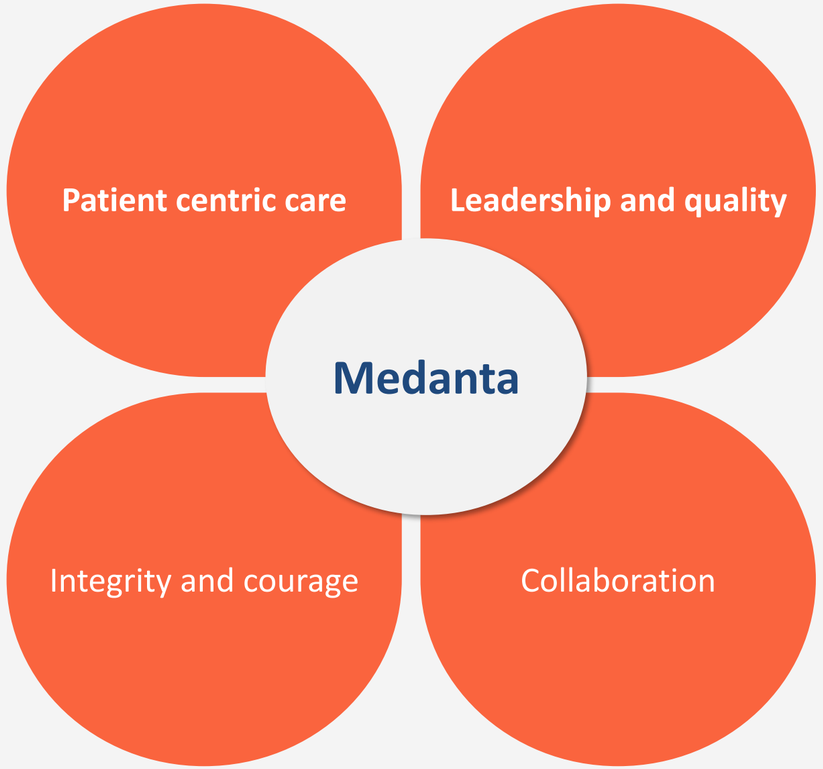
Dissertation presentation

TOPIC: Factors contributing to delay in the Discharge process of a tertiary Hospital

Medanta,Gurugram

Mission and Values

The mission is to deliver world class, patient centric, integrated and affordable healthcare through a dynamic institution that focuses on the development of people and knowledge.



Network of 6 multi-speciality hospitals and 5 clinics across 8 cities

Facilities for over 30 medical specialties , 1,100+ full time doctors

2,176 installed beds
Expanding to 3,500 installed beds by FY25E

1.1mn+ patients treated across IPD and OPD

Network of 6 multi-speciality hospitals and 5 clinics across 8

3.7 million sq. ft. of built up area with additional land for ancillary services

65 operation theatres
494 ICU beds

Accredited by JCI (Gurugram hospital) and NABH

Introduction

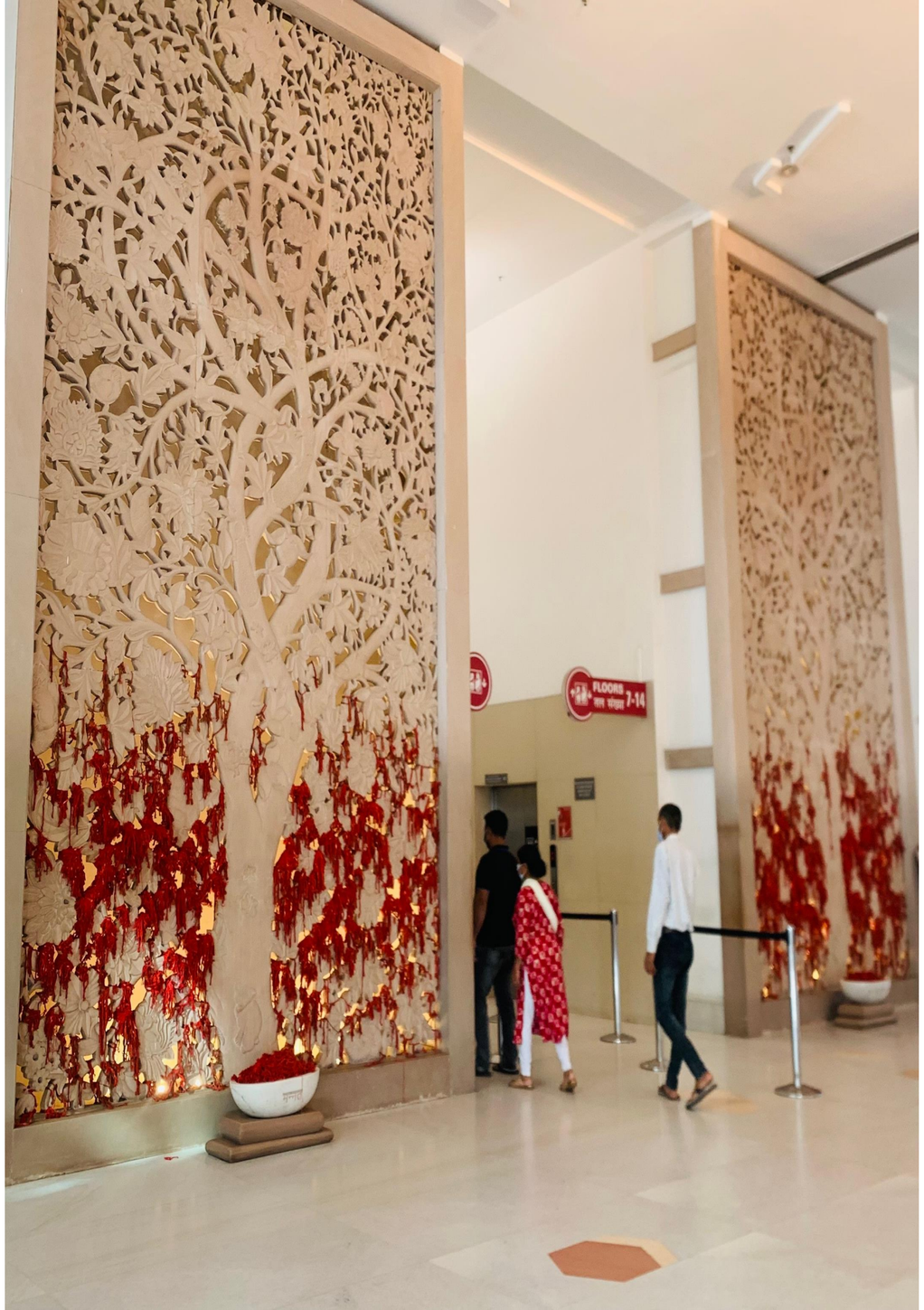
Efficient and prompt discharge of patients is vital for optimizing hospital resources, improving patient flow, and enhancing overall healthcare delivery. However, delays in the discharge process can significantly impact patient satisfaction, resource utilization, and hospital efficiency.

Research question:

What factors contribute to delays in a tertiary hospital's discharge process?

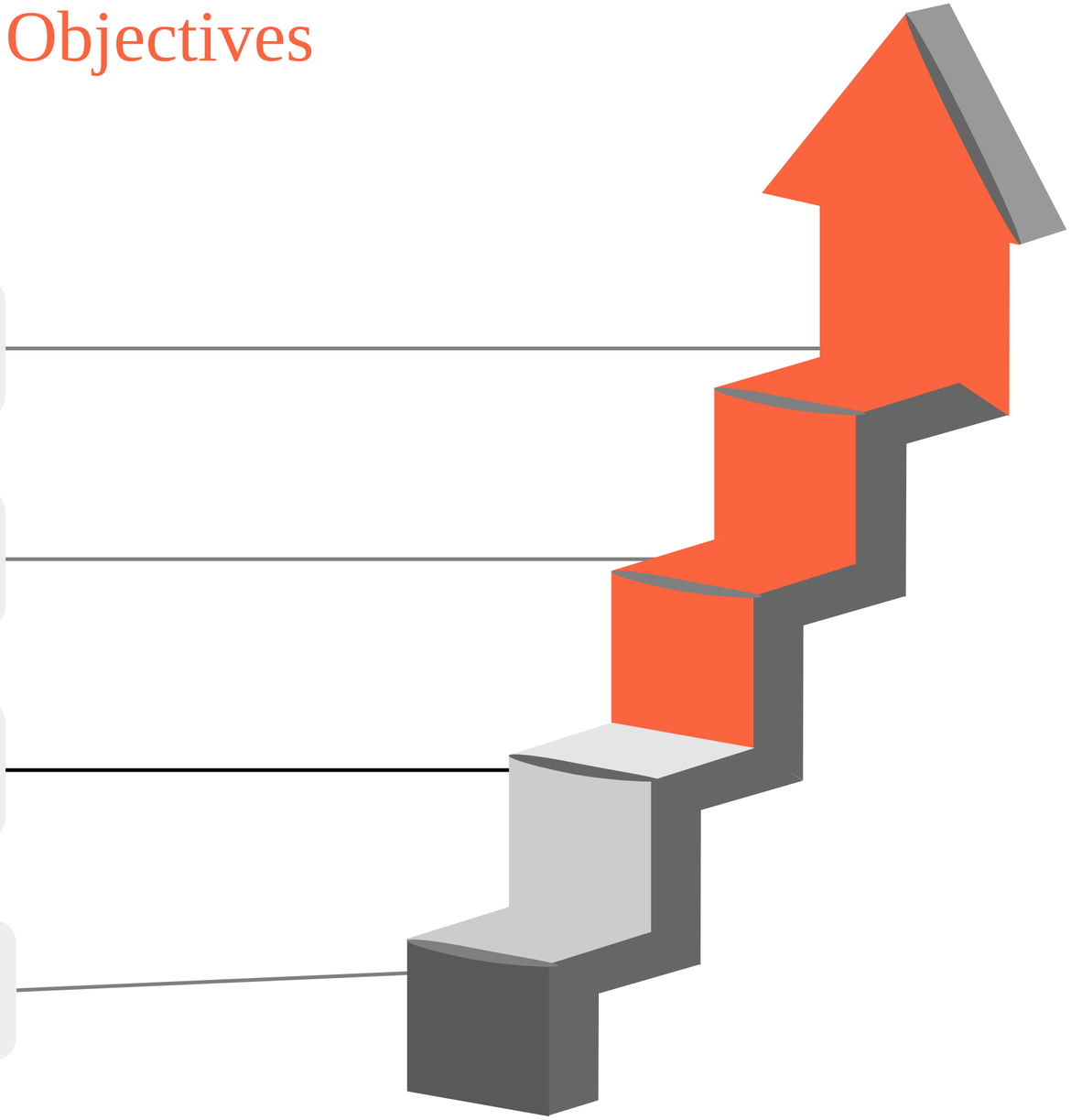
Aim:

To study factors that cause delays in the in-patient discharge process of a tertiary hospital.



Goals and Objectives

1. To study the discharge process of in-patients.
2. To identify the reasons for the delay in the discharge process.
3. Do a Root-cause analysis of the cause of delay in the in-patient discharge process.
4. To recommend and implement measures to reduce the discharge time of patients



Review of Literature:

Title	Author	Review
Defining Delayed Discharges of Inpatients and Their Impact in Acute Hospital Care,Feb 2022	Alexander Micallef, Sandra Buttigieg, Gianpaolo Tomaselli, and Lalit Garg	The scoping article conducted by Alexander Micallef, Sandra Buttigieg, Gianpaolo Tomaselli, and Lalit Garg explores the definitions and impact of delayed discharges of inpatients in acute hospital care. The study reveals that there is a lack of consistency in defining delayed discharges across different studies. The factors contributing to delayed discharges include clinical, system-related, and social factors. These factors lead to increased healthcare costs, compromised patient safety, decreased bed availability, and operational challenges for hospitals. The scoping review emphasizes the need for standardized definitions and targeted interventions to address the multifaceted nature of delayed discharges. Improving care coordination, communication among healthcare teams, bed management strategies, and community care services are crucial steps toward reducing delayed discharges and improving patient outcomes. The findings underscore the complexity of the issue and call for further research to evaluate the effectiveness of interventions and develop best practices for addressing delayed discharges in acute hospital settings.
Delay in hospital discharge of trauma patients in a University Hospital in Egypt Islam El-Abbassy: A prospective observational study Dec 2021	Wafaa Mohamed , Hazem Mohamed El-Hariri e, Maged El-Setouhy, Jon Mark Hirshon, Mohamed El-Shinawi	The study investigates the causes of delayed hospital discharge for trauma patients at a University Hospital in Egypt. The research examines administrative and clinical factors, such as documentation delays, insurance issues, coordination challenges, additional tests and surgeries, complications, and resource constraints. The findings emphasize the need for targeted interventions to improve administrative processes, interdepartmental coordination, and resource allocation in order to reduce discharge delays and enhance patient outcomes. The study highlights the complexity of the discharge process and calls for future research to evaluate the effectiveness of interventions and develop best practices to minimize discharge delays for trauma patients.

Review of Literature:

Title	Author	Review
Study on causes of delay in discharge process in one of the prominent hospitals in Tamil Nadu.	Ms.S.Arthi,S.Divya Assistant professor, Dr.N.G.P Arts and Science college, Coimbatore, India, A	Two studies examined delayed discharge in healthcare settings. The first review found that it leads to increased costs, reduced bed availability, compromised safety, infections, and delayed care access. Experiences included frustration, stress, compromised care, and strained relationships. The second study identified administrative factors, patient issues, and resource constraints as causes of delay. Both studies highlight the need for proactive strategies to optimize discharge and improve patient care.
In-depth analysis of delays to patient discharge: a metropolitan teaching hospital experience, Clin Med August 2012	P Hendy, JH Patel, T Kordbacheh, N Laskar and M Harbord,	This study provides an in-depth analysis of patient discharge delays in a metropolitan teaching hospital. Administrative factors, incomplete documentation, communication gaps, and medical clearances, along with patient-related factors like test results and post-discharge care arrangements, contribute to delays. Resource constraints and coordination with external healthcare services also impact discharge delays. Targeted interventions such as improving communication, streamlining procedures, and enhancing collaboration among healthcare teams can reduce delays and optimize resource utilization. Further research is needed to evaluate specific interventions and develop best practices for minimizing discharge delays in this context.

Methodology

Study

- Study design: Cross-sectional
- Setting: Medanta, Gurugram
- Duration: 2 months
- Sample size: 198

Variables

- Patient Demography
- Length of hospital stay
- Reasons for delay in discharge
- Discharge planning status

Inclusion criteria:

- Patients are admitted to any hospital department, including medical, surgical, and HDU.
- Patients who were discharged from the hospital during the study period.
- Patients of all paying category

Methodology

Ethical considerations

Privacy and confidentiality :

- participant confidentiality will be maintained, with all data collected, stored securely, and accessed only by the study team.

- **Risk of harm:**
- the study should ensure that any procedure used does not cause undue stress to the participants.

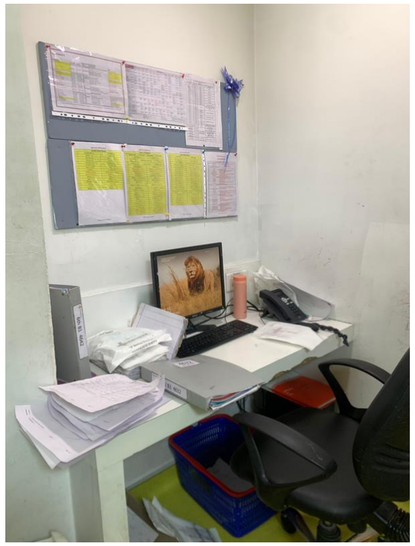
Equitable recruitment:

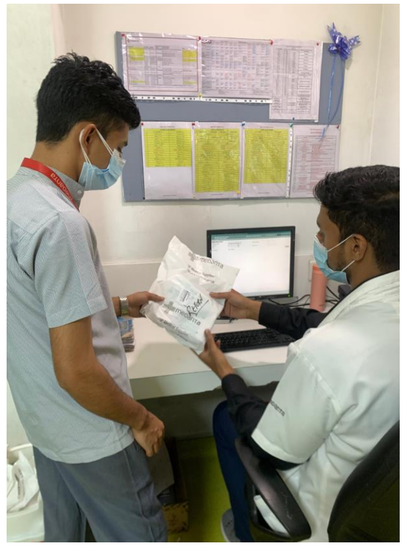
- Recruitment should be equitable, ensuring no group is excluded or unfairly represented. This means participants should be selected based on pre-defined inclusion and exclusion criteria.

Data sharing and reporting :

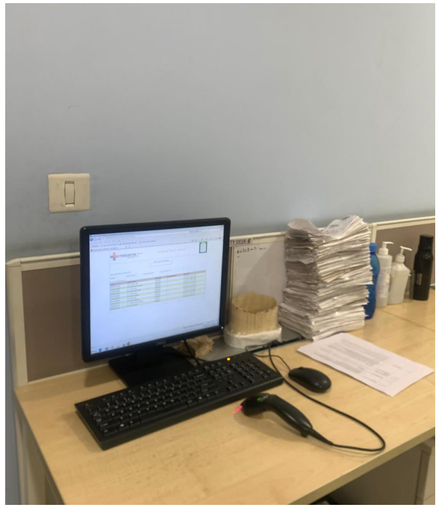
- The study team should ensure that any data collected is used appropriately and reported in a responsible and transparent manner.

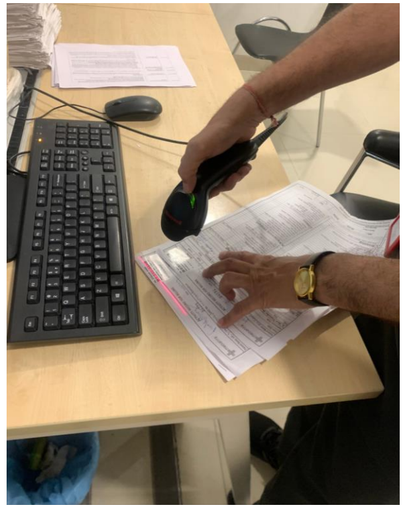
1. Medication return



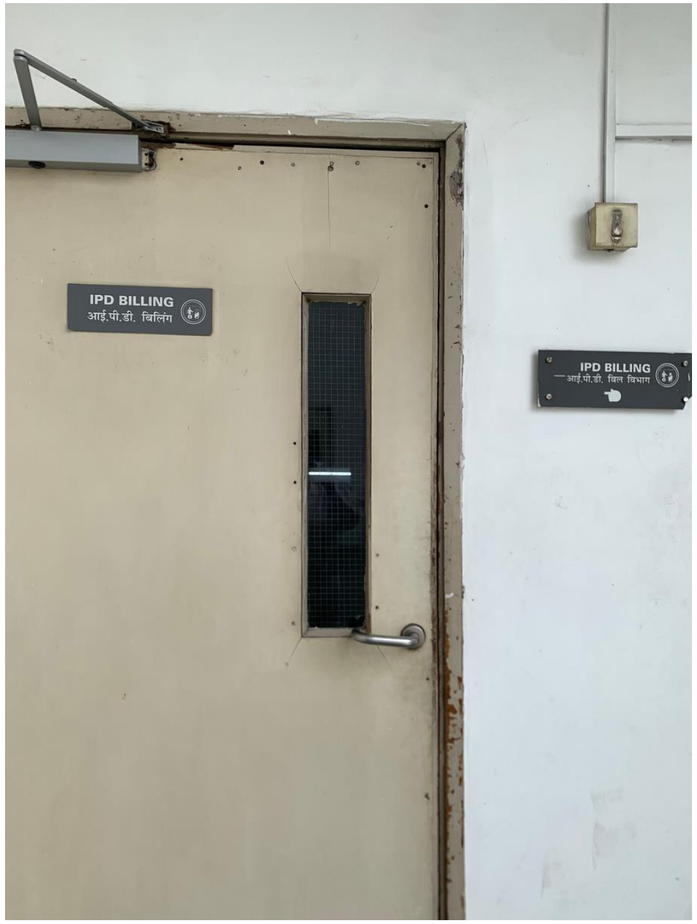


2. Activity sheet scan





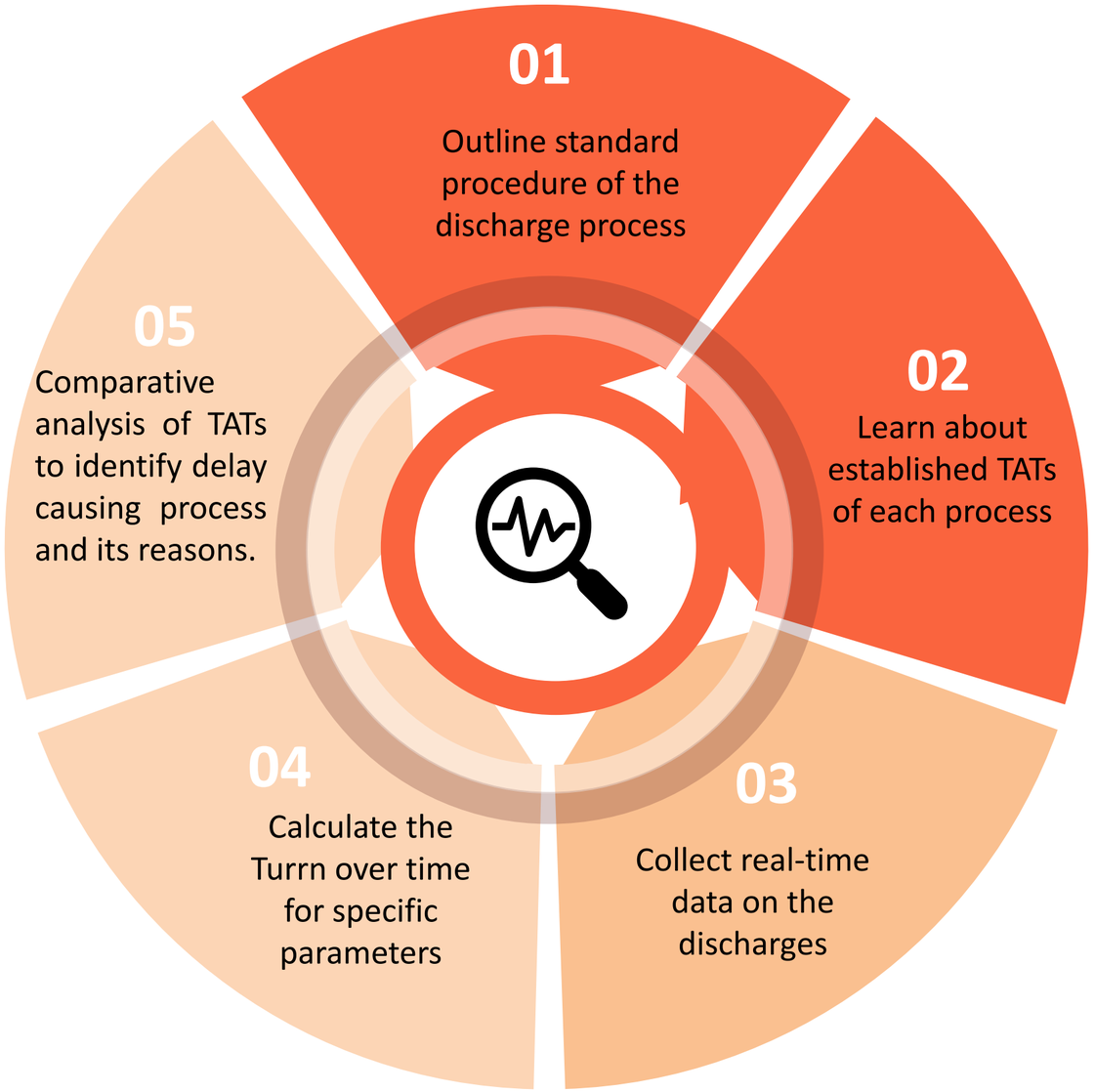
3. IPD Billing



4.Discharge Lounge

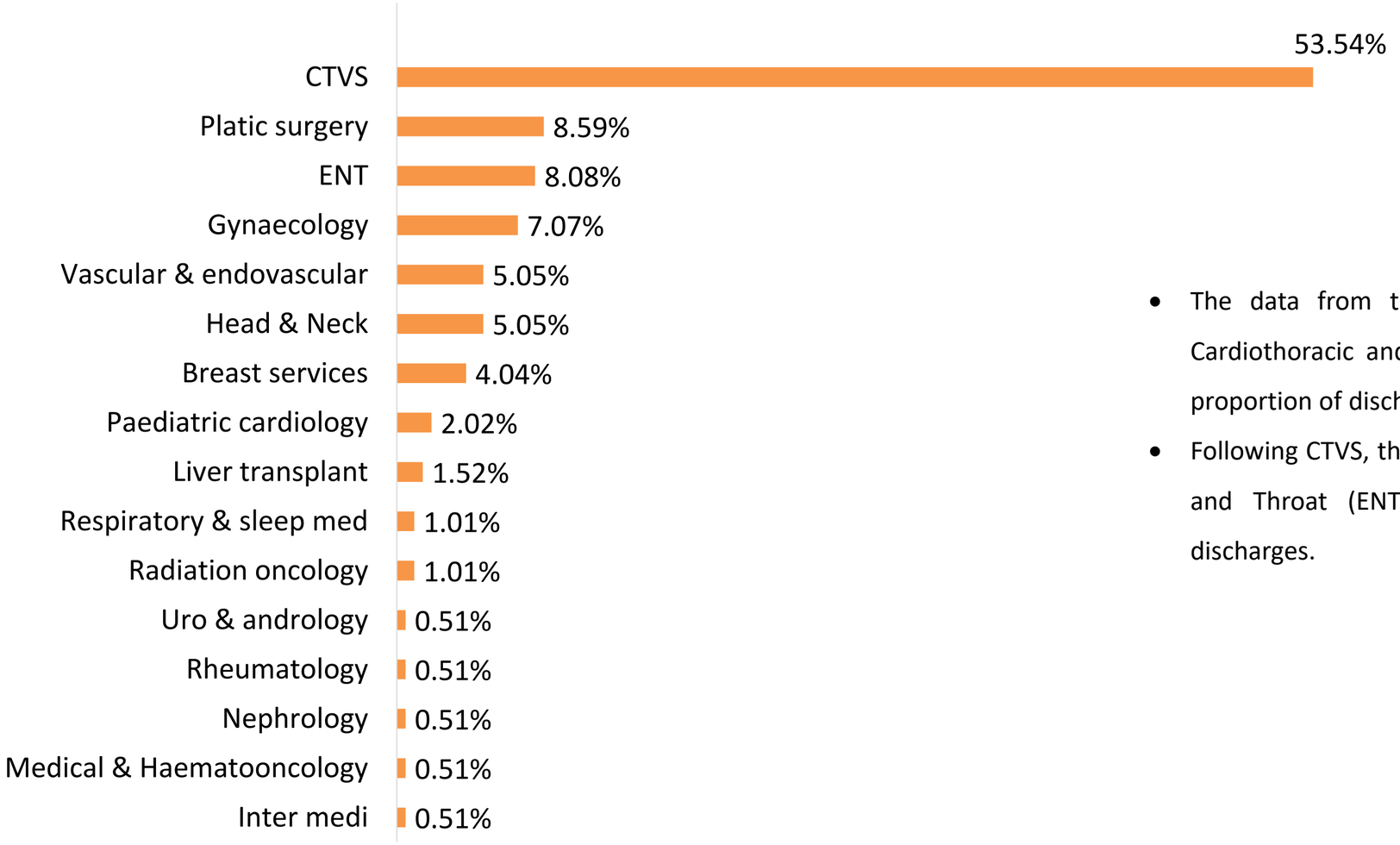
Data Analysis

Steps taken to analyse the collected discharge data



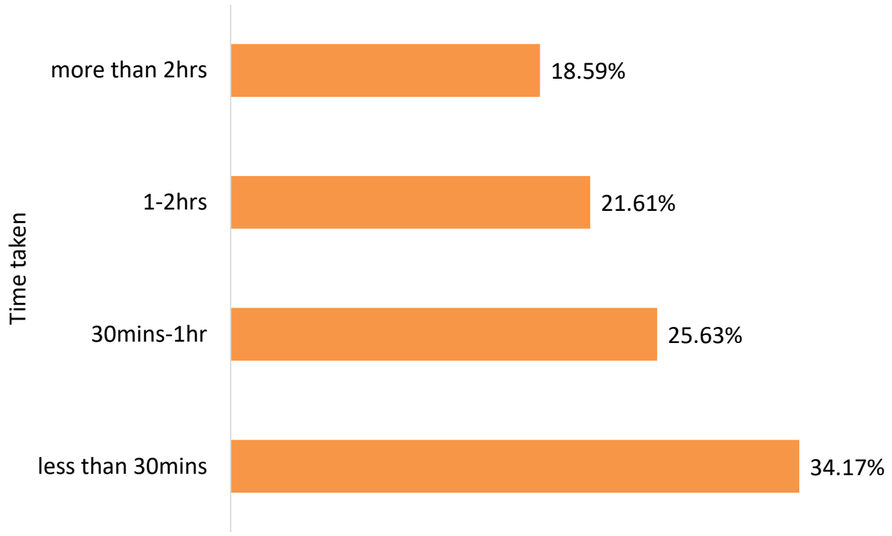
RESULTS

Specialty-wise distribution of discharges



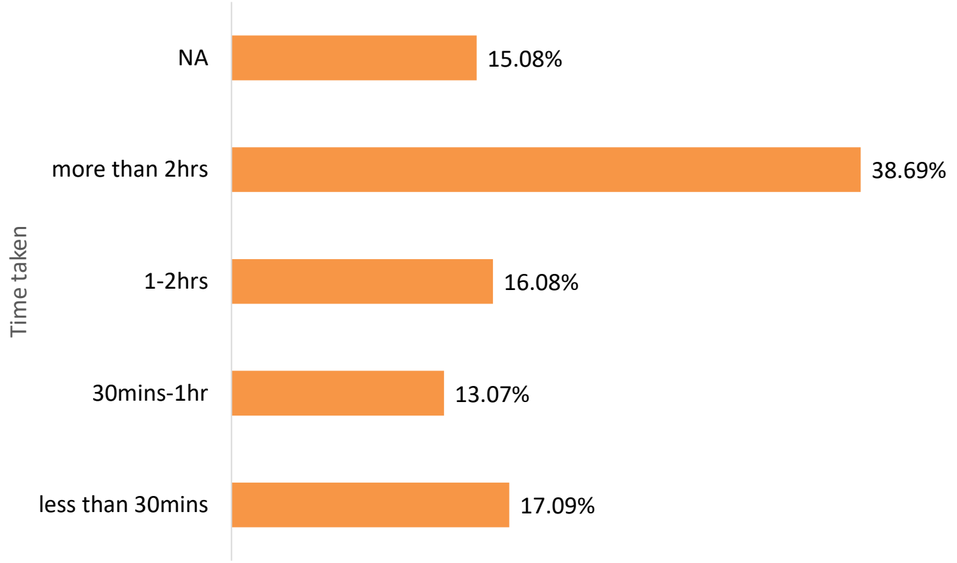
- The data from the graph indicates that the department of Cardiothoracic and Vascular Surgery (CTVS) exhibits the highest proportion of discharges.
- Following CTVS, the departments of Plastic Surgery and Ear, Nose, and Throat (ENT) show the second highest percentage of discharges.

Medication return



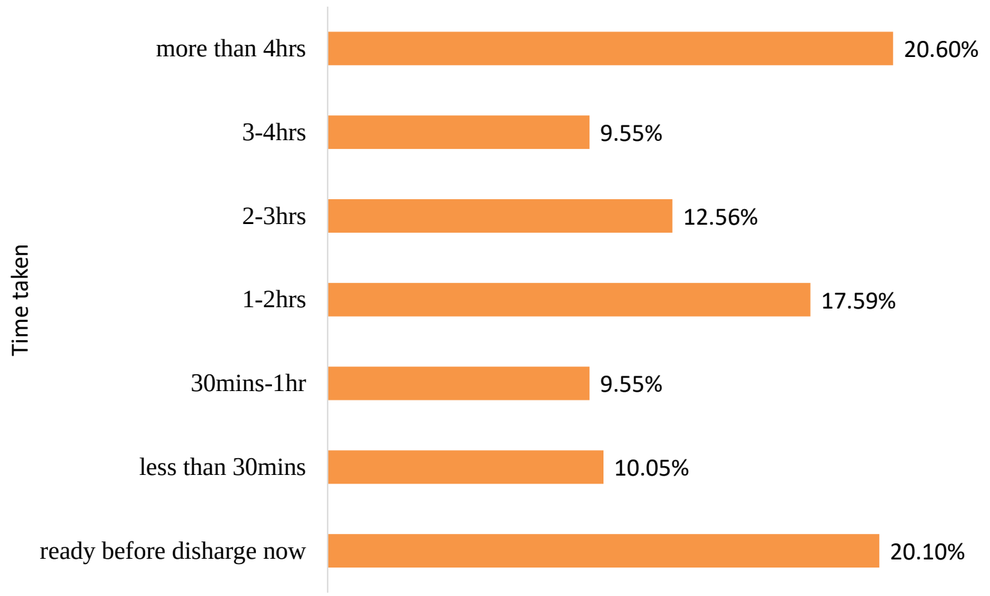
- Notably, the graph reveals that the highest percentage, nearly 35 percent, of medications are returned within a time frame of 30 minutes.
- A considerable delay in returning medications, with almost 19 percent of medications being returned after a duration exceeding 2 hours.
- Approximately 60 percent of medications are returned within 1 hour. However, to achieve more efficient and expedited discharges, it would be advantageous to focus on expanding the proportion of medication return within the first 30 minutes, as percentage difference between 30 minutes and 30minutes to 1 hour is of 10 percent.

Activity sheet scan



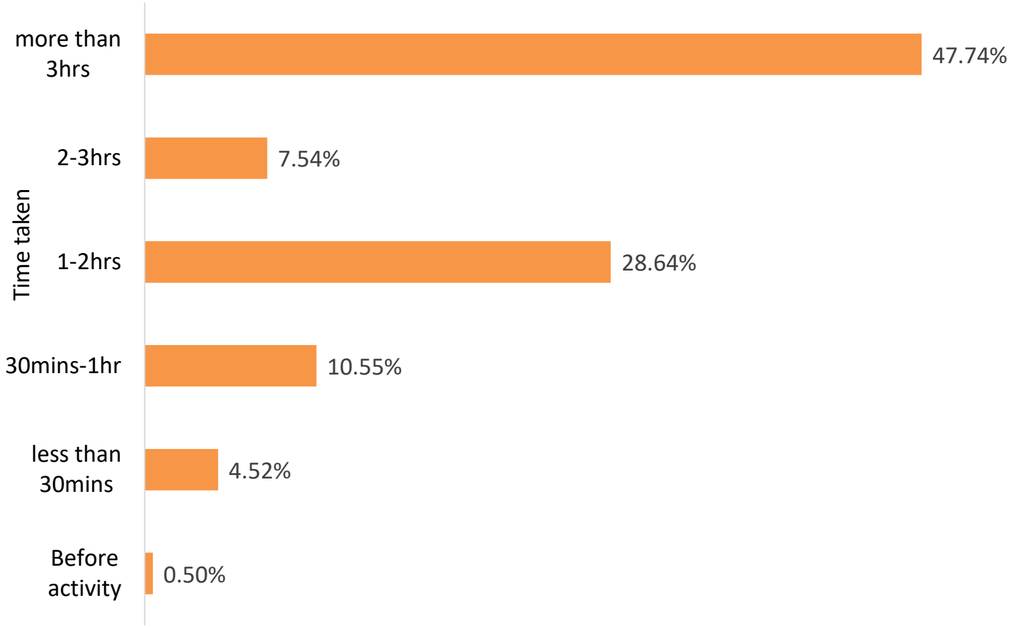
- The findings reveal the duration it takes for the activity scan to be transmitted from the ward to the IPD (Inpatient Department) Billing department.
- The graph demonstrates a substantial proportion of 38% of activity sheets taking more than 2 hours to reach the billing department.
- Only 17% of activity sheets are promptly sent to billing within a 30-minute timeframe.
- Timely submission of the activity sheet to the billing department is a crucial step as it serves as the primary requirement for patient clearance.

Discharge summary status

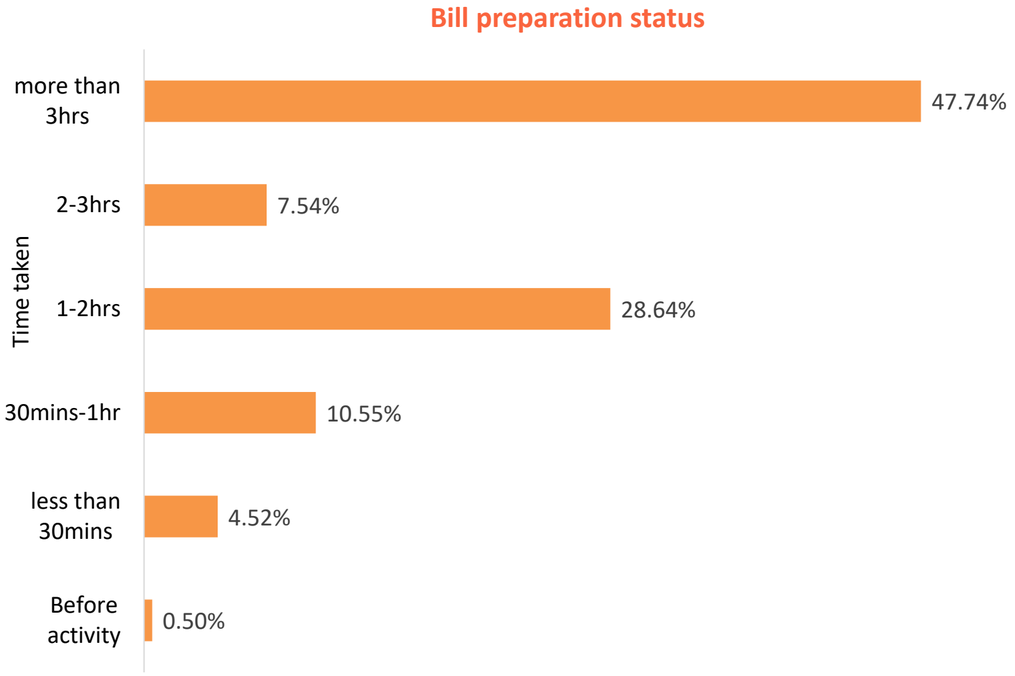


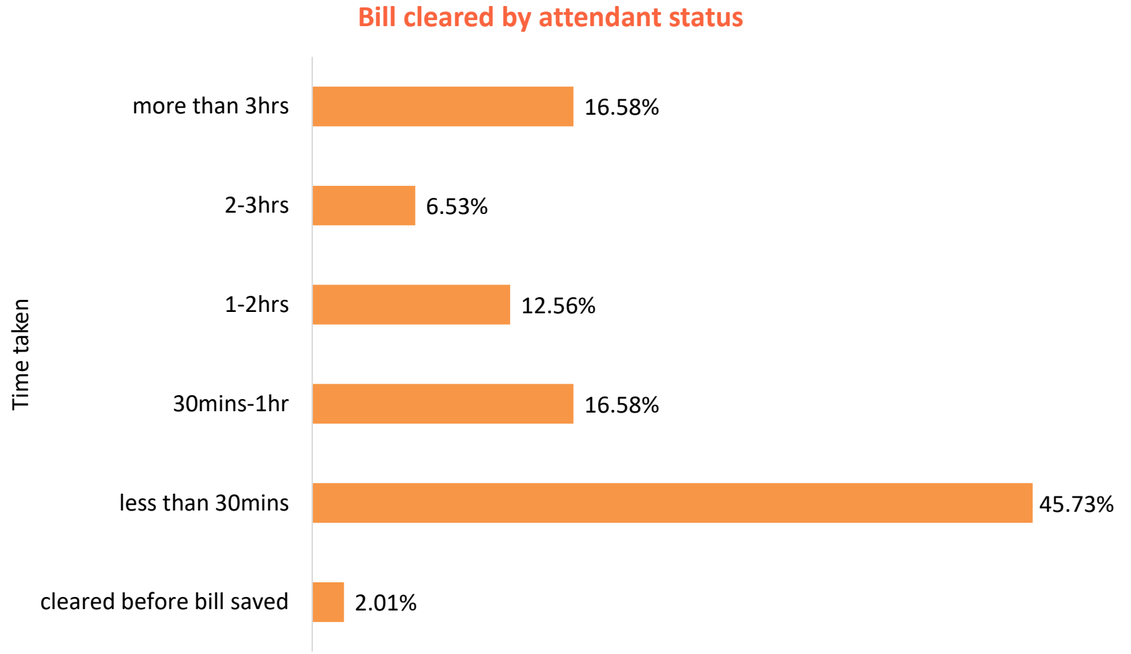
- At least 26% of discharge summaries are ready within 2 hours of time.
- Only 19% of discharge summaries are ready within one hour.
- 41% of total cases have discharge summaries ready only after 2 hours.
- 36% of cases have discharge summaries ready under 2 hours.
- 20% of summaries are ready before discharge now, but it nullifies the impact because an equal proportion of 20% of discharge summaries were ready only after 4 hours.

Bill preparation status



- Only 15% of patient bills are ready within 1 hour, indicating a relatively low percentage of prompt bill preparation.
- Out of that 15%, only 4% of bills are prepared within 30 minutes, suggesting that a small fraction of bills are expedited.
- A mere 38.6% of bills are prepared within 1 to 2 hours, representing a moderate percentage within this time frame.
- The majority of bills, approximately 55%, are prepared after two hours, indicating a significant delay in bill preparation.
- Out of the 55%, only 7% of bills are completed within 2-3 hours, while the remaining 48% take more than 3 hours to be prepared.





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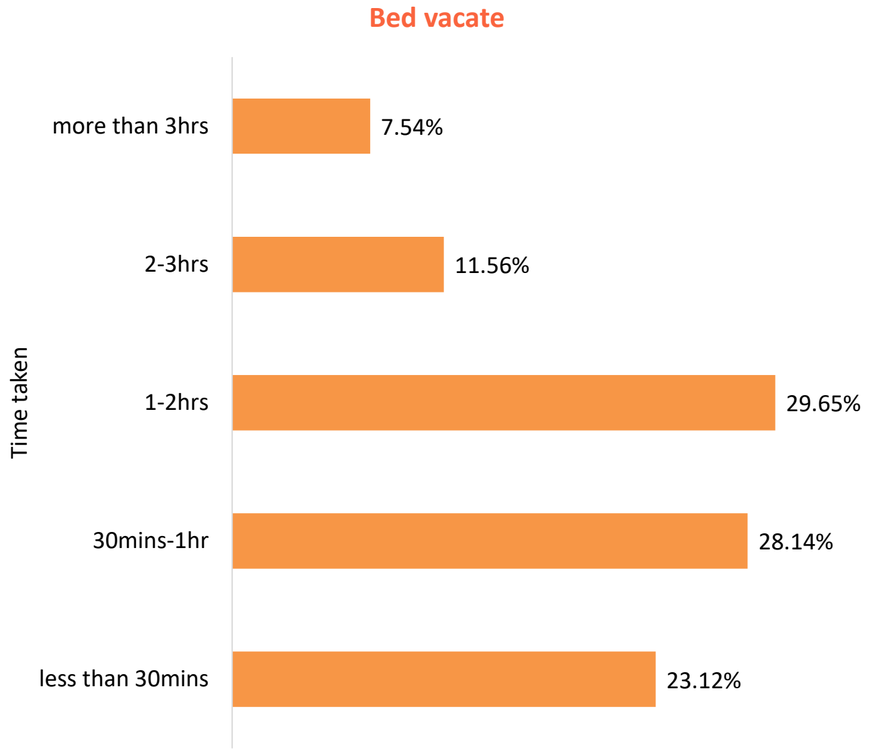
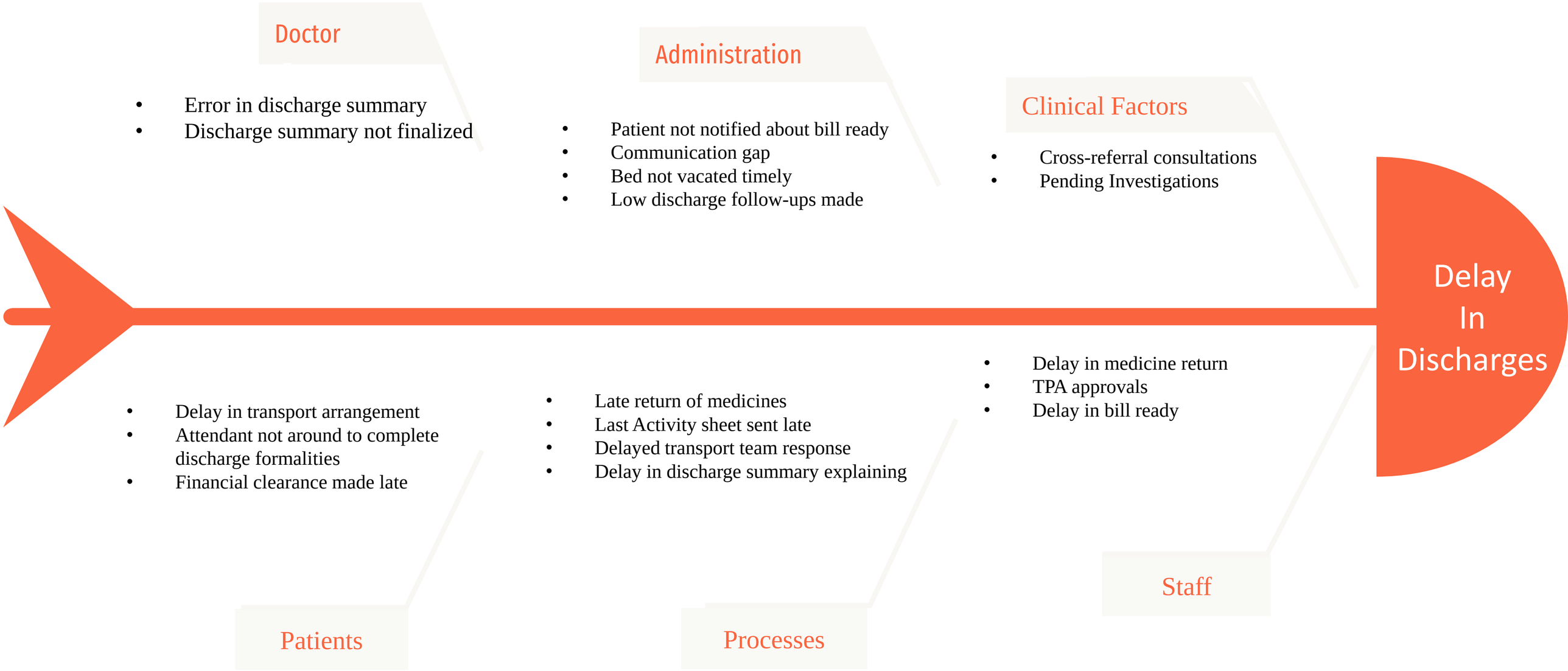
- It is notable that a majority of attendants clear the bill in less than 30 minutes, with 45% falling within this time frame.
- A smaller percentage of 16% of attendants take between 30 minutes to 60 minutes to clear the bill.
- A small portion of 12% of attendants require 1-2 hours to complete the bill clearance process.
- A chunk of 22% of attendants can be seen clearing the bills after 2 hours, indicating a significant delay in bill clearance.
- This 22% represents a focus area for improvement, as reducing this percentage can have a substantial impact on the overall discharge process, resulting in a reduction of the overall turnaround time.



- The rate of time taken for beds to be vacated after a patient's departure is increasing.
- There is a significant drop in the time taken when it exceeds 2 hours, which is a positive trend.
- Only 23% of beds are vacated within 30 minutes, indicating a low percentage.
- Approximately 28% of patients vacate the beds within 30 minutes to 60 minutes.
- The highest percentage of bed vacating falls within the time frame of one hour to two hours, with 29% of patients falling into this category.
- It is necessary to focus on reducing the time taken to vacate beds.

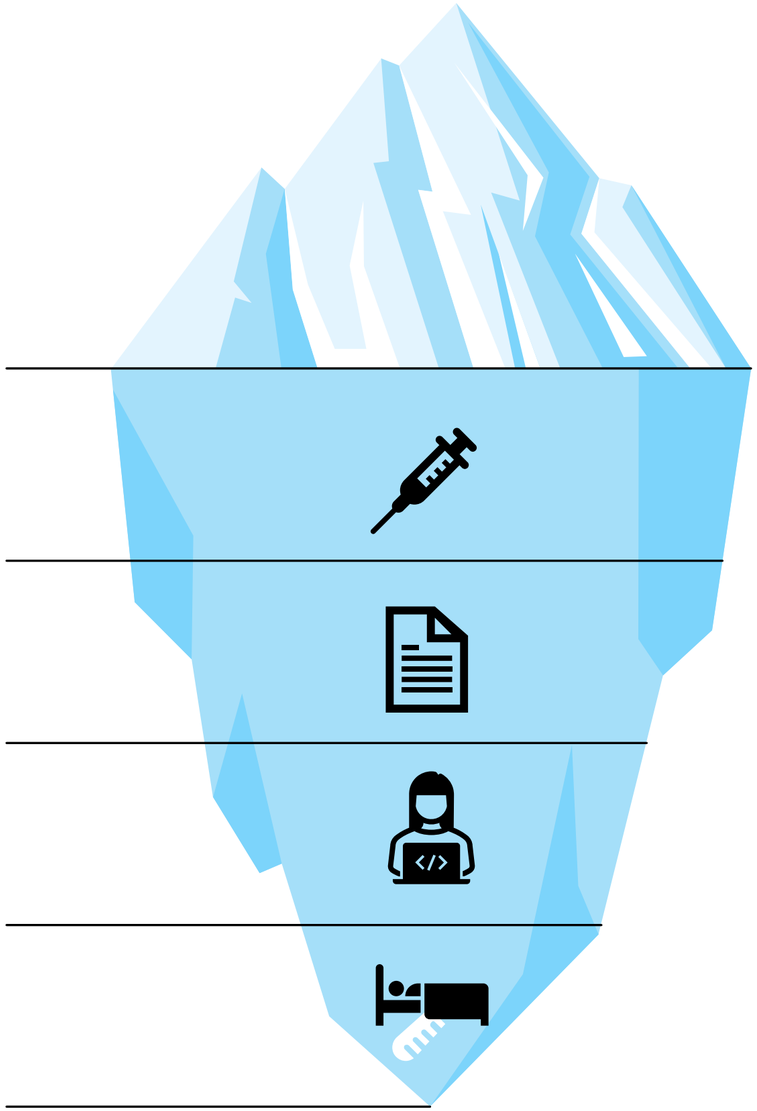
Fish-Bone Analysis on the factors causing delay in the discharge process



RECOMMENDATIONS

Major factors identified:

1. Return of medicined
2. Discharge summary
3. Billing
4. Bed vacate



Delay causing Process	Recommendations
Medication return	• Ensure that medicines that have been discontinued are returned daily, preventing any pending medications on the day of patient discharge.
Discharge summary	• A comprehensive daily summary should be created and regularly updated, documenting all patient records. This summary should be easily accessible for the attending doctor to review on a daily basis. By ensuring that the majority of the details and summaries are approved and finalized by the day of patient discharge, the process of finalizing the discharge can be expedited.
Bill preparation	• Make an inclusive, Billing counter/zone pertaining only to billing related queries or errors. • Effort should be made to clear as many queries as possible by the floor managers. • Provide interim bills to the patient, to keep them updated with their expenses.
Bed Vacate	• Implementing consistent discharge counselling and actively encouraging attendants to promptly complete the necessary clearances. • Increase the utilization of the discharge lounge in routine. • Promptly update “patient out” on the system. • Diligently conducting follow-ups for the discharge process, including explanations of the discharge summary