

**Internship at
Asian Heart Institute, Mumbai**

By

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MBA Hospital and Health Management

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ACRONYMS/ABBREVIATIONS

ABC	Always Better Control
A/D	Admissions/Discharge
ALOS	Average Length of Stay
ACLS	Advanced Cardiac Life Support
ABG	Air blood gas
BMW	Bio-Medical Waste
CPR	Cardio-Pulmonary Resuscitation
CSSD	Central Sterile Supply Department
AOS	Asian's Operating System
F & B	Food & Beverage
GDA	General Duty Attendant
HDU	High Dependency Unit
HIS	Hospital Information System
HRD	Human Resource Development
ICU	Intensive Care Unit
MLC	Medico Legal Cases
MRD	Medical Record Department
NABH	National Accreditation Board for Hospital and Healthcare Providers
NIAHO	National Integrated Accreditation for Healthcare Organizations
IPD	In-patient Department
OPD	Out-patient Department
OT	Operation Theatre
PCS	Patient Care Services
TAT	Turn-around Time
TPA	Third Party Administrator
SOP	Standard Operating Procedure
PHC	Preventive health checkup
MICU	Medical Intensive Care Unit
CCU	Cardiac Care Unit

SICU	Surgical Intensive Care Unit
NICU	Neonatal Intensive Care Unit
CSSD	Central Sterile Supply Department
CPR	Cardio pulmonary resuscitation
ECG	Electro Cardiograph
MRI	Magnetic Resources Imaging
ENT	Ear Nose Throat
ICD	International Classification of Diseases
HEPA	High Efficiency Particulate Air
SCD	Supply Chain Department
ACLS	Adverse Cardiac Life Support
BLS	Basic Life Support
MIS	Management Information System
CCTV	Close Circuit Television

ABSTRACT

The Issue of patient/customer satisfaction has gained increasing attention from executives across the healthcare industry. The measurement of patient satisfaction through patient satisfaction surveys has helped organization leaders incorporate patient perspectives as a way to create a culture where service is deemed an important strategic goal for healthcare facilities. However, despite their many efforts and successes with satisfaction measurement, evidence shows that a bit of work in this area is still needed. One of the primary challenges has been in sustaining patient / customer satisfaction improvement initiative in the face of competing priorities and diminishing resources. **Asian Heart Institute, Mumbai (AHI)** is an organization that has made the issue of improving patient/customer satisfaction one of its top priorities. The purpose of this study is to serve as a resource to help **AHI** fulfill its mission to enhance its patient/customer satisfaction as to make it community's first choice in seeking medical care. By analyzing data, this study demonstrates that intangible human values such as care, co-operations, compassion along with the tangible medical services are vital to satisfy the needs of the patient and has the most powerful effect in terms of patient satisfaction during a hospital stay at **AHI**.

ACKNOWLEDGEMENT

I owe a great debt to all professionals at **ASIAN HEART INSTITUTE, BKC, MUMBAI** for generously sharing their knowledge and time, which inspired me to do my best at this project study.

My heartfelt gratitude to **Dr. Ramakant Panda** (Vice Chairman and Managing Director) **Asian Heart Institute, Mr. Girinath Menon (C.O.O) Mr. Aditya Bahadur** for showing their keen interest in the study and for sharing their views in spite of their very busy schedule. It has been my privilege to work under their dynamic supervision at the Hospital.

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I express my warm veneration towards front office department staff, for their valuable guidance throughout the entire course of study to its completion.

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I would like to express my heartless thanks to my parents for their moral support, which always inspires me to perform best. And finally credit goes to all my friends' colleagues who helped me in this study.

Sincerely

Dr. Sundeep Seth

MBA- HM 20. (2015-2017)

IIHMR, Jaipur

HOSPITAL PROFILE

Asian Heart Institute (AHI), is India's No.1 cardiac care hospital, established in 2002, located in the western suburb of Bandra, at the Bandra-Kurla Complex (BKC), in Mumbai, Maharashtra, India. In just 15 years, the hospital has treated more than 300,000 patients, and completed over 37000 angiographies & angioplasties and more than 21000 heart surgeries. AHI has a staggering success rate of 99.83% in bypass surgeries and an overall 99.6% in cardiac surgeries. These success rates are among the highest in the world. It has pioneered the treatment of complex heart surgeries, arterial graft & beating heart surgery in India.

ASIAN HEART INSTITUTE AND RESEARCH CENTRE (AHIRC) is a renowned name in the field of cardiac surgery, interventional cardiology and cardiac diagnostic. The institute was set up as a dedicated cardiac hospital to bring to India the best cardiac care, training of cardiac surgeon and cardiologists and also to conduct research of international standards.

Asian Heart Institute (AHI) which is pioneer in the field and is fully dedicated to cardiac care facility. Asian heart is led by the vision of Dr. Ramakant Panda for creating a best healthcare delivery system in India.

Asian Heart Institute has set benchmark in cardiac care with its path breaking work over the past 15 years. Today, it is recognized world over as a center of excellence providing the latest technology in Cardiac Bypass Surgery, Minimally Invasive (Robotics), Interventional Cardiology, Non involve Cardiology, Pediatrics Cardiology Surgery. The hospital is backed by the most advanced laboratories performing complete range of investigative tests in the field of Nuclear Medicine, Radiology, Hematology, Transfusion medicine, Microbiology.

Asian Heart Institute has a vast pool of talented and experienced team of doctors, who are further supported by a team of highly qualified, experienced & dedicated support staff & cutting edge technology. The hospital today has an infrastructure comprising of around 250 beds 2 CATH Labs, 6 Operation Theatres, 3 ICU's besides an array of other world-class facilities. AHI provides top and services in areas of acute care, invasive and non-invasive cardiology and state of the art surgical procedures, besides playing a leading role in prevention, early detection and the renewal of heart disease.

It provides high-class emergency services to patient including the facility for air ambulance. The institute also offers many cardiac preventive health checks.

AHI has now taken a landmark step in introducing Robotic Cardiac Surgery by installing the first the **Da Vinci Surgical System** in this Region.

MISSION

“To operate as a world-class heart hospital, incorporating the latest technological advances and ethical practices to provide quality heart care at reasonable costs”

VISION

To be a globally preferred centre of excellence.

VALUES

- Customer Satisfaction
- Highest Quality
- Culture of High Performance
- Integrity and Ethical Practices
- Innovation and Change

HOW AHI HAS ACHIEVED THIS

- By providing state-of-the-art world standard healthcare that exceeds expectation of patients and families.
- Pursuing independent as well as collaborative research in all aspects of cardio-thoracic medicine and surgery.
- Providing expert training for medical, paramedical, nursing and other professionals in the field of heart care.
- Networking with other organizations to promote health and well being in society through education and preventive checkups.

Accreditations

Joint Commission International, USA

AHI is a Joint Commission International (JCI) accredited hospital. JCI is the highest global accreditation body to recognize hospitals adhering to patient care and safety norms. The receiving of the JCI accreditation is a vindication of our excellence in medical services and the care we provide to each of our patients.

NIAHO (National Integrated Accreditation for Healthcare Organizations)

This NIAHO Accreditation Standards Interpretive Guidelines and Surveyor Guidance for Critical Access Hospitals (NIAHO) document is based upon the Centers for Medicare and Medicaid (CMS) Conditions of Participation for Critical Access Hospitals 42 CFR 485.606 and State Operations Manual Regulations and Interpretive Guidelines for Critical Access Hospitals. These Interpretive Guidelines also are periodically updated based on notices distributed from CMS. Hospitals participating in the Medicare and Medicaid program are expected to comply with current Conditions of Participation. When new or revised requirements are published hospitals are expected to demonstrate compliance in a time frame consistent with the effective date published by CMS in the Federal Register.

International Organization for Standardization (ISO) 9001:2000 Certification

Asian has been certified by ISO 9001:2000 ensuring compliance across multiple criteria including improved patient satisfaction, effective Quality Management System, efficient management of our processes and contribution improvement of the system.

Have also been acknowledged as

- "India's Best Private Cardiac Hospital" In 2014, by the Health Care Achievers Awards hosted by the Times of India Group
- "India's Best Private Cardiac Care" two years in a row in The WEEK-Hansa Research
- "India's Best Cardiac Care Hospital" by CNBC & ICICI Lombard healthcare award
- Amongst the "World's TOP 10 Best Hospitals for Medical Tourists" by Medical Travel Quality Alliance (MTQUA)
- Among the TOP 5 Cardiac Hospitals in India by Indiatimes.com

HISTORY

Med gate Today honored Dr. Ramakanta Panda, the Chief Consultant Cardiovascular Thoracic Surgery and the Vice Chairman and Managing Director of Asian Heart Institute, as the No1 cardiac surgeon and one of the 25 living legends in the Healthcare of India.

The hospital added a sports medicine facility in 2007 as a number of hospitals across the country expanded their services in that practice area prior to the 2010 Commonwealth Games.

As of July 2012, it was one of the two private hospitals in Mumbai, India to participate in a government insurance scheme to provide coverage for the poor.

In April 2013, through its Pediatric Cardiac Center, AHI committed to providing free heart surgery for 100 economically-weak children who have congenital heart disease. The hospital helped clear up the government-operated KEM Hospital's waiting list, which had grown so long that some infants and children had been waiting for surgery for over three years. Dr. Panda committed to operating 1000 children, who because of their financial situation, would otherwise have had no recourse to cardiac surgery.

Dissertation Profile:

I was appointed on the floors to understand the operations on the floor and to manage daily activities on the floor and understand the problems faced by the patients and attendants with respect to the services of the hospital. The main concern was to observe and understand the process of how different departments present in the hospital work to maintain the proper channel of work day in and day out.

The work helped me out to understand the synchronization amongst various departments and for the same I have laid down the work that I have done over the period of three months. This also helped me to understand how the hospital maintains the standard's laid down at various parts of hospital which are directly or indirectly related to patient experience.

HOSPITAL LAYOUT

AHI is a renowned name and has a building i.e. vertical expansion. The building is semi circular in shape with 7 floors and two level basement. Each of the floor would be dealt in details below for understanding it's relation to patient satisfaction:

FLOOR WISE DISTRIBUTION OF AHI

Lower Basement

- Medical Records department
- Laundry and linen
- Mortuary
- Central Stores Department

Upper Basement

- Parking
- Cafeteria for staff

Ground Floor

- Hospital Entry
- Admission Desk
- Help Desk
- Reception
- Cafeteria
- Billing
- Imaging Services
- Marketing Department
- Corporate Office
- Security Cottage
- Pharmacy
- Day care center
- Emergency
- Auditorium
- Doctors Cabin

First Floor-(OPD Block)

- OPD Billing
- One helping desk
- Eighteen consultation chambers where specialized doctors in the following fields are available-
 - Pulmonologist
 - Neurology
 - Gastroenterology
 - Ophthalmology
 - Laparoscopic and General Surgery
 - Psychiatry
 - Thoracic Surgery
 - Pediatric surgery
 - Urology
 - Dermatology
 - Diabetology
 - Cardiology
 - Cardiac surgery
 - Vascular surgery
 - Pediatric cardiac surgery
 - Pacemaker Clinic.

Second Floor

- OPD
- Echo area
- IT section
- AKD
- ICU 2
- Endo ,diabetic OPD
- Pediatrics unit
- Stress echo
- 2d echo
- Doppler

Third Floor

- ICU 1
- Lobby
- cathlab
- Cardiac OPD
- Dr. Dora, Dr. Gautam, Dr. Vanzara cabin
- Think tank
- Opd Lift
- OT complex
- Cath Office
- Quality

Fourth Floor

- Nursing Station 1
- Nursing Station 2
- Nursing Station 3
- Shaving room
- Store room
- Dirty utility room
- Pantry
- Waiting Area

Fifth Floor

- Store room
- Dirty utility room
- Pantry
- Doctors room
- Nursing Station 1
- Nursing Station 2
- Nursing Station 3
- Dietician

Sixth Floor

- Cardiac rehb
- Expansion area
- Physiotherapy

Seventh Floor

- Expansion area
- Dental OPD

MEDICAL RECORDS DEPARTMENT

Layout- Lower Basement

Functions of MRD

- To ensure that the AHI has complete & accurate medical record for every patient.
- Public dealing with respect to TPA queries, Bill verification, MLC cases and dealing with Summons to the doctors, hospital.
- To maintain high level of confidentiality as far as patient's records are concerned.
- To ensure that the records are identified and stored safely to prevent unauthorized changes and easily retrieved whenever required.
- Issuing Emergency, Medical, Birth & Death certificates.
- To generate Bed Occupancy reports (daily & monthly), **P.N.D.T**, **M.T.P** reports (monthly).
- Sorting of active files from the inactive files.

Record Retention Periods:

- IP Records : 10 years
- OPD documents : 3 years
- MLC Records
 - Non court cases : 10 years
 - Court Cases : on final decision of court + 3 years
- Birth/Death Register : Not to be destroyed

Colour coding followed for various files as follows:-

- Green - insurance
- Red - Pediatric

- Yellow - Ophthalmology
- Blue - General (OPD+IPD)

EXECUTIVE HEALTH CHECK UP (EHC)

Layout:- 1st floor

Process Flow: -

AHI has a EHC department on 1st floor meant for preventive health check. It offers a wide range of preventive health check packages for various mindsets. This area is exclusively designed for providing complete body check-up for.

1. Gold
2. Platinum
3. Platinum plus
4. Diamond

For corporate clients, AHI have various health check packages that are pre-designed and customized by the respective company, according to their policies.

The patients usually come with a prior appointment, empty stomach that is then undergone through a series of tests under the supervision of doctors. The package includes doctors consultation both pre-post, valid up to 15 days from the letter of reference from their office, duly authorizing the check.

This health center exclusively caters to patients from various companies with whom AHI has a tie-up and also other executive patients including international patients. These patients have an array of various health checkup packages to choose from. They can decide which package to choose, depending on their present health condition and medical history, or they can consult the doctor, who can guide them in making the decision. After the patient has opted for a health check-up package he is guided to various diagnostic procedures.

The EHC has the following facilities:

- Sample collection room
- TMT
- ECG
- ECHO
- PFT

- Ultrasound
- Audiometry department
- ENT Department
- Gynecology department
- Dental department
- Dietician
- Clinical Psychologist
- Cardiologist

Apart from these facilities, EHC also has a spacious Patient Waiting Lounge and a Learning Center.

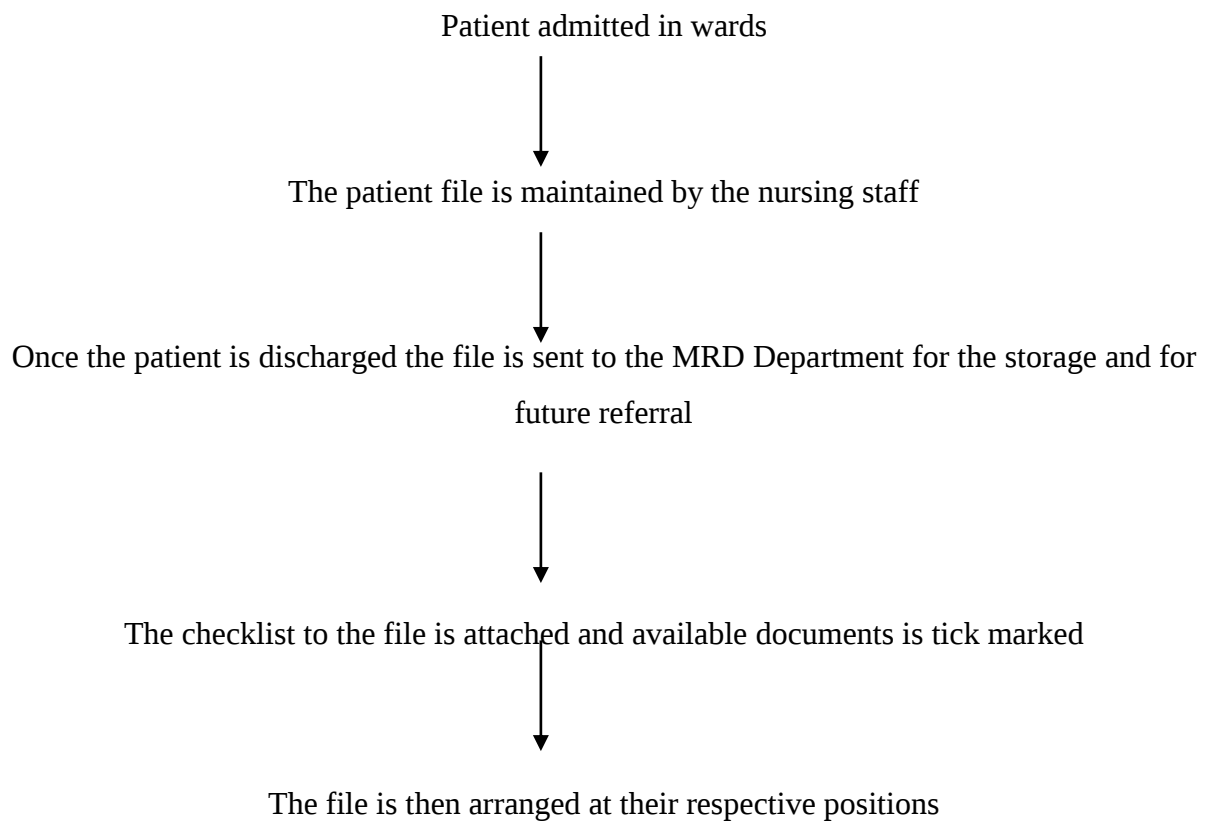
PROCESS FLOW- The MRD department of AHI is centralized (OPD+IPD)

1. OPD Flow-



One file of documents is given to the patient (patient copy) and one document is kept in the file (file copy).

2.IPD Flow-

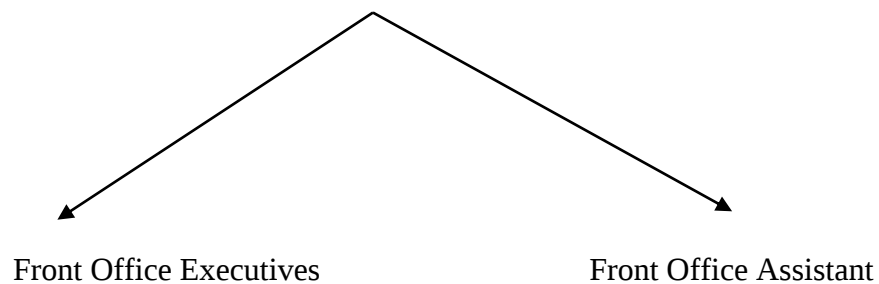


OPD DEPARTMENT (1st floor, 2nd floor & 3rd floor)

HELP DESK

It guides the patients and given them the information about all the packages of AHI and also escorts the patient to their required destinations. There are 3 front office executives who provide all the information and guides to the respective destination.

Supervisor



OPD Billing

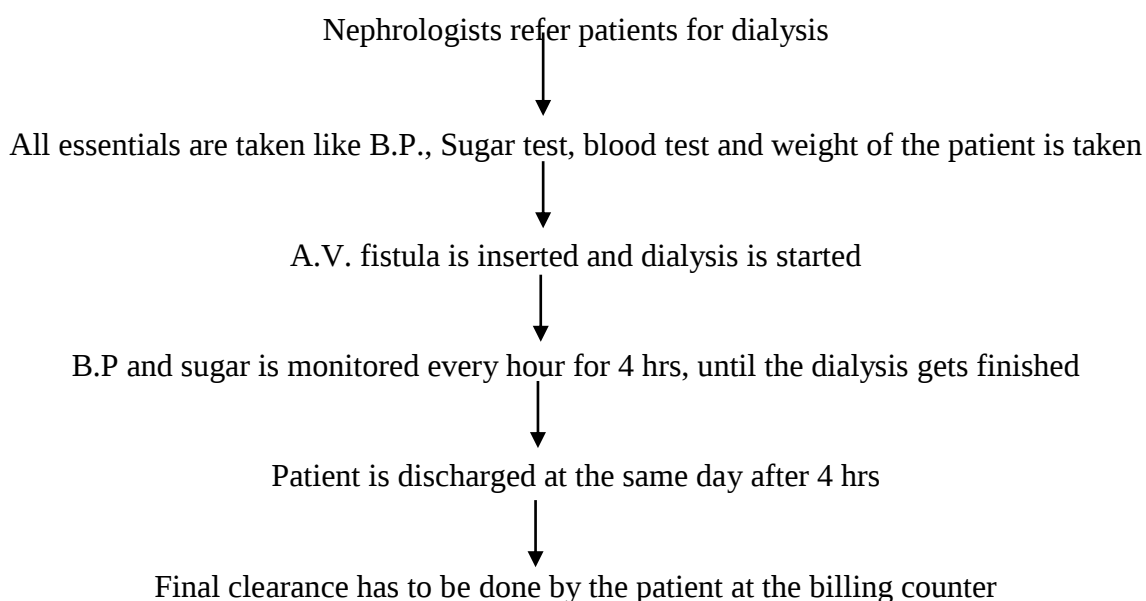
Here the billing of all the tests is done (both individual test billing as well as packages test billing). The billing counters start at 8.00AM to 5.00PM. There is 2 billing staff for this purpose.

Sample Collection Room

Blood samples are collected for various tests along with urine sample and stool sample.

Dialysis Center

Process Flow



- The patient is given the appointment for the next dialysis depending upon the condition of the patient. But if the patient is called twice or thrice a month then investigation are not performed. The tests are valid for one month only, after that patient has to undergo all the tests before admitting for the procedure.
- Consultant Rooms
There are chambers for doctor consultation at the respective floors.

Physiotherapy

The department is on 6th floor. It is used for cardiac rehab as well as sports therapies. Various machines of international standards are placed over here which also includes treadmills, cross trainers, cycles and cardiac pumpers.

There are various test's which are being performed at the ground floor and 2nd floor. They are as follows:

- X-Ray
- Echo
- ECG
- TMT
- Mammography
- Bone Densitometry

STANDARDS OF OPD

- PATIENT TURN AROUND TIME = 4.5 HOURS
- DOCTORS DELAY = 15 MIN
- WAITING TIME FOR PATIENT = >15 MINUTES

PROCESS FLOW:

- As the patient enters at 1st floor, he has to go at billing counter where he has to pay the initial amount for package.
- After completing billing patient comes to the nursing counter and from there patient goes for the investigation (sugar-fasting)
- After that patient comes back to the nursing counter and here patient is diverted for various investigation.
- Then reports send to the report room from various investigation centers, where the reports are compiled and distributed to the patient.

PROCESSING IN OPD

Every patient coming for CCC was considered and observed throughout all the procedures he/she undergoes, till the time their reports are compiled in the report room.

Average time taken for each package was calculated by combining the time spent by the patient for the tests, since the time his billing is done till he undergoes the last test and finally the time at which the reports are available.

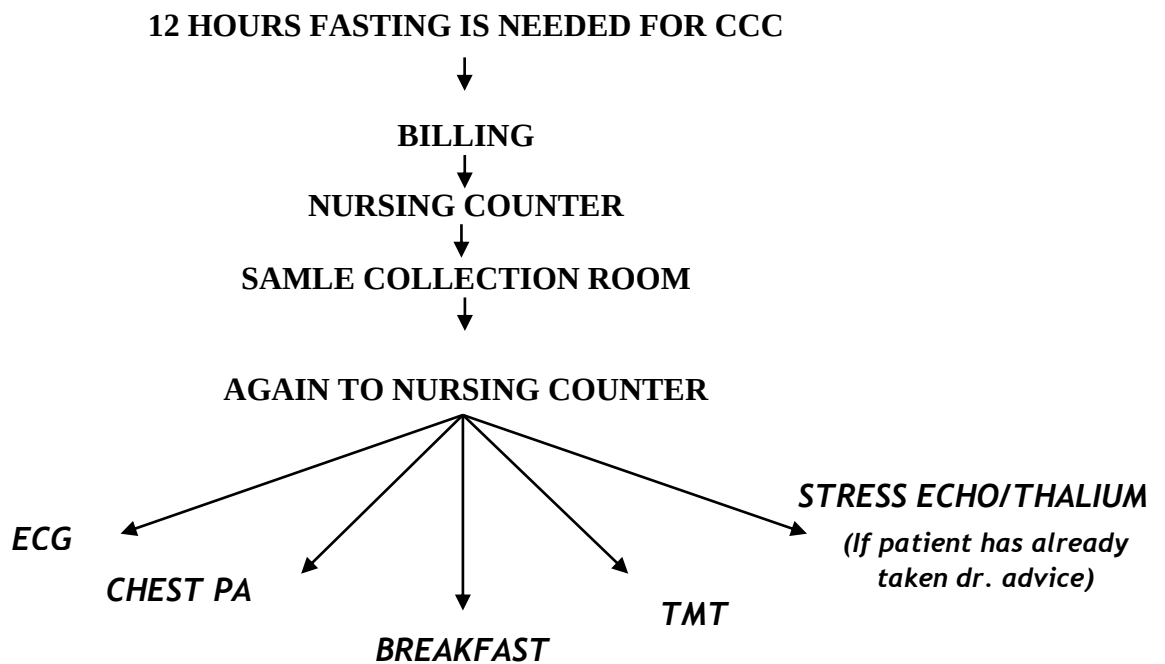
The patients visiting the CCC consist of company executives, executives for pre-employment medical checkup and the walk-in patients. The total time for each package per patient was calculated initiating from the billing time till the report generating time.

We observed CCC packages in preventive health check and observed the process flow of CCC patients. We observed the functioning of the various departments here. Time spend by the patients at various department and made comparative study of the standard time and actual time to find out the productivity gap.

Tests Include: -

- Doctor's consultation and full medical examination
- Blood tests:
 - Complete haemogram (Hb, TLC, and DLC)
 - ESR, Haematocrit, peripheral smear)
 - Blood group (ABO, RH)
 - Blood sugar (fasting and post prandial)
 - Blood urea
 - Serum uric acid
 - Lipid profile
- Urine examination
- X-Ray chest PA
- ECG
- Ultrasound whole abdomen
- Stress screening by psychologist
- Post check-up consultation

PROCESS FLOW OF CCC



Imaging and Radiology

Services Provided:

- CT
- Ultrasound
- X-Ray
- MRI
- Mammography
- Bone Densitometry

PHARMACY-the complete health store

Layout :-

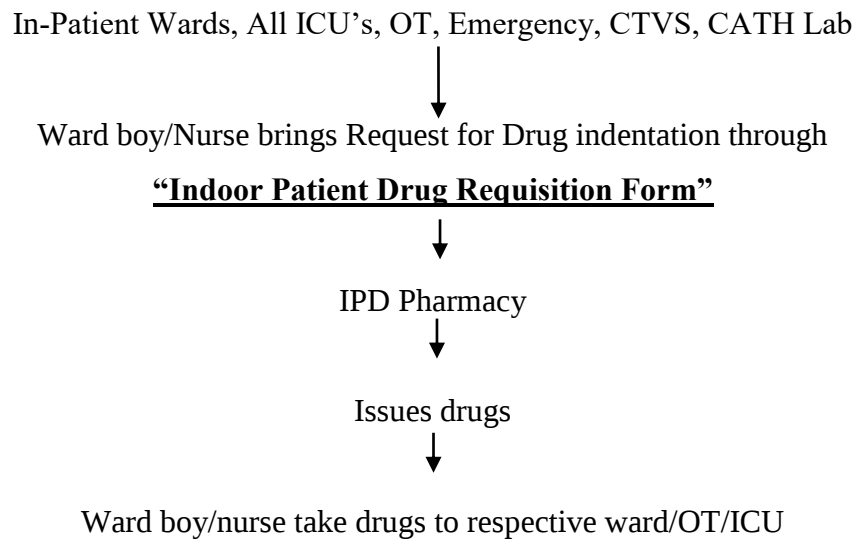
Ground floor

Timing: -

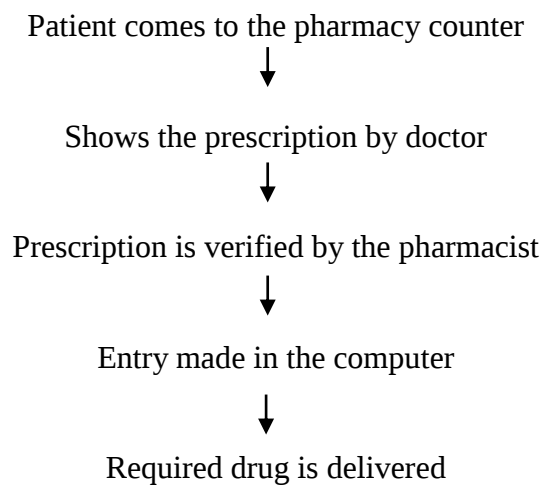
- OPD: 8:00 AM – 8.00PM
- IPD: 24 Hours

PROCESS FLOW:

FOR IPD PHARMACY-



FOR OPD PHARMACY



OPD PROCEDURE

QUALITY POLICY OF OPD

AHI is committed to deliver highest quality of healthcare to enhance **patient experience** and meet their expectation through well defined quality systems, world class professionals, state of art technology, human and compassionate care.

QUALITY INDICATORS IN OPD

- Waiting time analysis of patients in OPD
- Delay time in doctor starting their OPD

OPD billing-

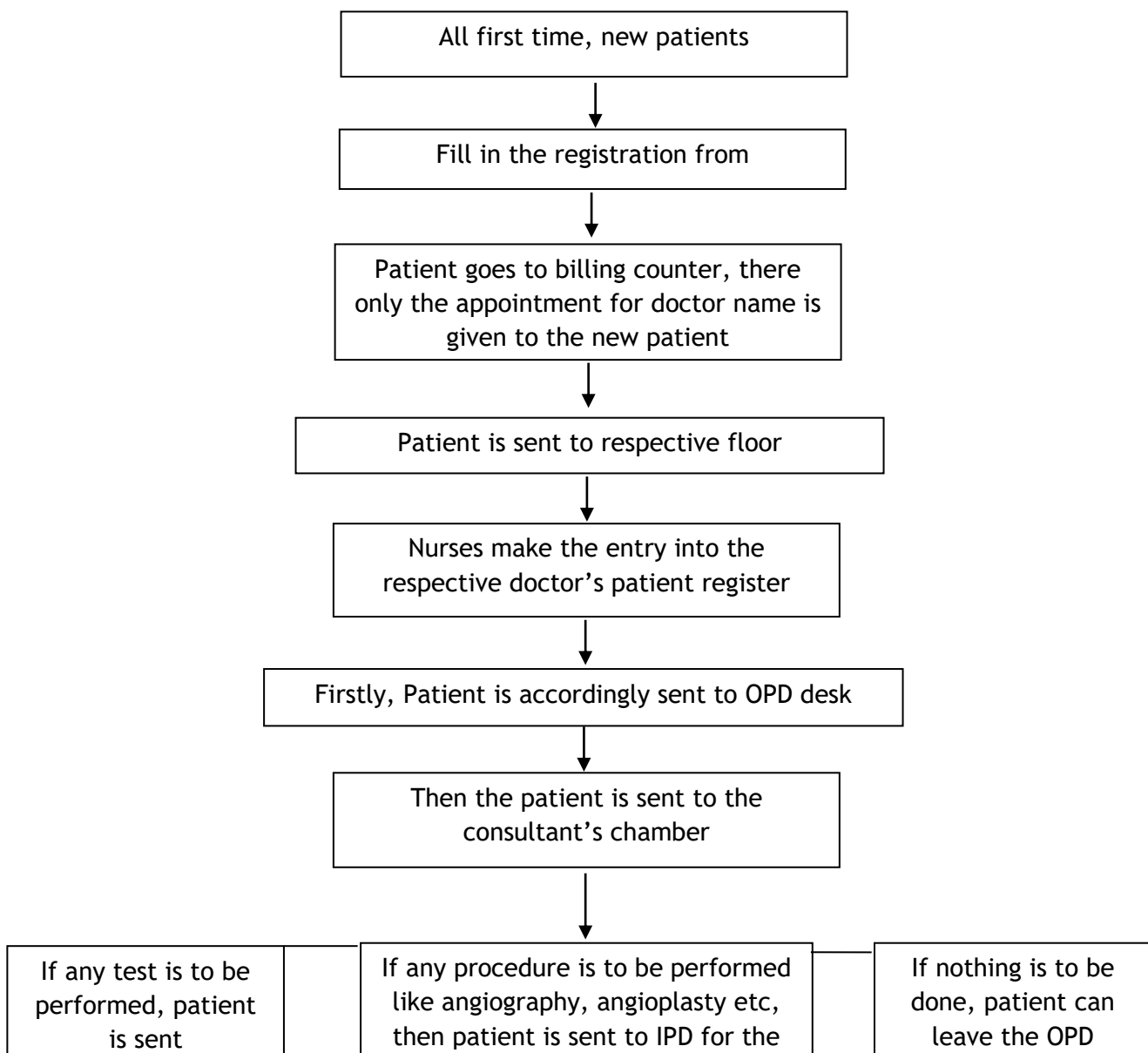
There is one billing counter and billing for the consultant for all doctors on the same floor is done here.

PROCESS FLOW:

- As the appointment patient enters the first floor OPD for seeking doctor's consultation, she/he has to report to the OPD desk, where the FOE guide them to the billing counter to pay the consultation fee. If the patient is non appointment, walk in patient who is visiting for the first time then he/she has to fill the registration card and has to do the billing where itself the particular doctor is appointment and if the patient is non appointment follow up patient then he has to first do the billing and then report to the respective nursing station.
- After completing billing, appointment patient again comes to the OPD desk and get their name registered in the patient register. If the patient is coming for the first time for consultation then the nurse makes their new OPD card, wherein doctor writes all the important findings, all the test and drugs are prescribed in the same booklet, and the patient has to bring the booklet every time he/she comes for follow ups. The patient has to bring the booklet every time he/she can keep all his reports. But if the patient is coming for the follow up visit the nurse themselves take out their file, which contains all their previous and current reports. As soon as patient leaves the counter FOE makes an entry in the computer that patient has arrived (there is an automatic system and each nurse and other staff have their separate ids and passwords to open this and so by this they can see all the records of patients).

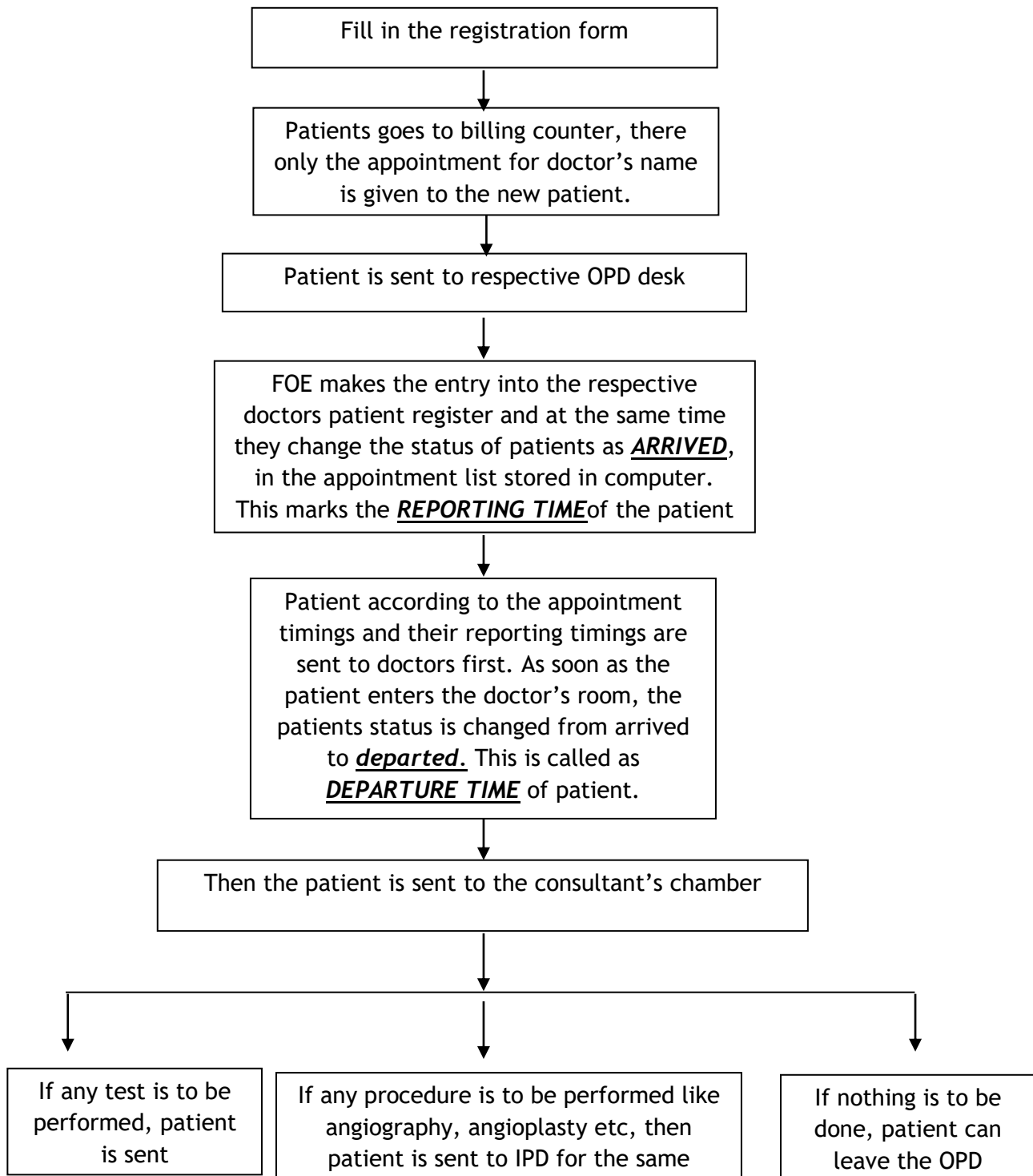
- The FOE then goes and keep these files in the doctors room, whereby each patient is called according to their appointment time.
- As soon as the patients name is called he/she first has to visit the consultant, sees the patient as soon as the patient enters doctors cabin the FOE changes the status from arrived to departed. In this way the AHI maintains the record of patient waiting time.
- After departing from the consultation room, the patient has to either undergo some tests, or he has to get admitted into the IPD (for which he goes to Day care for screening), or he can leave the hospital, as prescribed by the doctor.
- Before leaving the first each and every patient gets his/her consultation details of that day's documents are scanned as well as photocopied.

First time patient (walk in/non appointment)



- For the follow up non-appointment patients, the patients directly go the OPD desk and then to doctors' chamber, then the procedure is same as above.

First time visitors, but appointment patients



MARKETING DEPARTMENT

1) Referral:

- Community Education Programmes (CME) through social media
- General Practitioners
- Picnics
- Friends of AHI

2) Corporate

- Empanelment/Corporate Tie ups
- PSU's Tie-ups
- TPA Tie Ups
- Summits
- Workshops

3) International

- Embassy
- Doctors
- Facilitators

4) Public Relation

- Press Conferences
- Shoots/Interviews
- Print Media: Newspaper, Magazines
- Branding: Events, Conferences, Trade shows.

LOCAL PUBLICITY

- TV ads / Cable ads
- Newspaper Ads
- Ads in local magazines, supplements, directories
- Leaflets, Pamphlets and Flyers
- Direction Boards
- Kiosks
- Hoardings
- Hospital Board (Glow sign)

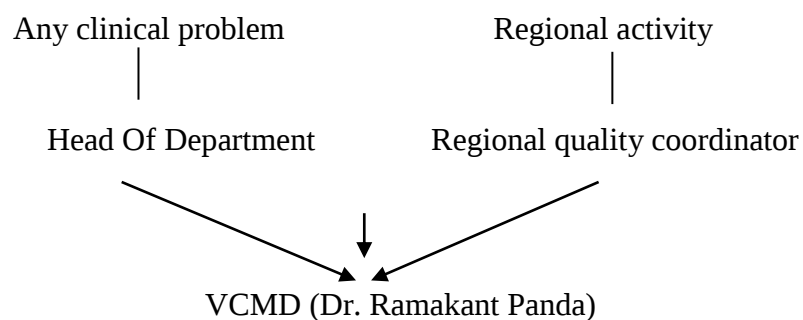
QUALITY DEPARTMENT

Layout:- 3rd Floor

Functions of quality department

- Clinical and non clinical audit
- Policy making
- Quality initiative
- Committee meeting coordination
- Organizing meeting and taking the minutes
- Various committee organized by quality department are:-
 - Infection control committee
 - Safety and quality starting
 - HR committee
 - Pharmacy and therapeutically committee
 - Medical audit committee
 - Medical record committee
 - OT committee
 - Sexual harassment committee
 - Independent ethics committee
 - Executive council committee
 - Institutional review board committee

Process Flow



HUMAN RESOURCE DEPARTMENT

Layout:- Ground Floor

Jobs & Responsibilities:

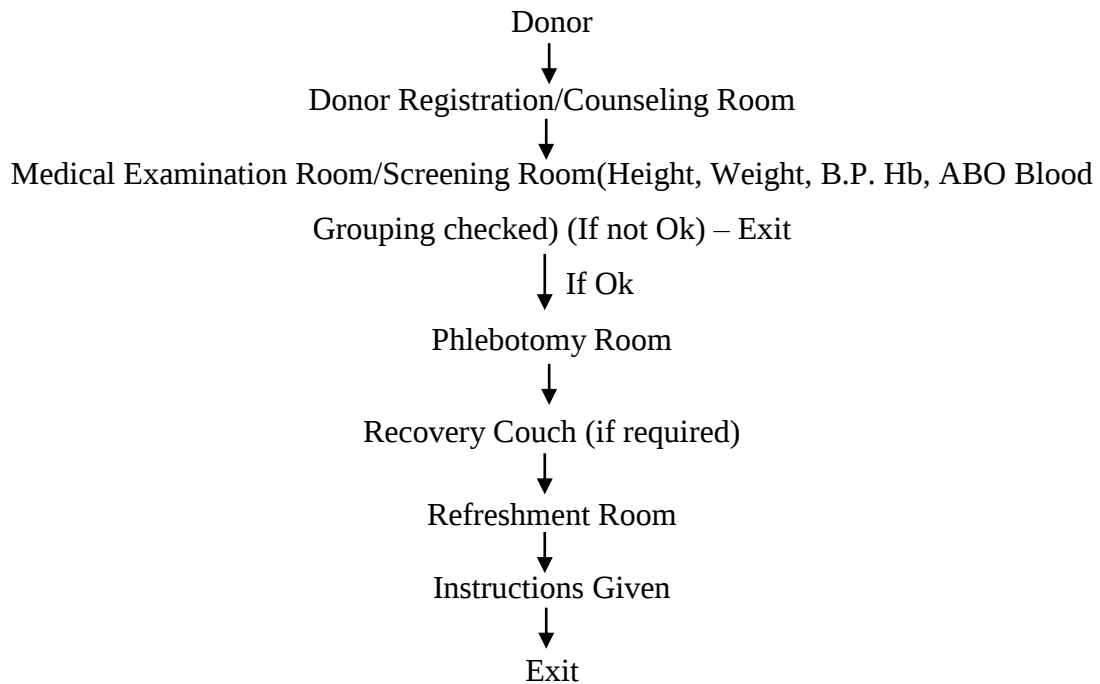
- Manpower Planning
- Internal Job Posting Process
- CV Selection
- Credential Policy
- Confirmation and Appraisal
- Staff Queries
- Follow up with selected candidates
- Issuing of appointment letters
- Disciplinary Policy
- Leaves sanctioning
- Payroll
- Budgeting for departments
- Doctors payout
- Duty roster
- Issuing of Experience letters
- Investigation of staff grievances
- Issues of slow cause
- Salary statement
- Full in final settlement
- Outsource staff report checking
- Manpower planning
- Dispatch of salaries
- Pre-recruitment calls
- Organizing interviews
- Housekeeping of CV's
- Preliminary interviews
- Joining formalities

- Leave record maintenance
- Issuing of I-Cards
- Conducting Employee Welfare Programme e.g. Nurse Day
- Issuing of Refreshment Coupons
- Conducting Exit Interviews.

BLOOD BANK

Layout: First Floor

FLOW OF DONOR:



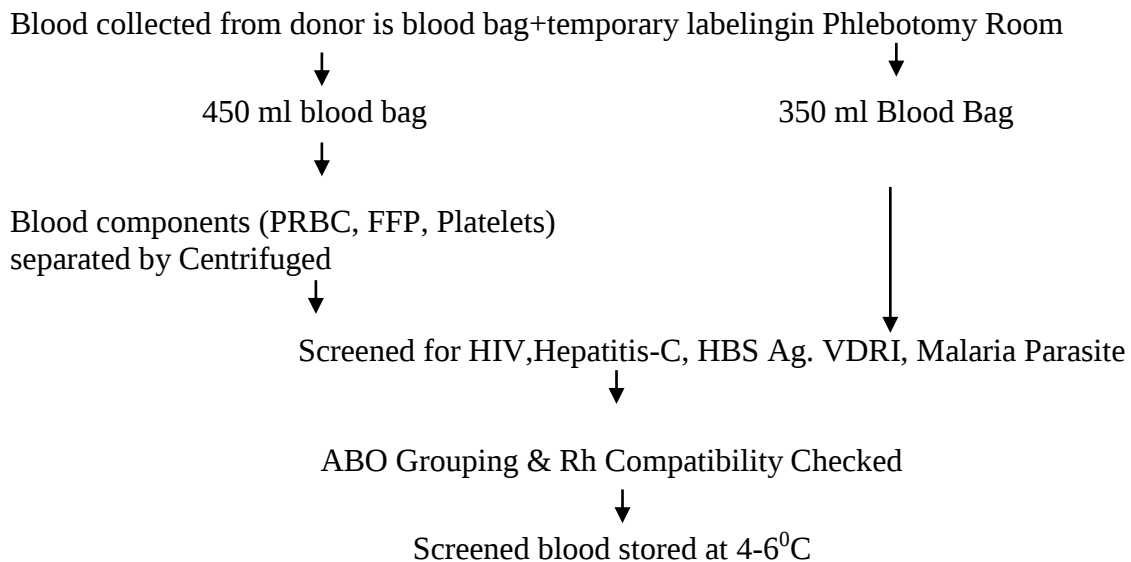
- If the donor is more than 55kgs, then 450 ml of blood is collected, otherwise 350 ml.

Infrastructure of the blood bank-

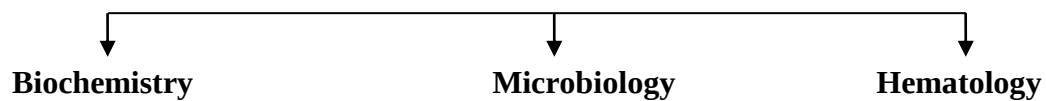
- Donor Registration/Counseling Room
- Medical Examination Room
- Donor room/Phlebotomy/Bleeding room-Blood is collected in this room.
- Aphaeresis Room

- Refreshment Room-After donating the blood, refreshments are provided here.
- Component Room: Here collected blood is formed into different components.
- Cross matching Room (Serology room) – Here Blood is tested & cross matched.
- Store Room/Record Room-All the records and inventories are stored here.
- Wash & Sterilization Room-Here any blood tested positive for any infection or unmatched blood is discarded.

Movement of Donor's Blood:

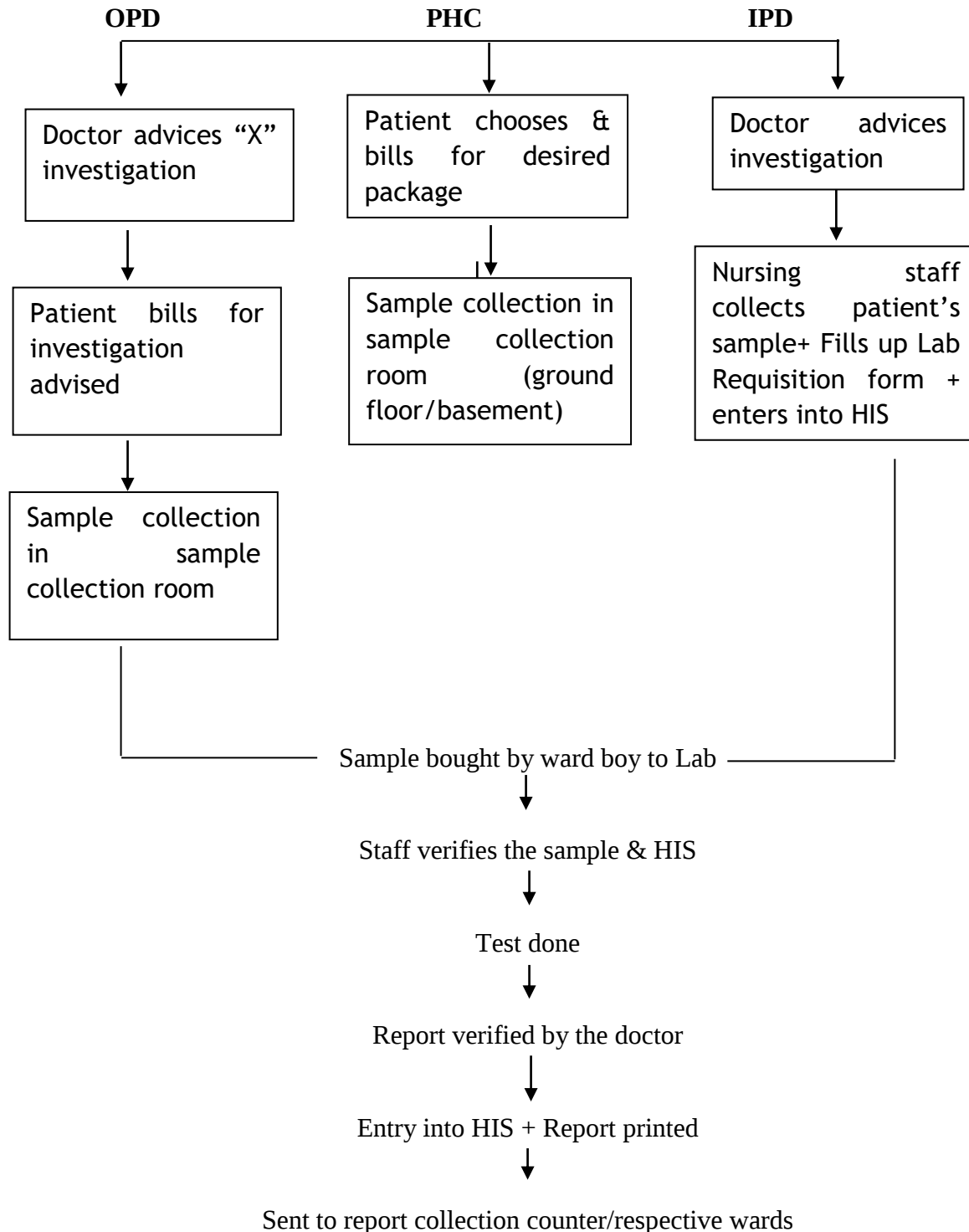


Laboratory Services



Layout:-Basement, Main building

Workflow:



FINANCE & ACCOUNTS

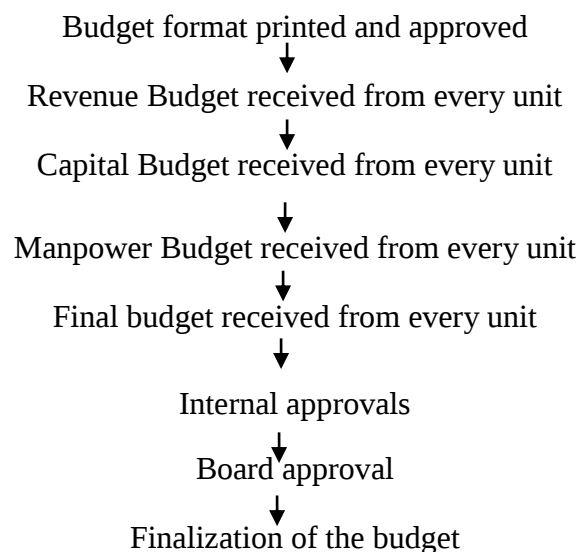
Layout:- Ground Floor

Scope of Services:

The scope & complexity of service proved by this department (which includes billing aspect also) is:

- Business building insights.
- Areas for lowering cost & improve profitability
- Updating of bills on daily basis for IPD patients.
- Customer (patient's Attendant) satisfaction for billing concern.
- The Billing staff has overall responsibility for coordination of various functions (Pharmacy, Wards etc.) and daily basis report for admission and they maintain a log of all the problems that arise and provide the necessary solution as deemed proper and reasonable.
- Daily collection of money from various sources in the hospital and its deposition in bank.
- Maintenance of petty cash.
- Budgeting
- Department serves all departments for finance & billing aspect.
- Making Balance sheet, Profit & Loss statement for the financial year.
- Maintenance of file of all employees, vendors, creditors & debtors.

PROCESS OF BUDGET MAKING



LAUNDRY SERVICES

Layout:- Lower Basement

- Cleaning and washing of clothes of all the hospital with ironing is done.

MAINTENANCE & ENGINEERING

Layout: Between 3rd and 4th floor and Lower basement

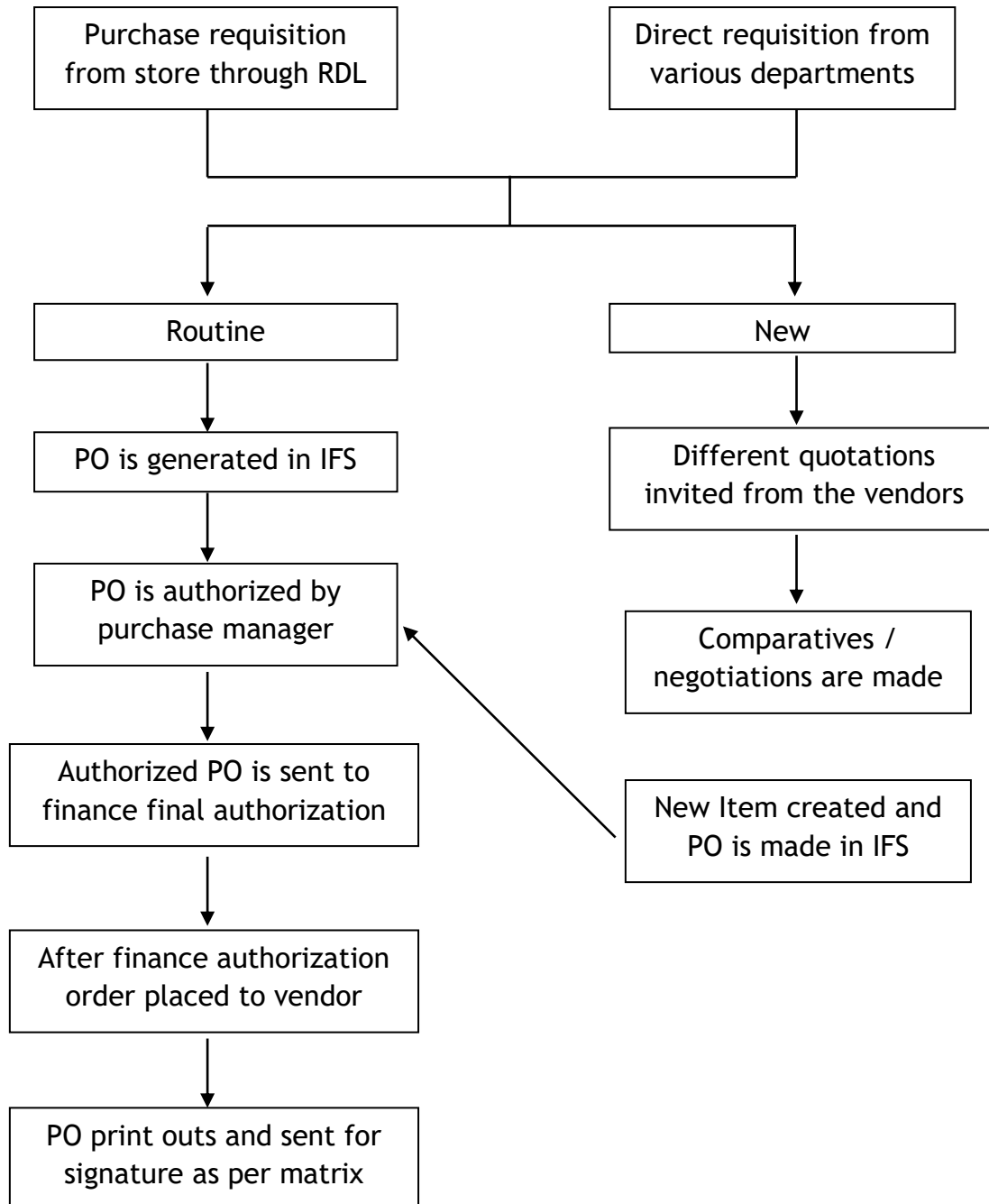
Components:

- Electricals
- Boiler Plant
- Air conditioning
- Sewage treatment
- Carpentry
- Pump House + Fire Fighting
- HVAC
- Plumbing

Functions:.

- Preparing the plan for equipment daily and preventive maintenance, spare parts and consumable for the department so that each facility works properly & there is minimum breakdown.
- Engineering is also responsible for controlling and ensuring for optimum use of power, water and diesel.

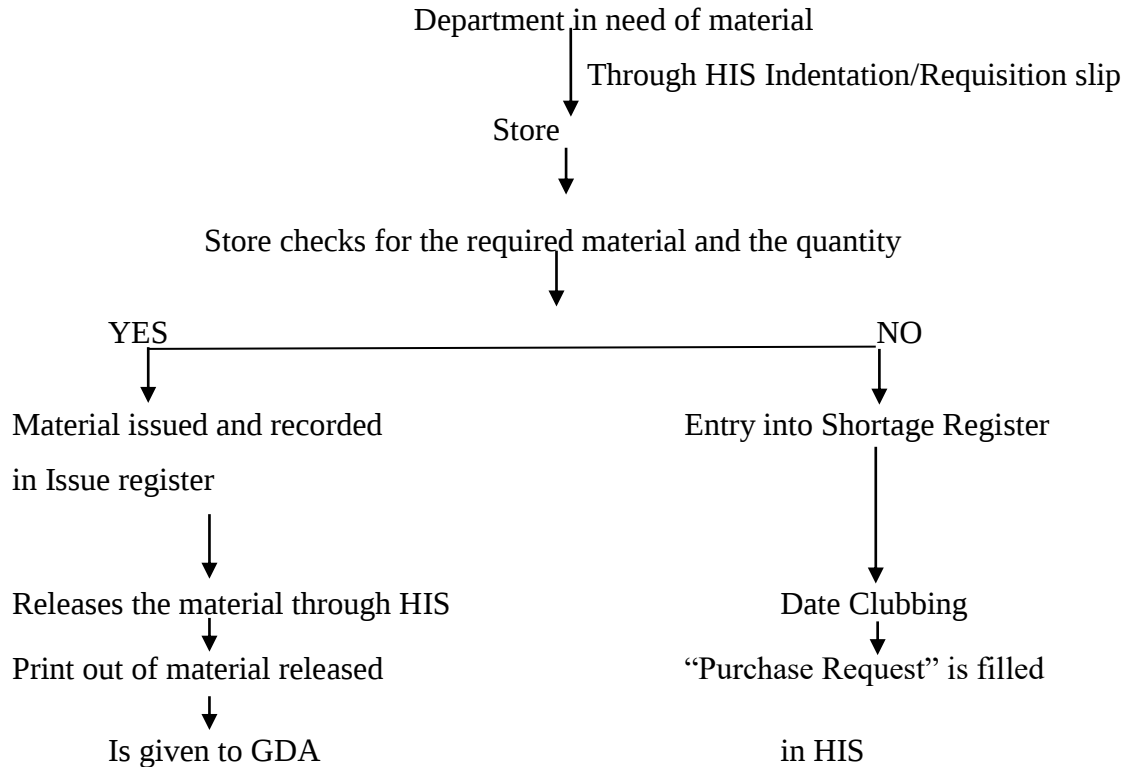
Work Flow



STORES

Layout: Lower Basement

WORK FLOW



IMAGING & RADIOLOGY

Services provided:

- CT
- ULTRASOUND
- X-RAY
- MRI
- MAMMOGRAPHY
- BONE DENSITOMETRY

HOUSEKEEPING

Status: Outsourced

Components & Status

S. No.	Component	Outsourced to:	Shift Timings
1.	Housekeeping	Proserv	Morning: 7:00 AM-7:00 PM Night: 7:00 PM-7:00 AM
2.	Ward boys (GDA's)	Proserv	Morning: 7:00AM-7:00 PM Night: 7:00 PM-7:00 AM
3.	Glass Cleaners	Classic Appearance	8:00 AM – 5:30 PM
4.	Pest controllers	Proserv	Morning: 7:00AM -11:00AM Evening: 5:00PM – 9:00PM

Advantages of outsource:

- ✓ Reduce workload of management e.g. no salary, PF, Uniform headache.
- ✓ Manpower management is the responsibility of contractor
- ✓ Reduction in cost if services are contracted out.

FUNCTIONS:

- Clean Floor, Wall ceiling
- Discharge Cleaning
- Remove Garbage
- Replace Supplies in Utility Rooms
- Clean Housekeeping Equipments
- Clean Room, Wards, Reception, OT, ICU Etc.
- Infection Control
- Pest & rodent Control
- Odor Control
- Environment Hygiene
- Sanitation Hygiene
- Checking Cleanliness of All Areas
- Control & Reporting of All maintenance Works
- Hospital Waste Disposal
- In-Service Training

Day	Weekly Assignment
Monday	Thorough Cleaning of all hospital doors
Tuesday	Thorough Cleaning of Ceilings & AC ducts
Wednesday	Thorough Cleaning of corners & skirting
Thursday	Thorough Cleaning of Toilets
Friday	Thorough Cleaning of AHU's & wooden beading cleaning
Saturday	Thorough Cleaning of Outer area+Parking Area
Sunday	Thorough Cleaning of all Administration Block + All Wards

EMERGENCY

Layout: Ground Floor

- Nurse Station
- Store room: 1

Infrastructure:

- Beds: Total: 5
 - For Triage-3
 - For Observation -2
- Ambulance -2
- Air Ambulances-1

Nurse: Patient Ratio: 2:1

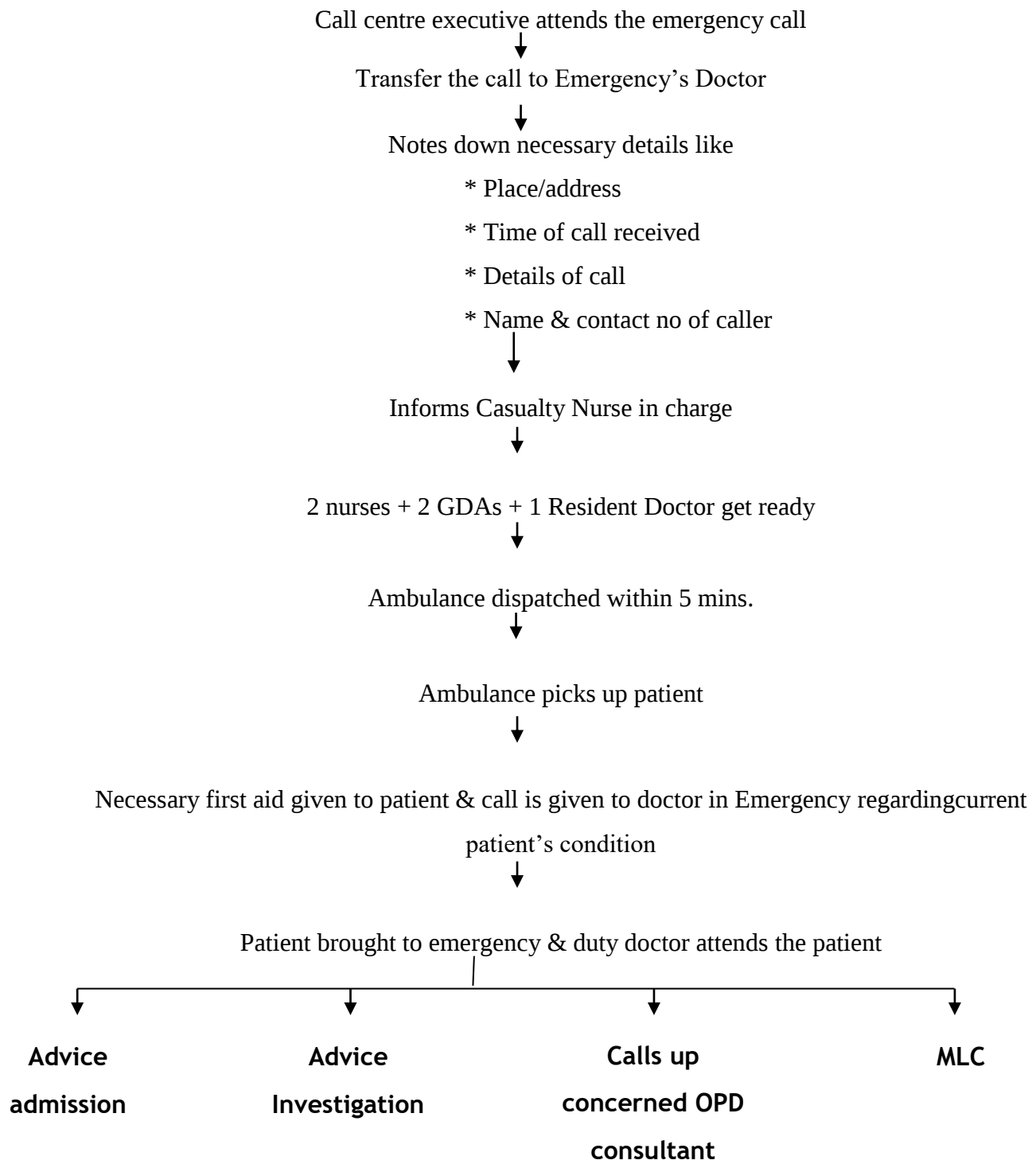
Inventory Management

1. Inventory register
 - Medicine trolley daily checklist
 - Dressing trolley daily checking
 - POP Checklist
 - Crash cart checklist
2. Ambulance inventory Register

Maintenance Book:

- Oxygen pressure daily checklist
- ECG Checklist
- Biomedical Equipment Checklist.

AMBULANCE SERVICE FLOW



Think Tank

Layout: 3rd Floor

Workflow:

If there is a case to be discussed at common platform amongst doctors or any management related issues or other requirements where people need to come together and discuss over matters related to hospital then think tank is brought into use.

Amenities Available:

- Large oval table
- Eight chairs
- Projector
- White board
- Audio system.

F & B Department

Layout- Ground Floor and lower basement

Functions:-

- Catering to Inpatients, Hospital staff, Patient attendants.
- Diet counseling
- Education
- Smooth provision of laid out 9 diets to the patients.
- To check the patient, Attendant & Staff food for quality, preparation, presentation and packing.
- Coordinating closely with the Nursing shift in charges for changes in the patient's diet or new admissions etc.

Areas in Kitchen

- **Receiving & Storage Area-** Walk in refrigerator
- **Preparation Area-** For peeling, cutting, chopping, slicing, mincing
- **Cooking Area:** Party, Bakery, Continental, Indian
- **Tray Layout & Packing Area**
- **Service Area:** From here food is transferred to patient's on trolleys.

Other Areas:

- Dish washing & pot washing area
- Dietician Room

Flowchart of Dietician and Inpatient Interaction;

The dietician takes details of new patients such as name, UHID, doctor's name, diagnosis and diet prescribed.



Takes a detailed round and provides nutritional counseling and education, ensures patient's compliance to recommended diet.



Does nutritional screening in order to know about patient's clinical conditions, appetite and tolerance to food and acceptance to hospital diet and food allergies if any.



After the rounds, detailed food summary sheets are planned and prepared for every patient keeping in mind medical history and preference of patient as well.

Flowchart of Dietician & Nursing Staff interaction

Dietician receives a daily diet requisition once a day from all nursing station.



Dietician cross-checks received diet requisition from time to time with nurse both during rounds and on phone constantly.



Dietician updates changes with respect to new admissions/transfers/discharges/changes in diet

SECURITY SERVICES

Layout:- Ground Floor

Area of Operation (Present)

- Visitor's check
- Surveillance of hospital through CCTV's
- Theft, Burglary
- Violence
- Handling of MLC
- Material movements in & out of the hospital
- Handling visitor's pass
- In case of patient's death, handling emotional chaos of attendant
- Parking management and traffic control.

Additional Responsibilities:

- Playing their role once different codes are brought into action.
 - Blue : Individual Disaster
 - Red : External Disaster and Fire
- Locker & key management.
- Conducting Mock Fire and Disaster Drills.
- Playing their part in **HAZMAT**.

ICU

Layout:- 3rd floor and 2nd floor.

Working Shifts:

Morning: 8.00 AM to 2.00 PM

Evening: 2.00 PM to 8.00 PM

Night: 8.00 PM to 8.00 AM

EQUIPMENTS:

1. Ventilator
2. Patient monitor
3. Defibrillator

4. Syringe pump
5. ECG machine
6. Pace Maker
7. ICU bed
8. Blood gas analyzer
9. Crash Cart

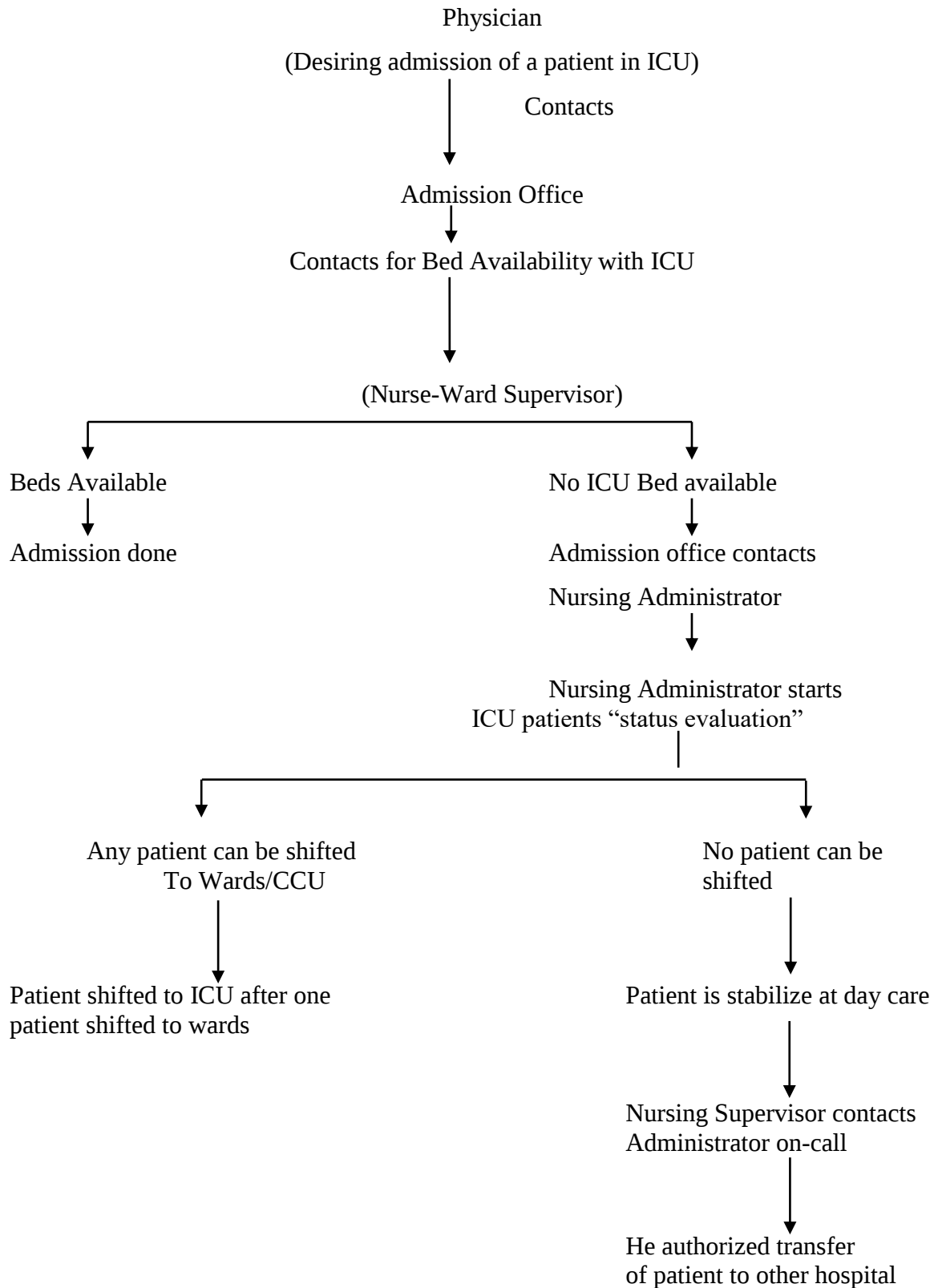
Each Bed Space Contains

1. Motorized Electric Bed
2. Multiparameter Modular Philips Monitor- mounted on wall behind the bed.
3. Chart/Locker Trolley
4. Independent wall mounted panel housing 2 each of Oxygen, Air & Vacuum outlets
(all connected to control manifold by concealed pipelines)
 - Each bedside monitor is hooked to CENTRAL NURSING STATION MONITOR.
 - Other Equipment (common to all beds):
 - Ventilators
 - Syringe pumps
 - Feedings pumps
 - Nebulizer
 - I bed has access to piped Ro water & can be used for bed-side dialysis.

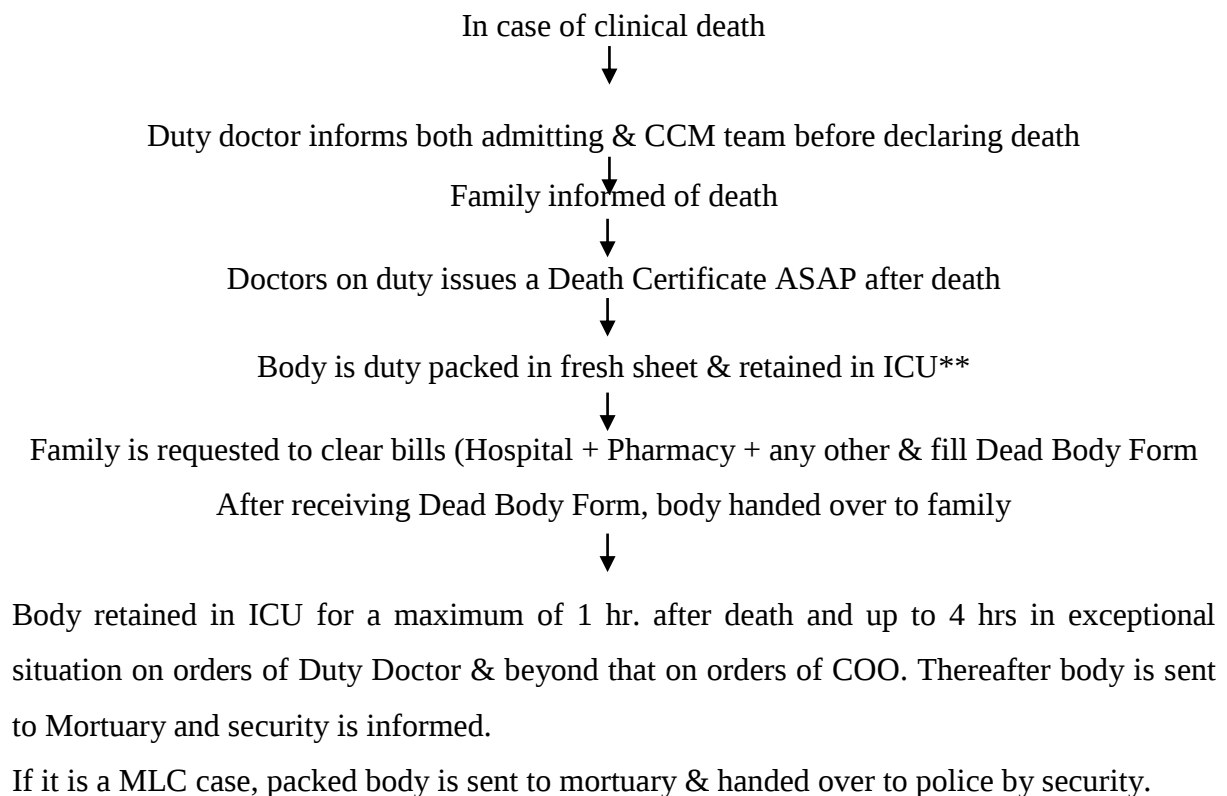
Admission in ICU can occur from:

- Inpatient wing of the hospital
- Emergency complex
- From other hospitals
- Sometimes directly from OPD
- Rarely from Bronchoscope, Endoscopy, Dialysis unit

Patient admission procedure in ICU-



DEATH PROTOCOL



Information Technology (IT) Department

Layout:- 2nd Floor

Functions and responsibilities:

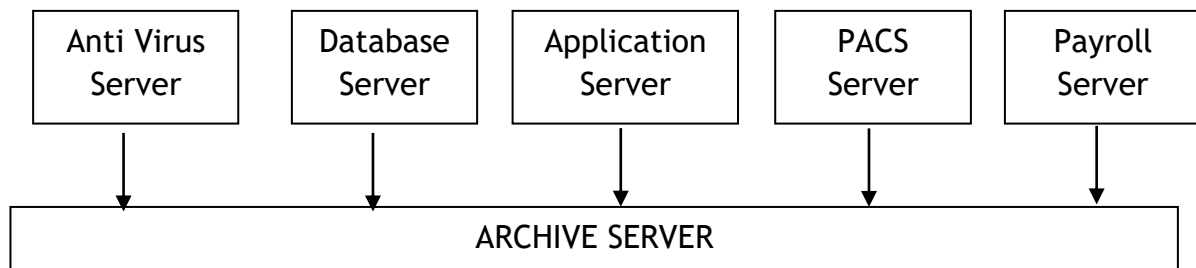
- To keep the servers alive
- To keep the network alive
- To keep internet connectional alive
- To take care of all the desktops & laptops in the organization
- To track the records of all the desktops
- To keep an eye on the employees
- Training of the other Staff for the HIS
- To come up with new technologies that can be implemented in the hospital to ensure its smooth functioning and increasing safety of care of patients.

2 Major Work Areas: General Administration & HIS

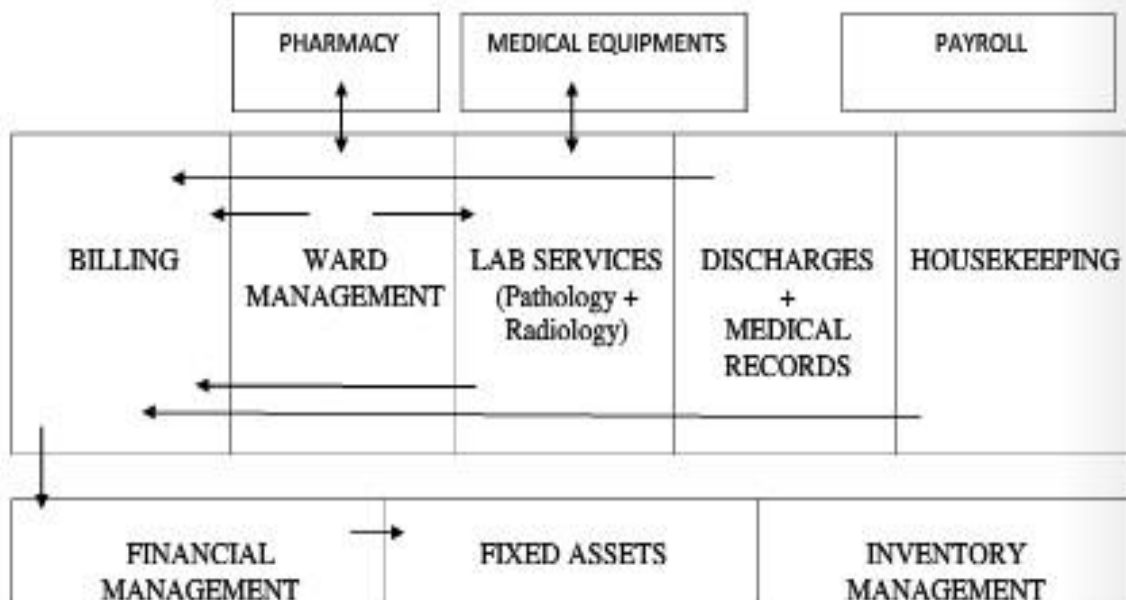
I) General Administration:

Servers:

- Anti view server
- Database server
- Application server
- PACS server
- Payroll server
- Archive server



II) HIS Structure



OT (Operation Theatre)

- ❖ Layout: 3rd & 2nd floor
- ❖ No. of OT's: 6
- ❖ No. of beds in Preoperative ward: 3
- ❖ No. of beds in post operative wards: 6
- ❖ Utility room: 1
- ❖ Pantry: 1
- ❖ Sterile room: 3
- ❖ Changing room: 3

OT Staff:

1. OT Coordinator
2. Surgeon
3. Anesthetist
4. Anesthetist Assistant
5. Senior OT Technician
6. OT Technician
7. Per fusionist
8. Perfusionist technician
9. Scrub Nurse

INFECTION CONTROL SURVEILLANCE PROGRAME FOR OT

Records maintained for OT Sterilization Check:

1. OT Culture File:

- Contains culture report of each OT
- Done every **72 hrs.**
- Swabs taken from OT floor, walls, table locations.
- Method used: **Still Air Method.**
- FORMAT: Site (OT No.)

Method

Receiving date

Reporting date

Microbiology report

2. **Daily OT Cleaning File:**

- Daily OT cleaning record (compiled to get monthly record) with format as:
OTNo. / Item name / Qty./Date/Morning, Evening, Night with (personnel sign & ID no.)
- OT washing date record, OT fumigation date record.

3. **Fumigation Record File**

- Separate record for each OT
- Fumigation done by **2% trigen**
- Weekly reporting
- FORMAT:

DOCUMENTS AND CHECKLIST MAPPING ACCORDING TO PATIENT FLOW

IN OT

Patient's Progress	Documents in file	Documents to be added	Checks and checklist	Procedure done by nursing staff (during the process)
From WARD to PRE-OPERATIVE AREA	Consent forms: - Informed - Surgical - Anesthesia Pre operative checklist Bill clearance papers Records of Antibiotic & Investigations Pre anesthetic check up record	Surgical safety checklist form Requisition forms: - Histopathology - Blood bank - Laboratory - Indoor patient's drug requisition form	All documents received from wards are complete Part preparation done On-time pre-surgery antibiotic schedule	OT Patient Pre hold register completion Time in entry in "In-Out Register"
From PRE-		Completed Surgical	"First column" of	Completion of

OPERATIVE AREA to OPERATION THEATRE (OT)		safety check list form. Operation notes	Surgical safety check list form completed or not. Checks of: - Medical gases - Equipments - Electrical points - Linen - Surgical set “Pre-column” of Instrument checklist form.	“Second column” of Surgical safety check list form Operation records register completion “Post column” of Instrument checklist form completed.
From OT to POST OPERATIVE AREA/RECOVERY AREA		Completed operation notes form OT Daily Charge Bill	Proper disposal of OT waste as per procedures laid down. OT preparation for next surgery. Special attention to blood spills.	OT Daily charge bill completion Completion of “Time out” in “In Out OT Register”

CSSD

(Central Sterile Supply Department)

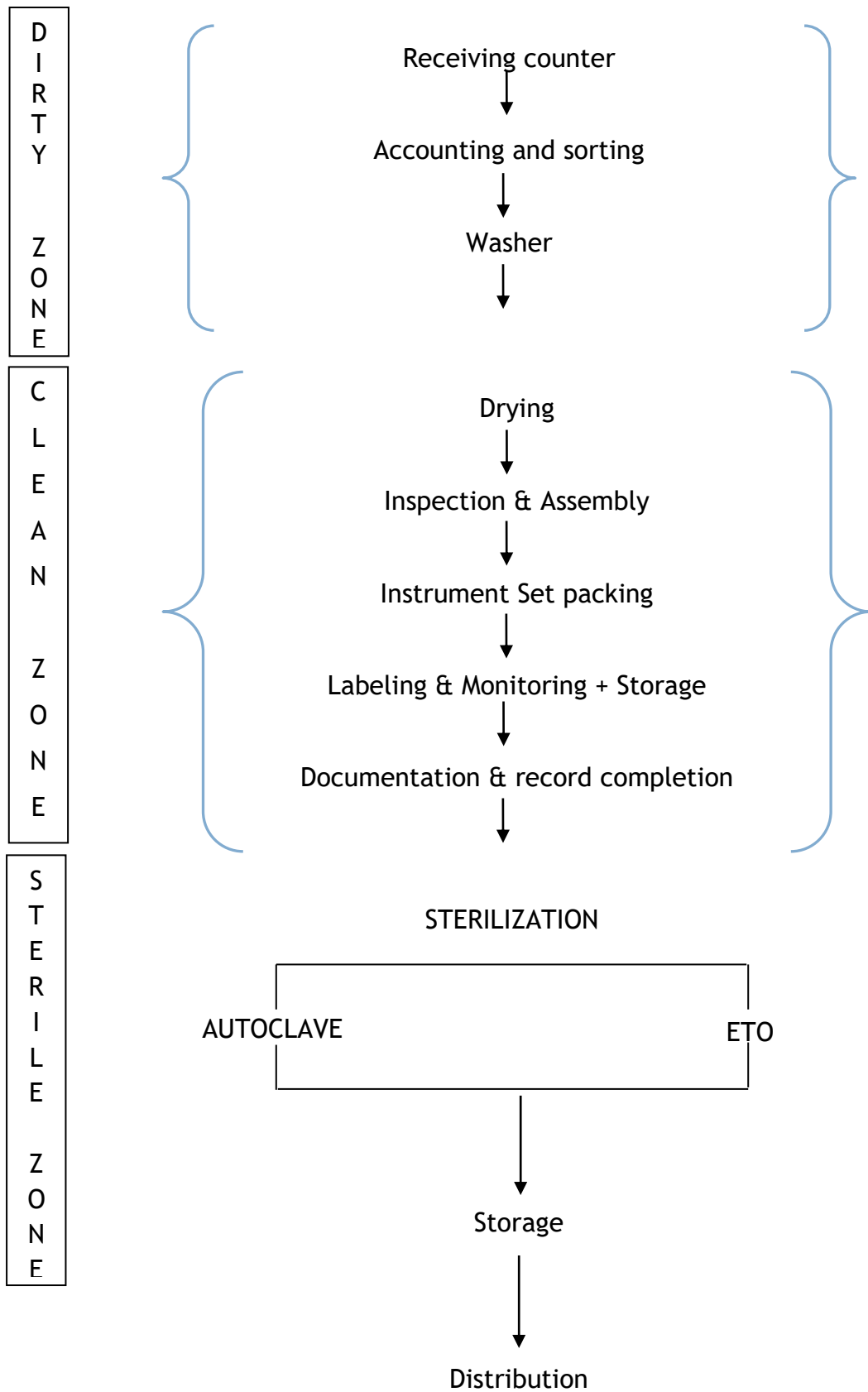
Layout: 2nd floor

Infrastructure:

- Autoclaves (Vacuum type)
- ETO-3
- Ultrasonic washer

Work Flow: The process how CSSD works for the hospital is as follows

DEPARTMENT WORK FLOW:



METHODS OF STERILIZATION USED:

AUTOCLAVE (Steam sterilization)	ETO (Ethylene Oxide)
• No. of autoclave -2 • Type-vacuum type • No of cycles per day –Acc. To load. • <u>Temp/time/pressure.</u> 121⁰C/15 mins/1.2kg 134⁰C/4 mins/2.2kg • STERILIZATION CHECK: a) Bowie Dick Indicator (Chemical Indicator) One a day b) Biological Indicator: <i>G. Stereothermophilus</i> Once a week	• Number -3 • No of cycles-usually 1/day (But can vary acc. To load) • Temp-54⁰C • 12 hour cycles • STERILIZATION CHECK: ✓ Biological indicator <i>Bacillus atrophaeus</i>: Eachload

MONITORING:

CHEMICAL MONITORING	BIOLOGICAL MONITORING
• Class I Indicator: Interlocking Tape applied on packs. • Class II Indicator: Bowie Dick+Batch Monitor • Class VI Indicator: To be put in packs.	• <i>G. stereothermophilus</i> • <i>B. atrophaeus</i>

Labeling:

Autoclave I or II/Lot no/Date of Sterilization/Date of Expiry/Indicator Slip/Contents

Records Maintained

1. Receivable item register
2. Items issued register
3. CSSD Sterilization Record Register:

It includes:

- Reports from microbiology
- Graphs generated from each sterilization
- Batch Monitoring Record

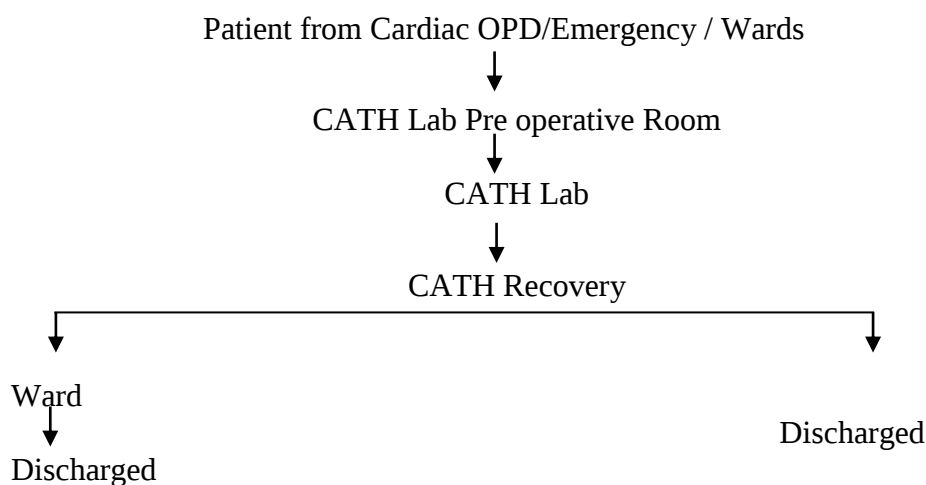
4. Record keeping register of each sterilization process:

It includes:

- Indicator used
- Temperature/pressure
- Time of start/end
- Initials of person doing sterilization
- Process number

Catheterization Lab (CATH)

Layout: 3rd floor

Workflow

Common procedures in CATH Lab:

- Coronary Angiography (CAG)
- Coronary Angioplasty (PTCA)
- Balloon Mitral Valve Plasty
- Permanent Pacemaker
 - Single chamber
 - Dual chamber
 - Bivent
 - Combo device
 - AICD
- Electrophysiology study-Radiofrequency Ablation (EPS-RFA)

CATH Recovery ICU 2nd floor

Layout: 2nd floor

Workflow-

After the patient has undergone a cardiac procedure, he/she is shifted to CATH Recovery ICU 2nd floor, to keep an eye over the cardiac status for the next few hours.

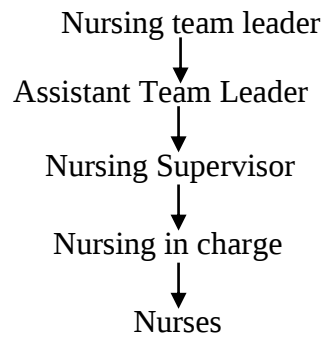
- If the patient had only Angiography, he is discharge from CATH Recovery after 6 hours of the procedure.
- If the patient has undergone any surgical procedure, then he/she is shifted to the wards the next day for further investigations.

The nurses keep the record of the patients' status and their medications as well. The duty doctor is responsible for reviewing the patients from time to time.

Wards

Layout: 3rd floor and 4th floor

Staffing of Nursing Personnel in wards:-



- Nurse to Patient ratio-1:5
- The staff works in three shifts
 - a) Morning (8.00AM-2.PM)
 - b) Evening (2.00PM-8.00PM)
 - c) Night (8.00PM-8.00AM)