

STUDY ON TURNAROUND TIME OF DISCHARGE PROCESS FOR CASH & INSURANCE PATIENTS IN FMRI, GURUGRAM

Dissertation Submitted to



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for the partial fulfilment 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

Mr. Ashish Bandhu

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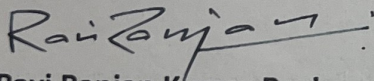
To Whomsoever It May Concern

This is to certify that **Dr. Rajat Dewan** has undergone Training Course as an **Management Trainee** in the department of **Medical Administration** from **01-April-2024** From **30-Jun-2024** at **Fortis Memorial Research Institute** and can be mutually extended thereafter.

During his training he exhibited a high level of professionalism and a tremendous zest for learning.

We wish **Dr. Rajat Dewan** all the best in his future endeavors.

For Fortis Hospitals Limited



Ravi Ranjan Kumar Ravi
SBU Head HR



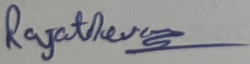
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DECLARATION BY STUDENT

I hereby declare that this dissertation titled **''Study on turn around time of discharge process for cash and insurance patient in FMRI, Gurugram''** 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 Information derived from the published or unpublished work of others has been duly acknowledged in the text.

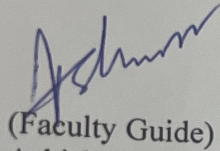


Dr. Rajat Dewan

Date: 09/07/2024

CERTIFICATE

This is to certify that dissertation titled “ **Study on turnaround time of discharge process for cash and insurance patients in FMRI, Gurugram** is a record of the research work undertaken by **Dr. Rajat Dewan** in partial fulfilment of the requirements for the award of the degree of Master of Business Administration (MBA) in Hospital and Health Management (HM) from the IIHMR University, Jaipur under my guidance and supervision and his approach to the research study has been sincere, scientific, and analytical.

A handwritten signature in blue ink, appearing to read 'Ashish Bandhu'.

(Faculty Guide)
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School Dean
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Abstract

Introduction and objective:

The discharge planning procedure encompasses medical, financial, legal, administrative, and documentation elements. It's an exhaustive procedure that starts with preparing for discharge orders and concludes with settling all kinds of hospital debts. It can be finished in a way that meets international norms through systematic management with support from skilled medical, para-medical, and administrative staff.

The study's major goal is to analyze the gap in the discharge process and the factors influencing the discharge procedure in cash and TPA patients. And to assess and solve the problem.

Methodology:

The study was carried out in the inpatient unit of Fortis Memorial Research Institute, Gurugram. It involved an observational study on all patients who left the designated wards between 10 a.m. and 5 p.m. daily, except on Sundays, to be monitored during their departure and a structured questionnaire was distributed to the family members of the patients who left. The questionnaire asked about the process of their discharge, including how long it took, and the reasons for any delays. The process of planning for a patient's discharge involves various elements such as clinical, financial, legal, administrative, and record management. This process is elaborate and time-intensive, starting from the drafting of discharge orders to the resolution of all kinds of hospital invoices. It can be streamlined and done in accordance with international standards with the help of well-trained medical, para-medical, and administrative staff.

Results:

During the research period, 80 discharged patients from the inpatient department's four wards (general/cubicle/sharing/deluxe) were monitored. According to the findings, 268 minutes was noted as an average time of release for individuals who had a scheduled discharge. They have to pay from their pocket (Self-Payment). The average length of stay was found to be 2.5 days. The data also suggest that most released patients' relatives observed thought that their discharges were delayed owing to the non-availability of the resident doctor for drafting the summaries. In contrast, others attributed their delay to a long waiting period for billing.

Conclusion:

Time and the rigorous discharge procedure all contribute to patient discontent. If there are a lot of patients in the hospital, every department involved in letting patients go should have enough staff members. Hospital management should conduct a periodic time motion assessment of all related departments to determine the causes of delays and challenges in process execution.

Feedback from patients or their families regarding hospital services, particularly discharges, should be a continuous activity for hospital administration.

Keywords: discharge, insurance, pharmacy, diagnostic

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List of Abbreviations

NABH	National Accreditation Board for Hospital and Healthcare Providers
ACC	Access Assessment and Continuity of Care
TPA	Third-Party Administrator
ALOS	Average Length of Stay
HMIS	Hospital Management Information System
MOU	Memorandum of Understanding
DMO	Duty Medical Officer
OT	Operation Theatre
CNS	Central Nervous System
CVS/RS	Cardiovascular System/ Respiratory System
LAMA	Leave against medical advice
ENT	Ear, nose, throat
IP	In-patient
ICU	Intensive care unit
MICU	Medical intensive care unit
AD	Memorandum of Understanding

Chapter 1: Introduction

1.1 Background

Overview of Hospital Discharge Processes and Their Importance

NABH defines discharge as the event of evacuating a affected person (patient) from the hospital. And also, and receiving all the necessary medical reports to ensure the stability of the patient. Discharge begins when the specialist officially approves the discharge and ends when the patient leaves the clinic. The goal of the study conducted was to know the discharges from a 25-bed specialist hospital, compare them with the NABH AAC 13 and 14 criteria and look for possible bottlenecks. In practice, discharge is defined as "discharging an admitted patient from the hospital after fulfillment of adequate medical care for a period deemed necessary" and the discharge process includes maintaining clinical, financial, legal and administrative records. It starts with the physician signing the discharge order and ends with the payment of various types of hospitalization fees. It is a lengthy process and may take many hours as it involves multiple parties. Planning at the time of admission, preparation of a clinical care plan within 24 hours of admission, and maintaining the of care plan of clinical within 24 hours of admission are the main concepts of efficient discharge planning. The time limit for the discharge process depends on the patient's payment method: H. Credit PSU, TPA, cash payment.

Layoffs can be classified as planned or unplanned. In planned discharges, the plan is made in the afternoon before discharge after the morning doctor's rounds (verbal or written), financial and pharmacy actions start at noon, and the patient is discharged at nightfall. If discharge is planned, the patient's admission should be delayed until 5 pm. Unplanned discharges occur when the discharge process begins naturally after the doctor's consultation and all discharge activities are initiated. To improve the quality of healthcare and hospitalized patients, long and inefficient discharge processes must be addressed. Patient dissatisfaction erodes loyalty and threatens hospital revenue. The patient discharge process is the most critical step that needs to be improved to increase hospital bed availability. Hospitals need to have a solid discharge strategy to make certain the satisfaction of the patient, quality patient care, bed availability. It also focused on the customer loyalty. The ultimate end stage is the discharge process of a patient's treatment, and if completed on time, patients are completely satisfied. A rapid discharge process can ensure early availability of beds for patients, thus minimizing the waiting time for admission of patients and even reducing the rate of refusal of patients due to lack of beds. " If a discharge date is provided, hospitals and other medical professionals involved in patient care may consider additional strategies to simplify the discharge process and improve hospital services.

The aim of the above mentioned experimental study was to identify a number of parameters that affect discharge TAT and predict them using machine learning. Generally, patients are notified that they are being discharged to receive a final summary and preparation letter, after which billing is initiated and paid. The hospitals selected for this study were no exception. This procedure includes several activities and remaining obligations, such as: B. Last-minute investigations and mutual consultations cause unplanned and unpredictable delays. If a release date is offered, the hospital and other healthcare professionals involved in patient care may be able to simplify the discharge procedure and investigate further strategies to improve hospital services. The purpose of this work was to identify the many parameters that impact discharge TAT and forecast it using machine learning. In general, the patient is notified that she will be discharged to final summary and preparation, after which the bill is begun and cleared. This study's chosen hospital was no exception. This procedure involves several activities and remaining obligations, such as last-minute investigations and cross-consultations, resulting in

unplanned and unpredictable delays.

In almost every hospital, the above mentioned processes i.e., admission and discharge processes can both be gridlockls, lowering the efficiency of hospital. It is also considered as an important point in the quality of care and satisfaction to the patient. Delays of the patients discharge in the hospital boost the need for hospital beds even more. Delays in discharge are inefficient for both hospitals and patients, It boosts healthcare expenditures while making people sad. A considerable delay in discharge increases the patient's chances of getting a hospital acquired infection.

1.1.1: Average length of stay (ALOS)

The hospital's average length of stay is a common statistic practiced in planning of health-care.

According to common belief, the kind of payment system or health insurance plan currently has a greater impact on patients' duration of stay in hospitals. As the average length of a hospital stay has grown in popularity, it seems like a good idea to include a description of this calculation in a "Tools of the Trade" page.

There are two way to calculate the average stay length. Each method's formula as follows:

* METHOD 1: $(\text{Total discharge days} / \text{Total discharges}) = \text{Average length of stay (in days)}$

* METHOD 2: $(\text{Total inpatient days of Care} / \text{Total Admissions}) = \text{Average Length of Stay (in days)}$

1.1.2: Bed Occupancy Rate

The occupancy rate indicates how fully a hospital or similar health facility is being used over a specific time frame, presented as a percentage. Words like "occupancy rate," "percent of occupancy," and "occupancy ratio" are often used in place of each other. The Department of Health Statistics regularly compiles and organizes the rates for hospitals and nursing homes by location, including state, county, and institutional levels. This data is invaluable for planning health care services.

To exert influence on the bed occupancy for a time period of a year, two important pieces of information are required: "Inpatient Days of Care" and "Bed Days Available." For example, "Inpatient Days of Care" defines the total number of days patients are staying in the hospital facility within a year, by summing up all the daily figures for the 365 days. Other synonyms or similar terms used to describe the same are "total inpatient service days," "occupied bed days," and "census patient days of care."

Beds Availability - - It indicated the total number of patient admitted in IPD of treatment that would be offered, if all the beds are filled.

If the number of beds fluctuated during a year, the availability of the beds days would have to change as well, complicating the calculation.

We'll go over this in further detail in the next paragraphs. Bed days can alternatively be called "potential days," "maximum patient days," or "total inpatient bed count days." The inpatient days of care and bed days availability in this calculation:

When assessing occupancy rates, the facility is not the only thing to consider. Commonly occupancy

rates are assessed in order to establish how successfully a certain inpatient unit, such as obstetrics, psychiatric, medical/surgical, or other, is used. The occupancy rate can be defined as the statistical metric value that is often calculated over a period of time (month, year, etc.). Even if the number of beds varied within the reporting period, evaluating occupancy over long run illustrates the extent to which hospital beds were occupied.

1.1.3: Discharge TAT

Analysis of processes in health information systems can be supported by assessing lead times. The TAT for discharge is identified from the time of notice of dismissal to the period of vacancy. If the consultant recommends discharge, the physician assistant enters this information into the HMIS. The second TAT for discharge is when the discharge summary is completed, pharmacy return is completed (by the ward secretary), OT clearance is obtained (in case of surgery) and the ward secretary marks the discharge. The third TAT is the final processing of the bill, where the billing clerk checks and validates all entries and the bill to the insured patient is generated according to the insurer's price list and memorandum of understanding. The biller then marks it as complete. The fourth TAT occurs to release the room when the patient leaves the room after paying the bill. After paying the fee, the viewer receives two pink slips which he must hand over to the nursing staff and the security guard at the gate.

1.1.4: The content of discharge summary includes:

- Clinical Department & Consultant Name
- Patient Demographics
- Primary Diagnosis
- Secondary Diagnosis
- Present complaints
- Clinical Findings- General examination, Vitals, CNS examination, CVS/RS
- Investigations performed and detailed information about the results.
- Progression course at the hospital, including procedure/surgery results and medication/treatment given.
- Patient condition at the time of discharge
- Additional care and medicines

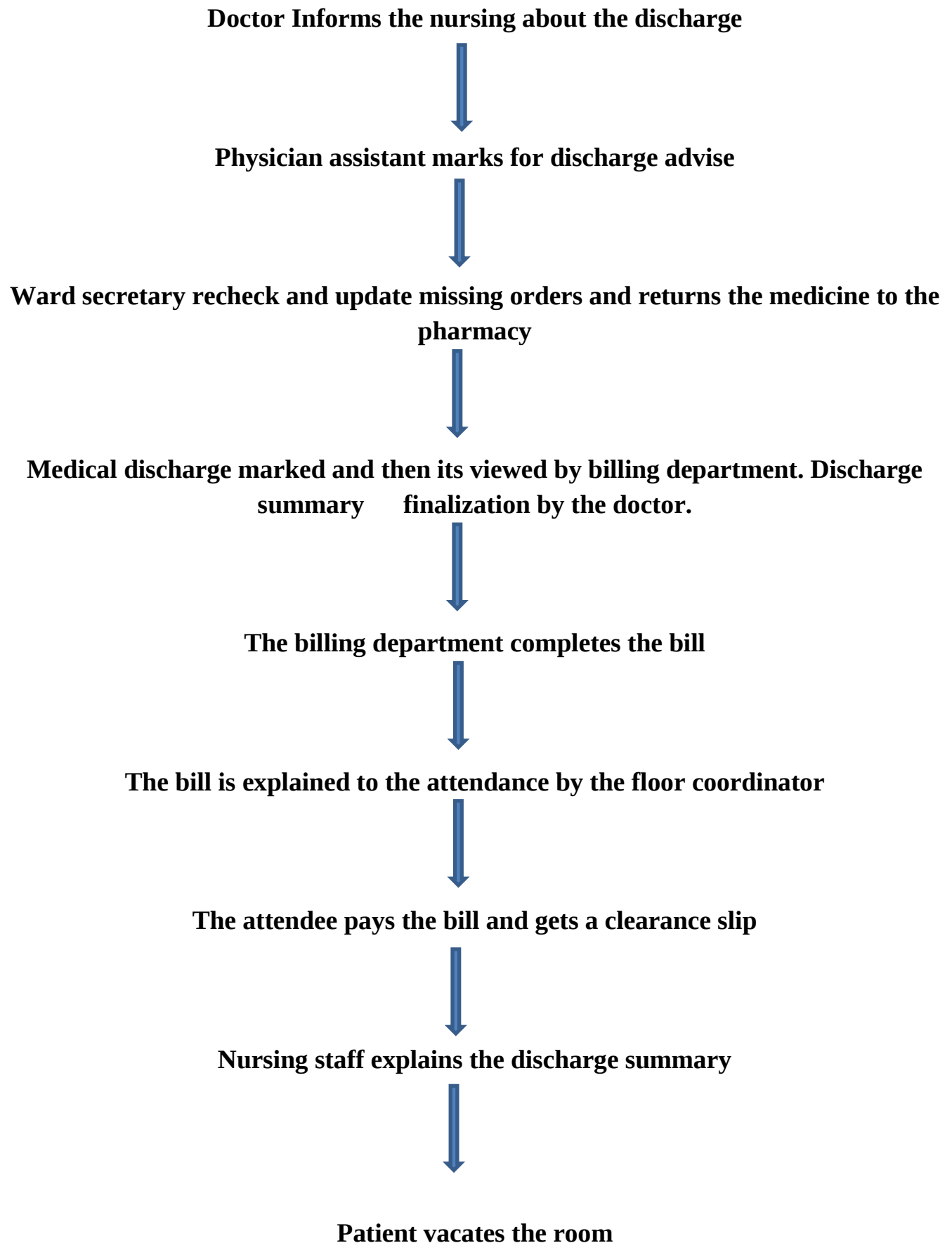
- Discharge advises
- Follow-up advises
- Emergency phone number of the hospital Emergency Department Treating consultant

1.1.5 Key Stake Holders of Discharge Process

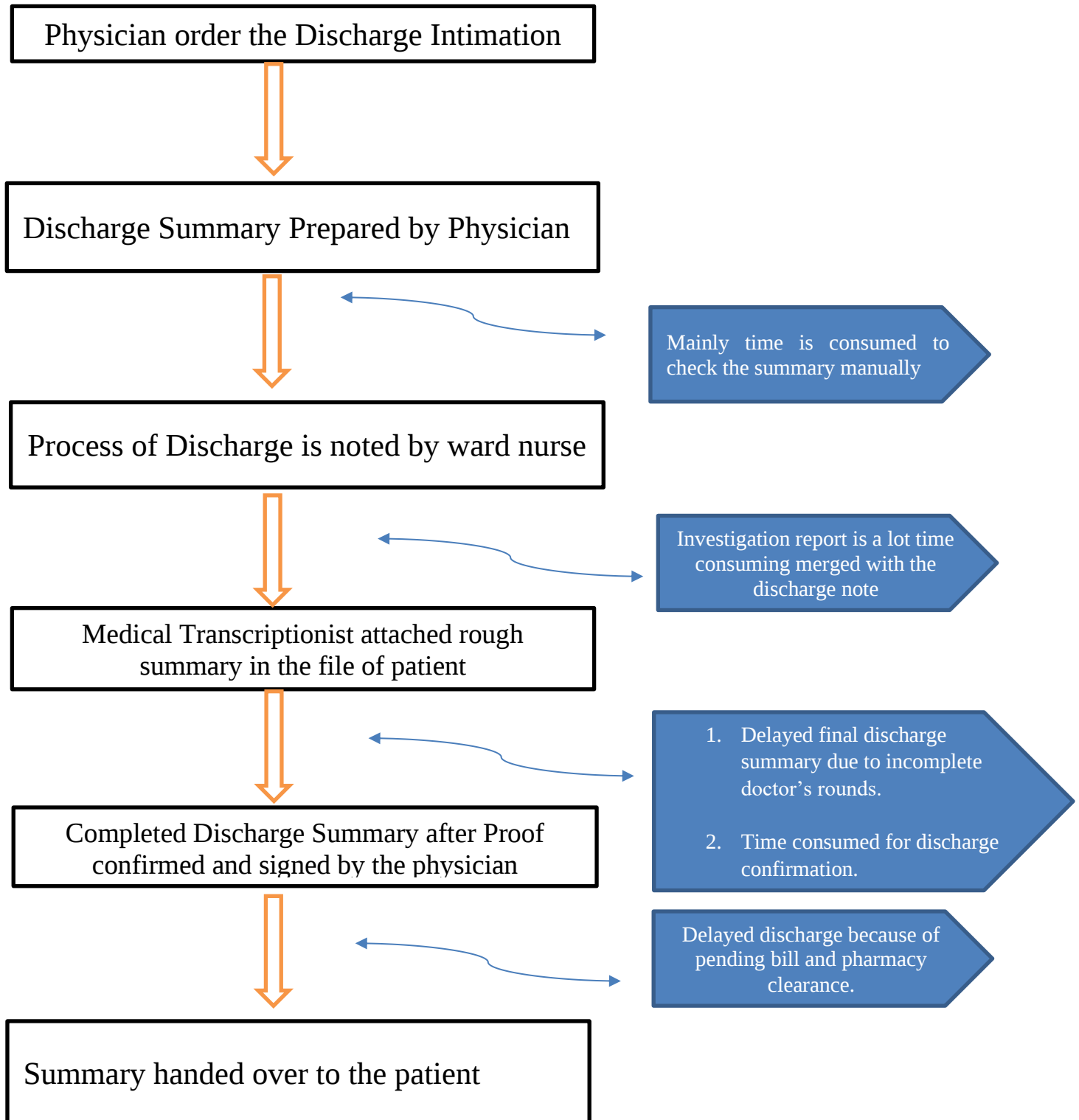


Fig1.1 Key Stake Holders of Discharge Process

1.2 Overview of Discharge Process



1.3 Major Steps in Preparation of Discharge Summary



1.4: Objectives

While conducting the study, the following objectives were kept in mind:

- * To study the process of discharge at Fortis memorial research institute Hospital.
- * To understand the gap in the process of discharge and factors affecting the discharge process in cash and TPA patients.
- * To analyse the problem and overcome it.

Chapter 2: Literature Reviews

Sr. No	Author	Year	Title	Findings
1	Sima Ajami, Saedeh Ketabi	2004	An analysis of the average waiting time during the patient discharge process- A case study	Patients required an average of 4.93 hours to complete the discharge procedure, according to data. The most important factors influencing regular waiting times, according to the medical experts concerned, are patients' financial concerns and the distance between different wards. The average length of stay on the Neurology ward was 5.7 days. There was a wait to fill out medical records at the nursing and medical equipment stations, according to the findings.
2	Kumari J. V	2012	A study on time management of Discharge Process and Billing in Tertiary Care Teaching Hospital	The average time for patient discharge was 2 hours and management of 22 minutes. The intra processing (outside billing) time Discharge and for the discharge procedure was found to be longer than Billing Process the inter processing time (within billing department).
3	Swapnil B, S. Tak, Kulkarni	2013	A comparative time motion study of all types of patients discharges in a hospital	There was a delayed for all types of discharges at the hospital, including insurance patients, cash patients. DAMA, and so on. The entire time required for discharge was matched to NABH norms. The total time for insurance, self-pay, and DAMA patients was 278.337 and 302 minutes, respectively
4	Harmanjot Kaur, Roopjot Kochar	2017	A Study on Discharge Process of Discharged Patients of a Multispecialty Hospital	The current study results indicated that a maximum turnaround time of 9:07 hours was used between discharge notification and patient handover, and an average of 5:07 hours was wasted between discharge notification and room preparation for the next patient. The minimum turnaround time for updating the billing card on the floor and its receipt at IP billing is 18 minutes

Sr. No	Author	Year	Title	Findings
5	Human Konnect	2017	Turnaround time for Discharge process	This knowledge the discharge procedure, satisfactory/unsatisfactory experience, and main bottlenecks in the discharge process. The following are the key obstacles in the discharge process: i. Delay in beginning the discharge procedure. ii. The completion of the discharge card has been pushed back. iii. Delay in completing the final case file The final bill was not completed on time. IV. The financial approval process is taking longer than planned
6	Kasturi Shukla, Shrishti Upadhyay	2018	Predictive modelling for TAT of Discharge process for Insured patients in Cooperate Hospital	According to this study, investigating the predictors of insured patients is a common occurrence. Furthermore, hospital delays must be reduced through timely filing of discharge summaries and obligatory reports, as well as rapid replies to produced inquiries.
7	Mundodan J, Sarala K, & Narendranath	2019	A study to assess the factors contributing to Delay in Discharge Process in a hospital	The average time for the discharge procedure was 5 hours and 41 minutes. The average duration between receiving discharge instructions and leaving the ward ranged from 6.62 hours in urology to 3.01 hours in ear, nose, and throat (ENT). Only 13 patients (18.8 percent) were released within the time restriction of 180 minutes set by the National Accreditation Board for Hospitals and Healthcare Providers (NABH). The longest delay occurred during the time required to complete the discharge summary.

Chapter 3: Methodology

Study period: 1 April to 30 June, 2024

Study setting: In-patient Department at Fortis Memorial Research Institute Hospital, Gurugram

Type of study: Descriptive and observational

Study population: IPD patients at General ward, deluxe/exclusive and sharing ward.

Inclusion criteria: Cash or insurance covered patients stay of 24hours or more at General ward, maternity or critical care areas like ICU, MICU.

Exclusion criteria: Emergency cases. Night indents are not mentioned for primary data collection.
Study tools: Discharge checklist, discharge tracked through HMIS

Sampling Method: Convenience sampling-

Only IP are recorded, and the indents are recorded in daytime. The night indents are not being watched.
Sample size: 80 Discharges

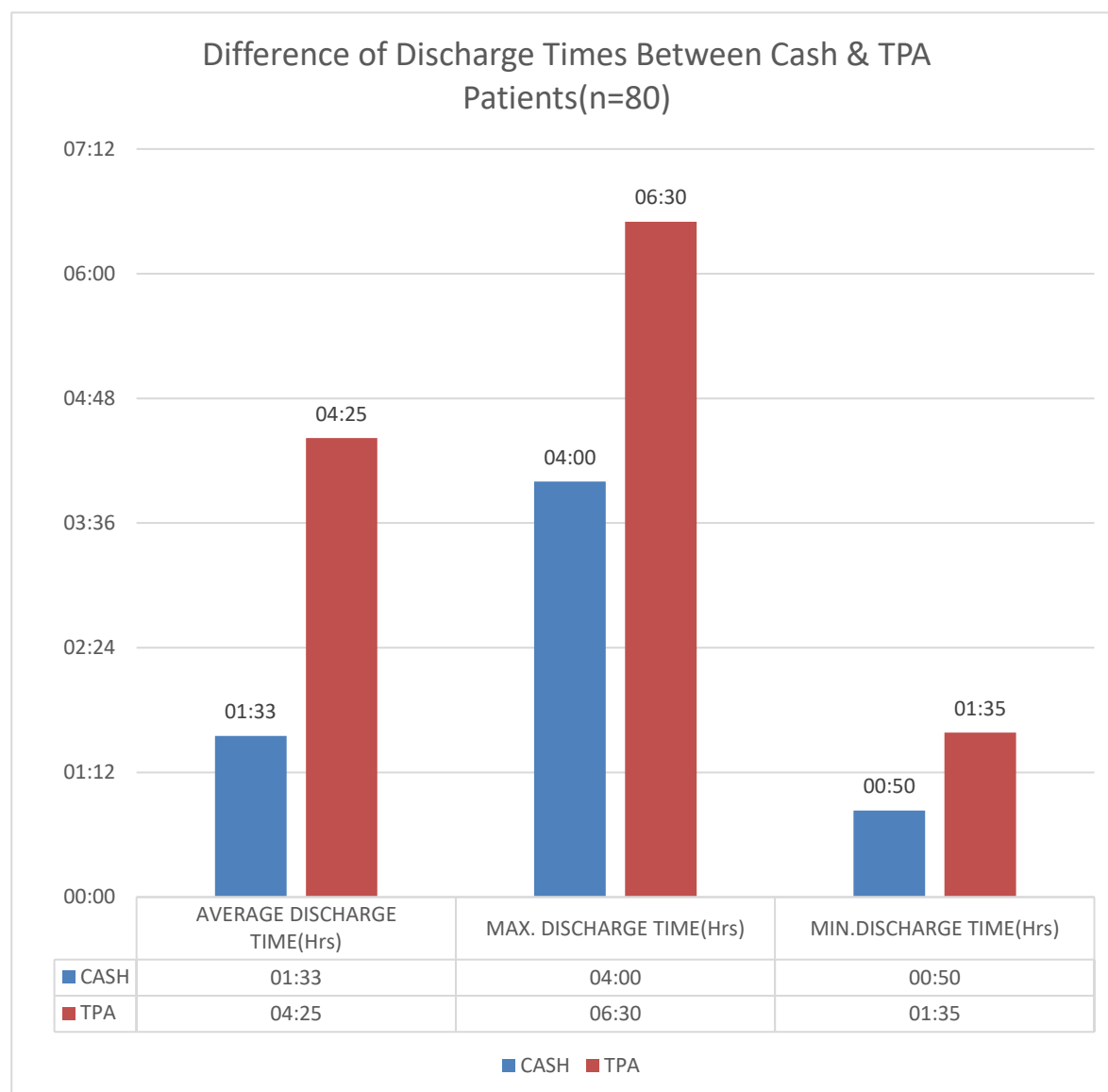
Mode of Data collection: Observation methods

Type of Data: Quantitative

Chapter 4: Results/ Interpretation

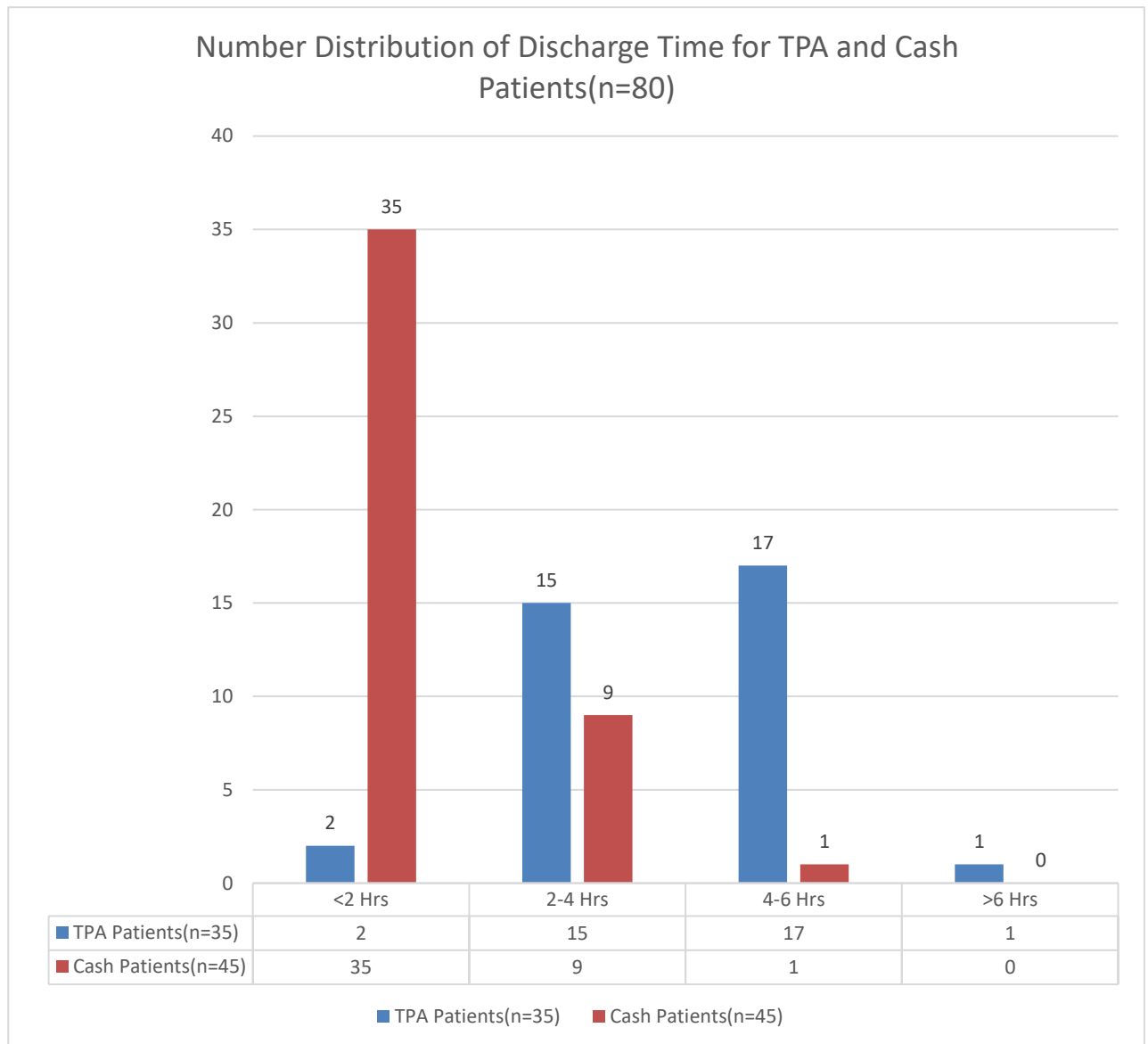
4.1 Data Collection

4.1.1 Difference of Discharge Times Between Cash and TPA Patients (n=80)



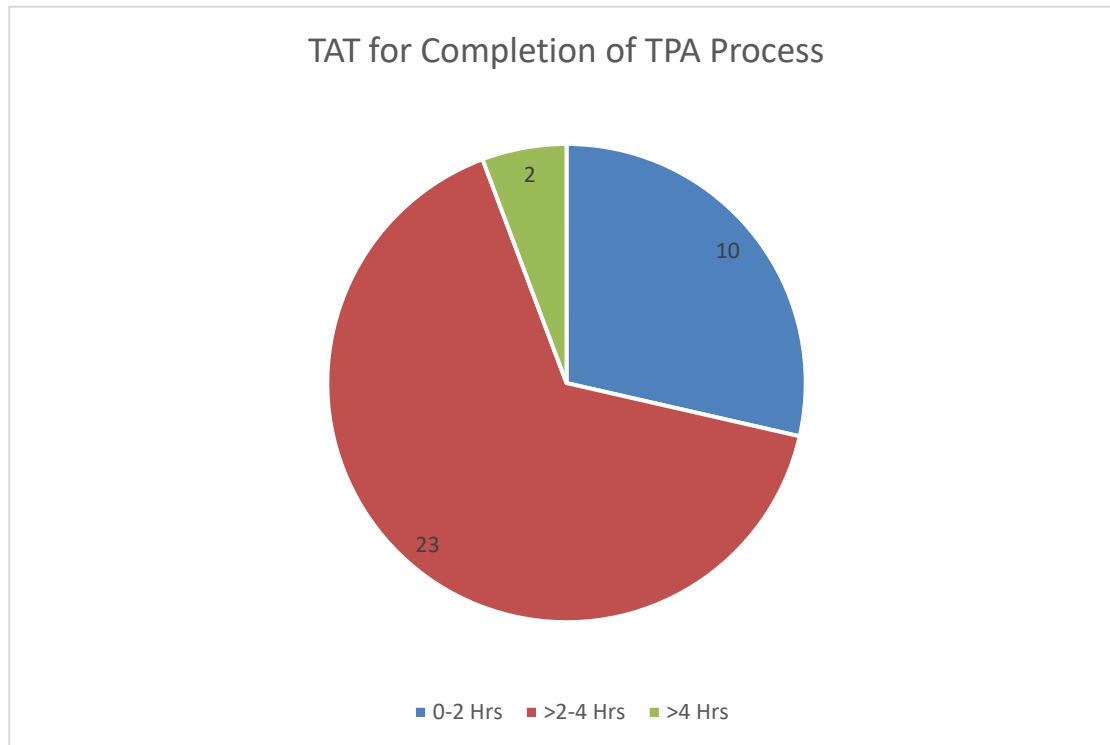
Cash payment patients had an average discharge time of 1 hour and 33 minutes, with a range from 50 minutes to 4 hours. If we compare it with TPA patients experienced a much longer waiting discharge time of 4 hours and 25 minutes, with a range from 1 hour and 35 minutes to 6 hours and 30 minutes.

4.1.2 Number of Distribution of Discharge Time for TPA and Cash Patient (n=80)



This comparison shows that TPA patients tend to have longer treatment durations, which required almost 4 hours. If we compare with the Cash patients predominantly have shorter treatment time, with most of patient being treated in less than 2 hours

4.1.3 TAT for completion of TPA Process



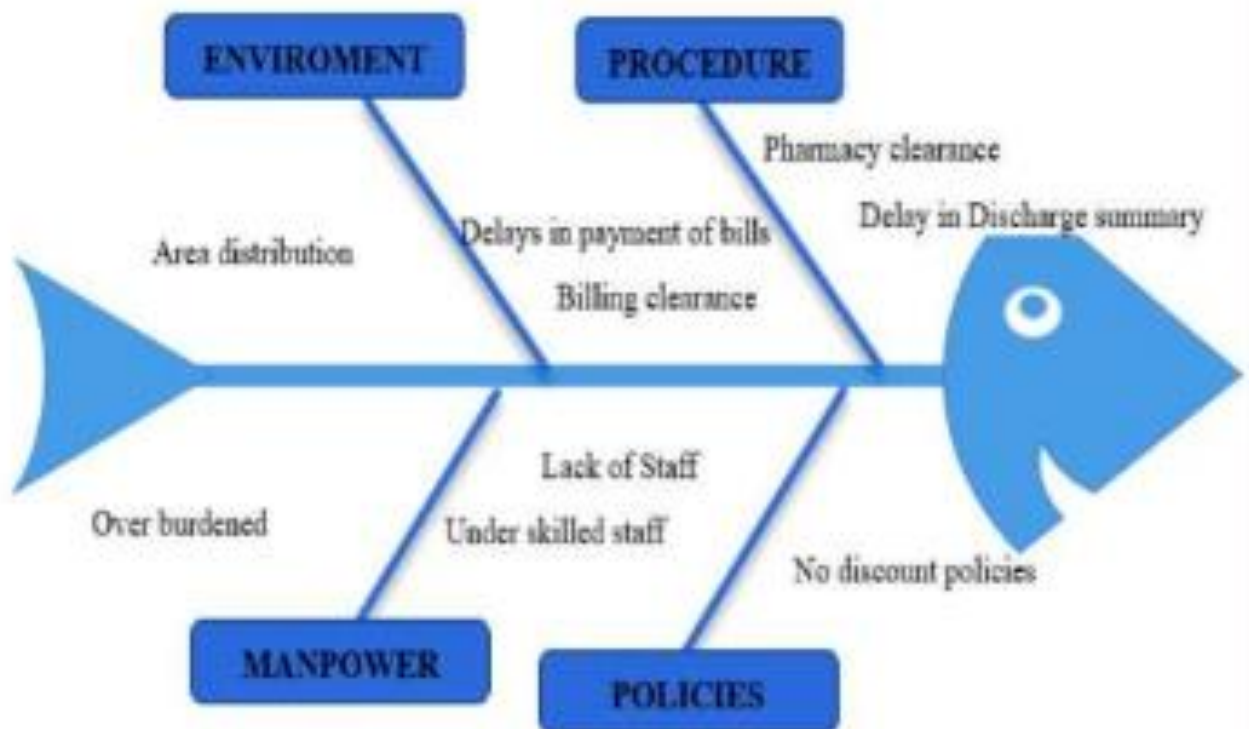
The efficiency of TPA processes varies notably. A relatively small proportion (28.6%) of TPA processes are completed efficiently within 2 hours, indicating that only a minority of patients receive quick treatment. Most TPA processes (65.7%) fall within the 2 to 4-hour range

Reasons for discharge delays for the greatest number of patients (80):

- Inadequate cash on hand at the time of discharge among attendants
- Anticipating reductions on final bill settlement
- Pharmacy returns of a few medications that cannot be returned

4.2 Fish Bone Analysis

To identify the reason for the delay in the discharge process.



Fish Bone Diagram Shows the Reason for Delay in Discharge Process

4.3 Problems Identified

Several factors for the problem of excessive time spent preparing a discharge report were discovered. These are separated into four major components, which are listed below:

1. Delay in sending the file to discharge desk

- Delay in turning over the patient file to the discharge desk by nursing personnel.
 - There might be several causes for delay, such as healthcare personnel taking their time presenting the paperwork or being involved in other duties (attending the patients).
 - Wait for a doctor's round before ordering a patient's release. The doctor may have previously authorized the patient's discharge the day before, but a final order is required by law.
 - Delays in obtaining approvals such as pharmacy and lab. The employees may get so preoccupied with completing these requirements that the file is not forwarded to the discharge desk.
 - Tasks such as medication indent or discharge marking require time.

2. DISCHARGE DESK

- Workload owing to understaffing may cause forgetting to notify DMO about the discharge indicated by consultant at times.
- When the workforce has a lot of files. it might lead to job overload.
- In the rush to complete the discharge report, personnel may make mistakes such as
- The personnel may misunderstand some phrases and input the incorrect prescription.
- Prior notification of leave by personnel to the HOD will assist with accommodating alternatives in the ward without affecting the procedure delay.

3. DMO

- DMO conducts rounds in the middle of the job of creating discharge summaries since different consultants have rounds at different times.
- The DMO may interrupt the summary process if he or she has to attend to patient complaints.

Chapter 5: Discussion and Suggestions

Suggestions for improving the discharge process s timeliness

The system should record the time taken to complete the discharge summary.

- Employees involved in the dismissal process should receive regular training.
- For better results, DMO should prepare a preliminary discharge report and send it to the discharge counter.
- If dismissal is expected, the dismissal summary form should be completed. The problem of shortage of manpower should be resolved by hiring additional specialists.
- The AD department should be prepared to advance the outstanding funds.

To collect planned layoffs:

- Training should be conducted to keep employees' skills up to date. And
- Planned layoffs play a key role in reducing the layoff TAT.

Chapter 6: Conclusion

Hospitals are experiencing delays in patient discharge and hospital authorities have to manage various situations associated with these delays. Through this analysis, we have identified key areas where issues with timeliness of the discharge process are increasing. Comprehensive process mapping of the study population helps in deeper understanding of the problem and provides ideas to reduce on-time performance. The process of planning patient discharge involves clinical, financial, legal, administrative and paperwork elements and takes a long time. However, it can be completed efficiently if performed systematically with the help of qualified medical, paramedical and administrative staff. Investigating the causes of delayed patient discharge is essential in hospitals as it allows healthcare managers to manage patient discharge more efficiently. Therefore, careful planning is required and each step of the process must be regularly reviewed.

ETHICAL CONSIDERATIONS:

The respondent's privacy and confidentiality were protected. The procedure was initiated with the permission of the hospital administration.

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