

STUDY ON DISCHARGE PROCESS DELAYS AND BOTTLENECK IN SURAT MULTISPECIALITY

Dissertation Submitted to



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in

Hospital and Health Management

By

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Under the Supervision and Guidance of

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28th June, 2024

CERTIFICATE OF INTERNSHIP

This is to certify that **Dr. Rajat Shah**, has successfully completed his internship in **Quality Department** from 17th March, 2024 to 17th June, 2024.

He has done a short project on Study and Streamlining of discharge process

During the internship period he was found to be sincere, hardworking and dedicated.

We wish him all the very best for his future endeavor

Dr. Ketan Desai

Unit Head



DECLARATION BY STUDENT

I hereby declare that this dissertation titled "**A study on delays in turnaround time of discharge process and identifying bottlenecks at a multispecialty hospital in Surat**" is the Bonafede 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 Information derived from the published or unpublished work of others has been duly acknowledged in the text.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 Shah

Date-03/06/2024

CERTIFICATE

This is to certify that dissertation titled "A study on discharge process delayed and bottleneck in Surat Multispeciality" is a record of the research work undertaken by **Dr. Rajat Shah** in partial fulfillment of the requirements for the award of the degree of MBA (Hospital & 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.


Dr. Vidya Bhushan Tripathi
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Date 03/07/2024

ABSTRACT

Objective:

The objective of this study is to study the efficiency and adherence to standards of hospital discharge procedures under different payment methods: cash (self-payment) and health insurance. The study aims to identify critical bottlenecks and provide recommendations for optimizing discharge processes to enhance patient experience and operational efficiency.

Methodology:

The present study was conducted in one of the large multispecialty hospitals in Surat, Gujarat, India. The discharge process was targeted for study from March 1st 2024, to March 31st, 2024. Although I initially aimed to review three months records, I considered only one month's record due to the hospital's permission constraints, which allowed access to only one month of data. We reviewed approximately 198 records, of which 83 were found to be complete. The total sample included 83 discharge records that were purposively selected from the Medical Record Department to ensure representativeness.

This was a descriptive cross-sectional study, with data analyzed at only one point in time. Data were collected by procuring permissions from the concerned authorities of the hospital and extracting information from the discharge records. The aim was to record the time taken for each step in the discharge procedure to identify delays and bottlenecks.

Key Results:

Key findings indicate that discharge procedures for self-payment are consistently faster than those for health insurance across all steps. The preparation of the discharge summary, return of unused medicines, clearance from all departments, and preparation of the bill show only minor differences between the two payment methods and generally meet the NABH (National Accreditation Board for Hospitals & Healthcare Providers) standards. However, the bill

settlement/approval step for health insurance patients significantly exceeds the recommended time, with an average duration of 200 minutes compared to 46 minutes for self-payment and the NABH standard of 30 minutes. This indicates a major inefficiency in the insurance discharge process. The total mean time for self-payment discharge procedures is 145 minutes, well below the NABH standard of 180 minutes, highlighting a streamlined process. In contrast, the total mean time for health insurance discharge procedures is 309 minutes, nearly double the NABH standard, underscoring the need for substantial process improvements.

Conclusion:

The present study is undertaken to know the delays in the turnaround time of the discharge process in a multispecialty hospital in Surat. This involves pinning viable bottlenecks that delay this process and thus recommending optimization. The study will therefore try to enhance the experience of the patients and operational efficiency while ensuring adherence to the standards set by NABH.

Acknowledgement

I would like to recognize my solemn thanks to our Institute, Indian Institute of Health Management Research to give me such an opportunity so that we can enhance knowledge in Hospital and Health related distribution.

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DISSERTATION

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Abbreviations

Abbreviation	Full Form
IP	Inpatient
NABH	National Accreditation Board of hospital
OP	Outpatient
RMO	Residential Medical Officer
TAT	Turnaround Time
TPA	Third Party Administration

CHAPTER 1: INTRODUCTION

1.1 Background

In India, one of the major problems faced by multispecialty hospitals is proper management of discharge processes within the healthcare sector. Since any delay may lead to patient dissatisfaction and increase the cost towards the hospital, the discharge process in the whole care process for patients is one of the most critical phases. So, presented in this paper is the finding of bottlenecks in the discharge process in a multispecialty hospital located in Surat. Literature to date has revealed that delays in the hospital discharge process are very common across the globe, and studies continue to point to inefficiencies in coordination among healthcare providers, administrative processes, and patient readiness.

In the Indian context, it becomes manifoldly complex as it gets entwined with various factors such as consultant order time, discharge preparation by RMOs, and departmental clearances from labs and pharmacies. Added to that is TPAs for insurance claims and the cashless billing process, which makes the timely discharge of patients even more difficult. Previous research indicated that these administrative and procedural delays are one of the major causes of prolonged discharge time. Delayed discharges do not only delay operational efficiency but it would drastically affect patient turnover rates, hospital beds available and general revenue generated.

Hospital discharge procedures are complex, and the chain of stakeholders involved in them often goes from doctors and nurses to administrative staff and insurance companies, all of whom can create possible delays. In India, with its eclectic mix of healthcare systems, coupled with differing levels of efficiency at various hospitals, understanding these delays and mitigating them becomes quite important for improving outcomes in patient care and enhancing operational efficiencies at hospitals. It did a Chart review of the MRD reports of 83 patients to screen the common stages of maximum delay.

This study aims to have a close look at the process of discharge with special attention to some of the parameters like consultant order time, preparation of discharge time, laboratory and pharmacy departments' clearance times, TPA and billing efficiency. This is done to identify specific bottlenecks and provide recommendations for streamlining the discharge process and, hence, the turn-around time, for efficient operations in the hospital. The present study focuses on providing an insight into the knowledge about inefficiencies in the discharge process, thereby adding to the available literature portraying the hospital management practices in India. The present research work is intended to enlighten hospital administrators and policymakers with actionable insights from its findings, so that targeted interventions would bring in fast and effective improvements in discharge times and satisfaction among patients treated in multispecialty hospitals.

1.2 Profile of Organisation

1.2.1 Maitreya Hospital, Surat



Located at the centre of Surat, Maitreya Hospital is an ultra-modern health care institution that offers comprehensive health care services across a wide range of specialties. Our task force of highly qualified and skilled medical professionals leaves no stone unturned to pursue the vision and mission of rendering optimum treatment and care. Here is the detailed list of services offered at Maitreya Hospital and also those which are beyond our scope.

Mission: To bring quality healthcare within the reach of everyone, so you can get essential medical help whenever you need it. Maitreya multispeciality hospital focuses on maintaining ethical care for the people. We are destined to provide a rapid response for all kinds of medical emergencies; therefore, you can get medical, surgical, and diagnostic services under one roof.

Vision: To bring quality healthcare within the reach of everyone, so you can get essential medical help whenever you need it. Maitreya multispeciality hospital focuses on maintaining ethical care for the people. We are destined to provide a rapid response for all the kind of medical emergencies, therefore you can get medical, surgical, and diagnostic services under one roof.

1.2.2 Scope of services:

No Scope of Service

- 1 Cardiology
- 2 Oncosurgery
- 3 Cardiac Surgery
- 4 Gastroenterology
- 5 Dialysis & Vascular Surgery
- 6 Oncology & Haematology
- 7 Gastrointestinal Surgery
- 8 Neurology & Neurosurgery
- 9 Critical Care Medicine (ICU)
- 10 General & Laparoscopic Surgery
- 11 Plastic & Reconstructive Surgery

No Not in Scope

- 1 Paediatrics & Neonatology
- 2 Radiation Therapy
- 3 Organ Transplant
- 4 Rehabilitation
- 5 Blood Bank

12 Orthopaedic & Reconstructive Surgery

13 Pathology

14 Pharmacy

15 Radiology

1.3 Objectives

The objectives of this thesis are pivotal in addressing the critical issue of discharge process delays in multispeciality hospitals. By understanding the average time taken for the discharge process for both self-payment and insurance patients, and by identifying specific delay points, this research aims to provide actionable insights for hospital administrators and policymakers. The goal is to enhance the efficiency of hospital operations, reduce discharge times, and improve patient satisfaction, thereby contributing to better healthcare delivery in India.

- To understand the average time taken for the entire discharge process for both self-payment patients and insurance patients
- To study the delay points in the discharge process

CHAPTER 2: Literature Review

Drawing from books, articles written by colleagues, and other sources on the digital platform, I managed to research a wide array of perspectives and insights into the formulated research problem of delays in the discharge process at multispecialty hospitals. Information from these varied sources has helped me to draw general trends, common challenges, or potential solutions that would help in improving turnaround time and smoothening out bottlenecks.

S.NO	Author	TITLE/OBJECTIVE	YEAR	FINDINGS
1	Anil Pandit, Savita Prashar	•To learn the current discharge process • To determine delays. •To suggest recommendations for improvements.	2019	TPA and cash patients were discharged from a multispecialty hospital in an average time of 7 hours and 5 hours, respectively, based on this study.
2	Harman jot Kaur, Rajpoot Kocha	A study on discharge process of discharged patients of a multispecialty hospital Ludhiana.	2017	The current study's findings showed that an average turnaround time of 5:07 hours was required from the time of the discharge notification and the time the patient was handed over, with maximum turnaround time of 9:07hours. It has been determined that 18 minutes is the minimum turnaround time between updating billing card on

				the floor and receiving it at IP billing. An average turnaround time of 4:05 hours has been recorded between the time the patient is advised of his or her release and the time the room becomes available.
3	Sima Ajami, Saedeh Ketabi	An analysis of the average waiting time during the patient discharge process at Kashani Hospital in Esfahan, Iran; case study	2004	The results show that it took patients 4.93 hours on average to complete the discharge procedure. The distance between different wards and patients' financial concerns are said to be the two factors that have the biggest impact on typical waiting times, according to the engaged medical professionals. The average length of stay on the Neurology ward was 7 days. The results show that there was a line at the nursing and medical equipment stations to fill out medical records.

4	U Suji, A Malalingam	A study on delay in insurance patients' discharge at a multispecialty hospital in Kerala	2023	The turnaround time(TAT) for the discharge procedure is 5 hours on average, according to the article , and 59.4% of the observations are longer than that. To reduce discharge delays and enhanced patient care, the study suggests reducing the administrative procedures involved in discharge.
5	S Arthi, S Divya	A study on causes of delay in the discharge process in one of the prominent hospitals in Tamil Nadu	2020	The study shows that most of the discharge delays are due to late approval of discharge summary by the consultants. Also major delay was found in vacating the room after discharge that takes about 5 to 6 hours after the payment of cash/insurance approval which can be optimized by framing a discharge policy for vacating the

				room within an hour after cash payment or insurance approval. Almost 74% of patient discharge time takes about more than 4 hours which is not according to prescribed NABH standard.
6	Swapnil Tak, Sheetal Kulkarni, Rahul More	A comparative time motion study of all types of patient discharges in a hospital	2013	Average discharge times were 278 minutes for individual patients, 337 minutes for insured patients, and 302 minutes for patients discharged against medical advice. Delays were observed across all discharge steps compared to NABH standards, except for returning unused medicines to the pharmacy.

CHAPTER-3: METHODOLOGY

4.1 Study Population: It involves indoor patients who were discharged from a multispecialty hospital in Surat during the period from 1st March 2024 to 31st March 2024.

4.2 Sample Size: A total of 83 discharge records were collected for the present study. The sample size is to be considered representative of the discharge process from which inferences can be drawn to recognize bottlenecks.

4.3 Sampling Method: Purposive sampling was used to select, the discharge record.

4.4 Duration of Study: The study covered a period of three months. Data records were captured & reviewed in duration of 17th March 2024 to 17TH June 2024.

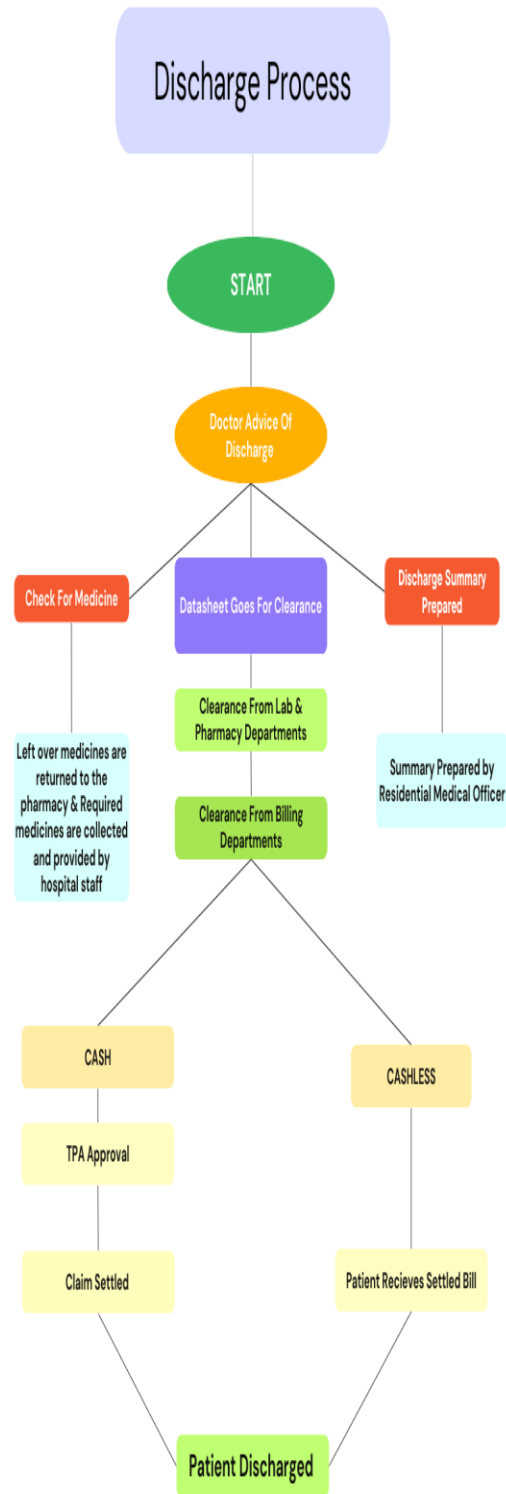
4.5 Study Design: It is a descriptive cross-sectional study. This design allows to collect and analyze data from a single point in time, thereby giving a snapshot of the discharge process and ascertains delays and bottlenecks.

4.6 Data Collection: The data were collected from the MRD at the hospital.

- Although I initially aimed to reviewed three months records, I considered only one month's record due to the hospital's permission constraints, which allowed access to only one month of data. We reviewed approximately 198 records, of which 83 were found to be complete process.

4.8 Ethical Considerations: The study ensured confidentiality and anonymity of the patients' information. The ethical approval of the hospital ethics committee was solicited upfront. The data was treated with regard to privacy regulations and guidelines.

Flowchart 1: Discharge Process Flowchart of Hospital



CHAPTER 4: RESULTS AND DISCUSSIONS

4.1 Results:

It was therefore pointed out in the study report that while both self-pay and TPA patients recorded delays in the process of discharge, at least in the case of the latter group—the TPA patients—it was much more due to additional administrative procedures while filing insurance claims. This analysis hence underlines the need for focused interventions in smoothing out this process of discharge, particularly for TPA patients who are in greatest need of such intervention. Some of the possible solutions are improved efficiency in document verification, increasing the speed of approvals digitally, and improving communication between hospital departments and insurance companies. By addressing these specific bottlenecks, hospitals will be able to trim discharge times, improve bed turnover rates, and enhance patient satisfaction. The study was conducted for this very reason at Surat's multispeciality hospital, aimed at uncovering the inefficiencies and delays in the discharge process. The important findings, thus, through a retrospective analysis of the MRD reports of 83 patients, can be summarized as:

A. Average Discharge Time Differences: One of the most important findings that came out was the huge difference between the discharge times for self-payment patients and TPA (Third-Party Administrator) patients. For self-pay patients, the average time to discharge was 1 hour and 33 minutes, ranging from 50 minutes to 4 hours. In comparison, the average discharge time for the TPA patients was 4 hours and 25 minutes, running from as short as 1 hour and 35 minutes to as long as 6 hours and 30 minutes. This huge disparity almost certainly bespoke testimony to added procedure-related complications that TPA patients were likely to suffer from, especially with the multiple layers of documentation and approval that attend it.

B. Distributions of treatment hours: Significant differences exist between both groups according to the distribution of treatment time. For the duration of at least 4 hours but less than 6 hours, the percentage was 48% for the TPA group, while 5% took less than 2 hours. In the other group, the corresponding distribution looked quite different for the 48 self-pay patients; that is,

79% at a treatment time of less than 2 hours. This finding suggests that less bureaucratic procedure is followed for self-pay patients, by avoiding the cumbersome insurance-related procedures which TPA patients have to go through.

C. Specific Delay Points: The study of specific delay points in the discharge process established a few critical points of delay. For instance, preparation of discharge summary took an average of 29 minutes in case of self-pay patients, against the 33 minutes taken in case of TPA patients. Though both are close to the NABH standard of 30 minutes, minor delay for TPA patients can be explained due to additional documentation. Returning unused medicines to the pharmacy and obtaining clearances from various departments also introduced delays. Average time for the departmental clearance in self-pay patients was 33 minutes and that for TPA patients was 36 minutes. Both are below the NABH guideline of 60 minutes, indicating some efficiency in this area but with still much scope for improvement, especially on the TPA patient side.

D. Bill Settlement and Approval Delays: The maximum delay was perceived in the bill settlement or approval. On average, a self-paying patient spent 46 minutes for the settlement of his/her bills; however, TPA patients spent an average time of 200 minutes. This probably happened because verification and approval by the insurance companies are necessary at different levels and may further be delayed if discrepancies are noted in the claims submitted.

E. Efficiency of TPA Processes: Graph 3 showed the efficiency of the TPA process; it showed that only a very small percentage of TPA processes were completed in less than 2 hours. A very large percentage of 65.7 % remained within a quite reasonable range of between 2 to 4 hours, indicating some moderate delay. Only a small percentage of cases (5.7%) took more than 4 hours, suggesting extreme outliers that show major bottlenecks or issues that need to be addressed for greater efficiency.

Figure 4.1: Comparison of Discharge Time Between Cash & TPA Patients

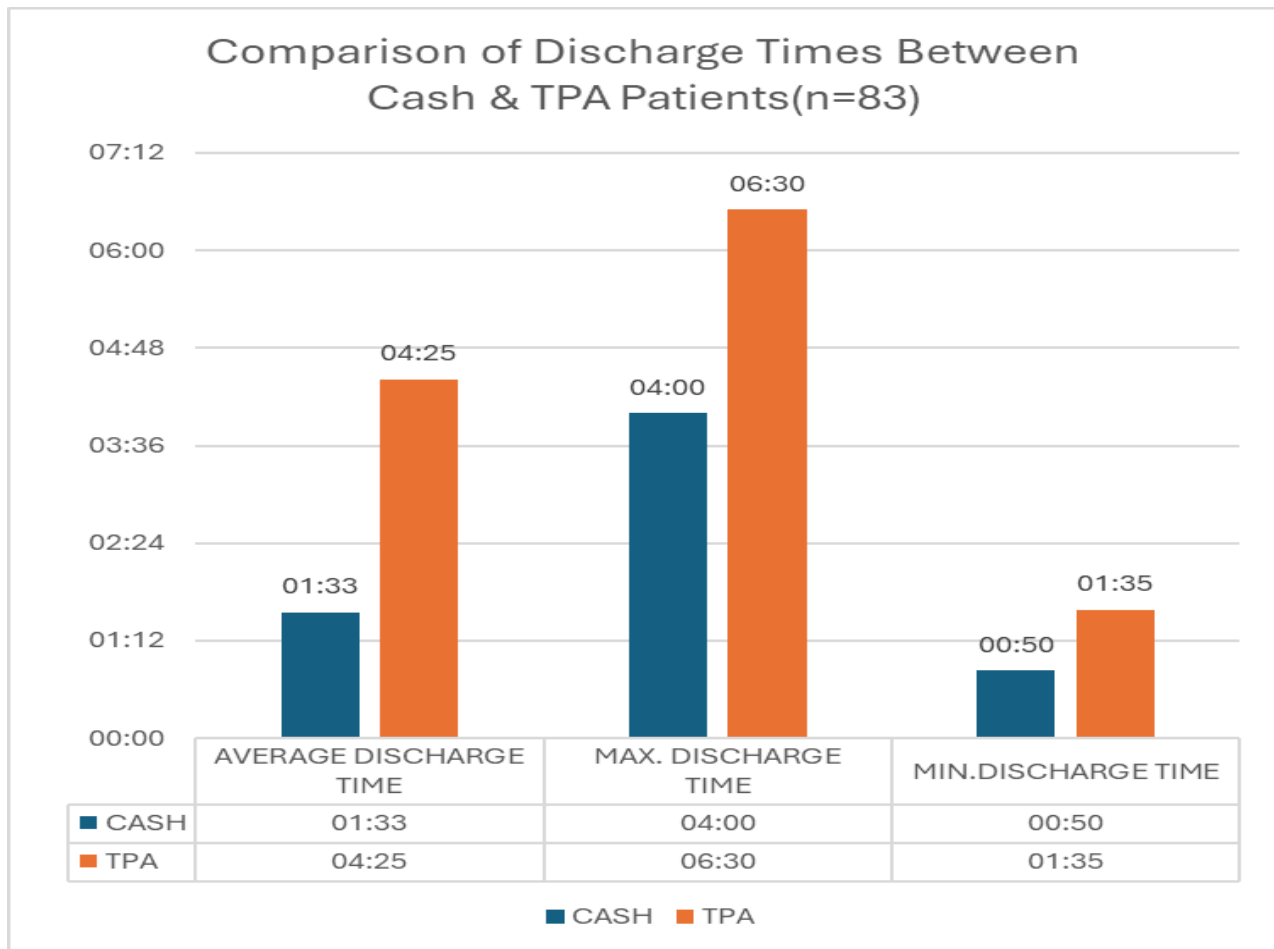


Figure 1: One of the most significant findings was the stark contrast in discharge times between self-payment patients and TPA (Third-Party Administrator) patients. Self-payment patients had an average discharge time of 1 hour and 33 minutes, with a range from 50 minutes to 4 hours. On the other hand, TPA patients experienced a much longer average discharge time of 4 hours and 25 minutes, with a range from 1 hour and 35 minutes to 6 hours and 30 minutes. This discrepancy Entails additional procedural complications. That means being aware of all the challenges TPA patients face, such as many layers of documentation and approval.

a. Interpret the data from Graph 1: Despite the remarkable differences between the times of discharges by self-pay and TPA patients, the average time it takes for a self-paying patient to be discharged is 1 hour and 33 minutes, ranging from 50 minutes to 4 hours. In relation, for a TPA

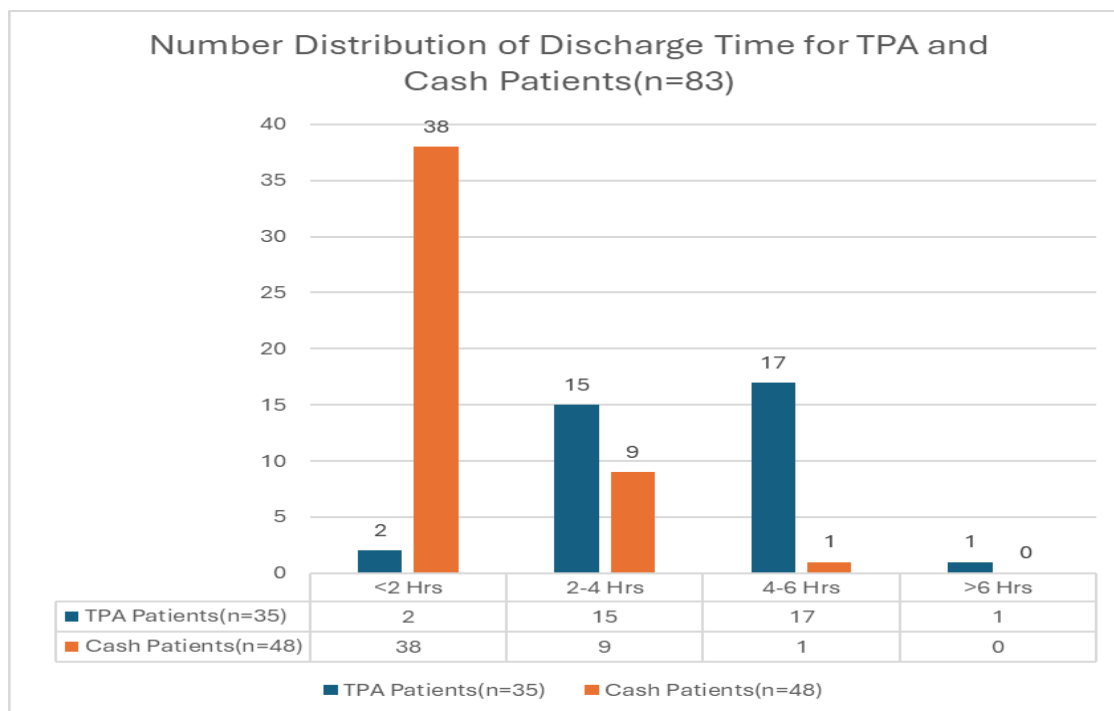
patient, it took an average of 4 hours and 25 minutes for them to be discharged, with a range from a minimum of 1 hour and 35 minutes to a maximum of 6 hours and 30 minutes.

b. The large difference underlines additional complications and procedure needs inherent in the insurance claims process, including multi-level approval and verification procedures absent in the self-pay situation.

c. The various extended discharge times of TPA patients are for a number of reasons. The time consumed in detailed documentation, its submission for approval to insurance companies, and finally its approval brings in the attendant time delays absent in self-pay cases. Moreover, most of the submitted documents have discrepancies or errors, which consume additional time for correction and resubmission, thereby extending the discharge process.

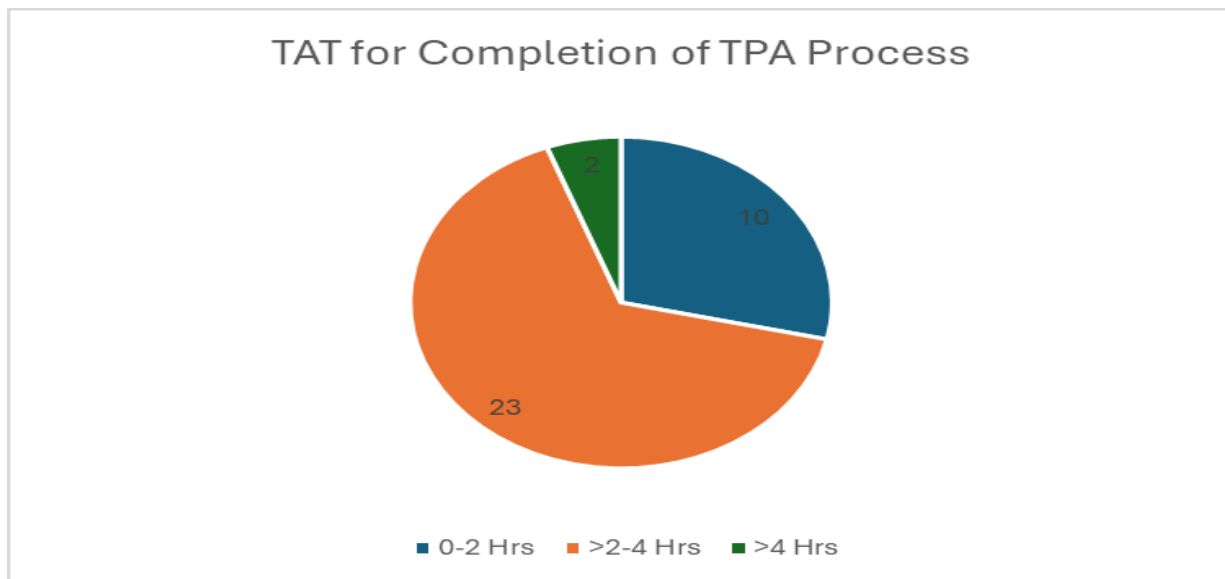
d. The findings presented are in sync with earlier studies that have identified that administrative procedures along with insurance-related verifications remain as the prime factors for extended stays in hospitals (Kumar & Garg, 2020).

Figure 4.2 Number Distribution of Discharge Time for TPA & Cash



In explaining **Figure 4.2**, One can tell that the patient duration distribution differs a great deal between TPA patients and Cash patients. Of the 35 TPA patients, nearly half of them, or 48%, had a treatment duration of at least 4 hours but less than 6; only a few, 5%, were treated for less than 2 hours. Another 43% of TPA patients are had a treatment duration of at least 2 hours but less than 4 hours, and just 3% had a duration of more than 6 hours, the 48 Cash patients exhibited a different pattern, with the vast majority having a treatment duration of less than 2 hours. A smaller proportion 19% lasted at least 2 hours but less than 4 hours, while only 2% lasted at least 4 hours but less than 6 hours. Notably, none of the Cash patients had a treatment duration of more than 6 hours. This comparison highlights that TPA patients tend to have longer treatment durations, with a significant portion requiring at least 4 hours. On the other hand, Cash patients predominantly have shorter treatment durations, with the majority being treated in less than 2 hours.

Figure 4.3: TAT for Completion of TPA Process



In interpreting **Figure 4.3**, It is evident that 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, suggesting that the majority of patients experience a moderate delay in receiving treatment. Furthermore, a very small number (5.7%) of cases take more than 4

hours to complete, representing significant outliers where major bottlenecks or issues likely need to be addressed to improve overall efficiency.

Provide deeper insights into the specific delay points within the discharge process for both TPA and self-payment patients. The analysis reveals that the distribution of patient durations varies significantly between these two groups, with TPA patients experiencing longer treatment durations. Among the 35 TPA patients, 48% had a treatment duration of at least 4 hours but less than 6 hours, while only 5% had a duration of less than 2 hours. In contrast, 79% of the 48 cash patients had a treatment duration of less than 2 hours, highlighting a stark difference in the efficiency of the discharge process. Several critical stages in the discharge process contribute to these delays. Preparation of discharge summaries, for instance, takes slightly longer for health insurance patients (33 minutes) compared to self-payment patients (29 minutes), though both are close to the NABH (National Accreditation Board for Hospitals & Healthcare Providers) standard of 30 minutes. Returning unused medicines to the pharmacy and obtaining clearance from all departments also introduce delays, with TPA patients averaging 36 minutes compared to 33 minutes for cash patients, both below the NABH guideline of 60 minutes. The most significant delay occurs in the bill settlement or approval process. Self-payment patients spend an average of 46 minutes on this process, whereas health insurance patients require a significantly longer time, averaging 200 minutes. This discrepancy is due to the need for detailed verification and approval by insurance companies, which often involves multiple steps and can be subject to further delays if any discrepancies are found in the submitted claims (Figure 4.2&4.3).

Table 4.1: Comparison of Mean Time Taken for Discharge Steps Based on Payment Types and NABH Standards (n=83).

Sr No	Steps in Discharge Procedure	Cash (Self Payment)	Health Insurance	NABH Standards
1	Preparation of Discharge Summary	29 minutes	33 minutes	30 minutes
2	Return of Unused Medicines to Pharmacy	9 minutes	10 minutes	30 minutes
3	Clearance from all departments (lab & pharmacy)	33 minutes	36 minutes	60 minutes
4	Preparation of Bill	28 minutes	30 minutes	30 minutes
5	Bill Settlement/Approval	46 minutes	200 minutes	30 minutes

The table highlights that while most steps in the discharge process are conducted efficiently and within or near NABH standards, significant delays occur in the bill settlement/approval stage for health insurance patients. Addressing these delays, particularly for insurance-related procedures, is crucial for improving overall discharge efficiency and patient satisfaction.

- **Preparation of Discharge Summary:** The preparation of discharge summaries shows that cash (self-payment) patients spend an average of 29 minutes, while health insurance patients spend slightly longer at 33 minutes. Both figures are close to the NABH standard of 30 minutes, indicating that the process is generally efficient. However, the slight increase for health insurance patients suggests that additional documentation requirements for insurance may introduce minor delays.
- **Return of Unused Medicines to Pharmacy:** When it comes to returning unused medicines to the pharmacy, cash patients take an average of 9 minutes, whereas health insurance patients take 10 minutes. Both durations are well below the NABH benchmark of 30 minutes, demonstrating efficiency in this aspect of the discharge process. The marginally longer time for insurance patients could be due to the verification processes required for insurance claims.
- **Clearance from All Departments (Lab and Pharmacy):** Clearance from all departments, including lab and pharmacy, takes an average of 33 minutes for cash patients and 36 minutes for health insurance patients. Both times are significantly below the NABH guideline of 60 minutes, indicating that this step is performed efficiently. The slight delay for insurance patients again points to the additional steps needed for insurance verification and approvals.
- **Preparation of Bill:** The preparation of the bill takes 28 minutes for cash patients and 30 minutes for health insurance patients, both meeting the NABH standard of 30 minutes. This similarity suggests that the billing preparation process is streamlined and standardized across both payment methods.
- **Bill Settlement/Approval:** Bill settlement or approval is where the most significant disparity occurs. Cash patients spend an average of 46 minutes on this step, while health insurance patients require a much longer 200 minutes. The NABH target for this process is

30 minutes, indicating that both groups exceed the standard, with insurance patients experiencing particularly long delays.

4.2 Discussion

4.2.1 The Waltz of Ensemble Average Discharge Time: Self-Payment vs TPA Patients:

- Disaggregated analysis of ensemble average discharge times between self-pay and TPA patients brings out scores of differences that underline many systemic inefficiencies.
- In the current study, the average discharge time was observed higher for TPA patients- 4 hours and 25 minutes compared to 1hour and 33 minutes for self-payment patients. This significant time difference highlights the complexities and additional procedural steps in processing insurance claims that are absent in the case of self-pay patients.
- Several things explain why discharge times are much lengthier for TPA. In the first one, the insurance verification process includes multilayers of approval and documentation.
- In patients with TPA, the course of illustrative claims validation by the insurance providers may be lengthy, unlike in self-paying cases. This comprises a detailed scrutiny of the case record, the treatment plan, and the billing summary.
- The administrative work involved, and inter-departmental coordination have been shown to be the major causes of delay in health processes. In cases wherein there are inconsistencies or incomplete information, this leads to further delay for additional clarifications or resubmissions.
- In addition, the need to pre-authorize specific treatments or medications would only contribute to the delay in time before discharge. This would mainly be so because it would be in the interest of the insurance firms to cater for most treatments in their policies, thus adding to the different time lapses with the waiting periods.
- The fact is that the process is further protracted and involved many stakeholders, such as hospital administrative personnel, insurance coordinators, and professional brokers involved from external insurance bodies.
- Research has shown that the delays are further exacerbated by bureaucratic inefficiencies and communication gaps among these stakeholders (Siddiqui & Salam, 2022). In effect,

the practical implication that these findings have on the hospital is tremendously far-reaching.

- Any delay in the discharge time of the TPA patients will result in a bottleneck in the inflow and outflow of patients, thereby reducing beds that become available to other incoming patients with a potential lag in admission of patients.
- Most likely, this may erode the aspect of the hospital's capacity to attend efficiently to incoming patients, especially at peak times of the service. Further, it will negatively impact such things as operational costs from such situations as hospital stays being prolonged, which means that resources are held and bound for periods longer than they should be.
- More strain on resources will likely translate into having to hire more administrative staff to try to deal with the rigors of the TPA discharge process. The patient experience might get washed away considerably long before the total discharge times for the purpose of patients' satisfaction.
- The most common reason a patient is ready to leave a hospital is because they are feeling well enough to go home, and any delay causes them annoyance and dissatisfaction. For TPA patients who already live with the stresses of their medical conditions, the additional administrative barriers must be especially trying.
- It may also affect their perception of quality care from the hospital, thereby affecting hospital reputation and patient loyalty. Such issues call for implementation of certain targeted interventions in hospitals about making the discharge process smoother for TPA patients.
- Electronic solutions that allow faster exchange of information between hospitals and insurance companies and cut human errors in claims processing include electronic health records and automated claim submission systems.
- Administrative staff could be trained to be more aware of insurance protocols, and there might be a need to build better communication lines between hospital departments and insurance companies to facilitate quicker discharges. In that view, the inefficiencies that exist may be taken away, and this will raise operational efficiency at the hospitals, enhancing patients' satisfaction and maintaining or having a higher standard of patient care.

4.2.2 Bill Settlement and Approval:

The most important reason for discharge delay in the case of TPA patients is the bill settlement and approval process. The average time of TPA patient's bill settlement is highly extended

Factors Requiring Long Procedure for Insurance Claiming:

1. TPA patients get delayed in the settlement of their bills for many reasons. For one, the verification of insurance is a time-consuming act. Hospitals must provide the insurance provider with itemized billing; the number of steps involved must be followed by detailing the medical expenses item-wise and what sort of treatment has been provided, supported by detailed proof. All such documentation is thoroughly scrutinized by the insurance company in detail—for it, the test of entering within the boundaries of the policy. This can lead to a further delay in errors or inconsistencies encountered and needs clarification or resubmission in documentation (Kumar & Garg, 2020).
2. There's also an added challenge because of the precondition for certain treatments or medicines. Many insurance companies require pre-authorization to ensure that certain conditions being treated are, in fact, included in the insurance coverage the patient takes out. This is done through an arrangement between the hospital and the insurance company indicating potential delays in the process. Additional delays occur when the insurance company requires additional information or even in the event of discrepancies of records between the hospital and the insurance records.
3. Involvement of various stakeholders also elongates the process. The hospital's billing department must liaise with the patient and the insurance company. All these stakeholders consist of their own set of procedures and timelines that may be misaligned further and increase the delay. Studies have found that inefficiencies in communications and coordination are one of the biggest contributors to insurance claim settlement delays.
4. Comparison with NABH Standards: Comparing the bill settlement process of the TPA patients with the NABH standards, it lagged far behind. The NABH-prescribed target is 30 minutes for bill settlement and approval. In our study, the self-pay patients were comparable to this benchmark, with an average time of 46 minutes. However, an average of 200 minutes for TPA patients still represents substantial inefficiency and procedural bottlenecks. This non-conformance with NABH guidelines has many other implications for hospital management and

involves a prolonged settlement time, finally reducing the bed turnover rate and hence less capacity for the hospital to admit newer patients. This may prove particularly problematic during peak times when demand for hospital beds is at its peak. Moreover, hospitalization of the patients is prolonged due to such billing delays. This leads the operation costs and resource consumption to rise further, which further refrains the hospital from its operational and administrative resources.

5. Management Implications for Hospitals: For the hospital management, it is very important to investigate the issues of the bill approval and settlement delays to improve the overall efficiency and satisfaction level of the patients. It is, therefore, necessary that electronic solutions be used in the form of electronic billing systems, which will be geared at minimizing the manual errors and at the same time facilitate the increased speed of information exchange between the hospital and the insurance companies. Enable some automation of the documentation and verification work to cut down the time taken to settle the bills (Patil et al., 2021). This should also be supplemented with effective communication and coordination between the hospital's billing department and the insurance companies. Regular training of administrative personnel in insurance procedures and needs for different documentation that can reduce error be helpful in speeding the verification process. Special teams for the billing and claims of TPA patients may increase working efficiency as they can give specific attention to such cases.

4.2.3 Bottlenecks in Discharge Process:

1. Preparation of discharge summaries: Though near to the NABH standards, preparation of discharge summaries had the ignominy of suffering from minor delays, especially in the case of TPA patients, most of the time, due to the additional documentation required to meet their insurance protocols. Necessity of detailed and precise account of summaries regarding the treatment, medication, and follow-up care of the patient sometimes lie behind the reason for admitting delays if the administrative processes of the hospital are not perfectly coordinated. Moreover, mistakes or omissions may attract greater delays because such papers need to be checked for mistakes and rectified before completion.

2. Returning Unused Medicines to the Pharmacy: Returning unused medicines is typically an easy process but sometimes slows down to a bottleneck when more checks are required for

insurance purposes. In the case of TPA patients, the pharmacy has to ensure that all the returned drugs are properly documented and reflected in the insurance claims. This can be taken if there are errors in the medication records or if the pharmacy staff requires coordination with the billing department to have the right reflection in the final bill to be presented to the patient.

3. Departmental Clearances: Clearances of several departments, such as labs and pharmacies, pose yet another big bottleneck. These clearances are going to verify for the finalization of all the pending laboratory tests as well as no remaining orders issued from the pharmacy. Ineffectiveness in inter-departmental communication and collaboration may increase the overall time frame for the completion of the process. There are more steps needed to travel to get the verification of services delivered to TPA patients as these patients need to ensure that these services are regulated under their insurance policy, which an escorting time increase for the process.

4. Bill Preparation and Approval: Of course, the biggest bottleneck in the whole discharging process would be the preparation and approval of the bill, especially for TPA patients. Itemized bill preparation is a time-consuming activity, as all treatments, medications, and services provided to the patient have to be accounted for. In the case of insurance claims, each and every item in this list would have to be cross-verified against the patient's policy coverage. Quite a considerable delay may be added especially if mismatches are found or in cases where further documentation is required. Depending upon the case, in most cases of the approval process, thus many layers of inspection by the insurance provider tend to further lengthen the time consumed before finally billing is closed.

5. Inter-Departmental Communication and Coordination: A theme that comes across in the bottlenecks that one identifies is the inefficiency in inter-departmental communication and coordination. Effective discharge would require smooth functioning and interaction among the medical, pharmacy, billing, and administrative departments. Any miscommunication causes a delay because information has to be verified again and re-verified, all the more so when it concerns TPA patients, where the stakes of accurate documentation and billing are high due to the requirement of insurance risk cover.

6. Documentation and Verification Processes: Due to the extensive documentation and verification that needs to be done for insurance claims, such a process is also one of the most significant reasons behind the delaying of TPA patients. Every step of the discharge process, right from preparing discharge summaries to the final passing of bills, requires detailed documentation, which is all supposed to be accurate and complete. Any errors or omissions can lead to delays since the documents are reviewed and corrected. Multiple levels of approval by many interested parties, such as the administration of the hospital and insurance company officials, contribute to more complexity and potential delay.

Chapter 5: Conclusion & Recommendations

5.1 Conclusion

This study highlights the significant delays in the discharge process for TPA patients compared to self-pay patients, primarily due to the complex and layered procedures involved in insurance claims processing. TPA patients experience a significantly longer average discharge time (4 hours and 25 minutes) compared to self-paying patients (1 hour and 33 minutes), which underscores the inefficiencies and bottlenecks in the current system. The main factors contributing to these delays include multi-layered insurance verification, detailed scrutiny of case records and billing summaries, pre-authorization requirements for certain treatments, involvement of various stakeholders, and inefficiencies in inter-departmental communication and coordination.

The prolonged bill settlement and approval process for TPA patients, averaging 200 minutes compared to the NABH standard of 30 minutes, further exacerbates these delays. This not only affects the hospital's operational efficiency but also has far-reaching implications on patient satisfaction, resource allocation, and overall hospital capacity. The delays in discharge processes, preparation of discharge summaries, returning unused medicines, and departmental clearances further contribute to the inefficiencies observed.

5.2 Recommendations:

- Conduct regular audits of discharge procedures to identify bottlenecks and areas for improvement.
- Use patient feedback to assess the effectiveness of implemented changes and make further adjustments as needed.
- Simplify the documentation process required for health insurance approvals.
- Standardize forms and reduce redundant paperwork to minimize time spent on administrative tasks.
- Develop and implement comprehensive training programs covering all aspects of the discharge process.
- Include modules on documentation, billing, patient communication, and use of technology.
- Schedule regular refresher courses to keep staff updated on new protocols, technologies, and best practices.
- Encourage staff to give response on the discharge process and training programs.
- Utilize this feedback to consistently enhance educational content and discharge procedures
- Doctor should convey expected date of discharge & change in date should be intimated.
- Case sheet (Data sheet) should be send on time to the Billing Department.
- Establish clear communication channels between healthcare providers and insurance companies to facilitate timely resolution of approval delays.
- Educate healthcare staff about insurance approval processes and strategies for mitigating delays, including best practices for documentation and communication.
- Implement continuous improvement strategies to monitor and address common issues related to insurance approval delays through feedback mechanisms and quality improvement initiatives.
- Based on the study of hospital discharge procedures, several recommendations can be made to address the inefficiencies identified, particularly in the health insurance discharge process.

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