A STUDY OF PATIENT DISCHARGE PROCESS IN FORTIS ESCORTS HEART INSTITUTE, NEW DELHI

Dissertation Submitted to

The IIHMR University, Jaipur

for the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

in

Hospital & Health Manageemnt

by

Hamza Perwaiz

Under the Supervision & Guidance of

Prof. Shiv K Tripathi

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DECLARATION BY STUDENT

I hereby declare that this dissertation titled "A Study of Discharge Process In Fortis Escorts Heart Institute, New Delhi" 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 Information derived from the published or unpublished work of others has been duly acknowledged in the text.

(Signature)
Name of Student : Hamza Perwaiz
Date : 02/07/2021

CERTIFICATE

This is to certify that Hamza Perwaiz in partial fulfilment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur has successfully completed his internship at Fortis Escorts Heart Institute, Okhla, New Delhi during April 25, 2021 to June 19, 2021.

Place : New Delhi

Date : 02/07/2021

Perceptor/ Head of the Organization:

Name of the Organization : Fortis Escorts, Okhla

CERTIFICATE

This is to certify that dissertation titled "A Study of Discharge Process In Fortis Escorts Heart Institute, New Delhi" is a record of the research work undertaken by Hamza Perwaiz in partial fulfillment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and his approach to the research study has been sincere, scientific, and analytical.

Faculty Guide
IIHMR University, Jaipur
Date

School Dean
IIHMR University, Jaipur
Date

ABSTRACT

Background - This study identifies whether the discharge turnaround time for cash patients in Fortis Escorts Heart Institute, Okhla, New Delhi are in compliance with the hospital's policy i.e. 120 minutes. It also highlights the importance and role of timely discharge for bed managemement and serving a larger population.

Objevtives – The objective of this study is to measure the turnaround time of discharge, identify causes for delay and provide suggestions for further improvement.

Methodology - It's a descriptive cross sectional study design. Convinience sampling technique will be used to draw the smaple. The data was collected form HIS (OneFortis). Cash Patients both Covid and Non-covid has been included in the study.

Results – It was found that in majority of the months the discharge turnaround time was more than 120 minutes. Causes for the same was identified and recommendations made. Conducting a Pareto analysis highlighted the causes which were contributing around 71% of the total causes towards delayed discharge in the hospital. After identifying the major causes, some recommendations were made to further improve and streamline the discharge process.

ACKNOWLEDGEMENT

The two month Dissertation opportunity I had with Fortis Escorts Heart Institute, Okhla, New Delhi, was a great chance of learning and professional development. I consider myself grateful to have got this opportunity and the chance to meet such wonderful and professional people who led me through this period.

Before all, I would like to thank Allah and my Parents for their blessings and support without which it would have been difficult to complete the project in scheduled time.

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I am immensely grateful to Dr. Amrita Gupta, Medical Director, Fortis Escorts Heart Institute, Okhla for giving me the opportunity to work in Medical Administration department despite of me having a non medical background and a special thanks to her for providing me various opportunities to learn. A special thanks to Dr. Peerzada Owais Iqbal, Deputy Medical Superintendant, Fortis Escorts Heart Institute, Okhla for being such a wonderful mentor and guiding me at every step of my work. He has been a pillar of support and encouragement throughout my journey. A special thanks to Mrs. Ritu Nadeeem, Quality Head, Fortis Escorts Heart Institute, Okhla who allowed me to encroach upon her precious time freely right from the very beginning. Also, I would like to thank Mr. Ravi Ranjan Kumar and entire HR team at Fortis for giving me this wonderful opportunity.

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I perceive this opportunity as a big milestone in my career development. It has helped me again skills and knowledge and would continue to work on their improvement in order to attain dersired career objectives.

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ABBREVIATIONS USED

HIS – Hospital Information System

TPA – Third Party Administrator

TAT – Turnaround Time

NABH – National Accreditation Board for Healthcare and Hospitals

DOT – Discharge Optimization Tool

DBN – Discharge Before Noon

FEHI – Fortis Escorts Heart Institute

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

Hospital discharge process is one of the most important factor which contributes towards the good patient experience. All the patients wants to leave the hospital as soon as possible once the doctor has allowed it. Hospital discharge is a process when you leave a hospital after the course of treatment. From another source, the series of events and activities which takes place to discharge a patient from the hospital to home or another healthcare facility is known as hospital discharge process (1). It involves multi discplinary stakeholders to facilitate a discharge.

NABH defines the discharge process as the process through which the patient admitted in the particular hospital is discharged or shifted out from the facility. At the time of discharge, the patient is provided with all the medical summaries (2). A hospital discharges a patient when the patient doesn't needs any inpatient care and is stable enough to go home, or when the patient needs to shifted to some other higher facility for better care (3). The process of discharge starts when the doctor or consultant formally approves after thoroughly assessing the patient's clinical condition, that he or she is ready to leave the hospital.

It is very necessary to streamline hospital discharge process as it may deteriorate the whole patient experience of stay in the hospital and may contribute towards bad word of mouth. Both the admission and the discharge process can degrade the reputation of a hospital and can badly affect the effciency of the hospital. Better and planned discharge could help in patient wellnes and can decrease the chances of patient getting readmitted (4). Discharging the genuine patients on a regular basis also saves cost and helps in revenue generation of the hospital.

An effective discharge planning is very important for streamlining the process and saving cost for both the hospital and the patient. Patient leaving the facility or discharged from the facility after getting stable ensures adequate amount of bed availability for another patient who might need inpatient care (3). A delay in discharge process also put the patient's health at risk by exposing them to hospital acquired infections. Researchers suggest that "appropriate discharge processes enable the list of available beds for admission to be kept current and accurate, and in addition, the

managers can obtain useful data by accurate registration of patients in the admission book and calculating there from the admission and discharge dates for each patient (5)."

According to National Accreditation Board for Hospitals and Healthcare (NABH) 4th Edition, the standard discharge time for the patients is 180 minutes. By adhering to this NABH guideline, the hospital ensures being on a competitive edge and is reflective of providing care as per the national standards.

1.2 Statement of the Research Problem

The patient discharge process is a complex process and it directly affects the patient satisfaction as well as the revenue generation of the hospital. Timely discharge process can ensure larger number of patient admissions which will in turn increase the occupancy and better bed management of the hospital.

In this research paper we have studied the turnaround time for discharge process in Fortis Escorts Heart Institute, Okhla, New Delhi. This study will identify turnaround time of discharge for cash patients and try to identify the root causes for the dealy in discharge.

1.3 Objectives of the Study

Effective hospital discharge process aims to incerase the bed utilization so that a larger number of population can be served.

The objectives of this study is to –

1. To assess alignment of the discharge turnaround time in Fortis Escorts hospital to Hospital's Operating Policy.
2. To identify root causes for deviation in turnaround time of discharges.
3. To provide suggestions for improving the discharge process.

1.4 Research Question

The study aims to address the following research questions:

1. In how many months of the year 2020-21, the discharges turnaround time are in compliance with the per hospital's operating policy?
2. What has been trend of turnaround time in the last 1 year?
3. What were the major causes which contributed towards the deviation in discharged time?
4. How can we improve the patient discharge system at FEHI, Okhla, New Delhi.

1.5 Significance of the study

Timely discharge of patients from the hospital is very important because it leads to proper bed management and keeps the hospital business going by admitting new and more needy patients. Proper discharge planning also contributes towards maintaining hospital's quality policy and shows compliance towards NABH standards which provides a competitive edge to the hospital in the external environment. Effective discharge planning also leads towards increased operational efficiency of the hospital and helps in saving csot of the hospital. This study is being conducted to analyze the current hospital discharge process, find the gap and provide recommendations to further improve the discharge process which will benefit the hospital. By analyzing the percentage adherence to the standardised process as per NABH, we can identify how much the process needs improvement and how it can be improved.

1.6 Chapter Plan

1. Background of the study – This section focuses on developing the background of the research paper in terms of how hospitals are affected due to delayed discahrge process and why is there a need for the hospitals to be operationally efficient in terms of discharge.
2. Objectives of the study – This section pens down the main purpose of the study and what result it wants to achieve after the study.
3. Significance of the study – This section highlights how the findings of this study will benefit the organization in long term.
4. Research question – This section pens down the intent and the questions of the researcher and its main focus.
5. Literature review – This section builds a background and presents various works and studies of different reseacrher that has previously been published in the domain of hospital discharge process and turnaround time.
6. Research gap – This section presents the knowledge gap in determining the efficiency of the hospital through discharge process and how the researcher intend to shorten this knowledge gap.
7. Conceptual framework – This section focuses on certain concepts and the parameters related to hospital discharge.
8. Research Methodology – This section presents the study design , data collection plan and tools for the study.

CHAPTER 2: LITERATURE REVIEW

2.1 Definition of key terms

- Discharge process – The series of events and activities which takes place to discharge a patient from the hospital to home or another healthcare facility is known as hospital discharge process (1). It involves multi discplinary stakeholders to facilitate a discharge.
- Turnaround Time – The amount of time taken by a process to complete is known as Turnaround Time. By identifying the turnaround time of a process we can know if the process is fully efficient or not. Thus we can identify gaps and increase the process efficiency. (6).
- NABH - National Accreditation Board for Hospitals & Healthcare Providers (NABH) is a constituent board of Quality Council of India, set up to establish and operate accreditation programme for healthcare organisations. The board provides a set of minimum standards for all healthcare organization which needs to be followed (7). NABH conducts audits in healthcare organizations and provide suggestions for further improvement. When the healthcare organizations finally meet the standards, NABH gives the accreditation them which provides a competitive edge for the healthcare organizations in the external environment.
- Hospital Information System – Hospital Informations System is a part of health informatics which is responsible for fulfilling the administrative needs of all the corporate organizations including healthcare organizations. In today's world where there are millions of data which needs to be stored, interpreted and analyzed, a hospital information system provides smooth functioning for these data management. A hospital information system has different modules according to the needs of different departments. It is very useful in terms of indenting medicines, general items, booking procedures for patients and managing all kinds of data for each patients present in the hospital (8).

2.2 Empirical Review

Many researchers have conducted the research on dischareg process and turnaround times. Most of the researches were focused on minimizing the turnaround time of discharge process so that the patient may leave the hospital with a happy face.

One of the research titled as 'The Discharge Process-From a Patient's Perspective' authored by Maura Krook, Marie Iwarzon and Elina Siouta in the year 2020 focused on describing the patient's experience of their discharge process (9). In one University Swedish Hospital, a descriptive study was conducted by interviewing 15 interviews. Following interviews, a qualitative content analysis was done through the help of collected data. This study concluded that information, confidence, communication, participation and accessibility are the factors which are very much important in future development of the discharge process. This study also found that there should be a collaborative approach from nurses, doctors and administration for the proper intimation of discharge process. A more patient centric and individualized approach to a discharge process would ensure proper patient governance.

Another research titled as 'Improving Early Discharges with an Electronic Health Record Discharge Optimization Tool' led by Michael F Perry et.al in May 2020 focused on implementing a tool known as Discharge Optimization tool (DOT) to discharge at least 25% of the patients from th ehospital before noon, which they called as Discharge Before Noon (DBN). This study was conducted in a paediatric hospital. The concerned team in the hospital created a Discharge Optimization tool and embedded it cantrally in the care team standard worklflow to communicate anticipated time until discharge. Percentage of patients discharge before noon was the primaty outcome of the study while provider utlization of the DOT, tool accuracy and the patient LOS was the secondary outcome of the study.

Another research titled as 'Barriers to Early Hospital Discharge: A Cross-Sectional Study at Five Academic Hospitals' led by Jeff Zoucha et.al. aimed to identify and determine the frequency of barriers contributing to delays in placing discharge orders. This was a prospective, cross-sectional study (11). At 8 AM, 12 PM and 3 PM, doctors and physicians were surveyed and those patients were identified whose definite or possible discharges were there. They were also asked to identify specific barriers to writing discharge orders. The primary outcome of the study was specific barriers to discharge orders while discharge order time for high versus low team census, teaching versus nonteaching services, and rounding style were the secondary outcomes. Caring for other patients on the team or waiting to staff patients with attendings was the most

common barrier for definite discharges awaiting patient improvement and ancillary services to complete care were the most common barriers for possible discharges.

Another research led by Martinez Ramos, Emilio Flores and Uris Sellas was performed in 2015. This study focused on proving that the hospital discharge process improves the exit time of the patient through re-engineering and proper planning of the process (12). A working group was formed, retrospective data were analyzed and improvement areas were identified to re-engineer the discharge process. Time of patient when he/she got discharged was the dependant variable of the study. The study was divided into 3 parts which were, pre-intervention, inter-intervention, and post-intervention. After identifying the improvement areas the mean discharge release time decreased by fifty minutes between pre-intervention and post-intervention periods. The difference between planned discharge and unplanned discharge was that the discharge release time was 25 minutes lower in planned discharge as compared to unplannned discharge.

A research led by Audayi Hayajneh et.al titled as ‘Nurses Knowledge, Perception and Practice Toward Discharge Planning In Acute Care Settings: A Systematic Review’ aims to find and measure nurses' knowledge, perception, and practices towards discharge planning. It was a systematic review following PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (13). In this study 9 articles revealed nurses' knowledge, perspectives, and practices of discharge planning. Obstacles included low-level knowledge of patients' activities and discharge; inability to define Discharge Process; debates over the timing of beginning, implementing, and preparing discharge; patients and their family members' negative attitudes toward Discharge Process; and perceiving Discharge Process as excessive, time-consuming paperwork for which the physician is responsible. It was found that the improvement in discharge process in acute care settings can be achieved by better time management.

Another research has been done in this domain titled as ‘Reducing and optimizing the cycle time of patients discharge process in a hospital using six sigma DMAIC approach, led by S. Arun Vijay. Using the DMAIC model of six sigma, this study aims to improve the cycle time of the discharge process of the patients in a hospital present in India. (14). Through the use of different quality tools the study was conducted in the 5 phases of six sigma DMAIC model. The findings of this study suggested numerous improvement strategies for the reduction of cycle time of the process. After implementing the improvement strategies, the cycle time of the process was reduced by 61%. In order to provide control measures, a control plan check sheet was developed.

A research titled as ‘Development and Implementation of Discharge Planning Service in Roozbeh Hospital’ led by Hamidreza Toufighi et.al focused on promoting the continuity of care after discharge and providing necessary services and support to his or her caregivers (15). The factors used in this study for analysing discharge process are re-admission, treatment adherence, length of stay, treatment costs, symptoms resolution and patient’s quality of life.

CHAPTER 3: CONCEPTUAL FRAMEWORK

Every hospital follows different process to discharge the patients but every hospital’s ulatimate aim is to effectively manage the discharge process so that it complies with the NABH standards and beds are available for new admissions on a timely manner. This effective management of discharge process helps the hospital to save costs and increase its revenues.

A hospital admits three types of patients in terms of mode of payment :-

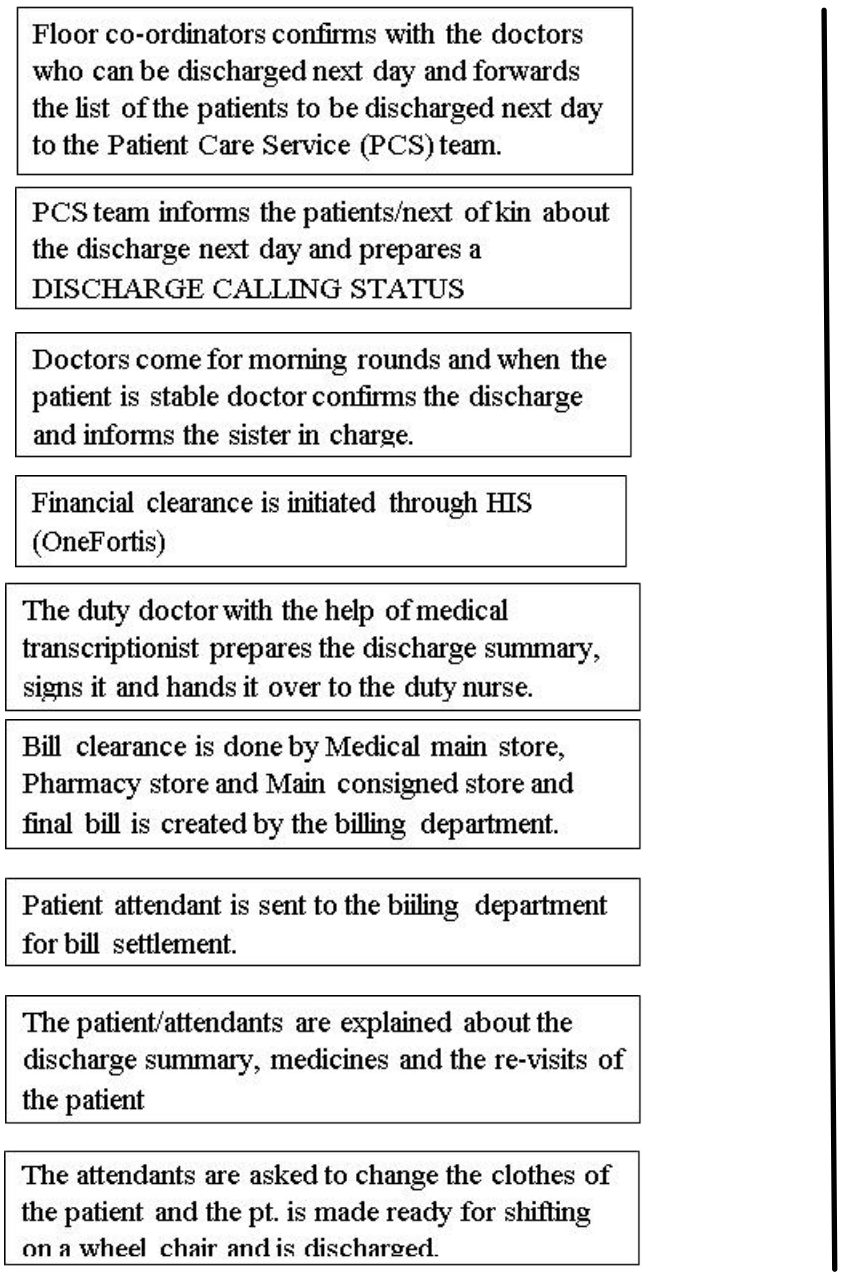
- Cash Patients – Patients who pay out of pocket for the in patient services availed through cash.
- CGHS Patients – CGHS stands for Central Government Health Scheme. These are the patients availing inpatient services in the hospital for which the payment is done by the central government as per the norms of Central Government Health Scheme.
- TPA Patients - TPA stands for Third Party Administrator. These are the patients availing inpatient services in the hospital whose payment is managed by a thirtd party insurer.

Discharge turnaround time for all the three types of patients are different in hospital. Discharge time for TPA patients are maximum in every hospital since the TPA verifies all the reports of the patients and sends the approval. Discharge time for cash patients are minimum because there is no complex processes like in TPA patients.

This study will be based in Fortis Escorts Hospital, Okhla. The study will first analyze analyze the discharge process of the hospital both for cash patients and TPA patients. The past three years data for discharge turaround time will be extracted from the

Hospital Information System known as OneFortis. These data will be analyzed in MS Excel 2016 to conclude that if the turnaround time for discharge in Fortis Escorts Hospital is under 180 minutes or not, as per NABH standards. Discharge process will be studied by drawing a Value Stream Map to identify non value adding steps. Based on the results recommendations will be given to further improve the hospital discharge process.

3.1 Hospital Discharge Process



CHAPTER 4: RESEARCH METHODOLOGY

Study Design - This study utilizes a descriptive cross-sectional research design. This is the particular study design because the study is conducted for a short period of time which means it's basically a snapshot of the entire process.

Sampling Technique – The sampling technique which will be used in this study is convenience sampling since the sample will be drawn from the part of a population.

Sample Size – The sample size is 1878 patients after following the inclusion and exclusion criteria. The sample was drawn from HIS.

Inclusion Criteria – Cash patients both covid and non-covid admitted in Fortis Escorts Hospital, Okhla.

Exclusion Criteria – TPA patients, CGHS patients, Corporate patients have been excluded from the study.

Data Collection Method – The data collection method used is secondary method as the data related to discharge turnaround time will be extracted form Hopsital MIS (OneFortis).

Data Collection Plan – This is a descriptive study and the data will be collected for a period of past 1 years from June, 2020 to June, 2021 for all kinds of discharges whether TPA or cash patients.

Data Collection Tool - Data will be collected through Hospital MIS (OneFortis) for the past 3 years. Apart from that, past records and documents present realated to discharges will also help the study to proceed.

CHAPTER 5: RESULTS/FINDINGS

The following data were obtained through HIS (OneFortis) from June 2020 to June 2021. There are 5 classifiations of data which were obtained through the HIS. These classifications are as follows :-

- Discharge Intimation Time to Pharmacy Clearance Time
- Pharmacy Clearance Time to Bill Ready Time
- Bill Ready Time to Bill Clearance Time
- Bill Clearance Time to Room Vacation Time
- Total Discharge Time

Discharge Intimation Time to Pharmacy Clearance Time is the time when the doctor approves and the nurse intimates the discharge from HIS.

Pharmacy Clearance Time to Bill Ready Time is the time when the pharmacy gives clearance to the patients after checking the medicines used and then the bill is made for the patient.

Bill Ready Time to Bill Clearance Time is the time when the billing department completes the bill of the patient and when the patient finally submits the money thorugh cash or card.

Bill Clearance Time to Room Vacation Time is the time when the patient clears the bill by submitting the money to the billing department till the patient actually vacates the room and leaves the hopsital.

Total Discharge Time is the total time from when the discharge of a patient is intimitated till the patient vacates the room and leaves the hospital. It’s the cumulative time of all the components of discharge turnaround time.

Month	Discharge Intimation time - Pharmacy Clereance Time	Pharmacy Clereance time - Bill ready time	Bill Ready time - Bill Clereance time	Bill Clereance time - Room Vacation time	Total Discharge time
Target (min)	***15***	***15***	***60***	***30***	***120***
June, 2020	19	14	14	59	106
July, 2020	17	16	31	54	118
August, 2020	15	65	15	33	128
September, 2020	16	54	15	34	119
October, 2020	12	80	15	81	188
November, 2020	17	86	14	75	192
December, 2020	15	69	13	60	157
January, 2021	18	55	10	95	178
February, 2021	14	39	16	21	90
March, 2021	15	45	15	41	116
April, 2021	16	66	18	76	176
May, 2021	18	68	14	70	170
June, 2021	17	58	13	66	154

Table-5.1 (Source : OneFortis)

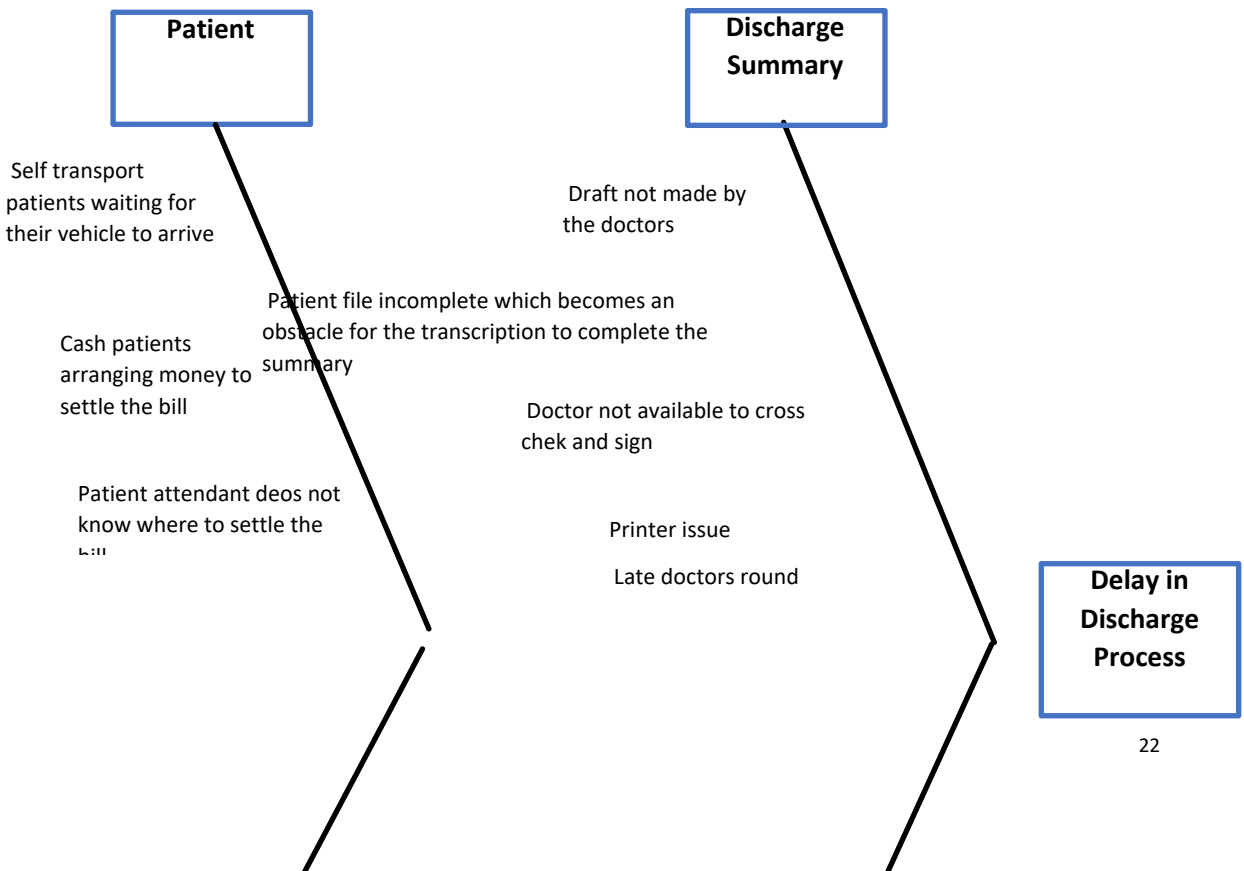
Figure-5.1 (Actual vs Standard TAT for Discharge)

The target Turnaround Time for discharge set by the hospital was 120 minutes. As per the above chart, we can see that the discharge turnaround time in June, 2020 and July, 2020 was under 120 mins. From August, 2020 the tirnaround time for the discharges increased and marked a hike in October and November, 2020. The graph shows a slight decrease in turnaround time during December, 2020 however its still above the standard turnaround time. During February and March, 2021 the turnaround time for discharges came within 120 minutes but again showed a hike from April to June, 2021.

CHAPTER 6: DISCUSSION OF THE FINDINGS

6.1 Fishbone Diagram

The utility of the fishbone diagram in comparison to summary of findings tables was tested by randomizing the respondants to the summary of findings tables presenting the same body of evidence. An informal interview was conducted with the involved stakeholders such as nurses, coordinators, transcriptionist, billing personnel etc and they answered questions related to the causes of delayed discharge. the respondents were asked about perceived utility of fishbone diagrams in comparison to summary of findings table. After agreement on the casues of delayed discharge, a fishbone diagrma was made.



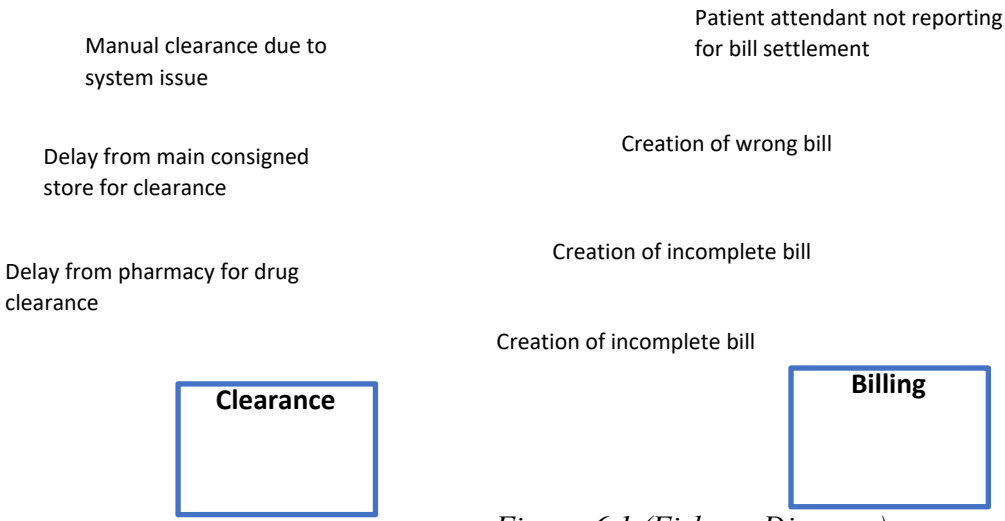


Figure-6.1 (Fisbone Diagram)

6.2 Pareto Anaysis for Discharge Delay

Pareto analysis has been performed after brainstorming the reasons for delayed discharge. Frequency of the reasons were followed for 3 months from 25th April, 2021 to 20th June, 2021. Following table was prepared by counting the reasons occurred each time of delayed discharge.

S.No.	Discharge Delay Reason	Frequency	Cumulative Frequency	Percentage
1	Incomplete patient file	66	66	31%
2	Draft not made by the doctors	19	85	40%
3	Delay from pharmacy for drug clearance	17	102	48%
4	Late doctors round	17	119	56%
5	Delay from main consigned store for clearance	16	135	63%
6	Doctor not available to cross check and sign	16	151	71%
7	Manual clearance due to system issue	14	165	77%
8	Patient attendant not reporting for bill settlement within 1 hour of bill creation	12	177	83%
9	Patient attendant deos not know where to go for bill settelement	9	186	87%

10	Cash patients arranging money to settle the bill	9	195	92%
11	Self transport patients waiting for their vehicle to arrive	6	201	94%
12	Printer issue	5	206	97%
13	Creation of wrong bill	4	210	99%
14	Creation of incomplete bill	3	213	100%

Table-6.1 (Frequency of reasons for discharge delay)

On the basis of the above table the following Pareto chart has been made.

Figure-6.2 (Pareto Chart)

From the above Pareto chart we can see that the following reasons contribute almost 71% of all the reasons for delayed discharge :-

- Incomplete patient file
- Draft not made by the doctors
- Delay from Pharmacy for drug clearance
- Late doctors round
- Delay from main consigned store for clearnace
- Doctors not available to cross check and sign

Incomplete patient file was was the major hindrance for the medical transcriptionist to complete the discharge summary typing as some of the informations were missing. Some duty doctors didn't put their notes in the patient file, as a result at the time of discharge it became difficult for the medical transcriptionist to gather information and complete the discharge summary.

Clearance from pharmacy side was also one of the major reasons for delayed discharge in Fortis Escorts Heart Institute. Although the clearance process is done through HIS, it

took time for the pharmacy staffs to cross check the medications intended by the floors and the medications that were actually used by the patient.

Late doctors round were also one of the reason for delayed discharge in the hospital. Although the discharge is planned one day earlier actual discharge process is initiated only after the doctors confirms the discharges after completing the rounds.

Clearance from main consigned store was also one of the major reasons for delayed discharge in Fortis Escorts Heart Institute. Although the clearance process is done through HIS, it took time for the consigned store personnel to cross check the items intended by the floors and the items that were actually used by the patient.

Many times after the completion of discharge summary, duty doctors were not available on the floors to cross check and sign the discharge summary which contributed towards the delayed discharge of patients in the hospital.

6.3 Summary of the Findings

As discussed in Chapter 1.4, this research paper intends to find answers to the following research questions for which the findings have been mentioned below :

- In how many months of the year 2020-21, the discharges turnaround time are in compliance with the per hospital's operating policy?
    - Discharges are in compliance with the hospital operating policy for a total of 5 months of 12 months which is less than 50% compliance.
- What has been trend of turnaround time in the last 1 year?
    - As per the above Figure 4.1, we can see that the discharge turnaround time in June, 2020 and July, 2020 was under 120 mins. From August, 2020 the tirnaround time for the discharges increased and marked a hike in October and November, 2020. The graph shows a slight decrease in turnaround time during December, 2020 however its still above the standard turnaround time. During February and March, 2021 the turnaround time for discharges came within 120 minutes but again showed a hike from April to June, 2021.
- What were the major causes which contributed towards the deviation in discharged time?
    - Major causes which contributed towards the deviation in discharged time Incomplete patient file are draft not made by the doctors, delay from Pharmacy for drug clearance, late doctors round, delay from main consigned store for clearnace and unavailability of doctors to cross check and sign.

- How can we improve the patient discharge system at Fortis Escorts Heart Institute, Okhla, New Delhi.
    - The recommendations to improve the discharge process at Fortis Escorts Heart Institute, Okhla, New Delhi has been disscussed in the next section.

6.4 Recommendations

1. One of the major reasons for delayed discharge in the hospital was the pharmacy clearance and main consigned store clearance. All the medical items and the non medical items intended and used for the particular patient should be entered in the system at the time of intend. This would ensure proper tracking of the items and the list of medical items and the non medical items would be ready at the time of discharge. Then only cross checking needs to be done by the respective departments. This would decrease the time taken to provide clearance and hence improve the turnaround time for overall discharge patients.
2. Providing an estimate bill a couple of days before discharge so that the patient's attendant can start arranging for funds that time only. Many times patient's attentand are not sure of the expenses of the treatment and at the time of discharge they start arranging for funds which increases the overall turanaround time of the process. Providing an estimate a bit earlier may ensure availability of the funds at the time of discharge which could smoothen up the turnaround time for discharge process.
3. Time to time repair and maintainence checks should be implemented for the software and printers so that at the time of discharge these things doesn't become a hindrance.
4. There should be a strict policy regarding the timings of doctor rounds so that the discharge is confirmed as soon as possible and the process is initiated at the earliest. However its not possible to always stick to the time as a doctor. For this a software can be integrated with the hospital HIS, which provides real time data such as patient vitals, status and a mode of communication with the nurses so that the doctors can evaluate the patient's condition without being present in the hospital. This way timely discharge process can be initiated as doctors can evaluate patient's condition from anywhere.
5. A seminar should be arranged for the stakeholders involved in discharge process from the management side to communicate the importance of timely discharge. The impact of timely discharge on hospital's revenue have already

been discussed in the above sections. If the stakeholders know the importance of timely discharge they would atleast try to adhere to the standard protocols of discharge process.

6. Employee recognition in terms of star performer or employee of the month should be given to the employees every month particularly for the stakeholders involved in the discharge process to motivate the stakeholders for initiating timely discharge. This would also encourage new ideas and innovations to further improve and streamline the discharge process.

CHAPTER 7: CONCLUSION

Patient discharge is cumbersome and complex process in a hospital. It involves cooperation and coordination of all the departments and staff in the hospital. Discharge of patients in a timely manner is a difficult task even if it is planned discharge. In this study turnaround time for discharge process of cash patients was analyzed in Fortis Escorts Heart Institute, Okhla. In this study we first highlighted what is discharge process and why streamlining of dischrage process is important. Then we defined the hopsital discharge policy and the process which is followed for discharging the patients. Through HIS we gathered the data for turnaround time for the year 2020-21 and anayzed whether the turnaround time are in compliance with the NABH/hospital's policy. Then through brainstorming we identified the causes which were reponsible for the delayed discharge in the hospital. Conducting a Pareto analysis highlighted the causes which were contributing around 71% of the total causes towards delayed discharge in the hospital. After identifying the major causes, some recommendations were made to further improve and streamline the discharge process.

CHAPTER 8: SCOPE FOR FUTURE WORK

The study findings are limited to a single hospital, however a study with multiple hospitals would have generated better results in terms of comapring the discharge turnaround time. Another limitation of this study is that the study is conducted for a short period of time and the process is not being followed to extract the data. Due to unavailablity of more time, the study could not establish the relationship between hospital efficiency and effective discharge process. Also more adddition or deletion of data might affect the results of the study. Since the sample size was small we could not establish high level of autheticity, however the same study with larger time span and

sample size could establish more relevant results. Thus a study on a larger scale can provide more authentic results.

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