

SUMMER INTERNSHIP PROGRAM

at

MANIPAL HOSPITALS, BANGALORE



From 20th May 2025 To 25th July 2025

A REPORT BY

Diya Prashanth

Master of Business Administration

Hospital and Health Management

IIHMR-U/01/2024-26/1945

2024-26

Under the Mentorship of

Dr. Sarthak Sengupta – Assistant Professor





16 May 2025

To,
Ms. Diya Prashanth,
IIHMR

Subject: Offer for Internship

Dear **Diya,**

1. This has reference to your application and the letter from your institute dated 14/04/2025 sponsoring you for undergoing Internship with our company.
2. We take pleasure in informing you that you are permitted to undergo Internship in our company for a period of 2 months (8 weeks) subject to the terms and conditions stipulated in this letter
3. Your Internship will commence on the date on which you report to our unit/office and shall come to an end on the expiry of 2 months (8 weeks) from the date of reporting.
4. Your Internship timings shall be as per the working hours of the employees of the company and you will observe the weekly holiday and other holidays as declared by the company.
5. You will be governed by the workplace policies as laid down by the company from time to time and you should conform to the said policies and guidelines.
6. You shall keep all the information which you may come across during the period of your Internship about the affairs of the company, and its business confidential and shall not divulge the same to anyone who is not authorized to receive such information. This would also include any intellectual property rights which may be developed/ conceived etc. which you may be part of or may be aware during your Internship with us.
7. Your progress will be reviewed periodically as per the course curriculum which you are pursuing.
8. The period of Internship may be extended at the discretion of company if requested by the sponsoring institute.
9. You will be required to focus on the Project/ Area of operation for which you have been taken and as guided by your allotted guide.



10. You will abide by the office timings, and other rules of discipline as applicable.
11. You will not be entitled to any leave, excepting for emergencies as approved by the HR Department.
12. You will be posted anywhere in India during your period of internship.
13. You will be responsible for your own safety and you hereby indemnify the Organization against any dangers to life, damages to property, injuries to self during the period of internship as may be caused within or outside the premises of the organization. The organization would not be responsible for any such liability arising due to the above. The same shall be applicable in the event of any such incidents arising out of any act or negligence on your part causing damages as specified above to any third party.
14. During your internship program, either party may terminate this Agreement by giving 7 days notice in writing. MHE shall be entitled to terminate this Agreement with immediate effect (but without prejudice to the rights and remedies of MHEPL for any breach of this Agreement and to your continuing obligations under this Agreement) if you are guilty of dishonesty or serious or persistent misconduct, or without reasonable cause neglect or refuse to attend to your duties or fail to perform any of your obligations
15. You will be responsible for the safe return of all the properties of MHE including any drawings, software, employee data, notebooks, manuals, documents, computerization of technical data, customer lists, specifications, files, memoranda, or other records of any nature belonging to MHE or any reproduction thereof which may have been provided to you during the course of your internship with MHE or which may be in your use, custody, care or charge. For the loss of any property of MHE in your possession, MHE will have a right to assess the value of the loss on its own basis and recover the damages as it deems proper in the event of your failure to account for such material or property to its satisfaction.
16. On expiry or earlier termination of this Agreement, you shall immediately hand over all papers, documents and other property of the MHE Group as may be in your possession, custody, control or power, including but not limited to any phones, computers, vehicles, etc. provided by MHE.
17. The permission is only for undergoing Internship and it shall not confer any right for claiming/preference in employment with company.
18. While reporting for internship please bring with you the following documents.
 - a) Identity card issued by the sponsoring college or the institute.
 - b) Address proof.
 - c) SSLC Marks Card as certified by your sponsoring institute with regard to proof of date of birth.
 - d) 3 Passport size photographs (colour print)

We are looking forward to the prospect of enhancing your knowledge by interacting with our team. Please inform us of your decision at your earliest convenience and feel free to contact the undersigned with any questions that you may have. You are expected to accept this offer and join us on 20 May, 2025. This offer will expire if not accepted by 17 May, 2025.



Stipend Annexure

Further to our offer of internship vide letter dated 16/05/2025 we would like to inform you will be eligible for stipend of Rs. 7,000 per month (Rupees Seven Thousand only) during the course of your internship. The same will be subject to applicable deductions and would also be calculated based on your attendance for the month.

Please sign a copy of this letter in token of your acceptance of the above terms.

**With Best Wishes,
For Manipal Health Enterprises Private Limited**

**Partha Das
Chief People Officer**

IIHMR University Faculty Mentor Approval

This is to certify that **Ms. DIYA PRASHANTH** of academic year 2024-26 of the **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: 28.07.2025

A blue ink signature of Dr Sarthak Sengupta, consisting of a stylized 'S' and 'S'.

Dr Sarthak Sengupta

Assistant Professor



NEURO-TAT: FAST TRACK TO EXCELLENCE IN PATIENT EXPERIENCE

MANIPAL HOSPITALS, BANGALORE



ROLL NO: 1945

ORGANISATION MENTOR
Dinesh Babu

Created by: Diya Prashanth
University Mentor: Dr. Sarthak Sengupta

BRIEF HISTORY:

Manipal Hospital Sarjapur, part of the Manipal Hospitals network, was founded to deliver advanced, multi-speciality healthcare to Bangalore's Sarjapur area. With a focus on clinical excellence and patient-centric care.

VISION:

Manipal Hospitals envisions being the preferred and most trusted healthcare provider, recognized for clinical excellence, patient-centric care, and the highest ethical standards.

MISSION:

The mission of Manipal Hospitals is to deliver high-quality, affordable, and accessible healthcare through compassionate services, cutting-edge medical technologies, and continual staff development.

OBJECTIVE

- Pinpoint workflow issues during registration, billing, doctor visits, and pharmacy to shorten wait times.
- See how appointments versus walk-ins, payment styles change department speed and resource use.

SWOT ANALYSIS

S) Neurosurgery and Neurology departments have skilled doctors, which helps maintain quality patient care. The focus on patients also supports open communication and good teamwork.

W) Weaknesses: Patient flow can be disrupted by changes in turnaround times during busy times. Reliance on paper records may lead to errors and delays.

O) Patient tracking and queue systems could improve operations. Setting up standard turnaround methods could help with consistency and accountability.

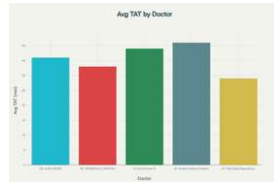
T) Increased patient volume seems to stress staff, leading to burnout and drops in service quality. Limited budgets can restrict the hospital's access to new tech and training opportunities.

DIFFERENCE BETWEEN PRACTICAL EXPOSURE & THEORETICAL LEARNING

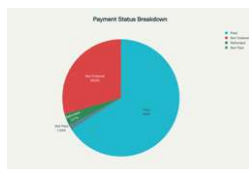
Aspect	Theoretical Understanding	Practical Exposure
Conceptual Knowledge	Scheduling, workflow optimization, TAT reduction, and process maps from textbooks.	Identifying how micro-delays at each step impact overall patient flow. Actively experimenting with flow adjustments and seeing immediate effects.
Literature & Case Studies	Studying process improvement methods, analytics case studies, and efficiency tools.	Translating those strategies to daily OPD challenges—troubleshooting, improving, and tracking outcomes in real hospital situations.
Standard Protocols	Familiarity with SOPs, billing rules, electronic records, and patient safety checklists.	Adapting protocols to fit variable patient load, training team on new SOPs, and rapidly troubleshooting when real-life cases don't fit the handbook.
Interdepartmental Coordination	Theories on departmental alignment and communication between hospital units.	Navigating real-time handovers, resolving miscommunication, and leading impromptu discussions to maintain patient movement and reduce errors.

DATA ANALYSIS

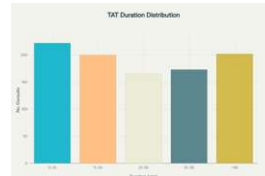
Avg TAT by Doctor



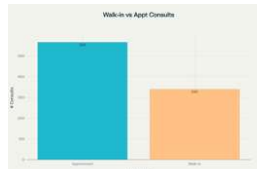
Pay Status Breakdown



TAT Duration Distribution



Walk in Vs Appointments



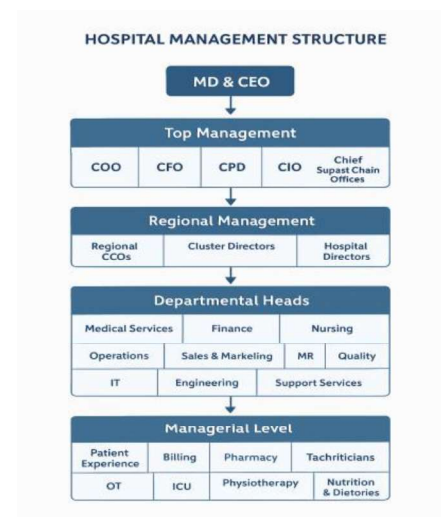
METHODOLOGY

- Study area:** Neurology OPD
- Sample size:** 947 patients
- Type of study:** Observational
 - Duration:** 1 month

LEARNINGS

- Data guides change; people drive it.
- Empathy better patient care.
- Communication is crucial.
- Problems mirror real life
- Importance of tracking TAT variations

ORGANISATION STRUCTURE

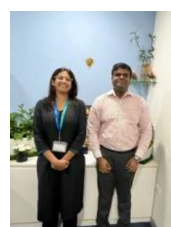


SUGGESTIONS

- To improve outpatient department (OPD) efficiency**, introduce digital queues and monitor turnaround time (TAT) by automatically logging timestamps at arrival.
- Set doctor- and complexity-specific TAT standards.** Analyze past TAT records to determine average times for each doctor.
- Improve billing** by allowing pre-consultation payments and creating fast lanes

CONCLUSION

- Reduced Turnaround Times:** Process mapping and focused solutions led to a decrease in average OPD turnaround times.
- Improved Teamwork:** Better real-time communication between OPD, billing, and clinical staff improved patient flow.



Weekly Report

Name of the Organisation: Manipal Hospitals, Bangalore (MHB)

Department: Business Analytics

Name of the Student: Diya Prashanth

Roll no: 1945

Stream: MBA HOSPITAL AND HEALTH MANAGEMENT

Week no: 1

From: 20/05/25 to 24/05/25

<u>Activity Done</u>	• I focused on patient-and operational centric areas, unique internships for each department, and monitored staff activities in the Internal Medicine, Neurosurgery, Geriatrics, ENT, Head and Neck Surgery, and OPD departments. • I evaluated the provided support services alongside self-streamlining standards, and refinement during clinical operations on a daily basis. • I engaged in OPD billing system evaluation and enhancement, where work documents were critique on their accuracy, payment processing speed, and document's work rate responsiveness. • I assimilated all relevant data related to service delay durations and associated patient waiting periods, which cut across various teams, and sought to reduce decrease in wait time, increase patient intake and departmental productivity. • I assisted in quality improvement projects by proposing operational departmental bottleneck barriers alongside evidence-informed alterations of processes that restructure or improve patient interactions. • Met with PCAs (Patient Care Advisor) who counselled patients, checked for insurance and assisted them in the 5Ws and 1H.
<u>Linking theory (Classroom learning) with practice at your organisation</u>	• Lean management is concerned with maximizing value from resources by focusing on eliminating waste and streamlining processes. It systematically enhances efficiency, minimizes waiting time, and improves customer satisfaction through workflow optimization. • Service delay and patient waiting time reduction: Every Lean initiative seeks to minimize waste, including waiting and delays in processes across departmental silos. • Evaluation and enhancement of billing systems: Lean evaluates process flow and accuracy to eliminate clearinghouse bottlenecks and speed up the payment processing. • Proposing operational bottleneck solutions: Lean tools (value stream mapping) enable identification and remediation of productivity and patient experience bottlenecks. • Cross-team collaboration: To facilitate seamless service delivery, Lean advocates for interdepartmental collaboration and communication.
<u>Gaps identified on the working area.</u>	• Departments Don't Have Common Ways of Working I gained experience in various departments because their internships and staff activities differed. But I realized that these departments did not have the same structure for how they operate. As a result, providing the same level of care and smooth work patterns for patients in the hospital was frequently a challenge. • Lacking the Combination of Different Databases I brought together and processed information on delays in service and how much patients wait. Nevertheless, I saw that these data were not always available in real time in the billing, clinical and patient systems. It became difficult for me to act swiftly and with the right information to boost operational performance. • Only a Small Portion of Manual Billing Processes is Automated I generally went through important work documents by hand to judge the billing system's effectiveness and rate of payments processed. It was noted that this process

	did not use many automation tools which both held up activities and resulted in a higher number of mistakes. • Problems with Cross-Sectional Communication During my work on team bottlenecks, it became clear that the departments were not always able to communicate well. As a result, resolving issues in operations was difficult and betterments took longer to occur. • Not Enough Training of Staff I noticed that company departments published internship programs differently; however, there seemed to be a need for more continuous training on strong operations and better quality. This resulted in teams not being able to handle new processes easily and keep high performance.
<u>Suggestions for improvement</u>	• Steps followed consistently for business activities I realized that different departments had very different ways of doing things because of missing workflow standards. I suggested that SOPs be created for functions like admissions, referrals and discharges. The procedures had to be recorded and given to everyone in the hospital so everyone could follow the same guidelines. • Integrated Systems In the past, systems for clinical work and administration did not interact seamlessly in real time which affected efficiency. I suggested having a single Electronic Health Record (EHR) which combined billing, scheduling and patient management, to make everything more coordinated. • Billing Automation Heavy use of manual reviews when billing caused there to be errors and delays. One of my proposals was to use automation for insurance checks and document keeping, so fewer errors happen, and payment processing is faster. • Interdepartmental Communication Because there was not enough communication among departments, more time was spent on projects and people's work was sometimes repeated. I advised regular gatherings of different departments and using the same program for information and coordination to avoid waiting in care areas and improve solutions to challenges.
<u>Plan for the next week</u>	• Help create sample SOPs for two departments within the company. • Follow the IT or admin team as they handle bringing EHR systems into the organization. • Evaluate OPD billing documents to discover how you can improve with automation. • Support making arrangements for a quick meeting among members of different departments. • Prepare a basic survey for patients and mention where it could be trialed in an OPD.

Signature of the Student

Diya Prashanth

Approved by the IIHMR University's Mentor

Week no: 2 From: 24th May to 31st May

<u>Activity Done</u>	- Assigned to the Patient Experience Project (OPD & ER) at Manipal Sarjapur Hospital. waiting times, vital checks, and feedback collection. - Shadowed floor coordinators and billing staff to understand daily operations. - Recorded patient flow data (e.g., >200 walk-ins/day, peak days with 250+ patients). - Participated in induction week at the flagship hospital to understand the overall hospital structure and processes.
<u>Linking theory (Classroom learning) with practice at your organization</u>	- Applied concepts of healthcare management, patient flow, and service quality from the classroom to real hospital settings. - Observed the importance of efficient registration and feedback mechanisms, as discussed in healthcare operations lectures, teamwork, reinforcing theoretical models of patient-centered care. - Noted the impact of peak/off-peak trends and resource allocation, linking to classroom discussions on capacity planning.
<u>Gaps identified on the working area.</u>	- Waiting Time: Average wait is 30 minutes; up to 1 hour in Endoscopy. - Registration: Manual registration is slower and less preferred compared to QR code. - Communication: Not all staff are equally proficient in English and patient communication. - Peak Day Management: Mondays, Fridays, and Saturday's experience overcrowding, stretching resources. - Feedback Utilization: While feedback is collected via Google Forms, the pro
<u>Suggestions for improvement</u>	- Reduce Waiting Time: Optimise scheduling and triage, especially in high-wait departments (e.g., Endoscopy). - Promote QR Code Registration: Encourage all patients to use digital registration for faster processing. - Staff Training: Conduct regular communication and language skills workshops for all floor coordinators. - Dynamic Staffing: Allocate more staff on peak days to manage higher patient loads. - Feedback Loop: Implement a visible action plan based on patient feedback to close the loop and show responsiveness.
<u>Plan for the next week</u>	- Continue shadowing floor coordinators to identify further workflow bottlenecks. - Collect and analyze more patient feedback for actionable insights. - Observe and document the impact of new suggestions (if implemented) on waiting times and patient satisfaction. - Prepare a short survey or interview with patients to assess their experience with the registration process. - Collaborate with the operations team to brainstorm and pilot small process improvements, especially in registration and waiting area management.

Signature of the Student

Diya Prashanth

Approved by the IIHMR University's Mentor

Week no: 3 From: 1st June to 7th June

<u>Activity Done</u>	• A printed sheet was prepared daily, listing the number of appointments booked for each doctor. • As patients approached the billing counter, their appointment status was verified against this list. • After billing, patients were guided by the billing staff to the appropriate doctor's coordinator or cabin. • I was placed in the OPD to observe the workflow and eventually took full charge of managing the patient lists for one or two doctors. • My responsibilities included ensuring smooth coordination between the billing department and the consulting doctors.
<u>Linking theory (Classroom learning) with practice at your organization</u>	• Patient Flow Management: • Applied process mapping from operations management to How patients moved from registration to billing and then to the doctor, identifying bottlenecks and improving efficiency. • Queue Theory: • Service Quality (SERVQUAL Model): Practiced reliability and responsiveness by ensuring Patients were accurately verified and promptly guided to the correct doctor. • Resource Allocation: • Observed the need for dynamic staff allocation, as taught in capacity planning, especially during peak patient hours.
<u>Gaps identified on the working area.</u>	• Manual Processes: inefficiency, especially during high patient volumes. • Waiting Time: Delays occurred when patients had to wait for verification at the billing counter before being guided to the doctor's cabin. • Communication: Occasional confusion arose when patients were unsure of the next steps after billing, highlighting the need for more proactive guidance. • Limited Use of Technology: Absence of a digital Patient management system led to duplication of effort and potential misplacement of records.
<u>Suggestions for improvement</u>	• Digitize Appointment Management • Enhance Patient Guidance: Introduce clear signage and assign dedicated staff to guide patients post-billing, ensuring they reach the correct department or doctor without confusion. • Dynamic Staffing: Allocate additional coordinators and billing staff during peak hours to manage increased patient flow efficiently. • Staff Training: Conduct regular training for coordinators and billing staff on communication skills and process updates to maintain consistency and professionalism. • Continue managing and optimizing patient flow for assigned doctors, focusing on reducing bottlenecks at the billing and coordination stages.
<u>Plan for the next week</u>	• Collect feedback from patients regarding their experience with appointment verification and guidance. • Observe the impact of any implemented changes (e.g., improved signage, additional staff) on patient flow and satisfaction. I plan to watch the front office staff and gather info to write a report on how well the OPD processes work.

Signature of the Student

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Approved by the IIHMR University's Mentor

Week no: 4 From: 8th June to 14th June

<u>Activity Done</u>	• Patient Flow Management: • Coordinated patient movement for 4 specialties — Pulmonology, Orthopedics, Neurology, and Psychiatry — from the billing counter to the respective doctor's cabin. • Appointment List Preparation: • Prepared and maintained daily printed lists of appointments for each doctor to track patient flow and manage their schedules efficiently. • Independent Coordination: • Gradually took on independent responsibility for managing patient flow for 1–2 doctors, strengthening my understanding of OPD operations and workflow. • PCR Tracker Project: • Assigned to maintain the PCR tracker for Conversion Department, updating the status of cases from Outpatient (OP) to Inpatient (IP) in a systematic and accurate manner. • Time-Bound Neurology Study: • I conducted a time-bound study in Neurology department to observe patient flow, waiting time, and service delivery bottlenecks. • Additional Department Observation: • Documented patient flow and service delivery process in Dermatology, Ophthalmology, Endocrinology, EEG, and Dental departments to identify areas for improvement and enhance coordination.
<u>Linking theory (Classroom learning) with practice at your organization</u>	• During my Patient Coordinator role at Manipal Hospitals, Sarjapur Road, I was able to directly connect several concepts I learned in the classroom to real-world hospital operations: • Patient Flow and Operations Management: • In theory, we studied workflow optimization, queue management, and patient journey mapping. At the hospital, I applied these principles by organizing patient movement from the billing counter to the doctor's cabin and by maintaining daily appointment lists to avoid bottlenecks and reduce waiting time. • Roles and Communication in Healthcare Teams: Classroom lessons about interdisciplinary team roles and the importance of clear communication were demonstrated in practice. Coordinating between reception, nurses, doctors' coordinators, and department heads made me appreciate how effective communication directly impacts patient satisfaction and service delivery. • Data Maintenance and Conversion Processes: My role in updating the PCR tracker to reflect the conversion of cases from Outpatient (OP) to Inpatient (IP) helped me connect theory about health information systems, patient data flow, and the importance of accurate record-keeping in a hospital setting. • Time and Motion Study: During my time-bound study in Neurology, I applied principles from operations research and hospital administration to observe service delivery timelines, patient waiting periods, and bottlenecks. This allowed me to identify areas for improvement — a key aspect we learn in theory about quality improvement and process optimization. • Management of Multiple Departments: Classroom concepts about coordination, delegation, and multitasking were put into practice when I documented patient flow across Dermatology, Ophthalmology, Endocrinology, EEG, and Dental departments. It demanded adaptability, strong organizational skills, and a clear understanding of department-specific workflows — exactly what we studied in hospital operations and health services management.

<u>Gaps identified on the working area.</u>	• Communication Gaps Between Departments: There were occasional delays in communication between the billing department, doctor's coordinator, and hospital staff, which sometimes resulted in confusion and longer waiting periods for patients. • Manual Processes and Paper Dependence: The daily printouts of appointment lists and manual updating of the PCR tracker made the process prone to human error and oversight. An integrated, digital system could streamline these tasks and reduce redundancy. • Patient Flow Inefficiencies: Certain department workflows, especially Neurology, were not adequately designed to handle peak patient flow, causing bottlenecks and extended waiting times. • Limited Standard Operating Procedures (SOPS) for Conversion Process: There were no clear, documented guidelines or protocols for updating and maintaining the PCR tracker during the conversion from OP to IP, which sometimes led to confusion or inaccuracies in patient status. • Inefficient Time Utilization: The time-bound study in Neurology revealed periods of under-utilization and overloading of resources. There were gaps in the scheduling and distribution of appointments, affecting overall department productivity. • Dependence on Individual Experience: The process relied largely on the experience and judgment of the coordinator, which could affect consistency and service delivery if responsibilities were handed over to a new person.
<u>Suggestions for improvement</u>	• Implement a centralized digital platform or hospital information system (HIS) to track patient flow in real time. This would reduce reliance on manual paperwork, minimize human error, and allow instant communication across departments. • Prepare a Standard Operating Procedure (SOP) for updating the PCR tracker when a patient converts from Outpatient (OP) to Inpatient (IP). Providing a clear, step-by-step guideline will help maintain consistency and accuracy. • Establish direct communication channels or instant messaging groups for department coordinators, billing, and nurses to enable faster information exchange and smoother operations. • Provide training sessions for coordinators and department staff to familiarize them with the updated procedures, digital tools, and communication protocols. • Develop real-time dashboards or reports to track waiting times, bottlenecks, and patient volumes across departments. This data can help hospital administrators respond promptly and efficiently. • Consider allocating resources based on demand by extending staffing or adding slots during peak hours to match patient flow and avoid bottlenecks. • Prepare comprehensive training manuals and checklists for patient coordinators. This will help maintain service delivery standards even if there are staffing changes.
<u>Plan for the next week</u>	• Initiate the process of drafting Standard Operating Procedures (SOPS) for updating the PCR tracker and managing patient flow from Outpatient (OP) to Inpatient (IP). • Collaborate with department coordinators and supervisors to set up a small training session (30– 60 minutes) to orient them on the new procedures and communication protocols. • Work with the hospital's IT department to explore possibilities for implementing a digital platform or tool to streamline patient flow and reduce manual paperwork. • Design a simple checklist or manual for patient coordinators to follow daily. This will help standardize operations and reduce dependency on individual experience.

- Analyze patient flow data from this past week and prepare a small report to highlight peak hours and bottlenecks. Present this to department heads to aid in decision-making about staffing and resources.
- Identify key department stakeholders and organize a meeting to discuss how to implement these improvement plans and resolve any bottlenecks.
- Test the new communication protocols and checklist during the coming week and gather feedback from the team on their practicality and ease of use.

Signature of the Student

Diya Prashanth

Approved by the IIHMR University's Mentor

Week no: 5 From: 15th June to 21th June

<u>Activity Done</u>	• Continued to manage patient flow for OPD under the supervision of the floor manager, specifically for departments including Pulmonology, Orthopedics, Neurology, and Psychiatry. • Maintained and updated daily appointment sheets for respective doctors, verified billing status, and guided patients accordingly. • Took independent charge of managing coordination for at least two specialties, ensuring timely flow between billing, consultation, and follow-ups. • Observed workflows in Dermatology, Endocrinology, EEG, Ophthalmology, and Dental departments, noting patterns in counter allocation and inter-department communication. • Project 1: Value Stream Mapping – OPD Neurosurgery • Initiated a Time and Motion Study for Neurosurgery OPD to analyze patient turnaround time (TAT). • Tracked data such as: • Number of patients seen per day per doctor. • Average consultation time per patient. • Waiting time before and after the consultation. • Began mapping each stage of the patient's journey from registration to exit to identify inefficiencies and opportunities for improvement.
<u>Linking theory (Classroom learning) with practice at your organization</u>	• Applied concepts of workflow mapping, healthcare service delivery, and operational efficiency learned in class while working on value stream mapping in Neurosurgery. • The PCR tracker project reflected theoretical understanding of hospital utilization, bed occupancy, and conversion metrics. • Learned the importance of interdepartmental coordination, communication protocols, and data accuracy in a hospital setting.
<u>Gaps identified on the working area.</u>	• Lack of a standardized format or SOP for recording and updating OP to IP conversions in real-time. • Heavy reliance on manual processes (e.g., printed appointment sheets, handwritten time logs). • Communication lapses between billing and coordinators sometimes led to delays in consultation flow. • Absence of a dedicated tracking mechanism for consultation times and patient movement stages in OPD.
<u>Suggestions for improvement</u>	• Develop and implement a digital PCR tracking system integrated with the HIS for accurate and real-time updates.

	• Draft a standardized protocol for conversions to improve documentation and reduce missed opportunities. • Introduce a timestamp system in OPD to record exact consultation start and end times to aid in analytics. • Improve communication through instant messaging or shared dashboards among billing, coordinators, and doctors.
<u>Plan for the next week</u>	• Continue value stream mapping in Neurosurgery OPD with deeper data collection and begin analyzing patterns. • Begin working on a cause- effect analysis for low OP to IP conversion rates across departments. • Collaborate with Ms. Anubha to prepare a conversion insights report based on weekly tracker data. • Draft the first version of SOPs for conversions and present them for feedback. • Explore feasibility of a digital appointment and conversion dashboard to reduce manual work. • Attend or propose a short feedback meeting with stakeholders to review coordination gaps and recommendations.

Signature of the Student

Diya Prashanth

Approved by the IIHMR University's Mentor

Week no: 6 From: 23rd June to 27th June

<u>Activity Done</u>	• Fully dedicated the week to Project 1: Value Stream Mapping in the Neurosurgery Outpatient Department at Manipal Hospitals, Sarjapur Road. • Conducted continuous observation of patient flow, tracking the entire journey from hospital entry to exit: • Entry time into the hospital • Billing completion time • Consultation starts and ends • Pharmacy service time (if applicable) • Maintained a detailed log of time stamps for each patient manually, due to the absence of an automated tracking system. • Calculated the Turnaround Time (TAT) for each patient by compiling data across all service points. • I identified peak consultation hours and observed patient congestion patterns, especially during mid- morning and afternoon slots. • Coordinated with billing staff, front desk, floor coordinators, and pharmacy team to ensure accurate time tracking and verification. • Engaged in informal discussions with staff to understand current operational practices and challenges in maintaining patient flow.
<u>Linking theory (Classroom learning) with practice at your organization</u>	• The project allowed me to apply key classroom concepts such as value streaming, time- motion studies, and Lean healthcare principles in a real-world setting. By tracking Turnaround Time (TAT) across patient touchpoints in the Neurosurgery OPD, I observed how delays and inefficiencies impact service delivery. • The experience reinforced the importance of workflow optimization, data-driven decision-making, and interdepartmental coordination—core themes in healthcare operations and hospital management theory.

<u>Gaps identified on the working area.</u>	• Lack of Automated Time Tracking: All time data was recorded manually, increasing the risk of inaccuracy and making real-time monitoring impossible. • Unpredictable Waiting Periods: Significant variation in waiting time between billing and consultation indicated poor scheduling and queue management. • No Defined Turnaround Time (TAT) Benchmark: The department lacked a standard reference for acceptable TAT, making it difficult to evaluate performance objectively.
<u>Suggestions for improvement</u>	• Implement Digital Time Tracking: Introduce an automated system to capture key time stamps (arrival, billing, consultation start/end, pharmacy) for more accurate and real-time monitoring. • Standardize TAT Benchmarks: Establish clear Turnaround Time (TAT) standards for the Neurosurgery OPD to assess performance and identify delays promptly. • Optimize Scheduling and Patient Flow: Use staggered appointment slots and real-time queue updates to reduce waiting time between billing and consultation. • Integrate Pharmacy into OPD Workflow Analysis: Include pharmacy service time in overall patient tracking to provide a more complete view of the outpatient experience.
<u>Plan for the next week</u>	• Complete Final Documentation for the Value Stream Mapping project in Neurosurgery OPD, including analysis of Turnaround Time (TAT) data and key observations. • Submit the Summary Report with insights, identified gaps, and practical recommendations for improving patient flow. • Familiarize with the PCR Tracker and current documentation process for recording OP to IP conversions. • Conduct Initial Observations and Discussions with relevant departments to understand common reasons behind successful and missed conversions. • Start Data Collection for conversion trends and prepare to map the workflow of the conversion process.

Signature of the Student

Diya Prashanth

Approved by the IIHMR University's Mentor

Week no: 7 From: 28th June to 5th July

<u>Activity Done</u>	• Continued working on the Value Stream Mapping project in the Neurosurgery OPD, with a refined focus on identifying process bottlenecks and actionable insights. • Maintained manual time tracking of patient flow across key service points: entry, billing, consultation start and end, and pharmacy (if applicable). • Reviewed and reflected on feedback received from mentors regarding the initial phase of the project, which emphasized the need to move from basic observation to strategic analysis. • Reorganized data collection to highlight delays with the greatest operational impact, especially during peak hours.
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	• Initiated informal interactions with OPD staff (floor coordinators, billing personnel) to incorporate practical challenges and frontline perspectives into the analysis. • Started drafting a structured findings report, organizing insights under categories such as delay sources, contributing factors, and possible interventions. • Began aligning project output with broader hospital goals, focusing on efficiency improvement and patient experience enhancement.
<u>Linking theory (Classroom learning) with practice at your organization</u>	• This week's work involved applying classroom principles of improvement process, healthcare operations, and strategic analysis to refine the Value Stream Mapping project. Feedback from mentors prompted a shift from purely observational data gathering to a more analytical and solutions-focused approach, aligning with concepts like root cause analysis, Lean methodology, and bottleneck identification taught in theory. • Additionally, incorporating stakeholder feedback and qualitative inputs connects directly to health systems theory on interdisciplinary collaboration and the value of combining quantitative and experiential data for effective decision-making.
<u>Gaps identified on the working area.</u>	• Initial Analysis Was Too Descriptive: • Early findings focused more on process mapping than on analyzing causes and consequences of inefficiencies. • Lack of Prioritization of Bottlenecks: • Delays were noted, but not ranked or assessed based on impact, making it difficult to focus improvement efforts. • Limited Integration of Staff Perspectives: Insights from floor staff and coordinators were not initially captured, resulting in a partial understanding of workflow constraints. • Absence of Strategic Framing: • Findings lacked alignment with hospital-wide goals, such as reducing patient waiting time or improving throughput. • Prioritize High-Impact Bottlenecks: • Focus improvement efforts on the stages with the most frequent or severe delays particularly between billing and consultation.
<u>Suggestions for improvement</u>	• Introduce TAT Benchmarks: Define and implement standard Turnaround Time (TAT) expectations for each step in the OPD workflow to enable performance tracking and accountability. • Incorporate Staff Feedback Mechanisms: Regularly gather inputs from floor coordinators, billing staff, and clinical teams to ensure the process design reflects operational realities.
<u>Plan for the next week</u>	• Finalize Data Collection for the Value Stream Mapping project in Neurosurgery OPD, ensuring all key time points and observations are complete. • Begin compiling and analyzing data, with a focus on: • Identifying recurring bottlenecks • Start writing a report comparing planned and actual TAT, using case examples to support the findings. • Quantifying average Turnaround Times (TAT) • Comparing delays across patient cases and time slots • Draft the Final Project Report, incorporating: • Key findings • Visual tools (charts, flow diagrams) • Recommendations aligned with hospital goals • Share initial insights with mentor(s) for review and feedback.

- Begin planning the project handover or presentation, summarizing outcomes and actionable suggestions for the department.
- If time permits, assist in creating a basic tracking template or SOP draft that the department can use for post-internship

Signature of the Student

Diya Prashanth

Approved by the IIHMR University's Mentor

Week no: 8 From: 6th July to 11th July

<u>Activity Done</u>	• Continued with the Value Stream Mapping project in the Neurosurgery OPD, focusing on patient flow tracking across all key service points. • Conducted detailed time-motion observations for each patient, recording timestamps for hospital entry, billing, consultation, and pharmacy (if applicable). • Held two feedback sessions with my mentor to present interim findings and receive guidance on making the analysis more strategic. • Based on feedback, refined the data collection framework to emphasize: • High patient load periods • Types of patient cases (new vs. follow-up) • Variability in consultation and waiting times across days • Identified and began organizing common bottlenecks and repetitive delay patterns to support the upcoming analysis phase. • Finalized the revised project timeline: • Data collection to continue until 11th July • Analysis and final reporting scheduled for 12th–24th July
<u>Linking theory (Classroom learning) with practice at your organization</u>	• This week, mentor feedback helped bridge classroom learning with on-ground application. The process of refining data collection and focusing on high-impact bottlenecks reflects practical use of concepts from operations management, Lean healthcare, and process improvement. • The transition from descriptive observation to strategic analysis aligns with the PDCA (Plan-Do-Check-Act) cycle, commonly taught in quality improvement frameworks. Additionally, segmenting data by patient type and time block applies principles of workflow optimization and performance benchmarking, translating theoretical models into actionable insights within a hospital setting.
<u>Gaps identified on the working area.</u>	• Overemphasis on General Observation: • Initial data lacked specificity and strategic focus, limiting its usefulness for targeted interventions. • Limited Differentiation in Patient Categories: Early tracking did not distinguish clearly between new, follow-up, and complex cases, affecting the accuracy of consultation time analysis. • Inconsistent Tracking During Peak Hours: Data from high-volume periods was underrepresented, making it harder to analyze real bottlenecks. • Lack of Real-Time Process Visibility: Patients and staff have no system to view queue status or expected wait times, leading to confusion and delays. • No Feedback Loop from Frontline Staff: Operational challenges faced by coordinators and billing teams were not integrated into initial findings,

	reducing contextual depth.
<u>Suggestions for improvement</u>	• Segment Data by Patient Type: • Categorize patients as new, follow-up, or complex to better analyze consultation time variations and design tailored scheduling strategies. • Focus on Peak Hour Monitoring: • Prioritize data collection during high-traffic time slots to accurately capture bottlenecks and pressure points in the workflow. • Integrate Staff Feedback into Analysis: • Conduct brief, structured discussions with OPD coordinators, billing, and clinical staff to gain practical insights and enhance the depth of findings. • Introducing Basic Queue Display or Communication Mechanism: • Recommend a simple queue display system or manual update board to improve transparency for patients and reduce confusion. • Align Findings to Operational KPIs: • Present final insights in terms of performance indicators like wait time reduction, improved throughput, and patient satisfaction to ensure strategic relevance.
<u>Plan for the next week</u>	• Collect staff inputs to support contextual understanding of workflow challenges. • Begin organizing data for analysis and identify recurring patterns. • Meet with mentor mid-week to review progress. • Draft the structure for the final project report and visuals.

Signature of the Student

Diya Prashanth

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Week no: 9 From: 12th July to 19th July

<u>Activity Done</u>	• Completed the final compilation of all collected data for the Value Stream Mapping project in the Neurosurgery OPD. • Performed detailed analysis of the compiled data, including: • Average TAT by Doctor – calculated consultation times to compare efficiency. • TAT Distribution – categorized appointments by duration to identify delays and bottlenecks. • Appointments vs. Walk-ins – analyzed the ratio to understand its impact on resource allocation. • Payment Status Breakdown – assessed payment trends to check for billing-related delays. • Discussed the analyzed findings with the mentor during review sessions for validation. • Began organizing results into a structured format for the final report and poster presentation.
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<u>Linking theory (Classroom learning) with practice at your organization</u>	• The final analysis phase demonstrated the practical application of Value Stream Mapping (VSM) and Lean healthcare principles learned in theory. Calculating Average TAT by Doctor, analyzing TAT distribution, and comparing appointments vs. walk - ins reflected the use of operations management and process optimization techniques. • The shift from raw data collection to actionable insights aligns with the PDCA (Plan-Do-Check-Act) cycle and data-driven decision-making models taught in classroom sessions. Additionally, identifying bottlenecks and proposing process improvements directly connects to quality improvement frameworks in healthcare management. • No Standardized TAT Benchmarks: The department lacks predefined Turnaround Time standards, making performance comparison difficult. • High Dependence on Walk-ins: Unmanaged walk-ins disrupt appointment schedules and increase waiting times.
<u>Gaps identified on the working area.</u>	• Billing and Payment Delays: • Occasional slow payment processing contributes to extended total patient TAT. • Lack of Real-Time Queue Tracking: • Neither staff nor patients have visibility of live queue status, leading to congestion and confusion. • Limited Integration of Case Complexity: Variations in consultation time due to patient complexity are not factored into scheduling or analysis.
<u>Suggestions for improvement</u>	• Establish Standard TAT Benchmarks: Define average expected TAT per doctor/specialty to enable consistent performance monitoring. • Manage Walk-ins Strategically: Introduce a controlled token system or allocate specific time slots for walk-ins to reduce disruption to scheduled appointments. • Streamline Billing and Payment Processes: Implement faster digital payment options or a separate counter for follow-up/quick consultations. • Introduce Real-Time Queue Tracking: Use a basic digital display or manual update board to show queue status and reduce patient confusion. • Factor in Case Complexity: Classify cases as routine or complex during scheduling to allocate appropriate consultation times.
<u>Plan for the next week</u>	• Design and finalize the poster for viva presentation, highlighting methodology, key findings, and recommendations. • Incorporate visuals such as TAT distribution charts, average TAT comparisons, and appointments vs. walk-in's graphs from the analyzed data. • Prepare a concise summary of findings and suggestions for the viva discussion. • Review the poster and practice the presentation with the mentor for final feedback. • Submit the final project report along with the poster by the end of the week.

Signature of the Student

Diya Prashanth

Approved by the IIHMR University's Mentor

Compiled Report

Name of the Organization: Manipal Hospitals, Sarjapur Road

Department of Summer Internship Program: Operations

Name of the Student: Diya Prashanth

Roll no: 1945

Stream: MBA -Hospital and Health Management

<u>Activity Done</u>	- Working in the outpatient department and the ER, I helped keep patient flow steady under different doctors' guidance. My duties included gathering, checking, and studying outpatient data to find useful patterns. I also built Excel tools to watch how quickly things were done and to track important performance measures. - To keep an eye on operational turnaround time (TAT) and key performance indicators (KPIs), I created tools using Excel. I also made charts and dashboards to show patient feedback and waiting times. I took part in team meetings and thought about possible improvements.
<u>Linking theory (Classroom learning) with practice at your organization</u>	My coursework in healthcare quality and process management gave me a base for my work. I used my data study and visualization skills to build dashboards and reports. Knowing about patient-centered care helped me judge how happy patients were and what the results were. I also used problem-solving methods to handle operational problems.
<u>Gaps identified on the working area.</u>	I noticed that there was a need for standard reports and automatic data tracking in the OPD. I found problems in patient registration and discharge processes that made wait times longer. Also, patient feedback wasn't being used well enough to make quality improvements.
<u>Suggestions for improvement</u>	I suggested automating reporting processes to lower manual errors. It's important to make patient flow and registration procedures standard. Regularly checking patient feedback and using it to make constant improvements is useful. Better staff training in data entry and communication is also needed.
<u>Key Learnings</u>	I learned a lot about data handling and healthcare operations. I saw the real-world challenges in managing a hospital. My communication and teamwork skills got better. I also understood that using patient feedback to improve quality is essential.

Signature of the Student

Diya Prashanth

Approved by the IIHMR University's Mentor