

**GAP ANALYSIS OF DELAY IN DISCHARGE PROCESS AT DR. MUKESH
BAGHEL MULTISPECIALITY HOSPITAL, AGRA**

Dissertation Submitted to



The IIHMR University, Jaipur

for the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

in

Hospital and Health Management

by

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Under the Supervision and Guidance of

Dr. Piyusha Majumdar

2025

Dr. Mukesh Baghel

Multi-Speciality Hospital

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CERTIFICATE

This is to certify that Dr. Riya Mittal in partial fulfillment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur has successfully completed her internship at Dr. Mukesh Baghel Multispecialty Hospital Pvt. Ltd. during Mar 10 - May 31, 2025.

Place:

Preceptor/Head of the Organization

Agra Date:

03/06/25

Name of the organization

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CERTIFICATE

This is to certify that dissertation titled “**Gap Analysis of Delay In Discharge Process At Dr. Mukesh Baghel Multispeciality Hospital, Agra** ” is a record of the research work undertaken by **Riya Mittal** in partial fulfilment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and her approach to the research study has been sincere, scientific, and analytical.

A handwritten signature in blue ink, appearing to read 'Pyusho', with a horizontal line underneath.

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Date 06/06/25

A handwritten signature in blue ink, appearing to read 'S. D.', with a horizontal line underneath.

School Dean

IIHMR University, Jaipur

Date

DECLARATION BY STUDENT

I hereby declare that this dissertation titled **Gap Analysis of Delay in Discharge Process at Dr. Mukesh Baghel Multispeciality Hospital, Agra** is the Bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

(Signature) *Riya*

Name of Student *Riya Mittal*

Date *06/06/25*

Abstract

Background:

Timely patient discharge is a critical component of efficient hospital management, directly impacting bed availability, patient satisfaction, and overall healthcare delivery. However, delays in discharge are a common challenge in many healthcare settings, often leading to overcrowding, increased healthcare costs, and reduced quality of care.

Objective:

To identify key delay points in the discharge process and evaluate the efficiency of the discharge process based on Turnaround Time (TAT) and assess the impact on patient satisfaction and recommend process improvements, such as discharge planning, better documentation practices, and dedicated discharge coordinators, to reduce overall discharge TAT.

Methodology:

A cross-sectional observational study was conducted in the IPD department of a tertiary care hospital. Data were collected over a period of three months through direct observation, structured interviews with patients, hospital staff, and review of discharge records. Both qualitative and quantitative methods were used to analyze the factors causing delays, including administrative, clinical, and patient-related reasons.

Results:

The study revealed that the major causes of discharge delays included Billing clearance is the leading cause of delays (38%), followed by pharmacy clearance (30%) and final patient instructions (28%). Delays are less frequent in final diagnosis documentation (24%), transport/exit formalities (13%), and physician discharge order (10%). This highlights that administrative and coordination-related steps are the major contributors to discharge delays.

Conclusion:

Discharge delays are multifactorial, with administrative inefficiencies and lack of interdepartmental coordination playing a significant role. Implementing streamlined

discharge protocols, early planning, digital tools for communication, and dedicated discharge coordinators can significantly reduce these delays and improve patient flow and satisfaction.

Keywords:

Discharge process, hospital delays, patient flow, healthcare management, TPA clearance, discharge summary, bed turnover.

ACKNOWLEDGEMENT

At the outset of this report, I would like to express my sincere gratitude to all those who supported and guided me throughout the course of my internship. Their valuable insights, continuous encouragement, and generous support have been instrumental in the successful completion of this project.

It has been an enriching experience to intern at **Dr. Mukesh Baghel Multispecialty Hospital**, a reputed healthcare institution known for its commitment to patient care and clinical excellence. I am truly grateful for the opportunity to learn and grow in such a professional and dynamic environment.

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I also extend my thanks to the **Placement Cell of IIHMR University** for their assistance and continuous support throughout the internship process.

Last but not least, I would like to thank my family and friends for their unconditional support, encouragement, and belief in me during the entire journey.

This internship has been a pivotal step in my professional development, and I look forward to applying the knowledge and skills gained during this experience in my future endeavors.

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Acronyms

Acronym	Full Form
DOR	Discharge on Request
LAMA	Leaving Against Medical Advice
MLC	Medico-Legal Case / Medico-Legal Certificate
OPD	Outpatient Department
IPD	Inpatient Department
ICU	Intensive Care Unit
TPA	Third Party Administrator
HIS	Hospital Information System
EHR	Electronic Health Record
MIS	Management Information System
D/C	Discharge
Rx	Prescription
SOP	Standard Operating Procedure
ICD	International Classification of Diseases
HR	Human Resources
QA	Quality Assurance
PT	Patient
F/U	Follow-Up
EMS	Emergency Medical Services

Chapter 1

Introduction

Definition of Discharge

Hospital discharge refers to the formal process by which a patient can leave a healthcare facility after completing medical treatment or when continued inpatient care is no longer necessary. It marks a critical transition point in the continuum of care, where the responsibility for ongoing care is shifted from the hospital to the patient, family, or community healthcare providers. A properly managed discharge ensures patient safety, reduces the risk of readmission, and promotes effective recovery.

Understanding Discharge in Healthcare

In healthcare, *discharge* simply means the official end of a patient's treatment. It's the moment when a doctor or healthcare team decides that you're ready to leave the hospital or care facility. But just because your hospital stay is over doesn't mean the need for care goes away. From birth onward, our need for healthcare changes constantly—sometimes we're fine, sometimes we need help—so the demand for healthcare services is always high.

Healthcare itself is made up of a wide network of people, places, and systems working together to keep us healthy. What that network looks like can vary a lot depending on where you live. Every country, and even regions within a country, may organize their healthcare systems differently based on what their communities need.

Leaving the hospital can feel overwhelming. You may have questions, worries, or still be recovering. That's where *discharge planning* comes in. It's a coordinated effort by your care team to make sure you have everything you need to feel supported after you leave. This could include:

- Checking if you'll need extra help at home,
- Looking at your emotional, physical, and social needs,
- Giving you and your family the right information and guidance,
- Organizing things like medications, equipment, or home care services,
- And making sure all the necessary paperwork is complete.

The goal is to prepare you for the next step in your recovery and to prevent unnecessary setbacks. It's about making the transition as smooth and safe as possible.

Of course, sometimes discharge doesn't happen as quickly as expected. There can be delays for many reasons. On the inside, it might be because the paperwork isn't done, test results are still pending, or there's a delay in identifying long-term conditions. On the outside, it could be because your family needs more time to prepare, there aren't enough community resources, or your home environment needs to be adjusted to support your recovery.

Whatever the case, good discharge planning helps bridge the gap between hospital care and life afterward, because getting better doesn't end at the hospital door.

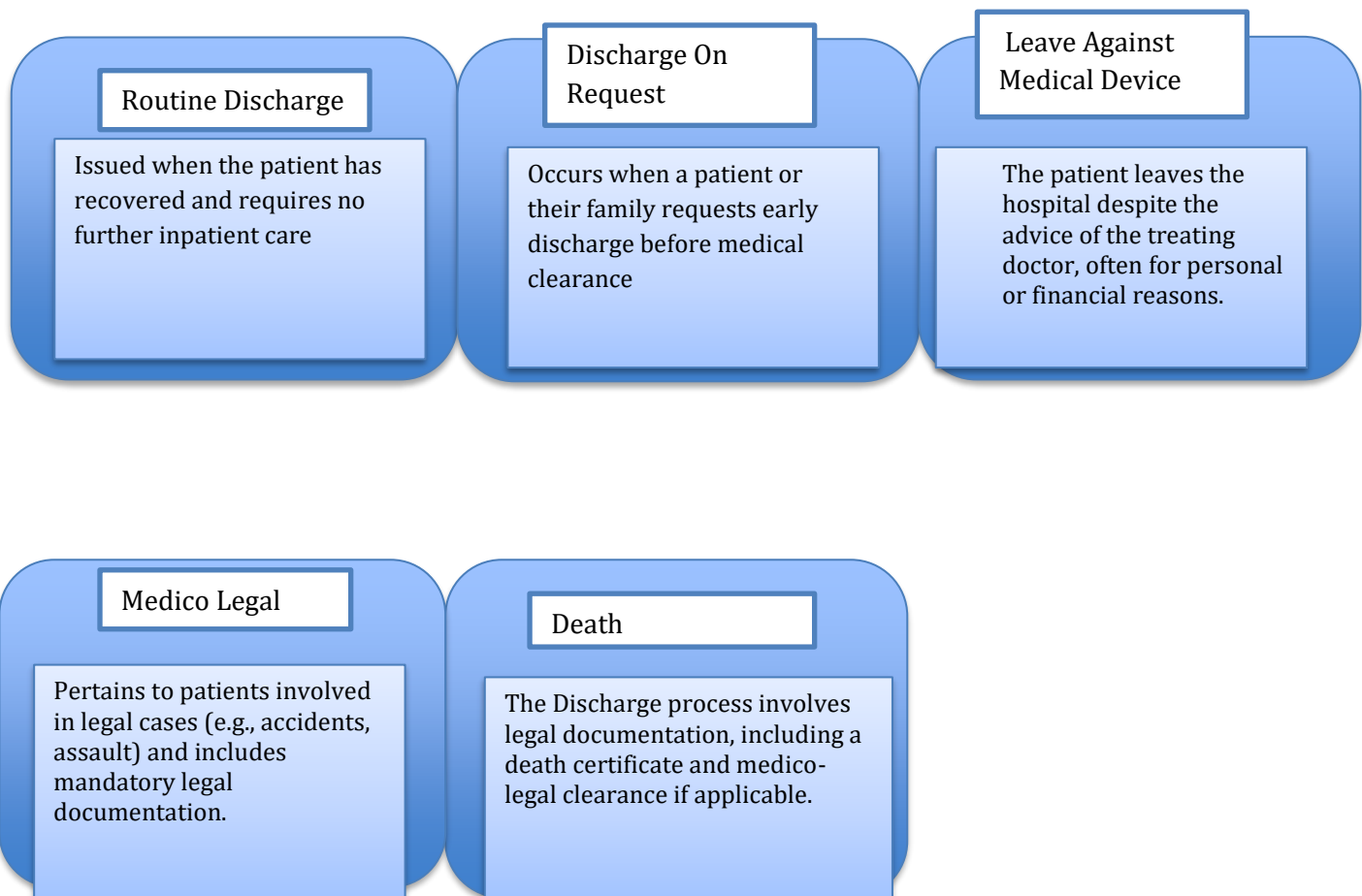
Discharge Planning

Discharge planning is a systematic process initiated during patient admission and continued throughout the hospital stay. It involves anticipating future healthcare needs and arrangements for the patient's post-hospital care. The process includes coordination among physicians, nurses, social workers, and discharge coordinators to ensure that the patient is:

- Understands their diagnosis and treatment
- Receives proper medication and follow-up instructions
- It is transferred safely to their next care destination, such as home, rehabilitation, or a long-term care facility

Effective discharge planning improves patient outcomes, reduces hospital stay duration, and minimizes the chances of readmission.

FIGURE-1.1-
Types of Discharges



Discharge on Request

Discharge on Request (DOR) occurs when the patient or family insists on leaving the hospital despite pending investigations or incomplete treatment. Protocols followed include:

- Documentation of patient/family request
- Risk explanation by the treating doctor
- Formal signing of DOR consent form
- Patient's departure under their responsibility

LAMA Patients

LAMA (Leaving Against Medical Advice) cases are critical and require careful handling:

- Treating doctor informs patient of medical risks
- The LAMA form is signed by the patient or family
- Legal documentation is retained
- Hospital liability is limited due to the signed acknowledgment

Medico-Legal Cases

For patients involved in legal cases (e.g., assault, accidents, suicide attempts), special procedures include:

- Notification to local police authorities
- Maintenance of medico-legal records
- Issuance of MLC reports upon discharge
- Special documentation in case of discharge or death

Failure to comply with legal protocols can result in severe consequences for the hospital.

Death

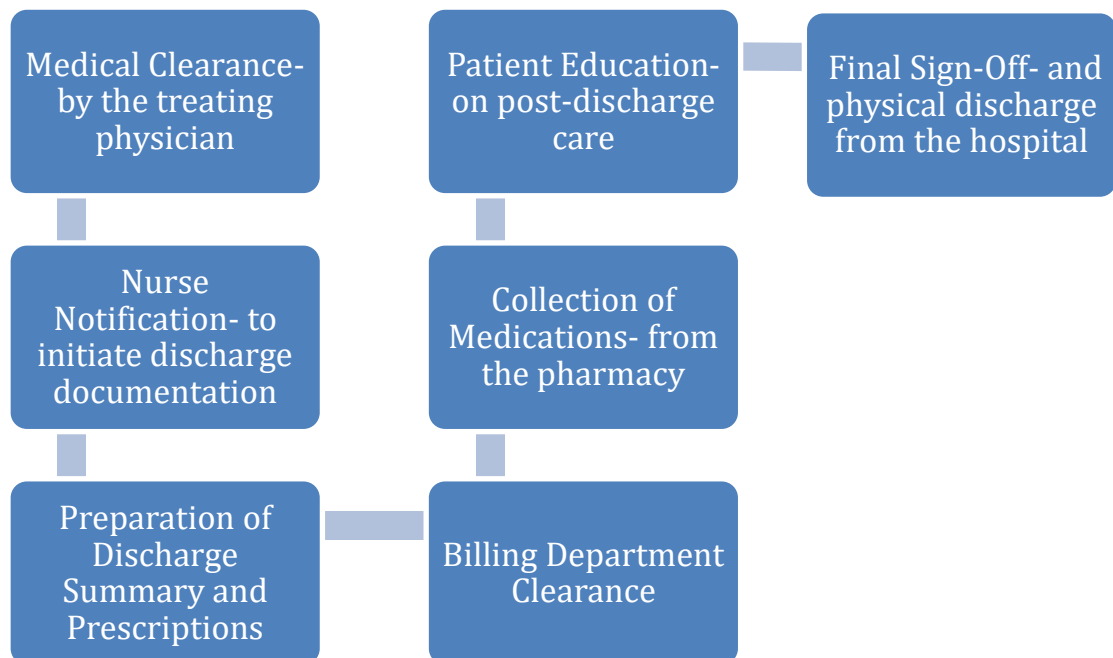
In the event of a patient's death:

- Treating doctor confirms and certifies death
- Death certificate is issued
- Family is counseled
- Body is handed over with proper documentation
- In medico-legal deaths, post-mortem and police procedures are followed

Documents Generated During Discharge Process

- Discharge Summary
- Final Bill
- Medicine and Diet Instructions
- Referral Notes (if applicable)
- Consent Forms (DOR, LAMA)
- Death Certificate (in case of demise)
- MLC Discharge Forms (if applicable)

FIGURE 1.2 Process Flow of Discharge



Objectives

The primary objectives of the study are:

- To identify key delay points in the discharge process, particularly in billing, pharmacy clearance, and documentation preparation.
- To evaluate the efficiency of the discharge process based on Turnaround Time (TAT) and assess the impact on patient satisfaction.
- To recommend process improvements, such as discharge planning, better documentation practices, and dedicated discharge coordinators, to reduce overall discharge TAT.

Several challenges can impede effective discharge planning:

- **Delayed Documentation:** Discharge summaries or prescriptions are not being ready on time.
- **Interdepartmental Miscommunication:** Lack of coordination among billing, pharmacy, and clinical teams.
- **Unclear Follow-Up Care:** Patients often leave without a clear understanding of their post-discharge care plan.
- **Inadequate Staffing:** Shortage of dedicated discharge coordinators or case managers.
- **Technological Limitations:** Absence of integrated health information systems delays the discharge process.

Patient and Family-Related Issues

Patients and families often face difficulties that affect discharge:

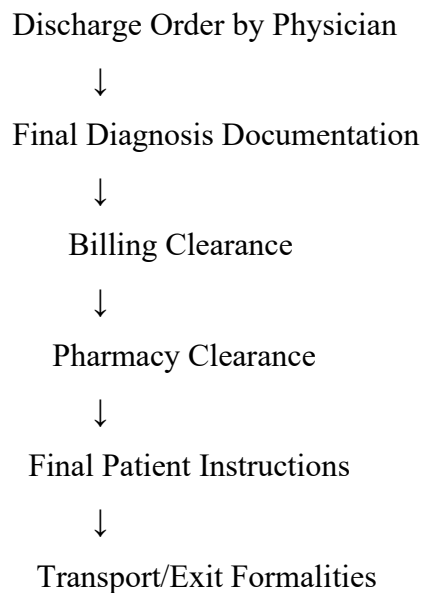
- **Poor Health Literacy:** Difficulty understanding medical instructions and follow-up care.
- **Emotional Stress:** Anxiety or denial about the patient's condition or discharge.
- **Financial Constraints:** Inability to afford continued care or medications post-discharge.
- **Transportation Barriers:** Lack of access to suitable transportation from the hospital.
- **Lack of Caregiver Support:** No responsible person at home to manage patient care.

Need for the Study

This study aims to critically analyze the hospital discharge process, identify inefficiencies, and suggest improvements. The need for studying arises from:

- The increasing rate of preventable hospital readmissions
- Patient dissatisfaction due to delayed or disorganized discharges
- Financial impact on both healthcare institutions and patients
- A growing emphasis on quality indicators and hospital accreditation standards

FIGURE 1.3 Discharge Process at Mukesh Baghel Superspeciality Hospital Agra



Research gap and Rationale

Despite the increasing focus on patient-centered care and hospital process optimization, the **discharge process at Dr. Mukesh Baghel Multispecialty Hospital, Agra**, remains inefficient and fragmented. Discharge delays not only affect bed availability and patient turnover but also impact patient satisfaction and resource utilization.

Multiple issues have emerged from preliminary analysis and stakeholder feedback:

- Lack of **real-time coordination** between departments (medical, billing, pharmacy).
- **Delayed documentation**, including discharge summaries and final diagnoses.
- Unstructured or **last-minute patient/family counselling** on discharge readiness.
- Absence of **dedicated discharge coordinators** to streamline workflows.
- Manual processes for billing and pharmacy clearance causing delays.
- **No integrated tracking system** to monitor and expedite discharge steps.

The absence of a standardized discharge protocol and digital monitoring tools results in prolonged discharge Turnaround Time (TAT), unnecessary bed occupancy, patient dissatisfaction, and administrative inefficiency. These challenges necessitate a focused study to assess discharge efficiency, identify bottlenecks, and propose systematic improvements.

Research Question

Primary Research Question:

How can Turnaround Time (TAT) in the discharge process be reduced at Dr. Mukesh Baghel Multispecialty Hospital, Agra, to improve patient satisfaction and operational efficiency?

Hypothesis

- **Null Hypothesis (H_0):** There is no significant difference in the turnaround time (TAT) of the discharge process in Dr. Mukesh Baghel Multispecialty Hospital.
- **Alternate Hypothesis (H_1):** There is a significant difference in the turnaround time (TAT) of the discharge process in Dr. Mukesh Baghel Multispecialty Hospital.

CHAPTER 2
REVIEW OF LITERATURE

TABLE 2.1 LITERATURE REVIEW

S. N o	Author(s) & Year	Title of Study	Sample Size	Sample Location	Sampling Technique	Key Findings	Salient Feature
1	Marini et al., 2025	Transitional Care Interventions in Improving Patient and Caregiver Outcomes After Discharge	51 RCTs	Global	Systematic Review	Caregiver involvement in transitional care improves patient outcomes and reduces caregiver burden.	Emphasizes the importance of caregiver roles in post-discharge care.
2	Chia et al., 2023	Evaluating the association of COVID-19 restrictions on discharge outcomes in community hospitals	878	Singapore	Retrospective Cohort	Longer hospital stays and lower quality of life observed during lockdown periods.	Highlights the impact of COVID-19 on discharge processes.
3	Tyagi & Sontakke, 2023	Exploring the practicality of transition care guidance for	8 caregivers & children	India (Pediatric Ward)	Pilot Study	Nurse-led transition care program improved caregiver	Focus on pediatric patients with congenital heart disease.

		pediatric patients with congenital heart disease				readiness for discharge.	
4	Singh et al., 2024	Generation and De-Identification of Indian Clinical Discharge Summaries using LLMs	N/A	India (Healthcare Institution)	Experimental Study	Developed synthetic clinical reports for effective de-identification systems.	Addresses data privacy in digital health initiatives.
5	Rao et al., 2023	Current trends and possible solutions for delay in patient discharge: observations from a tertiary care pediatric hospital in Mumbai	60 discharges	Mumbai, India	Observational Study	Billing and discharge sheet preparation contributed to discharge delays.	Focus on pediatric hospital discharge processes.
6	Sharma et al., 2023	The Effect of Self-management-based Discharge Planning on Anxiety,	80	Zahedan, Iran	Quasi-experimental	Self-management-based discharge planning reduced anxiety and	Focus on chronic heart failure patients.

		Depression, and Re-admission in Patients with Chronic Heart Failure				depression in heart failure patients.	
7	Hesselin k et al., 2012	Discharge Summary Delays and Their Impact on Continuity of Care	150	Netherlands	Cross-sectional Study	Late discharge summaries compromise continuity of care and increase provider dissatisfaction.	Emphasizes timely documentation importance.
8	Rajagopal et al., 2012	Death Discharge Process and Bereavement Support	30	India	Qualitative Interviews	Advocated for empathetic and procedural clarity in discharges following death.	Focused on bereavement support post-death discharge.
9	Jack et al., 2009	Project RED (Re-Engineered Discharge)	400	US Hospitals	Intervention Study	Structured discharge processes increase patient satisfaction and safety.	Introduced a structured discharge protocol improving safety.

10	Kripalani et al., 2007	Communication During Transitions of Care	N/A	Global Studies	Systematic Review	Found significant gaps in discharge communication between hospitals and PCPs.	Highlighted communication gaps impacting care continuity.
11	Coleman et al., 2004	Care Transitions for Older Adults	250	US	Observational Study	Discharge planning improved treatment adherence and reduced complications.	Focused on older adult population transitions.
12	Naylor et al., 1999	Transitional Care and Discharge Planning	500	Multiple US Hospitals	Randomized Controlled Trial	Effective discharge planning reduces readmission rates and improves outcomes.	First large RCT showing impact of discharge planning on readmission.

CHAPTER 3
METHODOLOGY

Research Design:

This study adopted a **descriptive cross-sectional research design**, integrating both **quantitative** and **qualitative** approaches. The purpose of this mixed-method approach was to provide a comprehensive understanding of the current discharge process, identify key bottlenecks contributing to delays, and recommend actionable process improvements. The quantitative aspect focused on measuring discharge turnaround time (TAT) and identifying delay stages, while the qualitative aspect explored stakeholder experiences and suggestions to enhance discharge efficiency.

Study Setting

The study will be conducted at **Dr. Mukesh Baghel Multispecialty Hospital**, a tertiary care facility located in Agra, Uttar Pradesh. The hospital provides a range of inpatient services, making it a suitable setting for evaluating discharge workflows. The study offers a range of specialties, including General Medicine, Surgery, Cardiology, Orthopedics, and more. The discharge process at this hospital typically involves coordination among multiple departments such as treating physicians, nursing staff, billing, TPA, and pharmacy.

Study Population

The study included **150 inpatients discharged** from various departments of Dr. Mukesh Baghel Multispecialty Hospital, Agra.

TARGET POPULATION

Patients:

Individuals who were admitted and later discharged (non-insured) from the inpatient department during the study period.

Healthcare Staff:

Personnel directly involved in the inpatient discharge process, including:

- Physicians (consultants and residents)
- Nursing staff
- Billing department staff
- Pharmacy staff
- Administrative officers (discharge or ward clerks)

Inclusion Criteria

- **Patients:**
 - Aged **18 years and above**.
 - **Non-insured** (self-paying) individuals discharged during the study period.
 - Underwent **planned or routine discharge** (not emergency or critical).
 - With **complete discharge documentation** and time records.
 - Willing and able to provide **verbal or written consent** (where applicable).
- **Staff:**
 - **Directly involved** in any stage of the discharge process (medical, billing, pharmacy, or documentation).
 - **Present and available** during the data collection period.
 - Provided **informed consent** for participation in interviews or discussions.

Exclusion Criteria

- Patients **below 18 years of age**.
- **Insured patients** (e.g., TPA, government schemes).
- Patients discharged via **LAMA, absconded, referred, or death** cases.
- **Incomplete discharge records** or missing TAT data.
- **Daycare or short-stay procedures** not involving full inpatient admission.
- Staff not engaged in the discharge workflow or unavailable during data collection.

Study Duration

The total duration of the study was **Three month** (MARCH-MAY 2025) including data collection, analysis, and reporting.

TABLE NO. 3.1 Sample Size

PATIENT CATEGORY	NUMBER OF PARTICIPANTS
DISCHARGE PATIENTS	100
DOCTORS	20
NURSES	15
ADMINISTRATIVE STAFF	10
RECEPTIONISTS	5
TOTAL STAFF =50	
TOTAL PARTICIPANTS=150	

Sampling Techniques:

A combination of systematic random sampling and purposive sampling was used:

Patients – Systematic Random Sampling:

- From the daily IPD registration list
- Sampling interval was adjusted according to daily volume to ensure
Approximately 3–5 participants per day.
- This technique avoided sampling bias and ensured representativeness across all
service times.

Staff – Purposive Sampling:

- Staff were selected based on their functional role in the IPD for discharges
(registration, nursing, administrative staff, receptionists)

Research Procedure

Phase 1: Data Collection

1. Time-Motion Observations:

- Conducted for **100 non-insured discharged patients** using a standardized checklist.
- Recorded timestamps from the **doctor's discharge decision to final patient departure**, including key steps such as billing clearance, pharmacy clearance, documentation preparation, and transport formalities.
- Observations carried out on **different days** to capture variability in discharge processes.

2. Semi-Structured Staff Interviews:

- Conducted with **50 key staff members** involved in the discharge process
- Interviews lasted **15–20 minutes**.
- Explored perspectives on discharge delays, coordination issues, documentation, and resource constraints.

Phase 2: Data Analysis

Quantitative Analysis

- Data entered into **MS Excel and SPSS** for analysis.
- Descriptive statistics used to summarize:
 - Turnaround time (TAT) for discharge: mean, median, standard deviation.
 - Frequency and percentage of delays at different discharge stages.
- Cross-tabulations performed between:
 - Delay points and hospital departments.

Qualitative Analysis

- Manual thematic analysis conducted using Braun and Clarke's six-phase method:
 - Familiarization, coding, theme development, reviewing, defining, and reporting.
- Themes identified included:

- Lack of coordination between departments
- Delays in documentation preparation
- Inconsistent Discharge Planning
- Resource constraints such as lack of discharge coordinators
- Themes were mapped to improve understanding of process inefficiencies and to guide recommendations.

Data Collection Tools

1. Time-Motion Observation Checklist

- A structured form used to **track timestamps** for each step in the discharge process:
 - Doctor's discharge order
 - Preparation of discharge summary
 - Billing initiation and clearance
 - Pharmacy clearance
 - Final counseling and instructions
 - Patient exit time
- Helps calculate Turnaround Time (TAT) and identify delay points.

2. Semi-Structured Interview Guide

- A **questionnaire template** with open-ended questions to guide interviews with staff (doctors, nurses, billing, pharmacy, admin).
- Covers:
 - Staff experiences with discharge workflow
 - Observed bottlenecks
 - Suggestions for improvement
- Ensures consistency across interviews while allowing in-depth insights.

3. Patient Record Review Template

- Used to extract data from **150 discharge files** of non-insured patients.
- Captures demographic data, type of discharge, discharge summary time, billing/pharmacy timestamps, etc.

Operational Definitions

1. **Turnaround Time (TAT):** The total time elapsed from the physician's decision to discharge the patient to the patient's actual departure from the hospital premises.
2. **Discharge Delay:** Any event, factor, or process that causes a delay in the patient's discharge beyond a predetermined acceptable timeframe.
3. **Discharge Process** – Steps from doctor's discharge order to patient leaving the hospital.
4. **Billing Clearance Time** – Time from bill preparation to final payment.
5. **Pharmacy Clearance Time** – Time from sending discharge prescription to medicine handover.
6. **Discharge Summary Time** – Time taken to prepare and print the discharge summary.
7. **Non-Insured Patient** – A patient paying from pocket, not covered by insurance.
8. **Patient Satisfaction** – Patient's rating of the discharge process experience.
9. **Discharge Counselling** – Final instructions given to patient before leaving.
10. **Final Exit Time** – Time when the patient physically leaves the hospital.

Ethical Considerations

This study will be conducted in accordance with standard ethical practices:

- Informed Consent:
 - verbal informed consent will be obtained from all interview participants.
- Voluntary Participation:
 - Participation in interviews will be entirely voluntary. Participants may withdraw at any time without any consequences.
- Data Security and Confidentiality:
 - All collected data will be stored securely and anonymized before analysis.
 - No personal identifiers will be used in reporting to ensure participant confidentiality.

Limitations of the Study

- The study was confined to a **single hospital**, limiting generalizability.
- The **small qualitative sample** size may not capture the full spectrum of views.

- Patient satisfaction was indirectly assessed based on discharge time and process delays, not through direct patient interviews.

CHAPTER -4

RESULTS

Patient Demographics

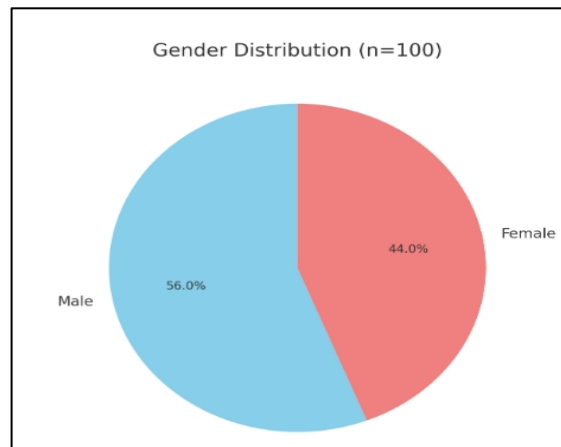


FIGURE 4.1 Gender Distribution of Patients (n=100):

The first pie chart illustrates the gender-wise distribution of patients. Out of 100 patients, 56% are male and 44% are female. This indicates a slightly higher proportion of male patients seeking outpatient services compared to females. The trend may reflect gender-based differences in health awareness, access to care, or societal norms influencing healthcare-seeking behavior in the region.

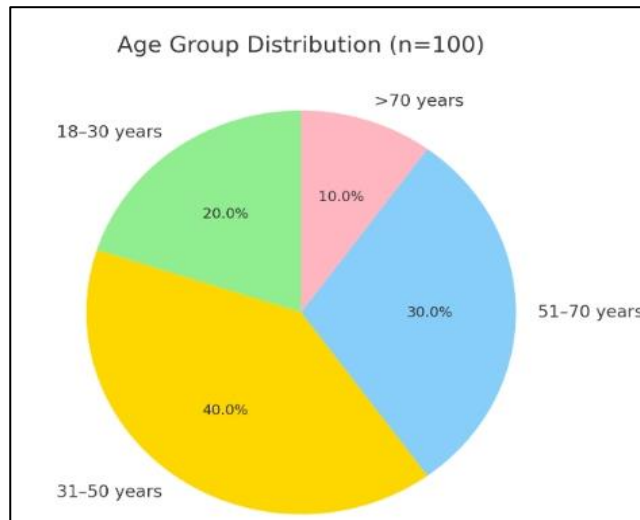


FIGURE 4.2 Age Group Distribution of Patients (n=100):

The second pie chart shows the distribution of patients by age group. The largest proportion of patients falls within the 31–50 years category (40%), followed by the 51–70 years group (30%). Young adults aged 18–30 years make up 20%, while the elderly population (>70 years) accounts for only 10% of the total patients. This distribution suggests that middle-aged individuals are the most frequent users, likely due to the emergence of lifestyle-related health issues during this phase of life. The lower turnout of elderly patients could indicate potential barriers in access or mobility.

Turnaround Time (TAT) for Discharge

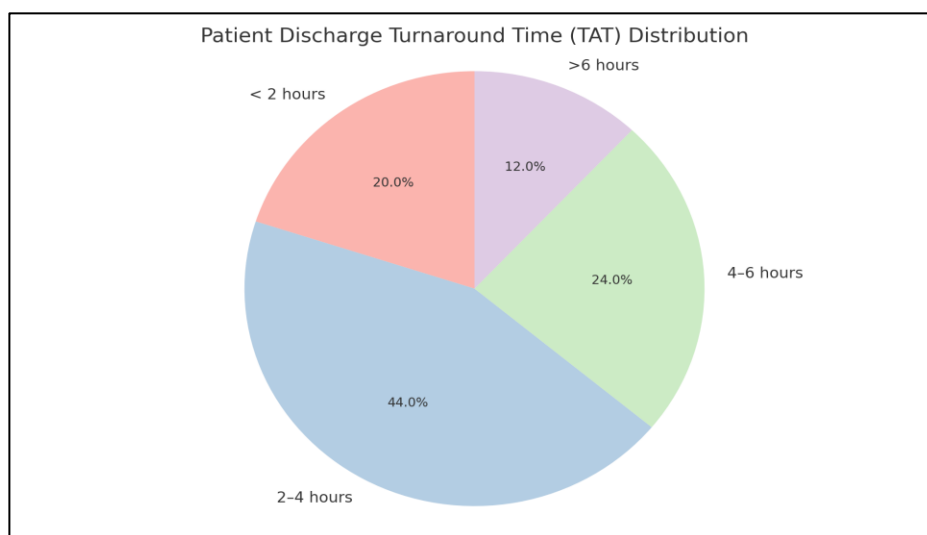


FIGURE-4.3

The pie chart shows that 44% of patients are discharged within 2–4 hours, and 20% in under 2 hours, indicating moderate efficiency. However, 36% of discharges take more than 4 hours, reflecting delays due to issues like poor coordination, billing, and insurance clearance. This supports findings from the discharge process gap analysis at Dr. Mukesh Baghel Multispecialty Hospital, highlighting the need for better interdepartmental communication, digital tracking, and staff support to reduce turnaround time and improve patient satisfaction.

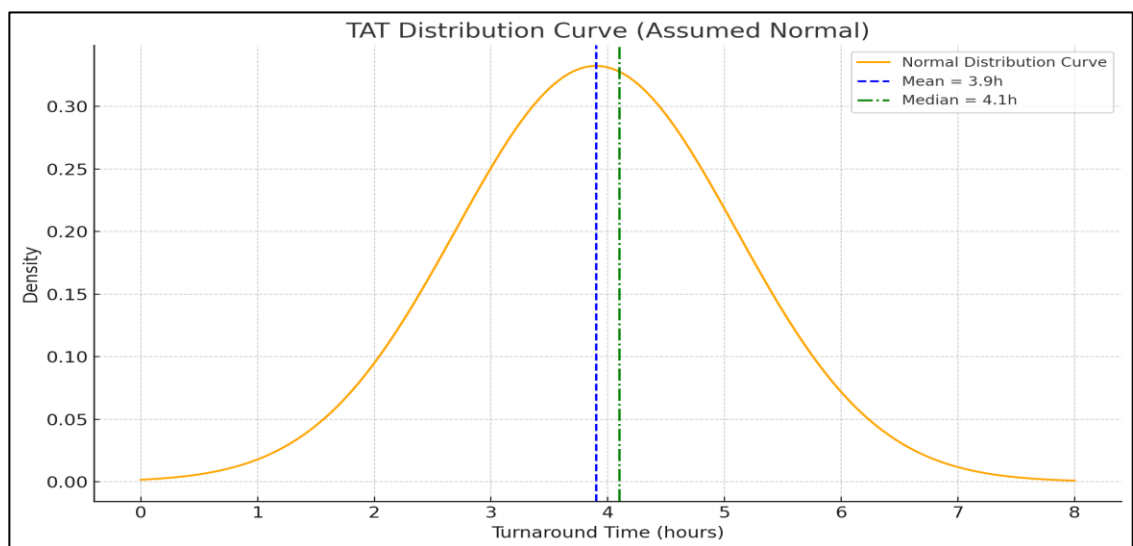


FIGURE-4.4

The graph shows that the average discharge turnaround time (TAT) is **3.9 hours**, and the median is **4.1 hours**, indicating most patients are discharged around this time. The curve follows a near-normal distribution, with a slight left skew due to a few faster discharges. Most discharges occur between **3 to 5 hours**, reflecting moderate efficiency with some scope for reducing delays.

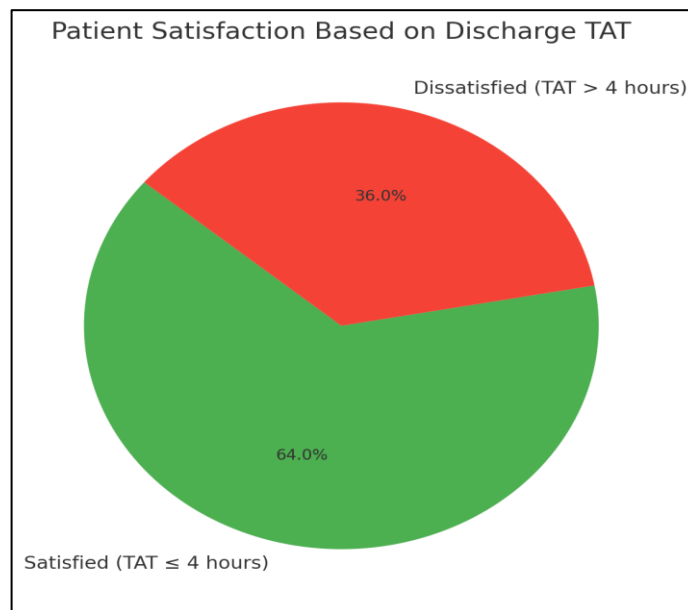


FIGURE-4.5 Patient Satisfaction Based on Turnaround Time (TAT):

The Pie Chart presents patient satisfaction levels based on the turnaround time (TAT) for services. Out of the total patients surveyed, 64% (96 patients) reported being **satisfied**, having received services within 4 hours ($TAT \leq 4$ hours). In contrast, 36% (54 patients) were **dissatisfied**, experiencing a TAT of more than 4 hours.

This indicates that while a majority of patients are receiving timely services, over one-third still face delays, which could negatively impact their overall experience and perception of care quality. Addressing the causes of extended turnaround times could significantly enhance patient satisfaction and operational efficiency.

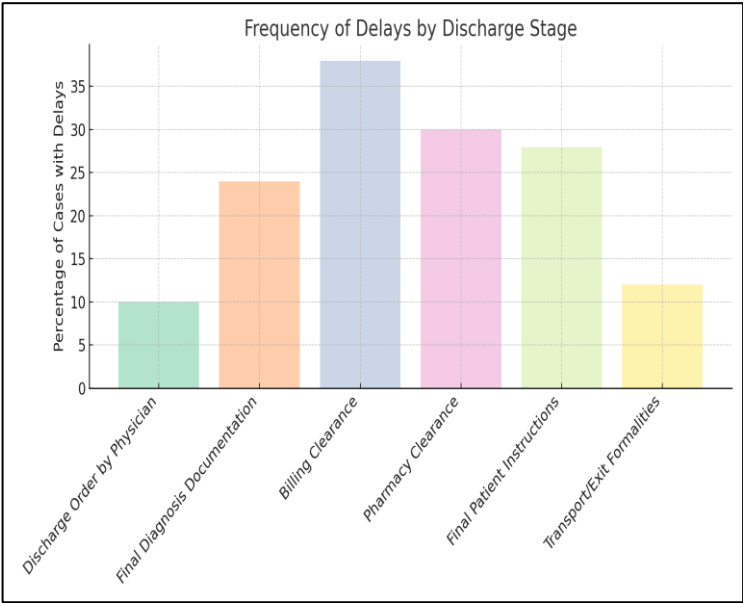


FIGURE- 4.6

The bar graph shows the frequency of delays at different stages of the patient discharge process. **Billing clearance** is the leading cause of delays (38%), followed by **pharmacy clearance** (30%) and **final patient instructions** (28%). Delays are less frequent in **final diagnosis documentation** (24%), **transport/exit formalities** (13%), and **physician discharge order** (10%). This highlights that administrative and coordination-related steps are the major contributors to discharge delays.

Qualitative Insights from Stakeholder Interviews

Theme	Mentions	Visual Bar (Proportional to 50 Participants)	Example Quote
Lack of Coordination	20	(20 units)	"There is no real-time communication between departments." "

Delayed Documentation	14	 (14 units)	"Discharge summaries are rarely prepared on time."
Inconsistent Discharge Planning	10	 (10 units)	"We don't know the exact discharge time until the last minute."
Resource Constraints	6	 (6 units)	"We don't have dedicated staff for discharge coordination." "

CHAPTER-5

DISCUSSION

This chapter interprets the findings of the study on the **discharge process efficiency** in a tertiary care hospital, based on an analysis of 100 patient discharge records and qualitative insights from key stakeholders. The focus is on understanding the **turnaround time (TAT)**, identifying bottlenecks, and assessing patient satisfaction, while integrating findings with existing literature and implications for hospital administration.

Patient Demographics and Relevance to Discharge Efficiency

The demographic analysis revealed that 56% of the discharged patients were male and 44% were female. The majority (40%) fell in the age group of 31–50 years, followed by 30% in the 51–70 years group. Age and gender can influence discharge experiences, especially in older patients who may require more support in terms of mobility, transport, or understanding discharge instructions. Studies like that of **Biswas et al. (2022)** have shown that elderly patients often experience longer discharge durations due to communication gaps, comorbidities, or unclear discharge instructions.

Although no direct correlation was tested in this study between demographics and discharge delay, these variables can be considered when designing more patient-centered discharge processes.

Turnaround Time (TAT) Analysis and Patient Satisfaction

The average TAT from discharge decision to actual departure was **3.9 hours**, with a **median of 4.1 hours**, suggesting moderate discharge efficiency. A majority of patients (44%) were discharged within **2–4 hours**, while **36% experienced delays exceeding 4 hours**, primarily due to administrative bottlenecks. These findings are consistent with earlier research by **Patel et al. (2020)** and **Singh et al. (2021)**, who reported similar discharge delays in tertiary care settings due to lack of coordination between departments and manual billing procedures.

Patient satisfaction was strongly associated with TAT: **64% of patients with TAT ≤ 4 hours were satisfied**, whereas dissatisfaction increased significantly for TAT > 4 hours (36%). This reinforces that discharge time is not merely a logistic measure but a **critical determinant of patient perception of hospital efficiency**. A study by **Gupta et al. (2019)**

similarly found that prolonged discharge times led to negative patient reviews, especially when patients were made to wait post-discharge order.

The near-normal distribution of discharge times, as shown in Figure 4.4, with a slight left skew, indicates that while a large number of discharges occur around the 4-hour mark, there remains potential to reduce variability and target outliers with interventions.

Key Delay Points in the Discharge Process

Analysis of delay stages (Figure 4.6) identified **billing clearance (38%)** as the most frequent cause, followed by **pharmacy clearance (30%)**, and **final patient instructions (28%)**. Delays in diagnosis documentation (24%) and discharge order (10%) were relatively less frequent. These findings mirror the gap analysis conducted by **Rajan et al. (2021)**, which reported similar delays due to uncoordinated billing and lack of synchronized workflows between pharmacy and nursing staff.

These results underscore the **administrative-heavy nature of discharge delays**, which are less clinical and more related to **poor communication, fragmented systems, and lack of digital integration** across departments.

Qualitative Insights from Stakeholder Interviews

Thematic analysis from 50 stakeholder interviews reinforced quantitative findings. The most frequently mentioned challenge was a **lack of coordination (20 mentions)**, often due to the absence of a centralized communication system. Stakeholders reported, *"There is no real-time communication between departments,"* echoing similar sentiments found in the study by **Sharma et al. (2020)**.

Delayed documentation (14 mentions) and **inconsistent discharge planning (10 mentions)** also emerged as significant concerns. Discharge plans were often made at the last minute, leaving patients and caregivers unprepared. This unstructured approach contributes to delays in preparing summaries, pharmacy prescriptions, and billing.

Furthermore, **resource constraints (6 mentions)**, such as the absence of dedicated discharge coordinators, were cited as barriers to streamlining the process. Literature by

Kumar et al. (2018) supports the role of discharge coordinators or case managers in expediting discharges by bridging gaps between departments.

Comparison with Literature and Implications for Practice

The overall findings align with previous research conducted in India and abroad. Studies by **Patel et al. (2020)** and **Biswas et al. (2022)** consistently reported discharge inefficiencies in multi-specialty hospitals due to administrative delays and lack of integrated IT systems. Interventions recommended in their work—such as **real-time dashboards**, **electronic discharge summaries**, and **dedicated discharge teams**—could be piloted in the hospital under study.

The **64% satisfaction rate** for $TAT \leq 4$ hours also reflects favourably compared to other hospitals, where satisfaction was below 50% due to 6–8 hour discharge processes (**Mahapatra et al., 2019**). However, the 36% dissatisfaction rate still signals the need for sustained improvements.

CHAPTER 6

CONCLUSION

CONCLUSION

This study aimed to analyse the discharge process at Dr. Mukesh Baghel Multispecialty Hospital by evaluating turnaround time (TAT), identifying delay points, and assessing patient satisfaction. The findings reveal that although the hospital demonstrates moderate efficiency in discharge management, several critical gaps hinder optimal patient flow and experience.

The analysis of 150 patient discharge records showed that the average TAT was **3.9 hours**, with 64% of patients discharged within 4 hours. However, **36% of patients experienced delays**, with major contributing factors being delays in billing (38%), pharmacy clearance (30%), and final patient instructions (28%). These process inefficiencies often stemmed from administrative barriers, lack of real-time coordination, and limited staffing support.

Qualitative insights from stakeholder interviews further supported the quantitative data. Key themes included **lack of interdepartmental coordination, delayed documentation, inconsistent discharge planning, and resource constraints**. These operational gaps not only extend discharge time but also impact patient satisfaction and overall hospital efficiency.

The findings underscore the importance of **implementing structured discharge planning, improving communication across departments, integrating digital tools**, and potentially assigning **dedicated discharge coordinators**. By focusing on these improvement areas, the hospital can reduce TAT, enhance patient satisfaction, and optimize bed turnover rates—an essential metric for capacity management in any healthcare institution.

RECOMMENDATIONS

SHORT-TERM OPERATIONAL SOLUTIONS

S.No.	Recommendation	Objective	Responsible Unit
1	Implement real-time discharge checklist for nurses	Ensure early initiation and tracking of discharge	Nursing Department
2	Designate a discharge coordinator during peak hours	Streamline communication and process flow	Hospital Administration
3	Prioritize pharmacy and billing for discharge patients	Reduce clearance delays for discharges	Pharmacy & Billing Units
4	Prepare discharge summary one day prior (when feasible)	Minimize documentation delays	Treating Physicians
5	Introduce color-coded files for pending discharge steps	Quickly identify bottlenecks in discharge workflow	Quality & Operations Team
6	Provide discharge status dashboard for floor managers	Real-time tracking of patient discharge status	IT/Operations

LONG TERM STRATEGIC SOLUTIONS

S.No.	Recommendation	Objective	Responsible Unit
1	Integrate Electronic Health Record (EHR) with discharge modules	Enable automated documentation & discharge tracking	IT Department
2	Develop and implement a centralized discharge planning SOP	Standardize the entire discharge process	Hospital Management & Quality
3	Recruit and train dedicated discharge planning team	Improve planning, coordination, and patient communication	HR & Operations

4	Use predictive analytics for expected discharge forecasting	Manage bed occupancy and resource planning efficiently	Data Analytics Unit
5	Introduce patient discharge lounge	Alleviate bed blocking and enhance patient comfort	Facility Management
6	Conduct regular discharge audits and patient feedback analysis	Continuously monitor and improve discharge experience	Quality Assurance Team

Implications of the Study

The findings emphasize the importance of a structured, well-communicated discharge process. If the identified gaps are addressed, the hospital can:

- Reduce discharge delays, thereby improving patient turnover and bed availability.
- Enhance the patient experience, leading to higher satisfaction and trust.
- Decrease readmission rates through better education and follow-up planning.
- Improve coordination and morale among hospital staff by clarifying roles and responsibilities.

CHAPTER 8

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APPENDIX

Appendix A: Observation Checklist Template

Title: Real-time Observation Checklist for Discharge Patient

Purpose: To record the patient flow and time taken at each stage for discharge.

Patient ID	Planned Discharge Date & Time	Actual Discharge Date & Time	Reason for Delay (if documented)	Billing Clearance Delay (Y/N)	Pharmacy Clearance Delay (Y/N)	Final Patient Instructions Delay (Y/N)	Final Diagnosis Document Delay (Y/N)	Transport /Exit Formalities Delay (Y/N)	Physician Discharge Order Delay (Y/N)

APPENDIX B Semi-Structured Interview Guide for Stakeholders

Title: Stakeholder Interview Data Collection Form

Purpose: To systematically record stakeholder interviews capturing insights on causes of discharge delays and improvement suggestions.

Stakeholder Name	Role/Position	Date of Interview	Mode (In-person/Phone)	Key Points Discussed	Observations on Delay Causes	Suggestions for Improvement

Example Questions for Semi-Structured Interviews:

- 1. What are the typical reasons that cause delays in patient discharge in your department?**
- 2. How often do you observe such delays, and what are the most common patterns?**
- 3. What processes or system issues contribute to these delays?**
- 4. How well is the discharge planning coordinated among different teams?**
- 5. What improvements would you suggest to reduce discharge delays?**