



Evaluation of Turnaround and Waiting Times for Ultrasound in the Radiology Department

This poster provides a comprehensive evaluation of the turnaround time (TAT) and waiting time for ultrasound procedures within the Radiology Department at Apollo Hospitals, Jayanagar, Bengaluru. It aims to identify key areas for improvement, enhance operational efficiency, and ultimately improve patient satisfaction. The report covers an introduction to the hospital, its vision and mission, organizational structure, a SWOT analysis



About Apollo Hospitals, Jayanagar, Bengaluru

Apollo Hospitals, Jayanagar, Bengaluru, is a leading multi-specialty hospital dedicated to providing world-class healthcare services. As part of the extensive Apollo Hospitals network, it upholds a legacy of clinical excellence, cutting-edge technology, and patient-centric care. The hospital boasts state-of-the-art facilities across various medical disciplines, ensuring comprehensive treatment and superior outcomes for its patients. With a strong focus on quality and innovation, Apollo Jayanagar serves as a cornerstone of healthcare in the region, continually striving to meet and exceed international standards.

VISION AND MISSION

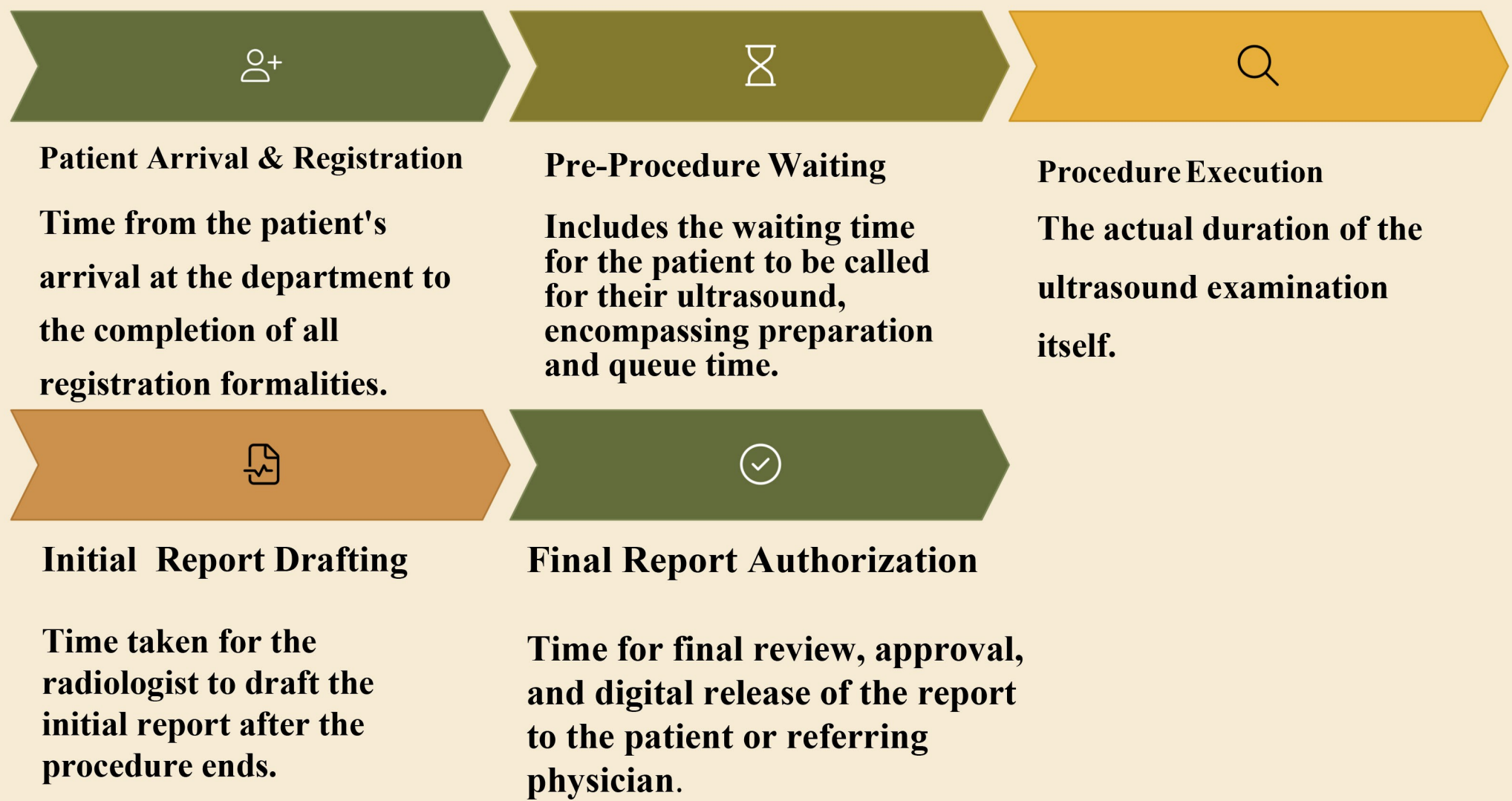
The vision of Apollo Hospitals is to bring healthcare of international standards within the reach of every individual. They are committed to the achievement and maintenance of excellence in education, research, and healthcare for the benefit of humanity. Their mission is to blend the best of technology and human compassion to provide comprehensive, cost-effective, and quality healthcare services that are accessible to all.

Challenges Faced and Methodology for Turnaround Time (TAT)

The Radiology Department encounter several operational challenges that can impact efficiency and patient experience. These include managing fluctuating patient volumes, ensuring optimal utilization of ultrasound machines, and minimizing administrative delays. Staffing levels, especially during peak hours, can also pose a challenge, affecting both waiting times and overall turnaround. Additionally, maintaining equipment and managing unexpected technical issues contribute to the complexity of daily operations.

Understanding Ultrasound Procedure Turnaround Time (TAT)

Turnaround Time (TAT) for ultrasound procedures is defined as the total time elapsed from patient registration to the final radiology report being available. For this evaluation, TAT is broken down into distinct, measurable stages:

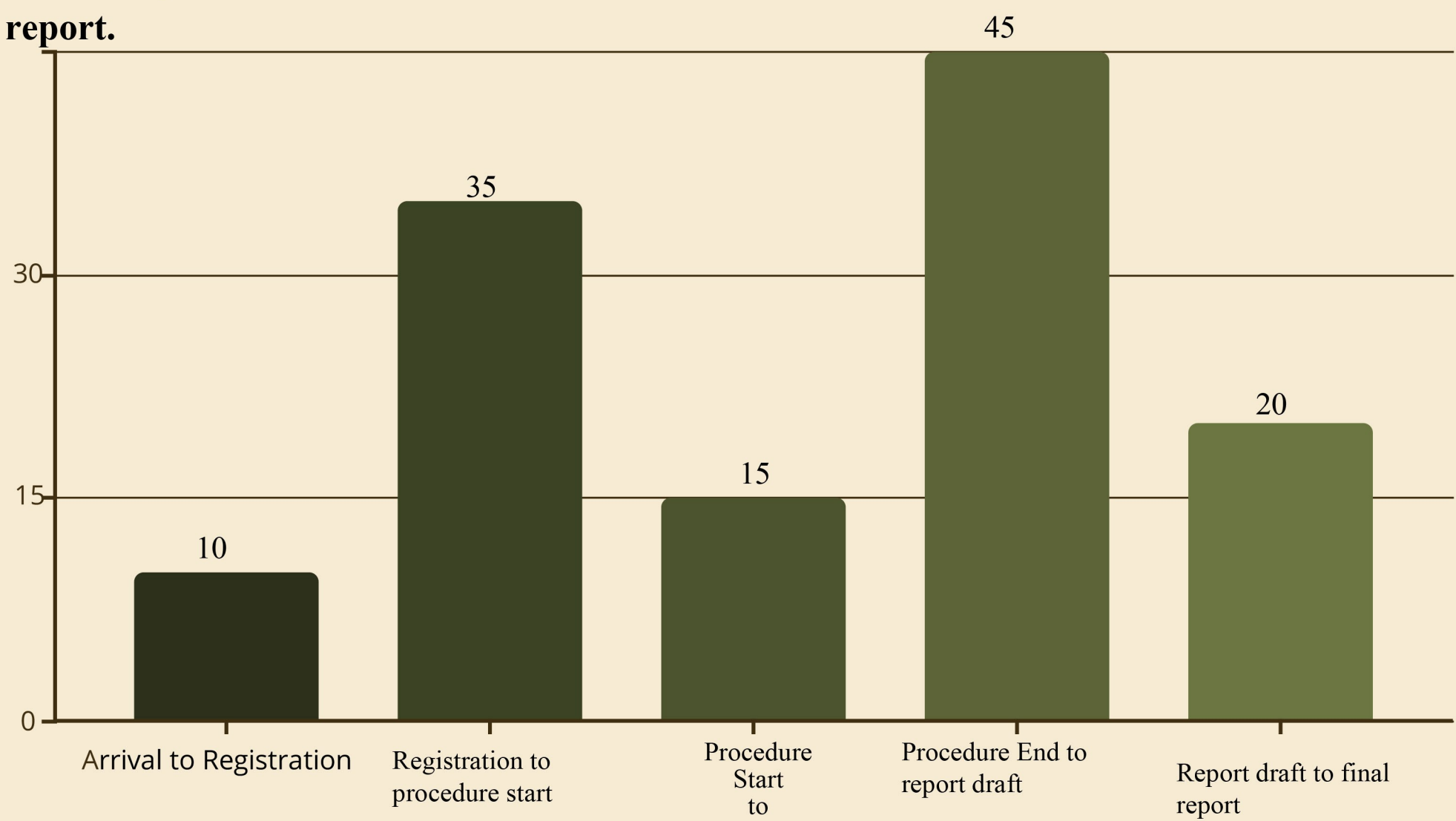


Data was collected using timestamps from the hospital's Electronic Medical Record (EMR) system and manual observations to ensure accuracy. This granular approach allows for precise identification of bottlenecks within the process.

Summer Internship Program Evaluation of Turnaround and Waiting Times for Ultrasound

Data Analysis: Ultrasound Procedure Timelines

The data collected provides critical insights into the efficiency of ultrasound procedures within the Radiology Department. Analyzing the average times for each phase of the patient journey helps pinpoint specific areas where improvements can be made. The following chart illustrates the average time taken for each stage of the ultrasound procedure, from patient arrival to final report.



As observed from the chart, the waiting time from registration to the start of the procedure (35 minutes) and the time for report drafting (45 minutes) are the most significant contributors to the overall turnaround

SWOT Analysis of the Radiology Department

A comprehensive SWOT analysis of the Radiology Department at Apollo Hospitals, Jayanagar, identifies internal strengths and weaknesses, along with external opportunities and threats. This assessment provides a strategic overview to leverage advantages, address shortcomings, and navigate the competitive healthcare landscape.

Strengths	Weaknesses	Opportunities	Threats
- State-of-the-art ultrasound equipment - Highly skilled and experienced radiologists - Comprehensive range of imaging services - Strong reputation for quality patient care	- Potential bottlenecks in patient registration - Occasional equipment downtime impacting scheduling - Limited waiting area capacity during peak hours - Dependency on manual data entry for some processes	- Implementation of advanced scheduling software - Expansion of services to accommodate more patients - Cross-training staff for multiple roles - Leveraging telemedicine for preliminary consultations	- Increasing competition from new imaging centers - Staffing shortages or high turnover rates - Unforeseen equipment malfunctions - Changes in healthcare regulations or reimbursement policies

Learnings During Internship

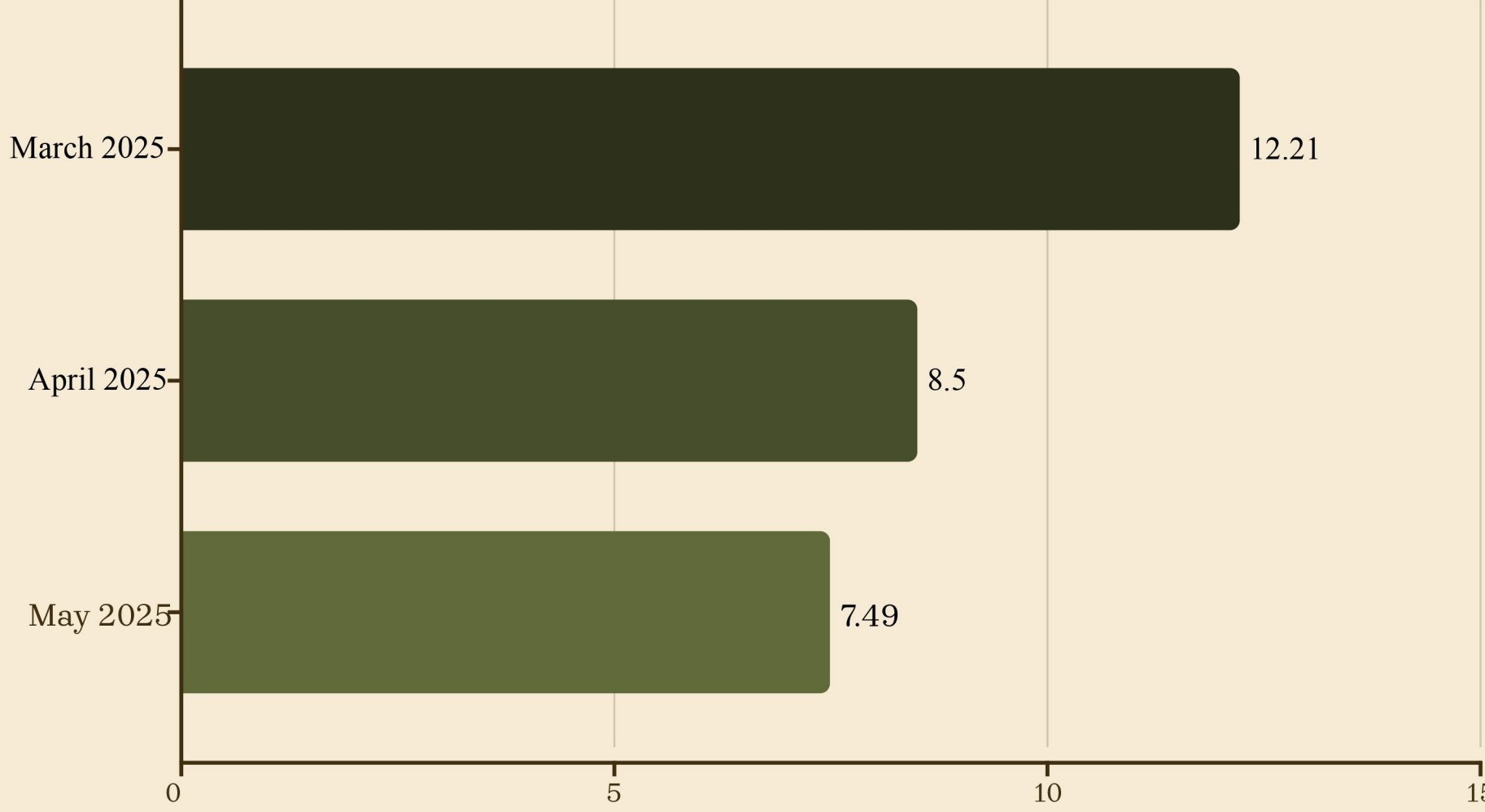
During the internship program, I gained invaluable insights into the intricacies of hospital operations, specifically within the Radiology Department. Key learnings included a deeper understanding of patient flow management, the critical importance of efficient scheduling, and the impact of administrative processes on overall service delivery. I observed firsthand the dedication of healthcare professionals and the collaborative effort required to maintain high standards of patient care. Furthermore, the internship provided practical experience in data collection and analysis, which was crucial for evaluating turnaround and waiting times.

Usefulness of Internship

This internship proved immensely useful in several ways. It bridged the gap between theoretical knowledge and practical application, providing a realistic perspective on hospital management challenges. The experience enhanced my analytical skills, particularly in identifying operational inefficiencies and proposing data-driven solutions. It also fostered a greater appreciation for the patient experience and the need for continuous quality improvement in healthcare settings. This exposure has significantly contributed to my professional development and understanding of healthcare administration.

Average Waiting Time Trends

The following bar graph illustrates the average waiting times observed over several months, showing a positive trend in reducing the time patients spend waiting.



As the chart indicates, there has been a consistent reduction in average waiting times from March to May 2025, suggesting improvements in operational efficiency and patient flow management.

Patient Flow for Ultrasound Procedure

Understanding the complete patient flow for an ultrasound procedure is crucial for identifying potential bottlenecks and areas for improvement. This detailed path way illustrates each step a patient takes from their initial arrival to the completion of their ultrasound and report generation.

- 1. Patient Arrival**
Patient arrives at the hospital, either with a prior appointment or as a walk-in.
- 2. Registration/Pre-Registration**
Patient registers at the front desk, providing necessary demographic and referral information. Pre-registered patients proceed directly.
- 3. Waiting Area (Pre-Procedure)**
Patient waits in the designated radiology waiting area until called for their procedure.
- 4. Pre-Procedure Preparation**
Patient is called by a technician, guided to the changing room, and given instructions for preparation (e.g., changing into a gown).
- 5. Ultrasound Procedure**
The ultrasound examination is performed by a sonographer under the supervision of a radiologist.
- 6. Post-Procedure**
Patient changes back into their clothes and is discharged from the examination room.
- 7. Radiologist Reporting**
The radiologist reviews the images and drafts the preliminary report.
- 8. Report Verification & Finalization**
The report undergoes internal verification and is digitally signed by a consultant radiologist.
- 9. Report Collection/Access**
The final report is made available to the patient or referring physician through the hospital's portal or at the counter.

Suggestions for Improvement

Automated Scheduling and Queue Management: Implement an advanced digital system to optimize appointment scheduling, manage patient queues, and send real-time updates to reduce waiting times.
Streamlined Registration Process: Introduce pre-registration options via mobile app or web portal to minimize paperwork and accelerate the initial patient intake process.
Dedicated Report Dictation Stations: Equip radiologists with dedicated, quiet spaces and advanced voice recognition software to expedite report drafting.
Cross-Training of Staff: Train administrative and technical staff in multiple functions to ensure flexibility and reduce bottlenecks during peak hours or staff shortages.
Patient Communication Enhancements: Provide clear communication regarding expected waiting times and procedure durations, potentially through digital displays or automated messaging systems.
Regular Equipment Maintenance & Upgrade: Adhere to a strict maintenance schedule to minimize downtime, and explore upgrades to newer, faster ultrasound machines.

Conclusion

The evaluation of turnaround and waiting times for ultrasound procedures at Apollo Hospitals, Jayanagar, Bengaluru, highlights critical areas for operational enhancement. By implementing the suggested improvements, the Radiology Department can significantly reduce patient waiting times and overall turnaround time, leading to enhanced patient satisfaction and improved departmental efficiency. Continuous monitoring and evaluation will be essential to sustain these improvements and adapt to evolving healthcare demands.