Summer Training at
P.D. Hinduja National Hospital and Medical Research Centre, Mumbai
(April - June, 2013)

1. **Quality Check for Tracking Delay of Patient Files from Medical Records Department for OPD Patients.**
2. **Live Audit for Quality Check of Medical Records in Accordance with NABH Specifications**
3. **Gap in Equipment Utilization in Ultrasound, Mammography and Color Doppler.**
4. **Reducing the Turnaround Time of Reports in Ultrasound, Mammography and Color Doppler.**

By
Gunjan Gera

Under the guidance of
Dr. S.D. Gupta

Post Graduate Diploma in Hospital and Health Management
2012-2014

Institute of Health Management Research,
Jaipur
2013

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CERTIFICATE

This is to certify that Dr.Gunjan Gera, student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from Institute of Health Management Research, Jaipur Batch 17th has undergone Summer Training at P.D Hinduja National Hospital and Medical Research Centre, Mumbai and has done following projects:

- Quality check for tracking delay of patient files from Medical Records Department for OPD patients
- Live Audit for Quality check of Medical Records in accordance with NABH specifications
- Gap in Equipment Utilization in Ultrasound, Mammography and Color Doppler
- Reducing the Turnaround time of reports in Ultrasound, Mammography and Color Doppler

The candidate has successfully carried out the mentioned studies assigned to her during summer training from 8th April 2013 to 8th June 2013 and her approach to study has been sincere, scientific and analytical.

I wish her success in all her future endeavors.

Dr. S.D Gupta
Director and Mentor
IHMR, Jaipur

Dr. Ashok Kaushik
Dean, Academics and Student Affair
IHMR, Jaipur

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

VEER SAVARKAR MARG, MAHIM, MUMBAI - 400 016, INDIA
PHONE : 2445 1515, 2445 2222, 2444 9199 FAX : 2444 9151

June 21, 2013

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Dr. Gunjan Gera a student of Post Graduate Diploma in Health & Hospital Management from Institute of Health Management Research (IHMR), Jaipur, did her internship in our Hospital from 08-4-2013 to 07-6-2013. During this period her assignment was as follows:

- Quality check for tracking delay of patient files from Medical Records Department for OPD patients
- Live Audit for Quality check of medical records in accordance with NABH specification
- Gap in Equipment Utilization in Ultrasound, Mammography and Color Doppler
- Reducing the Turnaround Time of Reports in Ultrasound, Mammography and Color Doppler

I wish her all the success in future endeavors.

Joy Chakraborty
Senior Director Operations

Quality Healthcare for All 60 YEARS

ACKNOWLEDGEMENT

A summer project is a golden opportunity for learning and self development. I consider myself very lucky and honored to have so many wonderful people lead me through in completion of my projects.

I wish to express my indebted gratitude and special thanks to Dr. Preeti Goraksha Sr. Manager- Clinical Services, P.D. HINDUJA NATIONAL HOSPITAL AND MRC who in spite of being extraordinarily busy with her duties, took time out to hear, guide and keep me on the correct path and allowing me to carry out my project work at their esteemed organization and extending during the training.

I express my deepest thanks to Dr. Swapnil Kharnare, Sr.Manager - A & E and Dr Supriya, Executive-I*maging* for taking part in useful decision & giving necessary advices and guidance and arranged all facilities to make life easier. I choose this moment to acknowledge their contribution gratefully.

It is my glowing feeling to place on record my best regards, deepest sense of gratitude to Mrs. Ranjana Varadkar, Sr.Manager – Medical Record Department for their judicious and precious guidance which were extremely valuable for my study both theoretically and practically.

I express my deepest thanks to my Mentor Dr. S.D Gupta Sir, Corporate Director, IHMR Jaipur for their guidance and support. He helped all time when we needed and he gave right direction toward completion of project.

Table of contents

Section –A

Introduction

Summer internship forms an integral part of the PGDHM curriculum. It provided a practical and first hand exposure of the healthcare industry to the first year students. It is meant to be a preparatory tool towards making a future Healthcare leader who can manage, initiate and innovate changes in this evolving sector of the Indian economy and provide it with standards that are accepted as the internationally.

I consider myself to be fortunate to have got this exposure in the largest corporate hospital of the country boasting of a successful standing of 60 exemplary yrs.

The learning that I extracted from the experience not only enriched me in terms of providing knowledge as to how a corporate hospital runs, but also gave me insights into my own self, imparting priceless of patience, dedication and importance of good behavioral communication.

Objectives of the training –

1- To get a fair grounding of how a healthcare organization is managed, maintained and run profitably.
2- To understand the working of the various department of a public hospital.
3- To understand the interdependency of the various departments of the hospital.
4- To understand how the theoretical aspects of study help in fulfillment of practical goals.
5- To evaluate the role that we, as future managers are expected to perform in the healthcare industry.
6- To gain the basic skills of managing a healthcare organization this is to share the twin responsibility of caring for the patients as well as earning profits.

Section –B

Methodology

The time of eight weeks that I spent at P.D Hinduja hospital saw me interact and communicate with a variety of people right from the cleaner in the housekeeping department to the top brass in the management. The experience was diverse and exhilarating as it gave us the opportunity to actually learn and understand the aspects of hospital management. The department studies and project reports prepared during tenure were possible because I employed the following.

Methodologies of data collection generation and analysis.

Primary data sources –

1- I actively interacted with the staff of organization in various departments.
2- Interviews with the respective in charge of the departments in the hospital.
3- Checklist prepared for each department.

Secondary data sources –

1- Through registered records and manuals.
2- Through Internal Website of the hospital.
3- Literature available about the hospital like Magazines, written documents.
   Apart from these, there has been made extensive use of MS- Excel in the formulation and analysis of the various projects undertaken.

P.D. HINDUJA NATIONAL HOSPITAL AND MRC –

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 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.
-

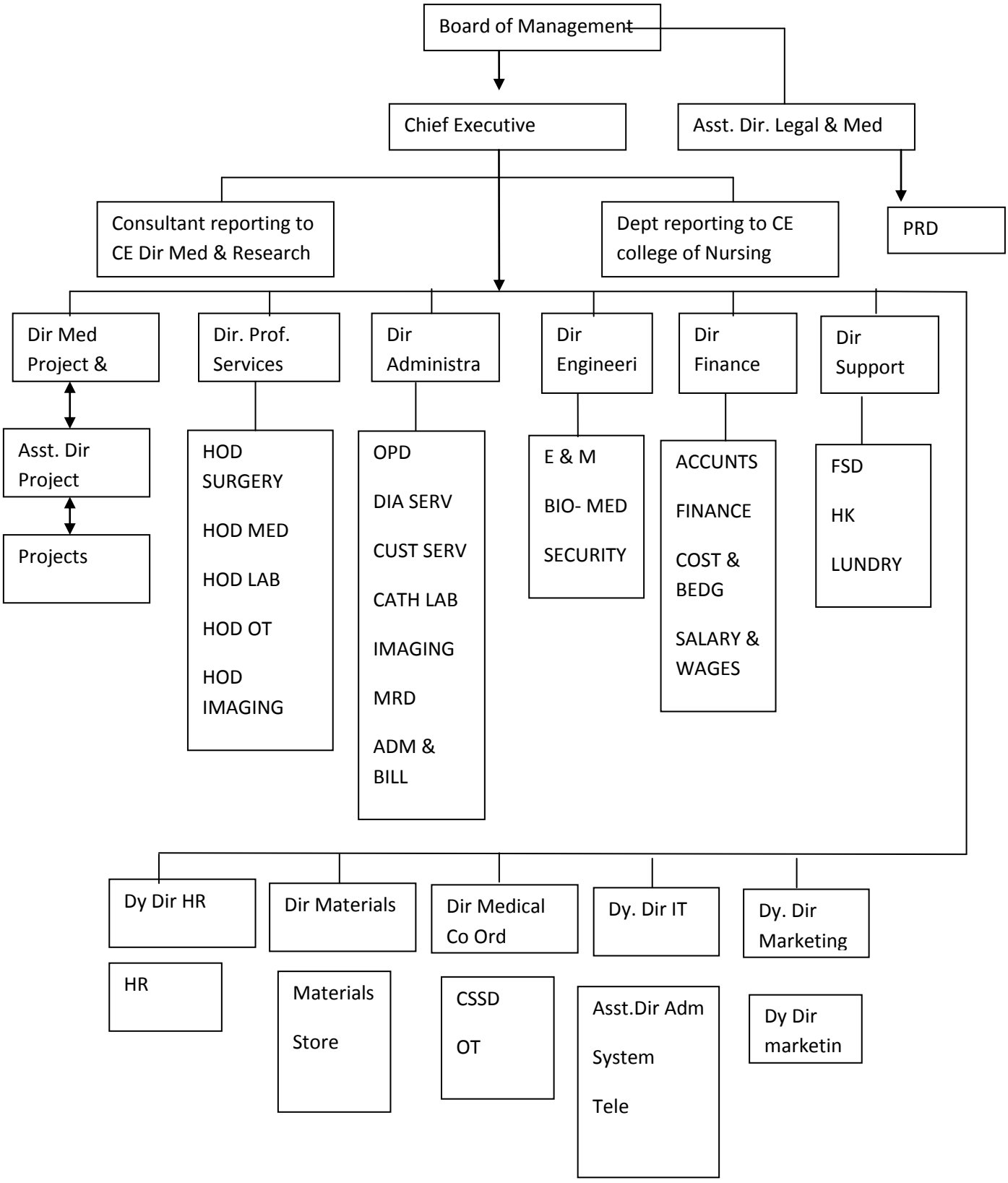
Basic Facts about P.D. Hinduja Hospital –

- Bed - 381 beds inclusive of 57 critical care
- Bed Occupancy rate - 99%
- ALOs - 4.2 days
- Mortality Rate - 35 death/month
- Patient to Nurse Ratio - 6:1
- Number of Discharges/month 2000
- Number of OPD patient/day - 900-1000
- Number emergency case - 45-50 day
- Building of Hinduja Hospital- 3
- Hinduja Clinic (OPD) - 4 floor (3 + 1 floor)
- West Block (IPD Block)- - 16 floors
- Lalita Girdhar Block – - 14 floors

ABBREVIATIONS -

A & E	Accident and emergency
AKD	Artificial kidney dialysis
ALOS	Average length of stay
BMD	Bone mineral densitometry
CT SCAN	Computerized tomography scan
CSSD	Central sterile supply department
CMO	Casualty medical officer
CEO	Chief executive officer
CCC	Customer care centre
DA	Director administrator
DPS	Deputy professional services
DN	Director nursing
DSA	Digital subtraction Angiography
EEG	Electroencephalography
FSD	Food service department
HH	Hinduja hospital
HR	Human resource
IPD	In patient department
ICU	Intensive care unit
ICD	International classification of diseases
IT	Information technology
MRD	Medical record department
MRI	Magnetic resonance induction
NABH	National accreditation for board of hospital and health
OPD	Outpatient department

Organogram of P.D. Hinduja National Hospital And Research Mumbai



DEPARTMENTS

CLINICAL SERVICES –

OPD
Accident and emergency
Cath Lab

CLINICAL SUPPORTIVE SERVICES –

Lab Medicine
Telemedicine
Poison and Drug information center
Imaging
CSSD
House-keeping

CLINICAL ADMINISTRATION SERVICES –

Ambulance Services
Nursing department
Laundry
Mortuary

ADMINISTRATIVE SERVICES –

Main Administration
Medical Record Department
Materials
Engineering
Information Technology
Purchase

OUT PATIENT DEPARTMENT

Introduction:-

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 :Out Patients", Hence the Department of ambulatory Care is also commonly known as Out Patient Department.

The Hinduja Clinic aims to provide

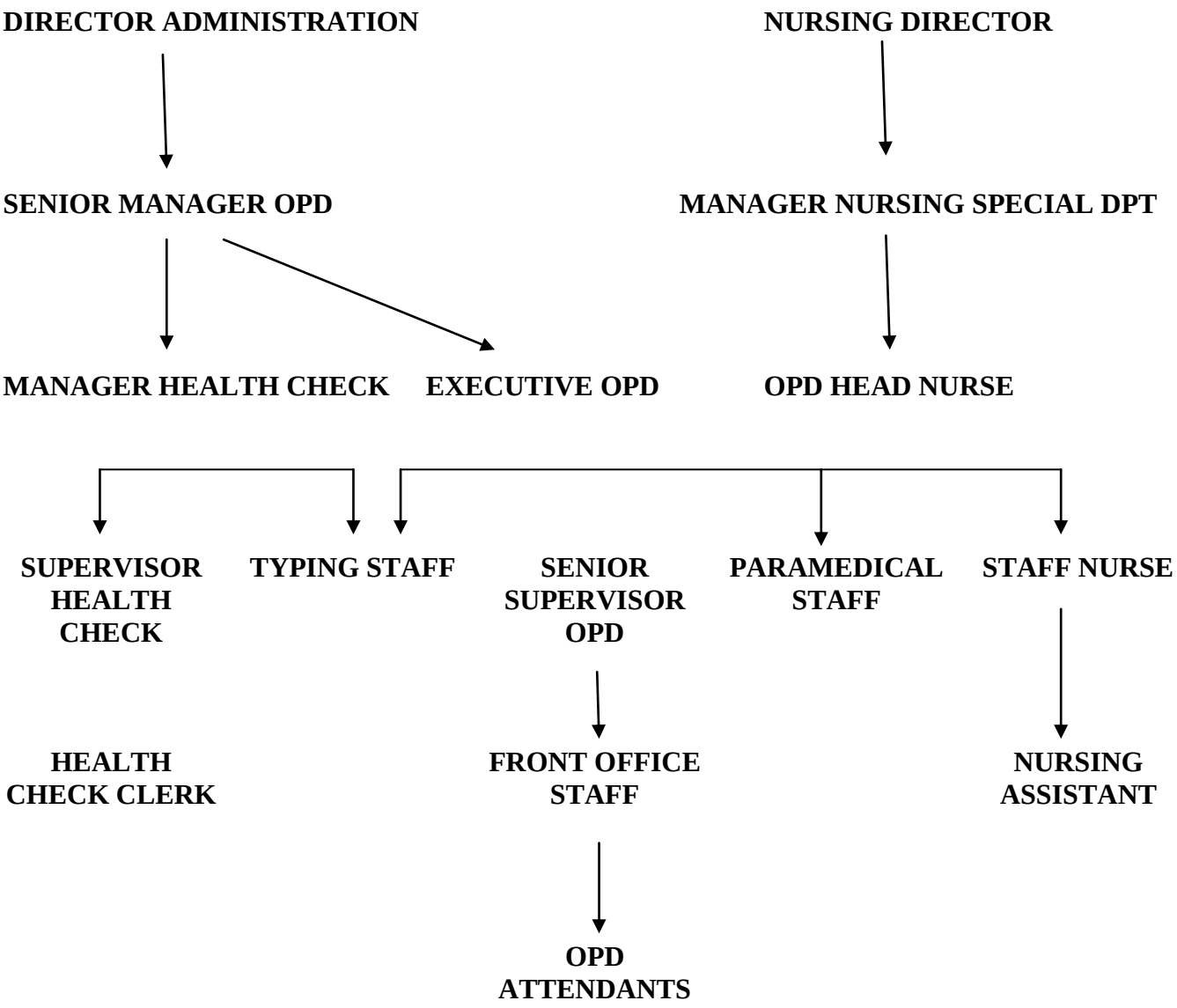
1- High quality ambulatory care services to the community in a secure environment,

2- 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 Dept.	Gamma knife Medical reports delivery counter and OPD Path Lab.
First Floor	Consultants	General Radiology and Ophthalmic	ENT and Medical Records	Consultant
Second Floor	Consultants Neurology Dept.	Consultants	Consultants, CDC and Physiotherapy	Dental and Consultants
Third Floor	Blood Donor Room, Blood Bank & Star lab,	Endoscopy Bronchoscopy & Uronyanmic	Cardiac, PFT Lab, Consultants	Executive health checkup
Fourth Floor	Administrative section	Library	Conference Hall	Administrative section

OPD Organogram –



ACESS TO OPD SERVICES

Hinduja Hospital Card (HH Card)

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 H H number is present on the card.

External Patient Token Number

Out patients 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 (External Number) for that particular transaction only.

OPD Appointment

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

Health check up

The Executive Health check up department, a part of the OPD services, is a wing of this multispecialty Hospital dedicated to the diagnostic and preventive side of patient care. This system facilitates the patient to get all the required investigations/consultations done by ;paying for the packages which includes consultations and/or for each individual item of Pathological or Imaging investigations. In addition, these packages are offered at special discounted rates that make them truly worthwhile. At the end of the day, candidates leave the hospital with all their reports.

The departments with which the Health check team works in co-ordination are; Pathology, Cardiology, ENT, Ophthalmology, Dental and Radiology.

The visiting consultants are from the following faculties: Physicians, Surgeons, and Gynecologists.

ACCIDENT & EMERGENCY

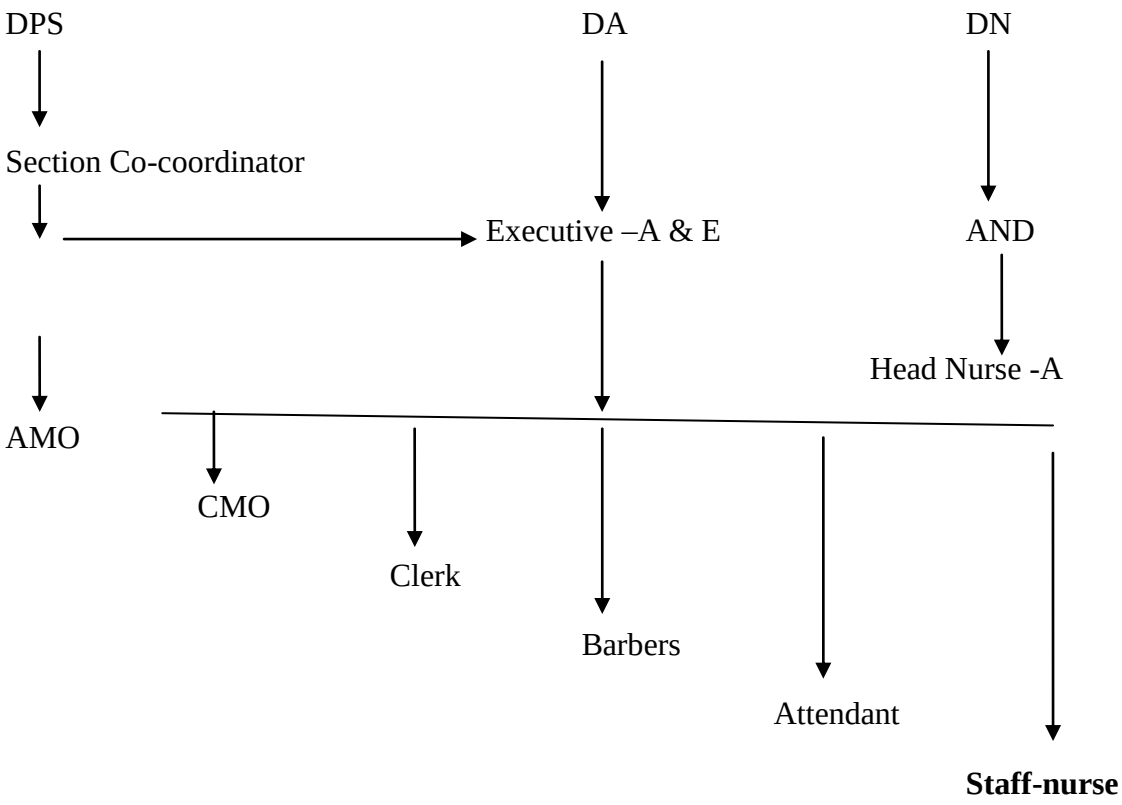
Introduction :

1. The A & E Department is the face of any hospital, which work around the clock through the year.
2. Department is manned by highly trained medical & paramedical staff & it serves all the immediate emergency medical interventions.
3. It can be divided into following areas – Accident and Emergency, Casualty centre and Minor OT.
4. 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 notifiabel 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 –

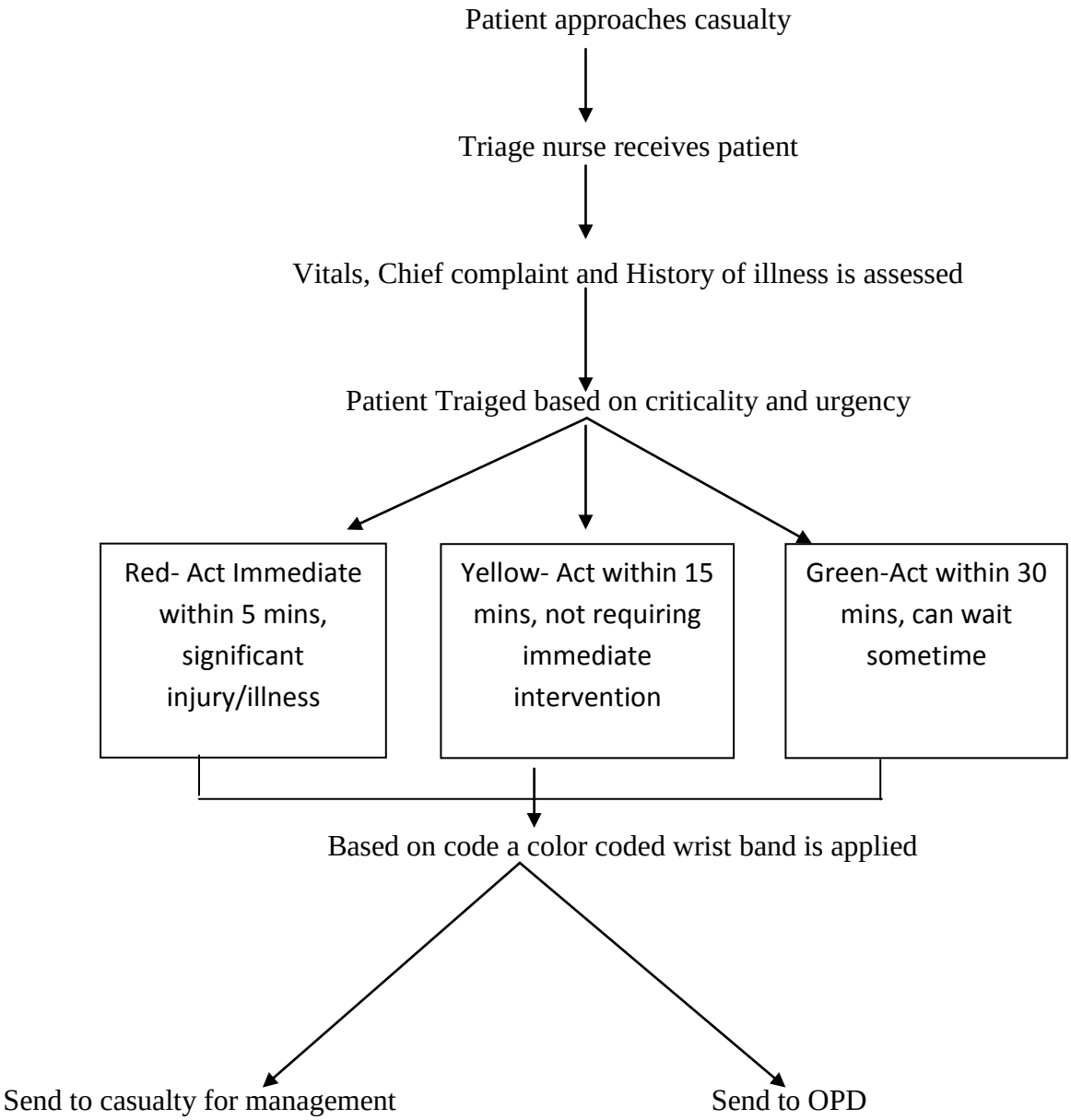


Staffing –

Categories of staff numbers –

1-	Executive Administration	01
2-	CMO	08
3-	Nurses	16
4-	Nursing Assistant	02
5-	Clerks	02
6-	Attendants	15

Triage Process Flow

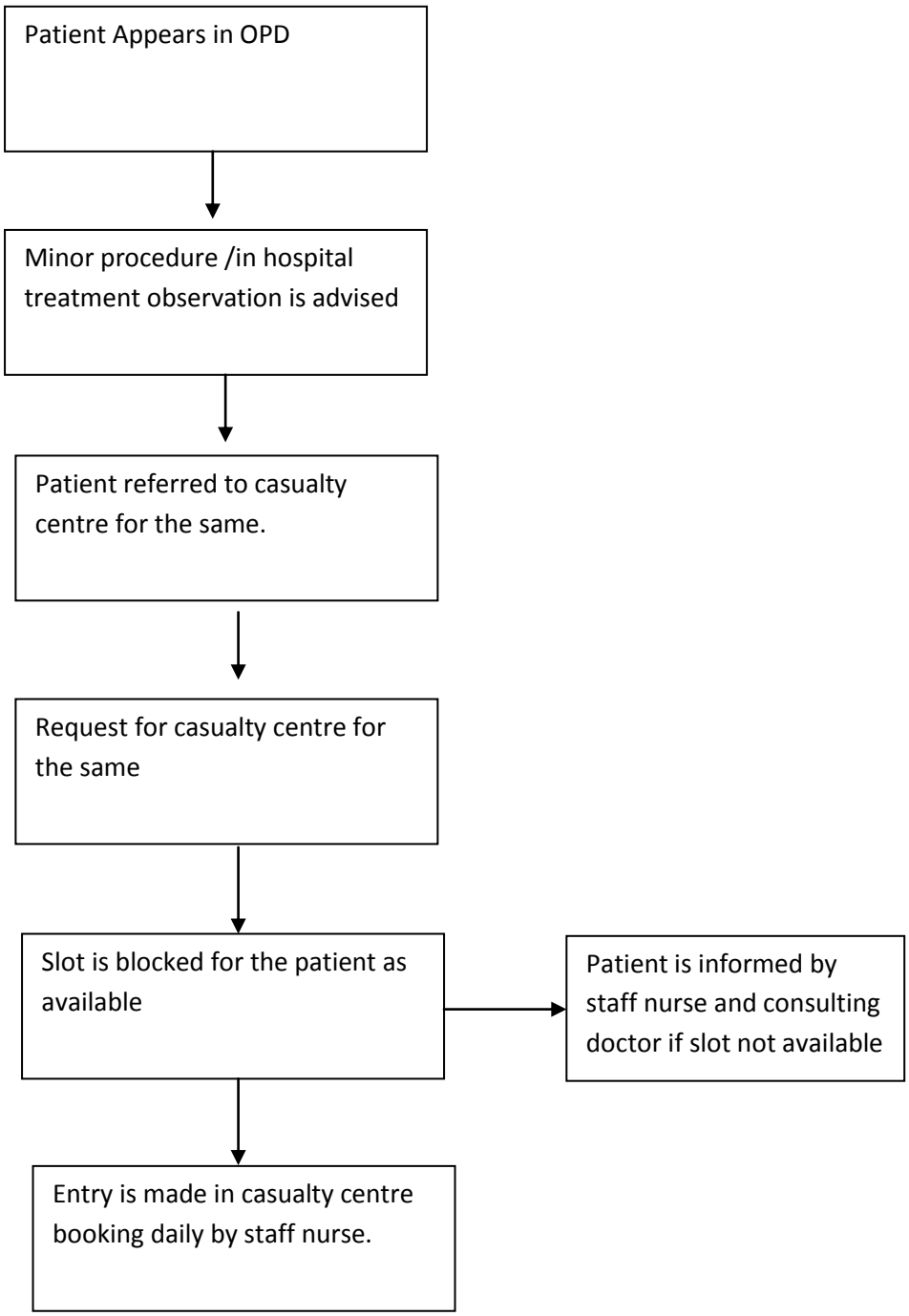


Triage :

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.

Casualty centre booking –



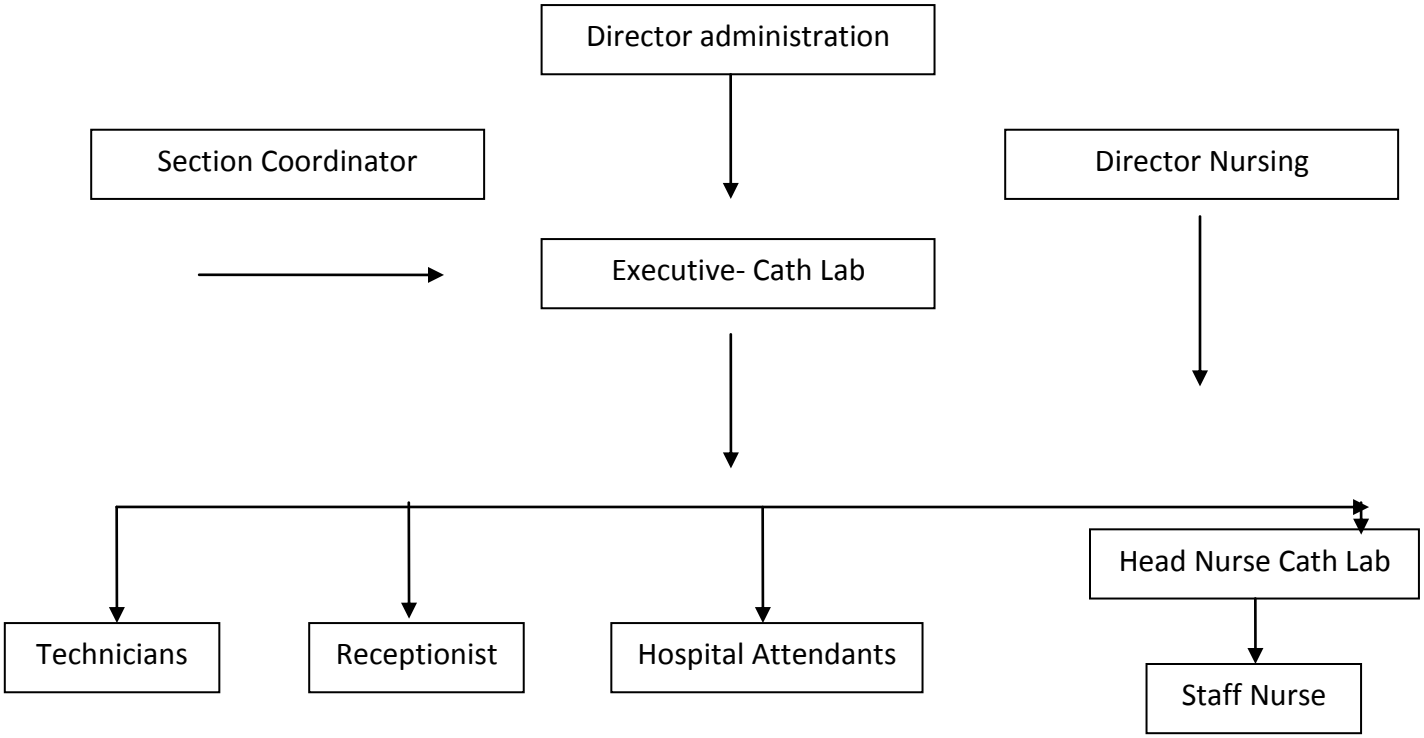
CATH LAB

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



Categories of staff:

TYPE	NOS.
Executive –cath lab	1
Technicians	4
Hospital Attendants	4
Nurse	3

CLINICAL SUPPORT SERVICES

LAB MEDICINE

Inrtoduction:

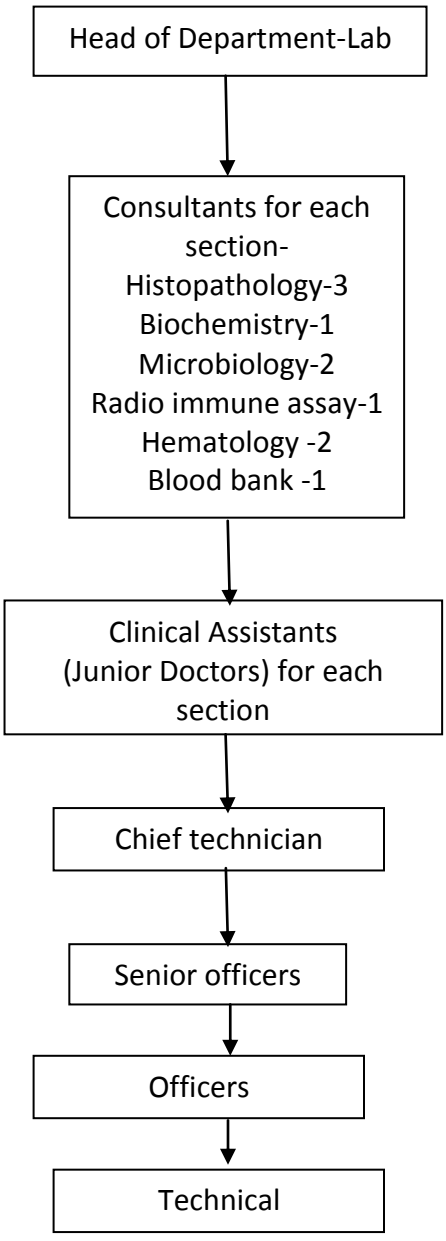
The lab medicine department of Hinduja hospital covers about 13000 sq. ft. area in 2 different buildings. It includes the following –

1. Biochemistry
2. Hematology
3. Radio immune assay
4. Microbiology
5. Serology
6. Histopathology
7. Star Lab
8. Blood Bank
9. OPD LAB

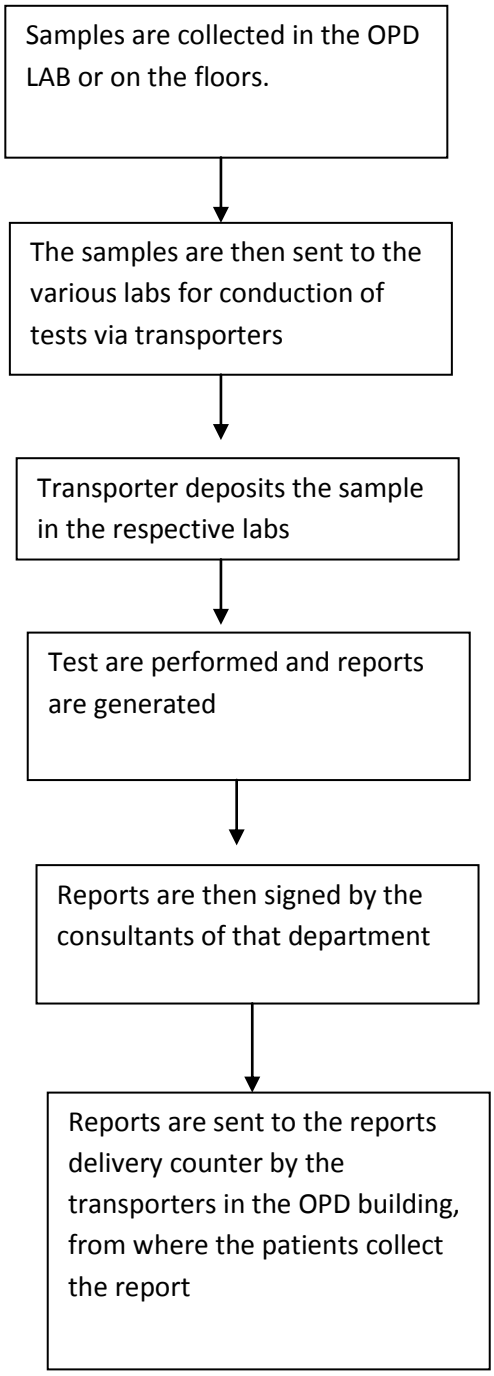
The lab has its own laboratory Information System, which is called the 'LABWARE' Software. There are 2 different teams for OPD and IPD. The lab also conducts quality assurance programs – Internal and external.

1. Central processing laboratory is spread over more than 10.000 sq ft which follows strict internal quality compliance for all analyzers.
2. Exhaustive menu of tests from routine to esoteric.
3. Excellent laboratory management system which handles both analytical and post analytical aspects.
4. Dedicated courier and logistics services.
5. Quality control and quality assurance executive that monitors pre-analytical and post analytical processing of the samples.
6. Fully automated laboratory using positive identification of bar-coded specimens.
7. Trials specific specimen kits can also be customized if required and bidirectional interfacing.
8. Customized management report (MIS- Management Information System)

Organgram


Head of Department-Lab
Consultants for each section-
Histopathology-3
Biochemistry-1
Microbiology-2
Radio immune assay-1
Hematology -2
Blood bank -1
Clinical Assistants (Junior Doctors) for each section
Chief technician
Senior officers
Officers
Technical

Process flow –



Biochemistry

Biochemistry lab is at the 3rd floor in the Lalita Girdhar building. The department has an automatic machine to carry out various tests. A machine print out is received, entered in the register and report is generated. The biochemistry dept, also maintains a Follow up card for patients. The tests on OPD samples are conducted here, and also any special tests on OPD as well as IPD samples is also conducted here and also any special tests on OPD as well as IPD samples is also conducted here.

Hematology

Hematology lab is on the 5th floor of Lalita Girdhar building. The department has got an automatic machine for CBC (Complete Blood Count.). It has a separate Congulation room and Fluocytometry room, for carrying out various tests.

Histopathology

Histopathology lab is on 5th floor of the Lalita Girdhar building. There is no automatic machine in the department and all the tests are done manually. The department is divided into 2 sections – Surgical Pathology and Cytopathology. All the tests related to microscopy are performed here.

Microbiology

The microbiology Department is on the 5th floor of the Lalita Girdhar building. It has got a separate Microbiology room for tuberculosis tests, where a negative pressure is maintained. The lab has a hot room, storage area, incubators and refrigerators.

Serology

The department of serology is a part of microbiology department only. It receives the samples in the test tubes and the various tests are performed. The department consists of a Laminar Air Flow machine for culture preparation.

Radio immune assay

The RIA lab is on the 4th floor of Lalita Girdhar building. The various radio immune assays are carried out on the the lab.

OPD lab

It is located at the ground floor of OPD building. The lab collects samples for various tests. Assign them a bar code, and send them to various labs for the tests to be conducted. All the entries are made in the LIS.

Star lab

Start lab is at the 3rd floor of the old building. Here all the tests are performed for the IPD patients. It also carries out emergency tests. Which require immediate reports.

Blood bank

Blood bank is located on the 3rd floor of old building. It consists of separate Donor room. The donor is assigned a donor unit no. and given a donor card. It also has an apheresis room for platelets pheresis, and storage area with refrigerators with a central monitoring system. For the IPD patients a requisition slip from the floor of that patient is received and then the patient's identification and donor's details are checked in the Blood Bank and on the floors. The department maintains daily records of blood donation and dispatch.

IMAGING DEPARTMENT

The Imaging Department is a department where various investigations of the pertinent are done. The patient comes for the investigation and after viewing the images of the scan the radiologists report. On the basis of the reports the diagnosis is done.

In the department there are 9 sections, namely MRI, CT, General Radiology. DSA, Color Doppler, Mammography, Ultrasonography, Nuclear Medicine and BMD (Dexa Scan).

MRI is located at the Ground Floor and rests are on the Ist Floor of the New Building. Three is separate X-ray for the OPD patients located in the OPD building.

There are two reception counters, one located on the Ist Floor and the other on the Ground Floor for MRI.

Both OPD and IPD patients come for the investigations either through an appointment or as a walk –in patients. In the department walk-in patient means the patients without having any appointment.

Objectives of the Department

1. To do quality imaging using all necessary safety measures in radiation.
2. To perform quality reporting and interacting with clinicians on regular basis through follow ups and clinical meetings about veracity of reports.
3. Conduct teaching programmes for residents in imaging as well as for clinical branches.
4. Monitor the work of all Technicians on regular basis to maintain as well as improve quality.
5. Monitor and regulate usage of different equipments in Imaging Department.
6. Interact with Bio-medical department on regular basis for upkeep of all equipments.

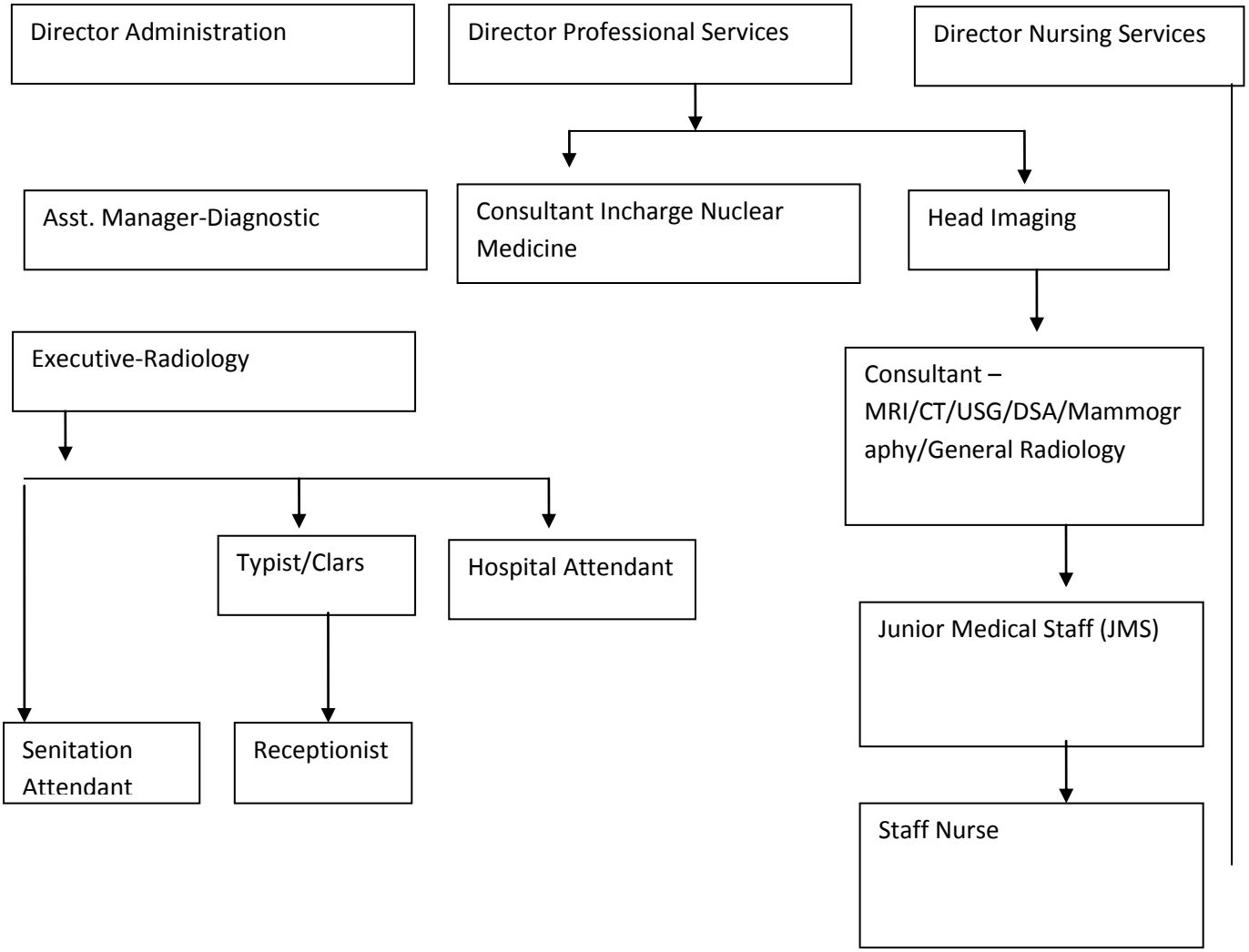
Location and layout :-

OPD x-ray	-	1st floor east block wing no.2
IPD x-ray	-	1st floor west block
X-ray procedures	-	1st floor west block
Ultrasound (USG)	-	1st floor west block
Color Doppler	-	1st floor west block
Mammography	-	1st floor west block
BMD	-	1st floor west block
CT	-	1st floor west block
DSA	-	1st floor west block
Nuclear Medicine	-	1st floor west block
MRI	-	Ground floor west block

Categories of Staff –

TYPE	NOS.
Head of Department	2
Consultant	8
Executive	1
x-ray technician	11
DSA technician	2
CT technician	6
Color Doppler/Mammography technician	2
Ultrasound technician	4
MRI technician	4
Nuclear medicine department technologist	5
Nursing staff	8
Receptionist Clerk	5

Organogram:-


Director Administration
Director Professional Services
Director Nursing Services
Asst. Manager-Diagnostic
Consultant Incharge Nuclear Medicine
Head Imaging
Executive-Radiology
Consultant – MRI/CT/USG/DSA/Mammography/General Radiology
Typist/Clars
Hospital Attendant
Junior Medical Staff (JMS)
Senitation Attendant
Receptionist
Staff Nurse

Procedures

Appointment can be given on the following basis:

Out-patient appointment

(a) Telephone Appointment:
(b) OPD/Walk in appointment:

In-patient appointment

1) Staff floor nurse sends the MRI request from two copies by attendant to the receptionist at the MRI counter for appointment for the technician inside the department.

2) It is the responsibility of the technician to take care of the slot and the same day or any earlier slot available.

3) Receptionist enters the patients name and demography details/date the description of the procedure in the request from.

4) Receptionist gives the white and blue copies of the MRI request to calling up of the patients for the procedure.

Pacs-picture archival communication system

It its image management system. Under this system, the pictures generated in various departments of radiology are uploaded in the system, to make them available to the consultants. Login and password are given to all the departments. The consultants can view them from any computer in the hospital using intranet. These pictures are also available on internet in read only mode. This system saves time and improves efficiency.

Legal requirement and guidelines

1. All sections in the Imaging department follow various legal guidelines set by Government of India. (Refer to Annexure for the list of Certificates and Guidelines). All Imaging Services Follow regulation by the AERB and all new interaction are subject to approval by AERB before commencement of services.
2. For all Radiation emitting (or) generating equipments in medical use, whether it is in diagnosis (or) treatment purpose such as X-ray (low energy), X-ray (high energy), Brachy therapy units, CT, Fluroscopy, Dental X-ray Units , PET CT, and Gamma Camera etc) the hospital should get first authorization from AERB to use the above units in the hospital .
3. Next , Hospital should get NOC from AERB for importin the units /radioactive source from BRIT/outside country/ private-it is valid only for 1 year and for subsequent usage the hospital needs to apply for the NOC for each units .
4. Next after importing units/ radioactive source the hospital should send the form for registration units (of installation)with plan. Type approval certificate of unit, QA details, Survey details to AERB/RSD, In the case of radioactive source, the hospital should intimate the arrival of above from (inland/outland) in a particular form and hen only the hospital can to can to use the unit (or) source after confirmation.
5. In the case of radioactive source used (or) decayed, hospital should get NOC from AERB for re-export to supplier outside country (it is internationally accepted norms) This will also be valid for 1 year only.
6. The AERB conducts random clecks of the department on routine basis.

Imaging reports –

Patient investigation in concerned imaging section

↓

In case of X-Ray, wet films are given to S1 patient, in case of all other modalities provisional report given except color Doppler

↓

Digital image reviewed by consultant

↓

In case of CT & MRI, consultants report by Dictaphone, in all other modalities, hand written reports sent to typing pool via Runner (10-6 duty)

↓

Draft copy is typed and sent by typing pool to consultant, in case of X-rays final report typed

↓

Report rechecked by consultant and sent back to typing pool

↓

Final report typed and sent to consultant for signing

↓

Final signed report sent back to typing pool, wherein name is verified and then reports are sent to dispatch counter in imaging department

↓

Dispatch attendant (3-11 duty) delivers reports to floors in west block same day , unable to deliver to S1 the same day due to case load in imaging department and time taken to deliver to S1

↓

Reports delivered to S1 by 10-30 am next day by Runner

CSSD

Introduction –

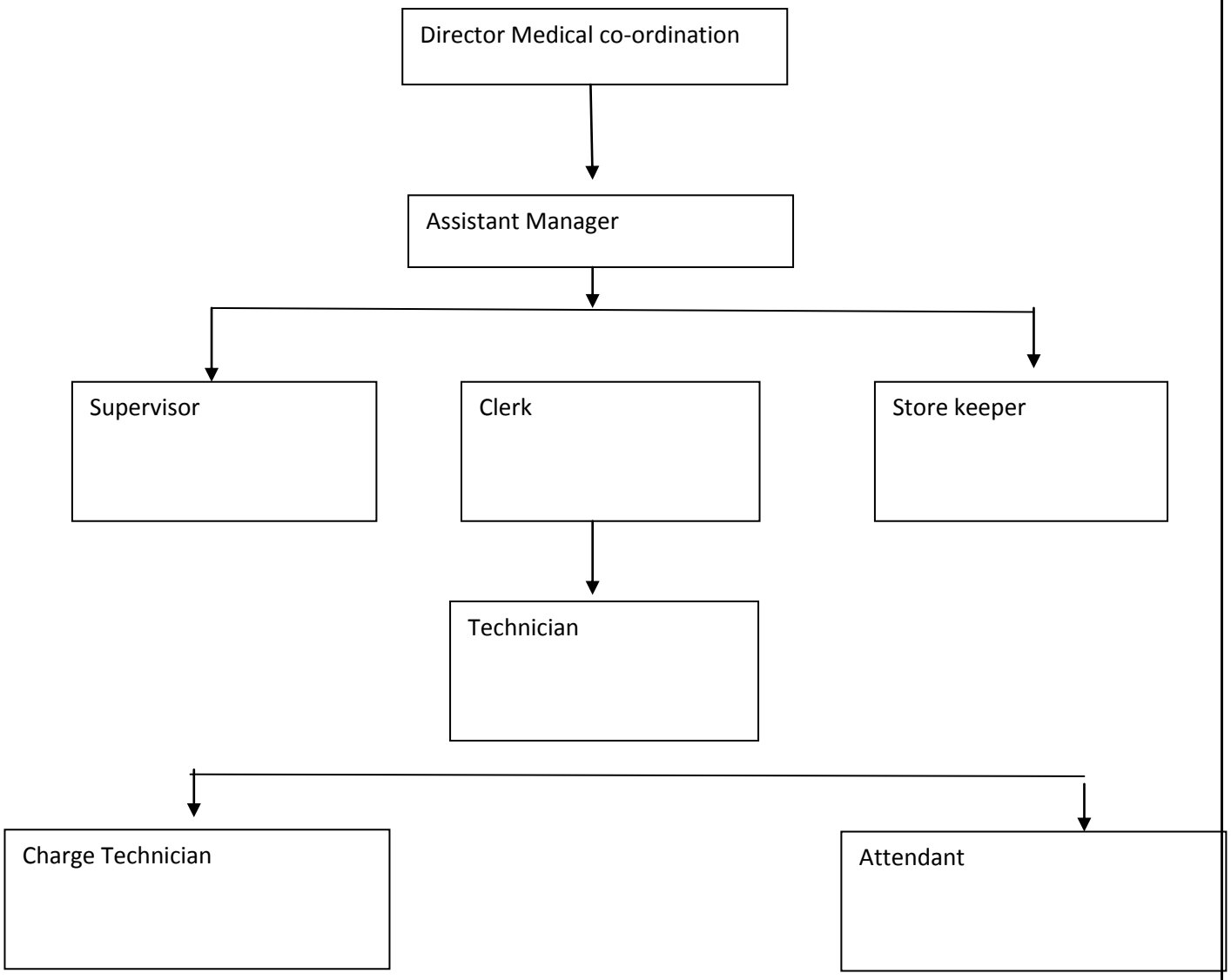
- The department is located on the 5th floor close to the O.T. used material (linen,equipment etc.) and sterilized material from and to the O.T. are conveyed through two separate decided elevators.
- Department send their use articles while, from wards CSSD personnel collect the used articles every night.
- During the day the used articles from the wards are sent to CSSD by their personnel.
- The layout of the department and flow of materials ensures that there is no possibility of mix up of un sterilized materials.
- The department is divided into 3 parts dirty area, clean area and sterile area.
- OT instruments are collected by CSSD in OT instruments wash/area and are send to CSSD through unsterile dump elevator.In night, sundries and holidays the instruments are sent to CSSD through unsterile dump waiter by theatre nurse.
- Ward instruments are collected early in the morning by CSSD. Departments like cathlab, AKD, Radiology , casualty OPD send their used sets themselves.
- All sterilizers are cleaned once a week. The inside of the sterilixzer is cleaned ever morning with a disinfectant solution.
- Micro biology department checks the air count weekly and issues a report of sterile area. In case of unsatisfactory levels , microbiology department intimates the CSSD within its report.

- **Objectives of the department –**
- Central sterile supply separtment is responsible to sterile material for use in the O.T. and wards in order to control the incidence of nosocomial infection.
- The department is also responsible for maintaining sufficient stock level of all surgical instruments, drapes and other accessories required for surgical procedures in good condition.
- The following types of items are sterilized:
    1. Surgical instruments
    2. Catheters (rubber)
    3. Linen
    4. Dressing materials
    5. Laparoscopic instruments
    6. PVC Tubing etc.

Staffing Plan –

Category	No.
Asst. Mgr.	1
Supervisors	1
Sr. charge technician	1
Charge technician	6
Sr. technician	10
Technician II	5
Assistant II	1
Store keeper	1
Attendants	23

Organ gram


Director Medical co-ordination
Assistant Manager
Supervisor
Clerk
Store keeper
Technician
Charge Technician
Attendant

HOUSE KEEPING

Introduction:-

Housekeeping services play a vital role in the management of complex facilities in a hospital. On one hand the management of bio medical waste as per the regulation is of prime importance to comply with legal norms and on other side, handling of patients on wheel chair, beds, stretchers require an alert housekeeping staff for safe transport of patient in hospital focused to deliver safety across the hospital.

Staffing :-

S.No.	Designation	Nos.
1	Asstt. Manager	01
2	Sr. Officer & Officer	03
3	Sr. Supervisor & Supervisor	04
4	Team Leader	04
5	Healthcare Workers	309
	Total Manpower	321

Range of activities:

- Maintaining the aesthetic and cleanliness of all the hospital properties which include inpatient and outpatient areas and S1 building.
- Planning and controlling of all inventories to ensure clean, hygienic and safe environment.
- Systematic collections and disposal of hospital waste.

CLINICAL ADMINISTRATIVE SERVICE

ANBULANCE SERVICE

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 type of ambulance services.

Cardiac ambulance (Advance care ambulance)

Nor cardiac ambulance

The cardiac ambulance serves all critical patients coming in form

Nursing homes

Office

Accident Site-RTA

All critical patients who requires medical intervention immediately

The non cardiac ambulance serves patients who are

Discharges

Planned admissions

For appointments to Hinduja clinic

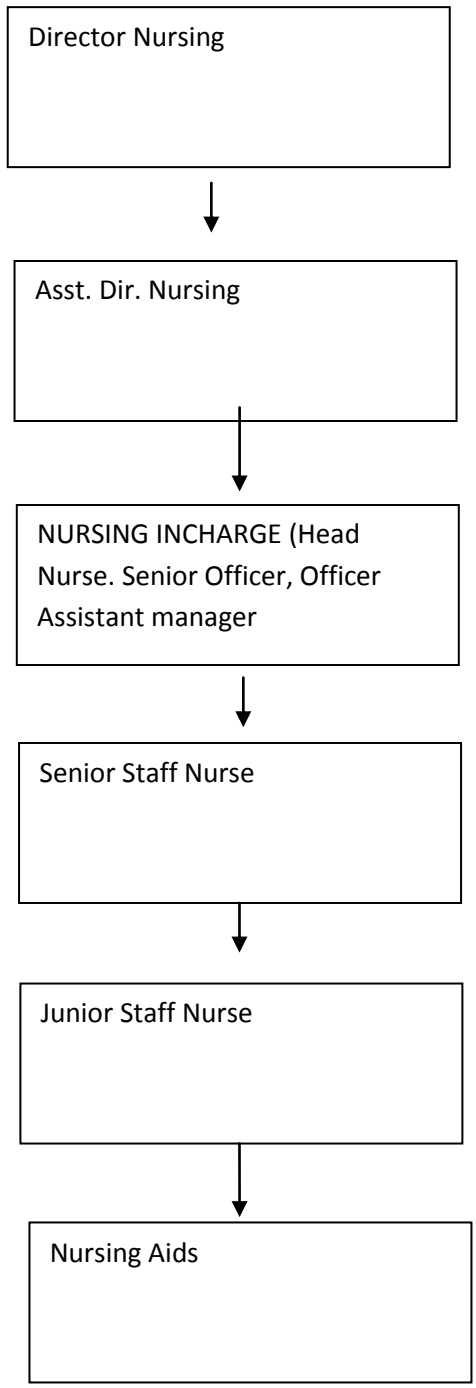
NURSING DEPARTMENT

Introduction –

Hinduja Hospital has a very efficient nursing department. This department is divided into two categories. Clinical and Administrative.

Clinical –

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



- The patient to nurse ratio in the hospital varies from 4:1 to 6:1
- The nurses work in The OPD, IPD, and Radiology S1.
- In the IPD building at each floor nursing stations are present in each wing. The nurses operate from these areas.

Laundry Services

- The importance of a clean, hygienic, un-stained and defect free linen for optimal patient care has been stressed upon since the very inception of hospitals. Clean linen delivery in a timely manner to healthcare areas is important. The quality of any health care system.
- Laundry service is responsible for providing an adequate, clean and constant supply of linen to all users. The laundry facilitates 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 peocedure 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
- 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 are traditionally compiled, stored and maintained by MRD of the P.D. Hinduja Hospital from 1987.

Terminal Digit System of file is most secure and safe system as far as the identification of the file is concern. New registration forms are kept at various station i.e. OPD, casually, 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 number where last 3 digits are color code. The filing system is dependent on the 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.

In addition, the medical record may serve as a document for quality assurance, and to provide data for medical research.

Research, auditing and evaluation

Individuals involved in medical research, financial of 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 of 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 patient may benefit from previous patient care
4. To substantiate procedure and diagnostic code selections for research previous patient care
5. To comply with legal requirement
6. To legally defend the physician in the event of lawsuits
7. To provide records of communicable diseases as per government requirement
8.

Nature of activity :-

1. Allocation of H.H.No.
2. Collection of computerized list of discharged/death cases.
3. Collection of health record charts form wards/casually.
4. Assembling in standard order.
5. Deficiency check.
6. Medical coding.
7. Indexing.
8. Filling 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 deparment is to :

i. Cater to any needs of computerization within the organization.
ii. Maintenance of existing hardware and software.
iii. Provide guidance to the user in terms of operation procedure.
iv. Develop a user friendly and automated software system.

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

Scope of Service:-

IT department has three sections :

i. Software Section
ii. Hardware Section
iii. Telecom Section

i. 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.

ii. Hardware section responsible for hardware section 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 is there day to day working.

iii. 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 & 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 from the life line to the hospital's activities.

The responsibilities of the department are :-

1- Operation & 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 :

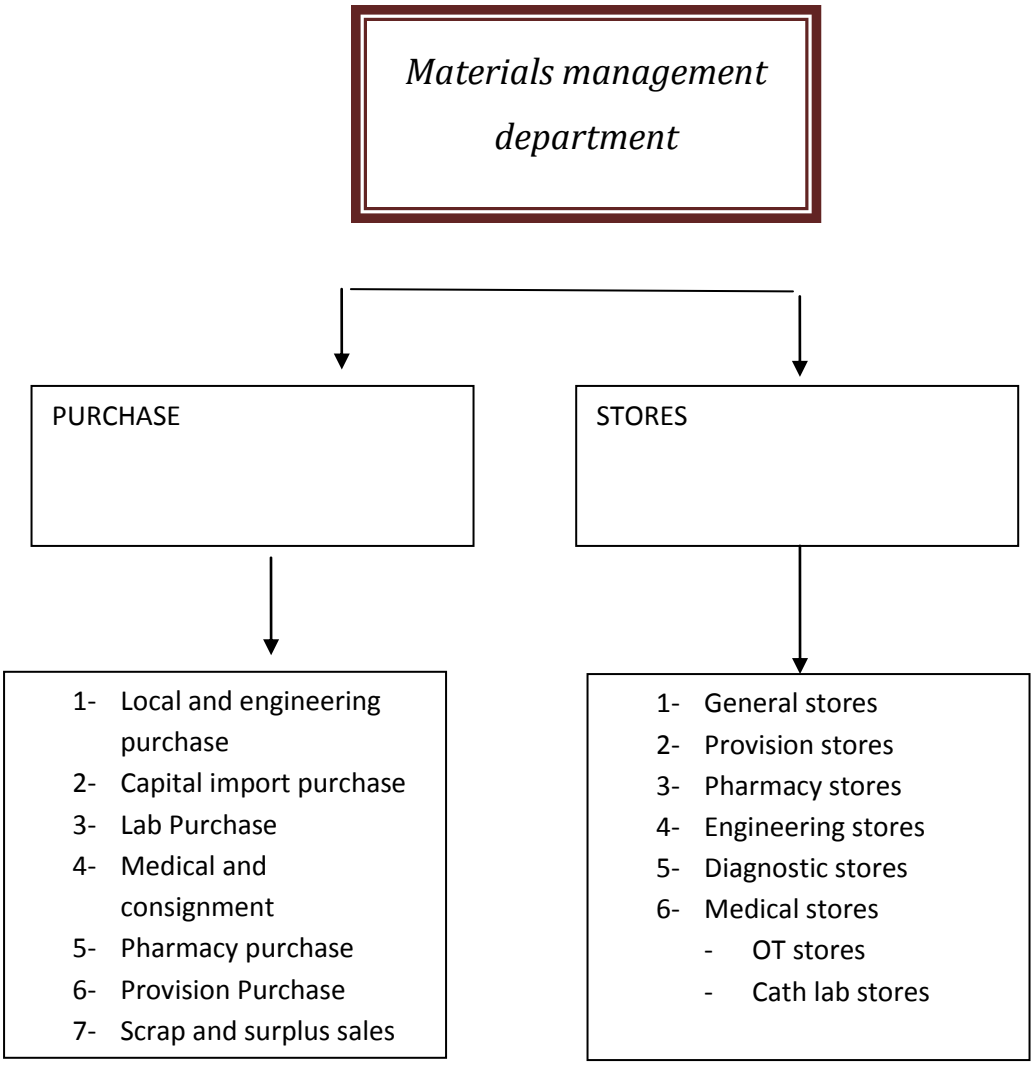
The major engineering services involved are as follows:

- 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.
- Internam & External plumbing systems.
- Civil works – Masonry, Carpentry, Glasswork, Upholstery, Painting etc.
- PNG & LPG Supply.
- Safety assessment of facilities.

MATERIAL MANAGEMENT DEPARTMENT

The materials management department aims at maintaining uninterrupted supply chain without affecting cost quality and service parameters.

The materials management department can be classified majorly under 2 heads i.e. purchase department and stores.

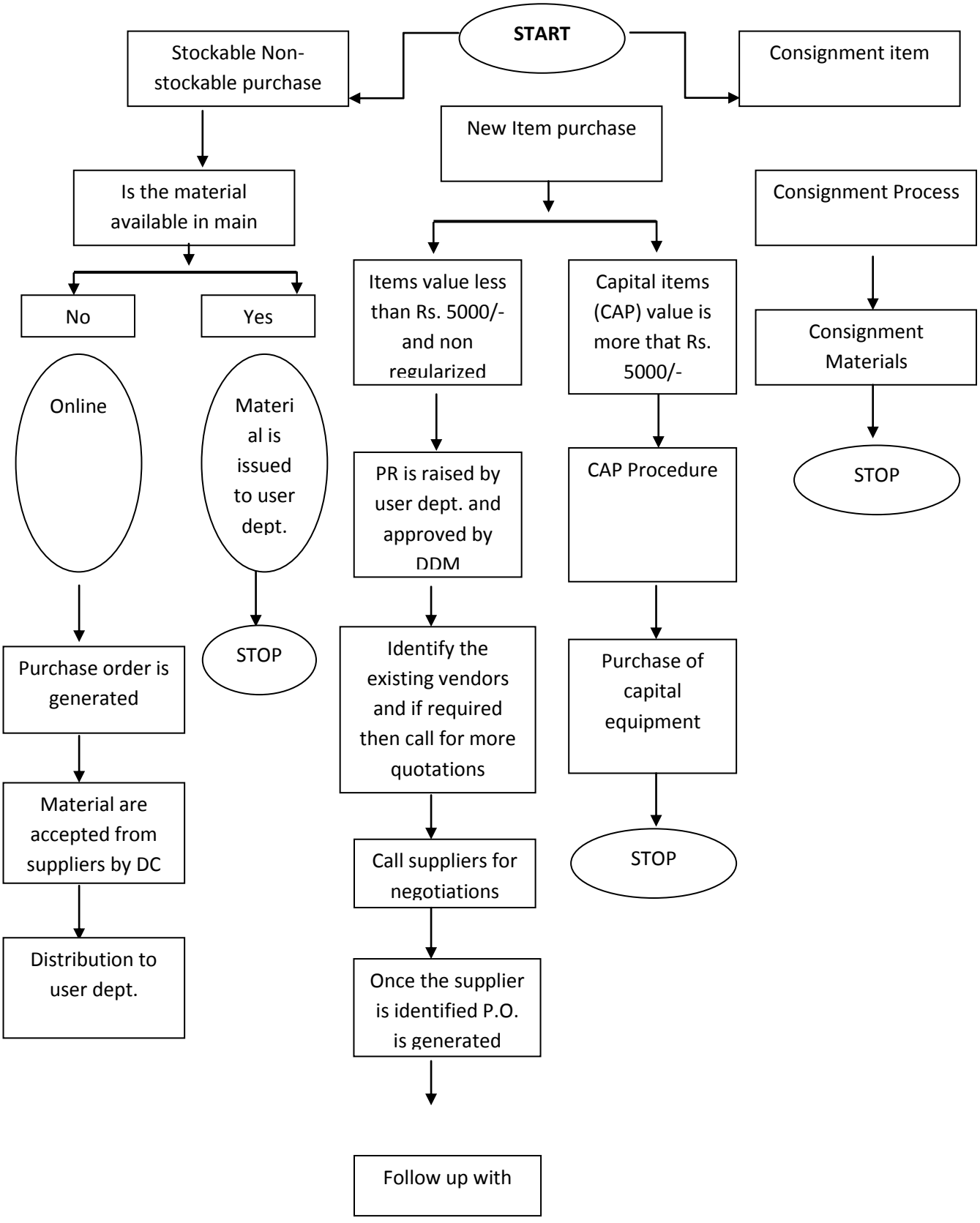


Categories of staff :

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 Skill	2
Piece rate	1
Casual	5
Temporary attendant	1
Total -	77

Process flow

Purchase section



Pharmacy:-

Hinduja Hospital runs a 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 transactions 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.

Inventory management is done by

FIFO- First in First out

ABC Analysis

Live Audit for Quality check of medical records in accordance with NABH specification.

Department	**Medical record department**	
Project Period	**From: may 2013**	**To: June 2013**
Conducted by **Name:** • DR. GUNJAN GERA **Designation:** Student, IHMR JAIPUR **Signature:** Date: 7-JUNE-2013		**Authorized by** **Name:** Mrs. Ranjana Varadkar **Designation:** Sr.Manager - MRD **Signature:** Date: 7-JUNE-2013

Introduction:

A medical record is a systematic documentation of a patient 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 intently personal documents and there are many ethical & legal issues surrounding them such as the degree of third party access and appropriate storage and disposal. MR are compiled, stored & maintained by MRD of P.D Hinduja Hospital from 1987**.**

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Patient fill up the form for all demographic details & put the signature & then entry is done by receptionist at counter in the system.

Patient is given ID card which has 6digits H.H No & name, age, sex etc. The file has 6digit number where last 3digits are colour coded. The filing system is dependent on last 3digits; hence total confidentiality of patient's file is maintained.

In addition medical record serves as a document for quality assurance & to provide data for medical research.

Objectives of medical record department

- To aid in the diagnosis are treatment of patients.
- To provide written documentation of directed medical care & to show service where medically necessary.
- To assist in the research of the disease & injuries.
- To comply with legal requirements.
- To provide records of communicable diseases as per government requirements.
- To legally defend the physician in case of MLC

SOME **NABH** GUIDELINES ARE AS FOLLOWS

IMS.1- Policies and procedures exist to meet the information needs of the care providers, management of the organization as well as other agencies that require data and information from the organization

- **Objective elements**

a) The information needs of the organization are identified and are appropriate to the scope of the services being provided by the organization and the complexity of the organization

b) Policies and procedures to meet the information needs are documented.

c) These policies and procedures are in compliance with the prevailing laws and regulations.

d) All information management and technology acquisitions are in accordance with the policies and procedures.

e) The organization contributes to external databases in accordance with the law and regulations

IMS.2- The organization has processes in place for effective management of data

- **Objective elements**

a) Formats for data collection are standardized

b) Necessary resources are available for analyzing data

c) Documented procedures are laid down for timely and accurate dissemination of data

d) Documented procedures exist for storing and retrieving data

e) Appropriate clinical and managerial staff participates in selecting, integrating and using data.

IMS 3- The organization has a complete and accurate medical record for every patient

- **Objective elements**

a) Every medical record has a unique identifier.

b) Organization policy identifies those authorized to make entries in medical record.

c) Every medical record entry is dated and timed.

d) The author of the entry can be identified

e) The contents of medical record are identified and documented

f) The record provides an up-to-date and chronological account of patient care

IMS 4- The medical record reflects continuity of care

- **Objective elements**

a) The medical record contains information regarding reasons for admission, diagnosis and plan of care.

b) Operative and other procedures performed are incorporated in the medical record

c) When patient is transferred to another hospital, the medical record contains the date of transfer, the reason for the transfer and the name of the receiving hospital

d) The medical record contains a copy of the discharge note duly signed by appropriate and qualified personnel

e) In case of death, the medical record contains a copy of the death certificate indicating the cause, date and time of death.

f) Whenever a clinical autopsy is carried out, the medical record contains a copy of the report of the same.

g) Care providers have access to current and past medical record.

IMS.5- Policies and procedures are in place for maintaining confidentiality, integrity and security of information

- **Objective elements**

a) Documented policies and procedures exist for maintaining confidentiality, security and integrity of information

b) Policies and procedures are in consonance with the applicable laws

c) The policies and procedures incorporate safeguarding of data/ record against loss, destruction and tampering

d) The hospital has an effective process of monitoring compliance of the laid down policy

e) The hospital uses developments in appropriate technology for improving, confidentiality, integrity and security

f) Privileged health information is used for the purposes identified or as required by law and not disclosed without the patient's authorization

g) A documented procedure exists on how to respond to patients / physicians and other public agencies requests for access to information in the clinical record in accordance with the local and national law.

IMS.6- Policies and procedures exist for retention time of records, data and information

- **Objective elements**

a) Documented policies and procedures are in place on retaining the patient's clinical records, data and information

b) The policies and procedures are in consonance with the local and national laws and regulations

c) The retention process provides expected confidentiality and security

d) The destruction of medical records, data and information is in accordance with the laid down policy

IMS 7- The organization regularly carries out medical audits-

- **Objective elements**

a) The medical records are reviewed periodically

b) The review uses a representative sample

c) The review is conducted by identified care providers.

d) The review focuses on the timeliness, legibility and completeness of the medical records

e) The review process includes records of both active and discharged patients

f) The review points out and documents any deficiencies in records

g) Appropriate corrective and preventive measures undertaken are documented.

Aim-

To assess the medical records of patient in accordance with NABH specification for quality check.

Purpose and Objective of project

1. To review the completeness of the patient's records in the Medical Record.

2. To see that all records are dated, timed and legibly signed by the persons authorized to make entries in patient's records.

3. To review that the patients record contains all the necessary documents.

4. To identify any discrepancy in the records such as absence of date, time or signature, lack of proper documentation or incomplete record etc

5. To suggest the medical record department to rectify the deficiency on an immediate basis.

6. To provide guideline instruction for better management of patient's medical records

Medical Record Analysis and Completion

PURPOSE: To evaluate all Medical Records of patients in compliance with the NABH standards.

POLICY: It is the policy of the Medical Records Department to ensure that all Medical Records are completed according to NABH criteria and contains complete documentation relating to treatment, procedure, medication and progress during hospitalization.

Sampling and Methodology:

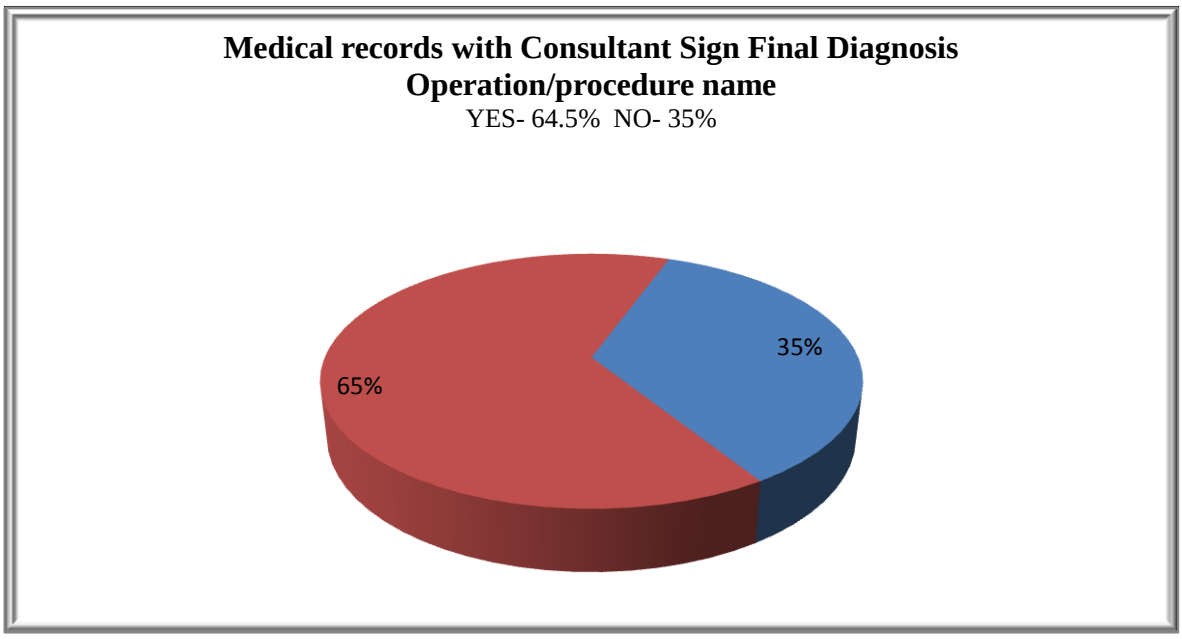
- Study setting: P.D.Hinduja National Medical Hospital & Research Centre, Mumbai.
- Study design : Cross sectional study
- The study was done by direct observation method.
- Data was collected from patient's files on each floor.
- Quality check is done by assessment of MR
- Sample size = 200 MR.
- After evaluating the MR, incomplete areas were highlighted with the help of stickers.
- Each record was analyzed according to NABH specification.

Results and Findings:

Medical records with

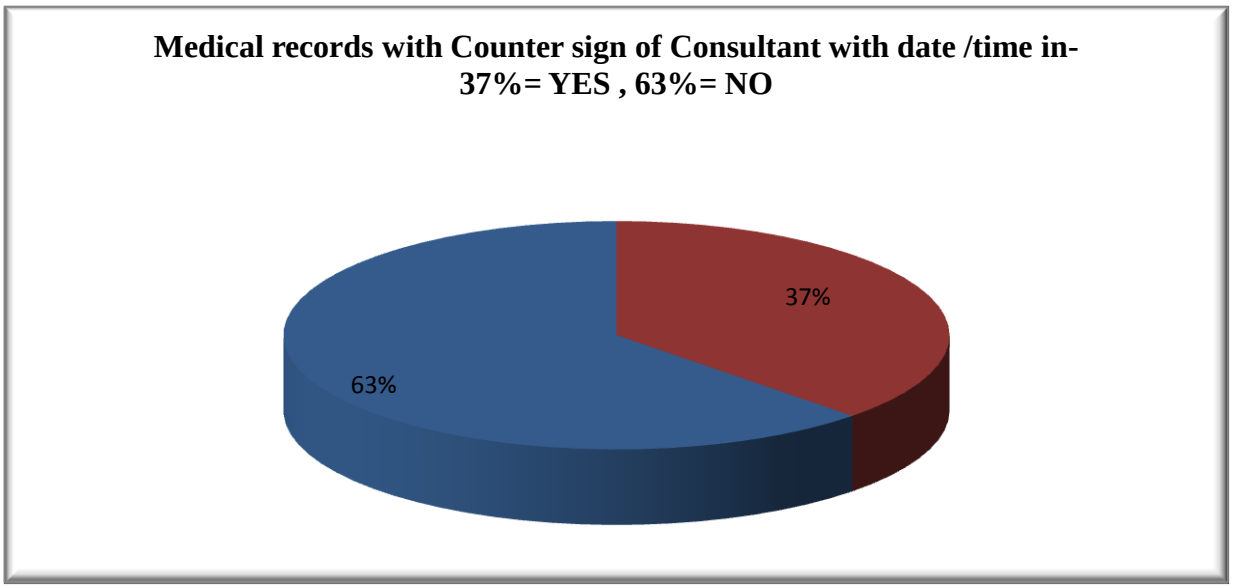
1. Consultant Sign Final Diagnosis Operation/procedure name-

Out of 200 medical records.

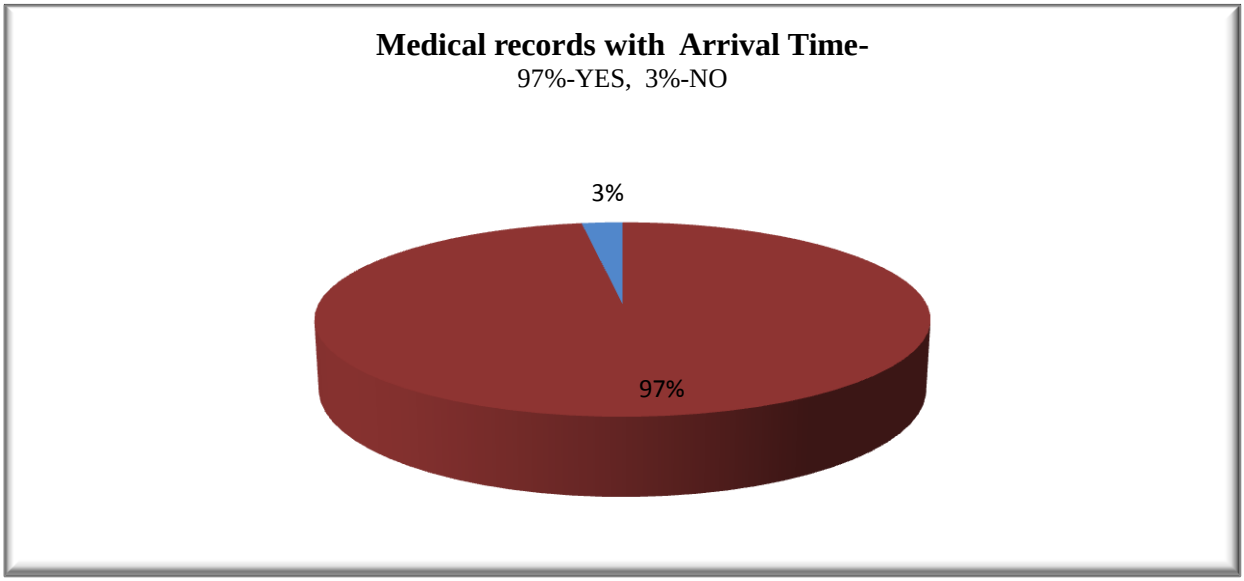


History Physical

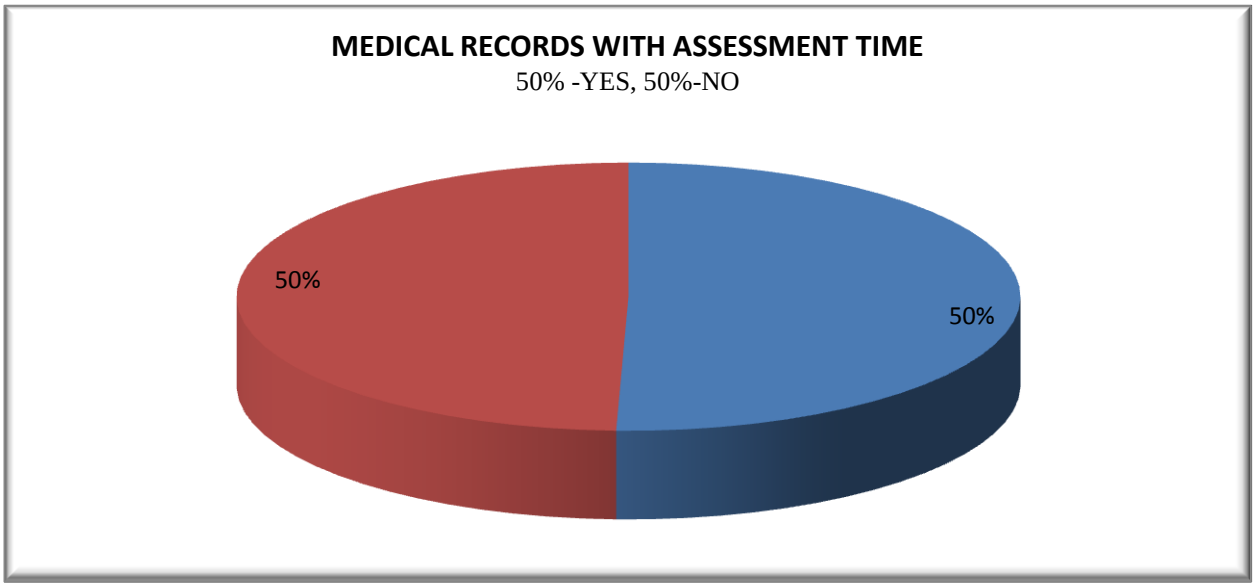
2. Medical records with
Counter sign of Consultant with date /time in-



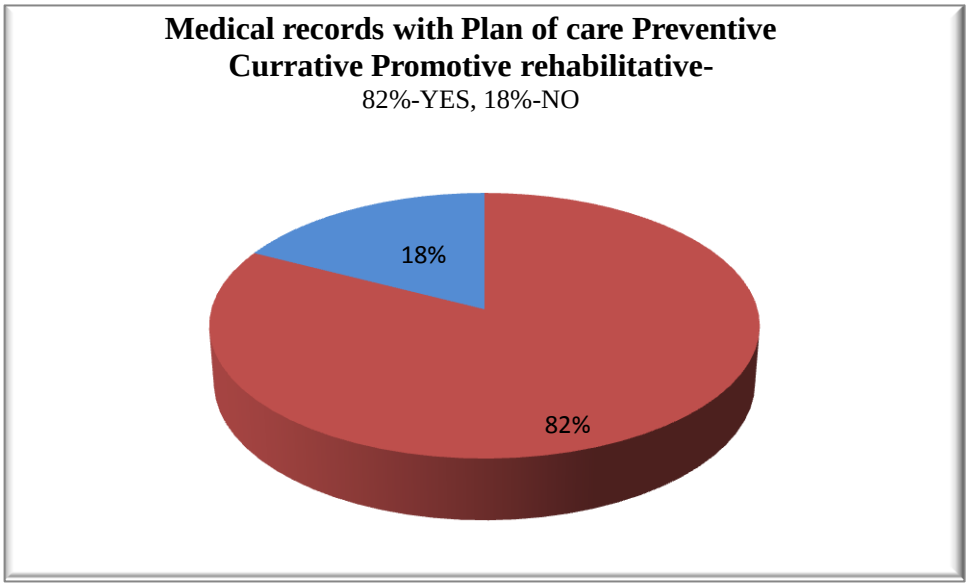
3. Medical record with Arrival Time



4. Medical records with Assessment Time-

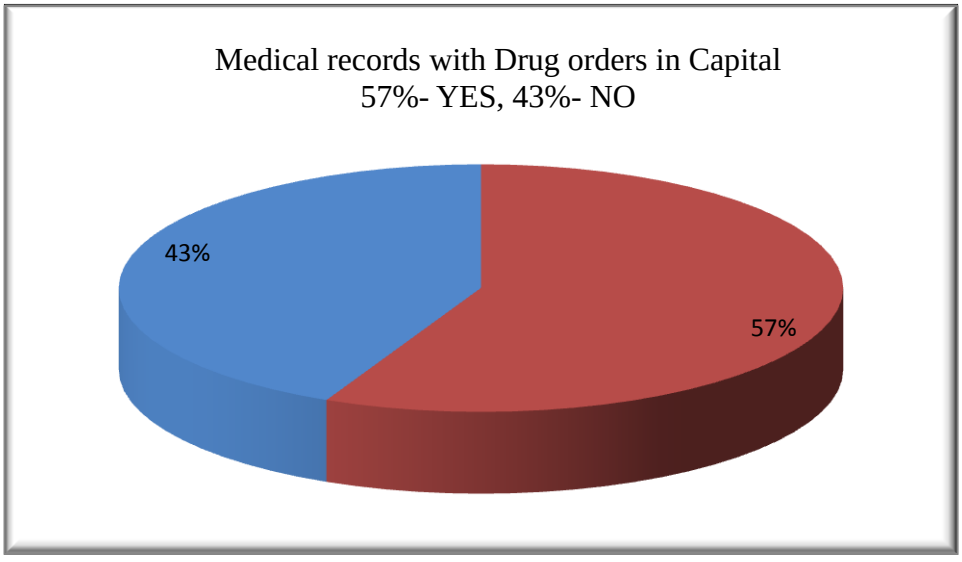


5. Medical records with
Plan of care Preventive Curative Promotive Rehabilitative-

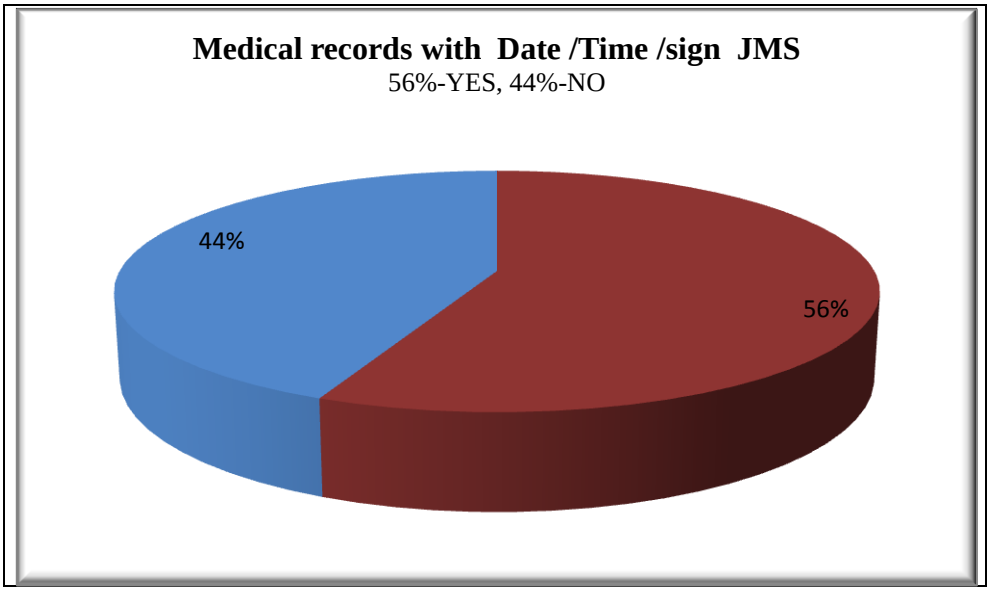


Physician Order

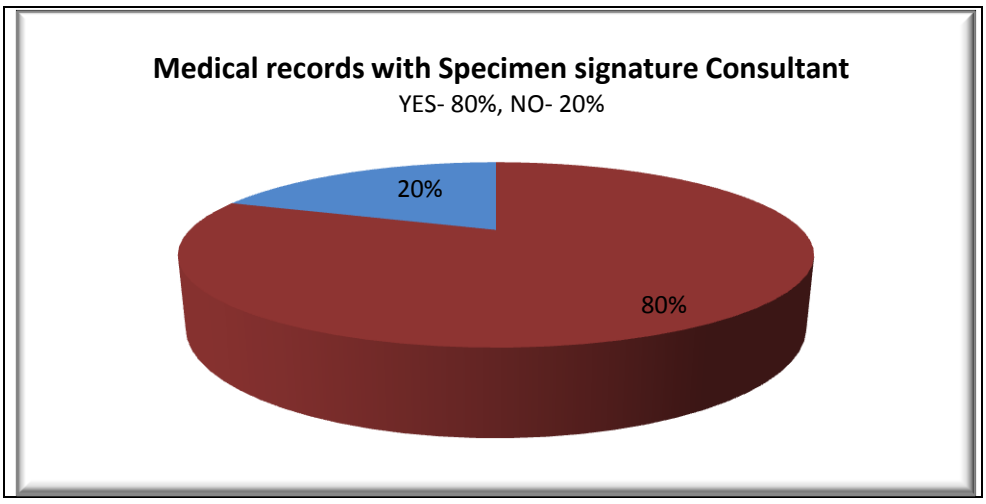
6. Medical records with
Drug orders in Capital

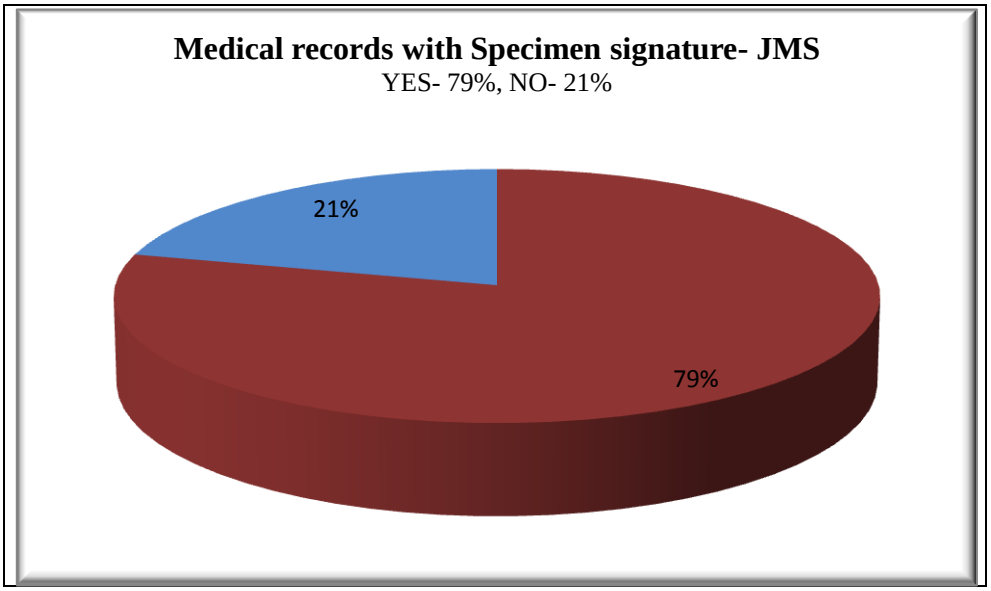


7. Medical records with Date /Time /sign JMS

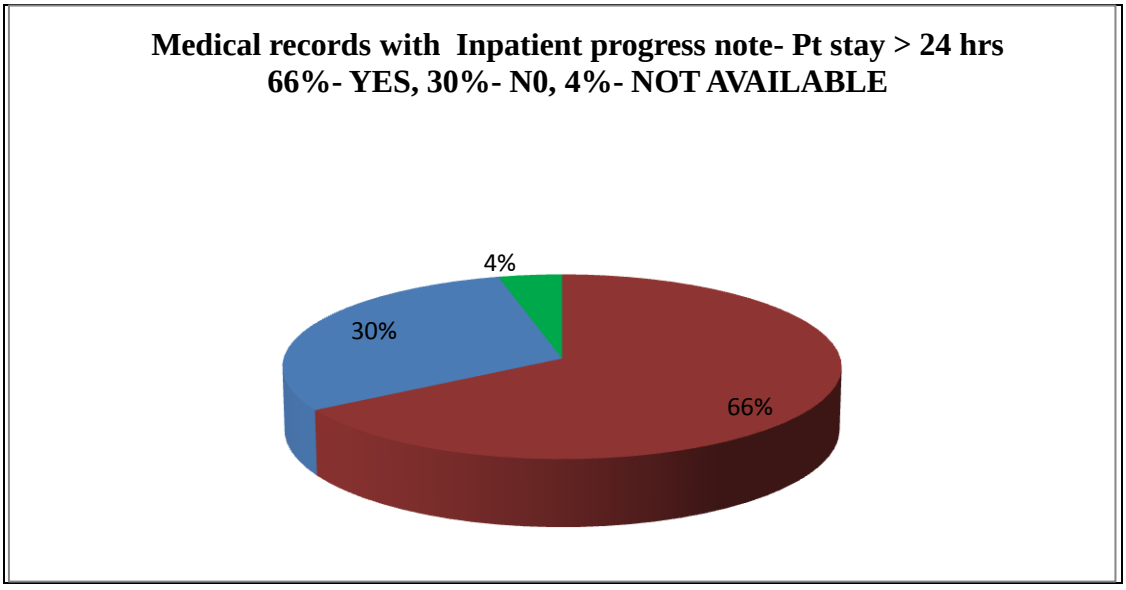


8. Medical records with Specimen signature- Consultant & JMS

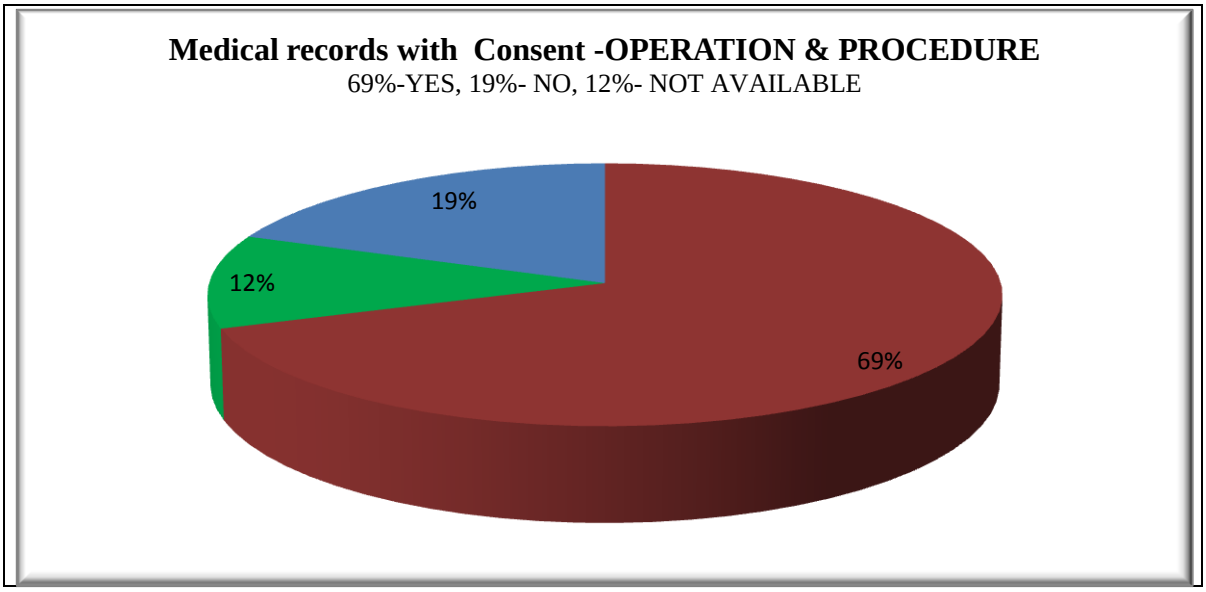




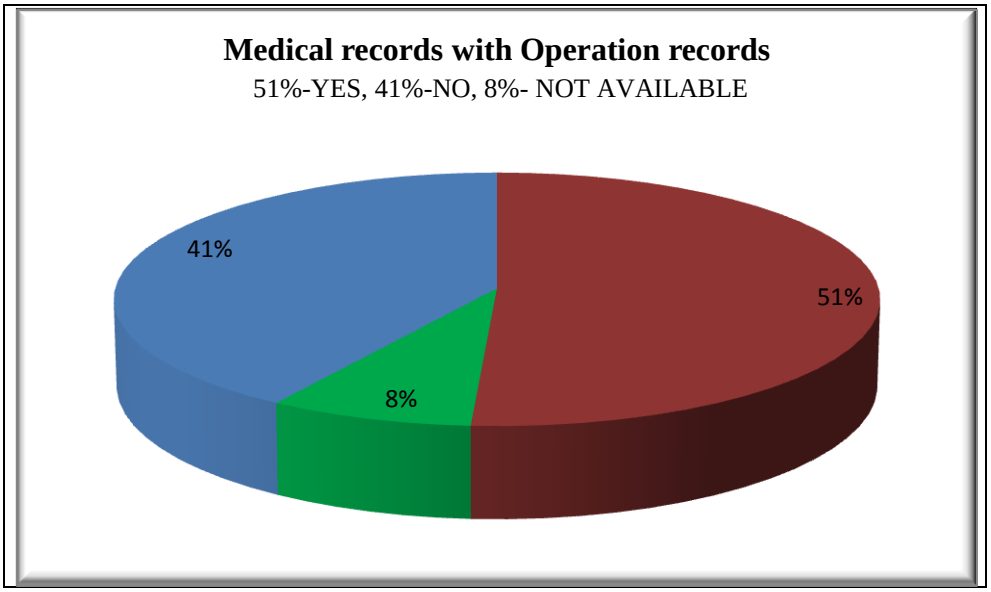
9. Medical records with
Inpatient progress note- Pt stay > 24 hrs



10. Medical records with Consent -OERATION & PROCEDURE



11. Medical records with Operation records



Recommendations-

It was noticed during the study that consultants/RMOs were not aware of NABH standards with respect to completeness of medical records.

- So we recommend that quarterly training should be conducted for doctors to make them aware about the **NABH guidelines** on medical records.
- More frequent live audits should be conducted to track the discrepancies of medical records.

Quality check for tracking delay of patient files from Medical Records Department for OPD patients

Project On	Quality check for tracking delay of patient files from Medical Records Department for OPD patients	
Department	Medical record department	
Project Period	From: APRIL 2013	To: MAY 2013
Conducted by Name: DR. GUNJAN GERA Designation: Student, IHMR JAIPUR Signature: Date:7-JUNE-2013		Authorized by Name: Mrs. Ranjana Varadkar Designation: Sr.Manager – MRD Signature: Date:7-JUNE-2013

Introduction:

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In addition medical record serves as a document for quality assurance & to provide data for medical research.

Objectives of medical record department

- To aid in the diagnosis are treatment of patients.
- To provide written documentation of directed medical care & to show service where medically necessary.
- To assist in the research of the disease & injuries.
- To comply with legal requirements.
- To provide records of communicable diseases as per government requirements.
- To legally defend the physician in case of MLC

Project:

Aim-

To assess the delay in reaching of patient files from Medical Records Department for OPD by tracking the files.

Purpose and Objective of project

1. To check the delay in arrival of patient's records from the Medical Record department

2. To see that all records are arriving within half an hour.

3. To suggest the medical record department to rectify the delay.

4. To recommend guidelines for better management of patient's medical records.

Tracking of Medical Records

PURPOSE: To track the medical record in OPD for appointment and non-appointment patients and delay caused by them.

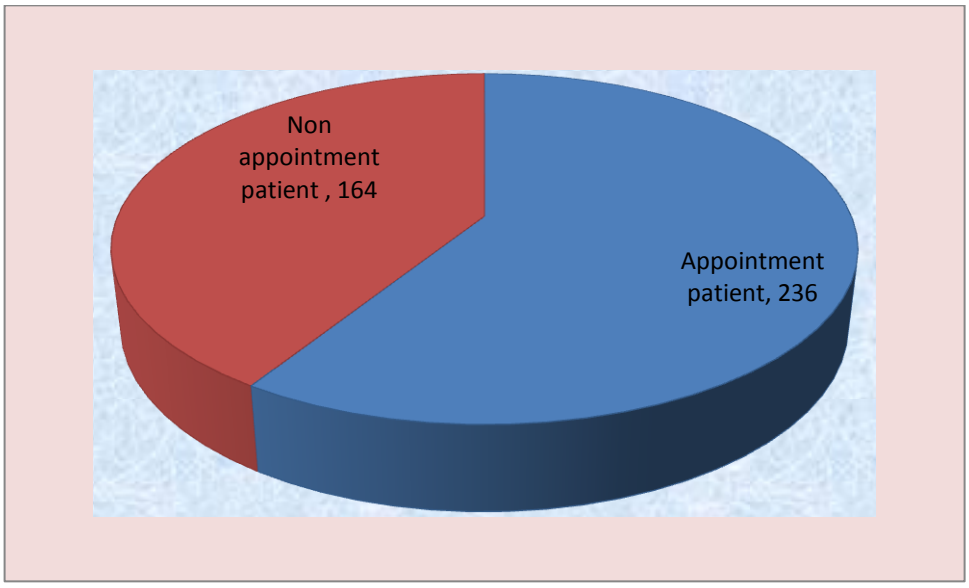
Sampling and Methodology:

- Study setting:
  P.D. Hinduja National Medical Hospital & Research Centre, Mumbai.
- Study area :
  Medical Records Department
- Study design :
  Cross sectional study
- The study was done by direct observation method.
- Data was collected by tracking the arrival time of the OPD patient's medical records.
- Data was collected in : Morning (9AM – 3PM)
  Evening (3PM – 6PM)

- Quality check is done by assessing the timing of MR
- Arrival time of MR of appointment and non appointment patient was noted.
- Sample size = 400 MR.

Results and Findings:

- Number of :
- Appointment patient = 236
- Non appointment patients= 164



Appointment patient file received timings-

Total number of Appointment patients whose medical files were not there are= 39

- Within ½ hour = 2 Files received
- ½ hr-1hr = 1 File received
- 1hr- 1.5hr = 6 Files received
- 1.5hr-2hr = 2 Files received
- 2hour + = 28 Files received

GRAPHICAL REPRESENTATIONS :

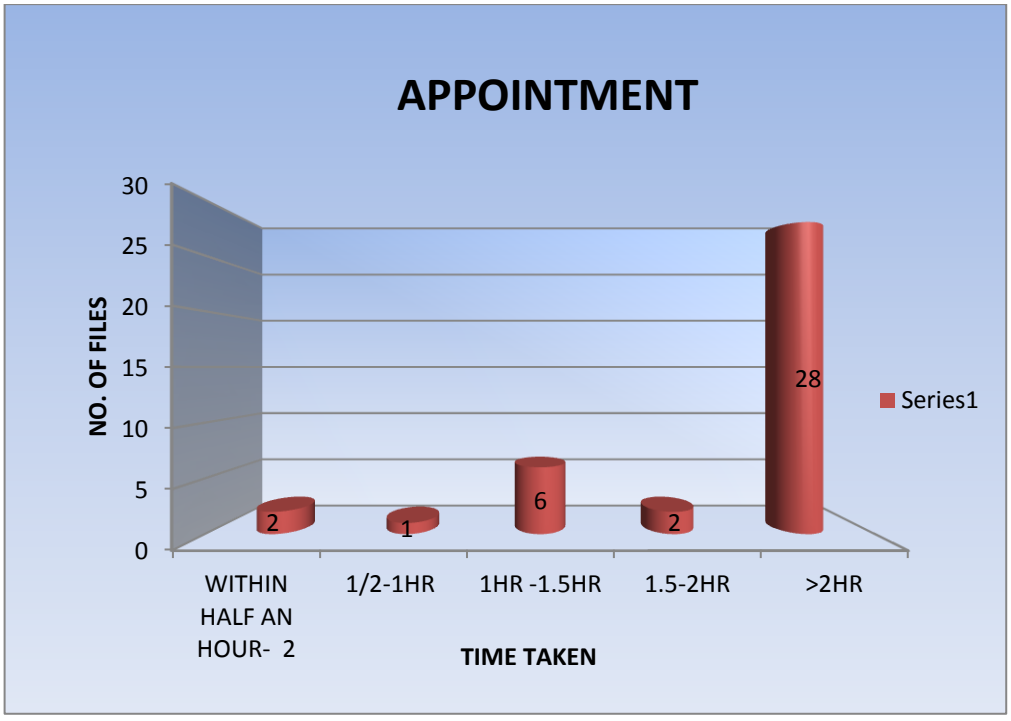


Figure1. The above graph shows the number of files received with respect to time.

Non Appointment patients file received timings-

Total number of Non - Appointment patients whose medical files were not there are= 164

- Within ½ hour = 11 Files received
- ½ hr-1hr = 44 Files received
- 1hr- 1.5hr = 29 Files received
- 1.5hr- 2hr = 13 Files received
- 2hour + = 67 Files received

GRAPHICAL REPRESENTATIONS :

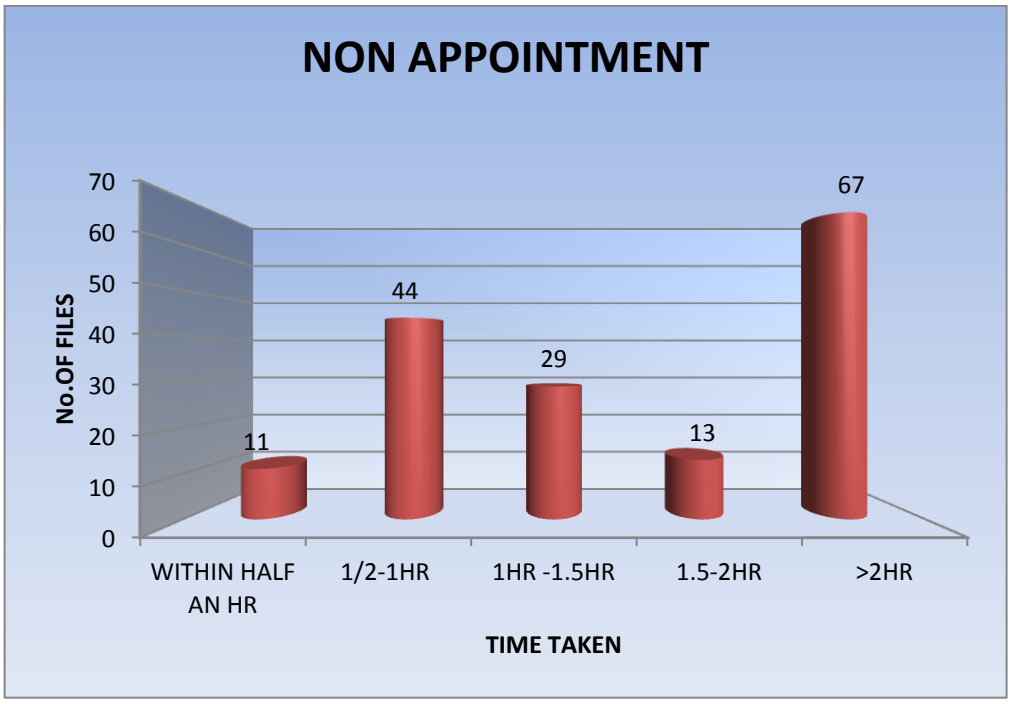


Figure2. The above graph shows the number of files received with respect to time.

RECOMMENDATIONS-

- Medical record- deposition area should be closely located to OPD to facilitate faster delivery of patient files.
- Root cause analysis should be done for the cause of the delay.
- Adaptation of Electronic medical record should be encouraged to prevent delay.
- The patient's files should be collected from the consultant or return back to the MRD within 48 hours.
- In case of delay in reaching of the files to the consultant, electronic medical record should be sent in order to reduce the waiting time of the patients.

Project-3

Project On	**Gap in equipment Utilisation and ReducingTurnaroundTimeOfReportsin Ultrasound, Mammography,Colour Doppler"**	
Department	Imaging	
Project Period	From: may 2013	To: June 2013
Conducted by Name: Dr.Gunjan Gera Designation: Student, IHMR JAIPUR Signature: Date:		**Authorized by** Name: Dr.Supriya Designation: Executive-Imaging Signature: Date:

Introduction:

The imaging department located on the first floor of the west building has Nuclear medicine Ultrasound , Mammography, Colour Doppler, Fluoroscopy, X-Rays, CT Scan, BMD. The MRI department is located on the ground floor. The OPD building also has one X-Ray department for OPD Patient.

The department receives patients from IPD, Casualty, Health check, Appointment and non Appointment patients.

This study was done in ultrasound, mammography, Colour Doppler area.

Problem Statement:

Imaging is one the major diagnostic department and also many other departments functioning is dependent on it. Out of which the Ultrasound , Mammography, Colour Doppler receives a significant number of the patients.

The Patient load was observed to be very high due to which many walk in patients were not attended. Also the patients were complaining about the delay in receiving reports. Denial leads to Patient loss and delay in despatch of reports causes patient dissatisfaction, degrades Patient Service. This ultimately affects the revenue of the hospital.

Review Of Literature:

- Barts and the London did a study for Reducing Waiting times- Freeing sonographers from administrative duties by introducing assistant and Establishing a centralised booking and appointment centre
- Chesterfield and North Derbyshire Royal Hospital NHS Trust-Improving patient choice and access by implement a call centre
- Eastbourne District General Hospital-Decreasing waiting timesAll outstanding requests were revalidated and prioritised resourced by using waiting list initiative monies Adjustments made to sonographer working hours and evening sessions rostered (making better use of equipment) New appointment schedules developed

Research Question:

1. Are the walk-in patients taken for the tests?
2. What are the causes for the denial ?
3. What can be done to improve the efficiency by reducing the idle Equipment time?

Hypothesis:

The denial to walk-in patients for ultrasound, mammography and Colour Doppler can be minimized and the efficiency can be improved.

Objectives:

1. To Study the Idle Equipment time.

2. To Study the causes for the Idle Equipment time

3. To suggest measures to minimize it so the walk in patients can be attended.

Research Methodology:

Study Area: Idle Equipment time

Study Location: P.D Hinduja National Hospital & Research,Mumbai

Study Unit: Patients in Imaging department at P.D Hinduja Hospital,Mumbai

Study Design: Descriptive study Design

Study Period: Two weeks

Sample Size: PRIMARY: USG-300

Mammography-100

Colour Doppler-20

SECONDARY: Data of two weeks

Sampling Size Collection:

The Sample was taken for a period of two weeks following the 20% sampling Method.

Determination of Sample Size:

According to the records of Imaging, number of patients visited in the one month

Ultrasound: 1382 Patients

Mammography: 276 Patients

Color Doppler: 274 Patients

By taking,

20% of the months Patients

Sample size needed =

Ultrasound: 276 patients

Mammography: 55 Patients

Color Doppler: 54 Patients

Data of : Ultrasound: 300patients

Mammography: 100 Patients

Color Doppler: 20 Patients (due to less no. of Patients)

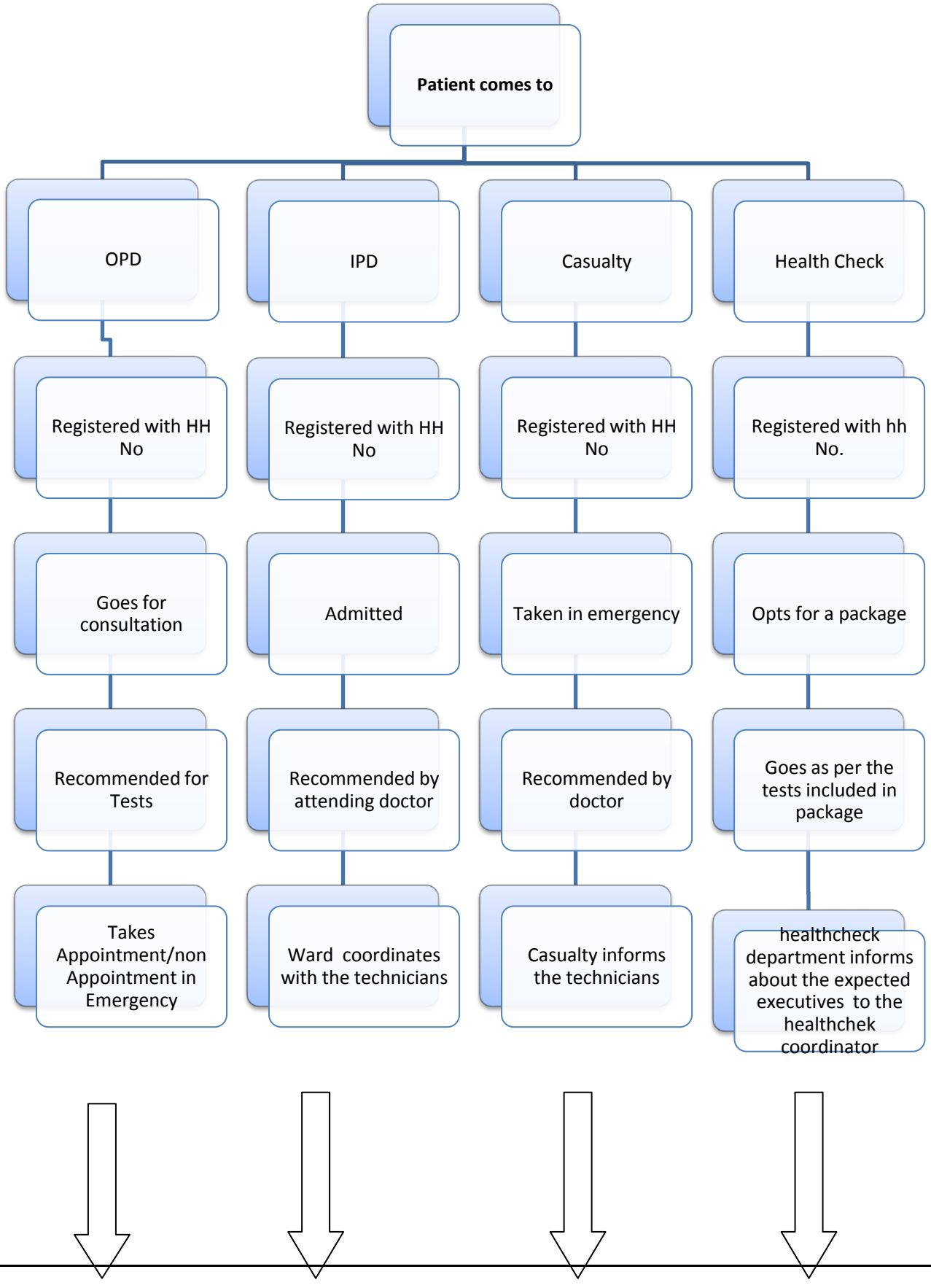
Method of data collection:

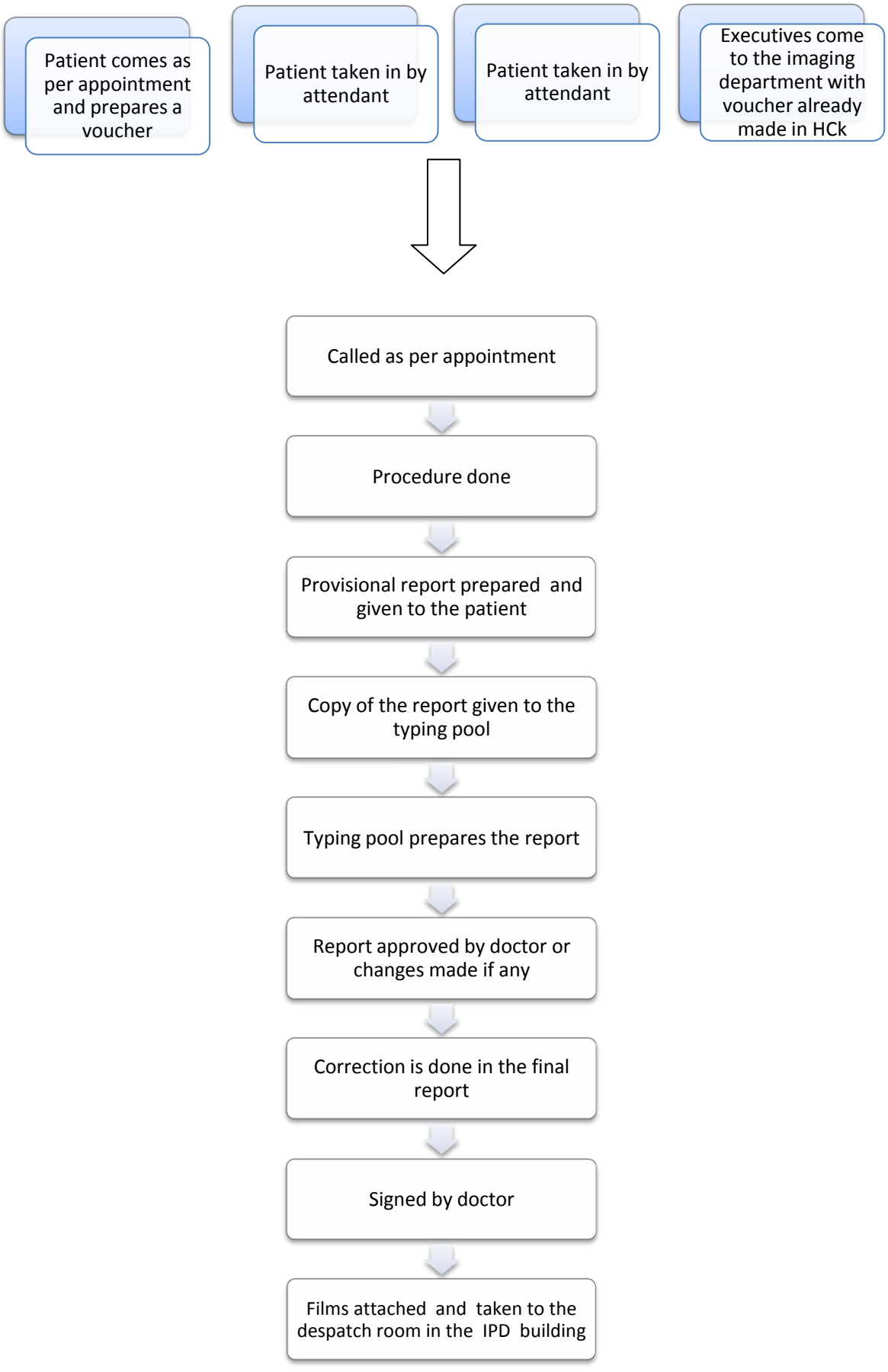
Primary: Through direct data collection.

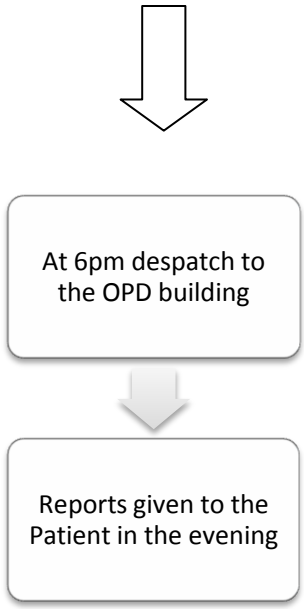
Secondary: Statistics of two weeks.

Study Tool: MS Excel

Process Mapping:


Patient comes to
OPD
IPD
Casualty
Health Check
Registered with HH No
Registered with HH No
Registered with HH No
Registered with hh No.
Goes for consultation
Admitted
Taken in emergency
Opts for a package
Recommended for Tests
Recommended by attending doctor
Recommended by doctor
Goes as per the tests included in package
Takes Appointment/non Appointment in Emergency
Ward coordinates with the technicians
Casualty informs the technicians
healthcheck department informs about the expected executives to the healthchek coordinator

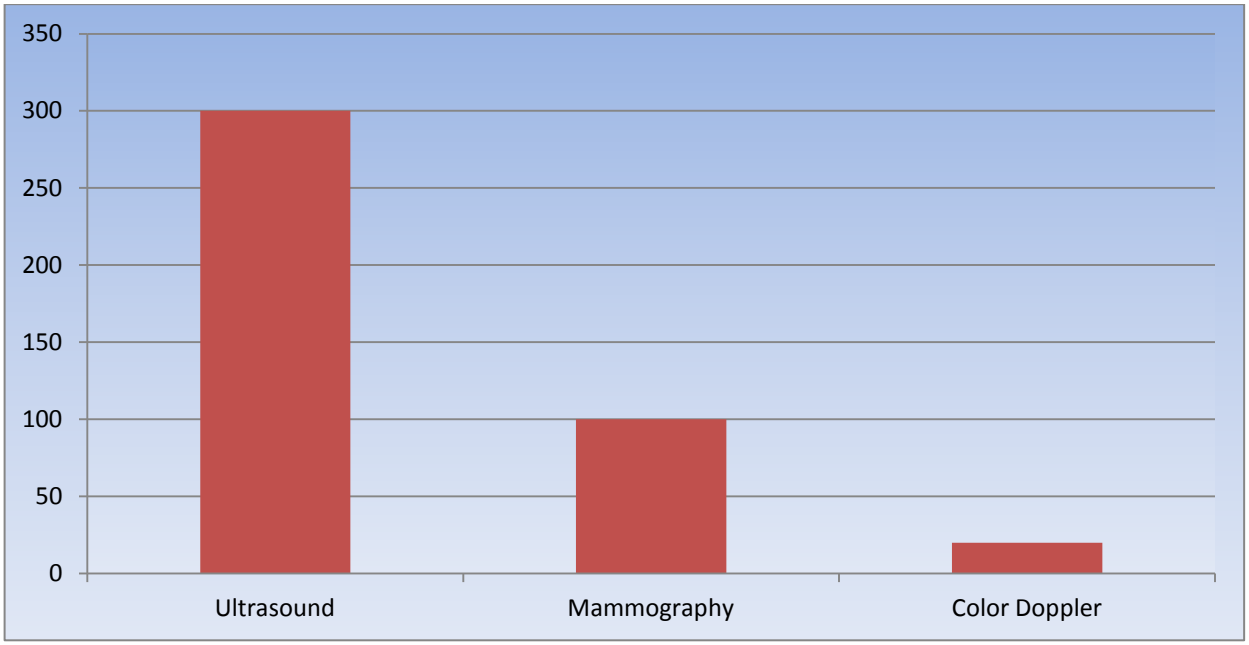

Patient comes as per appointment and prepares a voucher
Patient taken in by attendant
Patient taken in by attendant
Executives come to the imaging department with voucher already made in HCk
Called as per appointment
Procedure done
Provisional report prepared and given to the patient
Copy of the report given to the typing pool
Typing pool prepares the report
Report approved by doctor or changes made if any
Correction is done in the final report
Signed by doctor
Films attached and taken to the despatch room in the IPD building


At 6pm despatch to the OPD building
Reports given to the Patient in the evening

Idle Equipment Time:

Graphical Representation:

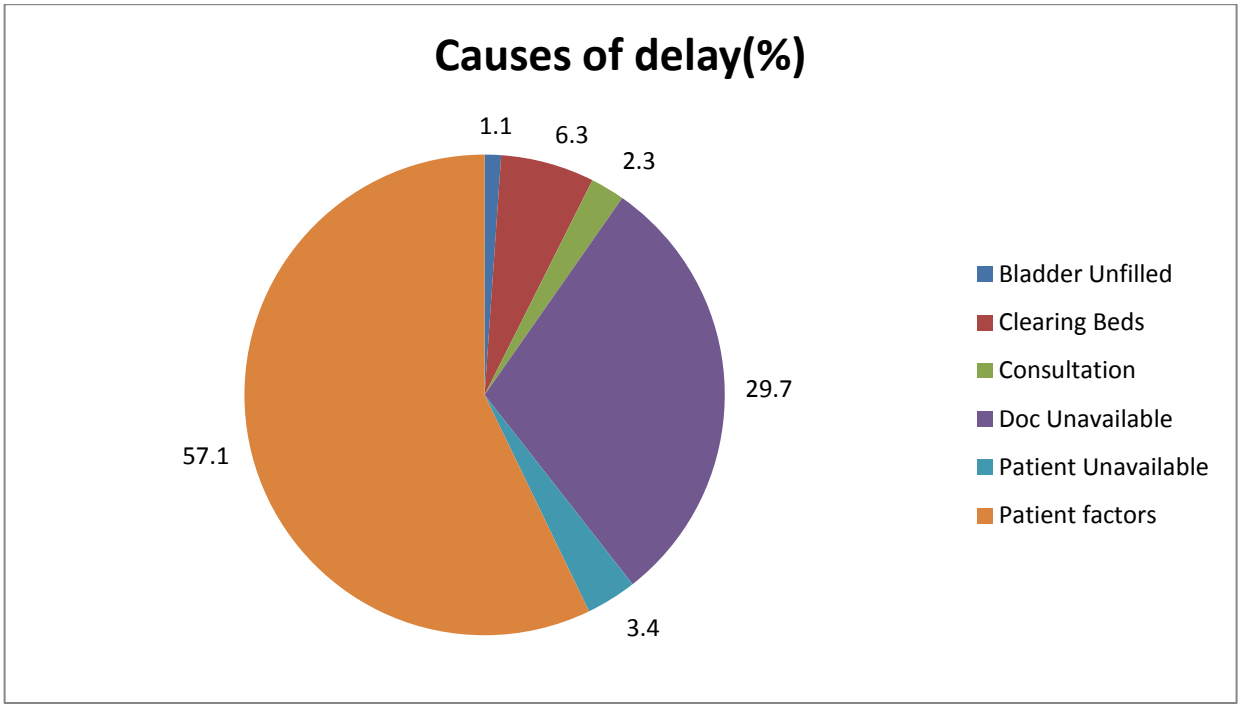
Number of Patients Taken



Above graph shows that out of 420 patients whose data were collected, 300 were taken from ultrasound department, 100 were taken from mammography department and 20 from colour doppler department

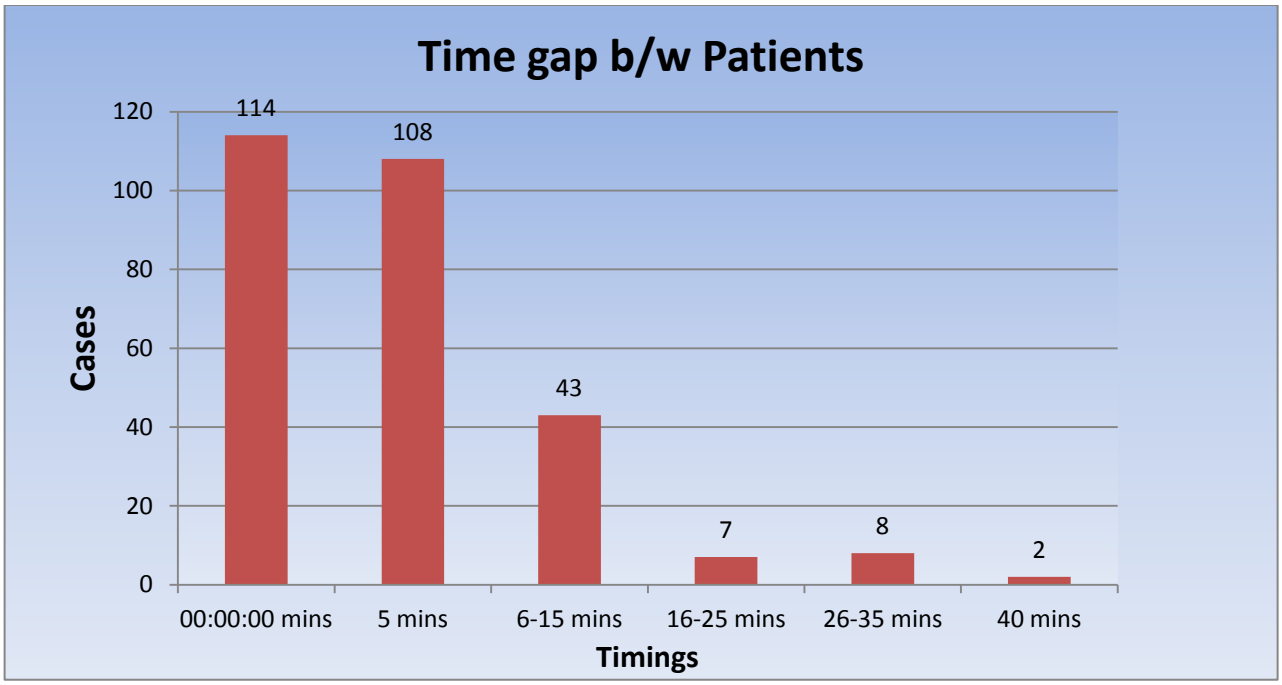
Sonography:

1)



The pie chart shows the maximum delay is due to patient factors .

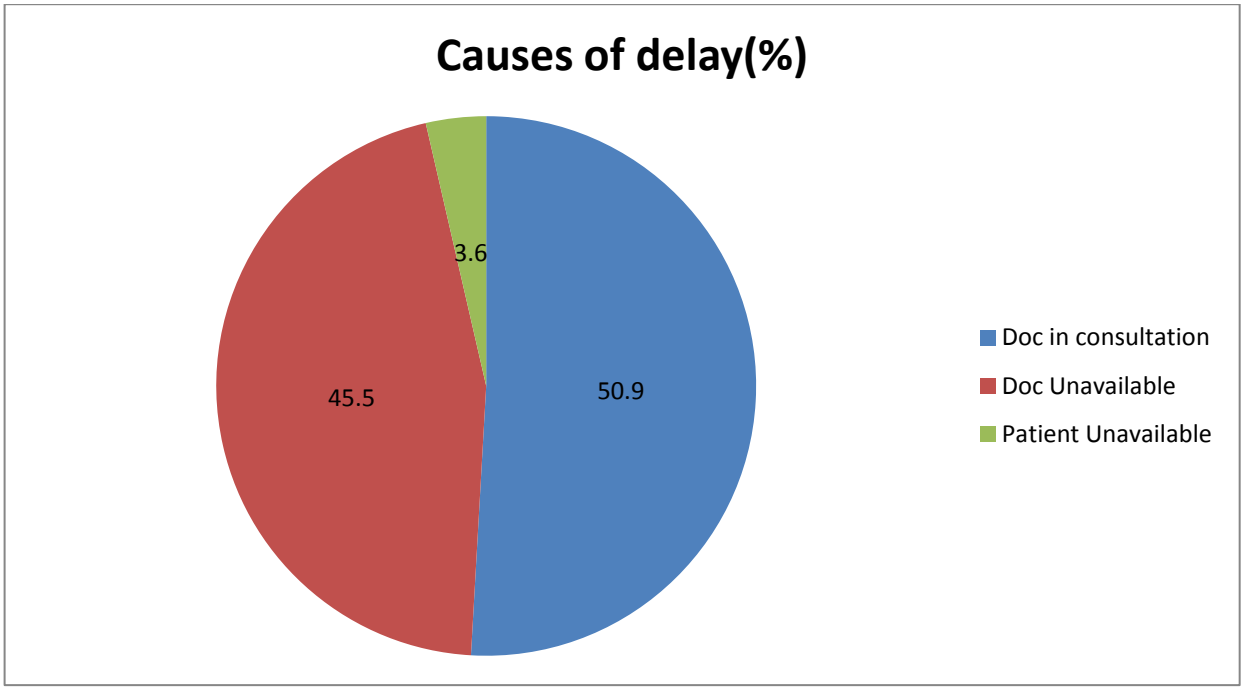
2)



The Graph shows maximum patients are taken without any delay .But the time gap for patients taken after 5mins is also high.

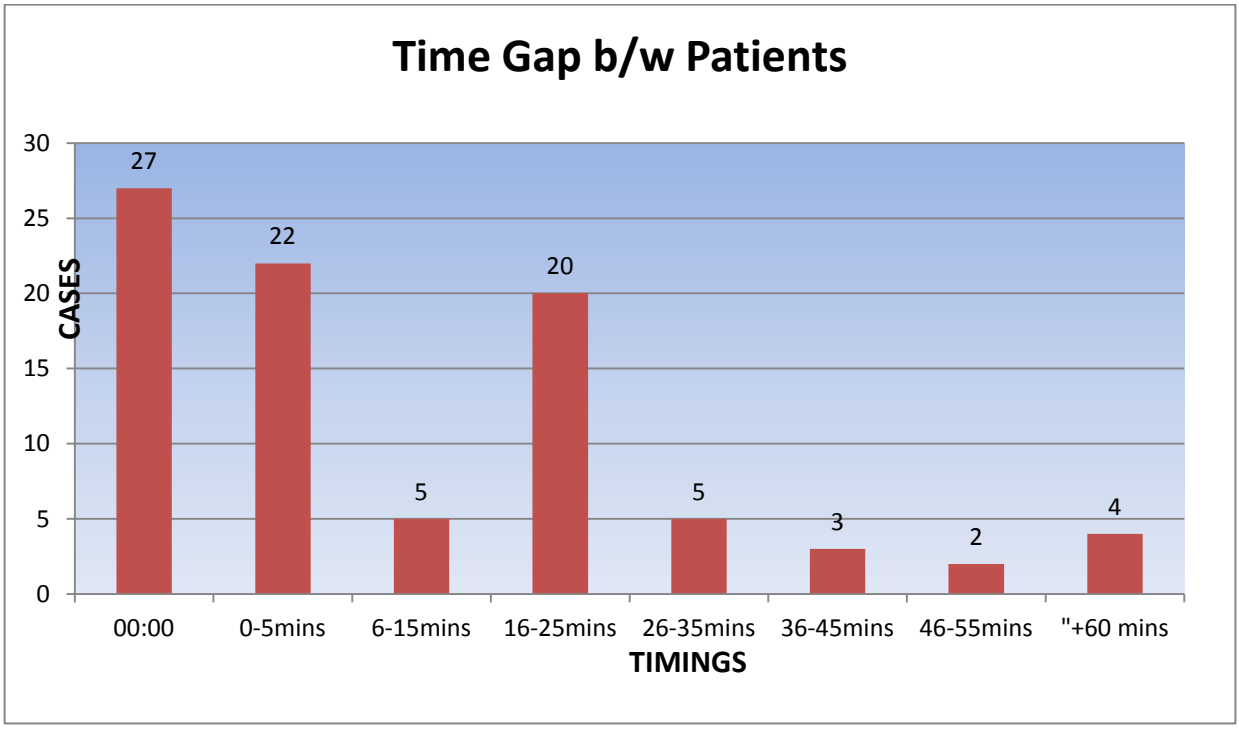
Mammography:

3)



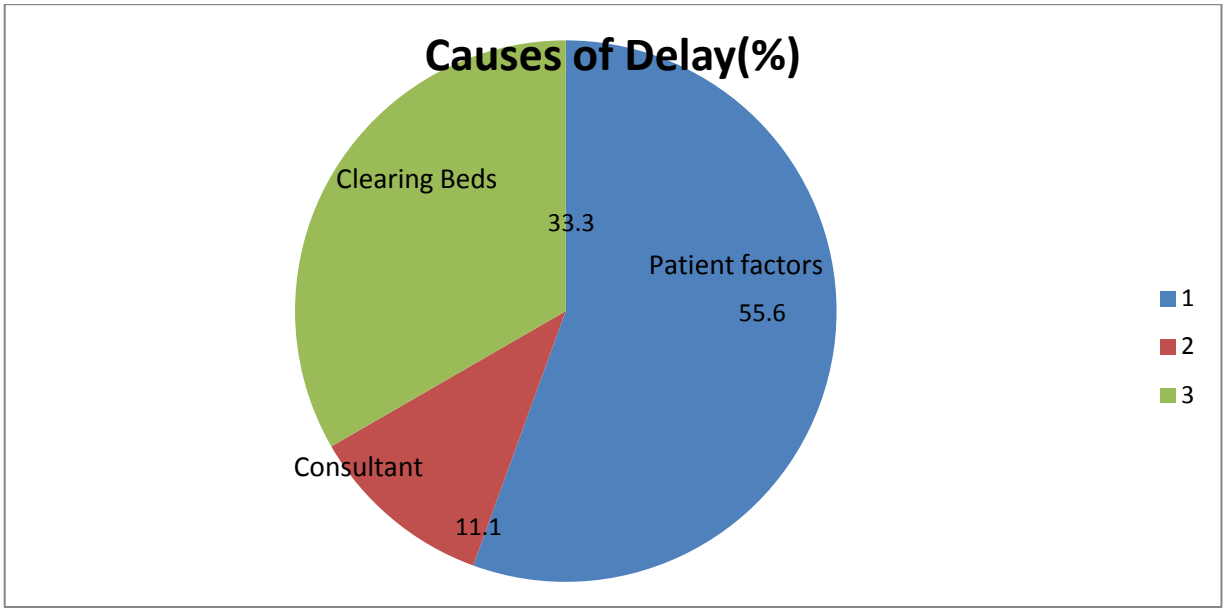
The major reason for the delay is the consultaion to patients by doctor in between two procedure.

4)



The graph shows the maximum patients are taken without any delay but no. Of patients patients taken after 5 mins is also high

Colour Doppler:



5)

The pie chart shows maximum delay is due to patient factors and the next being clearing of beds.

Interpretation:

The Idle Equipment time for ULTRASOUND was 1.96 minutes .40% of the cases were taken without any delay. 38% were delayed for around 5 minutes and the remaining longer than this. The major reason for delay was Patient Factors, the next being Doctors Unavailability (30%)

The Idle Equipment time for SONOMAMMOGRAPHY was 9.9 minutes .Only 30% of the cases were taken without any delay. 25% were delayed for around 5 minutes and the remaining longer than this. The major reason for delay was Doctors Unavailability (50%)

The Idle Equipment time for COLOUR DOPPLER was 5minutes.The major reason for delay was clearing of IPD beds after the procedure is done and accounts to around 56%.

Recommendations:

1. Digital Display flashing the HH No of the next patient can be installed to save technicians time.
2. The two sonography rooms can be connected if possible to reduce the technicians effort and increase their efficiency.
3. **Pre-screening can be done in a separate dressing room to check the patient bladder before the patient is taken in for ultrasound.**

4. **The digitomammography and Sonomammography rooms can be connected from inside so the patient need not change again to come out.**
5. Each technician could be assigned specific task in a day so processes can be streamlined and coordinated well..
6. The walk in Patients can be attended in the evening shift when the patient load is less and can be informed about the delay as well.

PART-2

Problem Statement:

The ward need the reports of the IPD Patients before the doctor comes for round. The OPD patients need the reports for follow up and planning line of treatment. The health check Patients need the reports as have to go for consultation to other doctors .Since all the patients demand the report at the earliest and .....affects the Patient Satisfaction, discourages them for next visit and eventually the revenue of hospital

Review Of Literature:

A cross sectional study was conducted by Laboratory Automation System,2009; 14,p 94-105, Dhirendra Pratap Singh shows that Automation systems are evolving and now have the ability to improve services to the patient, physicians, and other healthcare providers by improving TAT and providing predictable throughput. Information-based LASs can provide support for care models that include the ability to provide reflex testing, repeat testing, test cancellation, and reduce financial risk for healthcare organization. All of the metrics show improvement in the laboratory operations at Aultman with a payback of 2.5 years. In the future, we as laboratories will need data defining the operational characteristics of LASs. At this point, the data are lacking only as a result of the lack of implemented automation systems in India. We estimate that we will need 10–25 installed operational automation sites with at least 2 years of operating data to provide data that will have statistical significance. Until we have these data, laboratories will be required to take a leap of faith in the implementation of LASs, perhaps based on the successful implementation of other systems in other environments such as nonmedical industries

According to a study conducted on Turn Around Time (TAT) as a Benchmark of Laborator Performance by Binita Goswami • Bhawna Singh • Ranjna Chawla • V. K. Gupta • V. Mallika

Research Question:

1. Are the patients experiencing delay in receiving the reports?
2. What are the reasons of high TAT of reports?
3. What is the scope of streamlining processes of Imaging to reduce TAT of reports?

Hypothesis:

The TAT of reports can be reduced by interventions in the process

Objectives:

1. To study the current Turnaround time of reports.
2. To identify the key factors responsible for the delay.
3. To suggest solutions to decrease the high TAT of reports

Research methodology

Study Area: TAT of reports

Study location: P.D. Hinduja National Medical Hospital & Research Centre, Mumbai.

Study Unit: Patients in Imaging department at P.D Hinduja Hospital,Mumbai

Study Design: Descriptive Study

Study Period: Two weeks

Sample Size: PRIMARY: USG-224

Mammography-94

SECONDARY: Data of two weeks

Sampling size Collection: The Sample was taken for a period of two weeks following the 20% sampling Method.

Determination of Sample Size:

According to the records of Imaging, number of patients visited in the one month

Ultrasound:1382 Patients

Mammography:276 Patients

By taking,20% of the months Patients

Sample size needed =

Ultrasound: 224 patients

Mammography: 55 Patients

Data of :

Ultrasound: 224patients

Mammography: 94Patients

was collected by direct observation in the Imaging Department and secondary data of reports

Method of Data Collection:

Primary: Through direct data collection.

Secondary: Statistics of two weeks.

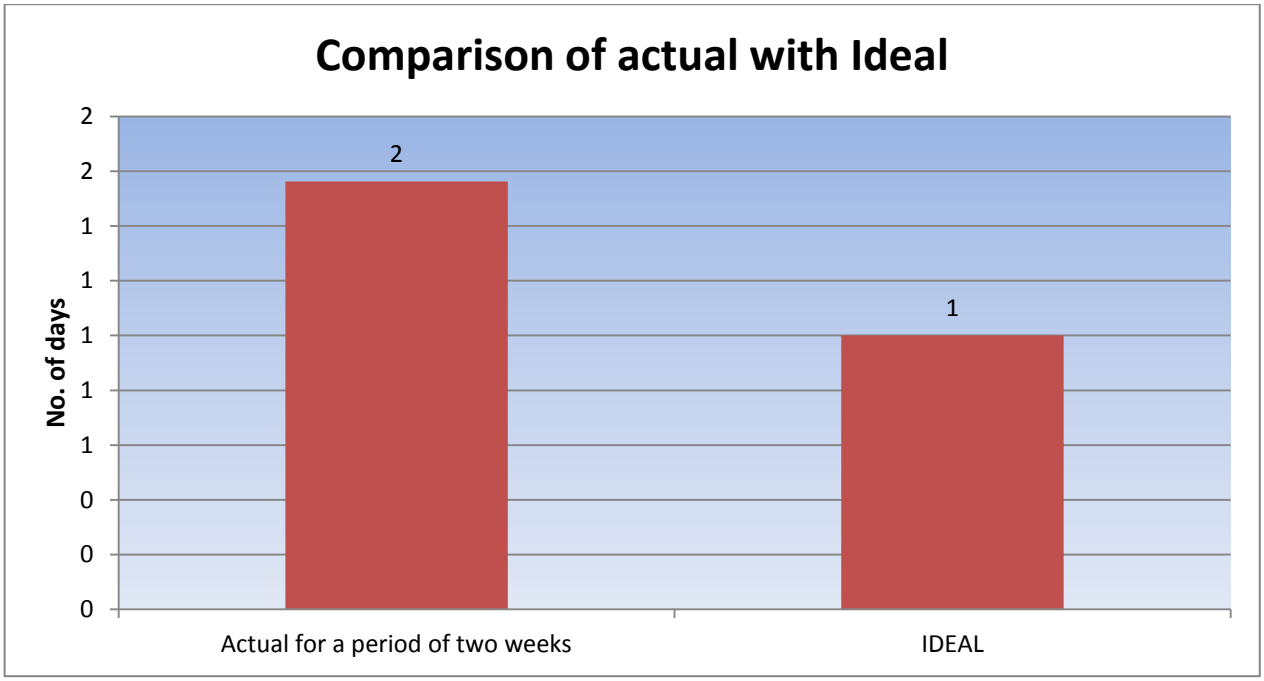
Study Tool: MS Excel

Results & Findings:

Graphical Representation:

Sonography:

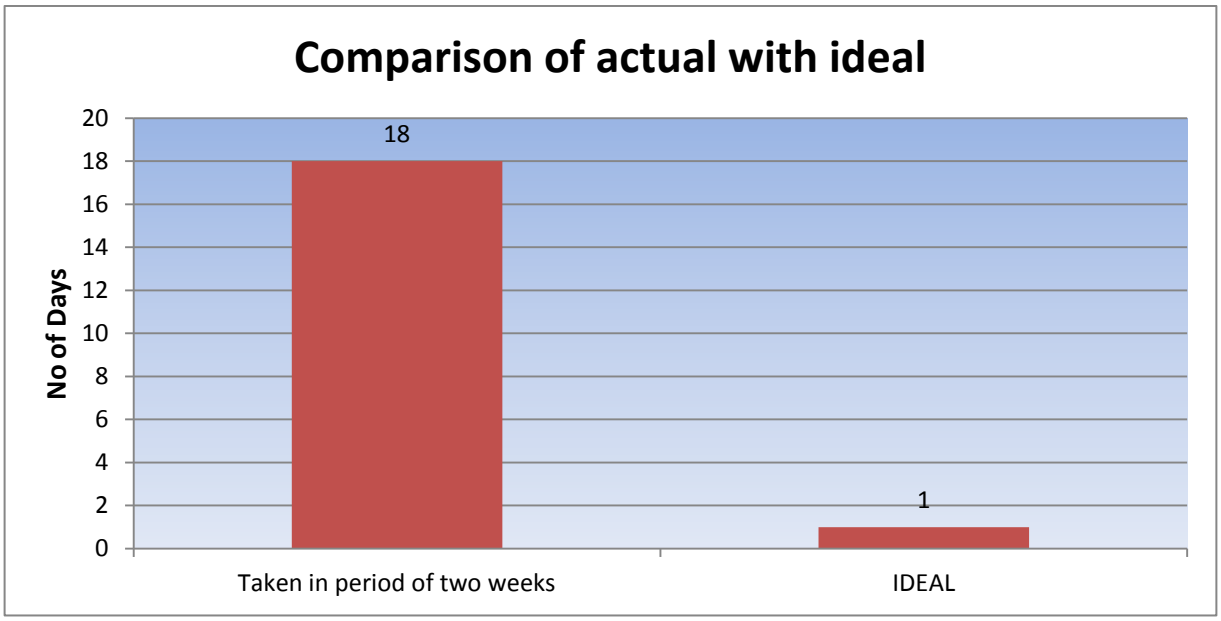
1)



The graph shows gap of 1 day from ideal TAT of reports

Mammography:

2)



The graph shows gap of 17 days from ideal TAT of reports

<u>Interpretation</u>:

The turnaround time was found to be 2 days for ULTRASOUND and 18 for MAMMOGRAPHY.

The reasons observed being less Manpower in the duration of the study. Also typing mistakes by the typing pool go for correction and then rechecking which wastes a lot of time.

Recommendations:

1.The Qualified and experienced typing personnel with the system can be shifted near to the area where the doctor is performing the procedure and the findings can be dictated there itself. It will save time wasted in retyping the reports.

2. The doctor can also crosscheck the report in between the time when the next patient is taken in.

3. The number of Junior Resident could be increased

4. If necessary the reports requiring consultation with other doctors can be left pending for the evening.

To make the dispatch of reports faster

5.Assistance from IT dept in developing a system where reports can be mailed to the patients and their consultants or as an SMS to their cell phones.

Abbreviations:

- **USG –**Ultrasonography
- **TAT-**Turnaround Tim**e**
- **IPD-**In Patient Department
- **OPD-**Out Patient Department
- **HCK-**Health Check

References:

1.www.improvement.nhs.uk

2.Hamilton, S. D. 2009. 2008 ALA Survey on Laboratory Automation. Journal of the Association for Laboratory Automation (JALA) 14: 308-319.

3.Hamilton, S. D. 2007. 2006 ALA Survey on Laboratory Automation. Journal of the Association for Laboratory Automation (JALA) 12: 239-246*END OF REPORT*