SUMMER INTERNSHIP PROGRAM

At

Pandit Dean Upadhyay Hospital, Jaipur

From

15-MAY-2025

to

29-JULY-2025

A REPORT BY

Dr. Sayali Balsaraf

Master of Business Administration

(Hospital and Health Management)

Roll no-1923

2024-26

Under the Mentorship of

Dr Deepti Sharma

(Assistant Professor)

IIHMR UNIVERSITY

आज़ादी का अमृत महोत्सव

2025
अंतर्राष्ट्रीय सहकारिता वर्ष
सहकारी समितियां एक बेहतर दुनिया का निर्माण करती है

कार्यालय चिकित्सा अधीक्षक

पंड़ित दीनदयाल उपाध्याय हॉस्पिटल, जयपुर
(सवाई मानसिंह चिकित्सा महाविद्यालय, जयपुर से सम्बद्ध)
Phone: +911412329050 Email : gangorihospital.mh@rajasthan.gov.in

PANDIT DEENDAYAL UPADHYAYA HOSPITAL JAIPUR

No. F-01 / संस्था / 2025 / 1447 दिनांक 29.07.2025

TO WHOM IT MAY CONCERN

This is to certify that **SAYALI ANIL BALSARAF,** who is Student of **MBA** from IIHMR University Jaipur (Batch-29 2025) was posted here from 15th May 2025 to July 29th 2025 as per directed medical education department order no 833 date 13-05-2025 for internship program.

During her internship period her project was completed successfully. We found her Sincere, hardworking, sound and result oriented .

All the best for her future endeavors.

Medical Superintendent
Pt. Deendayal UpadhyayaHospital,
Gangori Bazar, Jaipur

Dr. [illegible]
Senior Professor, Medicine
Medical Superintendent
P. D. D. U. Hospital
S. M. S. Medical College, Jaipur

IIHMR UNIVERSITY

IIHMR University Faculty Mentor Approval

This is to certify that **Dr. Balsaraf Sayali Anil** of academic year 2024-26 of **Institute of Health Management Research** has prepared a poster with respect to her summer internship held during May-July 2025.

She has carried out work as per the guidelines. Her poster is approved for presentation.

Date: 30-07-2025

Dr. Deepti Sharma

Associate Professor

1, Prabhu Dayal Marg, Near Sanganer Airport, Jaipur- 302029, Rajasthan, India.
Ph.: 0141-3924700, 2791431- 32, E-mail: iihmr@iihmr.edu.in, Web.: www.iihmr.edu.in

“Enhancing Patient Flow with Digital Signages & Queue Management”

Faculty Mentor - Dr.Deepti Sharma | **Presented by -Dr.sayali balsaraf (1923)** | **Batch : 2024-2026 (MBA-HM)** | **Oraganisation Mentor - Dr.Harshvardhan**

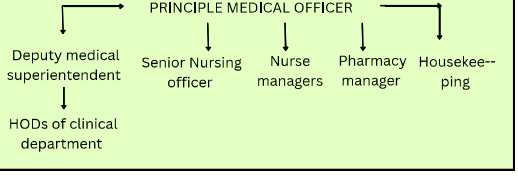
ABOUT

Pandit Deendayal Upadhyay Hospital, Jaipur, is a government multi-specialty facility located in Gangouri Bazar, Jaipur. It serves as a vital hub for public healthcare, providing services in general medicine, surgery, gynecology, ENT, orthopedics, neurology, and urology. Known for its affordable and accessible treatment, the hospital caters to a large patient population from urban and semi-urban regions of Jaipur.

VISION AND MISSION

Vision
To deliver compassionate, standards-setting healthcare that meets the evolving expectations of the community.
Mission
To provide inclusive, compassionate, and community-centered healthcare, ensuring high standards of care and continuous improvement in service quality.

ORGANISATION STRUCTURE



SUMMER INTERNSHIP PROJECT

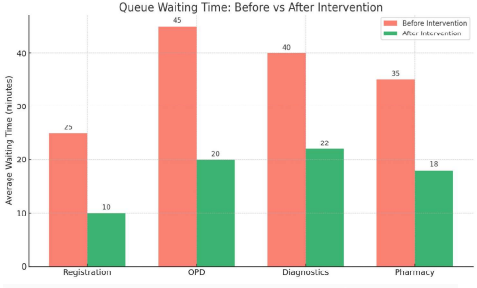
RESEARCH PROBLEM -
Despite basic infrastructure, patients—especially the elderly—struggle with navigation due to unclear signage, lack of help desks, and insufficient seating.
This leads to overcrowding, long queues, delays, and patient discomfort within the hospital.
OBJECTIVE -
To assess current queue and signage systems, identify patient navigation challenges, and propose a digital solution.
The aim is to improve patient flow, reduce waiting time, and enhance the overall OPD experience.

METHODOLOGY

Study Setting:
The study was conducted at Pandit Deendayal Upadhyay Government Hospital, Jaipur, a high-volume tertiary care public hospital.
Study Design:
A descriptive observational study design was adopted to assess signage and queue management issues.
Duration:
The study was carried out over a 10-week internship period from May to July 2025.
Sample Size:
Observations included over 200 patients and interviews with staff members across key hospital service areas.
Data Analysis:
Collected data were analyzed using thematic analysis for qualitative insights

KEY FINDINGS

1. Absence of token-based queue systems caused congestion and confusion.
2. Unclear or missing directional signage made navigation difficult.
3. Existing LED display panels were either turned off or outdated.
4. Insufficient Helpdesk Support:
5. Patient Feedback Indicated Strong Need for Improvement:
6. Over 70% of surveyed patients demanded better navigation support and more efficient queuing mechanisms.



THEORETICAL LEARNING

1. Understood the principles of hospital layout planning and patient navigation theory.
2. Learned about Queue Management Systems (QMS) and their importance in reducing waiting time and crowding.

PRACTICAL LEARNING

1. Identified real-world challenges in implementing and maintaining signage systems in a government hospital.
2. Conducted on-ground observational studies and interviews with patients and staff.

PROPOSED INTERVENTION

1. Deploy digital signage boards at every floor and entrance.
2. Color-code departments and create multilingual signage.
3. Implement a token-based queue system linked to IHMS.
4. Introduce real-time LED display boards showing queue numbers.
5. Plan for audio announcements in major waiting areas.
6. Staff training on system usage and troubleshooting.

CHALLENGES DURING INTERNSHIP

1. High Patient Volume
2. Inconsistent Power Supply
3. IHMS Limitations
4. Budget Constraints
5. Language Barriers

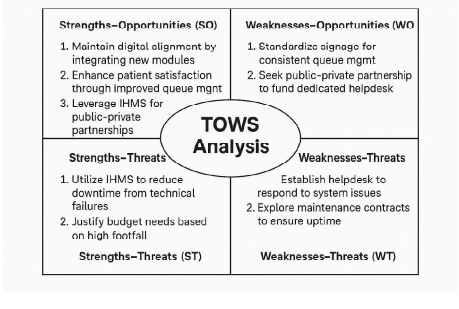
SWOT ANALYSIS

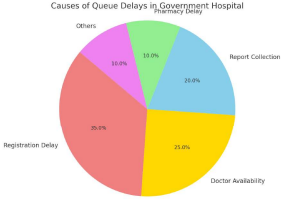
Strengths
1. Project aligns with NHM’s digital hospital vision..
2. High patient footfall justifies the digital intervention impact.
3. Availability of an IHMS that can be integrated.
4. Availability of feedback from real-time patient interaction

Weakness
1. Manual queue handling causing delays.
2. Non-uniform signage system and absence of real-time update
3. Absence of dedicated helpdesk, especially for elderly isabled.

Opportunities
1. Improved queue management will reduce patient dissatisfaction & complaints.
2. Integratio of signage with smart hospital modules (e.g. audio navigation, app support)..
3. §Scope for public private partnership to enhance facilities.
4.

Threats
1. Budget constraints for implementation
2. System downtime or lack of maintenance
3. Frequent technical failures or power disruptions can affect system use.





LEARNING DURING INTERNSHIP

1. Practical Knowledge of Hospital Workflows
2. Imports of health it system
3. Need for Patient-Centric Design
4. nce of Health IT Systems

WEEK 1

Name of the Organisation : Pandit Dean Dayal Upadhya Hospital, Gangouri, Jaipur

Area/ Department/ Project of Summer Internship Program: Hospital Administration

Name of the Student: Dr. Sayali Balsaraf

Roll no: 1923 **Stream: MBA (Hospital and Health Management)**

Activity Done	1. Visited various departments and created a detailed floor map of the Hospital. 2. The average patient waiting time before he sees a doctor in OPD, before his sample is collected in the laboratory to use X-ray and USG.
Linking theory (Classroom learning) with practice at your organization	1. Previous hospital visits organized by the college provided a foundational understanding of hospital departments, which made it easier to identify and relate to them during the internship. 2. Understanding hospital management and clinical hierarchy. 3. Exposure to discharge planning and documentation
Gaps identified on the working area.	1. Manual registration, long queues, no priority desk for the elderly/disabled. 2. Inconsistent record format, partial digitization.
Suggestions for improvement	1. Introduce EMR software and train staff on documentation standards. 2. Introduce digital self-registration kiosks and priority counters for special cases.

Plan for the next week	1. Steps followed from patient admission to discharge, including paperwork involved. Suggestions to improve the procedure.

Signature of the Student –

Approved by the IIHMR University's Mentor

WEEK 2

Name of the Organisation : Pandit Dean Dayal Upadhya Hospital, Gangouri, Jaipur

Area/ Department/ Project of Summer Internship Program: Hospital Administration

Name of the Student: Dr. Sayali Balsaraf

Roll no:1923 Stream: MBA (Hospital and Health Management

Activity Done	1) observed and documented the step-by-step process followed from patient admission to discharge. This included visiting multiple wards, the admission desk, medical record department, and billing section. 2) interacted with staff to understand how paperwork is handled manually and digitally under the IHMS software system or how the schemes software works.
Linking theory (Classroom learning) with practice at your organisation	In class, we studied hospital workflow, patient-centric service delivery, and discharge planning. I could relate this to the hospital's real-world functioning. Concepts like patient registration, ICD coding, discharge summary creation, and bill finalization were observed practically.
Gaps identified on the working area.	• **IHMS implementation:** Though IHMS is in place, due to software error, many entries are still done manually and later digitized, leading to duplication of work. • **Delay in discharge:** Discharge summaries are often delayed due to unavailability of doctors or incomplete paperwork. • **Inadequate patient education:** Patients are not always guided properly about discharge formalities or follow-up.

Suggestions for improvement	1) Implement real-time data entry directly into the IHMS system to avoid redundancy including for laboratories 2) Introduce a discharge checklist to be initiated 24 hours before expected discharge. 3) Standardize paperwork and documentation formats across all wards. 4) Set up a patient help desk to guide them on admission, discharge, and billing processes.
Plan for the next week	1) Study the IHMS record maintenance and billing system in detail. 2) Observe patient data flow and electronic health record (EHR) creation and storage.

Signature of the Student -

Approved by the IIHMR University's Mentor

WEEK 3

Name of the Organisation : Pandit Dean Dayal Upadhya Hospital, Gangouri, Jaipur

Area/ Department/ Project of Summer Internship Program: Hospital Administration

Name of the Student: Dr. Sayali Balsaraf

Roll no: 1923 **Stream:** MBA (Hospital and Health Management

Activity Done	1) studied the complete IHMS (Integrated Hospital Management System) module focusing on record maintenance and billing processes. 2) I observed how patient information is entered at registration and followed through to discharge. I also reviewed the creation of electronic health records (EHR) and their role in clinical documentation and billing. 3) MAA yojana claims submitted and unapproved claims 4) Delays in RGHS claims approvals.
Linking theory (Classroom learning) with practice at your organisation	theoretical knowledge of hospital information systems, patient data confidentiality, and digital health records from our coursework was practically observed. I understood the role of HIS in reducing paperwork, enabling quick data retrieval, and improving billing transparency.
Gaps identified on the working area.	1) Data entry in the IHMS is sometimes delayed,due to server error leading to incomplete or inaccurate records. 2) Staff require better training in using the EHR module effectively. 3) pharmacy also needs to implement IHMS software 4) Lack of real-time data sharing between departments like pathology, radiology, and billing.

Suggestions for improvement	• Conduct hands-on IHMS training sessions for all nursing and administrative staff. • Enable department-wise access and responsibility in the EHR system to streamline updates. • Integrate automatic charge capture from service departments to the billing module. • Implement IHMS system in pharmacy and laboratory • Monitor audit trails regularly to ensure data quality and minimize billing errors.
Plan for the next week	Detailed mapping and evaluation of IHMS and identifying gaps in its proper implementation

Signature of the Student-

Approved by the IIHMR University's Mentor

WEEK 4

Name of the Organisation : Pandit Dean Dayal Upadhyay Hospital, Jaipur

Area/ Department/ Project of Summer Internship Program: Hospital Administration

Name of the Student: Dr. Sayali Anil Balsaraf

Roll no: 1923 Stream : MBA(Hospital and Health Management)

Activity Done	Observed and evaluated the IHMS (Integrated Hospital Management System) usage and documented software- related challenges faced by staff. Identified gaps in its implementation in pharmacy
Linking theory (Classroom learning) with practice at your organisation	Related to classroom sessions on Health Information Systems
Gaps identified on the working area.	• Frequent software crashes during peak hours. • Staff unfamiliarity with certain IHMS modules leading to delays.
Suggestions for improvement	Request technical support for software stability enhancement. Staff IHMS training sessions Monitor audits trails regularly.
Plan for the next week	Patient flow and queque management

Signature of the Student

Approved by the IIHMR University's Mentor

WEEK 5

Name of the Organisation : Pandit Dean Dayal Upadhyay Hospital Jaipur

Area/ Department/ Project of Summer Internship Program: hospital administration

Name of the Student : Dr.Sayali Balsaraf

Roll no:1923 **Stream : MBA (Hospital and health management)**

Activity Done	• Observed and mapped the current Queue Management System at OPD and Registration counters. • Interacted with patients and staff to understand bottlenecks in patient flow.
Linking theory (Classroom learning) with practice at your organization	• Applied concepts of Healthcare Operations Management and Patient Flow Optimization to identify practical challenges in the existing system.
Gaps identified on the working area.	• Lack of proper queue system causing overcrowding and confusion. • No separate lines for elderly or differently-abled patients
Suggestions for improvement	• Implement a token-based queue management system. • Introduce separate counters for priority cases.
Plan for the next week	• Observe signage placements and wayfinding inside the hospital. Draft proposal for queue system improvement.

Signature of the Student

Approved by the IIHMR University's Mentor

WEEK 6

Name of the Organisation: Pandit Dean Dayal Upadhyay Hospital, Jaipur

Area/ Department/ Project of Summer Internship Program: Hospital Administration

Name of the Student: Dr. Sayali Anil Balsaraf

Roll no:1923 **Stream:MBA(Hospital and Health Management)**

Activity Done	Surveyed the hospital premises to assess the effectiveness of signage and wayfinding for patients and visitors.
Linking theory (Classroom learning) with practice at your organisation	Used concepts from Hospital Facility Management to evaluate spatial orientation and signage adequacy.
Gaps identified on the working area.	• Inadequate and unclear signages in key patient areas. • Lack of multilingual signs for better accessibility.
Suggestions for improvement	• Install clear, color-coded signage for OPD, Emergency, Labs, Pharmacy, Wards. • Use both Hindi and English language for all signs.
Plan for the next week	• Assess sanitation and infection control practices in various departments.

Signature of the Student

Approved by the IIHMR University's Mentor

WEEK 7

Name of the Organisation: Pandit Dean Dayal Upadhyay Hospital, Jaipur

Area/ Department/ Project of Summer Internship Program: Hospital Administration

Name of the Student: Dr. Sayali Anil Balsaraf

Roll no:1923 Stream:MBA(Hospital and Health Management)

Week no: 7 From: 27/6/25 to 2/7/25..

Activity Done	• focused on assessing the sanitation and infection control practices across various departments of the hospital. • interacted with the housekeeping staff to understand their cleaning protocols, schedules, and the challenges they face in maintaining hygiene standards. • Multiple instances of poor hygiene were documented, such as overflowing dustbins, unclean toilets, improper segregation of biomedical waste, and inadequate availability of cleaning supplies.
Linking theory (Classroom learning) with practice at your organisation	The importance of maintaining strict sanitation protocols to prevent hospital-acquired infections (HAIs) was evident. The practical exposure helped me connect theoretical principles of environmental cleanliness, risk management, and infection control audits to real-life hospital settings. I also drew on Lean Management principles to identify process inefficiencies in housekeeping operations.
Gaps identified on the working area.	• Cleaning schedules were inconsistent, especially in high-footfall areas like OPD and emergency. • Many toilets were found in unhygienic conditions, with foul smell and lack of regular cleaning. • Housekeeping staff lacked proper training on infection control and waste segregation. • Biomedical waste segregation at source was not consistently practiced.

	• Insufficient number of dustbins, leading to littering in corridors and waiting areas. •
Suggestions for improvement	• Establish fixed hourly cleaning schedules with proper documentation displayed for transparency. • Conduct regular infection control training and refresher courses for housekeeping and support staff. • Increase the number of waste bins with proper segregation labels across all hospital sections. • Implement a Sanitation Monitoring Committee to conduct random audits and provide feedback for improvement.
Plan for the next week	• In the upcoming week, I plan to focus on **Queue Management System** in the hospital, especially in the Outpatient and Registration areas

Signature of the Student-sayali anil Balsaraf

Approved by the IIHMR University's Mentor

WEEK 8

Name of the Organisation: Pandit Dean Dayal Upadhyay Hospital, Jaipur

Area/ Department/ Project of Summer Internship Program: Hospital Administration

Name of the Student: Dr.Sayali Anil Balsaraf

Roll no:1923 **Stream: MBA (Hospital and Health Management)**

Activity Done	Focused on observing and analyzing the **Queue Management System (QMS)** in high-traffic areas such as the **Registration Counter, OPD, and Pharmacy**. • Mapped the patient journey from entry to consultation, identifying points of congestion and delays. • Noted absence of digital token systems and lack of clear signages leading to patient confusion. • Manual entries in the registration system contributed to longer waiting times, especially during peak hours.
Linking theory (Classroom learning) with practice at your organisation	The study of **Queue Management Theory**, patient flow optimization, and **healthcare operations** provided the foundational understanding to evaluate bottlenecks and inefficiencies. Lean principles like **value stream mapping** were applied to identify non-value-adding steps.
Gaps identified on the working area.	No digital queue system in place; patients wait in long, disorganized lines. • Lack of **directional signage or floor guides**, causing confusion, especially for new patients. • Overcrowding near the registration desk and OPD entrances during peak hours. • Inadequate **seating arrangements** and shaded waiting areas, causing discomfort.

	• No dedicated helpdesk or volunteers to guide elderly or differently-abled patients.
Suggestions for improvement	• Introduce a **token-based digital QMS** with display boards and audio announcements in OPD and registration areas. • Install **clear, color-coded signages** to streamline patient movement and reduce congestion. • Deploy trained volunteers or interns during peak hours for crowd control and patient guidance. • Digitize patient registration forms and explore options for **online pre-registration**.
Plan for the next week	In the next week, I will focus on **Signage and Wayfinding Systems** in the hospital, examining their visibility, placement, and effectiveness in improving patient navigation and overall experience.

Signature of the Student-

Approved by the IIHMR University's Mentor

WEEK 9

Name of the Organisation: Pandit Dean Dayal Upadhyay Hospital, Jaipur

Area/ Department/ Project of Summer Internship Program: Hospital Administration

Name of the Student: Dr.Sayali Anil Balsaraf

Roll no:1923 **Stream: MBA (Hospital and Health Management)**

Activity Done	• Focused on evaluating the **signage and wayfinding system** across various departments of the hospital. • Identified several **confusing, missing, or poorly placed signages**, especially at entry points, junctions, and staircases. • • Took photographic evidence of signage gaps and documented areas with high navigation confusion.
Linking theory (Classroom learning) with practice at your organisation	The concepts of **patient-centered care, hospital design principles**, and **human factors in healthcare infrastructure** helped in evaluating the role of signage in enhancing operational efficiency.
Gaps identified on the working area.	• **Lack of standardized signage** formats – inconsistency in colors, font size, and language. • No **directional signs** at key decision points such as junctions and staircases. • Many signs are outdated or placed too high/low, reducing their visibility. • **No signage in english**– limits accessibility • Inadequate emergency exit signs and evacuation plans displayed in public area

Suggestions for improvement	• develop and install **uniform, color-coded, bilingual signage** using large, legible fonts. • Digital signages would be easier to update and will display queue information. • Use **visual symbols/icons** for quick recognition (especially for illiterate or elderly patients).
Plan for the next week	Working on digital signage and queue management system.

Signature of the Student

Approved by the IIHMR University's Mentor

WEEK 10

Name of the Organisation: Pandit Dean Dayal Upadhyay Hospital, Jaipur

Area/ Department/ Project of Summer Internship Program: Hospital Administration

Name of the Student: Dr.Sayali Anil Balsaraf

Roll no:1923 **Stream: MBA (Hospital and Health Management)**

Activity Done	• Proposed and designed a layout for **digital signages** across the hospital to enhance visibility and accessibility. • Recommended installation of **LED display boards** to show queue numbers in registration and OPD areas, helping to reduce crowding and manual announcements. • Worked on integrating the LED displays with the **Queue Management System (QMS)**, aiming to synchronize ticket generation and display.
Linking theory (Classroom learning) with practice at your organisation	This week connected theoretical learning on **hospital design, patient experience, e-health technologies**, and **ICT (Information and Communication Technology) in healthcare**.
Gaps identified on the working area.	• Absence of **electronic queue displays** leads to chaos and lack of discipline in waiting areas. • Patients, especially elderly and first-time visitors, find it hard to navigate due to a lack of **interactive navigation support**.
Suggestions for improvement	• Immediate pilot implementation of **LED queue display boards** in registration and OPD zones.

	• Deploy **digital signage boards** at hospital entrances, major corridors, and junctions showing department directions and important notices. • Develop **standard operating procedures (SOPs)** for updating and maintaining digital content regularly.
Plan for the next week	Having worked on multiple facets of hospital administration—from sanitation and infection control to digital transformation—I now have a better understanding of **systemic gaps and scalable solutions** in government healthcare settings.

Signature of the Student

Approved by the IIHMR University's Mentor

COMPILED REPORT

Name of the Organisation: Pandit Dean Dayal Upadhyay Hospital, Jaipur

Area/ Department/ Project of Summer Internship Program: Hospital Administration

Name of the Student: Dr.Sayali Anil Balsaraf

Roll no:1923 **Stream: MBA (Hospital and Health Management)**

Activity Done	Activities included visiting various departments, creating a detailed floor map, and assessing patient waiting times in OPD, laboratory, and for imaging services. The focus shifted to observing and documenting the patient admission to discharge process, including paperwork and the IHMS software system. Theoretical knowledge of hospital workflow, patient-centric service, and discharge planning was applied. Key gaps included IHMS implementation issues (manual entries, duplication), discharge delays, and inadequate patient education. Observation and mapping of the Queue Management System (QMS) at OPD and registration counters were undertaken. Concepts from Healthcare Operations Management and Patient Flow Optimization were applied. Identified gaps included a lack of proper queue systems, overcrowding, no separate lines for vulnerable patients, absence of digital token systems, and insufficient seating. Assessment of sanitation and infection control practices across various departments was performed, including interactions with housekeeping staff. The importance of preventing hospital-acquired infections (HAIs) and Lean Management principles were integrated. Inconsistent cleaning schedules, unhygienic toilets, lack of staff training, improper biomedical waste segregation, and insufficient dustbins were identified.

Linking theory (Classroom learning) with practice at your organisation	**Understanding Hospital Operations and Workflow:** The intern gained a foundational understanding of hospital departments and their interrelationships, observing patient journeys from admission to discharge. **Insights into Health Information Systems (HIS):** A significant portion of the learning revolved around the Integrated Hospital Management System (IHMS). This included understanding its role in record maintenance, billing processes, reducing paperwork, enabling quick data retrieval, and improving billing transparency. **Importance of Infrastructure and Patient Experience:** The internship highlighted the significance of effective signage, wayfinding systems, and facility management in enhancing patient navigation and overall experience.
Gaps identified on the working area.	**Patient Registration & Queuing:** • Manual registration and long queues. • No priority desk for the elderly or disabled. • No separate lines for elderly or differently-abled patients • Absence of digital token systems **Information Management & Digitalization (IHMS/EHR):** • Inconsistent record format and partial digitization. • IHMS implementation issues, with many entries still done manually and later digitized, leading to duplication of work • Data entry in the IHMS is sometimes delayed due to server errors, leading to incomplete or inaccurate records.
Suggestions for improvement	• Install clear, multilingual digital signages at all major decision points. • Integrate token-based Queue Management System with IHMS.

	• Train staff on digital systems and signage handling. • Use color-coded pathways and department indicators for better navigation. • Implement real-time LED display boards and audio announcements.
Key Learnings	• Importance of digital systems in reducing patient waiting time. • Signage plays a critical role in smooth hospital navigation. • Practical exposure to hospital workflows, IHMS limitations, and patient feedback analysis. • Developed stakeholder communication and hospital process-mapping skills.

Signature of the Student

Approved by the IIHMR University's Mentor