

Delayed Patient Discharge In Surgical And Allied Departments Of A Teaching Hospital

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ABSTRACT

The major area that needs to be streamlined in a hospital is discharge process of patients which is directly related to patients' satisfaction. In addition, a delayed discharge will affect bed-turnover ratio and may lead to increased risk of infections. The process involves coordination and cooperation of many departments of the hospital. The present study was taken up with the objective of understanding the various steps of a discharge process in a teaching hospital, the average time taken for a discharge and to analyze the reasons for delay. The study was done for a period of three months. A sample size of 150 patients was taken through Simple Random Technique. Out of this, 68 patients were those who paid for their treatment in cash and 82 used credit mode. A checklist was framed and time taken for each step of the discharge process was recorded for both cash and insurance patients and analysed to calculate the Turnaround Time. In addition the researchers made personal observations as to the reasons for the delay in the various steps of the discharge process. A Regression Analysis was done to compare the delay at each step of the discharge process for both cash and credit patients. The data was analysed, observations recorded and addressed with the necessary suggestions.

KEY WORDS: Discharge Process, Turnaround Time, Bed-Turnover Ratio, Patient Satisfaction

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I. INTRODUCTION:

Discharge is a process by which a patient is shifted out from the hospital with all concerned medical summaries ensuring stability. The discharge process is deemed to have started when the consultant formally approves discharge and ends with the patient leaving the clinical unit. It is a lengthy procedure and the time taken by a hospital is an important indicator of quality of care and patient satisfaction. The patient, as well as his relatives, is eager to resume their routine life immediately and any undue delay in the discharge process leads to patient dissatisfaction and takes a toll on image of the hospital, even after a successful and satisfactory treatment.

Types of Discharge – Discharge can be of various times depending on the reason underlying it. It can be a Planned Discharge when the Patient completes the treatment in the hospital and no more requires being under direct supervision of that hospital. It can be Discharge / Leave against medical advice (DAMA/LAMA) or Transfer/Referral to another unit or hospital for further management. The Patient's abscond from hospital is also a type of discharge. Essentials of a Planned Discharge- Typically in a planned discharge the following are the standard steps involved:

- Consultant notification of Patient Discharge
- Preparation of Discharge Summary
- Return of Drugs to Pharmacy
- Drugs Return Acknowledgment by Pharmacy
- Discharge Initiated
- Activity Card sent to Billing
- Patient Settlement of Bill
- Patient Discharged

II. NEED & SIGNIFICANCE OF THE STUDY:

Delayed hospital discharge is a patient care quality issue experienced globally in many healthcare systems. The delay in this process has been a perennial problem for many hospitals, creating ripple effect on the customer satisfaction, bed turn-over rate, etc it has been observed that the major factor for patients' dissatisfaction, many times, is delay in discharge process.

Delays in discharge have raised numerous other concerns such as increased risk of infection, reduced quality of life particularly for elderly patients, and a potential waste of economic and human resources. Delayed

discharge is associated with adverse effects on both the patients and the health care staff. At the patient level, there may be an increased risk of falls, hospital-acquired infections and mental health problems. As for the health care staff, this may be associated with stress and diversion from a primary focus on patient care.

Delay in Discharge of the patient also increases the pressure on beds of the hospital. Improper Bed Turnover Ratio increases cost to the hospitals. Delayed discharge is not simply a product of the increasingly complex needs of patients, but a result of inefficiencies within the various departments of the hospital. Despite knowing that delayed discharges are problematic, costly and lead to poor quality care outcomes, 'solving' the issue continues to be a challenge.

The present study was thus undertaken with the objective of understanding the steps involved in the Patient's Discharge Process, record the time taken for each step for a sample, identify and analyze the reasons for the delay at every step of the discharge process. Further it is also important to know the difference in time taken for each step of the discharge process between Cash Patients and Credit Patients.

III. REVEIW OF LITERATURE:

A study was done in Iran to analyze the waiting time for the discharge. The author Sima Ajami, (2007) collected the data using questionnaires, observation and checklist. The collected data was analyzed using SPSS and OR methods. Queuing model was used to study the reasons for delay in the discharges. Average waiting time for all the wards was found to be 4.93 hours. As per hospital personnel opinion the main reasons identified for the delay were delay for the discharge summary completion, lack of proper guidelines for the staff involved in the discharge process and absence of Hospital Information networking systems.

According to Janita Vinaya Kumari, (2012), the final stages of hospitalization i.e. the discharge and the billing process is more likely to be remembered by the patient. A study was conducted in a tertiary care teaching hospital to calculate the average time taken for the discharge of the patient. For the purpose of collection of data for the study registers were designed and kept in wards and the billing office. 2205 patient records were analyzed. The average time taken for the discharge of the patient was 2 hours and 22 minutes.

A time motion study conducted in a hospital by Swapnil Tak et al., (2013), observed That there is a delay for all the types of discharges i.e. insurance patients, cash patients, DAMA etc. in the hospital. The total time taken for the discharge was compared against the NABH standards. The total time taken for insurance, self-payment and DAMA patients was 278, 337 and 302 minutes respectively. As per the satisfaction survey conducted by the author, 69.80% of the patients felt that the discharge process was lengthy and 61.53% of the patients believed that process can be speeded up.

According to Silva et.al (2014), the main reasons for discharge delays are the processes and can be improved by appropriate interventions. The study was conducted in two Teaching hospitals by reviewing the medical records of the patient admitted to internal medicine ward. A pilot study was conducted to determine the sample size. The delays in discharges that occurred in two hospitals were 60% and 50.7% respectively. The main reasons identified for the delay were waiting for the test reports, delays in making clinical decisions and in providing specialized consultation.

Shobitha Sunil¹, Sarala K.S², R G Shilpa³ October (2016)., Time taken for the completion of discharge process is an important indicator of quality of care. As per NABH, the time taken for completion of the discharge process should not exceed 180 minutes. Discharge process is the last stage of the patient journey in the hospital and is more likely to be remembered by the patient. So delay in the discharge process can be depressing to the patients and also increases the pressure on hospital beds. The present study was conducted in M.S Ramaiah hospital to analyze the break up time taken for discharge and evaluate the level of patient satisfaction for the discharge process. The total time taken for the discharge process was broken up into time taken for discharge. Summary writing, discharge summary completion, billing completion and patient to leave the ward.

Dr. Niloy Sarkar¹, Ms. Tatini Nath² August (2016)., the main objective of the study is to identify the gaps, highlight those areas where delay can be eliminated and recommend accordingly, so that the hospital discharge process can be managed smoothly. This paper has explained the hospital discharge process in a simple way and has tried to find out the root causes for the delay in discharge process. The set-up of the study was Apollo Hospitals, Greaves Lane, Chennai (15th June – 14th August, 2012).

A Abiramalakshmi¹, Dr. SN Soundara Raja² October (2017). The aim of the study is to find the cause of delay in inpatient discharge and to increase the patient satisfaction. Objective of the study is to identify the cause of delay in inpatient discharge and to suggest some valuable information related to it to rectify the problem. Due to Discharge summary, Pharmacy, Nurses delay and Allied services the discharge of inpatients is getting delayed and this may lead to dissatisfaction in inpatients. The study is being done in order to find out the cause and to provide suggestion related to the findings.

According to LixiaOu, Lis Young, a study was conducted to identify the reasons and determinants of discharge delay in acute patients, the increasing demand for acute care hospital beds and a push for cost cutting requires efficient discharge planning. Delayed discharge has become a major issue because it leads to

unanticipated length of stay and bed block. Both the quality and cost effectiveness of care may be compromised as a result. In Australian context, delayed discharge is a major reason for the unavailability of beds in major acute care hospitals.

According to the study of Andrew P Costa, Jeffry W Poss, it was identified the acute hospital discharge delays were the pressing concern for many health care administrator. In Canada, a delayed is defined by the alternate level of care [ALC] construct and has been the target of many provincial health care strategies. Little is known on the patient characteristics that influence acute ALC length of stay. This study examines which characteristic drive acute ALC length of stay those awaiting nursing home admission.

According to Michael Emes, Smith, Suzanne, in the period from January 2013 to July 2014, three process change initiatives were undertaken at a major UK hospital to improve the patient discharge process. These initiatives were inspired by the findings of a study of discharge process using soft systems methodology. The first initiative simplified time-consuming paperwork and the second introduced more regular reviews of patient progress through daily multi-disciplinary situation reports.

IV. METHODOLOGY:

The study aims to monitor and record the time taken for each step of a patient’s discharge process.

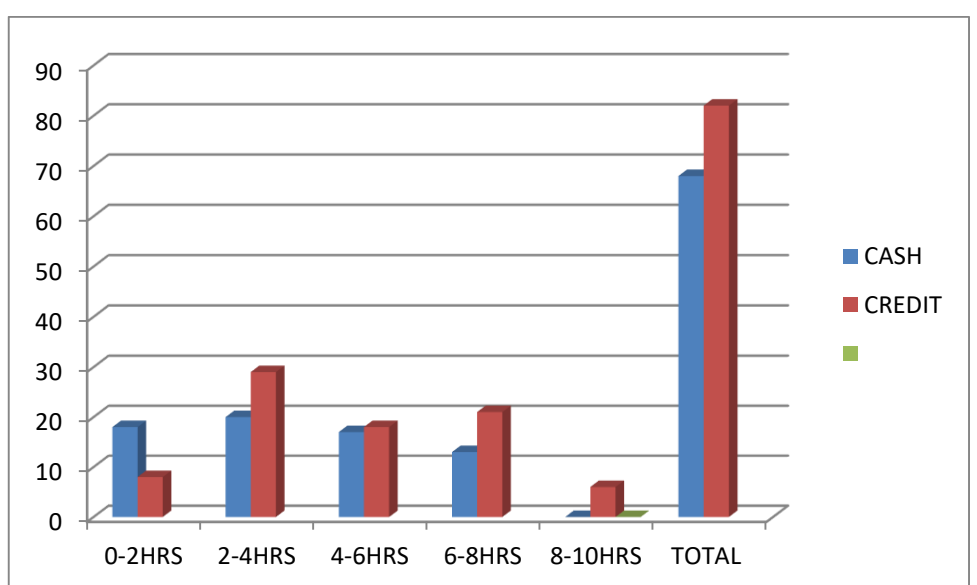
The study was an observational one and a sample of 150 patients were taken from surgical and allied departments of the teaching hospital. The sample was Simple Random selection. There were 68 patients who cleared their treatment expenses by cash and 82 who relied on Credit schemes. The data for the study included both Primary data and Secondary data. The primary data was collected by recording the time taken as each step of the discharge process through a structured Check list. The data was analyzed using Simple percentage method and Regression analysis. Secondary Data was collected from published information in Journals, Books and the Internet. The study was conducted for a period of three months from May to July 2022.

V. DATA ANALYSIS:

Table 1-Discharge Time for Cash and Credit Patients

Hours \ Mode	0-2		2-4		4-6		6-8		8-10		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
Cash	18	26(H) 69(V)	20	29(H) 41(V)	17	25(H) 49(V)	13	20(H) 38(V)	0	0(H) 0(V)	68	100(H) 45(V)
Credit	08	10(H) 31(V)	29	35(H) 59(V)	18	22(H) 51(V)	21	26(H) 62(V)	06	7(H) 100(V)	82	100(H) 55(V)
Total	26	17(H)	49	33(H)	35	23(H)	34	23(H)	06	4(H)	150	100(H)

H depicts Horizontal Percentage and V depicts Vertical Percentage.



Interpretation

The above table and figure present the discharge time taken for both cash and credit patients. The data shows that only 50 percent of the discharges were done within 4 hours time whereas the remaining 50 percent required more than 4 hours. Among those discharges that took more than 4 hours, almost 50 percent each were those which took 4-6 hours and 6-8 hours. Only 4 percent of the patient discharges took more than 8 hours and all such patients were those who relied on credit payment.

69 percent of the discharges which took less than 2 hours time were those of cash paid patients. There seems to be not much drastic difference with respect to cash and credit patients as far as other time bands are concerned.

Table 2-Reason for Delayed Discharge:

Steps in Discharge Process	Percentage
Doctor's Rounds	5
Preparing Discharge Summary	8
Billing Process	44
Patient Leaving the Hospital	11
No Delay	32
Total	100

Interpretation

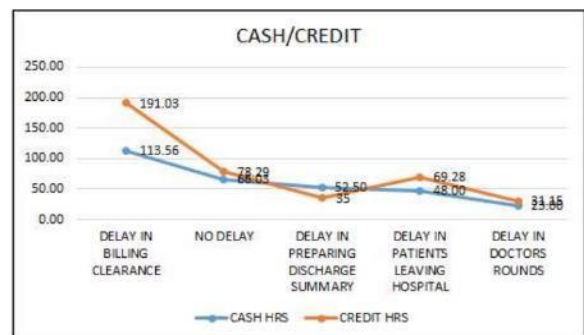
As per the objective of the study, it is further essential to understand which steps in the discharge procedure took more time leading to the delayed discharges. With respect to the hospital under study, it is found that 32 percent of the patients were discharge within 3 hours as stipulated by the National accreditation Board for Hospitals and Healthcare (NABH). Among the remaining 68 percent of the delayed discharges, 44 percent were due to billing delay and 11 percent was the delay in patients vacating beds/wards after discharge. Nominal 8 percent delay was due to discharge summary preparation and 5 percent due to delay in doctors' rounds.

SUMMARY OUTPUT FOR CASH/ CREDIT USING REGRESSION ANALYSIS

An attempt was made to summarize the stepwise delay in the discharge process and compare the same between cash and credit patients. Regression Analysis was used for the same and the results are presented hereunder in the table and the graph.

Table 3-Regression Analysis

<i>Regression Statistics</i>	
Multiple R	0.21893508
R Square	0.047932569
Adjusted R Square	0.041499681
Standard Error	42.53433145
Observations	150



Interpretation

The above analysis shows that the time taken for the billing process is high compared to the other stages of the Patient's discharge process. For Cash patients it is less compared to those on credit. No delay in the discharge process was there only for cash patients. With respect to delay in preparation of discharge summary, it is slightly higher in credit patients. The delay in patients leaving the hospital after the completion of the entire discharge process and the delay in doctors' rounds is almost same with both categories of patients.

VI. Observations

It is observed that the delay in billing process was due to lack of enough employees in the billing department. There were only 2 people taking care of billing, one for cash patients and the other for credit patients. The patients who visited this hospital on credit basis were mostly from the Arogyasri Scheme and there was only one person to process.

Many times it is noticed that the resident / duty doctor does not have enough information to write the summary due to non availability of the Consultant doctor. The Consultant doctors were engaged in Operation Theatres or were attending to emergency/critical cases. Delay in Doctors' rounds was also observed to be a reason.

There are no enough computers available in the nursing station for the preparation of discharge summary. Lack of sufficient nurses is also a reason in the department

Time gap between clearance of bill and patient vacating: this sometimes seen to be long. Some patients seek their own convenience to leave the hospital pertaining to arrangements for their own vehicle etc

VII. Suggestions

- 1) Appointing one more employee in the billing department especially for the credit patients would to a large extent reduce the delay of discharges in this hospital. Training the billing staff to stay up-to-date on the latest billing and coding rules and regulations is important. Billing counter staff can be instructed to contact and inform the ward staff directly once the bill is ready.
- 2) Interim Bill must be adequately updated. Billing card system must be eliminated and system must be updated directly at the billing counter. Patients must be immediately intimated via an automatic SMS system. This can help to reduce the time taken by patient to settle the bill since the patient is settling most of the bill well ahead of the discharge date.
- 3) Patient education: Educating patients on their insurance coverage and financial responsibility can reduce communication breakdowns and disputes related to billing, thus reducing the delay. Verifying patient insurance coverage and eligibility before providing services can help reduce claim denials and rejections. Developing clear billing policies and communicating them to patients can help reduce disputes and complaints related to billing.
- 4) Another area of delay is discharge summary preparation and signature by consultant. Discharge when preplanned, ward secretaries should ensure that all the summaries are ready by the next day for signature and correction by consultant. Updating the patient file on a daily basis will ensure that the complete information is recorded, allowing faster discharge summary dictation. This would involve central electronic patient charts and adopt an efficient electronic medical records (EMR) system. Discharge summary can be prepared before confirming the discharge to the patient. Time for discharge process can be fixed for a time as, say, 2:00 PM as the interns and junior residents will be busy with the ward rounds and clinical discussion till that time
- 5) All ward secretaries should be provided with guidelines in discharge procedures to reduce the delay in time taken for discharge process. Staff should also be trained in proper communication skills to carry out the process.
- 6) One Manager can be appointed to monitor and take care of the entire discharge procedure. He/She should be able to approach any department/person concerned with the discharge process when things are getting delayed. Sometimes it happens that the rough or fair summary is ready but due to unavailability of a typist or a transport boy it is delayed. Or maybe the consultant is with another In Patient or in a surgery. A person to monitor the entire discharge process would greatly help in removing all such bottlenecks in the process causing the delay.
- 7) Instruction in some form to vacate the room has to be given to the patient when Everything required is submitted to him/her or when he/she is admitted. There is a "General Consent Form" in which instructions are given to patients regarding the rules & regulations. In that form nothing is written about the discharge process. One sentence should be added in that form i.e., "Patient should leave the ward within one hour once everything is handed over to the patient or patient relative." Ward secretary should be instructed to advise the patient and patient relative about the importance of vacating the room. From the admission department and Secretary should be informed about the patient waiting for the bed. Repeated reminders from admissions would highlight the importance of discharged patient to vacate the room.

VIII. Conclusion:

Discharge of patients is one of the important area that needs improvement in hospital. In order to reduce the delay in discharge, the hospital needs proper cooperation and coordination of other department staffs. The study clearly shows that there is a significant delay in discharges in this hospital, and the duration varies considerably between departments. Delay is seen with majority of the patients, especially in billing and preparing discharge summary. Time taking and tedious discharge procedures often contribute to patient dissatisfaction and thus reflects on the image of such hospitals. Moreover, timely discharge of patients will help to improve the bed management in the hospital. The factors for delay were identified and suggestions were given to decrease the time so that the patients go our happily and bed allotment for next patient can also be given on time. This would eventually improve the efficiency of the hospital and increase its reputation.

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