



# A Study on Patient Perception towards Inpatients Discharge Procedure in Nathan Super Speciality Hospital at Salem

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## ABSTRACT

The major area that needs to be streamlined in hospital is discharge process of patients which is directly related to patients' satisfaction. The aim of the study is to find out the root cause for delay, highlight the areas that needs improvement and provide suggestions. The study was done in one of the prominent hospitals in Tamilnadu for a period of 3 months. A checklist was framed and time taken for each process was recorded and analysed both for self-payment and insurance patients using simple percentage analysis, simple average and quality tools. From this study, it is evident that high percentage of delay is due to vacating the room which consequently increases the waiting time of inpatients for bed allotment. Based on the findings proper training in communication skills for staff, adequate staffing and framing of policy for patients discharge are some of the recommendations given. The study concludes that delayed discharges is one of the prime factors and have an impact on ability to cut the waiting lists and deliver healthcare effectively and efficiently.

**Keywords:** Patient Satisfaction, Bed Allotment, Delayed Discharge

## I. INTRODUCTION OF THE STUDY

The discharge process is deemed to have started when the consultant formally approves discharge and ends with the patient leaving the clinical unit. The admission and discharge processes can act as bottlenecks in many of the hospitals and thus adversely affect the efficiency of the hospital (Davies & Macaulay). It is a very important indicator of quality of care and patient satisfaction. Delay in Discharge of the patient also increases the pressure on beds of the hospital Delay in discharge is bad for both hospitals and the patients. It increases cost to the hospitals and is depressing to the patients. Delayed discharge also increases the patient's exposure to hospital acquired infections. So, effective strategies must be in place to solve this issue. National Accreditation Board for Hospitals

and Health Care Organizations has set a standard of 180 minutes for the completion of the discharge process. Fortis hospital Gurgaon has set a bench mark of 90 minutes for the total time taken for the discharge.

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.

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

## INITIATIVES TO IMPROVE THE DISCHARGE PROCESS

Following the systems thinking study described above, three initiatives were proposed with the following focuses:

"HNA": Reducing the time taken to complete Health Needs Assessments (HNAs). The average time taken to complete HNAs at the start of the project was 12.7 days, whilst the hospital target was three days. This addressed the "keeping the process moving" theme.

"Sit Rep": Extending the daily Situation Report or Sit Rep of delays within the hospital by involving other practitioners and collating daily resource



availability. This initiative aligned with the “effective communication”.

“Front Door”: Developing an integrated model of working to establish early intervention and improved patient flow from front door to discharge, seven days a week, inspired by the “Proactivity”.

These initiatives and the specific interventions involved for each are outlined in the sections below. The results of the three initiatives are given together in the Results section below.

### STATEMENT OF THE PROBLEM

Patient discharges are delayed due to lack of communicated discharge plan/date, patient and family expectations, cost, and coordination and timing of health service delivery. This causes frustration and disruption for staff and patients and families.

### OBJECTIVES OF THE STUDY

- To study patient discharges according to various departments in your hospital
- The study Time taken for bill clean in your hospital
- To effects of health care community changes in your hospital
- To find service provide to the discharged patient after leave this hospital
- To study factors affecting waiting time in the discharge process in your hospital
- It reasons of patient might be holding the ALC Alternative Level of Care
- Alternate level of care institutions making them outside the scope of the hospital

### SCOPE OF THE STUDY

Discharge from the hospital has always been the topic of research and there has been continuous striving to reduce the time of discharge. If patients are dissatisfied, it has been observed that the major factor for their dissatisfaction is been delay in discharge process. It is the need of an hour in today’s competitive world to achieve cent per cent patient delight and to find the factors extending time in discharge process and try to rule out these factors.

### LIMITATIONS OF THE STUDY

- The study was the inherent risk of personal bias from the researcher because of their role as a hospital pharmacist.
- In an attempt to reduce this risk, all analysis was grounded in the data.
- Despite the range of hospitals involved in the study, a limited sample specific to the

➤ Study participants were not enough for random sampling.

➤ This study is based on patients management, secure access of all users into the health care delivery process.

## II. REVIEW OF LITERATURE

**Janita Vinaya Kumari, (2017)**<sup>1</sup>thinly 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.

**Silva et.al (2018)**<sup>2</sup> 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.

**Checkland (2018)**<sup>3</sup> to understand causes of delays to patient discharge. A systems approach to the problem was expected from the start of the research as indicated earlier. The Problem Structuring Methods of Strategic Options Development and Analysis (SODA) and the Strategic Choice Approach (SCA) were considered but rejected for this study, since from an early stage in the process, they would have required interactive workshops, usually with multiple participants at a time.

**(Nagaraju 2019)**<sup>4</sup> A fast discharge process can ensure early availability of patient beds, which in

<sup>1</sup>**Sima Ajami, (2017)**. A study on Time Management of Discharge and Billing Process in Tertiary Care Teaching Hospital” 52A, pp. 11533- 11535

<sup>2</sup>**Silva et.al (2018)** Factors influencing hospital high length of stay outliers. BMC Health Service 12:265.

<sup>3</sup>**Checkland (2018)** Systems Thinking, Systems Practice. Chichester: Wiley

<sup>4</sup>**(Nagaraju 2019)** Improvement of hospital discharge process by value stream mapping. Proceeding of 17th



turn, can reduce the waiting time of patient admissions or even reduce the incidence of patient rejection due to unavailability of beds.

**Batani (2020)**<sup>5</sup>, appropriate discharge processes enable the list of available beds for admission to be kept current and accurate, and in addition, we can obtain useful data by accurate registration of patients in the admission book ... and calculating therefrom the admission and discharge dates for each patient.

**(Rosenhead, 2020)**<sup>6</sup> These would have been difficult to organise given the time pressures that existed for the practitioners we hoped to involve in the study. Instead, one-to-one interviews were used as the primary means of capturing the many stakeholder perspectives that we felt were relevant to the problem situation. Two of the authors had experience of successfully applying Checkland's seven-stage process for SSM. We felt that it would be a practical and effective approach for understanding the problem and identifying possible interventions; it was therefore selected to form the basis for our study.

**Shepperd et al. (2021)**<sup>7</sup> Whilst there have been many studies previously investigating discharge planning, limited data exists that reports on the effectiveness of initiatives to improve the situation, and most previous studies report relatively modest gains. For example, reviews of the effectiveness of introducing individualised discharge plans have found that these reduce length of stay by an average of just one day

**(Porhasani 2021)**<sup>8</sup> Conversely, available beds are a hospital's most important resource and the length of stay in hospital is an important factor in its

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Annual Society for Health Systems conference. February held in Dallas, Texas, USA. University at Buffalo.

<sup>5</sup>**Batani (2020)** Medical records teaching. Esfahan, Iran, Esfahan Medical Sciences University Publisher.

<sup>6</sup>**(Rosenhead, 2020)** What's the problem? an introduction to problem structuring methods. Interfaces, 26, 117-131

<sup>7</sup>**Shepperd et al. (2021)**. Discharge planning from hospital to home. Cochrane Database of Systematic publisher, January 26, 2004. Issue 1, CD000313. DOI: 10.1002/146518 58.CD000313.

<sup>8</sup>**(Porhasani 2021)** A comparative study on open surgery patients stay average in private and training hospitals Medical Records Thesis, College of Management and Medical Information Sciences.

efficiency. The unnecessary occupation of hospital beds and rooms and consequent low hospital bed turnover rate represent a waste in health care resources, and result in heavy associated organisational costs

**(Derayeh 2022)**<sup>9</sup> It in most centres complications in the discharge process and unnecessary routines have caused discharge delay and patient dissatisfaction. Scattered information and nonintegrated database systems had resulted in increased works loads and dissatisfaction among internal and external hospital clients

### III. RESEARCH METHODOLOGY

According to industrial research institute in research methodology, research always tries to search the given question systematically in our own way and find out all the answers till conclusion. If research does not work systematically on problem, there would be less possibility to find out the final result. For finding or exploring research questions, a researcher faces lot of problems that can be effectively resolved with using correct research methodology.

#### RESEARCH DESIGN

To make the research systemized the researcher has to adopted certain method. The method adopted by the researcher for completing the project is called research methodology. Research is a process in which the researcher wishes to find out the end result for a given problem and thus the solution helps in future course action. The research has been defined as "A careful investigation or enquire especially through search for new facts in any branch of knowledge". To give more additional to the old research new ones are conducted.

#### SAMPLING TECHNIQUES

Disproportionate stratified random sampling techniques has been used in sampling due to the following reasons: It provides information about parts of the all the area of Salem.

#### SAMPLING SIZE

A sample size is guaranteed to its temperament of information assortment. Information assortment depends on the essential information is 120 respondents are taken as the example for this investigation.

#### DATA COLLECION

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<sup>9</sup>**(Derayeh 2022)** How can we apply methods and systems of analysis in patients discharge process in hospitals? Proceeding of Fourth Seminar of Medical Records. Abstracts from January 2003.



The following techniques were adopted for data collection.

**Primary data**

Primary data was collected through face to face interviews while filling up questionnaires. (130 respondents).

**Secondary data**

Relevant information was gathered from magazines, newspapers and project reports that formed the secondary data.

**STATISTICAL TOOLS:**

**Simple percentage**

In this project percentage analysis test was use. The percentage method is used to know the accurate percentage of the data we took. The following formula was used

$$\text{Percentage of respondents} = \frac{\text{No of respondents}}{\text{Total no of respondents}} \times 100$$

From the above formula, we can get percentage of the data given by the respondents.

**Chi-square analysis**

The Chi- square test is one of the simplest and most wickedly used non-parametric tests in statistical work. The quantity  $\chi^2$  describes the magnitude at the discrepancy between theory and observation.

Chi – square test

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

O = Observed Frequency  
E = Expected Frequency

In generated expected frequency for any cell can be calculated from the following equation.

$$E = \frac{RT * CT}{N}$$

**Correlation:**

Correlation is computed into what is known as the correlation coefficient, which ranges between -1 and +1. Perfect positive correlation (a correlation co-efficient of +1) implies that as one security moves, either up or down, the other security will move in lockstep, in the same direction. Alternatively, perfect negative correlation means that if one security moves in either direction the security that is perfectly negatively correlated will move in the opposite direction. If the correlation is 0, the movements of the securities are said to have no correlation; they are completely random.

$$r = \frac{\sum XY}{\sqrt{(\sum X^2) (\sum Y^2)}}$$

**Anova**

Appraisal of progress, or ANOVA, is a solid certified method that is utilized to show capability between at any rate two systems or parts through importance tests. It likewise shows us an approach to manage make various appraisals a few group induces. The Anova test is performed by

seeing two sorts of grouping, the variety between the model derives, comparatively as the combination inside the entirety of the models. Under alluded to equation watches out for one way Anova test encounters:

$$F = \frac{MST}{MSE}$$

**IV. SUGGESTIONS**

- 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 on-going activity



## V. CONCLUSION

Patient discharge is a complex process involving cooperation and coordination of all departments and staff in the hospital. Discharging patient in a timely manner is a challenging task. Through improvement in their processes, other hospitals have become successful in reducing the time taken for discharge process (Fortis Hospital, Gurgaon had reduced the time taken for discharge to 90 minutes). In this study, time taken for discharge process in Hospital was analysed. It was found that time taken for billing completion was contributing the most to the total time taken for the discharge process. With adequate staffing and patient counselling the time taken for billing completion can be reduced.. Thus improving the time taken for discharge not only improves patient satisfaction but also helps in effective bed management for the hospital.

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