

**Summer Training at
Asian Institute of Medical Sciences (AIMS), Faridabad
(April 3 to June 2, 2017)**

- **Hazard Identification and Risk Assessment**
- **Active Audit Analysis**

**By
Kajal Jumnani**

**Under the guidance of
Dr. C. Ramesh**

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


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

CERTIFICATE

This is to certify that **Kajal Jumnani** has undergone summer training in **Asian Institute of Medical Sciences, Faridabad** from 3rd April to 2nd June 2017.

The candidate herself completed the project assign to 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.

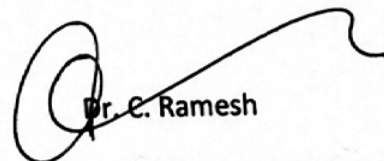
I wish her success in all her future endeavors.



Col. (Dr.) Ashok Kaushik

Dean (Academic & Student Affair)

The IIHMR University, Jaipur



Professor and Dean, School of
Pharmaceutical Management

The IIHMR University, Jaipur

Certificate of Internship Completion

Date: 2nd June'17

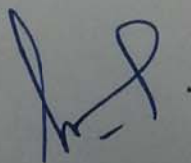
TO WHOM IT MAY CONCERN

This is to certify that Ms. Kajal Jumnani- pursuing MBA in Hospital & Health Management from IIHMR University, Jaipur has successfully completed her internship at Asian Institute of Medical Sciences, Faridabad in the Department of Quality & Operations - from April 3rd, 2017 to June 2nd, 2017. She has successfully completed project on "**Case Study on Hazard Identification and Risk Analysis (HIRA) in Cath Lab**". Apart from project, she actively contributed in following areas:

- Internal Audit Closures
- Active Audit Analysis
- Quality Indicator Validation

During the period of her internship programme, she was found punctual, hardworking and inquisitive.

We wish her good luck for all her future assignments.



Dr. Ankur Kathuria

Sr. Manager – Quality & Operations

Asian Institute of Medical Sciences

ACKNOWLEDGEMENT

I am exceptionally thankful to all the professionals at **ASIAN INSTITUTE OF MEDICAL SCIENCES (AIMS)** for sharing generously their knowledge and precious time. I owe a great debt to **Dr. Ramesh Chandna** (Director- Quality, Blood bank, Labs and CSSD) for sharing their valuable views in spite of their busy schedule. It has been our privilege to work under his dynamic supervision in the hospital.

I express our sincere gratitude to **Dr. Ankur Kathuria** (Senior Manager Quality and operations) and we would also like to grab the opportunity to thanks Dr. **Shashi Tiwari** (assistant manager of Quality) for their helping hand, keen interest and valuable suggestions in the compilation of the report without their guidance and regular encouragement my project would not have been compiled.

I would also like to grab the opportunity to thanks **Dr. Rishi Gupta** (H.O.D Cathlab, CCU), **Antony Thomas** (technician) and his whole team of cathlab and ccu for helping in my learning which would have not been possible without in-depth discussion with them.

I am highly grateful to all the departmental heads and staff for giving us time and helped in learning the process. Without the active cooperation and participation of **ASIAN TEAM** it would not have been possible to accomplish my project.

Most importantly I would like to thank our college Mentor Dr. **C. Ramesh**, Dean, School of Pharmaceutical Management for guiding and supporting me on given project work and **FACULTY OF IIHMR UNIVERSITY JAIPUR** for providing facilities for my study.

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ABBREVIATIONS

1. AHU - Air Handling Units
2. ALOS - Average Length of Stay
3. CCTV - Closed Circuit Television
4. CCU - Critical Cardiac Care
5. CMD - Chief Medical Director
6. CMO - Causality Medical Officer
7. CSO - Chief Security Officer
8. CSSD - Central Sterile and Supply Department
9. CTVS - Cardio Thoracic Vascular Surgery
10. DG - Diesel Generator
11. DOR - Discharge on Request
12. ECG - Electro Cardiogram
13. ENT - Ear Nose Throat
14. ETO - Ethylene Oxide
15. FDA - Food & Drug Administration
16. FOC - Free of Cost
17. GDA - General Duty Assistants
18. HAZMAT - Hazardous Material
19. HIS - Hospital Information System
20. HOD - Head of Department
21. HRD - Human Resource Development
22. HVAC - Heating, Ventilation & A/C
23. ICD - International Classification of Diseases
24. ICU - Intensive Care Unit
25. IGRT - Image Guided Radiotherapy
26. IMRT - Intensity Modified Radiotherapy
27. IPD - In Patient department
28. IT - Information Technology
29. LAMA - Leave Against Medical Discharge
30. MLC - Medico Legal case

- 31. MRD - Medical Records department**
- 32. MTP - Medical Termination of Pregnancy**
- 33. NICU - Neonatal Intensive Care unit**
- 34. OPD - Out Patient Department**
- 35. OT - Operation Theatre**
- 36. PET/CT - Positron Emission Tomography/ Computerized Tomography**
- 37. PICU - Pediatric Intensive Care Unit**
- 38. PNDT - Pre-Natal Determination Test**
- 39. RMO - Resident Medical Officer**
- 40. TPA - Third Party Administrator**

HOSPITAL PROFILE



ASIAN INSTITUTE OF MEDICAL SCIENCES, 355 bedded super specialty tertiary care hospital is truly futuristic in its services & technology and brings together some of the most talented medical professionals in India. The hospital has been accredited with NABH and NABL accreditations and is equipped with state-of-the-art technology. The hospital provides preventive, diagnostic, therapeutic, rehabilitative, palliative and supportive services all under one roof and is designed to meet patient care and research requirements of the new millennium.

The hospital is at Sector 21A, Faridabad, easily accessible from New Delhi International Airport, New Delhi Railway Station and New Delhi Interstate Bus Terminal.

ASIAN INSTITUTE OF MEDICAL SCIENCES has been rated seventh Best Hospital in Delhi NCR in year 2013 and again rated as eighth Best Specialty Hospital in year 2016 by “The Week” magazine as per the “AC Nielsen Survey”. Also hospital is ranked among the Best Healthcare Brand by The Economic Times Survey 2016.

Asian Institute of Medical Sciences provides comprehensive multi-specialty tertiary care facilities through its 14 centres of excellence.

The ASIAN CANCER CENTRE offers end to end services – from prevention, early detection to comprehensive treatment and palliative care. The first hospital in North India to deploy the Varian’s Rapid Arc on a Trilogy system along with several high-end equipment such as PET/CT, DUAL head Gamma Camera and HDR brachy-therapy among others.

The ASIAN HEART CENTRE provides comprehensive cardiac care including non-invasive, interventional and surgical facilities. The hospital runs the most advanced cardio

thoracic vascular surgery program including bypass, open heart and valvular heart surgery. This centre is equipped with the most advanced cath-lab for angiography and angioplasties.

The ASIAN CENTRE FOR ADVANCED SURGERY is manned by highly skilled surgeons, fitted with ultra-modern surgical and diagnostic tools to tackle the most complicated surgical procedures. 11 modular operation theaters are equipped with LED lights, media bridges, laminar air flow, operating microscopes, image intensifiers, laparoscopic equipment, harmonic , RFA , hepa filters, Laser, Cusa etc.

The ASIAN CENTRE FOR NEUROLOGY AND NEUROSURGERY is fully equipped to treat all kinds of disorders of the brain and spine. The department is equipped with latest and high end machines like Digital EEG, EMG etc.

The ASIAN CENTRE FOR UROLOGY AND KIDNEY TRANSPLANT is a state-of-the-art unit providing excellent care for all urological conditions such as kidney stones, prostrate, laparoscopic urology & uro-oncology.

The ASIAN CENTRE FOR RENAL DISEASES offers all forms of dialysis- haemodialysis, SLED, CRRT, Peritoneal dialysis and provision to dialyse hepatitis and HIV+ patients. The centre is also successfully running Renal Transplant programmes.

The ASIAN CENTRE FOR BONE AND JOINTS offers one of the most comprehensive treatments of bone and joint ailments. The hospital offers extensive expertise in joint replacement surgeries like knee, hip and other joints.

The high end and innovative technologies in the ASIAN CENTRE FOR ADVANCED IMAGING gives access to patients to a reliable and intensive diagnosis. The Imaging Department of this hospital is equipped with state-of-the-art Phillips equipment including a 1.5 T MRI, Mammography, Bone Densitometer, 4 D Ultrasound and Digital X Ray. The centre has PET/ CT and dual head Gamma camera, installed for early detection of cancer.

The ASIAN CENTRE FOR GASTROENTEROLOGY is a state-of-the-art unit providing excellent diagnostic and curative facilities in gastro intestinal problems with the most experienced specialists for a wide spectrum of Gastro Intestinal problems like: Gaseous Distension, Dyspepsia, Jaundice, Constipation, Bleeding from mouth and rectum.

The ASIAN CENTRE FOR MOTHER AND CHILD is an integrated unit providing excellent care for pre and post natal care including high risk deliveries. AIMS also have state-of-the-art LDR suites which enable mothers to give birth in a comfortable and friendly environment.

THE ASIAN CENTRE FOR BARIATRIC & METABOLIC SURGERY is specialized in treating obesity that results in weight loss. The hospital is known for highly successful weight loss programs, which have helped many people to take control of their weight and avoid life threatening diseases.

THE ASIAN CENTRE FOR AESTHETIC SURGERY & MEDICINE provides state-of-the-art unit for all kinds of cosmetic treatments with the best equipments and the most experienced ‘specialists’. Asian Institute of Medical Sciences is not just another hospital, but a complete solution in the philosophy of healthcare.

ASIAN IVF CENTRE POWERED BY KJIVF At Asian KJIVF Centre, each couple gets personalized care and individual attention under supervision and expert guidance of team of professionals. Asian KJIVF team is fully dedicated to infertility and comprises of IVF consultants, anesthetists, laparoscopists, gynecologists, surgeons, neonatologists, embryologists, nursing staff, counselors and public relation officers to ensure best results.

VISION

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

MISSION

“To provide comprehensive patient care by working as a team and offering highest standards of medical service in an ethical manner for delivering extraordinary customer satisfaction.”

MOTTO

“Will to Serve. Skill to Cure”

PUNCH LINE

Caring for what matters most

CORE VALUES

- 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

INTRODUCTION

As an integral part of the **MBA course**, the summer training helps us in understanding the overall functioning of the hospitals from a managerial point of view. Keeping this factor in view, I tried to visit different hospital departments of **ASIAN INSTITUTE OF MEDICAL SCIENCES (AIMS)** with a special focus on understanding the various procedures in place. I visited different departments, met the department In-charge and interacted with the doctors, nurses and other staff.

The **Aim** of the summer training was:

“To study the administrative and managerial functioning of ASIAN INSTITUTE OF MEDICAL SCIENCES (AIMS)” with special reference to the different areas / departments of the Hospital.

The **Objectives** of summer training were:

- To learn the daily operational management of the Organization and its various departments / areas.
- To study the salient and critical features about the functioning of these departments / areas.
- To identify issues / problems associated with some specific departments / areas.
- To undertake the projects / special tasks assigned to us.

METHODS OF DATA COLLECTION

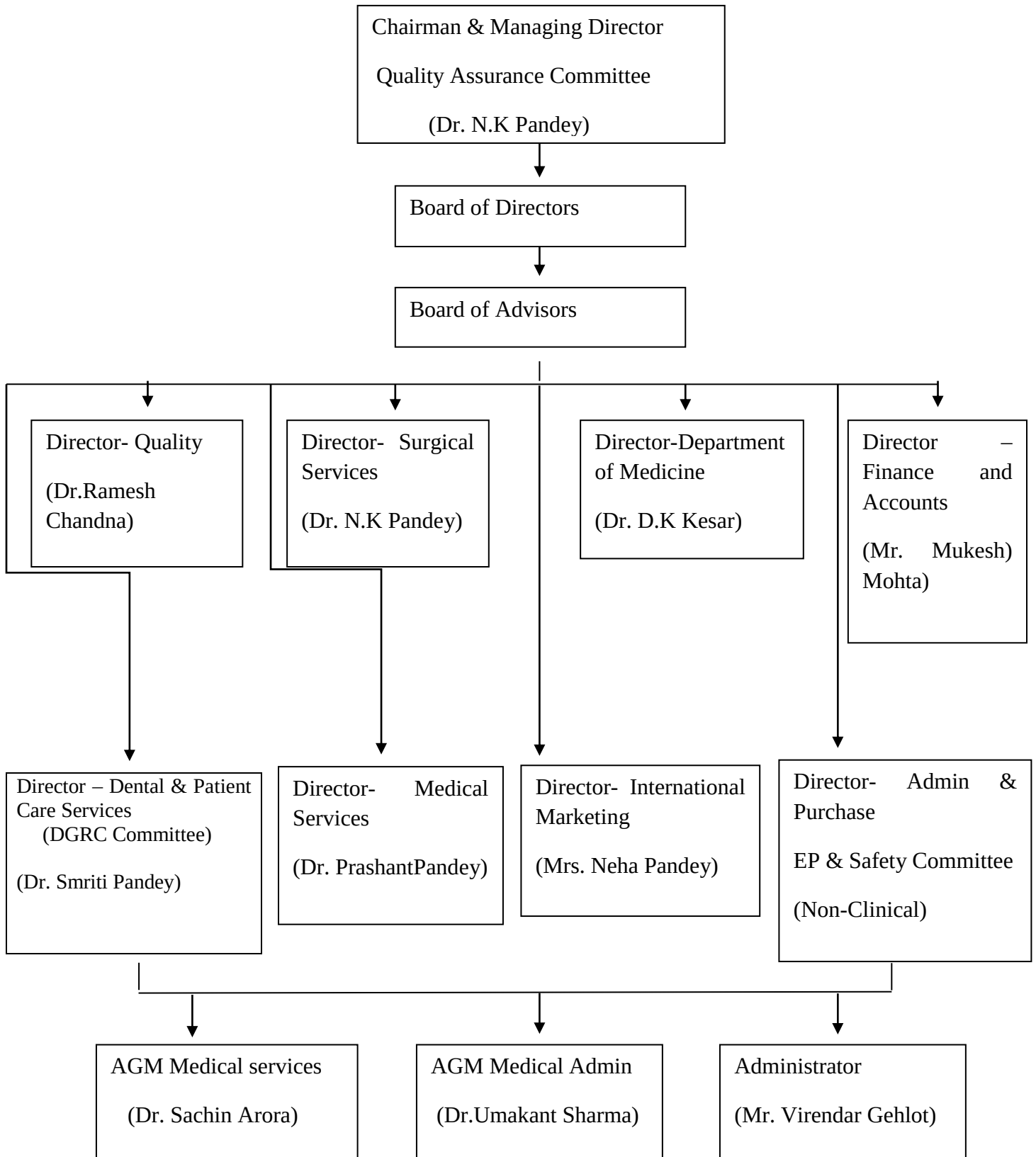
Study design-

- **Area-** ASIAN INSTITUTE OF MEDICAL SCIENCES (AIMS), Faridabad
- **Duration-** From 3rd April 2017 to 2nd June 2017
- **Type of study-** Observational study
- **Sample size-** Random (As per decision of management)
- **Procedure-** One to one discussion

Type of Data collected -

- Primary data collected by visiting the different departments.
- Secondary data from the various Hospital policies, documents in various departments.
- Most of the information was collected through observations. Both types of observations –participative and non participative were used in learning the function and working of various departments.
- Non Participative observation was used mainly to learn the general things about the hospital like location of different departments, behavioral aspects of employee and the response time.

ORGANIZATION ORGANOGRAM



HOSPITAL LAYOUT

Address (Location)	Building / Block	Level	Area/Activity
Asian Institute of Medical Sciences Badhkal Flyover Road, sec-21 A, Faridabad- 121001	ONE	BASEMENT (-2)	HR, IT, MARKETING, FINANCE&ACCOUNTS, IPD BILLING, KITCHEN, PET CT, RADIATION ONCOLOGY, FIRE CONTROL ROOM, LAUNDARY, PUMP HOUSE, A/C PLANT, IPD PHARMACY, MAINTENANCE, EQUILIBRIUM, HOSPITAL STORE
Asian Institute of Medical Sciences Badhkal Flyover Road, sec-21 A, Faridabad- 121001	ONE	BASEMENT (-1)	EMERGENCY, EMERGENCY WARD, BRONCHOSCOPY, MORTUARY, MEDICAL RECORDS DEPARTMENT
Asian Institute of Medical Sciences Badhkal Flyover Road, sec-21 A, Faridabad- 121001	ONE	GROUND FLOOR	MAINRECEPTION, OPD PHARMACY, CAFETERIA,SAMPLE COLLECTION,OPD BILLING,TPA,OPD'S,IMAGING/RADIOLO GY,ENDOSCOPY,REPORT COLLECTION,PHYSIOTHERAPY,NEURO LOGY UROLOGY LAB

Asian Institute of Medical Sciences Badhkal Flyover Road, sec-21 A, Faridabad- 121001	ONE	1ST FLOOR	ADMINISTRATIVE BLOCK, OPD'S, PHC, ONCO WARD (101,102,103), 1ST FLOOR SEMI CABIN, DAYCARE, AUDITORIUM
Asian Institute of Medical Sciences Badhkal Flyover Road, sec-21 A, Faridabad- 121001	ONE	2ND FLOOR	GEN WARD 201 TO 207, LDR, ANW, PNW, NICU, PICU, NURSERY, IVF, OPD'S (GYNAE& PAED), PLAY AREA
Asian Institute of Medical Sciences Badhkal Flyover Road, sec-21 A, Faridabad- 121001	ONE	3RD FLOOR	ICU, IMCU, IMCU 2, CTVS ICU, RECOVERY, PREHOLD, OPERATION THEATRE 1 TO 10, RTU

Asian Institute of Medical Sciences Badhkal Flyover Road, sec-21 A, Faridabad- 121001	ONE	4TH FLOOR	LAB, DIALYSIS, BLOOD BANK, DAY CARE CHEMO WARD, CSSD, QUALITY & TRAINING
Asian Institute of Medical Sciences Badhkal Flyover Road, sec-21 A, Faridabad- 121001	ONE	5TH FLOOR	BME, 5TH PVT ROOMS, PRESIDENTIAL SUITE, SUITE ROOMS, 5TH G.W.(501,502), 5TH B SEMI CABIN, 5TH A SEMI CABIN, TRACHECTOMY WARD
Asian Institute of Medical Sciences Badhkal Flyover Road, sec-21 A, Faridabad- 121001	ONE	6TH FLOOR	6TH PVT ROOMS, PRESIDENTIAL SUITE, SUITE ROOMS, 6TH SEMI CABIN, CCU, CARDIAC WARD, CATH LAB

DISTRIBUTION OF BEDS

OPERATIONAL BEDS	TOTAL BEDS
6TH P. S	1
BMT	4
6TH INTL	6
6TH PVT	13
6TH SEMI CABIN	14
6TH GENERAL WARD	5
CCU	18
CARDIAC WARD	8
5TH P. S	1
5TH SUITE	6
5TH PVT	16
5TH SEMICABIN A	12
5TH A S. ROOM	3
5TH A ISOLATION	1
5TH A TRACHEOSTOMY WARD	3
5TH SEMICABIN B	12
5TH GENERAL WARD (501)	12
5TH GENERAL WARD (502)	11
CTVS	5
RTU	4

ICU	18
IMCU	17
IMCU -2	10
NICU	18
PICU	7
ANW	4
PNW	4
GENERAL WARD -(201)	15
GENERAL WARD -2(204)	7
GENERAL WARD -2(205)	8
GENERAL WARD -2(206)	8
GENERAL WARD -2(207)	7
PEADIATRIC WARD (202)	7
PEADIATRIC WARD (203)	8
ONCOLOGY-101	15
ONCOLOGY-102	7
ONCOLOGY-103	18
1ST SEMICABIN(ONCO)	10
EMERGENCY WARD	12
TOTAL BEDS	355
	A

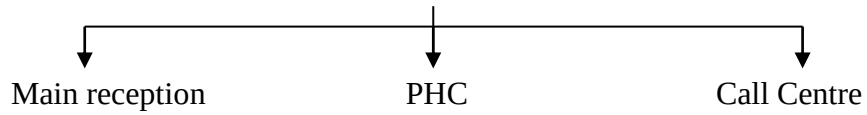
EXCLUDED BEDS

LDR	3
DIALYSIS	22
DAY CARE - ONCO 4th Floor	20
DAY CARE - Ground Floor	7
ER -TRIAGE BEDS	5
ER-OBSERVATION	6
RECOVERY ROOM BEDS	7
TOTAL	70
	B

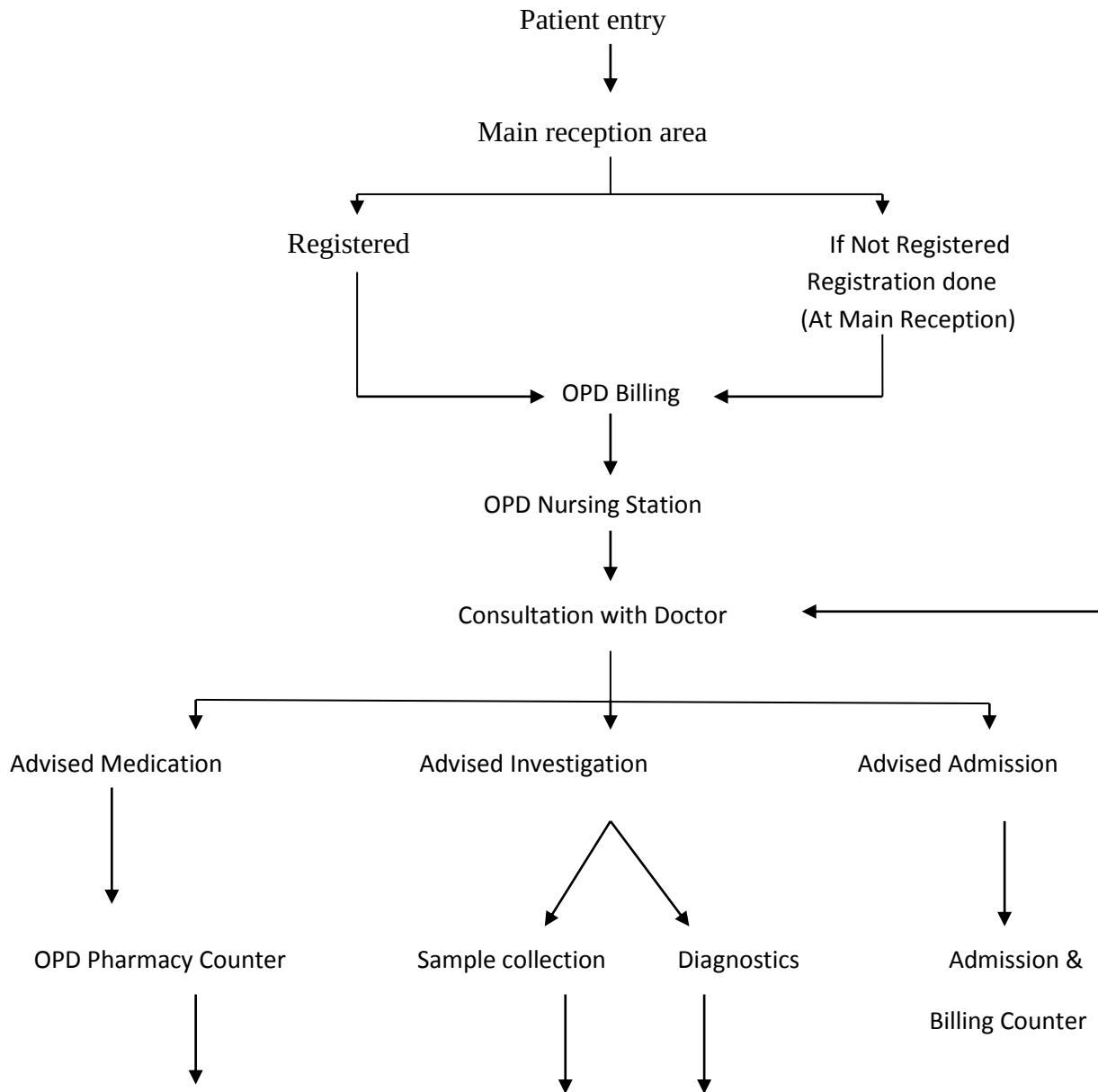
A + B	425
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ORGANIZATION STRUCTURE

FRONT OFFICE



I) MAIN RECEPTION



EXIT

Report Collection

Infrastructure:

Wheelchair : 4

Stretcher : 1

No. of OPD Billing Counters: 7

No. of Admission Billing Counters: 2

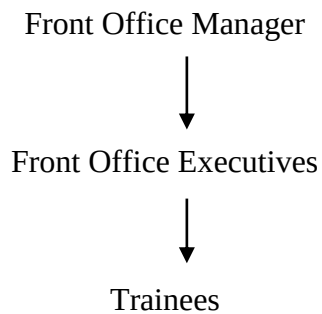
Sample Collection Room: 1

International Patient's Reception: 1

Staff:

- 1 Front Office Manager
- 4 Front Office Executives
- 1 Healthcare Executive
- 9 Trainees

Hierarchy:



Records Maintained:

- Current Inpatient reports.
- Appointment details.
- Daily patient's registration details.
- Doctors attendance details.

Responsibilities of Front Office Manager:

- Responsible for overall supervision of the front office staff.
- Formulation of department goals, policies, procedures and their implementation.
- Coordinates operations, assigns responsibilities and supports the staff in peak hrs.
- Coordinates events in hospitals like CME, VIP visits.
- Inventory control and budget forecasting w.r.t front office.
- Training of newly appointed front office executives and other staff under him/her.

Roles & Functions of Front Office Staff:

- Attending the patient, visitors & staff.
- Handling their queries.
- Patient coordination.
- Provide them necessary information according to the policy.
- Helping patients fill up their registration form.
- Making appointment with the doctors.
- Taking of the feedback in the feedback forms.

Roles & Function of Call Centre Executives:

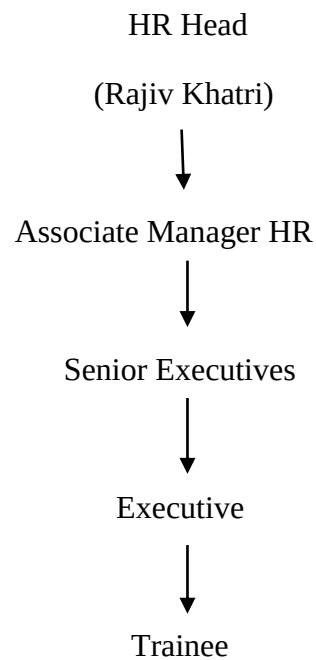
- Receive and answer the various calls from outside and within the hospital.
- Answering queries regarding the OPD appointments and charges, various tests availability and charges.
- Connecting to various employees within the hospital by Star-Dialing.

HUMAN RESOURCE DEPARTMENT

Layout: -2 Basement

Total Staff: 5

Organogram:



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

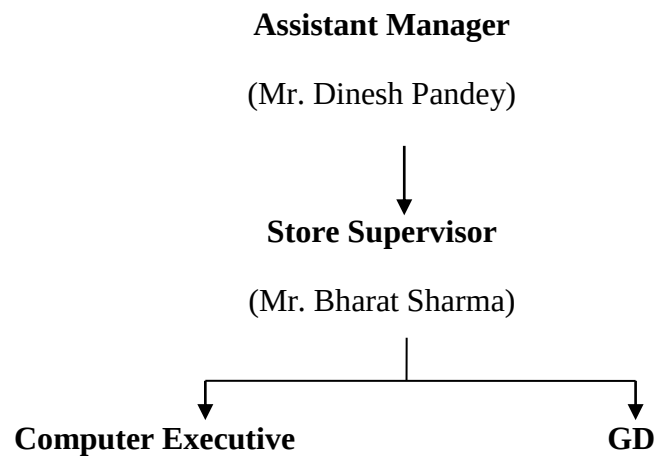
- Leaves sanctioning
- Payroll
- Budgeting for departments
- Doctors payout
- Duty roster
- Issuing of Experience letters
- Investigation of staff grievances
- Issues of slow cause
- Salary statement
- Full n final settlement
- Outsource staff attendance
- Induction and orientation
- Finger print report 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.

STORES

Layout: -2 Basement

Staff: 5

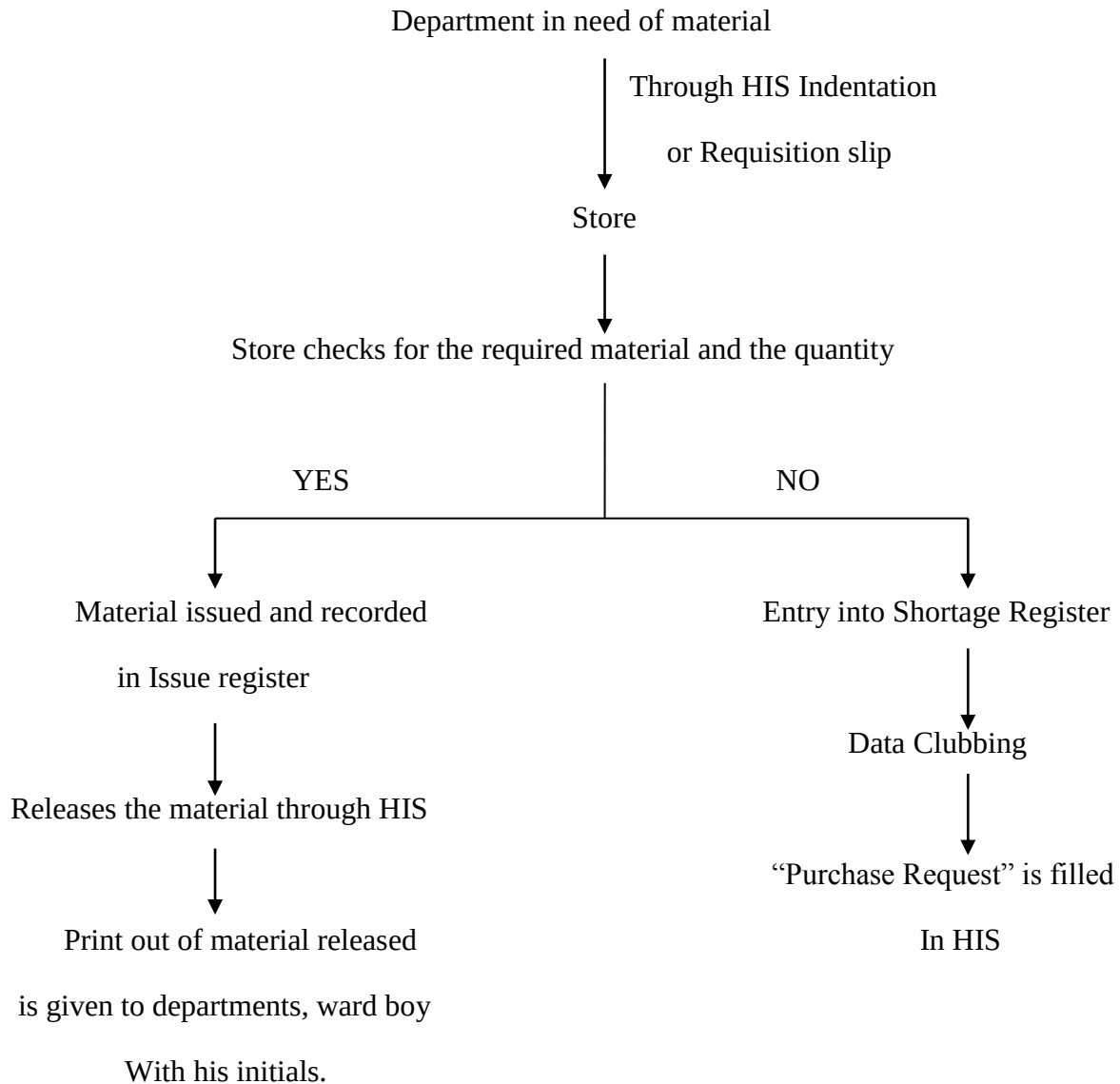
Hierarchy:



Records Maintained:

1. Goods Receipt Note
2. Issue Note
3. Return File
4. Returnable Gate Pass
5. Non-Returnable Gate Pass
6. Purchase Receipt

WORK FLOW



Duties of Store Incharge:

- Forecasting requirement
- Budgetary requirement
- Inventory control
- Stock verification

- Inspection & Quality control
- Communicate the purchase department about requirement
- Minimize pilferage.
- Distribution
- Disposal of surplus/ obsolete material

IPD PHARMACY

Layout: -2 Basement

Status: Outsourced

Staff: 13

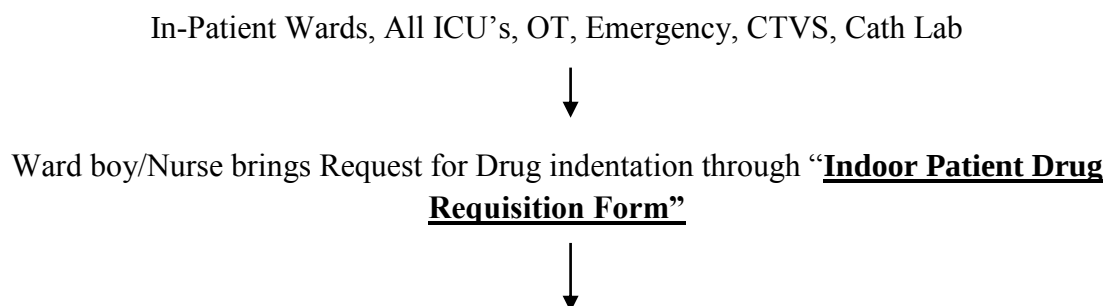
Hierarchy:

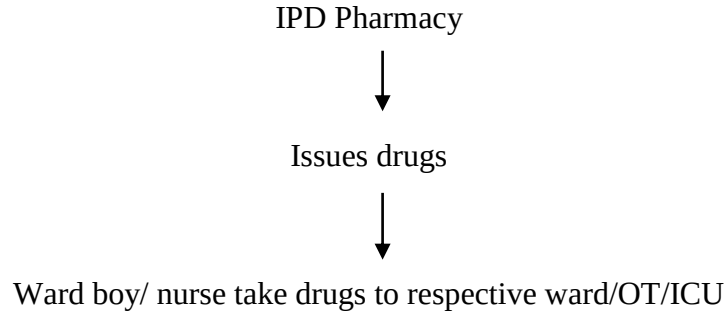


Infrastructure:

- Desktops: 4
- Printers: 3
- Refrigerator: 1

Work Flow:



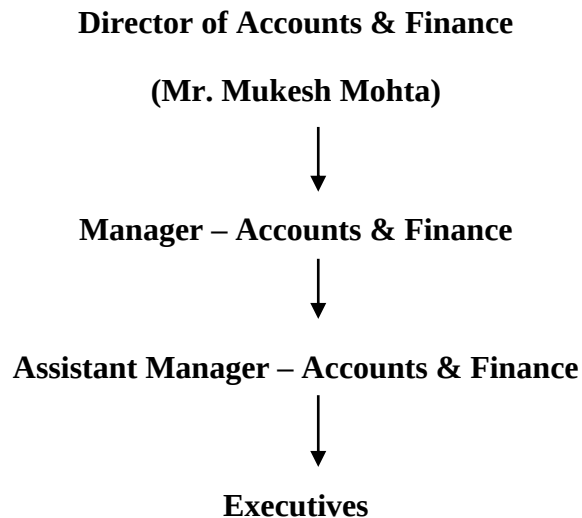


FINANCE & ACCOUNTS

Layout: -2 Basement

Total Staff: 9

Organogram:



Scope of Services:

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

- Business building insights.

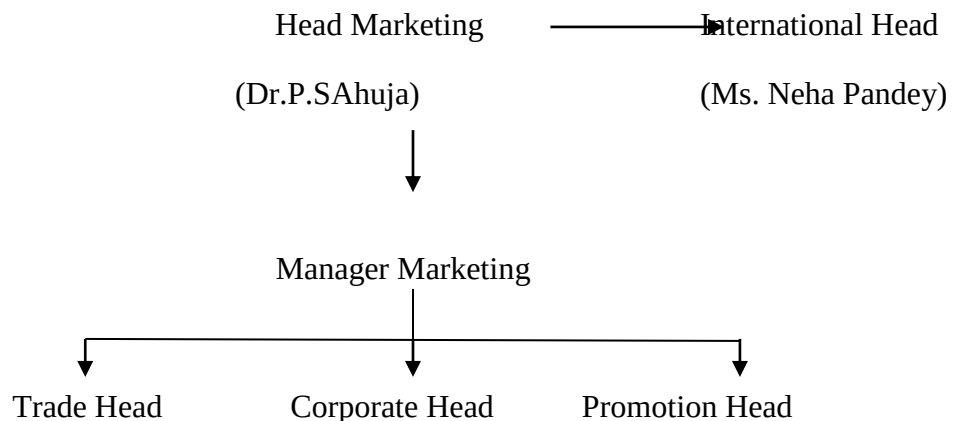
- Areas for lowering cost & improve profitability.
- Updating of bills on daily basis for IPD patients.
- Customer (Patient's Attendant) satisfaction for billing concern.
- The Billing staff has overall responsibility for coordination of various functions (Pharmacy, Wards etc.) and daily basis report for admission , Collection to higher management and Administration of the department, and they maintain a log of all the problems that arise on day to day basis 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.

MARKETING DEPARTMENT

Layout: -2 Basement

Total Staff: 8

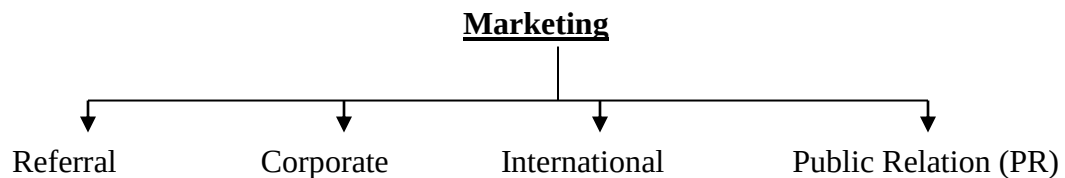
Organogram:



Marketing Pattern:

- **<150 Km Zone:** Marketing of Super specialty & all Specialties
- **150-300 Km Zone:** Marketing of 3 Specialties: Oncology, Cardiac & Orthopaedics
- **>300 Km Zone:** Marketing of Super specialty: Oncology

Marketing Format:



1) Referral:

- Society Education Programmes
- General Practitioners
- Get together
- Free Community Checkup Camps
- Diagnostic centres
- Pharmacy stores
- School, College Camps: Debate Competitions, Drawing Competitions etc

2) Corporate

- Empanelment/ Corporate Tie ups
- Health Talks
- PSU's Tie-ups
- TPA Tie Ups

3) International

- Embassy

4) P.R

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

LOCAL PUBLICITY

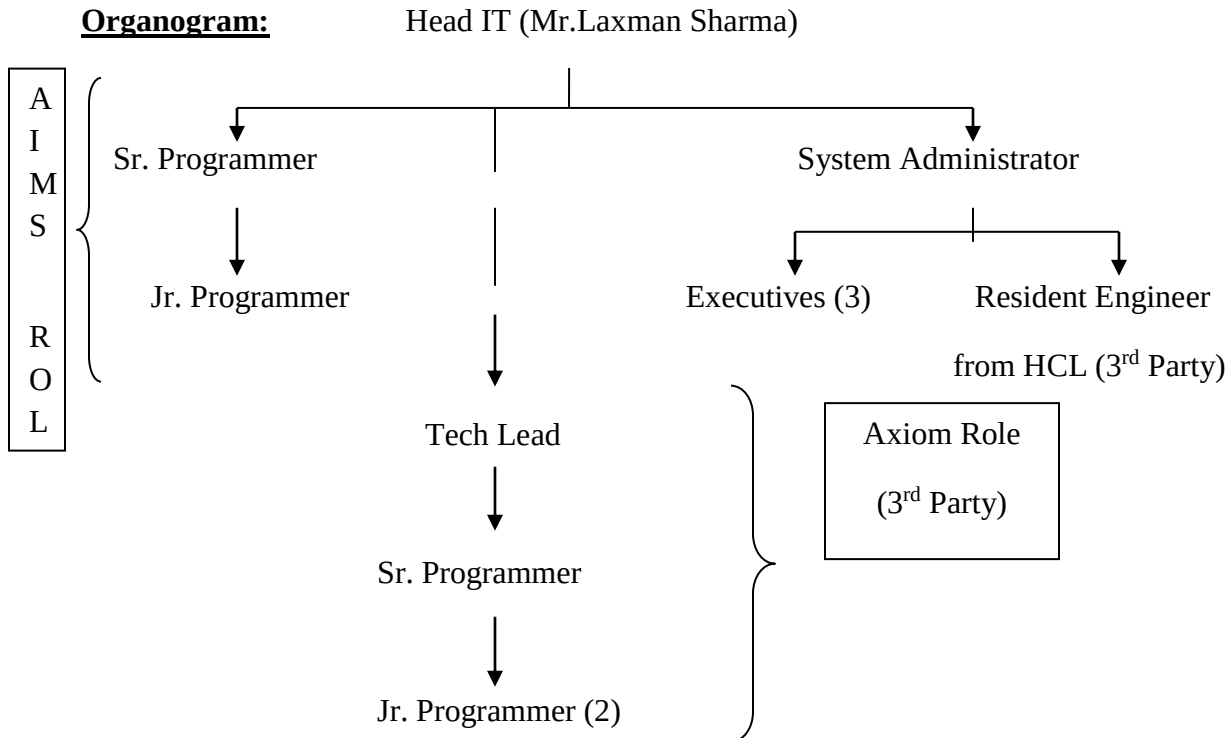
- TV ads / Cable ads
- Newspaper Ads
- Ads in local magazines, supplements, directories
- Leaflets, Pamphlets and Flyers
- Direction Boards
- Kiosks
- Hoardings
- Hospital Board (Glow sign)
- SMS Health Tips & Discount schemes
- Highway hoardings

Information Technology (IT) Department

Layout: -2 Basement

Staff: 7

Organogram:



Functions and responsibilities:

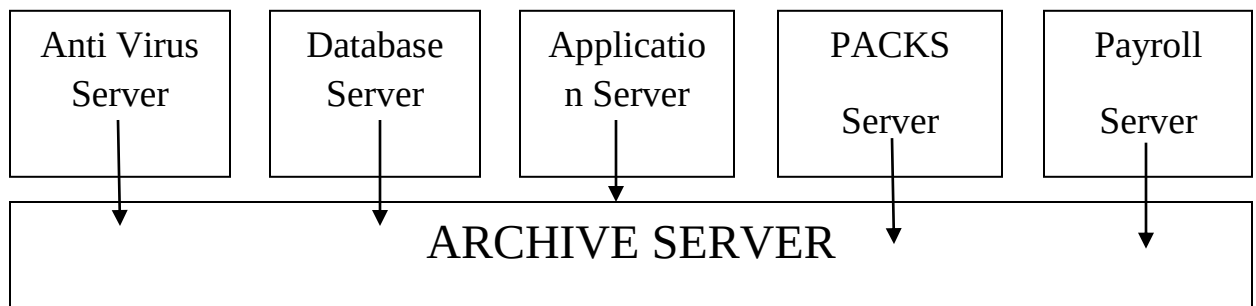
- To keep the servers alive
- To keep the network alive
- To keep internet connection alive
- To take care of all the desktops & laptops in the organization
- To track the records of all the desktops
- To keep an eye on the employee's desktops.
- To resolve the complaints of the employees
- Training of the other staff for the HIS

2 Major Work Areas: General Administration & HIS

I) General Administration:

Servers:

- Anti-virus server
- Database server
- Application server
- PACKS server
- Payroll server
- Archive server



Email Solutions: Google

- 500 Emails (FOC)
- Present Usage: 176 Clients

II) HIS (Hospital Information System)

Application by: Navision I : Product of Microsoft Dynamics

Manufacturing Products:

- Financial Management
- Fixed Assets

- Inventory Management

Taking Manufacturing Products as the core, other functional module has been built over them.

- Billing
- Ward management
- Laboratory services
- Discharges + Medical Records
- Housekeeping

These modules are also related to outsourced modules of:

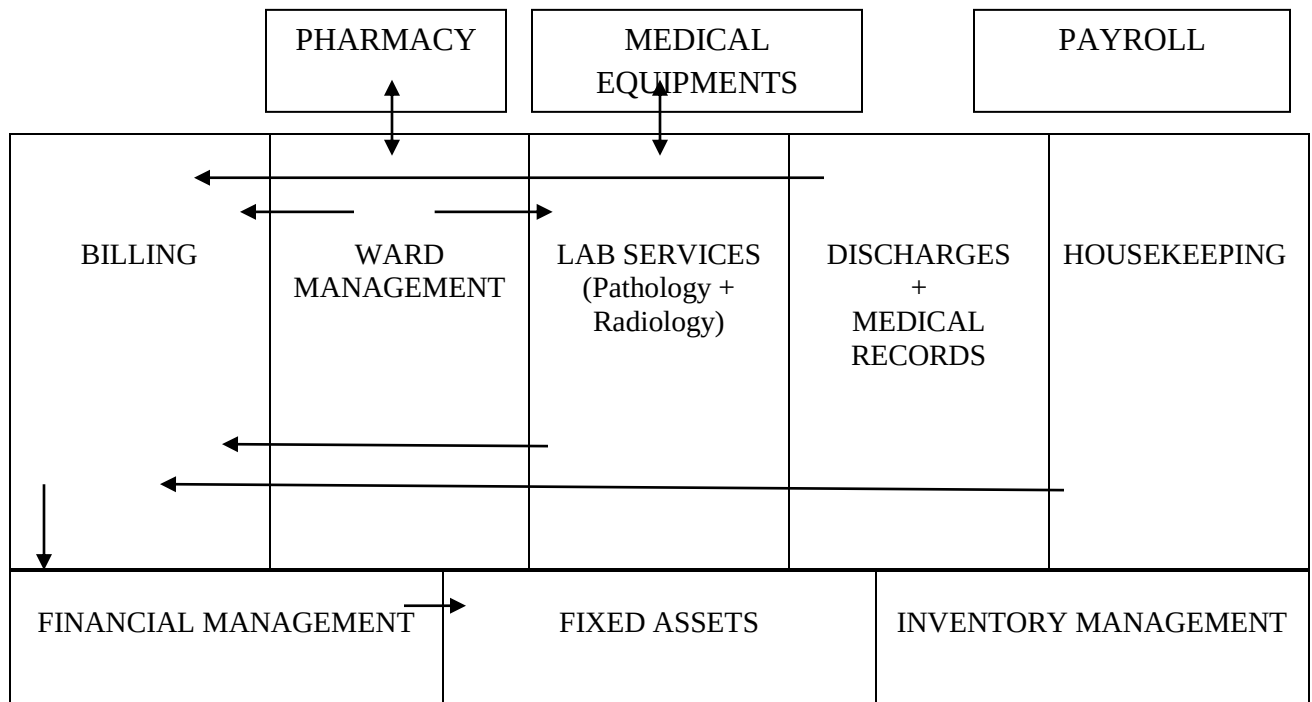
- Pharmacy
- Payroll
- Medical equipment

Access to Information:

Divided into 3 codes:

1. **Red:** Very restricted access to information e.g Wards
2. **Yellow:** Restricted but more than red. Access only after permission from higher authority.
3. **Green:** Large access to information. Available with higher authority.

HIS STRUCTURE:



HIS Backup:

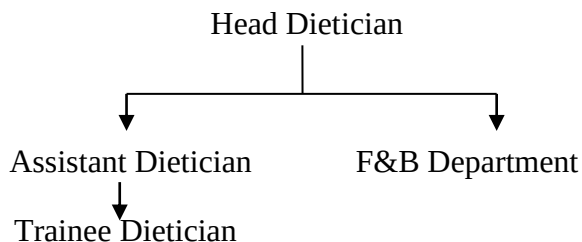
- Done once a day
- 2 internal backups
- 1 backup outside the hospital.

CLINICAL NUTRITION & DIETICS DEPARTMENT

Layout: -2 Basement

Head Dietician: Dr. Shilpa Thakur

Organogram:



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**
- **Preparation Area:** For peeling, cutting, chopping, slicing, mincing.
- **Cooking Area**
- **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

Records Maintained:

- Diet order sheet
- Meal count register
- Food tasting register
- Store register
- Staffs register.
- Diet Sheets
- Counseling Register
- Brand List

	<u>Diet Card Color</u>	<u>Tray Color</u>
Normal	White	Red
Diabetes Mellitus	Yellow	Yellow
Chronic Renal Failure	Green	Green
Renal Stone	Pink	

Flowchart of Dietician and Inpatient Interaction:

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



Then Dietician takes a detailed round wherein she meets every patient and determines patients' actual intake. Dietician then provides nutritional counseling and education, ensures patients' compliance to recommended diet. She also recognizes personal eating and food preferences.



Afterwards, the dietician does nutritional screening in order to know about patients' clinical condition, appetite and tolerance to food and acceptance to hospital diet, personal preferences, disliking 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 preferences 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

Future Plans:

To act on patient complains regarding below standards food service, the management has decided to set up satellite pantry on each floor to avoid delays in food service.

LAUNDRY SERVICES

Layout: -2 Basement

Equipments:

- Dryers : 2
- Washing machine (each 50 kg) : 2
- Extractors (each 25 kg) : 2
- Hand presses : 2
- Steam Boilers : 1
- Calendar Machine : 1
- Trolleys : 6

Total Manpower: 11+2 SUPERVISORS

Records Maintained:

- Department Register
- Items Received register
- Items issued register
- Detergent register
- Machine records
- Training records

BIO MEDICAL ENGINEERING DEPARTMENT (GAS MANIFOLD)

Location: - 2 Basement

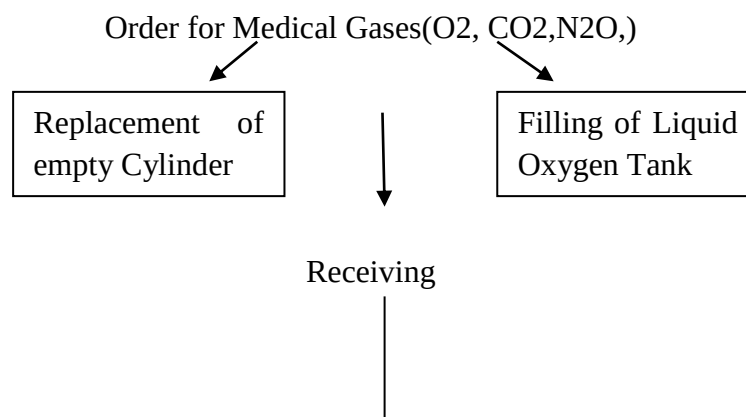
Staffing: - 3

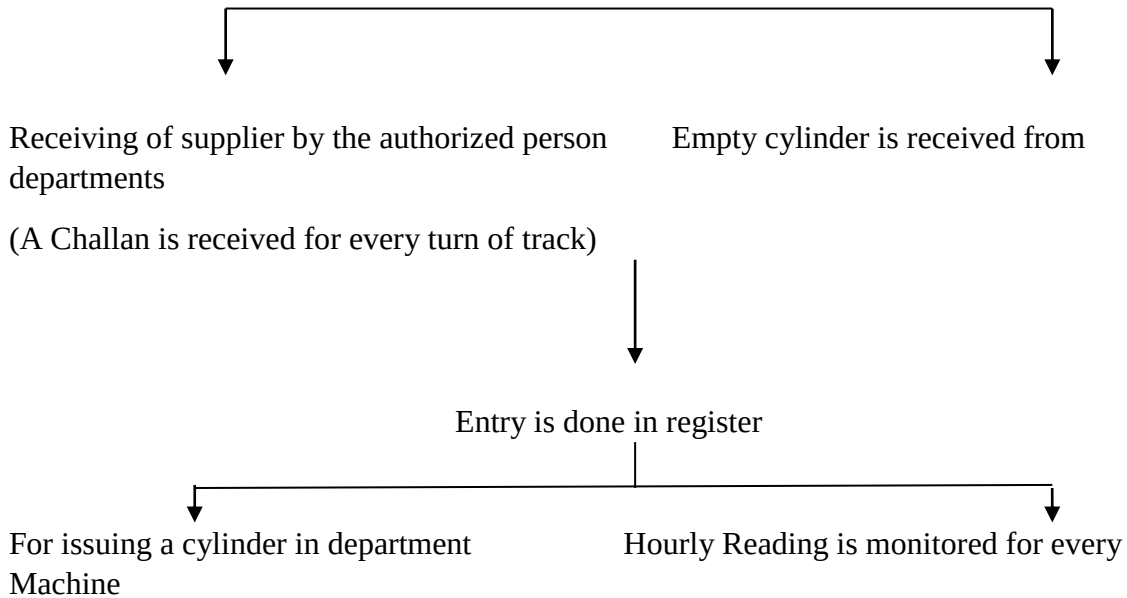
Supervisor: - Mr. Abrahm

Records Maintained: -

- Gas Manifold Log Book for Oxygen, Nitrous Oxide
- Complaint Register
- Cylinder Issue Register
- Cylinder (Out Party) Register
- Shift Register

WORK FLOW





Gaps:

- No CCTV Camera is present in gas manifold area
- Liquid oxygen tank is not covered by shed
- Poorly sitting arrangement for staff
- Maintenance sheet is not filled on time

Strength:

- Trained and Competent staff and every morning training is provided to the GDA's regarding handling of cylinder
- Medical gas supply systems are often monitored by various alarm systems
- Medical air is supplied by a special air-compressor, through a dryer(in order to maintain correct dew point levels)
- Inlets and outlets are colour coded
- Pin index safety system is used to prevent errors of identification of cylinders
- Standardized colour coding is done on cylinder

EMERGENCY COMPLEX

Layout: -1 Basement

- Nurse Station
- Emergency OT: 1
- Store room: 1
- Isolation Room: 1
- X-Ray Room: 1
- Ultrasound Room: 1
- Doctor's Duty Room: 2
- POP Room: 1
- Day Care Ward/ Casualty Ward

Infrastructure:

- Beds: Total: 22
 - In Day Care Ward: 11
 - For Casualty: 6
 - For Triage: 5
- Desktops: 2
- Intercoms: 2
- X-Ray Viewer: 3
- Printer: 1 (connected with Billing)
- Fridge: 1
- Fire extinguisher: 1
- Wheelchairs: 2
- Stretchers: 3
- Ambulances: 3 ALS Ambulances + 1 Van Ambulance

N: P Ratio: 1:1

Staff & Hierarchy:

Doctors: CMO – Dr. Hilal Ahmad & Dr. Satish Chaku

RMO'S – 5

Nursing and other staff: 24

Records Maintained

<u>Consent Forms</u>	<u>Investigation Forms</u>	<u>Patient Care Forms</u>	<u>Other Forms</u>	<u>Registers</u>
<u>Consent forms for:</u> - Surgical & Medical treatment - Anesthesia Consent - High Risk Consent for Anesthesia Surgery - Haemodialysis Consent - Informed Consent - Consent for Transfusion of blood & other blood products	<u>Requisition forms for:</u> Histopathological Exam. Cytopathological Exam. Indoor Patient Drug Req. Form Laboratory Req. Form MRI Investigation Form X-Ray/ Ultrasound Request Form	Progress sheet History sheet Nurse record Nursing care record Drug Prescription & Administration Record Investigation flow chart Vital Parameter Chart Pre Anaesthesia Check up Intake Output Chart	List of Linen for Washing Daily Floor Census Valuable Handover Form Daily Billing Activity Discharge Summary Transfer Request for Ambulance Discharge checklist	Daily Duty Register Laundry Register MLC Sample Reg. Duty Doctor Reg. CSSD Register Consumables Reg. Communication Reg. Ambulance Reg. Annual Leave Plan Reg. Loan Book Complaint Register RBS Register Equipment Breakdown Register

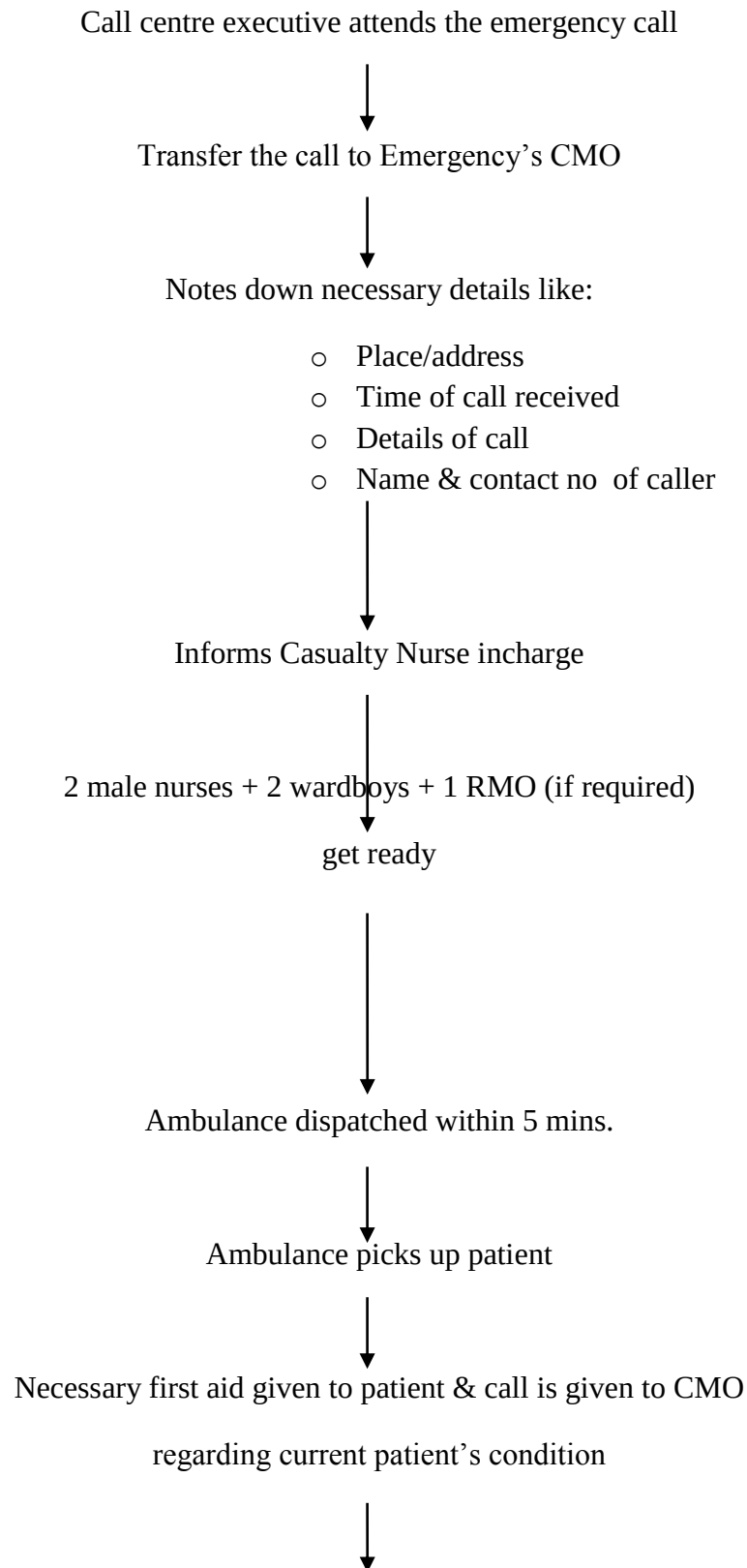
Inventory Management in ER:

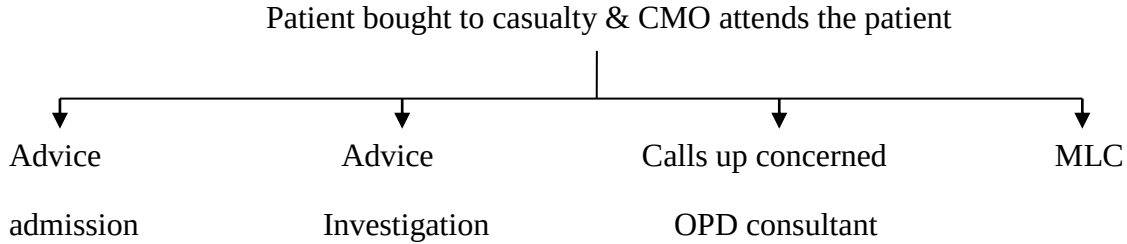
1. Inventory register:
 - Medicine trolley daily checklist
 - Dressing trolley daily checklist
 - POP Checklist
 - Crash cart checklist
2. Ambulance inventory Register

Maintenance Book:

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

AMBULANCE SERVICE FLOW





MEDICAL RECORD DEPARTMENT

Layout: -1 Basement

Staff: 3

Infrastructure:

- Desktop: 1
- Printer: 1

Assistant manager: Mr. Gaurav

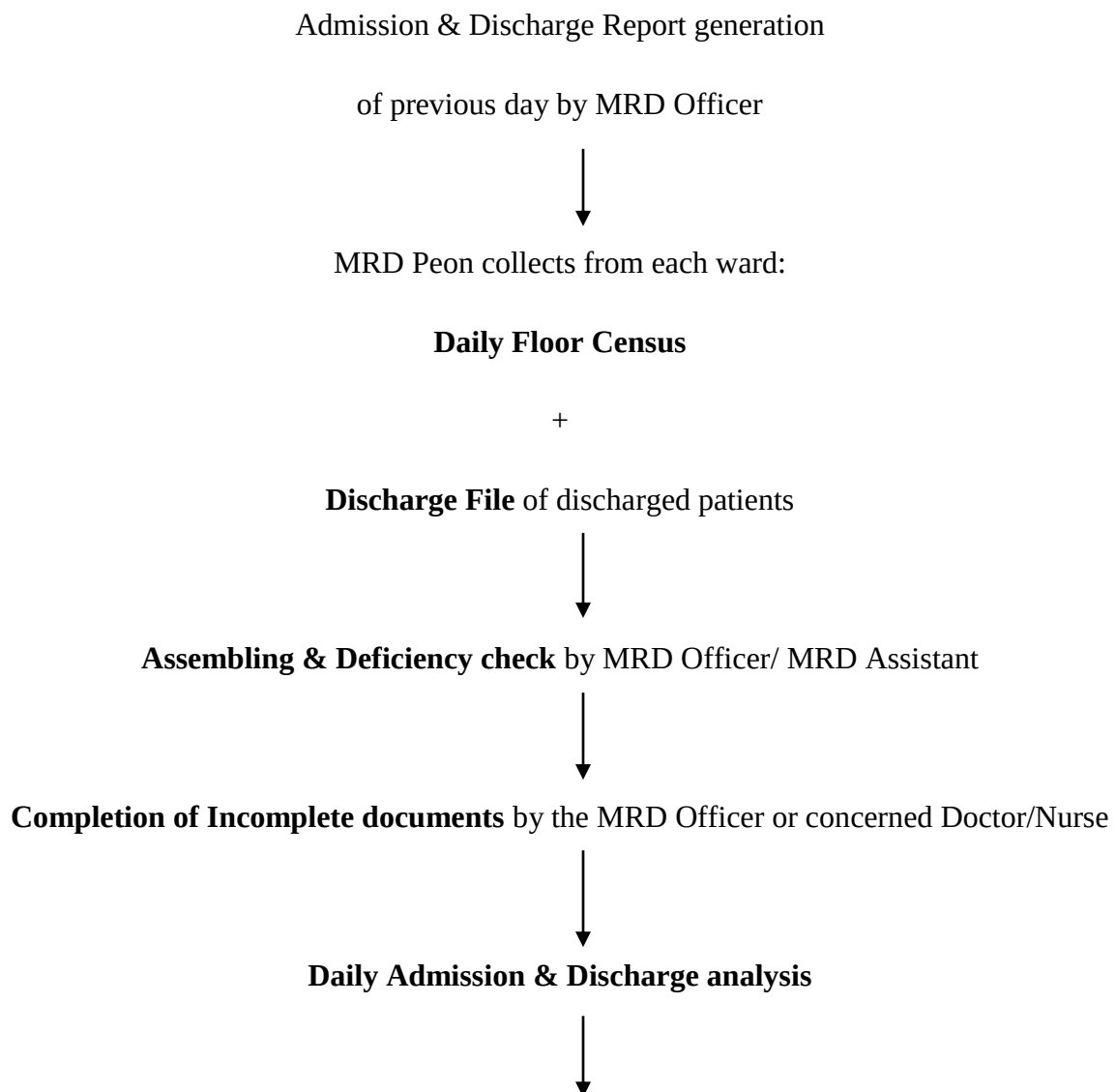
Functions of MRD

- To ensure that the AIMS Hospital has complete & accurate medical record for every patient.
- Public dealings wrt. 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).

Record Retention Periods:

- IP Record : 05 years
- Emergency Register : 02 years
- MLC Records : Not to be destroyed
- Birth/Death Register : Not to be destroyed
- OPD documents : Handed over to the pati

WORKFLOW:



Coding (acc. To ICD-10) & Indexing



Filing

Filing Order:

1. Face sheet
2. Patient's Discharge Records
3. Discharge sheet (Discharge, DOR, LAMA, Death)
4. Emergency & OPD card
5. History sheet
6. Investigation flow chart
7. Consultation form
8. Informed consent
9. Valuable handover form
10. Undertaking for payment Primary/ ADHOC PTCA
11. Angiography- Angioplasty Checklist
12. Cardiac Anaesthetic Record
13. Consultation for surgical & medical treatment
14. Pre-operative instruction checklist
15. Anaesthesia record
16. Surgical safety checklist
17. Operation note, Delivery note
18. Post operative evaluation form
19. Labor chart
20. Progress note
21. Temperature chart
22. Intake output chart
23. Blood sugar
24. Diabetic Monitoring chart

25. Drug prescription & Administration Record
26. NICU Observation Chart
27. Nurses Record
28. ICU & CCU Observation chart
29. Medical Certificate cause of death
30. Release of dead body certificate
31. Final Bills (MLC case)
32. Any other relevant document concerning to patient

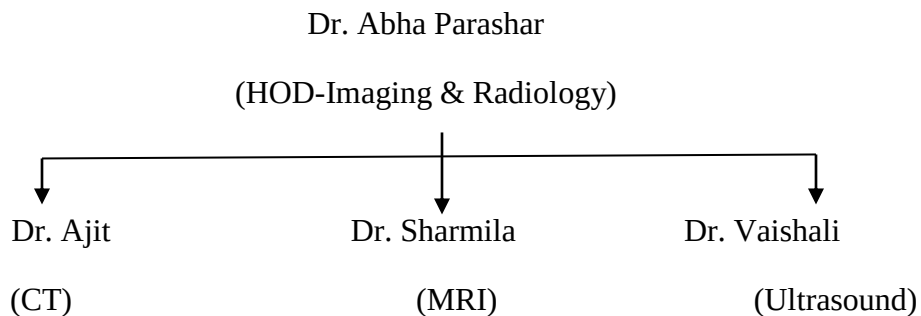
IMAGING & RADIOLOGY

Services provided:

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

Staff & Hierarchy:

Doctors: 4



Radiographers: 6

Chief Technical Supervisor



Senior Radiographer



Junior Radiographers (4)

MRI Technician: 1

Typist: 1

GDA's: 3

Records Maintained:

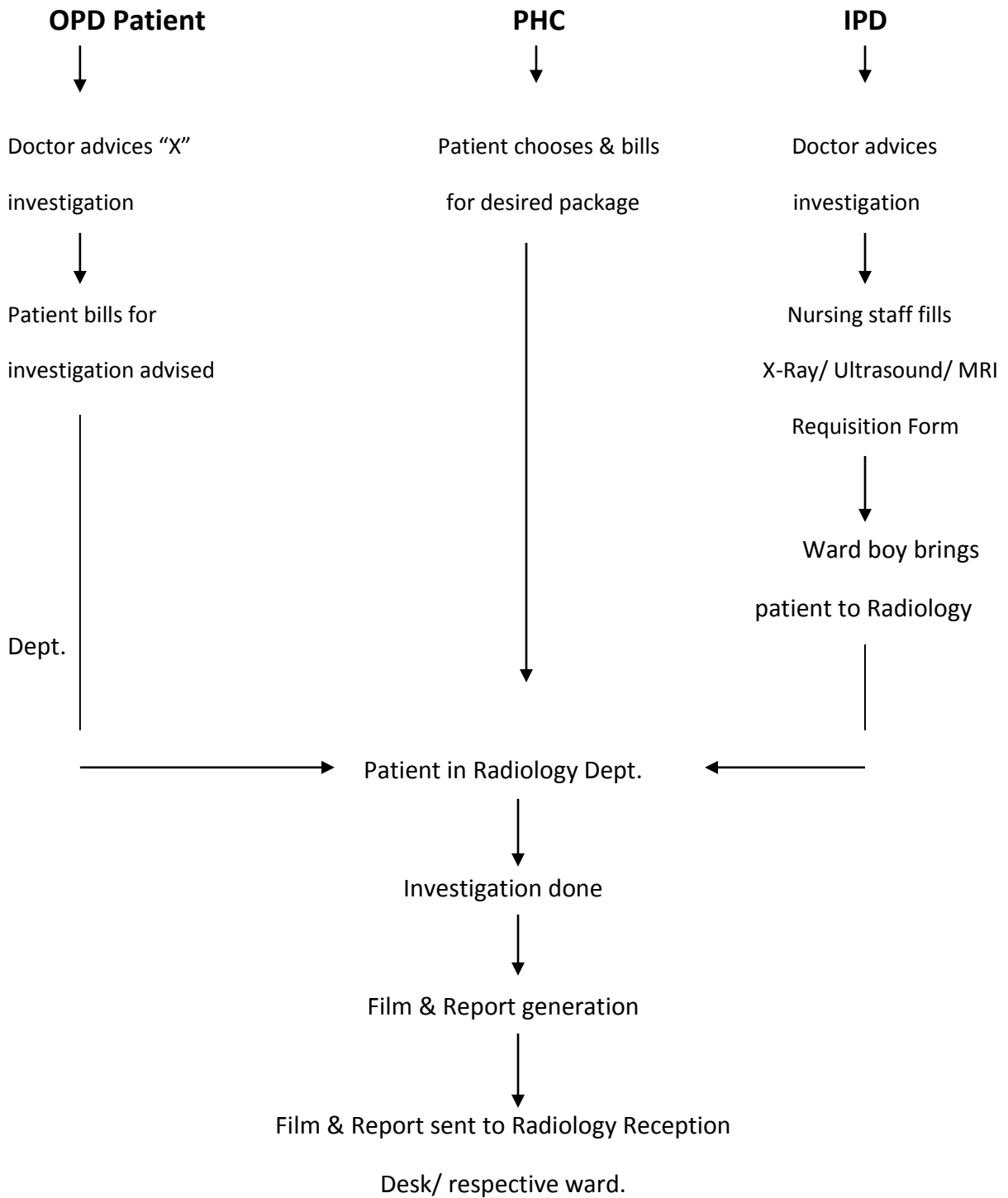
- Patient Register
- MLC Register
- BARC Standard Records

Equipments:

- High End Digital X-Ray machine
- Mammography machine
- 1.5 T MRI Machine
- PET/CT Scan*
- 3D & 4D Ultrasound Machine
- Bone Densitometry Machine

*AIMS is equipped with the first PET/CT in this region. The PET/CT is one of the most advanced diagnostic equipments available today for early detection of cancer.

WORKFLOW:



OPD RECEPTION

OPD's are distributed amongst Ground, First & Second floor of the hospitals.

Basement (-1) OPD	Ground Floor OPD's	First Floor OPD's	Second Floor OPD'S
Oncology	Urology Orthopedics Neurology Neurosciences Surgery Internal Medicine Ophthalmology ENT Dietetics Alternate Medicine Psychiatry Physiotherapy	Cardiology Gastroenterology Dermatology Respiratory Medicine Dental Psychology Nephrology Cardiac Surgery	Gynecology Pediatric

No. of OPD Counters: 7

- One for Orthopedics & Neurosciences
- One for E.N.T & Urology
- One for Eye & Surgery
- One for Cardiac Surgery, Nephrology, Respiratory Medicine, Gastroenterology & Dermatology
- One for Dental & Cardiology
- One for Gynecology & Pediatrics
- One for Oncology.

Total Manpower for OPD Counter: 15

Records Maintained:

- Patient's OPD Registration records.
- Daily visitor's report.

PHC

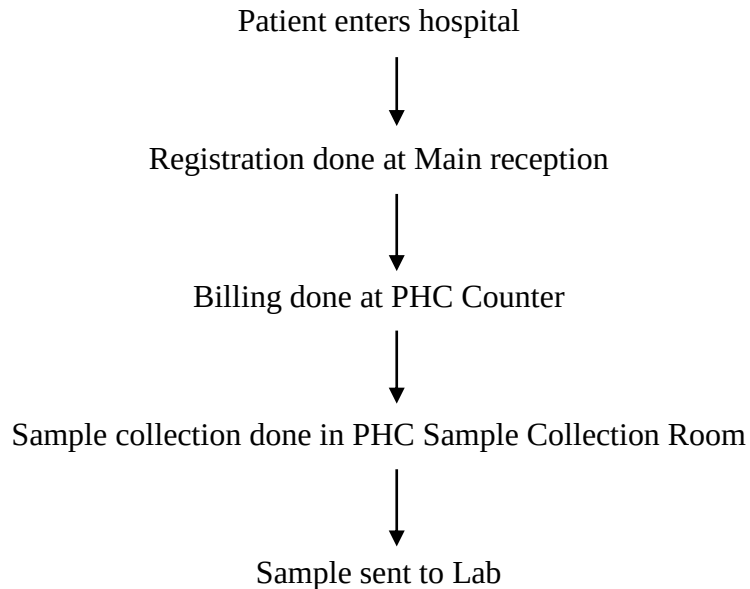
(PREVENTIVE HEALTH CHECKUP)

Layout: 1st Floor

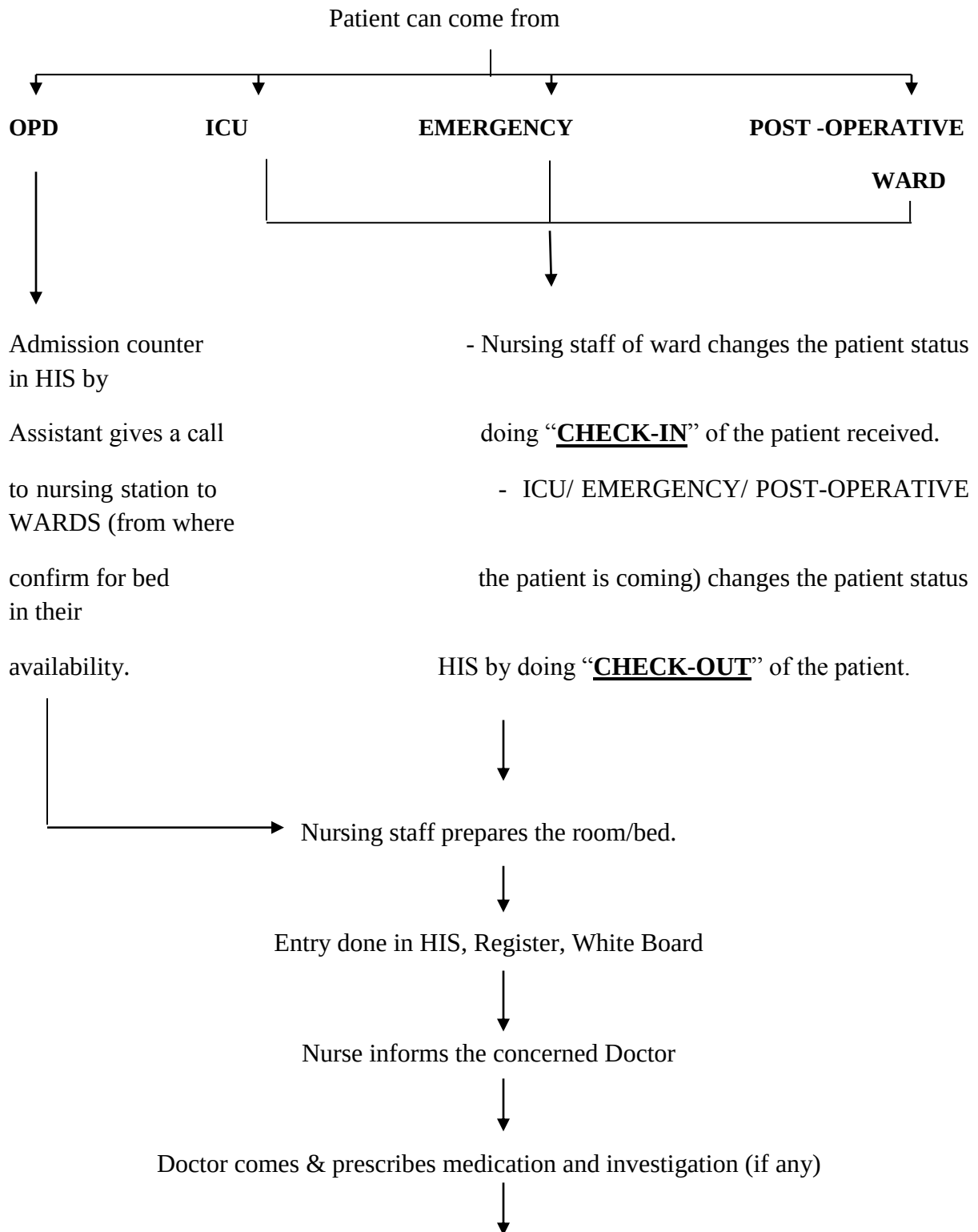
Staff: 4

Director – Preventive Health Care: Dr. P.S Ahuja

WORKFLOW:



FLOWCHART FOR ADMISSION OF A CASH/NON TPA PATIENT



Nurse writes the prescribed drugs on Indoor Drug Requisition Form



Ward boy goes and collects the drugs from Pharmacy



Nurse starts medication + prepares the patient for investigation (if any).

DISCHARGE PROCESS FOR NON-TPA PATIENT

Doctor prescribes the discharge

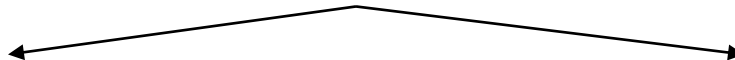


Nurse informs the patient about the time of discharge



Staff nurse starts discharge formalities

By



- Asking the Medical Officer / Concerned Physician to make discharge summary.
- Informing Dietician to make discharge diet report for patient.
- Counseling of the patient by the dietician and physiotherapist (if physiotherapy is going on for patient)

- Sending to Pharmacy :
 - Daily Billing Activity Sheet
 - Daily Pharmacy Bills
 - Discharge medication details
 - Medicines left unconsumed
- In Pharmacy, Summary of Pharmacy Bill is prepared.

Discharge Summary completion
Activity Sheet +

(by Medical Transcriptionist)
Pharmacy Bill

Daily Billing

Summarized

Billing Department

Billing department finalizes the bill

Payment taken by billing department from attendants

IPD Billing informs at the nursing station about the clearance of bill

Nurse informs the patient & patient changes clothes

Nurse checks the checklist given for discharge of patient

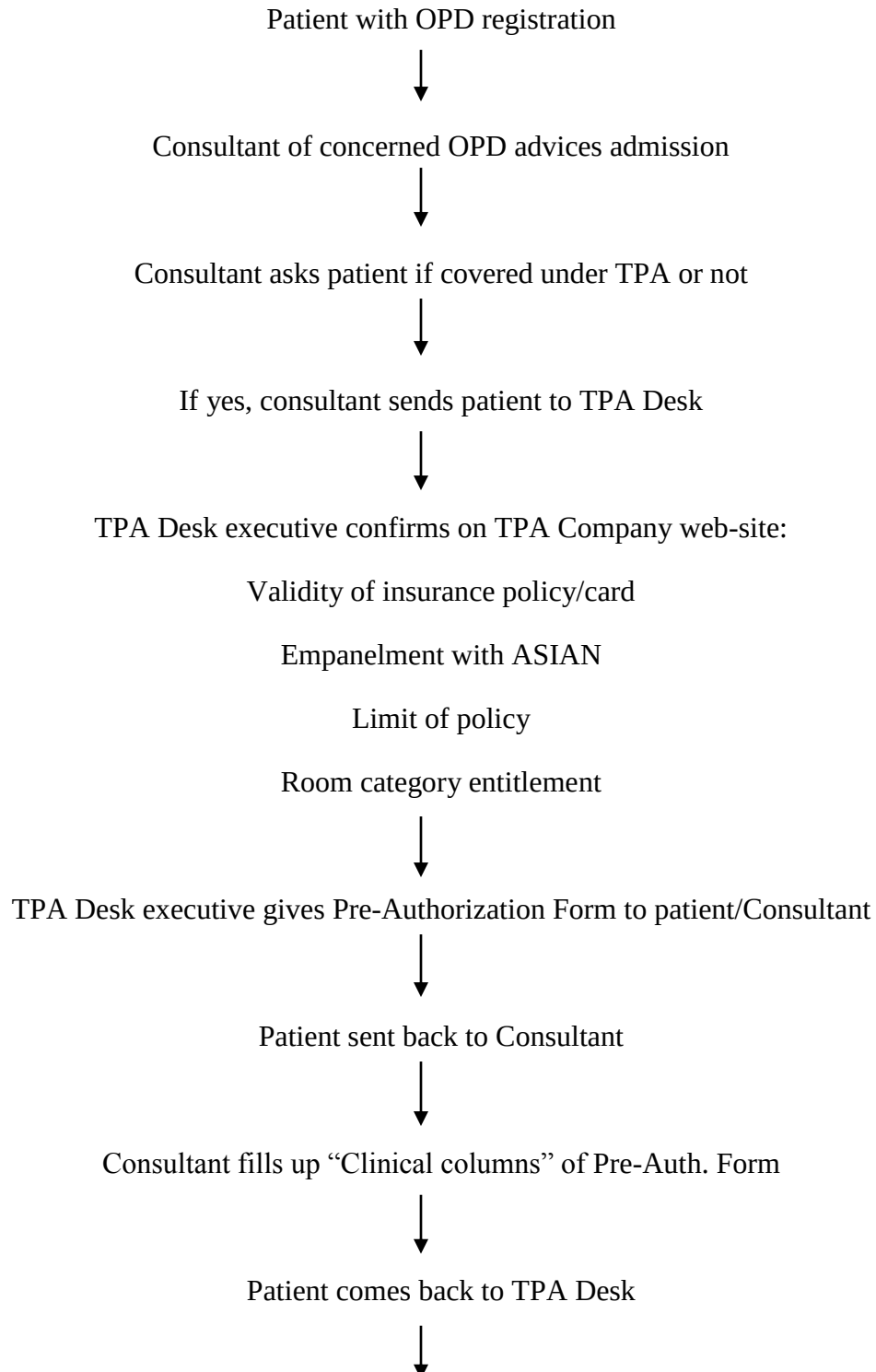
All medications + Investigations reports + Patient's file given to the patient

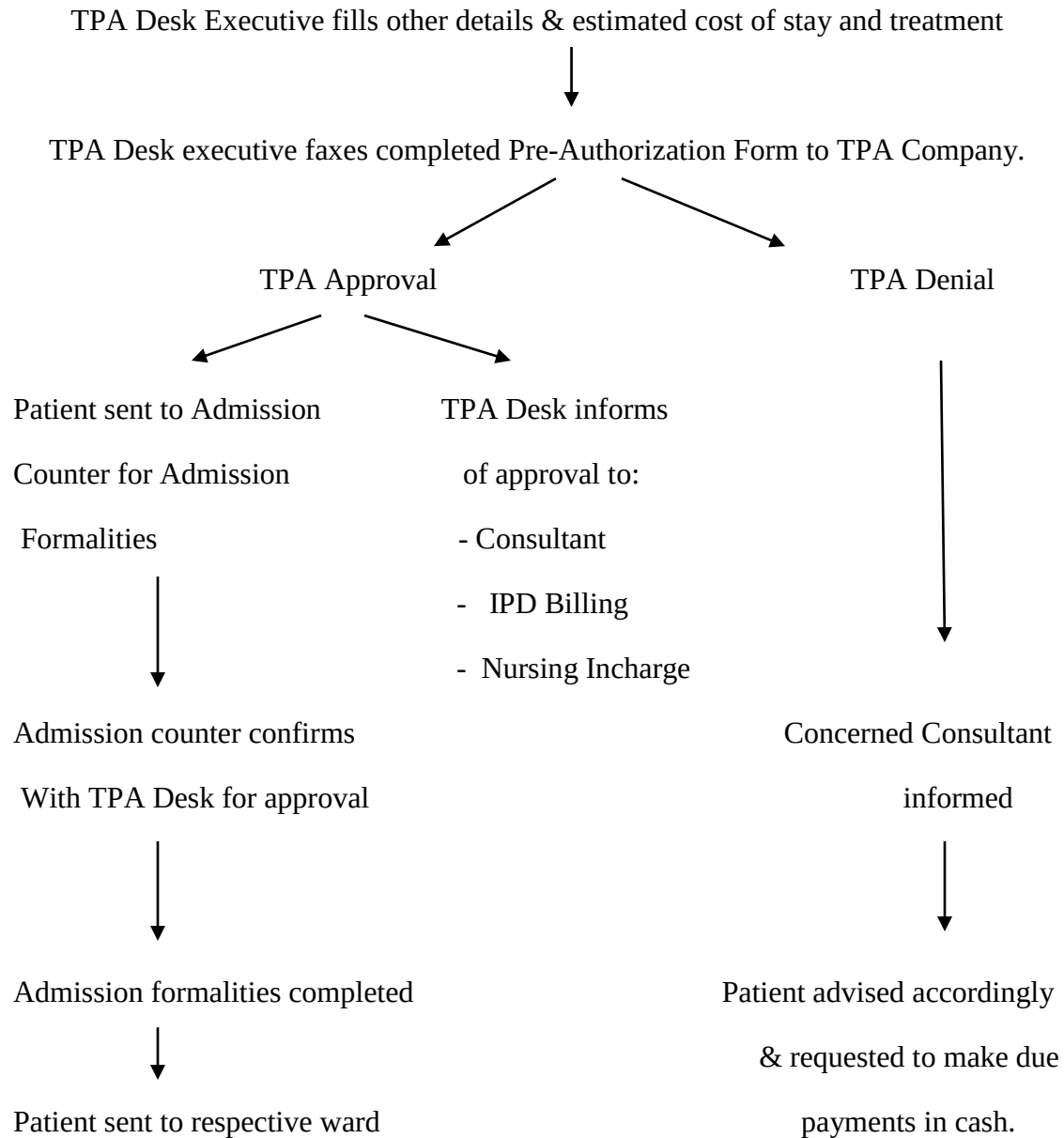
Patient given & explained about how to take the medications + any special instruction +
follow up schedule

Patient Discharged

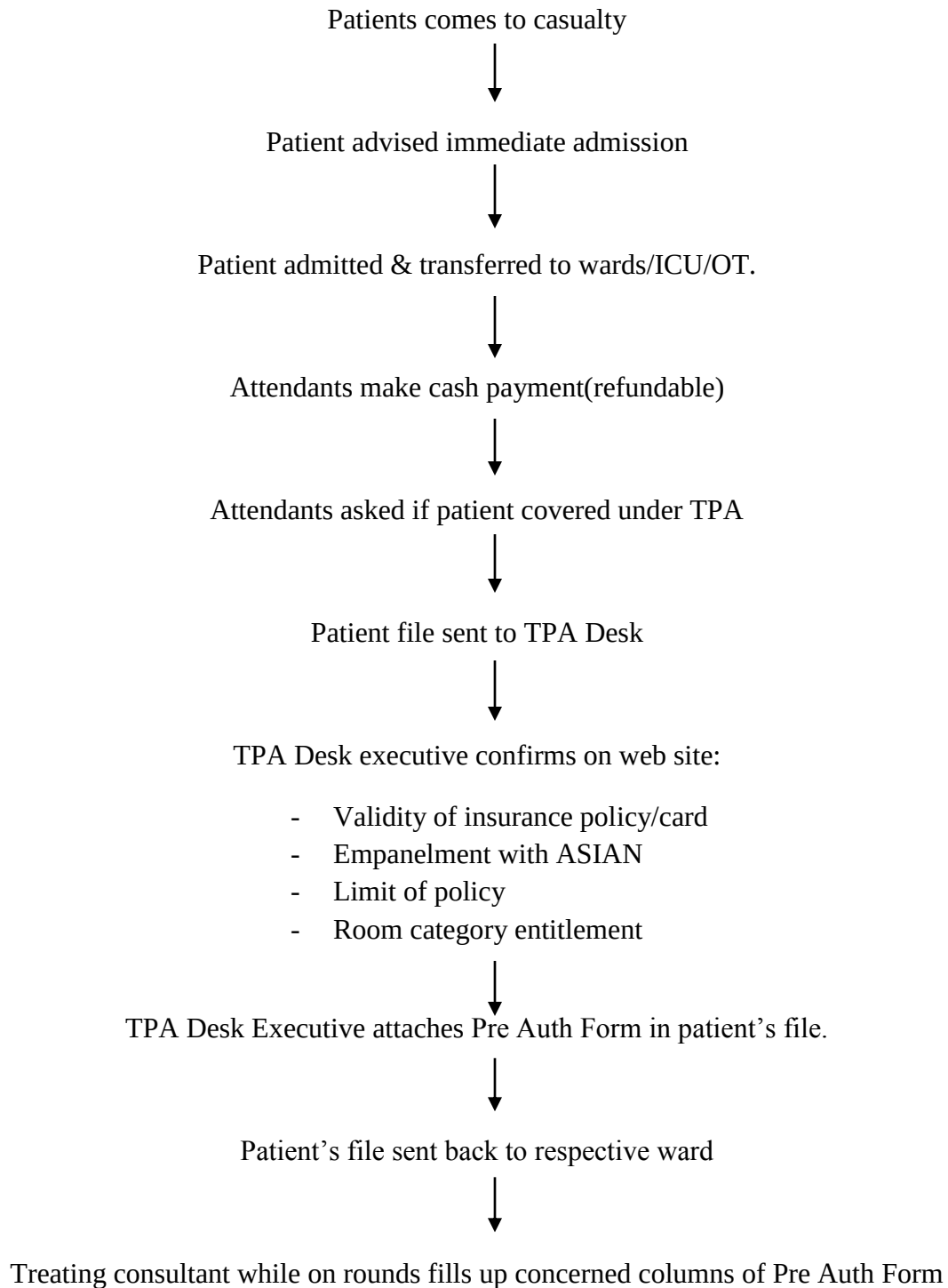
FLOW OF A TPA PATIENT

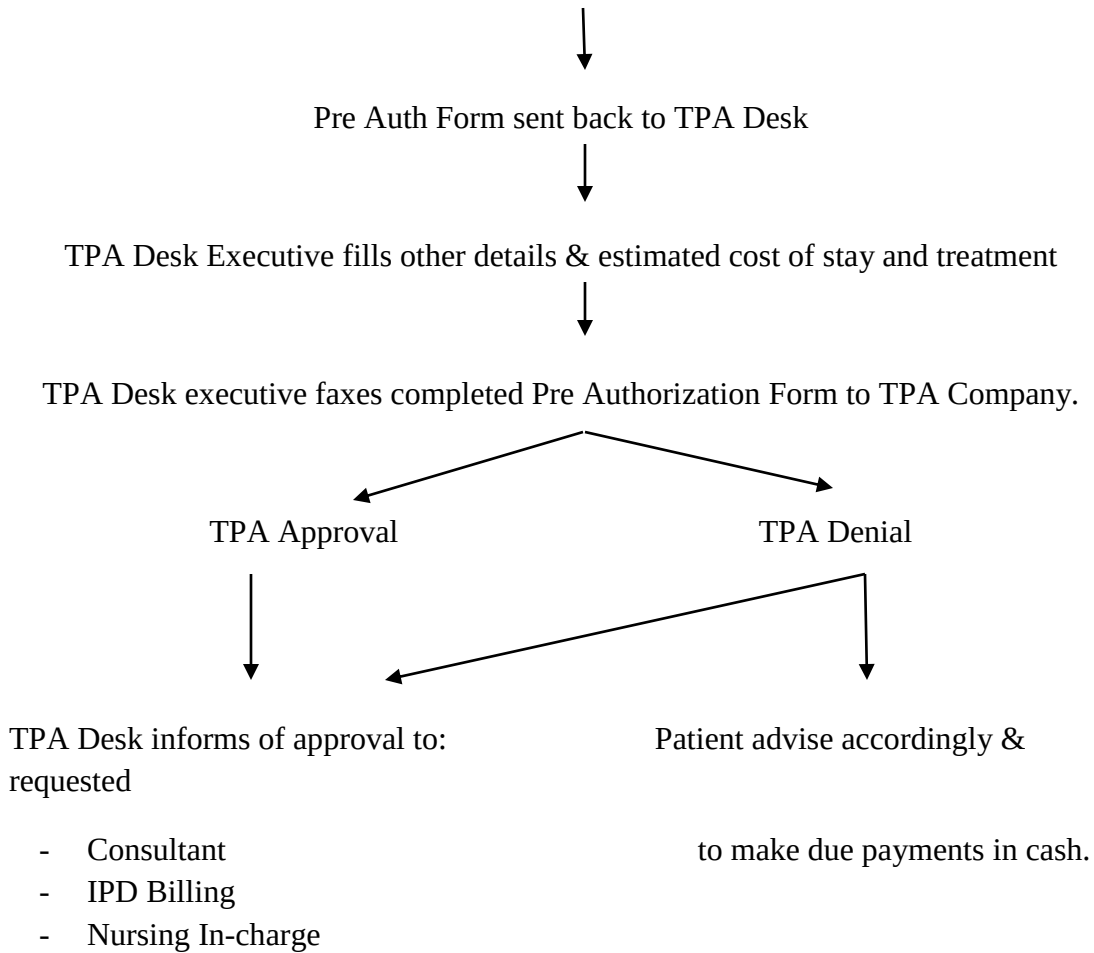
I) PRE-PLAN ADMISSION



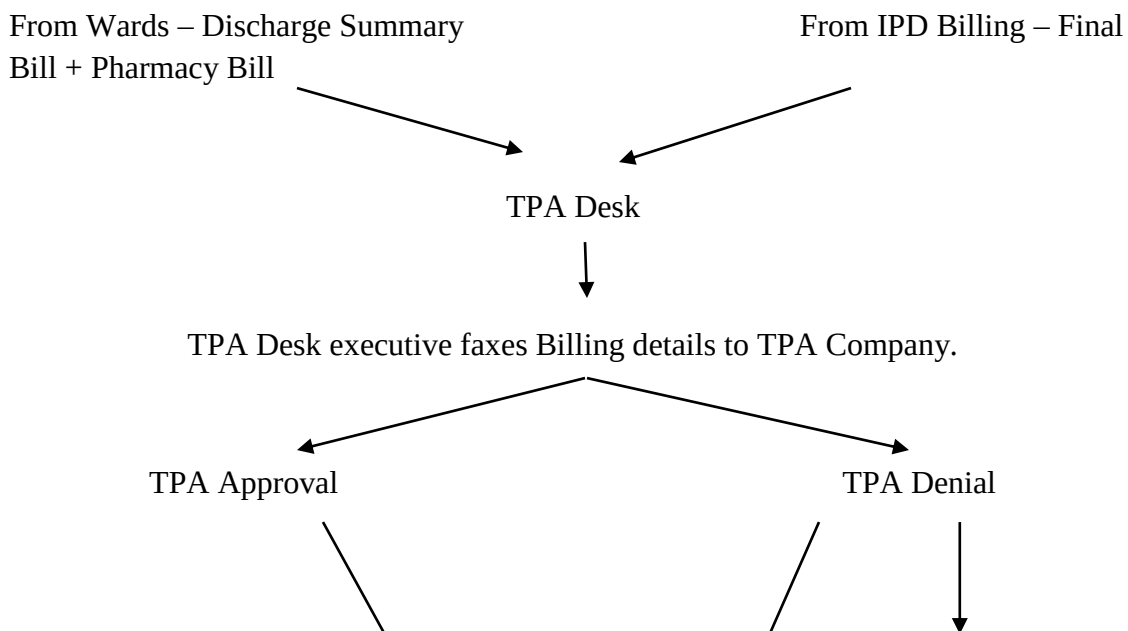


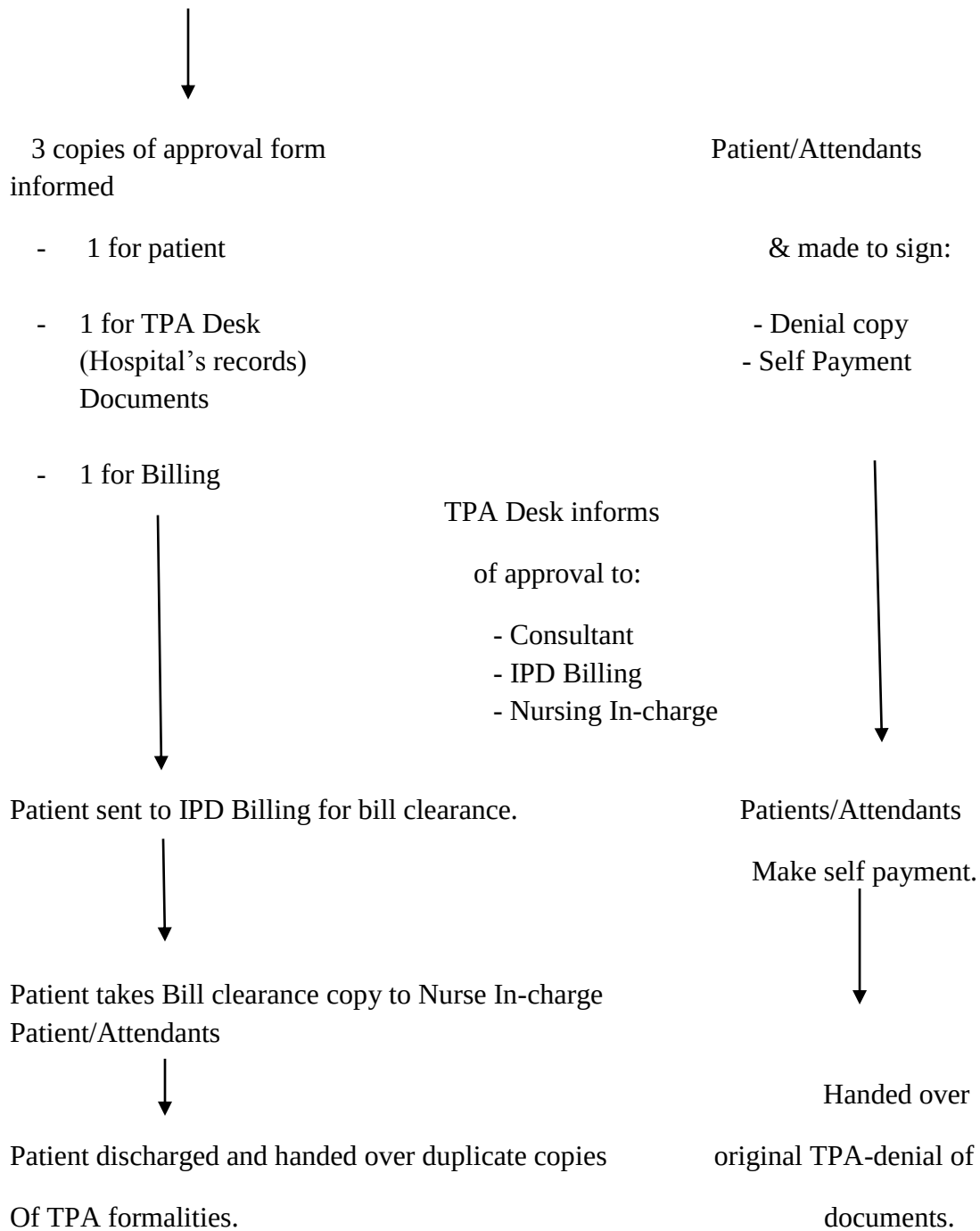
EMERGENCY ADMISSIONS FOR TPA PATIENTS





FLOW OF TPA PATIENT DISCHARGE



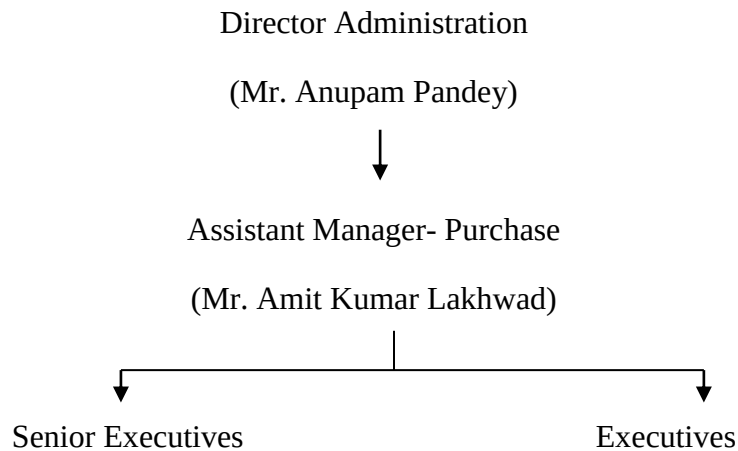


PURCHASE DEPARTMENT

Layout: 1st Floor (Admin Block)

Total Staff: 4

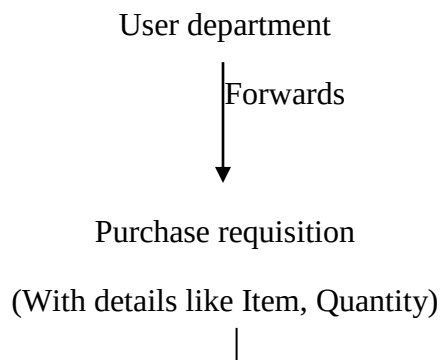
Organogram:

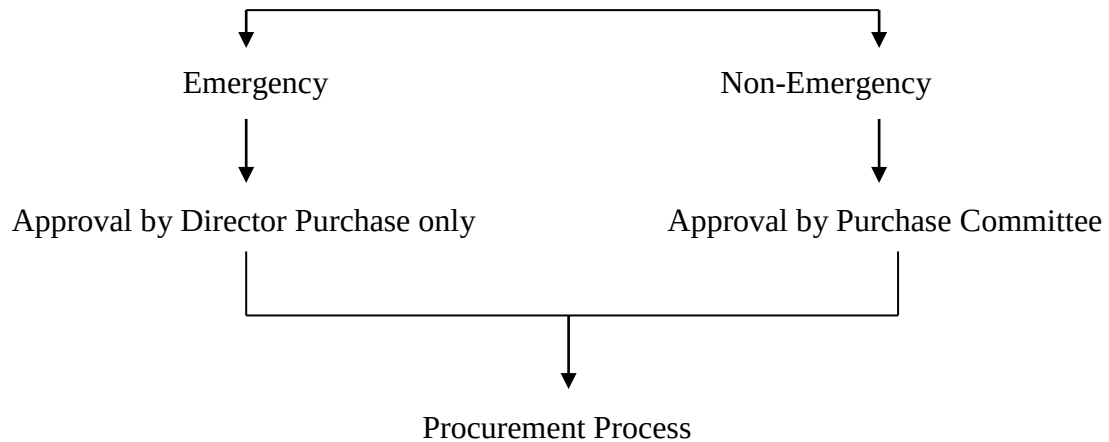


Records Maintained:

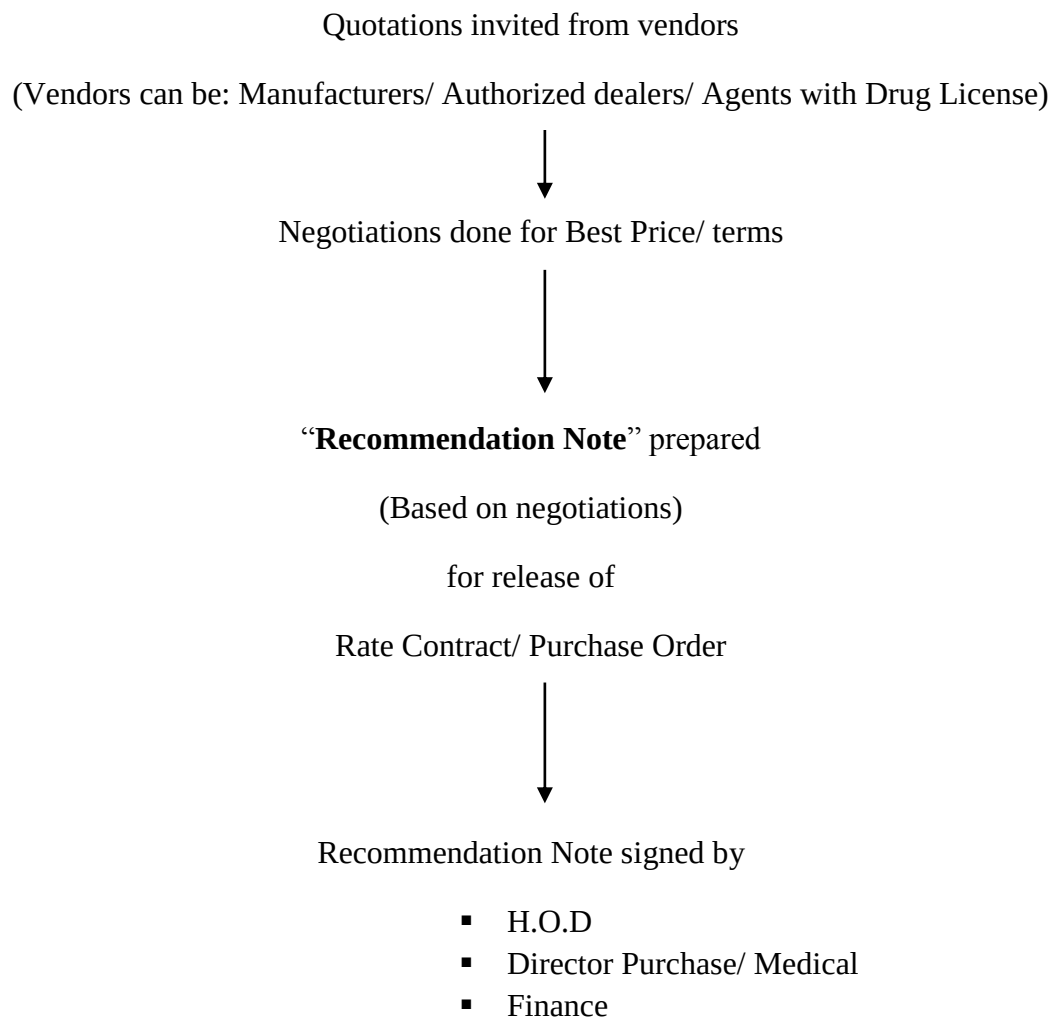
- Quotations
- Purchase Requests
- Capital Sanctioned Record
- Purchase Orders

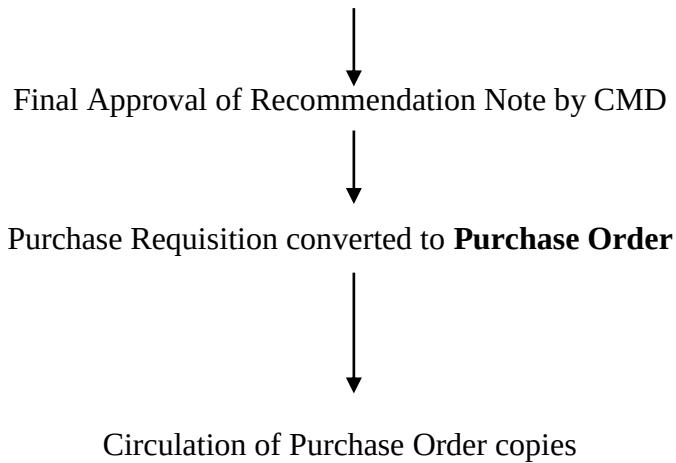
Procurement of medical consumables and drugs



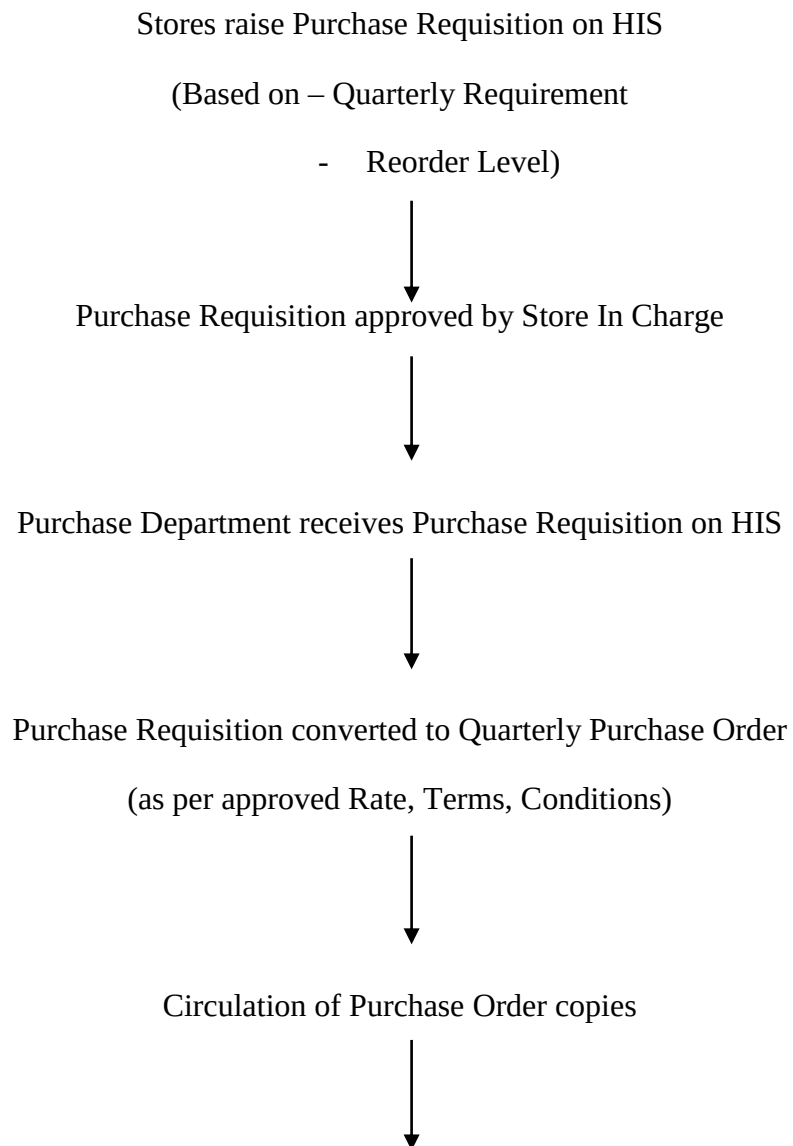


Procurement Process





Procurement of Stocked (Regular) Medical Consumables & Drugs



Vendor forwarded a copy of Purchase Order

(Mentioning – Delivery Schedule

Quantity Schedule)

OT (Operation Theatre)

❖ **Layout:** 3rd floor

❖ **No. of OT's:** 10

▪ General OT's – 8

▪ Cardiac OT – 1

▪ Eye OT - 1

No. of beds in Pre-operative ward: 7

❖ **No. of beds in post-operative wards:** 8

❖ **Utility room:** 1

❖ **Doctor's Lounge:** 1

❖ **Nurse and Technician Lounge:** 1

❖ **Pantry:** 1

❖ **Sterile room:** 1

❖ **Changing rooms: 4**

Doctor (male) changing room: 1

Doctor (female) changing room: 1

Nurse (female) changing room: 1

Technician + Nurse (male) changing room: 1

Department Head: Dr. Divesh Arora (MD, Senior Consultant, HOD- Anaesthesia)

AREA SPECIFICATIONS OF EACH OT

OT NUMBER	H X L X W	Cubic Feet
OT-1	10 X 21 X 19	3990
OT-2	10 X 20 X 19	3800
OT-3	10 X 21 X 18	3780
OT-4	10 X 21 X 17	3570
OT-5	10 X 22 X 18	3960
OT-6	10 X 21 X 18	3780
OT-7	10 X 26 X 18	4680
OT-8	10 X 20 X 18	3600
OT-9	10 X 20 X 18	3600
OT-10	10 X 20 X 18	3600

Records Maintained:

Forms Maintained	Registers maintained at OT Pre holding area	Registers maintained in Sterile Room	Registers maintained with Nursing In- charge	Registers maintained with Manager Technician
1. Consent forms: - Informed - Anesthesia - Surgical/ Medical Treatment. 2. Pre anaesthesia Check up form 3. Surgical safety checklist form 4. Requisition form : - Histopath . - Blood bank - Laboratory - Indoor patient drug requisition form 5. Operation note 6. Instrument	1. OT Patient Pre Hold Register 2. Operation Record Register 3. OT Daily Charge Register 4. In-Out 5. Register 6. CSSD Register	1. Instrument Set Register 2. OT Fridge medicine Register 3. Cidex OPA Register 4. Formalin Register 5. Re-Autoclave Register 6. Autoclave Register 7. ETO Register	1. Inventory Book 2. Movement Register OT 3. Duty Roaster 4. OT Purchase Book 5. Emergency OT Register 6. Complaint OT Register 7. Pharmacy Bill OT Register 8. OT Checklist Register 9. Consent form	1. OT Culture File 2. Daily OT Cleaning Register 3. Fumigation Record File

checklist form		r	file	
7. Form for linen & laundry.		8. Plasma Register		

OT Washing & Fumigation Schedule:

OT - 1,2,3,8, 9, 10and sterile room: Every Saturday

OT - 4, 5, 6, 7: Every Sunday

Present Scenario:

9 functional OT's



Therefore, OT Washing and fumigation done every Saturday



In case, culture report (every 72 hrs for each OT) shows more **than 10 types of isolates** then fumigation done on same day in OT.

INFECTION CONTROL SURVEILLANCE PROGRAMME 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: **Slit 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 :
OT No./Item name /Qty./ Date /Morning, Evening, Night with
(personnel sign & ID no.)
- OT Washing date record, OT Fumigation date record.

3. Fumigation Record File

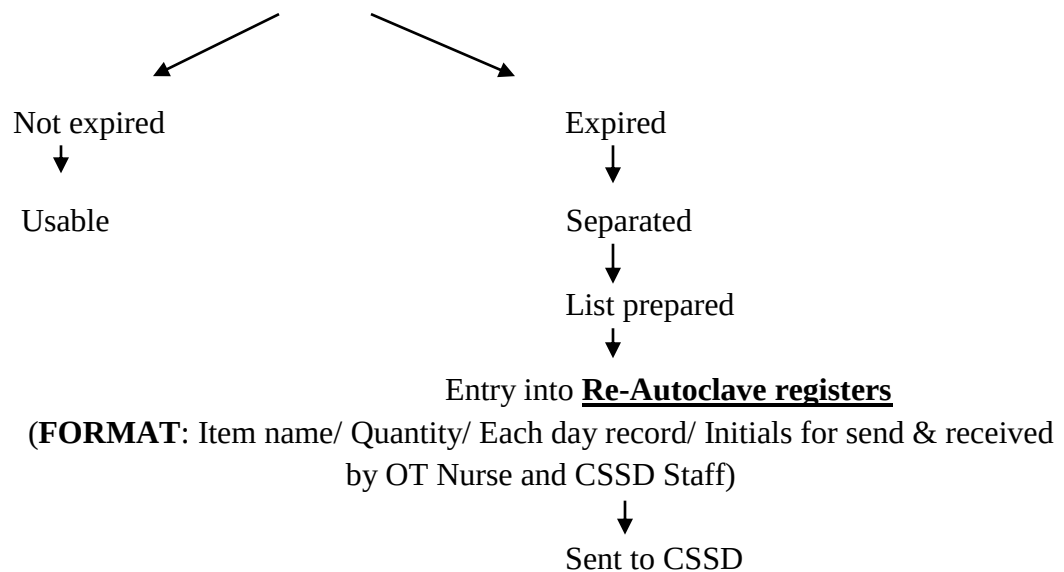
- Separate record for each OT
- Fumigation done by OT guard 8ml per Litre.
- Weekly reporting
- FORMAT:

Date/ Fumigation done by/ Technician name/ Remarks

OT Inventory Management & Records:

1. INSTRUMENT SET REGISTER (In sterile room)

- For daily inventory management in sterile room
- Person on charge: nursing staff personnel (assigned duty everyday)
- Inventory maintained according to **racks number**
- Each rack assigned a specific number
- Daily expiry check of each item in racks



2. FRIDGE MEDICINE REGISTER OT (In Sterile Room)

- Each day inventory maintained by personnel incharge of sterile room
- Daily expiry check

3. INVENTORY BOOK OT

- For each OT separate register
- For drug inventory in OT
- Inspected, maintained and signed daily by nurse incharge.

STRENGTHS:

1. State of art equipments.
2. Wall mounted communication system in OT (Telephone + Intercom).
3. **Modular OT'S** fitted with state-of-the-art **LED Trilux Aurinio Lighting** and equipped with a **Trilux Media Bridge****.
4. OT's are designed with HEPA filters, laminar airflow systems with **separate AHUs** for infection prevention.
5. Wall mounted digital temperature and humidity controller and medical gas alarm panel.
6. **AGSS** (Anaesthesia Gas Scavenger System) in OT's: First in any North India Hospital.

** The **Trilux Media Bridge system** combines lighting, media supply and clean air equipment in a perfectly matched system. The possible combination with a laminar flow air supply ceiling for turbulence free displacement current that delivers extremely high air purity.

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 - Anaesthesia Pre operative checklist Bill clearance papers Records of- Antibiotic &	Surgical safety checklist form Requisition forms: - Histopath - 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 "

	Investigations Pre anaesthetic check up record			
From PRE-OPERATIVE AREA to OPERATION THEATRE (OT)		Completed Surgical safety check list form. Operation notes	“First column” of Surgical safety check list form completed or not. Checks of : - Medical gases - Equipments - Electrical points - Linen - Complete surgical set “Pre column” of Instrument checklist form.	Completion of “ 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”

OT WORKFLOW

Doctor sends request for OT Availability



OT Incharge confirms OT availability



Entry into OT Booking Register regarding

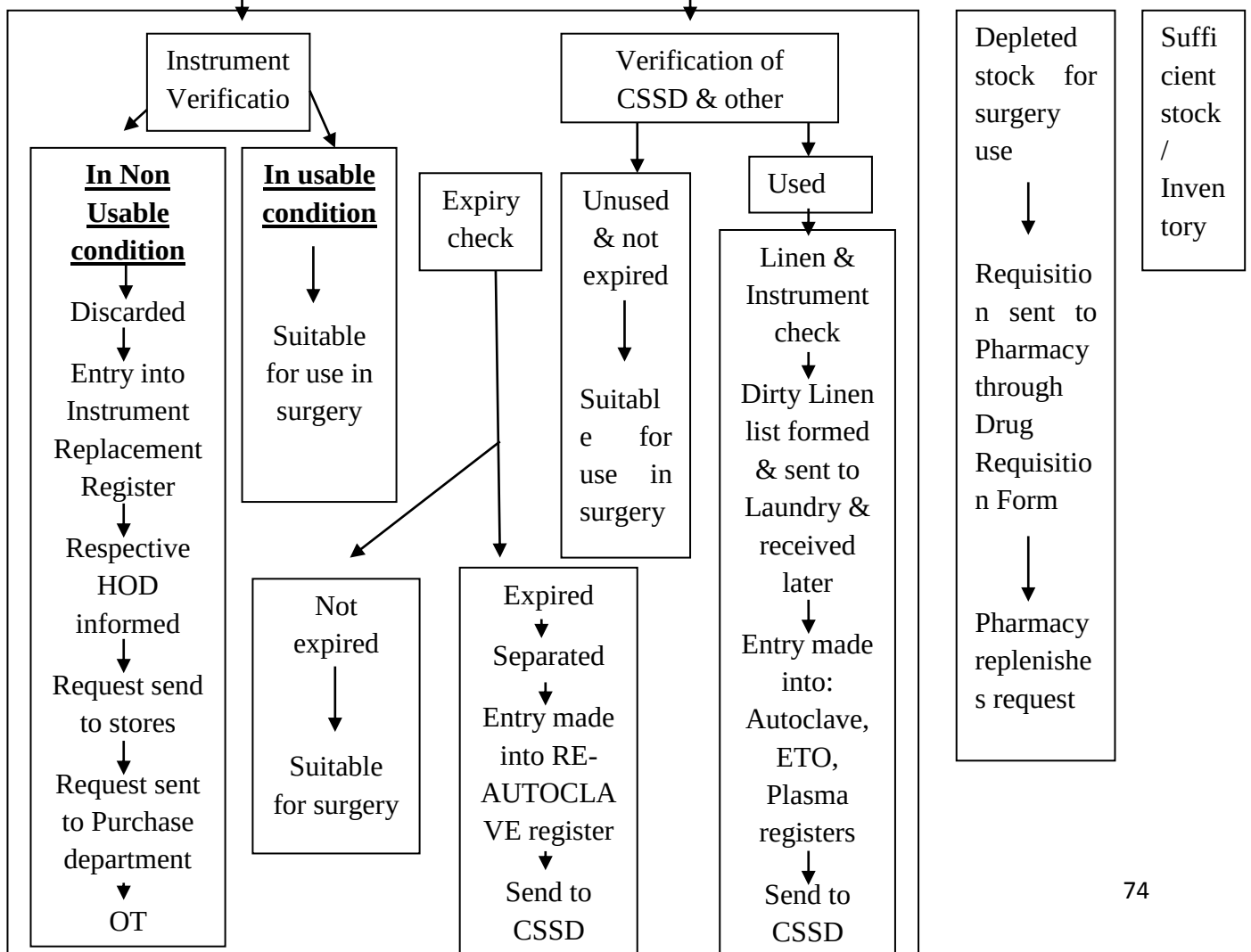
Scheduled surgery's Date, Time, Doctor, Patient



A day before surgery verification of:

Surgery Set

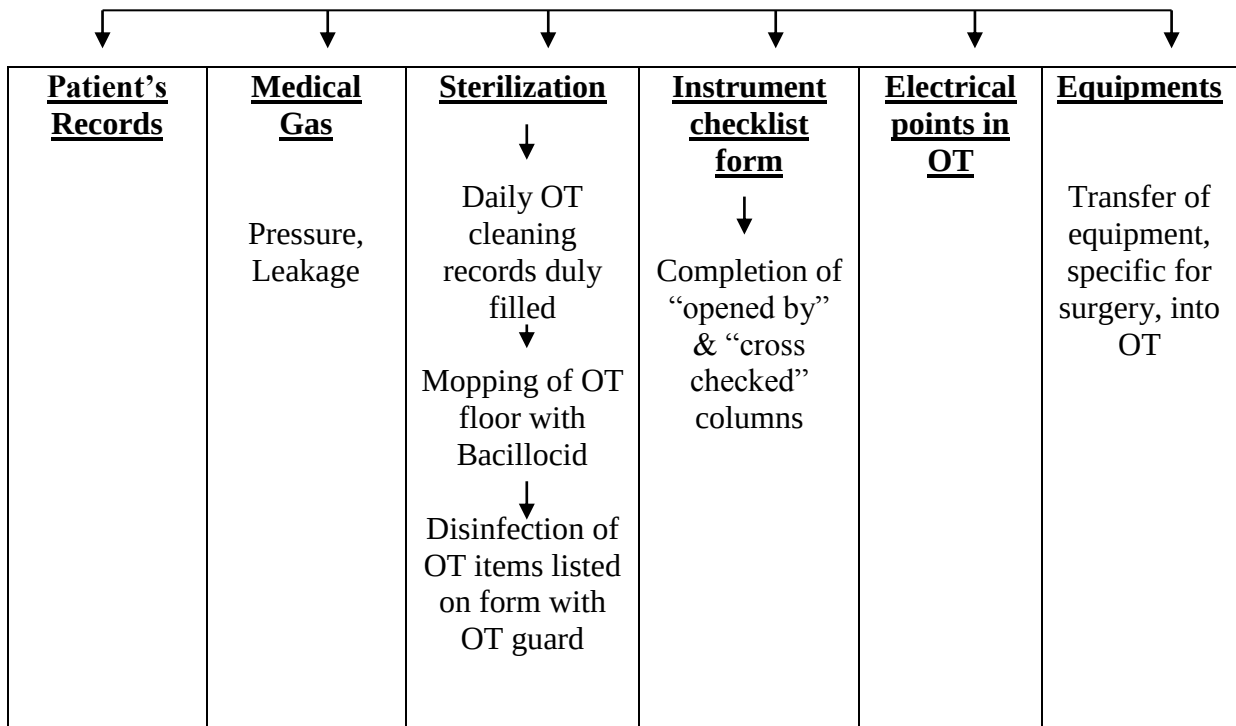
Drugs



Surgical set & consumables prepared



Before start of surgery, Inspection of:



OT Preparation done



Reception of Patient in Pre Holding area 20 minutes before surgery



Patient shifted to OT



Patient's Identification done & verified



OT Bulletin/ Whiteboard prepared



"Pre" Column of Instrument Checklist filled



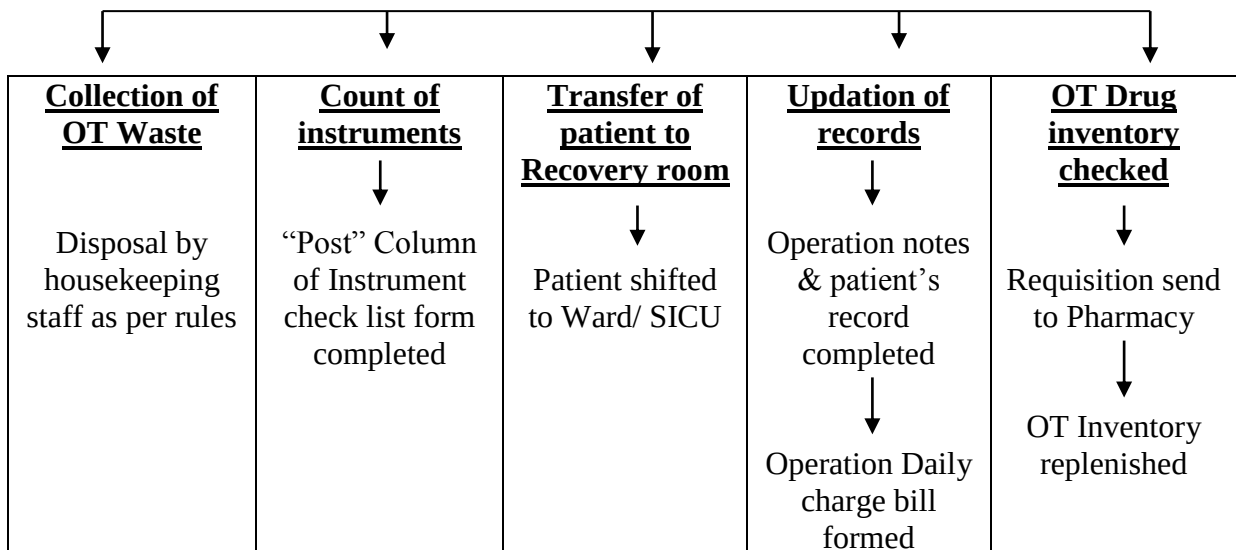
Surgery performed



Recording of all consumable used is recorded



Surgery completed



OT Prepared for next surgery

Department of Critical Care

Components: ICU, IMCU

Layout: 3rd Floor

- Doctor's Duty Room - 1
- Nurse Change Room-Female - 1
- Equipment Room - 1

ICU Beds: 12

IMCU Beds: 6

Department Head: Dr. Sandeep Bhattacharya

ICU

Infrastructure:

Desktops: 2

Printers: 1

Intercom: 1

Nursing staff: 29

Housekeeping staff: 3

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

Records Maintained:

1. ICU consumable book
2. Replacement book/loan book
3. Handing over/transfer book
4. ICU Lab register
5. ICU MRD Register
6. Leave register
7. Store item receiving book
8. Assignment book
9. ICU Patient report book
10. Admission & Discharge Register
11. Procedure book for Doctor's & ventilation data

Records for inventory:

1. Crash trolley inventory register
2. Procedure trolley inventory register
3. Bed side inventory register
4. Narcotic drug inventory record
5. Fridge inventory register

Forms with ICU:

1. Daily Billing Activity
2. Consultation form
3. Discharge summary
4. History Sheet
5. Investigation Flow Chart
6. Daily Floor Census
7. Progress Sheet
8. Nursing Care
9. Blood Sugar Chart
10. Patient Registration Record
11. Pre Anesthesia Checklist
12. Pre operative Checklist
13. Pre & Post Operative Form
14. Nurse Record
15. MRI Investigation Form
16. Requisition forms: - Indoor Patient Drug Requisition Form
 - X-ray/ Ultrasound Requisition Form
 - Lab Requisition Form
 - Cytopathology Requisition Form
 - Histopathology Requisition Form
 - Blood Requisition Form
 - Requisition Form for Blood Transfusion
17. ICU Daily Notes
18. ICU Observation Chart
19. ICU Admission Consent form
20. Death certificate
21. List of Linen for Washing
22. Consent Forms :
 - Informed
 - High Risk Consent for Anaesthesia

- Anaesthesia
- Surgical & Medical Treatment

23. Valuable Handover Form

24. Discharge Checklist form.

Suggested Infection Control Surveillance Program for ICU

<u>Frequency Of Change</u>	<u>Culture/ Swab area/ Walls/ Table</u>	<u>Infection Control Mechanism</u>	<u>Records</u>
Daily	-	- All surfaces, patient cubicle (locker, cardiac table, nursing station, bed railings etc) -Floor wet mopping with Bacillocid – 4 hrly	Cleaning Records
Fumigation (once a month or once in 15 days if low patient traffic)	- Air Culture - Swabs if req. (e.g. in case of outbreak)	- Thorough cleaning with detergent & water (e.g. floor, walls, stainless steel basins for patients for sponge bath) -Disinfection with Bacillocid -Fumigation must be done with 2% Bacillocid/ Trigene.	Fumigation Records + Culture Reports

Other Cleaning Protocols:

- Equipments like ventilators & monitor to be cleaned only by nurses.
- Separate stethoscope for each bed space (used after sterilizing with spirit).
- Digital thermometers for individual patients (later given to them & patient billed).
- Suction tube to be changed at each bed after every 3 hrs.
- Catheter mount & HME filters to be changed every 72 hrs.

- Nurse to patient ratio:**
- Routinely: 2:1
 - When the patient is on Ventilator: 1:1

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 central manifold by concealed pipelines)
 - Each bedside monitor is hooked to CENTRAL NURSING STATION MONITOR.
 - Other Equipments (common to all beds):
 - Mechanical ventilators
 - Syringe pumps
 - Feeding pumps
 - Nebulizer
 - 2 beds have access to piped RO water & can be used for bedside dialysis.

ICU ADMISSIONS

Admission in ICU can occur from:

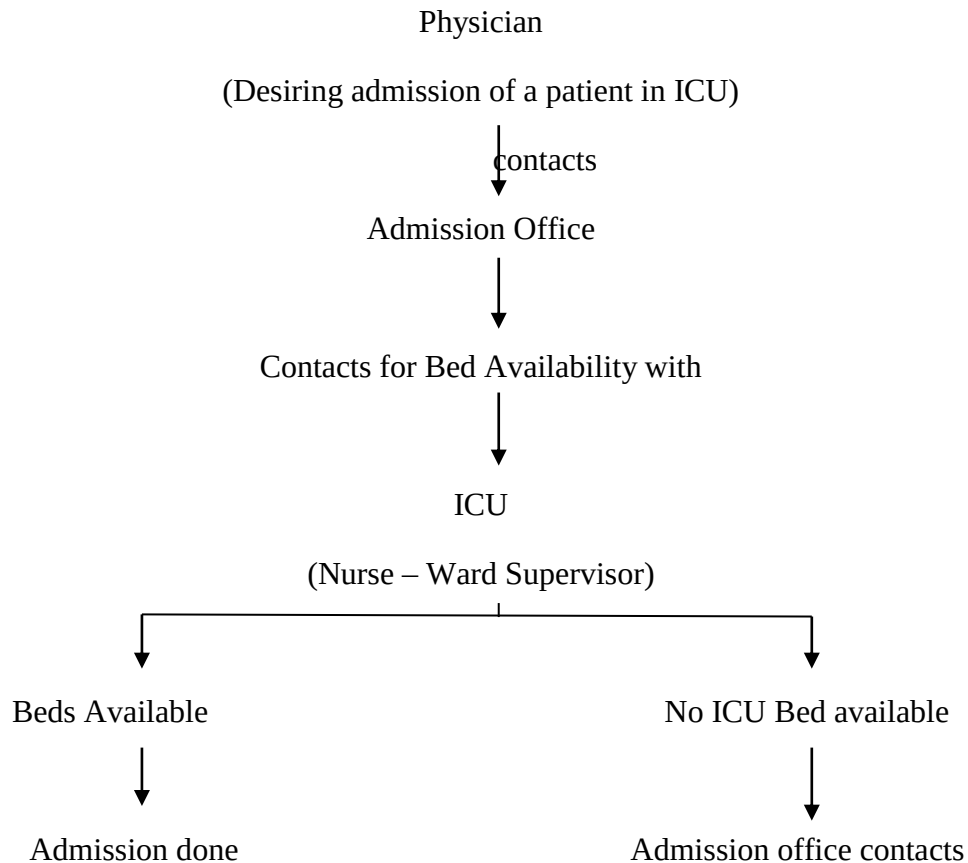
- Inpatient wing of the hospital
- OT
- Emergency complex
- From other hospitals
- Transfer from IMCU
- Sometimes directly from OPD

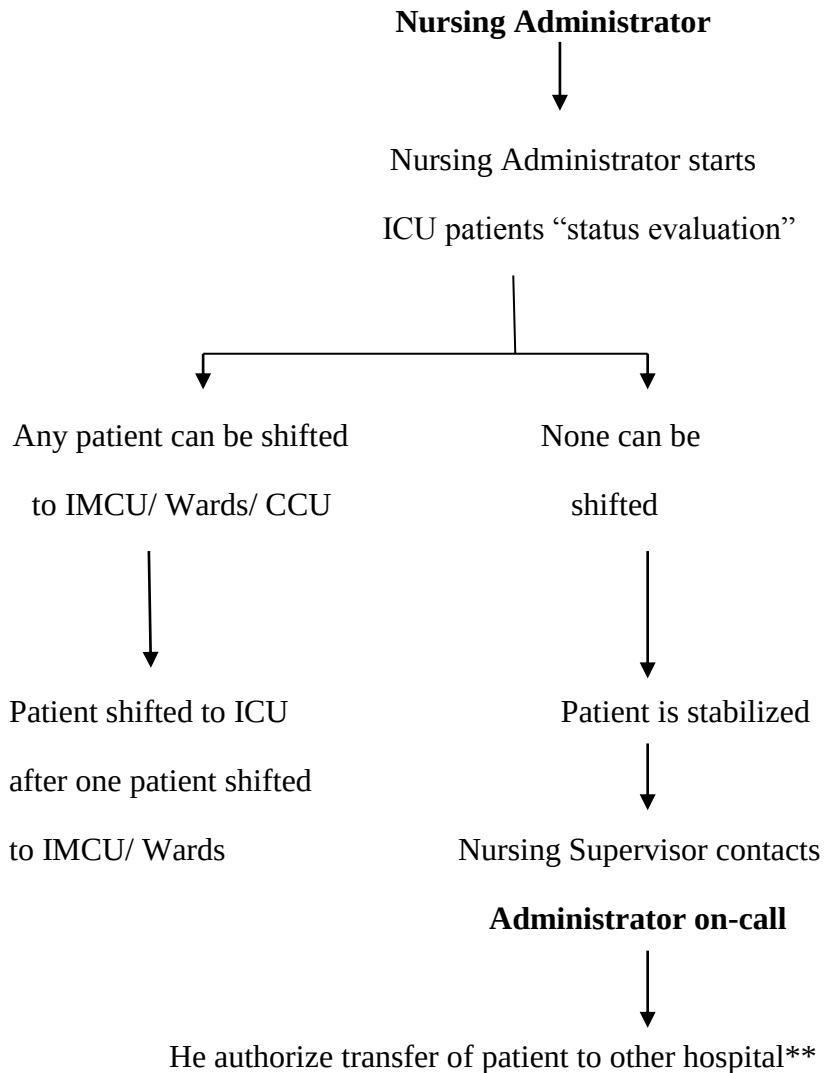
- Rarely from Bronchoscopy, Endoscopy, Dialysis unit

Ownership of patient care in ICU:

- ICU & IMCU are running under **“Semi-Open Model”**.
- Patients are admitted under consultants of various medical and surgical specialties.
- Thereafter, patients are managed jointly by: **ADMITTING TEAM & CCM TEAM**.
- All admissions must be notified by Duty Doctor to both the teams.

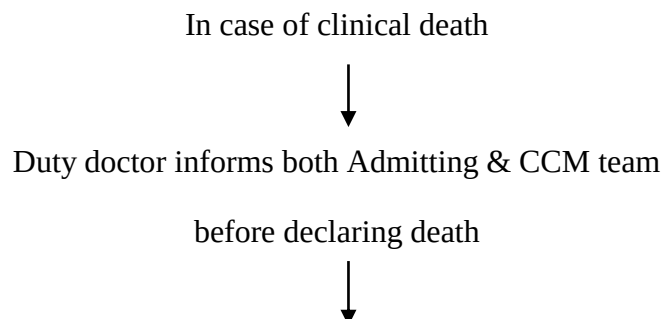
Patient admission procedure in ICU

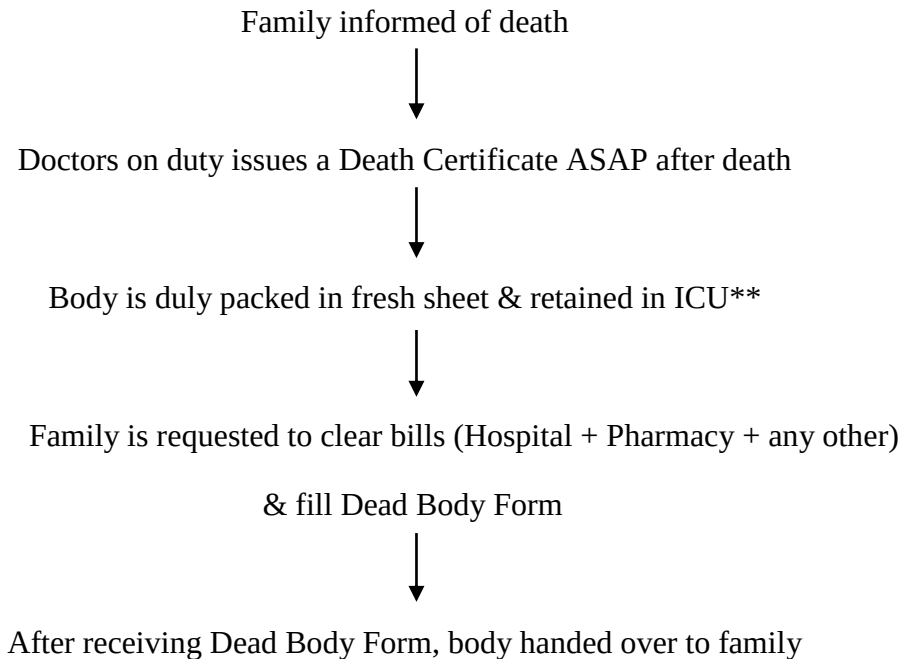




**AIMS Physician is responsible to locate a physician who will admit the patient to another hospital.

DEATH PROTOCOL





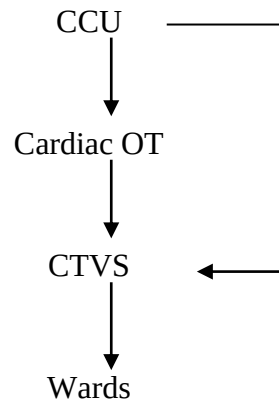
** Body retained in ICU for a maximum of 1 hr. after death and upto 4 hrs in exceptional situation on orders of Duty Doctor & beyond that on orders of GM (Admin). Thereafter body is sent to Mortuary and security is informed.

If MLC case, packed body is sent to mortuary & handed over to police by security.

CTVS

- **Layout:** 3rd floor
- **Beds:** 6
- **Store room:** 1
- **Doctor's room:** 1
- **Clean utility room:** 1
- **Dirty utility room:** 1
- **Consultant CTVS:** Dr. Adil Rizvi

Workflow:



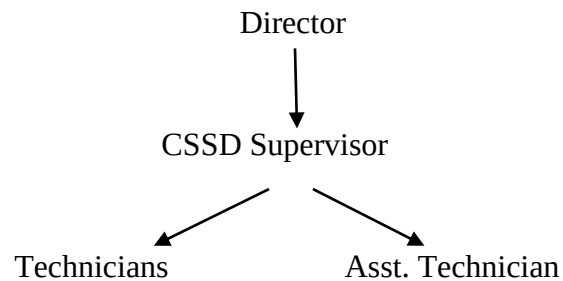
CSSD

(Central Sterile Supply Department)

Layout: 4th floor (“U” shaped layout)

Assistant Manager CSSD: Mr. Raj Kumar

Organogram:



Infrastructure:

- Desktop -1
- Intercom -1
- Printer -1
- Autoclaves (Pulse vacuum type) -2
- ETO -1
- Plasma sterilizer -1
- Steam boiler -3
- Auto sealer -1
- Loader -2

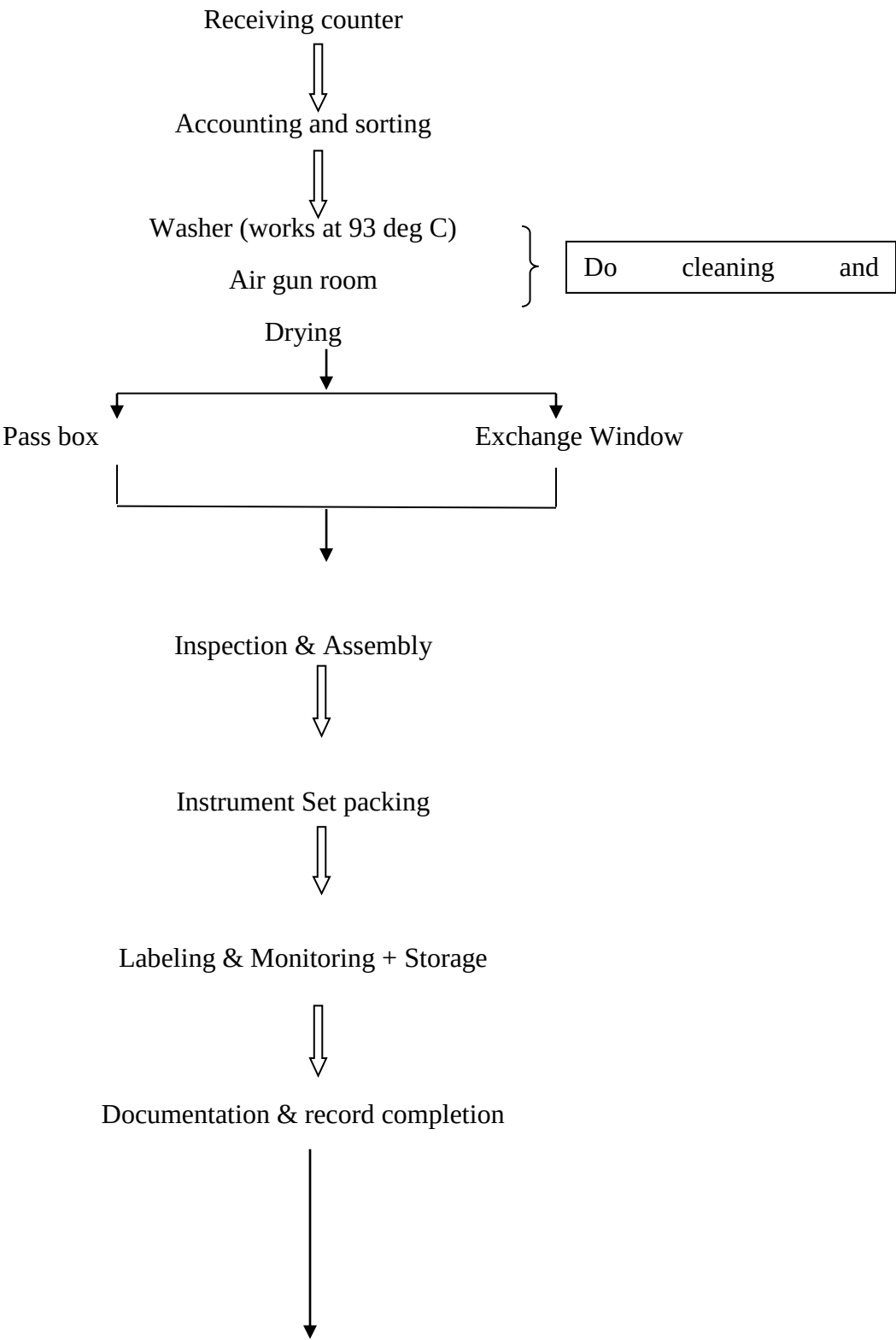
DEPARTMENT WORK FLOW:

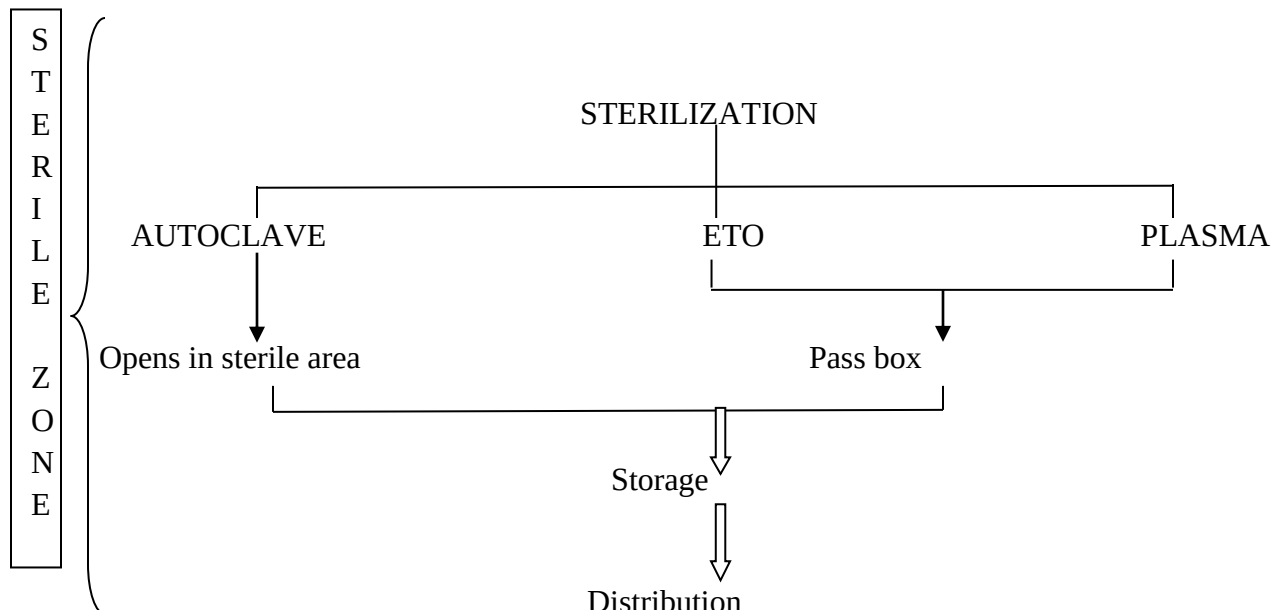
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METHODS OF STERILIZATION USED:

<u>AUTOCLAVE</u> <u>(Steam sterilization)</u>	<u>ETO</u>	<u>PLASMA</u>
- No. of autoclaves – 2 - Type – Pulse vacuum type - No of cycles per day – Acc. to load. <u>Temp/time/pressure.</u> 121 deg C/ 15 mins/ 1.2 kg 134 deg C/ 4 mins/ 2.2 kg STERILIZATION CHECK : <u>Bowie Dick Indicator</u> (<u>Chemical Indicator</u>) Once a day	- Number – 1 - No of cycles – usually 1 / day (But can vary acc. to load) <u>Temp</u> – 54 deg C 12 hour cycle STERILIZATION CHECK : ✓ <u>Biological indicator</u> <u><i>Bacillus atrophaeus</i></u> : Each load.	- Number – 1. - Not regularly used. Used in case of emergency; when ETO not in use. <u>Temp</u> – 45 deg C 50 min cycle. STERILIZATION CHECK : ✓ As such no biological indicator available. ✓ Therefore, its use is limited and only for emergency purpose. ✓ But <i>Bacillus atrophaeus</i> can be used.

MONITORING:

PHYSICAL MONITORING	CHEMICAL MONITORING	BIOLOGICAL MONITORING
• Gauges • Graphs • Process Logic Controller (PLC)	• 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>

Packing paper used :

1. Linen
2. Medical grade paper: - Used for ETO
- Lasts up to 6 months
3. Tyvec paper: - Used for plasma
Expensive

Strength:

- State of art equipments.
- Experienced staff
- Strong focus on sterilization, its monitoring and continuous physical, chemical, biological monitoring is done.

BLOOD BANK

Layout: 4th Floor

Staffing:-

- Director- Dr. Ramesh Chandra
- Medical officer- Dr. Uma rani
- Technical supervisor- vishwajeet sarkar
- Laboratory technician- 8

Area required:-

- Total → 150 square feet
- 100 m sq. for its operations
- 50 m sq. for preparation of blood components.

Storage and shelf life:-

WHOLE BLOOD→450 or 350 ml (>60kg)→blood loss→1-4`C→35 to 42 days,→(-40`C→1 Year)

RBC→250 ml red cell, 100ml SAGM~CPD→O2 transport→1 to 6`C→42 days.

Platelets apheresis→200-300ml→20 to 22`C→5 days

Cryoprecipitate→-80 to -40`C→1 Year

Fresh frozen plasma→-40 to -80`c→1 Year

Labeling on bag:-

1. **Color scheme:-**

- Blood group O- Blue
- Blood group A- yellow
- Blood group AB- white
- Blood group B- pink

2. Storage temperature, expiry date, Rh type

3. Name, address and manufacturing license number

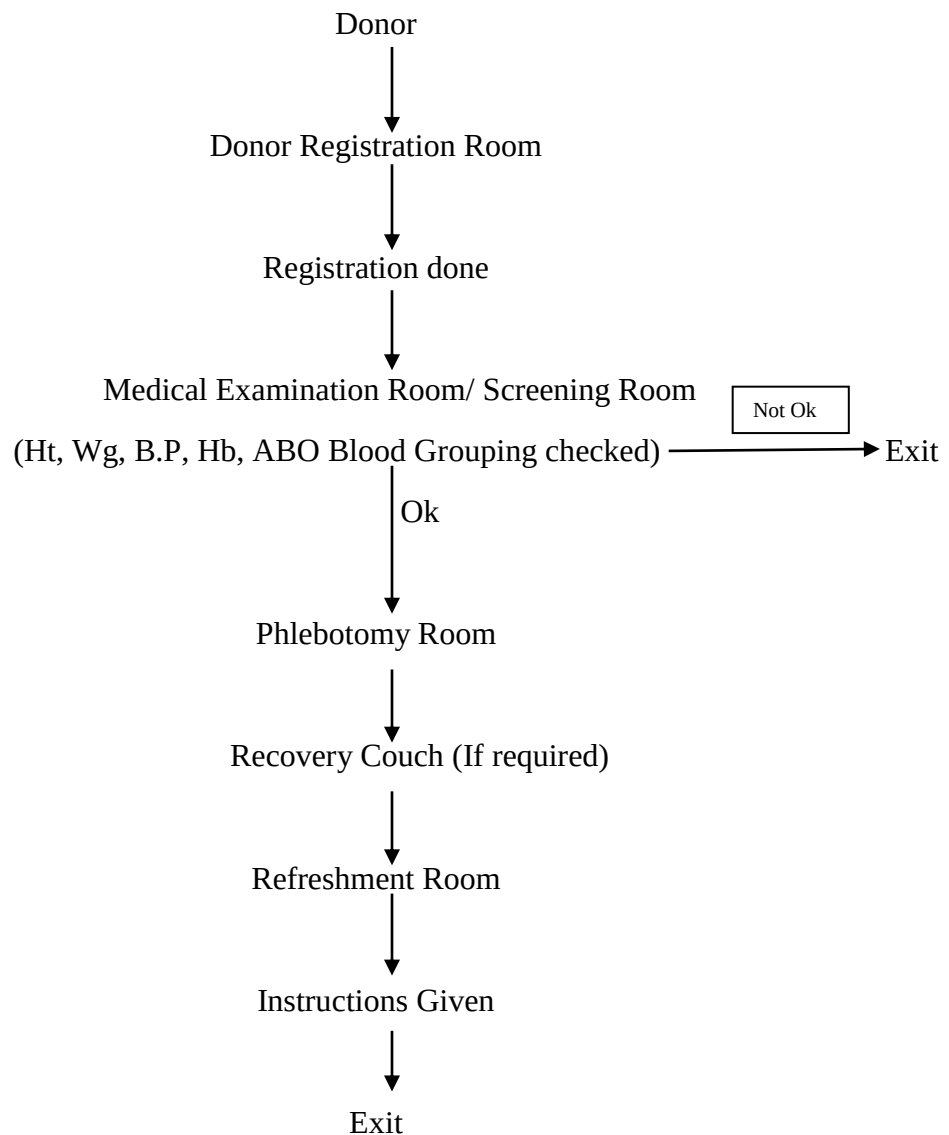
4. Volume of blood.

5. Type of donor

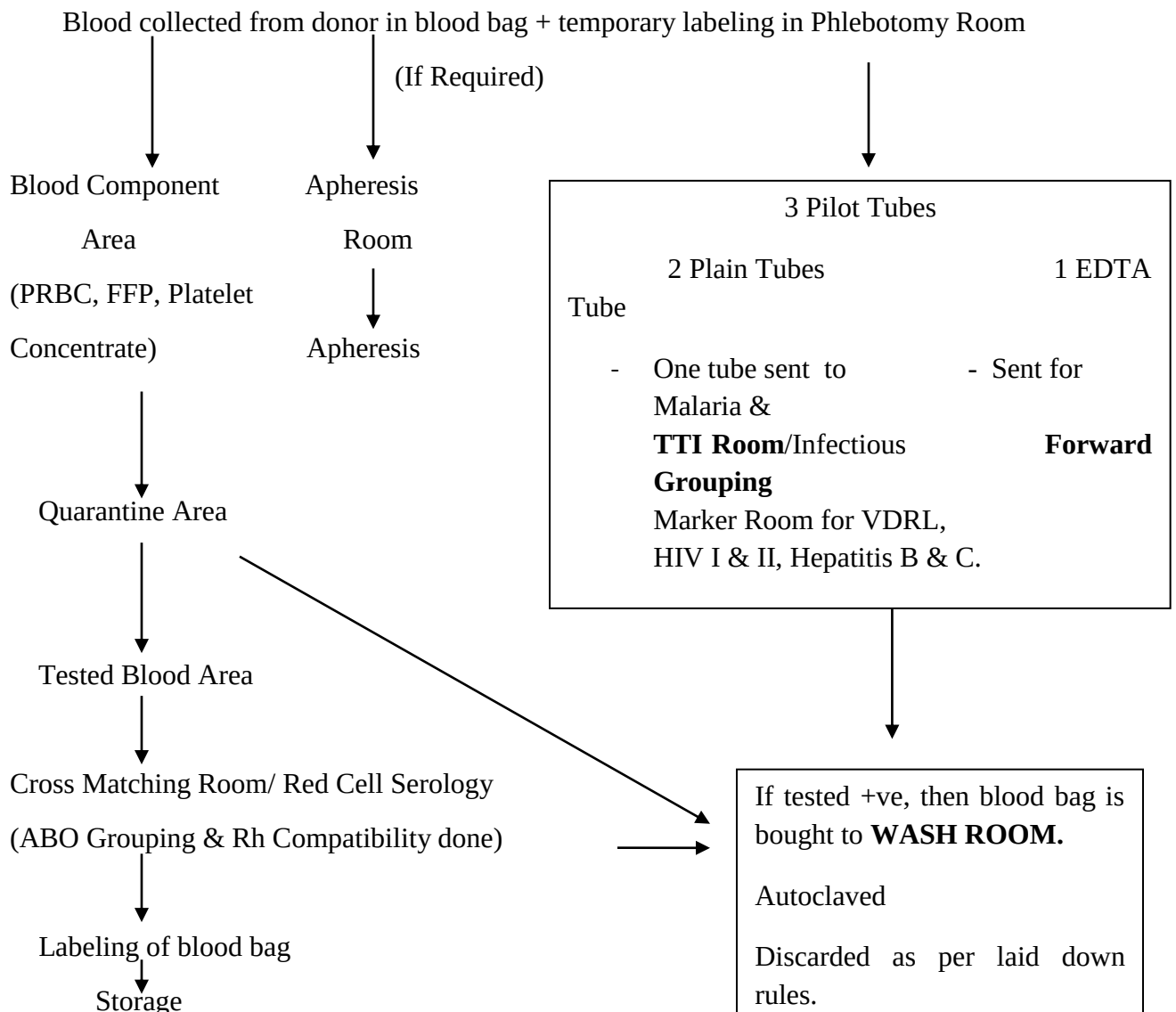
License for Blood Bank:-

- Licensed by State Drug Controlle. (panchkula, Haryana.)
- Regulated by Drugs and Cosmetic's Act.
- Licensed for processing whole blood and for preparation of its components. [lic. No.680B(H)]

FLOW OF DONOR:



Movement of Donor's Blood:



Label Color codes to be used -

- | | |
|----------|------|
| - Yellow | - A |
| - Pink | - B |
| - Blue | - O |
| - White | - AB |

Infrastructure of the blood bank:-

- **Donor Registration Room**
- **Medical Examination Room**
- **Donor room/Phlebotomy/Bleeding room-** Blood is collected in this room.
- **Apheresis Room**
- **Refreshment Room-** After donating the blood, refreshments are provided here.
- **Component Room:** Here collected blood is formed into different components.
- **TTI/ Infectious Markers Room-** Here Blood is checked to rule out any kind of infection in the collected blood.
- **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 +ve for any infection or unmatched blood is discarded.

Strength:-

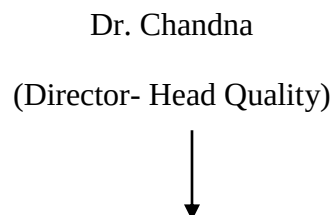
- Staff is trained and competent.
- Record maintenance was excellent.
- Preventive maintenance sticker was placed on all equipment's.

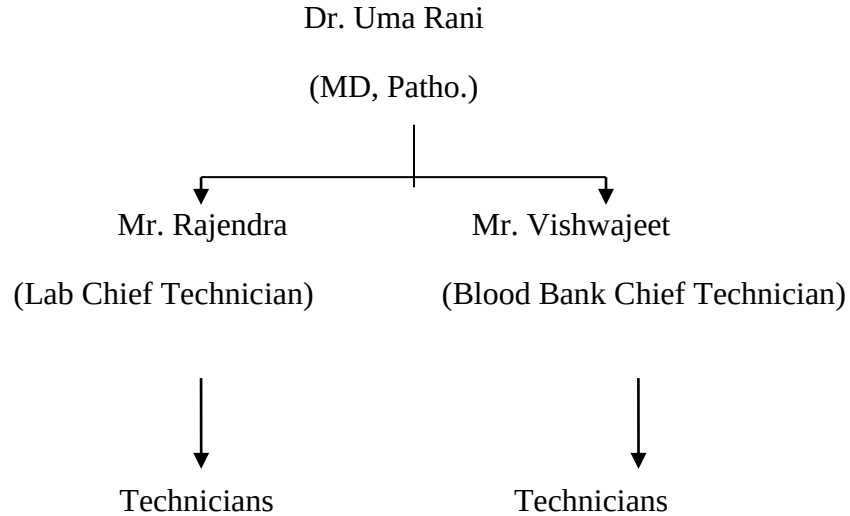
Laboratory Services



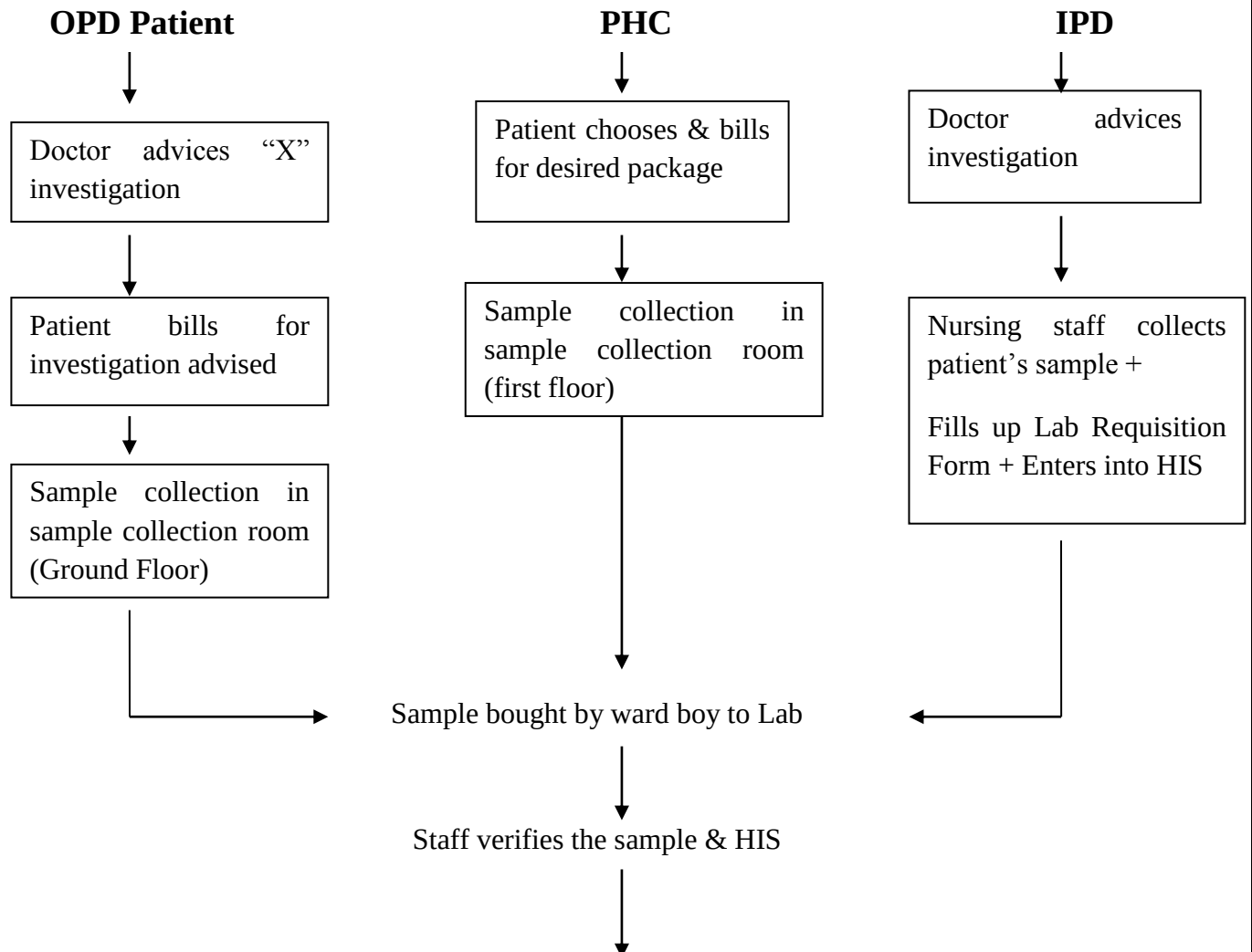
Layout: 4th floor

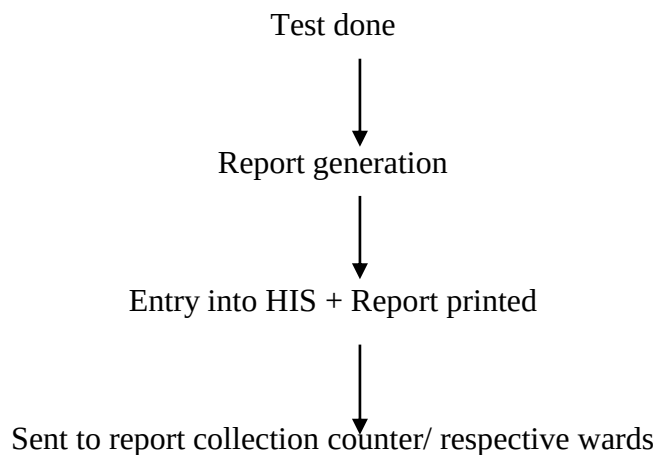
Staff & Hierarchy:





Workflow:





Records Maintained:

- QC File
- Calibration Log
- Scheduled service log
- Instrument log
- Instrument service log
- Daily maintenance log
- Delivery file
- Purchase file
- Patient Record Reg.
- Quota File

Equipments:

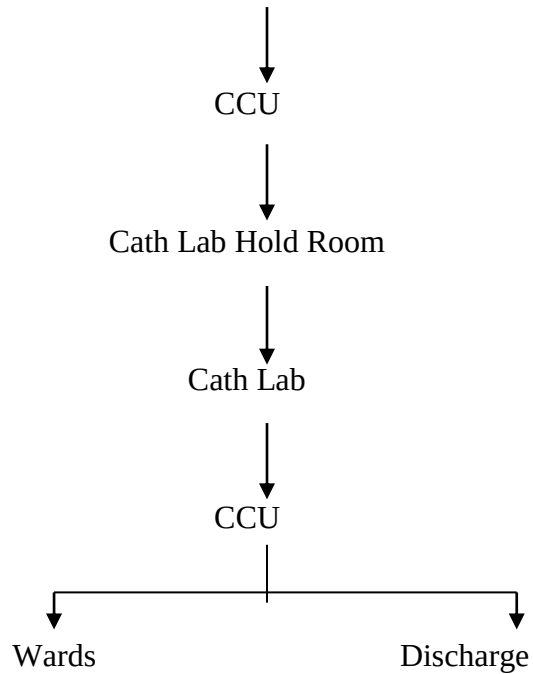
- Synchron CX 5- Pro (Beckman Coulter) – Fully Automatic Chemistry Analyser with Random Axis
- Vitek 2 compact – For Automated identification & Sensitivity Testing
- Bact Alert 3D- Blood Culture Machine
- Sysmex XT- 2000i
- Sysmex KX- 21
- Cytocentrifuge.

Cath Lab

- **Layout:** 6th floor
- **Department Head:** Dr. Rishi Gupta

Workflow:

Patient from Cardiac OPD/ Emergency/ Wards (rarely)



- **Common procedures in Cath Lab:**
 - Coronary Angiography (CAG)
 - Coronary Angioplasty (PTCA)
 - Balloon Mitral Valve Valvoplasty
 - Permanent Pacemaker
 - Single chamber
 - Dual chamber
 - Bivent
 - Combo device
 - AICD

- Peripheral Angiography
- Peripheral Angioplasty
- Renal Angioplasty
- Electrophysiology study- Radiofrequency Ablation (EPS-RFA)

- **EQUIPMENT:**

PHILIPS FD-20 Flat panel (for coronary & vascular intervention).

- **Records Maintained:**

- CAG Register
- PTCA Register
- PTA Register
- PPI Register
- Cleaning records
- Fumigation records
- Inventory records.

CCU

Beds: 16

Store: 1

Clean utility room: 1

Dirty utility room: 1

Records Maintained

<u>Consent Forms</u>	<u>Investigation Forms</u>	<u>Patient Care Forms</u>	<u>Other Forms</u>	<u>Registers</u>
<u>Consent forms for:</u> - Surgical & Medical treatment - Anesthesia Consent - High Risk Consent for Anesthesia Surgery - Haemodialysis Consent - Informed Consent - Consent for Transfusion of blood & other blood products - Hand written consent form	<u>Requisition forms for:</u> - Histopathological Exam. - Cytopathological Exam. - Indoor Patient Drug Req. Form - Laboratory Req. Form - MRI Investigation Form - X-Ray/ Ultrasound Request Form	- Progress sheet - History sheet - Nurse record - Nursing care record - Drug Prescription & Administration Record - Investigation flow chart - Vital Parameter Chart - Pre Anaesthesia Check up - Intake Output Chart	- List of Linen for Washing - Daily Floor Census - Valuable Handover Form - Daily Billing Activity - Discharge Summary - Discharge checklist	- Daily Duty Register - Laundry Register - Duty Doctor Reg. - CSSD Register - Consumables Reg. - Communication Reg. - Maintenance Reg. - Annual Leave Plan Reg. - Loan Book - Complaint Register MRD Book - Handover Book - Housekeeping record - GRBS Register - Patient Shifting Register - Complaint Book - Stock Register CCU

Daily Checks & Checklist:

- Inventory & Expiry Check Reg.
 - CCU Crash Cart Inventory
 - CCU Fridge Inventory
 - CCU Medicine Trolley I & II
 - CCU Capital Item
 - CCU Cup Board Inventory
 - CCU Laundry
- Equipments daily working checks.

MAINTENANCE & ENGINEERING

Layout: -2 Basement

Total Staff: 41

Components:

- Electricals
- Sewage treatment plant
- Carpentry
- Pump House + Fire Fighting
- HVAC
- Plumbing

Supervisor: Mr. Sachin (Generator set), Mr. Jagdish (A/C, Lift, Water Pump, Fire fighting)

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.

Records Maintained:

- Diesel Book
- Complaint Book
- Electricity Consumption Book
- AC Log Book
- Chiller Daily Parameter Log Book
- Pump Log Book
- Filter Cleaning Book
- DG Log Book
- Boiler Register
- Bore Well Register
- UPS Log Book
- Temperature Controller Register

HOUSEKEEPING

Status: Outsourced

Components & Status:

<u>Component</u>	<u>Outsourced to:</u>	<u>Total personnel</u>	<u>Shift Timings</u>
1. Housekeeping	Sandha & Co.	101	Morning: 7A.M – 3.30P.M Evening: 1P.M – 10 P.M Night: 10 P.M – 7 A.M
2. Wardboys (GDA's)	Indian Sanitation	105	Morning: 7A.M – 3.30P.M Evening: 1P.M – 10 P.M Night: 10 P.M – 7 A.M

3. Glass Cleaners	Classic Appearance	5	8 A.M – 5.30 P.M
4. Pest controllers	Pest Control of India (PCI)	1	Morning: 7A.M – 11 A.M Evening: 5 P.M – 9 P.M

Department Manager: Mr. Dheeraj

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
- Odour Control
- Environment Hygiene

- Sanitation Hygiene
- Checking Cleanliness Of All Areas
- Control & Reporting Of All Maintenance Works
- Hospital Waste Disposal
- In-Service Training
- Cooperation with Other Depts.

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 Scrubbing 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

PROJECT 1:- HAZARD IDENTIFICATION AND RISK ASSESSMENT

ABSTRACT

Hazard Identification and Risk Analysis (HIRA) is a collective term that encompasses all activities involved in identifying hazards and evaluating risk at facilities, throughout their life cycle, to make certain that risks to employees, the public, or the environment are consistently controlled within the organization's risk tolerance.

The three main risk questions are:

- Hazard – What can go wrong?
- Consequences – How bad could it be?
- Likelihood – How often might it happen?

Risk management is the process of minimizing risk to an organization by developing systems to identify and analyze potential hazards to prevent accidents, injuries, and other adverse occurrences, and by attempting to handle events and incidents which do occur in such a manner that their effect and cost are minimized.

The objective of the study was to eliminate and assess the risk of the cathlab department in the hospital was conducted in the organization along with the flaws and to suggest various changes that can be carried out in the existing system to increase the safety of the patients and of the handlers for which a qualitative risk assessment has been prepared.

This document summarizes the risk associated with the patients and the health personnel inside the cathlab and the controls existing in the system and recommendations for the improvement in the existing structure.

INTRODUCTION

Hazard: Anything (e.g. condition, situation, practice, behavior) that has the potential to cause harm, including injury, disease, death, environmental, property and equipment damage. A hazard can be a thing or a situation.

Hazard Identification: This is the process of examining each work area and work task for the purpose of identifying all the hazards which are “inherent in the job”. Work areas include but are not limited to machine workshops, stores and transport, maintenance and grounds, Tasks can include (but may not be limited to) using screen based equipment, audio and visual equipment, hazardous substances and/or teaching/dealing with people, dealing with emergency situations. This process is about finding what could cause harm in work task or area.

Risk: The likelihood, or possibility, that harms (injury, illness, death, damage etc) may occur from exposure to a hazard.

Consequence: Outcome of an event affecting objectives

Likelihood: Chance of something happening.

Risk Assessment: It is defined as the process of assessing the risks associated with each of the hazards identified so the nature of the risk can be understood. This includes the nature of the harm that may result from the hazard, the severity of that harm and the likelihood of this occurring.

Risk Control: Taking actions to eliminate health and safety risks so far as is reasonably practicable. Where risks cannot be eliminated, then implementation of control measures is required, to minimize risks so far as is reasonably practicable. A hierarchy of controls has been developed and is described below to assist in selection of the most appropriate risk control measure/s.

Monitoring and Review: This involves ongoing monitoring of the hazards identified, risks assessed and risk control processes and reviewing them to make sure they are working effectively.

Hazards are the main cause of occupational health and safety problems. Therefore, finding ways of eliminating hazards or controlling the risks is the best way to reduce workplace injury and illness.

Hazards are identified on past incidents to be examined to know what had happened and whether it could occur again. Staff can be interviewed for this purpose for considering safety issues. Workflow has to be observed and brainstorming is to be done as what can go wrong here.

Identification of hazards is followed by **Risk Assessment**. It considers the possible result of someone being exposed to a hazard and likelihood of this occurring. It determines how severe a risk is, whether controlling measures are effective and what action should be taken to control risk and how urgently actions need to be taken. Factors are identified that may contribute to the risk, the risk is relevant or not, duration and of risk, how severe the harm is, determining its likelihood. Actions are recognized that will help in controlling the risk.

Risk Assessment Matrix is used to assess the likelihood and severity or consequence of each hazard and a risk rating is assigned.

		PROBABILITY				
		Frequent (5)	Likely (4)	Occasional (3)	Seldom (2)	Unlikely (1)
SEVERITY	Catastrophic (4)	E (20)	E (16)	H (12)	M (8)	L (4)
	Critical (3)	H (15)	H (12)	M (9)	M (6)	L (3)
	Marginal (2)	H (10)	M (8)	M (6)	L (4)	L (2)
	Negligible (1)	M (5)	L (4)	L (3)	L (2)	L (1)

RISK RATING = Probability/Likelihood*Severity/Consequence

PROBABILITY:

FREQUENT - Occurs often, continuously experienced

LIKELY - Occurs several times

OCCASIONALLY - Occurs sporadically

SELDOM - Unlikely, but could occur at some time

UNLIKELY- Can assume will not occur

SEVERITY:

CATASTROPHIC - Death or permanent total disability, system loss, major property damage.

CRITICAL - Permanent partial disability, temporary total disability in excess of 3 months, major system damage, significant property damage.

MARGINAL - Minor injury, lost workday accident, compensable injury or illness, minor property damage

NEGLIGIBLE - First aid minor supportive medical treatment, minor system impairment.

Having identified the hazards, assessed their risks and reviewed the existing controls, as all hazards must be managed before people are hurt, become ill or there is damage to plant, property or the environment, if not then additional controls are required. Hazards should be deal within order of priority and most effective control need to be selected to eliminate or minimize risks. **Control** is a measure taken to modify risks. It include any process, policy, device, practice or other actions which modify risk.

Risk treatments deal with negative consequences is sometimes referred to as “risk mitigation”, “risk elimination”, “risk prevention” and “risk reduction” .It can create new risk or modify existing risk.

SARA	Share	Avoid	Reduce	Accept
ACAT	Avoid	Control	Accept	Transfer
4 Ts	Terminate	Treat	Tolerate	Transfer

Risks remain after Risk Treatment is **Residual risk**. These are unidentified or retained risks.

REVIEW OF LITERATURE

Risk assessment is a structured and systematic procedure that is dependent upon identification of the hazards and an appropriate estimation of risks in a workplace with a view to making inter-risk comparisons for purposes of their control or avoidance. In terms of occupational health, risk assessment aims to facilitate valid decision making in taking all necessary measures that will control the exposure to health hazards in any working environment. It permits employers to attest that all relative measures to work hazards are taken into account and that their evaluation is legitimate.

In recent years a qualitative occupational risk assessment strategy known as control banding has gained international attention in its goal to offer a complementary and simplified approach to reduce work-related injury and illness. This approach clusters workplace hazards into stratified risk "bands" based on common hazards and control approaches that offer long-sought unification across Occupational Health and Safety (OHS) professionals. The term has an industrial hygiene focus and represents a qualitative instrument to assess risks for chemical substances, generating solutions and implementing control measures. In the 1980s this risk assessment approach was expanded to radiation, lasers, biosafety and eventually pharmaceuticals in the 1990s. Control banding is supposed to provide assessment results of reasonable quality without expert involvement. In essence, a risk matrix is developed that describes the likelihood and probable severity of the event under study. The risk matrix is generally described as a function of two variables: the severity of the hazard presented by any facility or operation (and which is often a function of the intrinsic safety or health hazard of the material handled at that facility), and the likelihood of a major incident occurring, e.g., an explosion or a release of toxic material. These two variables (or minor variations of them) serve as the basis for most risk matrices. Such matrices can have the desirable characteristics that provide a benchmark against which to evaluate other approaches.

Occupational hazards refer to workplace factors with a potential for harm in terms of injury or ill health. Hazards are classified in four categories: physical (noise, vibration, radiation, extremes of temperature, ergonomic), chemical (solid, liquid, vapour), biological (bacteria, fungi, viruses), and psychosocial (psychological and social stressful factors). Exposure to these hazards can cause occupational diseases and work accidents.

Hospital workers are exposed to various occupational hazards that may threaten their health and safety (H&S). Physical hazards in the general working environment that are also encountered in the hospital sector include temperature, illumination, noise, vibration, changes in atmospheric pressure, and ionizing and non-ionizing radiation. A review of the international and Greek literature revealed the following physical hazards in the hospital working area: lighting, microclimate, noise, ionizing, and non ionizing radiation. Lighting is a hazard that concerns all workers, especially during the night shift, in all hospital departments. Bad lighting can cause eye fatigue, whose local symptoms are pain, dacryorrhea, redness, and general symptoms, such as headache, sleepiness and irritation, as well as increased likelihood of accidents and decreased work productivity. Sources that transmit heat in a hospital setting are numerous and this makes them important. Boilers, sterilization units, or even intense lighting in operation theatres are sources of heat, which (especially over 30°C) can cause rash, heat cramps, nausea, headaches, dizziness or just fatigue, and which can lead to impaired performance and work accidents. Heat can also have negative consequences in persons with heart or liver diseases, and pregnant women. Workers in hospital kitchens, laundry rooms and sterilization units are the main groups that are exposed to this hazard. Personnel that are occupied in boiler rooms, drive cars, or work outdoors, especially during summer in warm climates, are also exposed to heat. Noise can influence workers' ability to work efficiently and safely. Hospitals are not quiet workplaces. Many hospital departments offer exposure to high noise level that can cause hearing problems and influence workers' ability of concentration. For example, a noise level of 89 dB (A) was measured in the kitchen of a large hospital.

In Greece, hazard identification and assessment, although mandatory by law in the hospital sector since 1986, does not take place systematically. In this study, risk assessment of physical hazards (noise, temperature, relative humidity [RH], and lighting) was performed in two Greek hospitals, through inspection of departments by experts combined with subjective staff's perception of risk level and the results of objective measurements. One quantitative (objective measurements) and two qualitative (occupational safety professionals filled in a checklist through observation and workers filled in a questionnaire) risk assessment techniques were used. The use of multiple methods and sources (triangulation) was chosen since the application of only one method or sample - especially when it is not tested before,

as it happens in the present study- may disclose only one part of reality. A combination of different methods and/or data sources in a study promotes the possibility of disclosure of multiple dimensions of empirical reality and contributes to improving the reliability and validity of data. The proposed methodology (triangulation of different methods and data sources) can be a useful tool in any hospital areas in order to find out which hazards are of high, medium or low risk and which factors (demographic-working) is related to the staff's perception of risk level. It can also contribute to the enforcement of relevant legislation, and to the existence of a safer, more efficient and effective working place, such as the hospital.

According to NABH, hospitals must ensure proactive risk management across the organization. It should include clinical and non-clinical risks .This shall have risk identification, prioritization, risk alleviation .Risk management plan shall be documented risks identification, actions taken to alleviate it should be a part of the plan. There should be a mechanism for informing staff regarding the same. Risk Management plan should be monitored and reviewed for effectiveness at-least annually.

PROBLEM STATEMENT:

Identifying the potential hazards in the **cathlab** to the patients and the healthcare staff, evaluate both existing and potential hazards in the cathlab and the methods used to control or eliminate the identified hazards so that the patients and the healthcare staff to be prevented from the different risks/hazards.

AIM:

The aim of the study was to identify the potential hazards to increase the safety levels of the patient and the healthcare staff through risk assessment in the cathlab department and controls to be taken for effective management of the cathlab as well as to improve the quality of the services to the patients and the healthcare staff.

OBJECTIVE:

- Finding/ identifying the potential hazards in Cathlab.
- Assessing the risks that may result from these hazards.
- Quantifying the risk on the basis of likelihood and severity using a risk matrix.
- Determining control measures to eliminate or minimize the level of the risks.
- Monitoring and reviewing the effectiveness of control measures.

METHODOLOGY:

- **Study design:-** Observational study
 - **Study duration:-** 3rd April to 2nd June 2017
 - **Location:-** Cathlab department in Asian Hospital, Faridabad
 - **Study Tool:-** Risk Matrix
 - **Type of data collected :-**
 - Primary data collected by visiting the department and by communicating with the staff.
 - Secondary data from the various Hospital policies, documents in various departments.
- Most of the information was collected through observations. Both types of observations – participative and non participative were used in learning the function and working of various departments.

INTRODUCTION TO CATHLAB

A **catheterization laboratory** or **cath lab** is an examination room in a hospital or clinic with diagnostic imaging equipment used to visualize the arteries of the heart and the chambers of the heart and treat any stenosis or abnormality found.

Most catheterization laboratories are "single plane" facilities, those that have a single X-ray generator source and an x-ray image intensifier for fluoroscopic imaging.

“The consultant cardiologist is responsible for gaining arterial access, inserting a sheath into either the radial or femoral artery, passing a wire and catheter into the coronary artery and selectively injecting contrast media into the coronary arteries. They then interpret the images taken to ascertain where the narrowed or blocked artery has the problem. They use a variety of techniques and imaging tools to work the size of things such as balloons and stents.

Cardiac physiologists usually set up what is known as a transducer to monitor pressure in the arteries. They also have a live view of the patients ECG so they can tell whether or not there is a problem being caused by the insertion of the catheter into the heart to the electrical pathways. The physiologist will also set up a temporary pacemaker if the procedure is an angioplasty or a PCI. Finally, they also set up defibrillators on to the patient for emergency use if needed.

Cardiac catheterization is a general term for a group of procedures that are performed in the cath lab, such as coronary angiography. Once a catheter is in place, it can be used to perform a number of procedures including angioplasty, PCI (percutaneous coronary intervention) angiography, transcatheter aortic valve replacement, balloon septostomy, and an electrophysiology study or catheter ablation. Devices such as pacemakers may be fitted, or rotablation to remove plaque can be performed.

RISK ASSESSMENT AND RATING

RISK MATRIX:- A **Risk Matrix** is a matrix that is used during risk assessment to define the various levels of risk as the **product** of the harm probability categories and harm severity categories. This is a simple mechanism to increase visibility of risks and assist management decision making.

		LIKELIHOOD / PROBABILITY				
		Frequent (5)	Likely (4)	Occasional (3)	Seldom (2)	Unlikely (1)
CONSEQUENCE / SEVERITY	Catastrophic (4)	E (20)	E (16)	H (12)	M (8)	L (4)
	Critical (3)	H (15)	H (12)	M (9)	M (6)	L (3)
	Marginal (2)	H (10)	M (8)	M (6)	L (4)	L (2)
	Negligible (1)	M (5)	L (4)	L (3)	L (2)	L (1)

- **RISK RATING = Probability/Likelihood*Severity/Consequence**

PROBABILITY:

1. **UNLIKELY-** Can assume will not occur
2. **SELDOM** - Unlikely, but could occur at some time
3. **OCCASIONALLY** - Occurs sporadically
4. **LIKELY** - Occurs several times
5. **FREQUENT** - Occurs often, continuously experienced

- **SEVERITY:**

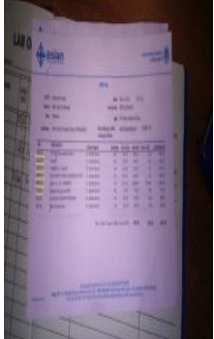
1. **NEGLIGIBLE** - First aid minor supportive medical treatment, minor system impairment.
2. **MARGINAL** - Minor injury, lost workday accident, compensable injury or illness, minor property damage.
3. **CRITICAL** - Permanent partial disability, temporary total disability in excess of 3 months, major system damage, significant property damage.
4. **CATASTROPHIC** - Death or permanent total disability, system loss, major property damage.

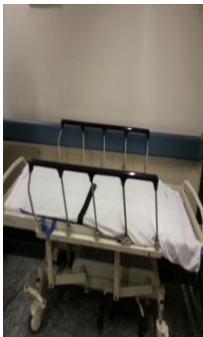
- **RISK:**

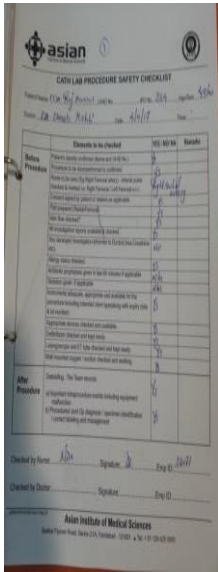
- 1) **1-5: LOW RISK:** Acceptable, no further action needed.
- 2) **6-10: MODERATE RISK:** Adequate, look to improve at next review.
- 3) **11-15: HIGH RISK:** Tolerable, look to reduce risk.
- 4) **16-20: EXTREMELY HIGH RISK:** Unacceptable, stop activity & make immediate improvements.

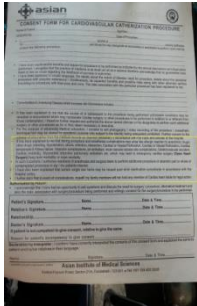
HAZARD IDENTIFICATION RISK ASSESSMENT IN CATHLAB

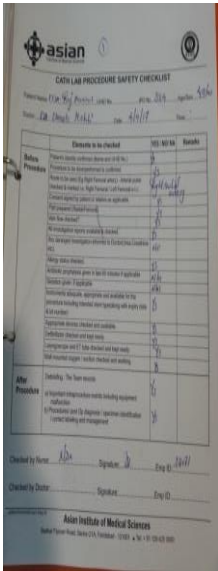
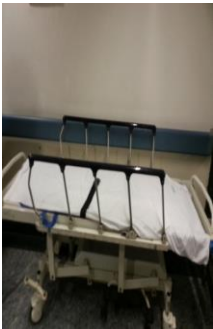
Process	Potential	Risk	S e v e r i t y	P r o b a b i l i t y	R i s k S c o r e	R i s k R a t i n g	Controls	Recom mendati ons
Patient come to Emergency Department								
Triaging process		1) Patient may be wrongly identified according to the triage.	3	2	6	M	Training given to the doctors and nurses regarding patient and triage recognition and priority.	Place the triage flexes at the emergency department gate.
Initial nurse assessment (ER)		1) Delay in assessment. 2) Nurse may not be trained for ACLS, BLS, PALS, NALS, and cases or unable to interpret the ECG rhythm.	3 3	1 1	3 3	L L	1) Sufficient staff to be appointed for the particular shifts. 2) Training given to all nurses for all type of emergency cases and handling the equipment and interpretation the ECG rhythm.	

initial physician assessment (ER)		1) Delay in assessment. 2) Doctors may not be trained for ACLS, BLS, PALS, and NALS cases.	3	1	3	L	1) Sufficient staff to be appointed for the particular shifts. 2) Training given to all doctors for ACLS, BLS, PALS, NALS cases.	
Doctor's prescription		1) Illegible handwriting of Doctor's prescription and forget to mark urgent for the tests in the requisition form. 2) Tests not required or extra tests prescribed.	2	2	4	L	1) Training given to doctors to write in legible writing preferably in capital letters and for marking urgent in the requisition form. 2) Top management evaluation / audits should be done.	
Billing Section		1) Wrong interpretation of illegible writing from Doctor's prescription. 2) Wrong code & test name entered by the billing executive.	2	2	4	L	1) Call the doctor or technician for clarifying doubts regarding medicines or tests. 2) Training given to the billing executives on codes.	
Patients coming with appointment at reception								

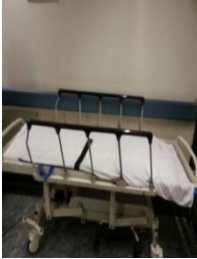
patient admission		1) Documentation error (Wrong UHID and name mention)	2	2	4	L	Training given to the staff for proper documentation and for their overall work in reception area.	
Transferring the patient to the CCU								
Transportation and receiving of patient at CCU		Risk of fall	4	1	4	L	1) Transported in appropriate method according to patients condition (e.g. trolley, wheelchair). 2) Side rails to be kept in up position during transportation in trolley. 3) Safety belt in the wheelchairs.	
CCU's doctor assessment		1) Delay in assessment. 2) Delay in informing and reaching of the cardiologist and whole team.	3	2	6	M	1) Sufficient staff to be appointed for the particular shifts. 2) Training given to the CCU's doctor for urgent informing to the nearest available cardiologist. 3) Arrange ambulance for picking up the doctors and whole team.	Additional amount to be given to the doctors and whole team on arriving with their own convenience for emergency cases.

Documentation		1) Incomplete documents like history sheet, requisition form, consent form etc. 2) Patient may not come with fasting or with specific reports (blood/ diabetes) for angioplasty. 3) Incomplete information sharing with the pregnant women.	3	1	3	L	1) Training given to nursing staff for placing the history sheet in the patient's case file and training given to the doctor's for history reconciliation like (Allergic to or any other treatment or surgical procedure/implant done before the angioplasty). 2) Ask patient to wait for 6 hours or another time is given or postpone the procedure for the next date. 3) Training given to the doctors for proper sharing of information with the pregnant women.
Vital parameter checking		Inappropriate checking of vital parameters (Blood pressure, HR, SPO2, ACT) and stabilize the patient.	3	2	6	M	1) Training given to the nursing staff and doctor for checking of the vitals and stabilizing the patient. 2) Nurse assessment form is

							provided and training given to nursing staff for regular filling of the same.	
Prepare The Patient		Psychological distress and nervousness	1	2	2	L	Maintain privacy and calm the patient by giving appropriate instructions to them .	
Patient transport to cath lab department								
preparation before procedure		1) Trolley and Equipment's not arranged properly. 2) Improper sterilization of single used items. 3) Incomplete information given to the patients for reusing.	3	1	3	L	1) Cath lab Procedure Safety Checklist is provided and is filled before the procedure. 2) Training given to the doctors and the technicians for proper sharing of the information with the patient and the attendant regarding reusing of the items.	Training given to the CSSD staff for proper sterilization techniques that to be used.

Docu- mentation		1) Route to be used for the catheterization not checked and marked. 2) Consent form not signed. 3) Vein flow not checked. 4) Unavailability of stent type (along with expiry date and lot number). 5) Laryngoscope and ET tube not checked before the procedure. 6) Defibrillator and suction may not working.	2	2	4	L	Cath lab Procedure Safety Checklist is provided and is filled before the procedure.	
Transpor- tation		Risk of fall	4	1	4	L	1) Transported in appropriate method according to patients condition (ex trolley, wheelchair) 2) Side rails to be kept in up position during transportation in trolley. 3) Safety belt in the wheelchairs.	

Procedure

Receivin g the patient		Patient may carry mechanically, electrically & magnetically operated devices which will be malfunctioning when comes in the magnetic field	4	1	4	L	1) Training given to the technician for screening the patient for metal items, mobiles , ATM Card etc. 2) History taken from the patient to clarify for any surgery with implants.	
Transfer the patient to the procedur e bed		Risk of fall as the width of the procedure bed is small.	3	1	3	L	Assistance provided by nurse, technicians.	
Anesthe sia		Drowsiness, severe allergic reactions, blood pressure problems etc. can occur.	2	2	4	L	Consent for Cardiovascular Catheterization is taken.	
Regular monitori ng of the vitals		Improper monitoring of vital parameters (Blood pressure, HR, SPO2, ACT) at start, during and at the end of the procedure.	2	1	3	L	1) Cath lab log chart is provided. 2) Training given to the technicians and nursing staff for proper monitoring and reporting of the vitals in the cath lab log chart sheet.	

X-Ray procedure		Wrong identification of blood vessels can cause procedure errors.	3	1	3	L	Identification markers are used for the identification of the blood vessels.	
Cardiac Catheterization		Blood vessel damage and hematomas at the catheter site.	3	1	3	L	1) Sterilization should be done of the catheter. 2) Training given to the doctors and nursing staff for proper usage of the catheter and aspirin is given.	
Contrast dye injection		Urticaria, Skin redness etc. can occur to allergic patients	1	2	2	L	Injection Avil or Injection Effcorlin given.	
Side effects of contrast or excessive use of contrast		Vomiting, nausea and minor damage to the kidney	1	2	2	L	Avoid the use of excessive amount of the contrast dye.	
Critical patients		Emergency situations like cardiac or respiratory discomfort can occur during the procedure.	3	2	6	M	1) Continuous monitoring through monitors, pulse oxymeter. 2) Crash cart is available.	

		Patients suffering from claustrophobia may make the procedure difficult	2	2	4	L	1) Anesthesia given to stable the patient.	
		Long Procedure (flouro timing) with least movement can cause pain in the pressure points like right arm and right femoral etc.	2	2	4	L	Painkiller given to the patient or local sedation.	
Validation		Inaccurate results can occur	4	1	4	L	1) Insert more dye. 2) Repeat the procedure.	
Documentation of the Quality Indicator (Door To Balloon)		wrong data entry	2	2	4	L	Technician to be trained for proper documentation of the quality indicator data.	
Bio-Medical Waste Segregation		Improper Bio-Medical Waste Segregation	1	2	2	L	Bio-Medical Waste Segregation Labels are placed on the walls along with bins.	

Cleaning		Improper cleaning of ET TUBES and Tearing of the gloves can lead to infection to the technician.	3	2	6	M	Training given to the technician for proper cleaning of the ET TUBES and regular checking of the gloves.	Provide rubber gloves to the technicians.
Patient Education/counseling		Incomplete information given to the patient regarding medication and follow up	2	3	6	M	1) Discharge summary form is provided and is filled during discharge and explained to the patients. 2) Training given to the nursing staff for proper sharing of the information with the patient and the attendant regarding medication and follow up.	

Legal requirements for Radiation Safety

Use of Lead Aprons	 	1) Doctors have high rates of orthopedic injury due to heavy weight of leaded personal protective equipment. 2) High risk of cataract as eyes are highly radio sensitive.	4	1	4	L	1) Personnel shielding by wearing lead apron, neck collars etc. Lead sheets.	1) Regular exercise sessions to be arranged for the doctors and whole team.
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		3) Chances of structural changes to the thyroid which include malignant and benign thyroid tumors. 4) Risk of birth defects and miscarriage for the pregnant women.					2) Patient shielding: - shielding of organs e.g. Gonads, thyroid and uterus of the pregnant women.	2) Provide eye glasses to the doctors and whole team to prevent cataract.
Inspection of lead aprons		Cracks in the lead lining can develop at the fold, reducing the useful life of the apron and a risk of getting radiations	4	1	4	L	1) Frequent visual checks to look for obvious tears & cuts. 2) Inspection for cracks in the apron done frequently. 3) Lead aprons are stored properly in hangers/ stand.	Apron checking checklist to be provided and filled on regular basis.
Deterministic effects of radiation		Skin erythematic, radiation induced cataract formation, thyroid hormonal misbalance.	3	1	3	L	Monitoring the threshold level of the radiation.	
Stochastic effects due to years of exposure		Occurrences of stochastic effect occur by chance & consist primarily of cancer & genetic effects.	3	1	3	L		

Use of TLD Badge	 	Excessive radiation exposure to healthcare staff can occur	4	2	8	M	1) TLD badge to be used by persons directly working with radiation sources like X-ray units. 2) TLD badge sent for reading every 3 months. 3) If high exposure suspected, TLD card is sent to RSO's office immediately along with the details of the incidence for urgent processing and necessary actions. 4) TLD results are displayed in the information board.	
Warning signs		Exposure of radiation to others while a procedure is going on within and they accidentally enter the room.	3	1	3	L	Appropriate signage's with CAUTION are pasted at the entrance gate	Red light signal is switch ON when the procedure starts.
Atomic Energy Regulatory Board		Legal issues	4	1	4	L	Registration of the C-arm done at the Atomic Energy Regulatory Board and registration record is available.	

Inventory		Shortage of inventory and patient inconvenience	3	2	6	M	Daily inventory done.	
		Delay of procedures due to deficiency of contrast.	2	1	2	L	Daily contrast inventory is done.	
		Reagent Or Consumables Stock Out	2	2	4	L	ROL (Re-Order-Level) is in place for cathlab items & Inventory is checked on daily basis.	
Risk Of Equipment Breakdown Or Malfunctioning		Software Error	3	3	9	M	1) Validation Of Software Should Be Done. 2) Error documented in error log register.	
		Equipment Shut Down For Maintenance	2	3	6	M	IT department /BME department schedules the maintenance is sync with the department, prior information is given to all & the work is scheduled accordingly.	

		Equipment breakdown or failure	3	3	9	M	In house BME team is in place to take care of the routine equipment breakdown.	
		Power Failure	3	2	6	M	Power Backup By UPS & DG Sets.	
		Inadequate Maintenance	2	3	6	M	Preventive maintenance schedule in place with bio medical engineering department.	
		Calibration Error	3	3	9	M	1) Daily/Routine checks by cathlab Personnel to avoid any calibration error. 2) Calibration schedule for machine is in place with bio-medical engineering department.	
		Aging Equipment	1	2	2	L	Condemnation Committee Is In Place.	
		Improper Usage	3	2	6	M	Staff Training For usage of equipment is being done and documented.	

		Lack Of Feedback From User For Minor Equipment Problems	2	2	4	L	Cath lab procedure checklist is filled after the procedure.	
Risk of fire		Electrical Short Circuit	4	3	12	H	Earthing Wire In Place, MCB'S In Place. Fire Extinguishers And Other Fire Control Devices in Place	
		Smoke Detector, Sprinkler Or Fire Alarm Malfunctioning	4	2	8	M	Fire Alarm, Sprinklers & Smoke Detector Checks At Regular Intervals By Fire Safety Officer.	
		Inadequate or ineffective fire apparatus	4	2	8	M	Adequate fire extinguishers, fire panel, fire hose pipes, fire alarm, smoke detectors, fire sprinklers in place & gauge check of fire extinguisher by fire safety officer.	
		No Knowledge or over use of Fire Extinguisher	3	3	9	M	Regular training of staff w.r.t "use of fire extinguisher" + regular mock drill to check response of staff in case of fire.	

		Evacuation Passage Not Known	3	2	6	M	1) Fire Exit Signage's In Place, 2)Evacuation signage's in place 3) Training given to the health personnel's on evacuation.	
		Improper Handling Of Inflammable Materials	4	4	16	E	1) Defined Staff for use of inflammable material. 2) Sticker On Inflammable Materials 3) Training given for proper handling. 4) Fire Extinguishers are in Place.	
Storage of Patient's Records		Legal issues	3	2	6	M	Original reports of MLC cases are not given to the patients and are kept in the hospital records.	
Health checkup of the employee		Risk to health of the health personnel's	4	2	8	M	Pre and Annual health checkups of health care personnel done and is well documented.	
Availability of staff		Inadequate Staffs	1	2	2	L	Manpower Planning Is Done On Annual Basis.	

DISCUSSION

As per the interpretation of hazards in the hospital there are mainly 2 types of Hazards that can happen in CATH LAB.

a. Operational Hazard

Hazards that occur due to the errors during various operations in the cathlab. Due to these hazards the quality of patient care and staff health is hampered.

Various types of hazards that can happen are:-

- a. Blood vessel damage and hematomas at the catheter site.
- b. Vomiting, nausea and minor damage to the kidney.
- c. Long Procedure (flouro timing) with least movement can cause pain in the pressure points like right arm and right femoral etc.
- d. Improper cleaning of ET TUBES and Tearing of the gloves can lead to nosocomial infection.
- e. Doctors have high rates of orthopedic injury due to heavy weight of leaded personal protective equipment.
- f. High risk of cataract as eyes is highly radio sensitive.
- g. Chances of structural changes to the thyroid which include malignant and benign thyroid tumors.
- h. Risk of birth defects and miscarriage for the pregnant women.

2. Mechanical Hazard

These hazards mainly occur due to malfunction of some machine that prevents the proper working of the process.

Various types of hazards that can happen are:-

- a. Software Error.
- b. Equipment breakdown or failure.
- c. Power Failure.
- d. Calibration Error.

- e. Electrical Short Circuit.
- f. Smoke Detector, Sprinkler or Fire Alarm Malfunctioning.
- g. Inadequate or ineffective fire apparatus.

Based on these hazards there are various precautions that are taken to prevent these hazards. In the Table above it has been clearly shown how these hazards can happen and what are the precautions need to be taken to prevent those hazards.

RECOMMENDATIONS

- 1) Place the triage flexes at the emergency department gate.
- 2) Additional amount to be given to the doctors and whole team on arriving with their own convenience for emergency cases.
- 3) Provide rubber gloves to the technicians.
- 4) Regular exercise sessions to be arrange for the doctors and whole team.
- 5) Provide eye glasses to the doctors and whole team to prevent cataract.
- 6) Apron checking checklist to be provided and filled on regular basis.
- 7) Red light signal is switch ON when the procedure starts.
- 8) Regular training sessions arrange for the staff.

CONCLUSION

Hazards risks identification in hospitals is one of the most important works that would help to increase patient safety and therefore increasing patient satisfaction. It will also help in identify, analyze and prioritize all hazards in cathlab department. This case study takes into account for the vulnerabilities of a specific hazard, consequences if a hazard is realized and means to prevent those hazards.

The staffs of the cathlab department are getting trained for proper technique of handling and usage of the equipment to avoid hazards in the department. Equipment's are timely calibrated to avoid failure during procedure. This study illustrated what are the types of hazards that can happen in the department and how to prevent them.

PROJECT 2: ACTIVE AUDIT ANALYSIS

REVIEW OF LITERATURE

Active audit analysis focuses on data collection procedures and quality assurance principles for patient registries. Data management—the integrated system for collecting, cleaning, storing, monitoring, reviewing, and reporting on registry data—determines the utility of the data for meeting the goals of the registry. Quality assurance, on the other hand, aims to assure that the data were collected in accordance with these procedures and that the data stored in the registry database meet the requisite standards of quality, which are generally defined based on the intended purposes.

They include specific and consistent data definitions for collecting data elements in a uniform manner for every patient. As in randomized controlled trials, the case report form (CRF) is the paradigm for the data structure of the registry. A CRF is a formatted listing of data elements that can be presented in paper or electronic formats. Those data elements and data entry options in a CRF are represented in the database schema of the registry by patient-level variables. Defining the registry CRFs and corresponding database schema are the first steps in data collection for a registry.

Two related documents should also be considered part of the database specification: the data dictionary (including data definitions and parameters) and the data validation rules, also known as queries or edit checks. The data dictionary and definitions describe both the data elements and how those data elements are interpreted. The data dictionary contains a detailed description of each variable used by the registry, including the source of the variable, coding information if used, and normal ranges if relevant. For example, the term “current smoker” should be defined as to whether “smoker” refers to tobacco or other substances and whether “current” refers to active or within a recent time period.

Data validation rules refer to the logical checks on data entered into the database against predefined rules for either value ranges (e.g., systolic blood pressure less than 300 mmHg) or logical consistency with respect to other data fields for the same patient.

RATIONALE:

Active audit/Data collection procedures need to be carefully considered in planning the operations of a registry. Successful registries depend on a sustainable workflow model that can be integrated into the day-to-day clinical practice of active physicians, nurses, pharmacists, and patients, with minimal disruption. Programs can benefit tremendously from preliminary input from the health care workers.

OBJECTIVE:

- 1) To determine the non-compliance rate of the registry in the patient files.
- 2) To identify the consultant name on the basis of the non-compliance in the patient files.

METHODOLOGY:

- **Study design-**

It is descriptive retrospective study based on existing data for the month MARCH 2017 and prospective study for the two months i.e. APRIL & MAY 2017.

- **Study area-**

The study area is ASIAN INSTITUTE OF MEDICAL SCIENCES, FARIDABAD.

- **Sampling and sample size-**

Random Sampling, during the duration all files from 1st march 2017 to 31st may 2017.

Files audited for the month of MARCH- 240

Files audited for the month of APRIL - 241

Files audited for the month of MAY - 283

- **Study tool:**

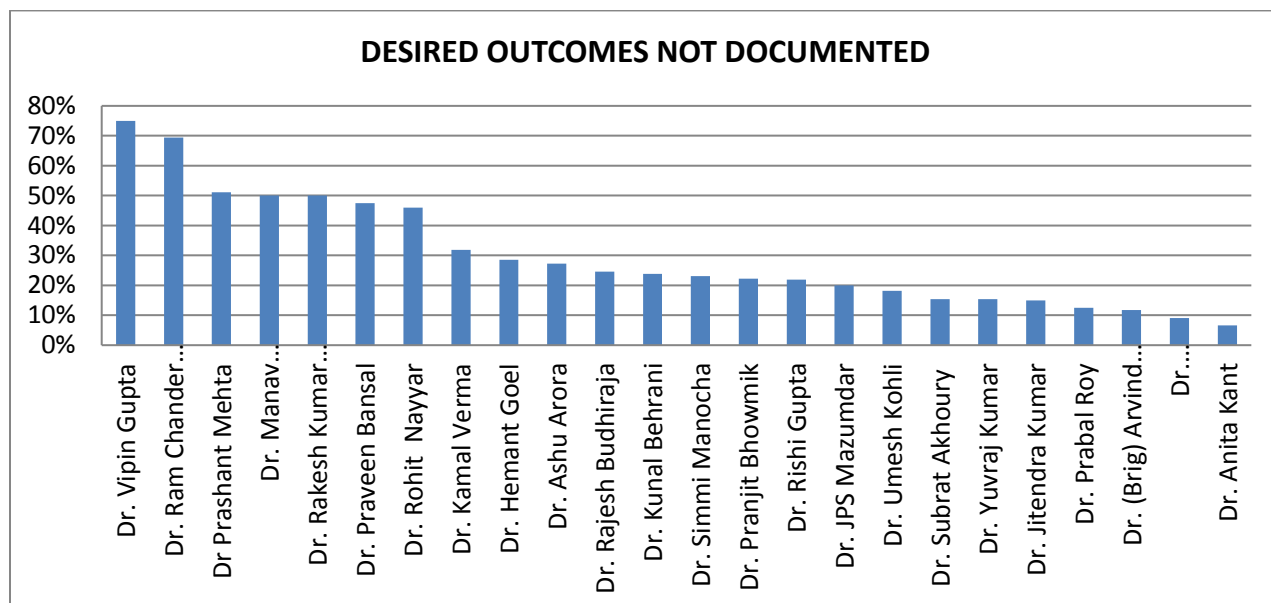
A quantitative tool (checklist) was designed in which indications were noted down. For checklist refer annexure.

- **Data collection procedure:**

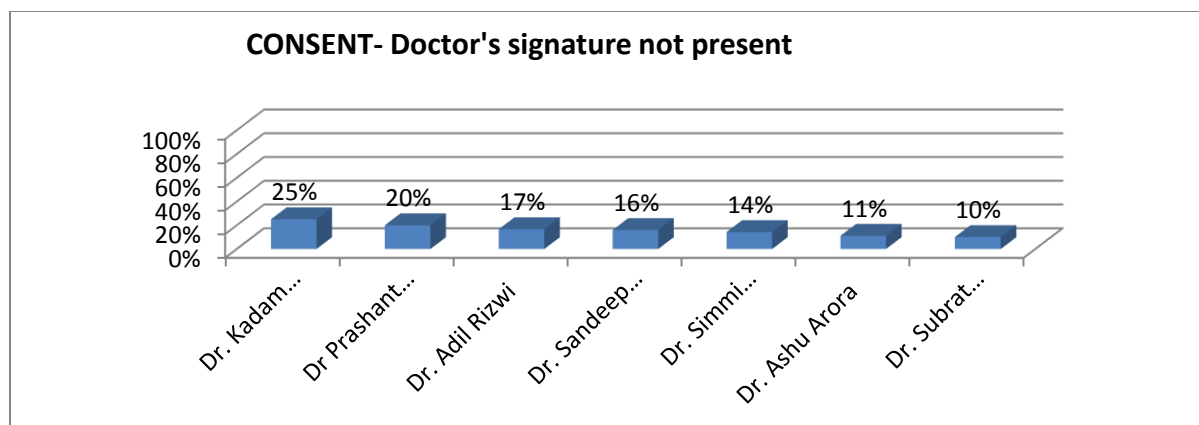
- 1) Primary data sources incorporate data collected for direct purposes of the registry (i.e., primarily for the registry).
- 2) Secondary data sources consist of data originally collected for purposes other than the registry (e.g., standard medical care, insurance claims processing).

ANALYSIS:

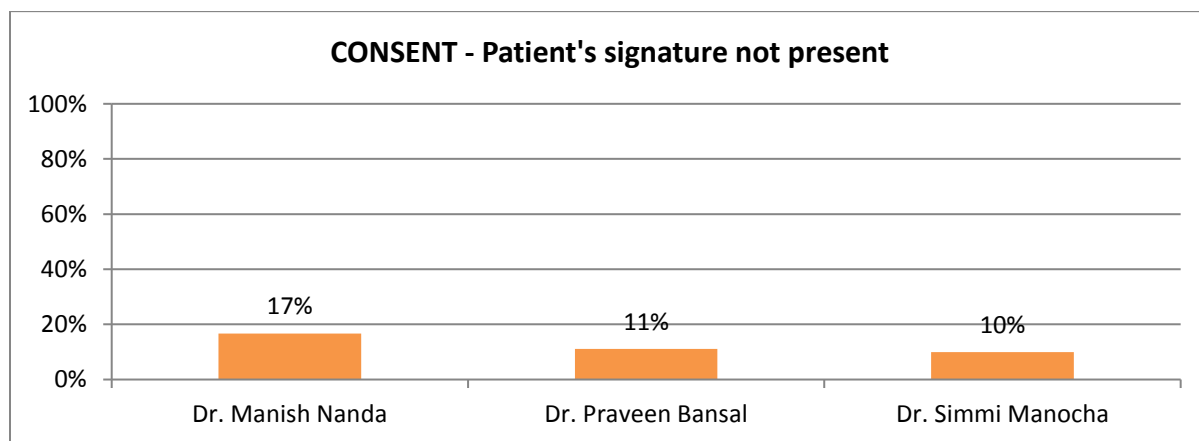
Total No of Files Audited	PROGRESS NOTES - Desired outcomes not documented	CONSULTANT	PROGRESS NOTES - Desired outcomes not documented %
12	9	Dr. Vipin Gupta	75%
36	25	Dr. Ram Chander Soni	69%
45	23	Dr Prashant Mehta	51%
54	27	Dr. Manav Manchanda	50%
10	5	Dr. Rakesh Kumar (Ortho)	50%
99	47	Dr. Praveen Bansal	47%
37	17	Dr. Rohit Nayyar	46%
22	7	Dr. Kamal Verma	32%
21	6	Dr. Hemant Goel	29%
22	6	Dr. Ashu Arora	27%
57	14	Dr. Rajesh Budhiraja	25%
21	5	Dr. Kunal Behrani	24%
13	3	Dr. Simmi Manocha	23%
54	12	Dr. Pranjit Bhowmik	22%
32	7	Dr. Rishi Gupta	22%
15	3	Dr. JPS Mazumdar	20%
11	2	Dr. Umesh Kohli	18%
13	2	Dr. Subrat Akhoury	15%
26	4	Dr. Yuvraj Kumar	15%
40	6	Dr. Jitendra Kumar	15%
16	2	Dr. Prabal Roy	13%
17	2	Dr. (Brig) Arvind Gupta	12%
11	1	Dr. PoojaThukral/Dr. Gunjan	9%
15	1	Dr. Anita Kant	7%



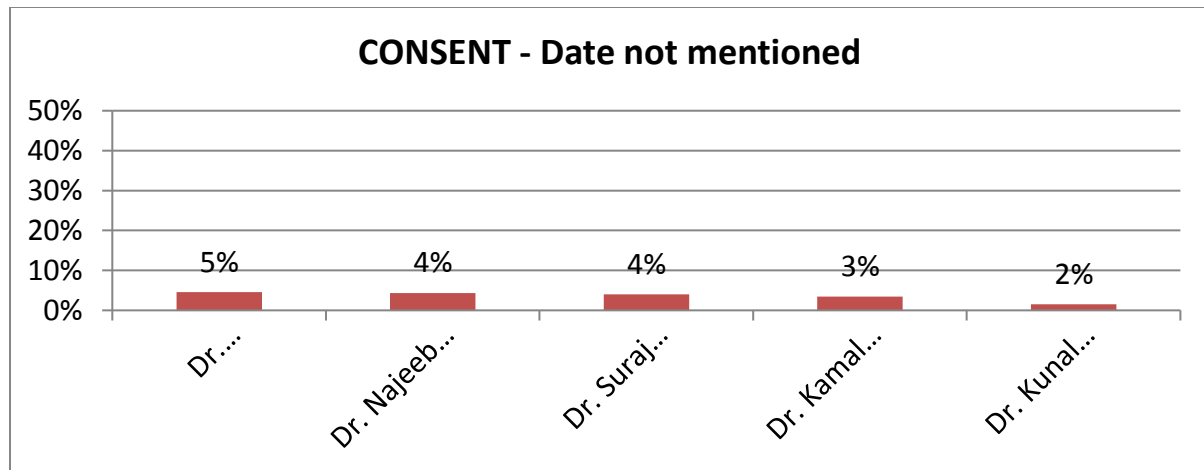
Total No of Files Audited	Files Applicable for Consent	CONSENT- Doctor's signature not present	CONSULTANT	CONSENT- Doctor's signature not present
5	4	1	Dr. Kadam Nagpal	25%
13	10	2	Dr Prashant Mehta	20%
8	6	1	Dr. Adil Rizwi	17%
40	25	4	Dr. Sandeep Bhattacharya	16%
10	7	1	Dr. Simmi Manocha	14%
11	9	1	Dr. Ashu Arora	11%
13	10	1	Dr. Subrat Akhoury	10%



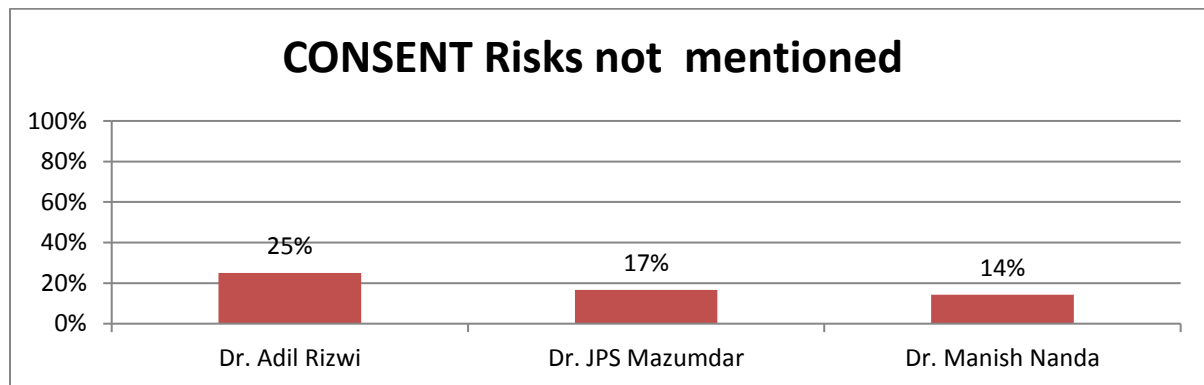
Total No of Files Audited	Files Applicable for Consent	CONSENT - Patient's signature not present	CONSULTANT	CONSENT - Patient's signature not present
8	6	1	Dr. Manish Nanda	17%
11	9	1	Dr. Praveen Bansal	11%
13	10	1	Dr. Simmi Manocha	10%



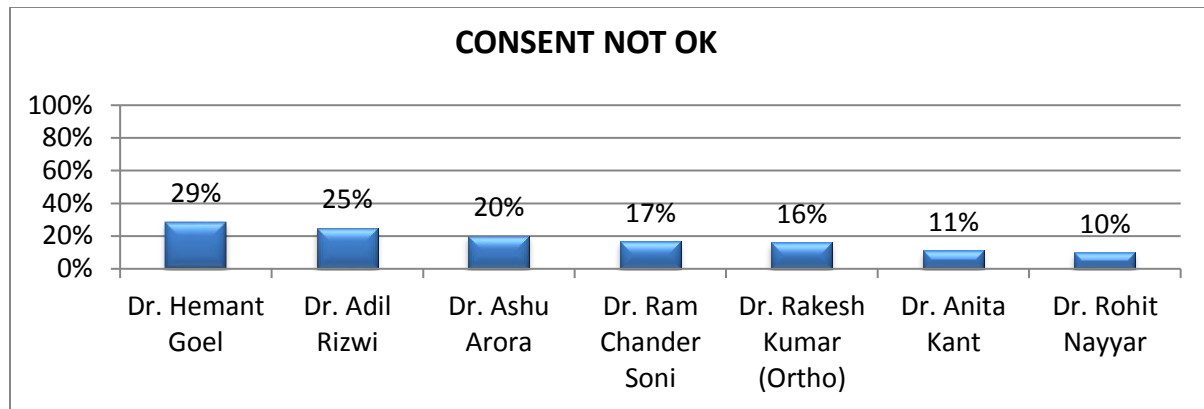
Total No of Files Audited	Files Applicable for Consent	CONSENT - Date not mentioned	CONSULTANT	CONSENT - Date not mentioned
36	22	1	Dr. Pooja Thukral/Dr. Gunjan	5%
32	23	1	Dr. Najeeb ur. Rehman	4%
40	25	1	Dr. Suraj Kumar Gupta	4%
45	29	1	Dr. Kamal Verma	3%
99	65	1	Dr. Kunal Behrani	2%



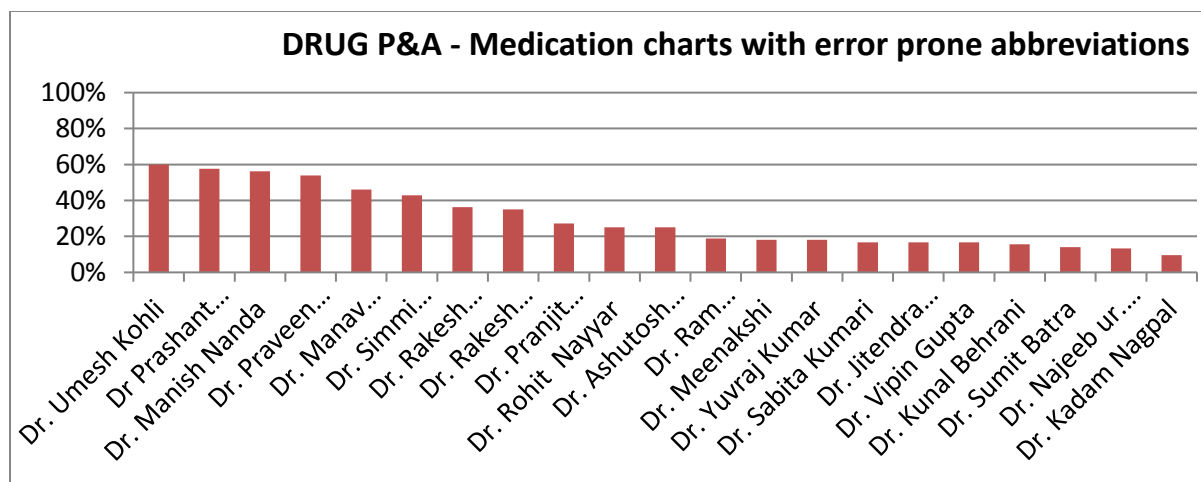
Total No of Files Audited	Files Applicable for Consent	CONSENT Risks not mentioned	CONSULTANT	CONSENT Risks not mentioned
5	4	1	Dr. Adil Rizwi	25%
8	6	1	Dr. JPS Mazumdar	17%
10	7	1	Dr. Manish Nanda	14%



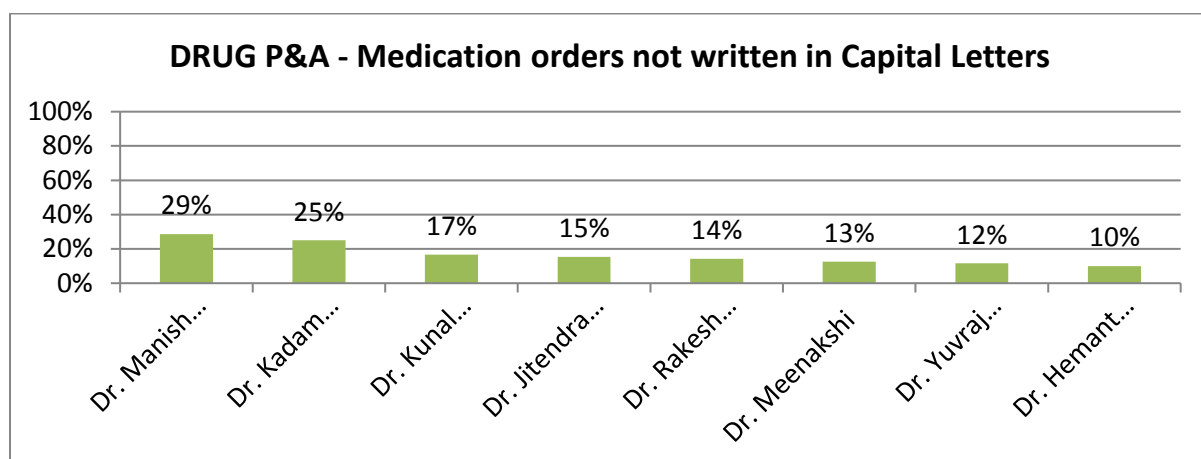
Total No of Files Audited	Files Applicable for Consent	CONSENT NOT OK	CONSULTANT	CONSENT NOT OK
10	7	2	Dr. Hemant Goel	29%
5	4	1	Dr. Adil Rizwi	25%
13	10	2	Dr. Ashu Arora	20%
8	6	1	Dr. Ram Chander Soni	17%
40	25	4	Dr. Rakesh Kumar (Ortho)	16%
11	9	1	Dr. Anita Kant	11%
13	10	1	Dr. Rohit Nayyar	10%



Total No of Files Audited	DRUG P&A - Medication charts with error prone abbreviations	CONSULTANT	DRUG P&A - Medication charts with error prone abbreviations
10	6	Dr. Umesh Kohli	60%
26	15	Dr Prashant Mehta	58%
32	18	Dr. Manish Nanda	56%
13	7	Dr. Praveen Bansal	54%
13	6	Dr. Manav Manchanda	46%
21	9	Dr. Simmi Manocha	43%
22	8	Dr. Rakesh Kumar (Gastroentrology)	36%
40	14	Dr. Rakesh Kumar (Ortho)	35%
11	3	Dr. Pranjit Bhowmik	27%
36	9	Dr. Rohit Nayyar	25%
8	2	Dr. Ashutosh Shrivastava	25%
37	7	Dr. Ram Chander Soni	19%
99	18	Dr. Meenakshi	18%
22	4	Dr. Yuvraj Kumar	18%
54	9	Dr. Sabita Kumari	17%
54	9	Dr. Jitendra Kumar	17%
12	2	Dr. Vipin Gupta	17%
45	7	Dr. Kunal Behrani	16%
57	8	Dr. Sumit Batra	14%
15	2	Dr. Najeeb ur. Rehman	13%
21	2	Dr. Kadam Nagpal	10%



Total No of Files Audited	DRUG P&A - Medication orders not in Capital Letters	CONSULTANT	DRUG P&A - Medication orders not written in Capital Letters
21	6	Dr. Manish Nanda	29%
8	2	Dr. Kadam Nagpal	25%
6	1	Dr. Kunal Behrani	17%
13	2	Dr. Jitendra Kumar	15%
21	3	Dr. Rakesh Kumar (Gastroenterology)	14%
40	5	Dr. Meenakshi	13%
26	3	Dr. Yuvraj Kumar	12%
10	1	Dr. Hemant Goel	10%



CONCLUSION

Active Audit data collection was lacking in many registries like desired outcomes, doctor signature, patient signature, consent form not filled, error prone abbreviations used, medicines not written in capital letters, etc. Active audit helps in improving the documentation.

RECOMMENDATION

This audit and its finding should be mailed to the concern consultants. Documentation need to improve more and active audits of this nature should be made regular and routine to improve the standard of care over time.

REFERENCES

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ANNEXURE**CHECKLIST FOR PROJECT-2**

MONTH _____		ACTIVE AUDIT		
CHECKLIST - AIMS				
Date of Arrival				
UHID NO				
Consultant Name				
Unit				
Bed No				
Care plan documented and signed (Yes/No)	Y / N	Y / N	Y / N	Y / N
Desired outcomes documented (Yes/No)	Y / N	Y / N	Y / N	Y / N
Dr's Name & Sign with date & time (Yes/No)	Y / N	Y / N	Y / N	Y / N
Doctor's Handover documented (Yes / No)	Y / N	Y / N	Y / N	Y / N
Clinical Counselling done (Yes/No)	Y / N /NA	Y / N /NA	Y / N /NA	Y / N /NA
Reason for referral mentioned (Yes/No)	Y / N /NA	Y / N /NA	Y / N /NA	Y / N /NA
Nursing care plan documented (Yes/No)	Y / N	Y / N	Y / N	Y / N
Nursing Handover documented (Yes/No)	Y / N	Y / N	Y / N	Y / N
Total No. of Opportunities for handover				

Total no. of appropriate handovers				
Consent form				
NA	NA	NA	NA	NA
Doctor's signature (Yes/No)	Y / N	Y / N	Y / N	Y / N
Patient's signature (Yes/No)	Y / N	Y / N	Y / N	Y / N
Procedure mentioned (Yes/No)	Y / N	Y / N	Y / N	Y / N
Date mentioned (Yes/No)	Y / N	Y / N	Y / N	Y / N
Risks mentioned (Yes/No)	Y / N	Y / N	Y / N	Y / N
Medication chart				
Any Medication error	Y / N	Y / N	Y / N	Y / N
Any error prone abbreviations used (Yes/No)	Y / N	Y / N	Y / N	Y / N
Medication Orders in Capital Letters (Yes/ No)	Y / N	Y / N	Y / N	Y / N
Medication charts signed & stamped (Yes/No)	Y / N	Y / N	Y / N	Y / N
Pt. Identification (for Procedure / Intervention/Medication)				
For: (for Procedure / Intervention / Medication)				
Yes/No (If Not, mention staff name/ ID/ Dept)	Y / N	Y / N	Y / N	Y / N
Emp. ID				
Awareness about Employee rights and responsibilities& Employee welfare scheme				
Remarks				

Auditor's Signature-

Date -