A STUDY ON TURNAROUND TIME IN DISCHARGE PROCESSES FOR PRIVATE PATIENTS, AYUSHMAN BHARAT PATIENTS, AND OTHER EMPANEL PATIENTS

Dissertation Submitted to

The IIHMR University, Jaipur

for the partial fulfilment for the award of the degree of

Master of Business Administration (MBA)

in

Hospital and Health Management

By

Tika Kumari

Under the Supervision and Guidance of

Dr. Nutan P. Jain

2024

ACH/HR-TR/2024/178

Date: 23rd May 2024

To Whomsoever It May Concern

This is to certify that **Dr. Tika Kumari** D/o Mr.Yam Bahadur , student of IIHMR University has undergone **2 months** Internship in Department of Medical Administration at Action Cancer Hospital (Which is a part of her course curriculum in MBA in Hospital & Healthcare Management) with effect from **18th March 2024 to 18th May 2024**

Her performance during internship period was found to be satisfactory.

We wish her success in all her future endeavors.

Pooja Sethi
23/5/24

Pooja Sethi
Dy. Manager –Training&HR

Dr. Archana Atreja
Medical Superintendent

DECLARATION BY STUDENT

I hereby declare that this dissertation titled "**A Study on Turnaround Time in Discharge Processes for Private Patients, Ayushman Bharat Patients, and Other Empanel Patients**" at **ACTION CANCER HOSPITAL** 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 Information derived from the published or unpublished work of others has been duly acknowledged in the text.

Tika

Dr. TIKA KUMARI

DATE 2/07/2024

IIHMR UNIVERSITY

CERTIFICATE

This is to certify that dissertation titled "**A STUDY ON TURNAROUND TIME IN DISCHARGE PROCESS FOR PRIVATE PATIENTS, AYUSHMAN BHARAT PATIENTS, AND OTHER EMPANEL PATIENTS**" is a record of the research work undertaken by **DR. TIKA KUMARI** in partial fulfilment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and her approach to the research study has been sincere, scientific, and analytical.

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Date: 2/07/2024

Dr. Sanjay Gupta

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Date: 02/07/2024.

I would like to express my special thanks of gratitude to my IIHMR mentor **Dr. Nutan P. Jain**, who gave me expert guidance and support in completing the project.

I am extremely grateful to **Dr. Archana Dhar (DMS)** at Action Cancer Hospital, New Delhi for their invaluable advice, continuous support and direct or indirect help during my dissertation period.

Their immense knowledge and plentiful experience have encouraged me during my academic research and daily life. I would like to thank all the floor executives, senior executives, ward secretaries and nurses of Levels. It is their kind help that has made my study successful at Action Cancer Hospital, New Delhi.

I would like to express my gratitude to my parents. Without their continuous understanding and support during my dissertation period, it would be difficult or impossible for me to complete the study.

Dr. Tika Kumari

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LIST OF ABBREVIATIONS

HDU	High Dependency Unit
HIS	Hospital Information System
IP	Inpatient
ICU	Intensive Care Unit
MTR	Medical Transcription Receptionist
MRD	Medical Record Department
MICU	Medical Intensive Care Unit
NABH	National Accreditation Board for Hospital & Health Care Provider
OT	Operation Theater
OP	Outpatient
OPD	Outpatient Department
QCI	Quality Council of India
TAT	Turn Around Time

INTRODUCTION

Discharging a patient admitted to a hospital, (as Inpatient,) is a complex process. It is multidisciplinary process in nature. The term " inpatient" -refers to a person who has been admitted to a hospital in order to receive inpatient hospital care and they spend night at hospital.

Efficient and effective discharge process needs cooperation among physicians, nurses, chiefs and heads of the departments, floor managers, ward secretaries, and other professionals within the hospital adapting an interprofessional team approach. Effective and positive collaboration and coordination among staff can streamline the patient discharge cycle and patient results. Patient discharge is impacted by hierarchical elements, individual elements, and teamwork elements.

Each discharge is unique, owing to the nature of the condition of each patient. The ultimate goal of an efficient, well-put discharge planning process is to improve the quality of life of the patient in the care continuum and also reduce the rate of unplanned readmissions owing to complications. Term Discharge Turnaround Time is used in Hospital to describe how long it takes from being marked for discharge by doctor to final bed release by the patient. This covers the interval between the time the doctor decides the patient is health is stable enough to be discharged. Discharge process is applicable for the inpatient. Outpatient and inpatient services are the two primary service categories that a hospital primarily offers.

National Accreditation Board and Hospital (NABH) defines discharge as "the process of activities that involves the patient and the team of individuals from various disciplines working together to facilitate the transfer of the patient from one environment to another".

The discharge process in a hospital is important because this is the last point of contact between the patient before they leave the place. If the patient is not satisfied with the time efficiency, it leaves behind a lingering distaste for the entire organization. A properly planned discharge is an added advantage to ensure patient loyalty to the same healthcare facility, in case of readmission. National Accreditation Board for Hospitals (NABH) by Quality Council of India (QCI) recognized by the Ministry of Health and Family Welfare, Government of India has standard timings set for different parts of the discharge process for efficient hospital processes. Setting a NABH-approved discharge Turn Around Time (TAT)

for hospitals also generates a sense of competition in terms of service excellence among corporate hospitals. This also motivates them to adopt a more methodical approach to well-planned processes.

Consequences of delay in Discharge

- Patients may feel frustrated or anxious if they have to stay longer than necessary. Delays can decrease patient trust in the hospital's efficiency and care quality.
- Delays can prevent new admissions, especially in high-demand settings, leading to bed shortages. Staff may have to manage overlapping responsibilities, leading to burnout and errors.
- Extended stays can increase costs for both the hospital and patients, particularly if charges are based on daily rates. Reduced patient turnover can impact the hospital's revenue from new admissions.
- Longer hospital stays can increase the risk of hospital-acquired infections. Delays in discharge can postpone necessary follow-up care or rehabilitation services.
- Hospitals might face issues with regulatory bodies if discharge processes do not meet required standards.
- Staff may experience higher stress levels due to the need to manage delays and patient dissatisfaction. Repeated delays can lead to decreased morale and job satisfaction among healthcare providers.

Several factors can affect the Turnaround Time for discharge in hospitals, including:

- Delays in paperwork and documentation completing discharge documentation and obtaining necessary signatures. Time taken to finalize billing and payments, especially for insured patients or those under government schemes. Inefficiencies in communication and coordination between different departments (e.g., nursing, pharmacy, administration).
- Longer waiting for the attending physician to give the final discharge approval. Completion of all necessary diagnostic tests and specialist consultations before discharge.

- Time needed to educate patients and their families about post-discharge care and medications. Delays in arranging transportation for patients to go home or to another facility.
- Availability of nurses, doctors, and administrative staff to process discharge can affect duration of TAT. Time taken by the pharmacy to prepare and dispense medications needed at discharge. Availability of support services such as social workers or discharge planners.
- Efficient communication between different hospital departments involved in the discharge process. Effectiveness of discharge planning processes and early initiation of discharge procedures.

LITERATURE REVIEW

S.NO.	Author	Year	Location	Objective	Process	Link
1	Vikas Gupta, Meena Joshi, Rajesh Mehra	2023	Indian public and private hospitals	To implement lean management to optimize the discharge process.	The study demonstrated that lean management significantly reduced the average discharge time, improved patient throughput, and increased patient satisfaction.	Optimizing Discharge Processes Using Lean Management in Indian Hospitals (BMJ Open Quality) .
2	Priya Nair, Sanjay Bansal, Kavita Singh	2022	Indian private hospitals	To explore how lean methodologies can improve discharge efficiency in Indian hospitals.	Lean techniques significantly reduced discharge times minimized patient wait times, and improved resource utilization.	Implementation of Lean Techniques in Indian Healthcare to Enhance Discharge Efficiency (BMJ Open Quality).

3	Shweta Gupta, Ramesh Kumar, Anil Gupta	2021	Indian public hospitals	To implement lean management strategies to streamline the discharge process.	The adoption of lean principles resulted in reduced discharge times and enhanced overall patient experience.	Improving Patient Discharge Process in Indian Hospitals Using Lean Principles (SpringerLink).
4	Gaurav Suman, Deo Raj Prajapati	2022	Various Indian hospitals	To integrate Lean and Six Sigma quality initiatives in Indian hospitals to streamline processes and reduce waste.	These methodologies significantly reduced discharge times by minimizing non-value-added activities and improving overall process efficiency.	Implementation of Lean and Six Sigma in Indian Hospitals

5	Ramkrishna S. Bharsakade, Padmanava Acharya, L.Ganapathy &Manoj K. Tiwari	January 2021	Indian public hospitals	To utilize lean management techniques in Indian hospitals to improve discharge processes and identify key areas of waste, such as unnecessary patient movements, excessive inventory, and waiting times.	Addressing these issues led to reduced discharge times and enhanced patient satisfaction.	A lean approach to healthcare management using multi-criteria decision making
6	Zafar Ali Syed, J.P. Unnikrishnan, V.C. Unni	**2022**	Indian academic medical centers	The study aimed to reduce discharge times and improve overall efficiency in outpatient clinics using Lean Six Sigma techniques.	Implementing Lean Six Sigma techniques significantly reduced patient wait times and streamlined discharge processes, demonstrating	**https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-020-06034-3**

					improved efficiency and patient satisfaction.	
7	**Aparna kanuparthy, tejo challa, sreenath meegada, Suman Siddaamreddy**	2022	Indian academic medical centers	To examine the impact of lean management techniques in reducing discharge times in academic medical centers.	Significant reduction in discharge time was achieved by eliminating non-value-added activities and improving workflow efficiency.	**https://pubmed.ncbi.nlm.nih.gov/32494545/**

AIM

The study aims at assuring quality of discharge process at Action Cancer Hospital.

OBJECTIVES

1.To map the discharge processes and study TAT for private patients, Ayushman Bharat patients, and other empanel patients.

2.To identify facilitating and hindering factors in discharge process.

RATIONALE

Discharge of patients, being the final step to achieving stellar patient satisfaction rates demands a special emphasis when it comes to hospital processes. This study is mandatory to understand the corporate process in place so that suggestions can be made with relevance to current industry standards and to develop ideas at par with the competitors.

METHODOLOGY

To understand the discharge TAT of private patients, Ayushman patients and other empanel patients (CGHS 2014 Working (Cash), CGHS NHA 2021-22, Delhi Development Authority, Delhi Development Authority (Cash) etc. at Action Cancer Hospitals, Paschim Vihar, New Delhi and to identify the factors that contribute to the delay in discharge of patients from the Inpatient Department.

This study is based upon Turnaround Time in Discharge Processes for Private Patients, Ayushman Bharat Patients, and Other Empanel Patients of Action Cancer Hospital, Paschim Vihar New Delhi. Furthermore, there is also an emphasis on identifying the areas that contribute to delays in the discharge of patient from the Inpatient Department of the hospital. The TAT for discharge process is recorded with the help of HIS and through observation.

STUDY DESIGN-This study is a cross-sectional study.

SETTING - This study is done in a 150 bedded Action Cancer Hospital, Paschim Vihar, New Delhi.

STUDY POPULATION- Patients (IPD) in different categories like Ayushman patients, Private patients and other empanel patients (CGHS 2014 Working (Cash), CGHS NHA 2021-22, Delhi Development Authority, Delhi Development Authority (Cash).

SAMPLING AND SAMPLE SIZE:

This study was done on 200 IPD patients who were discharged from 18 March to 18 May 2024.The study is inclusive of General ward Patients, twin sharing rooms patients, private rooms patients.

Table No1: Sample size

	Ayushman patient	Private patient	Other empanel patients	Total
Men	16	52	12	80
Women	42	47	31	120
Total	58 (29%)	99 (49%)	43 (22%)	200

STUDY TOOLS- This study was done with the help of HIS software for the data collection to collect information for discharge process TAT from HIS software Admission time ,Discharge time ,Panel of the patient (Private Patients, Ayushman Bharat Patients, and Other Empanel Patients),time of discharge marking., time of pharmacy clearance, time of billing settlement ,time of gate pass received by the patient, time of housekeeping bed release status marking, time of actual bed release (when the patient physically leaves the ward)

DATA COLLECTION METHODS:

- Review of Guidelines- It is very important to know the guideline of the hospital or can say any organization. So according to that data are collected keeping the confidentiality of the patient profile and following all the rule and regulation of hospital for primary data collection.
- Observation-Detail of the patient identification, keeping track from admission to till discharge of the patient.

- Datasheet for recording timings and other details of the patient like file number, admission date, discharge date, health problem for which s/he admitted, etc. using hospital information system.
- Checklist for reviewing the guidelines (hierarchy of the discharge process, standard time for discharge of different patients)

Observation cum data sheet included the following

1. Detail of the patient.
    - Unique Health Identification Number (UHID NO.)
    - Type of IPD Ward
2. Admission time and date
3. Discharge time and date.
4. Panel of the patient (Private Patients, Ayushman Bharat Patients, and Other Empaneled Patients).
5. Time of discharge marking.
6. Time of pharmacy clearance.
7. Time of billing settlement.
8. Time of gate pass received by the patient.
9. Time of housekeeping bed release status marking.
10. Time of actual bed release (when the patient physically leaves the ward).

Standards for Turnaround Time in discharge processes

- **Private Patients:** TAT for discharge process of private patient is 2-3 hours after the discharge is marked on the system, depending on the complexity of the case and any additional services required (arranging transportation, absence of attendant, any medication etc.).
- **Ayushman Bharat Patients**: TAT for discharge process of Ayushman Bharat patients is 4-5 hours after the discharge is marked on the system, depending on the complexity of the case and any additional services required (like medication dispensing, duration

of biometric of the patient, arranging transportation, absence of attendant, proper documentation etc.).

- **Other Empanel Patients**: TAT for other empanel patient is 4-5 hour after the discharge is marked on the system depending on the complexity of the case and any additional services required (time duration of TPA clearance, like medication dispensing, documentation arranging transportation, absence of attendant etc.).

Analysis of Turnaround Time in Discharge Processes:

Categorization of Patients: Differentiate between private patients, Ayushman Bharat patients, and other empanel patients to understand if there are variations in TAT among these categories.

Calculation of TAT – Calculation of total time in entire process from marked for discharge by doctor till actual bed release by patient.

Formula for calculating TAT.

= Time of discharge marking +Time of pharmacy clearance + Time of billing settlement +Time of gate pass received by the patient +Time of housekeeping bed release status marking +Time of actual bed release (when the patient physically leaves the ward).

Indicators for Analysis:

- **Average Turnaround Time:** This measures the average time taken from marked for discharge to actual bed release by the patient.

- **Percentage of Discharges Within Target TAT**: Establishing a target TAT and then measuring the percentage of discharges that meet this target can indicate the hospital's performance in timely discharges.

- **TAT by Patient Category:** This breaks down TAT by different patient categories like private patients, Ayushman Bharat patients, and other empanel patients, allowing for a comparison of performance across these groups.
- **Adherence to Discharge Protocols**: Assessing how well discharge protocols are followed can indirectly indicate the efficiency of the discharge process.

- **Reasons for Delay:** Identifying common reasons for delays in the discharge process, such as administrative, medical, or logistical issues, can help pinpoint areas for improvement.

RESULTS

Discharge Processes Mapping

- The discharge process in Action Cancer Hospitals follows a set standard (Fig.1) This process suggests that the how patients are discharge at hospital, how discharge planned a day prior so that the involved team can start the documentation required to give a head start which is expected to reduce the overall TAT.

- Discharge is planned and coordinated with the patient, family and all relevant agencies. Planning for discharge will take into account the patient's psychological, medical, social and educational requirements. When a date has been decided, the patient and their family will be notified. Primarily, your nurse will assist you in the discharge process which may take a few hours to complete the process. Once your final bill is generated, you are expected to clear your dues. The patients and/or their family will be given a discharge letter at the point of leaving, which will be explained and discussed. Any pre-arranged follow-up appointments on an outpatient basis will be detailed in this letter. Patients and/or their family are asked to complete a satisfaction questionnaire at the point of discharge, so that feedback can be analyzed and evaluated in order to implement and sustain the service provided.

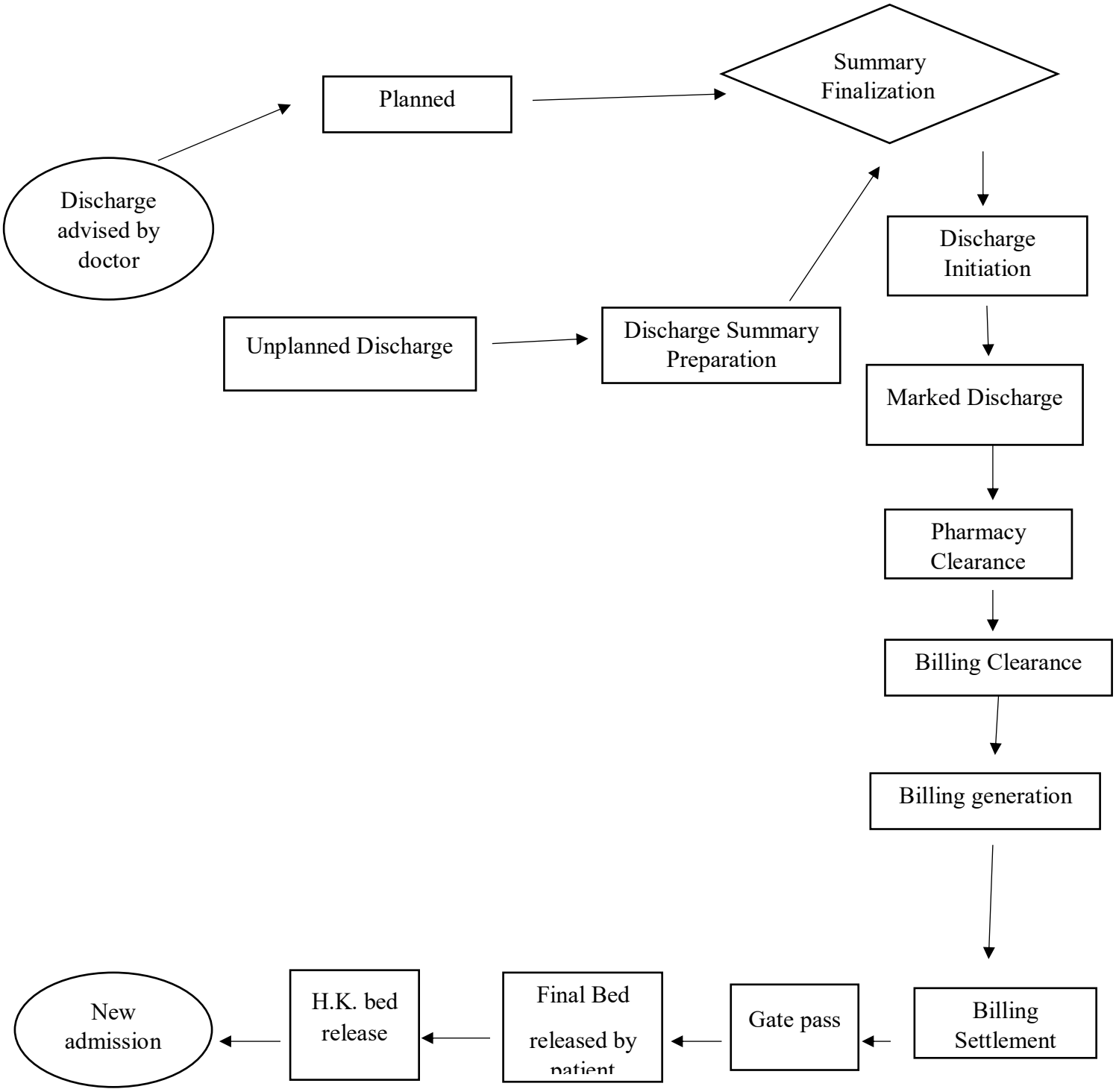

Fig no 1. Mapping of the discharge processes

Discharge Process Primary Team involvement was observed and mentioned as below

S. No	Process	Team Involve
1	Discharge Planning	Doctors (consultant)
2	Discharge advice.	Consultant, RMO
3	Discharge Summary Preparation	Medical Transcription Rceptionist
4	Summary Finalization	Consultant, RMO
5	Marked For Discharge (on the HIS system)	Nurse
6	Pharmacy Clearance	Nurse, Pharmacy Team
7	Billing Generation	Billing Team with inputs from doctors
8	Billing Settlement	Billing Team, Patient attendants
9	Gate Pass	Nurse, Attendant
11	Bed Release	Patient, Attendant, Nurse, Supervisor, Floor admin

The turnaround time was calculated and analysed for three categories separately.

Ayushman Patients

The average standard time for Ayushman Patients was decided 240 minutes by the hospital authorities. A majority of the Ayushman patients could complete their process before the standard time, that is 240 minutes. Out of 49 (84%) such patients, 29 (60%) have taken 200 minutes, followed by 11 (22%) 160 minutes, six (12%) 120 minutes and three (6%) 80 minutes.

Only 16 percent of the Ayushman patients have taken standard average time. None of the patients have taken more than the standard average time (Table 2).

Table No 2 : Percentage distribution of Ayushman patients by TAT

TAT in minutes		Number of patients n=58	%
Below the standard time	<240	49	84
Standard average time	240	9	16
Above the standard time	>240	0	0

Private Patients

The average standard time for Private Patients was decided 120 minutes by the hospital authorities. Most of the private patients could complete their process more than the standard time, that is 120 minutes. Out of 57 (58%) such as 25 (25%) 60 minutes have taken followed by 17 (17%) 120 minutes, 30 (30%) have taken 180 minutes, 26 (26 %) have taken 240 minutes, and nearly one percent have taken 300 minutes.

Only 17 percent of the private patients fall in standard average time. 58 percent patients have taken more than standard time.

Table no 3: Percentage distribution of Private patients by TAT

TAT in minutes		Number of patients (n=99)	%
Below the standard time	<120	25	25
Standard average time	120	17	17
Above the standard time	>120	57	58

The results revealed that out of every five private patients took more time than the standard average time in the process. The reasons could be that they are supposed to make payments and therefore, they might be arranging the said amount in any mode like cash, by netbanking, or using any app.

It is observed the Private patients have preferences for discharge timing due to their travel time and location (e.g., preferring to be discharged during specific hours or to a particular facility) that can complicate scheduling.

Other Patients included (CGHS 2014 Working (Cash), CGHS NHA 2021-22, Delhi Development Authority, Delhi Development Authority (Cash).

The average standard time for Other Patients was decided 240 minutes by the hospital authorities. All of the other empanel patients have taken TAT below the standard time that is 240 minutes.

The results revealed that for such patients, the processes are already in place as they might have availed the services for a long time as regular beneficiaries.

Facilitating factors in smooth discharge process

It was observed that the hospital does not have bias in general but still Ayushman Patients and Other patients are regular and have their proper documentation which makes the discharge process smooth. It is not studied but through observation, it can be said they are familiar with the processes as well and therefore, they made themselves ready. This is the reason, the hospital staff preferred them and also complete the process on priority so that the hospital can complete the process at the earliest to get it reimbursed.

Hindering factors in smooth discharge process

Private patients preferences' and time taken for arrangements for payment complicate scheduling as well the process.

DISCUSSION

The discharge process in Action Cancer Hospitals follows a set standard (Fig-6). This process suggests that the discharges be planned a day prior so that the involved team can start the documentation required to give a head start which is expected to reduce the overall TAT.

The process is such that a list of planned discharges is sent to the respective stakeholders before 5 pm, the previous day. Once this is done, the MTR prepares the discharge summary one day prior and keep it ready for when the doctor comes forward rounds the next day. This essentially reduces the time taken for summary finalization from the time discharge is intimated to the patient the next day. In case of unplanned discharges, the doctors confirm the date and time of discharge during morning ward rounds which is also mentioned in the notes section of the patient file. This time is considered to be the discharge intimation/discharge advice time.

Following this, the nursing team and the ward secretaries close the activities with OT, Cath lab along with OT stores and Cath stores, obtaining consumption declaration and then check with the pharmacy for returns if any. They also check if there are any pending laboratory or radiological investigations and clear them. This is followed by getting the discharge summary ready. In the case of planned discharges, the discharge summary is already ready whereas in the case of unplanned discharges, a part of the discharge notes is typed by the MTR. This is then signed by the doctor of the team which is captured as Discharge summary finalization time.

The discharge process is then initiated by the ward secretaries which is intimated to the billing department. The interim final bill is generated by the billing team after verifying the billing card and actual procedure details. They check for implants and consumables and check with the consultants for professional charges/surgical fees. Here, they also add consultation charges based on the number of visits to the doctor.

Once the bill is generated, the billing staff informs the patient attender through the ward secretaries. The patient is provided with the updated bill and is requested to settle the bill. If the patient is paying by cash, they reach the cash counter, settle the bill amount, and then submit the bill to the ward secretaries following which they are allowed to checkout. If the patient is covered under insurance, the summary and the bill is sent to the TPA companies for approval. Following approval, the patient is allowed to checkout with Gate Pass.

Everyone who is involved in the discharge process should be aware of the targets which would motivate them to enable the completion of each part of the process in time. It is also suggested that there is a strict environment1 for following the set standards.

This could be achieved by allocating a person with the sole responsibility of coordinating and live tracking the discharges from the time they are advised. This person should also be able to communicate with the different departments in case a delay is identified during the live-tracking process.

CONCLUSION

For Ayushman Patients:

- The majority of Ayushman patients (84%) completed their discharge process in less than the standard time of 240 minutes.
- Most patients (60%) completed the process in 200 minutes, indicating an efficient discharge process.
- None of the Ayushman patients exceeded the standard time, demonstrating that the hospital has effective discharge protocols for this category.

Private Patients:

- A significant proportion of private patients (58%) took longer than the standard time of 120 minutes to complete the discharge process.
- Only 25% managed to discharge below the standard time, highlighting inefficiencies in handling private patients.

- Financial considerations and patient preferences for specific discharge timings contributed to delays.

Other Empanelled Patients:

- All patients in the 'Other' category were discharged within the standard time of 240 minutes.
- This category showed the most efficient discharge process, with 100% of patients completing the process below the standard time.

Facilitating Factors for Smooth Discharge Process:

- Optimized discharge processes, including efficient coordination between departments and streamlined paperwork.
- Clear and timely communication between healthcare teams, patients, and families.
- Proper resource allocation, such as hospital beds, transportation services, and home care arrangements.
- Ensuring patients are clinically stable and meet discharge criteria.
- Effective coordination among healthcare professionals, including nurses, doctors, social workers, and discharge planners.

Hindering Factors for Private Patients:

- Financial disputes and considerations related to billing or coverage.
- Patient preferences for specific discharge timings or locations, complicating scheduling.

SUGGESTION

The hospital authorities may have review of the TAT once again and may consider the standard average standard time which is 240 minutes for Ayushman patients and other patients. The results show that many of the patients have completed the discharge process before time. There was no delay at all.

For the private patients, the hospital authorities may consider

- Implement a pre-discharge billing review process to address and resolve any financial disputes or billing issues before the discharge day. This ensures that financial concerns do not delay the discharge process.
- Provide clear and transparent communication about the billing process and potential costs early in the patient's stay. This can help manage expectations and reduce last-minute disputes.
- Employ dedicated financial counselors who can assist patients with billing questions, insurance coverage issues, and payment options. Having a point of contact for financial matters can streamline the process.
- Offer advance payment plans or estimates so patients can address financial obligations gradually throughout their hospital stay, reducing the burden at the time of discharge.

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