Summer Training at
Fortis Hospital,
Ludhiana

Study on Delay in Patient Discharge Process in a Hospital

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Under the guidance of
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MBA Hospital and Health Management
2015-2017

The IIHMR University, Jaipur
2016

INSTITUTE OF HEALTH MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

CERTIFICATE

This is to certify that **Dr. Inderpreet Kaur** student of **MBA- Hospital and Health Management** from IIHMR University, Jaipur, has undergone summer training at **Fortis Hospital, Ludhiana** from **1st April 2016** to **31st May 2016.**

The candidate herself completed the project assigned to her during summer training. Her approach to the project was sincere and proactive. The summer training is in fulfillment of the course requirements.

We wish her all success in all her future endeavors.

Col. (Dr.) Ashok Kaushik
Dean, Academic and Student Affairs
The IIHMR University, Jaipur.

17/6/16

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02-June-16

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Dr. Inderpreet Kaur** has completed her training in the Department of **Medical Administration** , at Fortis Hospital, Ludhiana, from **01st April, 2016 to 31st May, 2016.**

She possesses a keen observation and conducts herself with confidence.

She was a very diligent worker who was punctual, focused and very conscientious during her Training.

We wish her success in her future endeavors and pursuit of her career goals.

For Fortis Hospital,

Authorized Signatory
Human Resources

ACKNOWLEDGMENT

I would like to extend sincere thanks to my institute of Health and Hospital Management Research (IHMR), Jaipur, all the faculties at IIHMR. The education of IIHMR deserves the foremost appreciation for making me capable of doing the work. I acknowledge the contribution of **Dr. S.D. Gupta**, The President, **Col.(Dr.) Ashok Kaushik**, Dean and my college mentor **Dr. Susmit Jain**, who encouraged me and helped me in completion of my project.

I respect and thank **Mr. Vivan Singh Gill, Facility Director, Fortis Hospital, Ludhiana** for giving me an opportunity to do the summer internship. I express my deep sense of gratitude to **Dr. Harpreet Brar (Head Administration) and Dr. Ankush Mehta (Medical Superintendent)** for their kind cooperation, support and encouragement.

The guidance and support received from **Dr. Harcharan Kaur (Medical Coordinator), Dr. Priyanka Sikri (FOS Head), Dr. Gaurav Bindal (Medical Coordinator) and Dr. Gurpreet Somal (Service coordinator), Sis Dimpy (CON)** whose support to this project was vital for the success of project. I am thankful for their perpetual support and help. I feel honourable working under their guidance and leadership. They provided all facilities and comfort and were always be willing to help, in spite of their extremely busy schedule.
I am grateful to all the HODs and entire management of Fortis Hospital, Ludhiana, for sharing their valuable information and sparing time for me. I am obliged for their cooperation and support during the period of my assignment.

I would like to remember all nursing staff and GDAs for their cooperation extended and sharing their opinions and providing information related to my assignment.

Regards

Dr. Inderpreet Kaur

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List of abbreviations

TAT- Turn Around Time

ECHS- Ex-Servicemen Contributory Health Scheme

TPA- Third Party Administrator

HR- Human Resource

CON- Chief of Nursing

PCS- Patient Care Services

PWD- Patient Welfare Department

FOS- Fortis Operating System

CSSD- Centre Sterile Supply Department

ENT- Ear Nose Throat

OT- Operation Theater

PHC- Primary Health Center

GDA- General Duty Assistant

I.P. pharmacy- In Patient pharmacy

HIS- Hospital Information System

F&B- Food & Beverages

EDOD- Expected Day of Discharge

UHID- Unique Health Identification

IPID- In Patient Identification

Executive summary

Background

Patient discharge process from hospital is a significant process and determines the working of in-patient department. Any delay in discharge process leads to delay in patient admission process, thus disturbing smooth in-patient flow of hospital. Overdue stay of patient in hospital increases the utilization of hospital resources. This also affects the patient satisfaction level during hospital stay.

Objective

To study the steps involved in discharge process with reference to time.
To identify the reasons leading to delay in discharge process.

Method

a prospective study was done from April 4th, 2016 to May 21st, 2016 in in-patient department at Fortis hospital, Ludhiana. A descriptive study was done on discharge process of 148 patients. The patients to be discharged were studied, and the discharge activity was followed from the time of intimation to the time of discharge.

Results

The sample consist of maximum number of patients of bill clearance by individual cash payment mode, followed by ECHS patients. The percentage of patient discharge before 11:00 am in planned discharges is 51%. The cause of delay in discharge process was mainly due to delay is discharge summary and billing, which was 32% and 24% respectively. There was high percentage of delay in patient discharge GDA or nurses(12%) and also due to delay in bill clearance by attendents(15%). Average TAT for those cases in which delay in patient discharge occurred in individual cash payment patients is 30 minutes more than required time, in case of ECHS patients it is 1 hour 23 minutes, and in case of TAP payment it is 1 hour 50 minutes above the required time.

Conclusion

From study, it is concluded that there were few gaps analyzed in discharge process. The patients to be discharge consisted of maximum number of cash payment patients, followed by ECHS and then TPA payment mode. More than half of the patients were discharged before 11:00am. Major reason for delay in discharge process was due to delay in discharge summary and billing. The average turn around time for discharge of patients remained slightly higher than the required/ideal time.

Keywords

Discharge process, discharge before 11, turn around time for discharge process.

FORTIS HOSPITAL

LUDHIANA

Company profile

Fortis Hospital, Ludhiana

Fortis Hospital, Ludhiana, a super specialty tertiary healthcare hospital commenced its operations in November 2013 and has emerged as one of the finest healthcare service providers in the area. The hospital fulfills the dream of late Dr.Parvinder Singh, building a world-class infrastructure and finest family of medical professionals. The hospital boasts of a well-equipped range of super specialty departments including breast clinic, spine clinic, mother & child care, sports clinic, pain clinic, cardiac sciences, and gastro surgery unit. As hospital receives a large number of patients requiring treatment of breast cancer, exclusive emphasis has been laid on counseling patients to shun their fear and anxiety regarding treatments available.

Officially inaugurated on January 16, 2014, and has the bed capacity of 256 beds. It has 115 functional beds with bed occupancy rate of ranging between 80%-95%. Fortis Hospital Ludhiana is a preferred choice for medical treatment of not only the city but from patients living as far as in J&K, Rajasthan, Haryana, Himachal Pradesh, and Chandigarh.

Vision

To be a globally respected healthcare organization known for Clinical Excellence and Distinctive Patient Care.

Mission

To create a world-class integrated health care delivery system in India, entailing the finest medical skills combined with compassionate patient care.

Values

Patient Centricity

Commit to 'best outcomes and experience' for our patients.

Treat patients and their caregivers with compassion, care and understanding.

Our patients' needs will come first.

Integrity

Be principled, open and honest.

Model and live our 'Values'.

Demonstrate moral courage to speak up and do the right things.

Teamwork

Proactively support each other and operate as one team.

Respect and value people at all levels with different opinions, experiences and backgrounds.

Put organization needs' before department and self interest.

Ownership

Be responsible and take pride in our actions.

Take initiative and go beyond the call of duty.

Deliver commitment and agreement made.

Innovation

Continuously improve and innovate to exceed expectations.

Adopt a 'can-do' attitude.

Challenge ourselves to do things differently.

The brand

Brand Fortis was established in 1996, by Founder Chairman Late Dr. Parvinder Singh, who versioned *'to create a world class integrated healthcare delivery system in India, entailing the finest medical skills combined with compassionate patient care.'*

Fortis Healthcare is India's 'fastest' growing healthcare group, with its first hospital in Mohali, which opened in 2001. Fortis now have over 55 facilities, including the world famous Escorts Heart Institute and the Wockhardt facilities. Fortis truly has India covered - the frontier city of Amritsar, to Ludhiana, Mohali, the National Capital region, Mumbai, Chennai, Bangalore, Mysore, Kolkata and many more. Fortis occupies a place of pride in India's healthcare delivery system.

The Logo

The Fortis logo is a synthesis of human values of trust, ethics and service and quality healthcare. The integration of green hands with red dot represents Fortis' responsive approach to healthcare. The green color is for health, wellbeing, compassion, nurturing and generosity and the red dot gives an immediate association to Indian roots, and it is also represents energy, spirituality, courage and symbol of good luck.

Address and contact

Fortis Hospital, Ludhiana is 6kms away from Samrala Chowk, on Chandigarh road. Contact: +91 161 5222 333, *contactus.ludhiana@fortishealthcare.com*

Management Team

Board of Directors

Executive Directors

Mr. Malvinder Mohan Singh, Executive Chairman

Mr. Shivinder Mohan Singh, Executive Vice Chairman

Chief Operating Officer (North & East)

Mr. Ashish Bhatia

Group Chief Executive Officer

Mr. Bhavdeep Singh

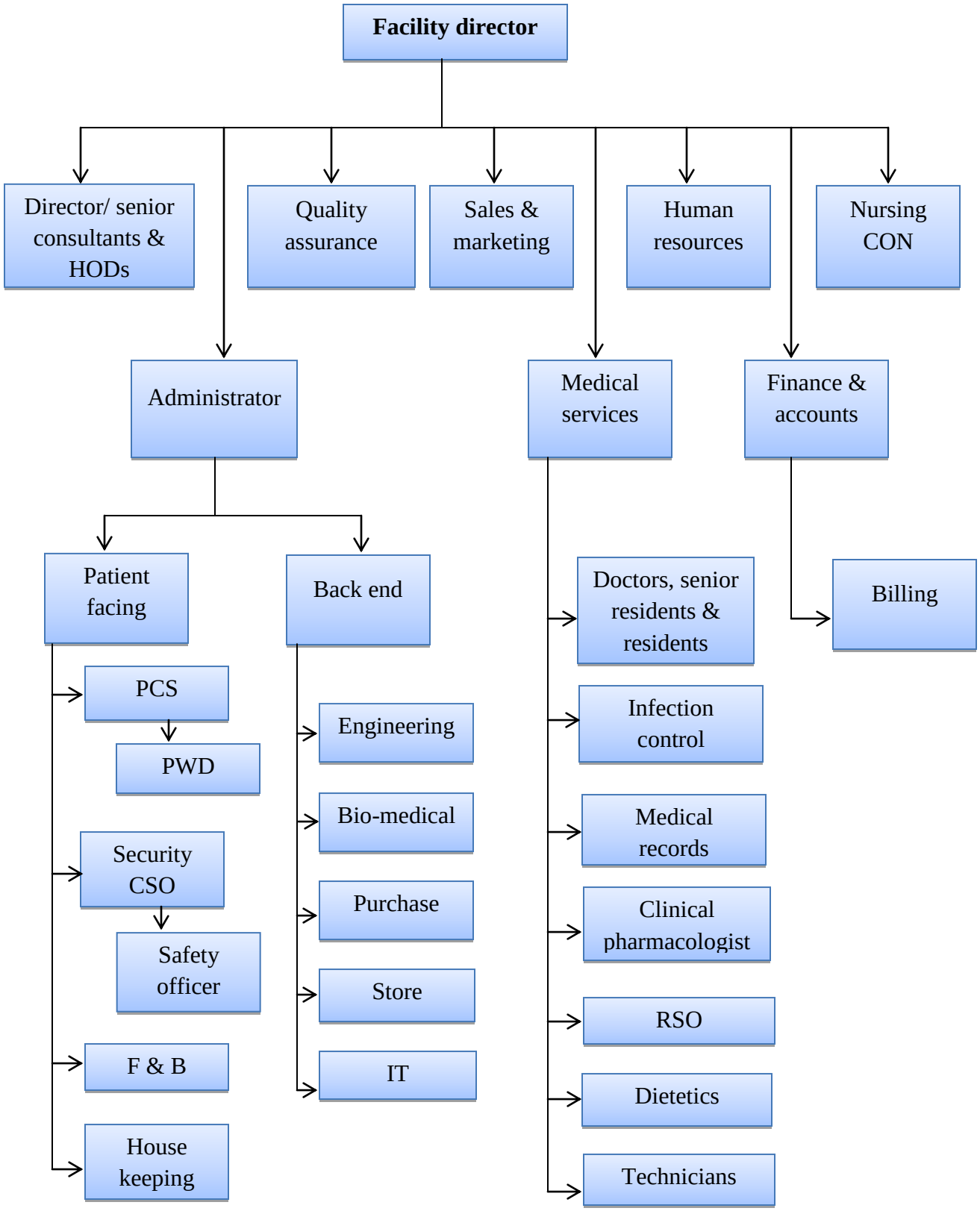
Group Chief Financial Officer

Mr. Gagandeep Singh Bedi

Company Secretary

Mr. Rahul Ranjan

Organogram:


Facility director
Director/ senior consultants & HODs
Quality assurance
Sales & marketing
Human resources
Nursing CON
Administrator
Medical services
Finance & accounts
Patient facing
Back end
Doctors, senior residents & residents
Billing
PCS
PWD
Engineering
Bio-medical
Infection control
Medical records
Security CSO
Safety officer
Purchase
Clinical pharmacologist
Store
RSO
F & B
IT
Dietetics
House keeping
Technicians

Committees

- Cardio pulmonary resuscitation analysis committee or code blue committee
- Safety committee (including disaster management, laboratory safety and radiation safety committee)
- Quality and patient safety committee (including clinical audit committee)
- Infection control committee
- Mortality and morbidity committee
- Ethics committee
- Pharmacy and therapeutics committee
- Blood transfusion committee
- Human resource committee
- Operation theater committee
- Brain death committee
- Transplant committee
- Medical record committee
- Internal complaint committee
- Sentinel event committee
- Credential & privileging committee
- Validation meeting committee

Building:

The hospital is constructed in a plot size of 153199.3 square feet and the covered area of the building is 335695 square feet. In the building there is 1 basement, ground and 4 floors. The basement has non-clinical departments like laundry, finance, HR, CSSD, Mortuary, Store and purchase etc. Hospital has two parking area, front parking is paid parking for patients which covers the area of 6199.2 square feet. The rare parking is for staff members and covers the area of 14967.5 square feet. There are 5 lifts in the hospital, each with the capacity of 18 people. There are 2 set of staircase and 1 ramp of area 6099 square feet.

Specialties

- Cardio-thoracic-vascular surgery
- Medical oncology
- Minimal access surgery
- Neonatology
- Nephrology
- Neurosurgery
- Ophthalmology
- Orthopedics & joint replacement
- Pediatrics
- Physiotherapy
- Psychiatry
- Pulmonology
- Radiology & imaging
- Transfusion medicine
- Urology
- Vascular surgery
- Endocrinology
- Invasive cardiology
- Non-invasive cardiology
- Anesthesiology
- Cosmetic and plastic surgery
- Critical care
- Dermatology
- Clinical nutrition
- Dentistry
- Emergency medicine
- ENT
- Gastroenterology
- General surgery
- Gynecology & obstetrics
- Internal medicine
- Neurology

Non-medical facilities

- Garlic &Green coffee shop
- ATM
- 24 hour chemist shop
- Patient welfare department (PWD)
- Prayer room
- Auditorium

Medical facilities

- Cardiac-cath lab
- Multi-speciality OTs
- Cardiac OTs
- Critical care unit
- Specialized emergency care
- Dialysis
- Day care oncology
- Radiology
- Endoscopy
- Urology lab
- Pulmonary lab
- Physiotherapy
- Blood bank
- Sleep lab
- Dietetics
- Lab machine
- Preventive health checkup (PHC)
- Sample collection

Accrediation

Study on delay in patient discharge process in a hospital

Introduction:

Discharge from the hospital is the process by which the patient leaves the hospital and either returns home or is moved to another facility such as one for rehabilitation/therapy or to a nursing home. Discharge involves the medical instructions that will aid the patient to fully recover.

Discharge of the patient from hospital is a complex, multi-stage process requiring integrated communication among the inpatient care team. It involves integration of different services such as visiting doctors, nurses, physiotherapist, dietician, GDAs, I.P. pharmacy and blood bank services. Discharge planning is a service that considers the patient's needs after the hospital stay. Planning of discharge process starts right at the time of admission, and continues till the patient leaves the hospital. As the process is a lengthy one, and requires cooperation from many departments, it is quite complicated and requires good communication between all the departments to have a smooth flow of the discharge patients.

As discharge is the wind-up step in the hospital experience, it 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. Slow or unpredictable discharge leads to delay in patient movement from the hospital; this in turn leads to delayed admission of the patient, thus disturbing the whole process.

Research question

Is the current patient discharge process satisfactory, and to find out the gaps if not satisfactory? Does the discharge process need to be supervised solely?

Problem statement

Why do patients to be discharged get delayed, even when the whole process is planned and prior information about discharge patients given to patient’s relatives and departments concerned?

Problem justification

Delay in the discharge process leads to patient dissatisfaction on the last day, even when the whole treatment procedure till date have been satisfactory. Delay in discharge process further delay the admission process of new patients, thus displeasing the patient on first day of admission. This over all disturbs the inpatient movement. Delay in patient discharge also increases the operational cost to the hospital by utilizing the hospital resources.

Objectives

1. To study the steps involved in discharge process with reference to time.
2. To identify the reasons leading to delay in discharge process.

Limitations of study

The total subjects of this study are being selected through convenient sampling, thus the result outcome of the study cannot be generalized to the entire population. The data was not fully available as required for study due inability of tracking time regarding TPA and ECHS patients because of different policies.

Literature review

The discharge process is a lengthy procedure which starts even before the patient in admitted in hospital in case of planned admissions, and starts at the time of admission in unplanned admissions. As the average length of stay of patient is reducing, the time for preparing the discharge of patient is also decreasing. According to Department of health, England (2001), delayed hospital discharges have become a significant issue.

Glasby et al, (2004) in a report on patient discharge says that 21 studies show delay in discharge can vary from 8%-66%, and the cause is quiet diverse ranging from internal hospital delays to delays by patient relatives. A study by Roberts (1975) showed that patients do not always receive the services they require at the time of discharge. Skeet's (1979) study presented evidence of unmet needs and ignorance towards discharge patients. Waters (1987) did a study on discharge planning of geriatric is suggested that discharge planning is not seen as a priority by ward nurses and doctors

Armitage (1981) mentions in his article that discharge of patients is not a single process, but a lengthy process consisting of negotiation involving nurse, doctors, paramedical staff, patients and their relatives. Patient may want to leave earlier than the doctor's say leading to unplanned discharge, or may want to stay for more time leading to cancellation of the plan discharge. Discharge process is comprehensive in terms of time because it involves a number of people who come together informally at different time of discharge. Patients who stay for a longer period in hospital gets aware of their surroundings and may play an important role in discharge process.

Ali Pirani (2010) discusses that combination of individual factors like age etc., medical factors such as presence of multiple pathology, and organizational factors such as lack of alternative forms of care facilities influences discharge process. Also, lack of nurses' participation contributes toward the delaying of discharge.

Clinical summaries prepared during discharge play a vital role in discharge process. Any error or delay in discharge summery preparation leads to delay in discharge. Sarzynski et al (2016) assessed clinical summaries in three relevant ways i.e. content of summary, organization of summary, and its readability, understandability & action ability. The summary should contain 14 unique messages, including non-medical instructions. Improvement in discharge summary improves the post-discharge care. Leqault el at (2012) did a study on preparation of discharge summaries by first year internal medicine residents and found that medication details were frequently omitted or inaccurate, and that family physicians identified lack of clarity about follow-up plans, further investigations and visits to consultants.

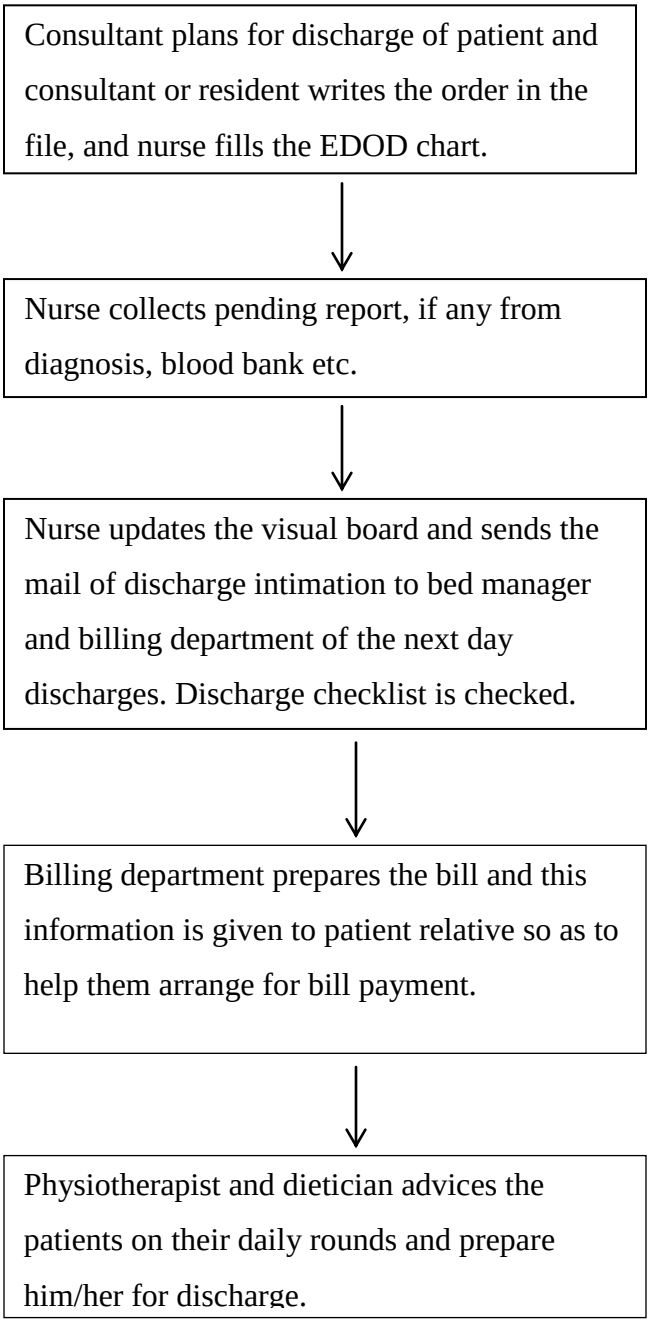
Udayai & Kumar (2012) studied various activities involved in discharge process. They found out those activities that hindered the actual process and called them 'time traps'. These time traps when removed from the process reduced the waste and increased the speed of process, thus, gave positive results.

Maloney et al (2007) did a study on improving discharge process and hospital communication practices. They devised a patient tracker system, a software which improved

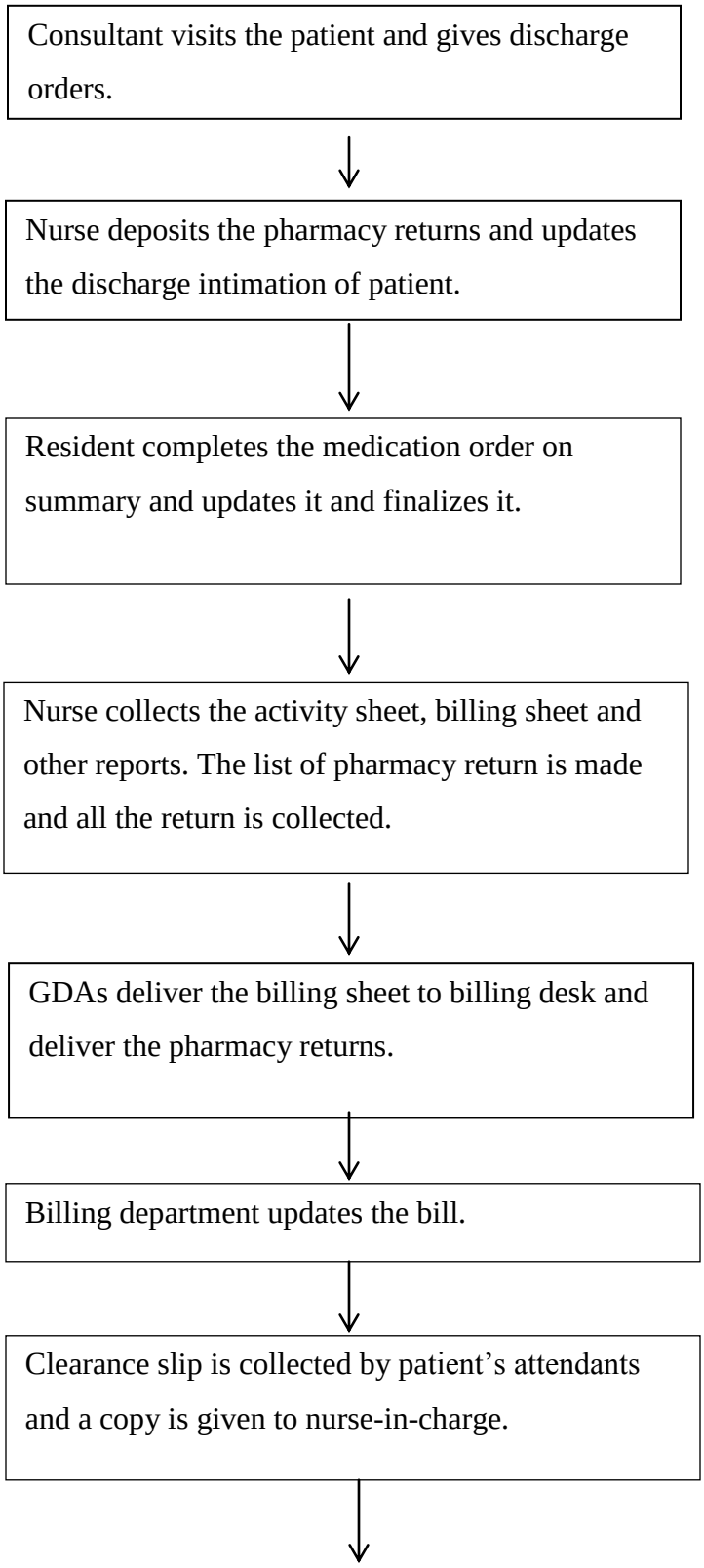
the communication between different departments and improved the process from admission to discharge of patient.

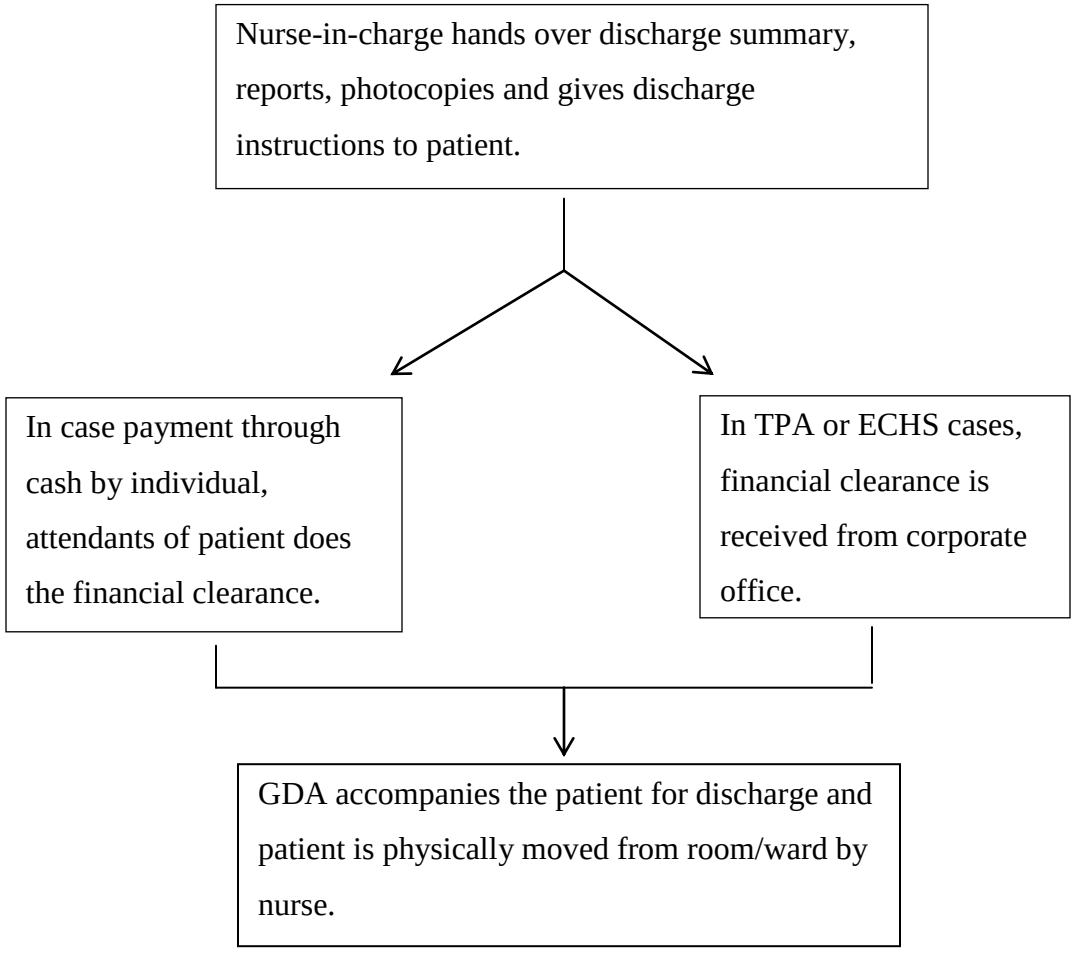
Steps involved in patient discharge

Day before discharge:



On day of discharge:





Steps of discharge process on the day of discharge:

Step 1: Patient discharge confirmed by doctor.

Step 2: Pharmacy return are indented into the system by nurse and pharmacy returns sent to I.P. pharmacy by GDA.

Step 3: Patient discharge intimation is updated on HIS.

Step 4: Billing activity sheet sent to billing counter via GDA.

Step 5: Billing department sends the mail to I.P. pharmacy and blood bank to get the clearance for patient to be discharged.

Step 6: A rough copy of discharge summary made by resident doctors is checked by the consultant and alterations are made by them, if required.

Step 7: The discharge summary once finalized is printed on Fortis letter head and signed by the respective consultant.

Step 8: Billing department receives the clearance for I.P. pharmacy and blood bank and completes the billing procedure.

Step 9: Bill update received on the system and patient or his attendants asked to get finance clearance by nurse in-charge.

Step 10: Patient is counseled by physiotherapist and dietician before discharge.

Step 11: Nurse and GDA gets the patient ready for discharge.

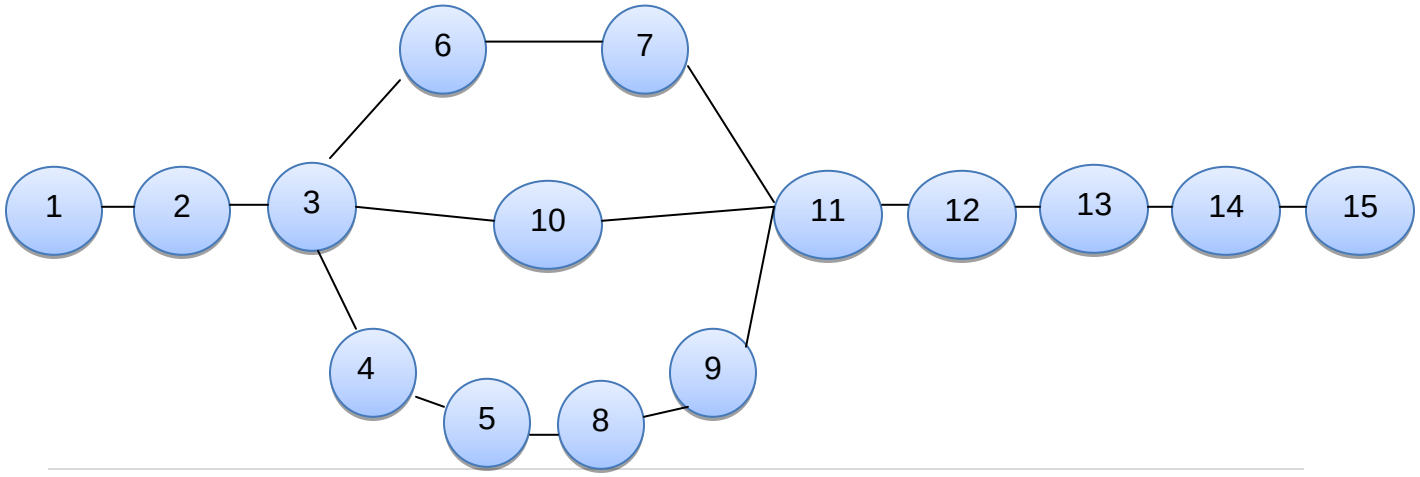
Step 12: Finance clearance slip received by nurse.

Step 13: Discharge summary and all the documents handed over to patient and all the discharge instructions given by nurse.

Step 14: Patient discharged from the ward/room on wheel chair accompanied by GDA.

Step 15: Beddings of the old patient changed and all is cleaned. Bed is ready for new patient.

Pert analysis:



EDOD chart

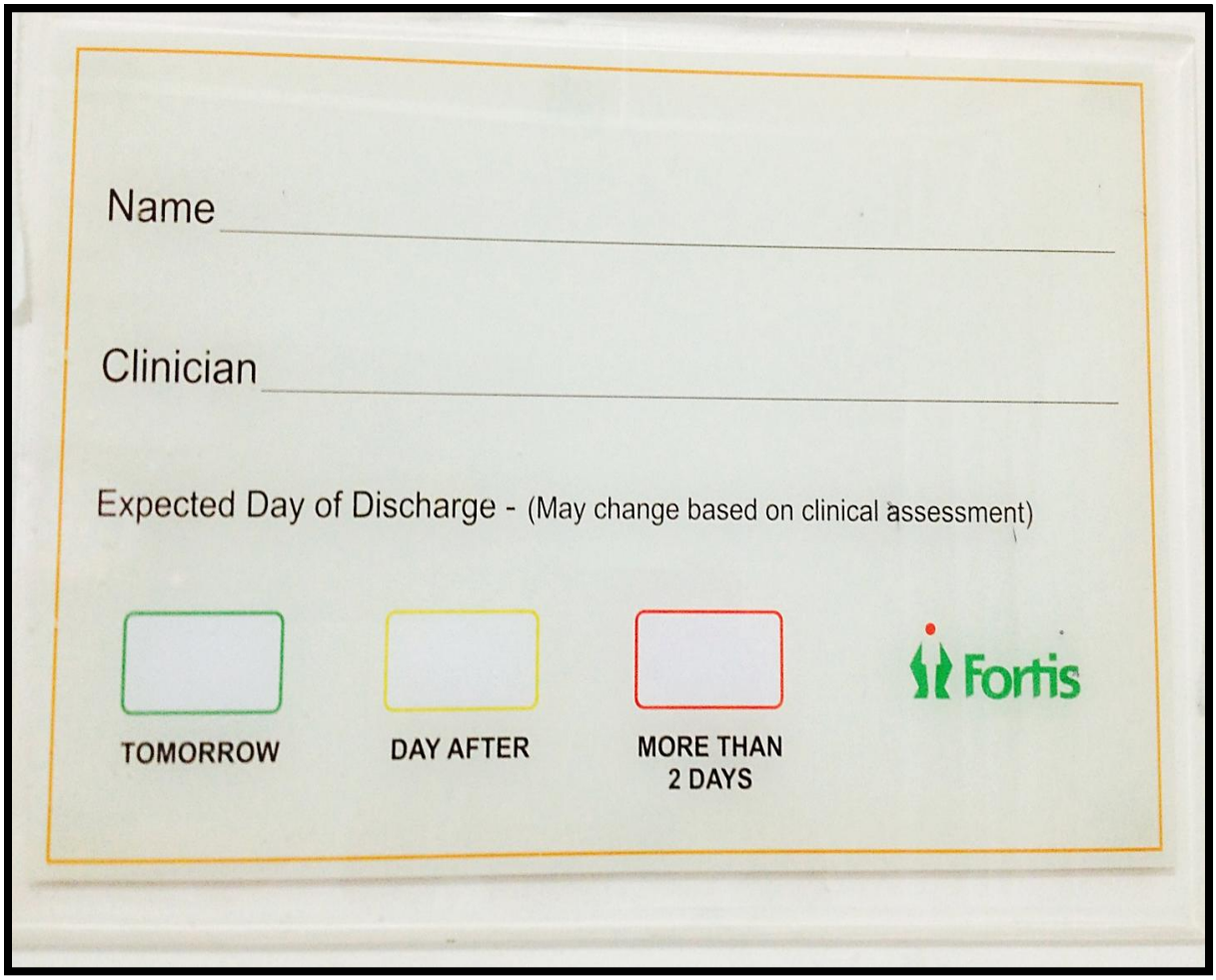
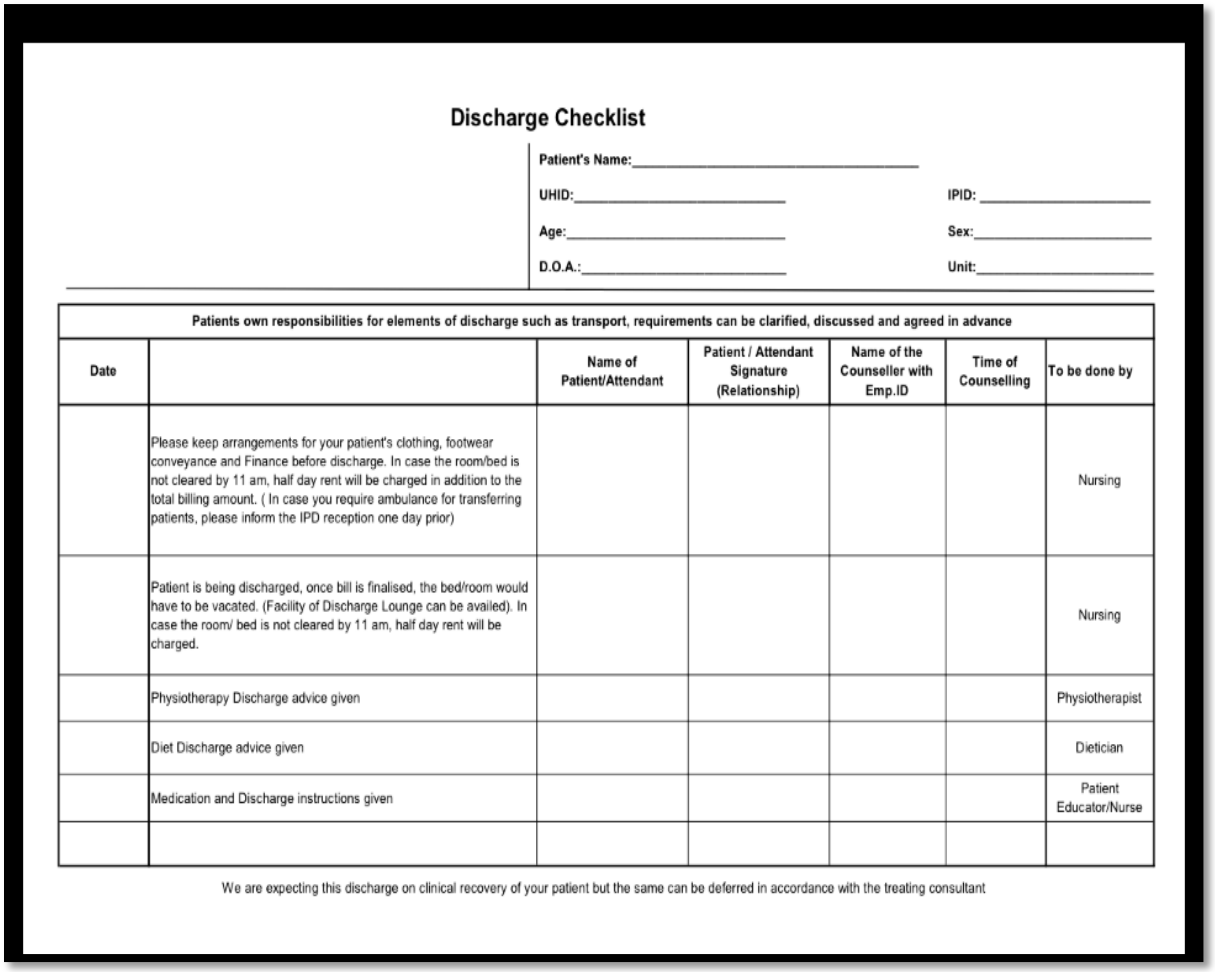


Figure 1-show representation of EDOD chart

EDOD (expected day of discharge) chart- As the name suggests, EDOD chart gives the information about the anticipated discharge day of the patient. EDOD chart is placed on the wall near the patient. It consists of the name of the patient, name of the clinician/doctor and expected day of discharge column. All these are to be filled in by nurse after consulting from the doctor. This chart is very helpful in planning the discharge process as it prior gives an idea about the discharge time, thus helping the hospital staff and the relatives/ attendants of the patient.

Discharge checklist



Discharge Checklist

Patient's Name:_____

UHID:_____ IPID:_____

Age:_____ Sex:_____

D.O.A.:_____ Unit:_____

Patients own responsibilities for elements of discharge such as transport, requirements can be clarified, discussed and agreed in advance						
Date		Name of Patient/Attendant	Patient / Attendant Signature (Relationship)	Name of the Counseller with Emp.ID	Time of Counselling	To be done by
	Please keep arrangements for your patient's clothing, footwear conveyance and Finance before discharge. In case the room/bed is not cleared by 11 am, half day rent will be charged in addition to the total billing amount. (In case you require ambulance for transferring patients, please inform the IPD reception one day prior)					Nursing
	Patient is being discharged, once bill is finalised, the bed/room would have to be vacated. (Facility of Discharge Lounge can be availed). In case the room/ bed is not cleared by 11 am, half day rent will be charged.					Nursing
	Physiotherapy Discharge advice given					Physiotherapist
	Diet Discharge advice given					Dietician
	Medication and Discharge instructions given					Patient Educator/Nurse

We are expecting this discharge on clinical recovery of your patient but the same can be deferred in accordance with the treating consultant

Figure 2- show representation of discharge checklist

Discharge checklist is prepared one day prior to discharge of the patients. The checklist consists of information that is to be educated to patient and patient's attendants a day before discharge. This helps the attendants to arrange all necessities for discharge in advance and prevents the last day panic by attendants. It consists of the tasks that are done by nurse, physiotherapist and dietitian before the patient is discharge. Features of discharge checklist are:

1. Name, age, sex, UHID, IPID, DOA, unit are to be filled in by nurse.
2. Instructions for attendants of the patient to be discharged to keep the arrangements for patient's clothing, footwear, conveyance and finance before 11:00am. Warning for

application of half day rent in case the billing delayed after 11:00am.

3. Instruction for moving the patient to discharge lounge after 11:00am, once the financial clearance is received.

4. Physiotherapy discharge advice explained to patient and attendant.

5. Diet discharge advice explained to patient and attendant.

6. Medication and other discharge instruction given by nurse.

For each counseling done, name of the patient/ attendant who is counseled, their signature, name of the counselor and date & time of counseling is noted down in the checklist.

Elements of discharge process

- Discharge planning: It is an individualized discharge plan for the patient before he leaves the hospital. It is to ensure that the patient is discharged at an appropriate time and gets adequate post discharge services, like patient may require post discharge services, home care services or transfer to some alternative health facility.
- Medication reconciliation: It includes the review of list of medicines that are to be taken after discharge by the patient. This helps the patient to identify which medicines are to be taken after discharge, how to take them and what is the use of those medicines.
- Discharge summary: It includes the summary of whole treatment provided in the hospital. It is the primary mode of communication between the hospital and after discharge care providers, and so is a very curtail paper work. It contains the admission date, treatment done, outcomes of the treatment, discharge date, medication to be taken, follow up care, and plan for any additional service like nursing home/rehabilitation center, if any.
- Patient instructions: At the time of discharge, the patient is provided with the document that includes appropriate instructions and patient education material and all that is explained to patient.
- Discharge checklist: It includes the checklist of the elements that are required at the time of discharge. It acts as an effective mechanism for ensuring a successful discharge of patient from hospital. This checklist starts day before discharge in case of planned patients.

Types of discharge of patients

1. Based on type of discharge:

- Planned discharge: The date of discharge is decided from prior, and all the people associated with discharge process are informed previously about it.
- Unplanned discharge: Unplanned discharges are instant discharges; the date of discharge is not decided before hand.
- Discharge against medical advice: The patient is not fit enough to be discharged, but he wants to leave the hospital because of his own personal reason. Discharge summary is made and consent is signed by the patient/ relatives and hospital permits the patient discharge.
- Leave against medical advice: The patient is not fit for discharge, but leaves the hospital without formally informing the medical staff.

2. Based on payment mode:

- Individual cash payment: The patients who does their financial clearance in the form of cash. Their payment is done by self/relative.
- Ex-servicemen contributory health scheme (ECHS): Ex-servicemen pensioners and their dependents are entitled for treatment not only in service hospital, but also in those private hospitals which are specifically empanelled with ECHS. The patient is referred to hospital from a service hospital or poly-clinic and treatment for ECHS patients is done by the hospital. The financial clearance is done later on by ECHS Department, Government of India.
- Third party administrator (TPA): The insurance patients who have cashless treatment or hospitalization based upon their health policy and the benefits are included in it. The billing department of hospital settles the bill of the patient with his /her insurance company during the time of the discharge.

Turn Around Time (TAT) for discharge process

It is the total time taken for the discharge process i.e. from the first step which starts with doctor's intimation to discharge the patient to last step which is the physical movement of the patient from the hospital and bed cleaned

This could be different for different types of patients:

Patient type based on payment mode	TAT for discharge process
Cash	90 minutes or 1 ½ hour
ECHS	120 minutes or 2 hours
TPA	240 minutes or 4 hours

Table 1- Represents TAT (turn around time)

The target time for discharge of patients in morning is 11:00 AM i.e. the discharge process should be completed before 11am. This helps in preventing delay in admission of new patients and enables smooth flow of in-patients.

Methodology

Study design: Descriptive study

Study time: April 4th, 2016 to May 21st, 2016

Sample size: 148

Sampling technique: Convenience sampling

Department: In-patient department

Place of study: Fortis hospital, Ludhiana

A prospective study was conducted in the general ward, double room and single room. The design was descriptive, were the whole discharge was observed without any interference and data collected was analyzed accordingly.

The data was collected from 148 patients hospitalized in Fortis hospital, Ludhiana. Sample consisted of both planned and unplanned discharges. The patients to be discharged were studied, and the discharge activity was followed from the time of intimation to the time of discharge.

The study sample consisting of data collected from April 4th, 2016 to May 12th ,2016 is the initial sample. On May 12th,2016 a discharge nurse was appointed who was exclusively suppose to look after the discharge process in wards and rooms. The data collected from May 13th, 2016 to May 21st ,2016 may have some influenced of the supervision of discharge nurse.

Sample size

Sample size based on bill clearance or payment mode consist of maximum number of individual cash patients, who cleared their bill through cash payment. It contributed 53%of total sample size and 78 in number.

Cashless payment mode consisting of ECHS and TPA finance clearance contribute together 47% of the sample size, with 42% ECHS and 5%TPA finance clearance patients.

	Sample size based in bill clearance mode	Percentage of sample size
Cash	78	53%
ECHS	61	42%
TPA	8	5%

Table 2- represents sample size based on bill clearance mode

Surveillance tool

Discharge clearance date-time report.

S.no	Patient no.	DATE	Payment mode	Time of intimation	Time taken for bill formation	Time taken to clear the bill	Time taken for patient to get ready	Patient discharge time	TAT
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

DELAY DUE TO?

Patients discharged on time	Billing	Summary	Pharmacy consignment	Consultant	Bill clearance	Nurse /GDA	Any other reason

Table 3- Represents surveillance tool

Data analysis

Data analysis was done by using Microsoft Excel 2010.

The following table shows the data for planned and unplanned discharges in the sample.

	No. of patients
Planned discharges	93
Unplanned discharges	55

Table 4- represents planned and unplanned patients

The following table shows the number of discharges before 11:00am, discharges from 11:00am to 12:00pm and discharges after 12:00pm in the sample.

Discharge time	Total no. of discharges	Before 11	11 to 12	After 12
No. of patients discharged	148	76	20	52

Table 5- represents discharge based on time.

Average TAT for patients who does their clearance by cash payment, ECHS and TPA clearance is given below in table.

		Average TAT
	Ideal TAT (in hours)	Average sample TAT in case of patients' discharge delayed (in hours)
Cash	1:30	2:00
ECHS	2:00	3:23
TPA	4:00	5:50

Table 6-represents average TAT

The following table shows the number of patients discharged on time, and the reasons for delay in discharge of the patients whose discharge process was late.

	Sample
Sample size	148
Patient discharged on time	86
Billing delayed	27
Discharge summary delayed	35
Pharmacy consignment delayed	6
Delay by consultant	6
Delay in bill clearance by patient/attendant	17
Delay by nurse/GDA	13
Delay due to any other reason	7

Note: There can be more than one reason for delay for discharge of a patient.

Table 7-represents reasons for delay in patient discharge

Results

The sample consisted of 93 planned discharges which formed 63% of the total data and 55 unplanned discharges which is 37% of total data. Thus, the compliance of discharge patients for the sample is 63%.

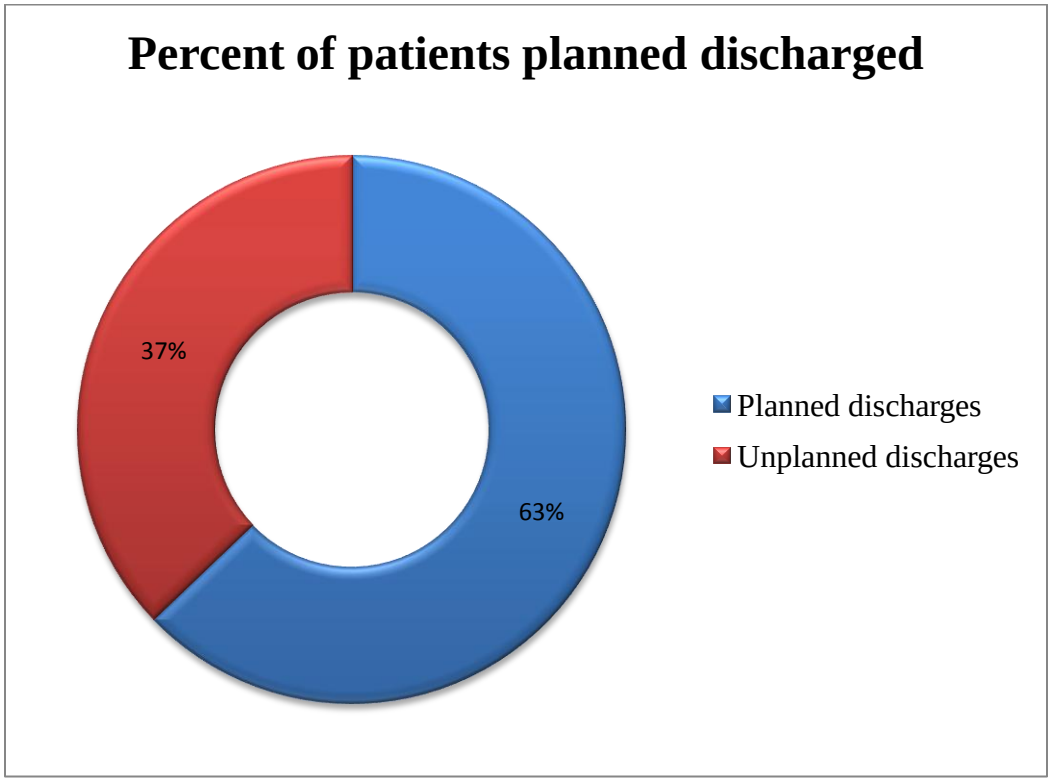


Figure 3- Graphical representation of planned and unplanned discharges

The sample consists of maximum number of patients of bill clearance by individual cash payment mode, followed by ECHS patients. The least number of patients in sample were those who had health insurance and the clearance to be done via TPA.

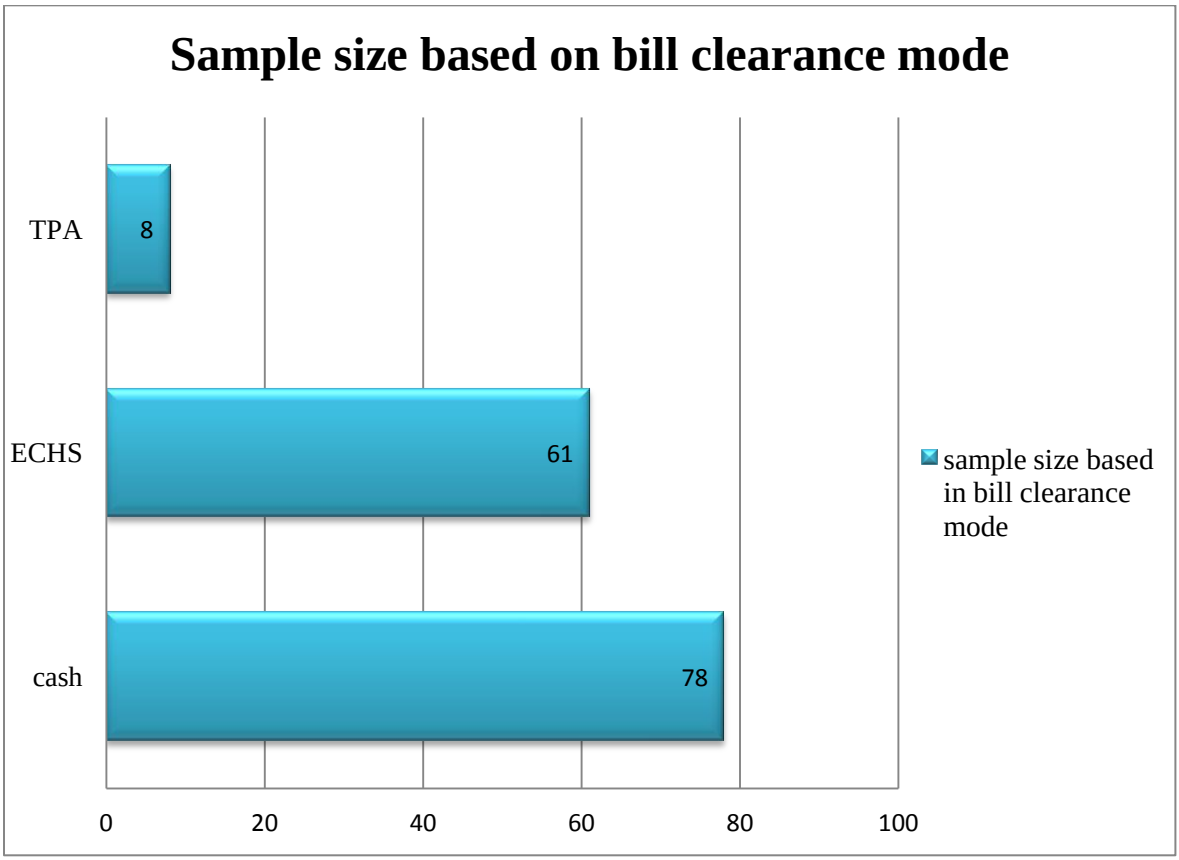


Figure 4- Graphical representation of sample size based on bill clearance mode

The column chart shows the percentage of patient discharge before 11:00 am is 51%% of total sample size. The patient discharge from 11:00am to 12:00pm is 14%. The total patients discharged before 12:00 pm is 65% of total sample size. Patient discharge after 12:00pm is 35%.

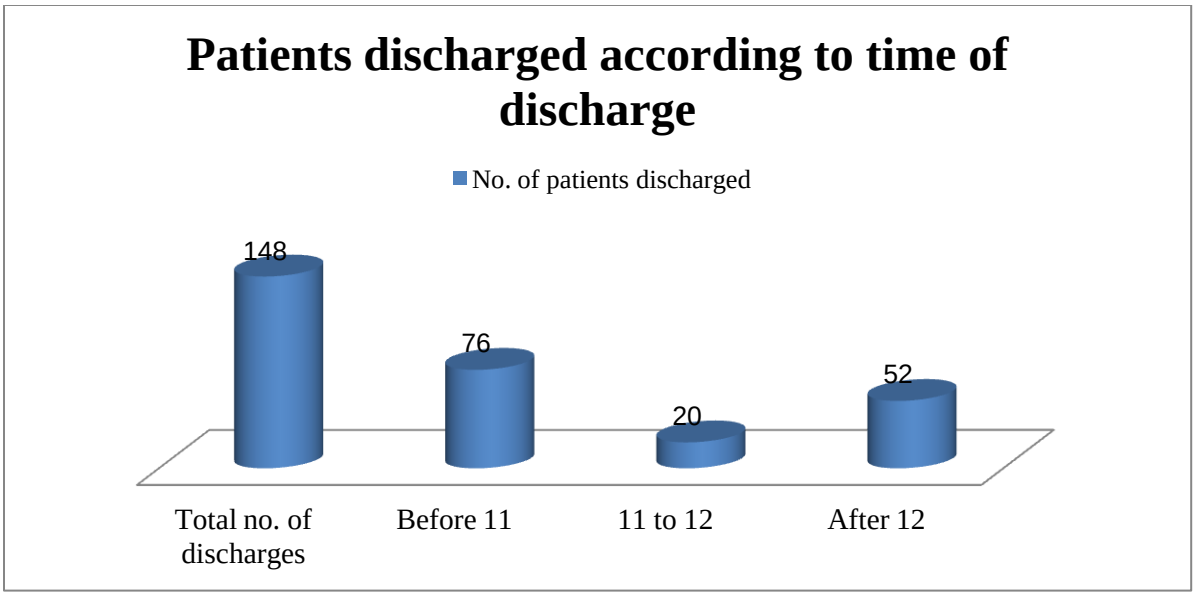


Figure 5- Graphical representation of patient discharge according to time

Average turn around time (TAT) of discharge process, as seen in the graph is above the ideal/ required time. %). Average TAT for those cases in which delay in patient discharge occurred in individual cash payment patients is 30 minutes more than required time, in case of ECHS patients it is 1 hour 23 minutes, and in case of TAP payment it is 1 hour 50 minutes above the required time.

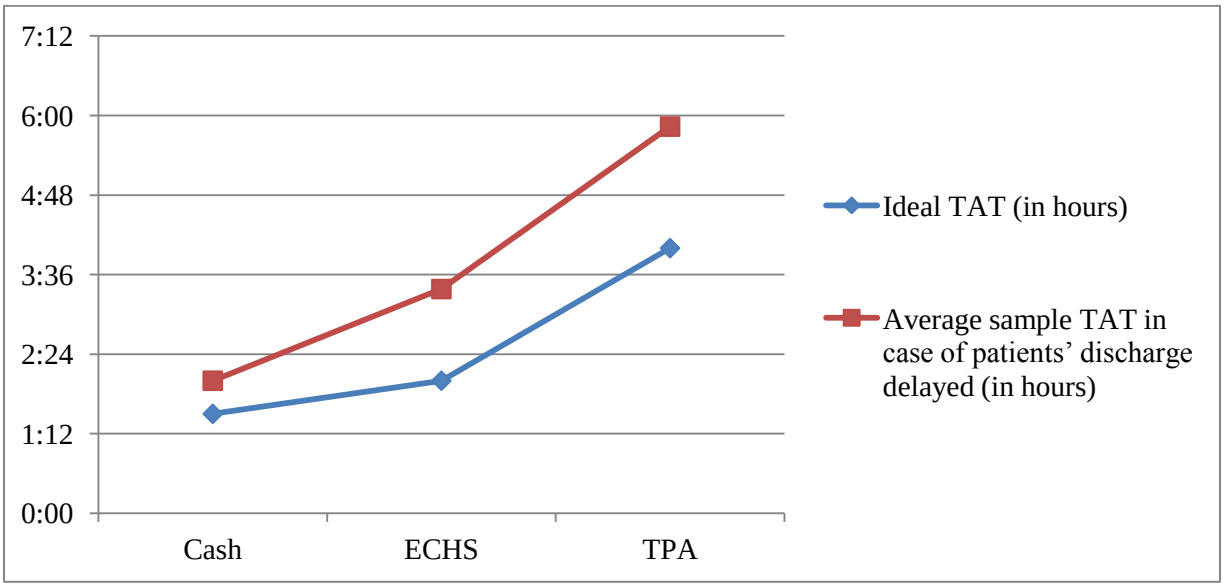


Figure 6- Graphical representation of average TAT

The cause of delay in discharge process , as shown in pie chart, was mainly due to delay is discharge summary and billing, which was 32% and 24% respectively. There was high percentage of delay in patient discharge GDA or nurses(12%) and also due to delay in bill clearance by attendents(15%).

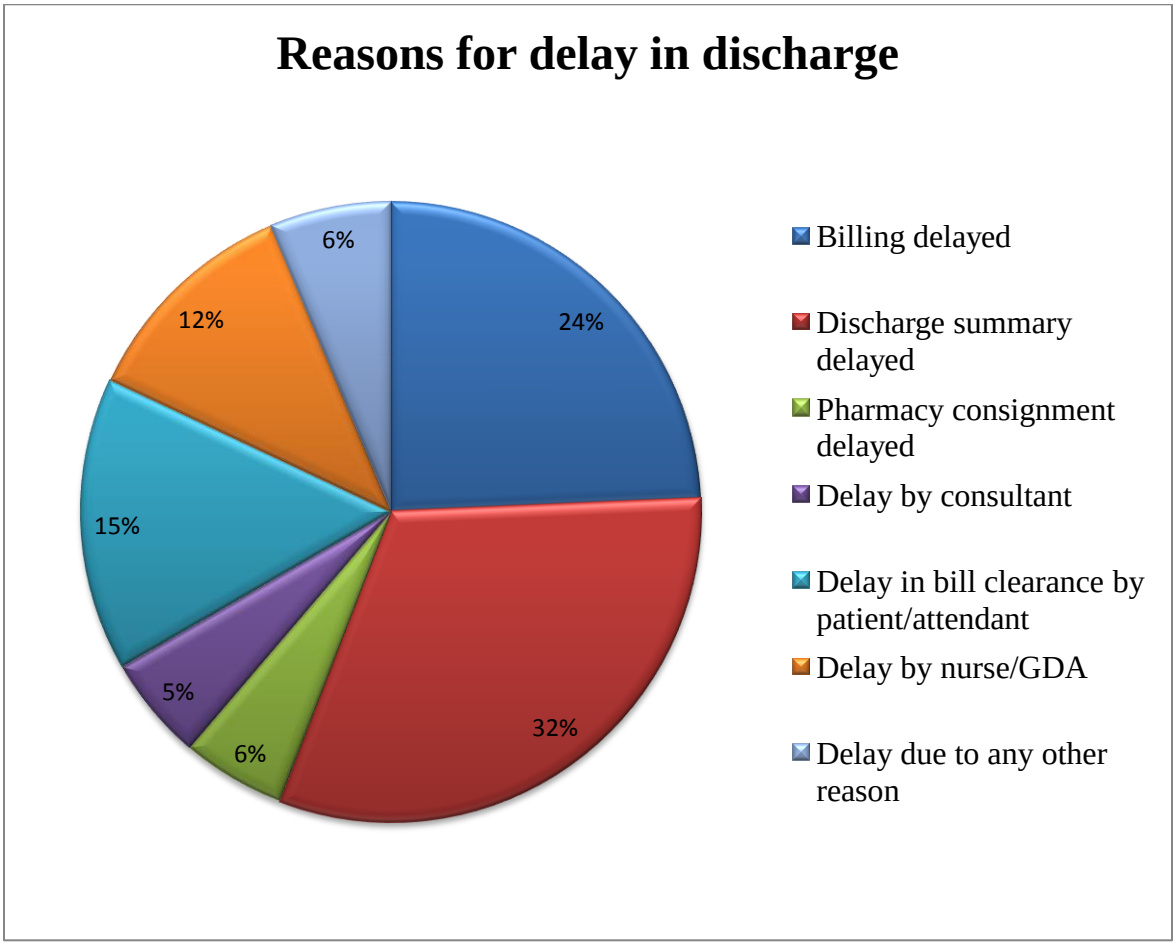


Figure 7-Graphical representation of reasons for delay in discharge process

Reasons for delay in discharge process

1. Billing process delayed- Billing process of an in-patient occurs every day by daily updating the charges from 'billing activity sheet' in evening. At the time of discharge, the billing activity sheet of that day is sent to the billing counter for updating the bill of that day. Each billing update takes around 10- 15 minutes. The delay in billing occurs due to delay in transferring of billing activity sheet to the billing counter once the intimation has been made.

Also accumulating of many billing activity sheets when intimations are made together for many patients.

2. Discharge summary delayed- As discharge summaries are made by the junior residents one night before discharge, the summary may need some corrections before its handed over to patients. The summary also needs to be updated in few cases where the consultant has made some changes. Then the final discharge summary has to be signed by consultant. This course of formation of discharge summary is time consuming and so may cause delay in discharge of patient. As handing over of discharge summary to patients may take time, the patient is moved to discharge lounge after the clearance to bill in many cases.
3. Pharmacy consignment delay- Pharmacy consignment may be delayed in case of any kind of implants where there may be some issue of cost of implant from vendor's side.
4. Delay by consultant- Consultant round may be time consuming as consultant has to see many patients. So the patients visited by consultant at the end may be delayed due to delay in intimation of discharge by the doctor. Sometimes, the consultant may get busy with some other emergency leading to delay in patient visit.
5. Delay in bill/ financial clearance- Bill payment is mostly done by attendants/relatives in case of cash payment. ECHS clearance slip is also received by the relatives of the patient. The attendants arriving late on the day of discharge, or queuing up at the billing counter leads to delay in the bill payment. Patient's attendants may also want to check the bill when its more than their expectation. Also few patients may want some discount on the bill. All these leads to postponed bill payment.
6. Delay by nurses and GDAs- Because of the work load of sick patients in the ward/rooms, the patients to be discharged, who have recovered from the sickness and are in better condition than the other patients becomes the least preferred one to look after, causing delay in patient discharge.
7. Delay from corporate office for finance clearance in TPA case- In case of cashless treatment, the insurance company has to approve the patient's bill before the patient is discharged. This process involves a long process and may take time.
8. Delay by attendants/relatives of the patient- The attendants coming from long distances reach the facility late, which leads to delay in finance clearance and delay in patient discharge.

9. Blood bank clearance pending- In case of patients who have received blood transfusion, the clearance from blood bank may be pending when the blood donor is not provided on time.

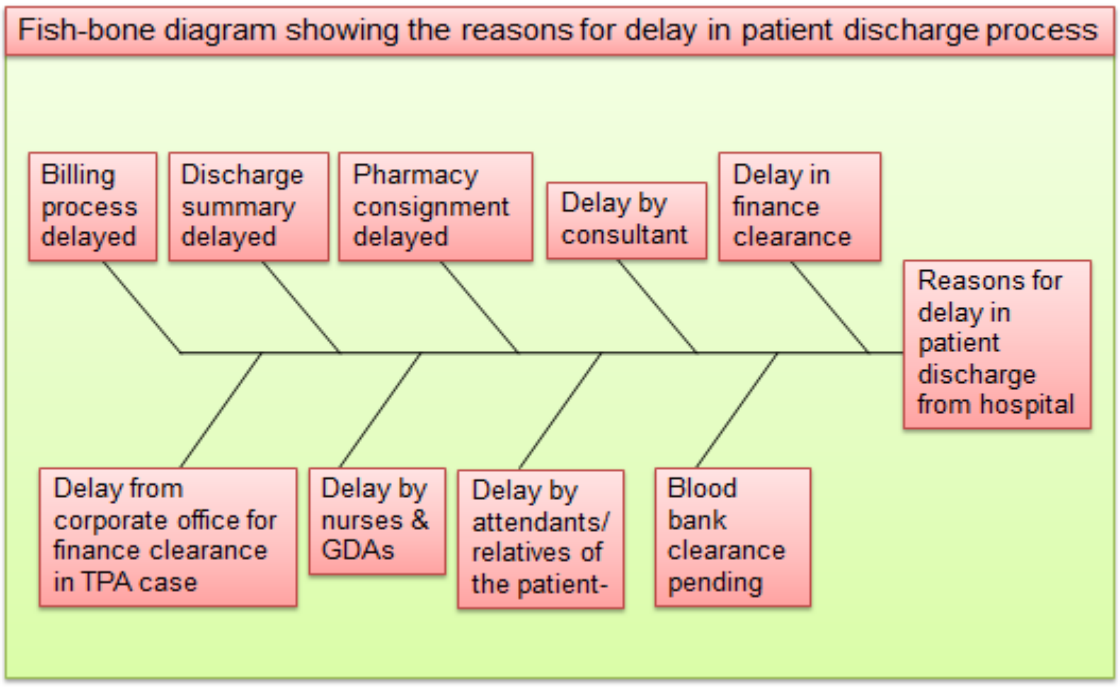


Figure 8- Represents Fish-bone diagram of reasons for delay in discharge process

Out of the total sample size of 148 patients, 86 patients were discharged on time, and 62 patients discharge process was delayed due to one or more reasons.

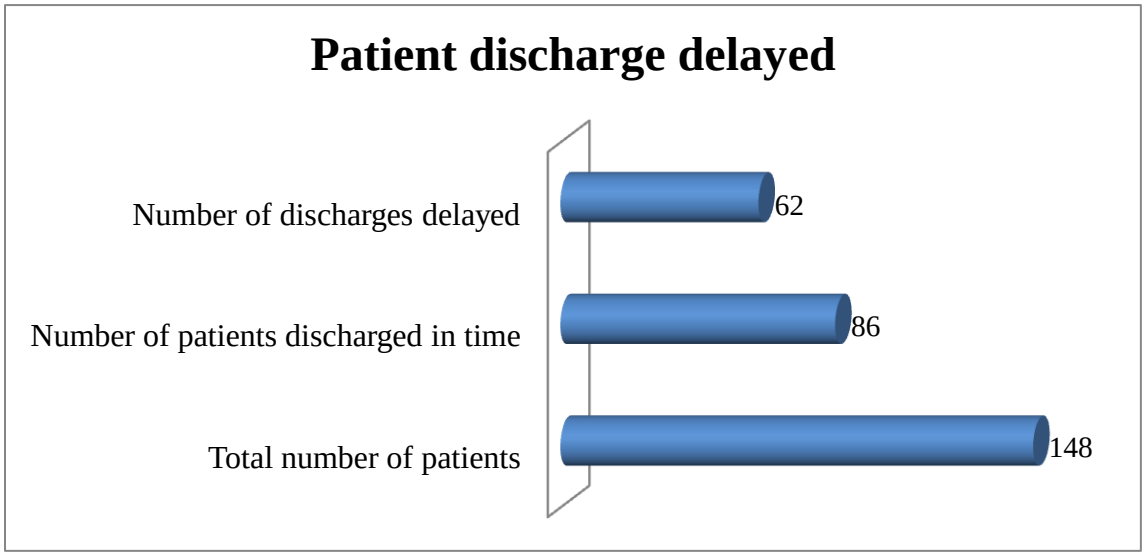


Figure 9-Represents outcome of patient discharge delayed

Conclusion

From study, it is concluded that there were few gaps analyzed in discharge process. The patients to be discharge consisted of maximum number of cash payment patients, followed by ECHS and then TPA payment mode. More than half of the patients were discharged before 11:00am. Major reason for delay in discharge process was due to delay in discharge summary and billing. The average turn around time for discharge of patients remained higher than the required/ideal time.

Suggestions

Although the hospital has been performing well, but few gaps found is discharge process can be minimized. The quality of the discharge summaries made one night before can be improved by appointing a senior resident who can check all discharge summaries for any correction prior to consultant. On time delivery of billing activity sheet to billing counter can reduce the delay due to billing. Timely updating of EDOD(expected day of discharge) chart and making patient's attendants aware of it can help the attendants to arrange for money on time.

Learning points

The experience of two month training in Fortis hospital, Ludhiana was very fruitful and productive for me. The main objective of the training to visit all the department and premises and to do the intensive study of each was successfully achieved. The summer training equipped me with understanding of the hospital functions and enhanced my capability. This exposure to professional world helped me learn professionalism, soft skills and enriched my knowledge.

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