



A comparative time motion study of all types of patient discharges in a hospital

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ABSTRACT

Introduction Discharge is a release of a hospitalized patient from the hospital by the admitting physician after providing necessary medical care for a period deemed necessary. Any hospital needs to work on finer aspects of the discharge process, to make it more patient friendly and less time consuming as it directly connects to patient satisfaction.

Methodology This observational study was carried out in a tertiary care 350 bedded hospital in Pune city on 354 discharged patients of all types of discharges, comprising of Insurance patients (104), self-payment patients (227) & discharges against medical advice (DAMA)(23).

Results and Discussion The results indicate that there is a delay in all types of discharges in this hospital in all the steps except for the time needed to return unused medicines to the pharmacy. Time and tedious discharge procedure, also contributes to patient dissatisfaction.

Keywords: Time-Motion, Discharge process, Patient Satisfaction

INTRODUCTION

Discharge is defined as, "a release of a hospitalized patient from the hospital by the admitting physician after providing necessary medical care for a period deemed necessary¹".

It is also defined as, "the process of activities that involves the patient and the team of individuals from various discipline working together to facilitate the transfer of patient from one environment to another²". 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.

The process comprises of clinical, financial, legal and administrative and recordkeeping aspects starts right from writing of discharge orders to settlements of all kinds of hospital bills is a time consuming process; but if executed in an organized way with assistance from trained medical, para-medical and administrative staff, can be completed as per global standards or those prescribed by hospital accreditation boards like NABH at national level.

The time study measures the time required to perform a given task in accordance with a specified method and is valid only so long as the method is continued. Once a new work method is developed, the time study must be changed to agree with the new method³.

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Time study is a direct and continuous observation of a task, using a stopwatch, video camera etc, to record the time taken to accomplish a task

Time motion study is often used when⁴.

- there are repetitive work cycles of short to long duration,
- wide variety of dissimilar work is performed, or
- process control elements constitute a part of the cycle

Thus, this time motion study was carried out with the following objectives:

- To observe and record the time needed for completion of discharge process for all types of discharges
- To compare the average time taken for completion of discharge process for all types of discharges with NABH standards.
- To propose recommendations based on the study findings.

METHODS

This observational study was carried out in a tertiary care 350 bedded hospital in Pune city, selected randomly by throwing chits with hospital names

RESULTS AND DISCUSSION

Table 1 Comparison of Average Time Taken According to Type of Discharges and NABH Prescribed Standards (n=354)

Sr. No	Steps in Discharge Procedure	Average Time Taken According to Type of Discharge (In minutes-rounded off)			
		Self Payment (n=227)	Health Insurance (n=104)	Against Medical Advice (n=23)	NABH Standard
1	Preparation of Discharge Summary	49 minutes	51 minutes	63 minute	30 minutes
2	Return of Unused Medicines to Pharmacy	28 minutes	33 minutes	31 minutes	30 minutes
3	Clearance from all departments	78 minutes	74 minutes	75 minutes	60 minutes
4	Preparation of Bill	67 minutes	66 minutes	71 minutes	30 minutes
5	Bill Settlement/Approval	56 minutes	113 minutes	62 minutes	30 minutes
Total Mean Time in Minutes		278 minutes	337 minutes	302 minutes	180 minutes

written on them. The time taken for discharge from physician writing orders on the case sheet to completion of billing process in all the departments was observed and measured using a stop watch by staff nurse present in each department of the hospital. The data was collected for all the patients discharged from 4th June, 2012 to 10th June, 2012.

Total 354 discharged patients of all types of discharges were included during this period comprising of Insurance patients (104), self-payment patients (227) & discharges against medical advice (DAMA)(23) were included in the study and separate record was maintained for each type of discharge .

A semi structured interview was administered on the discharged patients about the discharge process and the time taken for its completion.

A survey of the internal layout of the hospital was also done to assess the transit time for discharge procedures according to locations of concerned departments.

The data thus collected was analyzed using percentages and were presented in a tabular format.

The above table shows that the average time taken for each step of discharge procedure for Individual patients (278 minutes), Insured patients (337 minutes) and Patients discharged against medical advice (302 minutes) was markedly higher when compared with standards prescribed by National accreditation board for Hospitals (NABH).

Longest time (113 minutes) was taken for Insurance covered patients mainly because of delays in bill

approval process. The time taken for return of unused medicines to the pharmacy department was more or less, at par with NABH standards (30 minutes), the shortest being for individual patients (28 minutes), which was 2 minutes lesser than the prescribed time.

The total time required for all types of discharges was more than the findings of a study done in a 500 bedded hospital in Karnataka (142 minutes)⁵.

Table 2 Discharged Patients Positive Responses about Time & Steps Involved in Discharge Process

Sr. No	Feedback Heads	Positive Responses in Percentage			
		Individual	Insurance	DAMA	Average
1	Satisfaction expressed about time taken for discharge	31.28% (71)	20.19% (21)	39.13% (9)	30.20%
2	Satisfaction expressed about procedures for discharge	35.59% (74)	25.96% (27)	47.82% (11)	36.46%
3	Discharge process should be fast tracked	65.63% (149)	71.15% (74)	47.82% (11)	61.53%
4	Simplification of the discharge process	63.43% (144)	66.34% (69)	60.86% (14)	63.54%

Above table shows feedback from 227 individual, 104 insured and 23 patients, discharged against medical advice, about the procedures and time taken for discharge and their opinion about scope of improvement regarding the same.

Most of the patients in all types of discharges felt that the discharge process was too lengthy (Average 69.80%) and the procedures followed under each step for discharge were tedious (Average 63.54%). Majority of the patients felt that the discharge procedure should be speeded up (Average 61.53%) and the procedure should be simplified (Average 63.54), so that they would face less harassment and can resume their normal routine life early.

Survey of the internal layout of the hospital revealed that a lot of time was consumed as transit time for hospital staff and patient relatives to move around for completion of discharge procedures as the concerned departments were located at relatively distant places and not centrally. These findings are similar to the findings of factors affecting spending of nursing time with patients⁶.

CONCLUSION

The results clearly indicates that there is a delay in all types of discharges in this hospital in all the steps except for the time needed to return unused medicines to the pharmacy, when compared with prescribed standards for the same. Time and tedious discharge procedure, also eventually contributes to patient dissatisfaction and thus reflects on future business of such hospitals.

RECOMMENDATIONS

Based on the study findings, to improve the time needed and to make discharge procedures more patient friendly, for all types of discharges, it could be recommended that:

- All departments involved in the discharge process should be adequately staffed, depending on the patient load in the hospital.
- Staff, recruited for these departments should be trained in discharge procedures and communication skills for better interaction with patients/relatives.

- Hospital administrators should themselves, carry out a periodic time motion study in all concerned departments and identify the reasons for delays and difficulties in implementation of procedures administered therein.
- Hospital management should also take feedback from patients about services, including discharge, provided to them, as an ongoing activity & should recruit a dedicated staff for the same.
- There should be a mechanism for analysis of patient feedback and implementation of helpful or constructive suggestions from the patients.
- A software to expedite the discharge process should be purchased and customized according to needs of the hospital, after provision of adequate funds and training to the relevant staff.

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