Summer Training at
P.D. Hinduja National Hospital & Medical Research Centre, Mumbai
(April 1–May 31, 2014)

Study on OT Utilisation, OPD Waiting time Studies, Study on Physiotherapy Patient Satisfaction

By
Vrinda Gupta

Under the guidance of
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MBA- Hospital & Health Management (MBA-HM)
2013-2015

The IIHMR University, Jaipur
2014

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CERTIFICATE

This is to certify that **Ms. Vrinda Gupta** has undergone her summer training at,P.D. Hinduja Hospital and Research Centre, **Mumbai** from 1st April, 2014 to 31st May, 2014.

The candidate has successfully carried out the projects "A study on OT utilisation, OPD waiting time studies, Study on Physiotherapy patient satisfaction" assigned to her during summer training and her approach to the study has been scientific and analytical

The summer training is partial fulfilment of the course requirement.

I wish her success in all her future endeavours.

Dr. Shilpi Mishra Sharma
Assistant Professor
IIHMR Jaipur

Col. (Dr.) Ashok Kaushik
Dean (Academic & Student Affairs)
IIHMR Jaipur

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

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June 2, 2014

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. Vrinda Gupta, a student of Masters in Health & Hospital Administration , from Institute of Health Management and Research (IHMR), Jaipur did her project in our Hospital from 1st April, 2014 to 31st May, 2014. During this period her assignment was on the different departmental study as well as

a. Waiting Time Study for OPD Patients – A Time Motion Study

b. Patient Satisfaction in Physiotherapy Department

c. Operation Theatre Turnover time ,Waiting Time ,OT Cancellation , ICU bed allotment- A study on OT Utilization

d. Study on Delay in OT Billing

I wish her all the success in future endeavors.

Joy Chakraborty
Chief Operating Officer

Quality Healthcare for All 60 YEARS

ACKNOWLEDGEMENT

The Project training at P.D. HindujaHospitaland Research Centre**,** Mumbai, helped to provide me a both 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 **CEO** 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- 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 endaevours.

Finally I acknowledge my indebtedness to the staff of the Hospital and our respected teachers of IIHMR especially Dr. Shilpi Mishra for providing her constant support by guiding me throughout my internship tenure.

Vrinda Gupta

May 2014

P.D. HINDUJA NATIONAL HOSPITAL AND MRC

Introduction

The late Sh. Paramanad Deepchand Hinduja had in 1951established a charitable hospital under auspices of "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 centers 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 fulfillment 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 its from rest of the surrounding. The OPD block (Hinduja Clinic) and IPD (West Block) is connected through a bridge over the road. The hospital is well connected through roads, railway and air.

Philosophy

The Hospitals philosophy is '**To provide World Class Quality Health Care Services to all sections of the society**' with emphasis on philantrophy. To fulfill 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.

Quality Objectives

- To create a safer environment for the patient as well as staff by reducing the errors.
- Involvement of staff in the quality improvement to take the working to higher level continuously.
- Continual improvement in every area of the hospital services.

Achievements

- Hinduja hospital was the first disciplinary tertiary care hospital to have been awarded the **prestigious ISO 9002 certification** from **KEMA of Netherlands** for quality management system.
- Hinduja hospital was recently awarded the prestigious '**Golden Peacock Global Award for Philantrophy in Emerging Economics 2006**.'
- 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.
5. Digital Linear Accelerator Clinac 2300 C/D with MLC & micro MLC with portal vision along with CT stimulator, dedicated 3D computerized planning system for achieving a high tumor dose and increased cure rate and a low normal tissue dose to reduce toxicity.
6. Vacutainer system for blood collection.
7. Holmium Laser, thus replacing surgeon scalpel.
8. Synchrom CX-7 fully automated for pick-up, delivery and analysis of the sample and reagent.
9. Computerized Humphrey's perimeter for early diagnosis of glaucoma.
10. Digital Subtraction Angiography for cerehaed angiography, peripheral and renal angioplasty, biliary drainage and nephrectomy.
11. Viewing wand navigation system to conduct minimal invasive neurosurgery procedures.
12. **GE Volume Light Speed CT,** which captures images of the heart in just 5 heartbeats at the speed of light.
13. **GE INNOVA 2000 CATH LAB** machine for better visibility of blood vessels.
14. The **Radial Lounge, First of its kind in India,** is a unique concept for carrying out Coronary Angiographies and Angioplasties procedure. In support of the Nephrology services at the hospital.

Human Touch

1. Hospital provides charity to 20% of patients , spending approx 80 million for this purpose every year.
2. It ensures equal care and service to the charity and paying patients without discrimination in its OPD and Wards.

Milestones Achieved By Hinduja Hospital

The Firsts to Hinduja Hospital Credits to:

- One of the first hospitals in India to perform laparoscopic gall bladder surgery.
- One of the few hospitals in India to perform Cochlear Implantation.
- The first hospital in India to start a Pain Management Clinic.
- For the first time in India awake craniotomy for an epilepsy surgery was performed at the hospital.
- It offers the facility for Therapeutic drug monitoring for the highest number of drugs in the India.
- Started the first screening center for breast cancer in Mumbai.
- The first private hospital in Mumbai to perform cadaver kidney transplant &peripheral blood stem cell transplant.
- The first one in Mumbai to introduce high resolution scanning (HRCT) of the lungs.
- The first few in Mumbai to install Digital Video EEG which is capable of recording the electrical events of the brain.
- The first hospital in Mumbai to start Home Care, which is a service of nursing care at your doorstep.
- The first in India to set up Vulvar Clinic.
- The first hospital in Mumbai to start a Sleep Laboratory.

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

  Lalita Girdhar Block = 8 floors

CLINICAL SERVICES

ADMISSION & BILLING DEPARTMENT

Introduction:

Admission & Billing Department in its endeavor ensures:

1. To provide excellent quality health care to all sections of society.
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 delivered effectively & efficiently starting from admission to discharge.

Following are the services offered----

1. Registration of the new patient
2. Booking/Reservation –Bed & Operation theatre
3. Admission
4. Billing
5. Discharge
6. Corporate/ T.P.A. Help Desk
7. T.P.A. Deficiency
8. Outstanding Counseling & Recovery
9. Lobby Reception
10. Accident & Emergency Counter

Organogram:

CEO

DA

MANAGER – A&B

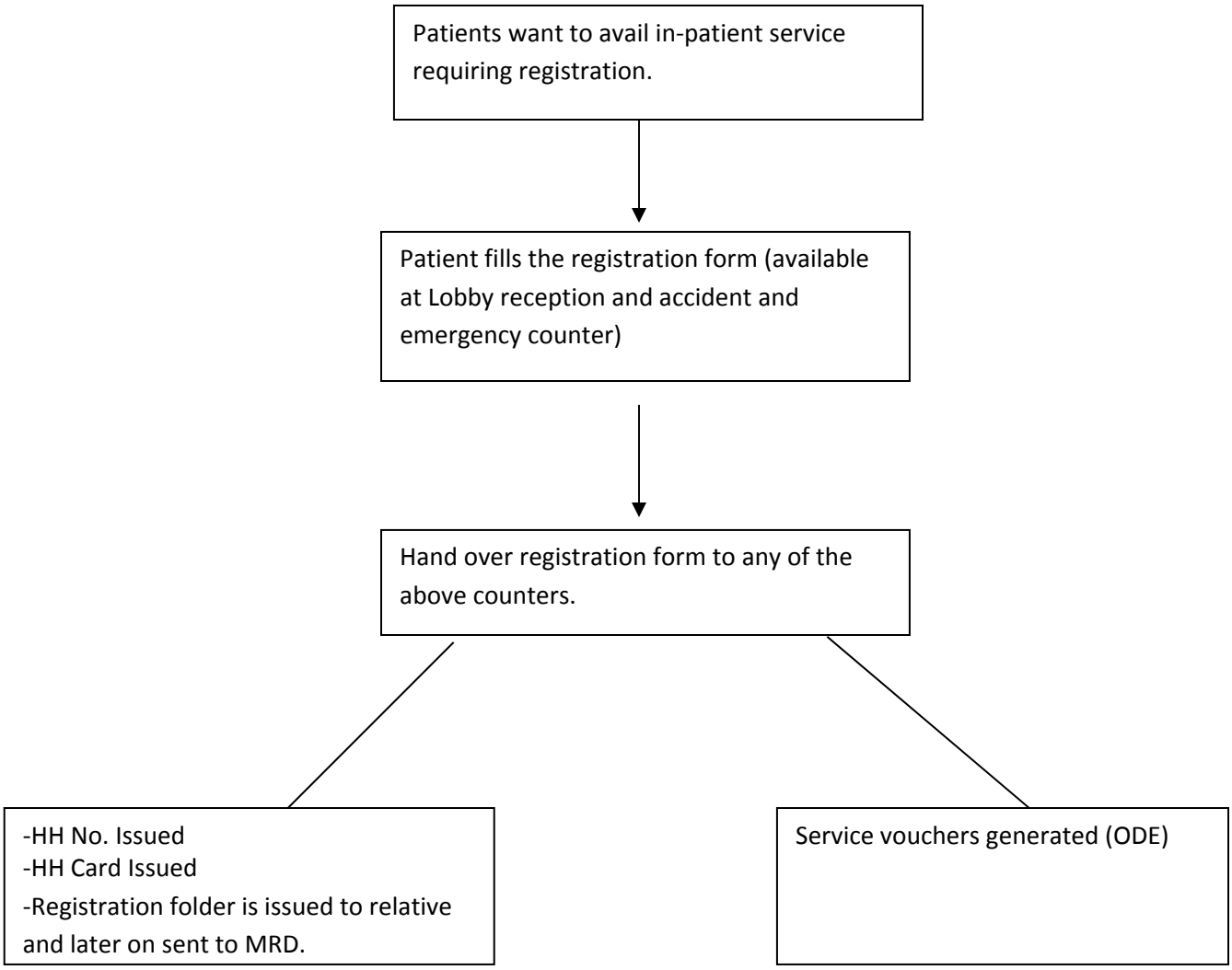
OFFICER

SUPERVISER

CLERK

ATTENDANT

REGISTRATION



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 Opthalmic	ENT and Medical Records	Consultants
Second Floor	Consultants, Neurology Department	Consultants	Consultants,CDC 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

Sections and Timings of OPD

HInduja is divided into:

a) Hinduja Clinic: where patients have to pay for the services 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

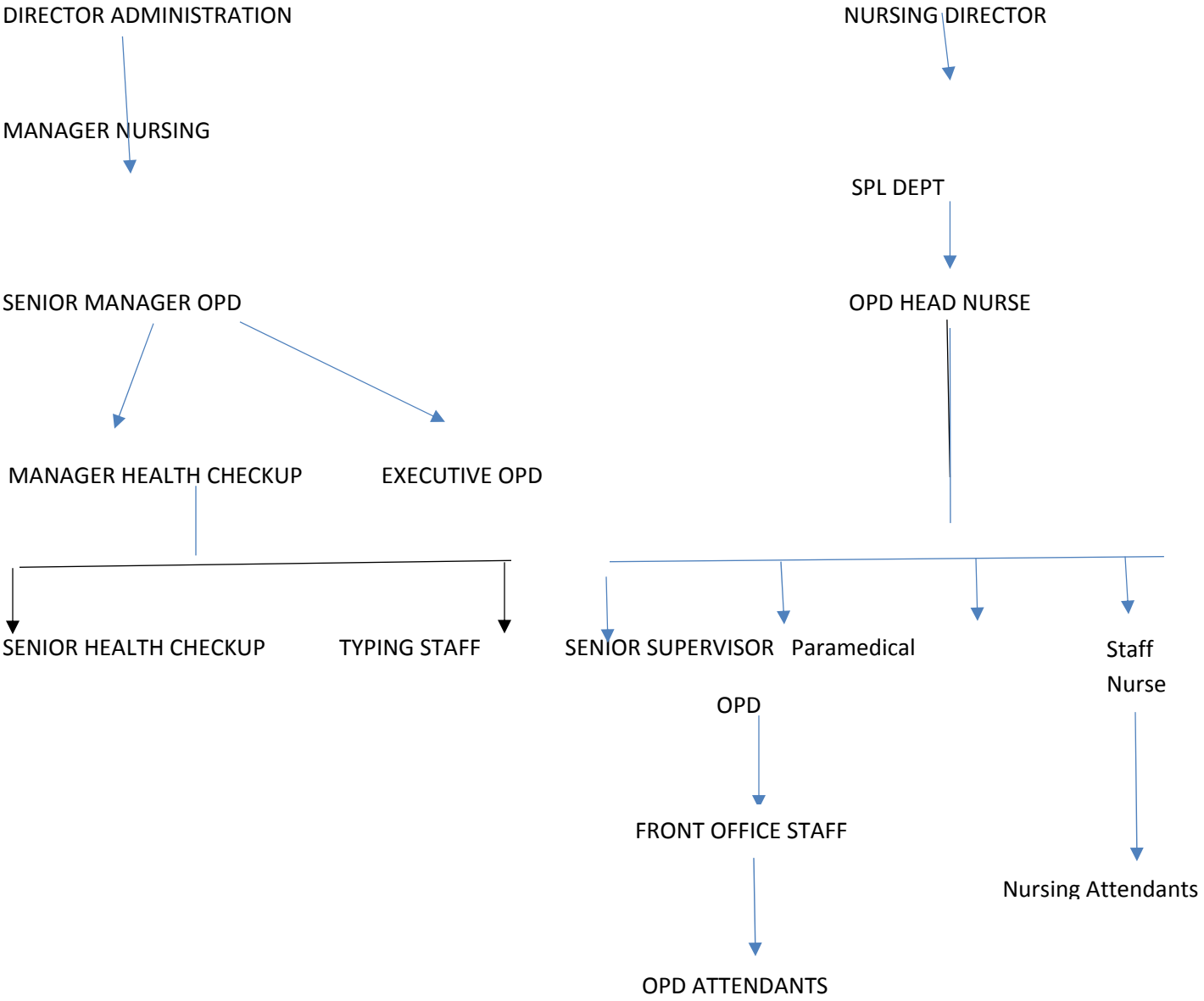
(Timings: as per consultant's schedule)

c) Report Delivery

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

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

OPD ORGANOGRAM



Following Services are provided in the OPD:

- Medical/Surgical/Oncology
- Healthcheckup Packages
- Laboratory Investigations
- Imaging Services
- Cardiology Investigations
- Neurology Investigations
- Pulmonary Investigations
- Pain Management
- AKD (Artificial Kidney Department)
- Gamma Knife
- Endoscopy
- Bronchoscopy
- Urodynamic Study
- Physiotherapy
- CDC
- ENT
- Opthalmology
- Dental Procedures
- Radiation Oncology

ACCESS TO OPD SERVICES:

HINDUJA HOSPITAL CARD (HH NUMBER)

All patients who visit the Hinduja Clinic or Free OPD for the first time for consultation/other services are issued a card. This card is known as the HH Card and is attached to the registration form and is issued to the patient at the time of registration. The HH number is present on the card.

The HH number and card being important as with the help of it, Medical Record folders can be accessed.Patients are advised to always carry their HH card number whenever they are visiting the OPD for follow up visits or when admitted as inpatient.

PATIENT CARD-STAFF

All time full employees of the hospital and their dependent family members are entitled to free treatment,as one of the staff welfare measures. For this purpose the employees are issued a patient card-STAFF.

EXTERNAL PATIENT TOKEN NUMBER

Outpatients visiting OPD for the first time,as referrals from external sources, and requiring only investigations, are not issued a HH card. The system generates an EX no. for that particular transaction only.

OPD APPOINTMENT

Appointments can be fixed over the telephone to the HTMT Call centre (facility for patient appointments have been outsourced) or personally across the Reception counter. Fax and e-mail facilities are also available.

NON APPOINTMENT PATIENTS

In the normal course, consultants in the Hinduja Clinic see the patients only by prior appointment. However exceptions are made to this system in the interest of the patients, or Non Appointment or Walk in patients are given appointment if a time slot is available. Patients, who have come as Non appointments are normally seen by the consultants after all the other waiting patients with prior patients ,are seen (except in emergency cases).

HEALTH CHECKUP

The Executive Health Checkup department ,a part of OPD services is a wing of this Multispeciality Hospital dedicated to the diagnostic and preventive side of patient care. The executive Health Checkup department is a place where healthy patient come in for prognosis of disease or to know about the preventive and curative aspect of Conditions they may already have.

This system facilitates the patient to get all the required investigations/consultations done without having to pay for either consultation and/or for each individual item of Pathological or Imaging Investigations.

It is a centre point where the potential customers come directly in contact with the hospital services. This department therefore can be a point to draw in patients to become in-patients or for them to come even for follow-up OPD consulatations.

The health checkup consists of 7 employees.

The packages in this Health check programme have been developed by a team of highly qualified and experienced medical personnel and are designed to offer a complete medical check-up and within their limitations detect any latent health problems. In addition, these packages are offered at special discount rates that make them truly worthwhile. At the end of the day, candidates leave the hospital with all their reports. The customers of this department are called Executives. On an average the inflow of customers is 25-30/day however on weekends the number rises to 45.

The departments with which the Health Checkup team works in Co-ordination are:

Pathology,Cardiology,ENT,Dental and Radiology

The visiting consultants are from the following facilities: Physicians,Surgeons and Gynaecologists.

The range of packages provided are:

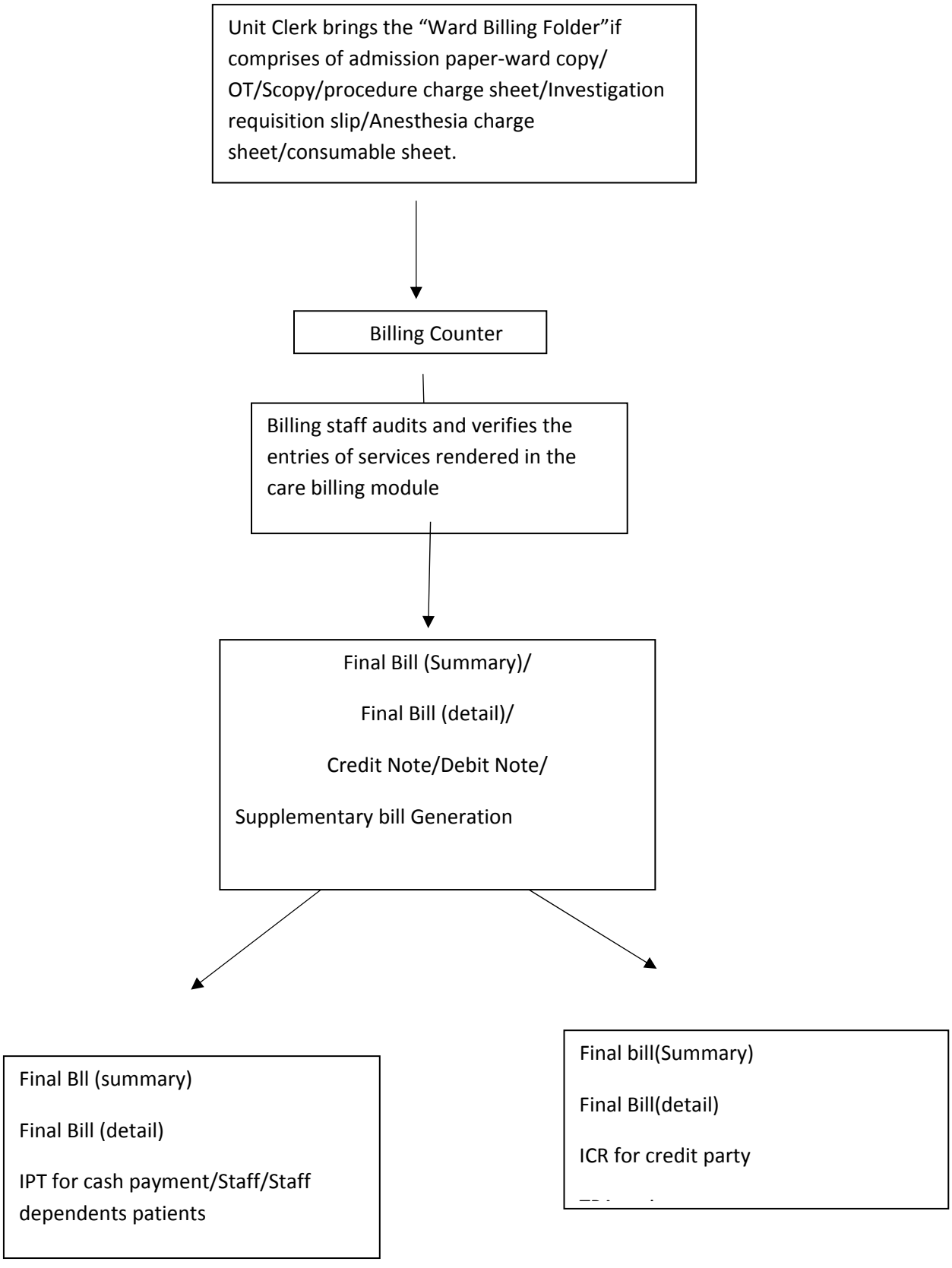
1. Premium Package
2. Special Package
3. Special Ultra Package
4. Comprehensive Package
5. Comprehensive Plus Package
6. Basic Package
7. Well women Pearl package
8. Well women Ruby package
9. Care Plus Package

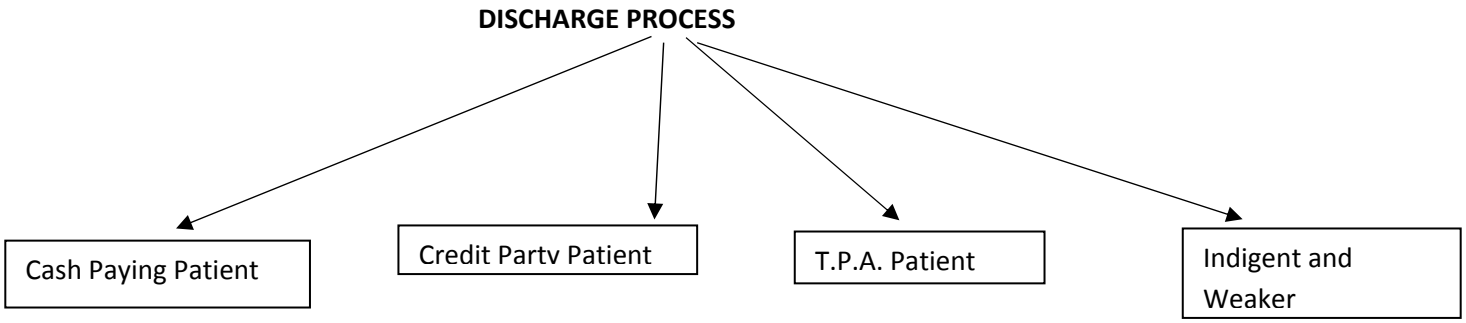
IN-PATIENT DEPARTMENT

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.

FINAL BILL GENERATION




DISCHARGE PROCESS
Cash Paying Patient
Credit Partv Patient
T.P.A. Patient
Indigent and Weaker

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

STAGE-I Patient Selection

The patient concerned will be seen by the consultant on an 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 proceed with 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 anesthetists work up,fitness for surgery would be given by the anesthetists.

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 Consent 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 biling formalities, the patient will be taken to the SSSU. The nursing staff will inform 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.

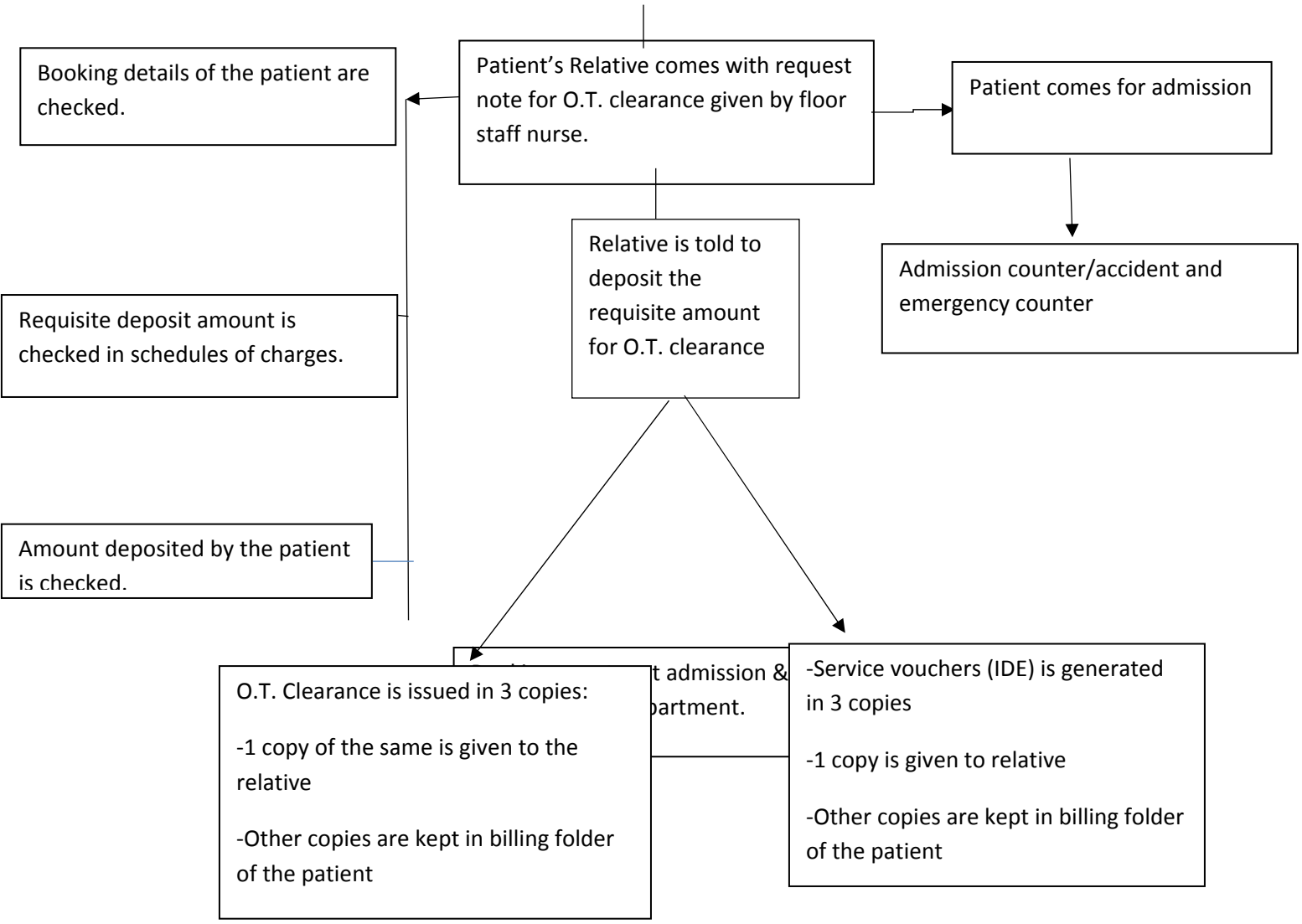
Following surgery the recovery area staff nurse will keep the SSSU staff nurse informed about the patient's status. After the patient has been shifted to the recovery area, concerned surgeon would need to visit and complete the discharge formalities including preparation of discharge.

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 @ Home” will be given.

OT CLEARANCE SLIP ISSUANCE



ACCIDENT & EMERGENCY

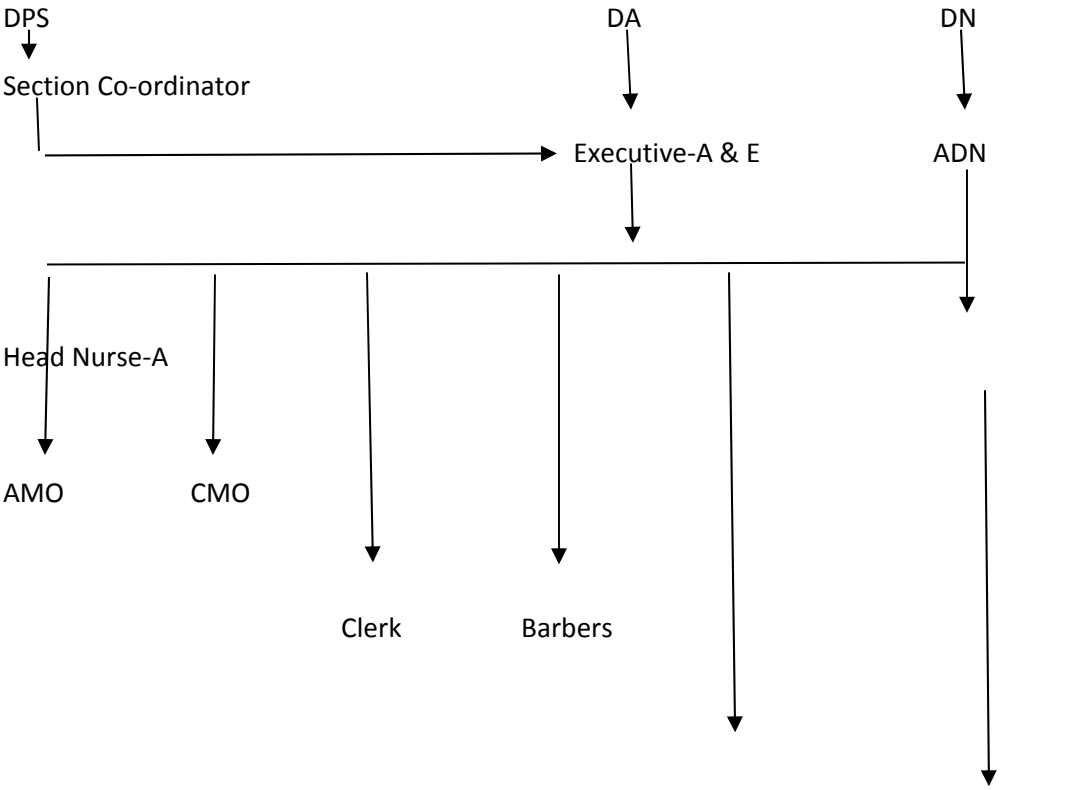
Introduction

- 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 interventions.
- 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.
- A & E is also a centre for all immunizations for staff as well as patients. The needle stick injury protocol for all staff is also carried out here.
- 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.

Organogram

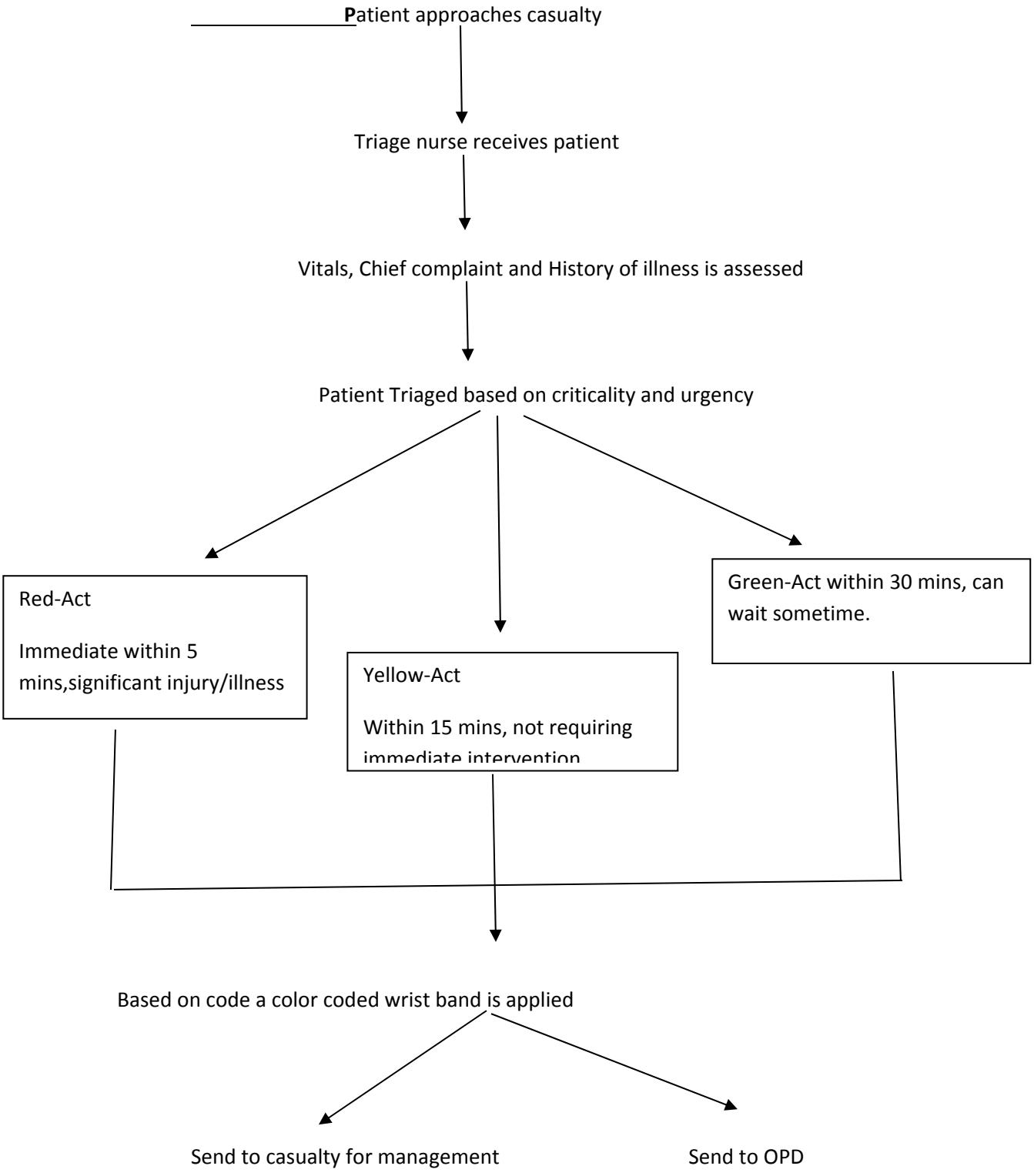


STAFFING

Categories of staff numbers:

1. Executive Administration 01
2. CMO 08
3. Nurses 16
4. Nursing Assistant 02
5. Clerks 02
6. Attendants 15
7. Barbers 03

TRIAGE PROCESS FLOW



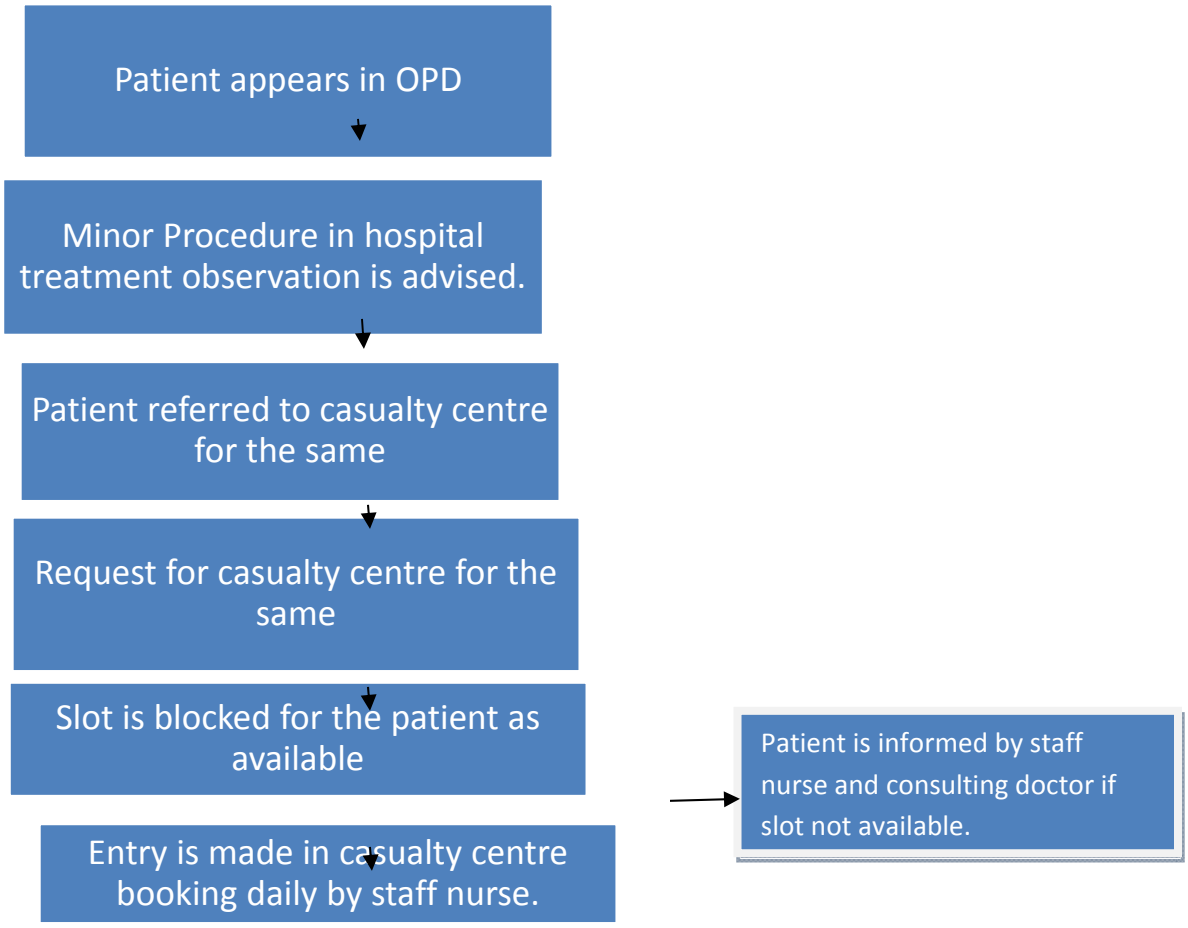
TRIAGE:

Triage is a French word meaning classify or sort. The triage desk is strategically situated in the lobby of the Accident & Emergency Department. Staff deputed at the desk is a Triage Nurse.

Purpose:

To ensure a standardized system whereby patients seeking medical care in the Accident & Emergency are seen in order of priority based on Acuity Level.

Casualty centre booking



CATH LAB

Introduction

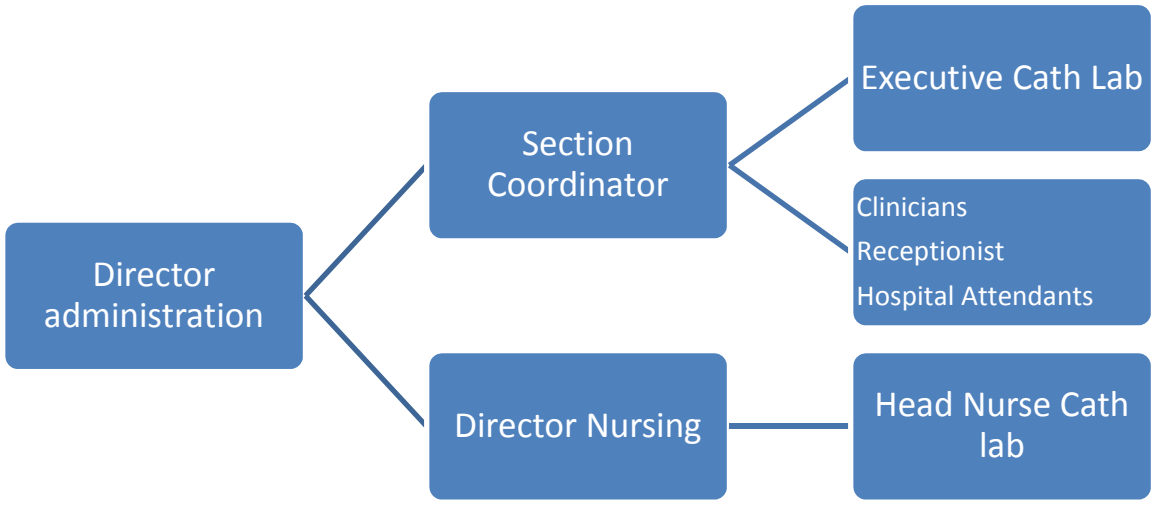
Cath Lab is located on the second floor of IPD building. It is well equipped to perform various heart related procedures such as Angiography, Angioplasty, Pacemaker etc. Two types of packages are provided-Radial Package and Femoral Package. It has a separate admission counter,which takes admissions till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

Scope of services

-Diagnostic Services

-Therapeutic Services

Organogram



Categories of Staff

TYPE	NO.s
Executive-cath lab	1
Technicians	4
Receptionist	2
Hospital Attendants	4
Nurse	3

Billing:

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/Anesthesia 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 whether 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,bed class,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

Primary Responsibility: staff Nurse,Receptionist,Billing Clerk

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

- After completion of discharge formalities at the respective counters,patient's relative is being given the discharge slip.
- Discharge slip is pre-printed in 4 copies-
    - White original-to be given to receptionist atcath lab or floor staff nurse
    - Pink-attached to respective billing folder of the patient
    - Blue-to be given to security while going out
    - White-is the book copy
- Document given to patient can be categorized into 3 parts:
    - Cash paying patients-Inpatient final bill-patient copy,settlement service voucher and Inpatient final bill
    - Credit party patiensts-Inpatient final bill (detail)
    - TPA Patients-Inpatient final bill(detail) & settlement slip of TPA security deposit
    - Procedural Chart

CLINICAL ADMINISTRATIVE SERVICES

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 endeavor to provide quality health care for all now offers air ambulance services for seamless transfer of national and international patients.

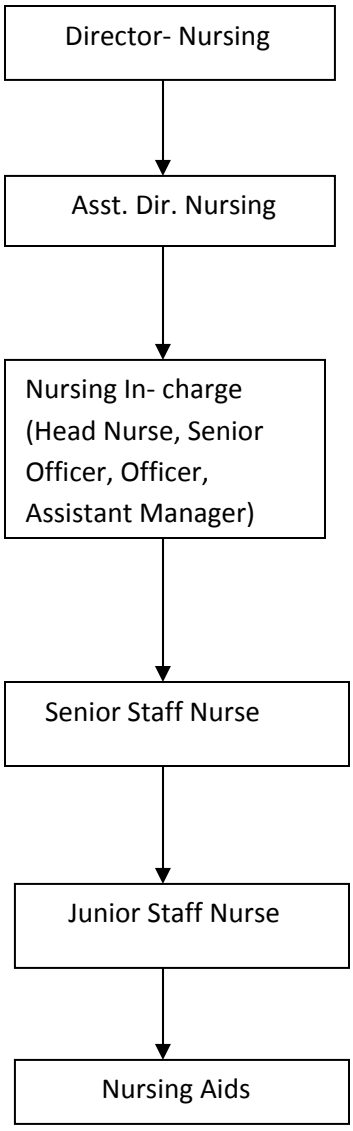
NURSING DEPARTMENT

Introduction

Hinduja hospital has a very efficient nursing department. This department is divided into two categories, **Clinical** and **Administrative.** It also has Special Nurses who are trained in a particular area and work only in that area.

Clinical:

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



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 commitment towards education and training in the field of healthcare, particularly the preparation of highly competent nursing professionals dedicated to patient care, 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, extra curricular activities and clinical practice.

LAUNDRY SERVICES

- The importance of a clean, hygienic, un-stained and defect free linen for optional 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, wasing, 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.

ADMINISTRATIVE SERVICES

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 is intensely personal documents and there are many ethical and legal issues surrounding them such as the degree of third –party access and appropriate storage and disposal. 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. In addition, the medical record may serve as a document to educate medical students/resident physician, to provide data for internal hospital auditing and quality assurance, and to provide data for medical research.

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, corresspondancen 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
- Provide guidance to the user in terms of operation procedure
- 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 for optimal & smooth performance of the organization

2. Hardware section is responsible for hardware functions of the system with zero downtime and high availability. It also fulfill the hardware related requirements from users and supports there systems. This section introduces the technology which is use full for users in there day to day working.
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

The policy of the department is:

1. Serve well with safety and in time
2. Continuous improvement, cost saving
3. Optimum utilization of manpower and equipment
4. Optimum utilization of inventory
5. Teamwork

Objective: To ensure uninterrupted support and supply of engineering services to end users by adopting correct process and practices leading to successful maintenance of all engineering systems in fully operational condition, at all the times.

Scope of Engineering Services:

The major engineering services involved are as follows:

- Electrical power supply- Normal & Emergency
- Air conditioning, ventilation & refrigeration
- Steam & Hot water supply
- Water stations & cold water supplies- Filtration systems
- Medical gases supplies
- Fire detection, alarm & fighting systems
- Internal & External plumbing systems
- Civil works- Masonry, Carpentry, Glasswork, Upholstery, Painting etc
- PNG & LPG supply
- Safety assessment of facilities

THE KNOWLEDGE CORE

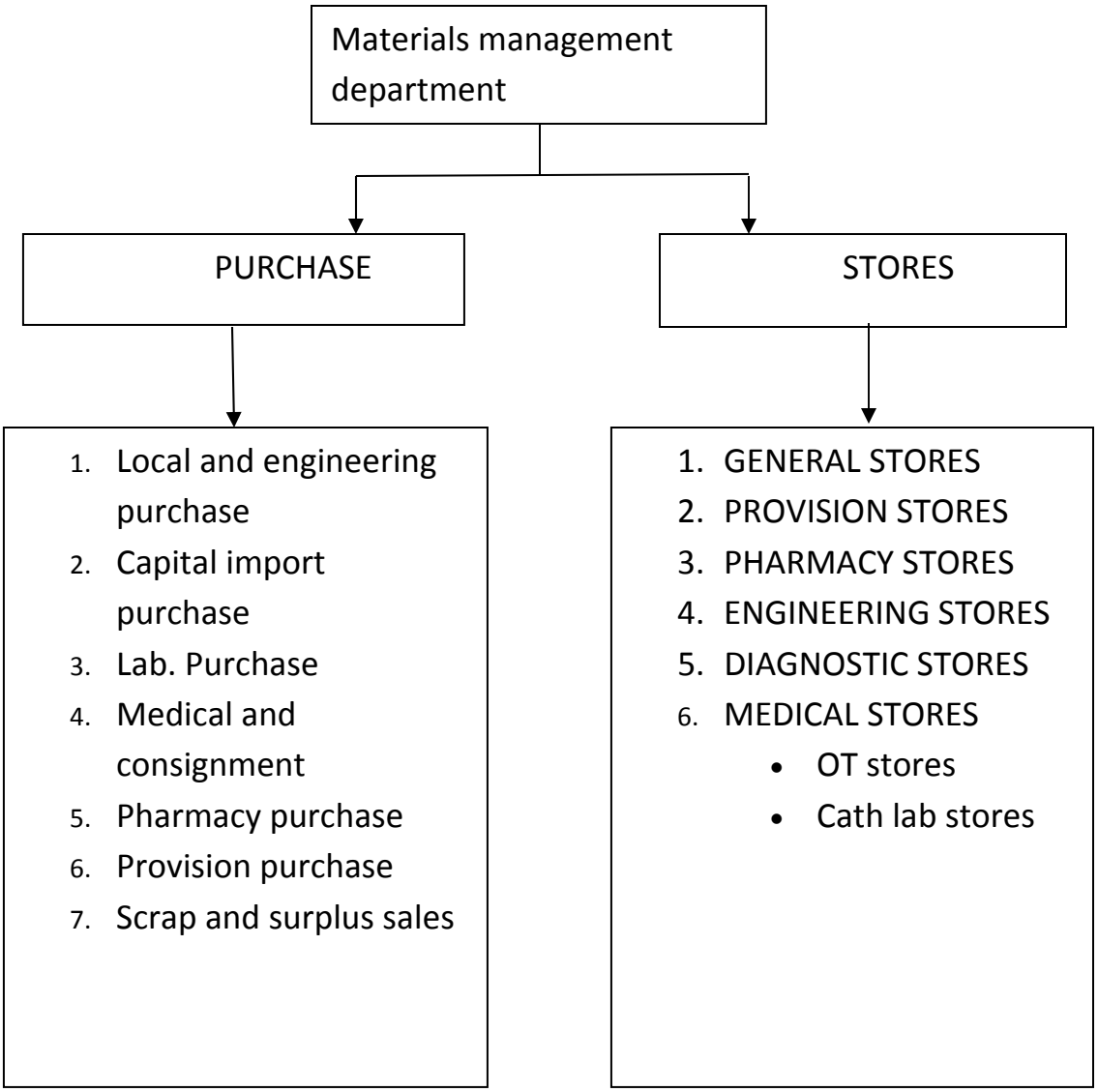
Introduction

Research is an important activity of Hinduja Hospital. It is recognized as a Research Organization by the Department of Scientific & Industrial Research, Ministry of Science & Technology and Government of India. Various clinical research projects are carried out with the objective of improving medical practices. A Research Advisory Committee with eminent scientists and researchers from all parts of the country guide & give direction to the research programme. The hospital is recognized by the Bombay University for M.Sc. and PhD in Applied Biology. The faculty members are recognized guides for M.Sc and PhD, Bombay University. The Hospital is approved by the Diplomate National Board for specialization in the following DNB RECOGNIZED SPECIALITIES.

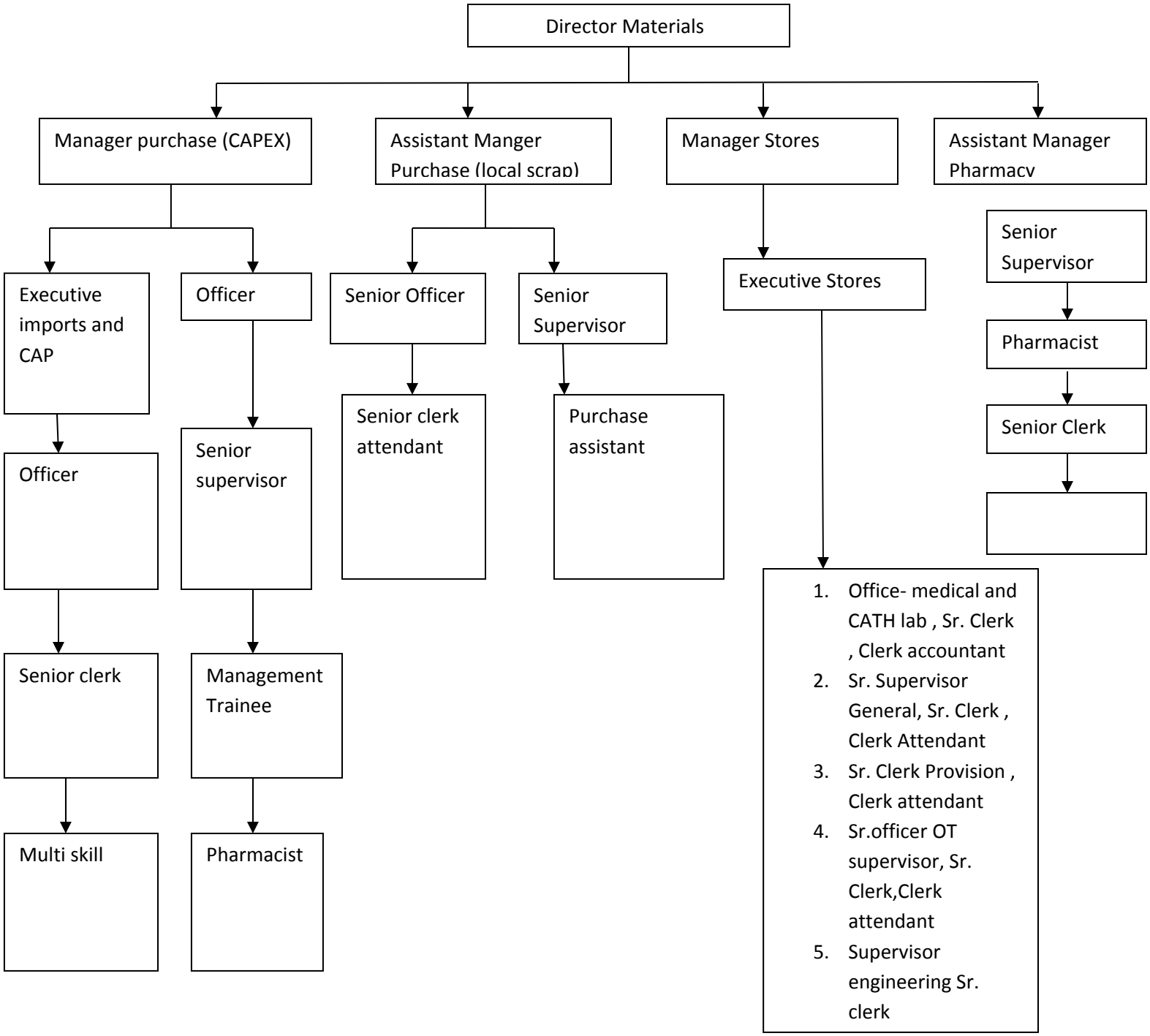
MATERIAL MANAGEMENT

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.



Organogram


Director Materials
Manager purchase (CAPEX)
Assistant Manger Purchase (local scrap)
Manager Stores
Assistant Manager Pharmacy
Executive imports and CAP
Officer
Senior Officer
Senior Supervisor
Executive Stores
Senior Supervisor
Pharmacist
Senior Clerk
Officer
Senior supervisor
Senior clerk attendant
Purchase assistant
Senior clerk
Management Trainee
Multi skill
Pharmacist
1. Office- medical and CATH lab , Sr. Clerk , Clerk accountant
2. Sr. Supervisor General, Sr. Clerk , Clerk Attendant
3. Sr. Clerk Provision , Clerk attendant
4. Sr.officer OT supervisor, Sr. Clerk,Clerk attendant
5. Supervisor engineering Sr. clerk

Categories of staff:

Type	**Nos.**
Director	1
Manager	3
Executive	2
Sr. Officers	2
Officers	3
Executive Secretary	1
Sr. Supervisors	5
Supervisors	3
Management Trainee	1
Pharmacists	15
Senior Clerk	10
Clerks	3
Purchase Assistant	1
Attendants	18
Multi skills	2
Piece Rate	1
Casual	5
Temporary Attendant	1
Total	77

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. XYZ
5. GOLF-Government Open Local Foreign Product
6. SDE- Scarce Difficult Easy
7. FSN- FAST, SLOW and Non- Moving

OPERATION THEATRE TURNAROUND TIME, WAITING TIME,OT CANCELLATION,ICU BED ALLOTMENT-A STUDY ON OT UTILIZATION REPORT

AUDIT ON:	**OPERATION THEATRE TURNAROUND TIME,WAITING TIME, OT CANCELLATION, ICU BED ALLOTMENT-A STUDY ON OT UTILIZATION**	
DEPARTMENT:	OPERATION THEATRE	
AUDIT PERIOD:	**FROM :** 05-May 14	**TO:** 22-May 14
CONDUCTED BY : **NAME:** Vrinda Gupta **DESIGNATION:** MANAGEMENT TRAINEE **SIGNATURE:** **DATE: :**		**APPROVED BY:** **NAME:** Dr. Neeta Kulkarni **DESIGNATION:** OT Manager **SIGNATURE:** **DATE:**

EXECUTIVE SUMMARY:

This study was done from the OT to observe the delay in admission to Intensive Care Unit for post-operative patients, since there is a severe shortage of allotted ICU beds in this hospital.The demand for critical care beds among the medical services has already exceeded its supply so it is very important to allot ICU beds to surgeons before the surgery is undertaken to ensure proper patient care and safety. Patient ICU bed allotment and when the ICU bed was received in OT complex were also observed, since post - operative ICU patients should not be kept in the recovery room.

Another study related to the turnaround time for OT was also calculated, to assess the OT utilization and to study the reasons in case of any delays. Since optimum OT utilization is one of the key indicators for proper utilization of the resources in a hospital. The patient's receiving time after entering the OT complex was also observed, and the time delay for the patient to be called for surgery was calculated and various reasons concerning that were observed and studied using MS EXCEL, using charts and diagrams.

For proper OT utilization, a study for cancelation of scheduled procedures was done and the possible reasons for cancelation were evaluated.

INTRODUCTION:

P.D. Hinduja Hospital consists of total 52 ICU beds with ICU wings on 2nd floor consisting of oncology and gastro patient's bed and on 10th floor consisting of cardiac and neurology patients fully equipped beds. Many post-operative patients require ICU beds which are pre-booked one day earlier according to the OT list scheduled. Transfer of patients occur directly to the ICU, once the ICU bed is received in the OT complex after the ICU bed is called for by the nurse in charge once the surgery is expected to get over. . A big number of post- operative patients need intensive care especially CABG surgery patients or ventilator bed required etc., hence a certain number of beds are pre-booked for OT in the intensive care unit. But the requirement is not always met due to certain emergencies or certain cases when floor patients require intensive care hence the post-operative patients are required either to wait in Recovery room or the surgery gets delayed or cancelled due to the non-availability of ICU bed. Hence this study is required to study the impact of that delay time and propose effective recommendations regarding the same.

Operation Theatre situated on the 3rd floor and 4th floor of the IPD building consists of total 9+2+1 (2 for SSS patients and 1 in IVF Centre) procedure rooms with scrub rooms for every procedure room, store room for preparation of trays, pre-operative room, post-operative recovery room and OT billing room, OT manager room, OT head sister room and a cryopreservation room for frozen sections. It also consists of separate change room for Doctors, nurses and attendants with their respective lounges. And the OT desk from where the patients are received, connected to an elevator.

Operation Theatre is one of those units working almost round the clock, starting from 8:00am and surgeries go up to 11pm, in cases of emergency, these are functional even at odd hours. Pre-operation the patients are called by the nurse in charge and received in the OT complex and subsequent investigation documents are confirmed with the confirmation of the patient name, surgery and doctor's name for the patient risk assessment checklist. The patient is then addressed by the anesthetist/JMS and patient history regarding any previous surgery and

specifications are asked. Then the patient is called inside the procedure room once the OT is ready, in many cases the patients for the next surgery arrive early before the previous one gets over, hence the waiting time for the patient is observed and the Turn Around Time is also calculated giving us a clear assessment for theatre utilization.

OBJECTIVES

This study would enable the authorities to assess the ICU bed allotment procedure and its impact on delay, and to evaluate the reasons for the same. It would also help in increasing the efficiency in allotment of bed such that all potential resources are optimally utilized.

OT turnaround time would help in giving the authorities a fair idea about if optimum OT utilization parameters are met or not and actually how many OT hours are utilized and

reasons pertaining to delay. Even the waiting time would help in evaluating the various reasons for delay of surgeries that is it the surgeon or the patient or the management responsible for the delay. The cancelation of surgeries was also studied and various reasons for cancellation were found out and evaluated.

Methodology

Study Area

The Operation Theatre on the third floor of the IPD building of P.D. Hinduja Hospital was taken as the area of study consisting of 9 OTs with one scrub room for each and consisting of a pre-operative and post-operative area.

Study Duration

OT utilization and waiting time study was carried out for time duration of 3-May to 13-May 2014 in a time period of 10 days. ICU bed delay was carried out from 3-May 2014 to 22-May 2014, a period of 15 Days. In both the studies observational methodology was used. The reasons for cancellation of surgeries were also studied in a time period of 10 days and analytical observational methodology was used.

Study Design

Descriptional Study

Sampling and Sample Size

Simple Random Sampling, A sample size of 200 was taken for OT utilization and waiting time study and for ICU bed delay a sample size of 107 was taken .Cancellation of surgeries in OT was taken with a sample size for 10 days.

Tools and Techniques for data collection

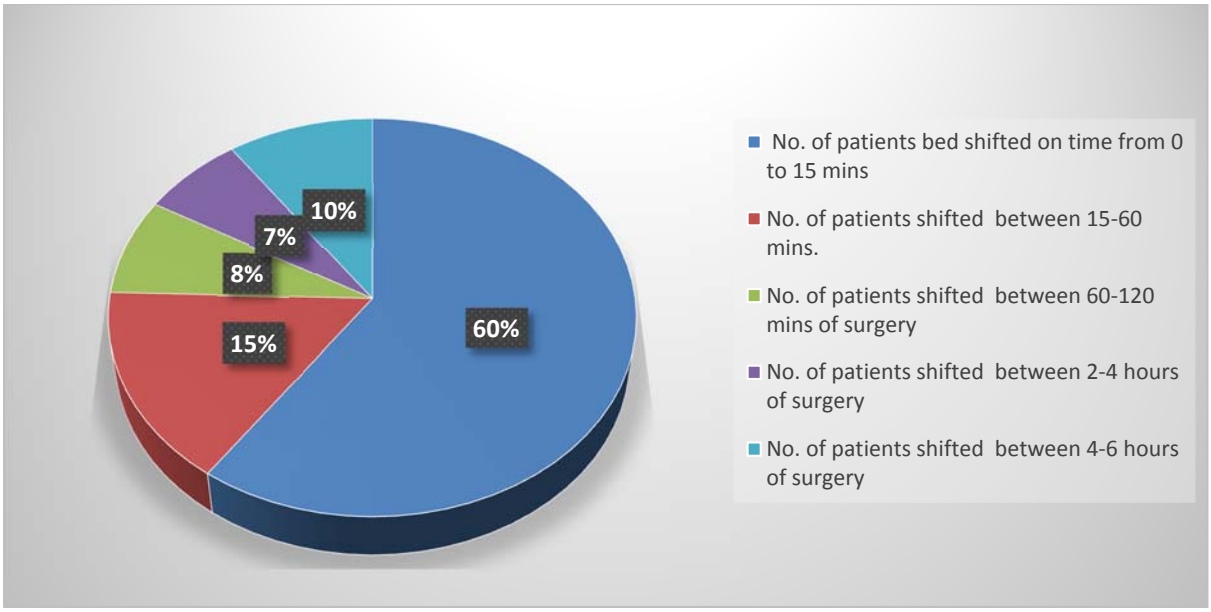
Checklist prepared in Microsoft excel attached in Annexure 1 and 2 for OT utilisation. Annexure 3 for Waiting time studies.

6.0 Analysis and Results

According to the observations made, it was seen that the requirement for ICU bed was not met, hence there was a delay in transfer of post-operative patients to the ICU. Even if the beds were allotted they were not vacant as internal transfer out of bed was not occurring. At times even if the bed was received in OT, the anaesthetists being busy with other surgery were not available to accompany the patient .For SOS patients where the ICU bed requirement was communicated after observing the patient in the Recovery Room delay was expected. In certain cases delay was also because no attendant was available in ICU to transfer the bed.

6.1 Shifting of post-operative patients to ICU

Fig.1: Delay in shifting of post-operative patients to ICU



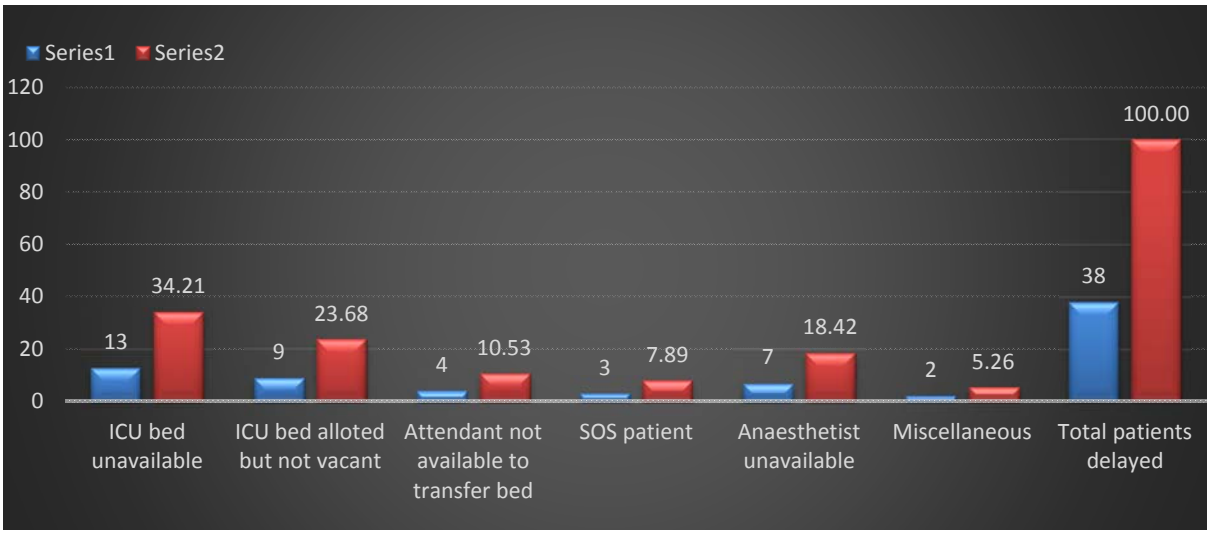
The above pie chart depicts the percentage of patients shifted to ICU on the basis of the time delay. Out of total 102 patients shifted to ICU, 40% of patients were shifted after 15 minutes of surgery. The average time delay for shifting of patient to ICU bed was found out to be 55 minutes and the average time delay after the bed was received in OT was found out to be 25 minutes.

6.1.a Reasons for delay in shifting of post-operative patients to ICU

Table 1

Reasons for delay	No. of cases	Percentage
ICU bed unavailable	13	34.21
ICU bed alloted but not vacant	9	23.68
Attendant not available to transfer bed	4	10.53
SOS patient	3	7.89
Anaesthetist unavailable	7	18.42
Miscellaneous	2	5.26
Total patients delayed	38	100.00

Fig 2. Reasons for Delay in shifting of post-operative patient to ICU

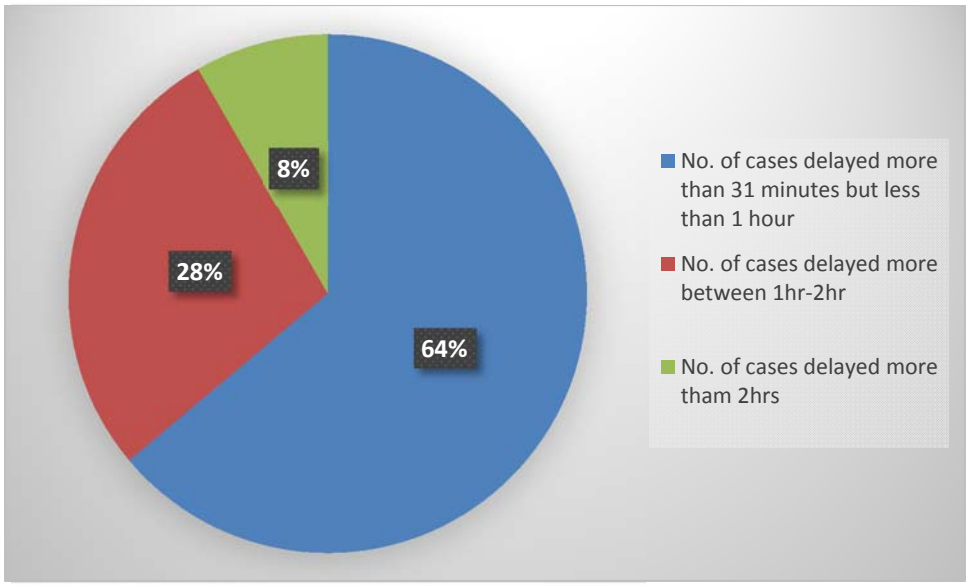


The above bar diagram enlists the reasons for delay of ICU bed, with total number of delayed cases to be 38 out of 102, out of these 38, 34.21% were delayed due to non-availability of ICU bed and 23.68% delay was due to ICU bed were allotted but were not vacant and 18.46% cases were delayed as anaesthetist was not available. Miscellaneous included reasons in which delay was due to miscommunication, bed had arrived inspite of surgery being cancelled and confusion about which bed to be allotted to which patient.(Fig 2, Table 1)

6.2 OT Turnaround Time

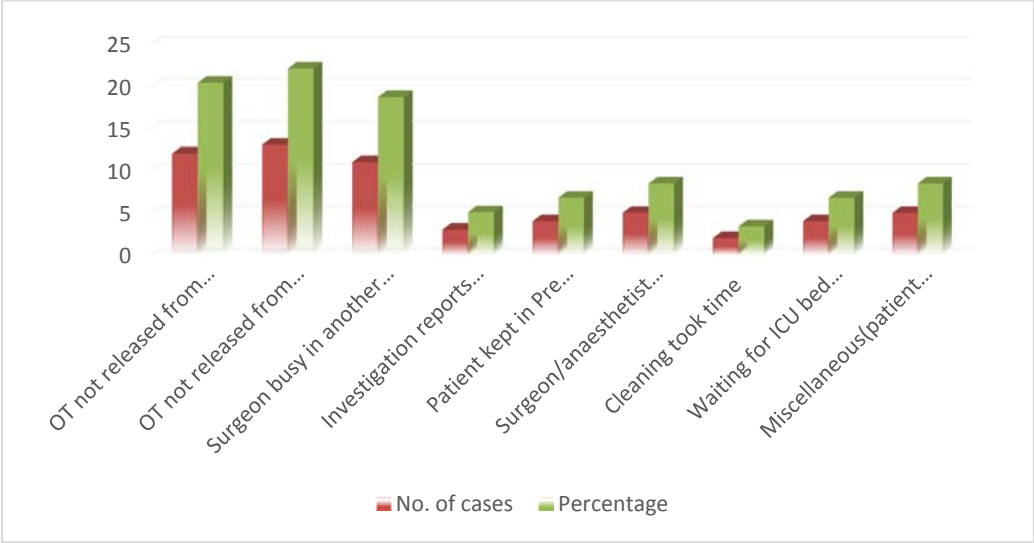
Average turnaround time was found out to be 31minutes and out of a sample size of 197 surgeries, 43 were taken as 1st ones in the morning and 38 were found to be delayed i.e. after 8am. And the possible reasons for that were listed as, surgeon came late, change in the OT scheduling order , Emergency case taken up first, equipment not available, Delay in OT deposit charge to be paid**.**

Fig 3. Delay in time lapse between surgeries



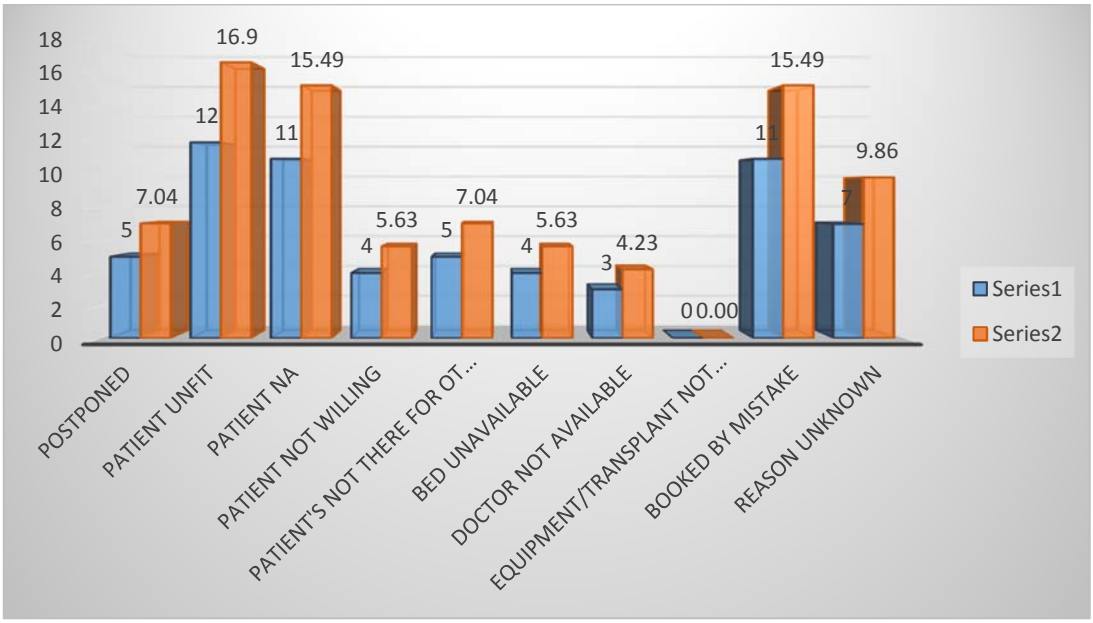
Delay by more than 31 minutes was observed in the cases depicted above as out of total 197 surgeries done, 72 were delayed by more than 31 minutes as it was found to be the average turnaround time. Out of 72, 64% were delayed but taken up within 1hour. In between 2 surgeries the OT cleaning occurs which takes about 15 minutes and it also includes the time when the patient is shifted to Recovery Room and the next patient is taken inside the OT and the patient positioning is done, and the store tray for the next surgery is also received and prepared, and in case the OT scheduling is changed that constitutes as one of the major reasons for delay in turnaround time, on an average this whole process takes approximately 31 minutes.(Fig. 3)

Fig 4. Reasons for Delay in waiting time when patient is taken in for surgery



The above bar diagram depicts the Reasons for delay in Waiting time out of a total number of 59 cases with delayed waiting time, with 27 minutes taken as the bench mark for average waiting time It was observed that 22.04% of delays occurred due to OT was not released from previous surgery and 20.34% cases were delayed as the OT was not released by the previous surgeon. In 18.64% cases the Surgeon was busy in another OT or there was an overlap of cases. 4% cases were also delayed since the surgeon was waiting for the ICU Bed to be available only then the surgery would be taken up. (Fig. 4)

Fig 5. Reasons of cancellation of surgeries



It was found ,that out of total scheduled surgeries i.e. 528 and 25 additional surgeries,71 were cancelled/postponed due to various reasons depicted above in the bar diagram, with 16.90% due to patient being unfit and 15.49% were either booked by mistake or the patient was not admitted ,this also included the Short stay services patients. And 4.23% of cancelation/postponed also occurred since the doctor was not available on that particular day (Fig. 5).

Summary and Conclusion

Since the patient inflow for surgeries in Hinduja is more, scheduling of surgeries is done generally one day prior which itself takes around 4-5 hours as the list by the OT booking counter needs to be edited and put in order, but the order for OT list surgeries is decided on the day itself hence a person is

required constantly on the OT desk to decide the order and which patient is to be called upon next, considering all the parameters, OT free time and surgeon availability. The ICU bed allotment is usually taken care by the nurse on the OT desk and the OT Manager.

The OT complex is a costly component of the hospital budget expenditure. This area of hospital activity requires maximum utilization to ensure cost-benefit. To achieve a high level of utilization in the operation theatre, it is necessary to efficiently coordinate a number of activities and personnel. In between two surgeries the average turnaround time was calculated, that included transfer of patient to RR, OT cleaning time for the next surgery, tray preparation time, scrubbing the instruments and change of staff for next surgery .In the recovery room two nurses were posted for 8 beds. Near OT 3 it was observed that one of the Scrub Rooms were made into an OT and utilized for proper Grade VI surgeries, despite of not having enough space for any surgery to carry out.

The waiting time for patients to be called for surgery also depends on various factors like if OT was not released by previous surgeon or the surgeon was busy in another OT or the patient was not ready/waiting for investigation reports. The patients were sometimes also received late by the sister on the desk since only one nurse has been assigned the responsibility of coordinating the calling of scheduled patients for surgery from floors and receiving the patient and attending to the various enquiries about ICU beds. The pre- operative space is also not utilized properly.

The cancellation of the surgeries was also done either by the doctor in the morning in case the patient was found to be unfit or the doctor was not available on that particular day, but the scheduling process takes 4-5 hours the previous day and due to the changes in rescheduling, the OT surgery order was generally changed according to the surgeon's or the anaesthetist's preference. The cancelation could also be informed beforehand in case the patient's investigation reports are awaiting or the patient has been given medication or the surgery is not required.

RECOMMENDATIONS

- For the ICU bed allotment a specific person should be allotted this responsibility to book the ICU beds for the post-operative patients and any cancellation for ICU bed requirement should be communicated effectively with immediate effect. And the ICU bed vacancy should be allotted to any senior management level person such that even the vacancy from the ICU can be tracked and the

internal transfer out of bed happens quickly. Even the non-availability of attendant for ICU bed transfer should be minimized and in the OT they should be intimated when the bed is sent from ICU such that the anaesthetist is also called such that no more delay occurs in shifting. For SOS patients a minimum delay is expected since their requirement is unsure, for that at all times at least one ICU bed should be kept in OT spare for emergencies and SOS patients, the Paediatric ICU ward could also be equipped with one or two adult ICU beds which could be utilized in times of emergency.

- To minimize the delay in the waiting time for the patients before surgery, the floor nurse should be informed to send the patient to OT once the closure for the previous surgery starts, in many cases it was observed that the OTC is not deposited, the patient should be informed about it in the morning on the day of the surgery such that less time is wasted waiting for the OTC to be deposited.
- The Cancellation should be informed prior in case the patient is not admitted or the surgery is postponed due to the non-availability of the surgeon on that particular day. Overscheduling of the surgeries should be minimized, especially the additional cases until and unless the patient's condition is very critical.
- More nurses are required in the recovery room for 8 patients, a minimum of 4 nurses are required such that the patients are taken care of properly.

- To minimize time for scheduling of cases, the staff at OT booking counter should be trained properly to book cases under the slots assigned and the surgery should be mentioned clearly, this would minimize the scheduling and rescheduling time, which takes around four to five hours of an officer at supervisory position.

- Each Cancellation wastes resources at every level starting from the supervisor responsible for scheduling to the attendant responsible for transfer of tray to the OT.

- The cancellation could also be avoided by not booking the slots until the patients get admitted, should not be booked on their EX number as some of the patients book surgeries just to get a bed available as surgery patients are given preference for admission.
- Surgeon slot should be pre-decided instead of changing the order of the surgeries scheduled, would help to save time.
- The Turnaround Time between surgeries could be minimized by ensuring that the next patient has been received before the previous surgery gets over and the OT schedule should be followed by properly intimating the surgeons one day prior about the slots allotted to them such that no case is delayed due to late arrival of the surgeon or the anaesthetist.
- The trays prepared should be transferred to the OT for the whole day for that particular OT to minimize the time for preparing the tray.

- Regular maintenance of the air conditioner in the OT should be done such that in case there is any problem, the maintenance work should be scheduled for Sundays or at night such that no patient is exposed to infection in case the air conditioner stops working.
- The lift connecting the OT should exclusively be used to transfer patients to and from the OT; this would minimize the time to transfer the patients after the surgery and the patients to come from floors once they are called for surgery.

OPD Waiting Time Study

A. Introduction:

In today's world of urbanization, with hectic schedules, people expect everything to be done in minimum amount of time with quality service, even if it includes availing health care facilities, waiting time in OutPatient Department determines the patient's experience and can influence his/her perception about the quality of services provided by the hospital. Hence an appointment patient generally expects to be called in by the doctor at the prior time allotted to him . The waiting time for services is crucial factor in determining patient satisfaction related to the services provided. Hence it is imperative to evaluate average waiting time and factors influencing delay in availing service.

B. Executive Summary:

A 2-week long study was conducted in outpatient department with predefined data entry sheet to monitor patient movement within the OPD. A comprehensive data of 300 patients was considered including Clinic / Free OPD patients and Appointment/ Non appointment patients.

C Aim/Objective:

- To evaluate the average waiting time for the patients visiting out patient service department for Consultation.
- To determine factors and the patient arrival pattern for Clinic and Free OPD patients both.

D Methodology:

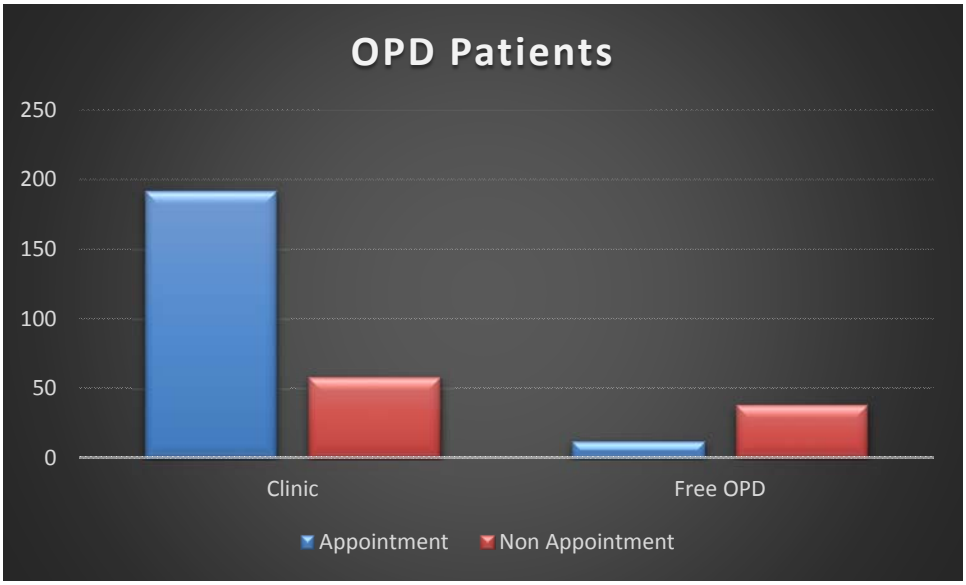
- Study Period: - 8/04/2014 to 15/04/2014
- Sample Size:- 300
- Sampling method: - Simple Random sampling
- Data Collection Tool: - Data Tracking sheet
- Data Source: -

- Primary Data Source- Data tracking through observation and time mentioned on consultation voucher and the time patient is called inside for consultation.

E. RESULT AND ANALYSIS

E.1. Composition of Patients visiting Outpatient service department for Consultation.

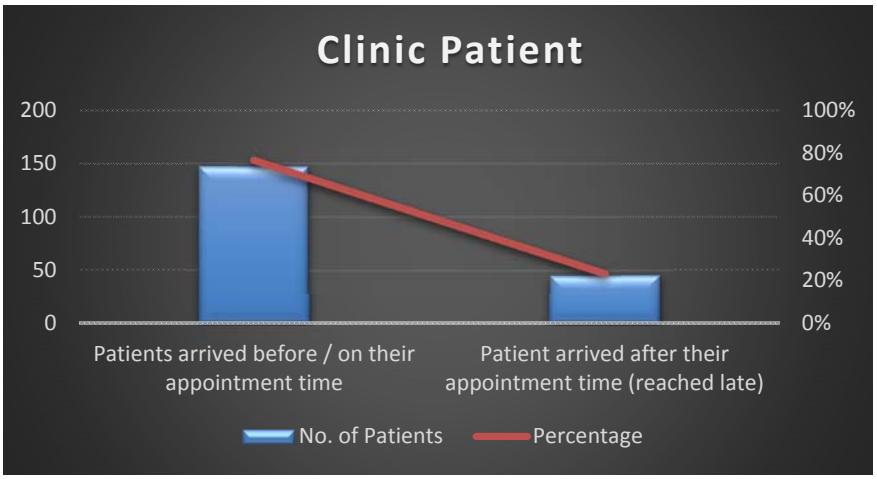
Type of Consultation	Appointment	Non Appointment	Total
Clinic	192	58	250
Free OPD	12	38	50
TOTAL	204	96	300



Interpretation:

Out of patients visiting the OPD, 23.2% of clinic patients are Walk-in patients visiting OPD for consultation and in free OPD 76.8% of free OPD patients are Walk-ins.

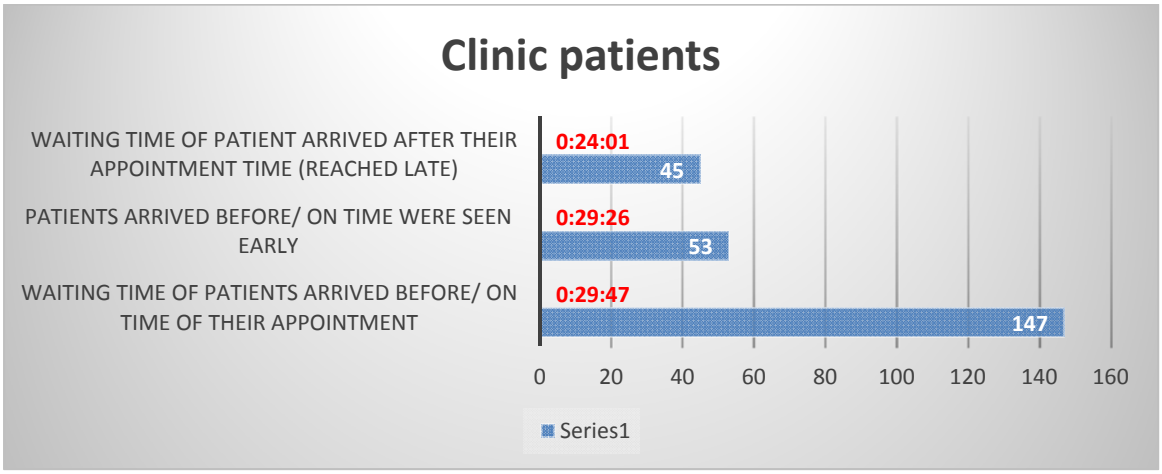
E2. Pattern of arrival for Appointment Patients.



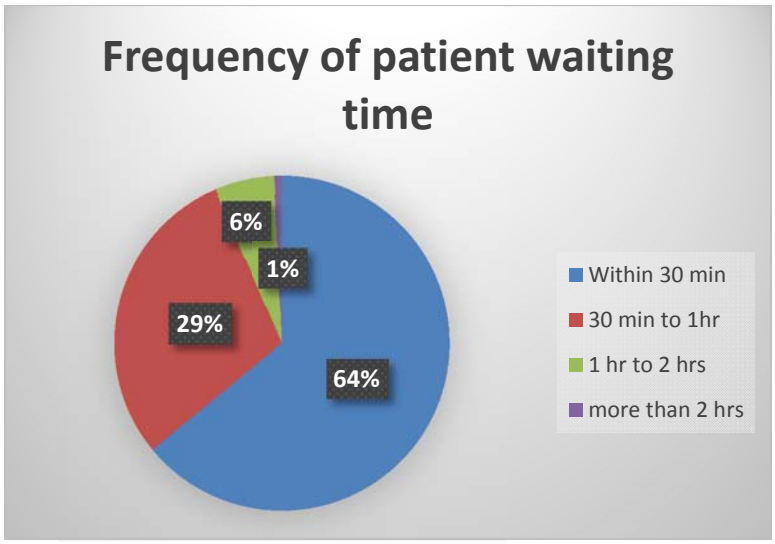
Interpretation:

77% patients arrived before or on their appointment time and 23% arrived late or after their appointment time.

E3. Idle waiting time of appointment patients



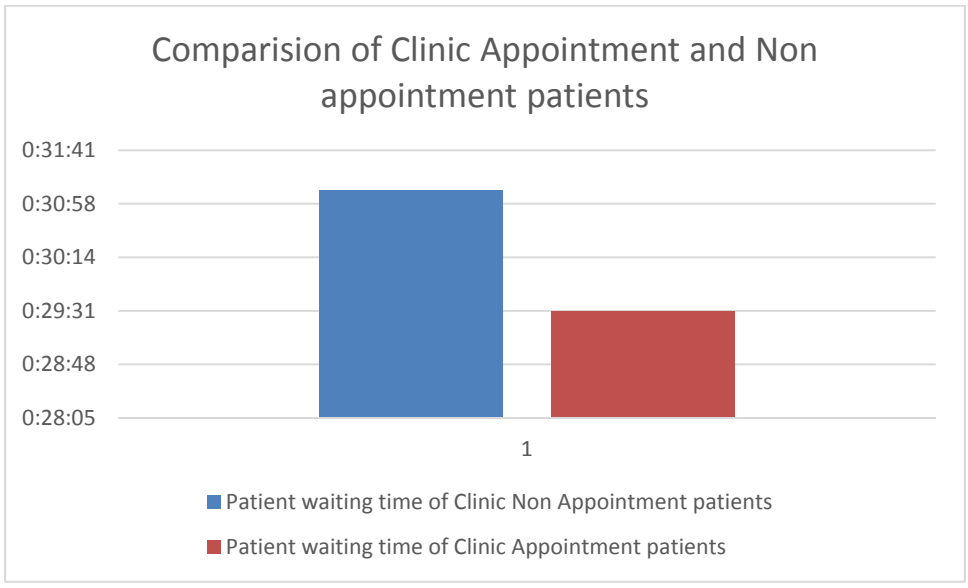
E4. Frequency of waiting time of Clinic Appointment Patients.



Interpretation:

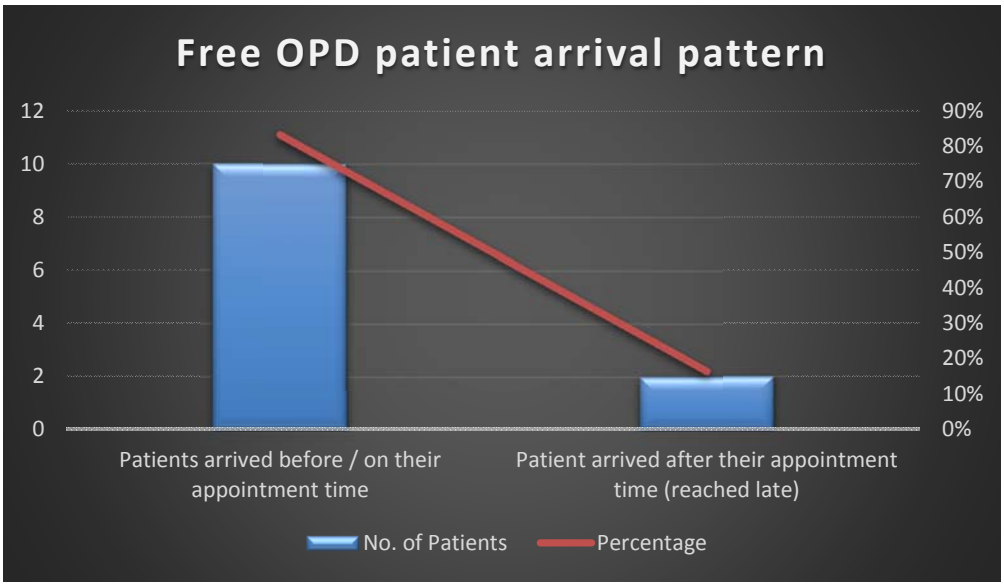
The average waiting time was found to be 32 minutes for clinic appointment patients, 64% of patients were seen within 30 minutes from their appointment time. 7% patients had to wait more than 1 hour and 29% patients were seen within 30 minutes to 1 hour of their appointment.

E5. Comparison of Clinic Appointment and Non appointment patients



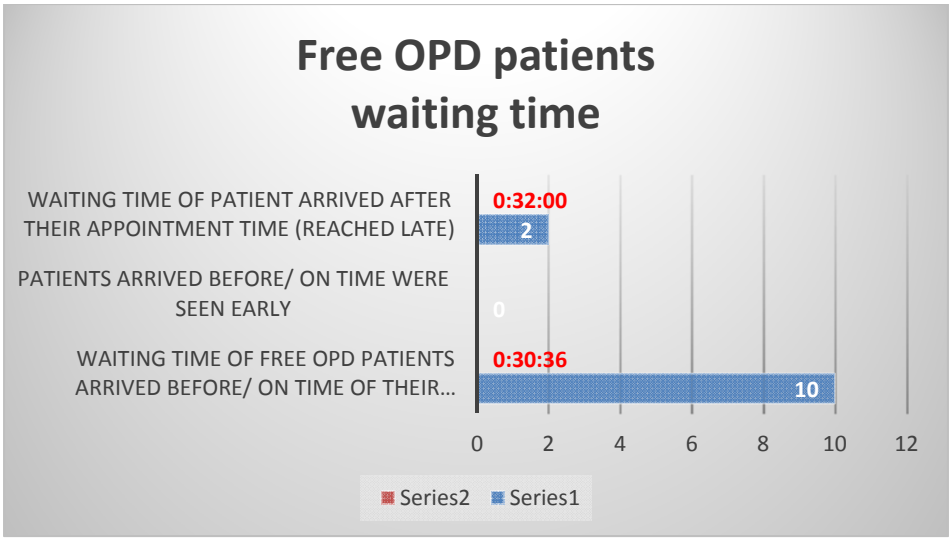
It was observed that the waiting time of non appointment patients was more than that of the appointment ones with the average waiting time found to be 31 minutes for non appointment patients and 29 minutes for appointment patients.

E6. Arrival Pattern of Free OPD appointment patients.



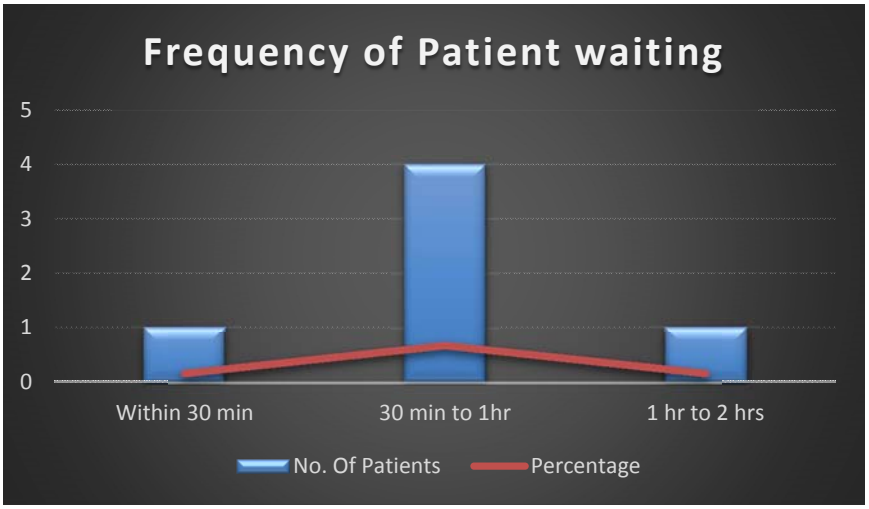
It was seen that 83% of Free OPD patients arrived before/on their appointment time, and 17% patients arrived after their appointment time for Free OPD patients.

E7. Waiting time of Appointment patients for free OPD.



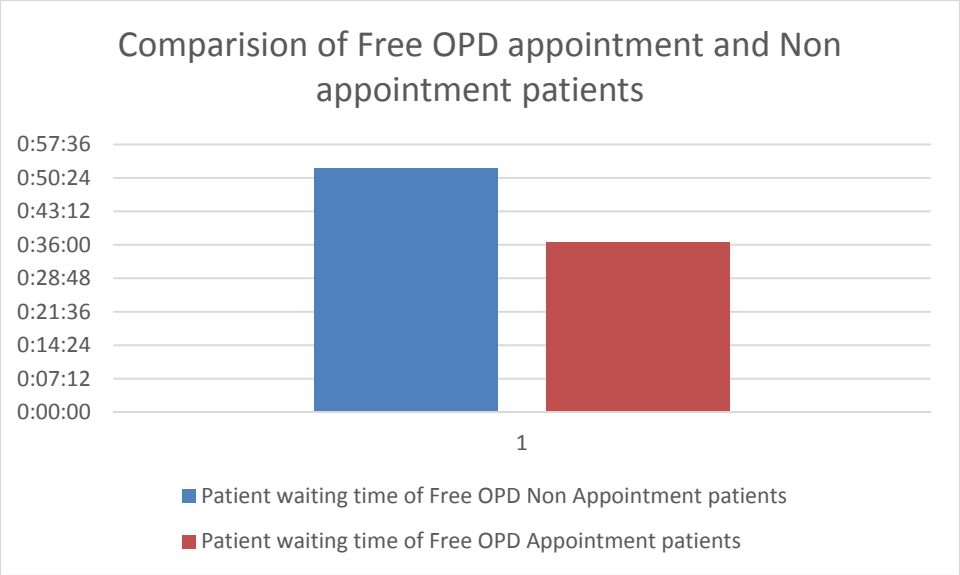
The waiting time for the Free OPD patients was also observed with approximately 30 minutes as the idle waiting time for patients who arrived before or on their appointment time.

E8. The Frequency of Patient waiting for Free OPD patients



Interpretation: It was observed that 17% patients were seen within 30 minutes of their appointment time and 67% were seen within 30 minutes to 1 hour duration.

E9. Comparison of Free OPD appointment and Non-appointment patients.



The average waiting time for free OPD appointment and non-appointment patients was compared and it was found out that average waiting time was 52 minutes for Non appointment patients and 36 minutes for Appointment patients.

F. Conclusion:-

- Idle Waiting Time for appointment clinic patient on time is 29 minutes.
- Idle Waiting Time for appointment Free OPD patients on time is 36 minutes.
- Idle waiting time for Walk- In clinic patients is 31 minutes.
- Idle Waiting Time for Walk-In Free OPD patient is 52 minutes.

G. Recommendations:

- The file transfer system could be made on an online server such that the file arrives on the desktop of the Consultant, this would save the file transfer time.
- The Consultants should be informed prior about their scheduling of OPD such that delay due to late arrival of consultants could be avoided.
- Incase the Consultant has to go for some emergency surgery, prior information should be given to the nurse on desk.

STUDY ON THE DELAY IN OPERATION THEATRE BILLING

AUDIT ON:	**Study on the delay in OT billing**	
DEPARTMENT:	OT billing, 3rd floor OT	
AUDIT PERIOD:	**FROM : 20-May**	**TO: 22-May**
CONDUCTED BY : **NAME: Vrinda Gupta** **DESIGNATION: MANAGEMENT TRAINEE** **SIGNATURE:** **DATE: :**		**APPROVED BY:** **NAME: Dr. Preeti Goraksha** **DESIGNATION: Sr. Clinical Care Unit Manager** **SIGNATURE:** **DATE:**

EXECUTIVE SUMMARY:

This study was done to assess the time required in OT billing, and the average time taken to enter one billing sheet was calculated, the billing counter staff has to also collect charge sheets from the stores and recovery room and the OT upstairs. Due to the various pending cases in the OT billing this was done to evaluate the work of the manpower assigned and the delay caused in the billing procedure and the reasons for delay.

The time required for the charge sheet to be received from stores, in case of consignment and the recovery room was also calculated. Since OT billing unit is present in the OT complex itself hence immediate billing after the surgery should be done to ensure less delay in the discharge procedure. Charge sheet has to be entered with utmost accuracy hence optimum clerical staff is required for this

,and it has to be ensured that the charge sheet is also complete with all the necessary details mentioned clearly.

INTRODUCTION:

OT billing department is situated inside the 3rd floor OT complex, the charge sheets post surgery are collected from the recovery room once the patient is shifted to floors and the anesthesia and consumables charge sheet is collected and entered in the system. The initial surgery details has to be entered and then the consumables charge sheet including the consignment sheet, in case is used is entered. The Charge sheet also consists of the surgeon charges and the theatre charges and for surgery charges, grading has to be mentioned accurately. OT billing department consists of a staff of 5 members including one supervisor responsible for supervising the efficient rotation of staff aswell in the procedure rooms,and one official responsible for scheduling as well and during the time of the study conducted only two of the staff was available for billing that too from 8:00am to 5:00pm. The charge sheet copy is compiled and one copy is kept in the OT billing section and the other one is sent to the OT main billing counter in the ground floor lobby, one copy containing the surgery details is kept in the patient's file from the Recovery Room. Any queries regarding the concession offered for staff of the hospital or TPA or is done at the main OT billing counter, inside the OT all charges are charged as per the package designed in the main system CARE.

AIM: / OBJECTIVES:

This study was done to evaluate the delay in Operation Theatre Billing procedure and possible reasons for it and to assess the possible causes for increase in workload in the billing department and suggest measures to overcome it's shortcomings. Since the billing procedure requires proper knowledge and experience about the gradings mentioned and the consumables charged as in many cases it is not clearly mentioned, hence the billing staff has to confirm with the surgeon or the nurse undersigned about the actual information mentioned in the charge sheet. Hence their optimum work hours utilization are also observed and evaluation.

SAMPLE SIZE:

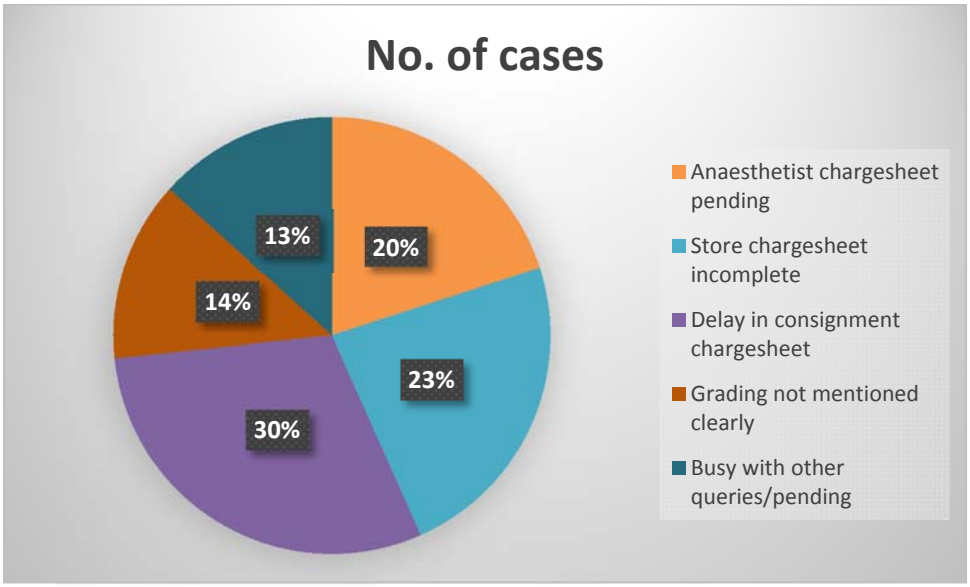
Simple Random Sampling, a sample size of 75 was taken within working hours of 8:00 to 5:30pm.

METHODOLOGY:

This study was carried out for a time duration of 3 days from 20-May 2014 to 22-May 2014 and observational analysis was adopted as methodology.

RESULTS/ANALYSIS:

This study was done to assess the average time required for the billing of one case ,it depends on a lot of factors including the grading, surgery type and the surgeon also. Hence the average time for one billing was found out to be 28 minutes and the average time delay from the charge sheet to be transferred from stores to billing was found to be 1:28 minutes, and from the Recovery Room to the billing was found to be 1:47 minutes since the sheet was transferred after the patient was shifted to floors.



The various reasons for delay in completion of Charge sheets were studied and are depicted in the pie diagram above, with from a total number of 30 delays, 30% and 23% cases were delayed due to delay in receiving of consignment sheet and incomplete store charge sheet respectively. The pending cases were found to be 48 out of a sample size of 75 which we completed on Day 2 and Day 3 of surgery.

DISCUSSION:

OT billing occurs in a very systematic way but it was observed that the billing procedure was kept very pending since it was observed that the working hours of the OT staff were not fully utilized in the billing process as receiving of the charge sheets from stores and Recovery Room also took much of their time and the morning 8:00am-11:00am were mostly utilised in completing the surgery charge sheets of the surgeries occurring after 6:00pm of the previous day. And out of the two persons involved in billing one was assigned to complete pending surgery charge sheets with Grade VI charge

sheet taking upto approximately 40 minutes. In certain cases the Charge Sheet was not complete or the package was entered incorrect hence even that consumed their time in confirming it from the surgeon or the nurse undersigned.

In a few cases the anaesthetist charge sheet was received late or was incomplete, there was a time delay from the stores in the morning hours, even including the consignment sheet that is issued very late. SSS patients and Grade I or II were always given preference since their discharge was due on the very same day.

The department contained inadequate working space for 4 individuals, creating a chaotic environment for keeping and receiving the charge sheets.

RECOMMENDATIONS:

- **The billing department requires at least one more person working after 6pm till at least 11pm to enter the charge sheets received after that time such that the morning time on pending is not wasted on pending charge sheets.**
- **Out of the 4 desktops, in the billing area the supervisor could be given a desk outside either in the pre-operative area where a lot of space could be utilised and which only consists of equipment and beds lying there in an untidy manner.**
- **A person should also be assigned to get charge sheets from stores and the Recovery Room at regular intervals such that the working hours of the OT staff is utilized to the maximum for billing.**
- **The billing could also be started by receiving the charge sheets in the Recovery Room itself, such that the surgery details are entered at least.**
- **In case of ICU patients the charge sheet arrives very late, once the Patient is shifted to ICU, hence just the surgery details could be entered as soon as the surgery gets over.**
- **And the CARE system could be made more advanced as the substitutes and the recent changes done in the packages are not updated on a regular basis,the package could also be modified depending on the surgeon and the surgery type since every surgeon uses different number of consumables.**
- **The charge sheet could be made as an OHP sheet consisting of options representing numbers such that the consumable entry is counted easily and it would also reduce the time for entering the charges and minimize errors.**