SUMMER INTERNSHIP PROGRAM

AT

P.D HINDUJA NATIONAL HOSPITAL & MEDICAL RESEARCH CENTRE

From 1st May 2024 to 30th June 2024

A REPORT BY

Surveen Kaur Sodhi

Master of Business Administration

(Hospital and Healthcare Management)

2023-25

under the Mentorship of

Dr. Nutan Jain, Associate Professor

IIHMR UNIVERSITY

P. D. HINDUJA NATIONAL HOSPITAL
& MEDICAL RESEARCH CENTRE
(Established and managed by the National Health & Education Society)
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Date: **29/06/2024**

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Dr. Surveen Kaur Sodhi** did **her** Internship in our Hospital from **01-05-2024 to 30-06-2024** as an Administrative Intern.

During this period, **her** assignment was as follows:

1. Enhancing Scopy Department Performance: A Quality Assessment and Improvement Strategy

2. Verification and Validation of quality indicator: - Accident and Emergency department

I wish **her** all the success in future endeavours.

Joy Chakraborty
Chief Operating Officer

Dr. Preeti Goraksha
Assistant Director Quality &
Clinical Administration

IIHMR UNIVERSITY

IIHMR University Faculty Mentor Approval

This is to certify that **DR. SURVEEN KAUR SODHI** of academic year 2023-25 of **INSTITUTE OF HEALTH MANAGEMENT AND RESERACH** has prepared poster with respect to her summer internship held during May-June 2024.

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

Date- 19/07/2024

(Signature of Faculty Mentor)

Dr. Nutan Jain

Associate Professor
IIHMR University Jaipur

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P. D. HINDUJA HOSPITAL & MEDICAL RESEARCH CENTRE

PRESENTED BY: DR. SURVEEN KAUR SODHI, MBA HHM (1848)
ORGANISATION MENTOR : DR. PREETI GORAKSHA
UNIVERSITY MENTOR : DR. NUTAN JAIN

IIHMR UNIVERSITY

ENHANCING SCOPY DEPARTMENT PERFORMANCE: A QUALITY ASSESSMENT AND IMPROVEMENT STRATEGY

Objective: To improve the operational efficiency and patient satisfaction within the Scopy Department at P.D. Hinduja Hospital. Implementing these changes will foster a safer, more organized, and patient-friendly environment.

ABOUT HINDUJA HOSPITAL: The healthcare journey commenced in 1951 by the late Shri P. D. Hinduja, with a vision to provide quality healthcare for all. It is a 400 bedded hospital with 55 specialties. It is known for Its rich legacy and proven expertise and has been a pioneer in medical excellence.

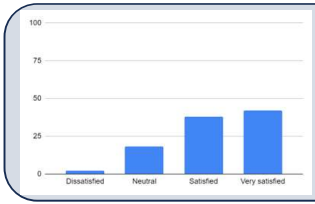
MISSION: "To create P. D. Hinduja Hospital & Medical Research Centre a world class medical institution by delivering quality medical care to all patients, as well as continuous medical education to all the doctors & training of nurses and by undertaking basic & clinical research with the focus on the needs of the country."

VISION: "To Provide Quality Healthcare For All i.e. healthcare that is
- Affordable
- Value based
- Ethical
- Transparent
- Outcome based
- Backed by Technology & Innovation"

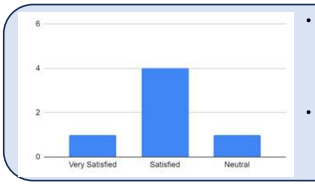
https://www.hindujahospital.com/about-our-guiding-principles

DATA COLLECTION::

1) Patient Satisfaction Forms: Sample size:-100
2) Staff Feedback Forms: Sample Size :- 6
3) Observation of operational efficiency, staff workflow, patient process and experience.
4) Review of Department Records.
5) Pre- deposit packages: Sample Size:-10 patients per procedure, for every grade.
6) Biomedical device checklist: Number of Devices in the Department:-10



- Patients Interaction with the doctor:- 70% were excellent, 15% were good and 12% were fair, 3% were poor.
- 19% Patients felt the waiting time was too long.



- 83% Staff felt the work culture and environment in the department is positive, others felt it as neutral..
- 20% Staff was motivated and engaged towards their work, whereas 80% were neutral about it.

ISSUES IDENTIFIED

1) Congested corridor
2) Lack of Waiting Area for Patients' Relatives
3) Lack of awareness of paid services.
4) Lack of guidelines for Biomedical devices maintenance.
5) Improper placement of Instruments and Medication.
6) Limited Recovery Room Capacity

IMPROVEMENT STRATIGIES

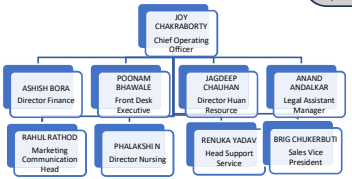
1) Pre-Deposit Packages
2) Checklist for Biomedical Devices Maintenance
3) Standardize Medication Placement
4) Designated Waiting Area

STRENGTH
Experienced and Highly skilled Staff.
Advance medical technology.
High Patient Turnover
History and Reputation of the hospital

WEAKNESS
Space constraints
Improper instruments and medication placement
Dependency on Handwritten records
Staff resistance to feedback

OPPORTUNITIES
Integration of Electronic medical records (EMR)
Training for Staff on new technologies and best practice for better efficiency.
Use of pre-deposit package for payment method can help solve the Payment problems

THREATS
Availability of services at a reduced cost in other healthcare organizations.
Constantly upgrading healthcare standards in vicinity.
High Competition by other healthcare facilities nearby



LEARNING AND VALUE ADDITIONS DONE DURING INTERNSHIP

- Developed skills in accurate data entry and efficient data management.
- Enhanced skills in designing surveys, conducting interviews, and analyzing feedback to drive quality improvements.
- Improved communication and change management strategies to effectively engage stakeholders and overcome barriers.

DIFFERENCE IN PRACTICAL EXPOSURE AND THEORETICAL WORK:

- Challenges in maintaining handwritten to records and experienced frequent document discard policies which were different.
- Despite being taught the importance of inclusive feedback and seamless communication, practical experience revealed hierarchical barriers and difficulties in collecting comprehensive staff feedback.

CHALLENGES FACED DURING INTERNSHIP

- Resistance to Feedback collection from Nursing Staff.
- Managing Team Collaboration for Timely Task Completion

USEFULNESS OF INTERNSHIP

- Exposure to the working environment.
- Getting to learn the challenges faced while implementing rules and to overcome them, for delivering the optimum level of service.

Reporting Format (Weekly)

Name of the Organisation: PD HINDUJA HOPITAL AND MEDICAL RESEARCH CENTER

Area/ Department/ Project of Summer Internship Program: Not Assigned Yet

Name of the Student: Surveen Kaur Sodhi

Roll no: 1848 **Stream:** MBA-HM (Batch-28)

Week no: 1 **From:** 02/05/2024 to 04/05/2024

Activity Done	1. Introductory Briefing with Assistant Director, Quality and Clinical Administration regarding the hospital and the roles and expectations. 2. Orientation with different departments of the hospital such as, A&E Department, Dialysis Unit, Day Care Unit, Intensive Care Unit, HDU/EICU, Pharmacy, Engineering Department, Laundry Department, Cath Lab and Oncology Department.
Linking theory (Classroom learning) with practice at your organization	Analyzed quality indicators related to the patient care and operational efficiency. Studied basic functioning of different departments in delivering healthcare services. Observed the workflow of each department.
Gaps identified on the working area.	
Suggestions for improvement	ICU: Optimize adjacent room usage; improve patient transportation. Cath Lab: Investigate post-COVID procedure reduction. A&E Department: Reorganize chaotic nurse station; improve patient transport. Pharmacy and Medical Store: Optimize newly shifted space and resolve logistics issues.
Plan for the next week	Exposure to different departments

Signature of the Student

Approved by the IIHMR University's Mentor

Reporting Format (Weekly)

Name of the Organisation: PD HINDUJA HOPITAL AND MEDICAL RESEARCH CENTER

Area/ Department/ Project of Summer Internship Program: Not Assigned Yet

Name of the Student: Surveen Kaur Sodhi

Roll no: 1848 **Stream:** MBA-HM (Batch 28)

Week no: 2 **From:** 06/05/2024 to 11/05/2024

Activity Done	1) Orientation to various departments including Admissions and Billing, Short Stay Services, Operation Theatre, Housekeeping, Food Service Department, Imaging Department, Medical Records Department, Lab Medicine, OPD, Marketing, Nursing, Security, Customer Service, and Business Excellence. 2) Allotment of the project titled "Optimizing Financial Accessibility: Crafting a Comprehensive Pre-Payment Deposit Package for Endoscopy and Bronchoscopy Procedures through Patient and Financial Analysis." 3) Data collection of patients undergoing treatment in the Scopy Department (OPD and IPD patients).
Linking theory (Classroom learning) with practice at your organization	
Gaps identified on the working area.	ADMISSION AND BILLING: Department space is insufficient for the workload. Expanding the space would enhance functionality. OPERATION THEATRE: Post-Covid procedure rates have decreased. Strategies to increase them should be assessed. FOOD SERVICE DEPARTMENT: Currently under construction; interim measures to improve hygiene and comfort are needed. MEDICAL RECORDS DEPARTMENT: The department is too small and located far from other departments, impacting efficiency. LAB MEDICINE: Logistics issues due to its separate building location from the IPD.
Suggestions for improvement	None
Plan for the next week	Starting with data collection, Financial Data collection and its analysis

Signature of the Student

Approved by the IIHMR University's Mentor

Reporting Format (Weekly)

Name of the Organisation: PD HINDUJA HOPITAL AND MEDICAL RESEARCH CENTER

Area/ Department/ Project of Summer Internship Program: Quality and Operations

Name of the Student: Surveen Kaur Sodhi

Roll no: 1848 **Stream:** MBA-HM (Batch 28)

Week no: 3 **From:** 13/05/2024 to 18/05/2024

Activity Done	Specific Department (Projects) and Mentors were allotted. My mentor is Assistant Director, Quality and Clinical Administration, Quality Department. Working on a project tentatively titled "Optimizing Financial Accessibility: Crafting a Comprehensive Pre-Payment Deposit Package for Endoscopy and Bronchoscopy Procedures through Patient and Financial Analysis." Data collection of patients in each procedure according to their grades of disease allotted by the doctors, age, date, HH number, admission number, and voucher numbers were done (approximately 500 patients) for all procedures in the Scopy department. Data collection from chargesheets, which are handwritten procedure lists signed by the referring doctors. Analyzed and segregated approximately 1500 chargesheets (including OPD and IPD patients) based on the criteria required for data collection. Data collection for Endoscopy, Bronchoscopy, and Urodynamics was done for 10 patients in each procedure based on the grade of the diseases.
Linking theory (Classroom learning) with practice at your organization	Data registration by each department was shown to us as a register or file containing all patient data, useful for further studies. Here, we understood how data registration is actually done and how well it can be systemized and converted. Discarding handwritten documents is done every 6 months, compared to the annual discarding taught in the module.
Gaps identified on the working area.	The chargesheets used in the department are very confusing, not updated properly, and contain many irrelevant markings. These chargesheets are not major documents saved by the department and are kept haphazardly in cupboards. Nurses maintain a register for the same documentation, but it does not contain all the patient information precisely, including the procedure grade and type. Without assessing the 1000 chargesheets, the register cannot provide accurate information on the actual number of procedures done in the department.
Suggestions for improvement	Use chargesheets in a better and more consistent manner by making sure the procedures marked in the chargesheet are clear and consistent with the bills and is maintained properly from day to day, and document patient information, their numbers, and procedures in the register in a more systemized way.
Plan for the next week	Understand the operations of the Scopy department, the patient relations in the department, and suggest changes required for better functioning, which will be done in the coming week. After data collection under the project, the excel sheet was given to the financial department of Hinduja for bill collection of all patients in the data. This bill collection will take around 2-3 weeks, after which the financial analysis of the data will be done to determine the approximate pre-package deposit for the patient. Hence, this project is on hold for the next 2-3 weeks.

Signature of the Student **Approved by the IIHMR University's Mentor**

Reporting Format (Weekly)

Name of the Organisation: PD HINDUJA HOPITAL AND MEDICAL RESEARCH CENTER

Area/ Department/ Project of Summer Internship Program: Quality Department

Name of the Student: Surveen Kaur Sodhi

Roll no: 1848 **Stream:** MBA-HM (Batch 28)

Week no: 4 **From:** 20/05/2024 to 25/05/2024

Activity Done	Thoroughly understood the departmental processes, from patient entry via outpatient (OPD) or inpatient (IPD) services to their discharge post-recovery to produce comprehensive quality improvement report,. Spent three full days immersed in the department's operations, observing the registration process, patient consent, pre-procedure instructions, tests, the procedure itself, and post-procedure recovery room examination. Reviewed the Standard Operating Procedures (SOPs) of the Scopy department and aligned them with observed practices. Insights from this study were used to draft suggestions for improving the workflow, including the use of Excel to track processes and documentation. Exposed to the equipment, including three scope machines (two Olympus, one Pentax), 17 scopes (15 Olympus, 2 Pentax), Urodynamics machine (Santron Meditronic Urodynamics System), and an Endoscope Washer.
Linking theory (Classroom learning) with practice at your organization	Classroom teaching emphasizes patient-centered care, efficient use of space, organized storage systems, and accurate medical record-keeping. Practical application revealed gaps, such as the absence of a designated waiting area for patient relatives, leading to congestion, overcrowded corridors, inconsistent availability of medicines and instruments, and inadequate medical record-keeping for urodynamics procedures. Improvements in these areas align practical operation with best practices taught in the classroom, enhancing patient care and operational efficiency.
Gaps identified on the working area.	• Lack of Waiting Area for Patient Relatives: No designated waiting area for patient relatives, leading to congestion due to extra machines and IPD patients on trolleys occupying the corridor. • Corridor Congestion in the Scopy Department: Overcrowded corridor hindering movement and operational efficiency due to small working and moving areas. • Disorganized Storage of Medicines and Instruments: Medicines and instruments are not consistently available in each examination hall, causing procedural delays as nurses retrieve items from other halls.
Suggestions for improvement	• Provide a designated Waiting Area for Family Members of Patients: Create a lounge with comfortable chairs and necessities to ease congestion and maintain traffic flow in hallways and workspaces. • Maximize the Scopy Department's Corridor Space: Declutter and reorganize the hallway by moving underutilized equipment to a specified storage space and directing traffic with legible signage. • Simplify Medicine and Instrument Storage and Accessibility:Standardize storage systems, ensuring all examination rooms are adequately supplied and setting up identical kits or stations regularly checked and restocked. Implement a centralized inventory management system.
Plan for the next week	Complete the final patient and staff feedback forms and start data collection. Form a biomedical devices checklist by reading manuals and consulting the biomedical engineer. Prepare and present the quality report.

Signature of the Student **Approved by the IIHMR University's Mentor**

Reporting Format (Weekly)

Name of the Organisation: PD HINDUJA HOPITAL AND MEDICAL RESEARCH CENTER

Area/ Department/ Project of Summer Internship Program: Quality Department

Name of the Student: Surveen Kaur Sodhi

Roll no: 1848 **Stream:** MBA-HM (Batch 28)

Week no: 5 **From:** 27/05/2024 to 01/06/2024

Activity Done	Finalized and approved patient and staff feedback forms, and data collection has commenced with a target of 100 patient and 10 staff responses over two weeks. Developed a checklist for maintaining biomedical devices, collaborating with our Biomedical Engineer, Mr. Bharat. The analysis for the Quality Improvement Report in the scopy department identified key issues such as a congested corridor, lack of waiting areas for relatives, limited recovery room capacity, inadequate instrument placement, poor urodynamics record-keeping, and cumbersome chargesheet processes. These findings highlight our commitment to improving care quality and patient experience as we address these challenges.
Linking theory (Classroom learning) with practice at your organization	Classroom learning emphasizes patient- centred care, space efficiency, and precise record-keeping, but practical implementation reveals several limitations. There is no designated waiting room for family members, leading to corridor congestion. Inadequate availability of medications and equipment in examination rooms causes delays, and urodynamics records are incomplete. Recommendations include creating a waiting area for family members, optimizing hallway space, standardizing storage solutions, and using electronic medical records (EMR) with staff training to enhance record accuracy.
Gaps identified on the working area.	The scopy department faces several issues: the corridor is congested with trolleys and machines, making movement difficult and patient transfers risky; there is no waiting area for patient relatives, causing additional congestion; the recovery room has limited capacity, leading to patients waiting in the lobby; instruments and medications are not readily available in examination rooms, causing delays; urodynamics records are incomplete; and the chargesheet process for endoscopy and bronchoscopy is cumbersome.
Suggestions for improvement	To address these issues, we suggest clearing the corridor of unnecessary equipment, expanding the recovery room to accommodate more beds and a waiting area for relatives, increasing bed capacity, standardizing instrument placement in examination rooms, developing a standardized format for urodynamics records, and simplifying the chargesheet process with a clear template and central register.
Plan for the next week	Collecting feedback from patients and staff, finalize the biomedical machines checklist, and develop an implementation strategy and action plan for the identified gaps in the department.

Signature of the Student **Approved by the IIHMR University's Mentor**

Reporting Format (Weekly)

Name of the Organisation: PD HINDUJA HOPITAL AND MEDICAL RESEARCH CENTER

Area/ Department/ Project of Summer Internship Program: Quality Department

Name of the Student: Surveen Kaur Sodhi

Roll no: 1848 **Stream:** MBA-HM (Batch 28)

Week no: 6 **From:** 03/06/2024 to 08/06/2024

Activity Done	• Quality Improvement Report: The initiative to collect patient feedback forms has yielded 45 forms so far, with efforts ongoing to gather the remaining data by next week. The collection of staff feedback forms is delayed due to pending approval from higher authorities. The quality improvement report has been reviewed and approved by my mentor, but the formulation of implementation strategies and an action plan is still pending. • Checklist for Biomedical Devices: The checklist for biomedical devices has been approved, with additional recommendations from my mentor currently under consideration and implementation. • Pre-Deposit Package for Scopy Department: Challenges in financial data collection for the pre-deposit package in the Scopy Department have led to discussions with mentors to explore alternative approaches, including data collection from the cash counter outside the department. Despite these challenges, approximately 100 patient data points have been successfully collected. • New Project Update: Plans are underway to assign a new short-term project in the coming week, pending availability.
Linking theory (Classroom learning) with practice at your organization	The department's continuous quality improvement programs provide practical knowledge closely aligned with classroom topics, particularly in data collection and analysis for quality improvement. Gathering patient feedback forms demonstrates the application of quality improvement concepts taught in courses, emphasizing stakeholder input in decision-making. The difficulties in collecting employee feedback highlight the practical challenges of implementing quality initiatives, such as navigating organizational hierarchies and securing approvals.Efforts to address discrepancies in financial data collection for the Scopy Department underscore the importance of data integrity and reliability, reinforcing the significance of robust data collection methods emphasized in classroom learning.
Gaps identified on the working area.	Significant gaps have been identified in the data collection process, particularly concerning pricing details from departments such as Pharmacy, Lab Medicine, Anesthesiology, and Material Management. These discrepancies vary significantly for each patient, complicating the formation of accurate averages for data analysis. The diverse nature of patient treatments further complicates this issue, as data from In-Patient Department (IPD) patients often includes expenses related to multiple treatments beyond the Scopy Department's scope. Addressing these discrepancies will require refining data collection methods and establishing clear protocols for capturing relevant pricing details in a standardized manner, ensuring the integrity and reliability of future analyses and quality improvement initiatives.
Suggestions for improvement	Implement better record-keeping, especially electronic record-keeping, in the department.
Plan for the next week	A new small project will be allotted. Patient feedback form data collection should be completed, and staff feedback form data collection should begin. The pre-deposit package data collection is paused, but solutions to this problem will be explored.

Signature of the Student **Approved by the IIHMR University's Mentor**

Reporting Format (Weekly)

Name of the Organisation: PD HINDUJA HOPITAL AND MEDICAL RESEARCH CENTER

Area/ Department/ Project of Summer Internship Program: Quality Department

Name of the Student: Surveen Kaur Sodhi

Roll no: 1848 **Stream:** MBA-HM (Batch 28)

Week no: 7 **From:** 10/06/2024 to 15/06/2024

Activity Done	Collected comprehensive data from the cash counter pertaining solely to the Scopy department, covering all procedures performed over the past 30 days. This extensive data collection would facilitate the formation of detailed procedural packages. Worked on the Quality Improvement project by nearing the completion of our patient feedback form collection, having achieved a sample size of 70 out of the targeted 100 responses. A new study on Quality Validation project within the Accident and Emergency department was assigned. This project entails validating the triage times for patients presenting to casualty, encompassing three key areas: examining the methodology, benchmarking, and assessing discrepancies between documented and actual times.
Linking theory (Classroom learning) with practice at your organization	In the classroom, we studied various data collection techniques and the importance of having sufficient sample sizes to ensure statistical validity in Research methods module. This knowledge was directly applicable when I collected data from the cash counter for the Scopy department. I realized that the 30-day data was insufficient due to the infrequency of higher-grade surgeries, underscoring the importance of understanding sample size and data variability, as emphasized in our coursework. The necessity to consult with department-specific consultants to address gaps in the Scopy department's data aligns with the teamwork and communication skills emphasized during our studies.
Gaps identified on the working area.	The infrequency of higher-grade surgeries presents a significant limitation, rendering the 30-day data set insufficient for comprehensive analysis. This limited timeframe does not adequately capture the variability and nuances of these complex procedures. Additionally, I observed that certain procedures necessitate a range of different tests. However, due to the variability and specificity of these requirements, I have been unable to pinpoint the exact tests independently.
Suggestions for improvement	**Extended Data Collection Periods:** To address the limitation of having insufficient data due to the infrequency of higher-grade surgeries, it is recommended to extend the data collection period beyond 30 days.
Plan for the next week	Will be starting with my new project and continue with data collection for my Project on Scopy department.

Signature of the Student **Approved by the IIHMR University's Mentor**

Reporting Format (Weekly)

Name of the Organisation: PD HINDUJA HOPITAL AND MEDICAL RESEARCH CENTER

Area/ Department/ Project of Summer Internship Program: Quality Department

Name of the Student: Surveen Kaur Sodhi

Roll no: 1848 **Stream:** MBA-HM (Batch 28)

Week no: 8 **From:** 17/06/2024 to 22/06/2024

Activity Done	Focused on a new project concerning the verification and validation of quality indicators in the Accident and Emergency Department. the tasks included documenting the methodology for recording initial assessment times, evaluating compliance with benchmarks, and verifying the accuracy of recorded patient arrival and assessment times. Spent full days in the Emergency Department, observing and recording data from approximately 15 to 16 patients daily, cross-referencing these with the Emergency Chargesheet. Concurrently, I progressed with the Quality Assessment project in the Scopy Department, finalizing sample sizes for patient and staff feedback forms and initiating data analysis for procedures involving pre-package deposits.
Linking theory (Classroom learning) with practice at your organization	The project revealed discrepancies in documented versus observed times in the Accident and Emergency Department, highlighting practical applications of classroom concepts in Data accuracy and transparency. These findings underscore the real-world challenges necessitating methodologies for enhanced efficiency. Resistance from nursing staff in providing feedback also emphasized the gap between theoretical emphasis on inclusive feedback and practical barriers, necessitating effective communication and change management strategies.
Gaps identified on the working area.	**In the Accident and Emergency Department:** Discrepancies in Documented and Observed Times: Variance between documented and observed patient arrival and assessment times were noted, attributed to registration delays and procedural inefficiencies. **Challenges with Staff Feedback Collection:** Resistance from nursing staff to provide feedback without higher authority approval hindered comprehensive data collection, highlighting a need for improved stakeholder engagement strategies.
Suggestions for improvement	Address current discrepancies by documenting patient arrival times immediately upon entry to the Emergency Department, rather than after registration, to enhance data accuracy. Establish clearer protocols for obtaining staff feedback to ensure comprehensive assessment of departmental performance.
Plan for the next week	The final presentation of the major project will be taking place in the next week. This presentation will be in front of the COO, Mr. Joy Chakraborty.

Signature of the Student **Approved by the IIHMR University's Mentor**

Reporting Format (Weekly)

Name of the Organisation: PD HINDUJA HOPITAL AND MEDICAL RESEARCH CENTER

Area/ Department/ Project of Summer Internship Program: Quality Department

Name of the Student: Surveen Kaur Sodhi

Roll no: 1848 **Stream:** MBA-HM (Batch 28)

Week no: 9 **From:** 24/06/2024 to 29/06/2024

Activity Done	• During the last week all the final changes and corrections in the project were done and the final presentation was prepared. • A formal presentation was conducted with the COO of the organization Mr. Joy and Preeti Ma'am alongwith all the other mentors including Mr. Vaibhav Patil. • Both the pre-deposit packages and the checklist for Biomedical devices were presented, with the data collection sheets and suggestions for improvement of the Scopy Department were given. • Further, as suggested by Mr. Joy, the checklist will be implemented by next week, before the new scopy department opens and for the predeposit packages it is already been given to the Finance department and the suggestions are awaited. • Analysis of the data collected for the Observed in time and Documented in time in the Accident and emergency department was done and presented to Dr. Preeti Goraksha and got approved.
Linking theory (Classroom learning) with practice at your organization	The project revealed discrepancies in documented versus observed times in the Accident and Emergency Department, highlighting practical applications of classroom concepts in Data accuracy and transparency. These findings underscore the real-world challenges necessitating methodologies for enhanced efficiency.
Gaps identified on the working area.	Discrepancy in Observed and Documented in time and Assessment time in the emergency department. Mainly observed in Green Triage patients
Suggestions for improvement	1**) Immediate Allotment of ER Chargesheet:** Allot the ER chargesheets to patients as soon as they enter the Emergency Department and document the arrival time immediately. Then, send the patient for registration to obtain the HH No, which can be added to the chargesheet later. This will reduce the variance in documentation caused by waiting for the registered ER chargesheet. **2) Introduction of Triage Time Placards:** Introduce small placards for triage time documentation upon patient arrival. The placard should include details such as patient in-time, assessment time, triage code, and vitals. This placard remains with the patient until registration and Chargesheet issuance, providing a reliable record of assessment times regardless of bed availability delays.
Plan for the next week	None.

Signature of the Student **Approved by the IIHMR University's Mentor**

Compiled Reporting Format

Name of the Organisation: PD HINDUJA HOPITAL AND MEDICAL RESEARCH CENTER

Area/ Department/ Project of Summer Internship Program: Quality Department

Name of the Student: Surveen Kaur Sodhi

Roll no: 1848 **Stream:** MBA-HM (Batch 28)

Activity Done	• During the eight-week summer internship at P.D. Hinduja Hospital and Medical Research Centre, engaged in a comprehensive range of activities within the Quality department, focusing on improving operational efficiency and patient care quality. INTRODUCTION AND INDUCTION PERIOD: - ❖ In the beginning, a thorough briefing session with Assistant Director, Quality and Clinical Administration was conducted where an introduction to the organization and discussion regarding roles and expectations was conducted. We were informed that we will be given 2 projects (One long project and one short project) ❖ Induction to the several departments of the organization was done briefly to understand their part in the functioning of the organization familiarising with the hospital's organizational structure, the roles of various departments, and the specific objectives of the Quality department. ❖ After the induction, we were assigned to our mentors under whom the project work was done. I was assigned under Assistant Director, Quality and Clinical Administration , Quality Department. Everyday activities were under Assistant Director, Quality and Clinical Administration who is the head of the Quality department of Scopy department. PROJECT 1: ENHANCING SCOPY DEPARTMENT PERFORMANCE: A QUALITY ASSESSMENT AND IMPROVEMENT STRATEGY This project involved conducting a comprehensive quality assessment of the Scopy department, focusing on processes, inventory, patient flow, patient satisfaction, staff satisfaction, and other relevant issues. The objective was to identify areas for improvement and propose effective strategies to enhance overall departmental performance. QUALITY IMPROVEMENT REPORT Understanding Departmental Processes A thorough understanding of the departmental processes was essential, starting with the patient's entry through outpatient (OPD) or inpatient (IPD) services and continuing through to their discharge post-recovery. This included observing the registration process, obtaining patient consent, administering pre-procedure instructions and tests, executing the procedure itself, and the subsequent post-procedure recovery room examination. The Standard Operating Procedures (SOPs) of the Scopy department were meticulously reviewed to ensure alignment with the actual practices observed on the ground. Insights and suggestions for improving the current workflow system were drafted based on this study. Feedback Collection

To understand patient and staff experiences, detailed feedback forms were developed for both patients and staff within the Scopy department. These forms aimed to capture comprehensive feedback to identify areas for further enhancement and ensure continuous improvement in service quality and patient care. The sample size for the patient satisfaction form was 100, and for the staff feedback form, it was initially set at 10. However, due to obstacles such as the nursing department's requirement for higher authority approval, the staff feedback sample size was reduced to 6.

Data Analysis

Once data collection was completed, the information was transferred to an Excel sheet for analysis. The analysis provided insights into patient and staff experiences within the department. Several critical process gaps were identified across various stages, including registration, pre-procedure, procedure, post-procedure recovery, and patient departure. These gaps included issues such as a congested corridor, lack of waiting areas for patient relatives, limited recovery room capacity, inadequate instrument placement, poor urodynamics record-keeping, and cumbersome chargesheet records for endoscopy and bronchoscopy procedures. Addressing these challenges is crucial for enhancing the quality of care and overall patient experience within the department.

Immediate Actionable Gaps

1.Payment Communication Issue:

- Problem: The department's policy of payment after treatment can lead to instances where payment is not properly communicated or understood by the patient before treatment.
- Risks:
  - Revenue Leakage: Potential revenue losses due to unpaid procedures.
  - Patient Experience: Unexpected bills post-treatment can negatively affect the patient experience.
- Action Plan: Implement a Pre-Deposit package to address payment issues in the department.

2. Biomedical Device Maintenance Issue:

- Problem: Complaints about biomedical devices often arise due to issues that could be managed with consistent maintenance. Regular weekly checks and disinfection before each procedure are necessary to prevent these complaints.
- Risks:
  - Device Malfunction: Unchecked devices may malfunction during procedures, leading to disruptions.
- Delays: Potential delays in procedures while changing to spare instruments, etc.
- Action Plan: Develop and enforce a checklist for biomedical devices to be completed pre- and post-procedure.

PRE-DEPOSIT PACKAGE:

A pre-deposit package is a predefined financial arrangement that requires patients to make an advance payment or deposit before receiving certain medical treatments or procedures. This package is designed to streamline payment processes, reduce the risk of revenue leakage, and enhance patient satisfaction by providing clear communication about costs upfront.

For the Pre-Deposit package, data collection from chargesheets present in the department

	was initiated, covering the last 6 months and categorizing them into OPD and IPD patients. Data collection involved patients in each procedure according to their grades of disease allotted by the doctors, age, date, HH number, admission number, and voucher numbers (approximately 500 patients) for all procedures in the Scopy department. This data was collected from chargesheets, which are handwritten procedure lists signed by the referring doctors. Approximately 1500 chargesheets (including OPD and IPD patients) were analyzed and segregated based on the criteria required for data collection. Data collection for Endoscopy, Bronchoscopy, and Urodynamics was done for 10 patients in each procedure based on the grade of the diseases. After data collection, the excel sheet was given to the financial department of Hinduja for bill collection of all patients in the data. This bill collection is expected to take around 2-3 weeks, after which the financial analysis of the data will determine the approximate pre-package deposit for the patient. After 2 weeks, it was communicated that the financial collection of the patients needed to be done by the team, so from the billings department, bill data of the patients was collected, dividing it into 4 parts: material management, pharmacy charges, surgery charges, and OT charges. There were obstacles encountered when the data, which was mainly available for IPD patients, were not pure Scopy cases and hence led to improper data collection. To overcome this obstacle, bills were taken from the cash counter on the 2nd and 3rd floors, which were precisely for the Scopy department, wherein chargesheets and bills of patients from the last 30 days were kept. Data was collected for all the patients for any procedure, and a data sheet was made, forming pre-deposit packages for almost all the procedures, excluding some procedures with higher grades due to insufficient data for approximation to form the package. The data was divided into: - Fixed cost: Surgery charges (Doctor charges + Assistant charges) + Operation theatre charges - Variable cost: Pharmacy charges + Material Management charges (Consumables) After data collection, a meeting with the Finance department was conducted to discuss the data collected for various procedures, which will help in formulating the Pre-deposit packages. CHECKLIST FOR BIOMEDICAL DEVICES MAINTENANCE: To maintain biomedical devices effectively and minimize inefficiencies and delays due to technical errors, a comprehensive checklist was made for utilization by technicians or responsible nurses. This checklist includes routine checks for sterilization, physical damages, kinks, and proper visualization. Regular inspections will ensure that the devices remain in optimal condition, reducing the need for frequent maintenance and enhancing overall operational efficiency within the department. The various equipment utilized within the department includes three scope machines (two Olympus and one Pentax), a total of 17 scopes (comprising 15 Olympus and 2 Pentax), a Urodynamics machine (Santron Meditronic Urodynamics System), and an Endoscope Washer. The total number of devices in the department is 10. Data collection was done using: - User Manuals: Reviewed device manuals to gather data on pre- and post-procedure

maintenance steps required for each device.
- Technician Consultation: Conducted discussions with the technician to understand the current maintenance steps performed before and after each procedure for each device.

After discussions with Mr. Bharat, Biomedical Engineer, a checklist was formed to be followed by the responsible person (technician or the nurse) pre and post-procedure, in order to maintain the biomedical devices. This checklist was approved and implemented in the department from that current week.

The report for this project was made and presented to the COO of the Hospital, Mr. Joy Chakraborty, and after his suggestions, an action plan was made to implement it in the next 2 weeks.

PROJECT 2: VERIFICATION AND VALIDATION OF QUALITY INDICATOR IN THE ACCIDENT AND EMERGENCY DEPARTMENT

Objective:
This project aimed to verify and validate the Initial Assessment time in the Accident and Emergency Department. The primary objectives were to evaluate the methodology employed after patients' arrival in the ER, assess if the triage times meet established benchmarks, and verify the accuracy of recorded in-time and assessment time for patients during their ER visit.

Quality Indicator:
The Quality Indicator assessed was Initial Assessment time. In an Emergency Room (ER), the initial assessment time is the duration between a patient's arrival and their first examination by a medical professional. The process begins with triage, where the urgency of the patient's condition is promptly assessed, followed by registration, a quick intake of medical information, measurement of vital signs, and a comprehensive medical evaluation by a physician or nurse practitioner. Effective initial assessments are crucial in the emergency room as they significantly influence patient outcomes.

Methodology:
The project involved documenting the methodology for recording the initial assessment time by medical professionals, evaluating whether it met the benchmark, and verifying the accuracy of the documented patient arrival time and initial assessment time. Data collection was conducted over seven days, from morning until evening, with approximately 15 to 16 patients recorded daily, resulting in a sample size of 106 patients. Patient arrival times and initial assessment times were observed and recorded, and these times were then cross-referenced with the times documented on the Emergency Chargesheet. The collected data was transferred to an Excel sheet for analysis.

Findings:
- The analysis revealed that all triage color codes met the benchmark, indicating consistent and compliant triage times in the emergency department.
- However, discrepancies were noted between the observed and documented in-time and assessment times in the emergency department chargesheets.
- Specifically, there were 4 patients who had accurately documented in-times (2 Red, 1 Yellow, and 1 Green).
- Additionally, there were 11 patients who had accurately documented assessment times (4 Red, 3 Yellow, and 4 Green).

	Recommendations: - To address the discrepancies, it is recommended to immediately allocate ER chargesheets upon patient arrival and document the arrival time before proceeding with registration. - Assessment times should be documented immediately after the evaluation, regardless of bed availability. - These recommendations aim to enhance the accuracy of documentation and improve the efficiency of the Emergency Department. The report of the analysis was presented to the mentors and received approval. The findings highlight the importance of accurate documentation in ensuring efficient and effective emergency department operations.
Linking theory (Classroom learning) with practice at your organization	• Data Registration and Systemization: In the classroom, we learned about the importance of meticulous data registration in each department, typically maintained in registers or files for future studies. During my internship, I observed the practical challenges and complexities of data registration in a real-world hospital setting. The process of converting handwritten records into a systemized digital format was highlighted, and how important it is for digitalized records to be present in the department as it underscores the importance of accurate data entry emphasizing the necessity for streamlined and reliable data registration methods, which are crucial for quality assurance and future research. • Data Collection Techniques and Sample Size: We studied various data collection techniques and the importance of sufficient sample sizes for statistical validity. This knowledge was directly applicable when collecting data from the Scopy Department's cash counter. The realization that a 30-day data collection period was insufficient for higher-grade surgeries highlighted the importance of understanding sample size and data variability. Collaborating with department-specific consultants to address data gaps reinforced the teamwork and communication skills emphasized during our studies, ensuring a comprehensive approach to problem-solving. This practical application underscored the critical role of adequate sample sizes and robust data collection methods in achieving accurate and reliable outcomes. • Patient-Centered Care: We were thought about patient-centered care, efficient use of space, and organized storage systems. But in the hospital during the Quality assessment of the scopy department, I observed significant gaps in these areas. The absence of a designated waiting area for patient relatives led to congestion, and overcrowding in the Scopy Department corridor hindered operational efficiency. Additionally, inconsistent availability of medicines and instruments in examination halls caused procedural delays. These observations underscored the importance of implementing practical solutions such as creating a dedicated waiting lounge, optimizing corridor space, and ensuring standardized storage solutions in examination halls. • Stakeholder Engagement and Inter-Departmental Communication: The department's continuous quality assessment provided practical insights that closely aligned with classroom teachings on maximize usage of the given circumstances .Collecting patient feedback forms illustrated the application of theoretical concepts on the importance of stakeholder input in decision-making. However, challenges in obtaining staff feedback due to hierarchical barriers highlighted real-world difficulties in implementing quality improvement initiatives. These experiences emphasized the need for effective

	communication and change management strategies to enhance process accuracy and efficiency. • Transparencies in data: Discrepancies in documented versus actual patient times in the Accident and Emergency Department highlighted practical applications of classroom concepts in transparency and consistency. These discrepancies underscored the importance of accurate data collection and transparency in the actual happenings at the department. • MS Excel tools and functions: The process of Data collection and Analysis using Microsoft Excel requires utilizing its extensive features for efficient data visualization and analysis. Charts and graphs for the visual depiction of trends and patterns, as well as pivot tables for the massive data sets summarization and dynamic data exploration, are important features. Slicers and timelines are used to provide interactive filtering and data segmentation. The data integrity and correctness is further guaranteed by Excel's data validation and protection capabilities. • Overall, my internship experience at P.D. Hinduja Hospital and Medical Research Centre provided a comprehensive understanding of the practical applications of classroom theories. The hands-on projects and collaborative efforts emphasized the complexities and rewards of working towards continuous improvement in healthcare quality, enhancing my analytical and problem-solving skills while aligning practical operations with best practices learned in the classroom.
Gaps identified on the working area.	**IN SCOPY DEPARTMENT: -** 1. Congested Corridor **Issue**: The department corridor, already narrow, is further crowded with trolleys, machines, and oxygen tanks. This congestion poses significant challenges: • **Movement Difficulties**: Both staff and patients face difficulty moving through the corridor, leading to delays • **Patient Transfer**: Transferring patients, especially those on stretchers or wheelchairs, becomes cumbersome, increasing the risk of accidents and discomfort. 2. Lack of Waiting Area for Patient Relatives **Issue**: The recovery room is small, and there is no designated waiting area for the relatives of patients undergoing procedures. This situation results in: • **Relatives Waiting in the Corridor**: Relatives often wait in the corridor due to the lack of space, contributing to the existing congestion and creating a chaotic environment. • **Inconvenience and Stress**: The lack of a comfortable waiting area adds to the stress of the patient's relatives, impacting their overall experience negatively. 3. Payment Management **Issue:** The department has a policy of payment after the treatment, there can be instances in which the payment is not properly communicated or understood by the patient before treatment. This situation can have a possible risk of: • **Revenue Leakage:** The department can face revenue losses due to unpaid procedures. • **Patient Experience:** Patient could be discontent when presented with unexpected bills post-treatment which can affect the experience negatively.

	4. Biomedical Device Maintenance **Issue:** Complaints about biomedical devices often arise due to issues that could be managed with consistent maintenance. Regular weekly checks and disinfection before each procedure are necessary to prevent these complaints. This situation can result in: • **Device Malfunction:** Unchecked devices may malfunction during procedures, leading to disruptions. • **Delays**:- Can lead to delay in the procedure, while changing to the spare instrument, etc 5. Instrument and Medication Placement **Issue:** Instruments and emergent medications, as well as procedural medications, are not consistently available in each of the three designated examination halls. This situation results in: • **Delays:** The unavailability of necessary instruments and medications at the designated place causes delays during procedures and added work for the nurses and the helping staff. 6. Limited Recovery Room Capacity **Issue**: The recovery room has only three beds, which is insufficient given the department's patient volume. This limitation leads to: • **Patients Waiting Outside the Department**: Patients, after changing into hospital attire, have to wait outside the department in the common lobby, which can be uncomfortable and unwelcoming. • **Impact on Patient Comfort and Privacy**: Waiting in public areas can compromise patient comfort and privacy, affecting their overall satisfaction and experience. **IN ACCIDENT AND EMERGENCY DEPARTMENT:-** 1. Discrepancy in the accuracy of the Documented In- Time and Assessment time: There was a notable discrepancy between the documented patient arrival and assessment times and the observed times. This variance was attributed to several factors, including delays in registration, time lag in receiving the registered chargesheet, and other procedural inefficiencies. These discrepancies highlight potential areas for process improvement to ensure more accurate and timely documentation.
Suggestions for improvement	**IN SCOPY DEPARTMENT: -** 1) Pre-Deposit packages: - A pre-deposit package is a predefined financial arrangement that requires patients to make an advance payment or deposit before receiving certain medical treatments or procedures. This package is designed to streamline payment processes, reduce the risk of revenue leakage, and enhance patient satisfaction by providing clear communication about costs upfront.

ENDOSCOPY	
Upper GI Diagnostic	₹ 15050
Upper GI Therapeutic (Grade III)	₹ 30300
Lower GI Diagnostic	₹ 18600
EUS Therapeutic (Grade II)	₹33000

Manometry	₹19510
Hydrogen Breath Test	₹7800
Urea Breath Test	₹9000
Therapeutic Ascitic Tapping	₹6200
IV Therapy	₹3500
BRONCOSCOPY	
Bronchoscopy with BAL	₹27000
Endobronchial Ultrasound	₹65000
COMBINATION	
UGI+ LGI (Diagnostic)	₹27000
URODYNAMICS	
Bladder Catheterisation	₹2700
Complete Urodynamics Study	₹ 13200
Cystometrogram	₹ 10450
Office Cystoscope Procedure	₹ 20900
Uroflowmetry	₹2000
Urethral dilation	₹3800

2) Biomedical devices checklist: -To maintain biomedical devices effectively and minimize inefficiencies and delays due to technical errors, a comprehensive checklist is made which will be utilized by technicians or responsible nurses. This checklist should include routine checks for sterilization, physical damages, kinks, and proper visualization. Regular inspections will ensure that the devices remain in optimal condition, reducing the need for frequent maintenance and enhancing overall operational efficiency within the department.

DEVICES	CHECKLIST
OLYMPUS EVIS EXERA III (CV-190)	☐Lamp Cover ☐Power Indicator Light ☐Air Exhaustion ☐Lamp Usage Indicator
OLYMPUS: - OEV262H	☐Lcd Panel Disinfection/Cleaning ☐Image Quality ☐Color ☐Automated Brightness
PENTAX MEDICAL: - DEFINA EPK-3000	☐Power Indicator Light ☐Air Exhaustion ☐Lamp Usage Indicator ☐Lcd Panel Disinfection/Cleaning ☐Image Quality ☐Color ☐Automated Brightness
OLYMPUS SCOPE	☐ Distal Objective Lens Irregularities ☐ Scope body Irregularities ☐ Up/Down and Right/ Left Motion ☐ Locks ☐ Airflow Regulation ☐ Air/ Water Valve ☐ Suction Mechanism ☐ Leakage test ☐ Sterilization of Scope ☐ Disinfection of scope before use
PENTAX SCOPE	☐ Cap ☐ Insertion Tube ☐ Distal Objective Lens Irregularities ☐ Scope body Irregularities ☐ Up/Down and Right/ Left Motion ☐ Locks ☐ Airflow Regulation ☐ Air/ Water Valve ☐ Suction Mechanism ☐ Leakage test ☐ Sterilization of Scope ☐ Disinfection of scope before use

DATEX-OHMEDA 9100NXT (ANAESHTHESIA TROLLY)	☐ Self-inflating bag ☐ Power source ☐ Battery Backup ☐ Pipelines ☐ Oxygen fail safe mechanism intact ☐ Machine leak check ☐ Flowmeters ☐ Oxygen analyser calibrated ☐ Breathing System.
HCBT-01 BREATH TEST ANALYSER	☐ Clean precision optics system ☐ Check temperature regulation system ☐ Confirm stability of sampling system. ☐ Disinfect sampling system ☐ Check precision detector for damages.
ENDOSAUBER TWIN: - ENDOCOPE WASHER	☐ Utilities Supply (Water/Power) ☐ Plug support
SANTRON MEDITRONIC URODYNAMICS SYSTEM	☐ Calibration ☐ Urine Pot Disinfection/ Sterilization
PATIENT MONITOR	☐ Parameters ☐ Cable Attachment

3) Standardize Medication Placement:

- ♦ Inventory current instruments and medication locations.
- ♦ Distribute necessary instruments and medications to each hall.
- ♦ Implement the pre-procedure checklist regularly.

4) Designated Waiting Area:-Space Reallocation:

- ▪ Identify and reallocate space within or near the Scopy Department to create a dedicated waiting area for patient relatives.
- ▪ Comfortable Seating: Provide ample and comfortable seating arrangements to ensure that relatives have a place to sit and wait comfortably.
- ▪ Amenities: Equip the waiting area with essential amenities such as water dispensers, tea/coffee to improve the waiting experience.

IN ACCIDENT AND EMERGENCY DEPARTMENT:-

1) Immediate Allotment of ER Chargesheets:

- **Current Process:** After a patient arrives, they are assessed and triaged. The patient's relatives are then sent for registration, and the time is documented only after the hospital number (HH No) is assigned. This leads to discrepancies between the actual arrival and assessment times and the documented times.
- **Recommendation:** Allot the ER chargesheets to patients as soon as they enter the Emergency Department and document the arrival time immediately. Then, send the patient for registration to obtain the HH No, which can be added to the chargesheet later. This will reduce the variance in documentation caused by waiting for the registered ER chargesheet.

2) Introduction of Triage Time Placards:

- **Current Issue:** Variations in documented in-time and assessment time also occur when beds are not immediately available after patient assessment.
- **Proposed Solution:** Introduce small placards for triage time documentation upon patient arrival. The placard should include details such as patient in-time, assessment time, triage code, and vitals. This placard remains with the patient until registration

	and Chargesheet issuance, providing a reliable record of assessment times regardless of bed availability delays. **TRIAGE FORM** **Patient name:** **HH No.:** **Age:** **Patient in- time:** **Patient Assessment time:** **VITALS** **Bp:** **Triage color:** **Spo2:** **Doctor Signature:**

Signature of the Student **Approved by the IIHMR University's Mentor**

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