Summer Training at
P.D. Hinduja National Hospital & Medical Research Centre

- **Therapeutic Outcome of Short Stay Services**
- **Cataract Study**
- **Angiography Study**
- **Hysteroscopy Study**
- **Clinical Correlation of CT Scan**
- **Discharge Process Time of IPD Department**

By
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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

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **AAGOSH CHAUHAN** student of MBA Health Management from The IIHMR University; Jaipur has undergone internship training at **P D HINDUJA NATIONAL HOSPITAL, MUMBAI** from **1st April 2016** to **31st May 2016.**

The Candidate has successfully carried out the study designated to his during internship training and his approach to the study has been sincere, scientific and analytical.
The Internship is in fulfillment of the course requirements.

I wish him all success in all his future endeavors.

Col (Dr) Ashok Kaushik
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P. D. HINDUJA NATIONAL HOSPITAL
& MEDICAL RESEARCH CENTRE
(Established and managed by the National Health & Education Society)

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June 10, 2016

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Dr Aagosh Chauhan a student of MBA in Hospital Management from Indian Institute of Health Management Research (IIHMR), Jaipur, did his internship in our Hospital from 1st April - 31st May 2016. During this period his assignment was as follows:

1. Discharge Process
2. Therapeutic outcomes of Short Stay Services
3. Clinical Co relation of CT scan

I wish him all the success in future endeavors.

Joy Chakraborty

Joy Chakraborty
Chief Operating Officer

Note: Granted leave due to injuries from 16/5/2016 - 31/5/2016

ACKNOWLEDGEMENT

The dissertation at P.D. Hinduja Hospital and Research Centre, **Mumbai**, helped in providing me with both, a learning experience as well as a glimpse into the daily managerial level issues of this renowned hospital. I was fortunate enough to interact with the esteemed authorities and staff of the hospital, who have encouraged and guided me with their support and patience.

First of all, I would like to thank Mr. Joy Chakroborty **COO** for providing me an opportunity to carry out my internship at **P.D. Hinduja Hospital, Mumbai**

I want to express my gratitude and sincere thanks to my mentor Dr. Preeti Goraksha**,** Senior Manager Clinical Services Unit, for her constant support and invaluable time-to-time guidance and kind help in completion of this project.

I also want to extend my thanks to **Dr. S.D. Gupta,** Director-IIHMR for incorporating right attitude towards learning and **Col. (Dr.) Ashok Kaushik ,** Dean-Academic and Students Affairs, IIHMR, for helping and supporting me to reach my goals and endeavours.

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I would also like to thank all those who have directly or indirectly supported me towards the completion of this project.

Sincerely,
Aagosh Chauhan
MBA-HM (2015-2017)
ROLL NO. : 0242

CONTENT:-

Abbreviations Used:

- PTCA- Percutaneous transluminal coronary angioplasty
- PCI- Percutaneous coronary intervention
- POBA- Plain old Balloon Angioplasty
- CABG- Coronary artery bypass grafting
- AVR-Aortic valve replacement
- Vn- Vision
- Fu- Follow Up
- CCC- Complex continuing care
- Cath - Catheter
- SSSU- Short Stay Services Unit
- A&E-Accident and Emergency
- TPA- Third Party Administrator
- AKD – Artificial kidney and dialysis
- PFT – Pulmonary function test
- ENT – Ear Nose Throat

PART 1

P.D. HINDUJA NATIONAL HOSPITAL AND MRC

Introduction

The Late Shri.Paramanad Deepchand Hinduja had in 1951 established a charitable hospital under "The National Health and Education Society". Later the Hinduja foundation under the patronage of Sh. S.P. Hinduja, launched an U.S. $30 million (about Rs 35 crore) project to develop this into a modern, technologically advanced Tertiary Care Hospital Medical Research complex. The Hospital project with 342 beds inclusive of 53 critical care beds was dedicated to the memory of late Sh. P.D. Hinduja and opened in August 1986. Today it is one of South Asia's most modern centres for health care. It has a unique collaborations program with Massachusetts General Hospital, Boston and the Washington Hospital Centre, Washington D.C., U.S.A.

History

Behind the ultra-modern and internationally acclaimed in extending world class medical services which are offered at P.D. Hinduja National Hospital & Medical Research Centre, lies a 50 years old dream.

A mission to assimilate the finest in medical and surgical talent and technique, to bring them closer to the common man, it was nurtured in the heart of great founder, **Shri Parmanand Deepchand Hinduja- a hard working philanthropist**, who laid the foundation of the National Hospital, way back in 1951. Today, the P.D. Hinduja National Hospital stands as a concrete testimony to the fulfilment of his dream.

Hinduja Hospital is an **ultramodern multi-specialty tertiary care hospital with a Medical Research Centre in collaboration with Massachusetts General Hospital (MGH), Boston.**

The hospital has an inpatient capacity of 381 beds inclusive of 57 critical care beds in different specialties. As a tertiary care hospital, the services offered are comprehensive covering investigation & diagnosis to therapy, surgery & post – operative care. The inpatient services are complemented with a day centre, out-patient facilities and an exclusive centre for health check for executives.

Location

Located in Mumbai, the heart of the financial and commercial capital of India, it is landmark in itself. Situated in Mahim, Veer Sarvakar Marg, its unique structure and immensity of size and its colour white and yellow edifice immediately distinguishes it from the rest of the surrounding.

Philosophy

The Hospitals philosophy is '**To provide World Class Quality Health Care Services to all sections of the society**' with emphasis on philanthropy. To fulfil this objective the hospital has highly qualified & dedicated medical professionals, paramedics and managerial support staff who regularly enhance their skills to the most contemporary world standards.

Mission

To create Hinduja Hospital as a world class medical institution by delivering quality medical care to all patients as well as continuing medical education to all doctors and training to nurses and by under taking basic and clinical research with a focused on the needs of the country.

Vision

Quality healthcare for all.

Quality Policy

To **our** patients **we** commit **our** best we aim to

- Assure best outcome.
- Build seem less services.
- Create values.
- Satisfied with personalized care.

Pledge to set and practice high standards through an effectively quality management system and ensure that our services always meet the expected requirement of our clients and patients.

Achievements

- The First Hospital Laboratory in India to be **accredited by the College of American Pathologists.**
- P.D. Hinduja Hospital is the second hospital in the city to receive the **NABH accreditation**, on July 1,2009.
- Hinduja Hospital was recently awarded the **IMC Ramakrishna Bajaj** Award for Quality.

Medical Expertise

With over **86 hospital based consultants**; which is a unique feature of the hospital, there is always an experienced specialist available to initiate treatment without delay. The various specialties covered are Cardiology, Cardiothoracic Surgery, Neurology, Neurosurgery, Orthopedics, Oncology, Ophthalmology, Rheumatology, Endocrinology, ENT, Gastroenterology, Pediatrics, Pediatric Surgery, Pediatric Neurology, Urology, Nephrology, Dermatology, Dentistry, Plastic Surgery, Gynecology, Pulmonology, Psychiatry, General Medicine & General Surgery.

Technology Upgrade

1. Gamma Knife- gold standard in Radio surgery, a non invasive neurosurgical tool.
2. **Twin speed MRI**, a revolutionary technology in neurovascular and cardiology imaging.
3. **Bactec NR 730 analyzer** for micro culture.
4. **Gamma Camera / PET scan** which redefines the treatment in cancer management ,orthopedics, neurology and cardiology.

Basic Facts about P.D. Hinduja Hospital

- Bed strength = 402 beds inclusive of 52 critical care
- Bed occupancy rate = 100%
- ALOS = 5.1 days
- Mortality Rate =35 death per month
- Patient to Nurse Ratio = 6:1

- Number of Discharges/month = 2000
- Number of OPD patient/day = 900-1000
- Number of Emergency case = 45-50 / day
- Building of Hinduja Hospital = 3
    - ✓ Hinduja Clinic (OPD) = 4 floors (3+1 floor)
    - ✓ West Block (IPD Block) = 16 floors
    - ✓ LalitaGirdhar Bloc = 8 floors

➢ **<u>Departments of Hinduja Hospital</u>**

- The Departments at P.D Hinduja Hosptal can be differentiated into :

1. **Clinical Services –** Those services which are directly related to medical Practice. These Include:-

    a) **Out Patient Department**
    b) **Indoor Patent Department**
    c) **Accident and emergency Department**
    d) **Short Stay Unit**
    e) **OT services**
    f) **Cath lab**
    g) **Ambulance Services**
    h) **Nursing Services**
    i) **Laundry Services**
    j) **Mortuary Services**
    k) **Laboratory Services**

2. **Non Clinical Services-** Those services which are related to the administrative and non medical side of the hospital. These include:-

    a) **Admission and Billing**
    b) **Medical Record Department**
    c) **Information Technology**
    d) **Engineering Department**

CLINICAL SERVICES

- **OUTPATIENT DEPARTMENT**

Patients who in the considered view of a competent medical professional do not immediately require Hospital admission and who can be satisfactorily treated on a domiciliary basis are classified as Ambulatory Patients, and are commonly referred to as outpatients. Hence the department of ambulatory care is also known as Outpatient Department.

The Hinduja Clinic aims to provide:

- High quality of ambulatory care services to the community in a secured environment.
- Ensuring safe, appropriate interventions, treatment and care which are delivered humanely and efficiently.

Location and Layout

FLOORS	WING 1	WING 2	WING 3	WING 4
Ground Floor	Medical/Surgical/Oncology	Radiation Oncology	AKD Department	Gamma Knife, Medical Reports Delivery Counter and OPD Path Lab
First Floor	Consultants	General Radiology and Ophthalmic	ENT and Medical Records	Consultants
Second Floor	Consultants, Neurology Department	Consultants	Consultants, DC and Physiotherapy	Dental and Consultants
Third Floor	Blood Donor Room, Blood bank and Stat. Lab	Endoscopy, Bronchoscopy, Urodynamic	Cardiac, PFT Lab, Consultants	Executive Health Check up

Table1 – Location and Layout Of OPD Department

Sections and Timings of OPD

HInduja is divided into:

a) Hinduja Clinic: where services are paid to be rendered

(Timings: 8.00 hrs to 20:00 hrs-from Monday to Friday)

(Timings: 8.00hrs to 18.00 hrs-Saturdays)

b) Free OPD : where patients get free consultation

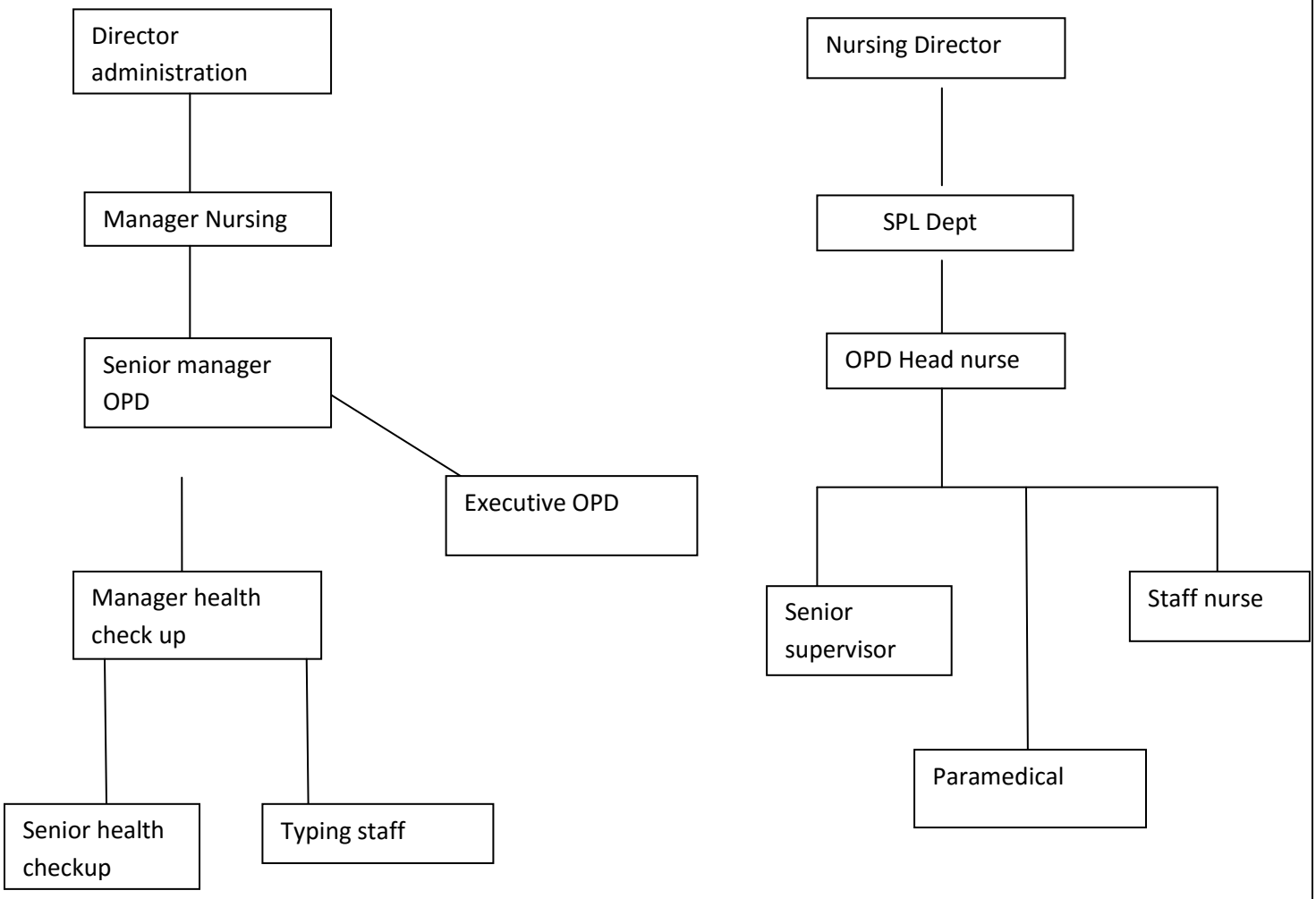
(Timings: as per consultant's schedule)

c) Report Delivery

(Timings: 8:00 hrs to 20.00 hrs- Monday to Friday)

(Timings: 8:00 hrs to 18.00 hrs-Saturdays)

OPD organ gram



➢ IN-PATIENT DEPARTMENT

The IPD Building is a 16 floors building.

- First Floor-admission and billing Department, Accident and Emergency, MRI ,Customer Care
- Second Floor- Cath Lab, I.C.U.(Non-ventilated)
- Third Floor-Operation Theatres(9)
- Fourth Floor-Short Stay services, Stop Over Unit,2 Operation Theatres(for minor surgeries)
- Fifth Floor-CSSD, Medical Stores, Pharmacy
- Sixth Floor-Food Services Department, Provision Stores, Cafeteria
- Seventh Floor-Special and Deluxe Rooms ,PICU(6 beds) and NICU (3 beds)
- Eighth and Ninth Floor-General Wards-median, median-A and Median-B (42 beds each)
- Tenth Floor-Intensive Care unit: ICCU (12 beds) and critical Patients (11 beds)
- Eleventh Floor-Deluxe and Suites(8 beds)-earlier there were 30 general beds
- Twelfth and thirteenth floor-Median-A and Special (26 beds each)
- Fourteenth Floor-(28 beds) Specially for Day care and Kidney transplant patients
- Fifteenth Floor-Suites (2) and Deluxe(12)
- Sixteenth Floor-24 beds for median, Median-a, Special and 9 beds for oncology patients.

➢ SHORT STAY SERVICE UNIT (SSSU)-4th Floor, West Block

- **STAGE-I Patient Selection**

- The patient concerned will be seen by the consultant on OPD basis. For a new patient, there would be necessarily Registration followed by vouchering.
- In the event that the patient meets the selection criteria for Short Stay surgery, the patient has to get on with the Pre admission procedures.

- **STAGE-II Pre-Admission Procedure**

- The patient would proceed to do OT/Bed Booking in SSSU Completion of relevant Lab investigations.

- **STAGE-III Pre Operative Stage**
- Based on the consultant's decision for Preoperative anaesthetist check up, fitness for surgery is given by the anaesthetists.
- Patient would follow up with concerned surgeon with lab reports/relevant investigation reports/fitness certificate.
- In the event that the patient is fit to operate, the consultant can choose to give the Consent form for the same at this stage.

- **STAGE-IV Pre-Admission**
- Patients will be asked to report at the Reception desk in Casualty area 1 hr prior to schedule timing.A designated CCC will then escort the patient to the SSSU billing area.

- **STAGE-V Admission**
- Following billing formalities, the patient will be taken to the SSSU. The nursing staff informs the OT desk/concerned Consultant/Registrar about the arrival of the patient.
- The SSSU staff nurse will coordinate transport of the patient to the OT at the scheduled time.
- Following surgery the recovery area staff nurse will keep the SSSU staff nurse informed about the patient's status. After the patient has been shifted to the recovery area, concerned surgeon would need to visit and complete the discharge formalities including preparation of discharge.
- Admitting Consultant/nominated medical officer will examine the patient and will give the order to physically discharge the patient. The SSSU nursing staff would discharge the patient, based ONLY on written order from the concerned authority.

- **STAGE-VI Discharge**
- Following recovery in SSSU and discharge, the patient will be shifted in wheel chair/stretcher; herein the patient will be accompanied by the CCC till Casualty exit. The CCC will also enquire on the necessity of clinical care for the patient, and if so, details of "Care at Home" will be given.

- **OPERATION THEATRE**

Intrduction:

- P.D Hinduja boasts of a ultra modernized O.T, which provides solutions to different surgeries .
- Annually around 10000 operative procedures are carried out at Hinduja Hospital.

Location and layout:

- It is based on the 3rd floor of the IPD block and consists of :-
  1. **9 Operation Theatre**
  2. **4 Hand scrubbing areas (2 between 1 OT).**
  3. **1 Clean utility room**
  4. **1 Dirty utility room**
  5. **1 Pre operative room**
  6. **2 Separate changing rooms for gents and ladies.**
  7. **1 Equipment room**
  8. **1 Doctors lounge**
  9. **1 OT manager cabin**
  10. **1 Billing and admission counter**

Features:

- The 9 operation rooms cater to all major surgeries like Orthopaedics, Neurosurgery, Cardiac Surgery, Oncosurgery, ENT, Urosurgery, Abdominal, Laproscopic, Gynaecological, Kidney and Liver transplants.
- 3 of the OT's are dedicated to oncology based services due to the high number of cancer patients.
- The whole OT consists of a laminar airflow designed Air conditioning system and HEPA filter to eliminate OT acquired infection.
- It is divided into two zones:-
  1) Sterile zone
  2) Clean zone
- Besides there are 2 dedicated operation theatres for **Short Stay Services**

➢ ACCIDENT & EMERGENCY

Introduction

- The A & E Department is the face of any hospital, which works around the clock through the year.
- Department is manned by highly trained medical & paramedical staff & it serves all the immediate emergency medical Situations.
- It can be divided into the following areas-Accident and Emergency, Casualty Centre and Minor OT.
- 4 bedded Accident & Emergency department along with 2 casualty centre beds is an ultra-modern facility well-equipped with sophisticated & advanced equipment specialized & skilled doctors and nurses is highlight of the department.

Scope of Services

- The department is responsible for treatment of emergency cases.
- The department is responsible for informing the police in cases of traumas, poisoning, suicide, homicide, rape, assault etc.
- Notification of all notifiable diseases to BMC .Ex Tb
- A & E is a very important constituent of the disaster management team-internal as well as external.
- Transfer of patients.
- First aid camps/teams
- Responsible to arrange for the ambulance services for transportation or transfer of patients. It also in arranging Hearse services.
- The Mortuary is also maintained by the Emergency department.

➢ CATH LAB.

- **Introduction**
- Cath Lab is located on the second floor of IPD building. It is well equipped to perform various heart related procedures such as Angiography, Angioplasty, and Pacemaker etc. Two types of packages are provided-Radial Package and Femoral Package. It has a separate admission counter, which takes admissions till 9 A.M. There are on an average 8-10 cases /day.

- **Scope of services**
- -Diagnostic Services
- -Therapeutic Services

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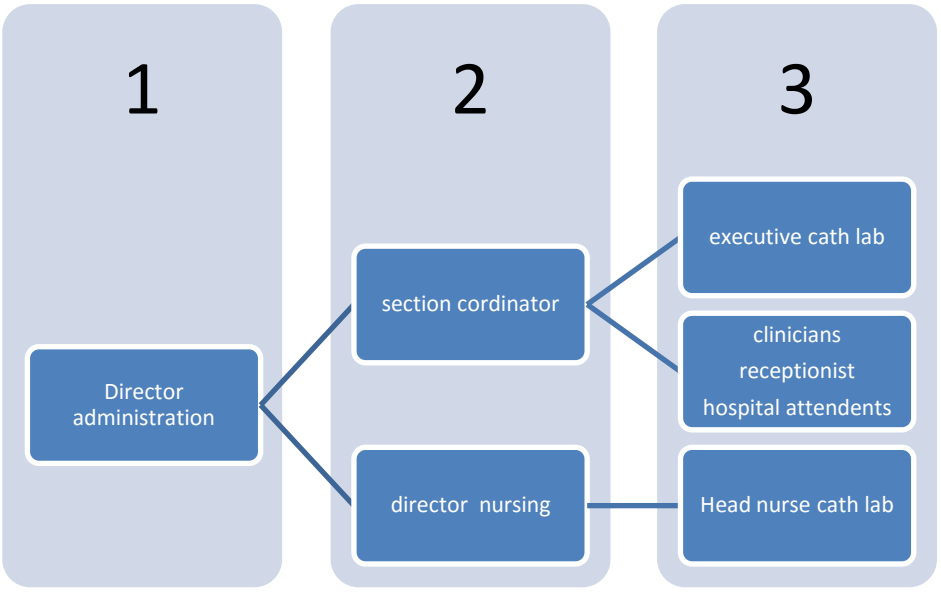
Organ gram



Billing Of Cath Lab:

Primary Responsibility: Technician, Receptionist, Billing Clerk

- After completion of the procedure, receptionist does the entries of the services rendered for billing
- O.T. Details
- Cardiologist/Anaesthesia Details-
- Consumable/equipment details
  - Categorized into : Consignment and Stock items
  - Consignment items charged after preparation of GN number and by intimating the Medical store and Material Department does entries at the billing counter.
  - Catalogue number of the items is put by the receptionist and the items are selected by the drop down menu.
  - Voucher number is generated.
- Sending of procedure Requisition Slip & Cath Lab Charge Sheet

Procedure for Admission

- Primary Responsibility: Clerk from Admission Counter, Receptionist
- Admission for IPD Patients:
    - Patient is admitted to the hospital on a written note either from Cardiologist Admission cum O.T. booking form, which state about the demographic details of the procedure.
    - Staff at the admission counter does the admission formalities.
    - Visitor pass is issued then and Admission deposit is taken through cash/credit card/pay order/Demand draft/cheque and service is generated.
    - Then the O.T. clearance slip is issued for the procedure.
    - Admission for day care procedures i.e. Angiography Packages-Radial and Femoral
    - In the morning 7:30 am to 9:30 am all day care admission is being procedure in cath lab, afterwards same is done for Accident and Emergency.

Working

- Primary responsibility: Admission billing staff, Receptionist
- Working can be done in either of the following ways:
    - Direct call from the cardiologist/clinical associate
    - By patient's on the basis of consultants letter/admission cum O.T. booking form
    - By receptionist at Cath lab
- Reservation done by cardiologist/clinical associate-Depending on the type of procedure, cardiologist/clinical associate calls at the booking counter/accident & emergency counter at admission and billing department.
- Reservations done by patient- Depending on the type of procedure-Patient/Relative approaches booking counter /accident and emergency counter at admission and billing department.
- Reservation done by receptionist-
    - Majority of them done by this
    - Cardiologist calls the reception counter and gives the patient's HH number details,name, demographic details, date of admission, date of procedure, bedclass, slot if any etc.
    - Depending on the type of procedure i.e. Day Care or Routine cares, receptionist calls the respective counter for booking all day procedures booking is being done at the accident and emergency counter/booking counter.

- Reservation number is then generated and staff gives that number to the receptionist.

Discharge

Type of Procedure	Location and Discharge Process
Day Care Angiography-Radial	Accident and Emergency counter
Day Care Angiography-Femoral	Accident and Emergency Counter
Therapeutic procedures-Femoral/Angioplasty/BMV/ Post plasty thrombosis/pacemaker implantation	Cashier counter of the Admission and Billing department

AMBULANCE SERVICES

Introduction

Ambulance services under the purview of the Accident & Emergency department. Hospital offers round the clock ambulance services, geared to meet any emergency – surgical or medical.

There are two types of Ambulance services.

- Cardiac ambulance (Advance care ambulance)
- Non Cardiac ambulance
- The cardiac ambulance serves all critical all critical patients coming in from
    - Nursing homes
    - Office
    - House
    - Accident site- RTA
    - All critical patients who requires medical intervention immediately
- The Non cardiac ambulance serves patients who are

- Discharged
- Planned admissions
- For appointments to Hinduja clinic.

Air Ambulance

Air ambulance is a blessing when the critical patient is in a remote area and urgently needs to be transferred to a tertiary care centre like Hinduja hospital for specialist treatment. Hinduja hospital, in its continuous endeavour to provide quality health care for all now offers air ambulance services for seamless transfer of national and international patients.

NURSING DEPARTMENT

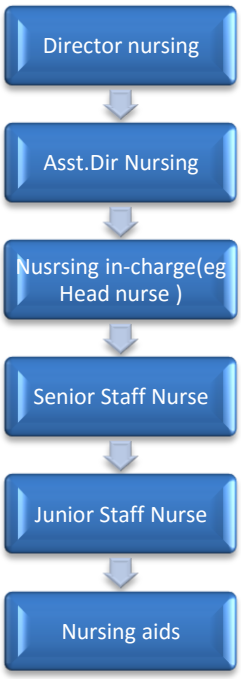
Introduction

Hinduja hospital has a very efficient nursing department. This department is divided into two categories, **Clinical** and **Administrative.** It also boasts of Special Nurses.

Clinical:

The division deals with administration of clinical services to the patients. The Hierarchy in Clinical Nursing division is:-

Organogram of the nursing department



Administrative:

The Administrative Nursing Division comprises of staff development. It deals with providing continuous training with formal structural programs and informal training. Induction Training and On-job training are also a part of staff development. Once a week, mainly on Thursdays, in-house training is given to the nurses.

Special nurses

The special nurses are trained in a particular area, and are assigned to work in that area only. There are 8 special nurses-

1. Diabetic Nurse Educator
2. Oncology Nurse
3. Infection Control Nurse
4. Breast Clinic Nurse
5. Stoma Care Nurse
6. Pain Management Nurse
7. Diabetic Foot Care Nurse
8. Home Care Nurse

- The patient to nurse ratio in the hospital varies from 4:1 to 6:1

- The nurse work in the OPD, IPD, Radiology, S1.
- In the IPD building, at each floor nursing stations are present in each wing. The nurses operate from these areas.

Education and training facility for nurses

In line with its continued dedication towards education and training in the field of healthcare, particularly the preparation of highly competent nursing professionals, the Board of Management has upgraded its school of nursing to a fully fledged **College of Nursing**. Prior to this, the hospital successfully conducted over two decades, a recognized three and half year diploma in General Nursing & Midwifery (GNM) for female candidates. Its students over the years excelled in academics, co- curricular, extracurricular activities and clinical practice.

➢ LAUNDRY SERVICES

- The importance of a clean, hygienic, un-stained and defect free linen for patient care has been stressed upon since the very inception of hospitals. Clean linen delivery in a timely manner to healthcare areas is important.
- Laundry service is responsible for providing an adequate, clean and constant supply of linen to all users. The laundry facilities is designed, equipped and ventilated to reduce the dissemination of microorganisms on to finished textiles. The basic tasks include: sorting, washing, extracting, drying, ironing, folding, mending and delivery.
- Cleaning of soiled linen collected from patient care areas.
- Storage and distribution of clean, unstained and defect free linen to various areas of hospitals like floors (for patients), CSSD (for sterile linen supply to operation theaters), housekeeping and food service department (for conference and other functions).
- Cleaning, storage and distribution of uniform to all employees and consultants.
- Specific procedure for handling, including labeling of materials contaminated with hazardous materials or body fluids.
- Policies and procedures for cleaning of contaminated materials.
- Storage and distribution of curtains across the hospital facilities.

➢ MORTUARY SERVICES

- Mortuary at Hinduja hospital is managed by A & E department and security and is maintained by Housekeeping department. It currently has capacity to keep 6 bodies.

- Only inpatient bodies are allowed to keep at Mortuary.
- Mortuary is also used to keep Amputated body parts.

➢ LABORATORY SERVICES

- The laboratory services at Hinduja hospital are above par excellence.
- P.d Hinduja hospital and MRC is the first hospital laboratory in India and SAARC countries to be accredited by College of American pathologists.
- It has also earned the accreditation of the "National Accreditation Board of Testing and Calibration Laboratories" in 2013.
- Services included under Lab Medicine :-

  - Biochemistry

  -Blood Bank

  -Hematology

  -Histopathology & Cytopathology

  -Immunoserology

  -Microbiology & Serology

  -Radioimmunoassay (RIA)

  -Blood Bank - HLA

  -Molecular Biology

- The samples are taken from all the units of the hospital and taken to the main laboratory in the L.G building by transporters in a Black sealed briefcase, who work in three shifts throughout the day.

ADMINISTRATIVE SERVICES

➢ ADMISSION & BILLING DEPARTMENT

Introduction:

Admission & Billing Department in its endeavour ensures:

1. To provide excellent quality health care to all .
2. To provide a friendly, compassionate, humanely & satisfactory atmosphere during the stay of the patient at the hospital.
3. To create an environment of high quality patient care, treatment & management that comes through with the result effectively & efficiently starting from admission to discharge.

Following are the services offered----

1. Registration
2. Booking/Reservation –Bed & Operation theatre
3. Admission
4. Billing
5. Discharge
6. Accident and emergency counter
7. TPA help desk

➢ MEDICAL RECORDS DEPARTMENT

Introduction

A medical record, health record, or medical chart is a systematic documentation of a patient's medical history and care. The term 'Medical Record' is used both for the physical folder for each individual patient and for the body of information which comprises the total of each

patient's health history. MR traditionally compiled, stored and maintained by MRD of the P.D. Hinduja hospital from 1987.

Terminal digit system of files is most secure and safe system as far as the identification of the file is concern. New Registration forms are kept at various stations i.e. OPD, Casualty and admission counters etc.
Patient or next of kin fill up the form for all demographic details and puts the signature, and then the entry is done by the receptionist at counter in the system.

The patient is given a ID card which has 6 digit HH no, and name, sex, age etc. The file has 6 digit numbers where last 3 digits are color coded. The filing system is dependent on the last 3 digits; hence total confidentiality of the patient's file is maintained.

The information contained in the medical record allows health care providers to provide continuity of care to individual patients. The medical record also serves as a basis for planning patient care, documenting communication between the health care provider and any other health professional contributing to the patients care, assisting in protecting the legal interest of the patient and the health care providers responsible for the patients care, and documenting the care and services provided to the patient.

The most basic rules governing access to a medical record dictate that only the patient and the health care providers directly involved in delivering care have the right to view the record. The patient, however, may grant consent for any person or entity to evaluate the record.

Research, auditing and evaluation

Individuals involved in medical research, financial or management audits, or program evaluation have access to the medical record. They are not allowed access to any identifying information, however the patients or their representatives the right to a copy of their record, except where information breaches confidentiality (e.g. information from another family member or where a patient has asked for information not to be disclosed to third parties) or would be harmful to the patient's well-being (e.g. some psychiatric assessments).

Objectives

1. To aid in the diagnosis and treatment of patient
2. To provide written documentation of directed medical care and to show services were medically necessary
3. To assist in the research of disease and injuries so other patients may benefit from previous patient care

4. To substantiate procedure and diagnostic code selection for research purposes
5. To comply with legal requirements
6. To legally defend the physician in the event of lawsuits

Location & layout

The MRD is located on the 1st floor, 3rd wing of the OPD. It is spread over 1500 sq.ft. with additional area of allocated for the storage of records.
The department has over 80,000 active files in the OPD, while are being maintained in archived form for legal/research purposes.

Nature of activity

1. Allocation of H.H. No.
2. Collection of computerized list of Discharged / death cases
3. Collection of health record charts from wards / casualty
4. Assembling in standard order
5. Deficiency check
6. Medical coding
7. Indexing
8. Filing of various reports
9. Operation procedure
10. Retrieval and issuance of files
11. Receiving and storing of files
12. Medical certificates, injury certificate, correspondence of L.I.C claims and legal matters etc
13. Third party administration queries and any other insurance companies queries pertaining to the patient illness and its duration

INFORMATION TECHNOLOGY

Introduction

Primary purpose of Information Technology department is to:

- Cater to any needs of computerization within the organization
- Maintenance of existing hardware and software
- Develop a user friendly and automated software system

Today, I.T. department is the backbone of hospital operation which facilitate in achieving the quality service, performance and maximum results. The department is responsible for providing highly automated user friendly and zero defect computer based solutions as per the requirements of the Hospital. This department works under the direction and supervision of the Dy. Director (Information Technology)

Scope of services

I.T department has three sections.

- Software section
- Hardware section
- Telecom section

1. Software section is responsible for system operation & control, software maintenance, controlling database backups & their libraries and to provide ongoing assistance to the application users. It is also responsible for system recovery in case of failure and for recording and monitoring down time of the system.
2. Hardware section is responsible for hardware functions of the system with zero downtime and high availability. It also fulfils the hardware related requirements from users and supports there systems.
3. Telecom section is responsible for implementation of new technology and maintenance of telecommunication operations of the hospital. Telecom section also looks after the maintenance of wireless system and paging system.

ENGINEERING DEPARTMENT

Introduction

Engineering and Maintenance Department is manned for 24 hours for keeping round the clock vigil on the proper functioning of plant engineering equipment coming under the purview of

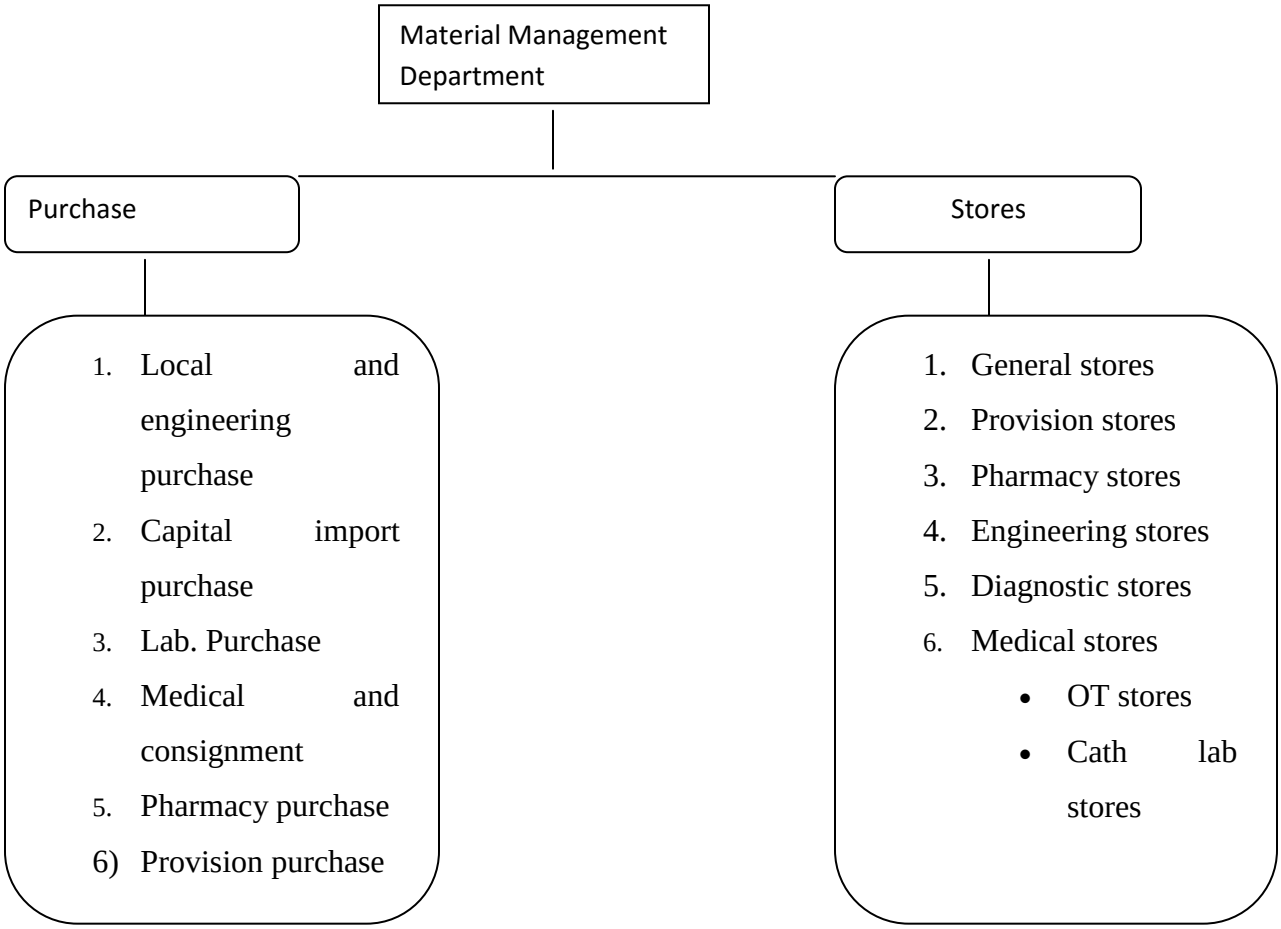
the department. This covers maintenance of major supplies to the hospital such as power, water, medical gases, air- conditioning and related equipment supporting the same, which form the life line to the hospital's activities.

The responsibilities of the department are:

1. Operation and maintenance of plant equipment installed in the basement of main building and various other areas to support the normal functioning of the hospital.
2. Repair work of equipment related to the department's responsibility.

➢ MATERIAL MANAGEMENT

- The materials management department aims at maintaining uninterrupted supply chain without effecting cost, quality and service parameters.
- The materials management department can be classified majorly under 2 heads i.e. purchase department and stores.



➢ Pharmacy

- Hinduja Hospital runs an inpatient pharmacy which works 24/7 throughout the year and consists of Dispensing area and store. It is located on the 5th floor of the new building. The Pharmacy also has a formulary with around 3000 items mentioned in it and also a DTC (Drug and therapeutic committee), with senior doctors, nurses and pharmacists as its members. In the pharmacy no cash transaction take place and no relative has to go there, the nurses enter the medications required into the system from the floors, and then a floor wise consolidated report is taken and all the items are sent together in 7 rounds to the nursing station at each floor by the pharmacy attendants. The patient is billed from the pharmacy on his HH No. and the information is sent to billing department directly. The pharmacy keeps only 1 brand of the drugs, which is generally the research molecule. They also have a provision for narcotic drugs, which they store in a lock according to the narcotic drugs and psychotropic substances act. The narcotic prescriptions are kept in a record. The hospital formulary is updated periodically. A pharmacy news bulletin is also prepared and is given to the doctors.

- The inventory control methods used are:

1. ABC- Always better control
2. HML-High Medium Low
3. VED- Vital essential Desirable
4. GOLF-Government Open Local Foreign Product
5. SDE- Scarce Difficult Easy
6. FSN- FAST, SLOW and Non- Moving

PART 2 – The Projects

- Therapeutic Outcome of Short Stay Services
- Cataract study
- Angiography Study
- Hysteroscopy study

- Clinical Correlation of CT scan

- Discharge process Time of IPD department

1) **Project on therapeutic outcome of short stay services**

Introduction:

- Therapeutic outcome can be considered as an effect or a result of a medical treatment or procedure, which are to be judged as desirable and beneficial.
- Any result whether expected, unexpected or an unintended consequence should be taken into consideration.
- It is done to assess the effectiveness of a particular procedure.
- Short stay department of the hospital is the one that deals with procedures that require only a day stay in the hospital.
- Procedures coming under the Short stay services at PD hinduja hospital ,which were studied for the therapeutic outcome were:-

1. **Cataract surgery**
2. **Angiography**
3. **Hysteroscopy**

a) - Therapeutic outcome study of the cataract Surgery-

AIM:

- To study the therapeutic outcome of the Cataract surgery.

OBJECTIVE:

- The objective of the study was to understand the therapeutic outcome of Cataract by assessing the difference between the before and the after conditions of the patient after going through the treatment.
- To assess the efficiency of the respective doctors.

SAMPLING:

- The Total number of cases studied was 60 out of 189, which were picked by systematic random sampling and the duration of the study was JAN-MAR 2016.

DATA SOURCE:

- Cataract reports

DATA MODULE:

- eMRD software

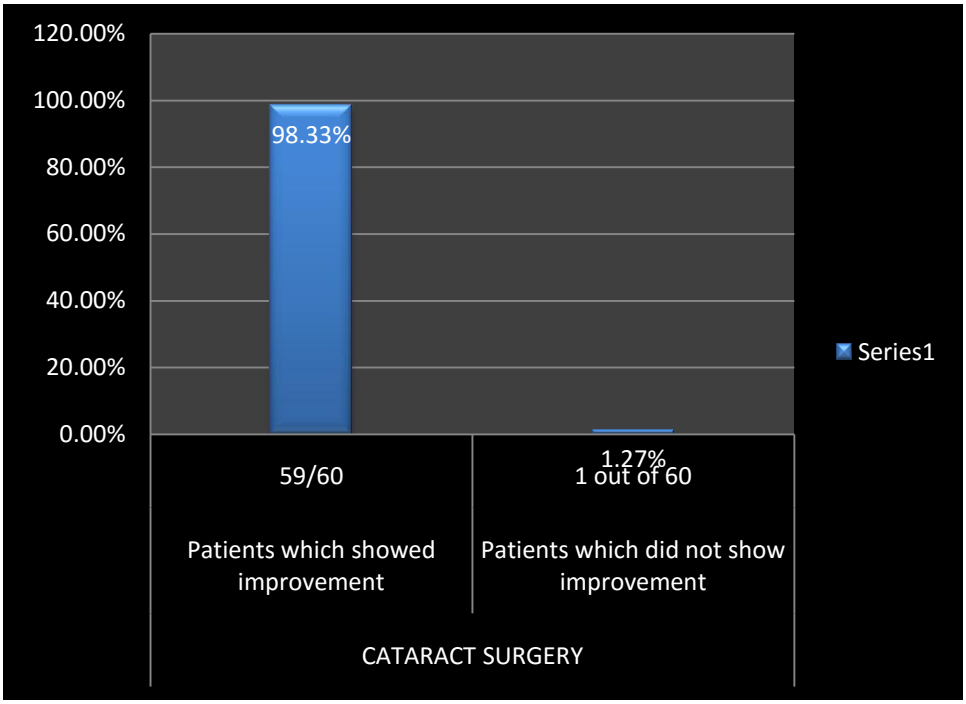
PARAMETERS USED:

- Refractive Index – Before and after
- Vision with glasses Vn(aided) – Before and after
- Date of procedure and Follow up
- Patient name
- Age/Sex
- HH number

DATA INTERPRETATION AND OBSERVATION:

- Out of the 60 samples seen ,it was concluded that:-
  1) Cases which showed improvement were= 59.
  2) Case which did not show improvement was =1.

- So, The success rate of the procedure was =98.33%



The doctor conversion details are as follows:-

1 **Dr Nisheeta Agarwala** – 71 cases in total, of which 22 were picked up. In this,

- Cases with improved results = 21.
- Cases with no improvement= 1.

  So, Success rate is=95.45%

1) **Dr Nayak Barun K**- 118 cases in total, of which 38 were taken. In this,

- Cases with improved results=38.
- Cases with no improvement=None

  So, Success rate is 100%

b) - *Therapeutic outcome study of Angiography* –

AIM:

- To study the therapeutic outcome of Angiography**.**

OBJECTIVE:

- The objective of the study was to understand the diagnostic outcome of Angiography by assessing the line of action taken by the patient after going through the procedure.
- To assess the efficiency of the respective doctors.

SAMPLING:

- Total No of samples studied are 71 for the duration Jan-Mar 2016, which were picked by Simple Random sampling.

DATA SOURCE:

- Angiography reports

DATA MODULE:

- eMRD software

PARAMETERS USED:

- Treatment advised
- Present Status
- Date of procedure and Follow up
- Patient name
- Age/Sex
- HH number

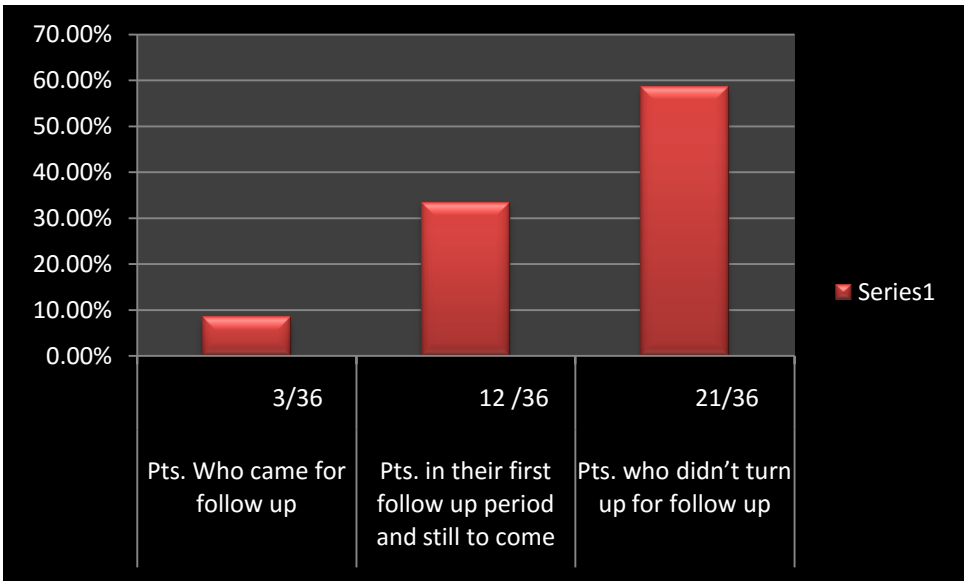
DATA INTERPRETATION AND OBSERVATION:

- The 71 samples studied were distributed in the following manner:

1. Medical Management cases – 36
2. Angioplasty cases.(PTCA ,PCI ,POB)-22
3. Open chest surgeries. (CABG,AVR)-13

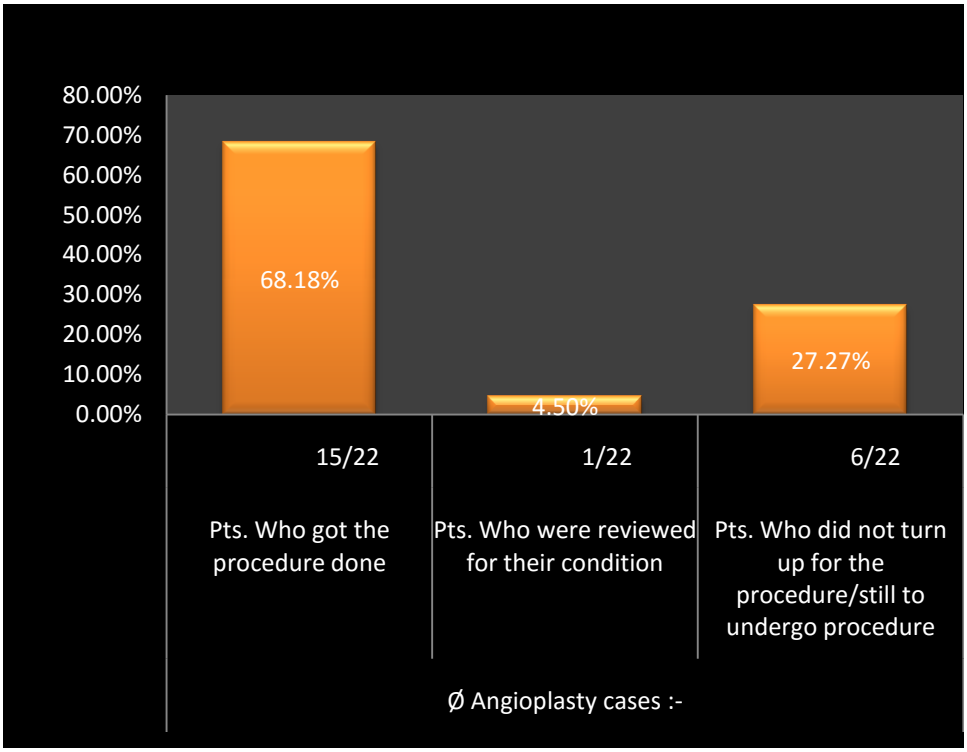
- **Medical Management cases:-**

Pts. Who came for follow up	Pts. in their first follow up period and still to come	Pts. who didn't turn up for follow up
3/36 % form = 8.33%	12 /36 % form=33.33%	21/36 % form=58.33%



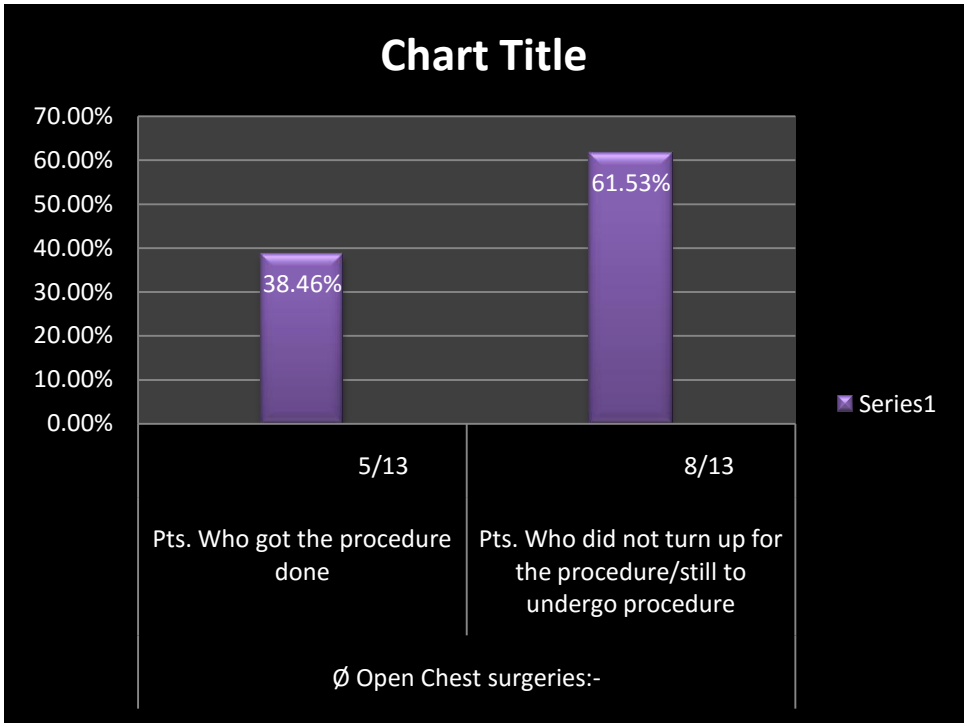
- **Angioplasty cases :-**

Pts. Who got the procedure done	Pts. Who were reviewed for their condition	Pts. Who did not turn up for the procedure/still to undergo procedure
15/22 % form= 68.18%	1/22 % form=4.5%	6/22 % form=27.27%



- **Open Chest surgeries:-**

Pts. Who got the procedure done	Pts. Who did not turn up for the procedure/still to undergo procedure
5/13 **% form=38.46%**	**8/13** **% form=61.53%**



Doctor Conversion Details:-

- **DrPillaiSudhir:** Cases Seen -16
  - Medical management cases-9 of which only 1 came for follow up.
  - Angioplasty cases -3 of which 2 got the procedure done.
  - Surgery cases-4 of which 1 got the procedure done.
  - So conversion rate is 25 %.

- **Dr Ponde Chandrashekar**: Cases seen 18
  - Medical management cases-7 out of which only 1 came for follow up.
  - Angioplasty cases-7 out of which 5 got the procedure done.
  - Surgery cases-4 out of which 2 got the procedure done.
  - So conversion rate is 44.44%

- **Dr Kumar Navneet**-Cases seen 31
  - Medical management cases-16 out of which only 1 came.
  - Angioplasty cases-11 out of which 7 got the procedure done.
  - Surgery cases-4 out of which 1 got the procedure done.
  - So conversion rate is 29.032 %.

- **DrRajani Rajesh**- Cases seen 5.

- Medical management cases-4 out of which zero cases turned up.
- Angioplasty cases-1 and the patient came up for the procedure.
- Surgery cases- No surgery cases.
- So conversion rate is 20%

➢ **Dr Kane GR** – 1 surgery case was seen and the patient turned up for the procedure. Conversion rate 100%.

c) - Therapeutic outcome study of Hysteroscopy –

AIM:

- To study the therapeutic outcome of Hysteroscopy**.**

OBJECTIVE:

- The objective of the study was to understand the diagnostic outcome of Hysteroscopy by assessing the line of action taken by the patient after going through the procedure.
- To assess the efficiency of the respective doctors.

SAMPLING:

- Total No of samples studied are 29 for the duration Jan-Mar 2016, which were picked by Simple Random sampling.

DATA SOURCE:

- **Hysteroscopy reports**

DATA MODULE:

- **eMRD software**

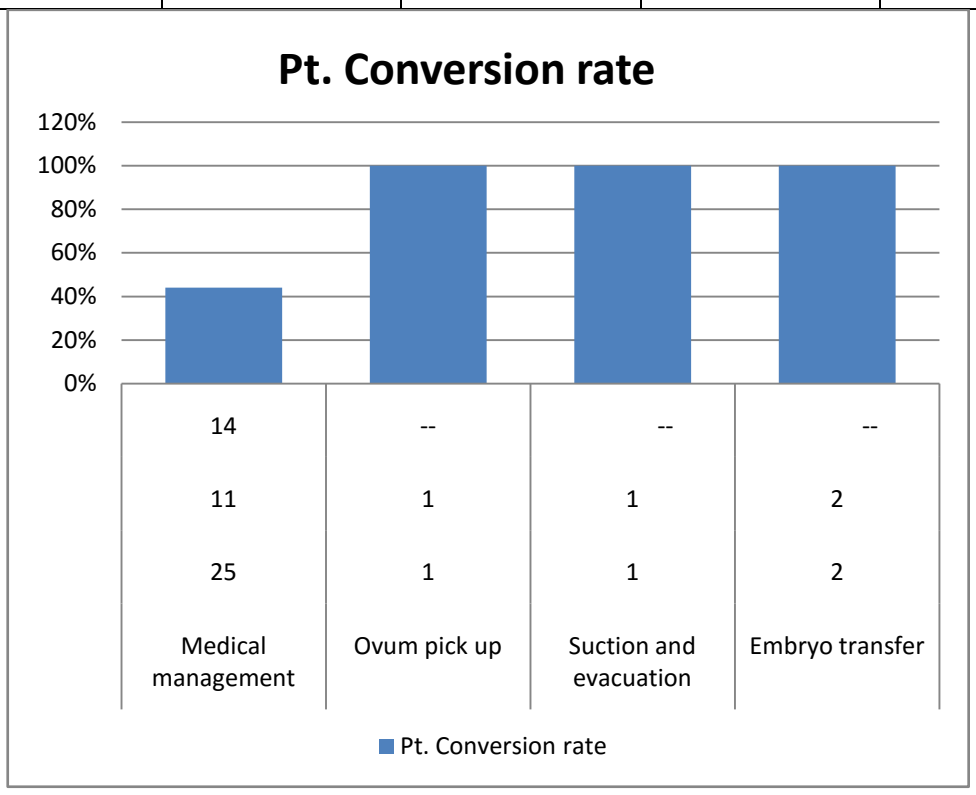
PARAMETERS USED:

- **Treatment advised**
- **Present Status1**
- **Date of procedure and Follow up**
- **Patient name**
- **Age/Sex**
- **HH number**

DATA INTERPRETATION AND OBSERVATION:

- Patients who came for the follow up = 15 i.e. 51.72%
- Patients who didn't come for the follow up = 14 i.e. 48.28%
- **The 29 samples studied were distributed as:**

Type of case	Total	Came for the FU	Did not come for the FU	Pt. Conversion rate
Medical management	25	11	14	11/25 i.e. 44%
Ovum pick up	1	1	--	100%
Suction and evacuation	1	1	--	100%
Embryo transfer	2	2	--	100%



Graphical representation of Pt. conversion

- Doctor Conversion details:-

1) Dr DJ Vora- Total cases seen were 9, advised for medical management and all of them came for review.
   - Doctor Conversion rate is 100 %
2) Dr K Zaveri- Total cases seen were 4, advised medical management and none of them came back for review.
   - Doctor conversion rate is 0 %
3) Dr Indira Hinduja –Total cases seen were 16 of which:
   - Medical management cases – 12 of which 2 came for review.
   - Suction Evacuation case- 1 and the patient got the procedure done.
   - Ovum pick up case -1 and the patient got the procedure done.
   - Embryo transfer case- 2 and both got the procedure done.
   - So, Doctor conversion rate is 6 /16 = 37.5 %

Recommendations for the complete study altogether:

1) **A through follow up of the patients who did not turn up for their return visit to the hospital should be done and the reason for their absence should be found out and worked upon.**
2) **A reminder through mail, SMS or a telephonic call one day prior to the appointment should be made.**
3) **Patients who have underwent and who need to undergo major procedures should be monitored at regular intervals.**
4) **Patients who did not show improvement after treatment should be evaluated and the reason should be found out.**

Conclusion:

- The Therapeutic outcome of the short stay services at P.D hinduja hospital has been more then beneficial and effective with a high percentage of positive results.

- But the recommendations above can help the hospital in finding out its hidden problems and lead to better patient satisfaction.

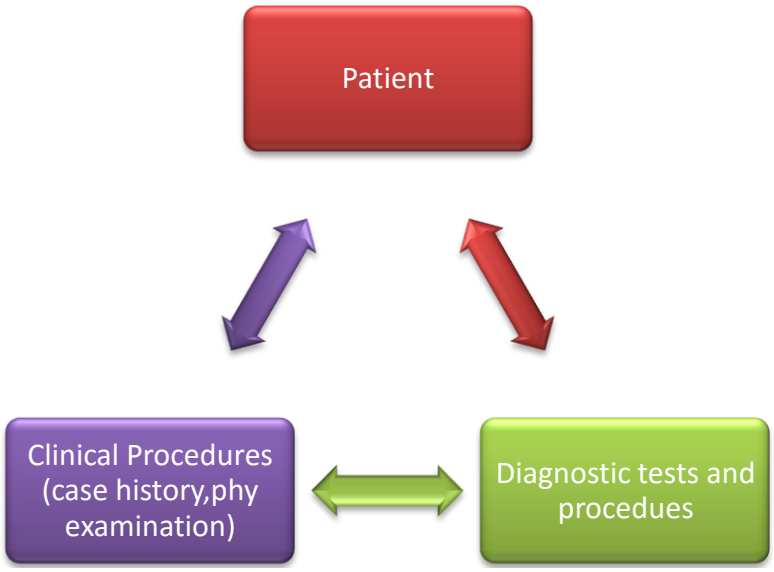
- And thank you for letting me a part of this study.

CLINICAL CORRELATION WITH COMPUTERIZED TOMOGRAPHY SCAN

Introduction of the topic:-

- Clinical correlation is a medical process physicians use to help them make a diagnosis on a patient to treat his or her condition.

- Clinical correlation is used after a diagnostic test – such as an X-ray, biopsy, or MRI – shows something on an image or tissue scan that is suspicious, abnormal, or notable. The physician then refers to the patient's age, past medical history, physical health, clinical tests, and symptoms to determine a diagnosis based on correlating (comparing and contrasting) the clinical findings of the patient. Clinical findings are observable conditions of a disease or condition with symptoms as reported by a patient.



The Relation between the processes of Clinical correlation

Aim:-

To Study the clinical correlation of the radiology findings with either the diagnosis or differential diagnosis

Objective:-

1. **To co relate with the differential diagnosis and the radiological finding of the CT scan report of patient.**

The objectives of the study was to assess how dependable clinical and radiological features are in establishing a diagnosis of special diseases and to identify other condition which may have clinical and radiological feature similar to those seen in patient with special diseases.

SAMPLING AND METHODOLOGY:-

- **SAMPLING**:
  Random sampling was done for one month
- **DATA SOURCE**:
  Radiology reports
- **DATA MODULE :**
  1. Care 2000
  2. e-MRD Software
- **SAMPLE SIZE**: -
  120 for month of August 2015
  Determination of sample size:-

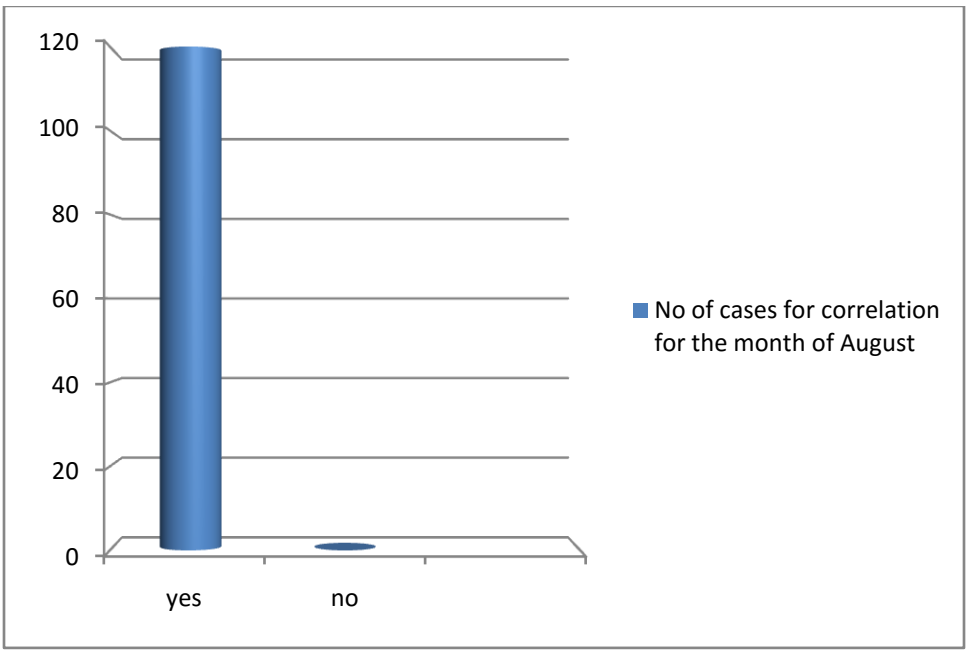
Each sample was analyzed on the basis of patients chief complaint , Radiological findings, Provisional diagnosis and Final diagnosis. The following table shows the parameter on which the data was completed .

Parameter used for Clinical Co-Relation :

1. Date
2. Patient name
3. Age/Sex
4. HH No
5. Admission No

6. Case Report
7. Radiological Findings
8. Provisional Diagnosis
9. Co-Relation
10. Remarks

Data Interpretation :



Total no of Cases studied were 120 of which all the cases showed correlation i.e 100% result.

Observation:

- Software Care2000 and EMRD are very useful in getting all the details of a patient on one click through his HH number.
- The efficiency of the doctor's is very high on their diagnosis.
- Location details of IPD patients do not match sometimes with the location details written on voucher of the patient.
- Some cases seem to have multiple voucher numbers, which are found to be blank.
- The Provisional diagnosis on some reports is not mentioned.
- The CT report on Care2000 is not complete in some cases, as only the first page of the report is seen.

Suggestions:

- Every voucher should contain voucher number and date and that extra blank voucher numbers on the Care2000 software should be removed.
- Provisional diagnosis should be entered properly in the IPD records.
- Every voucher should contain patient's chief complaint.
- Location of the IPD patient's should be cross-checked before test is conducted.
- The complete CT report of the patient should be made accessible in Care2000 as that leads to better understanding of the case.

Conclusion:

- The high efficiency of the doctor's in diagnosis shows the clinical excellence of Hinduja hospital but some of the few suggestions above can make the process of correlation much more effective and simpler.
- Thanking you for letting me be a part of this study.

PROJECT ON DISCHARGE PROCESS TIME

OF IPD DEPARTMENT

Introduction:-

- Many people admitted to Hospital fear the experience of hospitalization and of losing their autonomy, they want to rerun to living their previous lives as soon as possible and every effort should be made to help them do so.

- Discharge from a hospital is a process and not an isolated event .It should involve the development and implementation of a plan to facilitate the transfer of an individual from hospital to an appropriate setting.

Purpose:-

- The purpose for the study is to know the amount of time taken for discharge process in the hospital and factors affecting it.
- Discharge process is a time consuming process in every hospital and it becomes an important area for improvement. Reducing the discharge time also leads to patient and attendant satisfaction level and thus improving the quality of process in the hospital.

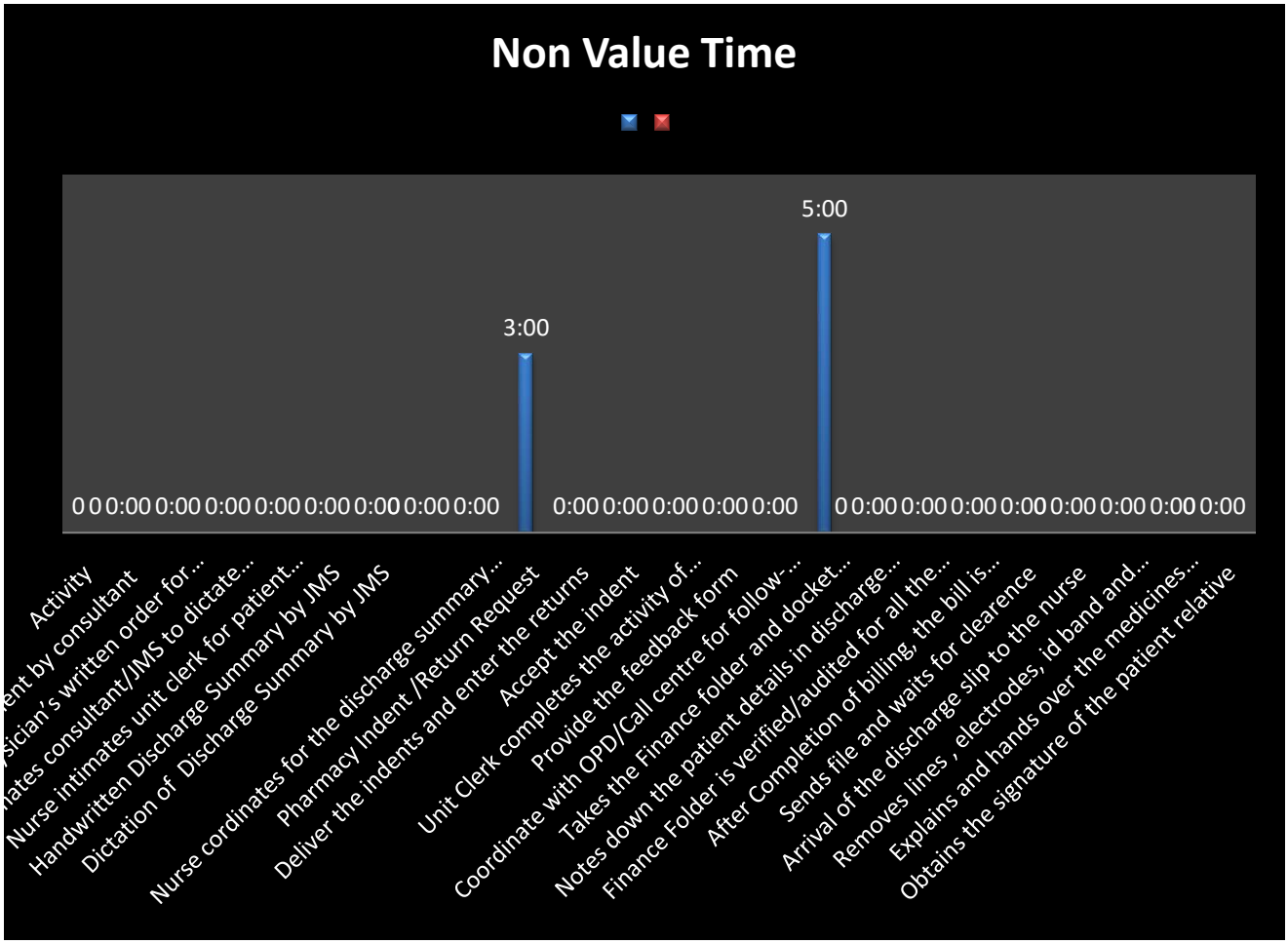
Methodology:-

- It was a 4 day study in the month of May, done in both of the sections of the hospitals which included the S1 or the LG building and the west block.
- A total of 12 patient discharge processes were studied including 6 TPA patient discharge.
- 5 patients were from the West block and 7 from S1 building.
- Collection of data started from the point of final discharge process of patient.
- Timing of discharge intimation by doctor was taken into account .
- The data collection was over, once the final sign of the patient was taken on the discharge slip.
- Physical leaving of patient from the ward was not accounted.

-Processes which were noted were-

- Verbal Intimation from the doctors
- Filing and checking of documents.
- Drug return/indent.
- Checking all the reports and finance folder.
- Taking the folder to billing department.
- Writing the timings and details on register by unit clerk.
- Auditing of accounts and folder by billing department.
- Giving the folder to TPA clearance.

- Transfer to cash counter.
- Patient attendant's arrival.
- Bill clearance at bank.
- Giving discharge slip to nurse.
- Final signature taken by nurse.



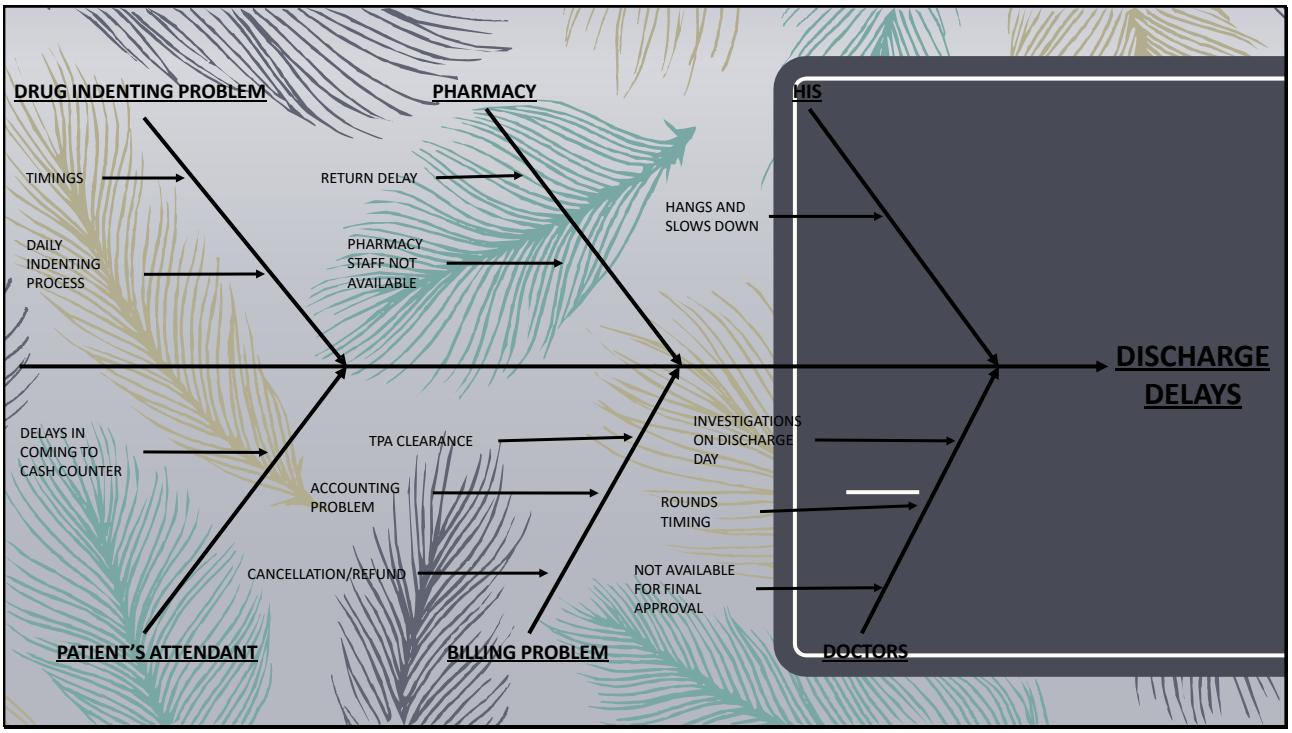
- The blue bar denotes the Non Value Time.
- Time that is not accounted for and can cause delay in the discharge process is Non Value Time.

Cause of Delays:-

The cause of a delay in discharge process can be due to many factors :-

1. Drug indenting problem:
    - Timings
    - Daily Indenting process
2. Pharmacy related problems:
    - Return delay
    - Pharmacy staff not available
3. Patient's Attendant:
    - Delays in payment services
    - Delays due to personal held ups
4. Billing problems:
    - TPA process for Insurance cases
    - Accounting problem
    - Cancellation/Refund
5. Hospital Information System:
    - Hangs and slows down
    - Mistyping of information
6. Doctor's related:
    - Investigations on discharge days
    - Rounds timings
    - Non availability

ISHIKAWA Diagram of different causes:-



Recommendations to improve discharge process:

1. Patient attendant should be informed prior to billing as they are held up in making arrangements of funds, taking up to 30 mins in some cases.

2. Files related to TPA process should be complete in all manners. E.g. Signature of discharge summary, Correct and proper updating of patient details.

3. A common standard format for all TPA's should be made as all TPA's have different clauses which result in delayed response from their side.

4. Pharmacy indenting time and discharge time should be coordinated as their difference causes a lot of loss in time. E.g Discharge ordered at 8:30 but pharmacy staff starts working at 9:30, creating a gap of an hour.

5. All pending reports and documents related to billing should be updated a day before.

Summary:

- The discharge process of Hinduja hospital is quite smooth and hassle free, taking an average of 2 hrs for Cash based patients, while 4 hrs in TPA based cases.

- This can be further reduced by better involvement of the patients' attendant in the process, and allocating time for the pharmacy indent and return.

- And last but not the least thank you for making me a part of this study.

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