



STRENGTHENING HEALTHCARE DELIVERY: DIGITAL LAB SAMPLE COLLECTION AND REPORTING AT MDM HOSPITAL

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Introduction

MDM Hospital in Jodhpur, the largest medical facility in western Rajasthan, has a rich history of serving the community. Opened in 1979 with a modest 200 beds, it has grown exponentially to an impressive 5,154 beds, reflecting its crucial role in regional healthcare. This vital institution operates under the purview of the S.N. Medical College in Jodhpur, with a dedicated superintendent at the helm who oversees all healthcare services and manages the budget. Patients at MDM Hospital benefit from a wide array of specialized care, with seven super-specialty departments and twelve other essential departments currently in operation. Beyond its comprehensive medical services, MDM Hospital embraces modern administrative solutions to enhance patient experience. The IHMS portal streamlines patient registration and record-keeping, while the E-Aushadhi system provides real-time information on drug availability. The hospital is committed to accessible healthcare, offering free diagnosis, treatment, and medication distribution. Furthermore, it actively participates in various government health schemes like the MAA Yojana and RGHS, ensuring a wider reach of its benevolent services.

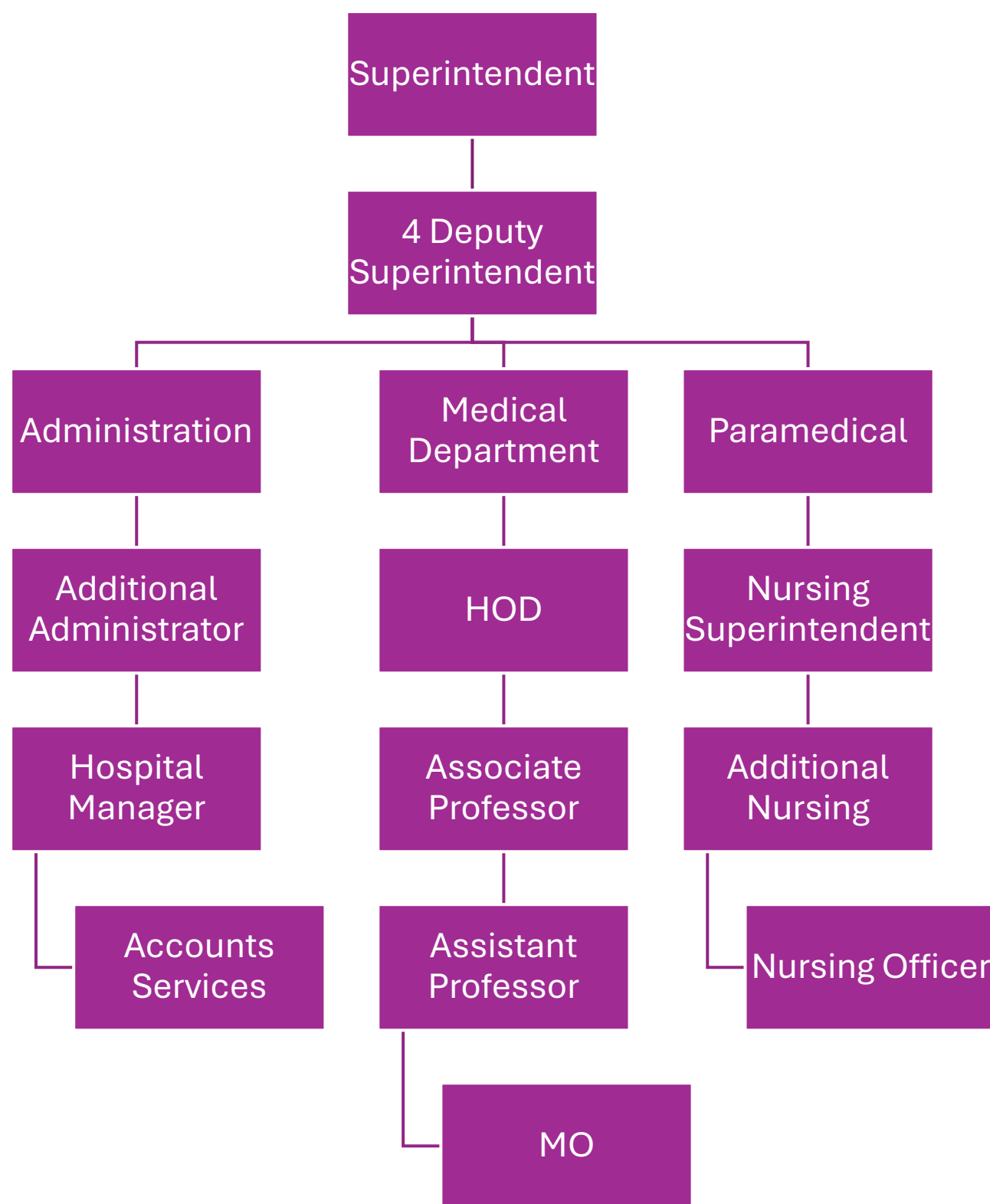
Mission

Provide personalized healthcare that focuses on patient happiness and well-being through optimal, evidence-based medical interventions.
To improve patient outcomes through investments in medical technologies.
To encourage health education and wellness through active engagement in community outreach and public health programs.

Vision

To provide comprehensive healthcare services accessible to all. To become a model and global leader in healthcare, and a research center on health.

Organization structure



About Project

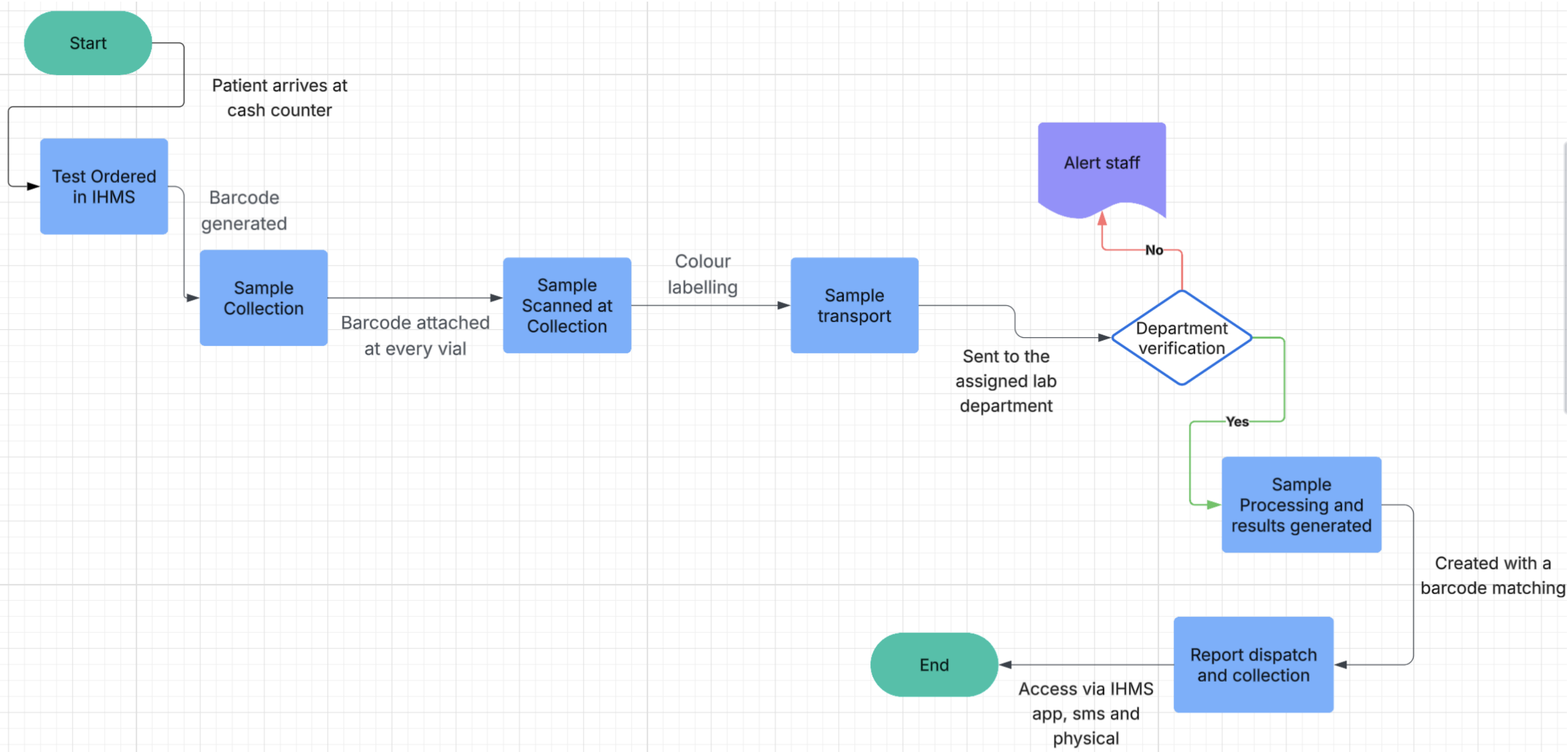
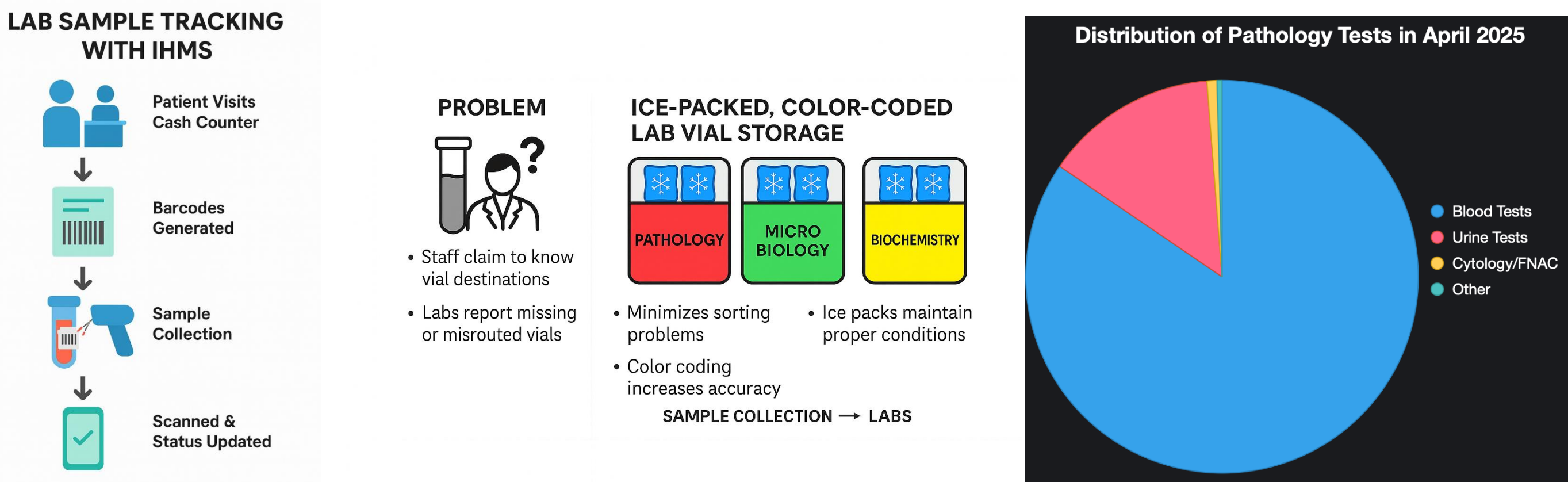
This project focuses on enhancing the Integrated Health Management System (IHMS) at Mathura Das Mathur Hospital by digitizing and streamlining the laboratory sample collection and reporting process. The primary goal is to address critical inefficiencies and improve the overall patient and staff experience.

Objectives

Reduce Inefficiencies: Cut down on delays in sample tracking and the delivery of results.
Minimize Errors: Decrease mistakes that come from manual sample handling.
Improve Experience: Enhance the patient experience and streamline the workflow for hospital staff.
Ensure System Reliability: Strengthen the server infrastructure with a hybrid cloud

model to prevent frequent downtime and slowdowns.
Enable Sample Tracking: Introduce a barcode system to track samples at every stage, eliminating misplacement and providing status updates to patients.
Enhance Diagnostic Accuracy: Allow lab doctors to securely access patient history within IHMS for more accurate diagnoses

Results



Practical Exposure vs Theoretical understanding

Operations Management: Applied process re-engineering principles to design efficient workflows, using barcodes and color-coding to reduce errors and delays.
Health IT Strategy: Addressed system failures by proposing a scalable hybrid cloud architecture to ensure server reliability and uptime.
Data Analytics: Leveraged data visualization by analysing daily sample loads and test distributions to identify key problem areas and inform solutions.
Patient-Centric Design: Focused on improving stakeholder experience by designing solutions to reduce patient wait times and simplify staff tasks

SWOT Analysis

STRENGTH	WEAKNESSES
- Clear project goals - Existing lab equipment - Clear Improvement Strategies	- Unreliable structure - Manual & inefficient process - Lack of tracking & history
OPPORTUNITES	THREATS
- Enhance patient satisfaction - Leverage proven models - Address high patient volume	- Implementation hurdles - Illegible prescriptions

Challenges

- The hospital's Outpatient Department (OPD) is struggling with long and persistent waiting times due to the high volume of patients visiting daily.
- Patients often feel lost and confused about how to navigate the OPD to find the services they need.
- When patients are transferred between different units, they are not receiving clear instructions or the necessary documentation for a smooth handover.
- Staff members are overworked, which is causing delays in service delivery and patient care.

Major Learnings

- Gained practical insight into how government hospitals and their administration function, including observing core processes like admissions, discharges, and infection control.
- Applied management concepts like queue management and resource allocation to develop practical solutions for daily challenges such as overcrowding.
- Learned to work on the IHMS digital platform and became familiar with government health schemes like MMA Yojana and RGHS.