

**Summer Training at
P.D. Hinduja National Hospital and Medical Research Centre
(April 1 –May 31, 2013)**

- **Cardiac Cauterization Laboratory Turnaround Time, Waiting Time & Compliance Towards the International Patient Safety Goals-A Study to Access Quality of the Operations of the Department**
- **Patient Satisfaction in Physiotherapy Department**
- **Waiting Time for OPD Patients – A Time Motion Study**

**By
Arushi Vij**

**Under the guidance of
Dr. Susmit Jain**

**MBA- Hospital & Health Management (MBA-HM)
2013-2015**



**The IIHMR University, Jaipur
2014**

**INSTITUTE OF HEALTH
MANAGEMENT RESEARCH**

1, Prabhu Dayal Marg
Sanganer Airport, JAIPUR - 302 029, INDIA
Tel. : 3924700, 2791431-32
Fax : 91-141-3924738
E-mail : iihmr@iihmr.org
URL : <http://www.iihmr.org>
Gram : HEALTHINST

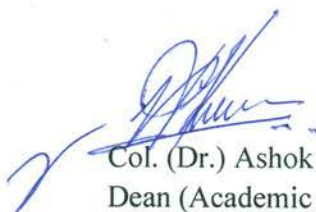
CERTIFICATE

This is to certify that **Dr.Arushi Vij** has undergone her summer training in **P.D.Hinduja Hospital and Medical Research Centre, Mumbai** from 1st April 2014 to 31st May 2014. The candidate herself carried out all the studies related to her summer training. Her topics of study were :

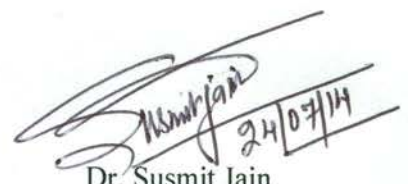
1. 'Cardiac Catherization Laboratory Turnaround Time, Waiting Time & Compliance towards the International Patient Safety Goals'- A Study to assess quality of the operations of the department.
2. Patient Satisfaction in Physiotherapy Department
3. Waiting Time Study For OPD Patients- A Time Motion Study

Her approach to the study has been scientific and analytical. This summer training is in the partial fulfilment of the course requirement recommended for the award of Post Graduate Diploma in Health and Hospital Management with specialisation in Hospital Management.

I wish her success in all her future endeavours.



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



Dr. Susmit Jain
Assistant Professor
IIHMR 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 2, 2014

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Dr. Arushi Vij , 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. Cardiac Catheterization Laboratory Turnover Time, Waiting Time & Compliance Towards The International Patient Safety Goals – A Study To Assess Quality Of Operations Of The Department .

I wish her all the success in future endeavors.


Joy Chakraborty
Chief Operating Officer

ACKNOWLEDGEMENT

Working as a Management Trainee during the two months of my Summer Training was all in all a wonderful learning experience that I shall always cherish. The successful completion of any given task requires a lot of hard work and sincere efforts. The base of this has to be continuous guidance, support and inspiration. Experience in a hospital environment was an important part of my course and this I have achieved from one of the esteemed health care organisation, P.D.HINDUJA HOSPITAL AND MEDICAL RESEARCH CENTRE, Mumbai. These eight weeks of training has added a valuable and knowledgeable exposure in the development of my career and achievement of my objectives, for which I am highly grateful to the organisation.

I would like to place on record my heartfelt gratitude to Dr. Preeti Goraksha Sr. Manager – Clinical Care Units, for her guidance. In spite of being extraordinarily busy with her duties, she took time out to hear, guide and keep me on the right path and allowing me to carry out my project work during the training. I felt at home and motivated by the encouragement which I received.

I wish to express my special thanks to Mrs. Purity D'Cruz Sr. Manager Cath Lab and the entire staff in the department who supported and helped me in the best possible way to conduct and conclude my study. Madam guided, encouraged and helped me, arranged all facilities to make things run smoothly. I choose this moment to acknowledge their contribution.

I am deeply indebted to my mentor Dr. Sushmit Jain, IHMR Jaipur whose help, stimulating suggestion and encouragement helped me all through the study.

Lastly, I offer my regards and best wishes to all those who supported me in any way during my Summer Training.

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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
IT	Information technology
MRD	Medical record department
MRI	Magnetic resonance induction
OPD	Outpatient department
IPSG	International Patient Safety Goals
TAT	Turnaround Time
PDSA	Plan Do Study Adopt

Introduction Summer internship forms an integral part of the PGDHM curriculum. It provides 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.

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.

Introduction To The Hospital :

P.D. HINDUJA NATIONAL HOSPITAL AND MRC –



Hinduja Hospital is a pioneer in bringing world class Healthcare to India.

It is an ultramodern;multispeciality tertiary care hospital and has a spectrum of services – from diagnostic to therapeutic,from prevention to rehabilitation all under one roof.People across the country and even globe,get referred to Hinduja Hospital for availing excellent medical care,rendered through state of the art technology , globally benchmarked skill sets and most importantly the „human touch“.

P.D.Hinduja Hospital and National Research Centre is a "Not for Profit" charitable trust hospital established in 1950s by late Shri P.D. Hinduja. It is the tertiary care multi-specialty hospital situated at the heart of the financial capital of India, Mumbai and catering to the healthcare needs of the millions of people annually from across the country. The vision of the hospital is “Quality Healthcare for All” through achievement of medical excellence and application of state of the art technology. The functioning of the organization is based on the guiding principles namely; Work to give, Work is a bond, act local - think global, advance fearlessly, partnership for growth. The hospital is proud holder of HACCP (Hazard Analysis & Critical Control Points), CAP (College of American Pathologists), NABH (National Accreditation Board for Hospitals & Healthcare Providers) accreditations and ISO 27001: 2005 Certification. This hospital is known for all the specialties provided by a tertiary level hospital including aesthetic services except obstetrics and psychiatry. The distinguishing services that brings accolades to the hospital are specialty clinics (Lupus, Vulva , Dental Implant , Geriatric and Diabetic foot) , IVF centre, surgical solutions for obesity, short stay services , care at home , virtual OPD and variety of health check packages under the umbrella program “ Secure your Health”. The hospital has easy to navigate, dynamically interactive web portal for providing all the requisite information and 24x7 assistance to the patients. The hospital being run on the non- profit model has additionally developed a charity fund “Life to Give Hope” for the benefit of the needy patients in all the ways besides core medical activities.

The principle that all payments to consultants should be through the hospital was also laid down. In 1991, a new plot of land close to the east building was purchased and two new buildings were constructed to accommodate the nursing school and provide residential quarters for doctors, nurses and nursing students, thus making available additional space for medical activities in the east building. Realising the need for close supervision, the society had constituted a Board of management consisting of Mr. S. P. Hinduja, Mr. G. P. Hinduja, Mr. P. P. Hinduja, Mr. A. P. Hinduja, the late Mrs. Lalita G. Hinduja and the late Dr. R. K. Menda in 1985 to oversee the management of the Hospital.

An organisational set-up with a Chief Executive Officer at the head and functional directors under him was created in 1986, thus introducing the concept of professional management in tune with modern trends. ⁽¹⁾

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.

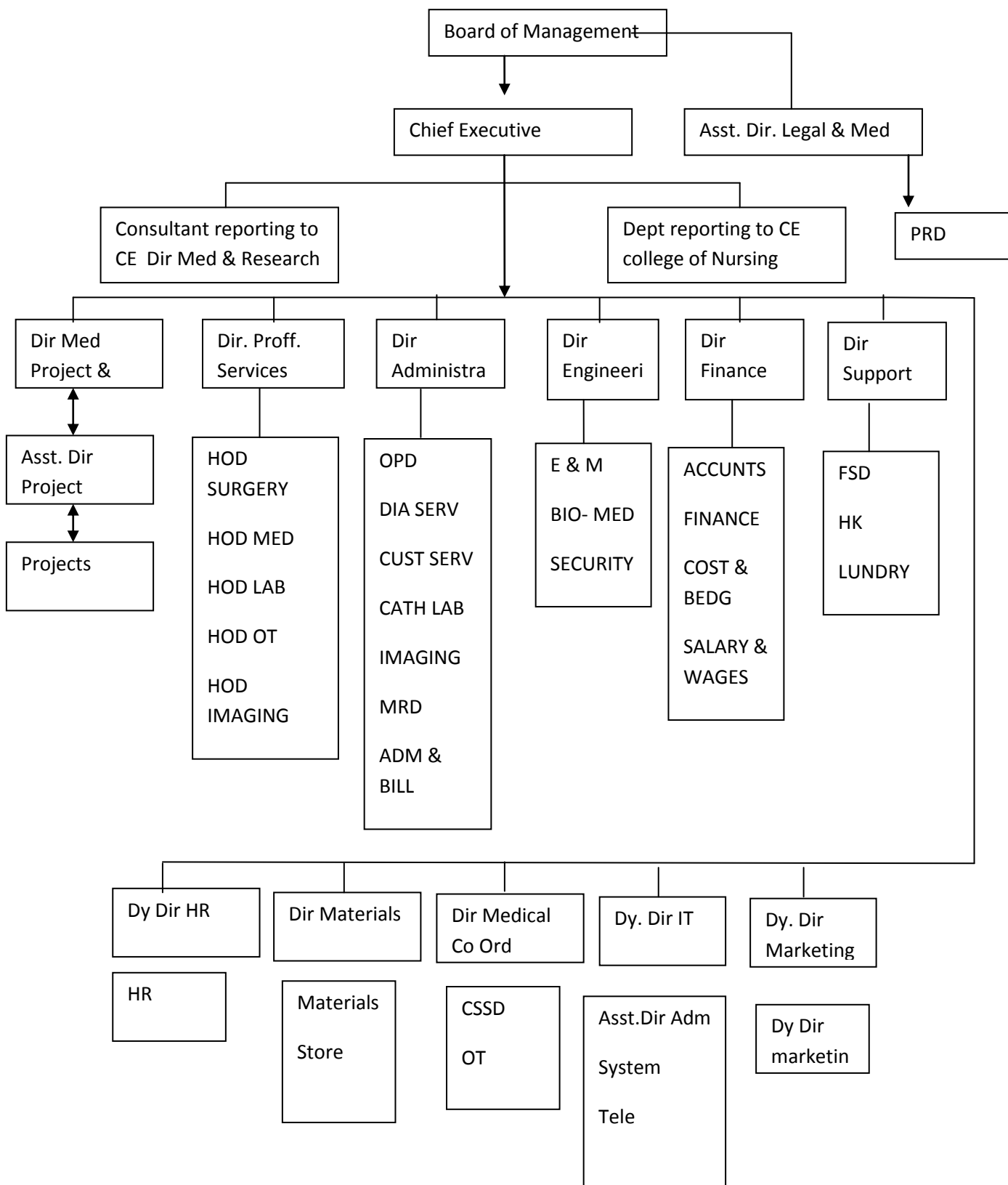
Quality Objectives –

- 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 | - | 402 beds inclusive of 57 critical care |
| - Bed Occupancy rate | - | 99% |
| - 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 |

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



OBSERVATIONAL LEARNINGS

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.

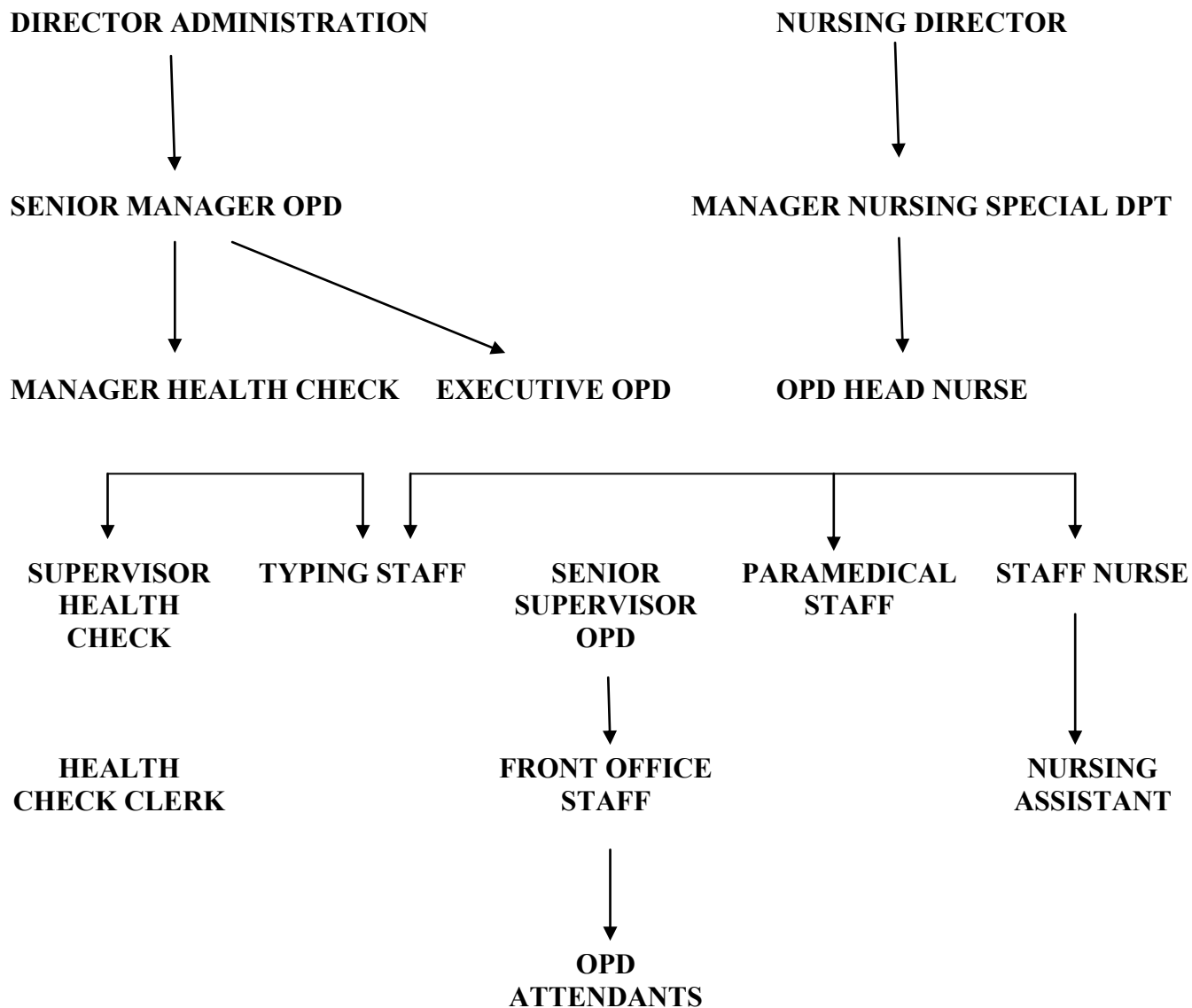
The Hinduja Clinic aims to provide

- 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 & Urinary	Cardiac, PFT Lab, Consultants	Executive health checkup
Fourth Floor	Administrative section	Library	Conference Hall	Administrative section

OPD Organogram –



ACCESS 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

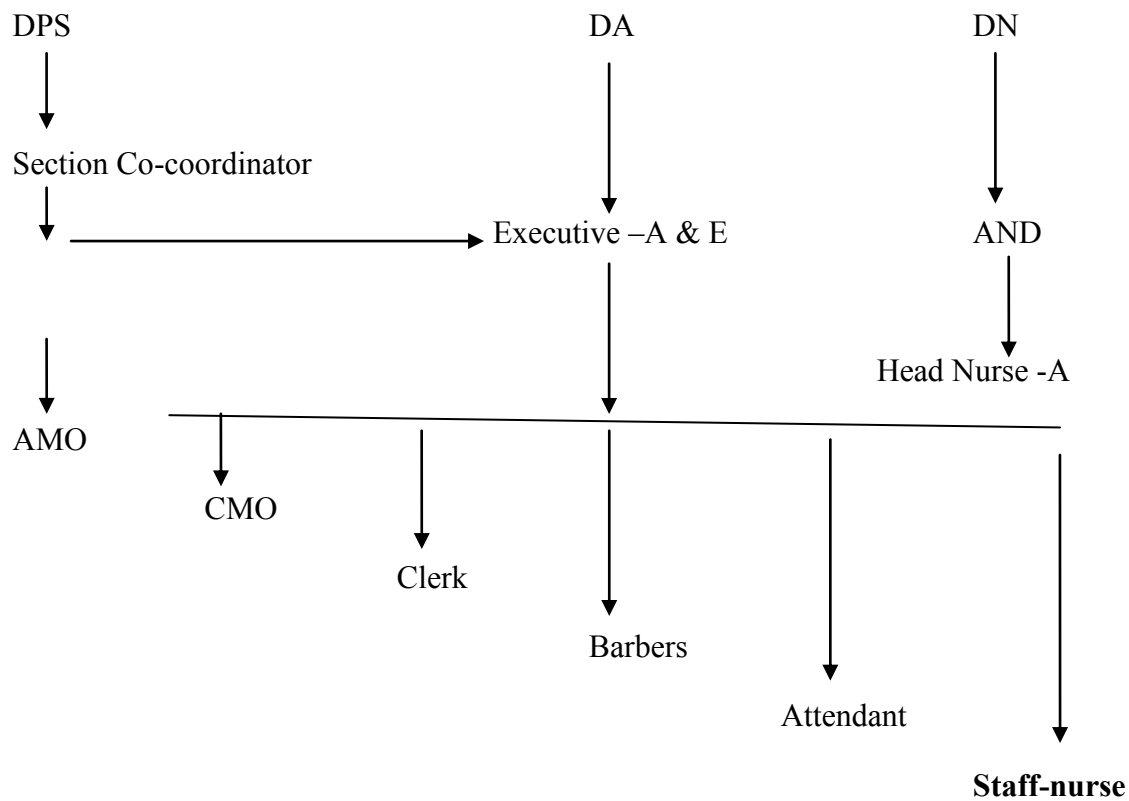
Introduction :

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 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 –

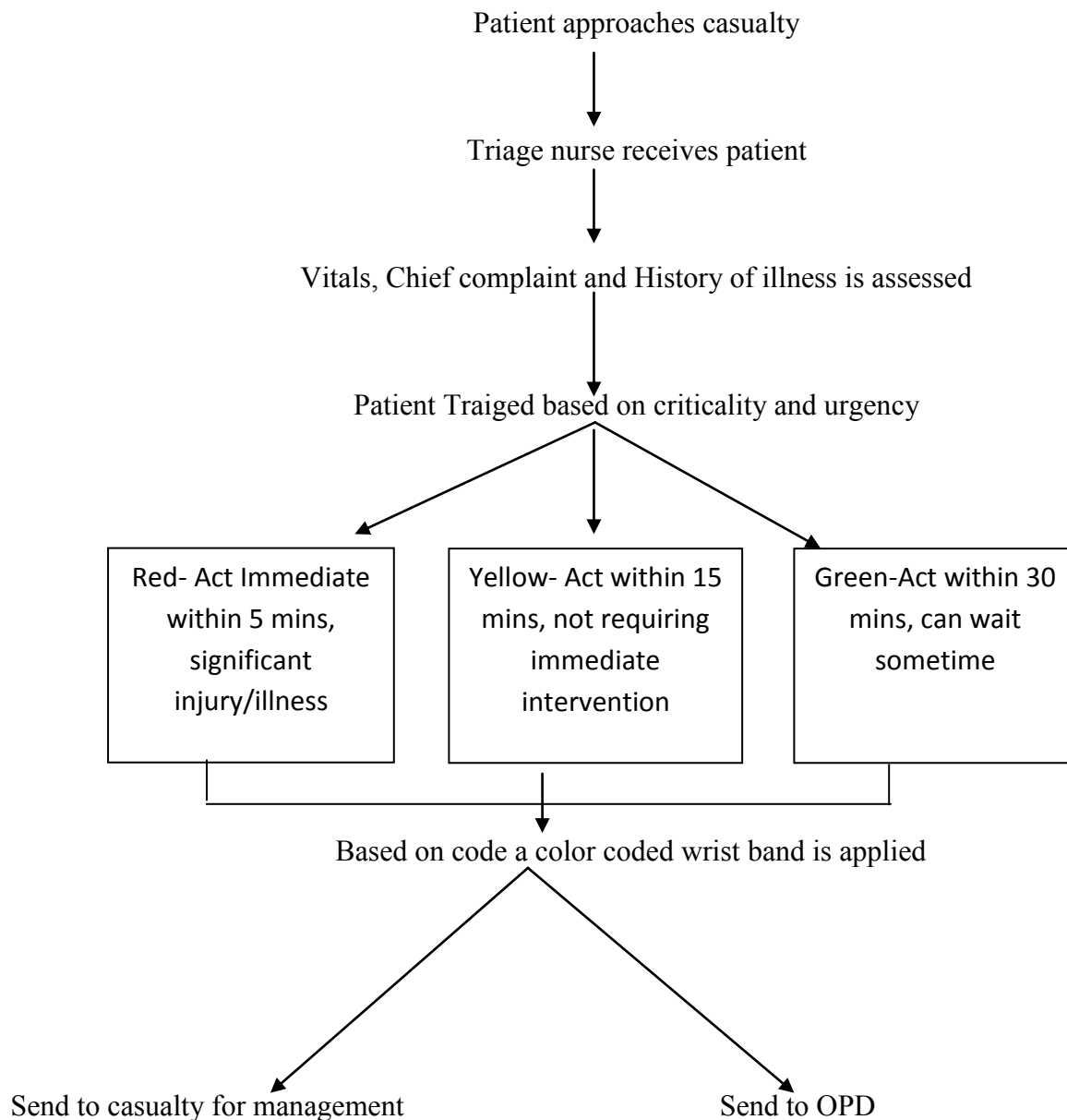


Staffing –

Categories of staff numbers –

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

Triage Process Flow

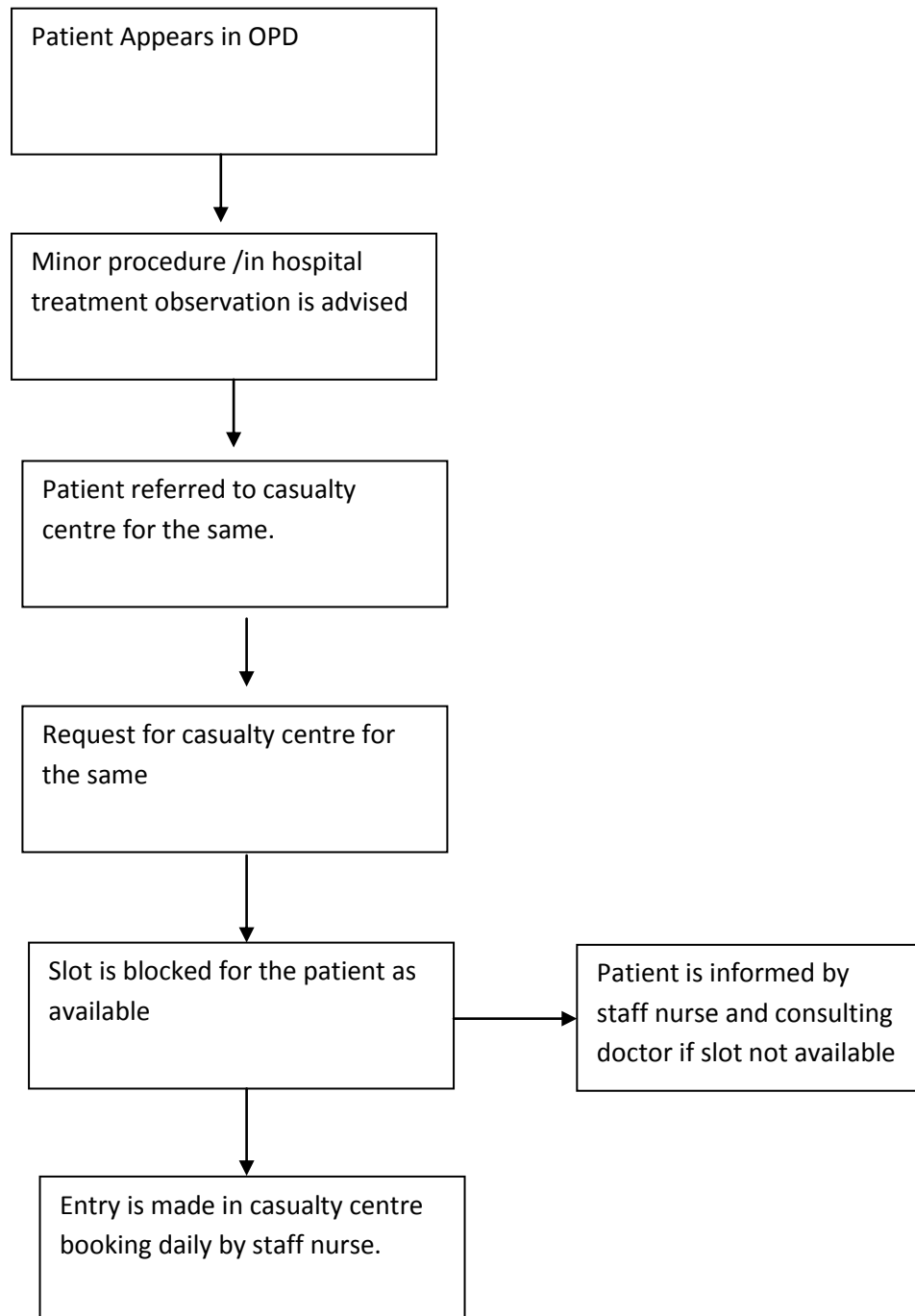


Triage :

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 –



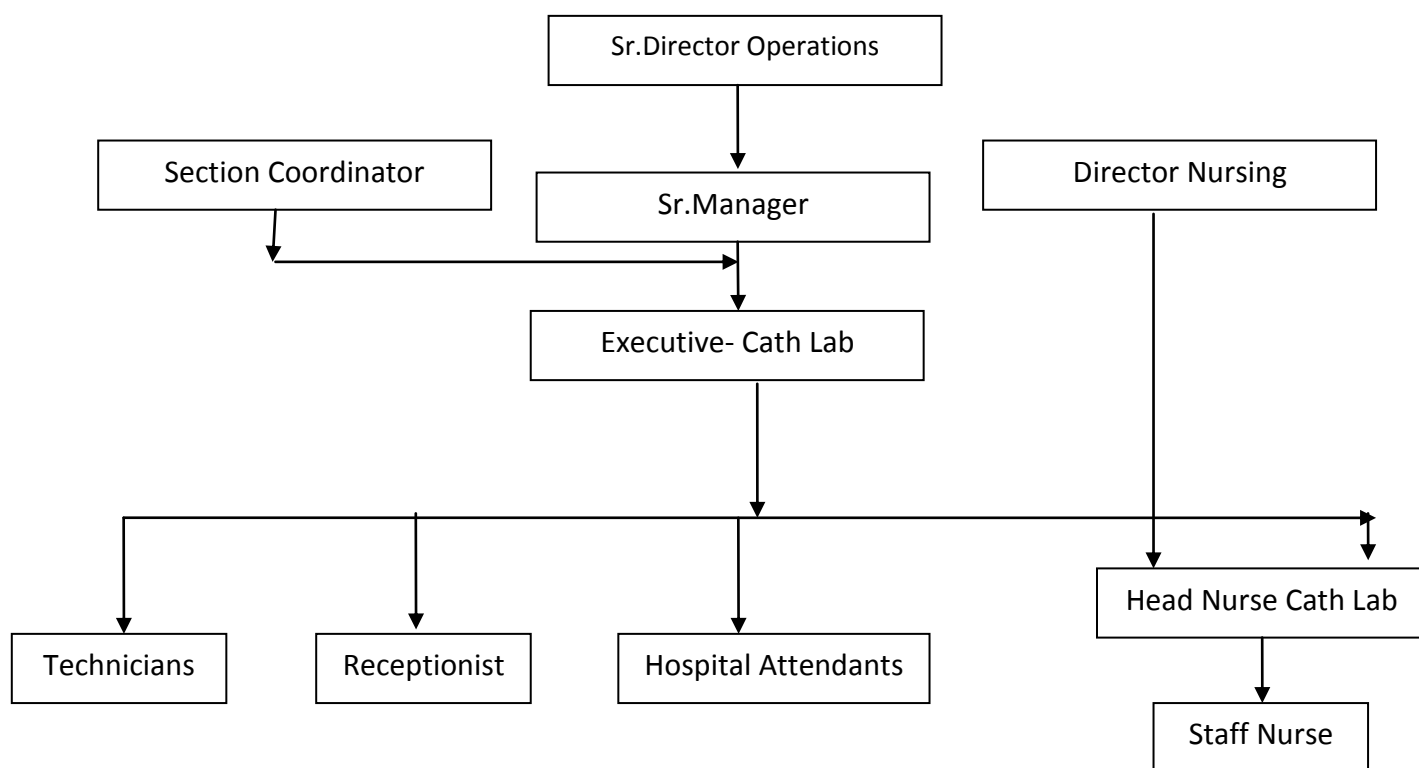
CATH LAB

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 Administration	01
Technicians	04
Hospital Attendants	04
Nurse	08
Receptionist	02

CLINICAL SUPPORT SERVICES

LAB MEDICINE

Introduction:

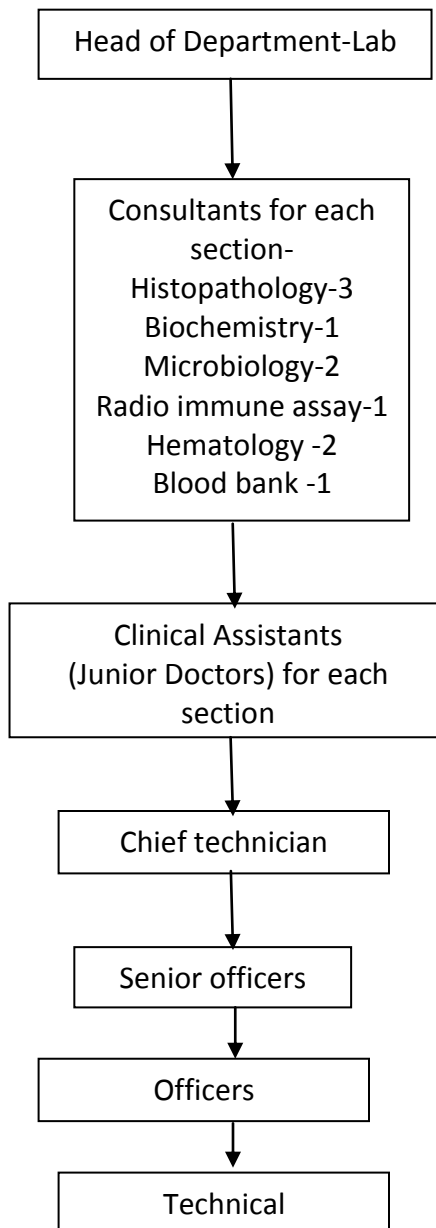
The lab medicine department of Hinduja hospital covers about 13000 sq. ft. area in 2 different buildings. It includes the following –

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

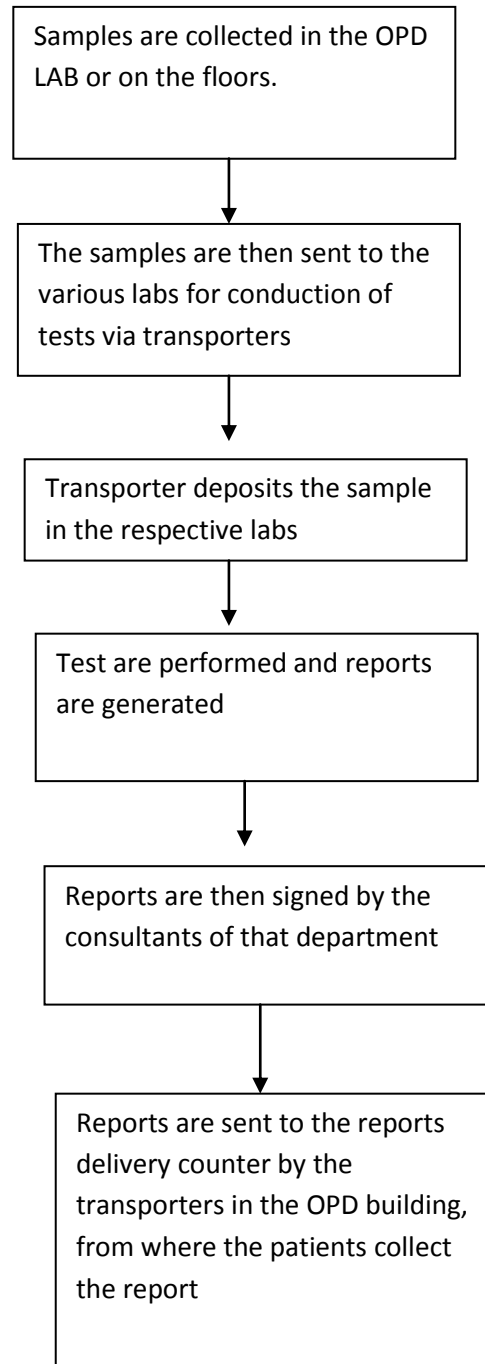
The lab has its own laboratory Information System, which is called the „LABWARE“ Software. There are 2 different teams for OPD and IPD. The lab also conducts quality assurance programs – Internal and external.

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



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

Star 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 1st Floor of the New Building. There is separate X-ray for the OPD patients located in the OPD building.

There are two reception counters, one located on the 1st 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.

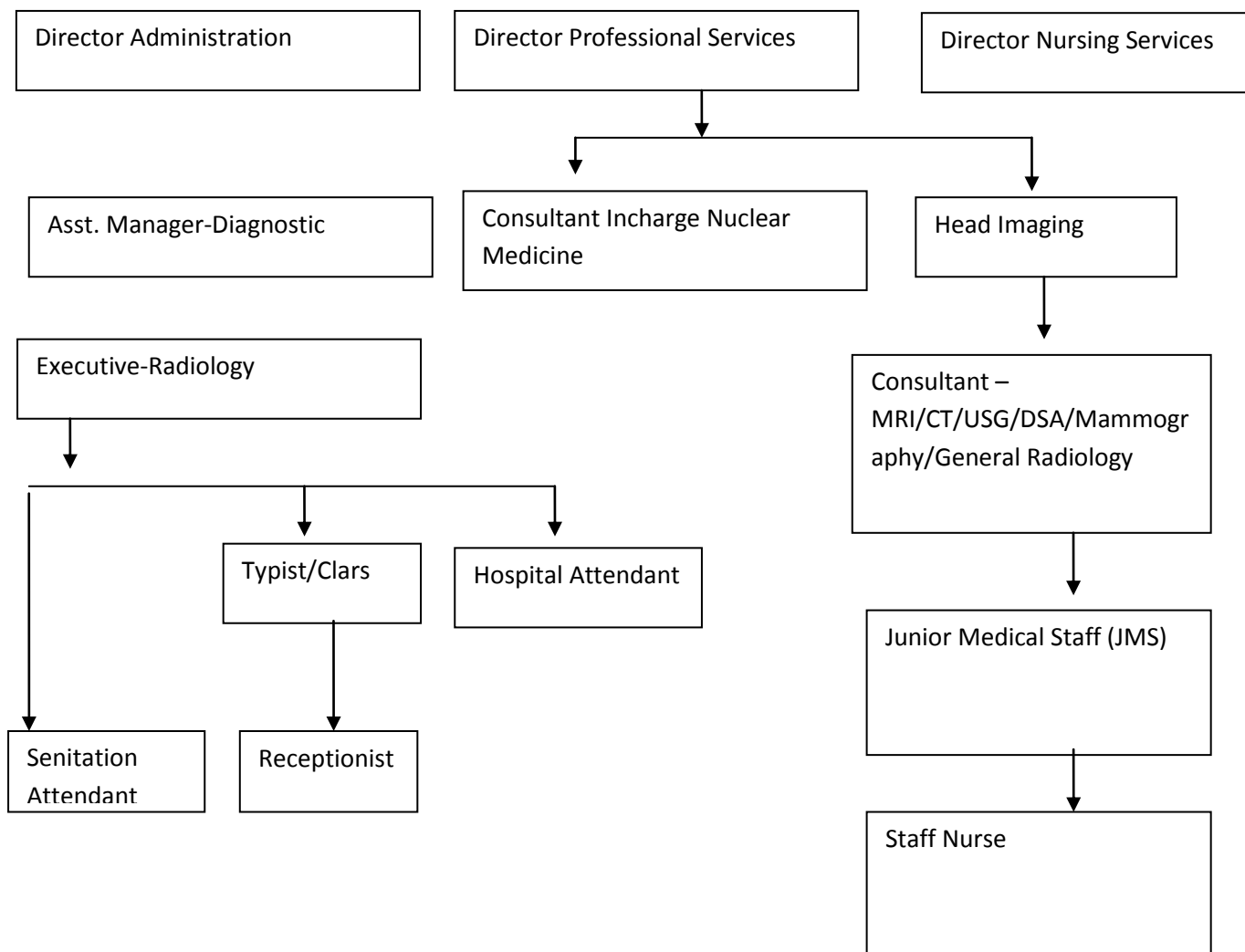
Location and layout :-

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



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 then only the hospital can 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 checks 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 –

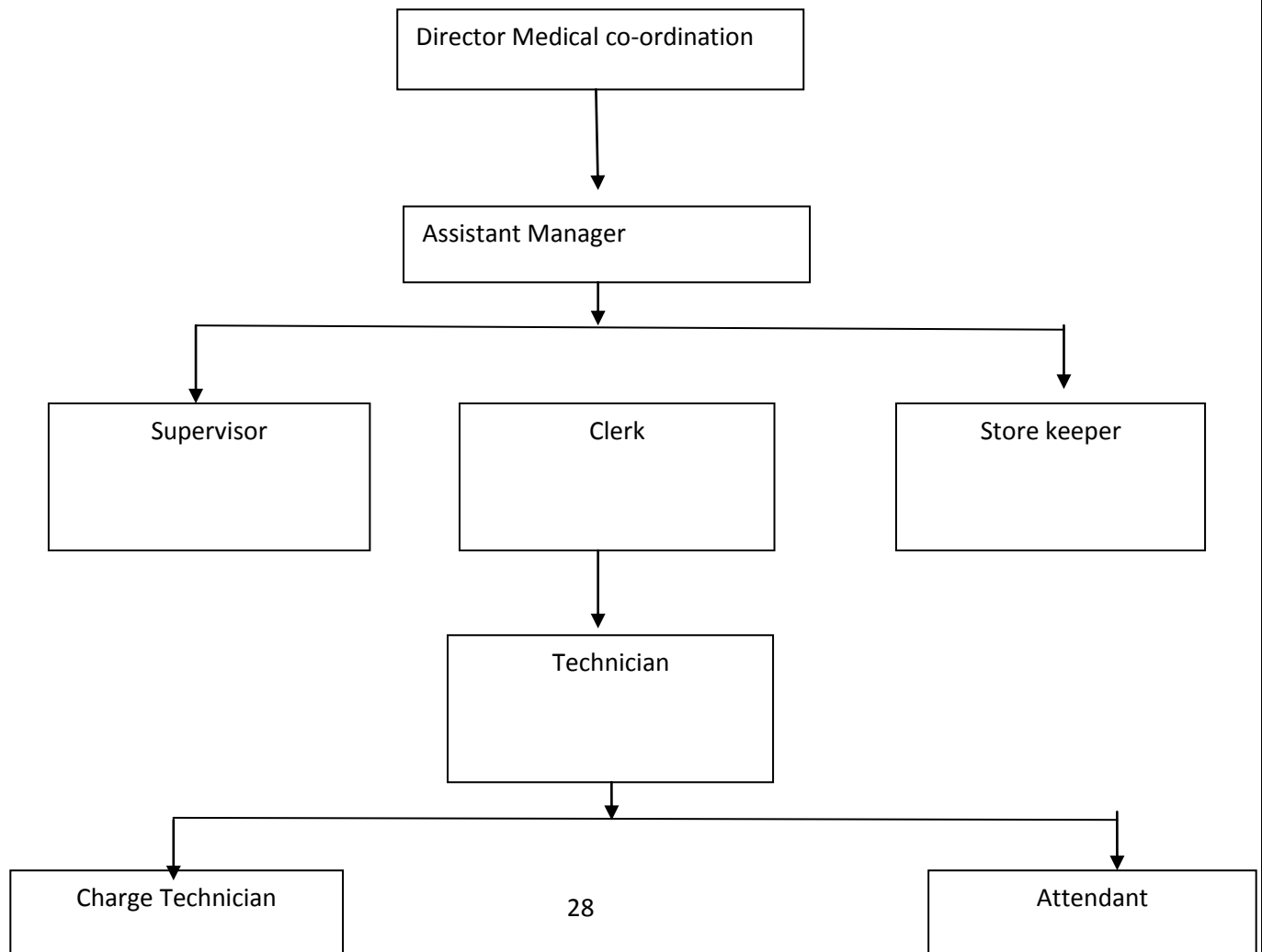
- Central sterile supply separtment is responsible to sterile material for use in the O.T. and wards in order to control the incidence of nosocomial infection.
- The department is also responsible for maintaining sufficient stock level of all surgical instruments, drapes and other accessories required 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



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

AMBULANCE 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

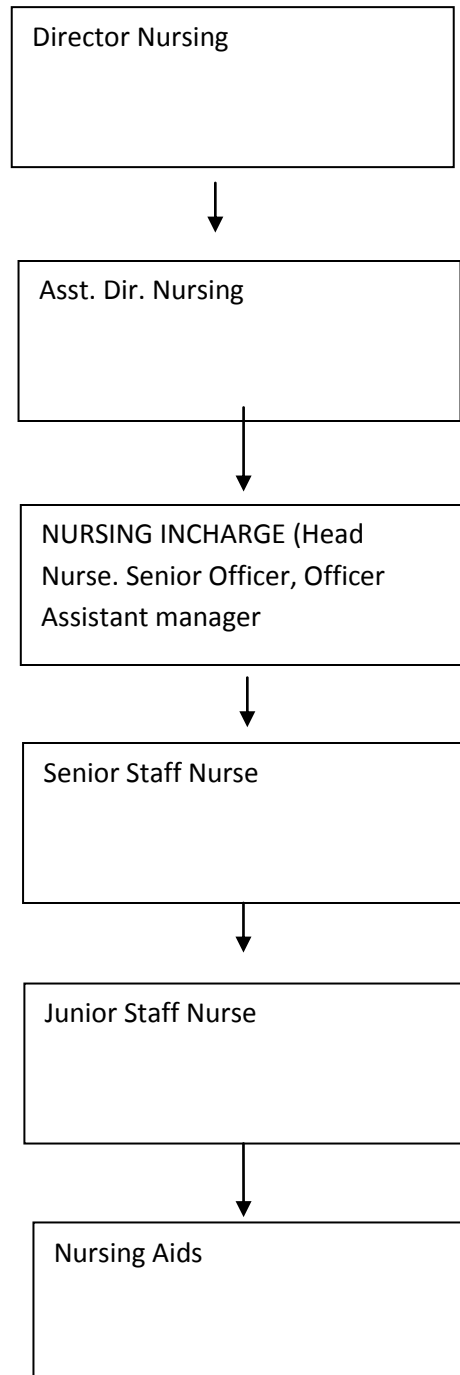
NURSING DEPARTMENT

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 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
- 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

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 :

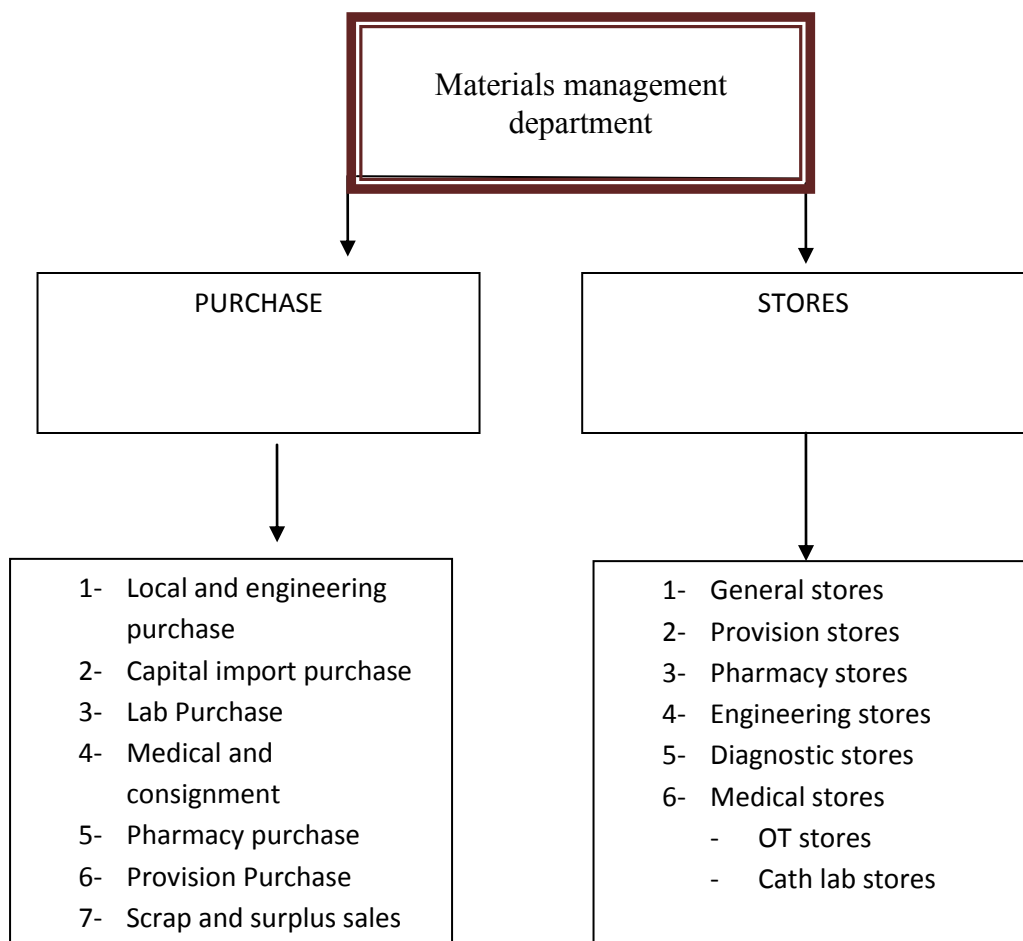
The major engineering services involved are as follows:

- 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.

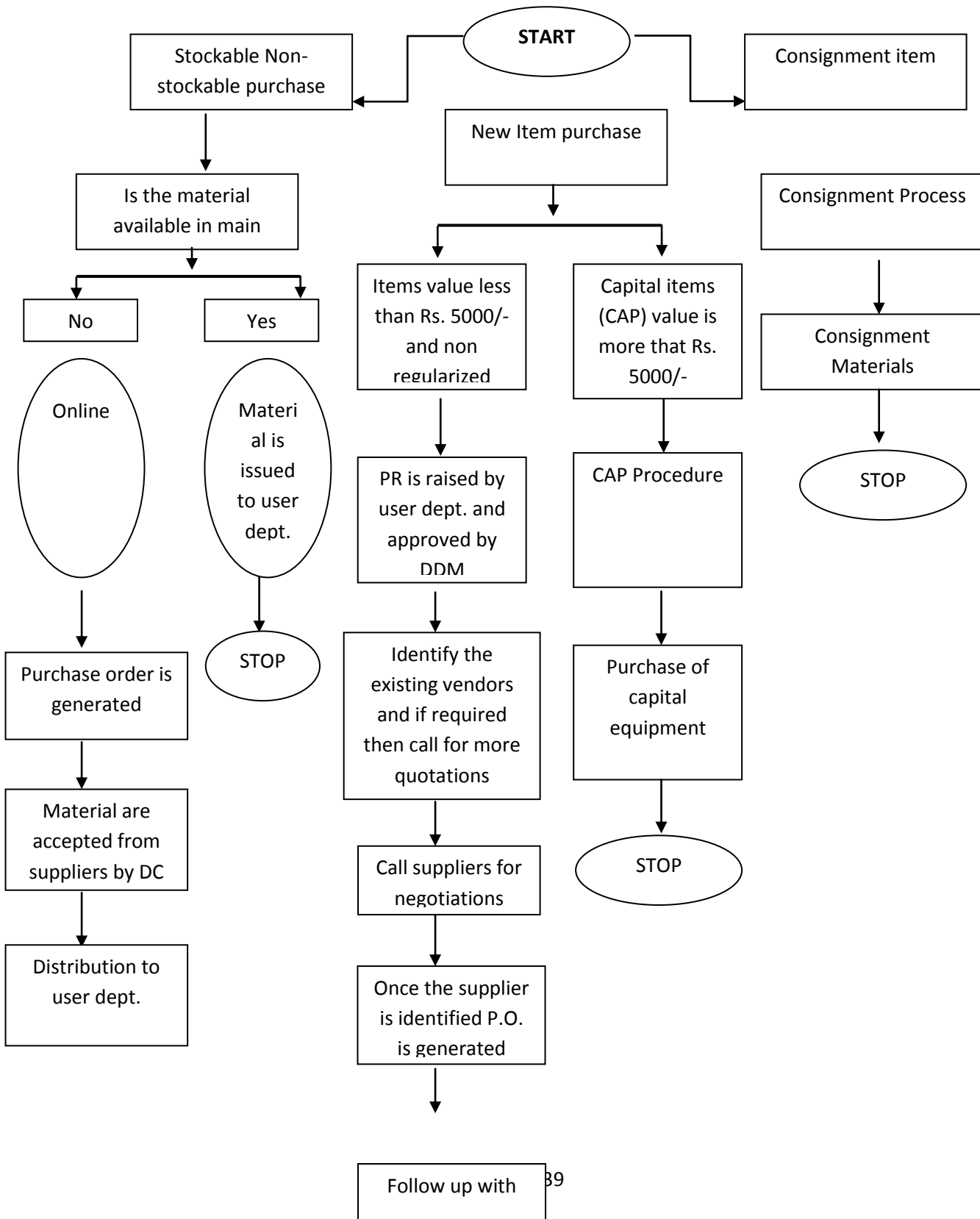


Categories of staff :

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

SPECIAL PROJECT

‘Cardiac Catherization Laboratory Turnaround Time,Waiting Time & Compliance towards the International Patient Safety Goals’-

A Study to assess quality of the operations of the department

A study was conducted in The Cardiac Catheterization Laboratory to assess the overall quality of the departmental operations. The parameters were:

1. Turnaround Time : is the total time taken between submission of a programme/process/task for execution and the return of a complete output to the customer/user.

- a. Turnaround time of the Cath Lab (overall time the patient spends in the lab) is the difference between the time when the patient was discharged to the time the patient was received in the cath lab.
- b. Turnaround time of the Procedure room ,(the time when the two consecutive patients are transferred in and out of the procedure room, post procedure). It is the difference between the time when the succeeding patient is shifted in to the time when the preceding patient is moved out of the procedure room .

2. The Waiting Time of every patient is noted as the difference between the time the patient is discharged /sent back from the cath laboratory to the time when the patient was transferred out of the procedure room.

Waiting time post procedure varied for the different type of patients . (The comparison was made with the set benchmarks)

Also ,taken into consideration were the cases who didnot reach on time for the procedure and the cases that were scheduled first were delayed due to the various reasons.

3. The compliance of the department towards The International Patient Safety Goals :

An overall compliance of the department based on a prepared checklist was calculated.

The sample size was set, the data was collected and compiled which was followed by the analysis. Adding to this were the reasons for all observations made and represented with help of

various statistical tools. The study was completed by giving the recommendations and later suggesting the corrective action plan.

The Cardiac Catheterization Lab forms an integral part of services at The P.D.Hinduja Hospital. The Catheterization lab is an examination room in a hospital or clinic with diagnostic imaging equipment used to visualise the arteries of the heart and the chambers of the heart and treat any stenosis or abnormality found.

Cardiac Catheterisation may be defined as a combined hemodynamic and angiographic procedure undertaken for diagnostic and therapeutic purposes .

It is generally recommended when there is a need to confirm the presence of a clinically suspected condition, define its anatomic and physiological severity, and determine the presence or absence of associated conditions. It helps to view the anatomy of the heart using a contrast material injected into the coronary arteries under fluoroscopic imaging.

It also may be done on an emergency basis when one has symptoms of a heart attack.

It is a minimally invasive procedure.

Patient Process flow in Cathlab :

Radial Patient :

1.	Admission	▪ In the morning upto 8.30 – 9.00 a.m. patient reports to Cathlab for admission.
		▪ Thereafter patient reports either directly to Cathlab & the relative is sent to Casualty Counter to make the payment. OR ▪ Patient makes the payment at Casualty Counter and comes to Cathlab.
2.	In Cathlab	▪ Patient comes to Cathlab at reception counter ▪ Requested to handover all valuables on person to relatives eg. Watch, bangles, chain etc.
		Patient is handed over the hospital clothes by the ward boy and requested to change
3.	Pre-procedure preparation is carried out in radial lounge	Barber is paged to shave the patient Consent form is signed Pre-procedural assessment is carried out by the nurse, anaesthetist, JMS.
4.	Taken inside procedure room	▪ Patient is positioned ▪ Punctured

		▪ Procedure carried out ▪ Patient is brought out
5.	Radial Patients	▪ Kept under observation post procedure ▪ Given breakfast / lunch / evening tea
6.	Ward Patient / SSS patients :	Admission done as per routine admission protocol
		Patient comes to department from ward on trolley
		Patient kept in hold area for pre-procedure evaluation in front of procedure room
		Taken inside procedure room
		Patient kept till sheath removal / change of bandage in hold area
		Sent back to ward

ICU patients /Inptients

1.	Patient comes to department from ICU on ICU bed & from wards	
2.	Patient kept in hold area in front of Procedure room	
3.	Taken inside procedure room	
4.	Patient taken back to ICU	

Post Plasty / complex heart procedure / as per status of patient during the procedure

1.	Patient comes to department from ward on trolley	
2.	Patient kept in hold area in front of Procedure room	
3.	Post Plasty / complex heart procedure / as per status of patient during the procedure, patient is kept near radial lounge area till ICU is physically available	
4..	Patient shifted to ICU	

An observational study was done for a time frame of sixteen days . It should be noted that there were days when the number of patients undergoing the procedure were less as compared to the other days, being a light month for the department.

The factors that play an important role in the efficient functioning of the Cath lab is **'Time'**. The amount of time the patient is spending in the laboratory, as well the time it takes for the patient to be transported from one area to the other pre procedure and post procedure are major factors that help us to know about the loop holes in the functioning of the department and what can be further done to improve the functioning.

The measurement of **turnaround time** is the most commonly adopted performance metric to gauge the success of services being carried out in the department meticulously .

Patient safety is another aspect which plays a vital role in such clinical departments.

The discipline of patient safety is the coordinated efforts to prevent harm to patients, caused by the process of healthcare itself.

It is a quality indicator studied to know about the department's compliance towards the set standards .

INTERNATIONAL PATIENT SAFETY GOALS :An Organization's culture consists of the values, beliefs, and the norms that play an important role in helping the organization complying with the goals .

Goal 1-Identify patients correctly.

Goal 2-Improve effective communication.

Goal 3-Improve safety of High Alert Medication.

Goal 4-Ensure correct site, correct procedure, correct patient surgery.

Goal 5-Reduce the risk of health care associated infection.

Goal 6-Reduce the risk of patient harm resulting from fall.

Keeping these in mind a Study of The Turnaround Time and Waiting Time along with The Compliance towards IPSG was carried out in The Cardiac Catherisation Lab.

OBJECTIVES:

- a) To find out the total turnaround time for the patients in the Cath Lab.
- b) To find out the turnaround time of the procedure room
- c) To find out how much time each cardiologist takes for beginning a procedure.
- d) To find out the Waiting time of the patients post procedure (for different type of patients).
- e) To find out the reasons for the increased waiting time.
- f) To plot the reasons for an overall delay with the help of the various available charting methods.
- g) To suggest ways to reduce the waiting time as well as the total turnaround time .
- h) To check for the compliance of the department towards the International Patient Safety Goals.

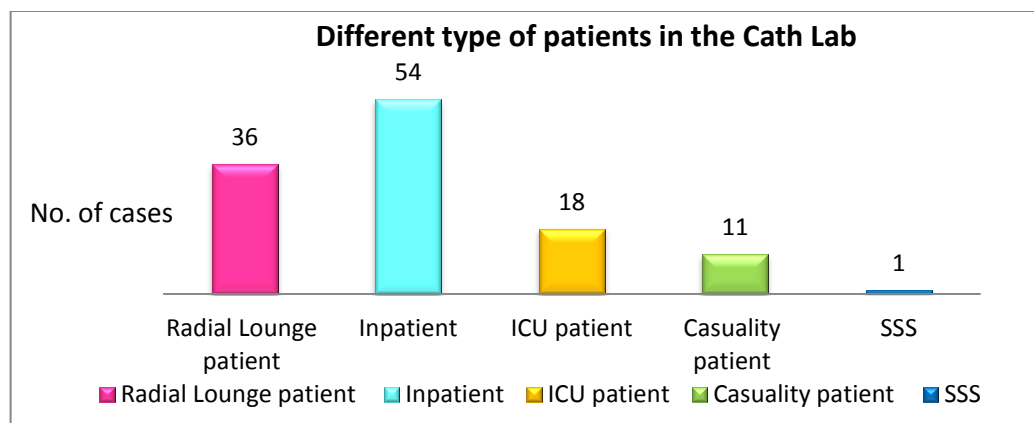
METHODOLOGY:

- a) **Study area-** Cardiac Catheterization Laboratory and Combolab P.D.Hinduja Hospital.
- b) **Sample size-** It indicates the number of persons to be surveyed. Large sample size gives more reliable results than the small samples. In a time period of 16 days
 - Turnaround time and waiting time -- 120 patients were included in the sample.
 - Compliance towards the IPSPG - 100 patients were included in the sample.
- c) **Study design-** Observational.
- d) **Tools used-** Observation, Checklist , records of the hospital, discussions with the staff, the patients and computer systems of the hospital.
- e) **Study duration-** 30th April to 16th May,2014

Type of patients included in the study :

- Casualty Patients
- Inpatient(including SSS)
- ICU Patients
- Radial Lounge Patients

Figure 1



Result & Interpretation : Figure 1 shows that there are 45% -Inpatients; 30% - Radial Lounge patients; 15% - ICU patients; 9% - Casualty patients; 1 % - Short Stay services (considered as inpatients only).

The study is under the following three headings :

a. TURNAROUND TIME

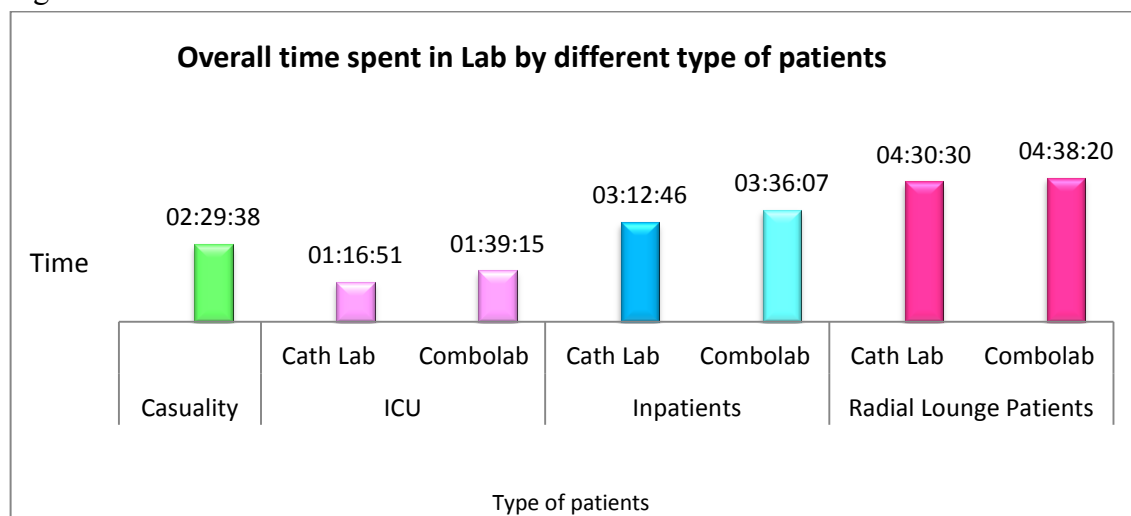


TAT is one of the key performance indicators of the laboratory performance. With a well defined throughput process which will not only help in speeding up the procedures carried out per day in the department but will also promote the quality of services being offered to the patients. As quality involves cost ,its measurement,control and management becomes inevitable. Quality costs are incurred because either the quality standards are met or not . In Cardiac Cath Lab increasing the profit by cost saving can be achieved by maximizing this throughput process. A well defined process flow as well as following a well timed and orderly shifting of the patients in and out of the lab and the procedure room will not only aid in adding minutes but even hours to the schedule. Thereby increasing the number of patients availing the services and this will add to the overall income of the Lab.

1. Overall Time spent in the cath la by the different type of patients

The total time a patient spends in the Cath Lab is calculated and noted. For this the difference between the time the patient is received at the reception of the lab to the time the patient is discharged or sent back is noted down carefully.

Figure 2



Result & Interpretation : The Overall TAT of the Cath lab and Combolab by the different type of patients:

On an average spent by ICU Patients postoperatively is the least as compared to the other type of patients. It is so because ICU patients are directly wheeled into the Cath lab via the connecting door between the two departments. This cuts short a lot of transportation time and saves manpower that can be used to do some other work in the department.

The radial lounge patients spend the maximum overall time in the department as they are made to stay postoperatively in the radial lounge for observations before they can be discharged .

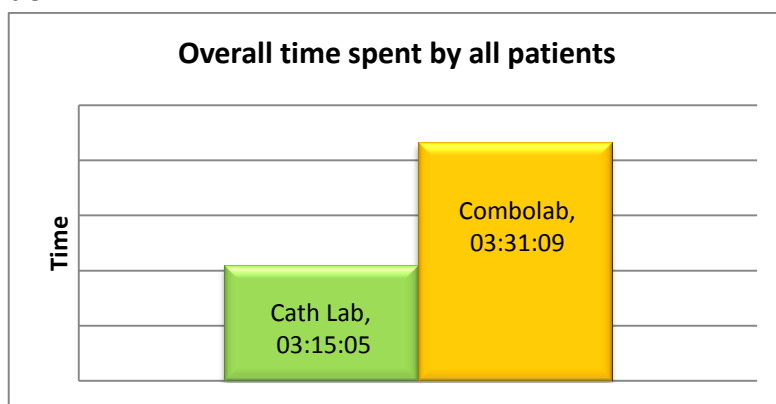
The inpatients are sent to the wards post procedure after they have been monitored .

The Casualty patients are rushed into the department and avail the services, post procedure they may at times have to be kept in the waiting area if they are to be sent to the ICU. It all depends on the availability of bed .

2.Overall time spent by different type of patients in the combolab & cathlab :

Keeping into account that there was a main Cath laboratory and another lab known as the Combolab , where the procedures were carried out.

Figure 3



Result & Interpretation : On analysing the data we can see that the overall time spent by patients treated in the Combolab is slightly more than the Cath lab patients as some time is spent post operatively to transport the patients from combolab which is on the first floor to the cath lab which is on the second floor.

3. Average Turnaround time of the Procedure Room :

It is calculated by taking the difference between (time the succeeding patient is moved in – time the preceding patient is moved out of the procedure room .

Figure 4

Average time it takes for shifting one patient out and other into the procedure room (TAT of procedure room)



00:20:39

Conclusion

Once the data was collected and analysed it was evident that the TAT was high .On closely analysing every step it was seen that throughput process was delayed due to various reasons that were :

Pre procedural delay:

1. The patient was received at the reception but the staff was occupied with other chores and the patient was left unattended .
2. The patient was kept waiting at times due to unavailability of the barber who had shave the procedure site .
3. The Doctor would give a higher priority to another case on medical grounds, so the scheduled patient had to wait for his turn .
4. The assistant doctor who had to note down the patient's medical history and the consent , would be late/busy ,delaying the patient further.

Post procedural delay :

1. Discharge Summary was not ready.
2. The Cardiologist was busy / on rounds and unavailable for signing the discharge.
3. The relatives of the patients had to clear the bills and get back the discharge slip , but they were at times absent on call .
4. The staff was busy with other patients / procedures and was unavailable to change the dressing of the patient before discharge.

Recommendations

1. One member of the staff should be assigned the duty on a daily basis to attend to the new patient who enters the department.
2. On basis of the scheduled patients the barber should be informed the prior evening as well in the morning so that time is not wasted for waiting for him .
3. The use a medication wallet card(a three fold card) can be done to cut short the time during which the patient has to answer all the medical history questions. It is useful for the revisit patients.
4. Electronics and IT should be put to use by introducing the trend of the online discharge summary availability and an electronic signature for the Cardiologist who has to attend to other patients as well and has to go on rounds and cannot keep waiting to just sign on the discharge summary .

b.WAITING TIME (Post procedural)



A patient's experience in waiting time will radically influence his/her perceptions on quality of the service. The waiting time is the total time a patient has to wait once he/she is shifted out of the procedure room post procedurally . The waiting time management plays a key role in a multispeciality hospital , it all together saves the overburden on the staff , the wastage of resources and energy. Hence every effort should be made to overcome or reduce this which may lead to an overcrowded waiting area to a chaotic atmosphere as well which becomes difficult to manage .

Waiting time is one of the key performance indicators of the laboratory performance. A well defined process flow which follows a timely and orderly manner of admission to discharge aids in improving the quality of services offered as well as the level of satisfaction of the patients.

Waiting time of the different type of patients:

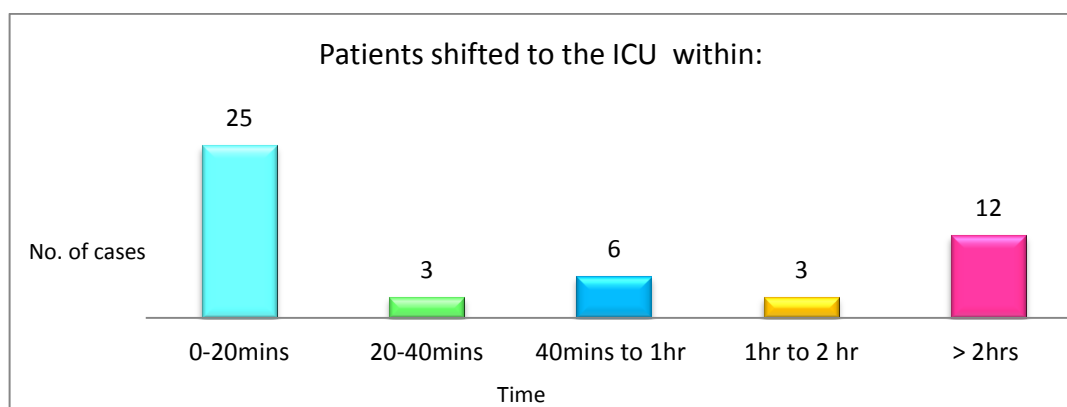
- a. Patients shifted to the ICU (ICU patients, inpatients, casualty patients) :

Patients from the ICU needing the cardiac procedures were shifted directly to the Cath lab (on the ICU bed) and post procedure back to the ICU ,

Table 4

TIME	No.of cases
0-20mins	25
20-40mins	3
40mins to 1hr	6
1hr to 2 hr	3
> 2hrs	12
TOTAL	49

Figure 4



Result & Interpretation: Table 4 and Figure 4 represents that out of a total of 49 patients who are transported to the ICU 51% are transferred out within 20 minutes ,6% between 20 to 40 minutes,12% between 40minutes to 1 hour,6% between 1-2 hours and 24 % after 2 hours.

The patients who fall in the 51% category are either ICU patients itself or are patients for who the ICU bed has been pre booked .

The other 24% cases who are shifted post 2 hours of stay are the patients for who:

-either the bed is not available(as they maybe the emergency cases ,for who the need for the bed is on that very day based on the kind of procedure that is being done)

-if available it is not ready ,which takes sometime for preparation.

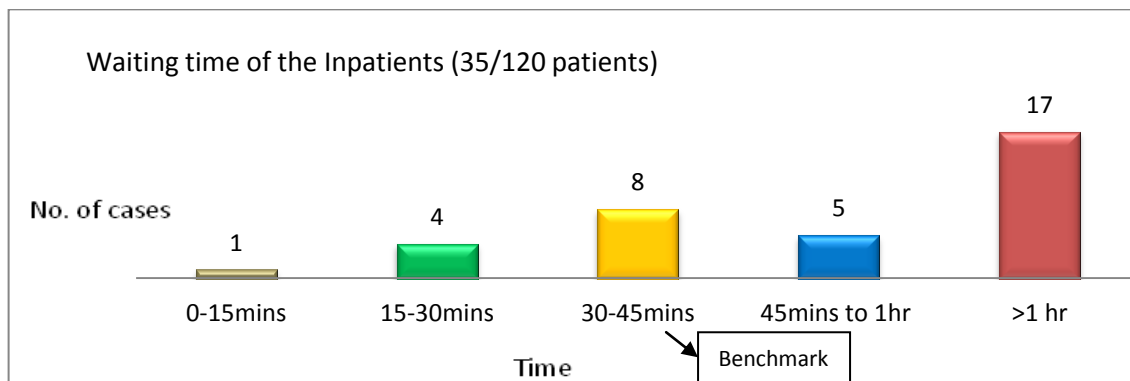
b. Patients transferred out back to the wards

All the Inpatients who needed to be sent back from the Cath lab post procedural to the wards were sent back within the following time slots. The benchmark set for the patients as per the department 30-45 mins within which the patients had to be sent back to the wards; failing to abide by this there were a number of contributing factors which are as follows .

Table 5.

TIME	No.of cases
0-15mins	1
15-30mins	4
30-45mins	8
45mins to 1hr	5
>1 hr	17
TOTAL	35

Figure 5



Result & Interpretation Patients being sent back to wards should be sent back within 30 minutes to 45 minutes (benchmark) after being observed in the waiting area.

Table 2 and Figure 2 represents that 49% of cases are transferred after more than 1 hour.

23% cases are sent back within the standard time .

14% cases are sent back within 45 mins to 1 hour.

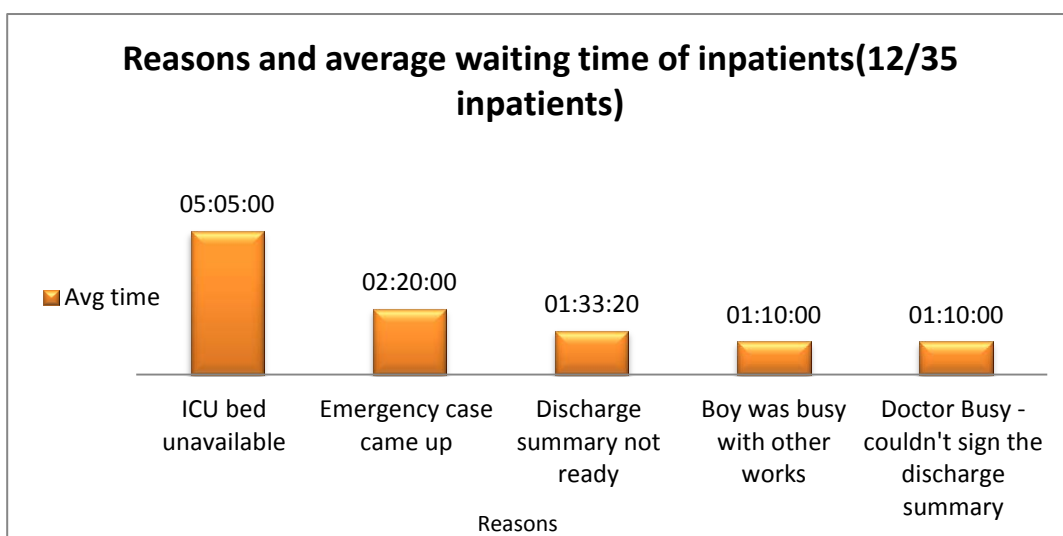
11% and 3 % cases are sent back much earlier than the set time standard for the various reasons.

Reasons and average waiting time of inpatients (12/35 inpatients)

Table 5a

Reasons	Avg waiting time
ICU bed unavailable	05:05:00
Emergency case came up	02:20:00
Discharge summary not ready	01:33:20
Boy was busy with other works	01:10:00
Doctor Busy -couldn't sign the discharge summary	01:10:00
	12/35 cases

Figure 5a



Result & Interpretation: Table 5a and Figure 5a represents that.

- The boy needed to wheel the patients out was busy with other works .
- Discharge summary was not ready .
- Doctor to sign their discharge summary as the Doctor was busy either with a procedure/ was on rounds and so couldn't be there to sign .
- The patient needed an ICU bed (waited long) which was unavailable .

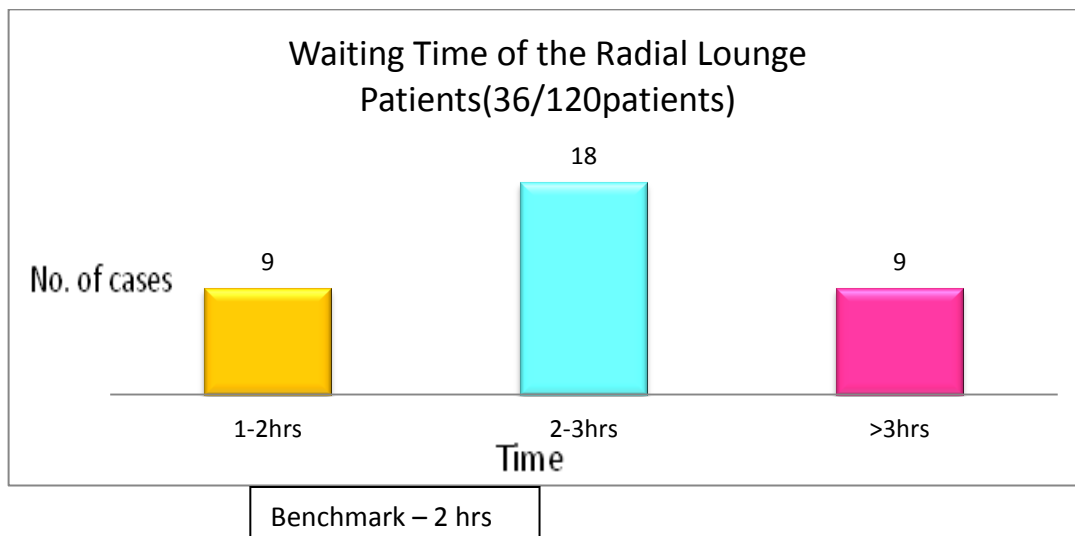
c. Radial Lounge Patients who are discharged directly :

Cath lab serves to a number of the radial lounge patients, on being received at the reception they follow a similar procedure but the admission and discharge of the patient is on the same day of the procedure date. These patients are discharged post procedure within 2hrs (benchmark) for the department .

Table 6

Time	No.of cases
1-2hrs	9
2-3hrs	18
>3hrs	9
TOTAL	36

Figure 6



Result : Radial Lounge Patients are discharged directly from the cath lab .Keeping the benchmark as discharge 2 hours.

From Table 3 and Figure 3 we can say that :

25% of patients are discharged on the needed standard set benchmark time.

50% patients are discharged between 2-3 hours

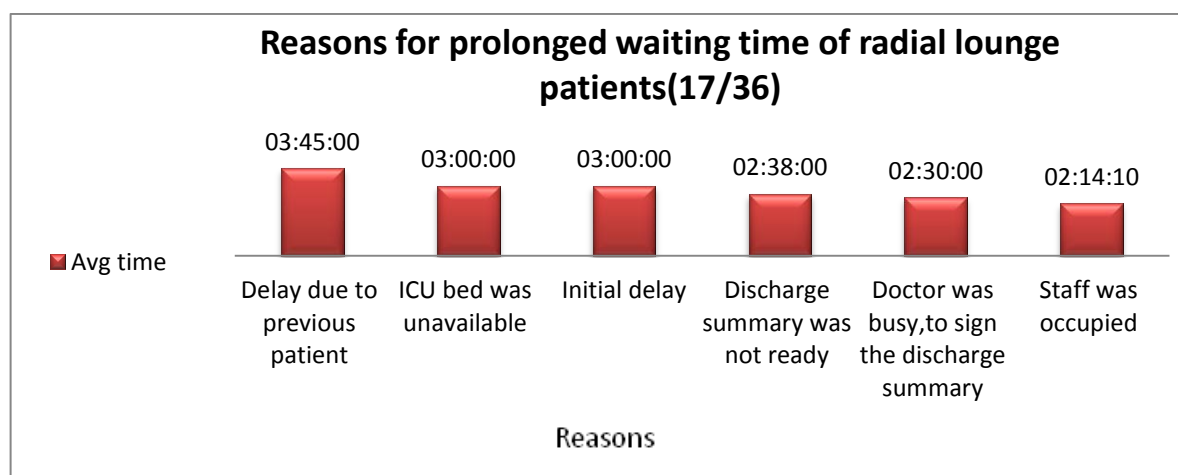
25% patients are discharged post 3hours (late discharge).

Reasons and average waiting time of Radial Lounge patients:

Table 6a.

Reasons	Avg time
Delay due to previous patient	03:45:00
ICU bed was unavailable	03:00:00
Initial delay	03:00:00
Discharge summary was not ready	02:38:00
Doctor was busy, to sign the discharge summary	02:30:00
Staff was occupied	02:14:10

Figure 6a



Results & Interpretation

Table 6a & Figure 6a represent the reasons for the prolonged waiting time of the radial lounge patients along with the average time respectively for what the patients had to wait. The delay due to the previous patient i.e. the patient reached late at the Cath Lab delaying the whole schedule of the day followed by unavailability or the delay in the availability of the ICU beds were the main reasons.

An overall Number of Patients who were delayed / came on time :

Table 7

Patients who came late according to schedule	
Total cases	120
Reached within 0-10 mins	3
Late Comers >20 mins	23
came on time	94

Figure 7

Figure 7

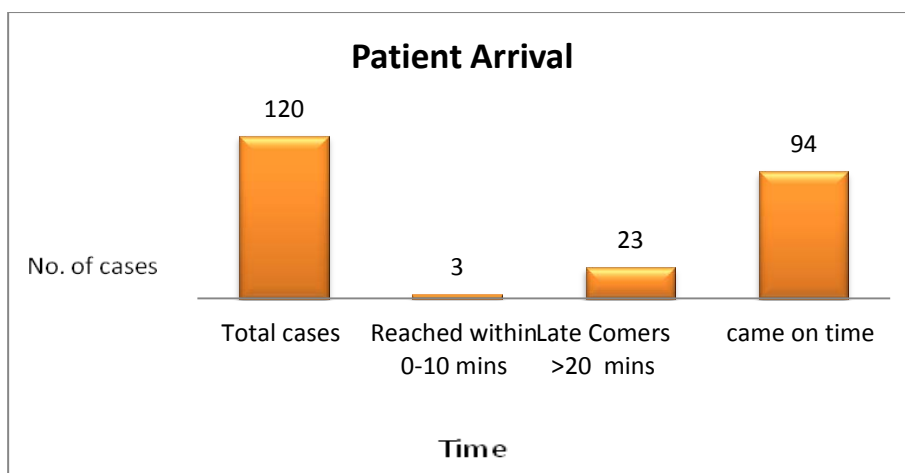


Figure 7

Result & Interpretation: It is evident from Table 7 and Figure 7 that out of a total of 120 patients

In total 26 patients came late to the department .These patients included the Inpatients ,Radial Lounge patients. They were late for about more than 20 minutes .

This overall delayed all the scheduled cases.

This delay is a reason to alot of issues :

- the patients who are waiting already maybe taken in late , based on the fact that the Doctor gives a higher priority to the late comer on medical grounds.
- the staff is overburdened
- may lead to overcrowding in the waiting area as well.
- the Consultant"s may not be very pleased as their whole schedule is disrupted just because of even one single patient coming late
- the whole scheduling of cases has to be managed which is time & energy consuming .

Reasons for the delayed procedures (scheduled as the first case of the day):-

There are always a certain number of patients who are scheduled as the first case of the day. Whenever these cases delay to begin the whole schedule of the day is disrupted and the waiting time of the other patients in total increases as well.

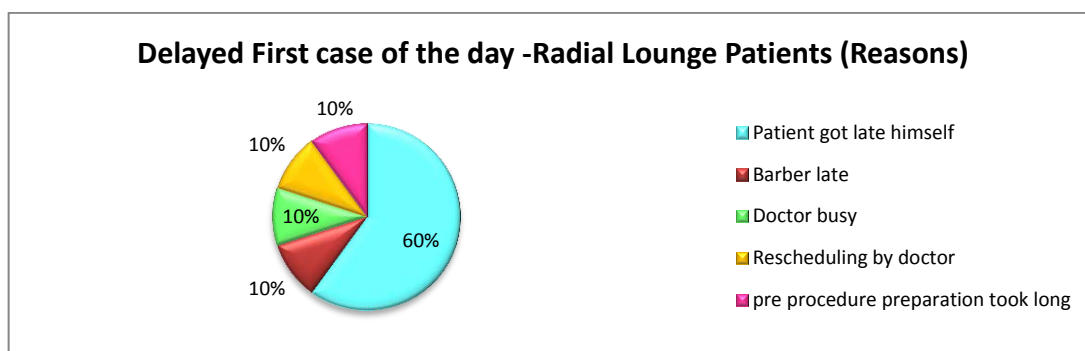
i. Radial Lounge Patients:

Table 8

Radial Lounge Patient Delay	
Reason	No.of cases
Patient got late himself	6
Barber was late	1
Doctor was busy	1
Rescheduling by doctor	1
Pre procedure preparation took long	1

10 cases

Figure 8



Result & Interpretation Table 8 and Figure 8 represent the Number of the radial lounge patients who were scheduled as the 1st cases to be taken up but were not .

60% of the cases were late reason being patient himself/herself :

- patient delayed as staying at a distance from the hospital

-admission procedure took long,as the relatives took long to go and get the admission done

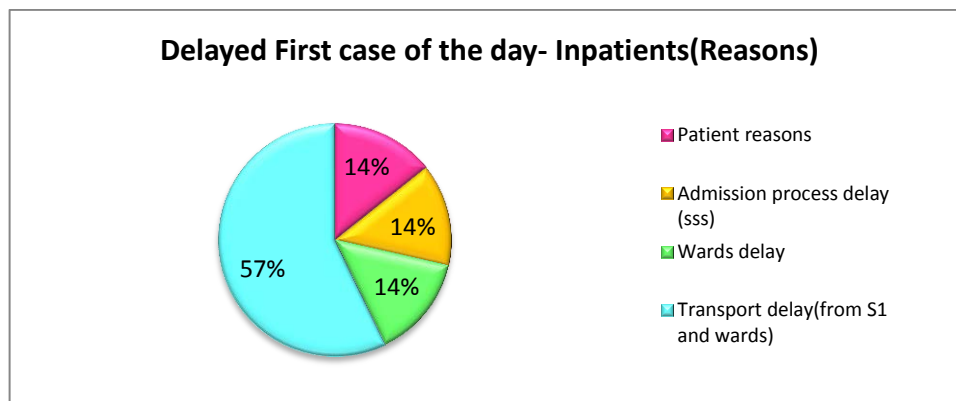
ii. **Inpatients(including SSS)- Delayed first case of the day**

Table 9

Inpatients /& sss		
Reason		No.of cases
Patient reasons		1
Admission process delay (sss)		1
Wards delay		1
Transport delay(from S1 and wards)		4

7cases

Figure 9



Result & Interpretation: It is being shown from Table 9& Figure 9 that:

57% of the cases were late to reach the Cath Lab due Transport reasons from the wards as well at time the S1 (which is at a distance from the IPD building)

The remaining cases were delayed due to the :

- delay from ward itself
- admission of SSS patient took time
- patient reasons

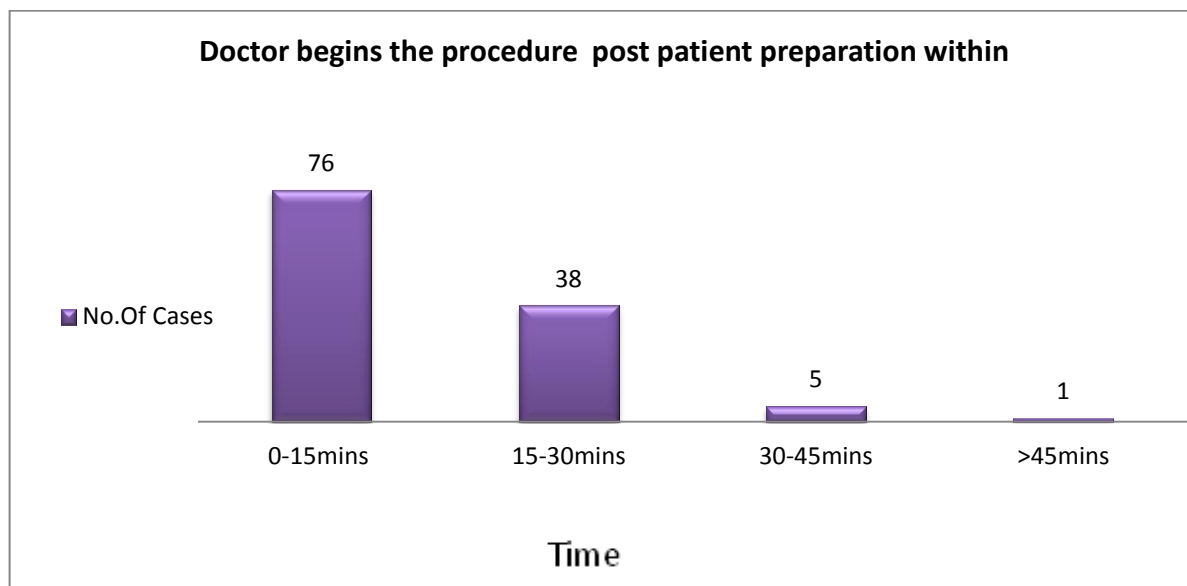
a. Doctor begins procedure post patient preparation within : benchmark being taken as 15 mins

Once the patient is taken into the procedure room the doctor has to begin the procedure within 15 mins (as per the hospital standards), failing which the cases are delayed as can be seen :

Table 10

Time	No. of cases
0-15mins	76
15-30mins	38
30-45mins	5
>45mins	1
	120

Figure 10



Result & Interpretation : Table 10 & Figure 10 show that

63% of the times Doctor begun the case within 15 mins

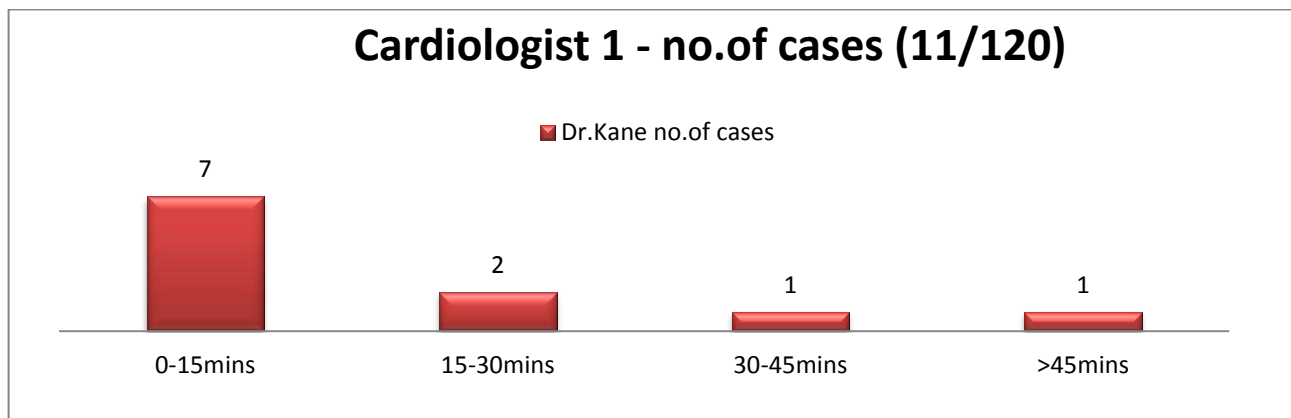
32% of the cases were begun within 15-30 mins of the preparation of the patient

5 % of the cases were begun later than 30 minutes

Reasons being either the Doctor was busy due to an urgent consult, or was on rounds.

The following figures will present the time each Doctor takes to begin the procedure post patient preparation : Figure 11 to Figure 15

Figure 11



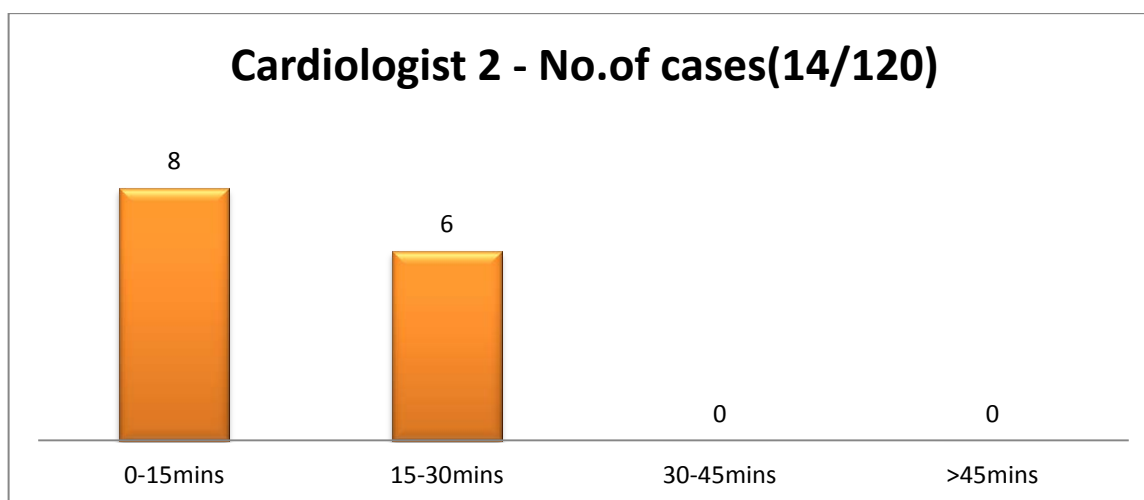
Result & Interpretation:

Figure 11 tells us that Cardiologist 1 - out of a total of 120 patients was the operating surgeon for 11 cases .

Of these 7 cases i.e 64% cases were begun well on time ; 2 cases i.e. 18% cases were begun within 30minutes; 18% cases were begun after 30 minutes.

Reasons could range from Doctor being busy with emergency case / was on rounds .

Figure 12

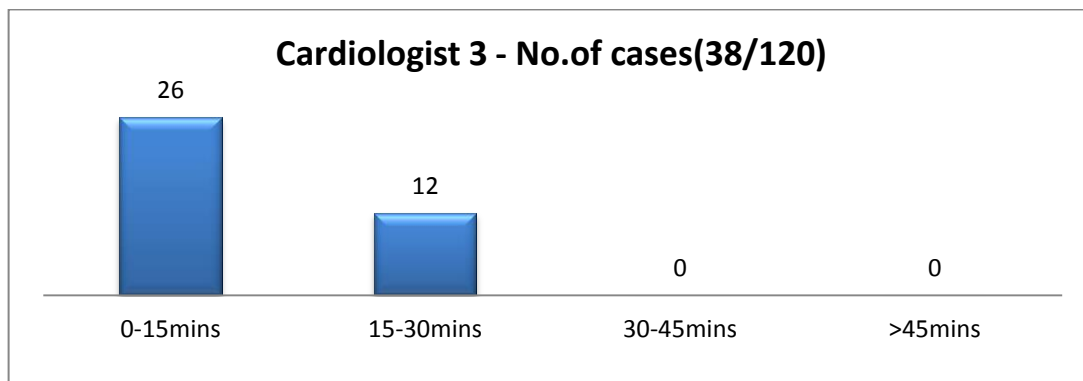


Results & Interpretation :

Figure 12 shows that Cardiologist 2 being the Head Cardiologist treated 14 patients in total during the 16 days of the study .(Doctor was on an official leave)

57% of his cases were begun well on time and 43% cases were begun within 15 to 30 minutes.

Figure 13

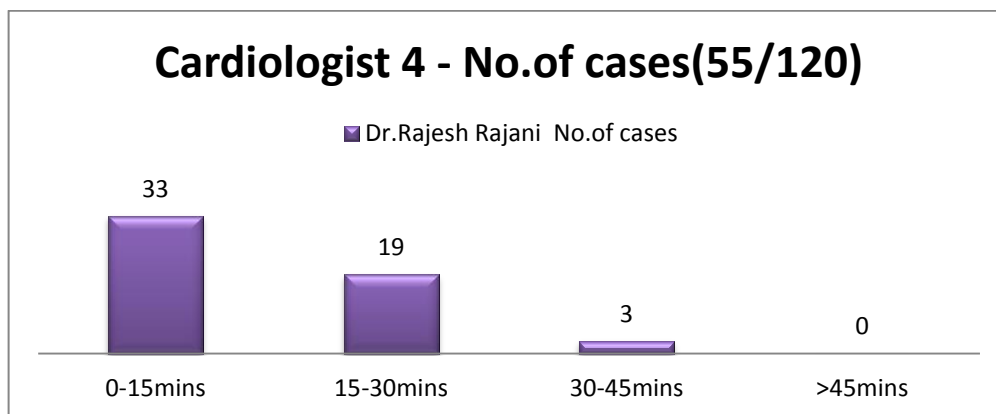


Results & Interpretation :

Figure 13 shows that Cardiologist 3 was the operating surgeon for 38 cases out of a total of 120

Of which: 68% cases were begun well in time and 32% cases were begun within 15-30 minutes

Figure 14



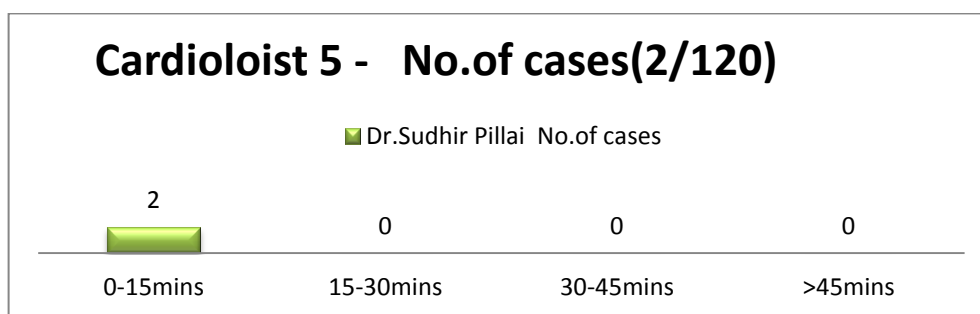
Results & Interpretation :

Figure 14 shows that Cardiologist 4 operated on a total of 55 cases out of 120 in the 16 days of the study

Of these 55 cases : 60% cases were started well in time; 35% cases were begun in 15-30 mins and 5 % cases were begun after 30 minutes.

Reasons could range from Doctor being busy with emergency case / was on rounds /was busy with a procedure in the Combolab.

Figure 15



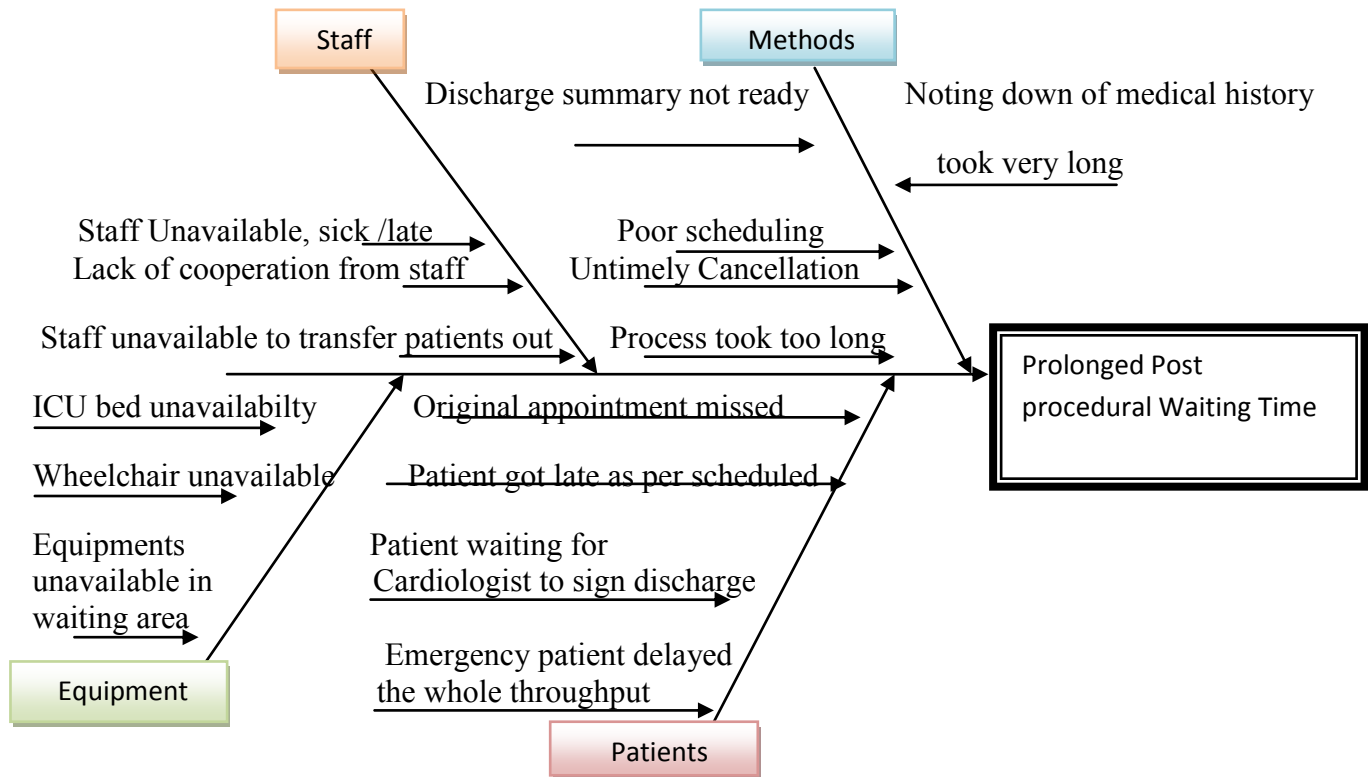
Results & Interpretation :

Figure 15 shows that Cardiologist 5 performed 2 procedures out of 120 cases and both were started well on time,i.e.within 15minutes.

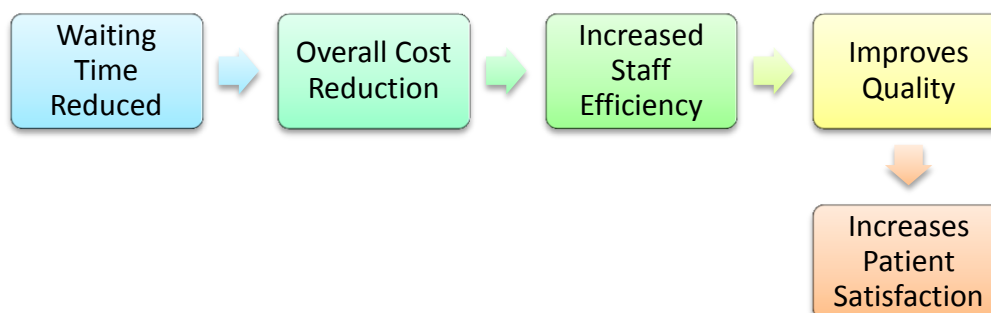
Conclusion

On the basis of the study followed by the analysis it is evident that the patients are waiting post procedurally for much longer time in the waiting area. All the reasons commonly contributing to this are as follows :

1. Fish bone diagram represents all the reasons for the prolonged post procedure time :

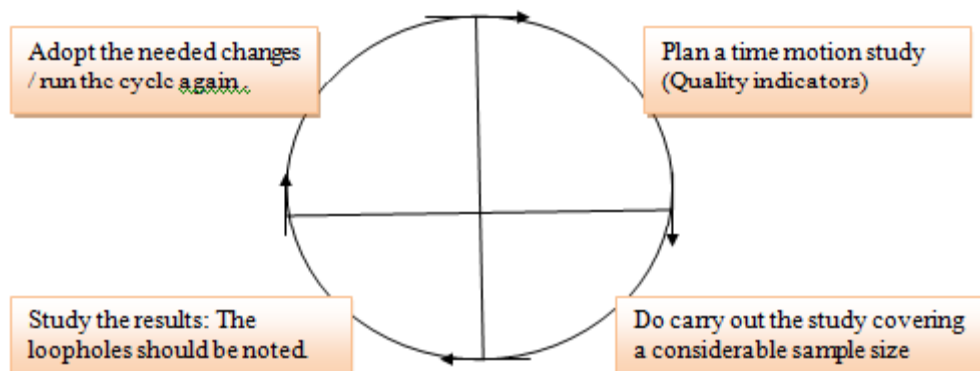


2. Flowchart representing what Cath Lab Reduced Waiting Time (Flow Improvement) can do :



Recommendations

1. Staff duties should be assigned weekly, not monthly what is being followed.
2. The ICU authorities should be asked to allot beds as quickly as possible , so that the patients donot have to wait in the Lab ,thereby increasing the crowd (as there is space only for adjusting a limited number of cases at one time)
3. The Waiting area should be fully equipt especially with the defibrillator and the Blood Pressure monitoring machines to avoid the emergency situation which may lead to delay .
4. Making use of Informatics and Technology Electronic reports can be sent to the respective Cardiologists if he is on consult immediately after the procedure
5. Providing an electronic signature will cut short the patient waiting for the doctor to come and sign the discharge sheet.
6. A Medicine Safety Wallet Card (My medication Card) can be introduced. It is made in the form of a detailed card which will cover all the different parameters: like Allergies , Medical History,Name of the medicine,dose,when is it to be taken and purpose. It should also include separate tables for noting down (with the dates being mentioned) the Blood Pressure , Cholesterol(LDL/HDL/Triglycerides) and the Blood sugar .
7. Appointing one person everyday for aiding the transport procedure should be done and the assigned role should be changed after every two days.
8. Appointing one person everyday for aiding the transport procedure should be done and the assigned role should be changed after every two days.
9. Skill enhancement sessions should be conducted they increase satisfaction, contributes to a more positive work environment.
10. PDSA cycle can be used to design small tests of changes and measures can be used to evaluate the effect of change :



c.Compliance of the Cath lab towards International Patient Safety Goals



Patient safety is a new healthcare discipline that emphasizes on the medical errors that often leads to adverse healthcare events. It has emerged as a distinct healthcare discipline supported by a developing scientific framework. The patient safety knowledge continually informs improvement efforts such as : applying learnt lessons ,adopting changes ,educating providers and consumers ,enhancing error reporting systems and developing new economic incentives.

The IPSPG play a very important role during the various services being provided to the patients when they are exposed to the hospital environment. They not only establish a base but also define the set parameters that help the managing authorities in getting the frontline staff and physicians to be compliant,vigilant and communicative everyday.

Also patient safety along with the safety of the staff plays a key role in maintaining the operational quality of services being provided to the patients .

SAFETY can literally mean :

S - Sense The error
A – Act to prevent it
F – Follow safety guidelines
E – Enquire into incidents or deaths
T – Take appropriate remedial measures
Y – Your responsibility

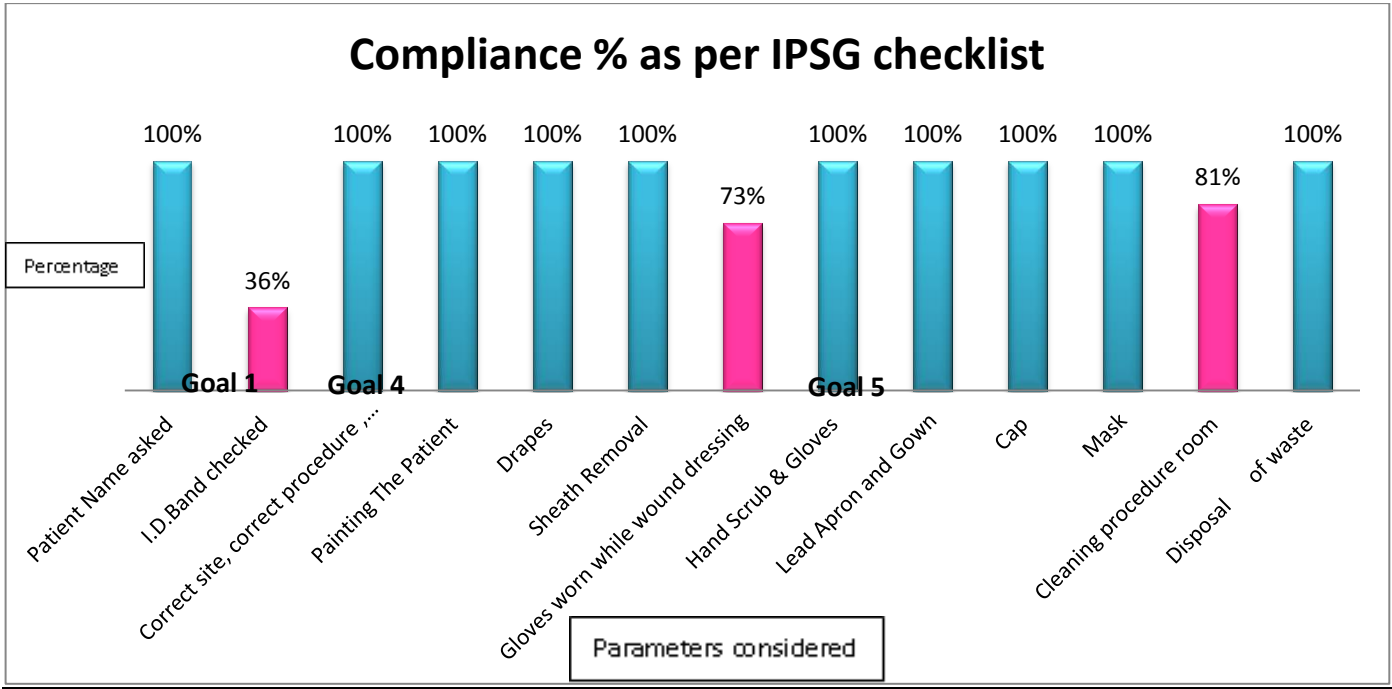
Keeping in mind these a thorough observational based data was collected and then analysed to assess the compliance of the department- towards the individual Goals(1,4,5) along with the overall compliance of the department (taking Goal1,4,5).

Data Collection

Primary data was collected based on the observations made and the prepared checklist.

Findings and Results

Figure 16



Every Parameter being followed , was marked:

Yes No

-Where every Yes was given a score of 1 ,and No a score of 0.

Figure 17

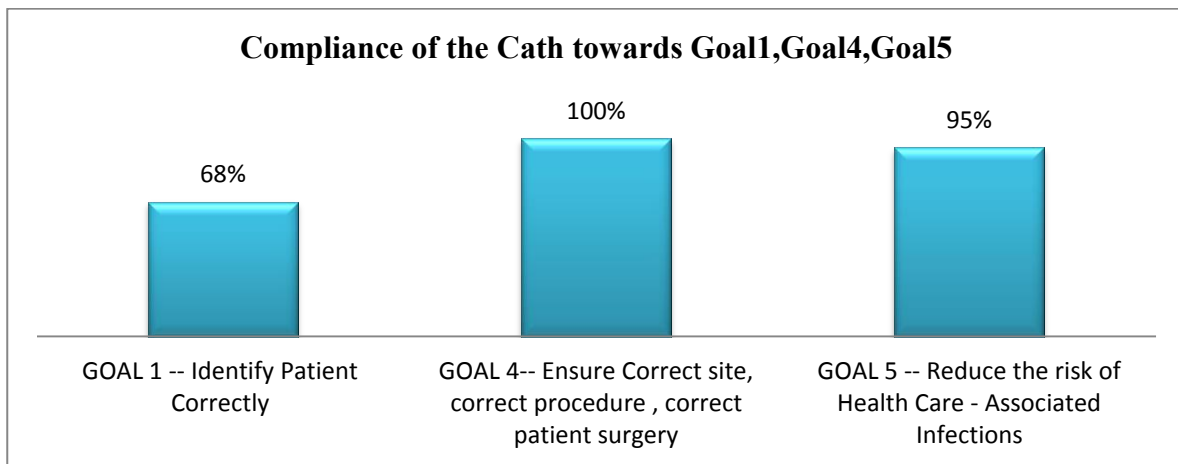
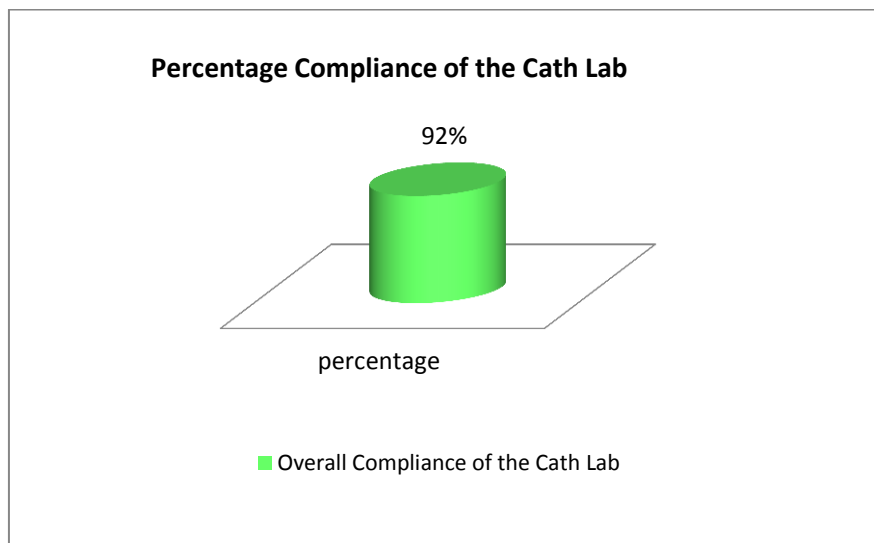


Figure 18



Result & Interpretation: Figure16 ,Figure 17 and Figure 18 show that

- A total score of **1300** is present (with 13 parametres being observed and noted under the Goal 1,4,5)

-Based on the practices being observed the scoring was calculated that add upto a total of **1190**

Department compliance Goal wise was also calculated and it was noted that the department was

68% compliant towards Goal1(Identify patients correctly)

100% compliant towards Goal 4(Ensure Correct site, correct procedure ,correct surgery)

95.40% compliant towards Goal 5(Reduce the risk of Healthcare-Associated Infections)

Overall Compliance of the Lab being **92%** ($1190/1300 \times 100$)

Conclusion

Based on the observations and analysis made it was noted that there were times a few parameters that were not given so much importance but need to be given due priority for maintaining the hospital standards of patient safety. Weekly audit should be performed for the safety checks as according to the prepared checklist .A regular training session should be held for inculcating the protocols of patient safetyfor the staff in total .The new recruits should be given information regarding the protocols and the various practices necessary for the patient safety.As and when the patient enters the department the I.D. band should be checked and patient name asked for the correct patient identity .Creating a culture and an environment that promotes safety. Offer a supportive leadership ,quality is everyone’s responsibility.

Recommendations

1. Incentives & Appraisals should be given to the team/staff for their performances to boost their morale and motivate them to work more efficiently giving patient safety the utmost priority.
2. A defibrillator machine should be kept in the Radial Lounge area for the post plasty patients who are at times kept waiting in the area until they have been allotted an ICU bed.
3. Recertification can be done to

Increase the employee confidence levels



Making them more efficient



Enabling them to provide better care

4. A separate boy should be assigned the duty of wheeling the patient’s in and out of procedure room / Cath lab ; serving the meal to the patient post procedure. This will help the other ward boys to be assigned in cleaning and other chores in and out of the procedure room .

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PROJECT : 1

REPORT ON	Patient Satisfaction in Physiotherapy Department	
DEPARTMENT:	Physiotherapy Department	
AUDIT PERIOD:	FROM : 8th April,2014	TO: 15th April,2014
CONDUCTED BY : NAME: Dr.Arushi Vij DESIGNATION: MANAGEMENT TRAINEE		APPROVED BY: NAME: Mrs.Gauri Shirke

Executive Summary: An 8 day study was conducted in the Physiotherapy Dept. to assess the level of satisfaction in the patients visiting the Physiotherapy department. This was noted with help of a questionnaire that is already present as a patient feedback form. 50 patients were taken up as the sample .

Introduction:

The Level of Patient satisfaction is the strongest determinant of the hospital functioning.It totally depends on the workers motivation,dedication and duty towards the patients.

Patients are the foundation of our medical practice,it is obvious that they must be satisfied while availing services at the departments/Hospital as a whole .

Providing a patient – centered care, creating a culture that meets the needs of the patients can help in sending back a totally satisfied patient. It is well known that a well treated ,satisfied patient is half cured,all they need is a little more medical support and they are cured in a shorter time as compared to those who go unsatisfied and unhappy from the departments.

Health care institutions are primarily patient centric and patients who return back totally satisfied help in bringing a good name to the hospital.

Objectives:

1. To evaluate the level of satisfaction of patients availing treatment at the physiotherapy department.
2. To determine factors affecting the level of satisfaction in physiotherapy patient

Methodology

- Study Period: - 08/04/2014 to 15/04/2014
- Sample Size:- 50
- Sampling method: - Simple Random sampling
- Data Collection Tool: -Preformed Questionnaire (Feedback form)
- Data Source: -
 - Primary Data Source- Data collection through interviewing the patients as well as patients filing up the feedback forms.

The questionnaire comprised on the mentioned 15 questions.

Grading Scale was used :

5- Very good

4- Good

3- Fair

2- Poor

1-Very poor

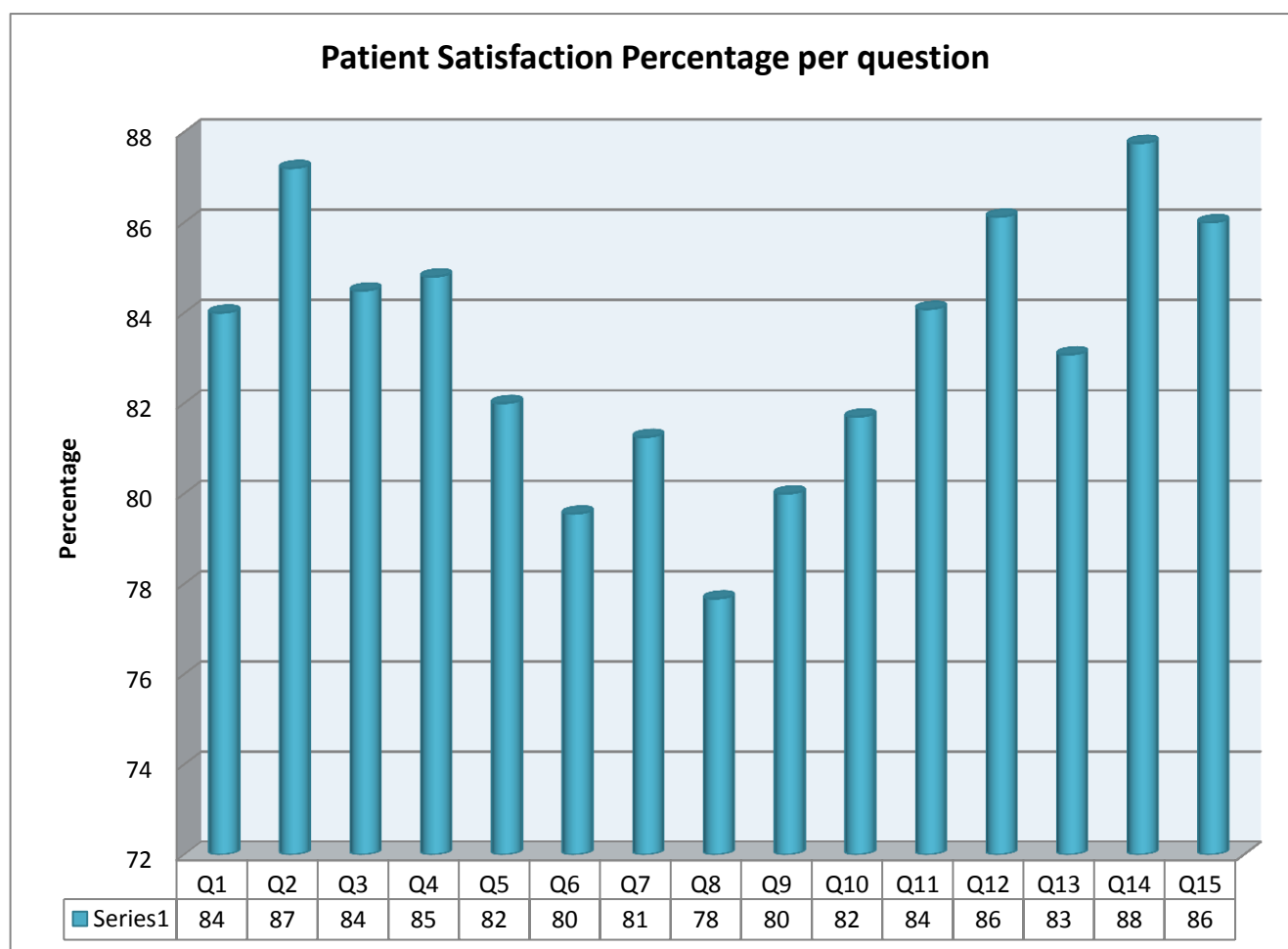
Every question was graded accordingly.

RESULT AND ANALYSIS:

Table 1

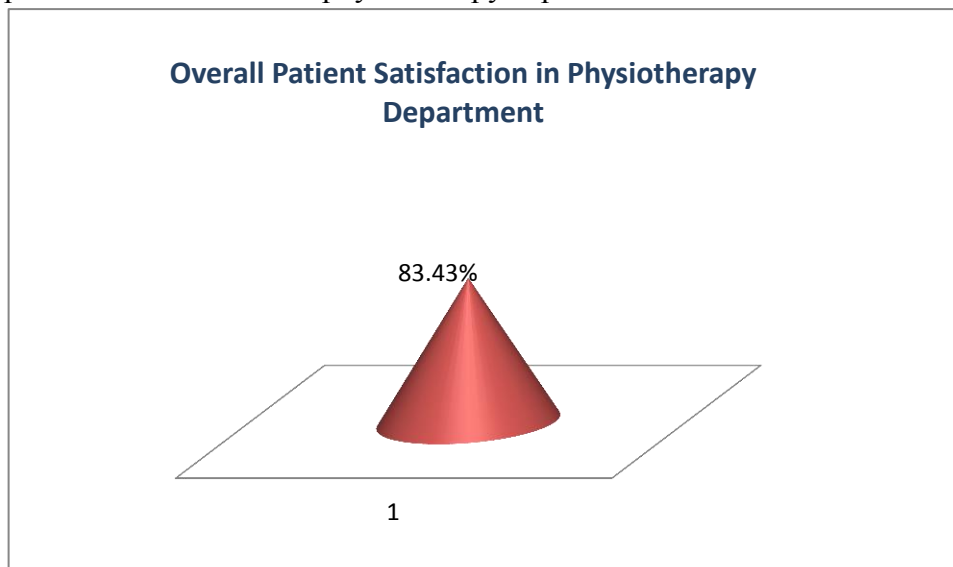
Patient Satisfaction	Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q1 0	Q1 1	Q1 2	Q1 3	Q1 4	Q 15	Total
TOTAL	210	218	207	212	205	179	195	167	184	192	206	211	54	215	215	2870
NR (N/A+0)	0	0	1	0	0	5	2	7	4	3	1	1	37	1	0	62
N/A SCORE	0	0	5	0	0	25	10	35	20	15	5	5	185	5	0	310
TOTAL SCORE	250	250	245	250	250	225	240	215	230	235	245	245	65	245	250	3440
PERCENTAGE	84	87	84	85	82	80	81	78	80	82	84	86	83	88	86	83.43 %

Figure 1



Result and interpretation : 78% responses only were given to the question that involved the explanation of the risk involved in the treatment to the patient.

CONCLUSION All together an 83.43% of patient satisfaction level was observed amongst all the patients who availed the physiotherapy department services.



Suggestions

1. Quality of care :should be maintained by a standardized practice.
2. A Junior Therapist should be assigned the duty of explaining the results that the patient can expect and from the next visit how will the treatment proceed.
3. The advantages, risk involved(if any) should be clearly explained to the patients in the first visit only. This will give the patients a thorough insight of what all they can expect from the therapy .
4. A separate pre defined and printed progress card for each patient should be made .Only the medical condition based changes can be made respectively for every patient undergoing therapy.
5. Managing anxiety,fear and pain :patients are highly anxious, managing and preventing anxiety of patients should be the focus area.
6. Better Communication : Communicating not only with the patients but also with the patient's relatives can make the whole experience of taking treatment a better one.
7. Staff Accountability: The staff should be accountable for their different roles:
 - Clear responsibility
 - Sound measurement and feedback
 - Consequences reporting.
 - Clear performance

PROJECT 2

REPORT ON	Waiting Time for OPD Patients – A Time Motion Study	
DEPARTMENT:	Outpatient Service Department	
AUDIT PERIOD:	FROM : 16 th April,2014	TO: 23rd April,2014
CONDUCTED BY : NAME: Dr.Arushi Vij DESIGNATION: MANAGEMENT TRAINEE		APPROVED BY: NAME: Mrs. Gauri Shirke

Executive Summary :

The out patient department was the department of choice for carrying out a one week study . The study is aimed at assessing the waiting time of patients visiting the Out Patient service department for consultation service. he study was conducted with help of a predefined data entry sheet .The total sample size was 345 patients. The data further was segregated in to Clinic patients and Free OPD patients. segregating the Clinic / Free OPD as well as the Appointment / Non appointment patients. While performing the data analysis the patients who reached within 10minutes were taken into consideration as on time patients. The OPD is spread over 4 floors i.e. Ground Floor to the Third Floor. A schedule was created for uniform collection of data . At the time of observations the different consultation wings were covered.

Introduction

A patient's experience in waiting time will radically influence his/her perceptions on quality of the service. The waiting time is the total time a patient hands over the voucher to the nurse upto the time patient is taken in for the consultation. The waiting time management plays a key role in a multispeciality hospital , it all together saves the overburden on the staff ,the wastage of resources and energy. Hence every effort should be made to overcome or reduce this time slot of increased restlessness and anxiety in patients. An overcrowded waiting area can lead to a chaotic atmosphere as well which becomes difficult to manage .

Objectives

1. To monitor the **ideal waiting time** of the patients visiting OPD section for consultation service.
2. Investigate the possible operational problems that may have lead to excessive patients' waiting time.
- 3.

Methodology:

- Study Period: - 16/04/2014 to 23/04/2014
- Sample Size:- As per the NABH 4th edition :2% total monthly OPD . 18000 monthly OPD . Therefore approximately 360.
- 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.

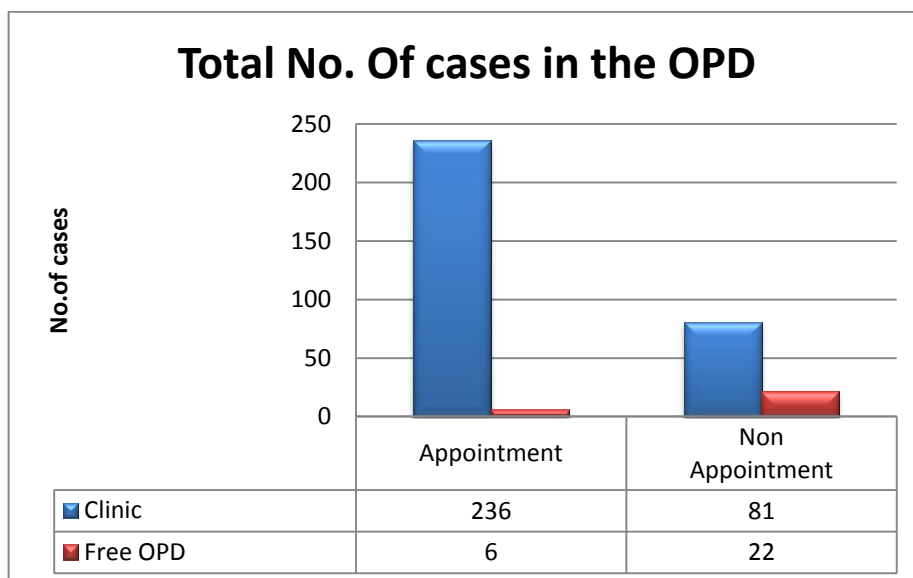
Result and analysis:

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

Table 1

Total OPD patients :			
	Appointment	Non Appointment	Total
Clinic	236	81	317
Free OPD	6	22	28
TOTAL	242	103	345

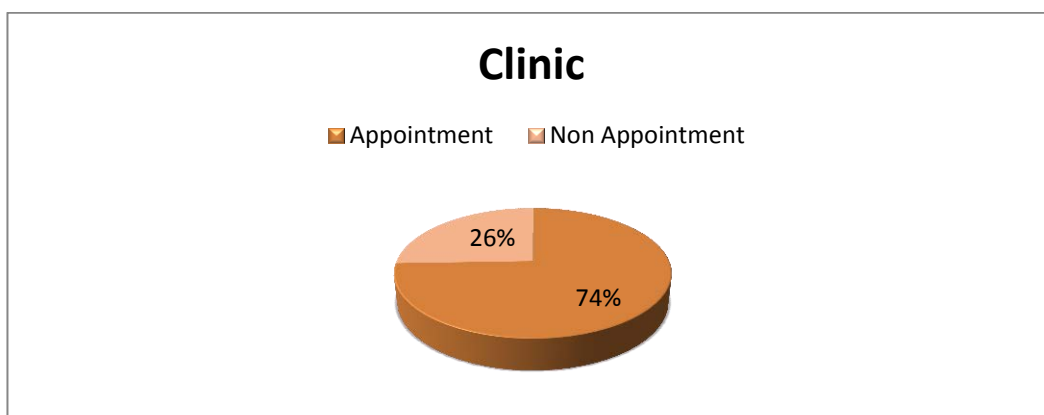
Figure 1



Result & Interpretation :

From table 1 & Figure 1 it is evident that out of 345 total patients 103 are free OPD/ Walk in patients, that makes it a 30% of the total .

2. OPD Clinic Patients



Pattern of arrival for Appointment Patients

Table 2

Clinic Appointment Patients Arrival Pattern	No. of Patients	Percentage
Patients arrived before / on their appointment time	188	80%
Patient arrived after their appointment time (reached late)	48	20%
Total Clinic Appointment Patients	236	

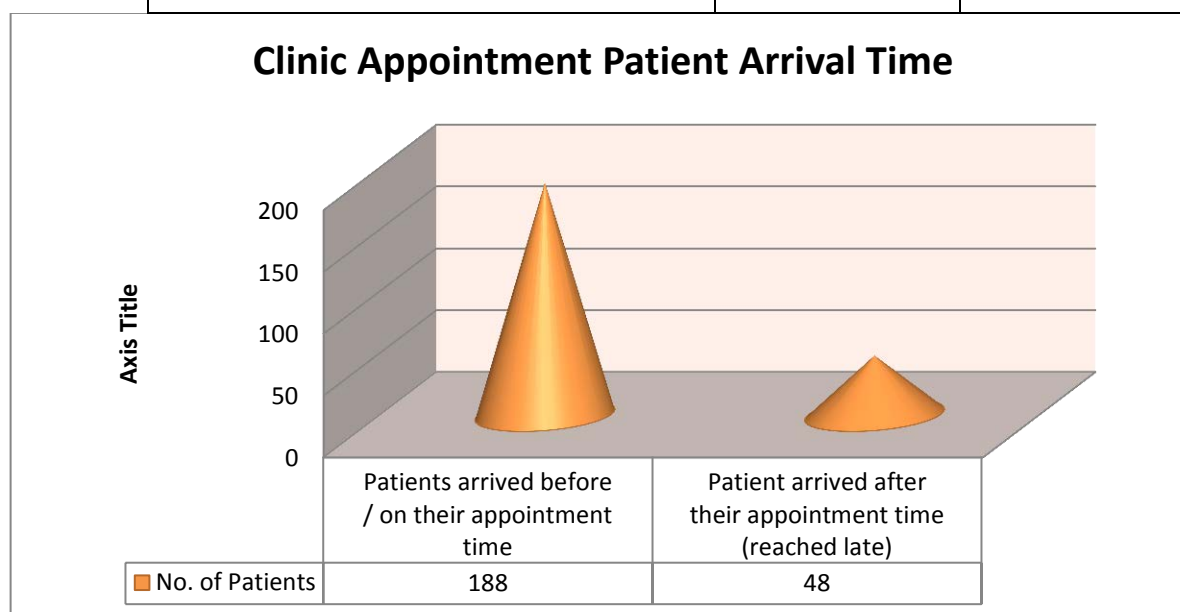


Figure 2

Result & Interpretation:

Table 2 & Figure 2 clearly tell us that 188/236 i.e. 80% of the cases arrived before or on their appointment time

Also 48 /236 i.e. 20% of the cases reached late as per their scheduled appointment time .The late comers affect the overall schedule and disrupt the smooth and efficient functioning of the OPD .

It was also noted as according to table 3 that

Table 3 :

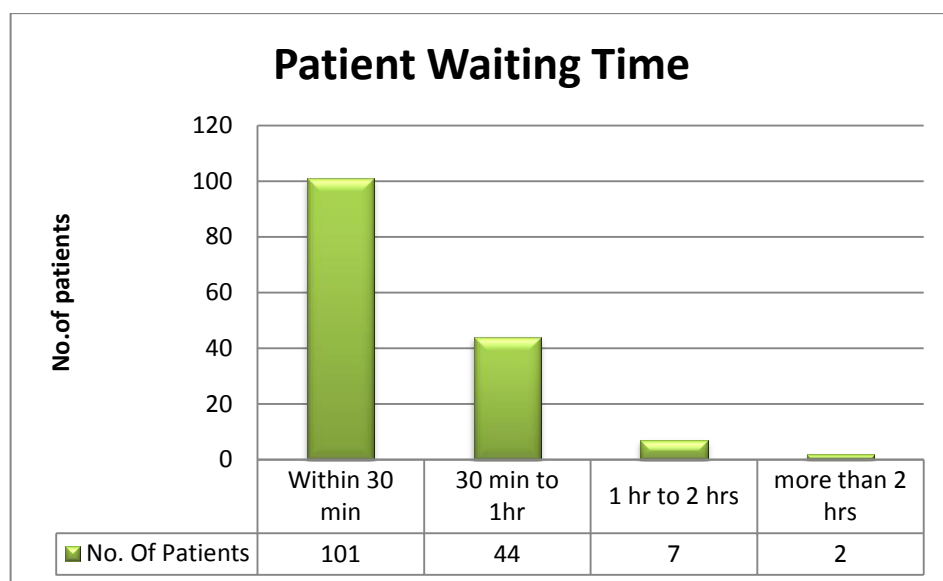
<i>Waiting time of Patients Arrived before/ on time of their appointment</i>	154	27 min
Patients arrived before/ on time were seen early	34	24 min early
Waiting time of Patient arrived after their appointment time (reached late)	48	24 min
	236	

Frequency of Patient waiting time:

Table 4:

Frequency of Patient waiting time	No. Of Patients	Percentage
Within 30 min	101	66%
30 min to 1hr	44	29%
1 hr to 2 hrs	7	5%
more than 2 hrs	2	1%
Total	154	

Figure 4 :



Result & Interpretation :

From Table 4 & Figure 4 It is evident 66% of patients had to wait only for 30 mins for their consultation.

A total of 35% cases were waiting for more than 30 mins for consultation.

Conclusion :

- Idle Waiting Time for appointment clinic patient on time is 27 min.
- Idle waiting time for Walk- In clinic patients is 41 min.

Suggestions :

- The time period of data collection gave an insight that many a times the patients were waiting /delayed only because their files had not reached the OPD as per their scheduled appointment. Corrective action : The appointments should be confirmed ,and the files should reach the OPD one evening prior to the scheduled appointment; saving a lot of time which is spent in coordinating the files that have not reached the OPD.
- Every consultant in the OPD should also be assessed from time to time ,depending on the field of service they are offering .Whether the consult includes procedures like sample collection etc . For these the consultation time tends to be more.

Corrective action : The respective Consultants should be requested to review their appointment time slots; patients should be scheduled in a manner that at time two patients can be attended to simultaneously ,one sample collection – the other patient treated.

This will reduce the waiting time and patient anxiety.

- A review every 10-15 mins of the list by every consultant should be done ,this can help reduce the waiting time as well.
 - Unless an emergency case that needs immediate attention,the Consultant should avoid leaving the patients waiting for long .
 - The Patients if are reason for delay themselves then they should be adjusted in the slack time and not made to wait for hours together.
 - Doctors whose scheduling patterns are showing huge variations should be analyzed and they should be asked to make needed changes, to reduce the waiting time.
 - Absenteeism of patients on call can be avoided by keeping patients well informed time to time so that when their turn comes they ae not missing from the waiting area.
 - The patients should be instructed that if for any reason they are leaving the waiting area they should inform the concerned nurse at the station so that a further delay is avoided if the patient misses his appointment slot.
 - An outcall to the patient for confirmation of appointments prior to the visit to avoid absenteeism of patients.
-

References :

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- <http://www.dha.gov.ae/EN/SectorsDirectorates/Sectors/hospitalservices/Documents/Jci-Conf/5-%20LFaraidooni.pdf>
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Annexure

1.Observation Based Prepared Checklist

GOAL 1 – Identify Patient Correctly		GOAL 4— Ensure Correct site, correct procedure , correct patient surgery	GOAL 5 – Reduce the risk of Health Care - Associated Infections									
			Patient Preparation & Protection				Laboratory Personnel – The primary operator and staff				Procedure room environment	
Patient Name asked	I.D Band checked	Correct site, correct procedure , correct patient surgery	Painting The Patient	Drapes	Sheath Removal	Gloves worn while wound dressing	Hand Scrub & Gloves	Lead Apron and Gown	Cap	Mask	Cleaning procedure room	Disposal of waste

2. Questionnaire for patient feedback :

- Q1. Were you promptly seen at the time of appointment
 - Q2. Behaviour & attitude of the physiotherapist
 - Q3. Your privacy was respected during physical therapy session
 - Q4. Your therapist understood your medical condition
 - Q5. The physical examination & treatment were adequately explained
 - Q6. At the end of the first visit were the results & treatment plan discussed
 - Q7. Was the advantage of treatment explained
 - Q8. Was the risk involved in treatment explained
 - Q9. Were the preventive aspects of your medical condition explained
 - Q10. Was the progress in your medical conditions explained follow up physiotherapy sessions
 - Q11. The instructions given by the physiotherapist were clear & helpful
 - Q12. Response given to your queries & doubts regarding treatment
 - Q13. The information given in brochure was good
 - Q14. Cleanliness & Hygiene maintained in the department
 - Q15. Overall quality of Physical therapy care provided to you
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