

A Study to Assess the Efficiency of Discharge Process in Inpatient, Cause of Discharge Delays, and their Impact on Increase Average Length of Stay

Lovepreet Kaur¹, Prabhjot K. Dilawari²

¹Student, Department of Sports Medicine and Physiotherapy, Guru Nanak Dev University, Amritsar, India

²Assistant Professor, Department of Sports Medicine and Physiotherapy, Guru Nanak Dev University, Amritsar, India

Abstract: *The main objective of this present study focuses on the patients who were related to delayed discharge process at Fortis Escorts Hospital, Amritsar for the treatment in various clinical specialities. It also provides an overview about the institution Fortis Hospital, Amritsar. The approach, based on patient centricity, state-of-the-art emergency response, integrity, teamwork, ownership and innovation, combines compassionate patient care with clinical excellence, to achieve a single-minded objective-Saving and enriching lives. Discharge from the hospital is the point at which the patient leaves the hospital either returns home or is transferred to another facility such as one for rehabilitation or to a nursing home. Special emphasis has been laid on defining the terms like Average length of stay, Bed Occupancy Rate, Inpatient, Patient turnover rate. Discharge planning is an important part of the any hospital admission. It play an important role in ensuring a smooth move from hospital to home. With elective care, discharge planning should start before admission this allows everyone to focus on a clear endpoint in the patient's care. It also reduces errors and unnecessary delays along the patient pathway. If inpatient beds are a bottleneck, reducing pressure on the beds will increase throughput and therefore reduce referral to treatment times.*

Keywords: Discharge delay, Inpatient, Bed occupancy rate, Patient turnover rate

1. Introduction

The main objective of this present study focuses on the patients who were related to delayed discharge process at Fortis Escorts Hospital, Amritsar for the treatment in various clinical specialties.

Discharge: discharge from the hospital is the point at which the patient leaves the hospital either returns home or is transferred to another facility such as one for rehabilitation or to a nursing home.

Average length of stay: This measure refers to the average number of days that a patient stays in a hospital. It is calculated using the following formula $ALOS = (\text{inpatient days} / \text{admissions})$.

Bed Occupancy rate (BOR): The occupancy rate is a measure of utilization of the available bed capacity in a hospital. It indicates the percentage of beds occupied by patients in a defined period of time, usually a year. It is computed using the following formula: $BOR = (\text{inpatient days} / (\text{Bed days}) * 100$ (2).

Importance of Discharge

Discharge planning is an important part of the any hospital admission. It play an important role in ensuring a smooth move from hospital to home. This is achieved by making sure that appropriate clinical and community based support services are in place if required.

Discharging patients from the hospital is a complex process that is fraught with challenges. Preventing avoidable re –

admission has the potential to profoundly improve both the quality –of- life for patient and the financial well-being of healthcare systems.

With elective care, discharge planning should start before admission this allows everyone to focus on a clear endpoint in the patient's care. It also reduces errors and unnecessary delays along the patient pathway. If inpatient beds are a bottleneck, reducing pressure on the beds will increase throughput and therefore reduce referral to treatment times.

2. Review of Literature

Elements of Discharge Process

Discharge planning — Discharge planning is the development of an individualized discharge plan for the patient prior to leaving the hospital, to ensure that patients are discharged at an appropriate time and with provision of adequate post-discharge services. Discharge planning is a complex process. This process ideally begins at the start of the hospitalization. The hospital case manager should be involved as soon as the patient will require services at home, or will require transfer to an alternative level of care.^[1]

Medication reconciliation — Medication reconciliation, or medication review, is the process of verifying patient medication lists at a point-of-care transition, such as hospital discharge, to identify which medications have been added, discontinued, or changed relative to pre-admission medication lists. Performing accurate medication reconciliation is a critical element of a successful discharge transition. Most studies included in a 2012 Systematic

Review showed that medication reconciliation was associated with a decrease in actual and potential adverse drug events. Medication reconciliation may have a more important impact on the reduction of readmissions due to adverse drug events.^[1]

Patient instructions — at the time of discharge, the patient should be provided with a document that includes language and literacy-appropriate instructions and patient education materials to help in successful transition from the hospital. These documents should be brief, focused on critical information to the patient, and primarily directed at what the patient needs to understand to manage his or her condition after discharge. Discharge information, both written and verbal, should be reviewed with the patient/family caregivers with an emphasis on assessing and ensuring comprehension. In one interview study of patient perception and understanding of discharge instructions, among discharged patients, aged >65 years who felt that they had good understanding of their discharge instructions, 40 percent were unable to accurately describe the reason for their hospitalization and 54 percent did not accurately recall instructions about their follow-up appointment.^[1]

Role of discharge process in determining patient satisfaction

In the present competitive world, quality of health care is playing an important role in the modern society. Among various factors affecting the health care system, discharge process is one of the important factors related to patient satisfaction. It is the process that occurs when the patient leaves the facility. It implies that the patient has previously been admitted to the facility. As the final step in the hospital experience, the discharge process is likely to be well remembered by the patient. Even if everything else went satisfactorily, a slow, frustrating discharge process can result in low patient satisfaction. Soon after completion of treatment, the patient as well as his or her escorts expects to be relieved off immediately. The delay in discharge process leads to dissatisfaction and affects image of the hospital.^[2]

Cause and reason for delay discharge

Scattered information and non-integrated database systems had resulted in increased works loads and dissatisfaction among internal and external hospital clients. Research in the Shahid Sadoghi Hospital, Iran has shown that the average length of the discharge process in the morning shift for a patient leaving the hospital in the afternoon is about six hours. The average length of the discharge process in the afternoon shift for patients leaving the hospital in the same shift is about two hours.^[3]

Sepsis as a cause of delay discharge:

Sepsis was the other commonest cause for delay hospital discharge among our long stay patients and majority of these were hospital acquired sepsis. Pneumonia and UTI were the other common form of nosocomial infections seen in the study patients. The high incidence of hospital acquired urosepsis may be related to the common occurrence of urinary retention which required urinary catheterization. This was also reflected in the delayed discharge of a large number of patients because of trials to wean off urinary catheters. The causes of urinary retention

in the elderly are multifactorial, among the commoner ones are reduced mobility the use restraints and constipation.^[4]

Three causes of delays in hospital discharge, represented by time awaiting complementary tests, awaiting the results of tests and waiting for the preceptor/care team to make clinical decisions, were responsible for the majority of days of delay in hospital discharge. Discharge delays due to lack of availability of post discharge facilities and waiting for consultant opinions, tests and procedures, have been identified previously. This study has attempted to accurately quantify delays and their causes by adjusting for each patient, potential delays that did not lead to a prolonged length of stay.^[5]

Effects of delayed discharge

Bed pressures are increased by 'delayed discharges', which exacerbate patients' exposure to hospital-acquired infections, low mood and increasing loss of functional capacity. Remedying such delays would provide both cost savings and better quality of care, in line with the NHS Quality, Innovation, Productivity and Prevention (QIPP) agenda.^[6]

A significant and common effect of delay is unavailability of a bed due to delayed discharges. Although some delays are necessary for insurance and hospital procedure purposes, there are still many preventable delays that affect the process. Some of these causes included: contingencies, patients believed or had been told they could stay, orders written at inconsistent times, nurses not always able to anticipate discharges. By coordinating discharge/administrative duties on the inpatient floors we will be able to decrease the average length of a discharge.^[7]

3. Methodology

The study is an observational one that focuses to assess the efficiency of discharge process in inpatient, cause of discharge delays, and their impact on increase average length of stay among randomly selected 200 patients.

3.1 Inclusion Criteria:

- 1) Patients visiting Fortis hospital Amritsar.
- 2) Health insurance Policy holders empanelled with Fortis Escorts Hospital Amritsar
- 3) Age more than 18 years

3.2 Exclusion Criteria

- 1) Patients age less than 18 years
- 2) Patients suffering from neurological disorders or mental retardation are totally excluded from the survey.

3.3 Procedure

Research approach adopted in this study included collection of information, opinions from patients visiting Fortis Escorts Hospital, Amritsar through well-structured questionnaire. Subjects were chosen randomly from the hospital. Interaction was done with the patients. Questionnaire was duly filled without prompting and all feedback was assessed later on.

4. Results and Discussions

The present study was a survey type research, carried out on randomly selected 200 patients who visited Fortis Escorts Hospital, Amritsar for their treatment. Out of the total majority of the patients belonged to Amritsar district. There were almost half numbers of males 52.5% followed by females 47.5%.

Table 1: Gender

| Gender | Frequency |
|-----------|-----------|
| 1. Male | 105 |
| 2. Female | 95 |
| Total | 200 |

Only 25.5% had education till higher secondary followed by 23% till matric, 21% till graduation, 14% were illiterate, 9.5% were post-graduate, 3.5% till middle, 2.5% till matric and 1% did vocational courses.

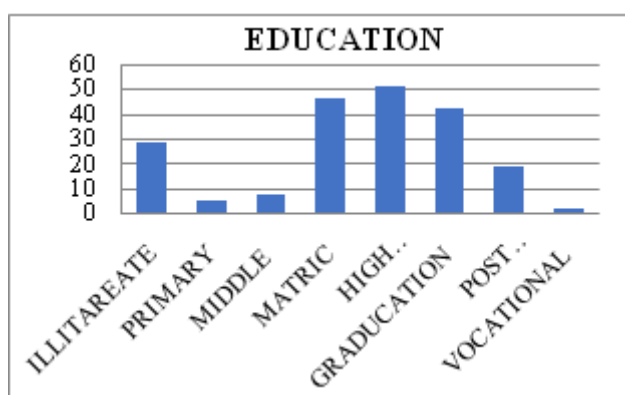


Figure 1: Education

36% of the subjects had length of stay of 2-4 days followed by 29% who had length of stay of 4-6 days, 22% had length of stay of 4-6 days and only 13% had stay of more than 6 days.

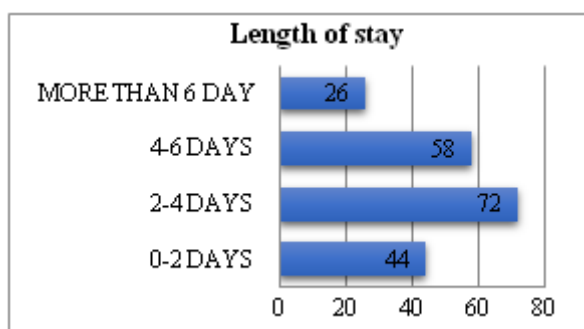


Figure 2: Length of Stay

Out of total 38.5% patients said that they don't know why procedure was delayed followed by 24.5% who said other reasons were there, 19% said due to nursing staff and other 18% said due to delayed in billing.

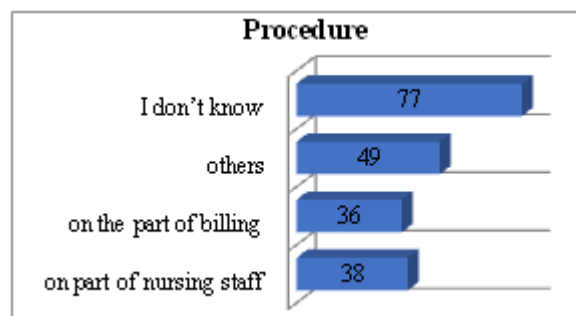


Figure 3: Procedure was Delayed

39.5% patients said the main reason due to which delay in discharge was that they had to wait for medicines, followed by 31.5% who said something else, 28% said they had to wait to see doctor and only 1% said they had to wait for an ambulance.

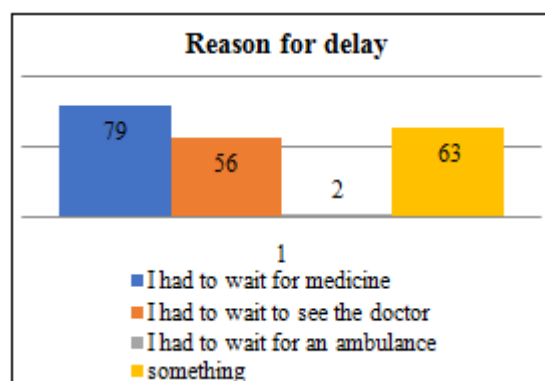


Figure 4: Reason for Delay

Majority 79% said they didn't made any complaint regarding their discharge timing from hospital followed by 21% who made complaint.

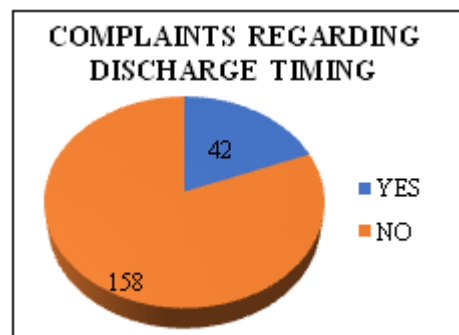


Figure 5: Complaints regarding discharge timing

Maximum 42% said they complained to staff involved and rest 31% said they either complained to reception staff or 19% to the senior staff.

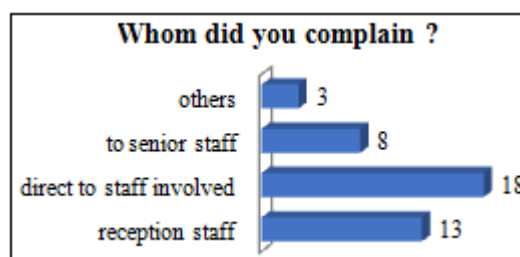


Figure 6: Whom did you complain?

Majority (93.5%) subjects said information either in printed or written form was given to them at the time of discharge followed by 6.5% who denied the same.

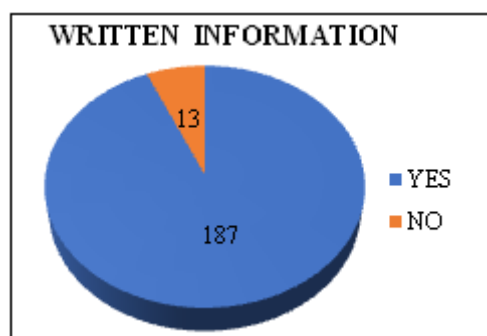


Figure 7: Information about Do's and Don'ts

5. Conclusion

The present study was a survey type research, carried out on randomly selected patients who visited Fortis Escorts Hospital, Amritsar for their treatment.

Out of the total majority of the patients belonged to Amritsar district. There were almost equal number of males and females. Majority of the respondents were married. Almost half of the respondents belonged to joint family while other half belonged to nuclear family. Most of the patients were literate and only few of them were illiterate. Average length of stay of the patients were between 2-4 days. Maximum number of subjects said during stay they were kept in IPD followed by few who were kept either in ICU or emergency. Maximum of the subjects were informed about what was happening to them regarding their discharge. Half of the respondents said they were definitely involved in decisions of their discharge from hospital followed by more than one fourth who were involved up to some extent and only few were there who was not involved at all.

Respondents said to notice about when they were going to discharge was given to them. Majority of the respondents said that their discharge from the hospital was delayed due to one or the other reason. Some of patients said that they don't know why procedure was delayed followed by some who said they know the reason of the delayed discharge. Patients said the main reason due to which delay in discharge was that they had to wait either for medicines or they had to wait to see doctor. Majority subjects said information either in printed or written form was given to them at the time of discharge. Majority of the respondents said staff explained the purpose of the medicines to them. Patients said staff told them about side effects of the medicine. Subjects said staff definitely told them how to take medication. According to respondents' overall discharge process was good.

6. Recommendations

- 1) There should be a provision of separate discharge templates in the existing software with alarming system on the main screen. It should provide information on discharge order time, bill ready time, bill clearance time and also physical exit time of patient from IPD. It serves

as a check and also brings about mutual accountability and transparency in the discharge process.

- 2) Follow up of cases at various stages of the discharge process. The shortcomings and possibility of delays can be predicted in advance and thereby interventions can be taken early.
- 3) When discharge time is crossed than average time period, it can be displayed on HIS (hospital information system) with discharge delay alert.
- 4) The discharge summary should be typed right from the day of admission and updated on a daily basis. On the day of discharge, only minor additional information should be added. The summary has to be checked and signed by the consultant during his morning visit to the patient on the day of discharge preferably within 10 am, so that patient can be discharged at appropriate time as per rules.
- 5) Doctors are always busy with their routine hectic schedules, so the implementation of medical transcription can aid in translating the discharge summary by transcriptionist which will help to reduce the unnecessary delay in discharge time.

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