Table of Contents

PART-I

ABOUT HOSPITAL

Fortis Escorts Hospital Jaipur (FEHJ) is a renowned name in the field of cardiac surgery, interventional cardiology and cardiac diagnostics. The institute formally came into existence on 2nd August 2007; FEHJ was set up as a dedicated cardiac hospital to bring to India the best cardiac care, training of cardiac surgeons and cardiologists and also to conduct research of international standards. The facility is a Greenfield project of the Fortis group.

FEHJ has a capacity of **300 beds, 210 functional beds and 5 Operation Theatres, 1 Cath Lab** besides an array of other world-class facilities. FEHJ provides top end services in areas of acute care, invasive and non-invasive cardiology and state-of-the-art surgical procedures, besides playing a leading role in prevention, early detection and the reversal of heart disease. It is **NABH accredited** facility. The hospital has a total of **48 Critical Care beds** to provide intensive care to patients after surgery or angioplasty, emergency admissions or other patients needing highly specialized management including tele-cardiology (ECG transmission through telephone). The hospital is backed by the most advanced laboratories performing complete range of investigative tests in the field of Radiology, Bio-chemistry, Hematology, Transfusion Medicine and Microbiology.

The FEHJ is unique in the field of multi specialty medical services. The hospital is centrally air-conditioned and environmentally sealed to ensure optimum comfort with ideal asepsis and hygiene. A safe power generation and a centralized UPS system ensuring life saving equipment function without interruption. The hospital has a vast computer network of over 225 nodes linked through Ethernet, utilizing the latest IT tools striving to support the best care and service to the patients. The IT provides three unique application software's namely MEDTRAK (Electronic patient record), PRODIGIOUS (Inventory management) and REPORT HOOK (Report generation).

MISSION AND VISION OF THE HOSPITAL

Mission 2012 (1/2)

Fortis aspires to…

. . . Domestic leadership in Cardiac, Ortho, Neuro, Renal and Gastro

. . . globally recognized in Cardiac & Ortho

Pan India presence with 40 Hospitals ~ 6000 Beds

3,500 Doctors
15,000 Nurses
. . . Employees

. . . have an International presence

Mission 2012 (2/2)

With financial goals of…

Revenues of USD 1 Bn

Gross margins > 65%

Highest profitability in the Industry with EBIDTA @ 30% across its steady (4 year+) facilities

Return on Capital Employed @ 24%

VISION

To create a *Globally respected* *healthcare* organization known for *Clinical Excellence* and *Distinctive Patient Care.*

This will be achieved by:

Providing state-of-the-art world standard health care that exceeds expectations of patients and families.

Pursuing independent as well as collaborative research in all aspects of cardio-thoracic medicine and surgery to develop affordable solutions for heart problems of this region.

Establishing a network of joint ventures and satellite centers to extend the availability of quality health care in India and other developing countries.

Providing expert and regular training to the talented manpower for medical, para-medical, nursing and other professionals in the field of healthcare. By following Ethical Values and Efficient Systems.

Networking with other organizations to promote health and wellness in society through education, preventive checkups and community outreach programs.

VIRTUOUS VALUES:

V – VISION: Imbibe and share the vision.

I – INTEGRITY: Lead through honesty and integrity

R – RESPECT: Earn respect

T – TRUST: Gain patient trust

U – UNDERSTANDING: Commit to compassion, care and understanding.

O – OWNERSHIP: Own quality excellence.

U – UPHOLDING: Uphold innovation and continuous improvement

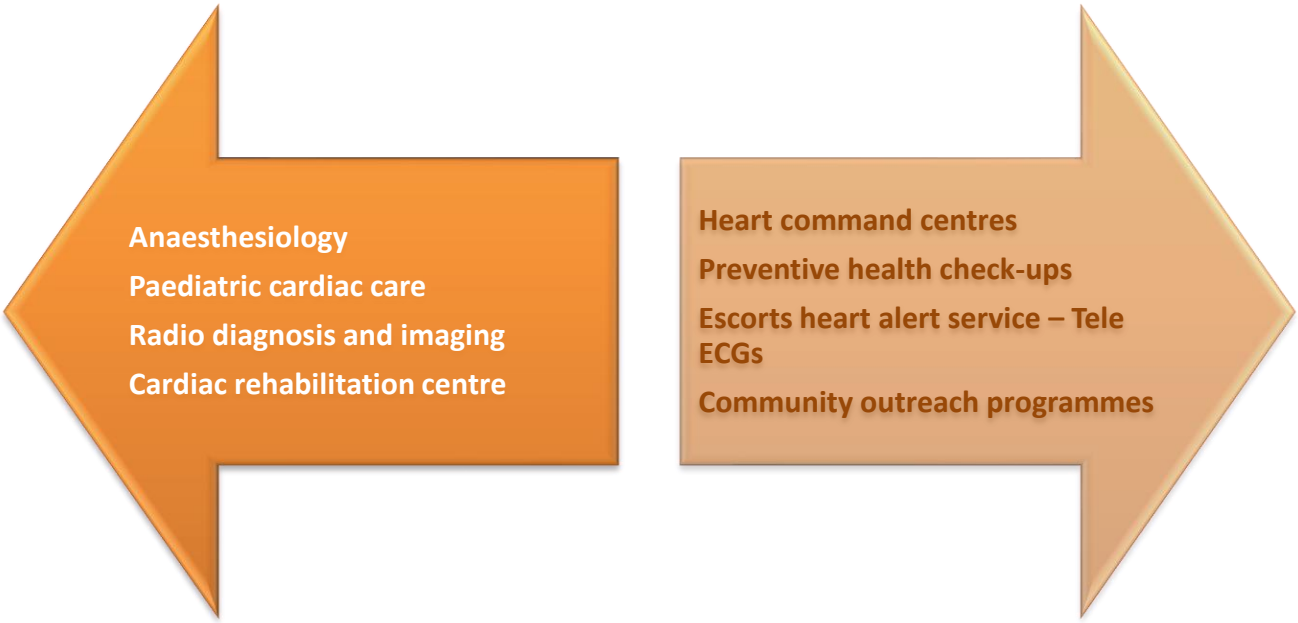
S – SHARING: Develop and share success.

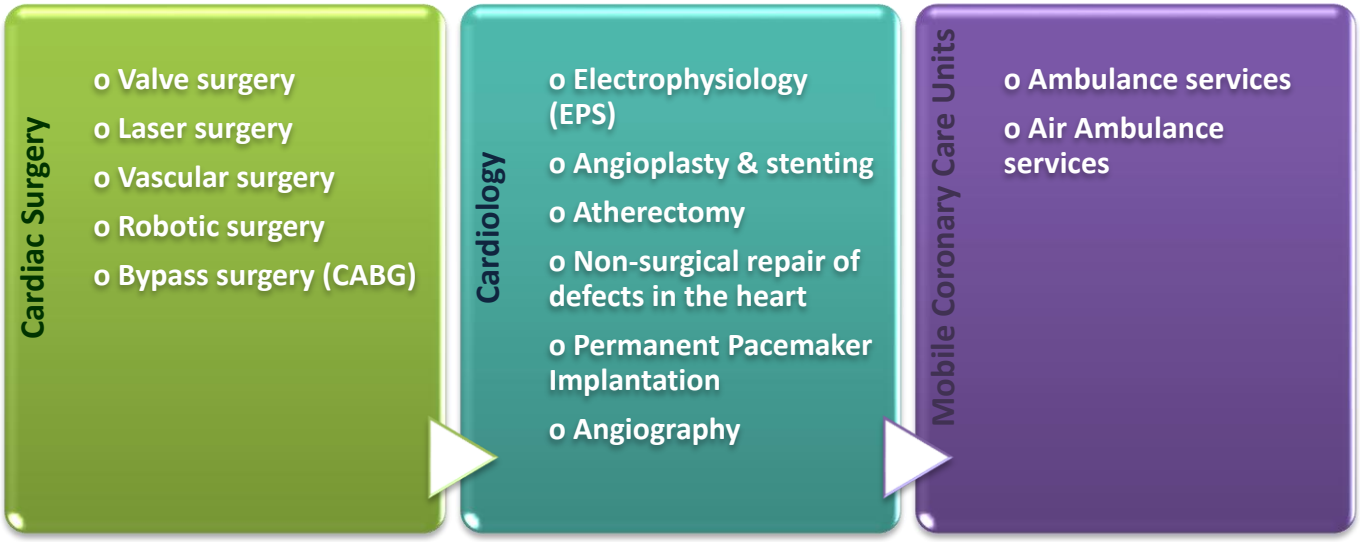
FACILITIES AT FORTIS JAIPUR-

They provide following Round the clock services for our visitors and patients:

1) Round-the-clock Emergency Services
2) 24-hour Ambulance Service
3) ICU Specialized Post Operative and Emergency Care
4) Operation Theatre
5) Imaging and Diagnostics
6) One of the most Advanced Pathology Labs in the country
7) 24- hour Chemist Shop
8) Cafeteria
9) Attendant Rest Area
10) ATM
11) Preventive Health Checkups
12) Call centre

SERVICES AT FORTIS ESCORTS HOSPITAL (FEHJ):





FLOOR PLAN AT FORTIS ESCORTS HOSPITAL JAIPUR

LOCATION OF FACILITIES AT FEHJ		
S. No.	*Facility*	*Location*
1.	Admission	Ground Floor
2.	Appointments	Ground Floor
3.	OPD I, OPD II, Paediatric OPD, Cardiac OPD	Ground Floor
4.	Executive check-up, Dental and Ophthalmology Department	Ground Floor
5.	Doctor's Longue	Ground Floor
6.	Emergency & Triage	Ground Floor
7.	TPA / Corporate Cell	Ground Floor
8.	Billing	Ground Floor
9.	Laboratory	Ground Floor
10.	Endoscopy	Ground Floor
11.	Radiology	Ground Floor
12.	EPABX	Ground Floor
13.	Blood Bank	Ground Floor
14.	Dialysis	Ground Floor

15.	**MICU**	**Ground Floor**
16.	**HDU**	**Ground Floor**
17.	**General Ward**	**1st Floor**
18.	**Neuro General Ward**	**1st Floor**
19.	**Library**	**1st Floor**
20.	**Training Hall**	**1st Floor**
21.	**Zonal Director's Office**	**1st Floor**
22.	**Medical Superintendant's Office**	**1st Floor**
23.	**LDR / NICU**	**1st Floor**
24.	**OT Complex**	**2nd Floor**
25.	**SICU I , SICU II**	**2nd Floor**
26.	**General Surgery, Internal Medicine, CTVS**	**3rd Floor**
27.	**Orthopaedic, Obs. & Gynae, Paediatric Ward**	**4th Floor**
28.	**Human Resource**	**Basement**
29.	**Quality Assurance**	**Basement**
30.	**Nursing Training & Infection Control Department**	**Basement**
31.	**Finance**	**Basement**
32.	**Marketing**	**Basement**
33.	**Biomedical Engineering**	**Basement**
34.	**Engineering Services**	**Basement**
35.	**Housekeeping**	**Basement**
36.	**Purchase / Stores / Pharmacy**	**Basement**
37.	**Food & Beverages**	**Basement**
38.	**MRD**	**Basement**
39.	**Security**	**Basement**
40.	**Laundry**	**Basement**

ABOUT QUALITY –

- Quality is the ongoing process of building and sustaining relationships by assessing, anticipating, and fulfilling stated and implied needs.(ISO)
- The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.

- Measure of excellence or state of being free from defects, deficiencies, and significant variations. ISO 8402-1986 standard defines quality as "the totality of features and characteristics of a product or service that bears its ability to satisfy stated or implied need.

Quality Assurance is any systematic process of checking whether the service being provided is meeting specified requirements. Here in the field of healthcare and hospital industry the services are being continuously monitored and improved and further developed for meeting the specified or desired requirements by the patients.

The need of every patient visiting the Hospital is ‘quick, effective health care provided in an atmosphere of comfort.

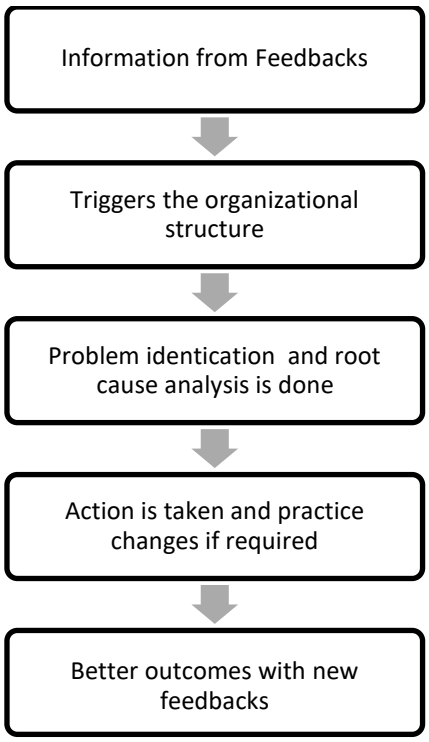
FORTIS ESCORTS HOSPITAL JAIPUR has a single quality assurance department which is connecting to the entire hospital being it clinical or non-clinical for the purpose of monitoring and improving the quality of services rendered to the patients.

It is the first hospital in Rajasthan which is NABH accreditated and now again targeting for its re-accreditation in the month of April.

The process of accreditation scrutinizes every possible detail of the hospital to ensure full standards of quality are implemented. This goes for all medical and non-medical related items. The purpose of this process is so patients are guaranteed a safe, hygienic and high quality facility to seek medical care from.

Accreditated hospital provides the obvious benefit of high quality care for the patient. What most people do not know is that they also have advantages for the general public, and for the physicians working within the organization.

How is the quality problem identified in the hospital?



It uses various tools and techniques in order to meet its targets, for example-quality indicators, various disciplinary committees, emergency codes, trainings of each and every staff etc.

A quality assurance system is said to increase patient's confidence and organization's credibility, to improve work processes and efficiency, and to also enable an organization to better compete with other organizations.

Advantages-

- For identifying opportunities to control inappropriate inpatient admissions
- Shorten a patient's length of stay
- Monitor the use of ancillary services
- Improve physician documentation in patient medical records
- Reduces the hospital acquired infections

1.2. Routine and General Management at Fortis Escorts Hospital Jaipur (FEHJ)

The routine and general management at Fortis Escorts Hospital Jaipur included a number of activities. Being a hospital, the system was fully dedicated to the patient safety and care.

Apart from this there were a number of social activities carried out in order to increase marketing of the hospital and to maintain the status quo of the hospital. Some of them were-

1) Routine OPD with doctors examining the patients in there OPD timings.
2) IPD, where the inpatients are admitted if they require any kind og surgeries or treatment in which they need to be get admitted in the hospital for the procedures available in the hospital. For eg: Labour and delivery,cardiac interventions like Open heart surgeries, angioplasty and angiography and many disorders in the body related to kidney, lungs, skin, orthopaedics etc.
3) Other then the clinical interventions many activities like-SPANDAN,NANHI CHAAN,HAND WASHING DAY,INFECTION CONTROL DAY,HUM TUM MILENGE,WORLD CONSUMER DAY are celebrated in the hospital.
4) Regular evening meetings of respective head of the departments is carried out in order to keep a track of the problems what the hospital is facing and how can be they sorted out immediately.

On the other side of the hospital a number of activities are done to keep a quality check on the patient care and safety as that id the main mission and vision of the hospital.

Managerial Tasks in Quality Assurance Department

- Attended meetings with subject lines of quality indicators of the hospital, code blue which was a code that indicated medical emergencies.
- Interacted with stakeholders for the reasons as to why their department indicators were distracting from the benchmark and what interventions they are practising for bringing it back to the benchmark.
- Daily audits of various clinical and non clinical departments which included Triage, Dialysis, critical cardiac unit, cardiac monitoring unit, surgical and medical ICU, LDR, NICU, HDU, Wards etc.
- Worked for improving the emergency department of the hospital by coordinating with the head of the department and implemented the changes as required.

The routine and the general management at Fortis was the biggest learning in the organization. The hospital was preparing for Re-accreditation, so the routine and general management included the same. The specific area where I was involved was the Quality Indicators of the hospital which were about 87 in number. The other activities apart from this included-

i) Comparison of Triage/Emergency of Fortis Escorts Hospital Jaipur with Triage of Fortis Escorts, Noida by observation in both the hospitals and then analysing the loopholes with the head of department for implementing the changes required.

ii) Organized the data of Fortis Operating System into proper format of presentation with the help of graphs and excel.

iii) Detailed analytical study on “Delays of surgeries in Operation Theatre” in Fortis Escorts Hospital ,Jaipur

iv) Prepared course curriculum and time-table for DNB courses which take place at Fortis.

v) Prepared the “Continuous Quality Improvement” chapter for NABH pre and final inspection, including all interventions and interpretations from all the departments in the hospital.

vi) Conducting clinical audits for the hospital which included-medical file audits, equipment audits, infection control audits.

vii) Performed mock drills for various codes in the hospital.

viii) Renewed the Plans, manuals, SOP’s for all the departments. Eg: Quality manual, ICU manual, Hospital infection control manual, safety plans etc.

ix) Prepared question papers for all the departments individually for evaluating everyone in the hospital for NABH.

x) Conducted trainings for nursing staff, ground duty assistants and housekeeping staff for fire, HAZMAT spills etc

xi) Prepared scope of services, standard operating procedures for the Day care ward.

xii) Designed and implemented file tracers in the hospital.

xiii) Re-planned the counselling chart for IPD patients..

xiv) Prepared a discharge note (in cases of emergency) for Internal medicine and cardiology patients.

Learning During Internship Duration from the Daily Diary

Summer internship is the best phase where a trainee can learn and implement his/her ideas into the processes that are taking place in the organization if they are acceptable**.**

During my course of internship I had learnt almost all the functions and operations that take place in the Quality Department and especially how a hospital prepares itself for the NABH inspection. As was involved in the core preparation of this event I learnt how to deal with the assessors impulsively.

The journey started with simple computer skills which included Microsoft excel and power point and ended onto a successful NABH (a certification body) inspection of three days with minimum non-compliances for the hospital.

The learning from the hospital can be correlated to the learning from the course curriculum as well.

As I was fully dedicated to the Quality department of the hospital, I learnt lots of things from there as well as the work done were fully coordinated with the help of Quality module of our course curriculum.

As the hospital had undergone NABH re-accreditation and I was involved in the same for past three months, I was not hesitant in working for same as the NABH module was already taught in the college which included the 10 chapters of NABH and I was dedicatedly working for one of the chapters that was continuous quality improvement.

The hospital had no loopholes or bottlenecks as it was fully prepared for the NABH and was complying with all the standards and the requirements of NABH which had no reason of getting any complaint regarding the quality the hospital was maintaining.

Apart from this there were number of tasks that were done that included attending regular meetings, conducting mock drills in the hospital for various codes followed by the hospital, giving trainings to the nursing staff and the ground duty assistants etc. This was also a great learning for me there as it helped me in knowing how smart work overwhelms the brain work at times. Knowing the mind set of people while they are working in a corporate hospital, the competitive spirit they have in order to achieve position in the market. When it was taught in the modules during the course of studying phase I never used to think much about the organizational behaviour, but while working for three months I could analyze how important it is to study organizational behaviour if you have to work in a corporate world.

The dissertation not only taught me to handle managerial problems with confidence also it showed me how actually a corporate hospital works.

Part-II

CHAPTER- 1

1.1. Introduction

'Discharge Planning' is a service that considers the patient's needs after the hospital stay, and may involve several different services such as visiting nursing care, physical therapy, and home blood drawing. It is the critical link between the treatment received in hospital by the patient, and post-discharge care provided in the community.

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.

The discharge process is a critical bottleneck for efficient patient flow. Slow or unpredictable discharge translates into a reduction in effective bed capacity and admission process delays. Patients can also be diverted to other hospitals. These changes can lead to major patient/family dissatisfaction, loss of hospital revenue and loss of competitive edge. In fact, the discharge process and scheduling in-patient surgery rank as the two biggest factors impacting wait times for in-patient beds.

Discharges include a set series of tasks that are often unsynchronised; a smooth patient flow requires coordination in the following events. Components of the system (family, care takers, hospitals, community and social service) must work together. Constant monitoring and reviewing of the policies is essential at each stage.

Admissions are challenged by inefficient discharges. Discharge planning is the classic display of interdependent components lacking 'systems aim'.

DELAYED DISCHARGES: THE IMPACT

- Significant impact on hospital admissions and patient output
- Less bed options to meet incoming demand.
- Critical care units become challenged with moving patients to step down areas.
- Direct impact on new patient admissions.

BUSINESS IMPACT:

- Poor resource utilization, inefficiency and wasted staff time
- Decreased patient safety and satisfaction
- Staff complaints and turnover
- Reduced admissions and referrals resulting from physician dissatisfaction
- Bad press and community relations

In effect, discharge delays create an upstream tidal wave of patient flow constraints which negatively impact the patient satisfaction, patient safety, hospital capacity and financial performance. So whether we look at the discharge process from the perspective of the patient's wellbeing or the hospital's need to streamline bed capacity, the discharge process is an important aspect of modern hospital care.

COMPONENTS OF THE EFFECTIVE DISCHARGE PROCESS

"Discharge does not begin on the day a decision is made to send a patient home. It is not a single event".

Effective discharge planning begins prior to admission for planned admissions and upon admission for unplanned admissions. It ideally comprises of four stages:

1. Assessment of patient physiological, psychological, social and cultural needs.
2. Development of a care plan, based upon the presenting condition, physician order set, severity of illness or injury, and intensity of services required.
3. Implementation of plan-- arranging for the provision of services, including patient/family education and referrals.
4. Follow-up post-discharge and evaluation of the effectiveness of the discharge strategies.

OUTCOMES OF EFFECTIVE DISCHARGE INTERVENTIONS

- Patients receive right service at the right time.
- Improved satisfaction of patient, care givers.
- Reduced and effective length of stay (LOS).
- Better quality of life
- Bed availability for emergency and elective admissions; and
- Optimum resource utilisation.

Thus, we can say that a discharge-focused bed strategy can increase inpatient volume without a subsequent increase in cost to hospital - **a substantial improvement to the hospital's bottom line.**

1.2. Managerial Problem

A lengthy and hectic discharge process of in-patient in the cardiac department is the concern of Fortis Escorts Hospital Jaipur. It not only causes frustation for patient and family menbers but delays in addmission of incoming patients from ICU(Intensive Critical Care Unit) and CT-ICU(Cardio-Thoracic Intensive Care Unit) and Emergency.

a. OBJECTIVES OF THE STUDY

a.1 General objectives-

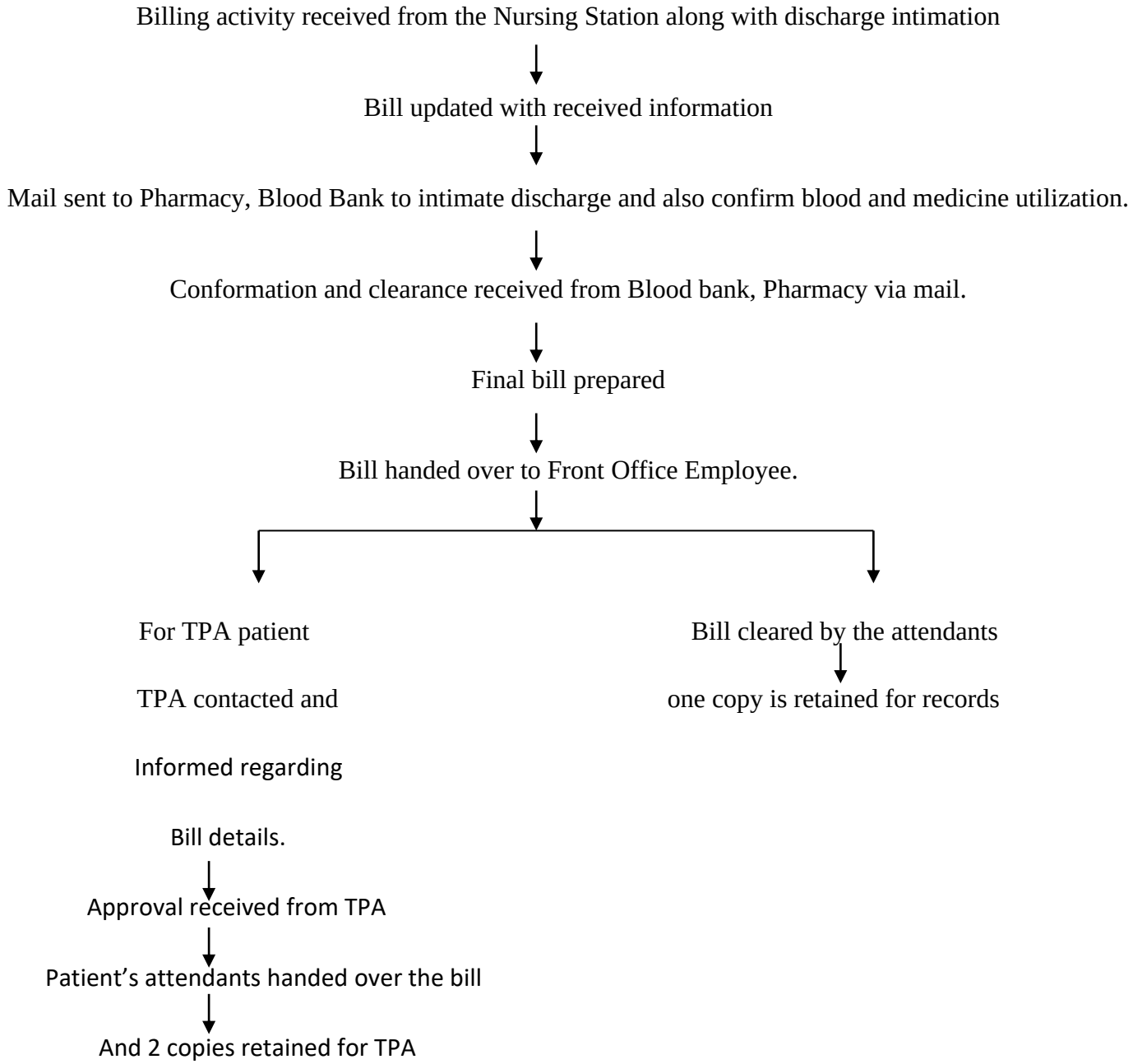
To study the quality in the hospital wide

a.2 Specific objectives-

1. To identify the loopholes in the discharge process in the hospital.
2. To find solutions for the cause of the problem
3. To analyze the discharge process of the hospital and find out the challenges at each step of the process.

It is believed that improving the quality of a hospital directly improves the patient and hospital quality of care. Quality improvement is a continuous process and leaves a scope of improvement at every level.
Discharge process plays a very important role in maintaining the quality of the hospital and that is the reason as to why it is included in the Fortis operating system.

OBSERVED PROTOCOL FOLLOWED BY THE BILLING DEPARTMENT DURING A DISCHARGE



OBSERVED PROTOCOL FOLLOWED BY THE NURSING STATION DURING A DISCHARGE.

Previous intimation of discharge that may or may not be received

↓

Conformation of discharge

↓

Billing activity sheet for the procedures undergone beyond 9pm***** of the previous day along with discharge intimation sent to the billing department.

↓

Discharge summary prepared by RMO or requisite changes made in the discharge summary prepared previously.

↓

Discharge summary sent for being typed by the Service Co-coordinator.

↓

Unused medication is checked for, returned and fed in the HIS.

↓

Reports required to be photocopied are sent for the same.

↓

Original reports-X-Rays and other documents are handed over to the patient's attendant. In case of a TPA patient, photocopies of the originals are handed over.

↓

Briefing by the nurse to the patient regarding patient care, medication, diet etc.

↓

Patient visited by the Guest relations Officer.

↓

Clearance slip received from the Billing Department.

↓

Patient and his attendants leave the hospital

1.3. DISCHARGE FROM WARD IN FORTIS ESCORTS HOSPITAL JAIPUR

Process definition-

The objective of this process is to discharge the patient from the ward and so free up a bed.

Scope of the process

- In scope includes the doctors' behaviour ,Nurse's behaviour , Sample testing and reporting, GDAs, Billing, Pharmacy
- Out of scope includes the clinical fitness for discharge

Parameters-

What defines a successful process is -

a. Time taken to discharge a patient
b. Percentage discharges before 11 am

Challenges in the process which were leading to delays in discharges of the patients-

The challenges in the process of discharge were none other than the various departments which were involved in the process. These included- TPA, billing, pharmacy, nursing, finance, dietetics, Resident doctor on duty, GDA etc .In case of death of the patient security and housekeeping department also comes into role.

1.4. Review of literature

1. **Prevention of Delay in the Patient Discharge Process: An Emphasis on Nurses' Role**

In this study by**:** Peter R,Jessica E,zaltmann G planning for a patient's post discharge needs care does not begin on the day when decision is made to release the patient from the hospital. It is generally accepted that discharge planning should start before admission (for a planned admission) or at the time of admission (for an unplanned admission). A combination of individual factors, most notably age, medical factors such as presence of multiple pathology, and organizational factors such as lack of alternative forms of care facilities put patients at risk of delayed discharge. Moreover, lack of nurses' participation also contributes toward the delaying of discharge. In this article, the author provides strategies to improve nurses' participation in discharge planning and discusses the importance of involving patients and their caretakers in decision making.

2. Discharge from Hospital

The Discharge Planning Process / Process Improvement

In the study by Shepperd S. et al. discharge planning is critical to ensuring rapid, safe and smooth transition from hospital to another care environment; it involves the social work functions of high risk screening, social work assessment, counselling, locating and arranging resources, consultation/collaboration, patient and family education, patient advocacy and chart documentation; it is a complex activity requiring a wide range of clinical and organizational skills to address needs of patient, family and health care system and to promote
the optimum functioning of patients, families and support systems. Delay factors may be internal (waiting for discharge summaries; waiting for declaration of chronicity; transfer between nursing units; lack of documentation of discharge plan); external (lack/delay of access to rehabilitation, convalescence, palliative care, home care resources, long term care facility); and psychosocial (waiting for family adjustment to illness, waiting for patient function to improve, unrealistic expectations of patient/family, social isolation of patient, inadequate support at home, lack of concrete medical aids, transportation for treatments, financial, family burden prevents discharge home).

3. A literature review of organisational, individual and teamwork factors contributing to the ICU discharge process.

The study by Mac Donald P.,Azrul A,Patrick.S. only a small number of ICUs used written patient discharge guidelines. Consensus, rather than empirical evidence, dictates the importance of guidelines and policies. Premature discharge, discharge after hours and discharge by triage still exist due to resources constraints, even though the literature suggests these are associated with increased mortality. Teamwork and team training appear to be effective in improving efficiency and communication between professions or between clinical areas. However, this aspect has rarely been researched in relation to ICU patient discharge.

Thus intensive care patient discharge is influenced by organisational factors, individual factors and teamwork factors. Organisational interventions are effective in reducing ICU discharge delay and shortening patient hospital stay. More rigorous research is needed to discover how these factors influence the ICU discharge process.

4. Research Review on Tackling Delayed Discharge

In the study by Zehner,R.B.Mofitt R, a combination of individual, medical and organisational factors interact to put people at risk of delayed discharge. The literature review identifies that older people, those with multiple pathology, and those with some specific conditions (such as neurological deficit and stroke) are most at risk. Some medical conditions appear more likely to lead to a delayed discharge for all age groups and that this is often because there is a lack of alternative care facilities available for these particular people. In other words, it is not the clinical condition per se, which causes the delay, but how organisations are managing services to care for these particular clinical groups. Problems within both health and social care organisations have been attributed with causing delayed discharges. Organisational factors associated with delay include: (i) lack of home support, (ii) unavailability of convalescent or rehabilitation facilities, (iii) waits for community care needs assessments or home care packages.

5. Prevention of Delay in the Patient Discharge Process: An Emphasis on Nurses' Role

In the study of Peter R,Jessica E,zaltmann G planning for a patient's post discharge needs care does not begin on the day when decision is made to release the patient from the hospital. It is generally accepted that discharge planning should start before admission (for a planned admission) or at the time of admission (for an unplanned admission). A combination of individual factors, most notably age, medical factors such as presence of multiple pathology, and organizational factors such as lack of alternative forms of care facilities put patients at risk of delayed discharge. Moreover, lack of nurses' participation also contributes toward the delaying of discharge. In this article, the author provides strategies to improve

nurses' participation in discharge planning and discusses the importance of involving patients and their caretakers in decision making.

Chapter-2

Data and Methods

2.1. Methodology:

Methodology is the scientific or the technical method by which the data is being collected for the study which is going to be conducted. The methodology should be reliable and should have a base or logic by which the data can be sorted.

Data can be of two types-

1. Primary Data
2. Secondary Data

Primary data is the data that is collected by oneself during the period of study while secondary data is the already existing data or is standardized.

The data collected for the projects which was undertaken was primary type for two months for the year 2011 while for carrying out the study on trend data for the year 2010 was withdrawn from the discharge registers and Med-Track.

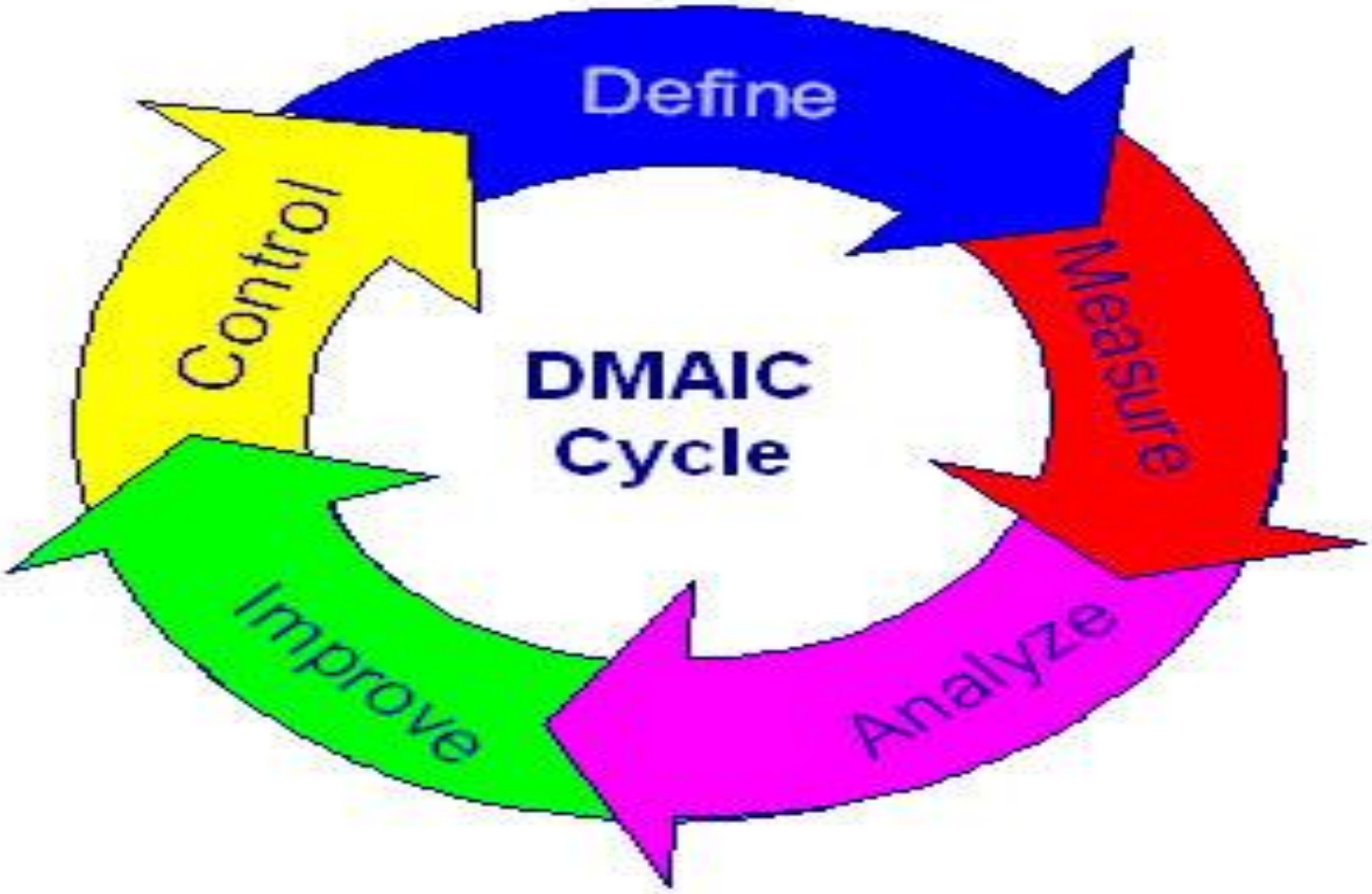
DMAIC was applied to this study.

- The process was Defined
- Measured weekly
- Findings were analyzed weekly
- Improvements were suggested in weekly scorecard meetings & department wise analysis was being forwarded to concern for action.
- Department wise Meetings were held to discuss the concerns of each department with the other
- Daily tracking of discharges by the nursing supervisor.

The DMAIC project methodology has five phases:

- ***D****efine* the problem, the voice of the customer, and the project goals, specifically.
- ***M****easure* key aspects of the current process and collect relevant data.
- ***A****nalyze* the data to investigate and verify cause-and-effect relationships. Determine what the relationships are, and attempt to ensure that all factors have been considered. Seek out root cause of the defect under investigation.

- ***I****mprove* or optimize the current process based upon data analysis using techniques such as design of experiments, mistake proofing, and standard work to create a new, future state process. Set up pilot runs to establish process capability.
- ***C****ontrol* the future state process to ensure that any deviations from target are corrected before they result in defects. Implement control systems such as statistical process control, production boards, and visual workplaces, and continuously monitor the process.



2.2. METHODS USED FOR DATA COLLECTION:

2.2.a. Observation: To study the time consumed in discharge process at various levels of the discharge procedure, like:

- Observing discharge advice time

- Summary typing time
- Final summary completing time
- Billing time, etc.

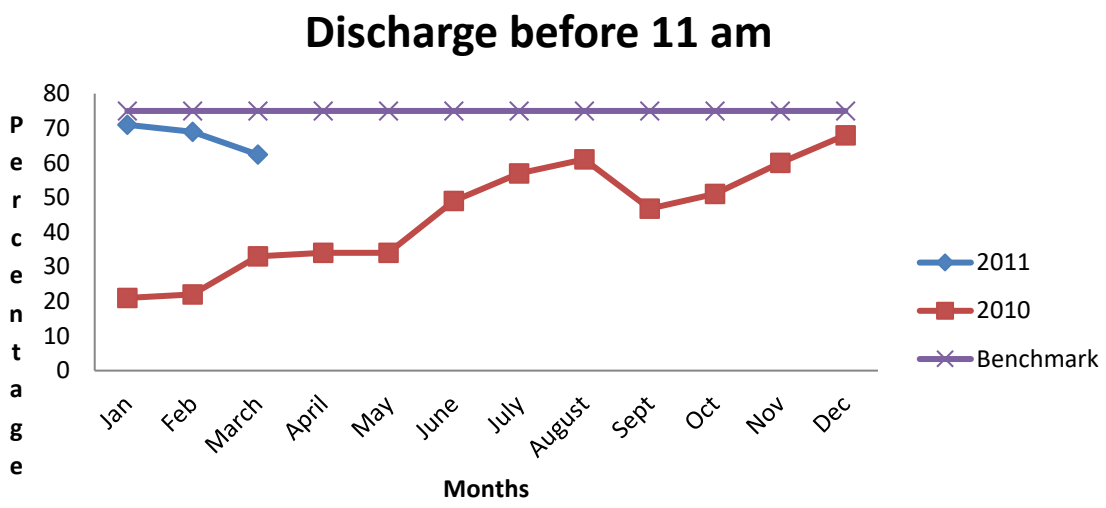
2.2.b. Checking Various Hospitals Records:

- Patient's case sheets
- Records related to billing
- Nurse's record books
- Discharge checklists

2.2.c.Unstructured interview: For understanding the discharge process unstructured interview was taken for data collection from hospital's Cardiac, Obstetrics and Gynaecology department staff, employee, nurses, consultants and others.

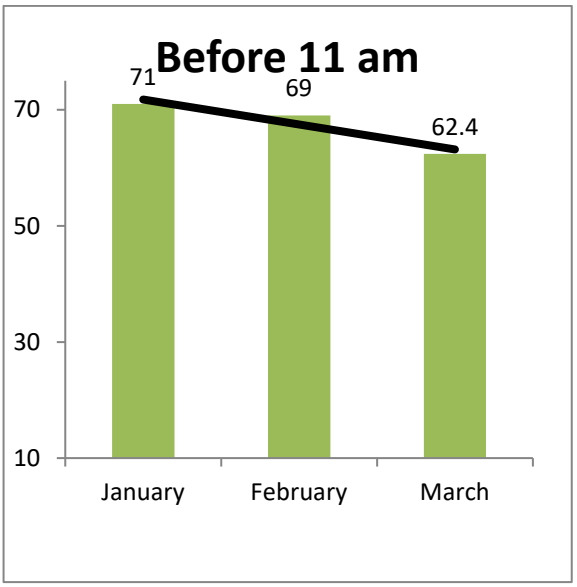
2.3. Data of two consequent years 2010 and 2011

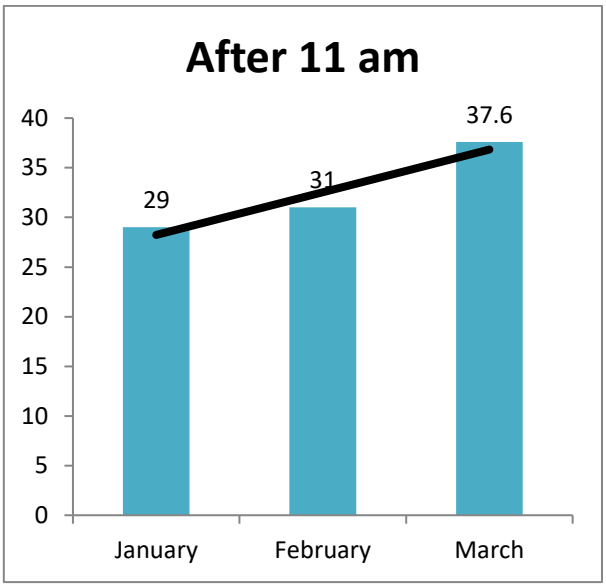
Months	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
2011	71	69	62.4									
2010	21	22	33	34	34	49	57	61	46.75	51	60	68
Benchmark	75	75	75	75	75	75	75	75	75	75	75	75



The above graph and the table shows the trend in the discharge process of the hospital which gives an impression that the trend increases in the year 2010 but it again decreaes in the year 2011 in the months of february and March.

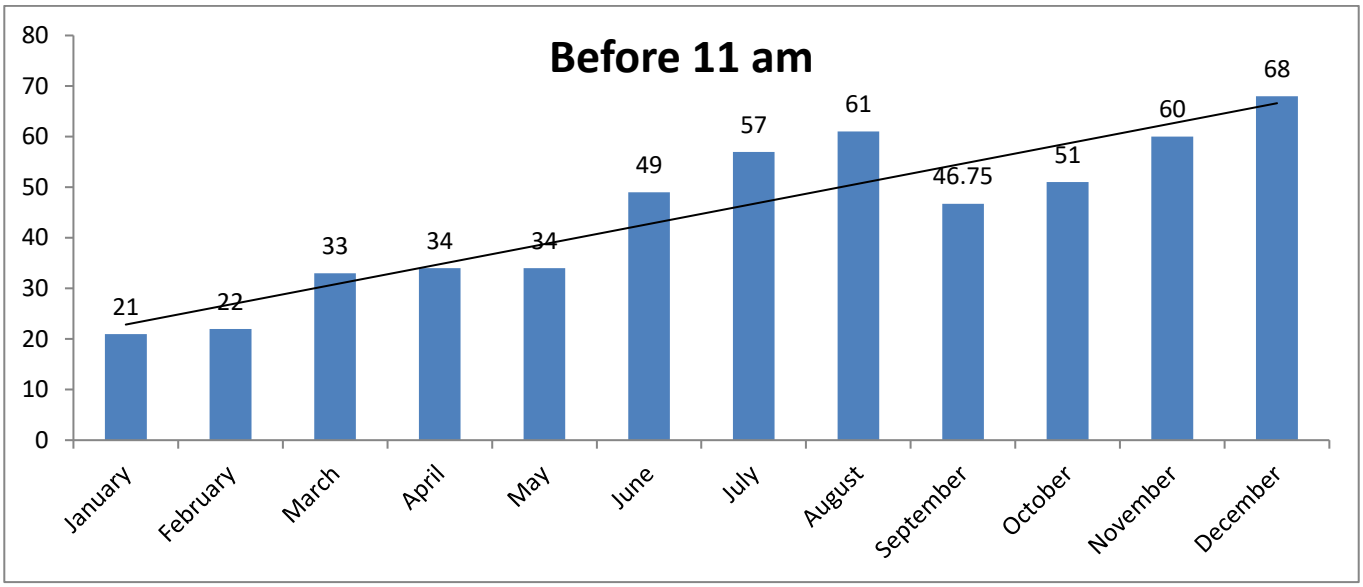
YEAR 2011



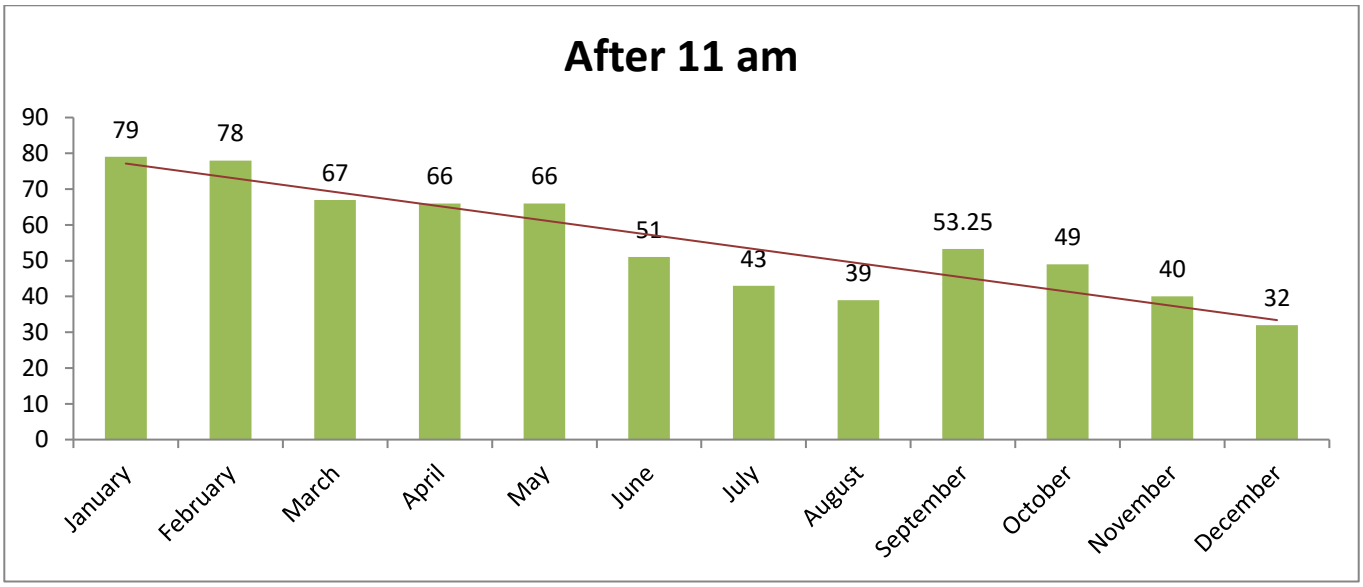


The above graph depicts a decreasing trend from january to march in the parameter of discharges before 11 am while an increase in the trend after 11 am

YEAR 2010



The above graph clearly shows an increase in the trend of discharges before 11 am from January 2010 to December 2010



This graph shows a decrease in the trend of discharges after 11 am from the months January to December in the year 2010

LIMITATIONS OF THE STUDY

1. Time consuming-The study was time consuming as for mapping the process i had to stick to the patient or the patient attendants.
2. Uncooperative attitude of the doctors-The doctors were asked to prepare the discharge summary a day before but they were not doing the same.
3. Busy nursing staff –The staff could not answer the questions which were asked to them as they were very busy with the patients all the time.
4. Discharge coordinator was not there.

Chapter-3

Result & Findings

3.1. Result:

When the trend was studied thoroughly it was observed that there was a shoot in the number of discharges consequently in the year 2010 but again the trend line showed drop from January to March in the year 2011.

3.2. Findings:

The delays in discharges were due to several causes related to the organization. They can be listed as following-

1. There were no planned discharges.
2. Photocopy of reports and discharge summary of the patient was prepared on day of discharge
3. Pharmacy returns were sent at the time of discharge and this again led to delay in the process.
4. Visit of Dietician on day of discharge
5. Delays in sending activity sheets to Billing due to unavailability of Ground Duty Assistants and then locating patient to handover bill.
6. Delay in vacating bed after financial clearance by the patient
7. Bed manager not aware of patients for discharge
8. TPA clearance was the biggest issue.
9. Doctors visit after 10am

Few tips followed to overcome these challenges for the departments responsible for these delays in discharge-

1. **Medical Staff-**
   Primary Consultant:-Information should be given for nursing staff or as well as patients
   On Duty Resident:-On duty Doctor should prepare discharge summary in night duty for plan discharge patients.
2. **MOD**
   - To check the planned discharges
   - To ensure the night staff prepares the Summary
   - To check the Medicine returns
3. **Nursing**

a. **Nursing Supervisor:-**

Evening Shift nursing supervisor to identify the planned discharges and mail to IT department at 6 pm and updated list by night duty supervisor before 10.30am.

b. **Nursing Staff:-**

- Counsel patient and patients relatives about discharge & preparation for clothes, vehicle and finance
- Night staff to return medicine of plan discharge patients and collect all pending reports.
- Get the night duty resident prepare the Discharge Summary

4. Support Services

- **Pharmacy**:-Pharmacy to check the medicine returns of planned discharges in night & give clearance, for finance department to initiate the billing process.
- **Finance & Billing Department:-**

  Financial counseling of patient relative one day in advance.
- **Dietician -** should complete rounds of DP before 10.30am

5. TPA cell

- TPA coordinator to take rounds & keep a track of discharge status of their clients.
- Proactive follow up with the staff & TPA's for timely clearance
- Photocopy of reports / required documents one day prior to discharge.

Chapter-4

4.1. Discussion

Delayed discharge can be defined as a condition in which a patient remains in *hospital* after his/her clinical readiness for *discharge* has been determined by the lead clinician in consultation with all agencies involved in planning that patient's next stage of care. The date on which the patient is judged clinically ready for *discharge* is the ***ready for discharge*** date. (ISD 2000)

This can take place in a hospital due to several reasons which may be technical, professional or physical .The challenges identified in Fortis Escorts Hospital Jaipur were as follows-

• No planned discharges
• Photocopy of reports and discharge summary on day of discharge. • Discharge summary prepared on the day of discharge • Pharmacy returns sent at the time of discharge • Visit of Dietician on day of discharge • All Imaging films are reported and Lab reports collected on day of discharge
• Patient/attendant not aware of the discharge process
• Bed manager not aware of patients for discharge
• Delay in vacating bed after financial clearance by the patient
• Consultants had to be repeatedly called to remind about the cross-referral (as they were either busy in the OTs, OPD etc.)
• Lack of Staff Motivation
• TPA cell which is the cause of maximum delays

What was done to overcome these challenges-

1. Discharge planning with help of
    a. EDOD poster put up in the wards
    b. Visual Board at the nursing stations
2. Photocopy of reports on a daily basis.

3. Night MO prepares discharge summary of next day discharges

4. Pharmacy returns sent on the night before day of discharge after keeping sufficient medicines for next day

5. Visit of dietician on previous day for planned discharges.

6. All Imaging films are reported and Lab reports collected day before.

7. Patient / attendant counseled one day prior for the arrangements to be made for the day of discharge.

8. Mail sent to the Bed Manager every evening of next days planned discharges.

9. Patient is counseled of importance of discharge timings.

10. After confirming his availability with the first call, a reminder SMS is sent to the Consultant using Medtrak.

11. Trophy for the week & month for best performance.

12. Discharge monitoring via Medtrak by people involved in the process.
    The soul goal was set which was to discharge 30% of discharging
    patients by 11 am and attain an average discharge time of 1 pm.

1. Flashing discharge Order alerts on the systems of the people involved in discharge a day before it was planned (orders for lab work, tests and X-rays were marked
   'discharge-dependent' to ensure priority pharmacy process for filling discharge prescriptions were streamlined

Chapter-5

Conclusion and Recommendations

5.1. Conclusion:

Patients whose discharge is delayed were common; majorities were due to the delay from TPA cell. The caregivers through this study recognized the bottlenecks in the process and worked over them and as a result the graph hiked from year 2009 to 2011. This vast differentiation in the data of almost 22 months contributes and adds on to the quality care of the patient with satisfaction. But there were many complaints also from the patients attendants which are recorded in the discharge complaint registers.

Discharge delays significantly lengthen the hospital stay of the patient and unnecessarily contributing to increased billing.

However, there are a few measures that have been recommended in order to decrease the time taken for the discharge of a patient from the hospital. If these measures are considered valid and applied in the system, the duration on time will be greatly reduced. The time taken for discharge can almost be reduced by 50% if appropriate measures are undertaken.

Keeping in mind the quality of healthcare the patient would expect when he is admitted to a Fortis Healthcare hospital, an improvement in the discharge procedure would increase patient satisfaction immensely as discharge is observed to be one of the most common reasons for dissatisfaction amongst the patients. Hence, this usually neglected area in healthcare should be carefully looked into and improved.

5.2. Recommendations-

- Ask the Consultant for EDOD of his patients during his rounds
- There should be a dedicated DISCHARGE SUMMARY CELL who would look after only the discharges in the hospital.
- Mark the EDOD on the EDOD poster and Visual Board at the nursing station
- For patients planned for discharge next day
    - Ensure discharge summary is completed in the night shift
    - Ensure all Imaging films are reported and Lab reports collected day before
    - Pharmacy returns sent the night before
    - Dietician rounds and dietary advice is given previous day of discharge
- On day of discharge, once discharge order is confirmed by the Consultant, send the activity sheet to Billing desk along with original summary
- Change the patient clothes and remove IV line as soon as the attendant is given the bill
- As soon as the attendant clears the bill, prepare to shift the patient out or moved to the Discharge Lounge
- Multidisciplinary team work is the key to success with discharge planning.
- Consultants, resident doctors, nurses, patients and their attendants should be actively involved in the discharge process.
- Discharge planning should be continually updated and improved and all the concerned departments should be made aware of the latest updates.
- Patients should be fully informed about the bill at the time of payments, this may reduce confusion.
- During preparation of discharge summary, duplication of work can be stopped by avoiding dictation of the summary once written by the duty doctor.
- The newly appointed ward secretaries or the customer care facilitators should be trained in typing and made familiarized with medical terminology to minimize errors in typing the summary.
- Management should take steps to ensure that ward boys or housekeeping personnel are present when required to transport documents from nursing station to billing station vice versa.
- There should be back up system for computers in the inpatient department floors so that if one system is out of order the work is not hampered and discharge summary preparation is not delayed.

- More time is wasted in communication especially in between ward nursing station and billing station regarding bill checking and pharmacy indent checking. A coordinated work system will reduce this wastage of time.
- For admissions with common ailments the resource plan of care can be developed, the procedures and services can be anticipated so that they are delivered in an efficient and timely fashion.
- Rounds must be performed on a schedule that supports discharge appointments. This can be accomplished through a variety of strategies, including discharge mini-rounds and physician extenders.
- Patient must be educated throughout the stay at the hospital not only at the time of discharge.
- The discharge time should be fixed, sufficient number of discharges should be done before 1 pm in the day so that demand can be accommodated. This will improve balance between bed supply and demand during peak hours and reduce queuing times in other critical areas.
- In case when patient is waiting for a discount and the doctor is not available or is in OT, he must be shifted to any of the transit beds, say to the daycare, thus a creating scope for new admissions.
- Discharge summaries can be fed into Electronic record system so that the doctor can access it when required, this will be helpful in management of admissions and appointment for follow up.
- Patients with religious beliefs delaying the discharge and checkout time should be explained about the need of bed for another patient. The check out time terms should be fixed and the patient should be informed at admission.
- In credit billing case pre-authorization letter should be given in advance to the respective company and if detail about Credit Company is not given by the patient on time, the patient needs to be informed for the same.
- During admission inform the patient about the expected bill amount so that patients can make arrangements for payment of bill as and when required.
- Inform patients regarding the expected time of discharge well in advance so that they can arrange for the vehicle etc for transportation after discharge.
- The hospital can apply lean process and six sigma techniques to stream line the operations. Lean is a process improvement methodology and management improvement system that is involved in optimizing work and reducing wastes in time and motion. It will thereby increase employee satisfaction, improve bed utilization and most importantly enhance patient care.

ANNEXURES

TABLE SHOWING ACTIVITIES OF THE NURSING STATION DURING A DISCHARGE AND TIME TAKEN FOR THE SAME.

Time **Patient**	**Prep of discharge summary**	**Typing of Discharge Summary**	**Checking for unused medication**	**Compilation & Photocopy of reports**	**Briefing by Nurse**	**Visit by Dietician**	**TOTAL TIME**
A	14	93	13	8	5	5	138
B	31	238	10	10	5	5	299
C	30	105	55	15	30	5	240
D	60	102	38	25	10	5	240
E	60	80	25	20	5	5	195
F	15	30	15	5	10	5	80
G	20	180	20	65	10	5	300
H	30	115	15	25	10	5	200
I	50	70	15	10	15	5	165
J	60	150	10	15	5	10	250
K	30	170	20	5	7	10	239

- Average time for discharge is found to be **213.27 minutes**, which is approximately equal to **3hrs and 33 min.**

- The main cause in the delay in discharge was found to be the **Preparation and Typing** of the Discharge Summaries.

TABLE SHOWING THE ACTIVITIES OF THE BILLING DEPARTMENT DURING A DISCHARGE PROCESS AND TIME TAKEN FOR THE SAME.

Activity Time (Min)	Clearance from Blood Bank	Clearance from Pharmacy	Preparation of the Final Bill	Payment of the Bill	**Total Time**
Patient					
A	10	30	3	2	45
B	1	2	8	5	16
C	2	23	10	10	45
D	1	4	6	10	21
E	15	2	18	5	40
F	5	10	5	10	30
G	3	11	5	5	24
H	5	34	19	10	68
I	3	10	7	5	25
J	2	3	6	5	16
K	14	25	8	3	50

- Average time taken by the Billing Department to carry out the formalities in a Discharge Procedure is 34.54 minutes, which is approximately equal to **35 minutes.**

- The main reason for the delay in the Discharge Procedure was due to Delay in attaining a **Clearance from the Pharmacy.**

CASH PAYMENT CASES

S.No	Advice for discharge(Time)	Final case sheet(time)	Initial Summary	Final Summary	Billing	Payment	Final Discharge	Total Time taken
1	10:05	10:43 AM	10:45 AM	11:05 AM	11:15 AM	12:55 PM	1:30 PM	3hrs,25mins
2	11:30	11:45 AM	2:45 PM	2:55 PM	3:10 PM	3:15 PM	3:17 PM	3hrs 47 mins
3	09:35	11:57 AM	12:10 PM	12:55 PM	1:10 PM	1:15 PM	1:20 PM	3hrs 45 mins
4	09:42	11:40 AM	11:52 AM	12:55 PM	1:25 PM	2:45 PM	2:57 PM	5hrs 14 mins
5	4:45 PM	4:47 PM	4:58 PM	6:00 PM	6:20 PM	6:30 PM	6:40 PM	1hr 55 mins
6	5:00 PM	5:05 PM	5:20 PM	6:43 PM	6:55 PM	7:00 PM	7:10 PM	2hrs,10 mins
7	9:15 AM	9:15 AM	9:15 AM	11:00 AM	12:45 PM	12:58 PM	1:00 PM	3hrs 45 mins
8	4:15 PM	4:20 PM	4:35 PM	4:55 PM	5:05 PM	5:07 PM	5:10 PM	55 mins
9	9:40 AM	11:00 AM	12:35 PM	1:16 PM	1:26 PM	2:45 PM	2:50 PM	5hrs 5 mins
Total Average Time								**4 hrs 20 mins**

CASHLESS PAYMENT CASES (Insurance Related Cases)

S.No	Advice for discharge(Time)	Final case sheet(time)	Initial Summary	Final Summary	Billing	Payment	Final Discharge	Total Time taken
1	11.30 am	11.40 am	11.58 am	1.00 pm	1.10 pm	4.30 pm	4.30 pm	5 hrs
2	9.30 am	10.07 am	10.40 am	10.45 am	11.45 am	11.55 am	12.10 pm	2 hrs 10 mins
3	9.45 am	11.08 am	11.20 am	1.00 pm	3.00 pm	5.30 pm	5.45 pm	8 hrs
4	3.00 pm	3.05 pm	3.10 pm	4.15 pm	4.35 pm	4.45 pm	4.50 pm	1 hr 50 mins
5	9.00 am	10.30 am	12.20 pm	1.45 pm	3.30 pm	4.25 pm	4.35 pm	7 hrs 35 mins
6	9.04 am	10.40 am	11.10 am	11.55 am	12.05 pm	12.10 pm	12.12 pm	3 hrs 8 mins
7	9.05 am	11.00 am	11.30 am	12.30 pm	1.55 pm	4.05 pm	4.30 pm	7 hrs 25 mins
8	9.10 am	11.05 am	10.55 am	12.05 pm	3.27 pm	3.30 pm	3.35 pm	6 hrs 20 mins
9	9.30 am	9.30 am	11.05 am	12.35 pm	1.50 pm	1.55 pm	2.02 pm	4 hrs 32 mins
10	9.15 am	10.15 am	11.10 am	12.30 pm	2.05 pm	2.25 pm	2.30 pm	5 hrs 15 mins
Average								5 hrs 6 mins

References

1. Mac Donald P.,Azrul A,Patrick.S. “Whole system working for hospital discharge”. Section 3.3” and Section 3.4. In: Discharge from hospital: pathway, process and practice. London, England: Department of Health.2000
2. Shepperd S. et al. “Discharge planning from hospital to home (Cochrane Review). The Cochrane Database of Systematic Reviews 2004. Issue 1.

3. Sedgh G.,Hussain R,”Quality Assurance Methodology Refinement Series”. Internal Quality Assurance: Lessons Learned From the PKMI Hospital ,Pilot Program in Indonesia. June 2003

4. Plummer. J.Smith T.W, Susan S. “ Medicare Quality Improvement Organization for Florida Department of Health and Human Services., 170-177

5. Zehner,R.B.Mofitt R. “Research Review on Tackling Delayed Discharge”Journel of hospital quality management. October 2004.Volume 1

6. Peter R,Jessica E,zaltmann G .”Prevention of Delay in the Patient Discharge Process An Emphasis on Nurses' Role” Journal for Nurses in Staff Development – JNSD.October/November 2010- Volume 27- Issue 5 –pp E2-E6
7. Pirani A, Sabza S . “Management of discharges in hospitals” Journal for Nurses in Staff Development - JNSD: July/August 2010 - Volume 26 - Issue 4 - pp E1-E5.