

SUMMER INTERNSHIP PROGRAM

at

Narayana Hospital, Kolkata

From 12th May to 19th July

A REPORT BY

Dipannita Hazra

Master of Business Administration

Hospital and Health Management-29

Roll no 1940

2024-26

Under the Mentorship of

Dr Ritu Vashistha, Assistant Professor

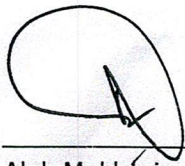


CERTIFICATE**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Ms. Dipannita Hazra a student of IIHMR University Jaipur, and pursuing two years full time MBA (Health & Hospital Management) underwent 10 Weeks of summer internship (SIP) with us from May 12, 2025, to July 19, 2025.

During the summer internship (SIP), Ms. Dipannita Hazra has successfully completed the Project in Material Management titled – Assessment Of Dispensing Time and Workflow gaps in Hospital OPD Pharmacy Service under guidance of Mr. Alok Mukharjee (Assistant General Manager).

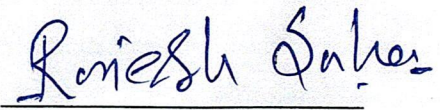
The student's performance during the summer internship was Excellent



Alok Mukharjee
Assistant General Manager

Guidance Team

Mr. Samit Howladar
Deputy General Manager



Mr. Rajesh Saha
Manager



IIHMR University Faculty Mentor Approval

This is to certify that **Ms Dipannita Hazra** 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:

A handwritten signature in blue ink, appearing to read 'Ritu Vashistha'.

(Signature of Faculty Mentor)

Name: Dr Ritu Vashistha

Designation: Assistant Professor

Assessment of Dispensing Time and Workflow Gaps in Hospital OPD Pharmacy Services

Narayana Hospital - RN Tagore Hospital, Mukundapur, Kolkata

Dipannita Hazra | Roll No.- 1940 | MBA HM – 29 |

University Mentor – Dr. Ritu Vashistha | Organization Mentor - MR. Alok Mukharjee

R.N. Tagore Hospital is a unit of Narayana Health, founded by Dr. Devi Shetty. Established in 2000, it began as a cardiac care hospital and evolved into a leading multispecialty tertiary care center in Eastern India.

2000 – Cardiac Care Set Up

2003 – Multispecialty Expansion

2008 – NABH & NABL Accredited

2011 – JCI Accreditation

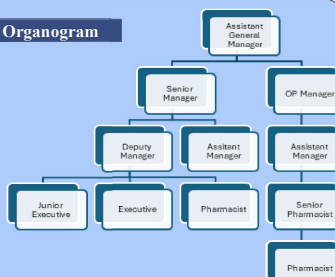
2015 – Organ Transplant Started

2020+ – Telemedicine & Outreach

Vision Our Vision is to provide high quality healthcare, with care and compassion, at an affordable cost, on a large scale

Mission Our Mission is to deliver high quality affordable healthcare services to the broader population by leveraging our economies of scale, skilled doctors, and an efficient business model

Organogram



Objective

- To measure the average time taken by patients to receive medicines after submitting their prescription at the OPD pharmacy in Narayana Hospital.
- To analyse and compare patient wait times across different time slots (morning, afternoon, and evening).
- To identify common factors causing delays in the medicine dispensing process.
- To suggest practical recommendations for improving workflow efficiency and reducing patient waiting time in the OPD pharmacy.

Methodology

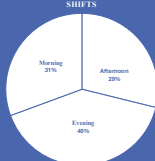
- Study area - OPD Pharmacy of R N Tagore, Narayana, hospital in Kolkata.
- Study design - Cross-sectional Analytical Observational Study
- Study Period - 28 days (except Sundays)
- Sample Size – 250 prescriptions, including discharge and outpatient
- Type of Data – Primary Data
- Data Collection Procedure - Time was recorded from prescription receiving to medicine dispensing time in 3 slots.
- Data Collection Tool – MS Excel Sheet
- Data Analysis Tool – MS Excel

Challenges Faced

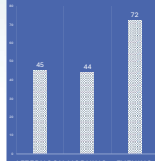
- Handling prescription interpretation with unclear handwriting or abbreviations.
- Facing challenges in time management during rush hours



DISPENSING DRUGS IN DIFFERENT SHIFTS



DELAY TIMING



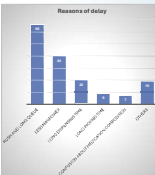
Theoretical Learning

- Gained understanding of hospital hierarchy and organizational structure in essential of hospital services.
- Importance of leadership, organization behavior and proper communication learn in Principle of Management.
- Understood the importance of timely documentation and register maintenance

Practical Learning

- Observed real-time workflow across OPD, wards, pharmacy, and billing
- Participated in problem-solving situations, adapting to patient and staff needs
- Witnessed the importance of accurate documentation and register maintenance

DISTRIBUTION OF DELAY



STRENGTHS

- RTICS is part of Narayana Health—one of India's largest healthcare networks with 40+ hospitals across major cities like Bengaluru, Mumbai, Kolkata, Jaipur.
- RTICS holds JCI Enterprise Accreditation along with NABH and NABL certifications.
- Serves patients from neighboring countries like Bangladesh, Bhutan, Nepal, and African nations.
- Specialized Cardiac Expertise for adult and pediatric cardiac surgeries, interventional cardiology, and heart transplants.

WEAKNESS

- Advanced procedures and infrastructure may lead to elevated treatment expenses for some patients.
- Staff Shortages.
- Long waiting time.

SWOT Analysis

Findings

- Most medicines were dispensed during the Evening shift (40%), followed by Morning (31%) and Afternoon (29%).
- 64% of cases experienced a delay, while 36% had no delay.
- The Evening shift showed the highest delay count (72), compared to Afternoon (45) and Morning (44).
- Top reasons for delays are—rush and long queue (66 cases), less manpower (40 cases), long dispensing time (20 cases) and other reasons, including long picking Time, Confusion about medication, and Others.

Learnings

- Gained knowledge of medication storage, expiry tracking, and cold chain maintenance
- Exposure to hospital billing systems and pharmacy software (e.g., ATHMA)
- Learned the importance of temperature and hazardous registers, along with the role of LISA labeling and high-alert medication stickers to maintain protocols.
- Learned the application of FIFO (First In, First Out) and LIFO (Last In, First Out) methods in pharmacy inventory management.

Suggestion

- As delays peak in the evening, allocate more manpower during that time to reduce wait time.
- Implement a digital queue or token system to handle the high patient load efficiently, especially during rush hours.

THREATS

- Rising healthcare competition in private sector.
- Manual register maintenance may cause delays, errors, or data loss if not digitized properly
- Unaffordable for middle income and lower income group.
- Policy changes affecting government-funded schemes

OPPORTUNITIES

- Growing demand for quality affordable healthcare.
- Expanding specialties like oncology, robotic surgery, and geriatric care
- Growth in telemedicine and home care for remote patient.
- Advanced digital Health and Ai in diagnostics

Weekly Report

Name of the Organisation: Narayana Health

Area/ Department/ Project of Summer Internship Program: Material Management

Name of the Student: Dipannita Hazra

Roll no: 1940 Stream: MBA in Hospital and Health Management

Week no: 1st From: 12.05.2025 to 17.05.2025

Activity Done	• Brief orientation about the organization and visit the 3 floors that are segregated into OPD, IPD, and surgical items. • Understand the workflow of material management department from purchase, receiving purchase medication from vendors, to receiving requisitions from different unit, to create GRN, sort out the medication according to the requisition of different unit, calculate the billing amount of the medicine, dispensing the medicine to different unit. • Collected secondary data (Jan to Apr 2025) from the organization to analyse the shipment quantities for every product, monthly and daily sales, calculated the cost with a 15% discount, and determined the closing stock value to assess the DOI (Days of Inventory) for these four months. • Use ABC analysis to understand the high-value and high-cost medications.
Linking theory (Classroom learning) with practice at your organisation	• Medication Management- Storage of the medication in the inventory, according to the temperature, light and ventilation. • Financial Management- Observe purchase process and maintenance of cost, sale, quantity, current and closing stock of medication. • Organization communication – Observes communication between staff and managers to erase any unnecessary miscommunications.

Gaps identified on the working area.	- Units are not getting every medication based on their requisition because of the unavailability of medication, for that medication they need to wait for average 3days. (It depends on the vendor and availability) - Some purchase medications are on inventory for a long period of time because of low demand or high cost or uses for some specific cases that decreases the sales.
Suggestions for improvement	- Analyse past consumption data to forecast demand accurately. - Maintain minimum stock level for high used medication and avoid overstocking of high cost and low used medication.
Plan for the next week	Analysing data and findings gaps to increase the sales and decrease DOI.

Weekly Report

Name of the Organisation: Narayana Health

Area/ Department/ Project of Summer Internship Program: Material Management

Name of the Student: Dipannita Hazra

Roll no: 1940 Stream : MBA in Hospital and Health Management

Week no: 2nd From: 19.05.2025 to 24.05.2024

Activity Done	- Assigned in the main store where all IPD and OPD medicines are stored and maintained. - Learn how to download a stock report and search for medication in the AATMA (the software is maintained only for supply chain management in Narayana). - Assigned to pick up medication from the store according to the requisition that different hospital units send based on their needs. - Make a list of near-expiry medication from the stock report to return the medication to the vendor. - Observed how re-checking was done after medication pick-up and the billing of the picked medication. - Checking the quantity, price, batch no, and expiry date of medications that are returned from the hospital unit
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	for different reasons. (mainly near expiry and non-moving)
Linking theory (Classroom learning) with practice at your organisation	- Assigned in the main store where all IPD and OPD medicines are stored and maintained, which relates to classroom theories of inventory management, drug classification (ABC/VED analysis), and proper storage practices for different categories of medicines. - Made a list of near-expiry medication from the stock report to return to the vendor, linking to hospital policies on FEFO (First Expiry First Out), minimizing drug wastage, and safe medication management as part of quality assurance in hospital pharmacy operations.
Gaps identified on the working area.	- The new medicines that are arriving at the store take a lot of time to be stocked. As a result, at the time of medicine pick up, many of them are not found in the rack but are available in the curtain box, because of this, the listed medication is not sent to the hospital. - Many times, near-expiry medication is sent to the hospital units for improper checking.
Suggestions for improvement	- Assign two staff members to handle the immediate stocking of new medicines within a fixed period. - Strictly apply the FEFO method for all medicine dispatching to minimize the risk of near-expiry stock being overlooked.
Plan for the next week	Observe the process of requisition of medication from the hospital.

Weekly Report

Name of the Organisation: Narayana Health

Area/ Department/ Project of Summer Internship Program: Material Management

Name of the Student: Dipannita Hazra

Roll no: 1940

Stream: MBA in Hospital and Health Management

Week no: 3rd

From: 26.05.2025 to 31.05.2024

Activity Done	• Checked the availability of medications in OPD stock using AATMA software to verify if the correct strength and composition were present. • Updated medication codes in the sheet when the exact strength was unavailable, by selecting an alternative strength of the same composition and marking it as to be changed. • Flagged medications as to be ordered when no suitable composition or strength was available in the OPD stock. • Documented all updates and remarks systematically to ensure accurate tracking and support procurement decisions for OPD medicine stock.
Linking theory (Classroom learning) with practice at your organisation	• The activity of checking and updating medication codes aligns with hospital management principles of inventory auditing and resource utilization, which are essential for maintaining continuity of care in OPD services. • Using AATMA software to track availability and flag missing items supports evidence-based planning and helps hospital managers make informed procurement and supply chain decisions.
Gaps identified on the working area.	• The process of copying medication codes and manually updating remarks is time-consuming and prone to human error. • Some drugs were not mapped correctly with their various strengths in the system, leading to delays or manual intervention.
Suggestions for improvement	• Ensure that all new strengths or combinations added to stock are also updated in the system with proper codes. • Implement auto-suggestions in AATMA for alternate strengths or compositions when exact matches are unavailable.
Plan for the next week	• Continue checking medication codes and updating entries for accuracy.

Weekly Report

Name of the Organisation: Narayana Health

Area/ Department/ Project of Summer Internship Program: Material Management

Name of the Student: Dipannita Hazra

Roll no: 1940

Stream: MBA in Hospital and Health Management

Week no: 4th

From: 02.06.2025 to 07.06.2025

Activity Done	• Gained a deeper understanding of the hospital's medication stock management system and workflow. • Analysed patterns in medication availability and common issues affecting stock accuracy. • Reflected on the importance of coordination between store management and hospital units for smooth operations.
Linking theory (Classroom learning) with practice at your organisation	• The practical use of AATMA software closely connects with classroom learning on hospital information systems (HIS), where digital platforms are used for stock monitoring, improving accuracy, and supporting overall decision-making in hospital supply management. • Identifying shortages or substituting medicines reflects operational planning concepts, helping maintain service flow and avoid delays in patient care.
Gaps identified on the working area.	• No automatic suggestions in AATMA for alternate strengths when exact matches are unavailable. • Inconsistent logging format makes tracking substitutions and updates slightly time-consuming.
Suggestions for improvement	• Introduce features in AATMA that suggest alternative strengths automatically. • Ensure regular syncing of stock master data with current physical availability to minimize mismatches.
Plan for the next week	• Any work assigned by the manager will be carried out as instructed during the upcoming week.

Weekly Report

Name of the Organisation: Narayana Health

Area/ Department/ Project of Summer Internship Program: Material Management

Name of the Student: Dipannita Hazra

Roll no: 1940

Stream: MBA in Hospital and Health Management

Week no: 5th

From: 09.06.2025 to 14.06.2024

Activity Done	• Assigned to observe the workflow of the main OPD pharmacy, from indenting medicine from Samyat Health Private Limited, Howrah, to dispensing the drug to patients. For a newly opened pharmacy, staff should check the stock report of medication availability and indent those medications that are out of stock or in short supply. • Learn how to generate bills in ATHMA software for doctor prescribed medication that the patient buys from the hospital pharmacy. • Assigned to maintain a good receiving note register and update purchase date and number, invoice date and number, GRN number, price of the product, and date of receiving in the register for proof of received medication. • Make an updated list of items from the ATHMA software to check that the physical and systematic quantities for moving and restocked items are the same in both places. • Audit the OP Pharmacy Refrigerator Temperature monitoring and OP Pharmacy Room Temperature and Humidity Monitoring file, and update and correct the gaps.
Linking theory (Classroom learning) with practice at your organisation	• Applied inventory management concepts such as stock checking and reorder levels while assisting in the medicine indenting process. • Used ATHMA software for billing, connecting classroom learning on hospital information systems with real-time pharmacy operations.

	Audited refrigerator and room temperature/humidity logs, linking to quality assurance and safety standards studied in class.
Gaps identified on the working area.	- The stock of medications in the newly opened pharmacy is limited. Many patients did not receive their prescribed medications, and some medicines were found to be low in stock. If a patient came with a two- or three-month prescription, the staff had to collect the medication from the main pharmacy before dispensing it. This process increased the waiting time for patients. - An audit of the current and 2023 monthly files for OP Pharmacy Refrigerator Temperature Monitoring and Room Temperature and Humidity Monitoring revealed that staff had not maintained them properly. In many instances, the time entries were missing, and there were several cases of overwriting.
Suggestions for improvement	- Ensure timely stock replenishment by setting up a regular monitoring and indenting system, and maintain a buffer stock of essential medicines to reduce patient waiting time and dependency on the main pharmacy. - Provide staff training on proper documentation practices and introduce a digital monitoring system to ensure the accuracy of temperature and humidity data to maintain quality standards.
Plan for the next week	- Any work assigned by the supervisor. - Continued the same work. - Start my work on the project.

Weekly Report

Name of the Organisation: Narayana Health

Area/ Department/ Project of Summer Internship Program: Material Management

Name of the Student: Dipannita Hazra

Roll no: 1940

Stream: MBA in Hospital and Health Management

Week no: 6th

From: 16.06.2025 to 21.06.2024

Activity Done	- Assigned to stock replenishment – the newly opened pharmacy every morning checks their stock in the software, which items are low and not in stock indent those item, and opd manager approves this line of items. To see this approved medicine sheet, I need to pick up the medication from the main pharmacy. - Assign a label to all high alert, sound alike and look-alike medications in the stock. - Start collecting data for the study of OPD pharmacy operation efficiency. I collect the data from the medicine prescription received by the pharmacist to the medication received by the patient. I divided the whole day into 3 slots – in the morning time I collect 3 samples, in the afternoon, 3 samples, and in the evening, 4 samples. A total of 50 samples I have collected so far. And plan to collect the data by 17th July. Every day I collect 10 samples and if any prescription takes more than 7 min it considers as delay and I mentioned the reason behind the delay. And I update the number of items dispenses. - As same as previous week I update the register every day.
Linking theory (Classroom learning) with practice at your organisation	- Applied inventory management principles by identifying low-stock items, initiating indents, and maintaining daily stock levels for uninterrupted pharmacy service. - Gained insight into operational efficiency and time management by collecting real-time data, analysing workflow delays, and understanding how time tracking can help improve service delivery. - Learned how proper labelling of LASA and high-alert drugs can reduce medication errors and enhance patient safety in pharmacy practice.
Gaps identified on the working area.	- Generating bill for bulk of medication takes time and for that the following patient need to wait. And in rush hour only one person is obliged to generating bill and it increase the waiting time of other patients. - Some patients are confused about medication; they continuously change their desire of drugs quantity. That's increase time of medicine picking of one patient.

Suggestions for improvement	- Assigning an extra staff member solely for billing during rush hours can significantly reduce patient waiting time. It will help divide the workload and allow parallel processing—while one staff member handles billing, another can attend to the next patient’s needs without delay. - Before final billing, quickly confirming the patient’s desired medicine quantity can avoid last-minute changes and save time.
Plan for the next week	- Continuing the data collection. - Continuing the same assigned work. - As new work assigned by manager.

Weekly Report

Name of the Organisation: Narayana Health

Area/ Department/ Project of Summer Internship Program: Material Management

Name of the Student: Dipannita Hazra

Roll no: 1940

Stream: MBA in Hospital and Health Management

Week no: 7th

From: 23.06.2025 to 28.06.2025

Activity Done	- Stock replenishment through checking inventory, indent preparation, and collecting approved medicines from the main pharmacy. - Labelling high-alert and LASA medications in the pharmacy stock. - Collecting data on prescription processing times and noting delays, with 10 samples collected daily. - Daily updating of the pharmacy register.
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Linking theory (Classroom learning) with practice at your organisation	• I observed how efficient stock management and timely indenting can reduce patient waiting time, relating to inventory control and supply chain practices. • Maintaining accurate records and tracking delays helped me understand the importance of quality assurance and continuous process improvement in healthcare. • Handling and labelling LASA and high-alert medications reinforced the significance of medication safety and preventing dispensing errors.
Gaps identified on the working area.	• The newly opened pharmacy stocks its items from the main OPD pharmacy. After restocking, some items become out of stock in the main pharmacy. If a patient comes for those medicines, the staff need to go to the new pharmacy to bring the medicine, which delays their other pending work.
Suggestions for improvement	• A suggestion for this issue is to maintain a buffer stock in the main pharmacy for frequently used items, so that even after restocking the new pharmacy, the main pharmacy retains enough stock to serve patients without interruption.
Plan for the next week	• Continuing the data collection. • Continuing the same assigned work. • Any new work assigned by the manager.

Weekly Report

Name of the Organisation: Narayana Health

Area/ Department/ Project of Summer Internship Program: Material Management

Name of the Student: Dipannita Hazra

Roll no: 1940

Stream: MBA in Hospital and Health Management

Week no: 8th

From: 30.06.2025 to 05.07.2024

Activity Done	• Continue data collection, as of now, 160 samples have been taken and noted down the reasons behind the delays to identify the gaps. • Stock replenishments of the new pharmacy by indenting and issuing the medication in the system, and Picking the required quantity of medication and sending it to the newly opened pharmacy after checking with the senior staff. • Maintain the GRN register by updating the daily received medication invoice. • Segregate the high alert and LASA medication and label the items according to the color-coded sticker. • Assign to write down all the medication names that are bounced at the time of patient requirement, and the items that need to be restocked as early as possible. • I was assigned to identify near-expiry medications. Using the pharmacy software, I first downloaded the stock value report and applied filters to identify medicines that are nearing expiry. After identifying them in the system, I located those medicines in the physical stock and prepared them for return to the vendor.
Linking theory (Classroom learning) with practice at your organisation	• The process of identifying and returning near-expiry medicines relates to Inventory and Store Management as it involves stock monitoring, expiry tracking, and minimizing wastage through vendor returns. • Identifying delays in prescription processing and recording their reasons helped me relate to concepts from pharmacy management, particularly in understanding workflow efficiency and strategies to improve patient service time.
Gaps identified on the working area.	• The newly opened pharmacy stocks its items from the main OPD pharmacy. After restocking, some items become out of stock in the main pharmacy. If a patient comes for those medicines, the staff need to go to the new pharmacy to bring the medicine, which delays their other pending work. The newly opened pharmacy stocks its items from the main OPD pharmacy. After restocking, some items become out of stock in the main pharmacy. If a patient comes for those medicines, the

	staff need to go to the new pharmacy to bring the medicine, which delays their other pending work.
Suggestions for improvement	• Implement a token system to maintain order and ensure fair, first-come-first-serve service. This would improve patient satisfaction and reduce conflict. • Additional support staff or proper duty distribution during peak hours can help ensure that all tasks are completed without affecting patient service.
Plan for the next week	• Continue the data collection. • Continue the same assigned work. • Any new work assigned by the manager.

Weekly Report

Name of the Organisation: Narayana Health

Area/ Department/ Project of Summer Internship Program: Material Management

Name of the Student: Dipannita Hazra

Roll no: 1940

Stream: MBA in Hospital and Health Management

Week no: 9th

From: 07.07.2025 to 12.07.2024

Activity Done	• Indenting and stock replenishment of new pharmacy from the issue medication list. • Updating GRN Register by checking gate pass no, invoice, and purchase order date and no. • Helping staff to pick and dispense prescribed medication for patients. • Continuing the collection of data and analysing the gaps of delaying. • List the bounced medication list and send it to the OPD manager to indent it. • Checking near-expiry medication every week.
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Linking theory (Classroom learning) with practice at your organisation	• Maintained accurate records and handled paperwork efficiently, including preparing detailed reports on inventory levels, identifying trends, and highlighting discrepancies to support decision-making and financial reconciliation. • Used efficient storage methods to improve inventory management and collaborated with various departments to ensure their inventory requirements were met.
Gaps identified on the working area.	• A time gap was identified between the prescription receiving time and the medication dispensing time. And before a prescription, receiving patient needs to wait for quite a long time in a long queue, and some of the patients go to an outside pharmacy to buy medicine to avoid the waiting time. • The refrigerator temperature monitoring sheet is not always updated timely. There were no persons who audited on a weekly or monthly basis. • After receiving the indent medications from Samayat Health, checking them against the GRN paper and racking them takes time. Without manual verification, these medications cannot be received in ATHMA (e-HIS), which often results in patients not getting the required items on time.
Suggestions for improvement	• To reduce waiting time and prevent patients from going to outside pharmacies, a token-based queue system or digital queue display can be introduced to manage patient flow more efficiently and allow patients to wait comfortably without crowding. • Assign a specific staff member to be responsible for daily temperature recording and implement a weekly audit by a supervisor to ensure timely and accurate monitoring. • A suggestion is to assign a dedicated staff member or allocate a fixed time slot daily for checking and updating received medications in the system promptly.
Plan for the next week	• Collect 40 samples next week and work on the poster and report as per the guidelines. • Continue the same assigned work. • Any new work assigned by the manager.

Weekly Report

Name of the Organisation: Narayana Health

Area/ Department/ Project of Summer Internship Program: Material Management

Name of the Student: Dipannita Hazra

Roll no: 1940

Stream: MBA in Hospital and Health Management

Week no: 10th

From: 14.07.2025 to 19.07.2024

Activity Done	• Assign to bill generation and dispensing medication. • Issuing the indent medicine of the new pharmacy and picking up and restocking the items of the new pharmacy. • Prepare the presentation and review with the manager, and make the necessary changes as per the suggestions. • Updating GRN register.
Linking theory (Classroom learning) with practice at your organisation	• I was responsible for generating patient bills and dispensing medications using the Hospital Information System (HIS). This gave me hands-on experience in handling digital billing processes, patient data, and real-time prescription management. • Leadership plays a vital role in Organizational Behavior as it helps in guiding the team, improving coordination, and ensuring smooth workflow, especially in a healthcare setting where timely decisions and responsibility are crucial.
Gaps identified on the working area.	• The collected data shows that most of the delays are during the afternoons and evenings because of rush and long queues, and less manpower. • Due to poor coordination between the newly opened pharmacy and the main pharmacy, the same quantity of medication was issued as indented, leading to stock shortages. This often resulted in patients not receiving their required medicines.

Suggestions for improvement	• Increase staff availability during peak hours to manage higher patient volumes more efficiently. • Before issuing medicine for the newly opened pharmacy, it needs to ensure that the quantity is not more than the available stock quantity in the main pharmacy. And if the medicine stock was low in the main pharmacy, and the same medicine was available in the new pharmacy, then restore the medication and immediately indent the medication to reduce prescription bounces
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Complied Reporting Format

Name of the Organisation: Narayana Health

Area/ Department/ Project of Summer Internship Program: Material Management

Name of the Student: Dipannita Hazra

Roll no: 1940

Stream: MBA in Hospital and Health Management

Activity Done	Samyat Heath – • Organizational Orientation and Departmental Visits- At the beginning of the internship, I was given an orientation to understand the structure and operational framework of the hospital. A physical visit to the different pharmacy floors was conducted, with each floor distinctly segregated for OPD, IPD, and surgical medications. This tour helped me visualize how different areas of the pharmacy were managed based on patient type and treatment requirements. It laid the foundation for understanding how medicine flows across departments and how the material management system is aligned with the hospital's clinical functions. • Understanding Material Management Workflow- I observed the complete workflow of the Material Management Department, which starts from purchasing and extends to inventory maintenance and medicine dispatch. The process includes receiving medicines from vendors, generating Goods Receipt Notes (GRNs), sorting medicines as per requisitions from different hospital units, calculating billing amounts, and finally dispensing them. This end-to-end view provided a practical understanding of how supply chain systems operate in healthcare, ensuring continuous availability of medications without overstocking or expiry losses. Narayana Hospital – R N Tagore Hospital, Kolkata- • GRN Maintenance and Invoice Documentation- Throughout the internship, I was responsible for updating the GRN register regularly. Each GRN entry was matched with details such as the invoice date and number, gate pass number, purchase order number, product pricing, and date of medicine receipt. This task
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	was crucial for maintaining traceability and accountability of purchased medicines and supported the hospital's audit readiness and regulatory compliance. I also verified incoming stock against invoices to ensure that the right medications in correct quantities were received. • Software Training: ATHMA Systems- I received hands-on training in hospital software systems: a) ATHMA, used exclusively for the hospital's supply chain and inventory management. I learned how to generate stock reports, search medication details, check expiry dates, update product codes, and filter stocks based on expiry and usage frequency. b) ATHMA, used in pharmacy billing and OPD stock handling. I used it to generate patient bills and monitor stock movements in the OPD pharmacy. c) This exposure enhanced my digital skills in healthcare inventory systems and improved my understanding of how software integration improves accuracy and transparency. • OPD Pharmacy Operations and Billing Activities- I was actively involved in observing and supporting the OPD pharmacy workflow, particularly in a newly opened pharmacy unit. I assisted in: a) Checking availability of medicines in AATMA b) Raising indents to replenish low or out-of-stock items c) Picking the required medicines from the main store d) Generating bills for doctor-prescribed medications e) Dispensing medications to patients at the OPD counter f) These activities helped me gain a deeper understanding of how prescription handling, patient interaction, and stock management are integrated into pharmacy services. • Medication Stock Replenishment and Indenting- One of my daily responsibilities included the replenishment of pharmacy stock. This process
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	involved identifying stock shortages through the system, preparing an indent request, and picking up approved medicines from the main pharmacy. I also participated in the physical restocking process and worked alongside senior staff to ensure medication accuracy before dispatch. These tasks helped me understand the critical link between clinical needs and logistics. I regularly maintained a list of bounced medications, i.e., medicines not available at the time of patient need. This list was sent to the OPD manager for immediate indenting, helping prevent gaps in medicine availability. Medication Safety & Labelling Practices- In alignment with medication safety protocols, I was assigned to segregate and label high-alert and LASA (Look-Alike, Sound-Alike) drugs using color-coded stickers. This is a crucial step in avoiding medication errors, especially in a high-paced environment like OPD. The physical labeling was done after verifying details in the system and cross-checking batch numbers and expiry dates. It emphasized the importance of visibility and clear communication in medication storage. Near-Expiry and Non-Moving Medication Management- Every week, I downloaded the stock value report from the system, applied filters to detect medicines nearing their expiry, and located these medicines physically in the storage. These medicines were flagged and listed for return to the vendor. Additionally, I helped verify medications returned by hospital units due to expiry or being non-moving. This exercise contributed significantly to reducing waste, maintaining stock hygiene, and ensuring that only valid medications are stored and dispensed. Efficiency Study: OPD Prescription Handling- One of the most engaging tasks during the internship was conducting a time-motion study to assess the operational efficiency of the OPD pharmacy. I collected data on the time taken from when a prescription was received by the pharmacist to when the patient received the medications. The full day was divided into three slots—morning, afternoon, and evening—and in each
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	slot, I collected 3 to 4 samples. Any transaction taking more than 7 minutes was considered a delay, and I noted the reason behind it (e.g., stock unavailability, billing delay, or crowding). Total 250 samples have been collected, and data analysis is ongoing to identify major process bottlenecks. This study will help in preparing a final report with practical recommendations for improving pharmacy efficiency. • Key aspects of the study – Title - Assessment of Dispensing Time and Workflow Gaps in Hospital OPD Pharmacy Services. Objective – - To measure the average time taken by patients to receive medicines after submitting their prescription at the OPD pharmacy in Narayana Hospital. - To analyse and compare patient wait times across different time slots (morning, afternoon, and evening). - To identify common factors causing delays in the medicine dispensing process. - To suggest practical recommendations for improving workflow efficiency and reducing patient waiting time in the OPD pharmacy. Methodology – - Study area - OPD Pharmacy of R N Tagore, Narayana, hospital in Kolkata. - Study design - Cross-sectional Analytical Observational Study - Study Period – 28 days (except Sundays) - Sample Size – 250 prescription including discharge and outpatient - Type of Data – Primary Data - Data Collection Procedure -Time was recorded from prescription receiving to medicine dispensing time in 3 slots. - Data Collection Tool – Ms Excel Sheet - Data Analysis Tool – Ms Excel Findings- - Most medicines were dispensed during the Evening shift (40%), followed by Morning (31%) and Afternoon (29%).
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	b) 64% of cases experienced a delay, while 36% had no delay. c) The Evening shift showed the highest delay count (72), compared to Afternoon (45) and Morning (44). d) Top reasons for delays are –rush and long queue (66 cases), less manpower (40 cases), long dispensing time (20 cases) and other reasons, including long picking Time, Confusion about medication, and Others. Suggestion- a) As delays peak in the evening, allocate more manpower during that time to reduce wait time. b) Implement a token or digital queue system to handle the high patient load efficiently, especially during rush hours. • Presentation and Documentation- I prepared a presentation based on my experiences and observations and reviewed it with the OPD pharmacy manager. The presentation was modified as per feedback, including more visuals and better structure. I continued daily documentation of tasks, data collection, stock activities, and GRN updates to maintain consistent records, which will support both learning and future audits.
Linking theory (Classroom learning) with practice at your organisation	• Medication Management and Storage Practices- During my internship, I closely observed and participated in the medication storage process within the hospital's central pharmacy. Medicines were organized according to essential parameters such as temperature sensitivity, exposure to light, and ventilation requirements. Refrigerators were used for cold-chain medicines, and proper humidity logs were maintained for temperature-sensitive drugs. This directly aligns with pharmacy classroom lessons on drug stability and storage conditions, emphasizing how poor storage can affect drug efficacy and patient safety. I also audited the OP Pharmacy Refrigerator Temperature and Humidity Monitoring Log, where I cross-verified actual records with standard values and corrected inconsistencies. This reinforced quality

	assurance protocols and the importance of environmental control in pharmaceutical storage. Financial and Inventory Management- I gained practical exposure to financial management by observing the purchase process of medicines, calculating costs, monitoring sale quantities, and tracking both current and closing stock. I used these figures to calculate Days of Inventory (DOI), which helped assess stock holding efficiency over a four-month period. This task helped me apply inventory analysis techniques like ABC (Always Better Control) and VED (Vital, Essential, Desirable) categorization to identify critical and high-cost medications. Additionally, I implemented FEFO (First Expiry First Out) policy by identifying and returning near-expiry drugs, linking theory to real-time stock movement and wastage minimization. Hospital Information Systems (ATHMA) - Hands-on use of ATHMA for inventory control and for billing allowed me to apply my theoretical knowledge of Hospital Information Systems (HIS). I tracked stock availability, identified shortages, flagged missing items, generated bills, and supported real-time decision-making using these platforms. Communication & Coordination - I observed clear communication between pharmacy staff and management, helping avoid stockouts and bounced prescriptions. This reflected classroom learning on organizational communication, showing how effective coordination supports service flow and reduces miscommunication. Organizational Behaviour & Leadership - I noticed how leadership plays a vital role in team coordination, especially in ensuring efficient task delegation, timely indent approval, and smooth operation during high-pressure situations. This connected to organizational behavior theories learned in class. Operational Planning & Stock Replenishment - Involvement in daily stock checking and indenting helped me apply inventory planning concepts like reorder levels and demand-based replenishment.
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	Maintaining a list of bounced and out-of-stock medicines supported prompt restocking and uninterrupted service. • Documentation & Quality Assurance - Maintaining the GRN register, tracking delays, and updating stock reports taught me the importance of accurate documentation in ensuring process transparency and supporting audits, tying into lessons on quality improvement in healthcare. • Safety in Pharmacy Practice - Handling High Alert and LASA (Look-Alike, Sound-Alike) medications was one of my critical responsibilities. These medicines were labeled using color-coded stickers to prevent mix-ups.
Gaps identified on the working area.	• Delay in Fulfilling Unit Requisitions - Hospital units often do not receive all requested medications due to unavailability. On average, there is a 3-day delay, depending on vendor supply and stock arrival. • Overstock of Low-Demand or High-Cost Medications- Certain medications remain in inventory for extended periods due to low prescription frequency, high pricing, or specific-use cases, resulting in decreased turnover and increased holding costs. • Delay in Stocking Newly Arrived Medicines- Newly received medicines are not immediately placed on racks. Many remain in curtain boxes, leading to confusion during medicine pick-up and missed dispatches to hospital units. • Improper Handling of Near-Expiry Medicines- In some cases, near-expiry medicines were sent to hospital units due to inadequate checking, violating FEFO (First Expiry First Out) principles and risking medication wastage. • Manual Medication Code Updating is Time-Consuming- The current system of copying and updating medication codes manually is inefficient and prone to human error, affecting the speed of pharmacy operations. • No Automated Alternative Suggestions in AATMA- AATMA does not provide automated suggestions for alternative drug strengths when exact items are

	unavailable, resulting in delays and dependency on manual decision-making. Limited Stock in Newly Opened Pharmacy- Due to limited inventory, many patients do not receive prescribed medicines directly. Long-duration prescriptions (2–3 months) further complicate dispensing, requiring staff to fetch items from the main pharmacy, increasing patient waiting time. Poor Maintenance of Temperature Monitoring Records- The temperature and humidity monitoring logs from 2023 and current year were inconsistently filled, with missing time entries and overwriting. There was no regular audit mechanism in place to check these logs. Billing Delays During Peak Hours- Single-person billing counters during rush hours lead to long queues. Bulk medicine billing for one patient often delays the next, causing dissatisfaction and operational lag. Patient-Induced Delays- Some patients frequently change the quantity of drugs they want to purchase, which increases picking time and contributes to delays in pharmacy flow. Restocking from Main to New Pharmacy Causes Shortages- After transferring medicines to the new pharmacy, certain drugs became out of stock in the main pharmacy. Staff are then required to go back to the new pharmacy to fetch them, delaying both current dispensing and other pending tasks. Long Waiting Time Before Prescription is Processed- Patients often face long queues even before submitting their prescription. The overall time from arrival to receiving medicine is significantly delayed, pushing some patients to opt for outside pharmacies. Delays in Manual Verification After Receiving Indent Medication - After receiving indent medications from vendors like Samayat Health, manual verification against GRN is required before they are entered into ATHMA. This step is often delayed, preventing patients from getting timely access to those medicines. Afternoon and Evening Delays Due to Rush & Staff Shortage-
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	Based on collected data, most delays occurred during afternoon and evening hours, primarily due to heavy patient load and limited manpower. • Coordination Gap Between Pharmacies- Lack of coordination between the main pharmacy and newly opened pharmacy often led to the exact quantity being issued as per indent without checking existing stock levels. This created stock shortages and impacted patient service.
Suggestions for improvement	• Stock Management & Forecasting- a) Analyse past consumption data to forecast demand accurately and avoid shortages. b) Maintain minimum and buffer stock for high-usage medications; avoid overstocking expensive, low-use drugs. c) Ensure timely replenishment through a regular monitoring and indenting system that prevents stockouts and reduces dependency on the main pharmacy. d) Maintain buffer stock even after restocking the new pharmacy to prevent shortages in the main unit. • Timely Stocking & Inventory Updates- a) Assign one staff members to stock newly arrived medicines within a fixed timeframe to ensure quick availability. b) Sync stock master data regularly with physical inventory to avoid system-physical mismatches and reduce prescription errors. c) Update system codes for every new strength or combination added to the inventory for smooth software operations. d) Assign dedicated time or staff for daily medication verification and AATMA entry to avoid delays in availability. • Temperature & Environmental Monitoring- a) Assign one staff member daily for recording temperature/humidity logs and conduct weekly audits by a supervisor. b) Train staff on documentation practices and shift to digital monitoring systems for temperature and

	humidity data to maintain cold chain and storage integrity. • Efficient Medicine Issuing Between Pharmacies- a) Cross-check stock quantities before issuing to the new pharmacy to avoid depleting the main pharmacy's inventory. b) Restore and reorder medicines immediately if low in one pharmacy and available in another to reduce prescription bounces. • Reducing Patient Waiting Time- a) Deploy an extra billing staff during rush hours to split tasks and reduce queues. b) Implement a token system for a fair and efficient first-come, first-serve basis, preventing crowding and confusion. c) Introduce a digital display or queue system for real-time updates to patients, increasing satisfaction and managing expectations. d) Increase manpower or reorganize duty hours during peak periods to maintain workflow without service compromise. • Patient Communication and Workflow Efficiency- a) Confirm patient's drug quantities upfront before billing to avoid last-minute changes and reduce medicine-picking delays. b) Use patient prescription data to adjust stock levels and assign priority to high-frequency chronic medications.
Key Learnings	• Practical Application of Inventory Management Concepts- a) Applied ABC/VED analysis, stock rotation (FEFO), and reorder level concepts while managing real-time pharmacy inventory. b) Understood how stock mismatches affect prescription fulfilment and how timely indenting supports continuous care. • Use of Hospital Information System - a) Gained hands-on experience in billing, stock entry, indent tracking, and GRN verification using ATHMA software.

	b) Learned how digital systems improve accuracy, prevent stock-outs, and support data-based decision-making in hospital operations. • Medication Safety & Quality Assurance- a) Handled and labelled LASA and high-alert drugs, understanding their risks and the importance of safe dispensing practices. b) Maintained and audited temperature/humidity logs, linking them to cold chain management and quality standards for sensitive medicines. • Workflow & Process Improvement Awareness- a) Identified delays in prescription processing and patient waiting times, linking them to operational inefficiencies and staffing gaps. b) Participated in real-time audits and suggested staff duty reallocation and buffer stocking to improve service delivery. • Communication & Coordination in Organizational Settings- a) Observed how communication between pharmacy, vendors, and hospital units plays a key role in smooth functioning. b) Witnessed real examples of miscommunication, delays, and conflict resolution—gaining a deeper understanding of effective coordination. • Problem Identification and Suggestion Development- a) Actively identified problems like stock delay, and improper documentation, and suggested practical, data-driven solutions. b) Developed a systematic approach to troubleshoot and recommend improvements for supply chain and inventory issues. • Leadership and Responsibility- a) Took initiative in managing critical tasks such as daily temperature audits, GRN checks, and billing support. b) Understood how leadership in pharmacy workflow—even at small levels—can reduce errors and ensure better service quality. • Exposure to Real-Time Challenges in Hospital Supply Chain- a) Understood the gaps between ideal system planning and real-world execution in a hospital setting.
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	b) Learned how to prioritize patient care needs while handling resource limitations and operational constraints. • Professional Growth and Confidence Building- a) Developed confidence in using software tools, communicating with stakeholders, and handling pharmacy responsibilities independently. b) Improved critical thinking, observation, and teamwork—essential skills for future roles in hospital or healthcare management.
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Signature of the Student:

Approved by the IIHMR University's Mentor: