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Study of discharge process of patients admitted in inpatient department of a tertiary care hospital of north India with a special focus on reducing the waiting time

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Abstract

Introduction: Hospital discharge plan process comprises of clinical, financial, legal and administrative and record keeping aspects, starts right from writing of discharge orders to settlements of all kinds of hospital bills and 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.

Methodology: The study was carried out in General medicine and General Surgery wards of inpatient department of SKIMS. It was an observational type of study where in all the patients who got discharged in the said wards from 10am to 4pm daily (Except Sundays) were observed for their discharge process and a semi structured questionnaire was administered in all the discharged patients' relatives about the discharge process including time taken for its completion and reasons of delay thereof.

Results: A total of 710 Discharged patients were observed during the study period which includes 417 patients from General surgery department and 293 patients from General medicine side. The results show that the average time taken for discharge process was 240 minutes for those who had a planned discharge and had to pay out of pocket (Self- Payment). It was 255 minutes for those who had been discharged against medical advice (DAMA) while it was 270 minutes for below poverty line (BPL) patients who had to exempt hospital charges. The results also show that among all discharged patient's relatives observed, majority (54%) felt that their discharges were delayed due to non -availability of resident doctor for preparing the summaries while 23% considered long waiting time outside MRD counter as the main reason for their delay.

Conclusion: Time and tedious discharge procedure, also eventually contributes to patient dissatisfaction. All departments involved in the discharge process should be adequately staffed, depending on patient load in the hospital. Hospital administration should themselves carry out a periodic time motion studying all concerned departments and identify the reasons for the delays and difficulties in implementation of procedures. Hospital administration should also take feedback from patients about services including discharges as an ongoing activity.

Keywords: discharge process, self-payment, delay, DAMA, BPL

Introduction

A hospital mainly provides two types of services, outpatient and inpatient services. Out of which the outpatient is a person who receives ambulatory care in the hospital, which do not require an overnight hospital stay. "An inpatient" is a person who has been admitted to a hospital for purpose of receiving inpatient hospital services. The inpatient in a hospital has to go through and experience three different stages. First is admission, next is Intervention and the final stage is discharge. During the discharge of the patient, after the necessary interventions, a number of procedures have to take place by engaging various staff members and departments making the process complex.

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 necessary [1].

Hospital discharge plan includes clearance from all departments, bill settlement, and inform patients regarding appropriate post-hospital treatment as per standard documentation. The process comprises of clinical, financial, legal and administrative and record keeping aspects, starts right from writing of discharge orders to settlements of all kinds of hospital bills and 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. [2-4]

Therefore keeping in view above factors a study on discharge process of patients was conducted in Sher-i-Kashmir Institute of Medical Sciences (SKIMS) Srinagar J&K, a tertiary care teaching hospital in order to review the existing discharge process and find the factors which are causing delay in the process.

Objectives

1. To study the process of Discharge of Patients admitted in inpatient Department of SKIMS
2. To study the cause of discharge delays of patients admitted in inpatient department of SKIMS

Methodology

a) Study Setting

The study was carried out in General Medicine and General Surgery Wards of inpatient department of Sheri-Kashmir institute of medical sciences (SKIMS), Srinagar a 783 bedded tertiary care hospital

b) Study Type

It was an observational type of study undertaken on patients discharged from the hospital.

c) Study design

The study was carried out in General medicine and General Surgery wards of inpatient department of SKIMS. It was an observational type of study where in all the patients who got discharged in the said wards from 10am to 4pm daily (Except Sundays) were observed for their discharge process and the time taken for discharge from physician writing orders on case sheet to completion of billing process in all the departments was noted for every patient and discharge summaries were observed for their accuracies.

A semi structured questionnaire was administered in all the discharged patients' relatives about the discharge process including time taken for its completion and reasons of delay thereof. The questionnaire had two parts, part 1 was dealing with questions regarding satisfaction of overall discharge process and part 2 was regarding delay in discharges and reasons for the same.

A total of 710 cases were studied. Among them 417 (58.73%) discharges belonged to General Surgery ward and 293 (41.27%) discharges were from General Medicine ward. The discharges included planned discharge cases (Self payment and BPL) and those who were discharged against medical advice (DAMA).

d) Study Period

The study was carried for 3 months duration (from 1st Nov 2017 to 31 Jan 2018) for data collection and observations.

e) Study population

The study population were all patients irrespective of gender who were discharged from the said wards daily from 10am to 4pm except Sundays as no planned discharge was scheduled for Sundays.

Results and Observations

Admission to and discharge from hospital can be a distressing time for individuals, their families and friends. For most people, however, treatment will be successful and they will return to their usual way of life very quickly through the provision of an accurate diagnosis, treatment and rehabilitative service. Some people will need additional help to enable them to do so over and above their medical treatment. It is increasingly evident that effective hospital discharges can only be achieved when there is good joint working in the organization in delivery of care including a clear understanding of respective services. Without this the diverse needs of local communities and individuals cannot be met.

An observational study was carried out in SKIMS, a 783 bedded tertiary care hospital in North India for 3 months duration (i.e. from 1st Nov 2017 to 31 Jan 2018). The General medicine and General surgery wards of the inpatient department of SKIMS were selected for the study owing to the fact these departments routinely admit and discharge patients every day. The Discharge process of every patient pertaining to these two wards was observed from 10am to 4pm every day during the study period of three months. The Sundays were excluded as no discharge was usually planned for Sundays.

A total of 710 Discharged patients were observed during the study period which includes 417 patients from General surgery department and 293 patients from General medicine side.

The discharge process of every patient pertaining to both wards was observed from the "time physician wrote about the discharge on a case file till the time of completion of billing process." Among 710 patients observed, 700 (98.6%) patients paid out of pocket (self-payments), and 10 (1.4%) were below poverty line (BPL) and had to exempt hospital charges. Among 700 self-payments, 695 were planned discharges and 5 cases were discharged against medical advice (DAMA). A separate record was maintained for each type of discharge. The number of cases along with percentages are shown in Fig 1.

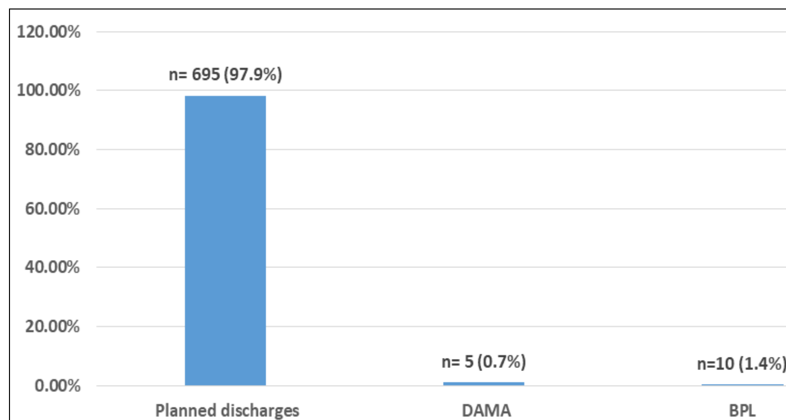

Fig 1: Discharges with Percentages total number of cases = 710

All the discharged cases (710) were observed for time taken to complete a discharge process. The data thus collected was analyzed using percentages and is presented in a tabular form in Table 1.

Table 1: Comparison of average time taken according to type of Discharge (n=710)

Steps in Discharge Procedure	Average time taken in minutes		
	Planned Discharges (Self Payment) n= 695	**DAMA (Self Payment) n = 5**	**BPL (Exemption from payment) n = 10**
From Physician writing discharge order on case sheet till availability of resident doctor to prepare discharge Summary	150 minutes	150 minutes	150 minutes
Preparation of Discharge Summary by Resident doctor	30 minutes	45 minutes	30 minutes
Preparation of Discharge alert by Nursing staff	15 minutes	15 minutes	15 minutes
Clearance from MRD section /approval	45 minutes	45 minutes	75 minutes
Total	240 minutes	255 minutes	270 minutes

The above table clarifies that average time taken was more in 1st step (150 minutes) i.e. from physician planning for discharge till the time resident doctor becomes available for preparation of discharge summary. It is pertinent to mention that in SKIMS only Resident doctors of concerned wards are allowed to prepare discharge summaries and usually 2-3 doctors are posted in wards for the day duty. All of them accompany consultants on their ward round and it was observed that consultants usually take three (3) hours to complete a ward round. It is only after completion of ward round, resident doctors become available to prepare discharge summaries.

The average time for preparation of discharge summaries was more in DAMA patients (45 Minutes) as resident doctors usually give 1st priority to those who are planned discharges and includes Self payments as well as BPL patients.

The clearance from Medical records department (MRD) section for billing and approval takes more time (average 45 minutes) due to the fact that long queues are seen outside the counters and attendants have to wait for their turn. MRD section functions with two windows which normally remain functional during day time but they have to cater discharges from the whole hospital.

The patients who were below poverty line had to approach administration for exemption of hospital charges before they could get approval from MRD section. Therefore their average time for billing was more than others (i.e. 75 minutes)

The average time taken for discharge process was 240 minutes for those who had a planned discharge and had to pay out of pocket (Self- Payment). It was 255 minutes for those who had been discharged against medical advice (DAMA) while it was 270 minutes for below poverty line (BPL)patients who had to exempt hospital charges owing to their BPL status and had to approach administration before they could get clearance from Medical records section. (Fig 2)

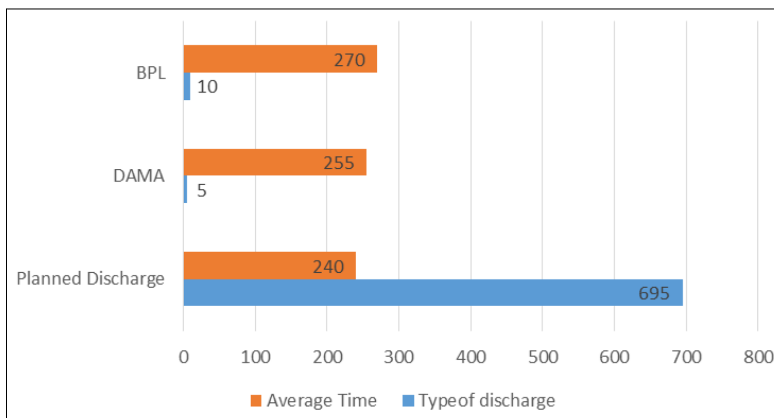

Fig 2: Average time taken per type of discharge

A semi-structured questionnaire was administered on all the discharged patients (i.e. 710) and their relatives/attendants were asked questions regarding the whole discharge process (part 1) and reasons for delays (part 2). Data collected was analyzed using percentages and is shown in table 2a and 2b respectively

Table 2a: Discharge Patients Positive response about Discharge Process

Feedback Heads	Positive Response in Percentages		
	Planned Discharges (Self Payment) n= 695	**DAMA (Self Payment) n = 5**	**BPL (Exemption from payment) n = 10**
Satisfaction expressed about time taken for discharge	20.2% (141)	Nil	10% (1)
Satisfaction expressed about procedure for discharge	20.2% (141)	Nil	10% (1)

Table 3

Feedback Heads	Positive Response in discharges		
	Discharges (Self Payment) n= 695	DAMA (Self Payment) n = 5	BPL (Exemption from payment) n = 10
Discharge process should be fast tracked	Yes 79.8% (554)	Yes 100% (5)	Yes 90% (9)
Simplification of discharge process	Yes 79.8% (554)	Yes 100% (5)	Yes 90% (9)

The positive response about the whole discharge process was less which includes the time taken for completion of discharges (20.2%, 10% and nil in self-payment, BPL and DAMA respectively) and other steps of process i.e. availability of doctor, long queues outside MRD counter and time consuming process in administrative office. (20.2%, 10%, nil in self-payment, BPL and DAMA respectively) (Table 2)

The table (3) shows that most of the patients' relatives were not satisfied about the discharge process including time taken for completion of whole process and felt that discharge process was too lengthy and needs to be fast tracked and simplified (79.8%, 90%, and 100% in self- payment, BPL & DAMA respectively)

The patient's relatives were asked about delays in the whole discharge process and reasons for such delays. The information thus collected was analyzed and is depicted in Fig 3

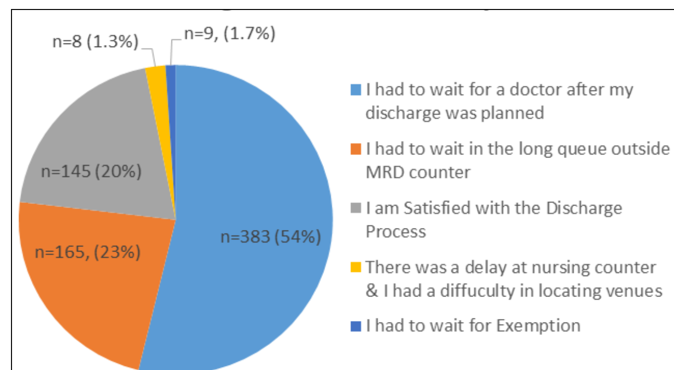

Fig 3: Reasons for Delay

The above figure clearly depicts that among all discharged patient's relatives observed, majority (54%) felt that their discharges were delayed due to non -availability of resident doctor for preparing the summaries while 23% considered long waiting time outside MRD counter as the main reason for their delay.

There were small percentage of cases (1.3%) whose discharges were delayed at nursing counter and some of them considered difficulty in locating venues as the main reason for their delay.

The relatives of BPL patients who had to exempt hospital charges considered their long waiting in administrative office as the main reason for the delay.

Among 710 cases, 20.02% cases were satisfied with the discharge process and they didn't find any reason for delay whatsoever.

The concept of Health insurance is yet to be introduced in the hospital information system of SKIMS. The insurance cases of concerned patients (if any) are settled between them and insurance companies after patients get discharge from hospital.

Discussion

Patients still experience needless harm and often struggle to have their voices heard, processes are not as efficient as they could be, and costs continue to rise at alarming rates while quality issues remain. A shorter length of hospital stay, the decrease in work-hours of health care providers, and the increasing number of patient transitions between departments and institutions requires effective patient handovers, especially those of frail patients with comorbidities. Continuity of care at patient discharge from the hospital is a critical aspect of high quality patient care. Highly reliable care requires close cooperation between care providers across organizational boundaries, thereby establishing an interdisciplinary network The study was conducted for a period of 3 months in Sheri-Kashmir institute of medical sciences (SKIMS), and the Discharges of patients admitted in General Medicine and General Surgery wards were studied.

Observations revealed that the average time taken for discharge process was 240 minutes for those who had a planned discharge and had to pay out of pocket (Self-Payment). It was 255 minutes for those who had been discharged against medical advice (DAMA) while it was 270 minutes for below poverty line (BPL)patients who had to exempt hospital charges owing to their BPL status and had to approach administration before they could get clearance from Medical records section. Comparing our results with the study conducted by swapnil tak *et al.*. [7] revealed that average time taken for planned discharges (self-payments) was 278 minutes while it was 302 minutes for those who were discharged against medical advice (DAMA)

Complementing the findings of above study, another study conducted by shobitha sunil *et al.* [5] revealed that average time taken for the discharge process was 218 minutes. The longest time taken was for General patients amongst the categories while in a study conducted by janita vaniya kumara [6] *et al.* discharge time of an individual patient was 2 hours and 22 minutes (142 minutes)

Studying the patients positive response about time and steps involved in discharge process revealed that most of the patients' relatives were not satisfied about the discharge process including time taken for completion of whole process and felt that discharge process was too lengthy and needs to be fast tracked and simplified (79.8%, 90%, and 100% in self-payment, BPL & DAMA respectively). Comparing the results of our study with the study conducted by swapnil tak *et al.* [7] revealed that most of the patients in all types of discharge process said that process was too lengthy (average 69.8%) and the procedures followed under each step of discharge were tedious (average 63.54%). Majority of the patients felt

that the discharge procedure should be simplified (average 63.54%)

Another study conducted by lovepreet kaur *et al.* [8] revealed that majority (79%) said that they were satisfied with the procedures and timings while 21% said they want simplification of discharge process while in a study conducted by lakshmi bhaskar *et al.* [9] 75% patients were satisfied with the discharge process.

Studying causes and reasons for delay in discharges revealed that majority (54%) felt that their discharges were delayed due to non -availability of resident doctor for preparing the summaries while 23% considered long waiting time outside MRD counter as the main reason for their delay. There were small percentage of cases (1.3%) whose discharges were delayed at nursing counter and some of them consider difficulty in locating venues as the main reason for their delay. Comparing the results with the study conducted by lovepreet kaur *et al.* [8] revealed that 28 % said that delay occurred as they had to wait for a doctor while 31.5% said that they had to wait outside the counter for billing. Another study conducted by shobitha sunil *et al.* [5] revealed that 45% of cases attributed their delay to exhaustive billing process while in a study conducted by P.hendy *et al.* [10] 54 of the 83 patients (65.1%) experienced a delay while waiting for a service

To analyze the causes of delay in hospital discharge of patients admitted to internal medicine wards of hospitals in canada and united states was studied by Soraia Aparecida da Silva [11] which revealed that delays in discharge occurred in 60.0% of 207 hospital admissions in the *Hospital das Clínicas* and in 58.0% of 188 hospital admissions in the *Hospital Odilon Behrens* and the main reasons for delay in the two hospitals were, respectively, waiting for complementary tests (30.6% *versus* 34.7%) or for results of performed tests to be released (22.4% *versus* 11.9%) and medical-related accountability (36.2% *versus* 26.1%) which comprised delays in discussing the clinical case and in clinical decision making and difficulties in providing specialized consultation (20.4% *versus* 9.1%).

Summary and Conclusion

Time and tedious discharge procedure, also eventually contributes to patient dissatisfaction. All departments involved in the discharge process should be adequately staffed, depending on patient load in the hospital. Hospital administration should themselves carry out a periodic time motion studying all concerned departments and identify the reasons for the delays and difficulties in implementation of procedures. Hospital administration should also take feedback from patients about services including discharges as an ongoing activity.

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