

STUDY ON TURNAROUND TIME OF DISCHARGE PROCESS FOR CASH AND INSURANCE PATIENT

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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(IIHMR-U/01/2020-22/1141)

Under the Supervision and Guidance of

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(Associate Professor)

2022

**STUDY ON TURNAROUND TIME OF
DISCHARGE PROCESS FOR CASH AND
INSURANCE PATIENT IN
MOTHERHOOD HOSPITAL,
NAVI MUMBAI**

DECLARATION

I hereby declare that this dissertation “**Study on turnaround time of discharge process for cash and insurance patient in Motherhood Hospital, Navi Mumbai**” 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 Information derived from the published or unpublished work of others has been duly acknowledged in the text.

Neha Singh

HM25-1141



21th Jun 2022,

Ms. Neha Singh,

Internship Letter

This letter is to certify that **Ms. Neha Singh** of IIHMR Jaipur, has successfully completed her general orientation training for three month and a detailed study in "Study on Turn Around Time Of Discharge Process For Cash And Insurance Patience" at Motherhood Hospital a unit of Rhea Healthcare Pvt Ltd, Kharghar

Her internship tenure was from **28th Mar 2022** to **18th Jun 2022**.

During her internship we found her to be sincere and hard working

Wishing you all the best in your future endeavours.

For Rhea Healthcare Pvt Ltd,


Lisha Mohantey
Facility Director



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CERTIFICATE

This is to certify that dissertation titled Study on turnaround time of discharge process for cash and insurance patient in Motherhood Hospital is a record of the research work undertaken by Neha Singh 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 his/her approach to the research study has been sincere, scientific, and analytical.

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ACKNOWLEDGEMENT

On the very outset of this report, I would like to extend my sincere and heartfelt gratitude towards all the respected personages who have helped me in this endeavor. Without their active guidance, help, cooperation, and encouragement, I would not have made headway in the report. It is a privilege to have a wonderful internship in one of the renowned Cooperate Hospital. The internship opportunity I had with **Motherhood Hospital (Rhea Healthcare Pvt Ltd)** was a great chance for learning and professional development. I'm appreciative for this chance and for getting an opportunity to meet such countless brilliant individuals and experts who directed me through this internship.

I would also like to take this opportunity to express my deepest gratitude and special thanks to the Head of Branding and Marketing, **Mr. Kanishk Jha**, who despite being extraordinary busy with his duties, took time to hear, guide and keep me on the correct path and allowing me to carry my internship at their esteemed organization and guiding throughout the internship.

It is my radiant sentiment to place on record my best regards, deepest sense of gratitude to **Mrs. Lisha Mohantey (Facility Director)** for their careful and precious guidance which was extremely valuable for my study both theoretically and practically.

I would like to express sincere thanks to **Dr. P.R. Sodani** (President, IIHMR university, Jaipur) for giving me a chance to do this internship. Now, I would like to express my gratitude towards my mentor at IIHMR University, **Dr. Alok Mathur** for his extraordinary cooperation, invaluable guidance, and supervision. This report is the result of his painstaking and generous attitude.

I would also like to express a deep sense of gratitude to the Placement Cell of my esteemed university for guiding me throughout the internship process and for providing time to time internship guidelines.

I perceive this opportunity as a big milestone in my career development. I will strive to use gained skills and knowledge in the best possible way, and will continue to work on the improvements, to attain desired career objectives.

ABSTRACT

Introduction and objective:

The hospital discharge plan process includes clinical, financial, legal, administrative, and record keeping aspects. It is a time-consuming process that begins with the writing of discharge orders and ends with the settlement of all types of hospital bills. It can be completed according to global standards if executed in an organised manner with assistance from trained medical, para-medical, and administrative staff.

The study's major goal is to analyse 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 research was conducted in the inpatient department of Motherhood Hospital in Navi Mumbai. It was an observational study in which all patients who were discharged from the said wards between 10 a.m. and 5 p.m. daily (except Sundays) were observed for their discharge process and a semi-structured questionnaire was administered to all discharged patients' relatives about the discharge process, including the time it took to complete and the reasons for the delay.

Results:

During the research period, 322 discharged patients from the inpatient department's four wards (general/cubicle/sharing/deluxe) were monitored. According to the findings, the average time required for release was 268 minutes for individuals who had a scheduled discharge and had to pay out of pocket (Self- Payment). The average length of stay was found to be 2.5 days. The data also suggest that most released patient's relatives observed thought that their discharges were delayed owing to the nonavailability of the resident doctor for drafting the summaries, while others attributed their delay to a long waiting period for billing.

Conclusion:

Time and the rigorous discharge procedure all contribute to patient discontent. Depending on the patient load in the hospital, all departments engaged in the discharge process should be sufficiently staffed. 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 family regarding hospital services, particularly discharges, should be a continuous activity for hospital administration.

Keywords: discharge, insurance, pharmacy, diagnostic

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LIST OF ABBREVIATION

NABH	National Accreditation Board for Hospitals and Healthcare Providers
ACC	Access Assessment and Continuity of Care
TPA	Third Party Administrator
ALOS	Average Length of Stay
HMIS	Health Management Information System
MOU	Memorandum of Understanding
DMO	Duty medical officer
OT	Operation Theatre
CNS	Central Nervous System
CVS/RS	Cardiovascular System/ Respiratory System
DAMA	Discharge Against Medical Advice
IP	In-Patient
ENT	Ear, Nose and Throat
ICU	Intensive Care Unit
MICU	Medical Intensive Care Unit
AD	Administrative Department

CHAPTER 1:

INTRODUCTION

INTRODUCTION

1.1: Background

The NABH defines discharge as a procedure in which a patient is evacuated from the hospital with all medical reports necessary to ensure stability. The discharge procedure is considered to begin when the consultant formally approves to discharge, and it ends when the patient exits the clinical unit. The study's purpose was to examine the discharge of a 25-bed Specialty Hospital, compare it to NABH AAC 13 and 14 criteria, and look for any potential bottlenecks.

In practise, discharge is defined as "the admitting physician's release of a hospitalized patient from the hospital after providing appropriate medical treatment for a period judged necessary." The discharge procedure includes the maintaining of clinical, financial, legal, and administrative records. It begins with the doctor signing discharge orders and ends with the settlement of various types of hospital expenses. It is a time-consuming procedure that may take many hours to complete due to the involvement of multiple parties. Planning on admission, developing a clinical management plan within 24 hours of admission, and developing a clinical management plan within 24 hours of admission are the main concepts of efficient discharge planning. The time limits in discharge process vary according to the patient's mode of payment i.e., CREDIT-PSU, TPA & CASH payments.

Discharges can be classified as either planned or unexpected. In the case of scheduled discharge, the planning is done in the afternoon prior to the discharge after the morning round by the doctor (either verbal or written) and actions connected to finances, pharmacy is begun in the midday itself, and the patient is discharged by nightfall. In scheduled discharges, the patient should be wheeled out by 5 p.m. Unplanned discharge occurs when the discharge procedure begins spontaneously after the doctor's round and all discharge activities begin.

A lengthy and ineffective discharge procedure to improve healthcare quality, in-patients from hospitals must be addressed. Patient unhappiness is eroding loyalty and jeopardizing hospital profitability. The patient discharge process is the most crucial procedure to enhance in order to increase the availability of hospital beds. A hospital must have a sound discharge strategy in place to ensure patient contentment, quality patient care, bed availability, and customer loyalty. The discharge process is the final phase in a patient's treatment procedure, and if finished on

time, the patient will be entirely pleased. "A quick discharge procedure can assure early availability of patient beds, which can minimise patient admission wait times or even lower the rate of patient rejection owing to bed shortages."

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 many hospitals, the admission and discharge processes can both be bottlenecks, lowering the facility's efficiency. It is an important indicator of the quality of care and patient satisfaction. Delays in discharge 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 average length of stay in hospitals is a common statistic used in health-care planning. 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.

The average length of stay may be calculated in two ways. Each method's formula is 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 is a measure that shows the actual utilisation of an inpatient health facility during a certain time period. It is expressed as a percentage, and terms such as "% of occupancy," "percentage of occupancy," and "occupancy ratio" are sometimes used interchangeably. The Department of Health Statistics calculates and aggregates hospital and nursing home occupancy rates at the institution, county, and state levels on a regular basis. This information is incredibly useful for health-care planning.

Two data elements are required to compute the average occupancy rate for a typical one-year reporting period. "Inpatient Days of Care" and "Bed Days Available" are two examples. These two items are defined as follows:

Inpatient days of care - For the whole year, add up each daily inpatient census. To acquire this amount, just add up all of the daily censuses for the 365 days of the year. Other equivalent terms include "total inpatient service days," "occupied bed days," and "census patient days of care."

Beds days available - - The maximum number of inpatient days of treatment would have been offered if all beds were filled throughout the year.

If 50 beds were available for use every day of the year, the number of bed days available would be $50 \times 365 = 18,250$. If the number of beds fluctuated during the year, the number of bed days available 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." Use the inpatient days of care and bed days available in this calculation to compute occupancy rate:

$(\text{Inpatient Days of Care} / \text{Bed Days Available}) \times 100$ - When assessing occupancy rates, the facility is not the only thing to consider. Occupancy rates are commonly assessed in order to establish how successfully a certain inpatient unit, such as obstetrics, psychiatric, medical/surgical, or other, is used. The occupancy rate is a valuable statistical metric that is often calculated over a period of time (month, year, etc.) rather than a single day. Even if the number of beds varied within the reporting period, evaluating occupancy over a longer time period demonstrates the extent to which hospital beds were used.

1.1.3: Discharge TAT

Analyzing processes in medical information systems can be aided by assessing turnaround times. The discharge TAT is computed from the time of discharge advice to the time the room becomes unoccupied. When the consultants recommend discharge, the physician assistant enters the information into the HMIS. The second TAT for medical discharge is when the discharge summary is finalised, the pharmacy return is completed (by the ward secretary), and the OT clearance is obtained (in the event of surgeries), and the ward secretaries mark for medical discharge. The third TAT is for bill finalisation, in which the billing executives examine and verify all inputs, and the bill for insured patients is created in accordance with the rate list of the insurance companies and the MOU. The billing executive then marks it as completed. The fourth TAT comes for room vacant when the patient vacates the rooms after settling the bill. The bystander receives two pink slips upon the clearance of bill which is to be handover to the nursing and the guard in the gate.

1.1.4: The content of discharge summary includes:

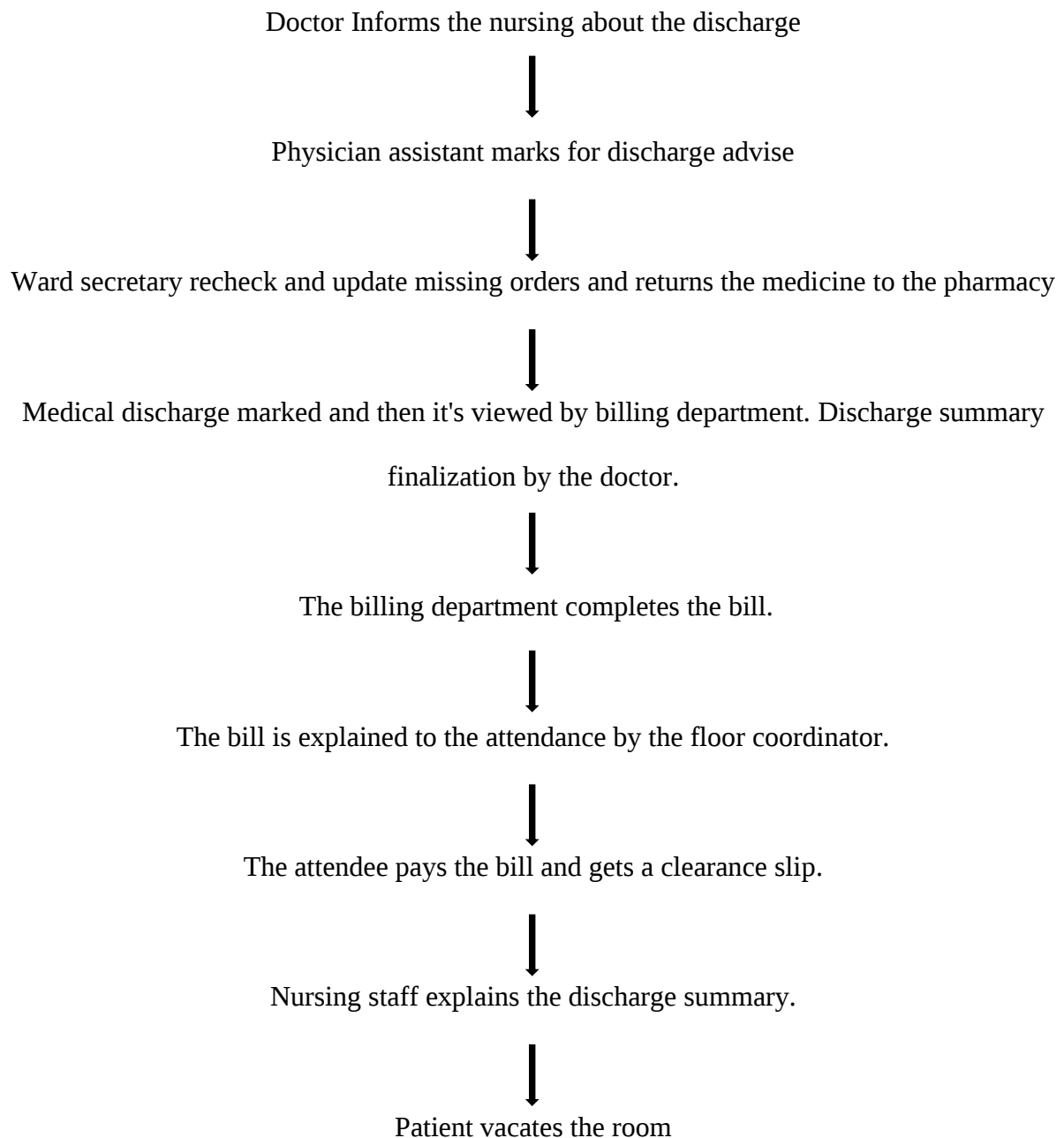
- Clinical Department & Consultant Name
- Patient Demographics
- Primary Diagnosis
- Secondary Diagnosis
- Present complaints
- Clinical Findings- General examination, Vitals, CNS examination, CVS/RS Investigations performed and detailed information about the results.
- Progression course at the hospital, 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 Stakeholder of Discharge process

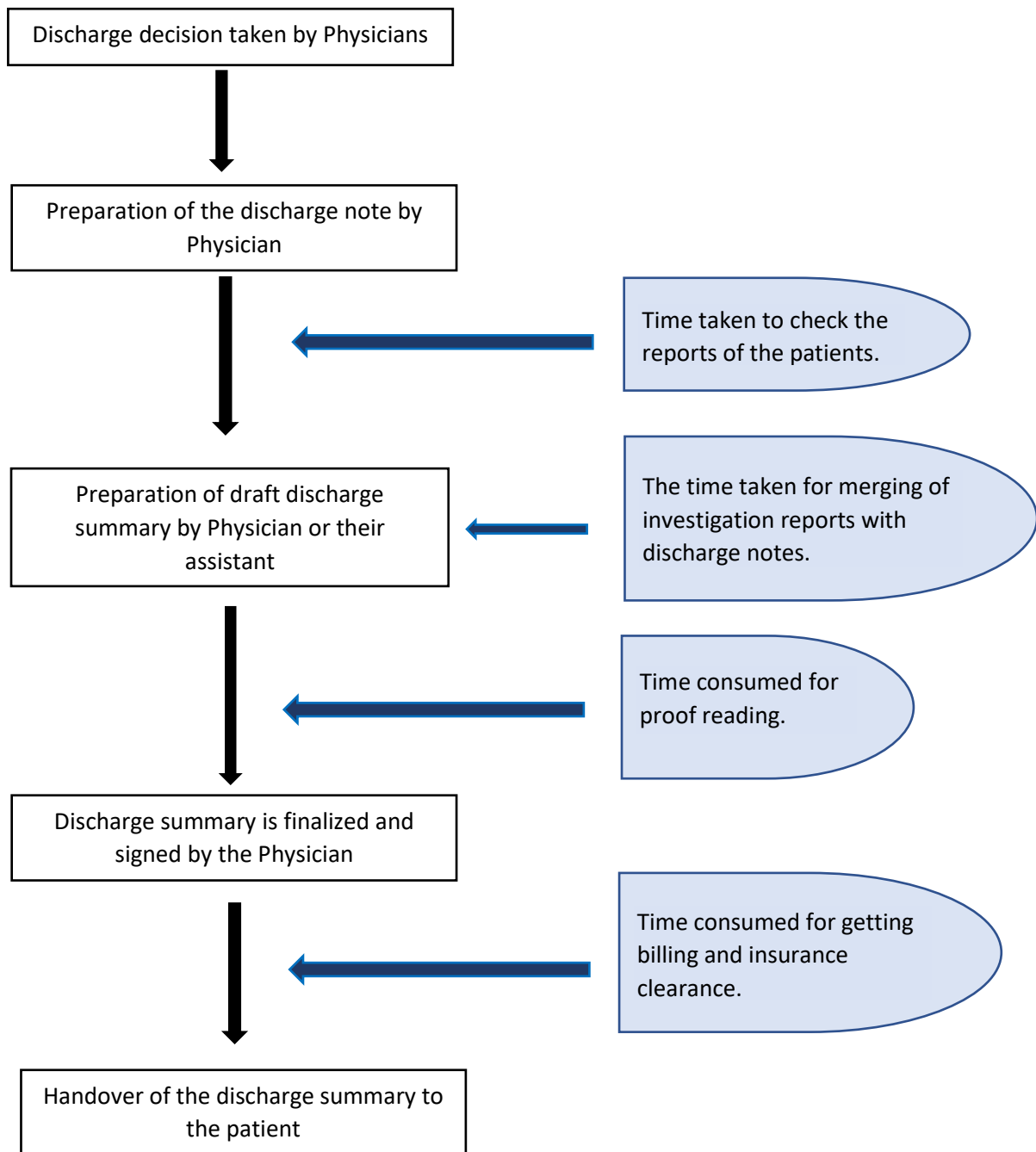


Figure 1.1. Key Stakeholder of Discharge process

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 Motherhood 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:

LITERAURE 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 and Billing Process in Tertiary Care Teaching Hospital	The average time for patient discharge was 2 hours and 22 minutes. The intra processing (outside billing) time for the discharge procedure was found to be longer than the inter processing time (within billing department).
3	Swapnil B Tak, S. 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.

				An average turnaround time of 4:05 hours has been noted from the time the patient is advised of his or her release and the time the room is available.
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 V	2019	A study to assess the factors contributing to Delay in Discharge Process in a teaching 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: 28th March to 18th June 2022

Study setting: In-patient Department at Motherhood Hospital, Navi Mumbai

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: 322 discharges

Mode of Data collection: Observation methods

Type of Data: Quantitative

CHAPTER 4:

RESULTS/ INTERPRETATION

4.1: Data collection

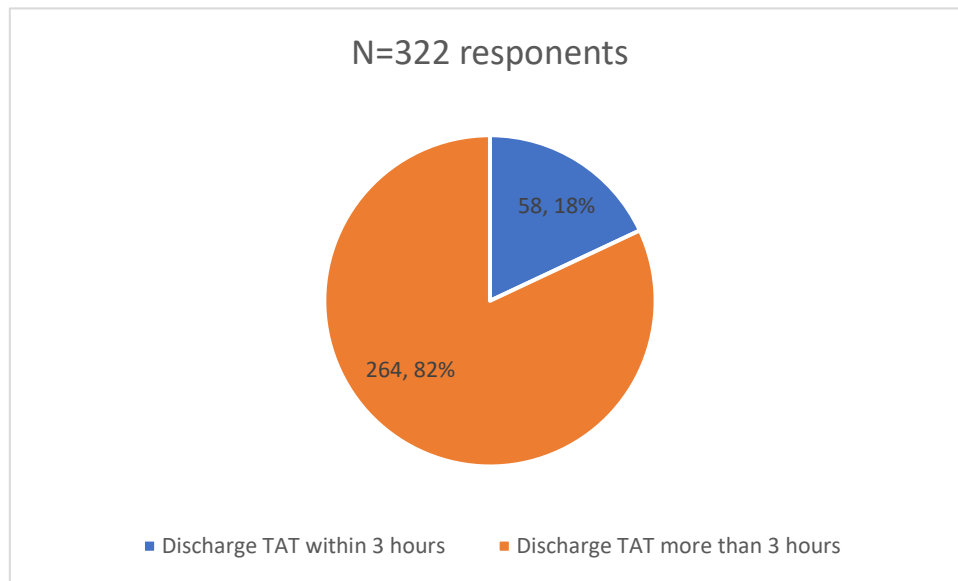


Fig 4.1: A pie chart showing a discharge within 3hrs and more than 3hrs

According to the above pie chart in Fig 4.1, 82% of the patients' release time was more than 3 hours, while only 18% of the patients' discharge time was less than 3 hours. As we all know, waiting time is strongly tied to patient happiness. As a result, Motherhood Hospital's TAT must be reduced.

Average length of stay (ALOS)	2.5 days
Average Turnaround Time (TAT)	4.28 hours

Table 4.1(a): A table showing ALOS and Average TAT

According to the above data, the average duration of stay is 2.5 days, and the average discharge turnaround time is 4 hours and 28 minutes.

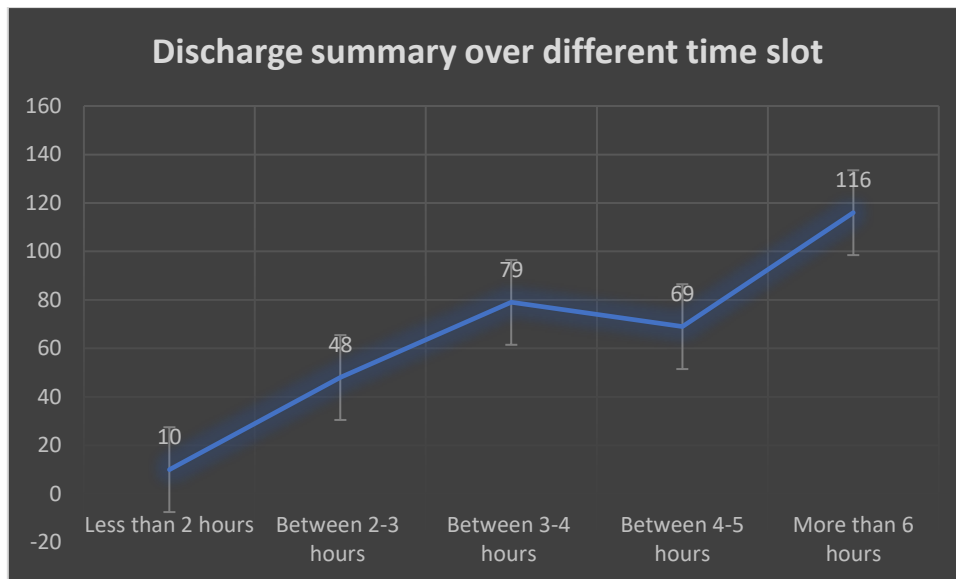


Fig 4.2: A graph showing discharge summary over different time slots

The graph above, Fig 4.2, shows that out of 322 discharges, 116 patients' release time was longer than 6 hours, whereas 69 patients' discharge time was between 4 and 5 hours. 48 patients were discharged between 2 and 3 hours, with just 10 patients discharged within 2 hours after the primary consultant's order for release.

According to NABH criteria, the majority of patients were discharged within 2-4 hours.

Reasons for discharge delays for the greatest number of patients (116):

- 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: Fishbone analysis

To identify the reason for delay in discharge process

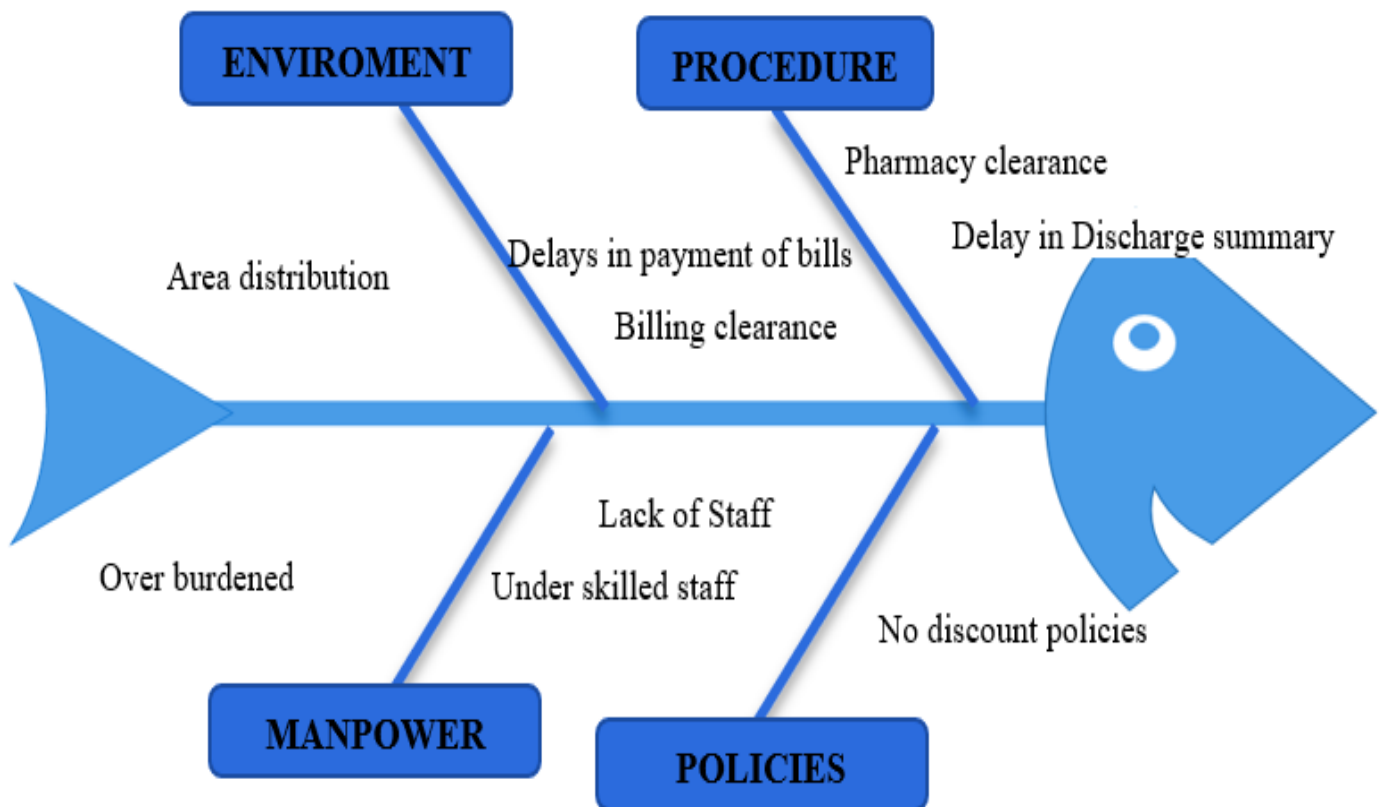


Fig 4.3: Fishbone diagram show the reasons for delay in discharge process

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 authorised 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 typos.
- 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.

4. CONSULTANT

- Most of the time, he/she is unavailable for the purpose of cross checking the discharge summary.

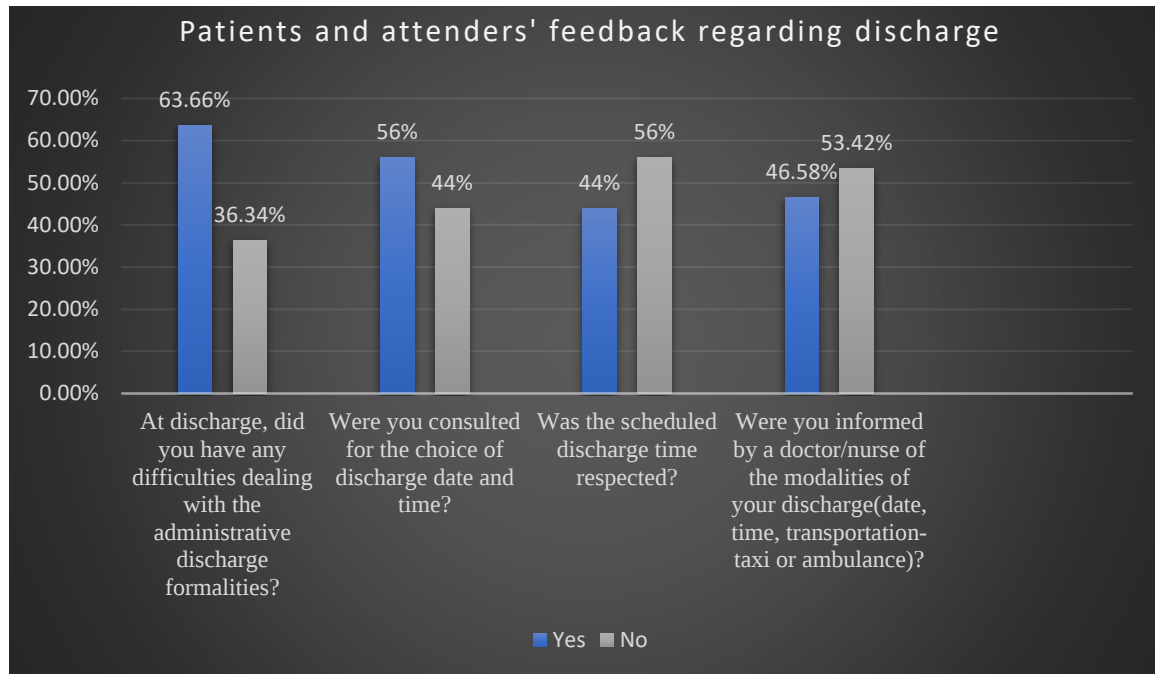


Figure 4.4: A chart showing patients and attenders' feedback regarding discharge

Figure 4.4 clearly shows when patients/attendees were unhappy with the discharge procedure at Motherhood Hospital in Navi Mumbai. When asked if they had been informed of their release date and time, 172 of 322 patients said no. When asked if the release time was followed, 180 of the 322 patients replied no. On the release date and time, 180 patients reported being consulted. However, 205 of 322 patients reported considerable difficulties with the administrative release procedures.

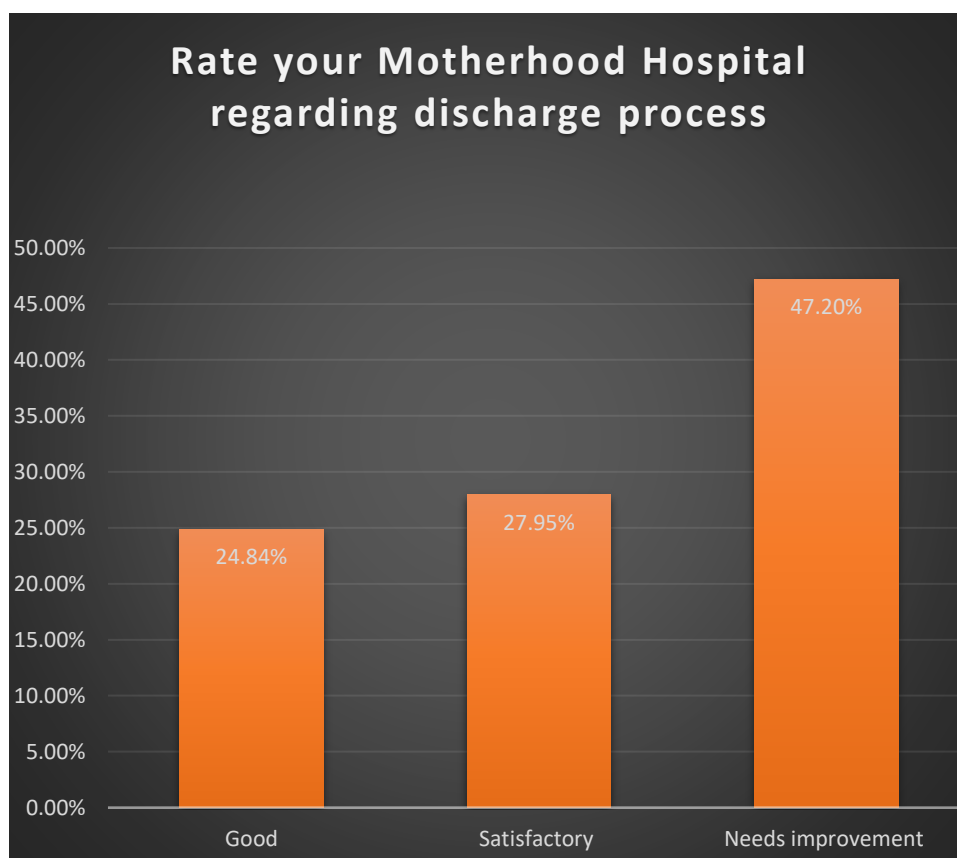


Figure 4.5: A graph showing the attitudes of patients and visitors toward the hospital at the time of discharge.

Figure 4.5, depicts the impression of patients and attendants toward the hospital at the time of discharge: 80 patients felt it was nice, 90 said it was satisfactory, and 152 stated it needed improvement. Aside from the standard inquiries, patients commented on the slow and disorganised billing procedure, misunderstanding, and the fact that they were exhausted from moving from one location to another.

CHAPTER 5:

DISCUSSION(SUGGESTIONS)

Suggestions for improving the discharge process's timeliness

The system should record the time it takes to complete the discharge summary.

- Staff participating in the discharge process will receive periodic training.
- For a better outcome, the DMO should prepare a provisional discharge report and send it to the discharge desk.
- For anticipated discharges, a discharge summary form should already be written.
- The problem of understaffing should be addressed by hiring additional professional staff.
- The AD department should be prepared to collect pending funds in advance for planned discharges;
- Training sessions should be conducted to keep staff' skills up to date; and
- Planned discharges play an important role in decreasing discharge TAT.

CHAPTER 6:

CONCLUSION

Delays in discharging patients occur in hospitals, and hospital authorities must manage the numerous dynamics connected with these delays. By doing this analysis, we determined the key core locations from where the issues of discharge process timeliness are growing. A comprehensive process mapping of the study population helps to better understand the problem and gives ideas to reduce timeliness. The hospital discharge plan process, which includes clinical, financial, legal, administrative, and record keeping aspects, is time-consuming; however, it can be completed in accordance with global standards if executed in an organised manner with assistance from trained medical, paramedical, and administrative staff. In hospitals, research on patient discharge delays is critical because it can assist hospital administrators discharge patients more effectively. As a result, it must be carefully planned and the entire process must be monitored on a regular basis.

ETHICAL CONSIDERATIONS:

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

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