

“Analyzing Antimicrobial Usage Pattern and MDRO Trends in Intensive Care Units”

Internship Report submitted to



To IIHMR University, Jaipur

for the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

In

Hospital and Health Management

By

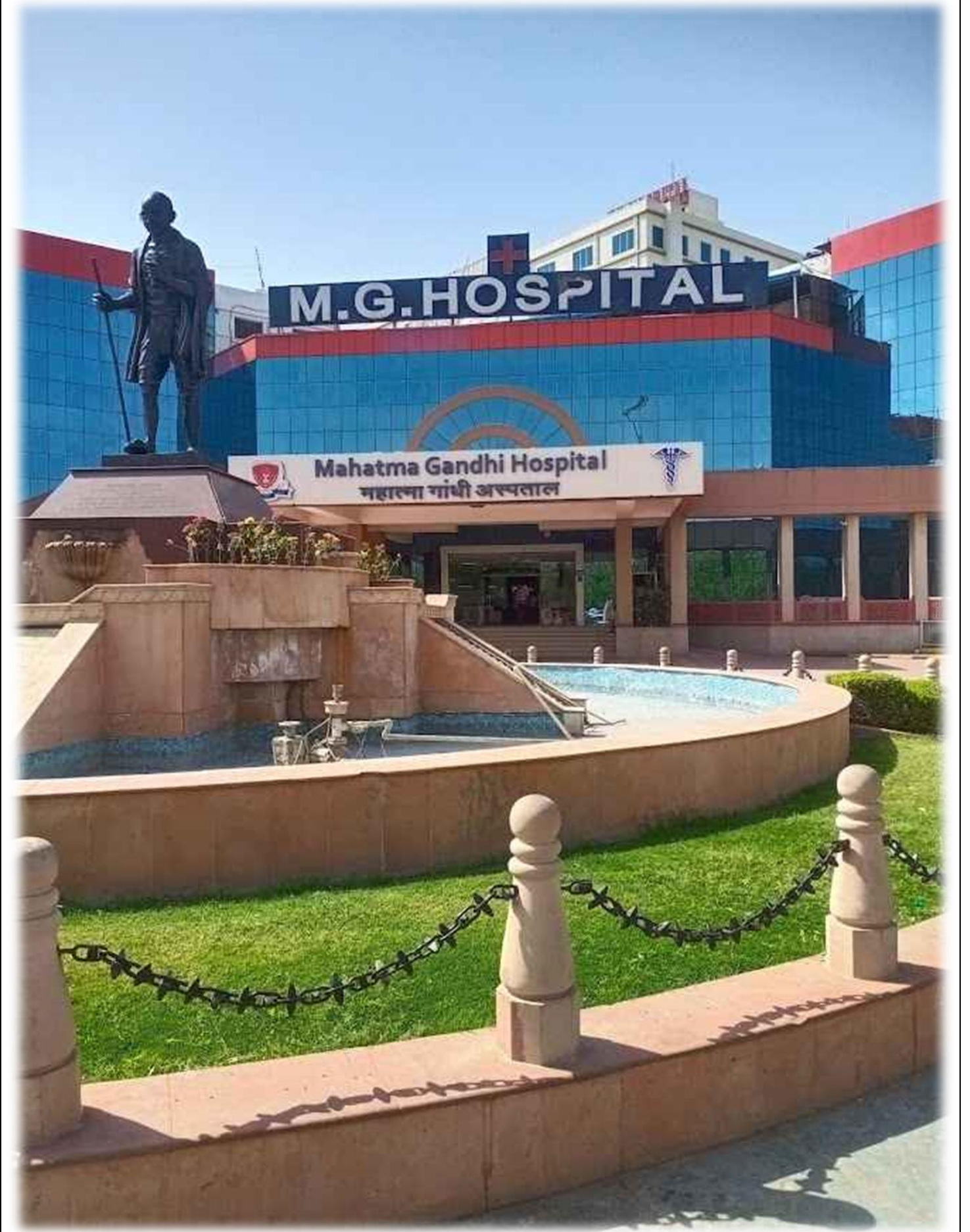
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INTERNSHIP'2025



INTRODUCTION

During my internship at Mahatma Gandhi Hospital, Jaipur, I had the privilege of immersing myself in a dynamic healthcare environment that significantly shaped my professional and personal growth. Working closely with my seniors and co-workers, I developed strong interpersonal skills and learned the value of collaboration in delivering patient-centered care. Teamwork was at the core of my experience, as I contributed to multidisciplinary teams, ensuring seamless coordination and communication to meet shared goals. I also had the opportunity to support leaders by assisting in decision-making processes, which deepened my understanding of responsibility and accountability in a high-stakes setting.

The organizational culture at Mahatma Gandhi Hospital emphasized excellence, empathy, and professionalism, inspiring me to uphold high standards in every task I undertook. I honed my documentation skills by maintaining accurate and detailed records, a critical aspect of healthcare that enhanced my attention to detail. Additionally, my analytical skills grew as I assessed patient data and contributed to problem-solving efforts alongside my team. Above all, I learned to work with high integrity, adhering to ethical principles and prioritizing patient well-being in every action. This internship not only equipped me with practical skills but also instilled a sense of purpose and resilience that I will carry forward in my career.

OBJECTIVES OF INTERNSHIPS

1. Understanding the Hospital's Quality Framework: To learn about Mahatma Gandhi Hospital's specific Quality Management System (QMS). To understand the hospital's quality policy, objectives, and overall mission related to quality care. To gain familiarity with the national (like NABH - National Accreditation Board for Hospitals & Healthcare Providers) and potentially international quality standards the hospital adheres to or aspires towards.

2. Learning Key Quality Processes and Methodologies: To understand how quality indicators (KPIs) are identified, measured, monitored, and reported within the hospital. To learn about patient safety protocols, including incident reporting, root cause analysis (RCA), and corrective/preventive action (CAPA) processes. To gain knowledge of quality improvement methodologies used in healthcare (e.g., PDCA cycle, Lean, Six Sigma principles adapted for hospitals). To understand the process of internal and external audits (like NABH surveillance or certification audits) and the department's role in preparation and follow-up.

3. Developing Practical Skills in Quality Management: To assist (under supervision) in collecting, compiling, and performing basic analysis of quality-related data. To participate in or observe quality improvement projects and initiatives. To assist in the development or revision of standard operating procedures (SOPs), policies, and other quality documentation. To learn how patient feedback and complaints are managed and used for quality improvement.

4. Understanding the Managerial Aspects of Quality: To observe the day-to-day management and functioning of the Quality Department. To understand how the Quality Department interacts and coordinates with other clinical and non-clinical departments to implement quality initiatives. To learn about the role of hospital committees (like Quality Steering Committee, Patient Safety Committee, Infection Control Committee) in driving the

quality agenda. To gain exposure to resource planning and management related to quality projects.

5. Professional Development: To apply theoretical knowledge of management and quality principles in a real-world hospital setting. To develop professional skills such as communication, teamwork, problem-solving, and data analysis within the healthcare context. To build a professional network within the hospital environment. To understand potential career paths within healthcare quality management.

6. Understand Hospital Operational Workflow: To gain a comprehensive understanding of the day-to-day operational processes within a large hospital setting, including patient flow (admission, transfer, discharge), scheduling (appointments, surgeries, diagnostics), and resource allocation.

7. Learn Key Departmental Functions: To familiarize yourself with the specific functions managed by the Operations department, which could include:

- Front Office Management
- Patient Registration & Admissions
- Bed Management & Allocation
- Housekeeping & Sanitation Services
- Security Services
- Biomedical Waste Management
- Supply Chain & Inventory Management (for operational supplies)
- Ambulance Services Coordination
- Maintenance & Facility Management liaison
- Potentially aspects of Billing & Discharge processes coordination.

8. Understand Inter-Departmental Coordination: To learn how the Operations department collaborates and coordinates with clinical departments (like Emergency, Wards, ICU, OT), diagnostic services (Lab, Radiology), Pharmacy, HR, Finance, and IT to ensure smooth patient care delivery.

9. Learn Quality Standards & Compliance: To understand the operational protocols, quality standards (like NABH - National Accreditation Board for Hospitals & Healthcare Providers, if applicable), and safety regulations relevant to hospital operations in India and specifically at Mahatma Gandhi Hospital.

10. Familiarization with Hospital Information Systems (HIS): To gain basic proficiency in using the hospital's software systems relevant to managing operational tasks (e.g., patient tracking, bed status, scheduling).

11. Develop Analytical & Problem-Solving Skills: To learn how to identify operational bottlenecks, analyze relevant data (e.g., patient wait times, bed turnaround time, resource utilization), and contribute to finding practical solutions.

12. Enhance Communication & Interpersonal Skills: To effectively communicate with diverse hospital staff (doctors, nurses, support staff, managers) and potentially patients or their families regarding operational matters.

13. Improve Process Mapping & Documentation: To learn how to map existing operational processes and assist in documenting standard operating procedures (SOPs).

14. Assist Operations Staff: To provide supervised support to operations managers and staff in their daily tasks and routines.

15. Contribute to Process Improvement Initiatives: To participate (even in a small capacity) in projects aimed at improving efficiency, reducing costs, enhancing patient experience, or ensuring compliance within operations.

16. Gain Practical Experience: To apply theoretical management concepts learned in coursework to real-world hospital operational challenges.

17. Gain Exposure to Healthcare Management: To understand the complexities and career pathways within hospital administration and operations.

18. Build Professional Network: To connect with professionals working in the healthcare sector in Jaipur.

19. Develop Professionalism: To cultivate essential workplace skills like time management, teamwork, responsibility, and ethical conduct in a professional healthcare environment.

ORGANIZATION PROFILE

Mahatma Gandhi Hospital, Jaipur, is a prominent, large, private, multi-super specialty teaching hospital affiliated with MGUMST, known for its extensive facilities, wide range of medical services, focus on medical education, and adherence to quality standards.

MGH is the primary teaching hospital associated with the **Mahatma Gandhi University of Medical Sciences & Technology (MGUMST)**, a private university in Jaipur. It is a large-scale healthcare facility, often cited as having over 1450+ beds, making it one of the major hospitals in Rajasthan. Functions as a **tertiary care center**, meaning it provides specialized consultative care, usually on referral from primary or secondary medical care providers.

Offers **multi-super specialty services**, indicating it covers a wide range of medical and surgical disciplines, including highly specialized ones. Provides comprehensive medical services across various departments including (but not limited to) Cardiology, Oncology, Neurology, Nephrology, Gastroenterology, Orthopedics, General Surgery, Medicine, Pediatrics, Obstetrics & Gynecology, etc.

Equipped with advanced diagnostic facilities (like MRI, CT scans, advanced labs) and therapeutic equipment. Features multiple Intensive Care Units (ICUs) catering to different needs (Medical, Surgical, Cardiac, Neonatal). Operates numerous modern Operation Theatres. Offers 24/7 Emergency and Trauma care services.

Serves as the principal training ground for students enrolled in MGUMST's Medical College, Dental College, Nursing College, Physiotherapy College, and other allied health science programs. Integrates patient care with medical education and research.

Quality Accreditations:

- The hospital's laboratories frequently have NABL (National Accreditation Board for Testing and Calibration Laboratories) accreditation, guaranteeing quality in diagnostic testing.
- The hospital generally possesses accreditations such as NABH (National Accreditation Board for Hospitals & Healthcare Providers), JCI (Joint Commission International) indicating adherence to national standards for quality and patient safety in hospital services.

VISION

To establish MGUMST as an Institution of Excellence in the healthcare and related sciences, on par with international standards.

To bring together our departments, colleges, students, and alumni to provide top-notch research and instruction with the goal of improving healthcare both domestically and internationally.

To instill a culture of curiosity, inclusivity, teamwork, and creativity in order to attain the total development of students, including character and moral values.

To guarantee equality among diversity in every way, embodying the genuine Gandhian ideals, so that everyone has an equal chance and the brightest brains and talent can be acknowledged and given the chance to thrive in the dynamic competitive landscape.

MISSION

- To create a world-class, self-sufficient, and dynamic healthcare facility committed to offering the greatest clinical care and medical education.
- To create a healthy, disease-free society by advancing the best healthcare practices in the community, encompassing everything from tertiary care excellence to preventive health measures.
- To offer a variety of clinical and non-clinical programs to students, staff, and faculty without discrimination on the basis of race, sex, non-disqualifying disability, caste, religion, or national or ethnic origin, and on the basis of merit and impartiality.
- To make use of the most recent technological advancements as well as determine how best to apply emerging technologies like artificial intelligence to anticipate, stop, and treat a range of diseases and conditions before they have an impact on a person or the community.

SERVICES PROVIDED BY ORGANIZATION

Mahatma Gandhi Hospital (MGH), Jaipur, being a large, private, multi-super specialty teaching hospital, provides a comprehensive range of medical services. Here's a breakdown of the key services offered, based on available information:

I. Major Clinical Specialties & Centers:

- **Cardiac Sciences:** Cardiology, Cardiac Anaesthesia, Cardiothoracic & Vascular Surgery (CTVS). Includes state-of-the-art Cardiac Care Center with Cath Lab, CCU, etc.
- **Neurosciences:** Neurology, Neurosurgery, Neuro Anaesthesia. Comprehensive neurological care, stroke care, advanced imaging, and surgical capabilities.
- **Cancer Care (Shri Ram Cancer & Super Specialty Centre):** Medical Oncology, Surgical Oncology, Radiation Oncology, Gynecological Oncology, Onco Pathology. Offers comprehensive cancer treatments including chemotherapy, advanced radiation therapy (like CyberKnife, True Beam Linear Accelerator), and surgical oncology.
- **Organ Transplantation:** Specialized units for Liver, Kidney, Heart, Pancreas, and Bone Marrow Transplants. MGH is noted as a pioneer in several types of transplants in Rajasthan. Includes dedicated Organ Transplant Anaesthesia & Critical Care.
- **Digestive & Liver Diseases:** Medical Gastroenterology, Surgical Gastroenterology, Hepatology, Hepato Pancreato Biliary (HPB) Surgery, Liver Transplantation.
- **Renal Sciences:** Nephrology, Urology, Kidney Transplant services, Dialysis Center.
- **Orthopaedics & Joint Replacement:** Orthopaedic Surgery, specialized institute for Joint Replacement, Arthroscopy & Sports Medicine.
- **Obstetrics & Gynaecology:** Comprehensive care including high-risk pregnancy, Gynecological Oncology, and a specialized center for Fertility (IVF) and Microsurgery (Reproductive Medicine & Surgery).
- **Paediatrics & Neonatology:** General Paediatrics, Paediatric Surgery, Paediatric Nephrology, specialized Neonatal Intensive Care Unit (NICU), and Paediatric Intensive Care Unit (PICU).

II. Other Medical & Surgical Specialties:

- General Medicine (Internal Medicine)
- General Surgery (including minimally invasive, bariatric/weight loss surgery)
- ENT (Ear, Nose, Throat / Otorhinolaryngology)
- Ophthalmology (Eye Care)
- Dermatology, Venereology & Leprology (Skin)
- Pulmonology / Respiratory Medicine
- Endocrinology (Diabetes, Thyroid, Hormonal disorders) & Endocrine/Breast Surgery
- Psychiatry & Clinical Psychology
- Plastic & Reconstructive Surgery
- Clinical Hematology (Blood disorders)
- Anaesthesiology (General, Cardiac, Neuro, Organ Transplant)
- Family Medicine
- Physical Medicine & Rehabilitation
- Palliative Medicine
- Genetics

III. Diagnostic Services:

- **Radiology & Imaging:** Advanced services including 3 Tesla MRI, 128-Slice CT Scan, PET Scan, Digital X-Ray, Ultrasonography (Sonography), Doppler studies, Mammography.
- **Interventional Radiology:** Minimally invasive procedures guided by imaging.

- **Laboratory Medicine:** Large, NABL-accredited central laboratory covering Pathology, Microbiology, Biochemistry, Serology, Clinical Hematology, etc.
- **Nuclear Medicine:** Including diagnostic scans (like Gamma Camera) and therapies.
- **Cardiology Diagnostics:** ECG, Echocardiography (Echo), TMT, Holter monitoring, etc.
- **Other Diagnostics:** Endoscopy, Colonoscopy, ERCP, Bronchoscopy, Electrophysiology lab (Neurology).

IV. Emergency & Critical Care:

- **24/7 Emergency & Trauma Services:** Well-equipped department, recognized as a regional trauma center and approved for Medico-Legal Cases (MLC).
- **Intensive Care Units (ICUs):** Multiple specialized ICUs including Medical (MICU), Surgical (SICU), Cardiac (CCU), Trauma, Paediatric (PICU), and Neonatal (NICU), equipped with advanced monitoring and life support systems.

V. Support Services:

- **24/7 Pharmacy:** In-house pharmacy for inpatients and outpatients.
- **Advanced Blood Bank:** NABH and AABB accredited Immunohematology & Blood Transfusion (IHBT) department providing whole blood and components.
- **Ambulance Services:** Round-the-clock availability.
- **Dialysis Services:** For patients with kidney failure.
- **Clinical Nutrition & Dietetics:** Dietary planning and counselling.
- **Physiotherapy & Rehabilitation**
- **Speech, Language & Hearing Sciences**
- **Telemedicine Services:** For remote consultations.
- **Online Lab Reports**

VI. Other Facilities:

- Bank & ATM facility on campus
- Cafeteria, Canteen, Coffee Shop
- Guest House / Attendant accommodation
- General stores / Shops
- Temple

KEY ACTIVITIES/PROJECTS UNDERTAKEN OTHER THAN DISSERTATION

1. Process Mapping & Analysis:

- **Mapping Patient Flow:** Selecting a specific pathway (e.g., emergency admission to ward, OPD registration to consultation, discharge process) and creating a detailed flowchart to identify steps, timings, and potential bottlenecks.
- **Analyzing Waiting Times:** Focusing on a specific area (like OPD registration, pharmacy queue, or a diagnostic service like X-ray) to collect data on waiting times, analyze patterns, and potentially suggest simple improvements (e.g., queue management techniques, signage).
- **Bed Turnaround Time Study:** Observing and documenting the steps and time taken between a patient's discharge and the bed becoming ready for the next admission in a specific ward, identifying delays.

2. Observation & Data Collection:

- **Resource Utilization Observation:** Tracking the usage patterns of a specific resource managed by operations (e.g., wheelchairs, patient trolleys) to understand demand and availability.
- **Biomedical Waste Segregation Audit:** Assisting the operations or infection control team by observing and documenting compliance with waste segregation protocols in designated areas.
- **Housekeeping Efficiency Check:** Observing housekeeping rounds in a specific zone, noting timings, checklist adherence, and identifying any operational hurdles.
- **Front Office Process Timing:** Documenting the time taken for various front-office processes (registration, appointment booking, information requests) during peak and off-peak hours.

3. Documentation & Support:

- **SOP Assistance:** Helping to review or update Standard Operating Procedure (SOP) documents for a specific operational task under supervision.
- **Inventory Check Assistance:** Participating in a physical verification or documentation update for operational supplies (like linens, housekeeping materials) in a specific store.
- **Data Entry for Operational Reports:** Assisting in compiling data from various sources for routine operational reports (e.g., daily census, discharge summaries log).

4. Small Improvement Initiatives:

- **Signage Review:** Assessing the clarity, visibility, and adequacy of directional and informational signage within a section of the hospital from a patient/visitor perspective and providing feedback.
- **Feedback Collection:** Assisting in collecting informal feedback from patients or staff regarding a specific operational service (e.g., cleanliness, porter service).

KEY LEARNINGS FROM INTERNSHIP

1. Understanding of Hospital Operational Dynamics:

- **Patient Flow Management:** Gaining practical insight into the entire patient journey from admission, transfers between departments, to discharge, and the operational steps involved at each stage.
- **Resource Allocation:** Learning how critical resources like beds, operating theatres, diagnostic equipment, and staffing are managed and allocated efficiently in a large hospital setting.
- **Core Operational Functions:** Understanding the day-to-day running and importance of key operational areas like front office, housekeeping, security, biomedical waste management, supply chain for non-medical goods, and ambulance services.

2. Appreciation for Healthcare Systems & Quality:

- **Inter-departmental Coordination:** Realizing the critical need for seamless communication and collaboration between operations and clinical departments (doctors, nurses), labs, pharmacy, billing, etc., for effective patient care.
- **Importance of Quality Standards:** Understanding the practical application and significance of quality accreditations (like NABH, JCI) and protocols in ensuring patient safety and operational efficiency.

3. Development of Practical & Analytical Skills:

- **Process Observation & Improvement:** Learning to observe operational workflows, identify potential bottlenecks or inefficiencies, and perhaps contribute ideas for improvement.
- **Data Awareness:** Understanding the types of operational data that are tracked (e.g., wait times, turnaround times, occupancy rates) and their importance in decision-making, even if deep analysis isn't performed by the intern.
- **Familiarity with Hospital Information Systems (HIS):** Gaining hands-on exposure to the software used for managing patient data, scheduling, and operational tasks.

4. Enhancement of Professional & Soft Skills:

- **Communication in a Healthcare Setting:** Learning to communicate effectively and professionally with a diverse range of hospital staff, from senior management to support staff.
- **Teamwork:** Understanding how to work collaboratively within the operations team and across different departments.
- **Professionalism & Ethics:** Developing workplace discipline, time management, responsibility, and understanding ethical considerations in healthcare operations.

5. Insight into Healthcare Management:

- **Career Exposure:** Gaining a real-world understanding of the challenges, responsibilities, and career paths within hospital administration and operations.
- **Understanding the Business Side of Healthcare:** Seeing firsthand how operational efficiency impacts the overall functioning and financial health of the hospital.

THANK YOU