale with a beaker of red liquid, a test tube with red bubbles, a metal stand with two circular platforms, a Bunsen burner with a red flame, a blue spoon, a mortar and pestle, a microscope, and a vertical thermometer. The bottom row includes a syringe, a funnel, a petri dish with red and green agar, a pair of tweezers, a beaker with pink liquid and bubbles, a pair of scissors, a graduated cylinder, and a balance scale. A small dish with blue liquid is also present on the left side.