

**Summer Training at
Asian Institute of Medical Sciences, Faridabad
(April - June, 2013)**

**1. IPD Process Mapping and Gap Analysis and Suggesting Recommendations.
2. Turn Around Time of Discharge Process.**

**By
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**Under the guidance of
Mr. Saumitra Joshi**

**Post Graduate Diploma in Hospital and Health Management
2012-2014**



**Institute of Health Management Research,
Jaipur
2013**

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CERTIFICATE

This is to certify that Dr.NEHA MAKKER student of the 17th batch of the Post Graduate Diploma In Hospital and Health Management (PGDHM) at Institute of Health Management Research, Jaipur, underwent the summer internship at Asian Institute Of Medical Sciences, Faridabad from April 8th 2013 to June 8th 2013 and performed studies on

- IPD process mapping and gap analysis and suggesting recommendations.
- Turn around time of discharge process.

The candidate successfully carried out the study assigned to her during summer training and her approach to the study was sincere, scientific and analytical.

We wish her success in all her future endeavours.

Dr Ashok Kaushik
Dean(Academics and Student Affairs)
IIHMR,Jaipur

Mr.Saumitra Joshi
Asst.Prof and Student Counsellor
IIHMR,Jaipur

ABOUT SUMMER TRAINING

The Post Graduate Diploma in Hospital and Health Management (PGDHM)of Institute of Health management and Research aims at preparing professionally trained managers of health care organizations and hospitals to meet the increasing need for managerial skills .

It involves a eight week summer placement for the first year students to provide them with a firsthand experience of the hospital system or environment.

As a part of this programme ,I had the privelage to undergo my practical training at ASIAN INSTITUE OF MEDICAL SCIENCES,faridabad to get a firsthand knowledge and experience about the functioning of the hospital.I worked in the hospital from april 8-june 8, 2013.

OBJECTIVE:

1. To understand and learn day to day operational management of a Hospital and its service centres,
2. To study identified issues/ problems associated with some specific operational area / programme.
3. Work on the specific issue/ project work assigned by the hospital management.

ACKNOWLEDGEMENT-

Apart from our efforts, the success of any project depends largely on the encouragement and guidelines of many others. I take this opportunity to acknowledge and extend my heartfelt gratitude to the following persons who have made the completion of this project possible:

First and foremost, I would like to thank my mentor Mr.Saumitra Joshi ; special thank to Dr. Ashok Kaushik for the valuable support and guidance at every point of the project work.

Then I would like to thank to Mr .Vivek Menon , Head HR ,and to Dr.Umakant for the valuable guidance and advice. He inspired me greatly to work in this project. His willingness to motivate me contributed tremendously to our project.

I wish to express my deep sense of gratitude to my Internal Guides, Mr.Pradeep Sharma , Ms. Deepali Parihar ,Mr.Eldose and al employees of general ward for their able guidance and useful suggestions, which helped me in completing the project work, in time.

Finally, yet importantly, I would like to express my heartfelt thanks to my beloved parents for their blessings, my friends/classmates for their help and wishes for the successful completion of this project, and to God, who made all things possible.

These two months 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 organization.

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ABBREVIATIONS:

AIMS	Asian institute of medical sciences
IPD	Inpatient department
OT	Operation theatre
HMIS	Hospital management information system
NABH	National accreditation Board for hospital and Healthcare Providers
MRD	Medical record department
PAC	Pre-Anesthetic Check-up
TPA	Third party administrator
CGHS	Central government health scheme
ICU	Intensive care unit
MLC	Medico legal cases
PET	Positron emission tomography
CT	Computerized tomography

SECTION- A
OBSERVATIONAL LEARNING

INTRODUCTION TO ORGANIZATION

Asian Institute of Medical Sciences is the vision and dream of renowned surgeon, Dr. Narendra Kumar Pandey,.

AIMS is a 350 bed Super specialty tertiary care hospital, A eight story building located centrally in Sector 21A, Faridabad in the National Capital Region, and close to New Delhi International airport, New Delhi Railway station and New Delhi Interstate bus terminus.

AIMS has shown exceptional levels of healthcare quality and have achieved CGHS and NABH accreditation for its super speciality services.

The Asian hospital provides preventive, diagnostic, therapeutic, rehabilitative, palliative and support services under one roof and is designed to meet patient care and research requirements of the new millennium.

AIMS has a comprehensive Super Speciality tertiary care facilities .The facility is planned with international quality specifications and equipped with state of the art equipment in all specialties. The institute with 11 operation theatres, 80 critical care beds, high- end diagnostics, therapeutic and preventive health facilities, is set to become a preferred destination for quality healthcare services.

The AIMS has in house comprehensive Laboratory and Radiology Services. AIMS has advanced Tri with Rapid Arc-IGRT & IMRT Linear Accelerator, MRI for whole body Imaging, Angiography & spectroscopy. Special facilities for Breast, Abdomen, Joints, Spine and Brain, Elastography for Non Operative cancer Diagnosis, PET/CT for whole body Imaging and Angiography, Multi-slice CT Scanner with 3D Reconstruction and many more along with complete range of Computed Conventional Radiography, Special procedures and Investigations.

AIMS offers state-of-the-art facilities in Orthopedics, General Surgery, Nephrology, Endocrinology, Gastroenterology, General Medicine, Gynaecology, Pediatrics, Laboratory Medicine, Neurology, Ophthalmology, Radiology, Respiratory Medicine, Urology among other specialities.

AIMS endeavours to provide accessible, affordable and best available healthcare to people.

ASIAN CENTRE OF EXCELLENCE

- Asian Cancer Centre
- Asian Heart Centre
- Asian Centre For Advanced Surgery
- Asian Centre For Mother And Child
- Asian Centre For Neurology & Neurosurgery
- Asian Centre For Renal Diseases
- Asian Centre For Bone & Joints
- Asian Centre For Imaging & Advanced Imaging
- Asian Centre For Bariatric & Metabolic Surgery
- Asian Centre For Gastroenterology
- Asian Centre For Cosmetic Surgery & Medicine

VISION-

To be the most trusted healthcare partner FOR PEOPLE through our unsurpassed quality and care and by striving to provide ACCESSIBLE, AFFORDABLE and BEST AVAILABLE healthcare services in India.

OUR MOTTO-

“will to serve. Skill to cure”

OUR VALUE-

- Focus on patient and patient care
- To provide extraordinary customer satisfaction
- Treating all people with respect and dignity
- Acting always with utmost integrity
- Creating value for the society we live in
- Service with empathy and compassion
- Teamwork-partnering for success

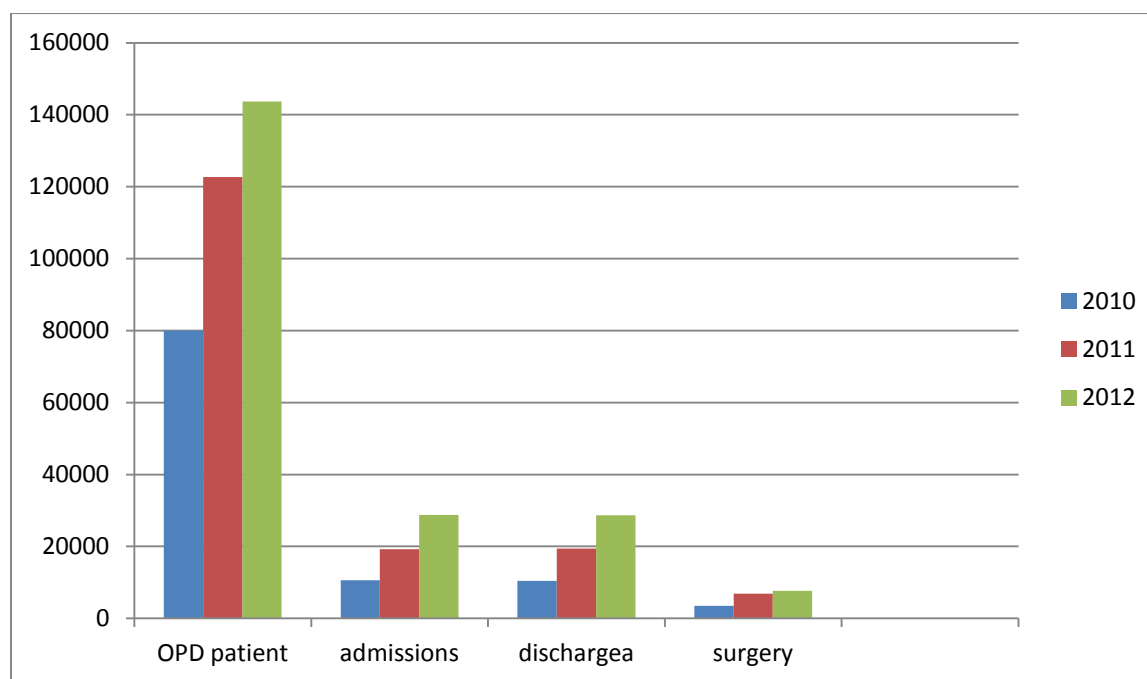
QUALITY POLICY

“To create a safe patient centric healthcare delivery system which is accessible and affordable.”

ANNUAL WORKLOAD OF ASIAN INSTITUTE OF MEDICAL SCIENCES

DESCRIPTION	2010	2011	2012
Scheduled bed	287	320	330
Total OPD patients	79955	122653	143717
Daily average OPD attendance	219.05	336.03	393.74
Number of deaths			
-IPD	209	373	386
-Emergency	7	18	2

FLOW OF PATIENTS IN 2010-2011-2012



PERFORMANCE INDICATORS;

1)AVERAGE LENGTH OF STAY(ALOS):

= Total inpatient days/Total admissions

2)BED TURN OVER RATE:

= Total admissions/Total authorized beds

3)AVERAGE DAILY OPD ATTENDANCE:

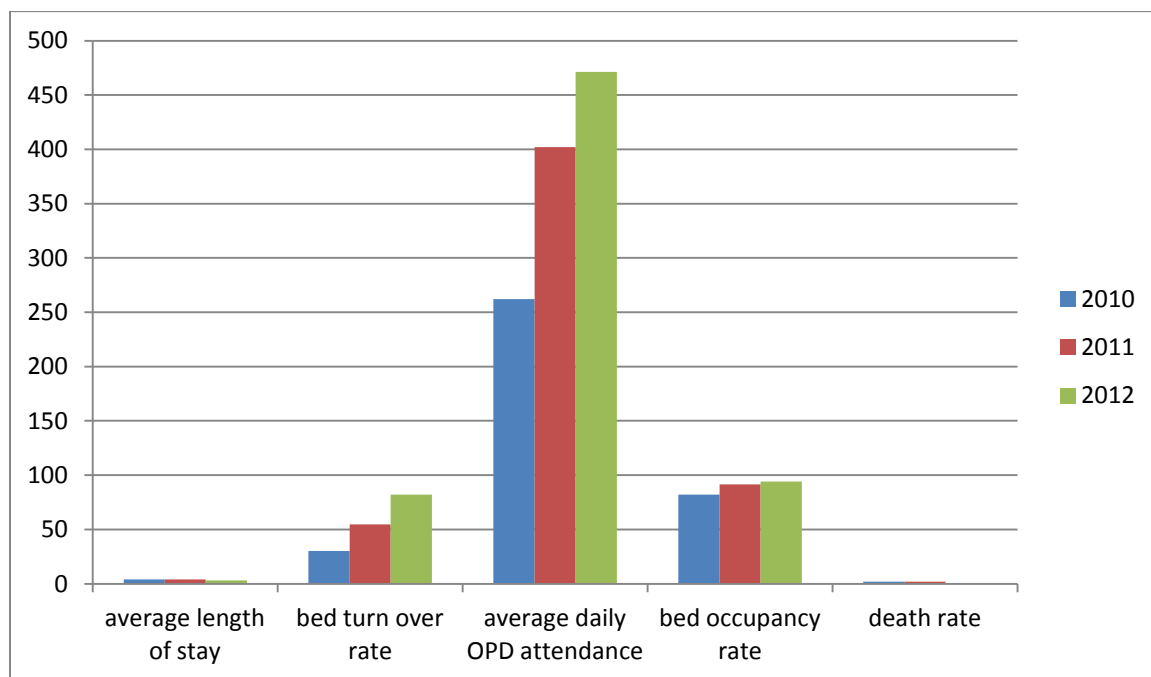
= Number of beds occupied/Number of available beds*100

4)BED OCCUPANCY RATE:

= Number of beds occupied/Number of available beds*100

5)DEATH RATE:

= Number of deaths in a period/Total number of admissions *100



INTENSIVE CARE UNIT-

LOCATION :

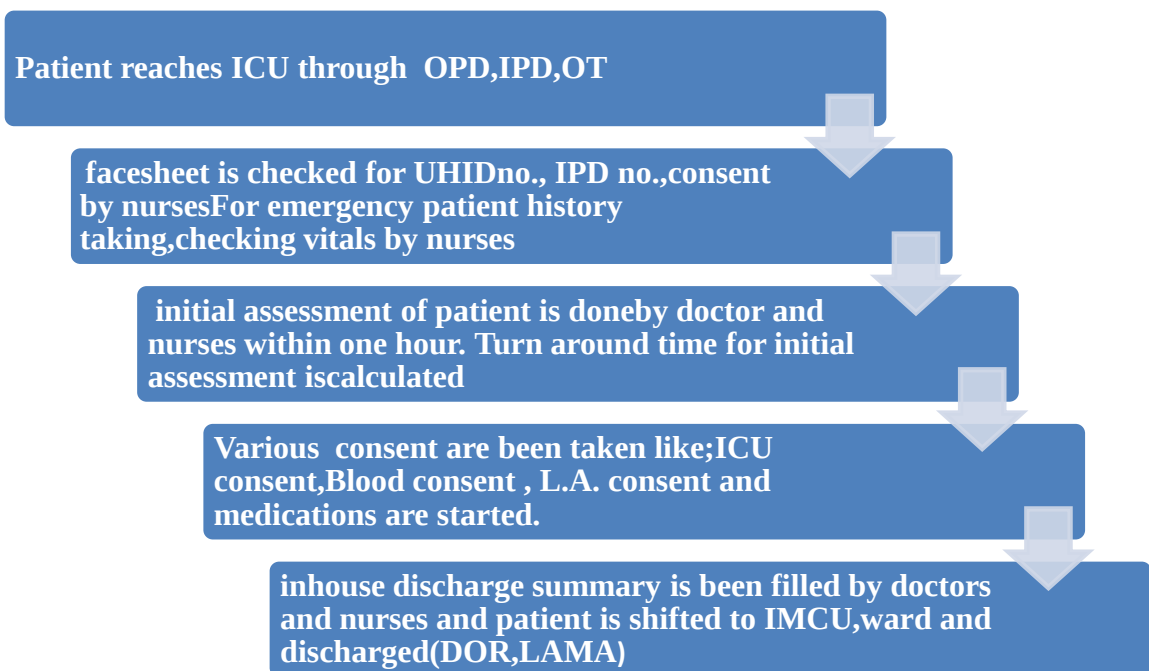
ICU is located on third floor

It include IMCU ,ICU and CTVS.

FEATURES;

- ICU is 18 bedded (no isolation room)
- IMCU is 16 bedded(including two isolation rooms)
- CTVS is 5 bedded
- It's a mixed pattern ICU-having patients from all department
- Monitoring of patient is been done in ICU
- Observation of patient is done in IMC
- All beds are separated by curtains
- Nursing station is present in centre-to allow visual contact of all patients.
- Open system of ICU is been followed.

WORK FLOW



EQUIPMENTS –

Various equipments present in ICU,IMCU,CTVS are;

- ☐ ECG machine
- ☐ Defibrillator
- ☐ Infusion pumps
- ☐ Cardio plus
- ☐ Nebulisation machines
- ☐ ventilator
- ☐ Cardiac monitors
- ☐ Syringe pumps
- ☐ oxygen humidifier

CHARGES-

Rs 7500/day-for ICU

Rs 5000/day-for IMCU

CTVS services-comes in form of packages for different treatments.

PATIENT:NURSE ratio

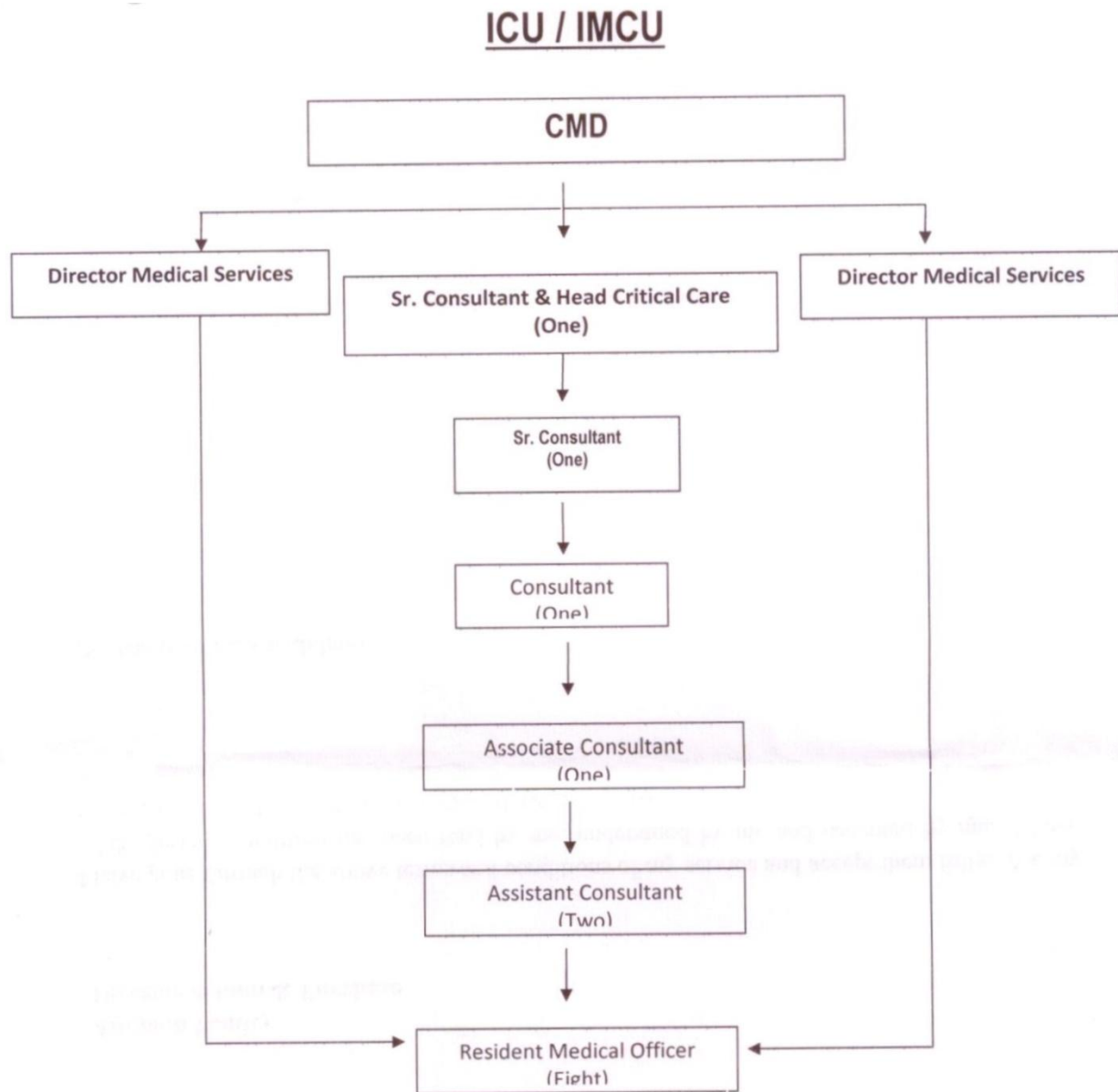
1:1(ICU)

1:2(IMCU)

1:1(CTVS-for ventilated patients)

1:2(CTVS-for non ventilated patients)

HR STRUCTURE-



CATH LAB AND CRITICAL CARE UNIT

PROCEDURES PERFORMED;

angiography

- coronary angiography
- peripheral angiography

angioplasty

- stenting

pacemaker

- single,dual,bi-ventricular
- ICD,combo

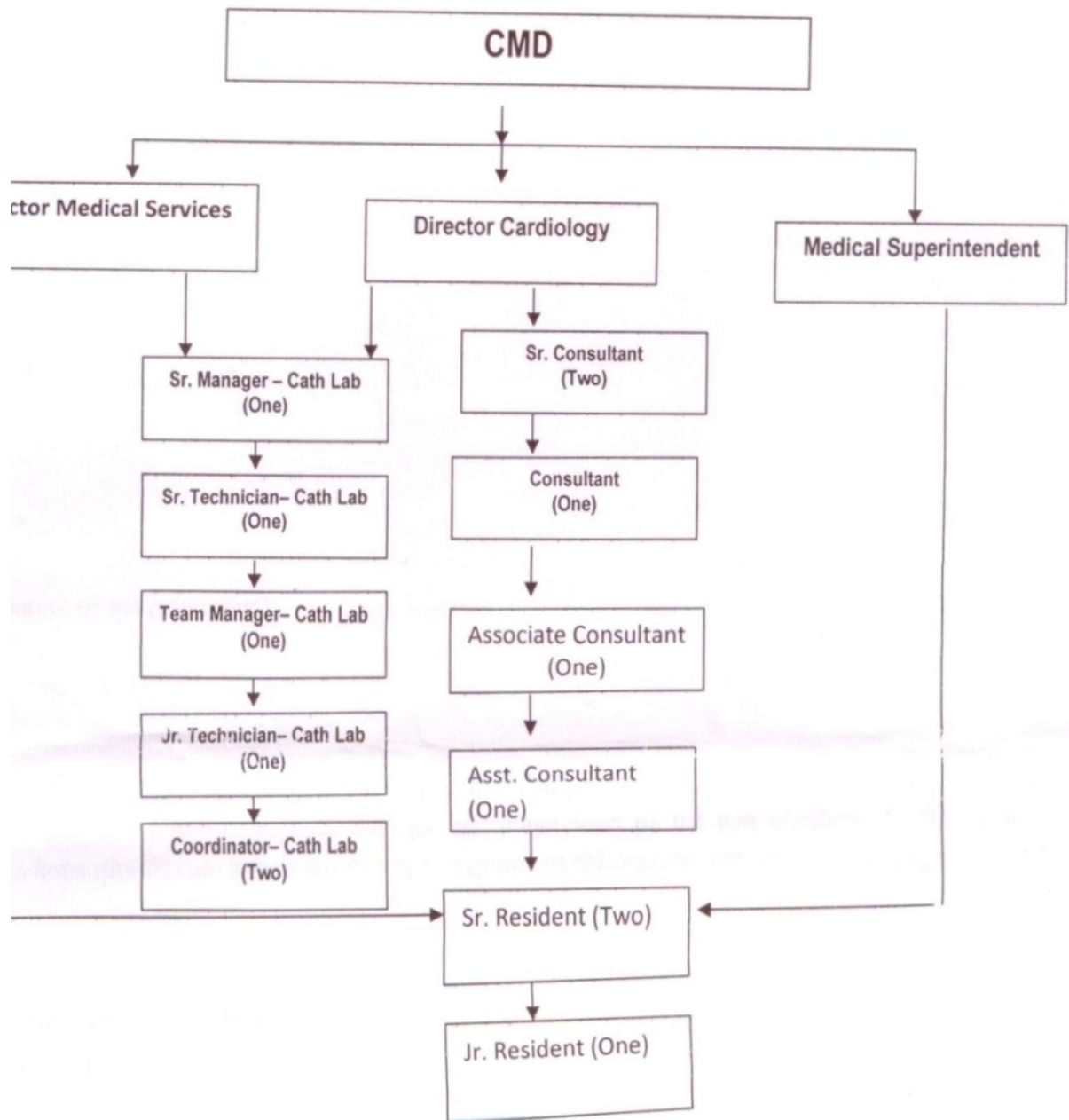
ballooning mitral valve

VOLUME;

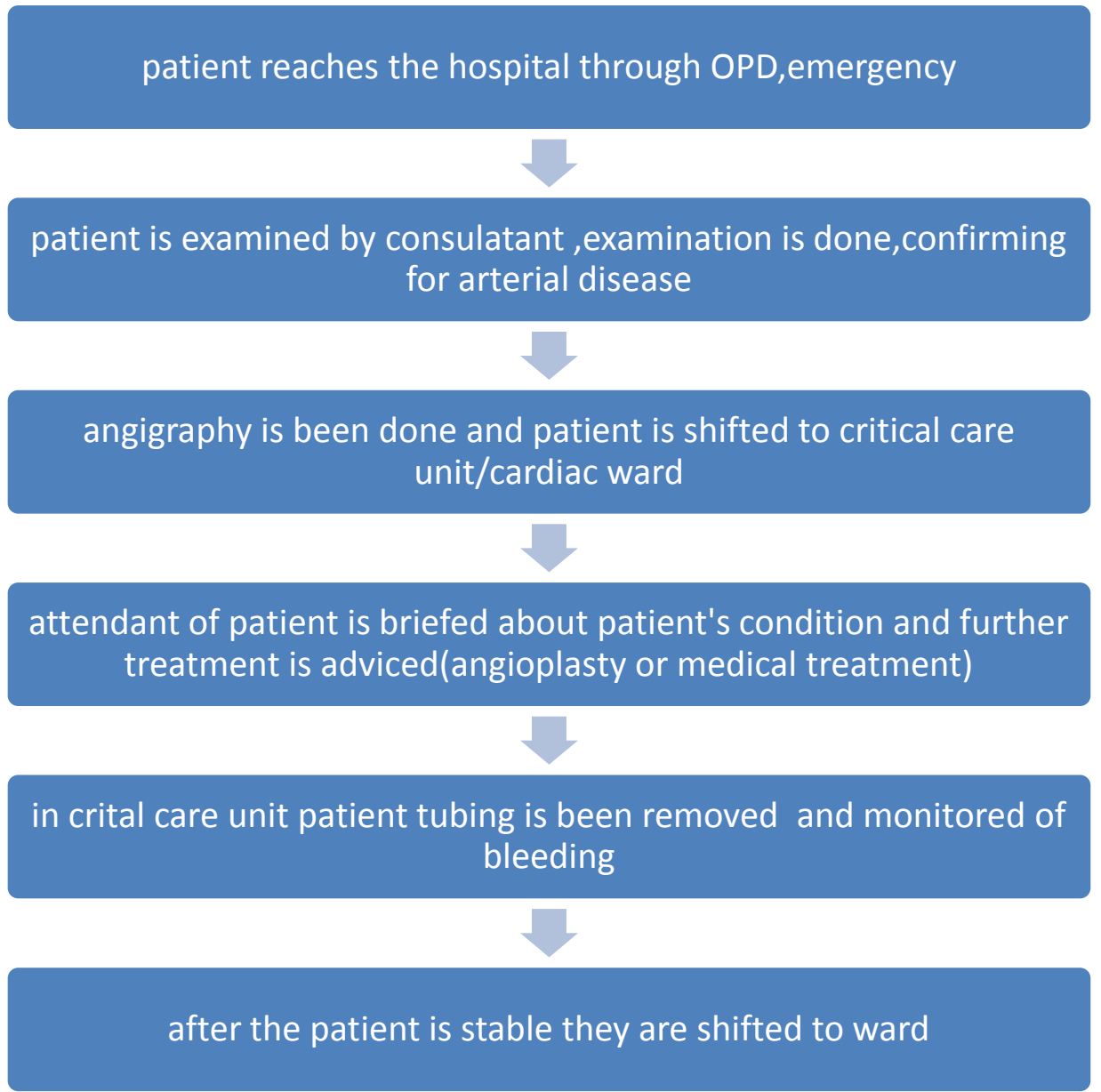
100-125 angiography per month.

HR STRUCTURE;

CARDIOLOGY



WORK FLOW-



CARDIAC CARE UNIT

FEATURES

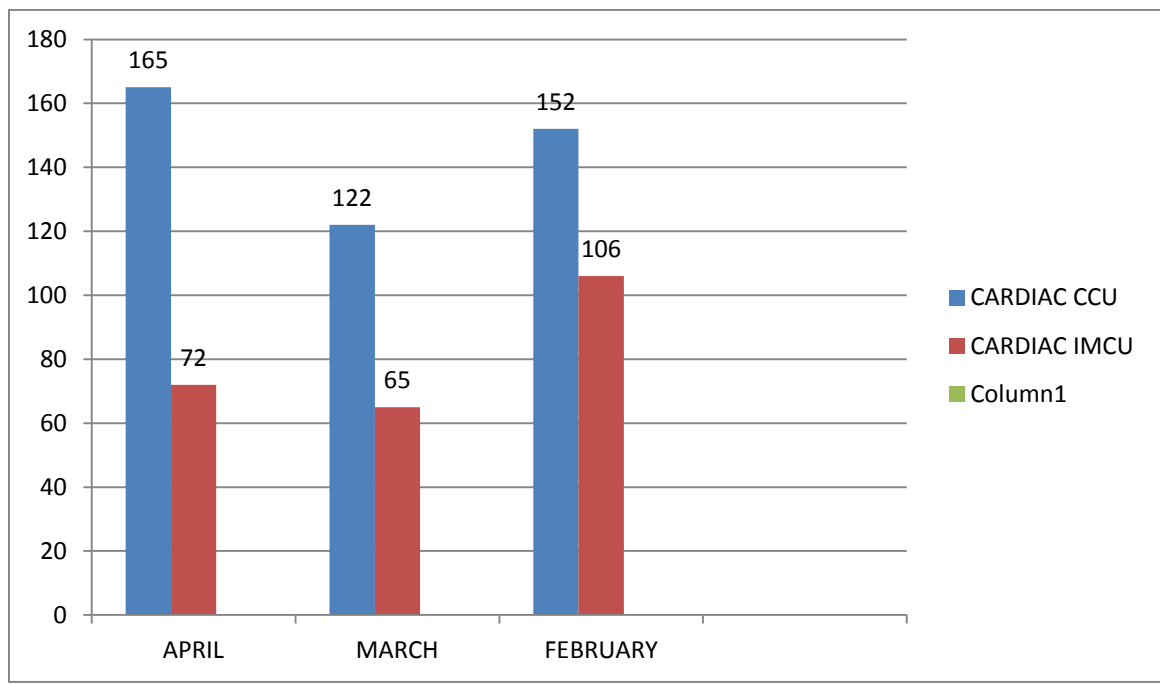
- 14 bedded(8 cardiac beds +6 cardiac IMCU beds)
- Includes cardiac patients(from CTVS) and day-care patients (angiography)

PATIENT:NURSE RATIO

1:1(for ventilated patient)

1:3(for non-ventilated patients)

ADMISSIONS IN CCU;



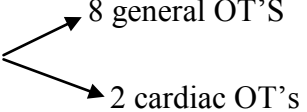
On an average 4-5 patients are admitted per day

OPERATION THEATRE-

LOCATION;

Operation theatre is located on third floor

FEATURES;

AIMS has 10 operation theatre's 

Various operation theatre are classified as:

OT 1- infected cases /local anaesthesia OT

OT 2- urology and plastic surgery OT

OT 3- gynaecology OT

OT 4- orthopaedics OT

OT 5- replacement OT

OT 6- ophthalmology OT

OT 7- neurosurgery/replacement OT

OT 8-general surgery OT

OT 9-cardiac OT-1

OT 10- cardiac OT -2

ALSO INCLUDE ;

- 1) Sterile area-consisting of
 - Linen
 - Instruments
 - Sterile drum water
- 2) Dirty utility area
- 3) General store area
- 4) For cardiac OT separate-
 - Sterile unit area
 - Storage area
- 5) pre-operational area/patient hold area
 - Consist of ten beds
 - Patients are checked for their vital parameters
- 6) Post –operational area/recovery area
 - Consist of six beds

- After surgery patient is been kept in recovery room for 1-3 hrs till the patient recovers.

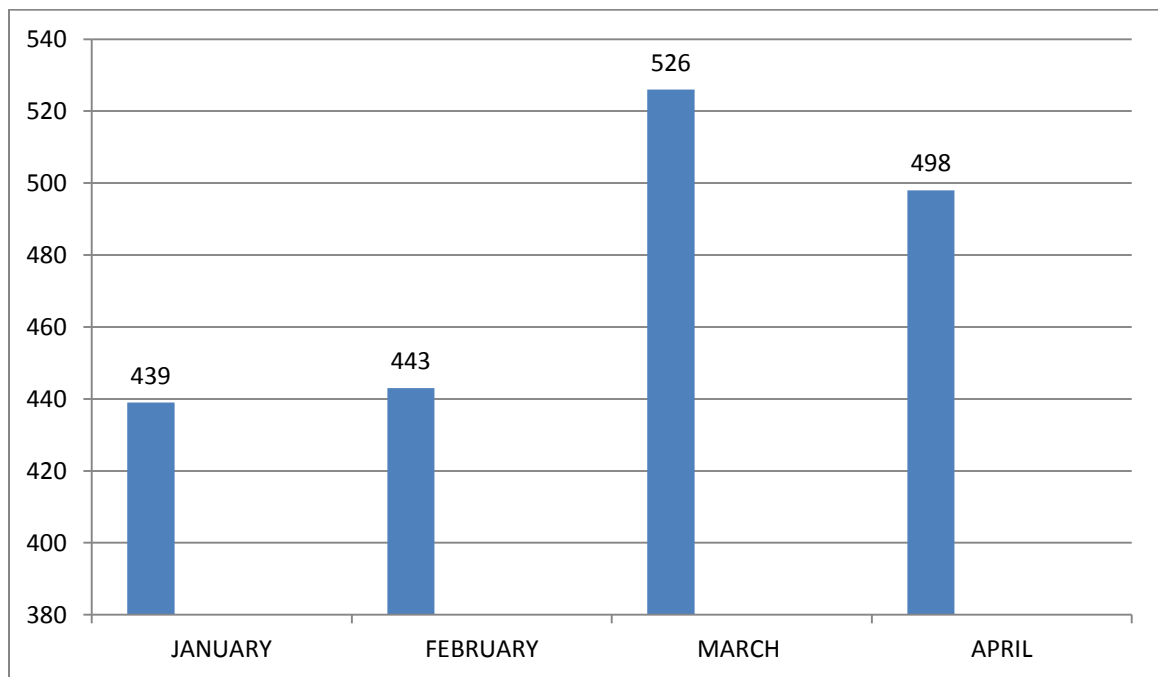
HEPA filters;

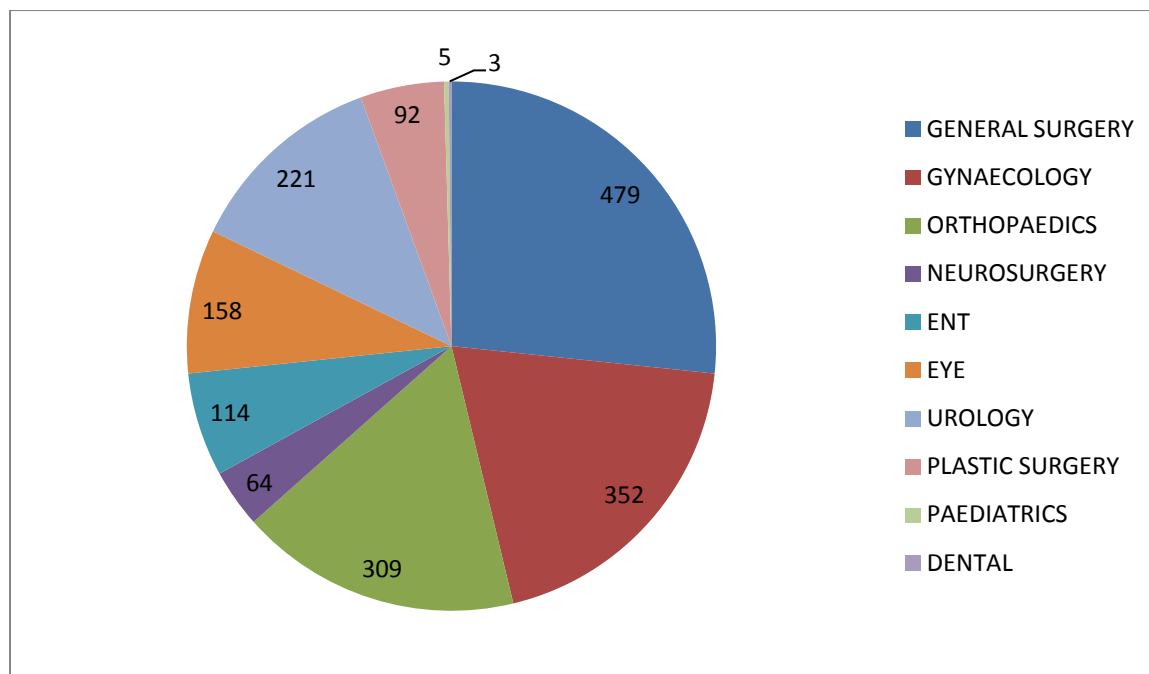
- Present in all 10 operation theatre
- Prevents outside impure air to enter inside OT

AIR CONDITIONING AND HUMIDITY;

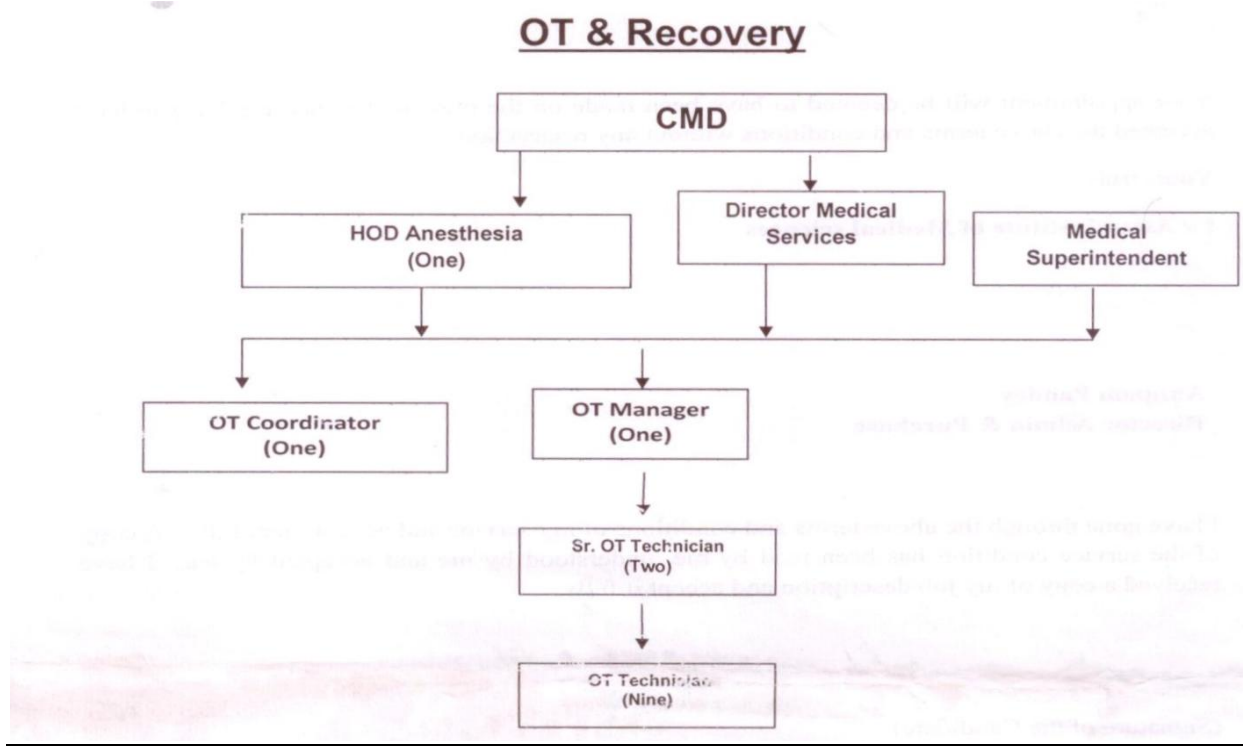
- All the OT's are centrally air conditioned.
- 40-55% humidity is maintained in side OT.

ADMISSION STATISTICS 2013

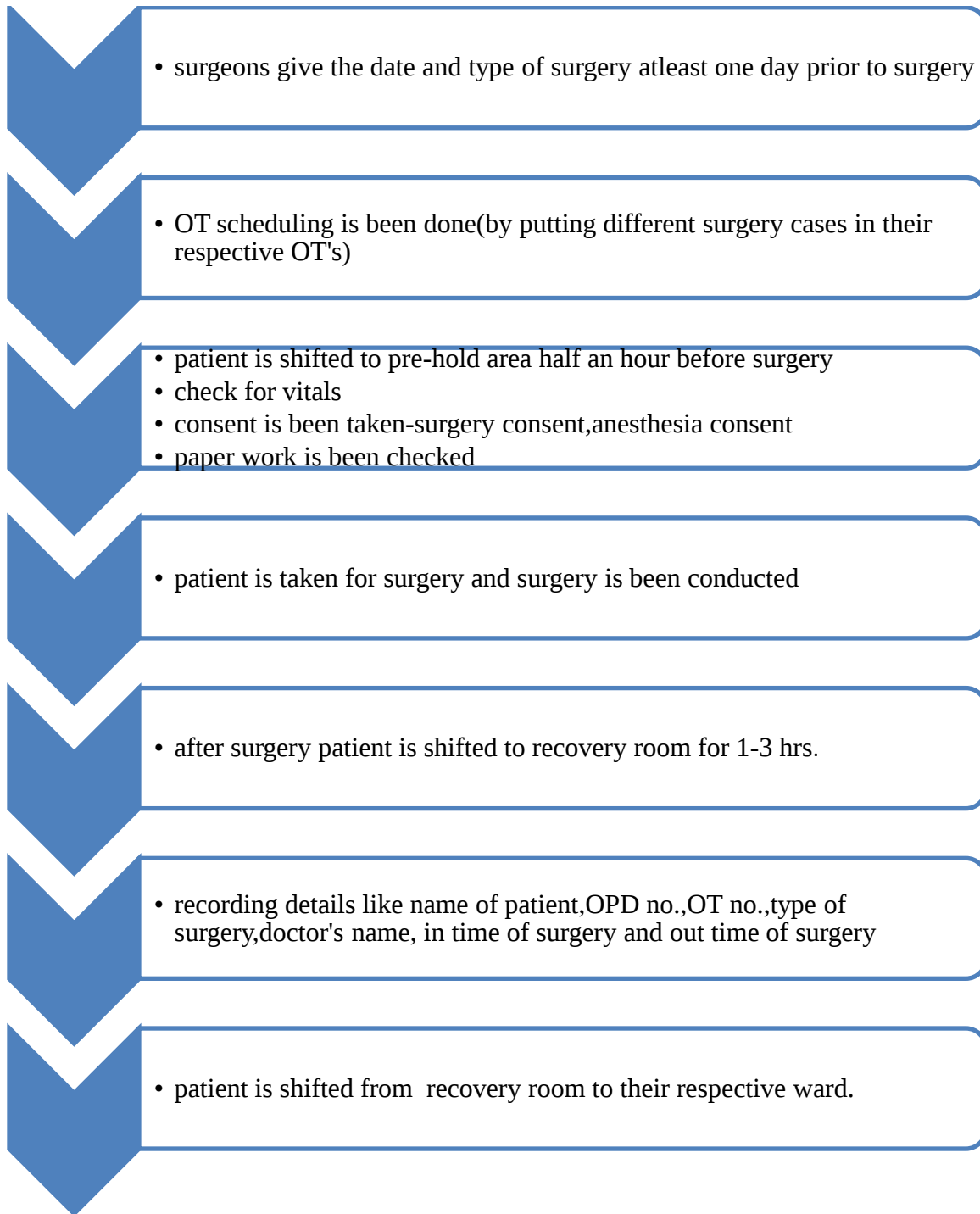




ORGANOGRAM-



WORK FLOW-



BILLING-

- A list of all consumables is present-consumption sheet
- Sister ticks the equipments been used during the surgery in consumption sheet
- All the consumables used are entered into the system and bill is been generated.

TAKING SUPPLIES-

- All the supplies required for surgery are been indented three days prior to surgery.
- implant,lenses,etc. is been taken one day prior to surgery from company and billing is been done via stores
- unused material is send back to company.

SENDING BIOPSIES-

Biopsy form is been collected and filled.

Biopsy is been done and stored in formalin.

In half an hour(maximum 4 hrs) biopsy is sent to histopathology lab

CLEANING AND FUMIGATION-

Cleaning of OT is been done every day and after each surgery.

FUMIGATION-

- OT -1,2,3,8- fumigated on Saturday
- OT- 4,5,6,7-fumigatedon Sunday
- Fumigation is done by-1%virion
- Fumigation is done by fumigator for 20 minutes
OT is ready for use after 2 hrs of fumigation

MEDICAL RECORD DEPARTMENT

WORK FLOW PROCESS-



REPORT SEND BY HOSPITAL TO GOVERNMENT-

1. Communicable diseases report(OPD cases,IPD cases,death cases)
2. Delivery report
3. PNDT report
4. MTP report
5. Immunization report
6. Polio and measles report

OTHER WORK DONE BY MEDICAL RECORD DEPARTMENT

1. Death statistics
2. Doctor statistics
3. Monthly statistics
4. Dealing with claims of LIC forms
5. Summoning

DURATION OF RECORD KEEPING-

OPD cards-1 year

Ordinary IPD cards-5 years

Medico-legal cases IPD cards-10 years

Death cases cards-10 years

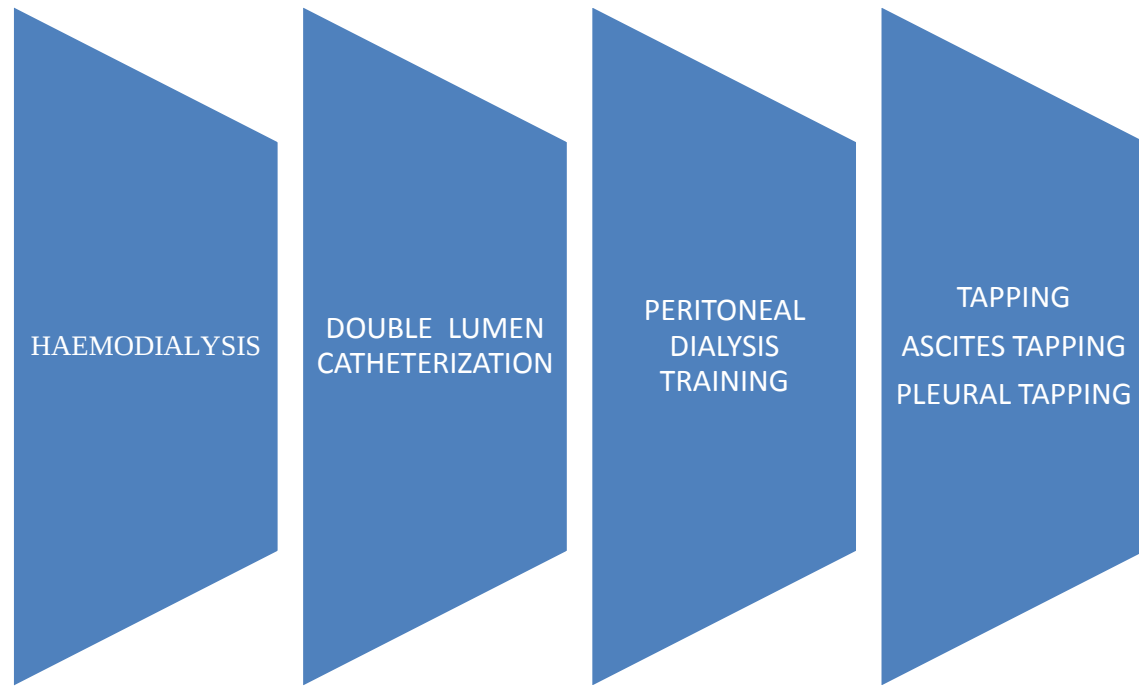
RETREIVAL POLICY-

If any patient file has to be retrieved then following details are required

- ☐ UHID number
- ☐ Name of patient
- ☐ Date of admission
- ☐ Father's name.

DIALYSIS

PROCEDURES PERFORMED-



EQUIPMENTS-

21 dialysis machine-all fully movable

It include one dialysis machine which is dedicated to critical care unit.

DAILY VOLUME-

60-70 dialysis per day

(a single patient requires 2-3 appointments per week) .

TARIFF-

OPD cases- Rs 1400 +Costing of dialyser i.e. Rs 900

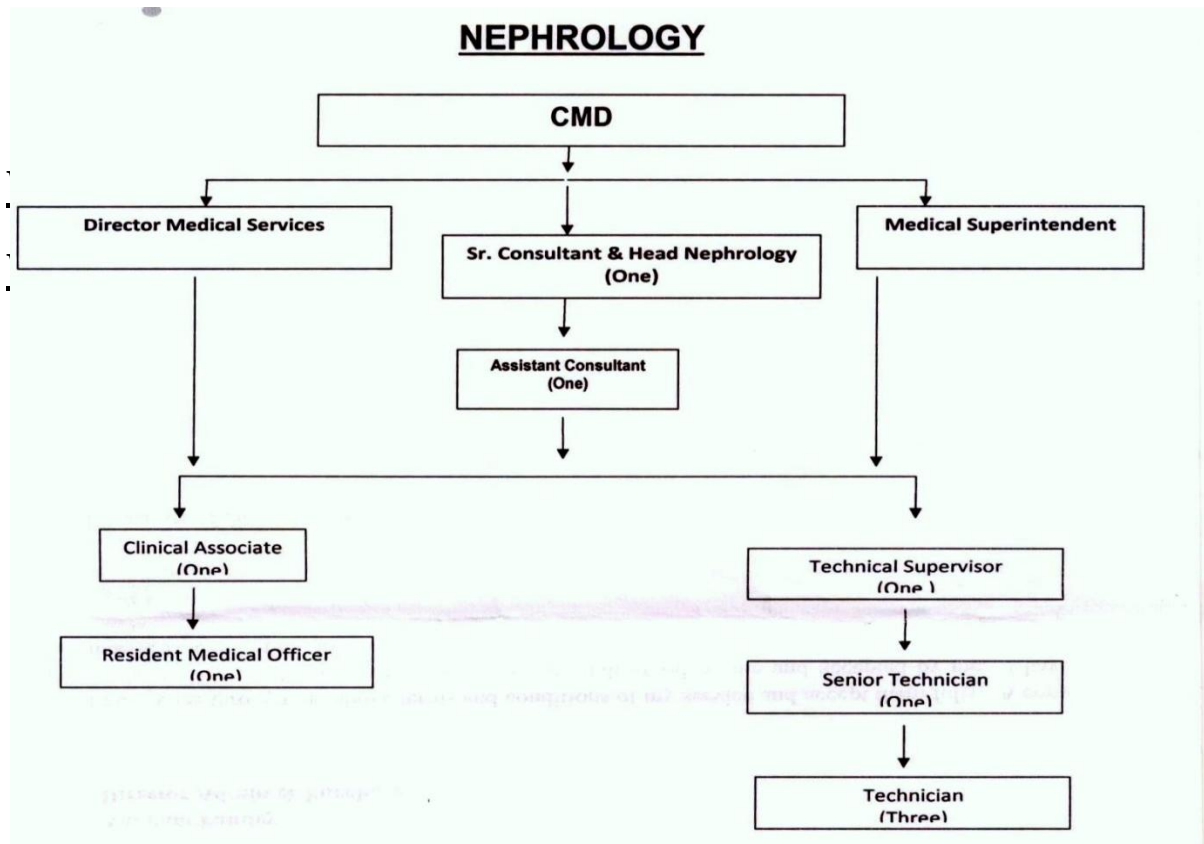
ICU cases(critical care unit)-Rs 3000 per sitting

MEDICINE-

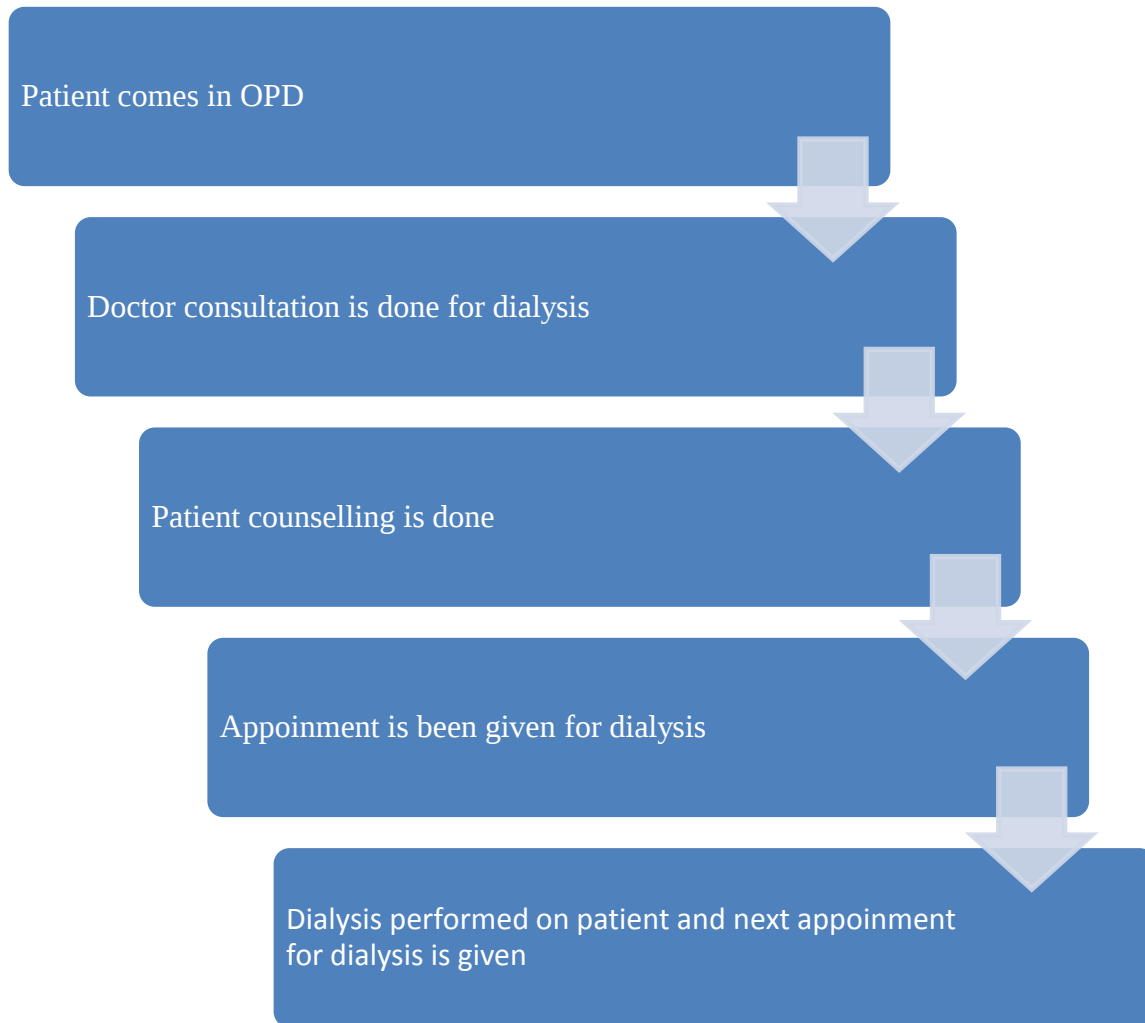
Three weeks medicine are indented and kept in department.

Example- Dialyser ,Syringes ,Heparin ,IV sets.

ORGANOGRAM



WORK FLOW-



LAUNDRY-

EQUIPMENT USED-

EQUIPMENTS	QUANTITY
Washing machine(50 kg)	2
Hydro extractor(25 kg)	2
Steamer	4
Dryer	2
Flat work ironer(calendar)	1
Flat body press	1

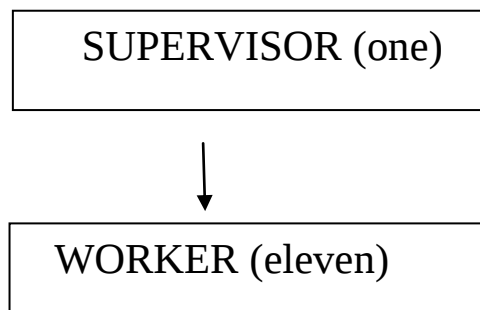
DAILY WORK LOAD-

3500-4000 pcs per day

It includes-

- Bedsheet
- Blanket
- Kurta pajama(patient ,doctor)
- Hand towels
- Pillow cover

HIEARCHY-



WORK FLOW-

collection of linen is been done

segregation of linen is done into

- infected linen
- soiled linen
- normal linen

washing of linen

- hydroextraction of linen
- drying of linen in dryer
- ironing of linen

storing of linen

folding of linen
distribution of linen

FOOD AND BEVERAGES-

WORK FLOW-

Dietary chart is been recieved in mid night for next day.

Three copies are there,given respectively to;

nurse

dietician

food and beverages department

One copy of dietary chartis given to dietician.

Summary of dietary chart is been prepared

Food is been prepared

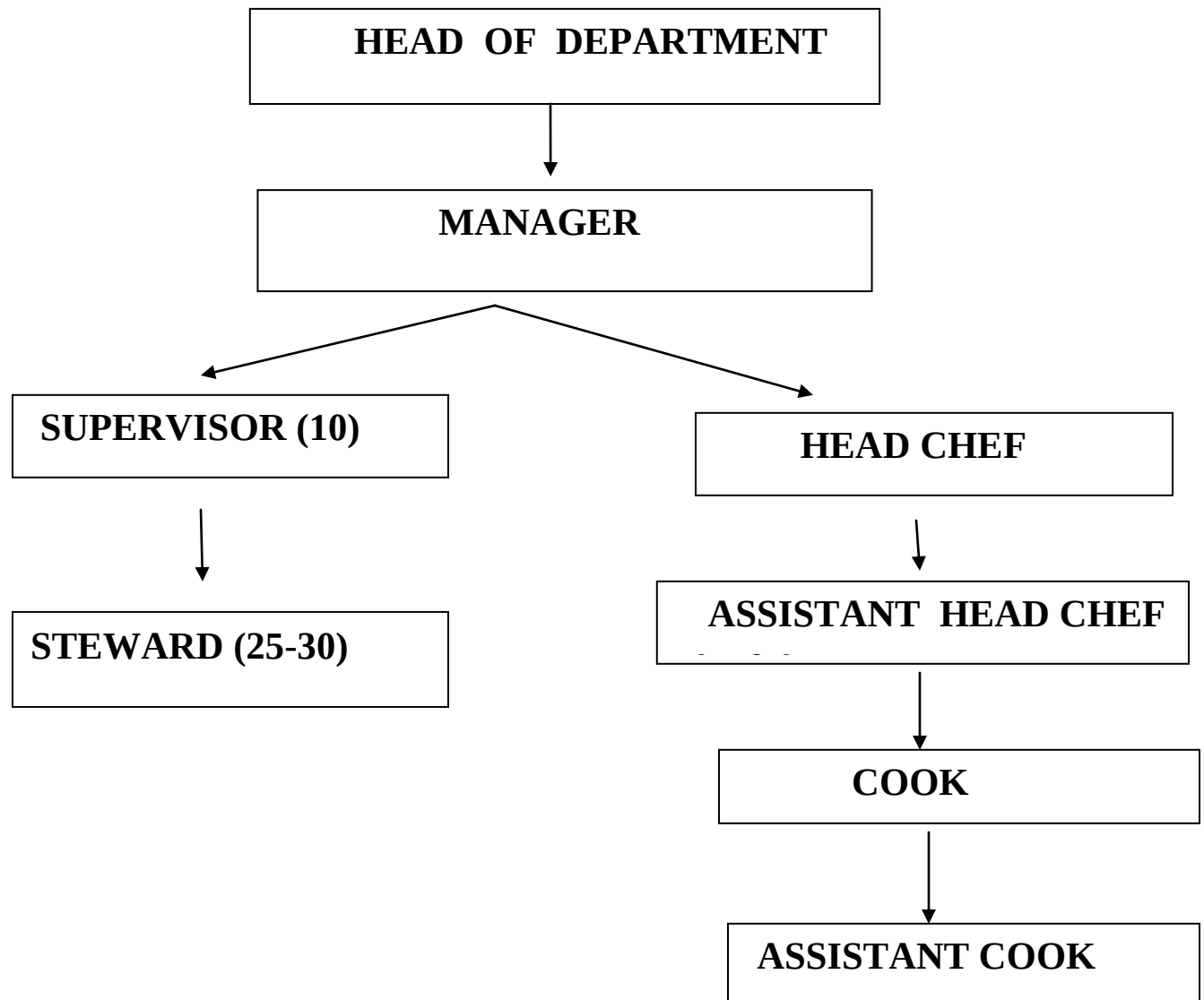
Food is packed in supervision of dietician and F and B supervisor in hot food trolley

Food is served to patient by steward by Room Service Order Taken Area.

Food trolley is received at Room Service Order Given Area.

Washing of food trolley is been done

ORGANOGRAM-



PHARMACY-

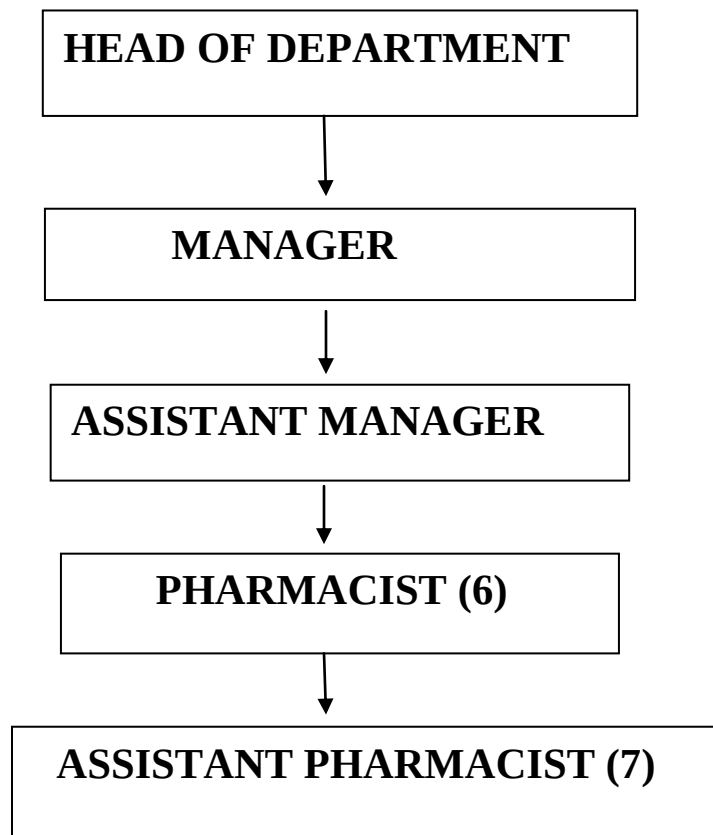
FEATURES-

- Narcotic drugs-
 - Kept in double-lock system
 - 4000 expired ampules per year
 - Issuing of drugs on request of form submitted by doctor
- Inventory- 70 to 80 lakhs
- Navigen software is been used-since april 2012
- Expired drugs-discarded three months before expiry ,to vendor

NRGP-Non Return Gate Pass is issued for returned expired drugs.

- Look -a-like drugs and sound-a-like drugs
 - Kept on separate counters
 - Kept close to issuing counter

HR STRUCTURE-



WORK FLOW-



- Purchase of drugs is done through vendors.
(purchase order given by e-mails or verbally)



- good receipt note is been prepared
(which include costing,MRP,expiry)
- goods purchsed are entered into system



- **SALES OF DRUGS-**
 - prescription for drugs
 - issuing the drugs at issuing counter
 - billing of drugs
 - check-in
-

IN PATIENT DEPARTMENT-

INVOLVES FOLLOWING TYPES OF ROOMS WITH THEIR RESPECTIVE TARIFF;

TYPE OF ROOMS	NUMBER	TARIFF
Presidential suit	2	Rs 15000
Suit	12	Rs 8500
Single room	38	Rs 6000
Semi-cabin	49	Rs 4000
General ward	140	Rs 2100
Day care	39	Rs 1000
Critical care	58	Rs 7000
PICU,NICU	18	Rs 5000
Nursery	6	Rs 4000

VISITING POLICY;

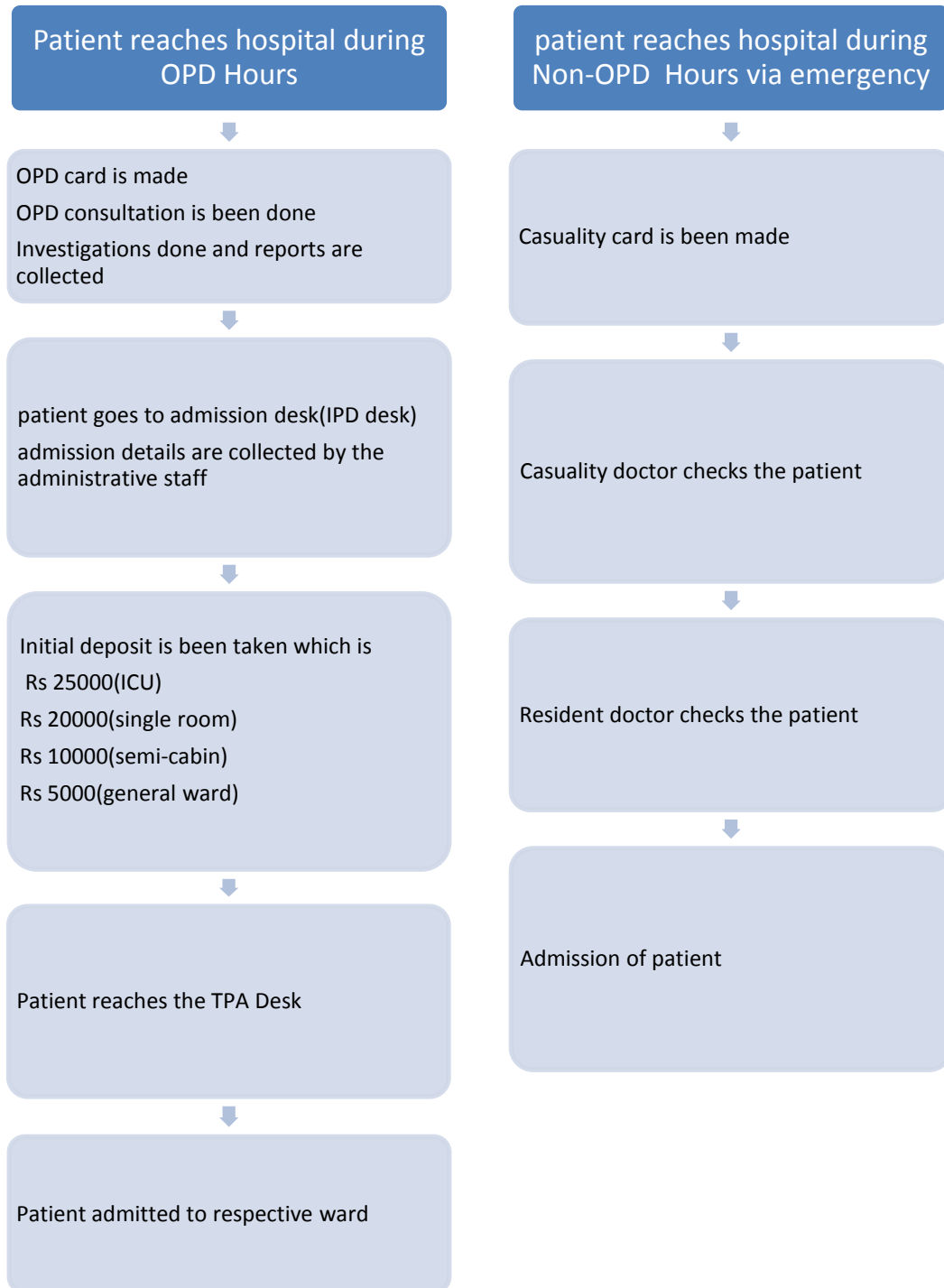
- ICU-
 - Timings;- 11:00 a.m.-11:30 a.m.
5:30 p.m.- 6:00 p.m.
 - Two visitors are allowed per day
- WARDS-
 - Timings;
 - One visitor is allowed at a time.
 - Blue pass-visitors pass
 - Yellow pass-attendant pass

NURSING STATION-

Following things are present in nursing station-

- System
- Crash card-it includes
 - Incubation tray
 - Defibrillator
 - Emergency drugs
 - Medication trolley-containing medical consumables
- Nursing call system-electronic bell

WORK FLOW-



DISCHARGE OF PATIENT:

Patient is adviced to be discharged.

Nursing staff compiles the summary sheet

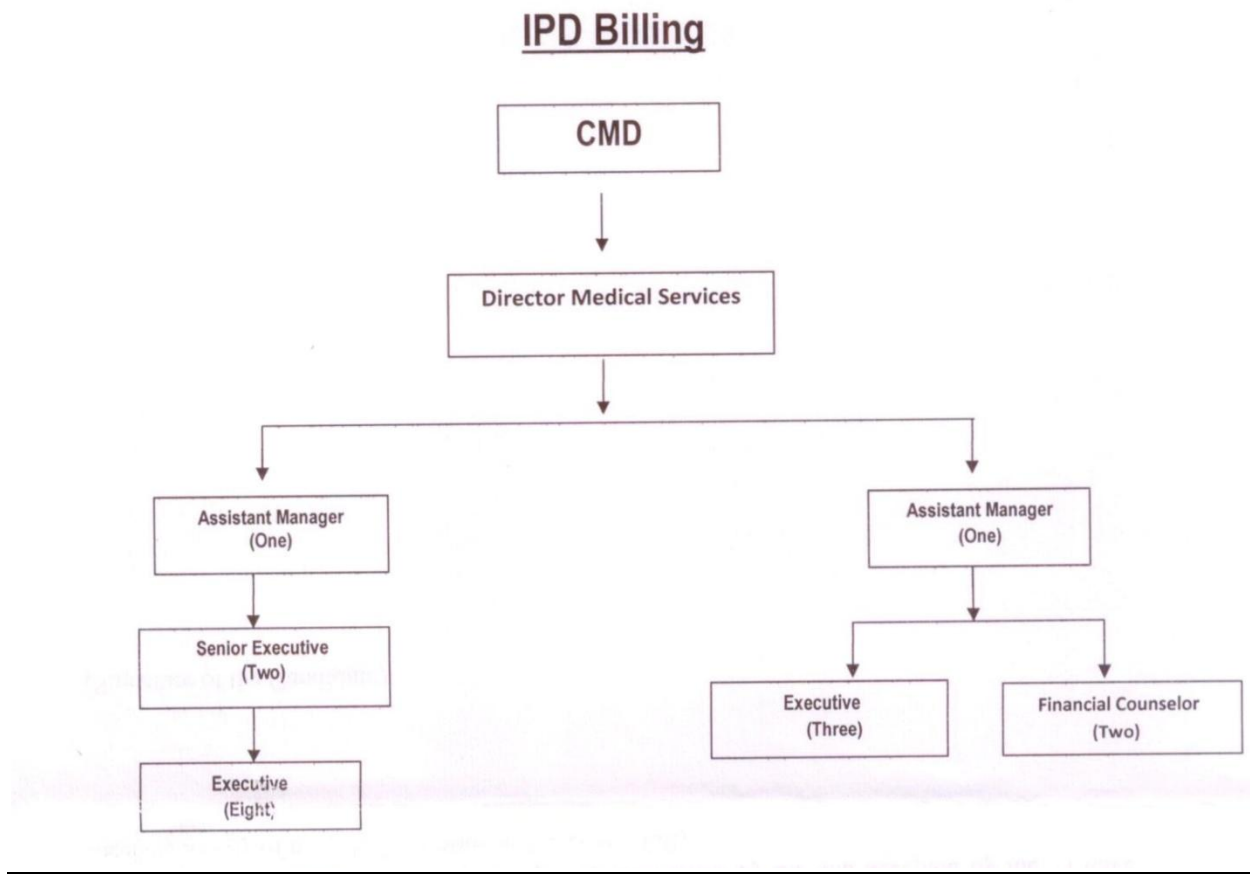
Resident doctor forms the summary and goes to medical transcriptionist room for typing

Daily billing sheet is been sent for IPD pharmacy and food and beverages clearence

Daily billing is finally send to IPD billing where bill is deposited.

For International patients and for public service unit(PSU)-discharge medicines are also been given.

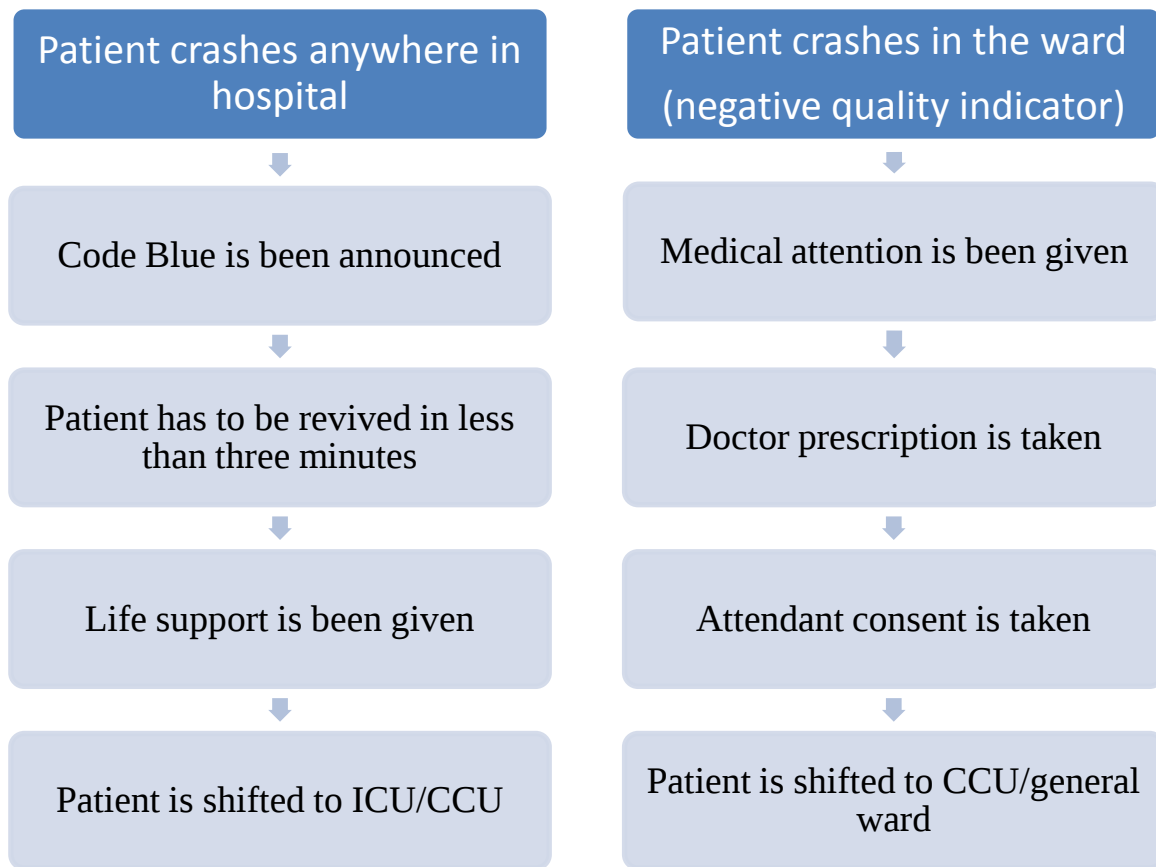
HR STRUCTURE-



VOLUME OF PATIENTS-

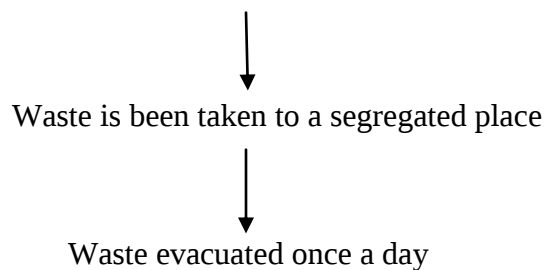
100-110 patients are admitted each day (including 25-30 day care patients)

MANAGING PATIENT CRASH-



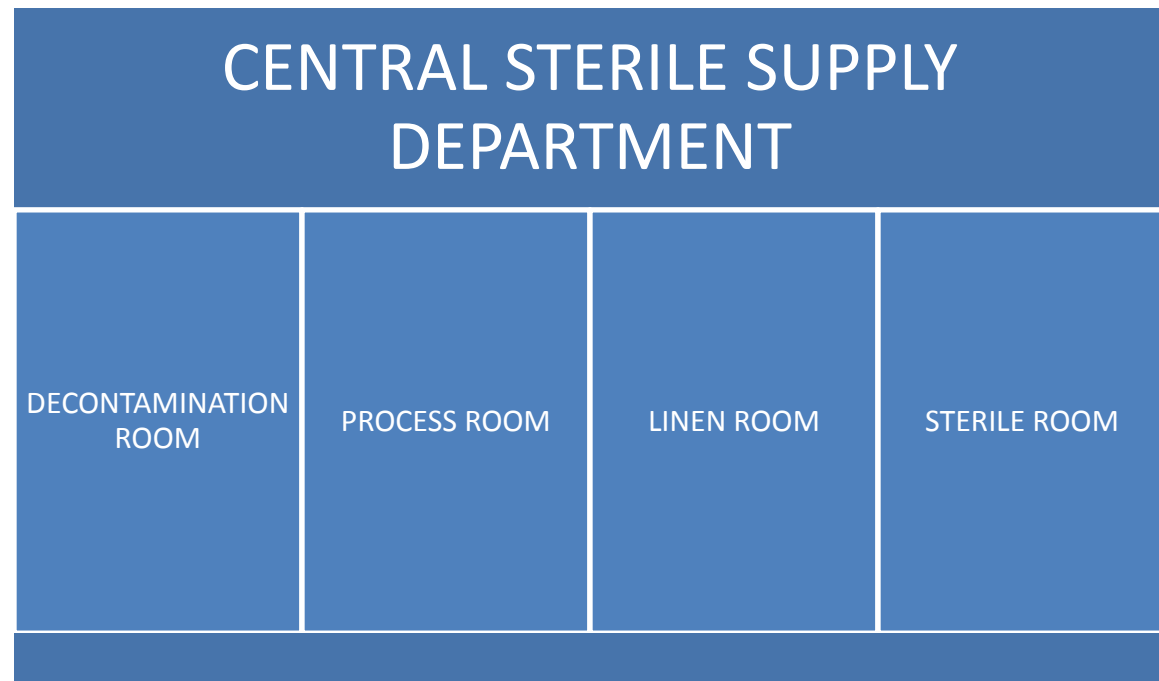
BIO-MEDICAL WASTE MANAGEMENT-

Waste is segregated at ward level, done after the end of each shift

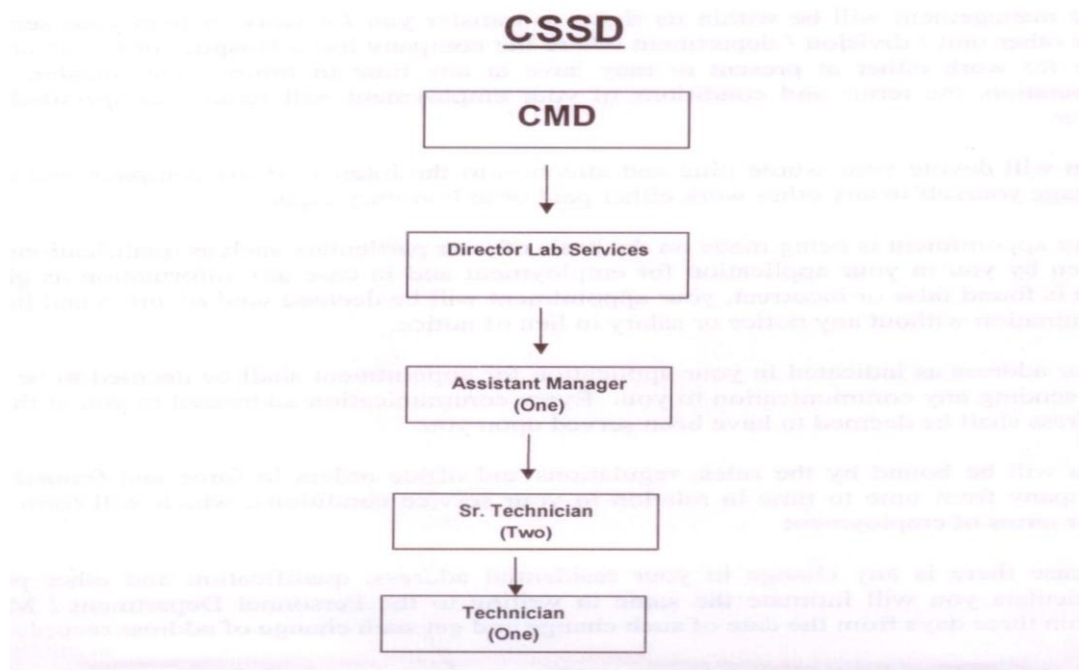


CENTRAL STERILE SUPPLY DEPARTMENT-

PHYSICAL STRUCTURE-



HR STRUCTURE-



PROCEDURE-

1. Receiving- all the instruments are received ,acknowledged and entered in the register.
2. Cleaning and disinfection-instruments are cleaned in washer with detergent. instruments are first washed with plain water ,then with detergent and again with water.
3. Inspection- instruments are inspected by staff for any damage or blockage .the instruments which have been disassembled at cleaning stage have to be re-assembled.
4. Assembling of trays- instruments are placed in the trays and are been labelled.
5. Autoclaving-instruments are sterilized in autoclave ,but before that instruments are labelled with sticker which have staff code, date ,time,autoclave number,autoclave cycle type and expiry date of sterilization.
6. Storage- storage of sterilized items is been done in the storage room

LIST OF EQUIPMENTS-

- ULTRASONIC CLEANER-1
- WASHER DISINFECTOR-4
- PLASMA STERILIZER-1
- ETHYLENE OXIDE STERILIZER-1
- AUTOCLAVE-3

STERILIZATION CHECKS-

Biological indicators-bowie-dick test.it has along tube which is equivalent to steam penetration in seven meters of cotton. It has one test paper which turns black in contact with steam.

Physical indicators- Temperature and time displayed by autoclave

Chemical indicators-

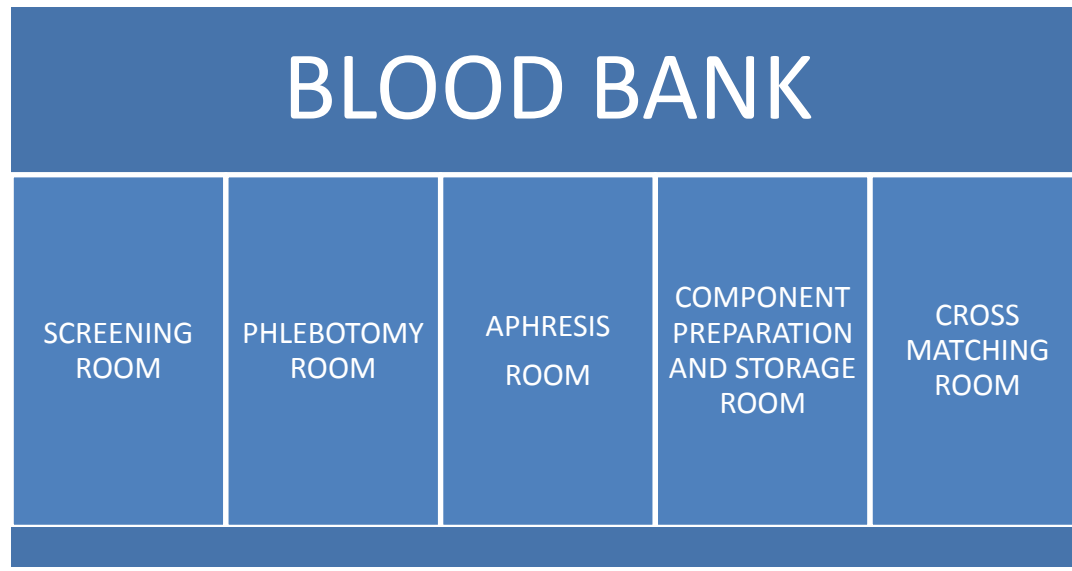
CSSD DISTRIBUTION SYSTEM-

Soiled instruments are received from various departments and clean instruments are been issued.

Receiving and issuing is done at the receiving and issuing counter respectively in morning.

BLOOD BANK-

PHYSICAL STRUCTURE-



SCREENING ROOM- Here a form is been filled by the blood donour, mentioning the required details.

- Blood donation is rejected if patient has-
 - Drug allergy
 - Alchohol consumption within 24 hrs
 - Sexually transmitted diseases

PHLEBOTOMY ROOM- it is donour rest room

- Donour eats
- Donates blood, Lies down for sometime
- Blood sample is also been taken
- Unit number, segment number is been mentioned
- Bag is been put in Biomixer for separtion

APHRESIS ROOM-in this room therapeutic procedure is been done on blood via centrifugation

- Blood is been separated into plasma and platelets and remaining components

COMPONENT PREPARATION AND STORAGE ROOM-

- In this room from the remaining component portion of donours blood following is separated
 - R.B.C
 - W.B.C

CROSS-MATCHING ROOM/GROUPING ROOM/COMPATIBILITY ROOM-

STORAGE AND LIFE SPAN OF BLOOD AND ITS COMPONENTS-

1. PLASMA-

- Stored at -20C to -40C
- Life span- one year

2. PLATELETS-

- Stored at 22C to 24C
- Life span-five days
- Requires continuous agitation on agitator

3. BLOOD-

- Stored at 2C to 8C

ISSUING OF BLOOD-

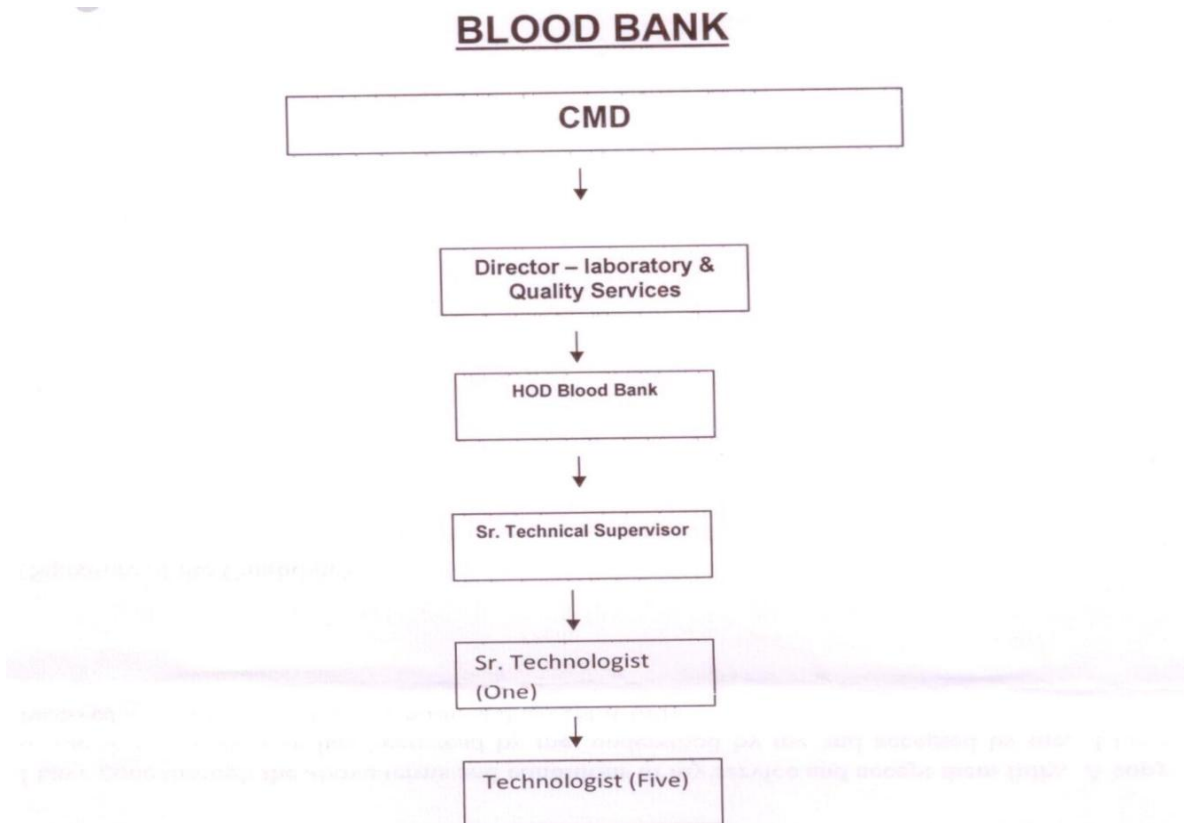
SAMPLE RECEIVING/ISSUE COUNTER-

- Request form for blood transfusion is been filled
- Attendant is been called for blood donation

ISSUING COUNTER-

- Blood is been issued
- Blood issue slip containing patient IPD number is been generated

ORGANOGRAM-



MANIFOLD

- **Manifold**: A device for connecting one or more gas cylinders to the central piping system for a specific gas
- **Medical gases**: Any gaseous substance meeting medical purity standards and has application in a medical environment
- **AGSS** (Anaesthetic Gas Scavenging System): Excavate the remanant anaesthetic gases

GASES USED

- Liquid Oxygen
- Nitrous Oxide
- Compressed Air
- AGSS
- Vacuum

USE OF GASES

- Oxygen – Ventilators and Anaesthesia
- Nitrous Oxide – Anaesthesia

CYLINDERS

Oxygen	– Black cylinder with white top
Nitrous Oxide	– Blue cylinder
Carbon Dioxide	–Black cylinder with Grey top
Nitrogen	– Black cylinder with silver top

OXYGEN-

- Main oxygen supply is through oxygen tank outside the manifold room with capacity of about 12000 litres.
- Liquid oxygen is stored in oxygen tank.
- Oxygen cylinders are now used as a backup or emergency measure
- They are used only to check their functionality.

NITROUS OXIDE-

- Used as anaesthetic
- Primary supply is through the cylinders

COMPRESSED AIR-

- Mechanism
- A compressor is present that generates continuous pressure.
- Used to clear Field View during surgery
- Alarm systems present
- Emergency release valves present

MEDICAL VACUUM-

- Not a medical gas but an essential part of Manifold
- Used in Surgeries, ICU and recovery
- Source – Two Vacuum pumps

COLOUR OF PIPES

Yellow with white -	Oxygen
Yellow with Blue –	Nitrous Oxide
Sky Blue with White and Black –	Medical Air
Sky Blue and Black -	Vacuum Pipe

SECTION B
SPECIFIC PROJECT FINDINGS

PROJECT-

A study on Process mapping of inpatient department to do the gap analysis and suggesting recommendations to improve the work flow process.

INTRODUCTION-

The managerial aspect of providing health services to patients in hospitals is becoming increasingly important. Hospitals want to reduce costs and improve their financial assets, on the one hand, while they want to maximize the level of patient satisfaction, on the other hand. One unit that is of particular interest is the **INPATIENT DEPARTMENT**. Since this facility is one of the hospital's major cost and revenue center, it has a major impact on the performance of the hospital as a whole.

Enhancing the efficiency of inpatient department has been always a challenging process especially in a quick changing healthcare sector with increased patient care complexity.

Balancing the needs to satisfy doctors, support staff, and meet the patient high expectations in healthcare would require clinical and cost effectiveness and require critical and close monitoring of business management inside the inpatient department to ensure efficient resource supply, guarantee quality safe care provided, and maintain fiscal sustainability.

Study of patient flow management in an inpatient department of a hospital is done and focus was on understanding the effect of an "early discharge" policy,

“Management of inpatient department requires the coordination of human and material resources in such a way that treatment can be performed efficiently, cost effectively, and safely” within the rules of clinical governance of standards.

Managing the inpatient department , however, is hard due to the conflicting priorities and the preferences of its stakeholders. Moreover, health managers have to anticipate the increasing demand for admissions caused by the increase in burden of diseases. These factors clearly stress the need for efficiency and necessitate the development of adequate planning procedures.

LITERATURE REVIEW

Patients' satisfaction with an encounter with health care service is mainly dependent on the duration and efficiency of care, and how empathetic and communicable the health care providers are.¹ It is favored by a good doctor-patient relationship. Also, patients that are well informed of the necessary procedures in a clinical encounter, and the time it is expected to take, are generally more satisfied even if there is a longer waiting time

A patient is referred to hospitalization in the following manners:

- Emergency hospitalization - Through the Department of Emergency Medicine ; for birth through the Women's Emergency; or by direct referral by the hospital's outpatient clinics or institutes.
- Planned hospitalization – Pre-scheduled appointment by the inpatient department.
- Ambulatory care – Hospitalization for procedure or treatment, with discharge on the same day.

Discharge from the Department:

- On the day of discharge, the patient will receive instruction from the nurse and doctor, and will be given a discharge letter containing a detailed summary and recommendations, in order to ensure continuous care.

INPATIENT MODULE-

The inpatient module is designed to take care of all the activities and functions pertaining to Inpatient Management. This module automates the day-to-day administrative actives and provides instant access to other modules, which leads to a better patient care. It provides comprehensive data pertaining to Admission of Patients & Ward Management: Availability of beds, Estimation, Agreement preparation, Collection of advance, planned admission, Emergency admission and so on. The Inpatient module also deals with Ward Management: Shifting from one ward to the other, Bed availability, Surgery, Administration of drugs, nursing notes, charge slip and so on.

- Patient registration
- Referred doctor and Hospital informations
- Wards, rooms and bed configuration
- Patients admission requests
- Bed occupancy matrix
- Admission and bed allocation
- Bed or room transfer
- Medical observation and nursing notes

- Service Order Entry
- Estimate Bill
- Advance Payment
- Payment collection by different Payment mode
- Physician order entry
- Laboratory and radiology investigation request
- Drug prescription
- Discharge summary and details
- Doctors note

Rationale for Study

Managing the inpatient department is hard due to the conflicting priorities and the preferences of its stakeholders. Inpatient department manager were many problems in smooth functioning of department because functioning of the department deals in close association with other departments like IPD Pharmacy, Blood bank ,Laboratories ,Radiological department ,etc. and mismanagement and lack of co-ordination with other department cause many problems to the patient.

Staff raised many criticisms reflecting lack of communication among the different groups or stakeholders. All this reflected a non-coherent and poor workflow within the department. It was essential to address this area seriously. Trying to understand the inpatient department status and the contributing factors to this ailment I decided to start with Process mapping.

AIM AND OBJECTIVES

AIM-

To improve work flow process of inpatient department by incorporation of IPD–HMIS module.

OBJECTIVES-

The study had the following objectives:

- To Examine the process of Admission till discharge of inpatients.
- To Identify the gaps, in proper and efficient utilization of inpatient beds.
- To suggest remedial measures for improving the functioning of inpatient department.

METHODOLOGY and DATA COLLECTION

Study Setting: Asian Institute of Medical Sciences, Faridabad

Study Period: 8th April to 30th June 2013

Study Population: In patients Cases

Study Sample: In patient cases of general ward between April to June 2013

Study design: Descriptive, Cross-sectional study.

DATA COLLECTION-

- ✓ **PRIMARY DATA:** Real time data of Inpatients was collected for the month of April 2013 till May 2013.
- **PROCESS MAPPING AND OBSERVATIONS**

The entire process starting from admission till discharge of patient was mapped for the month of April and May 2013. Patients were observed to analyze the cause of problematic areas .

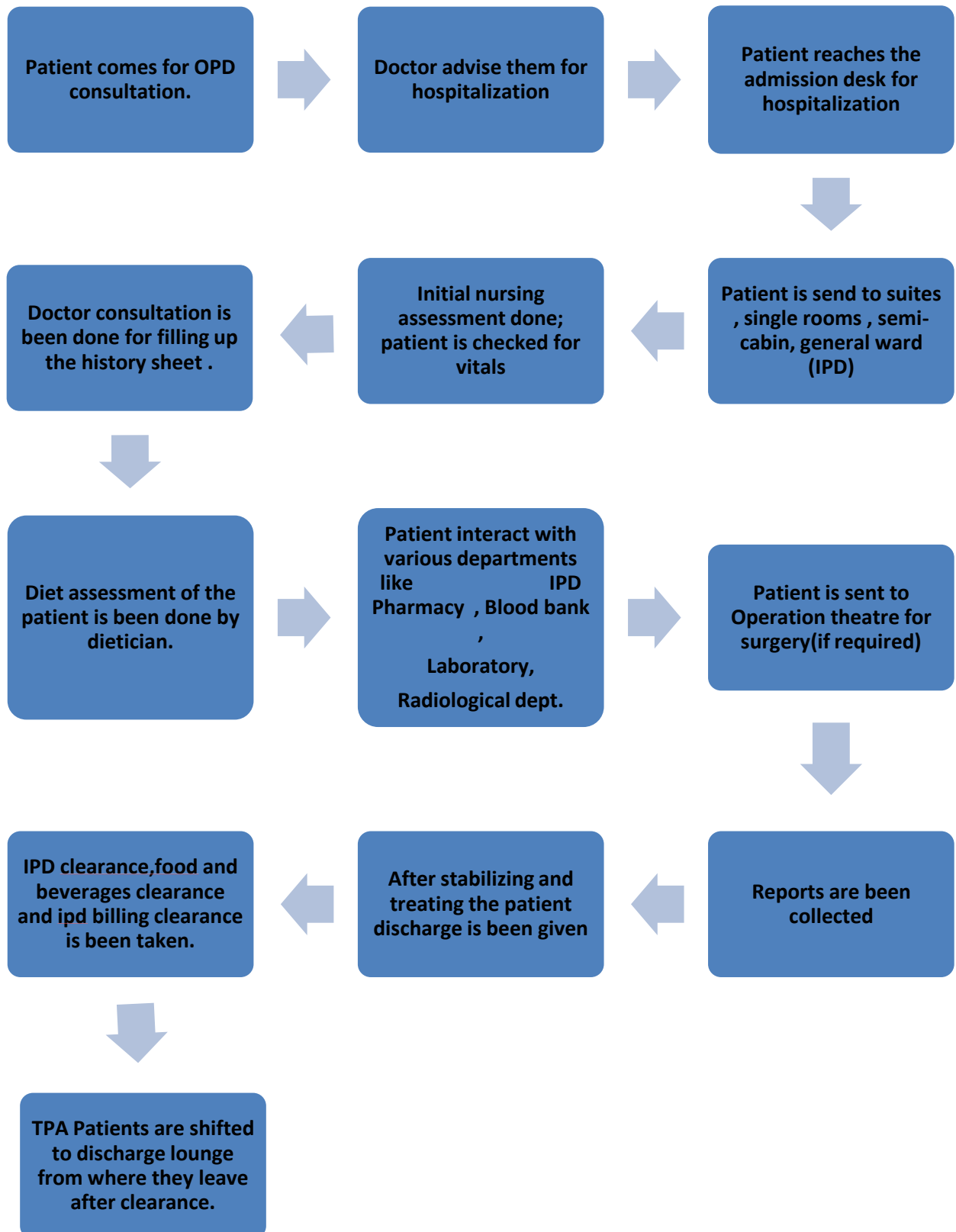
- **INTERVIEWS**

Interviews were conducted with stakeholders like-

- Patients
- Nurses
- Doctors Laboratory personnel
- IPD Pharmacy people
- Radiological personnel

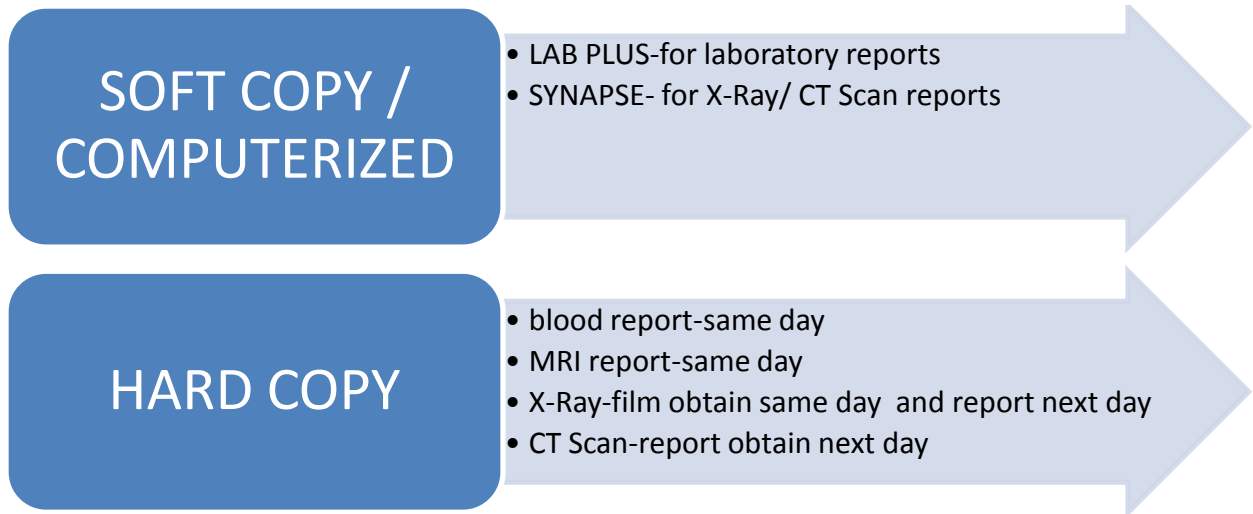
etc to identify and understand the problems faced at their level.

PROCESS MAPPING



COLLECTION OF REPORTS-

TWO METHOD OF REPORT COLLECTION-



DISCHARGE OF PATIENT -

Primarily two types of patient exist-

1. Cash patient
2. TPA patient

Small difference in discharge procedure exist between both types of patients.

Doctor gives order for discharge and prepares the discharge summary

Discharge summary goes to medical transcriptor room for typing and discharge details are explained to patient by doctor

Daily billing sheet is been updated and sent to IPD Pharmacy and food and beverages department for approval

Patient is shifted to discharge lounge

All the original documents are handed over to patient

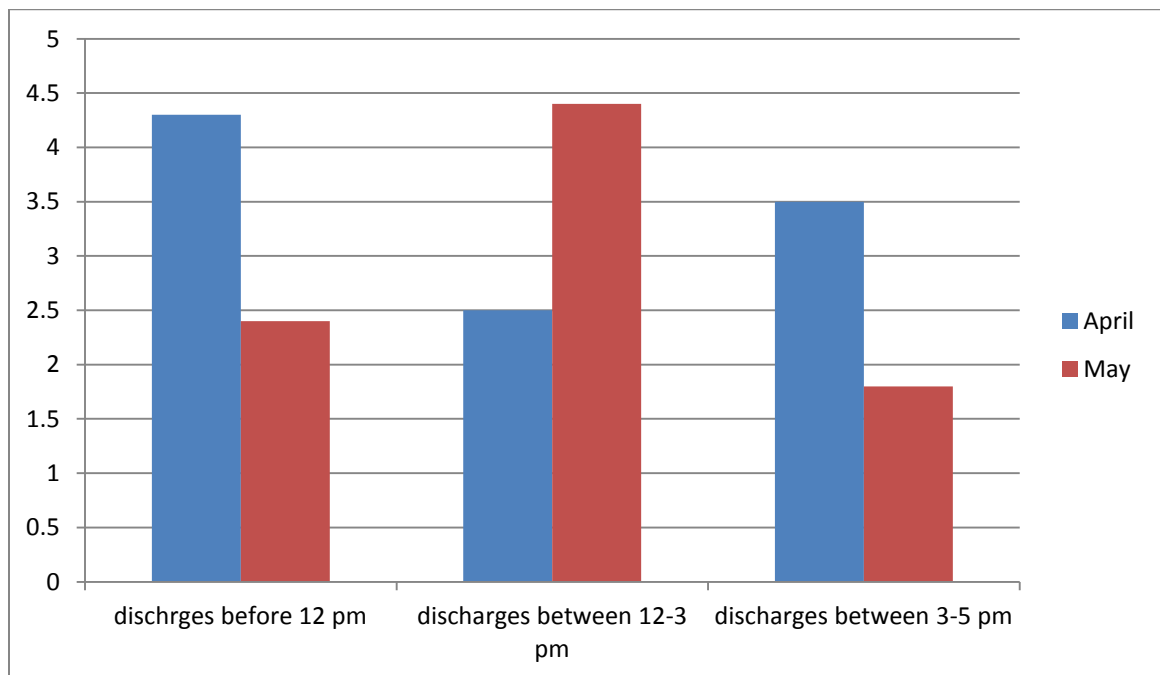
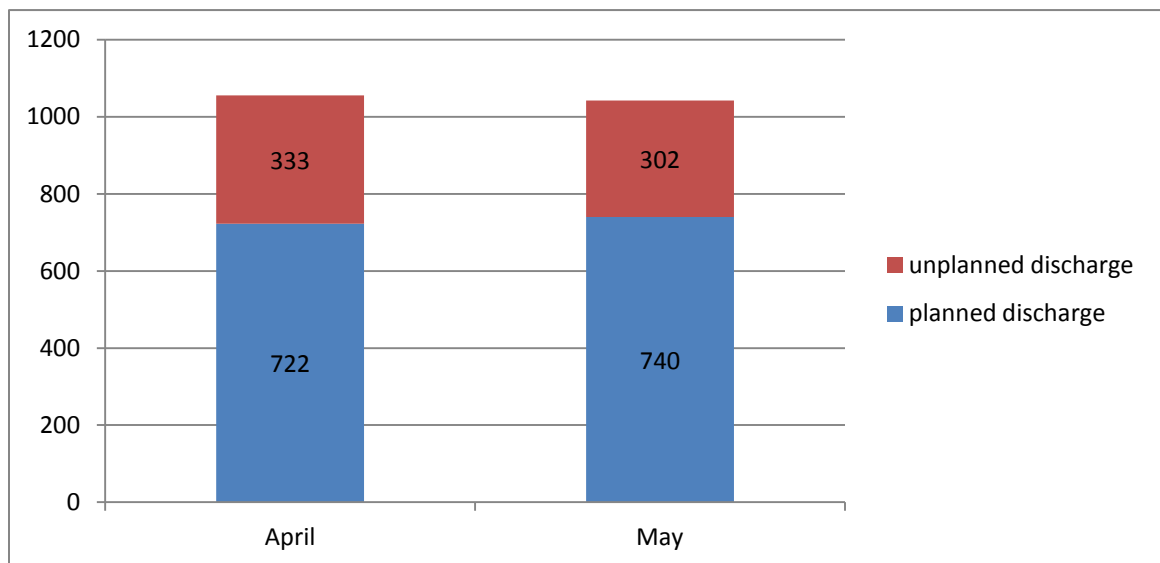
FOR TPA Patients-

- Discharge summary along with all the reports are been sent to TPA room along with final bill
- After getting approval from TPA company patient is been discharged(meanwhile patient is shifted to discharge lounge).
- Patient is given the diagnostic film along with the photocopy of reports and all the original documents are been sent to TPA company.

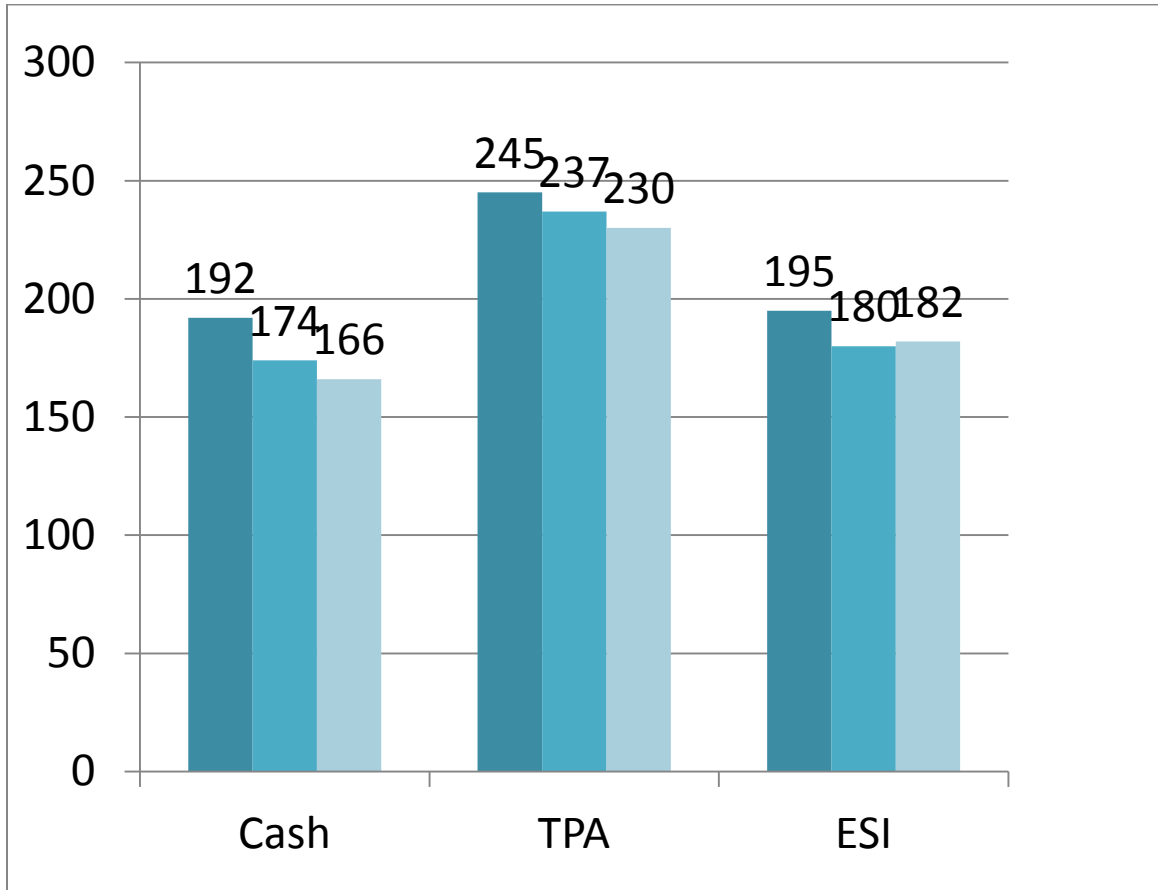
PROBLEMS IN WORK FLOW

- NON AVAILABILITY OF BEDS
- NURSING ASSESMENT NOT DONE.
- NURSES NOT KNOWING PATIENT DETAILS AND HISTORY.
- NON AVAILABILITY OF DOCTORS FOR CONSULTATION (treatment and medication cannot be started)
- LARGE TIME TAKEN FOR MEDICINE PROCUREMENT FROM IPD PHARMACY
- PATIENT REPORT NOT AVAILABLE OR NOT COLLECTED
- DELAY IN DISCHARGE PROCESS(mainly caused due to unplanned discharges)

DISCHARGES-



TURN AROUND TIME OF DISCHARGES-



RECOMMENDATIONS

- Initial nursing assesment should be done within 15 minutes of patient admission.
- Nurses should be given adequate professional training so that they can improve their communication skills and before handling a patient a list should be given to them containing all patient information.
- Doctors consultation should be done within 30 minutes of patient admission.
- For reducing extra time used in medicine procurement
 - Pneumatic chute machine should be used.
 - Dedicated GDA should be available in IPD pharmacy.
- Floor supervisor should be given the duty of timely collection of reports.
- Discharge co-ordinator should be present to overlook the discharge process and discharge process should be computerized.

IPD –HMIS SYSTEM

IPD	PHARMACY	BLOOD BANK	OT	LABORATORY	CSSD
IPD PATIENT MASTER	MEDICINE INDENT	BLOOD REQUIRED	OT RESERVATIO N	INVESTIGATION REPORTS	KIT CONSUMPTION
IPD DAILY BILLING SHEET	MEDICINE RETURN	PLASMA REQUIRED	OT CHARGE SLIP		ITEM STERILIZATION
PAYMENT DETAILS		PLATELETS REQUIRED			ITEM RECEIVING
DISCHARGE SUMMARY		BLOOD DONATED			ITEM SHIPMENT
IPD DISCHARGE DETAILS					
TELEPHONE					

PATIENT ID-

PATIENT NAME-		GENDER	
AGE	-	REFERRED NUMBER-	
MOBILE NUMBER-			

BED NO.	CHECK IN DATE	IN TIME	CHECK OUT DATE	OUT TIME	RATE	DAYS
BED LOCATION	-					
CURRENT BED NUMBER-						
BED TYPE	-					
SHIFT DATE	-					
SHIFT TIME	-					
RATE	-					
STATUS	-					

TOTAL CHARGES	
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ISSUE MEDICINE-

ISSUE MEDICINE

ISSUE MEDICINE LIST

PATIENT DETAILS

ISSUE FORM NO

LOCATION

ADDRESS

EMPLOYEE ID

PATIENT NAME

PHONE NO

GENDER

AGE

DOCTOR

DATE

MEDICINE DETAILS-

BAR CODE

MEDICINE

BATCH

EXPIRY DATE

STOCK

QUANTITY

MANUFACTURE DATE

ADD

CANCEL

ISSUE DETAILS-

MEDICINE

BATCH

PACK

MANUFACTURE DATE

EXPIRY DATE

QUANTITY

EDIT

DELETE

REVERT

UPDATE

IPD BILLING-

USER NAME-

PATIENT ID -

PATIENT NAME -

ADMIT DATE-

ADDRESS -

ADMIT TIME-

DEPARTURE DATE-

FIND

NEW

PRINT

DOCTOR'S FEES

<i>PARTICULARS</i>	DOCTOR'S NAME	DAY	AMOUNT
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TOTAL-

ROOM BILL

BED NO.	CHECK IN DATE	DAY	RATE	AMOUNT	TOTAL TAX
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TOTAL-

SERVICE BILL-

DATE	GROUP CODE	SERVICE NAME	QUANTITY	AMOUNT
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TOTAL-

PAYMENT DETAILS-

PAYMENT DATE -

PAYMENT MODE -

PAYMENT TYPE -

TOTAL AMOUNT -

TOTAL ADVANCE -

PAYMENT DUE -