

**Summer Training at  
Max Super Speciality Hospital, Mohali, Punjab  
(April 3 to June 2, 2017)**

- **OPD Focus Project**
- **Blood Transfusion Audit**

**By  
Suhani Heena**

**Under the guidance of  
Mr. Abhishek Dadhich**

**MBA Hospital & Health Management  
2016-2018**

  
**Institute of Health Management Research  
The IIHMR University, Jaipur  
2017**

**CERTIFICATE**

This is to certify that Mr./Ms. Suhani Heena has undergone summer training in (Organization name Max Hospital, Mohali) from 3<sup>rd</sup> April to 2<sup>nd</sup> June 2017.

The candidate herself/himself completed the project assign to his/her during summer training. Her approach to the project was sincere and proactive. This summer training is in partial fulfillment of the course requirement recommended for the award of MBA in Hospital and Health Management.

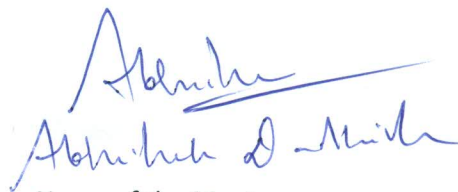
I wish him/her success in all her future endeavors.



Col. (Dr.) Ashok Kaushik

Dean (Academic & Student Affair)

The IIHMR University, Jaipur



Name of the Mentor

Designation Asst. Professor

The IIHMR University

**TO WHOMSOEVER IT MAY CONCERN**

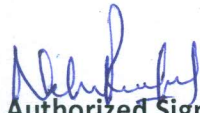
This is to certify that Ms. Suhani Heena has completed her internship in the department of Sales & Marketing at Max Super Speciality Hospital, Mohali on 31-May-2017.

During her training (3-April-2017 to 31-May-2017) her project title was OPD focus & Blood bank transfusion auditing in super specialty hospital in Punjab.

She was part of the hospital set up and reporting to Mr. Vishal Sharma( Regional Sales head).

We wish her all the best in her future endeavors.

**For Max Super Specialty Hospital**



**Authorized Signatory**  
**Human Resource**

**Max Super Speciality Hospital, Mohali - A unit of Hometrail Estate Pvt. Ltd.**

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**Hometrail Estate Private Limited**

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M-0574

## **ACKNOWLEDGMENT**

The Summer Training at MAX HOSPITAL, MOHALI, helped in providing me with both, a learning experience as well as a glimpse into the daily managerial level issues of this renowned hospital. I was fortunate enough to interact with the esteemed authorities and staff of the hospital, who have encouraged and guided me with their support and patience.

First of all, I would like to thank Mr. Sandeep Dogra(Senior Vice President) for providing me an opportunity to carry out my internship at Max Hospital, Mohali.

I want to express my gratitude and sincere thanks to my mentors Dr. Pranav Shankar, MS and Mr. Vishal Sharma, (Zonal Marketing Head)

for his constant support and invaluable time-to-time guidance and kind help in completion of this project. I also want to extend my thanks to Dr. S.D. Gupta, Director-IIHMR for incorporating right attitude towards learning and Col. (Dr.) Ashok Kaushik , Dean-Academic and Students Affairs, IIHMR, for helping and supporting me to reach my goals and endeavors.

Finally I acknowledge my indebtedness to the staff of the Hospital and my respected Guide of The IIHMR University Mr. Abhishek Dadhich for providing his constant support by guiding me throughout my Training period. I would also like to thank all those who have directly or indirectly supported me towards the completion of this Internship.

Sincerely,

Suhani Heena.

**CONTENT:-**

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- Abbreviations and Terms
- Introduction
- location
- Mission, Vision, quality policy and values
- Achievements
  - Medical expertise
  - Basic facts about the Hospital
  - Advanced technologies
  - Departments of Max hospital
    - Clinical
    - Non Clinical

## Part 2 ---The Projects---

- Project 1—OPD FOCUS PROJECT
- Project 2 – BLOOD TRANSFUSION AUDIT
- References

### **ABBREVIATION USED**

MICU- Medical intensive care unit

RICU- Renal intensive care unit

NICU- neonatal intensive care unit

SICU- Surgical care unit

HDU- high dependency unit

ONDC- Oncology day care

MRD- Medical record room

PFT- pulmonary function test

PRBC- Packed red blood cells

FFP- Fresh frozen plasma

RDPC- Random donor platelet cell

SDPC- Single donor platelet

CABG- Coronary Artery bypass Angioplasty

MHC – Max Health Care

## **PART- 1**

### **MAX SUPER SPECIALITY HOSPITAL**

#### **INTRODUCTION-**

Max Super Specialty Hospital, Mohali is a unit of Hometrial Estate Pvt. Ltd. , which offers services like Neurosciences , Cardiac Sciences , Cardiac Care, Orthopedics , Obstetrics andGynecology among several others. The 200+ bedded healthcare facilitiesare equipped with MICU, CCU, SICU and Cath Labs. Our Team of experts understands the problems related to health and offers personalized care to each and every patient.

#### **LOCATION-**

Located in Mohalinear Civil Hospital, Phase 4, Sector 56A, Sahibzada Ajit Singh Nagar, Punjab 160055.

#### **MISSION –**

- Create exceptional standards of Medical & Service Excellence.
- Care provider of FIRST CHOICE.
- Principal Choice for Physicians.
- Ethical Practices.
- Create International Centre of Excellence for select Super Specialities.
- Safety – Patient, Customer, Staff.

## **VISION-**

Deliver premium class healthcare with a overall service focus, by creating an institution committed to the highest standards of Medical & Services excellence, patient care, scientific Knowledge, research and medical education.

## **QUALITY POLICY-**

To our patients we commit our best we aim to

- Ensure every interaction leads to customer delight.
- Take ownership and resolve complaints to the customer satisfaction.
- Escort customers whenever they approached for directions.
- Respect the privacy of patients.
- Responsible for uncompromising levels of cleanliness.
- Help my colleagues who are involved in patient care.
- Treat every patient as my own family.

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

## **VALUES OF MAX HEALTH CARE**

- Excellence
- Credibility
- Sevabhav

## **ACHIEVEMENTS**

- MHC received Express Healthcare Awards for Excellence in Healthcare in 2008
- MHC received D L Shah National Award on Economics of Quality by Quality council of India in 2009

## **MEDICAL EXPERTIES**

With over 30 hospital based consultants; which is a unique feature of the hospital, there is always an experienced specialist available to initiate treatment without delay. The various Key Specialties covered are Cardiac Sciences, Neurology, Neurosciences, Orthopaedics & Joint Replacement, Oncology, ENT, Pediatrics, Urology, Nephrology & Kidney Transplant , Obstetrics & Gynaecology, Internal Medicine, General Surgery , Minimal Access & Bariatric Surgery. The various Allied Medical Specialties covered are Anaesthesiology, Dental Surgery & Orthodontics, Dermatology, Diabetics/Endocrinology, Dietetics, Emergency and Trauma Care , Endoscopy , & Bronchoscopy Labs , Laboratory Medicine , Mental Health & Behavioral Sciences.

## **Basic Facts about MAX Super Specialty Hospital**

- Bed strength = 224 beds
- Bed occupancy rate = 90%
- Number of Discharges/month = 1400
- Number of OPD patient/day = 30-350
- Number of Emergency case = 15-20 / day
- Total staff (on roll) = 787
- Building of Max Hospital = 1

## **ADVANCED TECHNOLOGIES**

- **FFA**  
FFA machine is used in case of Angiography which helps in reading and recording of blood vessels in the retina. A fluorescence dye is injected in the body which changes the wavelength of blood vessels once excited with the help of this machine.
- **CRRT**

It delivers a gamut of continuous extracorporeal blood therapies with highly versatile platform that can be customised to specific patient needs specifically used in renal transplant therapy.

- **TRANSCRANIAL DOPPLER**

**Departments of Max Hospital**

The Department at Max Hospital can be differentiated into:

1. **Clinical Services**– Those services which are directly related to medical Practice. These Include:-
  - a. Outpatient Department(OPD)
  - b. Inpatientdepartment (IPD)
  - c. OT services
  - d. Cath labs
  - e. Ambulance Services
  - f. Nursing Services
  - g. Laundry Services
  - h. Accident and Emergency Department
  - i. Laboratory Services
  - j. Mortuary services
  - k. Blood bank
2. **Non Clinical Services**- Those services which are related to the administrative and non medical side of the hospital. These include:-
  - a. Administrative service (Admission, Registration and Billing)
  - b. Medical Record Department(MRD)
  - c. Information technology.
  - d. Engineering department
  - e. Pharmacy department

## **CLINICAL SERVICES**

### **OUTPATIENT DEPARTMENT –**

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

1. Appointment
2. Consultation
3. Diagnosis and Laboratory services
4. Minor procedures
5. Pharmacy services

The Max clinic aims to provide:

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

**The OPD in MAX clinic is on Ground Floor and consists of:**

- Front Office
- Outpatient Registration
- Pharmacy
- Nurse station
- Billing Cashier
- Radiology
- Nuclear Medicine

- Immigration
- Changing Rooms (2)
- Console Room
- Day Care/Cath beds
- OPD Room
- Seminar Room
- Report Collection/Delivery
- EMG/EEG/NCV
- Dentistry Dept.
- PHP
- Cardiology Dept.
- Gastroenterology Dept.
- Pulmonology Dept.
- Gynaecology Dept.
- Nephrology Dept.
- Dermatology Dept.
- Oncology Dept.
- Ophthalmology Dept.
- Elite orthopaedics Dept.
- Internal Medicine Dept.
- Paediatrics Dept.
- Urology Dept.
- Plastic Surgery and Diabetics foot Clinic

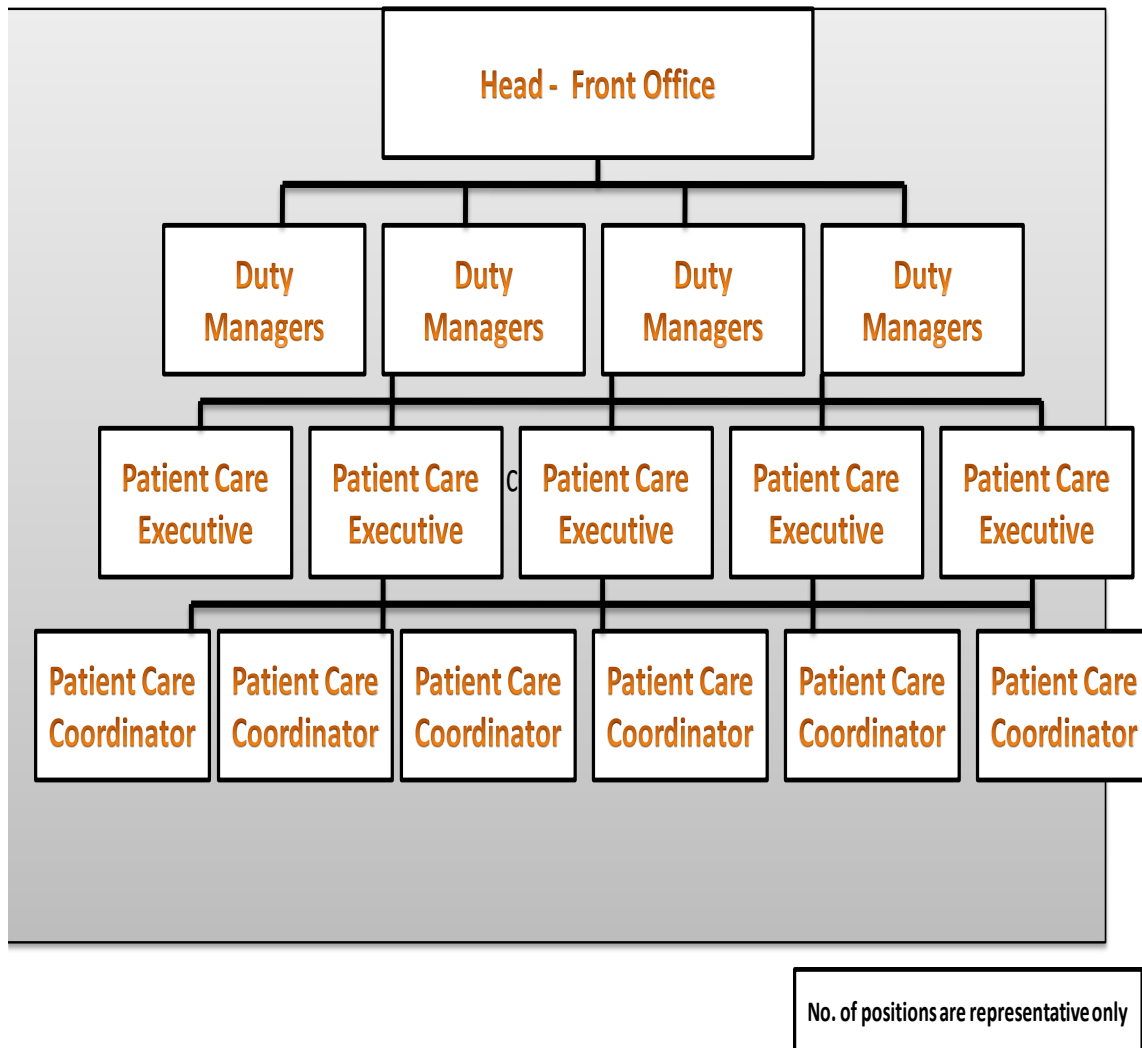
#### **PREVENTIVE HEALTH PROGRAMME (PHP) –**

- PHP provides comprehensive medical assessments and personalised preventive plans.
- Designed for the early detection of certain risk factors and conditions.
- Gives the lifestyle management guidance.
- Offers a range of customised packages.
- Specially designed corporate packages.

**REPORT COLLECTION/DELIVERY –**

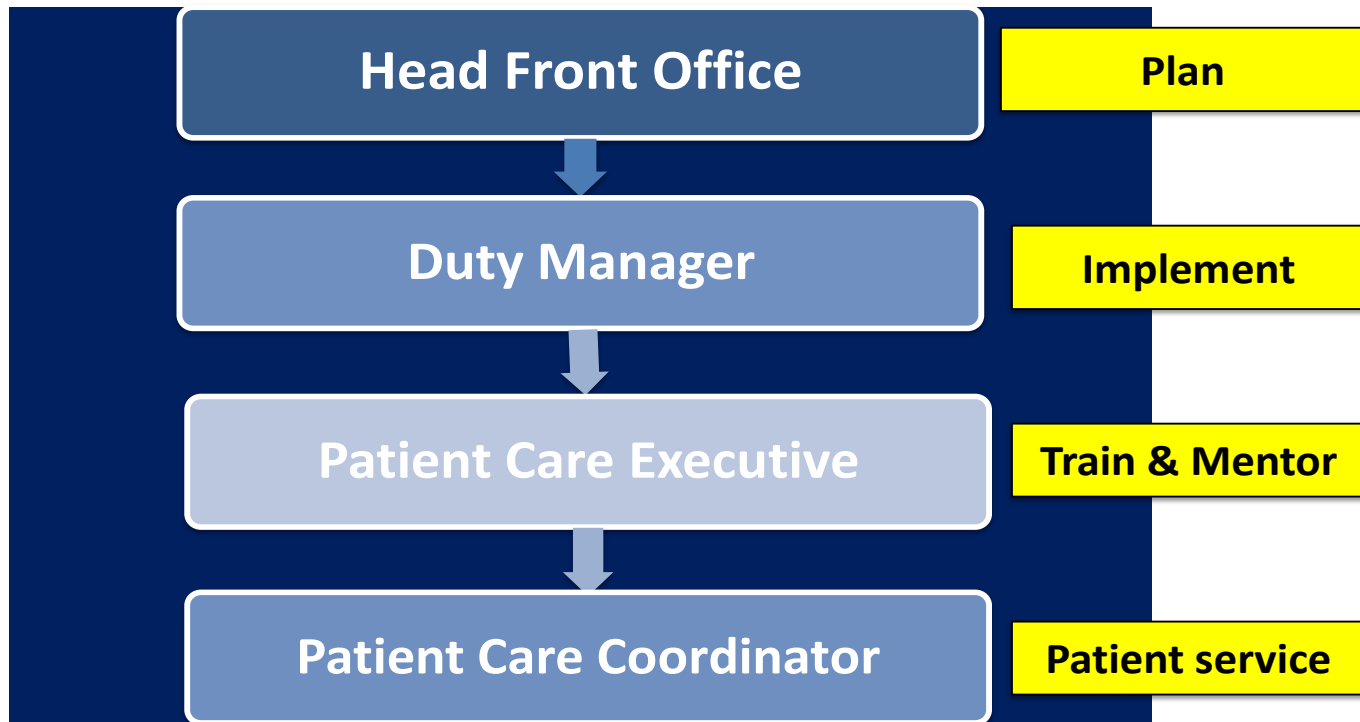
- Reports of diagnostic tests carried out for patients are delivered either by hand or sent via post.
- Patients are guided for report collection to the report delivery counter.
- Reports are handed over only on the basis of an invoice.

## REPORTING RELATIONSHIP –



**Source-** Official documents of Max Hospital, Mohali.

## SERVICE DELIVERY –



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**Source-** Official documents of Max Hospital, Mohali.

## IN-PATIENT DEPARTMENT –

- The admission of the patients to the hospital is required so that he or she can be closely observed and monitored during the procedure and afterwards and during recovery.
- An inpatient word symbolises that a person is admitted to the hospital and he or she stays overnight or for uncertain time period , usually it lasts for many days or sometimes even weeks.
- A variety of care or facilities available to patients depending on the needs of the persons involved.

The IPD Building consists of –

- Basement 2
- Basement 1
- First floor
- Second floor
- Third floor

### FIRST FLOOR

|                                |                           |      |      |
|--------------------------------|---------------------------|------|------|
| OPERATION THEATRES (6)         | ENDOSCOPY / BRONCHOSCOPY  |      |      |
| ICU'S →                        | ORTHO ICU<br>(2)          | SICU | HDU  |
|                                | CTVS                      | CCU  | NICU |
| PRE/POST DELIVERY<br>CAESARIAN | LABOUR ROOM               |      |      |
| CATH LABS                      | Dr.DUTY ROOM              |      |      |
| NURSERY                        | CLEAN UTILITY ROOM        |      |      |
| DIRTY UTILITY ROOM             | DOCTORS CHANGING ROOM (2) |      |      |
| STORE ROOM                     | STAFF CHANGING ROOM (2)   |      |      |

### SECOND FLOOR

|                            |                         |
|----------------------------|-------------------------|
| MEDICAL ICU (31 BEDS)      | Dr.DUTY ROOMS (2)       |
| PAC                        | DIRTY UTILITY ROOMS (2) |
| STORE ROOM                 | TEA ROOM                |
| BABY FEED ROOM             | HOUSEKEEPING            |
| PANTRY                     | OPERATION THEATRES (2)  |
| SLEEP LAB PATIENT          | NURSE STATIONS (3)      |
| NEGATIVE PRESSURE ROOM (2) |                         |

### **THIRD FLOOR**

|                         |                                  |
|-------------------------|----------------------------------|
| MICROBIOLOGY LAB        | BLOOD BANK                       |
| SAMPLE REPORT RECEIVING | ECO WARD                         |
| NURSE STATIONS (3)      | DIRTY UTILITY ROOM               |
| HOUSEKEEPING ROOMS (2)  | ADMISSION / DISCHARGE<br>COUNTER |
| PANTRY                  | SEMINAR ROOM                     |
| MS OFFICE               | DOCTORS LOUNGE                   |

### **BASEMENT 1**

|                            |                   |
|----------------------------|-------------------|
| DIALYSIS                   | CSSD              |
| AMBULATORY DAY CARE        | SECURITY ROOM     |
| MEDICAL RECORDS DEPARTMENT | ENGINEERING ROOM  |
| AHU CT SCAN                | GAS MANIFOLD ROOM |
| MORTUARY                   | IP PHARMACY       |
| IT DEPARMENT               | EPABX ROOM        |
| HOUSEKEEPING               | BIOMEDICAL        |
| UNIFORM ISSUE              | DIRTY LINEN       |

### **BASEMENT 2**

|                       |                         |
|-----------------------|-------------------------|
| ONCOLOGY DAY CARE (2) | LINAC RADIATION THERAPY |
| ADMIXING LAB          | RECEPTION               |
| MOULD ROOM            | OBSERVATION AREA        |
| BRACHYTHERAPY         | TREATMENT PLANNING      |

### **OPERATION THEATRE**

#### **Introduction:**

- MAX boasts of a ultra modernized O.T, which provides solutions to different surgeries .
- Annually around 8000 operative procedures are carried out at Max Mohali Hospital.

#### **Location and layout:**

1. 8 Operation Theatre (OT 1-6 are on first floor and 7 and 8 are on second floor)
2. 5 Hand scrubbing areas
3. 1 Clean utility room
4. 1 Dirty utility room
5. 1 Pre operative room
6. 2 Separate changing rooms for gents and ladies.
7. 1 Equipment room
8. 1 Doctors lounge
9. 1 OT manager cabin

**Features:**

- The 8 operation rooms ply to all major surgeries like Orthopaedics, Neurosurgery, Cardiac Surgery, Oncosurgery, ENT, Urosurgery, Abdominal, Laproscopic, Gynaecological, Kidney transplants.
- 3 of the OT's are dedicated to Ortho based services due to the high number of Ortho patients and 1 is dedicated for cardiac surgeries.
- The whole OT consists of a laminar airflow designed Air conditioning system and HEPA filter to eliminate OT acquired infection.
- It is divided into two zones:-
  - 1) Sterile zone
  - 2) Clean zone

**CATH LAB.**

**Introduction**

- Cath Lab is located on the first floor of IPD building. It is well equipped to perform various heart related procedures such as Angiography, Angioplasty, and Pacemaker etc.
- Two types of packages are provided -Radial Package and Femoral Package.

### Scope of services

- -Diagnostic Services
- -Therapeutic Services

### Billing Of Cath Lab:

Primary Responsibility: Technician, Receptionist, Billing Clerk

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

### Procedure for Admission

- Primary Responsibility: Clerk from Admission Counter, Receptionist
- Admission for IPD Patients:
  - Patient is admitted to the hospital on a written note either from Cardiologist Admission cum O.T. booking form, which state about the demographic details of the procedure.
  - Staff at the admission counter does the admission formalities.
  - Visitor pass is issued then and Admission deposit is taken through cash/credit card/pay order/Demand draft/cheque and service is generated.
  - Then the O.T. clearance slip is issued for the procedure.

- Admission for day care procedures i.e. Angiography Packages-Radial and Femoral

### Working

- Primary responsibility: Admission billing staff, Receptionist
- Working can be done in either of the following ways:
  - Direct call from the cardiologist/clinical associate
  - By patient's on the basis of consultants letter/admission cum O.T. booking form
  - By receptionist at Cath lab
- Reservation done by cardiologist/clinical associate-Depending on the type of procedure, cardiologist/clinical associate calls at the booking counter/accident & emergency counter at admission and billing department.
- Reservations done by patient- Depending on the type of procedure-Patient/Relative approaches booking counter /accident and emergency counter at admission and billing department.

## **AMBULANCE SERVICES**

### Introduction

Ambulance services under the purview of the Accident & Emergency department. Hospital offers 24 hours ambulance services, always ready to meet any emergency be it surgical or medical.

There are two types of Ambulance services.

- Advance cardiac life support
- Basic Life Support

The ACLS serves all critical all critical patients coming in from

- Nursing homes
- Office
- House
- Accident site- RTA
- All critical patients who requires medical intervention immediately

The Basic Life Support Ambulance depends on patient's condition & also used for-

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

### Air Ambulance

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



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## **NURSING DEPARTMENT**

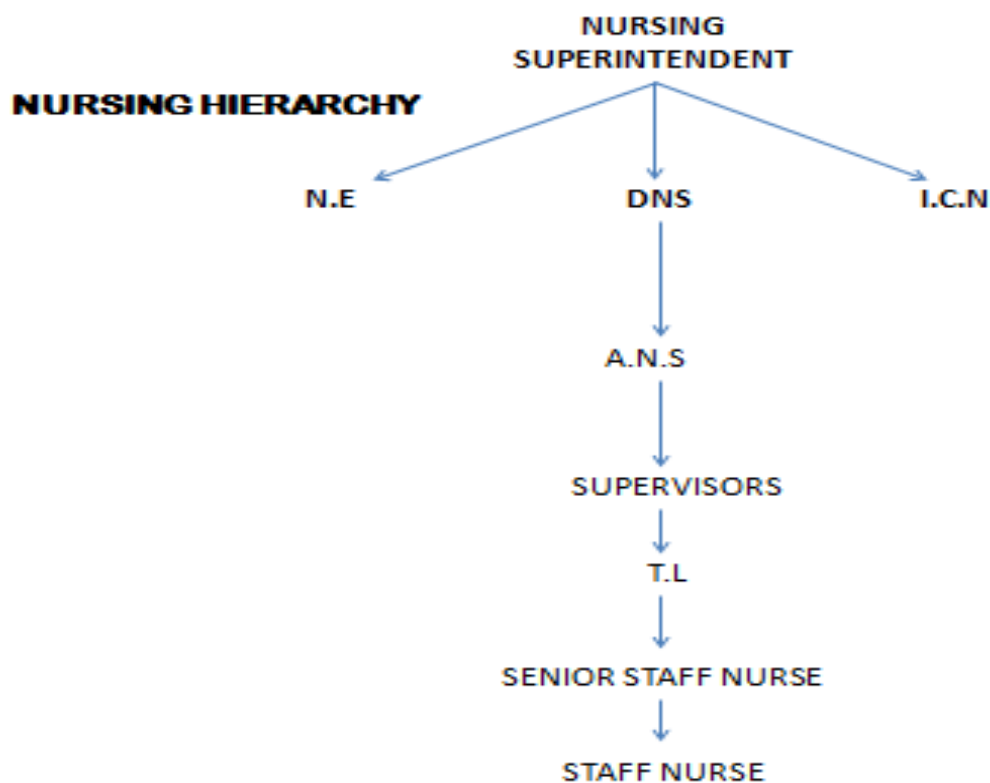
### Introduction

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

### Clinical:

The division deals with administration of clinical services to the patients.

### Organogram of the nursing department



**N.E**- Nurse Educator

**DNS**- Deputy Nurse Superintendent

**I.C.N**- Infection Control Nurse

**A.N.S**- Assistant Nurse Superintendent

**T.L-** Team Leader

Administrative:

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

Special nurses

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

There are few special nurses-

- Diabetic Nurse Educator
- Infection Control Nurse
- Link Nurse
- Physician Assistant Nurse with consultants

**LAUNDRY SERVICES**

- The importance of a clean, hygienic, un-stained and defect free linen for patient care has been stressed upon since the very inception of hospitals. Clean linen delivery in a timely manner to healthcare areas is important.
- Laundry service is responsible for providing an adequate, clean and constant supply of linen to all users. The laundry facilities is designed and equipped in such a way that it reduces the spreading of microbes 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 theatres), 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 labelling of materials contaminated with hazardous materials or body fluids.
- There are various policies and standard procedures (SOPs) for cleaning of contaminated materials.
- Storage and distribution of curtains across the hospital facilities.

## **ACCIDENT & EMERGENCY**

### **Introduction**

- The A & E Department is the face of any hospital, which works around the clock through the year.
- Department is manned by highly trained medical & paramedical staff & it serves all the immediate emergency medical Situations.
- 5 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.
- In case of code blue A&E department is first to respond.
- A & E is a very important constituent of the disaster management team-internal as well as external.
- Transfer of patients.
- First aid camps/teams
- Responsible to arrange for the ambulance services for transportation or transfer of patients. It also in arranging Hearse services.
- The Mortuary is also maintained by the Emergency department.

## **LABORATORY SERVICES**

- The laboratory services at Max Mohali hospital are above par excellence.
- It has also earned the accreditation of the “National Accreditation Board of Testing and Calibration Laboratories” in 2012.
- Services included under Lab Medicine :-

- Biochemistry

-Hematology

-Histopathology & Cytopathology

-Immunoserology

-Microbiology & Serology

-Radioimmunoassay (RIA)

-Molecular Biology

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

## **MORTUARY SERVICES**

Mortuary at MAX Mohali is managed by security and maintained by housekeeping department. Only inpatient bodies are allowed to keep at mortuary.

Mortuary is at basement 1 of the building.

## **BLOOD BANK**

Blood bank is situated on the third floor of the building.

Blood bank requisition form consists of

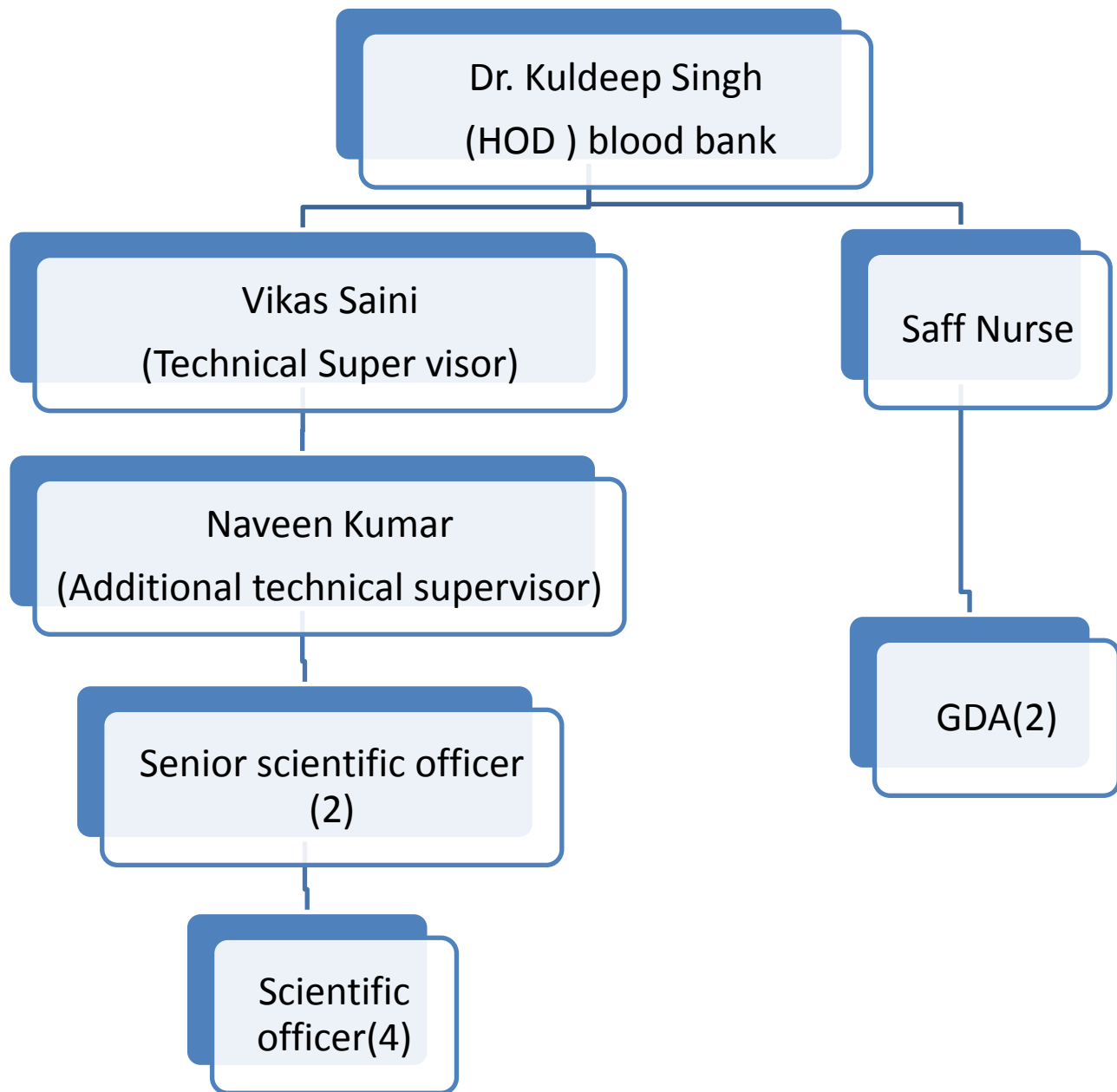
- Patients identification.(First name, surname, gender, date of birth)
- Date of admission.

- Location (ward)
- Which blood components are required.
- Date/ time blood product required.
- Other tests are required.
- Signature of phlebotomist.
- Amount/ number of units and identification of blood product required.

IT IS ESSENTIAL TO HANDLE ALL SPECIMENS WITH AN EXTRA CARE.

**Pre transfusion testing procedures:**

- ABO AND RH grouping.
- Major and minor cross match. (compatibility testing)
- Completion of pre transfusion testing requires minimum of one hour and 30 mins.

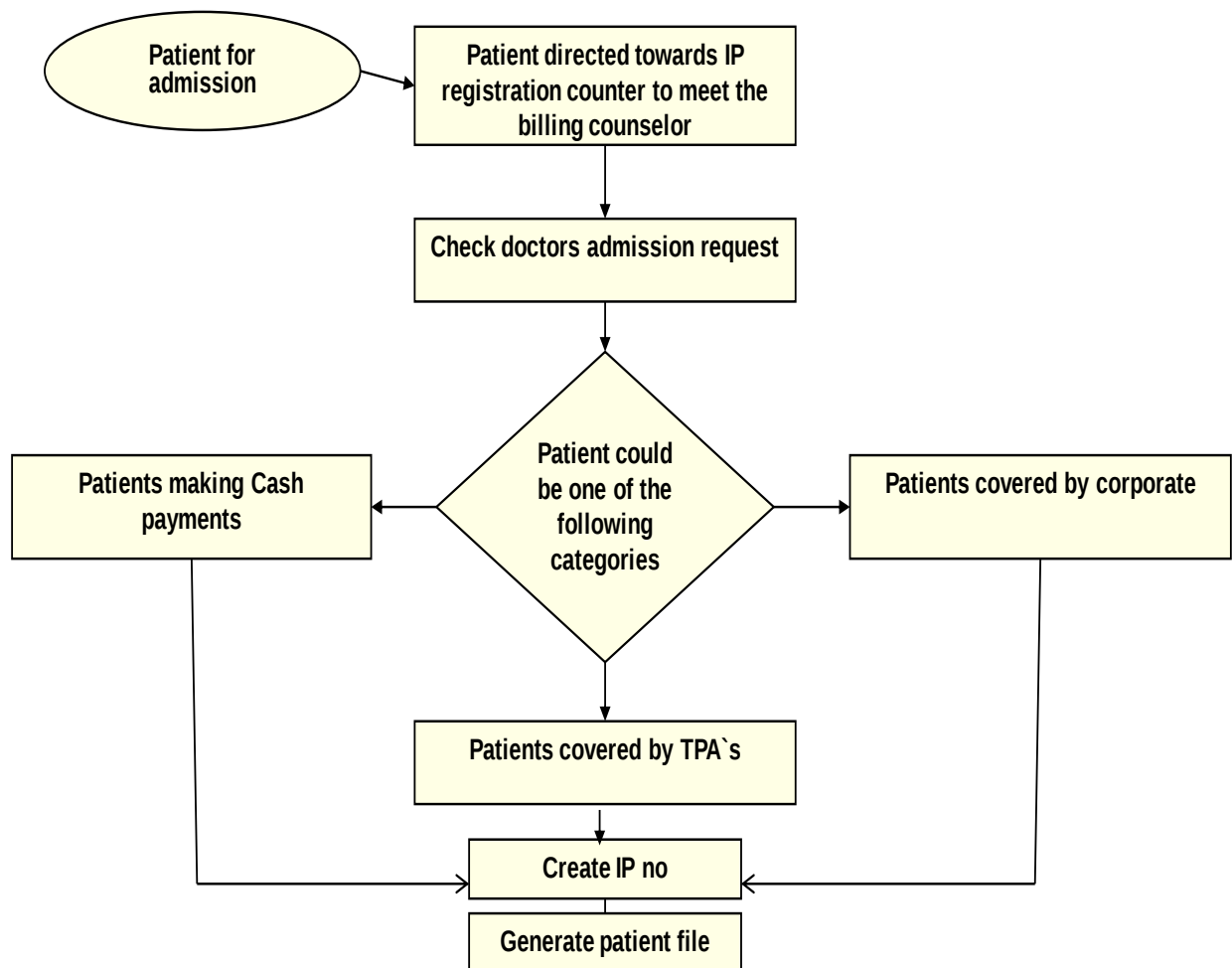


## NON CLINICAL SERVICES

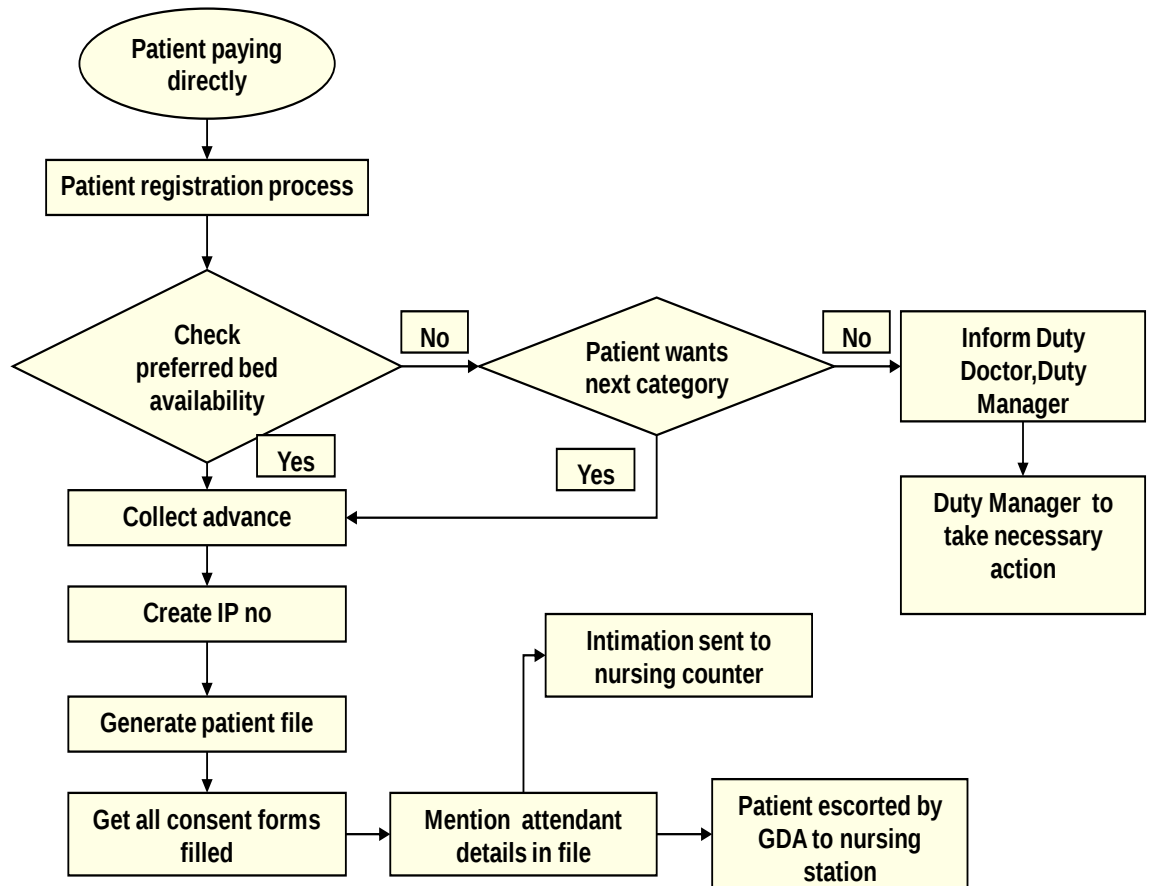
### ADMINISTRATIVE SERVICES

#### ADMISSION, REGISTRATION AND BILLING-

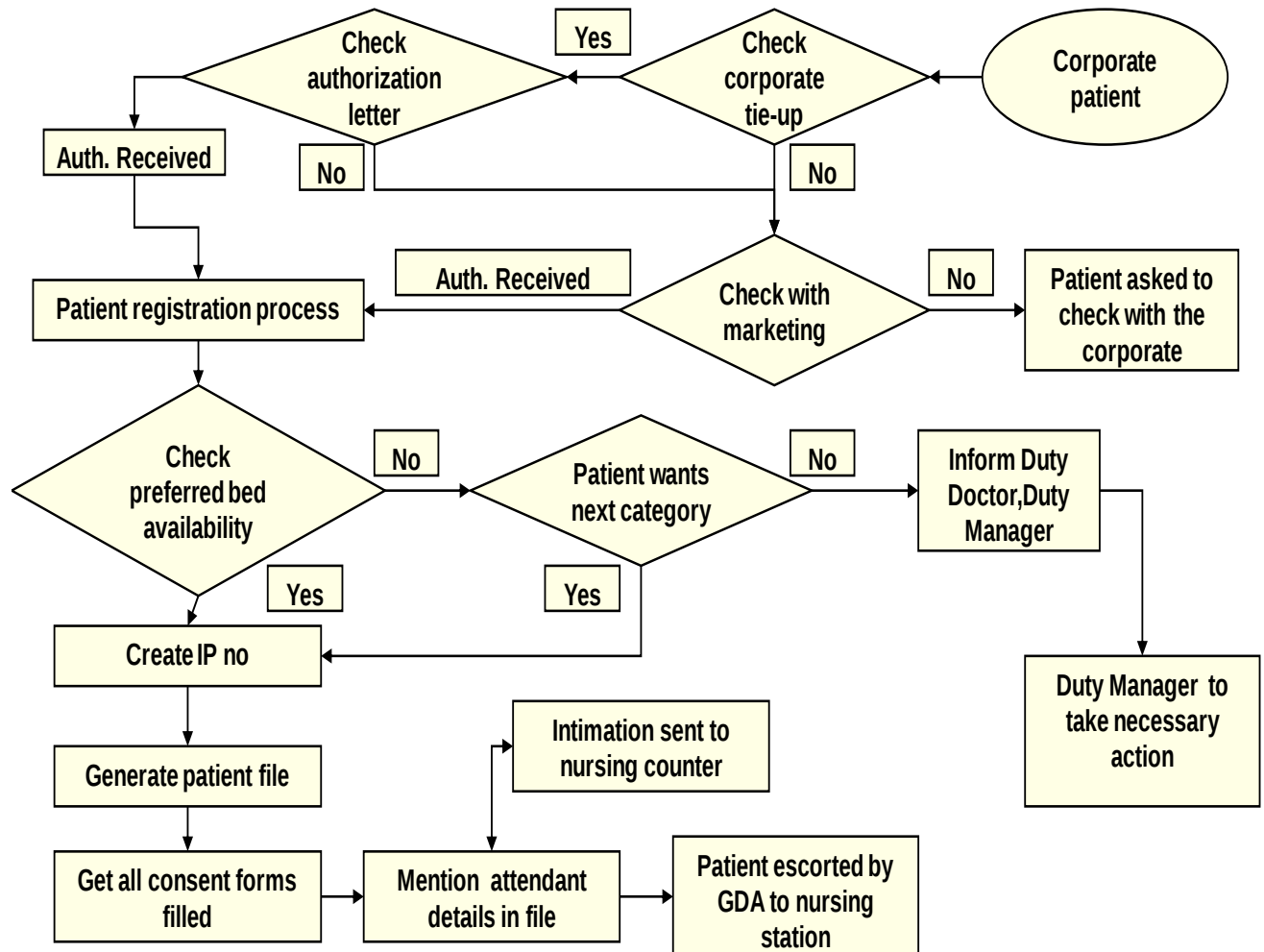
## Admission Process



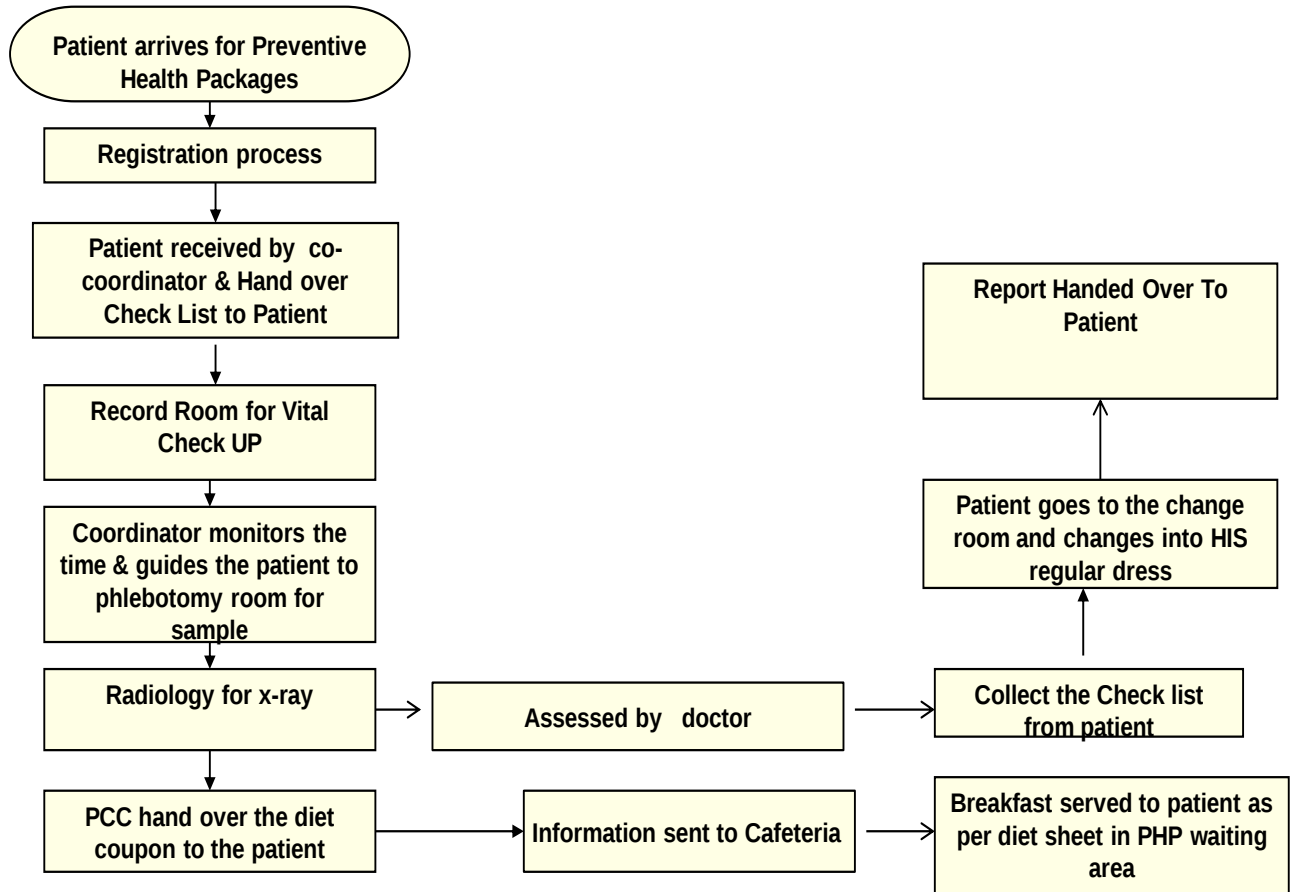
## Cash payment



## Corporate patient



## Preventive Health Packages



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### MEDICAL RECORD DEPARTMENT-

#### INTRODUCTION OF THE DEPARTMENT

Medical Record department is situated at Upper Basement and it ensures the effective management of medical records at Max Hospital Mohali. Medical Records are an essential component in modern health care management. It is the only reliable proof of treatment given to patient and is the basic indicators in accessing health status of the community. The safer existence of the institution is depends on this. Health information of different nature at various levels could be generated from Medical Records. Accurate and reliable information is

needed for comparison of health status of the community and basic data for planning health care activities and health budgeting could be obtained only from Medical Records. The present scenario people need evidence based treatment. All these factors and the present day challenges imposed by Right to Information act 2005, Consumer protection act 1986, Medical Councils of India regulations, etc. emphasis the strengthening of Medical Records Maintenance System so as to beneficate all walks of people in the community. Central Bureau of Health Intelligence- the nodal agency for health information in the country also insist the strengthening of Medical Records system and implementing ICD-10 of WHO in classifications and coding of morbidity & mortality cases.

**MISSION-** To organize, manage the activities of health record generation (manual & CPRS) providing quality and efficient services

**VISION-** Generate and maintain high quality Health information

#### **GOALS-**

1. To develop, implement and continually improve the safe, confidential, systematic & effective method of maintaining CPRS and receiving physical files, storing, retrieving & discarding the medical record of the patients admitted for the treatment in accordance to the legal requirements.
2. To protect the privilege of Patients, Doctors, Hospital staff and Administrators.
3. To Help Health care authorities / health care providers in formulating health policies and planning preventive measures
4. To ensure systematic preservation and storage of health records for future use.
5. To ensure systematic maintenance and preservation of Medico-legal documents.
6. To help Judicial authorities, Insurance authorities, Investigating Officials, Enquiry officials etc by providing the required documents / information in time.

#### **SCOPE OF SERVICES**

- A medical record is the chronological documentation of health care and medical treatment given to a patient by professional members of the health care team. It is an

exact, correct and accurate recording of their observations including relevant information about the patient, the patient's progress, and the results of the treatment.

- The department forms an integral part of the Max Hospital, forming the base station for all the medical records. Medical record keeping is not only a legal requirement but also helps in analyzing the medical care, research base, a source of back reference in case the patient seeks the care in the same hospital or the need for review of the disease suffered or medication given is there in case the patient is taking services in some other healthcare setup thus forming a continuity of care. It is also covered in the scope of the department to provide appropriate information to external data banks, which includes the notifiable diseases. The department works closely with all of the clinical departments admitting patients to the hospital.
- The Institute has modern technology, the, EHR (Electronic Health Record) system implemented in Aug 2011. To achieve the strategic objective of paperless hospital to create an integrated environment the help of the EHR system has been taken with a home grown HIS (Hospital information system) application and a radiology information system. The highest level of environmental controls and fully trained and experienced staff who are dedicated to the maintenance of the CPRS & Physical medical records with record to safety, security and protection from damage. The department works from 9:00 am to 6:00 pm.

- **ORGANIZATION STRUCTURE**

**LOCATION AND LAYOUT**

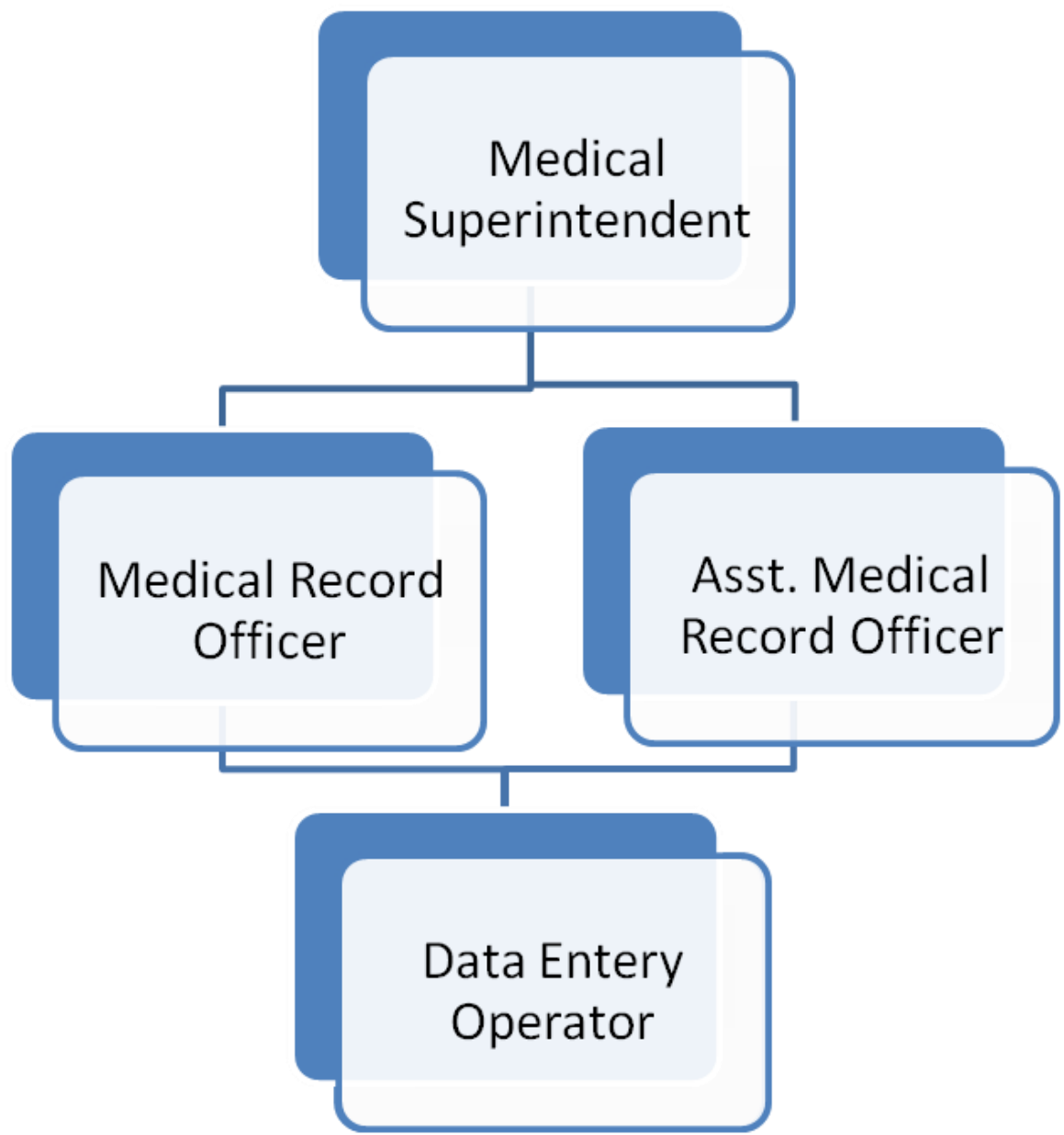
The MRD is located on the -1<sup>st</sup> floor. The department has over 70,000+ discharge IPD file records, while are being maintained in archived form for legal/research purposes.

**PURPOSE:**

Medical records are to be maintained in a manner that is current, detailed, organized, and easily accessible. All patient data should be filed in the medical record, (i.e., lab, consultation notes, etc.)

**POLICY:**

To provide appropriate documentation of inpatient medical care in such a way that it facilitates communication, coordination and continuity of care and promotes efficiency and



effectiveness of treatment.

### PROCEDURES:

All entries shall be:

- Unique identifier of patient on every document page
- Written in black/blue indelible ink for handwritten documentation. No pencil entries
- Dated and signed (include day, month, and year)
- Timing of entries is required on Medication Administration, Pre-Operative, and Nursing documentation
- Legible and include clear, concise and pertinent patient information
- Authenticated. Signature and professional title
- Chronological
- No part of the medical record is ever to be removed after entry.
- The patient's name and medical record number must appear on every record page/document medical record.
- Rubber stamps are not allowed for physician signatures.
- Written Signatures validate written orders and written notes.
- Inpatient Care is documented in the Medical Record and includes:
  - Reason for admission, diagnosis, and plan of care must be included in the documents.
  - Evidence of the initial patient assessment and all subsequent re-assessments.
  - Documentation of interventions based on physician orders and/or on unit standards of care or approved protocols.
- Any operation /Procedure performed in detail .Name, signature, and date, time on every entry made in the record.
- The records should be legible.
- The records should be in a chronological order demonstrating the continuity of care.
- Transfer notes should be in accordance to the policy of transfer and should include- Date, reason for discharge and name of the receiving hospital.
- Medication administration is recorded on the Medical Administration Record or area specific forms
- Specific care provided is evidenced on the patient care flow sheet.

- Aspects of patient care during operative or other invasive procedures, in the emergency department, the dialysis unit, obstetrics, the clinical research center, and the sub acute unit is documented on forms specific to each specialized area.
- Patient discharge instructions
- Discharge summary should be prepared and signed by the consultant
- Death summary should include – cause of death, date, time and should bear the signature of the clinician in charge.
- The medical notes by the resident doctors have to be countersigned by the clinician in charge within 24 hrs.

#### **THE INFORMATION REQUIREMENTS OF THE ORGANIZATION:**

Monthly, quarterly and annual reports are prepared for management, which are useful in planning, policymaking and utilization for hospital resources.

| <b>S. No</b> | <b>Report</b>                     | <b>Frequency</b> |
|--------------|-----------------------------------|------------------|
| <b>1</b>     | <b>Census Report</b>              | <b>Daily</b>     |
| <b>2</b>     | <b>Daily Administrator Report</b> | <b>Daily</b>     |
| <b>3</b>     | <b>Occupancy Dashboard</b>        | <b>Daily</b>     |
| <b>4</b>     | <b>Monthly Abstract</b>           | <b>Monthly</b>   |
| <b>5</b>     | <b>Yearly Abstract</b>            | <b>Yearly</b>    |
| <b>6</b>     | <b>Financial Year Abstract</b>    | <b>Yearly</b>    |

## **INFORMATION TECHNOLOGY**

### **Introduction**

Primary purpose of Information Technology department is to:

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

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

### **Scope of services**

I.T department has three sections.

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

## **ENGINEERING DEPARTMENT**

### **Introduction**

Engineering and Maintenance Department is manned for 24 hours for keeping round the clock vigil on the proper functioning of plant engineering equipment coming under the purview of the department. This covers maintenance of major supplies to the hospital such as power, water, medical gases, air- conditioning and related equipment supporting the same, which form the life line to the hospital's activities.

The responsibilities of the department are:

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

## **PHARMACY DEPARTMENT**

Max Mohali Hospital runs an inpatient pharmacy which works 24/7 throughout the year and consists of Dispensing area and store. It is located on the basement 1 building. The Pharmacy also has a formulary with around 14000 items mentioned in it and also a DTC (Drug and therapeutic committee), with senior doctors, nurses and pharmacists as its members. In the pharmacy no cash transaction take place and no relative has to go there, the nurses enter the medications required into the system from the floors, and then a floor wise consolidated report is taken and all the items are sent together in 4 rounds to the nursing station at each floor by the pharmacy attendants. The patient is billed from the pharmacy on his SSN No. and the information is sent to billing department directly. The pharmacy keeps only 1 brand of the drugs, which is generally the research molecule. They also have a provision for narcotic drugs, which they store in a lock according to the narcotic drugs and psychotropic substances act. The narcotic prescriptions are kept in a record. The hospital formulary is updated periodically. A pharmacy news bulletin is also prepared and is given to the doctors.

The inventory control methods used are:

1. ABC- Always better control
2. VED- Vital essential Desirable
3. FSN- FAST, SLOW and Non- Moving

## **PART 2**

### **PROJECT 1**

#### **OPD FOCUS PROJECT**

##### **INTRODUCTION:**

OPD focus project is been performed to observe, analyze and commend some opinions' on-

- Pharmacy conversions
- Radiology conversions
- Pathology conversions

The departments that were being assessed were

- Cardiology
- Nephrology

##### **AIM:**

To study the Pharmacy, Radiology and Pathology conversions of Cardiology, Nephrology.

##### **Objective:**

- The objective of the study was to understand frailty and to observe the loopholes due to which the conversions are low.
- To understand the needs for better efficiency and effectiveness of the procedure.

##### **SAMPLING:**

The total number of patients screened were 487, which were picked by systematic random sampling and the duration was two months April – May 2017.

Cardiology: 323

Nephrology:164

DATA SOURCE:

Daily OPD patient's prescriptions.

DATA MODULE:

HISV614

PARAMETERS USED:

- Name of the patient
- Date of OPD
- Doctors name
- NO. of medicines prescribed/purchased.
- Radiology test advised/ done.
- Pathology test advised / done.

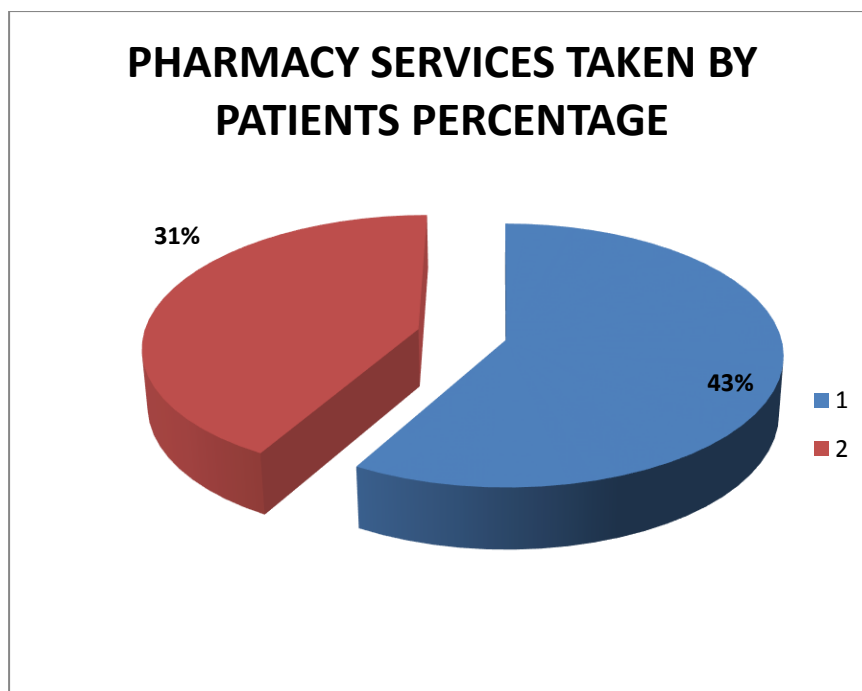
**INFERENCE OF OPD FOCUSS PROJECT-**

From our Monthly Report from April 3, 2017 to May31, 2017 , thePharmacy Services taken by Patients of **Cardiology**and **Nephrology** is just 43% and 31% respectively.

.  
Nephrology (2)

Cardiology (1)

|                                                       |            |            |
|-------------------------------------------------------|------------|------------|
| NUMBER OF PATIENTS MEDICINE PRESCRIBED TO             | 193        | 92         |
| PHARMACY CONVERSIONS                                  | 82         | 29         |
| <b>PHARMACY SERVICES TAKEN BY PATIENTS PERCENTAGE</b> | <b>43%</b> | <b>31%</b> |

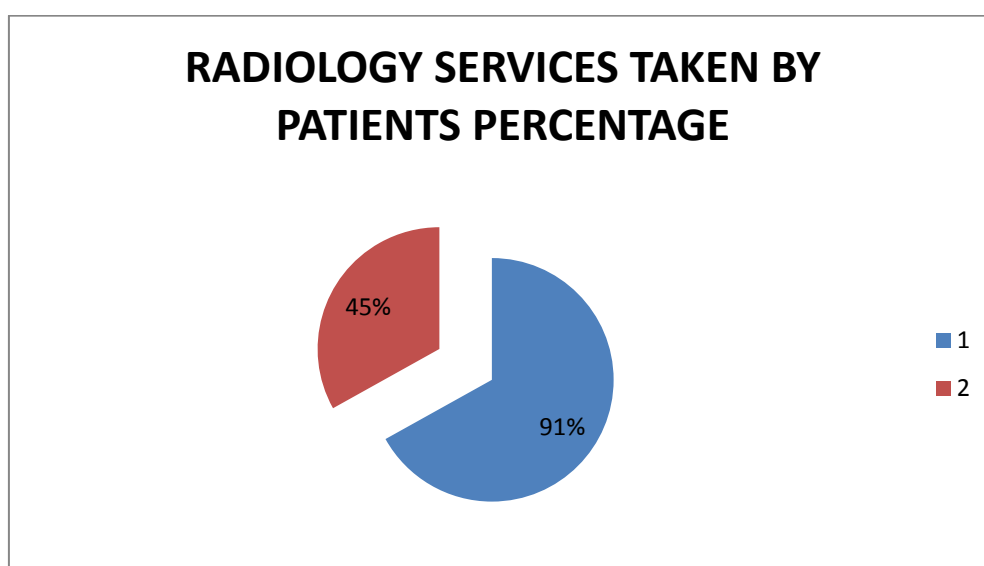


The **Radiology** services taken by patients of **Cardiology** and **Nephrology** is 91% and 45% respectively.

Cardiology (1)

Nephrology (2)

|                                                        |            |            |
|--------------------------------------------------------|------------|------------|
| NUMBER OF PATIENTS RADIOLOGY ADVISED TO                | 149        | 40         |
| NUMBER OF RADIOLOGY CONVERSIONS                        | 136        | 18         |
| <b>RADIOLOGY SERVICES TAKEN BY PATIENTS PERCENTAGE</b> | <b>91%</b> | <b>45%</b> |



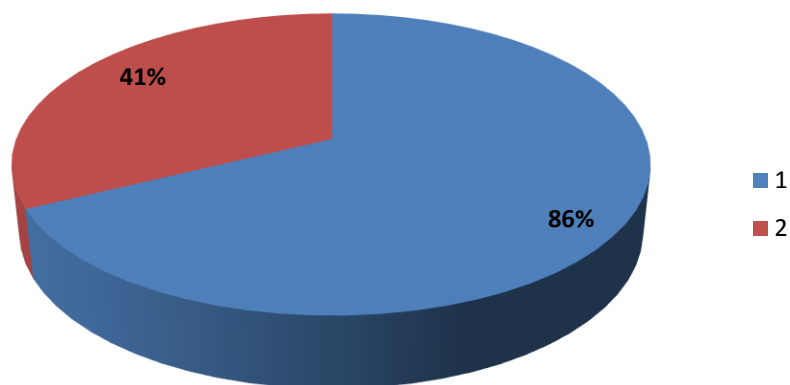
The **Pathology** services taken by patients of **Cardiology** and **Nephrology** is **86%** and **41%** respectively.

Cardiology (1)

Nephrology (2)

|                                                  |            |            |
|--------------------------------------------------|------------|------------|
| NUMBER OF PATIENTS LAB TEST ADVISED TO           | 72         | 65         |
| LAB CONVERSIONS                                  | 62         | 27         |
| <b>LAB SERVICES TAKEN BY PATIENTS PERCENTAGE</b> | <b>86%</b> | <b>41%</b> |

**LAB SERVICES TAKEN BY PATIENTS  
PERCENTAGE**



- The **reasons** for the less Pharmacy services taken by patients are - :
- On the whole the Cardiac patients have long term diseases that lead to nearly life time medication that are a bit costly so patients prefer taking medication from outside chemists where they get medications cheaper along with discounts.

- No doubt, MAX also gives discount of 10% (loyal customer discount) but it is only valid if the patient purchases medicines costing above Rs.3000 on subsequent billing.
- Nowadays, awareness of generic medicines is so high among patients that they prefer purchasing the same which is not available in our hospital's pharmacy.
- The tests done here are comparatively costlier than the nearby labs available. So, the patients prefer getting themselves tested there itself. So, if he or she is going out he gets various advices from the technicians available in the lab to get their medicines from the cheaper sources available outside.
- In Nephrology, the number of medicines prescribed to the patient is too high that it creates a big hole in their pockets, due to which they prefer taking medications from outside chemists where they get their medicines at lower rates.
- Mostly the Nephro patients have long term medication procedure that too a bit costly so patients prefer taking medication from outside chemists where they get medications cheaper along with discounts.

➤ The **reasons** for the less **Radiology services taken by Nephrology** Patients are -:

- The tests done here are comparatively costlier than the nearby labs available. So, the patients prefer getting themselves tested there itself.

➤ The **Reasons** for the less **Pathology** services taken by **Nephrology** Patients are -:

- The tests done here are comparatively costlier than the nearby labs available. So, the patients prefer getting themselves tested there itself.

### **Author's Opinion-**

- Pharmacy should provide some incentives on billing above Rs. 3000 like – instead of giving them 10% discount they should provide them with 20% off on next consultation (for Cardio Patients) and urine test free (for Nephro Patients) that is

strategically more attractive. This offer should be displayed at the front office so that the patient gets to know about this offer easily.

- Coordinators should convince the patient to purchase medicines from hospital's pharmacy by telling them this offer.
- Coordinators must convince them the technology available here is upgraded than the labs available outside the hospital

## **PROJECT 2**

### **PROJECT ON AUDITING OF BLOOD TRANSFUSION**

#### **INTRODUCTION:**

Blood transfusion is still an important procedure in modern medical practice despite efforts to avoid it. This is due to its association with infections especially HIV. It is therefore necessary to have proper quality control of its production, storage and usage. A way of controlling usage is to do regular clinical audit. To effect this, there has to be an agreed standard for appropriate use of blood.

#### **AIM:**

The aim of this project is to briefly highlight the importance of audit and to observe whether standard use of blood and its component is being followed or not.

#### **Objective:**

- The objective of the study was to see the percentage of blood type transfused and if it follows the standard percentage.
- To see the percentage of cases with nursing blood transfusing notes.
- To see the percentage of cases with adverse reaction during blood transfusion.

#### **SAMPLING:**

The total number of patients picked was 673, which were taken from April month of issue register.

#### **DATA SOURCE:**

Blood transfusion issue register.

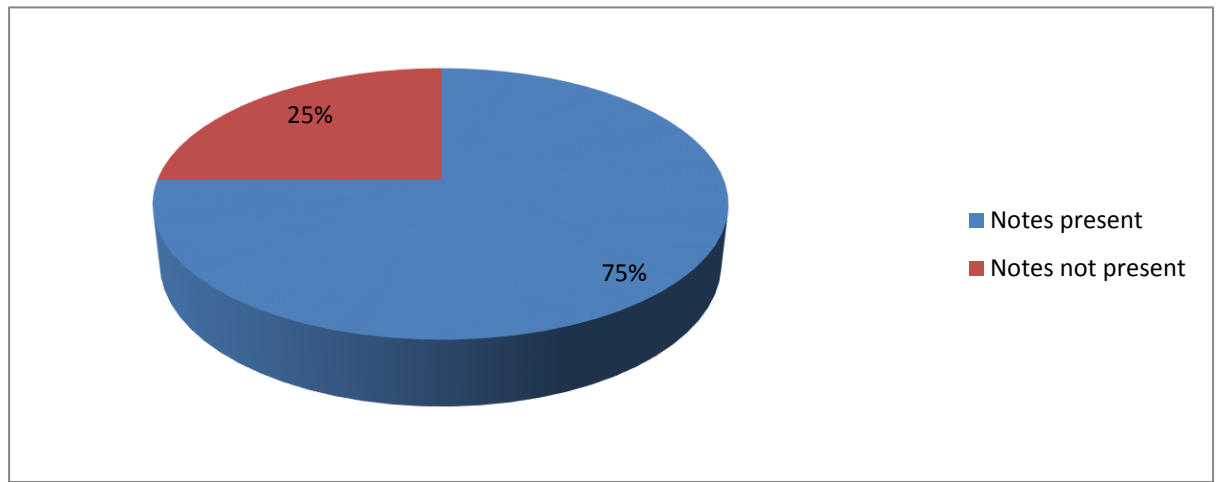
#### **DATA MODULE:**

CPRS

#### **PARAMETERS USED:**

- Name of the patient
- Date of blood transfusion
- Component transfused
- Indication of transfusion.
- Availability of nursing notes.
- Adverse reactions occurred during transfusion.

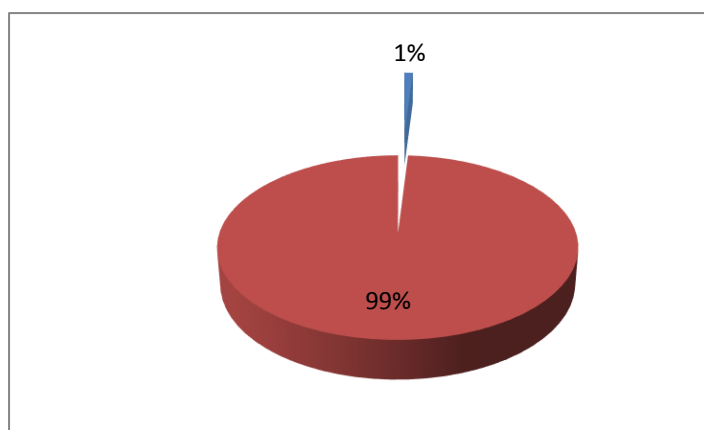
**OBSERVATIONS:**



Percentage of cases with nursing BT notes      506/ 673      **75 %**

Percentage of cases with transfusion reaction      8/67      **1 %**

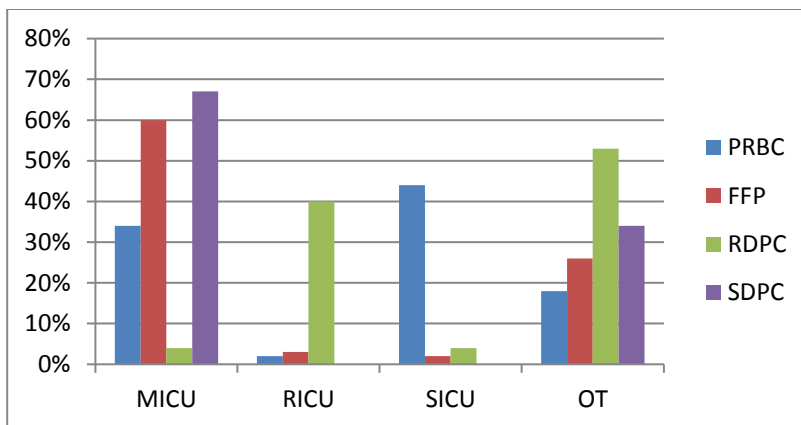
|                       |      |
|-----------------------|------|
| Reaction occurred     | 1 %  |
| Reaction not occurred | 99 % |



Percentage of cases with consultant orders in CPRS      599/ 673      **88 %**

### Percentage of blood type transfused

|      | MICU | RICU | SICU | OT  |
|------|------|------|------|-----|
| PRBC | 34%  | 2%   | 44%  | 18% |
| FFP  | 60%  | 3%   | 2%   | 26% |
| RDPC | 4%   | 40%  | 4%   | 53% |
| SDPC | 67%  | 0%   | 0%   | 34% |



|             |         |     |
|-------------|---------|-----|
| <b>PRBC</b> | 457/673 | 68% |
| <b>SDPC</b> | 19/673  | 3%  |
| <b>FFP</b>  | 109/673 | 16% |
| <b>RDPC</b> | 89/673  | 13% |

