

Dissertation Training

at

**Amrita Hospital
Faridabad**

**Identifying and Addressing Operational Gaps in Gastroenterology
Department Services within a Multispecialty Hospital**

by

Dr. Alisha Shandilya

PG/23/012

**Under the guidance of
Dr. Sumesh Kumar**

PGDM (Hospital and Health management)

2023-25



International Institute of Health Management Research

New Delhi

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The following dissertation titled **Identifying and addressing operational gaps in Gastroenterology department services within a multispeciality hospital at IIHMR Delhi** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **PGDM (Hospital & Health Management)** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

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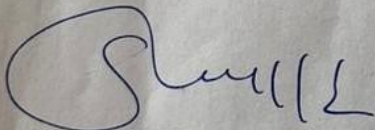
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TheCandidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.
I wish him all success in all her future endeavors.



Dr. Sumesh Kumar

Associate Academic Dean

IIHMR, New Delhi

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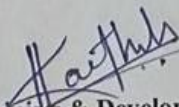
**Identifying and addressing the operational gaps in Gastroenterology Department of a multispecialty
Hospital**

18th August 2025

Amrita Hospital ,Faridabad

She comes across as a committed, sincere & diligent person who has a
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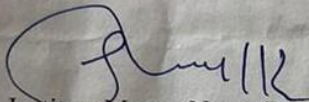

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This is to certify that **Dr. Alisha Shandilya**, a graduate student of the **PGDM (Hospital & Health Management)** has worked under our guidance and supervision. She is submitting this dissertation titled "**Identifying & Addressing Operational Gaps in Gastroenterology Department Services within a Multispecialty Hospital**" at "**Amrita Hospital, Faridabad**" in partial fulfillment of the requirements for the award of the **PGDM (Hospital & Health Management)**.

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.



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This is to certify that the dissertation titled **Identifying and addressing operational gaps in gastroenterology department of a multispecialty hospital .A study at Amrita Hospital, Faridabad** and submitted by Dr Alisha Shandilya Enrollment No. PG/23/012 under the supervision of Dr Sumesh Kumar for award of PGDM (Hospital & Health Management) of the Institute carried out during the period from 10 March 2025 to 10 June 2025 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

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Annexure F

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Name of the Student: Dr. Alisha Shandilya

Name of the Organisation in Which Dissertation Has Been Completed: Amrita Hospital

Area of Dissertation: Administration

Attendance: Present

Objectives achieved: Achieved

Deliverables: Met

Strengths: Hard working, Ability to adapt, Soft skills.

Suggestions for Improvement:

Suggestions for Institute (course curriculum, industry interaction, placement, alumni):

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Signature of the Officer-in-Charge/ Organisation Mentor (Dissertation)

Date: 18/8/2025
Place: Faridabad.



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Acknowledgement

I wish to express my deepest gratitude to Mr. Karthik Sreekumar for his exceptional guidance, encouragement, and unwavering support throughout the course of my study. His profound knowledge, insightful feedback, and patient mentorship have been instrumental in shaping the direction of my research and ensuring the quality of my work. From the early stages of topic selection to the final completion of this dissertation, his valuable inputs have helped me approach challenges with clarity and confidence.

I am particularly grateful for the time and effort he invested in reviewing my progress, offering constructive suggestions, and motivating me to strive for excellence. His willingness to share his expertise and experience has not only enriched this study but also contributed significantly to my academic and professional growth.

This dissertation would not have been possible without his constant encouragement, critical insights, and belief in my abilities. For this, I remain sincerely thankful.

Dr. Alisha Shandilya

PG/23/012

List of abbreviations

GI	Gastroenterology
OPD	Out Patient Department
TAT	Turn Around Time
NABH	National Accreditation Board For Hospitals and Healthcare Providers

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Abstract

This study investigates and addresses operational inefficiencies in the Gastroenterology (GI) Department of a multispecialty hospital, with a focus on outpatient, inpatient, and procedural services.

The absence of a centralized, real-time scheduling framework was identified as a key gap, leading to extended waiting times, uneven workload distribution, and procedural delays. A prospective observational approach was adopted, with baseline data collected over one month to assess current workflows and identify bottlenecks.

An integrated scheduling model was developed to align consultant, anaesthetist, and support staff availability, aiming to streamline patient flow and optimize specialist time. Post-implementation analysis revealed significant reductions in average consultation times for both appointment and walk-in patients, improved workload distribution, and enhanced procedural coordination.

The findings highlight that structured, real-time scheduling can improve efficiency, reduce staff strain, and enhance patient satisfaction. The model offers a scalable solution for other hospital departments facing similar coordination challenges.

Identifying and addressing operational gaps in gastroenterology department services within a multispecialty hospital

Introduction

Gastroenterology (GI) services form a critical component of patient care in multispecialty hospitals, encompassing outpatient consultations, inpatient management, and a variety of diagnostic and therapeutic procedures. Due to the inherently multidisciplinary nature of these services, seamless coordination among various departments is essential to ensure timely interventions and optimal patient outcomes. However, in many hospital settings, the scheduling and allocation of resources for GI services remain fragmented, leading to operational inefficiencies.

Consultants are often required to divide their time between outpatient clinics, inpatient rounds, and procedural duties, frequently without an integrated system to align these responsibilities. This lack of synchronization not only contributes to extended patient waiting times and procedural delays but also places considerable strain on healthcare staff, increasing the risk of burnout. The challenge is further compounded when multiple specialists, such as anesthesiologists, need to be available simultaneously for certain procedures, yet scheduling remains decentralized.

The absence of a real-time, centralized scheduling framework represents a significant operational gap in many multispecialty hospitals. By identifying these inefficiencies and developing an integrated scheduling model tailored to the unique needs of GI services, healthcare institutions can streamline workflows, optimize specialist availability, and enhance both patient satisfaction and care outcomes.

Objectives

- To assess the current workflow in the Gastroenterology department, including OPD consultations, inpatient rounds, and procedural scheduling, through systematic data collection and analysis.
- To identify key operational pain areas contributing to patient waiting times, scheduling conflicts, and delayed procedures.
- To develop and implement an integrated scheduling model that aligns the availability of consultants, anesthetists, and support staff to streamline patient care across OPD, procedural, and inpatient services.
- To evaluate the impact of the integrated scheduling model on:
 - Patient waiting times for consultations and procedures
 - Doctor consultation and procedural efficiency
- To provide data-driven recommendations for sustainable workflow improvements that enhance patient satisfaction, reduce burnout among healthcare staff, and improve overall departmental efficiency.

Methodology

Study Design

This study employed a prospective observational design aimed at evaluating the existing workflow in the Gastroenterology Department of a multispecialty hospital, identifying operational inefficiencies, and implementing targeted improvements through an integrated scheduling model.

Study Area

The research was conducted in the Gastroenterology Department of a multispecialty hospital, encompassing Outpatient Department (OPD) consultations, inpatient rounds, and procedural scheduling.

Study Duration

Baseline data was collected over a one-month period from **15 March to 15 April**, providing a representative snapshot of the department's operational performance.

Sampling Method and Sample Size

A **simple random sampling** method was used. To determine the sample size (as per NABH) statistical power of 44%, level of significance set at 0.05 with screening population of 500 were used.

$$n = N / (1 + Ne^2)$$

(where n=Number of samples, N=Total population and e=error tolerance)

The sample size was determined using the formula:

$$n = 500 / 1 + 500(0.0025)$$

$$= 500 / 2.25$$

$$\approx 222.2$$

Thus, the required sample size was **222**.

Key Respondents

- Consultants (Gastroenterology)
- Nurses
- Technicians
- Patients

Data Collection Tools and Variables

Custom-designed **Excel sheets** were used to record and analyze workflow data. Variables included:

- Doctor name and consultation timing
- Patient arrival and departure times
- Average consultation and waiting durations

Additional data sources included patient records, departmental logs, procedure registers, and consultation schedules.

Data Collected On

- Patient waiting times (OPD and procedures)
- Doctor consultation time
- Appointment adherence
- Discrepancies between scheduled and actual consultation times

Procedure

1. **Baseline Data Collection** – Existing workflows were mapped, and patient flow data was recorded for one month.
2. **Identification of Inefficiencies** – Key operational pain points were analyzed from the baseline dataset.
3. **Model Development** – An integrated scheduling model was designed to align consultant, anesthetist, and support staff availability.
4. **Implementation & Monitoring** – The new model was applied, and its effect on waiting times and consultation efficiency was tracked.

Purpose of Tool Usage

- Evaluate doctor scheduling efficiency.
- Improve patient experience through reduced waiting times.
- Provide data-driven recommendations for sustainable workflow optimization.

Variables covered

Variables Description	Variables Description
Date	Date Of the patient visit.
Doctor Name	The consulting doctor for the patient.
Walk-in	Time of arrival for patients without an appointment.
Appointment	Time of arrival for patients with an appointment.
IN Time	Actual time the patient entered the consultation room.
OUT Time	Actual time the patient exited the consultation room.
Waiting time	= (Walk-in time or appointment time) - (IN time)
Consulting time	= (IN time) - (OUT time)

Methods of Data Collection

Secondary Data Collection:

Appointment registers, patient assessment registers, consultation timings.

Data was triangulated through staff interaction, departmental protocols, and clinical notes to validate findings.

Expected Outcomes:

Significant decrease in average OPD and procedure-related waiting times due to better scheduling and coordination among consultants, anesthetists, and support staff.

Enhanced allocation of doctor time across OPD, inpatient rounds, and procedural duties

Faster TAT for consultations and procedures leading to better patient experience and potentially higher patient retention.

Key pain Areas

Key pain areas	Reason
Dr Consultation delay	Dr punch in timings Dr on floor rounds Procedures in between OPD
FIC	On the 4 th floor. No proper detailing about the procedure and additional charges
PAC	Anesthetist is not available permanently in department.
Patient shift from IPD to recovery room	No GDA staff present there at the time of shifting
Procedure	Anesthetist is not available permanently in department. Dr consulting the OPD /Appointment patients
Discharge summary preparation to approval time	Doctor is consulting the patient or in between procedure, so discharge summary approval takes time.

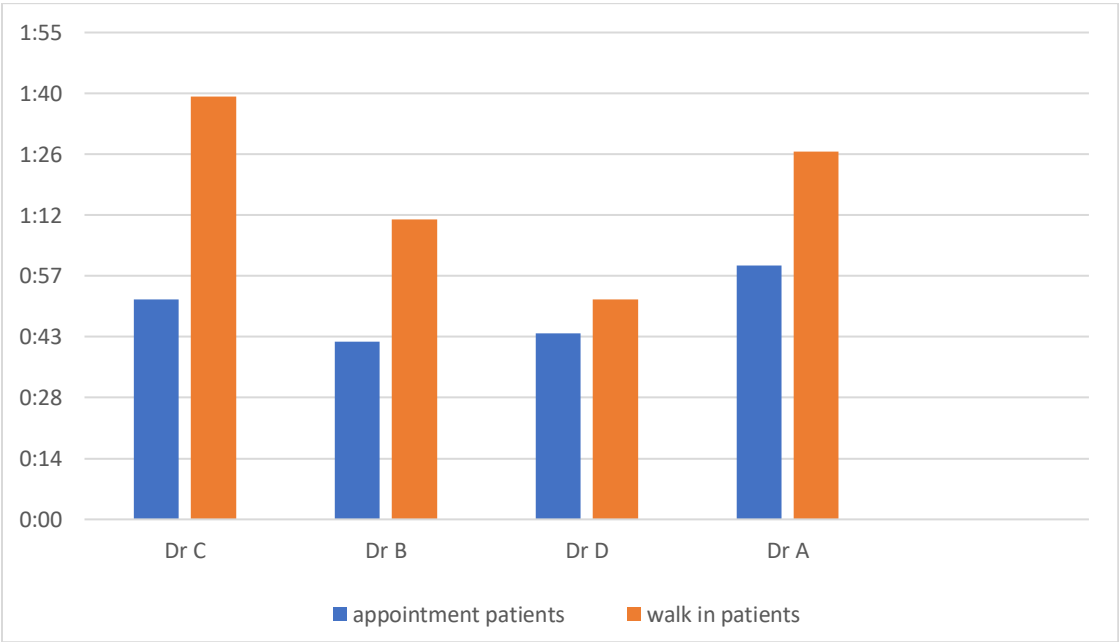
Observations

Pre-implementation phase

Average Consulting Time (15th March 2025–15th April 2025)

Baseline data was collected over a one-month period to assess the existing consultation time patterns for both appointment patients and walk-in patients across four consultants in the Gastroenterology Department.

	Average consulting time (March-April)	
	Appointment patients	Walk-in patients
Dr .C	52 min	1hr 40 min
Dr B	42 min	1 hr 11 min
Dr D	44 min	52 min
Dr A	1 hr	1 hr 27 min



- Appointments start at 10:00 AM, but doctors are generally available only from 10:30 AM.
- IPD rounds begin at 9:00 AM, overlapping with OPD hours and causing delays for appointment patients.
- Doctors frequently go for procedures during OPD hours and vice versa, leading to disruptions in patient flow.
- No planned procedure scheduling system which affect coordination and resource planning.

Suggestions for improvement and their implementation

(16th April 2025-15th May 2025)

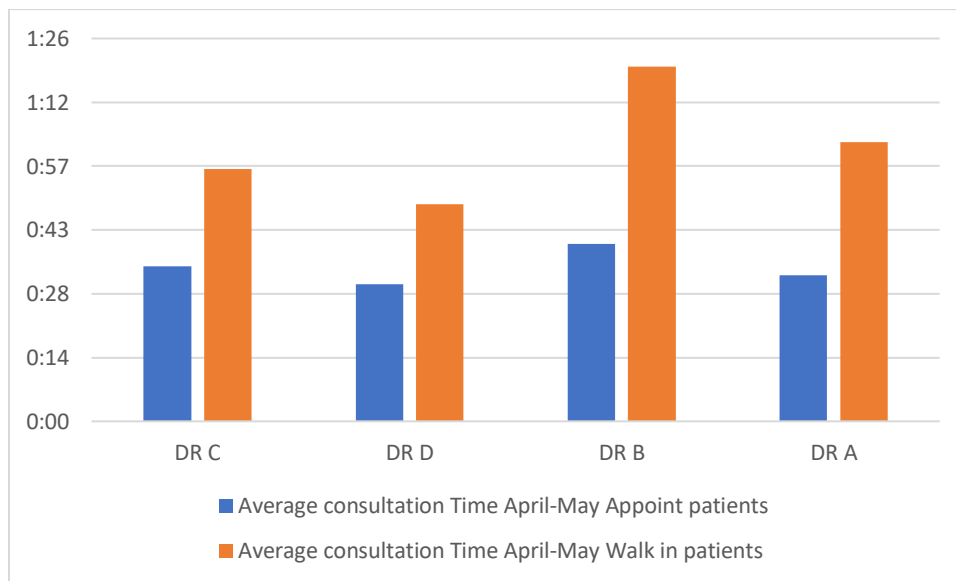
Suggestions	Implementation
Doctors timing should be scheduled.	Doctors started to consult 5 days a week. 8:30AM-10:00AM(IPD rounds) 10:00AM-11:00AM(Procedures) 11:00AM-02:00PM(OPD consultation) 02:00PM-04:00PM(Procedures) 04:00PM-05:30PM(OPD consultation)
Anaesthetist should be permanently available	LTP Anaesthetists started to cover the department.
A scheduler should be there in where comprehensive list of planned procedures must be made available to consultants, anesthetist, pediatrician, nurses, technicians, FIC persons and coordinators at least one day in advance. This ensures all involved personnel are well-prepared and aligned for the upcoming schedule.	A google drive Excel spread sheet is now maintained by the Nursing staff which is updated on daily basis one day before to all the concerned staff and it helps to make sure that everyone is present on time.
Patients scheduled for procedure should be contacted via telephone one day prior to confirm their booking and provide any necessary instructions or preparation details.	Nursing staff calls the patients one day before in advance to ensure their presence at the time of procedure.
Doctors should be advised to give discharge approval at regular interval of time like 30 min or 1 hr. gap. They have to review from the HIS and give approval.	JRs gets the discharge summary approved at the interval of 30 minutes in between the OPD consultations of Doctors to ensure the timely discharge of patient.

Observations

Post-implementation phase

Average Consulting Time (16th May 2025–15th June 2025)

	Average consultation time	
	Appointment patients	Walk-in patients
DR C	35 min	57 min
DR D	31 min	49 min
DR B	40 min	1 hr 20 min
DR A	33 min	1 hr 3 min



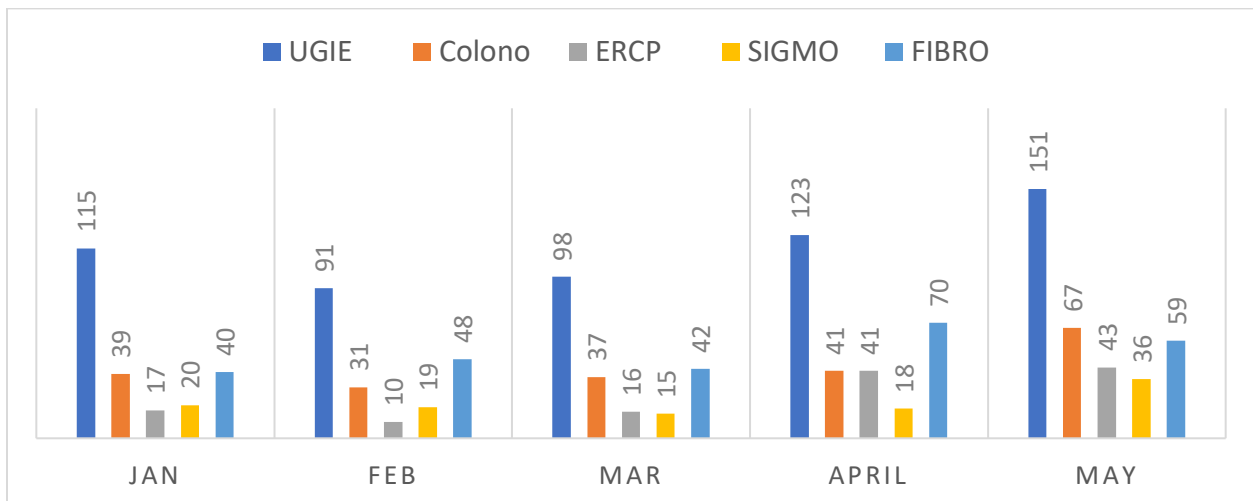
- Across all consultants, average consultation times for both appointment and walk-in patients decreased significantly.
- Largest improvement was in Dr C's walk-in consultations (reduced from **1 hr 40 min** to **57 min**).

- Gap between walk-in and appointment consultation times narrowed, suggesting improved scheduling and patient flow.
- Better alignment between consultants, anesthetists, and support staff led to fewer procedural delays.
- Reduced waiting and consultation times likely improved throughput in both OPD and procedural areas.
- Reduced bottlenecks and less unpredictability in schedules may have lowered stress for doctors and nurses.

Results

Count of procedures

	Jan	Feb	Mar
UGIE	115	91	98
Colonoscopy	39	31	37
ERCP	17	10	16
Sigmoidoscopy	20	19	15
Fibro scan	40	48	42
Total	231	199	208



- Count of procedures got increased post implementation of suggestions.

Discussion

Key pain areas	Before intervention	After intervention
Financial counselling	on 4 TH floor	ON 6 TH FLOOR TILL 1:30 PM
Pre anesthetic checkup	Anesthetist is not available permanently in department.	LTP anesthetist are available
Patient shift from IPD to recovery room	No GDA staffs available.	gastro IPD shifted to 6 th floor
Procedure	Procedure getting delayed due to lack of anesthetist	LTP anesthetist are covering the gastro department
Discharge summary preparation to approval time	Doctor is consulting the patient or in between procedure, so discharge summary preparation takes time.	JR's preparing the discharge summary Consultant reviewing the summary and approving it
Scheduler	No Scheduler	Scheduler is prepared and everyone is pre-informed regarding the procedures.

The study revealed critical inefficiencies in the scheduling and operational coordination within the Gastroenterology department.

Before intervention:

- OPD appointments were scheduled from 10:00 AM, but doctors generally arrived by 10:30 AM.
- IPD rounds started at 9:00 AM, overlapping with OPD hours, causing consistent delays.
- Doctors were frequently required to switch between OPD and procedural duties without a defined system, disrupting patient flow and consultation efficiency.
- There was no centralized or real-time scheduling system in place to coordinate among consultants, anesthetists, and support staff.

After Intervention:

- A major change following the intervention was an increase in doctor consultation days—from 2–3 days per week to 5 days per week. This change had multiple downstream effects:
- Higher patient throughput, as more consultation slots became available.
- Reduced patient waiting times, due to better distribution of patient load across the week.

- Improved patient satisfaction, linked directly to quicker access to care and smoother service flow.
- The introduction of an integrated scheduling model further streamlined workflows and allowed for better alignment of resources.

Conclusion

The implementation of an integrated scheduling model in the Gastroenterology Department successfully addressed critical operational gaps identified in the baseline assessment. By synchronizing consultant, anaesthetist, and staff schedules, the department achieved reduced consultation and waiting times, better-balanced workloads, and improved procedural efficiency. These operational gains are likely to enhance patient satisfaction, optimize specialist utilization, and potentially improve staff morale by minimizing unpredictable workloads.

While the intervention demonstrated short-term effectiveness, sustained improvement will require ongoing monitoring, adaptation of the scheduling system, and strong interdepartmental communication. Future research could incorporate patient satisfaction metrics, analyse long-term impact, and explore the model's applicability in other clinical settings. The findings reaffirm that systematic workflow optimization can significantly contribute to higher-quality, more efficient healthcare delivery.

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