Summer Training at
Narayana Hrudayalaya Hospital, Jaipur
(April 9- June 2, 2012)

By
Neha Swami

Under the guidance of
Dr. Shilpi Mishra Sharma

Post Graduate Diploma in Hospital and Health Management
2011-2013

Institute of Health Management Research,
Jaipur
2012

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Certificate

This is to certify that Dr. Neha Swami from Institute of Health Management Research, Jaipur has undergone Summer Training in Narayana Hrudayalaya Hospital, Jaipur from 9th April, 2012 to 2nd June, 2012.

The candidate herself carried out the project. Her approach to the study has been sincere, scientific and analytical. This summer training is partial fulfillment of the course requirement is recommended for the award of post graduate diploma in health and hospital management.

I wish her success in all her future endeavors.

Dr. P. R. Sodani
Dean (Academic and Students Affairs)
IHMR, Jaipur

Dr. Shilpi Mishra Sharma
Assistant Professor
IHMR, Jaipur

July, 2012

Narayana Hrudayalaya Hospitals
Caring with Compassion

NH/HRD-Off/2012/056

Date: 18th June 2012

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Dr. Neha Swami has completed his Summer Training Successfully in Narayana Hrudayalaya Hospital, Jaipur from 9th April , 2012 to 2nd June, 2012.

Her work during the period was commendable and appreciable. Her character and conduct was good.

The project are as under:-

- Study on audit of assessment done for vulnerable patients.
- Study on Medical Audit.
- Turn around time for inpatient pharmacy.

We wish her success in future endeavors.

Vishnu Priya Sharma
HR Department

NARAYANA HRUDAYALAYA PVT. LTD. JAIPUR

Narayanaya Hrudayalaya-Jaipur

ACKNOWLEDGEMENT

I have taken efforts in this summer training. However, it would not have been possible without the kind support and help of many individuals. I would like to extend my sincere thanks to all of them.

I feel deeply privileged in expressing our deep sense of gratitude to Dr. P.R. Sodani (Academic and student affairs Dean, IIHMR-Jaipur), Dr. S.D. Gupta (Director, IIHMR-Jaipur) and Brig. S.K. Puri (Advisor, IIHMR-Jaipur) for their expert guidance and encouragement which immensely helped in the process of making this report. Without their support, exploring such a vast organization could not have been possible.

I am highly indebted to my mentor Dr. Shilpi Mishra Sharma (Assistant Professor, IIHMR-Jaipur) for her guidance, constant supervision and encouragement which helped me in completion of this report.

I would like to extend my gratitude to Mr. V.P. Raghuvanshi (Assistant Professor, IIHMR-Jaipur) and Mrs. Tanjul Saxena (Assistant Professor, IIHMR-Jaipur) for their kind support and guidance. I am indebted to them for infusing reasonability in every aspect I encountered in the research work.

I am also thankful to Dr. Devi Shetty (CMD Narayana Group), Dr. Ashutosh Raghuvanshi (Vice Chairman), Dr. Arunesh Punetha (Chief Administrative Officer, NH Jaipur), Dr. Sandeep Attawar (Senior Consultant Cardiac Surgery, NH Jaipur), Dr. Mala Airun (Medical Superintendent) and Dr. Avadhesh Agarwal (Deputy Medical Suprintendent) for giving me valuable inputs and ideas to be incorporated in the report. I am thankful to all the staff members of Narayana Hrudayalaya Hospital, Jaipur for their generous support.

And last but not the least, I am indebted to my parents and my husband for their moral support.

Neha Swami

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF FLOW CHARTS

LIST OF ABBREVATIONS/ACRONYMS

ABBREVATIONS	FULL FORM
BMW	Bio Medical Waste
CAPD	Continuous Ambulatory Peritoneal Dialysis
CATH Lab	Catheterization Laboratory
CCU	Cardiac Care Unit
CEO	Chief Executing Officer
CRRT	Continuous Renal Replacement Therapy
CSSD	Central Sterile Supply Department
CT	Computer Tomography
Dept.	Department
ECG	Echocardiogram
ECI	Enhanced Chemo Luminescence Immunoessence
EPABX	Electronic Private Automatic Branch Exchange
F&B	Food & Beverages
GRN	Goods Receive Notes
ICD	International Classification Of Diseases
ICU	Intensive Care Unit
IPD	Inpatient Department
ISRO	Indian Space Research Organization
IT	Information Technology
ITU	Intensive Thoracic Unit
LT	Low Tension
MICU	Medical Intensive Care Unit
MRI	Magnetic Resonance Imaging
MRN	Medical Registration Number
OPD	Outpatient Department
OT	Operation Theatre
STP	Sewerage Treatment Plant
TMT	Tread Mill Test
TTI	Transmissible Transfusion Infection

ORIENTATION OF NARAYANA HRUDAYALAYA-

I. Introduction :

"Some call it a temple. Some chose to call it the abode of saints who heal. To some, it's a last chance of survival. But to no one, is this just a hospital. In its genre, Narayana Hrudayalaya may well be one of the biggest hospitals in the world, but the fact that it's one of the biggest hospitals, with a heart, is becoming legendary. The rich come here for the world's best heart care. The poor come here for the world's kindest care, for no one here is turned away for lack of funds. This was the vision of Dr. Devi Shetty, who believed that no child should be deprived of the best healthcare, because the parents cannot afford it. Caring with Compassion, this world's largest heart hospital for children, is set to be transformed into the world's biggest health city, with all super-specialties that the medical world offers. "

Narayana Hrudayalaya Health City at Bangalore spread over 25 acres, and Rabindranath Tagore International Institute of Cardiac Sciences in Kolkata, are the group's two-heart hospitals in Bangalore and Kolkata.

The Group performs largest number of heart surgeries on children in the World providing cardiac care to children from 73 countries. The postoperative pediatric cardiac surgical unit has 80 critical care beds which is World's largest Pediatric cardiac surgical Intensive Therapy Unit (ITU) to look after children who have undergone heart operations,

Narayana Hrudayalaya Health city, Bangalore, is a conglomeration of hospitals in one campus:

1000 Beds, Narayana Hrudayalaya Heart Hospital

It has 24 operation theatres and infrastructure to perform 50 major heart surgeries daily. Hospital treats patients from 73 countries with complex heart disease, doing the largest number of heart surgeries on children in the world. It is the only centre in Asia to implant 3rd generation artificial heart from Ventracor. One of the world's largest reference centers for Mitral valve, valve repair, pulmonary endarterectomy, and Aortic aneurysm surgery. It is one

of largest services in the world in Endovascular stenting for aneurysm of aorta. One of the largest services in Asia for Electrophysiology studies of heart

Asha Dinesh Institute for Organ Transplant:

The Institute is specialized in transplantation of heart, lung, kidney, liver, pancreas and Bone marrow. It is the largest center for pediatric liver transplantation in India.

Sparsh Hospital :

500 bed orthopedic & Trauma hospital, it is the largest dedicated specialty hospital for Orthopedics, plastic reconstructive and maxillo-facial surgery, delivering outstanding results using the best available technology and skills. The super-specialties available are Joint replacement, Pediatric Orthopedics, Spine deformity correction, sports injuries and Cosmetic surgery.

Narayana Nethralaya:

300 bedded, 'Narayana Nethrayalaya' is a Super Specialty Eye Hospital with an infrastructure to perform 500 cataracts per day is also focused on Lasik, Keratoconus, cataract, paediatric ophthalmology and refractive surgery. This institute is in the process of implanting Bionic eye for the blind.

Mazumdar Shaw Cancer Center :

With the stated vision to instill Hope and deliver Joy to the cancer patients, Narayana Hrudayalaya in association with Mrs. Kiran Mazumdar of Biocon has launched the World's largest cancer hospital with 1400 beds, latest infrastructure and equipments, internationally acclaimed faculty and affiliations with global centers of excellence in cancer care. The state-of-the-art Cancer Center, is established to provide comprehensive and dedicated cancer care of the highest international standard 20 Operation Theatrea and 3 Elekta Linear Accelerators & Brachy Therapy.

Academics:

Narayana Hrudayalaya is an academic institution conducting 49 training programmes and is short-listed by the University grant commission for the status of the Deemed University. Narayana Hrudayalaya sponsored Thrombosis Research Institute, which is a research institute based in London to start a research Lab in our campus, which has 30 scientists working to develop a vaccine to prevent a heart attack.

Narayana Hrudayalaya Health City, Kolkatta.

Rabindranath Tagore International Institute of Cardiac Sciences, Kolkata.

RTIICS is a full-fledged cardiac hospital spread over 6 acres, on the eastern metropolitan bypass of Kolkata Specializes in Cardiac Surgery, Cardiology, and Pediatric Cardiology and has the state-of-the-art facility to address the most complicated cardiac ailments.

Today, as the largest Heart Hospital in Eastern India, it has an average outpatient of 300 patients a day. It also performs 30-35 Cath lab procedures and 6 major surgeries, everyday.

Armenian Church Trauma Center

It is equipped with a gamut of state-of-the-art infrastructure & equipments to suffice to the health care need of industrial accidents and hazards with specialties like Neurology, Neuro Surgery, Orthopedics, Nephrology, Plastic Surgery, General Surgery, Nuclear Medicine, Gastroenterology, Endocrinology, ENT, Ophthalmology and General Medicine. has a well-equipped advanced radio diagnosis department and a clinical pathology laboratory with blood bank.

Manjulaben Kidney Hospital

Started with 55 kidney Transplantation Surgeries and now 10 Kidney Transplantation every are successfully performed every month, with a capacity of 2400 dialysis per month we run

the eastern India's largest kidney hospital. Our Dialysis centre with 22 beds has facilities of Haemodialysis, CAPD (Continuous Ambulatory Peritoneal Dialysis), CRRT (Continuous Renal Replacement Therapy), Kidney biopsy, Treatment of acute Renal Failure Patients for all kinds of treatment relating to kidney diseases.

Narayana Hrudayalaya Units across India:

Narayana Hrudayalaya Institute of Cardiac Sciences, Bangalore.
Mazumdar Shaw Cancer Centre, Bangalore.
Narayana Hrudayalaya multi-specialty hospital, Bangalore. |
Narayana Nethrayalaya Super Specialty Eye Hospital, Bangalore.
Narayana Hrudayalaya Institute of Nuero Sciences.
Narayana Hrudayalaya Institute of Organ Transplantation
Narayana Hrudayalaya Children's Hospital
Emami International Institute of Bone Marrow Transplantation.
Sparsh Hospital (Hospital for Trauma and orthopedics), Bangalore.
Rabindranath Tagore Institute Cardiac Sciences, Kolkata.
Armenian Church Trauma Center , Kolkata.
Manjulaben Mehta Kidney Hospital , Kolkata.
Rotary Narayana Nethrayalaya, Kolkata.
Narayana Smiles, Kolkatta
Narayana Hrudayalaya Bramhananda Hospital, Jamshedpur.
Narayana Hrudayalaya Health City , Jaipur.
Narayana Hrudayalaya Health City , Ahmedabad.
Narayana Hrudayalaya Malla Reddy Hospital, Hyderabad
Narayana Hrudayalaya Chains of Diagnostic Centre, Bangalore.
Narayana Hrudayalaya Chains of Dental Clinics, Bangalore.
MS Ramaiah Narayana Hrudayalaya, Bangalore.
CMH Narayana Hrudaylaya, Bangalore.
CSI Hrudayalaya, Bangalore.
Narayana Hrudayalaya SDM Hospital , Dharwad.
Narayana Hrudayalaya Devraj Urs Hospital , Kolar.

Proposed Narayana Hrudayalaya Health City, Mysore

Proposed Narayana Hrudayalaya Health City, Siliguri

Proposed Narayana Hrudayalaya Health City, Bhubaneswar.

Proposed Narayana Hrudayalaya hospital and Research Centre - Cayman Islands.

Micro Health Insurance and Community Projects:

Narayana Hrudayalaya in association with Karnataka State government launched a Micro Health Insurance Programme called **Yeshaswini**, which covers nearly 3 million farmers and is considered as India's largest Micro Health Insurance Programme for a monthly premium of 10 rupees. Similar programs inspired from Yeshaswini have been launched in other states of India. Today Yeshaswini is World's largest self funded Health care insurance scheme, widely studied by International labour organization and World Bank to implement similar schemes worldwide.

Narayana Hrudayalaya in association with India's Space Research Organization runs one of World's largest Tele-Cardiology programs using ISRO satellite and till date we have treated close to 70,000 heart patients.

VISION :

"Affordable quality healthcare to the masses worldwide"

MISSION :

Narayana Hrudayalaya Hospitals has a dream!

"A dream of making quality healthcare available to the masses worldwide"

To make the dream a reality we commit ourselves to: -

- Being a tertiary care referral center for complex medical and surgical problems
- Developing a Health City Model , to be replicated nationally and internationally

- Excelling as an Education, Training and Research Center in Medical, Paramedical and Allied specialties

NARAYANA HRUDAYALAYA, JAIPUR

Location: - Pratap Nagar, Sanganer, Jaipur

Area: - 4.83 acre

Total square feet area of the hospital: - 18500 sq meter.

Commencement of the construction: - May 2008

Promoters: - Narayana Hrudayalaya private limited.

Total numbers of proposed beds: - 1000 beds (the total project is divided into 4 phases)

Number of beds in first phase: - 200 beds

Budget (inclusive of cost of land, construction and equipments): - 100 crore

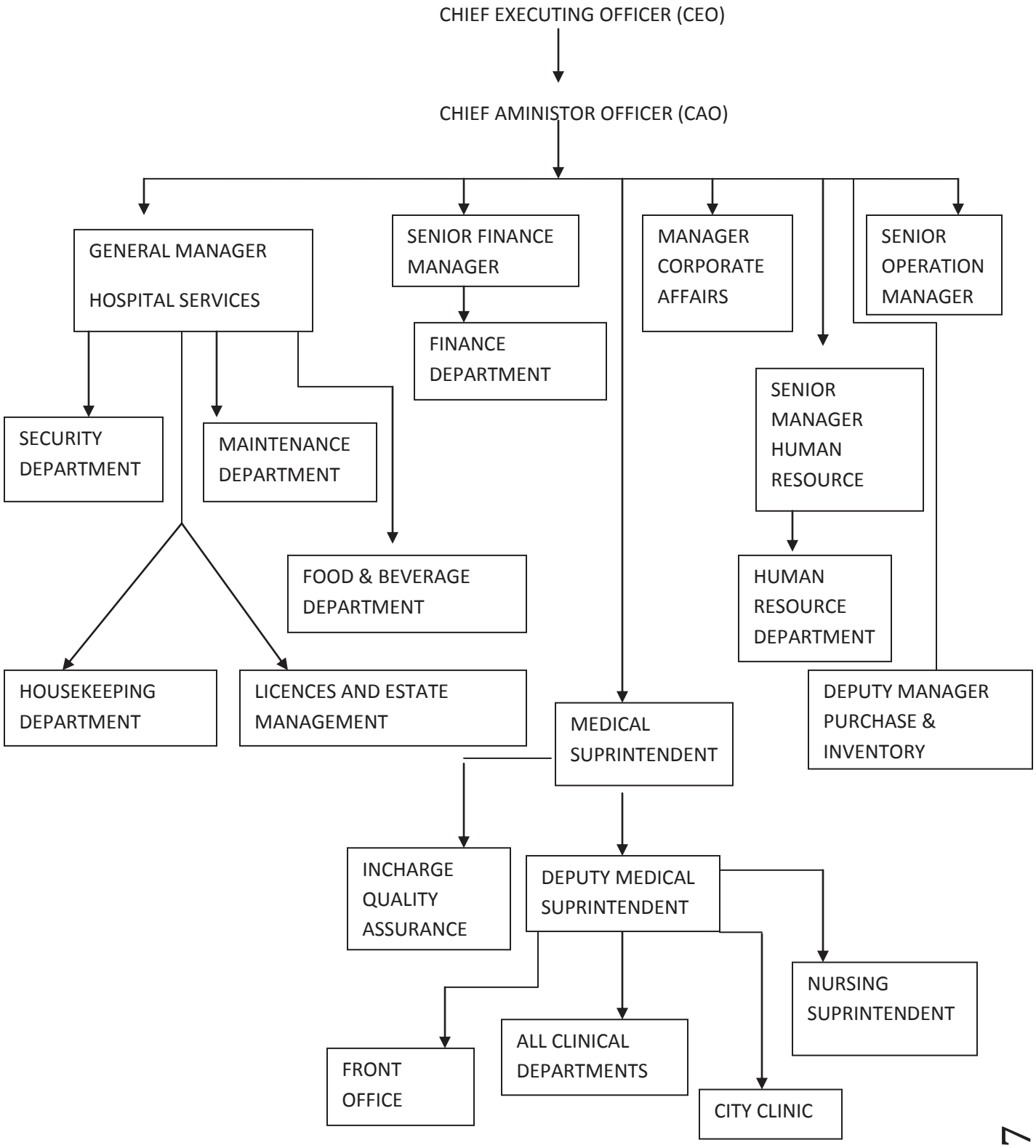
Type of investment: - mix of debt equity.

It is a multispecialty tertiary care hospital with primary focus on cardiac to cater to high demand of standardized quality and affordable health care in the region.

Environment friendly measures: - it has environment friendly design which includes solar heating and energy conservation methods. It also reuses sewage water after treatment for gardening purpose.

Future plan of hospital:- Joint Commission Accreditation and commencement of phase construction to make 1000 beds.

II. ORGANIZATIONAL STRUCTURE OF THE HOSPITAL [flow chart 1]



CLINICAL DEPARTMENTS OF THE HOSPITAL

- Radiology
- Inpatient department
- Cardiac catheterization laboratory
- Operation theatre department
- Non-invasive cardiology department
- Investigation laboratory
- Blood bank
- Dialysis unit
- Physiotherapy department
- Accident and emergency department
- Mortuary
- Central sterile supply department

NON CLINICAL DEPARTMENTS OF THE HOSPITAL

- Front office
- Quality Assurance department
- Human Resource department
- Medical record department
- Maintenance department
- Purchase department
- Pharmacy
- Linen department
- Fire safety department
- Security department
- Food & beverage department
- Central store
- Information Technology department
- Housekeeping department
- Marketing department
- Biomedical engineering department
- Billing and finance department

III. NON CLINICAL DEPARTMENTS OF THE HOSPITAL

A. FRONT OFFICE

Goal: - To attend the visitors and provide them accurate and timely information.

It is the first point of contact between patient/relatives/visitors with the hospital staff.

The department has following sections grouped under:-

1. Reception/ Enquiry
2. Registration
3. Admissions
4. Electronic Private Automatic Branch Exchange (EPABX)

1) Reception/ Enquiry

Total number of reception counters in the hospital = 8 (hospital has decentralized OPD)

Functions of reception/ enquiry

1. Attending the outpatients/ attendants and other visitors coming to the hospital.
2. Answering the queries
3. Providing all the information about hospital services, guiding and helping the patients/relatives/visitors for prompt availability of the services they require.
4. Providing information brochures, hand outs about the hospital services, schedule of charges and the health education literature.
5. Prior appointment for OPD consultation.

2) **Registration**

Functions of registration: -

1. Registering the personal particulars of all new patients and issuing to them their registration cards carrying Unique Hospital Identification Number (UHID) for current and subsequent use.
2. Collection of registration fees. (refer annexure for fee)
3. Collection of consultation fees, if applicable.
4. Listening to and understanding the patient's problems and deciding about the right specialty/doctor that the patient should see if the patient does not indicate it herself/himself.
5. Providing the patients with all assistance they require such as wheelchair.
6. Updating the statistics about the OPD attendance (new/old cases), date wise, specialty wise, doctor wise.

There are 4 types of modules for registrations in the software of the hospital like-

a. General: for OPD patient only (registration charge +consultation charges)

b. Revisit :follow up patient (only consultation fee are taken after 7 days)

c. IP_Admission_REG :package (with only registration fee)

d. IP_Admission : Zero biling registration.

3) Admission section: -

Functions of admission section: -

1. Preparation of the admission documents for patient advised admission after ascertaining the bed category desired/ advised.
2. Communicating with the attendant of patient about various packages available in the hospital.
3. Communicating the open billing patient's attendant about the approximate cost of the stay.
4. Updating the admission list and ward census.

5. Communicating the floor coordinators to get the bed ready for the new admission.
6. Informing the treating consultant about the new admission of the patient under his/her care.
7. Issue the visitor passes to the relatives and briefing them about the visiting rules as well as advice to leave the valuables at home.
8. Dispatch the cases document to ward concerned.

4) Electronic Private Automatic Branch Exchange (EPABX)

Functions of EPABX

1. To connect internal calls of the hospital.
2. To attend and connect external calls to respective receiver staff.
3. To make announcements related to code activations and general announcements.
4. To connect outer calls from the hospital.

Shifts = 8 am to 2 pm, 2 pm to 8 pm, 8 pm to 8 am.

Manpower

Telephone front office assistants (5) [reports to managerial administrator]

Organogram of the front office

Managerial Administrator

↓

Front Office Executive (01)

↓

Front office assistants (11)

Managerial administrator reports to Deputy Medical Superintendent.

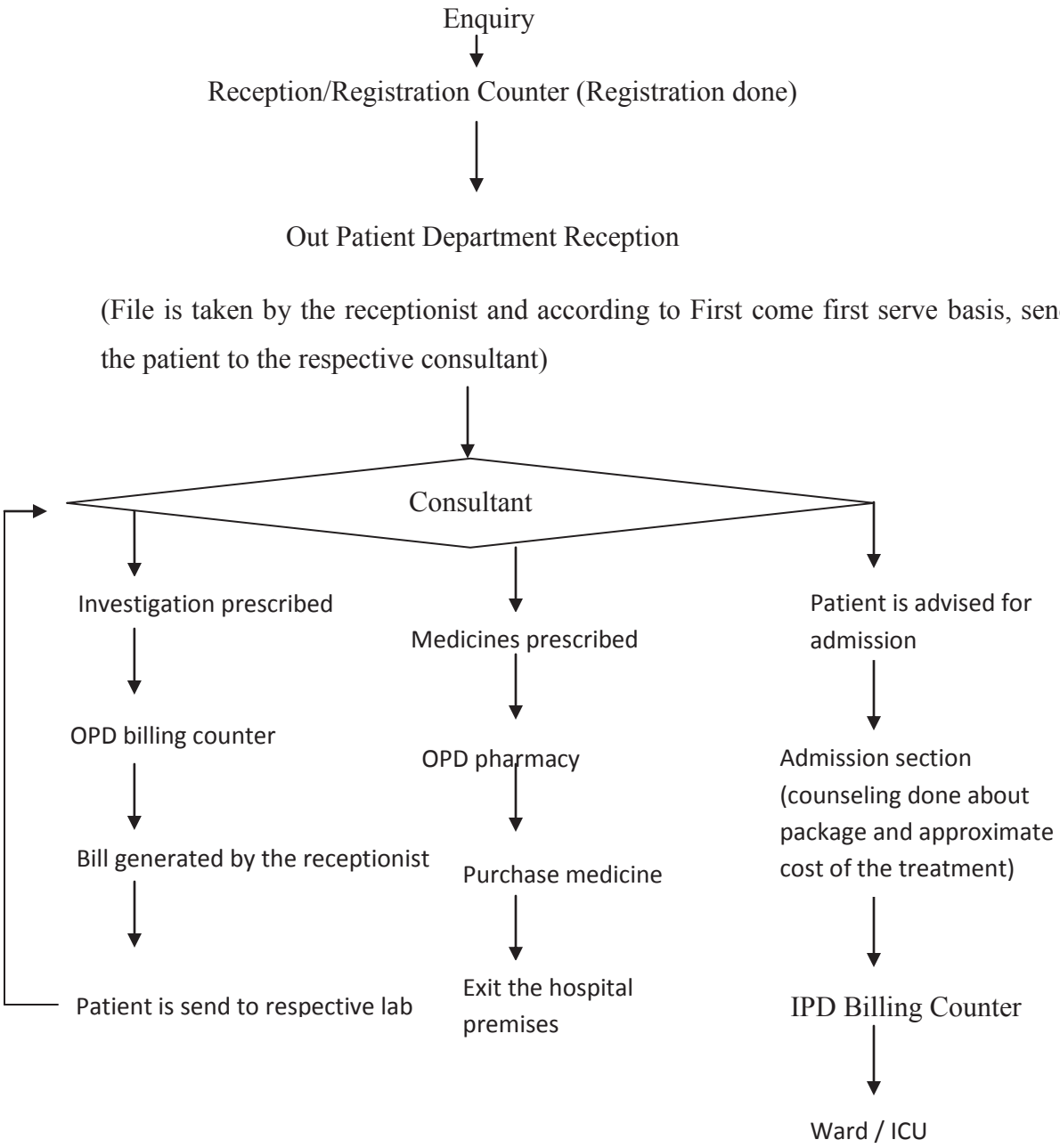
Out Patient Department (OPD)

Goal: - To provide diagnostic, therapeutic, preventive and rehabilitative care to those patients who are not registered as inpatients while receiving the services.

Location: - There are 5 decentralized OPDs in the hospital

1. North OPD= situated on the ground floor. It has 6 consultant chambers of following specialties: -Pulmonology, General Medicine, Gastroenterology, Neurosurgery, Cardiac surgery, Pediatrics.
2. South OPD = situated on the ground floor. It has 6 consultant chambers of following specialties: - Obstetrics and Gynecology, Gastroenterologist & Laparoscopic surgery, Urology, Joint Replacement surgery, Hand & Limb surgery, Spine surgery, Arthroscopy & Sports medicine
3. Cardiology OPD= situated on the ground floor. It has 3 OPDs of cardiology and electrophysiology.
4. Nine consultant chambers of Pediatric cardiology, General Medicine, Radiology, Laparoscopy and General Surgery, dermatology, neurology, pediatric surgery, Ear nose throat (ENT). Situated on the ground floor.
5. Nephrology OPD= situated on the lower ground floor near dialysis unit.

Patient Flow Process [flow chart 2]



B. QUALITY ASSURANCE DEPARTMENT

Goal: Headed to maintain and perk up the standards.

Quality assurance is the activity of providing evidence needed to establish quality in work and the activities that require good quality are being performed effectively.

Quality assurance activities

quality assurance covers all activities from design, development, production, installation, servicing, documentation, verification and validation. This introduced the rules: "fit for purpose" and "do it right the first time". It includes the regulation of the quality of raw materials, assemblies, products and components; services related to production; and management and inspection processes. One of the most widely used paradigms for quality assurance is PDCA (Plan-Do-Check-Act) approach, also known as the Shewhart cycle.

Location: - located on lower ground floor near human resource department.

Operational timings: - 9 am to 5 pm

Manpower: - Incharge (Quality Assurance) (1), Executive (2)

Incharge reports directly to MS

Scope of Services:

- Training of staff (Theoretical & Practical)
- Education
- Implementation according to standards and identifying the bottleneck areas.
- Conducting regular meetings with different committees and resolving issues related to their respective areas.
- Evaluation of quality steering indicators given by respective departments.
- Guidance & facilitation for smooth implementation of quality standards.
- Monitoring & evaluation by regular audits in various departments.

C. **HUMAN RESOURCE DEPARTMENT**

Goal: - To manage the human resource efficiently and effectively.

Location:- Situated on lower ground floor near quality assurance department.

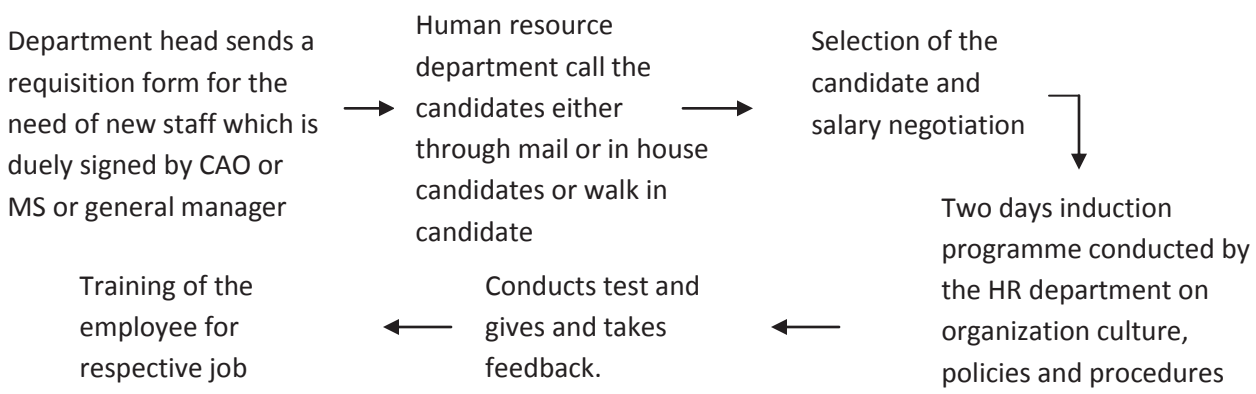
Manpower: - senior manager human resource management (1), junior executive (1), executive (1), associate (1), trainee (1).

Operational timing: - 9 am to 5 pm

Scope of services: -

1. Ensuring an adequate, well trained, motivated and stable workforce in every department of the hospital.
2. Documenting service rules and developing a human resource management policy including an effective retention policy.
3. Employee grievance handling.
4. Employee development including education, training and skill up gradation.
5. Performance appraisal of employees once in a year.
6. Maintaining high level of employee discipline through a fair disciplinary procedure based on the principle of natural justice.
7. Compliance of legal provisions.
8. Conducting employee satisfaction surveys once in a year.
9. Competency mapping of all employees.
10. Formulating job description and job specifications.
11. Conducting induction programme for newly joined staff.
12. Taking exit interview of employee leaving the hospital, to know the reason behind the resignation and attempts to solve the issue.

Process flow of recruitment [flow chart 3]



D. MEDICAL RECORD DEPARTMENT

Goal: Medical Record Department is the custodian of all the discharged/ expired health record charts. The Medical Records Department staff ensures the confidentiality, preservation, storage and retention of documents of patients.

Definition of Medical Record:- " A clinical, scientific, administrative and legal document related to patient care in which is recorded sufficient data in the sequence of events to justify the diagnosis, the treatment and the end results."

Functions of Medical Record Department

- Collection of information and maintenance of records of patient's movement from registration to discharge.
- Collection of case documents after discharge (IPD cases)/ OPD consultation.
- Checking of records as per the checklist for completion, and getting the incomplete file completed without any delay.
- Coding as per the International Classification of diseases (ICD) and indexing the records as per patient's name, disease/diagnosis, physicians and the surgical procedure carried out.
- Analysis of records and generation of statistics for the administrative use.
- Submitting the periodic reports (births/deaths notifications, notifications for communicable diseases, morbidity statistics) as required by health authorities.

- Filing and safe storage of records.
- Retrieval of records for issue to the physicians for references/review.
- Production in the courts of law, when summoned.
- Supplying copies to insurance agencies, when required

Location: - On the ground floor C block near IP pharmacy store and CCU.

Manpower

Medical Record officer= 1

Office assistant = 1

Operational timings = 9am to 5 pm (Monday to Saturday)

Documents maintained by the department

- IPD files receive register
- IPD file dispatch register
- OPD files receive register
- OPD file dispatch register
- Death register
- Birth register
- All medical records of hospital

Death records are of pink color and green records are of discharged patients

Records are kept according to code.

Records of normal cases are kept for seven years and records of medico legal cases and death cases are being kept for life long.

If some ward sends incomplete file of the patient in department, it is sent back for completion and receives completed file within 48 hours.

Scope of services

- Record collection
- Analytical evaluation
- Codification
- Assembly/ storage
- Retrieval
- Data generation

Process flow

- After the discharge of patient, next day nurse give file to clinical care assistant.
- Clinical care assistant converts blue file to green file and do an entry in the ward register.
- Then clinical care assistant brings file to medical record department.
- Medical record officer receives the file and crosscheck according to checklist given in the file and signs in the ward register.
- Medical record officer sends back incomplete file to respective wards or consultants for completion within 48 hours.
- Medical record department staff takes the list of patient discharged on the previous day and cross checks every day, whether they have received respective files or not.

E. MAINTENANCE DEPARTMENT

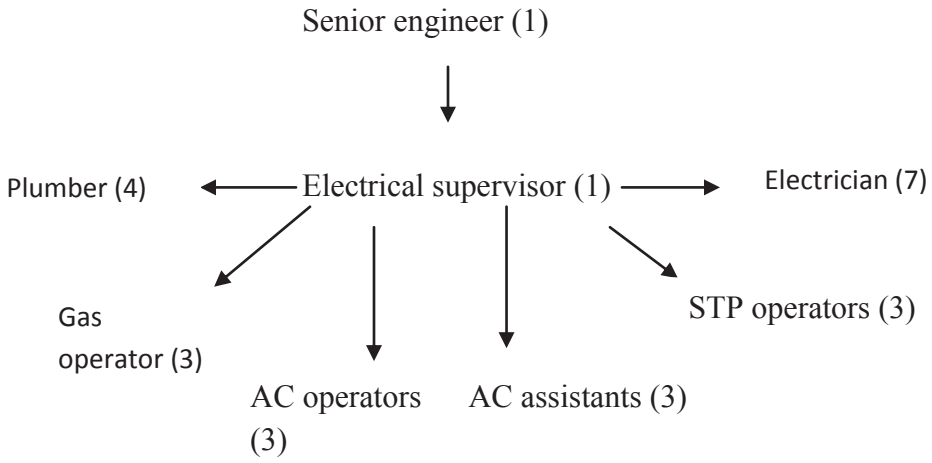
Goal:- To provide for a safe and functional environment by ensuring the proper maintenance of all equipment and facilities.

Functions: -

- To maintain the overall electric supply of the hospital
- To maintain the chilling plant room of the hospital
- To maintain the supply of medical gases in the hospital building.
- To maintain the proper functioning of sewerage treatment plant.

Location = lower ground near main store.

Organogram



Operational Timings = 24x7

Infrastructure: -

1) **low tension room**
    - 11000 high tension lines is converted by transformer to low tension lines.
    - LT panels are there which have LT breakers which finally supply electricity to all the departments and sections of the hospital.
    - Finally the department staff maintains and calculates the cost of electricity in each department.

2) **Generator panel**
    - There are two generators in this panel of 750 ampere each.
    - There are four big (10 kg each) and ten small fire extinguishers (5 kg each) in this panel to deal with fire causality. This panel also has five sand buckets to deal the same.

3) **Diesel tank** of 24 kilo liters for the generators, situated in the outer area of the hospital.

4) **Sewerage treatment plant (STP)**

Goal: - To convert sewerage water in to treated water which can be given to flora.

Location: - on the outer side of the building near oxygen plant.

Infrastructure: - It has following parts:-

i. Bar Screen chamber = Sewage passes through this chamber, where all over sized particles are trapped by a screen.
ii. Oil & grease trap = It removes oil and grease from the sewage water. Oil and grease get collected in a small chamber.
iii. Equalization tank = The sewage is collected in this tank by gravity, where variations in flow and characteristics are dampened, which otherwise can lead to operational problems and moreover it allows a constant flow rate downstream. This tank reduces suspended solids.
iv. FAB reactor/ Fluidized aerobic bio reactor.= The equalized sewage is pumped into FAB reactor where all impurities are reduced by aerobic microbes. The oxygen supply for microbes are supplied through mechanical aerator.
v. Tube settler tank: - aerated water is passed into tube settler tank by centrifugal pump in upward flow. Here biological sludge is generated in aeration tank. The sludge is settled down.
vi. Sludge holding tank = the sludge from tube settler tank is collected in this tank and an aerobic reaction is occurred here. After the completion of reaction, the sludge is passed to sludge drying bed. Here it is dried and used as manure.

vii. Filter press = the sludge from sludge holding tank is passed through filter press, so that total water is separated out from sludge and solids from sludge come out as a cake. This cake can be used in gardening

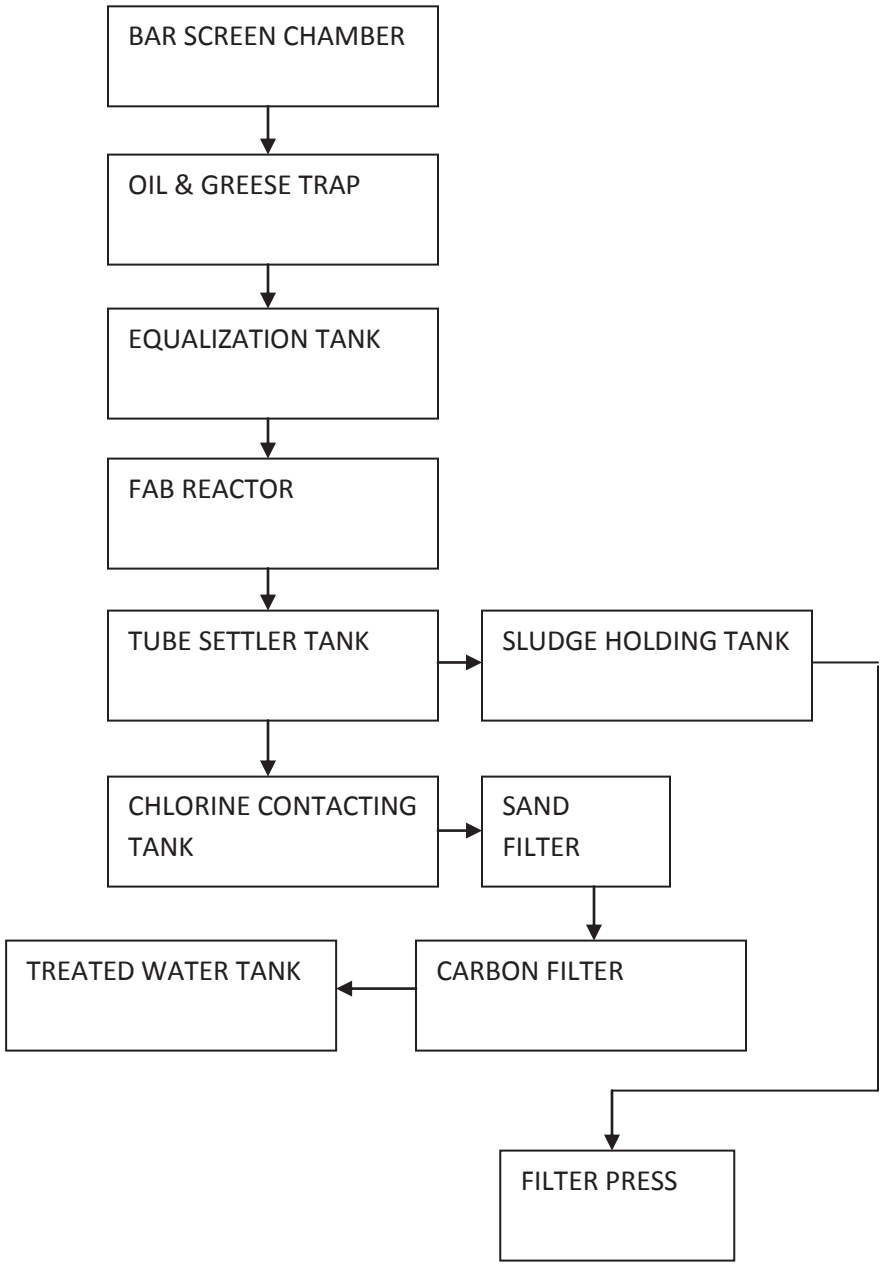
viii. Chlorine contacting tank = Here dose of sodium hypo chlorite is put in the water for disinfection, to make it suitable for gardening.

ix. Dual media filter: - it removes turbidity.

x. Activated carbon filter: - it removes bad odor and excess of chlorine.

xi. Treated water tank= the treated water is stored here for use in gardening.

Process flow [flow chart 4]



5) **Desk panel**

- To control the working of Air Handling Unit (AHU).

6) **Chilling plant room**

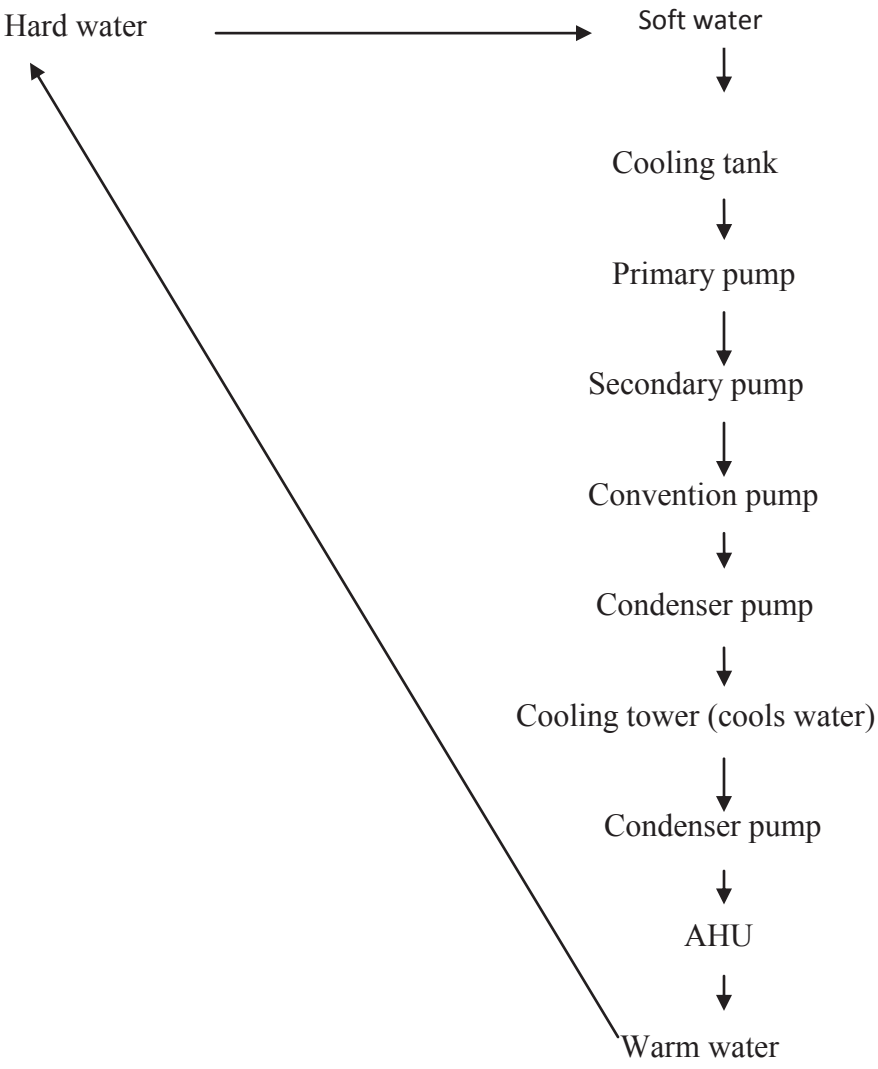
Function: - To maintain the supply of cool air in hospital building.

Timings = 24 x 7

Manpower = AC operators (3) , AC assistants (3)

Location = Basement

Work process [flow chart 5]



7) **Gas manifold room**

Function: - To supply and maintain the flow of medical gases (oxygen, suction, and clean air and nitrous oxide) in the hospital.

Timing = 24 x 7

Manpower = Gas Plant Operators (3) who works in three shifts of 7 am to 3 pm, 2 pm to 10 pm and 10 pm .

Infrastructure

- There are 24 oxygen cylinders, out of which 4 cylinders are for emergency.
- Nitrous Oxide cylinders for OT (2)
- Automatic air compressor pump (3)
- Air dryers(2)
- Vaccum compressor (2)
- Five gas alarms

Location = Basement

Process flow

1) Of oxygen supply = a standard line pressure of 4.2 Kg per cm^2 is maintained, if the pressure falls below this pressure, alarm starts ringing in the hospital building and line pressure is again brought back by the gas plant operators. Lines for oxygen supply are of yellow color.
2) Of clean air = automatic air compressor pump starts whenever the clean air pressure in lines falls below 7 kg per cm^2 and stops when pressure reaches to 10 kg per cm^2. Then air is passed through air dryer to remove any moisture. A line pressure of 4 kg per cm^2 is maintained for ventilators and line pressure of 7 kg per cm^2 is maintained for OT

and CSSD. Lines of clean air supply are of blue color with white and black stripes.

3) Of suction = automatic vaccum compressor starts whenever the line pressure falls below 500 mm Hg and stops when pressure reaches to 700 mm Hg. Lines for suction are of blue color with black stripes.

F. PHARMACY DEPARTMENT

Goal: - Procuring and delivering generic medicines to the in-patients and out patients.

Functions: -

1. Preparation of demands as per the planned schedule as well as for emergency purchases and forwarding requisition to the purchase department.
2. Ensuring right quality of drugs by inspection of the stocks received and getting samples tested by the drug testing laboratories.
3. Receiving, checking, accounting, storing and issue of drugs.
4. Supply of all pharmacy items for in patients in various wards/departments as well as dispensing of drugs for outpatients.
5. Maintenance of updated inventory of stocks of all the drug items along with the stock details (batch no.) of each and every item.
6. Recall of drugs whose expiry date is in next 3 months from wards and ICU stores.
7. Continuous training and education of pharmacy staff.
8. Maintain a check and control over the the usage of narcotic and other dangerous drugs.
9. Recall of items found defective/toxic from wards/departments and taking necessary actions including reports to the drug controller office.
10. Keeping control over the overall and item wise consumption of all inventory items and submitting periodic reports to the management.
11. Ensuring compliance of all statutory requirements including timely renewal of licences.

- There are three types of pharmacy departments in the hospital:
    1) OPD pharmacy
    2) IP pharmacy
    3) OT pharmacy

I. Outpatient department Pharmacy (OPD Pharmacy)

Goal: - Procuring and delivering genuine medicines to the out patients.

Location: - Situated on the ground floor near south and north OPDs.

Operational Timings: - 8 am to 8 pm (Monday to Saturday) and 8 ma to 3 pm (Sunday)

Shifts = 8 am to 4pm, 12 pm to 8 pm, 10 am to 6 pm (in each shift one pharmacist is present)

Manpower: - OPD pharmacy incharge (1), pharmacist (2)

II. Inpatient department pharmacy (IP Pharmacy)

Goal: - To deliver guanine drugs and consumable to the respective wards or ICUs on time.

Location: - C- block of Ground floor near cathlab and medical record department.

Organogram:

Executive IP pharmacy (1)

↓

Shift Incharge (3)

↓

Pharmacist (4)

↓

Data operator (2)

↓

Housekeeping runners (8)

Operational timings: - 24x7

Shifts: - 8am to 4pm = one pharmacist

9am to 5 pm = one pharmacist/data operator

12pm to 8 pm = one pharmacist and one data operator

8pm to 8am = two pharmacist/data operator

Housekeeping runner's shifts = 7 am to 3 pm (3 runners), 11 am to 7 pm (3 runners), 7pm to 7am (2 runners)

Scope of services: -

1. Receiving indents by continuous checking on the system ward wise.
2. Checking the batch number of drugs and consumables.
3. Physical packaging of indents and cross checking, printing and sticking labels and signing of indents.
4. Receiving returned indents of discharged patients from wards.
5. Sending the stock request to the main drug store for stock.
6. Receiving and rechecking the stock issued by main drug store.
7. Maintaining records of stock issued by the Main drug store, returned drugs, delivered indents.
8. Arranging drugs on special request from the consultant/ surgeon which are unavailable in the store from outside the hospital and creating Goods received notes (GRN).
9. Issuing medicines for emergency operations between 8 pm to 8 am.

Process flow: - for delivering indent [flow chart 6]

Ordering of indent by nurse at nursing bench

↓

Packing of indent on HINAI

↓

Taking printout at IP pharmacy

↓

Packing of medicines in buckets by the pharmacist

↓

Dispatch to the wards by runners of pharmacy

↓

Received at wards and repacking and arranging at wards by the runners

↓

Verification and signature by the receiving nurse

<u>Process flow for drug return: -</u> [flow chart 7]

Nurse sends request for drug return on the system from nursing station

↓

Nurse count and signs on the drug return slip and send ward runner with the drugs to be returned to IPD pharmacy

↓

IPD pharmacy staff crosschecks the drug returned with the drug return slip → If items are less than listed

↓

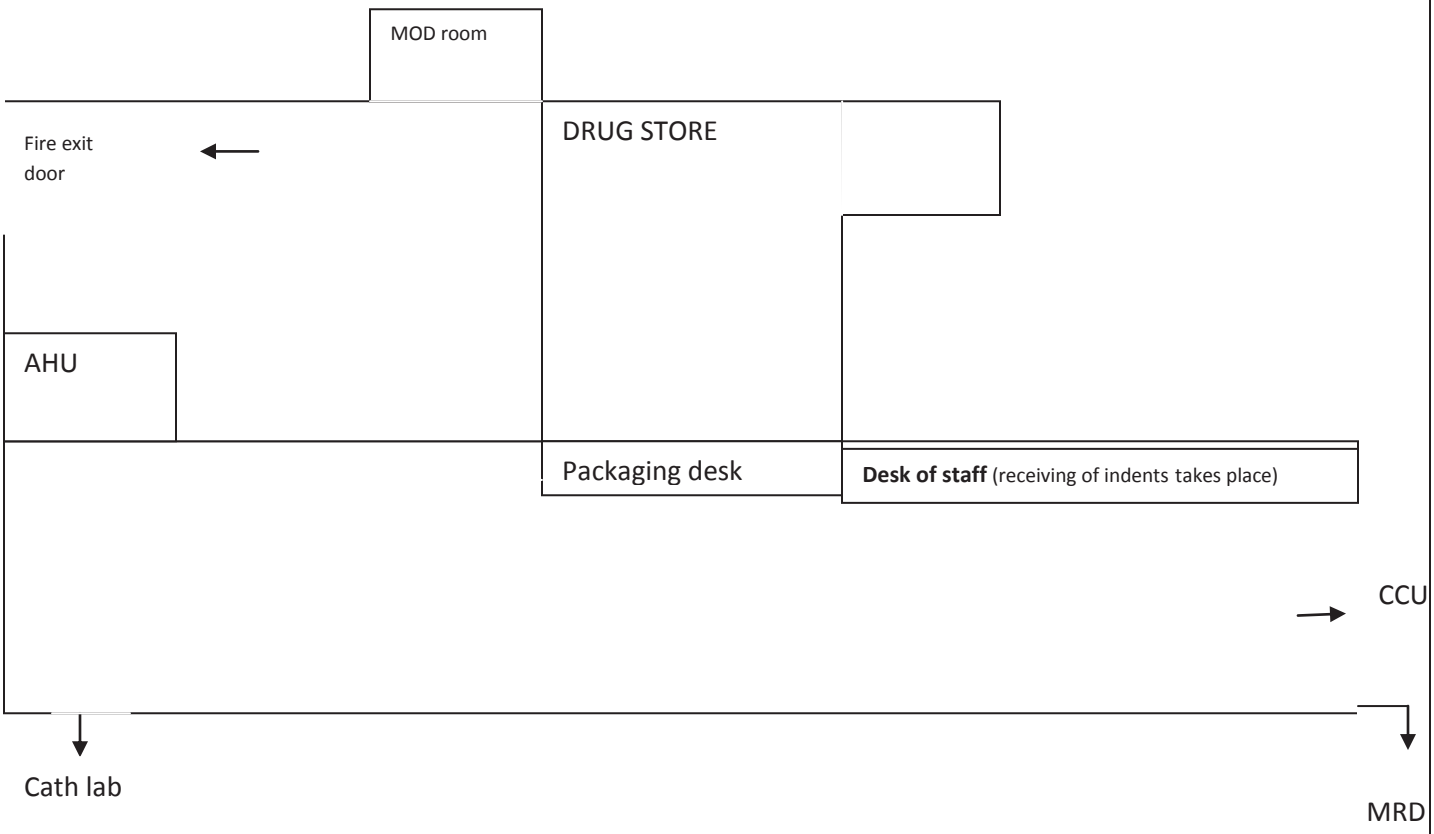
Sends back the ward runner to respective ward for verification

Items match with the slip

↓

Ask runner to sign on the slip and receives the drugs back

Layout: - **figure I.1**



III. Operation Theatre Pharmacy (OT Pharmacy)

Goal: - To deliver drugs and consumables for operation theatre on time.

Location: - situated in C- block of first floor on the back side of operation theatre.

Manpower:- pharmacist (1), computer-operator (1), housekeeping runner (1)

Operational timing: - 8 am to 8 pm

Process flow: -

- Operation theatre nurse (OT nurse) indent drugs and consumables from operation theatre nursing bench.
- Computer-operator receives the indent and takes print out.
- Pharmacist packs the indent in bucket and dispatch indent through runner.
- Runner delivers the indent to OT and OT nurse verify and receives the indent.

IV. **Main drug store**

Goal: - To store, arrange and supply drugs and consumables to the IP pharmacy and OT pharmacy as per demand.

Location: - situated on lower ground floor near purchase department.

Manpower: - store incharge (1), store assistants (5), housekeeping staff (2).

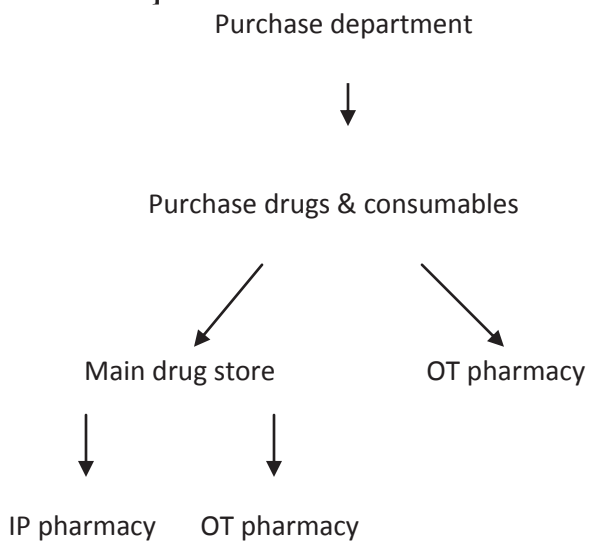
Operational timings: - 9 am to 8 pm

Shifts: - 9 am to 5 pm, 12 pm to 8 pm

Scope of services: -

1. Preparation of demands as per the planned schedule as well as for emergency purchases and forwarding requisition to the purchase department.
2. Receiving, checking, accounting, storing and issue of drugs.
3. Maintenance of updated inventory of stocks of all the drug items along with the stock details (batch no.) of each and every item.
4. Generating goods receiving notes.
5. Recall of drugs whose expiry date is in next 3 months from wards and ICU stores.
6. Recall of items found defective/toxic from wards/departments
7. Supply stock to IP pharmacy and OT drug store on their request.
8. Generating **Bar Code** for all drugs and consumables and arranging them in alphabetical order in racks and on each rack they are further arranged according to x1,x2,x3… manner and the storage area of each consumable is allocated on the soft ware. The storing pattern of each item is same in OPD pharmacy, IP pharmacy , main drug store and OT pharmacy.

Process flow [flow chart 8]



G. LAUNDRY & LINEN DEPARTMENT

Goal: - To provide an adequate quantity of the right quality linen for the indoor patients, OTs, OPD and other areas and for the medical and para -medical personnel engaged in providing health care.

Functions: -

1. Collection and receipt of soiled and infected linen.
2. Sorting, sluicing, disinfecting, washing and ironing of the linen.
3. Repair of damaged linen.
4. Assembling and packing specialty items and linen packs for sterilization.
5. Distribution of linen to user departments.

- Linen service of hospital is outsourced. Hospital has a linen store.

Location: - C-block of lower ground floor near mortuary and main drug store.

Manpower: - Store Manager (1) , housekeeping staff (4).

Operational timings: - 7a.m. to 7 p.m. (Monday to Sunday)

Shifts = Store Manager- 9 a.m. to 5 p.m.

Housekeeping staff - 7am to 7 pm

Process flow: -

- Dirty linen is collected from all the areas of the hospital in covered trolleys by housekeeping staff and brings to dirty linen area through lifts.
- The dirty linen area is situated on the outer side of the hospital building near parking area.
- In the dirty linen area the linen is counted area wise by the housekeeping staff and entry is done in the register.
- At around 9 am van of the outsourced company comes to collect dirty linen.
- The same van with clean linen comes at around 3 pm to deliver clean linen and takes away the dirty linen of the next lot.
- The clean linen is stored in the linen store where entry in the register is maintained.
- The surgeon's gown and linen of OTs are send to the CSSD for sterilization.
- The remaining clean linen are distributed to respective wards, ICUs and OPDs through covered trolleys (for clean linen), by the housekeeping staff.
- Soiled linen and infected linen are packed in polythene bag, send to dirty utility room and dipped in 1% hypochlorite solution for 1-2 hours and then normal washed and send to laundry.

H. FIRE SAFETY DEPARTMENT

Goal: - Prevention of fire through proper design and construction.

Function: - Protecting hospital building from fire hazards and provision for smoke detectors alarms, restriction of spread and extinguishment systems. Evacuating hospital building through fire exit doors.

Location: - Fire alarm room is situated at C block of lower ground floor near purchase department and pump room is situated on the outer side of the building near parking area.

Organogram: - Senior Engineer (1), fitter (2), electrician (1), helper (1) along with 14 maintenance workers.

Operational timings: - 24x7

Infrastructure and designing: -

1. Pump room

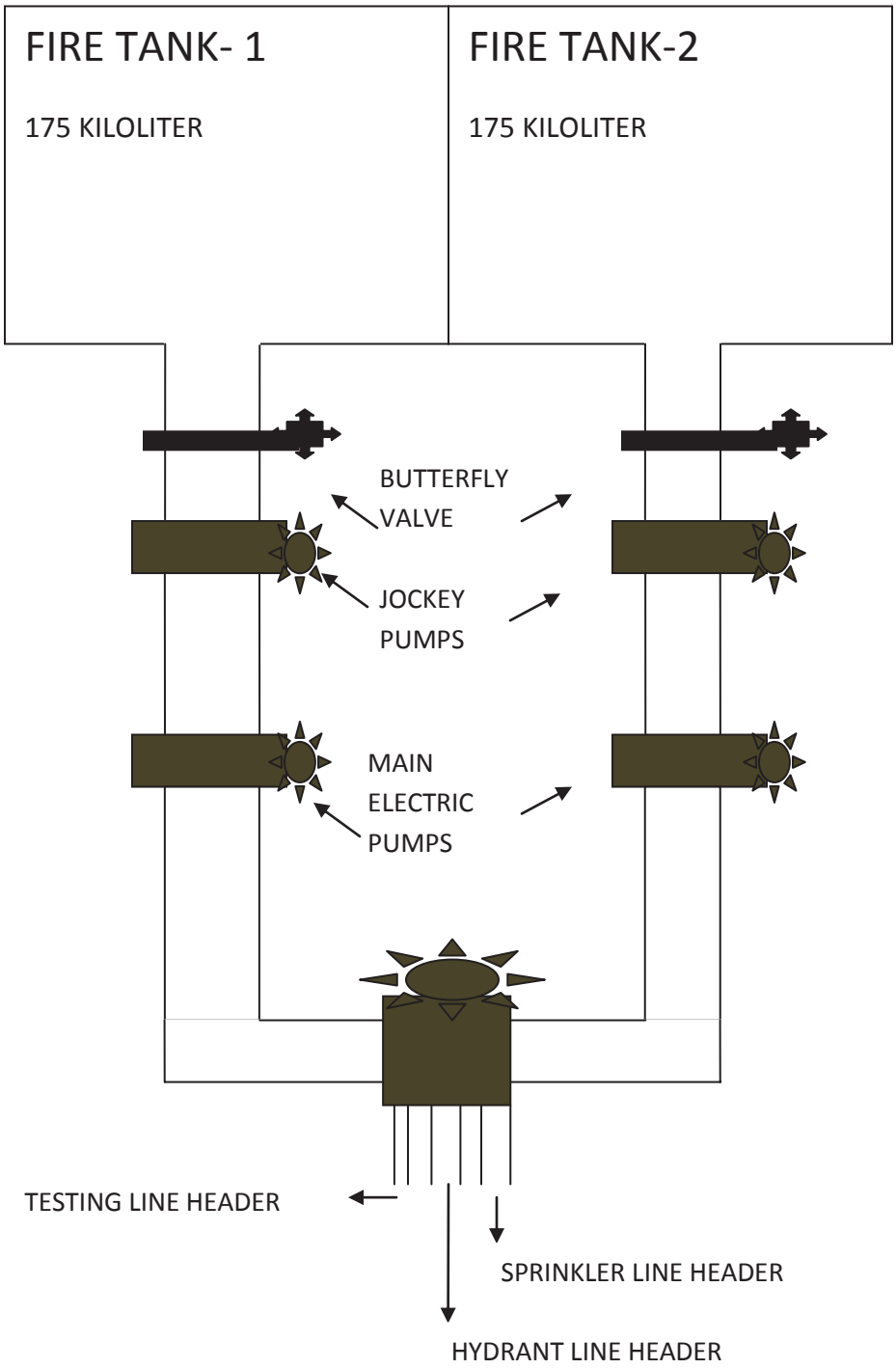
   It has two **fire tanks** of 175 kiloliter capacity each. They contain submersible water. Two valves are connected to these tanks, called **butter fly valves.** There is a **Jockey pump pipe strainer,** whenever the pressure falls from 10 kg per cm^2 to 9 kg per cm^2, the jockey pump starts.

   There are two **Main electric pumps** which start whenever the pressure falls from 9 kg per cm^2 to 8 kg per cm^2.

   In case of no electric supply, hospital has a D**iesel pump**. It starts when pressure falls to 5 kg per cm^2. It is maintained quarterly. For the storage of diesel for diesel pump, hospital has a diesel tank of 200 liters.

   There are **sprinkler line header (1), hydrant line header (1)** and **testing line header (1)** which are under ground in the building. The testing line header is for testing the fire system.
2. Yard hydrants: - situated on outer areas of the building. Total 15 in number. It has two pipes of 15 meter and has single nozzle hydrant valve. These are connected with hydrant line header for water supply.
3. Fire hydrants: - situated inside the hospital building. It has double hydrant valve. These are connected with hydrant line header for water supply.
4. Sprinklers: - Sprinklers are fitted on the roof of the building at a distance of every 3 meters. It contains mercury. Whenever the temperature in the building raises to 70^0 centigrade, they open up sprinkle water. Sprinklers are connected with sprinkler line header for the water supply. Whenever pressure decreases to 7 kg per cm^2, the alarm in sprinklers starts ringing to alert the staff.

Layout: - **figure I.2**



…..

Types of fire extinguishers in the hospital

I. **A type:** for extinguishing paper and wood fire
II. **Class B** fires involve flammable or combustible liquids, including petrol, grease, and oil.
III. **Class C** fires involve flammable gases.
IV. **Class D** fires involve combustible metals.
V. **Class E** fires involving electrical appliances (no longer used as when the power supply is turned off an electrical fire can fall into any category).
VI. **Class F** fires involve cooking fat and oil.

I. SECURITY DEPARTMENT

Goal: - To ensure the security and safety of hospital building, personnel, patients and public as well as regulating the traffic within the hospital premises.

Manpower: - There are total 50 guards in the security department of Narayana Hrudalaya, out of which 43 guards are allocated with in the hospital and remaining 7 are allocated outside the hospital premises (2 guards are allocated at Sampurana nursing hostel and 2 guards are allocated at new hostel, 2 guards are allocated at vice-president's residence and one guard is allocated at Narayana Hrudalaya dispensary).

Out of 43 guards there are 20 female guards and 23 male guards.

Security Supervisor (2)
↓
One in each shift
↓
Head guard (2)
One in each shift
↓
Guards

Security supervisor reports to General Manager.

Operational timings: - 24X7

There are two shifts in security department of 12 hours each (8 am to 8 pm and 8pm to 8 am)

Scope of services: -

1. Screening all the vehicles and person entering into the hospital premises and not allowing any unauthorized person and vehicle into hospital premises.
2. To manage any incidence of fight in the hospital.
3. Security supervisor manages the documentation regarding the mortuary and manages the exit of dead bodies from the hospital premises.
4. To manage the functioning of lift system of the hospital.
5. Checks and maintains the record of every material supplied to the hospital..
6. Checks and maintains the record of exit of every material from the hospital.
7. Fire prevention.

J. FOOD & BEVERAGE DEPARTMENT

Goal: - to provide food and beverages to patients, attendants and staff and educating the patients regarding use and utility of different foods and balanced diets.

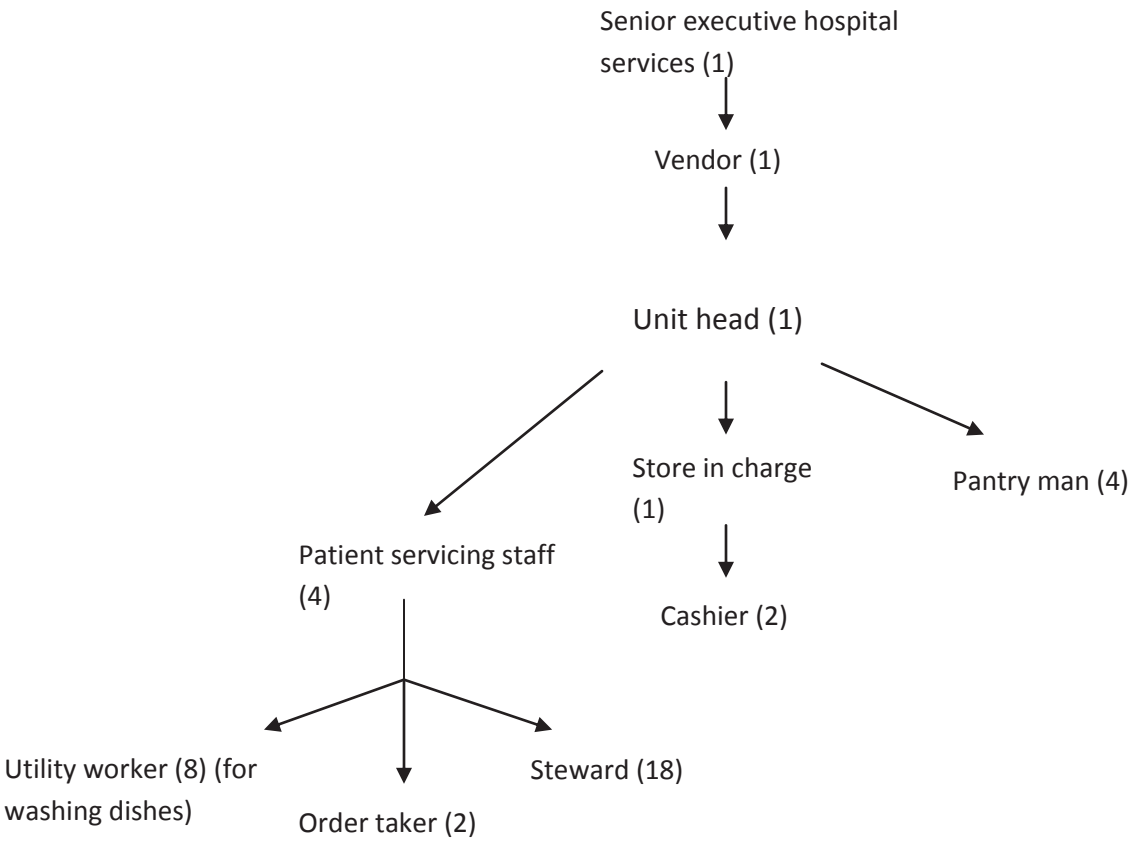
Functions: -

1. Providing adequate nourishment to the patients, in accordance with their disease, clinical condition, age, weight, allergies, personal preferences and the instructions of treating consultant.
2. Catering food and beverages to staff and attendants.
3. Ensuring food served are hygienically cooked, stored and served.
4. Dietary counseling of the patients.
5. Maintaining the account of the number and type of diets issued meal wise and day wise.

Location: - lower ground floor.

F&B service is outsourced.

Organogram: -



Senior executive hospital service reports to General Manager.

There are two **dieticians** in the hospital who reports to Deputy Medical Superintendent. They work in close coordination with the F &B staff.

Timings: - 24 x 7 **(**works in shifts of 6am to 4 pm, 12 pm to 10 pm, 9pm to 9 am and 9am to 6 pm)

Presently dieticians have only shift from 9:00 am-5:00pm

Dietician takes round in the wards twice daily and records the type of diet needed by various patients.

Infra structure: -

- Receiving area
- Storing area
- Washing area
- Packing area
- Trolley area

Trolleys**:** 4 (2 for hot & 2 for cold)

Process flow:

- Total 8 Services are there from morning to night.(Details attached)
- Food items are received at the receiving area and put in the store.
- They are packed in different utensils, covered and arranged in the trolleys according to hot & cold food.
- Distributed ward wise.

K. INFORMATION TECHNOLOGY DEPARTMENT

Goal: - to provide IT value to end users with respect to their day to day function.

Location: - situated at lower ground floor near male general wards.

Manpower: -

IT executive (1), assistant IT executive (1)

Operational timings: - Two shifts of 8 am to 4 pm and 10 am to 6 pm.

After 6pm support is available on call.

Scope of services:- the scope and complexity of services provided by this department is HNAI web.

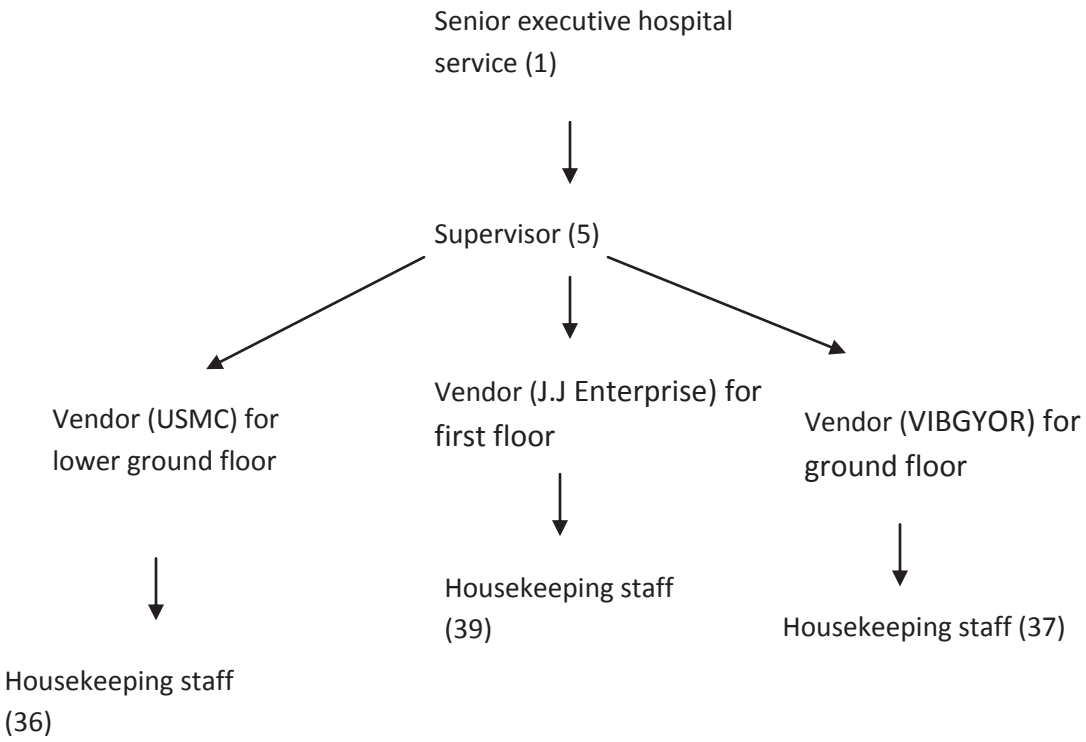
1. IT Infrastructure
   - Hardware and Network
   - Anti Virus Services
   - Internet Services
   - Email Services
2. Communication System

L. HOUSE KEEPING DEPARTMENT

Goal: - reducing hospital associated infections, by providing a safe, clean and hygienic environment. Housekeeping service is responsible for all activities aimed at maintaining the facilities presentable, pleasant and comfortable and safe for the people living or working within the hospital or visiting from outside.

Functions: -daily cleaning activities including mopping of floors, cleaning and disinfection of high touch surfaces like door knobs, bed rails, light switches. Garbage and bio –medical waste removal

Organogram:



Housekeeping service is outsourced by different agencies (J.J Enterprise, VIBGYOR, USMC) on three different floors.

Operational timings: - 24x7

Housekeeping staff works in 3 shifts

- Morning (7:00AM -3:00PM)
- Evening (11:00AM-7:00PM)
- Night (7:00PM-7:00AM)

Frequency of cleaning: Thoroughly twice and total 4 times/shift

Procedure: Dusting, wiping window panes, doors etc, Brooming, Bushing &mopping (Manual & Electric both)

Material used for mopping**:** Veriax &Baleofloor

Team of 3: 2 for Room & 1 for toilet cleaning.

Scope of services

- Sweeping, washing and cleaning
- Waxing the floors
- Waste disposal and sanitation
- Window cleaning, walls cleaning.
- Care of rugs, curtains and furniture
- Environmental hygiene and odor control.
- Collection of dirty linen and distribution of clean linen to the respective departments/wards
- Performing activities according to department, they have been distributed.

M. BIO MEDICAL WASTE MANAGEMENT:

Goal: -Reducing hospital associated infections, by providing a safe, clean and hygienic environment, thereby reducing the average length of stay of patients.

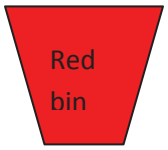
Definition of bio- medical waste: - Any solid, fluid or liquid waste, including its container and any intermediate product, which is generated during the diagnosis, treatment or immunization of human beings.

Bio medical waste management services are outsourced.

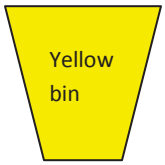
Process:

- Waste collected in color coded bins (Red, Yellow, Blue, and Black) in respective departments.
- Segregated &transferred in larger bins (80 Liters) in BMW rooms twice a day.
- Waste is collected by the BMW personnel twice a day for disposal.
- Waste is transported though route with minimum exposure to clinical area.
- Then larger bins are stored in color coded rooms situated in the outer side of the building.
- Waste is then disposed off in vans of municipal cooperation twice a day.

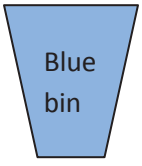
Color coding based disposal



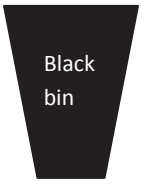
Blood and body fluid containing plastics, gloves, syringes, cap, mask and blood bags.



Blood, Body fluids, Stained cottons, bandages, body parts and placenta



Sharps, needles, broken glasses, scalpel and blades



Papers, discarded medicines and wrappers of gloves and syringes.

N. BILLING & FINANCE DEPARTMENT

Goal: - To provide accurate, relevant and timely financial information in making right business plan and decisions.

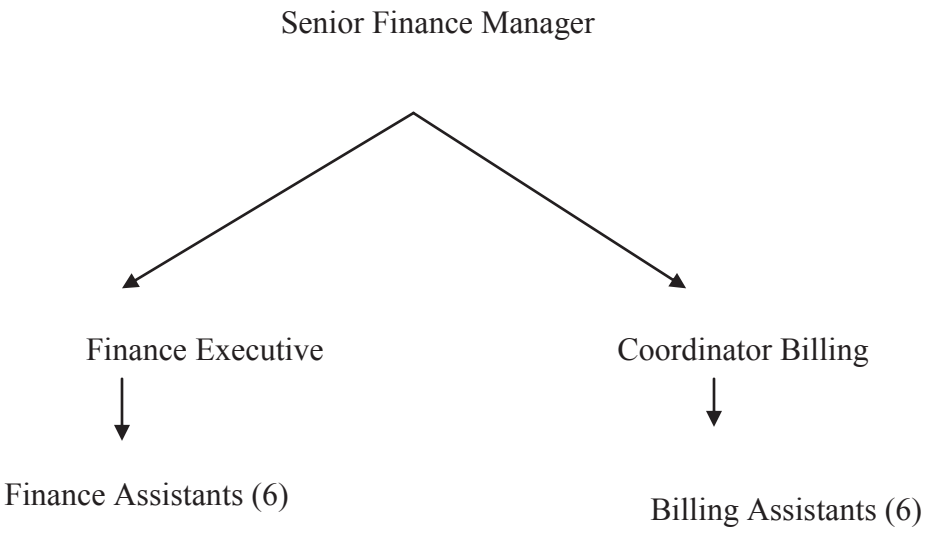
Function of the department: -

1. Provide data for bench marking and self-assessment of financial result and enhance the business operational efficiency by implementing processes and control measures.
2. Timely payment to employee's, vendors and contractors.
3. Optimum utilization of working capital.
4. Tracking the expenses of IPD patients on daily basis and taking advance deposit from them.
5. Timely discharge to patients as far as financial clearance.

Location: -Situated on the ground floor near south OPD.

Operational timings = 9am to 5 pm

Organogram:



Scope of services

1. Business building insights.
2. Areas for lowering cost and improve profitability.
3. Updating of bills on daily basis for IPD patients.
4. Customer (patient's attendant) satisfaction for billing concern.
5. The billing staff has overall responsibility for coordination of various functions (pharmacy, wards etc.) and they maintain a log of all the problems that arise on day to day basis and provide necessary solution as deemed proper and reasonable.
6. Department serves all department for finance and billing aspect.

Process Flow: -

- After counseling in admission office, the patient comes at the IPD billing department with the admission sheet.
- His/her details are entered in the software and a patient's account is created.
- The doctor of that department where admission has to be done is contacted and informed about the admission and also sent through PC.
- It is accepted by the respective department and then the patient is sent for admission.
- All investigations, drugs and all expenses of the patient are continuously informed to the billing and finance department on daily basis so that his expenses are updated and explained to him regularly.

Before discharge of the patient, this department has to give a No dues card, only after which the doctor discharges the patient from the respective wards

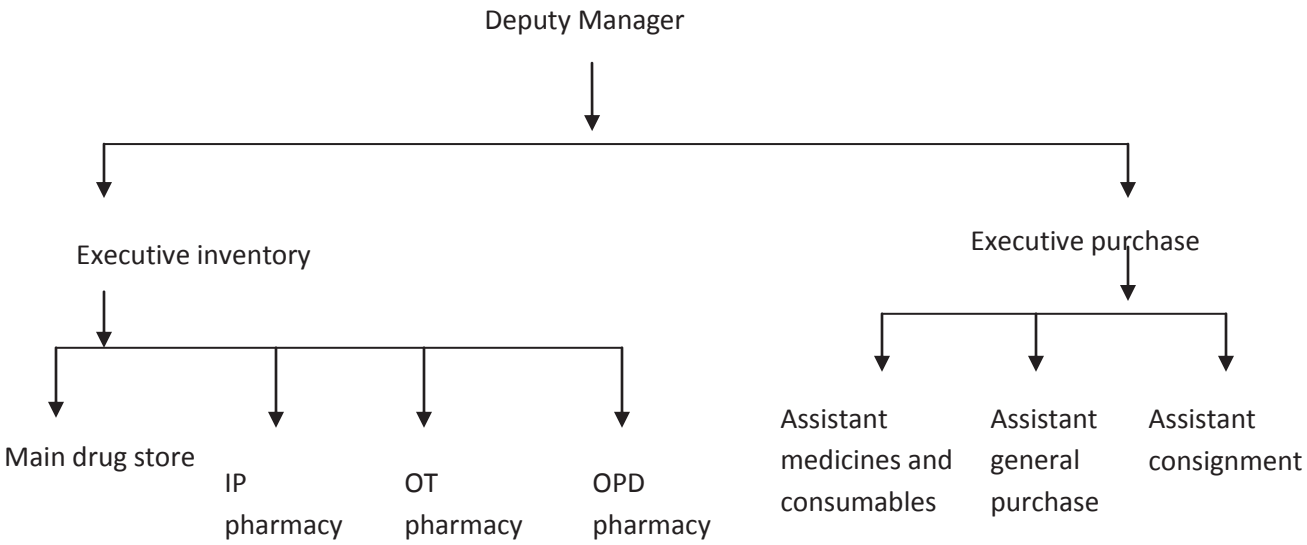
O. PURCHASE DEPARTMENT

Goal: - To purchase and supply best quality and quantity of material to the respected departments in affordable price range.

Location: - Situated on lower ground floor near main drug store.

Operational timing: - 9am to 5 pm

Organogram: -



Scope of services: -

1. Receiving the requisition from stores and department for drug or consumables.
2. Selection of vendor for supply based on quality, cost, reliability and credit availability.
3. Receiving and checking of goods.
4. Arrangement of material at central store and codification.
5. Generating goods receipt note (GRN)
6. Return of expired and damaged goods to the vendor.

Process flow: -

Flow chart of material purchase planning **[flow chart 9]**

REQIUISITION

⇩

QUOTATION FROM VENDORS

⇩

NEGOTIATION BY PURCHASE MANAGER

⇩

PURCHASE ORDER

⇩

PURCHASE FROM VENDORS

⇩

GOOD RECEIPTS

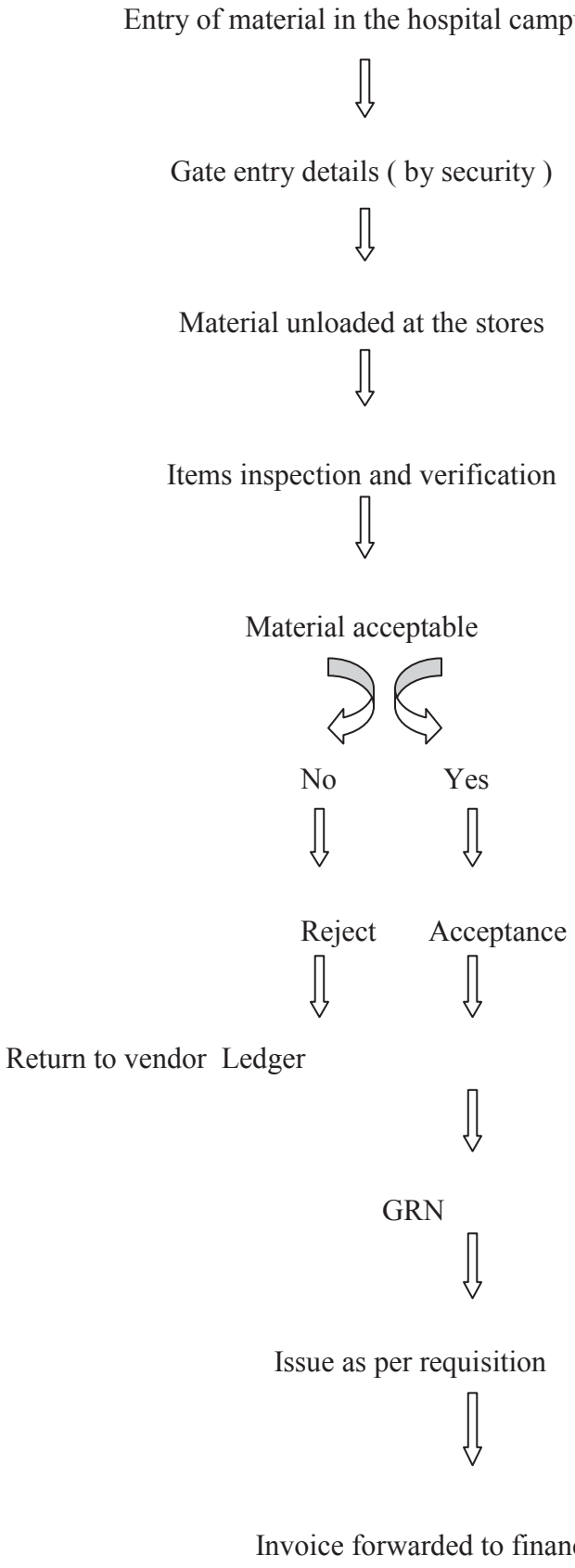
⇩

CENTRAL STORE

⇩

ISSUED TO RESPECTIVE DEPARTMENT

RECEIVING OF MATERIALS PROCESS FLOW :- **[flow chart 10]**



PROCESS OF INDENTING IN EMERGENCY (if the required product is not available):-

- ✓ Central store calling up vendors for product availability.
- ✓ Closest possible vendor is given a telephonic order and asked to keep product ready for collection.
- ✓ Boy from IP pharmacy is sent to collect product or vendor sends his boy for delivery.
- ✓ Product is obtained, code generated and entered in the system. Subsequently P.O and GRN is generated at the same time and handed over to the concerned person
- ✓ Product is made ready for supply and concerned staff is informed so that it can now be indented for patient use.

GRN PROCESS (Good receipt note) :-

TYPES OF GRN :-

I. Consignment of GRN

II. Regular GRN

PROCESS :-

- ✓ Once the physical verification and allocation of materials is done, entry is done in HIS for the same, GRN procedure is followed.
- ✓ Challan no./ invoice cum challan no. and challan date is picked from supplier challan/ invoice cum challan copy is checked by accounts while making payment.
- ✓ Purchase order no. is compulsory while making GRN, GRN is made on the basis of purchase order no and supplier name.
- ✓ Proper details like quantity, batch no., expiry should be entered and saving an GRN

- ✓ Sometimes partial quantity of purchase order received, so same being entered in the hospital information system.

  GRN quantity can't be greater than purchase order quantity.

- ✓ GRN shall have serial numbering system (system generated). Once GRN is made as per P.O quantity then P.O is automatically closed
- ✓ The GRN is printed in a 1+1 stationary attached to 2 copies of purchase order
- ✓ GRN is checked and authorized by the head of the purchase department.
- ✓ Once GRN is verified, signed and authorized by the manager – central store undergoes following documentation as follows :-
  - Original set of GRN and challan is sent to the finance department for processing the payment.
  - Duplicate copy of GRN and challan is filed in GRN file serially.

PROCESS FLOW CHART FOR EXPIRY AND BREAKAGE :- **[flow chart 11]**

Check the expiry while issuing the indent orders or every three months

⇩

List of expiry and near expiry (3 months)

⇩

Sorting and separation of expiry material

⇩

Return material to respective vendors

⇩

Replacement / credit notes

P. MARKETING & PUBLIC RELATION DEPARTMENT

Goal: - creation of the right image for the hospital among public and promoting the business interests of the hospital

Functions of marketing department: -

1. Identifying different target segments among the public to focus the efforts.
2. Identifying different segment specific marketing strategies.
3. Identifying different emerging trends in customer attitudes and behaviors.
4. On the basis of marketing research, suggesting the management the development of new, more profitable services or repacking the existing services.
5. Selling hospital services to prospective clients.
6. Cultivating new clients/organizations for empanelment of the hospital by them.

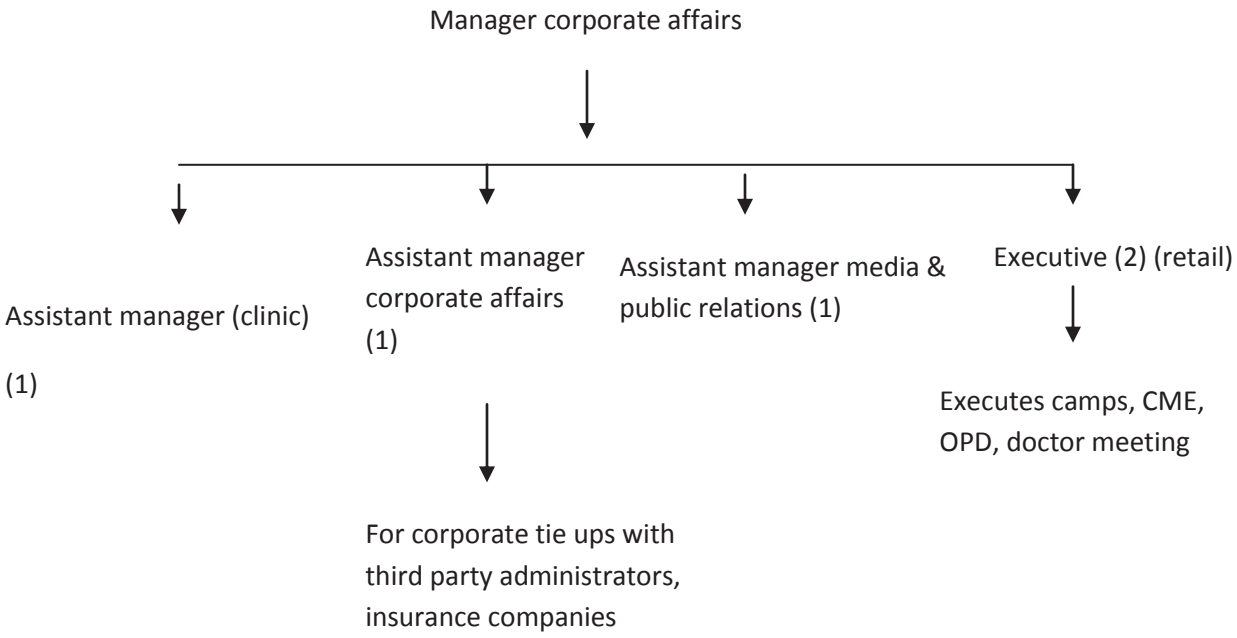
Functions of public relation department

1. Organizing campaigns for public information about the hospital, its mission, services available and high quality standards achieved.
2. Issue press statement after approval of the CEO.
3. Issue of brochures and handouts about the hospital, the services available, news bulletins about the activities in the hospital with the purpose of informing the public more and more about the hospital and excellence of the services provided.
4. Building a positive relationship with and through media.

Location: - situated on lower ground floor near quality assurance department.

Operational timings: - 18x 7

Organogram



Q. BIOMEDICAL ENGINEERING DEPARTMENT

Goal: - to close the gap between engineering and medicine. It combines the design and problem solving skills of engineering with medical and biological sciences to improve healthcare diagnosis, monitoring and therapy.

Location: - situated on lower ground floor

Manpower: -Senior biomedical engineer (1), bio medical engineer (1)

Operational timings:- 9 am to 5 pm. For one week each staff is appointed for on call service after 5pm till 9 am.

Scope of services:-

1. To purchase the best quality equipments for all departments of the hospital. purchase department sends the vendors to biomedical engineering department to choose the best quality equipment.
2. To codify each and every equipment of the hospital and maintaining their records.
3. Maintenance of the equipments.
4. There are total 500 equipments in the hospital. For half of the instruments senior biomedical engineer is the primary technician and for another half biomedical engineer is the primary technician. If the primary technician is not available then secondary technician look after the equipments.

IV.CLINICAL DEPARTMENTS OF THE HOSPITAL

i. ACCIDENT & EMERGENCY DEPARTMENT

It is also called as **Casualty department**

Goal: - To provide immediate and correct life-saving treatment at all times and for all situations.

Definition of medical emergency

Medical emergency is a situation when patient requires urgent and high quality medical care to prevent loss of life or limb and / or to initiate action for the restoration of normal healthy life.

Functions of emergency department

This department is one of the most vital and sensitive components of acute medical care services in the hospital. the department provide non-stop services round the clock and performs following functions:-

1. Prompt reception of all emergency cases and the assessment of their clinical condition.
2. Immediate resuscitation and other life support treatment measures.
3. Starting the investigations and treatment by the specialists concerned and calling other/senior specialists for management of the cases as required.
4. Admitting the patients requiring admission to the appropriate ward and sending back to home (after necessary investigations/treatment, observation) those not requiring admission.
5. Providing ambulance services for pre-hospital care and transportation of patient to and from hospital.
6. Filing the FIR, calling the police, preparing the detailed case records in medico legal cases.
7. Maintaining the records of all cases attended to in emergency department.
8. Functioning as the centre for reception, triage and management of mass casualties as the central and integral part of disaster plan.

Location: Lower ground Floor C block near Radiology department.

Entrance: Separate entry directly from the main road.

Organogram:

Emergency Incharge (1)
↓
Emergency Medical Officer (3)
↓
Nurses (2)
↓
General duty assistant (2)
↓
Housekeeping staff (4)

Specialty Doctors: On Call

Operational timings: - 24x7

Infra structure

Table I.a Emergency is divided into 3 Zones based on Triage of patients.

Red (Priority- 1)	Yellow (Priority -2)	Green (Priority -3)
• Chronic self limiting disorder etc. • Patient has life threatening injuries or conditions that are critical. • Survival with immediate treatment. Ex: Respiratory, Arrest	• Patient requires definite treatment but no immediate threat to life exists. Ex: Acute abdominal pain, acute Renal failure, acute asthmatic attack	• Patient having minimal injuries or minor conditions and ambulation. Ex: Abrasion &superficial.

Emergency department of the hospital is having six areas

1. RED AREA
   Is having three beds. Each bed is having:-

- Monitor
- Ventilator
- Slots for medical gases (oxygen, suction and clean air)
- Medicine rack

Other than this, red area has ECG Machine, Cardiac Defibrillator, crash cart, Nebulization machine, Bronchoscopy bed, Oxygen cylinder, Needle discarder.

2. YELLOW AREA

Is having three beds. Each bed is having:-

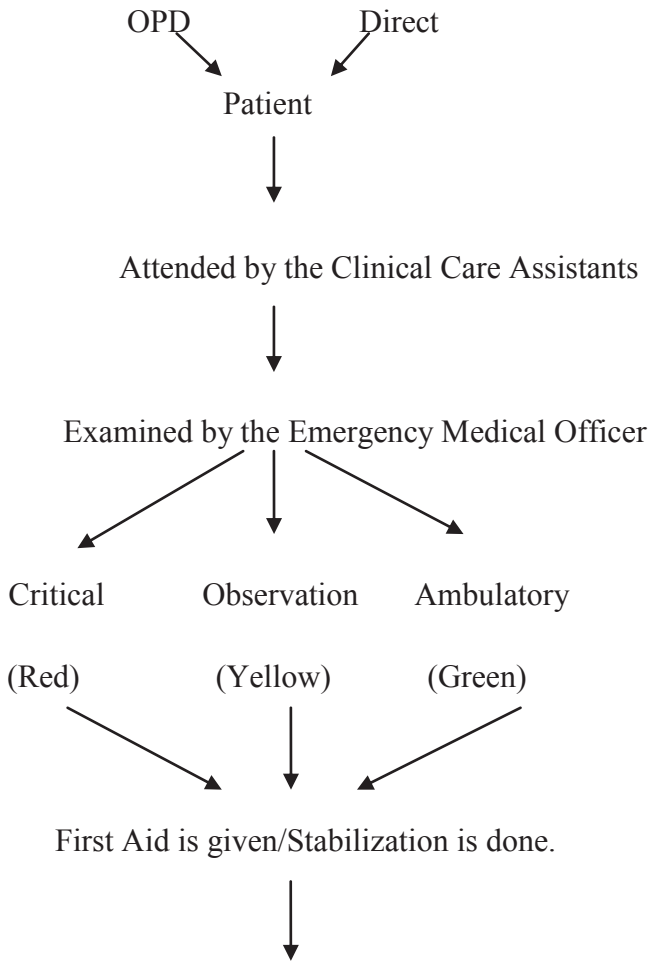
- I/V stand
- Slots for medical gases
- Medicine rack

3. GREEN AREA

This area has three beds. Each bed has slots for medical gases and medicine rack.

4. MLC EXAMINATION AREA
5. NURSING STATION
6. STORE: - For the storage of emergency medicines and consumables.

Process flow in case of disaster [flow char 12]



Specialty Doctor called if needed.

Attendants meanwhile get Registration done & depending on their wish/condition of patient

Admission Instructions/Medications Referral

& sent

Ambulance Services: - Are outsourced.

Advanced Life Support ambulance -2

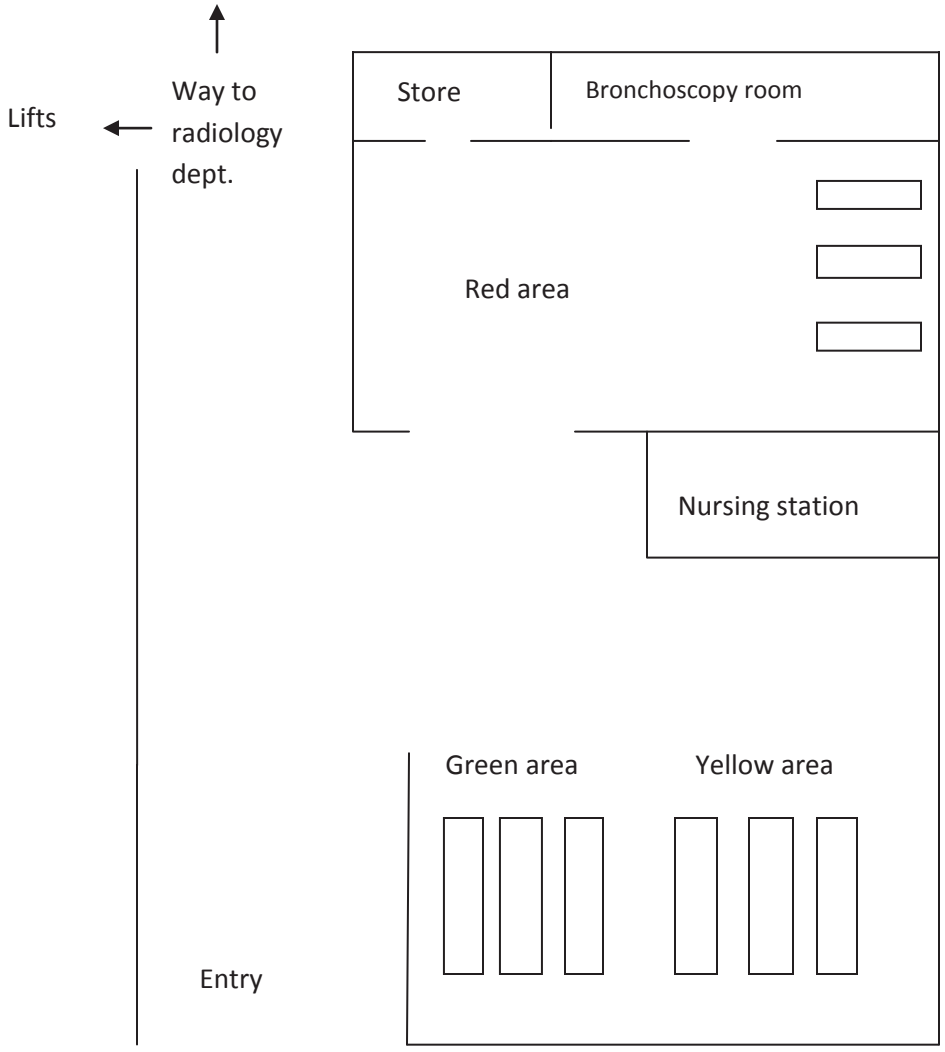
It is provided with ventilator, defibrillator, ECG, monitor and syringe pump. It has one driver, one personal staff of private company and one emergency staff of hospital.

In critical cases medical officer of emergency department and nursing staff of the hospital are also available.

Basic Life Support ambulance -1

It is provide with oxygen cylinder. It has one driver and male/female emergency staff. Emergency nursing staff checks daily the level of inventory and functioning of machine in advanced life support ambulance.

Layout: - figure I.3



ii. CENTRAL STERILE SUPPLY DEPARTMENT (CSSD)

Goal: - To provide an efficient, economic, continuous and quality supply of sterile materials to various areas of the hospital with the ultimate objective of ensuring high quality patient care.

Functions: -

1. Receiving unsterile instruments, equipment and linen from OTs and wards.
2. Sorting out items.
3. Washing, disinfection and drying.
4. Checking and packing of sets/trays/instruments.
5. Sterilization of all the items received, by using appropriate techniques applicable to the items.
6. Storage and issue of the sterilized items to wards and OTs.
7. Maintaining records of the stores received, processed and issued.
8. Validation of effectiveness of sterilization techniques.
9. Training of staff in the techniques of sterilization.

Location: - C-block of lower ground floor near purchase department.

Operational timings: - 24X7

Shifts: - of clinical care assistants = morning shift: 8am to 2 pm (2), evening shift: 2 pm to 8 pm (2), night shift: 8 pm to 8 am (2).

Shift of CSSD incharge = 9 am to 5 pm

Organogram: -

CSSD Incharge

↓

OT Technicians (8)

(In 3 shifts 2 in each shift and 2 relievers)

↓

Housekeeping Staff (3)
(1 in each shift)

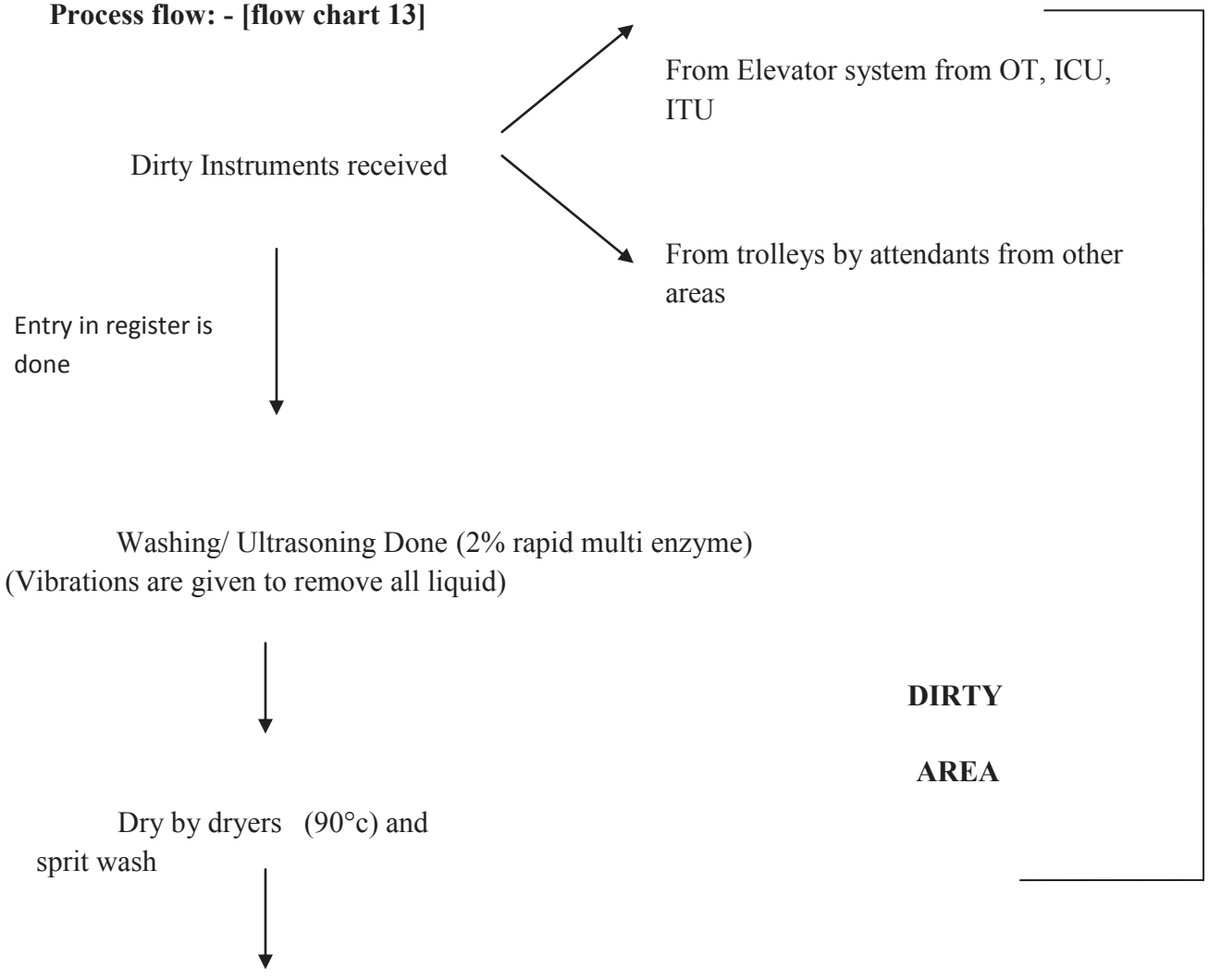
Total Area: the CSSD is divided into three zones: -

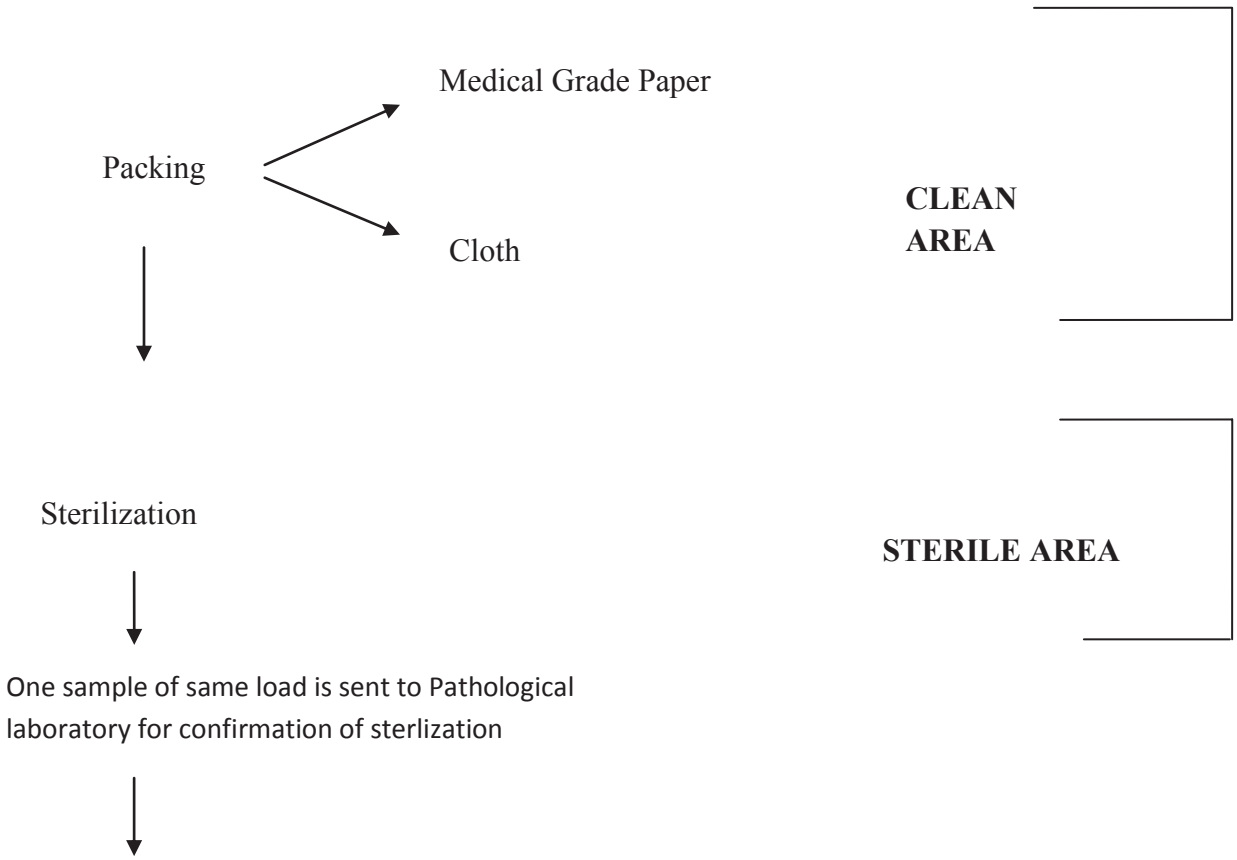
- Dirty area
- Clean area
- Sterile Area

Major Equipments:

- Autoclave Large(450 litre)- 2 Temp-134°c & pressure 2.5kg
- Autoclave small 1(300 litre)-1 Temp-134°c & pressure 2.5kg
- Air Guns -2
- EthyleneTrioxide Sterilizer-1
- Packing machines/Sealing machines-2

Process flow: - [flow chart 13]





Instruments are issued to respective departments.

- The pack of sterilized instrument contains batch no., no. of instruments, and signature of CSSD incharge.
- The pack of sterilized instrument is opened by scrub nurse and count in front of surgeon.

Check of sterilization:

- **Bowie and Dick test**- Color changes Yellow-Black (Autoclave) Green (Ethylene Trioxide). It is carried out every day to check for pressure, temperature and vaccum. It is a 3.5 minutes cycle.
- **Leak test=** is carried out every morning to check for any leakage of steam.
- **Batch monitoring test**

After confirmation of proper color change it can be only 60% assured that the instruments are sterilized. 100% confirmation is given by laboratory tests.

All through the entire procedure unidirectional flow is maintained.

Records maintained in CSSD: - register for leak test, every day record of Bowie and Dick test, every cycle's total time record and per hour record of Batch monitoring test.

Scope of services: -

1. Provide all the departments with an adequate supply of reliably sterilized material, for routine and emergency use, thus helping to reduce the incidence of hospital acquired infections.
2. Supervise and provide facilities for the bulk-sterlization of materials.
3. Pool in the equipment resource of the hospital for economical and effective utilization under adequate managerial and technical supervision.
4. Training of the nursing staff about infection control methods.

iii. DIALYSIS UNIT

Goal: - To provide artificial replacement for lost kidney functions (renal replacement therapy) in patients with acute Renal Failure or chronic Renal Failure.

Patients availing the services are generally day care patients with small percentage of those admitted because of other problem and having concurrent renal failure also, in those cases dialysis is carried out in respective ICUs.

Location: - Situated on lower ground floor near physiotherapy department.

Manpower: - dialysis unit incharge (1), nursing staff (3), technician (6), clinical care assistant (2), housekeeping staff (5).

Nursing staff reports to nursing supervisor, technicians reports to deputy medical superintendent and clinical care assistant and housekeeping staff reports to housekeeping supervisor.

Operational timings: - 7 am to 8 pm

Shifts of clinical care assistants= 7 am to 7 pm

Shifts of housekeeping staff = 7am to 3 pm and 12 pm to 8 pm

Infrastructure: - Heamodialysis machine (15 in dialysis unit and one in ICU), number of beds= 14 (out of which 3 beds are kept in isolation area for HIV positive, hepatitis B & C patients), scrub area, instrument washing area, store.

Process flow: -

- Patients requiring dialysis twice a week are given appointment on Monday & Thursday, Tuesday & Friday and Wednesday and Saturday.
- Patients requiring dialysis thrice a week are given appointment on Monday, Wednesday and Saturday.
- Patients requiring dialysis once a week are given appointment on Thursday.
- For normal patients (patients without HIV& Hepatitis infection) the dialyzer tubing are reused for five time
- For HIV & Hepatitis infected patients, dialyzer tubing are used only once and then thrown out. These patients are kept in isolated chamber.

iv. **PHYSIOTHERAPY DEPARTMENT**

Goal: - To provide rehabilitation services including all measures aimed at reducing the impact of disability and handicapping condition and at enabling the disabled for active participation in the main stream of community.

Location: - Situated on the lower ground floor near dialysis unit

Operational timings: - 8am to 9 pm

Shifts: - Morning shift 8 am to 3 pm, General shift 9am to 5 pm and evening shift 2pm to 9 pm.

Manpower: - senior consultant physiotherapist {Masters in physiotherapy} (3), junior consultant physiotherapist {Bachelors in physiotherapy} (1), housekeeping staff (1)

Infrastructure: - inferential therapy, ultra sound therapy, muscle stimulator therapy, traction unit, hot moist pack, wax therapy short wave diathermy equipment and gymnasium equipments.

Process flow: -

- Physiotherapy department works in close coordination with orthopedics, neurology, cardiology and gynecology departments of the hospital.
- Whenever there is OPD of respective departments, if there is need for physiotherapist for a particular case, the senior consultant physiotherapist gets the call from respective consultant.
- All OPD and ICU patients are dealt by senior consultant physiotherapist. The first assessment of all the patients is done by senior consultant physiotherapist.
- All IPD patients are dealt by junior consultant physiotherapist.

Scope of services: -

1. Aid to physician in early ambulation of patients.
2. Aid to patients in improvement of scope of self care activities.
3. Adjunctive and supportive treatment for many pathological conditions for speedy recovery.
4. Planning and follow up program after discharge.

v. NON INVASIVE CARDIOLOGY DEPARTMENT

Goal: - early diagnosis of the coronary artery disease.

Location: - located on the ground floor near cardiac OPD.

Operational timing: - 9 am to 5 pm.

Manpower: - non-invasive cardiology technician (4), housekeeping staff (1), barber (1)

Infrastructure : - Tread mill test machine (2), Electrocardiogram machine (2), Holter monitor (2) and pulmonary function test machine (1), defibrillator and crash cart.

Process flow: -

- Consultant advice patient to go for a particular non invasive cardiology test for the confirmation of cardiac disease according to the condition of patient.
- Patient comes to non-invasive cardiology department and show the prescription of consultant to the receptionist.
- Receptionist asks the patient to change his/her clothes.
- Chest of male patients is shaved by the barber before undergoing for the test.
- For Tread Mill Test = electrodes are attached to the chest and a preprocedure blood pressure is measured. After that patient is made to walk on the treadmill to achieve target heart rate (220 – age of the patient). Tread Mill Test machine works on Bruce protocol for normal patients (in every 3 minutes height and speed increases) and for physically challenged patients, it works on Modified Bruce protocol (i.e. in every 5 minutes height and speed increases). A recovery period of 3 minutes is taken for normal patients and recovery period of 6 minutes is taken for physically challenged patients. Whole process of TMT takes approximately 25 minutes. Report is given hand to hand.
- For Electrocardiogram = take approximately 2-3 minutes and report is generated in 2 minutes.
- Holter monitor is installed to the patient for 24 hour electrocardiogram monitoring.

vi. CARDIAC CATHERIZATION LABORATORY (CATH Lab)

Goal:- To diagnose the actual location of block in blood vessel and removal of the blockage under high standard aseptic conditions.

Location: - situated on ground floor near cardiac OPD.

Operational timings: - 8 am to 8 pm

Manpower: -

- Nursing staff = 3
- Cardiac instrument technologist =3
- Coordinator =1
- Clinical Care Assistant = 1
- Housekeeping staff =1 per shift (two shifts)

Infrastructure: -

a) Recovery area

Here pre and post procedure patients are kept, to monitor their conditions.

b) Cath lab (one in number)

It is the place where invasive cardiology procedures are done. It has following infrastructure- Patient table**,** Monitors (3){First monitor for live recording of heart, Second monitor for selection of desired view of heart**,** Third monitor for display of vital signs of patient}, ECG machine**,** C-arm machine**,** Anesthesia machine, EP study monitors(2**).**

Soft ware used ALURA XPER FD 10

c) Console room

From this room the monitoring of the process is done. The live recording of procedure and monitoring of vital signs of patient is done.

d) Store room

Thirty procedure's inventory is maintained at a time.

Process flow: -

Coordinator checks on computer system for the new patient admission in IPD who are suggested for cath lab procedure and sets the schedule along with informing the cardiologist and cath lab team

↓

Patient is brought from the CCU prior to procedure; patient's clothes are changed and put into recovery room for monitoring the vital signs

↓

Patient is shifted to cath lab and his/her angiography is done

↓

Cardiologist counsels the patient about the present condition and desired treatment procedure and coordinator counsels about the treatment charges.

↓

If patient agrees and deposit fee, the desired procedure is carried out

↓

Patient is shifted to recovery room for monitoring of the vitals and then shifted to CCU

Scope of services: -

1) Reception and pre-operative monitoring of patients.
2) To carry out angiography, to detect location of blockage in the blood vessel
3) To carry out angioplasty, Electrophysiological study (EP study), Cath study, Arterial septal defect closure, Ventricular septal defect closure, Patent ductus artriosus closure by strictly following the protocol of asepsis.
4) To maintain high level of patient and staff safety.

vii. PATHOLOGY LABORATORY

Goal: - To generate patient related information that enhances delivery of health care and constitutes an important link.

Location: on the ground floor near blood bank.

Operational timings: - 24x7

Manpower: - Consultant microbiologist (1), consultant pathologist (1), junior microbiologist (1), laboratory technicians (9), phlebotomist (2), report dispatcher (1), clinical care assistant (2), housekeeping staff (1).

Infrastructure: - biochemistry laboratory, hematology laboratory, microbiology laboratory, histopathology laboratory and serology laboratory.

Scope of services: -

1. As a vital aid to diagnosis.
2. Provision of baseline data to monitor the progress of the cases.
3. Provision of measurable values/ criteria for evaluation of effectiveness of treatment.
4. Validation of diagnosis through tissue study.
5. Early detection and prevention of diseases in asymptomatic cases.

viii. BLOOD BANK

Goal: - To provide adequate quantity of safe blood for the patients in a cost-effective and coordinated manner.

Location: - Situated on the ground floor near pathology laboratory.

Operational timing: - 24x7, donation time is between 9am to 5pm.

Manpower: - medical officer incharge, lab technician (3), staff nurse (2), housekeeping staff (1) {staff cover after 5 pm}.

Infrastructure: -

- Consultant room
- Medical examination and counseling area
- Donor room/ Bleeding room = it has one tube sealer and two blood collection monitors. Here blood is taken from the donor. At a time 350 ml blood is taken from the donor.

- Serology laboratory = here cross matching and checking of blood sample for HIV and HBs reactivity is carried out. It has a **Transmissible transfusion infection room (TTI Room) which have** Auto analyzer (for HIV reactivity and T3,T4 and Thyroid stimulating hormone testing) (more sensitive than ELISA), Vitreous ECI (Enhanced chemo luminescence Immunoessence) For Immunoglobulin, Blood bank refrigerator (2), VDRL shaker, Centrifugal Machine, Incubator,

Process flow: - there are 2 Types of donors: **[flow chart 14]**

1. **Voluntary donor:** voluntarily donates blood.
2. **Replacement donor:** donate blood in exchange of blood for their relatives.
3. **Direct donor**

Patient relative who wants to donate blood walks in the blood bank/ Voluntary donors

↓

Blood bank nurse give him/her a form to fill

↓

Nurse does an entry in register

↓

Medical Examination/ counseling Nurse takes a small sample of blood to check donor's blood group and hemoglobin (Consent)

↓

Sample of blood taken both in EDTA and Plain bulk)

↓

Donor kept under observation for 45 minutes

↓

Sample sent to the serology lab (All test are done)

↓

Checked for HIV, HBs Ag reactivity

Scope of services: -

1. Selection of voluntary donors to determine suitability for donation history and medical examination.
2. Blood collection in an aseptic manner.
3. Screening of collected blood for various blood borne diseases.
4. Optimum storage of blood for specific duration of time so as to ensure availability during emergency.
5. Record keeping such as Issue register, Master register, Cross match Register, Destruction register, Transmissible transfusion inspection register.
6. Training of medical and para-medical staff.
7. To develop and nurture the pool of healthy voluntary donors.

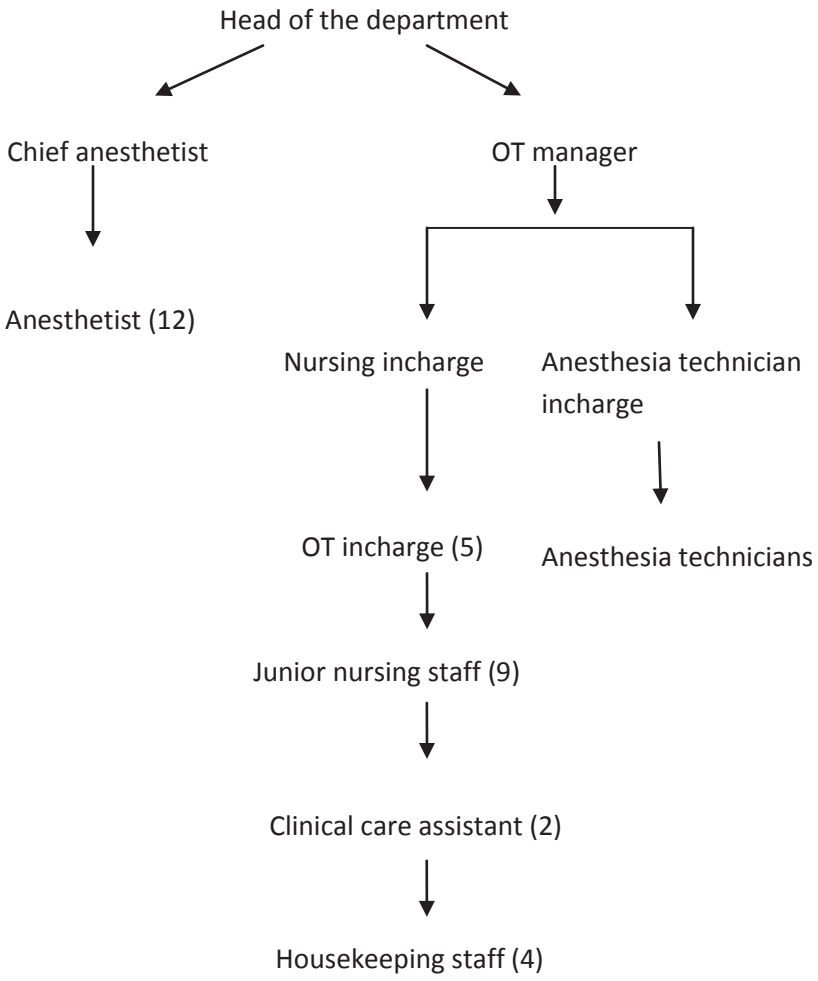
ix. OPERATION THEATRE DEPARTMENT

Goal: - To carry out life saving or life improving procedures on human body by invasive methods under strict aseptic conditions in a controlled environment by specially trained personnel to promote healing and cure with maximum safety, comfort and economy.

Location: - Located on the first floor near ITU. It has easy access to lift.

Operational timings: - 9 am to 5 pm, emergency operations are carried out after 5 pm also.

Organogram: -



Infrastructure: - there are 5 OTs in this department and each OT is assigned to a particular specialty: -

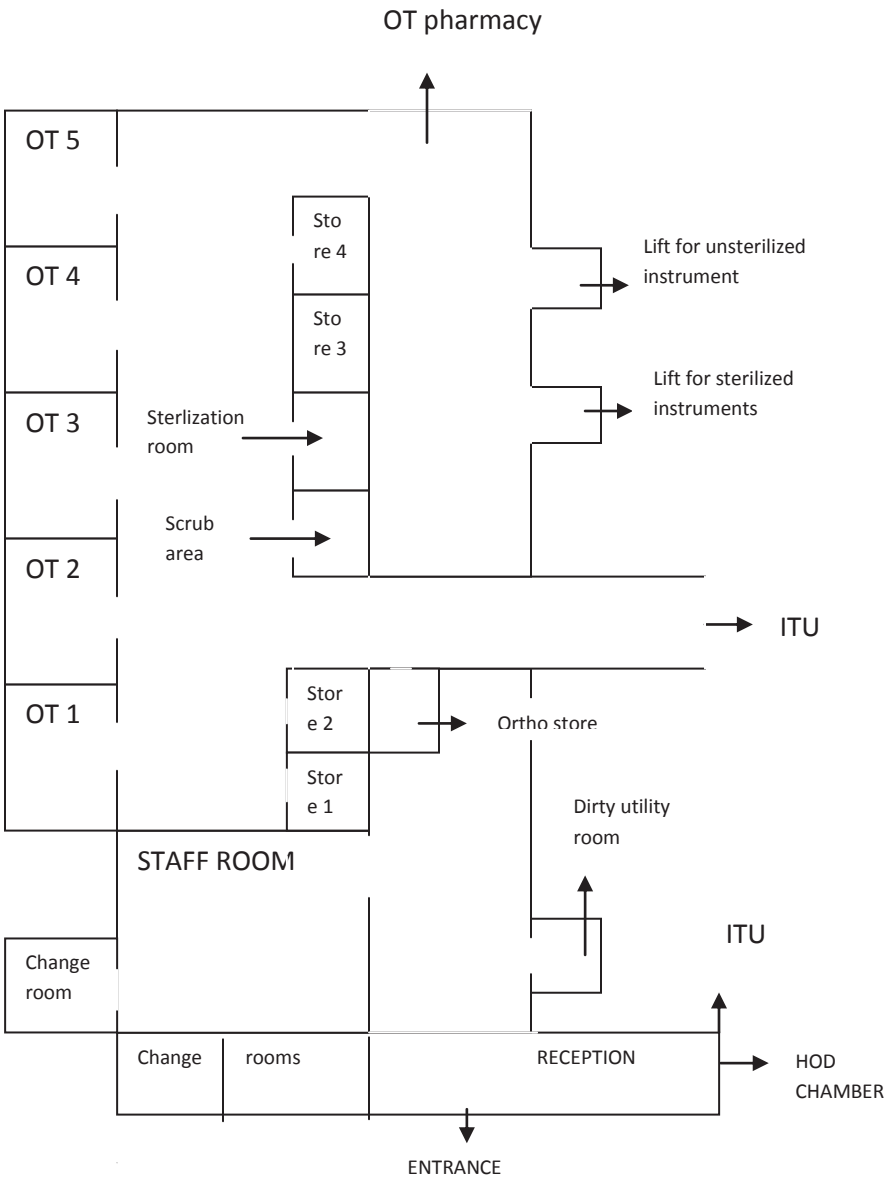
OT 1st is allotted as general OT, OT 2nd is allotted to urology/general surgery, OT 3rd is allotted to orthopedics and neurology, OT 4th and OT 5th is allotted to different units of cardiology.

There are four stores in the OT department where consumables and instruments are stored for surgeries. Store 1 &2 are for general surgery and cardiac surgeries, store 3 is for anesthesia and store 4 is for cardiac surgeries.

The OT department is divided into five distinct zones according to degrees of cleanliness in which the bacteriological count progressively diminishes from the outer to the inner zones and is maintained by a differential decreasing positive pressure ventilation gradient from inner zone to the outer zone: -

1. Protective zone : - includes reception, waiting area, changing room.
2. Clean zone: - includes pre-operative area, recovery room, staff room and stores.
3. Sterile zone: - includes operation theatre.
4. Disposal zone: - includes dirty utility room and lift for unsterilized instrument.

Layout: - **figure I.4**



Scope of services: -

1. Reception and pre-operative supervision of the patients.
2. Verification of patient's identity, marking of correct operating site and of operating procedure to be performed, by anesthetist, operating surgeon, and OT nurse before preoperative cleaning and draping of patient on the basis of clinical examination of the patients, medical records and radiological images, preoperative nursing evaluation notes and informed consents.
3. Maintaining high standards of asepsis.
4. Maintaining high level of functional efficiency and safety for staff.
5. Optimize utilization of OT and staff time.
6. Monitoring and management of postoperative cases.

x. IN PATIENT DEPARTMENT

Includes: -

- ICUs
- Female Ward
- Male Ward
- Private & semi private wards
- ANC ward
- Post CTVS ward

I. Intensive Care Unit

Goal: - to provide an inpatient care unit with all the specialized facilities for intensive observation and monitoring round the clock, life saving procedures and specialized care and treatment by staff (nurses and doctors) specially trained in critical care with the help of critical care

equipments for sustaining life during the critical phase and nursing back to the level of health where the patient can be further managed in wards.

Types of ICUs in the hospital

1. Medical Intensive Care Unit (MICU)
2. Cardiac Care Unit (CCU)
3. Intensive Thoracic Care Unit (ITU)
4. Neonatal Intensive Care Unit (NICU)

Functions of ICU: -

1. Provision of inpatient services for the critically sick patients.
2. Continuous intensive observation and monitoring of all the vital parameters for the continuous assessment of the patient's clinical condition.
3. Specialized investigations and life saving procedures such as ventilator support (intubation/extubation), tracheotomy, haemodialysis.
4. Intensive and specialized nursing care required for the critically sick including the unconscious-requiring life support, spinal injury cases, head injury cases.

i. Medical Intensive Care Unit (MICU)

Location: - situated on the ground floor. It has easy excess from emergency department, OTs and wards through lift.

Manpower:- nursing incharge (1), shift incharge (3), nurse (21)

Total bed strength: -12 bedded

Bed nurse ratio: - 1.5:1

ii. Cardiac Care Unit (CCU)

Location: - situated on the ground floor. It has easy excess from emergency department, OTs and wards through lift.

Manpower: - nursing incharge (1), shift incharge (3), nurse (11)

Total bed strength: - 12 bedded

Bed nurse ratio: - 1.5:1

iii. Intensive Thoracic Care Unit (ITU)

Location: - Situated on the first floor near OT.

Manpower: - nursing incharge (1), shift incharge (3), nurse (25)

Total bed strength: - 11 bedded

Bed nurse ratio: - 1.5:1

iv.Neonatal ICU & Nursery

Location: - situated on first floor near Ante Natal Care ward, so that the mothers can come and feed the neonate.

Manpower: - incharge 1, shift incharge 3, nurse (4),

Bed strength: - 6 cribs (one in cath lab)

Bed nurse ratio 1.5: 1

Temperature maintained at 36.5 degree Celsius

Scope of services

- Constant nursing care and continuous cardiopulmonary and other support services for severely ill infants.
- Care of infants less than 1500 grams at birth.
- Ventilator support beyond that needed for immediate ventilator stabilization.
- Surgery and post operative care during the neo-natal period.
- Pharmacological stabilization of heart rate and blood pressure.
- Parenteral nutrition.

II. Female General Ward: -

Location: - situated on first floor near OT & ITU and labor OT. It has easy excess from CCU and MICU through lift.

Manpower: - nursing incharge (1), shift incharge (3), nurses (14)

Bed strength: - 33 bedded

Bed nurse ratio: - 5:1

III. Post Cardiac Thoracic Vascular Surgery Ward: -

Location: - situated on first floor near OT & ITU and labor OT.

Manpower: - incharge (1), shift incharge (3), nurses (4)

Bed strength: - 12 bedded

Bed nurse ratio: - 5:1

IV. **Ante Natal Care Ward:-**

Location: - situated on first floor near female general ward and NICU.

Manpower: - incharge (1), shift incharge (3), nurses (5)

Bed strength: - 8

Bed nurse ratio: - 5:1

V. Private And Semi Private Ward: -

Location: - situated on the first floor near OT and ITU and labor OT.

Manpower: - incharge (1), shift incharge (3), nurses (10)

Bed strength: - 27 bedded out of which 2 beds are for isolation (barrier and reverse barrier).

Bed nurse ratio**:** - 4:1

VI. Male General Ward- 1

Location: - situated on the ground floor. It has easy access from OT, MICU and CCU through lift.

Manpower: - incharge (1), shift incharge (3), nurses (10)

Bed strength: - 16 bedded

Bed nurse ratio**:** -5:1

VII. Male General Ward- 2

Location: - situated on the ground floor. It has easy access from OT, MICU and CCU through lift.

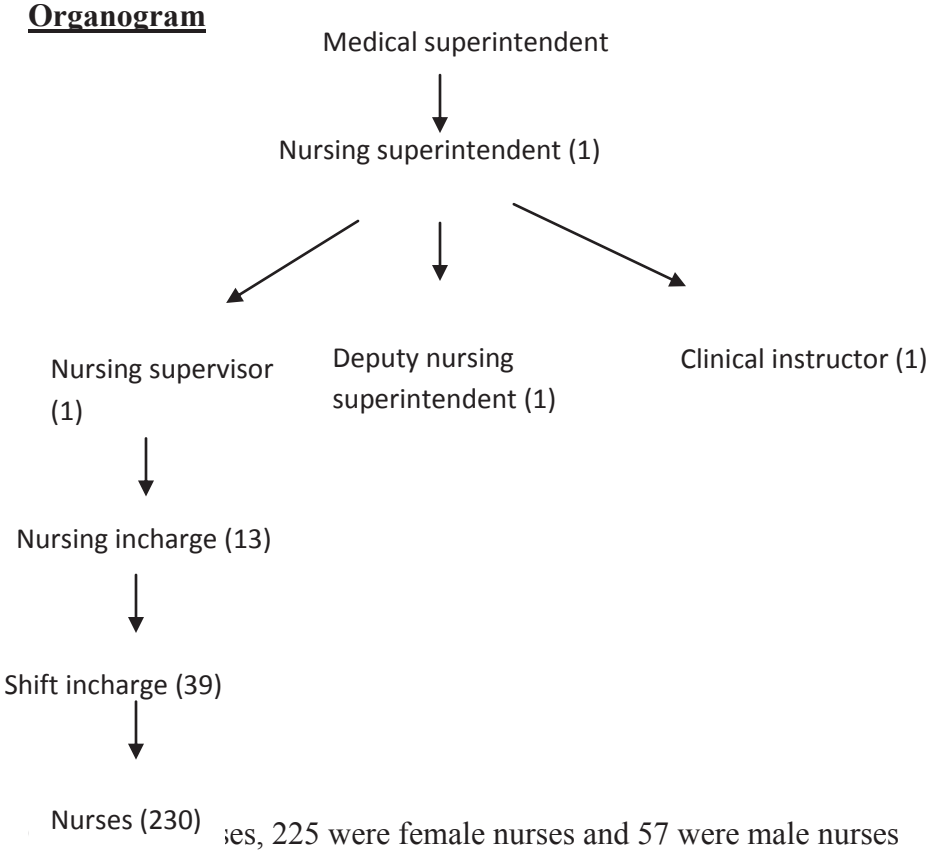
Manpower: - incharge (1), shift incharge (3), nurses (12)

Bed strength: - 19 bedded

Bed nurse ratio: - 5:1

xi. NURSING DEPARTMENT

Organogram



ses, 225 were female nurses and 57 were male nurses

RESPOSIBILITY OF GENERAL WARD NURSE

A. DIRECT PATIENT'S CARE

1. Admission and discharge of the patients
2. To maintain the personal hygiene of the patients, including bathing, care of mouth, back, nails, hair etc
3. Care of pressures points as needed
4. To assist the patient in elimination, offering and removing the bed pans and Urinals, Bed making
5. Assist in feeding the weak and debilitated patients.
6. Writing of diet sheet, Supervision and distribution of diets
7. Assist in physiotherapy, ambulation and rehabilitation.
8. Carry-out patient's teaching and demonstration according to the need.
9. Counseling the patients, and relatives/ patients and family education
10. Care of the dying and dead
11. Administration of Medicines and Injections to the patients
12. Assist in administration of intravenous injections, infusion and Transfusion
13. Observing, recording and reporting of vital signs e.g. T.P.R. and Blood pressure

14. Carry out technical procedures, such as Naso-gastric intubation, Gastric Gavage and Lavage, Oxygen Therapy, Dressing and Irrigation, Enema, Catheterization hot and cold applications, suction etc

15. Collecting, labeling and dispatch of specimens

16. Preparation for and assistance in clinical tests and medical/surgical procedures

17. Urine testing for sugar, and albumin

18. Observation, recording and reporting of all procedures and tests

19. Escorting serious patients to and from the department/wards for investigation

B. WARD MANAGEMENT**:**

1. Handing over and taking over charge of patients, and ward inventory in each shift.

2. Maintenance of therapeutic environment in the ward

3. Keeping the ward clean and tidy

4. Routine care and cleaning of dressing trolleys, cupboards apparatus, mackintosh etc

5. Care of clean and soiled linen.

6. Disinfection of linen, beds, floor and bed pans, and fumigation of rooms etc

7. Preparation of room, trolleys, and sets for procedures

8. Preparation of surgical supplies

9. Maintaining interpersonal relationship with patients, relatives and health team members

10. Orientation of new staff/students

11. Demonstration and guidance to student nurses

12. Participation in staff education and staff meetings

13. Participation in professional activities

14. Demonstration and supervision of domestic staff

15. Report about the medico-legal cases if any admitted in the ward. To keep the senior nursing officials informed of the happenings / in the ward like fire, absconding patients, theft etc.

16. Any other duty that may be assigned by In charge from time to time

Duties and responsibilities of an ICU nurse

A. DIRECT PATIENT'S CARE

1. Responsible for the care of all the patients that are admitted in the ICU
2. Responsible for all documentation as per policy
3. Care of pressures points as needed
4. The nurses have to keep checking on the patients constantly during their duty as all the patients are in critical condition
5. The nurses have to look after the life support equipment

6. They have to assist the doctor during emergency procedures that are done in an ICU
7. They have to administer medicines to the patients as per the doctor's instructions
8. Care of the dying and dead
9. Carry out technical procedures, such as Naso-gastric intubation, Gastric Gavage and Lavage, Oxygen Therapy, Dressing and Irrigation, Enema, Catheterization hot and cold applications, suction etc

10. Collecting, labeling and dispatch of specimens
11. Assist in physiotherapy, ambulation and rehabilitation
12. To maintain the personal hygiene of the patients, including bathing, care of mouth, back, nails, hair etc

B. WARD MANAGEMENT:

1. Handing over and taking over charge of patients, and ward inventory in each shift.
2. Routine care and cleaning of dressing trolleys, cupboards apparatus, mackintosh etc
3. Keeping the ward clean and tidy
4. Disinfection of linen, beds, floor and bed pans, and fumigation of rooms etc

5. Follow all infection control policy as per rule

6. Maintaining interpersonal relationship with patients, relatives and health team members

7. Preparation of room, trolleys, and sets for procedures
8. Any other duty that may be assigned by In charge from time to time
9. Maintenance of therapeutic environment in the ward

DUTIES AND RESPONSIBILITIES OF AN OPERATING ROOM NURSE JOB DESCRIPTION

1. Assist the surgeons during surgery, and they have to also coordinate with surgical technicians
2. Sterilize all the surgical equipment before and after the surgery
3. operating nurses have to do an instrument check before and after the surgery
4. prepare the patients before the surgery and wheel them in to the operation theatre
5. observe the patient after the surgery and ensure that they wake up from the anesthesia
6. Opens all sterile packs and supplies according to aseptic technique.
7. Observes patient for changes in condition
8. Ensures all medications are administered and charted according to established policies and procedures.
9. Cares for specimens and cultures as directed by set policies and procedures
10. Maintains records of procedure and reports any unusual occurrences
11. Accompanies patient to ICU and reports to nurse on patient, procedure, and special happenings to ensure continuity of care.
12. Provides for psychological needs of patient.
13. Assists in control and maintenance of supplies and equipment.
14. Assists in scheduling of operative procedures.
15. Ensures clean, safe environment through continued alertness to safety and explosive hazards and aseptic techniques.

xii. RADIOLOGY DEPARTMENT

Goal: - To assist the clinician in the diagnosis and treatment of diseases.

Functions of medical imaging department:- it is to assist the clinician in the diagnosis and treatment of diseases through the use of X-Ray, Computer Tomography, Mammography and Ultra Sonography.

Location: C block of lower ground floor near emergency department. The department is situated in the corner of the building to meet the **Atomic Energy Regulatory Board** rule of designing.

Manpower:

1. Radiologists = 4
2. X-Ray technician and mammography technician = 5
3. MRI technician = 1
4. CT technician = 1
5. Receptionist = 1
6. Housekeeping staff = 1
7. Clinical care assistant = 1

Operational timings: - 9 am to 5 pm and one staff remains available at night for billing from 8 pm to 8 am.

After 5 pm support is available on call

Imaging services rendered

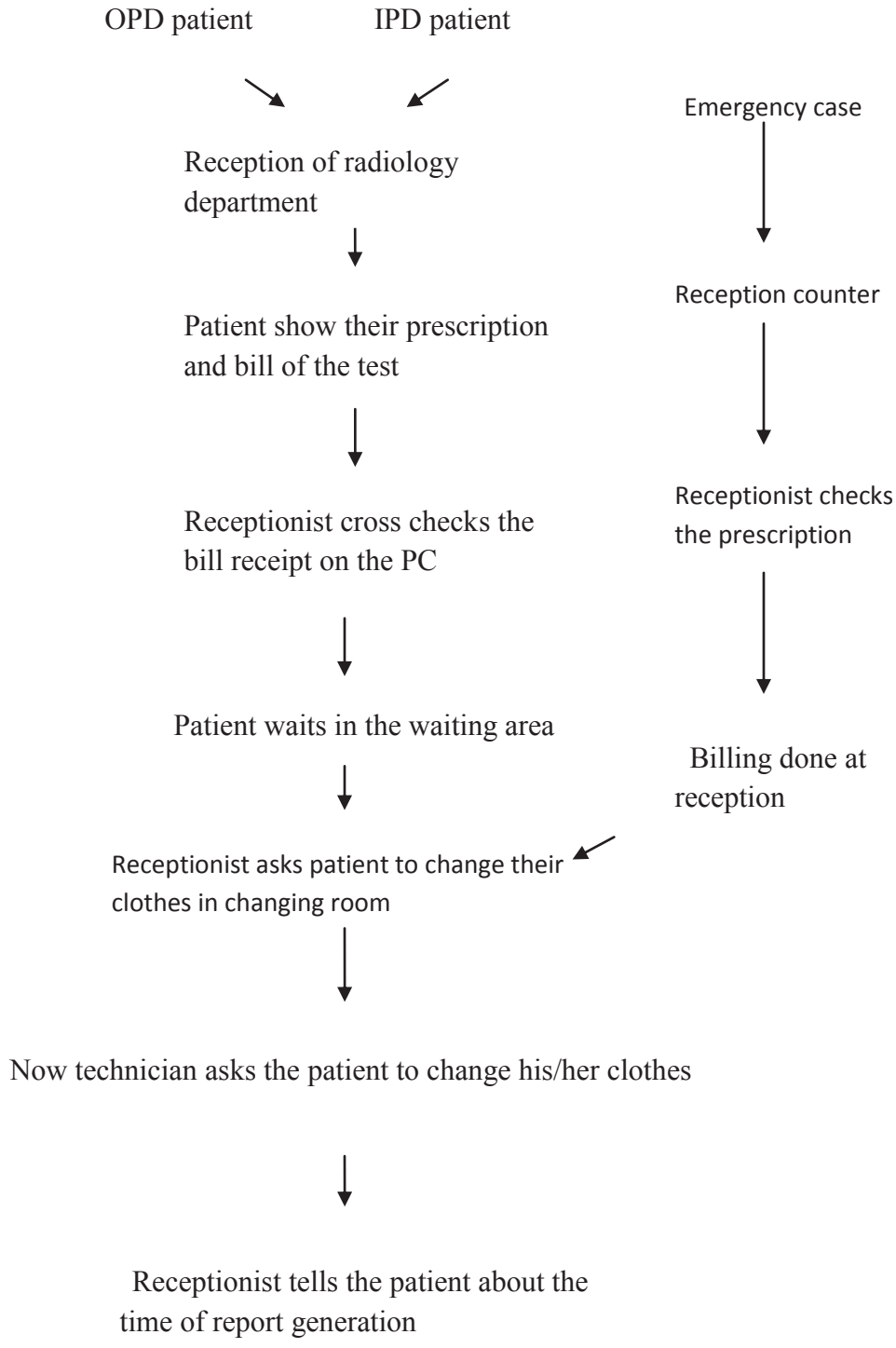
- X-Ray
- CT scan
- Mammography
- Ultra Sonography

Infrastructure: -

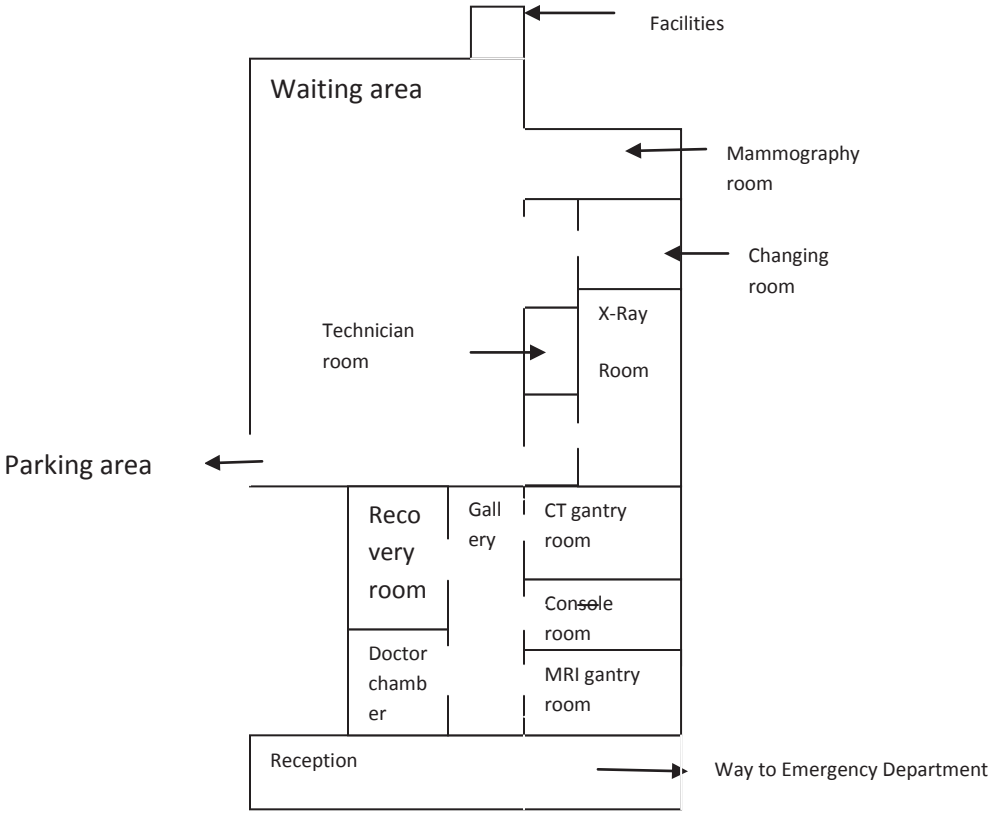
Department is divided into 8 areas: -

1. Reception area and waiting area: - Two receptionists sit here. Patients waits here for their turn.
2. Changing room: - for changing clothes for X-Ray, MRI and CT scan.
3. Gantry room for CT scan : - it has one CT scan machine of GE brand of 64 slice
4. Gantry room for MRI: - it has one MRI machine which is of GE brand and of 1.5 tesla
5. Console room:- Both CT scan and MRI are controlled through one console room. On the right side of the console room the CT scan gantry room is present and on the left side of the console room MRI gantry room is present. The CT scan technician and MRI technician sits in the console room. The area of the console room is approximately 900 sq feet. There are nine personal computers and one laptop, with two printers the console room. There are five table and five chairs in this room, with two smoke detectors on the roof.
6. X-Ray technician room: - here X-Ray technicians generate X-Ray reports.
7. X-Ray room: - for taking X-rays. It has one Fixed X-Ray machine of GE brand of 500 MA power and two Portable X-Ray machines of Allenger and GE brands and of 100 MA power each.
8. Mammography room: - It has one mammography machine of 100 MA power.

Process flow [flow chart 15]



Layout: - **figure I.5**



xiii. **MORTUARY**

Goal: - To provide a suitable space for temporary holding of the dead body, and handling over to next of kin.

- To provide facility for the safe custody of dead bodies in mortuary cabinets, both before and after postmortem examination in medico legal cases.
  Definition of Mortuary: - The facility for the holding of dead bodies, and viewing by authorized persons for identification purposes prior to handling over last rites
  Functions: -
  1. To hold dead bodies until burial can be arranged or cremation takes place.

2. To provide a place where a pathologist can investigate causes of death and make scientific investigations.
3. To allow viewing and identification by relatives and other people.

Location: - C- block of lower ground floor near linen store. It has separate exit and has close proximity with emergency department.

Operational timing: - 24X 7

Infrastructure: -

1. **Body store=** It the room where dead bodies are kept in mortuary cabinets. There are four mortuary cabinets. These cabinets open at 180^0 to allow the attendant to approach either side of the trolley. Temperature is maintained between 3.5 to 6.5^0 C.
2. **Autopsy/Postmortem room=** It has one autopsy table of stainless steel with sink.

Process flow: -

- Dead body of patient of ward/ICU is packed and shifted to mortuary through lift.
- Before shifting the dead body to mortuary, the nursing incharge, manager on duty, security supervisor and attendant have to sign on record as a proof.
- Here the dead body is kept in mortuary cabinet.
- During handovering the body to family members, manager on duty, security supervisor, housekeeping staff and attendant signs on the record.
- Close circuit camera is installed for proof.
- As per hospital norms, unidentified dead body can be kept for 72 hours in the hospital mortuary after that it is transferred to government hospital.
- In medico legal cases, dead body is handover to police

Layout

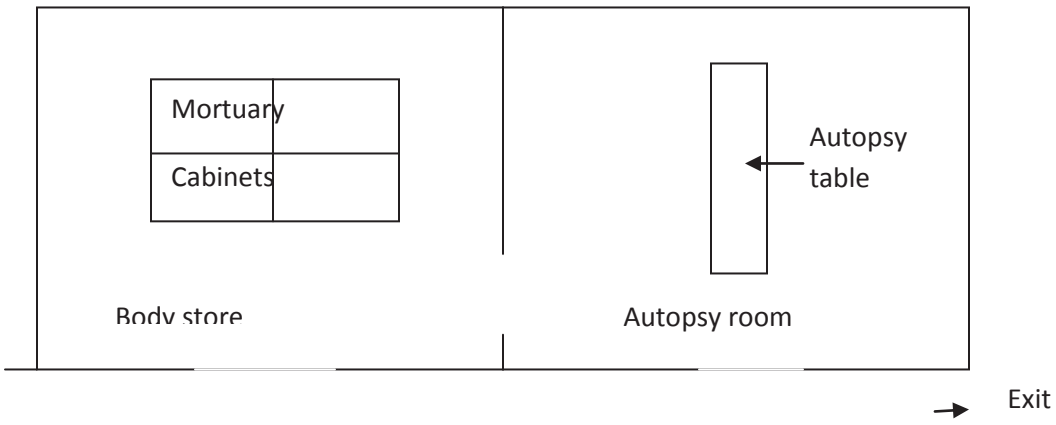


Table I.b **PROBLEM AREAS**

Major critical areas	Effect	Recommendations
Lack of proper signage in the hospital building	Patients and attendants get confused and creates chaos	Signage should be placed after every 15 meters.
Existing signage are only in English language	Becomes difficult for the layman to understand	Both Hindi and English signage should be used.
A common lift system for patients, management staff, clinical staff and for dead bodies	Chances of infection spread and many times it creates chaos	There should be a separate lift system for dead bodies, for patients.
No separate lift system from ward and ICUs to mortuary	Affects the mental condition of patients and their attendants.	There should be a separate lift system to mortuary from all wards and ICUs.
The physiotherapy department was situated on lower ground floor	Access to the department for the follow up patients was problematic	Physiotherapy department should be situated on the ground floor, so that follow up patients can easily access it
Attrition of nurses and house-keeping staff	Both clinical and non-clinical services are affected with this.	Rewards and recognition should be given to nursing staff and employees for the good performance.
Area of medical record department was less	Problems in storing the medical records	More area should be provided to the department and it should be shifted to lower ground floor near fire exit so that, in case of fire the fire should spread later.
Dirty mess and toilets	Chances of spread of infection by using dirty public toilets.	Regular surprise visits should be done by the respective floor coordinators.
The hospital building is horizontal	Problem in speedy interdepartmental connectivity eg. Pharmacy indent delivery delay etc.	More lifts and stairs should be connected to improve the interdepartmental connectivity
Emergency department in the lower ground floor and there is no direct entry gate to this department from the main road.	Emergency patients has to come from the common entry gate and has to come down on lower ground floor which may cause delay	Emergency department should have a separate entry and exit door from the main road.
Windows towards corridor were lacking in NICU	Infant's parents were not been able to see their child.	A window should be made towards the corridor.

All wards and ICUs were having centralized nursing station.	Nurse sitting at the nursing station is not been able to see all patients and nurse has to walk a long distance to visit a patient at another corner.	Decentralized nursing stations should be formed.
In OT, sometimes if a surgeon completes his/her surgery before estimated time, he prefer to perform another surgery in that time only, s.	Disturbs the schedule of other planned surgeries and also creates conflicts between surgeon	There should be strict norms for OT scheduling and only in case of emergency they can be changed.

Table I.c EMERGENCY CODES OF HOSPITAL

Code BLUE	Cardiac Arrest
Code RED	Internal Disaster/ Fire
Code ORANGE	External Disaster
Code PINK	Child Abduction
Code PURPLE	Imminent Physical Alteration

Study on

"INPATIENT DEPARTMENT PHARMACY TURN AROUND TIME"

1. INTRODUCTION

Premises licensed for the retail sale or the supply to the hospital outpatient department and/or inpatient areas of drugs which have qualified licensed persons indulged in compounding of drugs is called as Pharmacy [1]. Pharmacy is the department which is responsible for drugs in a hospital, including purchasing, supply and distribution.

It is one of the most important departments of the hospital. The basic objectives of inpatient (IP) pharmacy are procuring and delivering genuine medicines to the in-patients, delivering medicines to the wards, intensive care units (ICU) and operation theatre (OT) and taking back the drugs on discharge of the patients.

The pharmacy indents are the order of medicines which are put on the track from the wards, outpatient department (OPD), OT and ICU. It has details of the patient for whom the medicines are being ordered. It shows details like Patient name, MRN, Doctor's name who prescribed medicines, date, ward and time of ordering indent etc.

The major expectation from the pharmacy department is to make the right drug available at the right time. The delays in delivering of the medicines interrupt in smooth functioning of pharmacy. Delays can be disastrous and the effect can be horrifying in terms of mortality and morbidity and that is why continuous monitoring of the procedure and continuous efforts and dedication of the whole staff to improve the process is of utmost importance to vitalize the lifelines of the hospital that is "medicines."

2. REVIEW OF LITERATURE

Many studies have been done in the past in hospitals worldwide to know the possible reasons and solutions for drug delivering delay.

A Case study on drug dispensing delay (at Wishaw general hospital, Lanarkshire, UK in 2001) was done to know the possible reasons behind delay

in dispensing of drug in the wards of the hospital. The project team applied 'LEAN' concepts into the dispensary operation which enabled faster fulfillment of prescriptions and better management of dispensary resources [2].

A study on Improving Pharmacy Services (by Giddings. J Monica, Gray. L Amanda, Hannon. A Teri) was done at Lerdsin Hospital in 2005 with the goal to suggest improvements for Lerdsin Hospital's outpatient pharmacy, focusing on the areas of layout, equipment, and division of labor. After compiling the data, they formulated multiple solutions for renovating and reorganizing the pharmacy [3].

The study gave two recommendations. The first one uses minimal funding, making no structural changes and utilizes pre-existing equipments. The second layout incorporates structural changes and equipment replacement.

Study on Pharmacy Delay (by Gaur Shruti et al) done at Fortis Escorts hospital, Jaipur in 2011 for 121 indents. Aim of the study to know the possible causes behind the delay in dispensing of drugs for in-patients [4].

3. RESEARCH QUESTIONS

1) How the IP pharmacy department carries out dispensing of indents?
2) Whether there is delay in this procedure?
3) What are the possible reasons behind the delay?
4) What can be the possible solutions, if delay is there?

4. OBJECTIVES

1) To understand the basic functioning of the pharmacy department.
2) To trace and understand the delivery system of the IP pharmacy.
3) To calculate the average total time consumed in the process.
4) To figure out the major areas involved in consuming the time of delivering the medicines.
5) To trace the delays and the probable reasons behind the same.
6) To find out the possible solutions for the delay in drug delivery process.

5. METHODOLOGY

1) STUDY DESIGN

The study was divided in to two phases

First phase- an observational study was done for the understanding of the department and calculation of average time taken in each step.

Second phase – an analytical study was done for tracing the probable cause behind the delay in the process and to formulate the recommendations.

2) SAMPLING TECHNIQUE

The sampling technique was Non-Probability Quota Sampling method.

3) STUDY AREA

The study area for the study was the IP pharmacy department, female general ward, male general ward, semi private and private wards, ante natal clinic, male Cardiac thoracic vascular surgery ward, MICU and CCU of Narayana Hrudayalaya Hospital, Jaipur.

4) SAMPLE SIZE

160 indents were covered. Out of which 111 were from wards and 48 indents were from Intensive Care Unit (ICU). One indent was excluded because of incorrect entry

5) STUDY PERIOD

The first phase of the study was carried out for two days.

Second phase of the study was carried out for next 13 days.

6) SOURCE OF DATA

Primary data were taken for calculating the turnaround time for IP pharmacy and secondary data were taken from the software for calculating the number of indents per hour, number of indents per department and top eight consumables ordered between 20th and 27th April 2012.

6. ANALYSIS AND FINDINGS

PROCESS FLOW

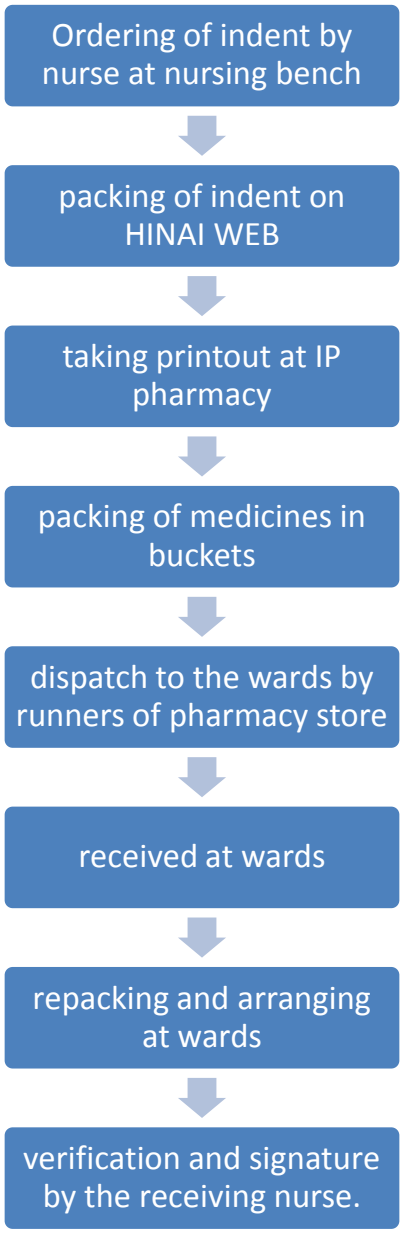
The software used in pharmacy store was HINAI WEB SYSTEM for all functioning.

The IP pharmacy receives all the orders of indents from wards and ICU(s).

TERMS GENERALLY USED

1) DISPENSE LAG: The time between ordering of indent and printing of indent is known as dispense lag. It is also known as system registration of the medicine.
2) PACKAGING TIME: The time consumed in physical packaging of the indents is known as Packaging Time.
3) DELIVERY TIME: The time consumed in the delivering of medicines from IP pharmacy to the respective wards/ ICU(s).
4) RECHECKING TIME: The time consumed in rechecking of the medicines ordered in the wards after the delivering of medicines in the wards/ICU(s).

process flow of IP pharmacy [flow chart 16]



The findings are encapsulated in the following way:-

1) Average time consumed in the delivery and the processes involved.
2) Peak hours of ordering indent vs. staff availability.
3) Average indents per patient per day.
4) Average indents per department per day.
5) Average indent per shift vs. no. of staff available.
6) Average number of items per indent.
7) List of consumables ordered the most. (routine items)

1) AVERAGE PROCESSING INVOLVED AND TIME LAGS IN INDENT DELIVERY:-

I. Average total time consumed (for indents of wards) = 106 minutes per indent
   a) Average dispense lag= 17 minutes per indent
   b) Average packaging time= 78 minutes per indent
   c) Average delivery time= 3 minutes per indent
   d) Average rechecking time = 5 minutes per indent

II. Average total time consumed (for indents of ICUs) = 109 minutes per indent
   a) Average dispense lag = 22 minutes per indent
   b) Average packaging time= 77 minutes per indent
   c) Average delivery time= 1 minute per indent
   d) Average rechecking time = 7 minutes per indent

- Observations regarding turnaround time
  a) Pharmacist has to do lot of things along with the packaging and delivering of the indents. Such as
     1. Attending phone calls from the wards.
     2. Receiving returned indents.
     3. Managing the work of runners.
     4. Help others to retrieve medicines.
     5. Cross checking, printing and sticking labels and signing of indents.

6. Sending the stock request to the main drug store.
7. Receiving and rechecking the stock issued by main drug store.
8. Maintain records.

b) Due to lack of manpower, more time is taken in dispensing medicines.
c) Most of the indents are of 1 or 2 items.
d) Access to the IP pharmacy store is poor.
e) Runners are less in number. So, they are not been able to deliver medicines to each ward individually. They have to wait for the indents to collect and then take them in bulk for related departments.
f) Some times 2 or 3 departments are covered at the same time.
g) At times runners have to wait for the lift.
h) As the medicines are taken together, time is wasted in repacking the medicines separately for each indent at the ward.
i) No proper training is given to the runners. So sometimes they deliver wrong medicines to wrong department.
j) Nurses take long time to recheck and receive the indents, as they are overloaded with work.
k) Sometime system shows the stock in IP Store but stock is not physically present in the store. In that case store staff has to directly issue the items from the main drug store. This increases the time consumed.
l) The layout of the IP store is not spacious. So sometimes it becomes difficult for the staff to store the drugs and consumables properly. The transfer of patients from CCU to Catherization lab is done via IP pharmacy, which hampers the work process of the department.
m) Soft ware hangs sometimes which delay the dispatch of indents.

2) PEAK HOURS OF ORDERING INDENT

Figure 1.62 Number of indents per hour

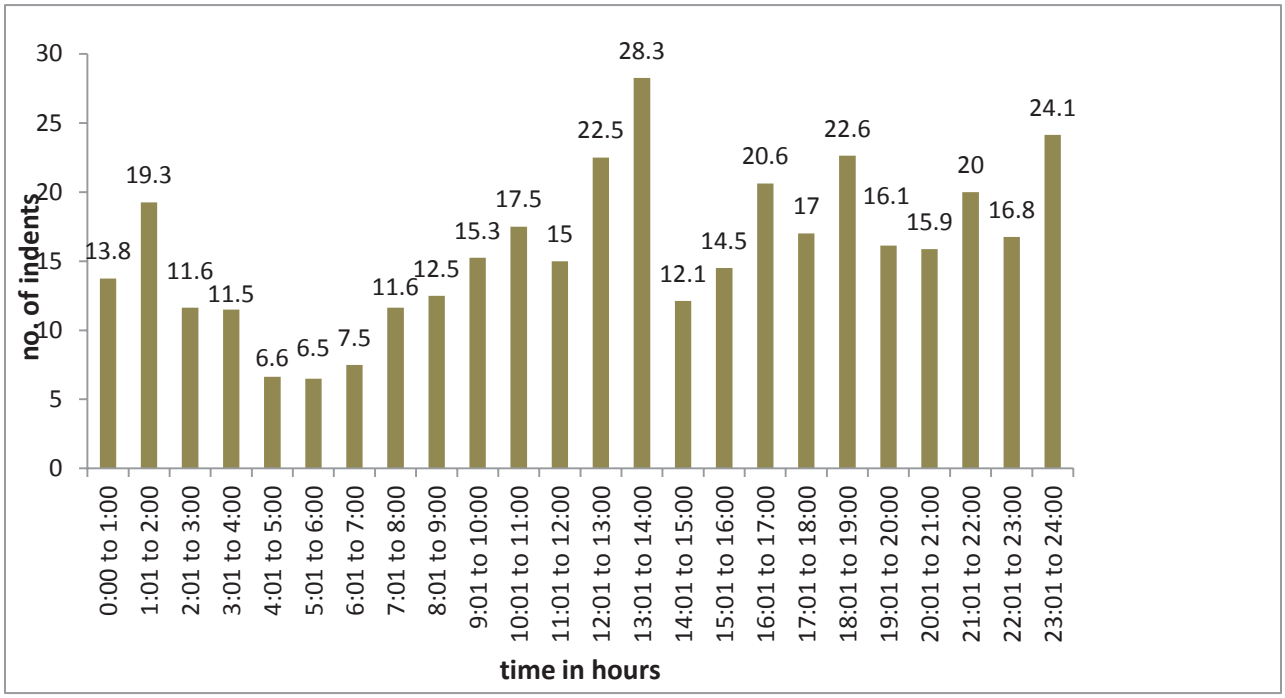
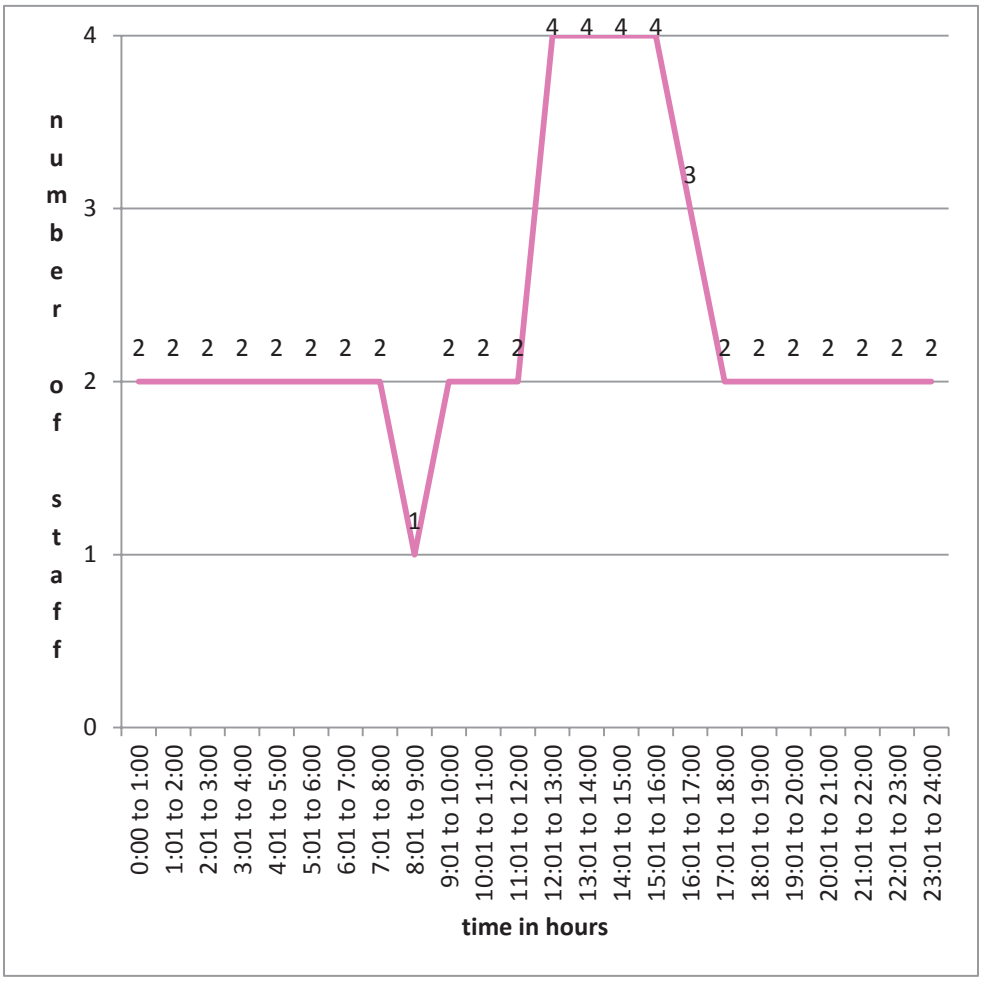


Figure 1.63 Staff availability per hour



As per figure 1.b, the second highest peak hours came out to be the ones around 11 pm to 12am and third highest peak hours 6 pm to 7pm and between 1 am to 2 am, with staff availability of only two.

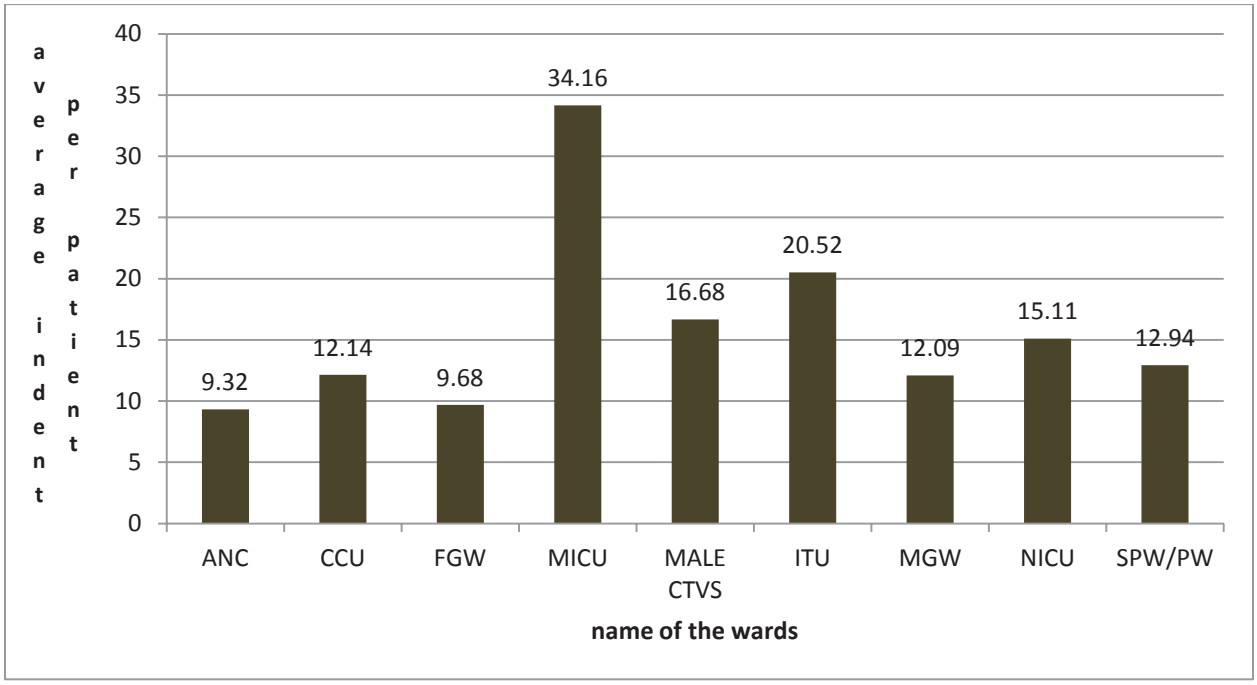
This may lead to increased work load on the available staff and can add up to the delays.

3) AVERAGE INDENTS PER PATIENT PER DAY

Data of the no. of indents ward wise of 8 days and total no. of patients per ward were taken from the system. The total no. of indents between 20th April 2012 and 27th April

2012 came out to be 10191. From the filtered data the average no. of indents per patient per day was calculated and it came out to be 15.85

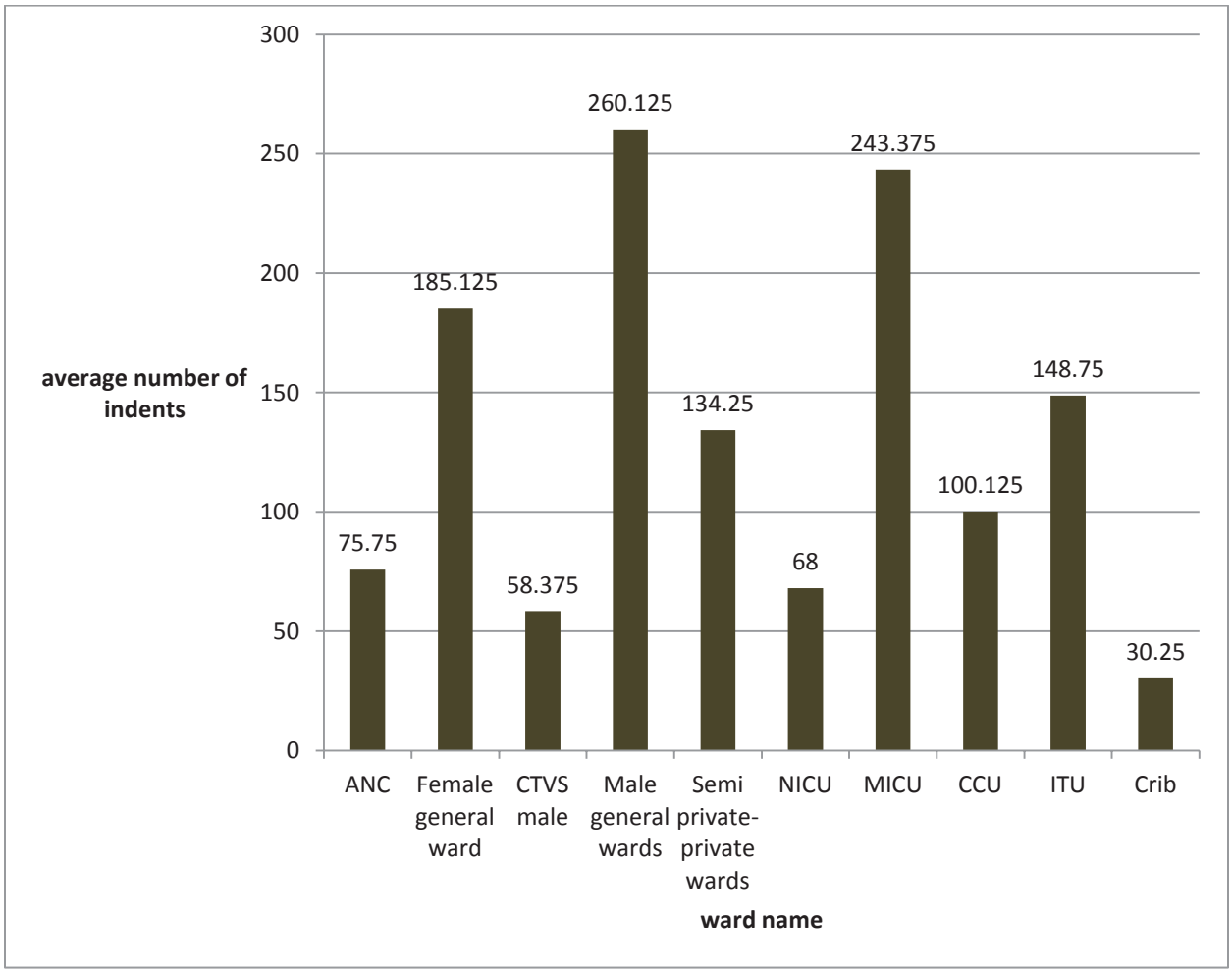
Figure 1.64 Average numbers of indents per patient per day department wise between 20th and 27th April 2012.



As per figure 1.d the average no. of indents per patient per day is high in Male CTVS ward and semi private and private wards, where the condition of the patients is not so critical as compared to ICUs. Which shows all the required drugs for patients were indented at different – different times, which leads to over use of pharmacy staff for one patient.

4) AVERAGE INDENT PER DEPARTMENT PER DAY

Figure 1.65 Average numbers of indents per ward between 20th and 27th April 2012.



Average number of indent per department was calculated, so that the department demanding more medicines or ordering more indents can be provided with inventory with a confined capacity and the load on IP pharmacy can be reduced.

5) AVERAGE INDENTS PER SHIFT

Figure 1.66 Average numbers of indents per shift

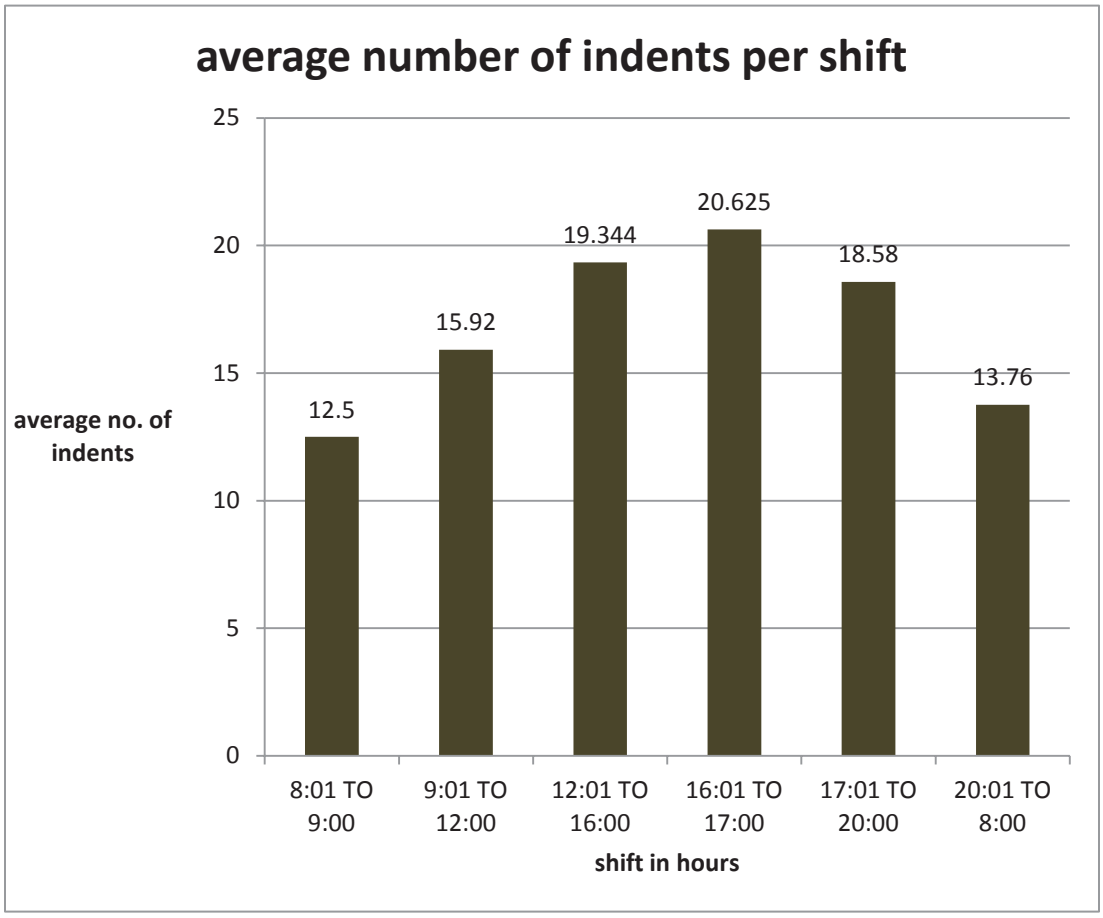


Table 1.61 Average numbers of indents per staff

SERIAL NUMBER	TIME	NO. OF INDENTS	STAFF AVAILABILITY	AVERAGE NO. OF INDENTS PER STAFF
1	8:01 to 9:00	12.5	1	12.5
2	9:01 to 12:00	15.92	2	7.96
3	12:01 to 16:00	19.344	4	4.836
4	16:01 to 17:00	20.625	3	6.875
5	17:01 to 20:00	18.58	2	9.29
6	20:01 to 8:00	13.76	2	6.88

Table 1.61 shows the average no. of indents per staff is highest between 8 am to 9 am, with minimum staff of one. This may add up to delay in pharmacy dispensing.

The second highest average no. of indents per staff is between 5 pm to 8 pm with staff availability of two.

Table 1.62 Standards according to Study Group on Hospitals (1968)[5]

STANDARD		CURRENT STATUS	
NO. OF BEDS	NO. OF PHARMACIST	NO. OF BEDS	NO. OF PHARMACIST
Up to 50	3		
Up to 100	5		
Up to 200	8	167	4
Up to 300	10		
Up to 500	15		

6) AVERAGE NUMBER OF ITEMS PER INDENT

The average number of items per indent was calculated by taking data from the system from 20th April to 27th April 2012, and it was approximately 2.47.

The average number of items per indent, in ICUs was approximately 2.1

The average number of items per indent, in ward was approximately 2.84

These figures show that for the same patient, nurse is not indenting all the required items at the same time, which in turn burdens the pharmacy staff, runners and nurses themselves.

7) LIST OF CONSUMABLES ORDERED THE MOST (routine items)

The list of top 8 ordered consumables between 20th to 27th April were figured out, so that these items can be put in the ward stores and the number of indents can be reduced.

Table 1.63 Top eight orders of consumables in the hospital from 20th to 27th April 2012

TOP 8 CONSUMABLES	NO.
SYRINGE	814
WIPE & SHINE CLOTH	289
GLOVES	132
I V CANNULA	132
IV SET	116
STOP COCK	90
OUNCE GLASS	73
SODIUM CHLORIDE	73

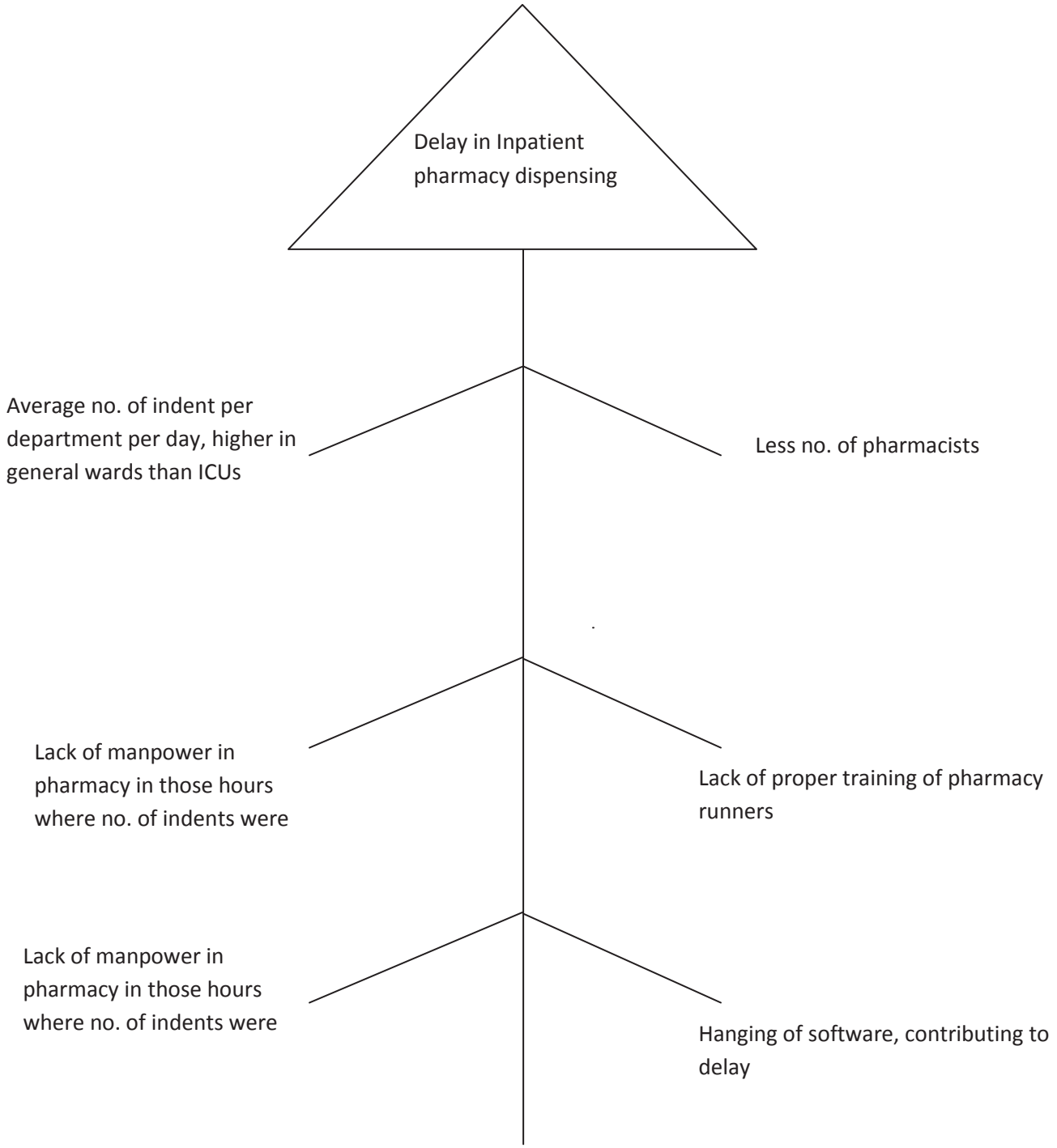


Figure 1.67 Fish Bone Skeleton of causes of Inpatient Pharmacy dispensing delay

7. RECOMMENDATIONS

1) Hours for ordering indent by nurse should be fixed.

   For wards : Two fixed hours should be made between 11 am to 12 pm (after the round of consultants in the ward) and between 9 pm to 10 pm. And if indent is required on urgent basis or if nurse forget to indent by mistake, s/he can indent only after taking permission from nursing incharge of the ward.

   For ICU: three fixed hours should be made between11am to 12 pm, 3pm to 4 pm and 5 pm to 6pm. And if indent is required on urgent basis or if nurse forget to indent by mistake, s/he can indent only after taking permission from nursing incharge of the ward. More leniency should be there for ordering of indent in ICU.

   The distribution of staff according to this schedule should be made i.e. maximum staff availability during these hours. By this workload on IP pharmacy will be reduced and they can improve their dispatch time in ICU.

2) Training of housekeeping staff (runners) should be carried out on regular basis. So that it could be checked what is delivered, to whom and when.
3) Fixed duty of nursing staff should be made on hourly basis for receiving indents at wards, to reduce the rechecking time. As every body's duty, is no body's duty. So if the duty of nurses is fixed on hourly basis, they will be responsible for delay in rechecking time.
4) According to the list of the common consumable items, some items can be shifted to the ward and ICU stores and can be prioritized in placing in the IP pharmacy. By this packaging time can be reduced.
5) IP pharmacy store should be provided with more spacious area which is easily accessible to all the wards and ICUs.
6) Manpower during night shift and between 6pm to 7 pm should be increased to 3(refer figure 1.b). Manpower between 8 am to 9 am should be increased to 2.

7) Software with color code pop up should be developed, so that indents required on urgent basis shows red color pop up, new admission shows green pop up and discharged patients shows yellow pop up.

8. CONCLUSION

By fixing a fixed time slot for indenting, will save the manpower and time of staff (nursing staff, housekeeping staff and pharmacy staff).

9. LIMITATIONS OF THE STUDY

1. ITU and NICU were not covered in the study due to time constraint.
2. Only pharmacy runners were followed, not the ward runners were followed, so the delay caused by ward runners was not measured.

10. REFERENCES

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STUDY ON

AUDIT OF ASSESSMENT DONE FOR VULNERABLE PATIENTS

A. INTRODUCTION

Medical care evaluation or Medical Audit refers to the quantitative and qualitative analysis of Medical Records.

A. "Quantitative analysis" is a review of prescribed areas of the medical record for identifying specific deficiencies in recording.

B. "Qualitative analysis" is a review of the content of medical record entries for inconsistencies and omissions, which may signify that the medical record is inaccurate or incomplete [1].

Medical audit is the evaluation of medical care in retrospect through analysis of medical records. It is a review of the professional work done in the hospital or in other words the quality of medical care rendered [2]. The purpose of quantitative analysis is primarily to identify obvious and routine omissions that can be easily corrected. The purpose of qualitative analysis is the identification of correctable deficiencies, patterns of poor documentation practices, and potentially compensable events.

According to 4th Edition of **Joint Commission International Accreditation Standards for Hospitals 2011**, vulnerable patients are those patients who are below 13 years of age, above 65 years of age, terminally ill patients, patients with intense chronic pain, patient with infectious or communicable diseases, patients suspected of drug and/or alcohol dependency, patients receiving chemo or radiation therapy, patients whose immune system is compromised, patients on dialysis patients on life support (comatose), patients on restraint, victims of abuse and neglect, physically and mentally handicapped patients, all patients admitted to ICUs, women in labor, women experiencing terminations in pregnancy and all those patients who have to depend on others for their daily activities [3].

So the medical audit of vulnerable is an effective tool to measure the quality of care rendered to these patients.

B. REVIEW OF LITERATURE

According to Practitioner Medical Record Standards and Performance Measures, by the Corporate Quality Improvement Council on April 28, 2009, health care education provided to the vulnerable patients, family members or designated caregivers should be noted in the record and periodically updated as appropriate [4].

Joint commission standards 4th edition, 2011 states that, regular fall and risk assessment of vulnerable patients should be done by the clinical staff. A red "safety first" tag should be placed at the head end of the bed. Assessment and reassessment of pain should be documented in the initial and follow notes on each and every shift of nurses [3].

C. RATIONALE OF STUDY

Since vulnerable patients are prone to fall and infections and many of them themselves cannot complain, so the regular audit of compliance of policies is necessary to evaluate the quality of clinical care rendered to them by the hospital. it a very effective quality indicator for the hospital.

D. RESEARCH QUESTIONS

1. What policies and guidelines are followed by the hospital for vulnerable patients?
2. What is the level of compliance of the policies and guidelines for vulnerable patients?
3. What is the level of improvement in the compliance of policies and guidelines for vulnerable patients after the continuous training to nursing staff?

E. OBJECTIVES

1) To understand the basic policies and guidelines for the care of vulnerable patients followed by the hospital.

2) To measure the level of non- compliance of the policies and guidelines for vulnerable patients by auditing of the medical records of these patients.
3) To compare the level of non-compliance before and after the training of nursing staff.

F. HYPOTHESIS

"Non- compliance level of the policies and guidelines for vulnerable patients would not change significantly after the training of the nurses."

G. METHODOLOGY

1) STUDY DESIGN

The study was divided into two phases: -

First phase: - An observational study was done for 2 days to understand the basic policies and guidelines for the care of vulnerable patients followed by the hospital.

Second phase: - One group pre test post test experimental study was conducted for 3 weeks to measure the change in the level of non-compliance before and after the training of nursing staff..

2) STUDY AREA

The study areas for the study were all the wards and ICUs of the Narayana Hrudayalaya Hospital, Jaipur.

3) SAMPLING TECHNIQUE

Proportional stratified sampling technique was used in the study.

4) SAMPLE SIZE

814 nursing daily assessment forms were taken as sample size for the calculation of fall and pain assessment compliance, out of which 302 nursing daily assessment forms were audited before and 512 nursing daily assessment forms were audited after the training of nurses.

814 “patient and family education assessment forms” were audited, out of which 302 forms were audited before and 512 forms were audited after the training of nurses.

Total 236 restraint consent forms were audited. Out of them 97 were audited before and 139 forms were audited after the training

5) STUDY PERIOD

The first phase of the study was conducted from 5th of May 2012 to 6th of May 2012.

The second phase of the study was conducted from 7th of May 2012 to 28th of May 2012

6) SOURCE OF DATA

Secondary data was taken from the medical records of the vulnerable patients to measure the level of non-compliance.

7) TOOLS

Nursing daily assessment form, patient and family education assessment form and restraint consent form

8) TECHNIQUE

Checklist

H. ANALYSIS AND FINDINGS

1. Findings of first phase of the study

Policies and guidelines followed by the hospital for vulnerable patients

For vulnerable patient, prevention of fall is the most important precaution to be taken. For child below 13 years of age, there is a different history and physical examination form, side rails are always put up on the beds of vulnerable patients. A red “safety first” tag is placed at the head end of the bed. Like all other patients,

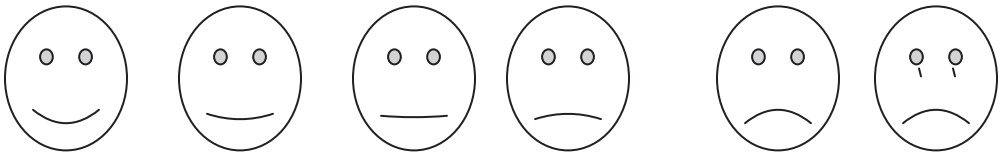
an incident form is filed in case of something untoward happening with such a patient. Assessment and reassessment of pain is documented in the initial and follow notes on each and every shift of nurses.

For fall assessment of the patient, the hospital use fall rating scale. It is based on past history of fall of the patient. It categorizes patient into three groups: - low risk, medium risk and high risk.

The fall assessment of the vulnerable patient is must to document every day in "nursing daily assessment form". If the patient falls in high risk category then it is mandatory to document fall assessment in each nursing shift. The rescoring of fall score is compulsory to document at the end of nursing shift and if the patient falls in the high risk category, then rescoring must be done at the end of each nursing shift

Different pain rating scales are used in the hospital according to age and consciousness of the patients

1) Wong Baker facial grimace scale: - used with child above 3 years & below 13 years, unconscious patients and adults with the use of six facial expressions, suggesting various pain intensities. The patients are asked to choose face that best describes how they feel. For unconscious patients the facial expressions are read by the nurse.

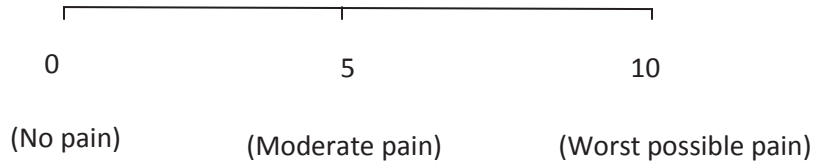


2) **FLACC pain scale**: - used with the infants and pediatric patients aged 0 to 3 years.

Table 2.1H1 FLACC PAIN SCALE

CRITERIA	SCORE 0	SCORE 1	SCORE 2
Face	No particular expression or smile	Occasional or frown, withdraw, uninterested	Frequent constant quivering chin, clenched jaw
Legs	Normal position or relaxed	Uneasy, restless, tense.	Kicking or legs drawn up.
Activity	Lying quietly, normal position moves easily.	Squirming, shifting back, tense	Arched, rigid or jerking
Cry	No cry (awake or asleep)	Moans or whimpers occasional complaints.	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging or being talked to, distract able	Difficult to console or comfort

3) Numerical rating scale: - used with adult and conscious patients. Patients are asked to choose a number from 0 to 10 that best describes their current pain.



4) Activity Tolerance scale: -

0 = no pain, 1-2= can be ignored, 3-4= interferes with task, 5-6= interferes with the concentration, 7-8= interferes with basic needs, 9-10= bed rest required.

.It is must to educate patient and family members on fall prevention measures and pain management issues. For this purpose, the nursing staff of the hospital has to document that fall prevention and pain management education has been given, in the patient and family education form. If the medical staff is using some restraint on vulnerable patient, then the restraint consent form must be completely filled and signed by the doctor, nurses, interpreter and patient's representative along with daily documentation of patient care and ongoing monitoring.

2. **Findings of second phase of the study**

The active files of vulnerable patients were audited on the daily basis, to check the level of non-compliance of policies and guidelines for the vulnerable patients.
For first eight days the level of non-compliance was measured. On the ninth day three training sessions on "JCI policies for vulnerable patients" were conducted in three nursing shifts for the nurses. And after the training the level of non compliance was measured for next two weeks.
Equalities of two proportions z-test was applied for testing the hypothesis at 5% level of significance.

The null hypothesis was that there is no significant difference between the compliance before and after the training of the nurses. The alternate hypothesis states that there is a significant decrease in the non- compliance of policies and guidelines of vulnerable patients after the training of nurses.

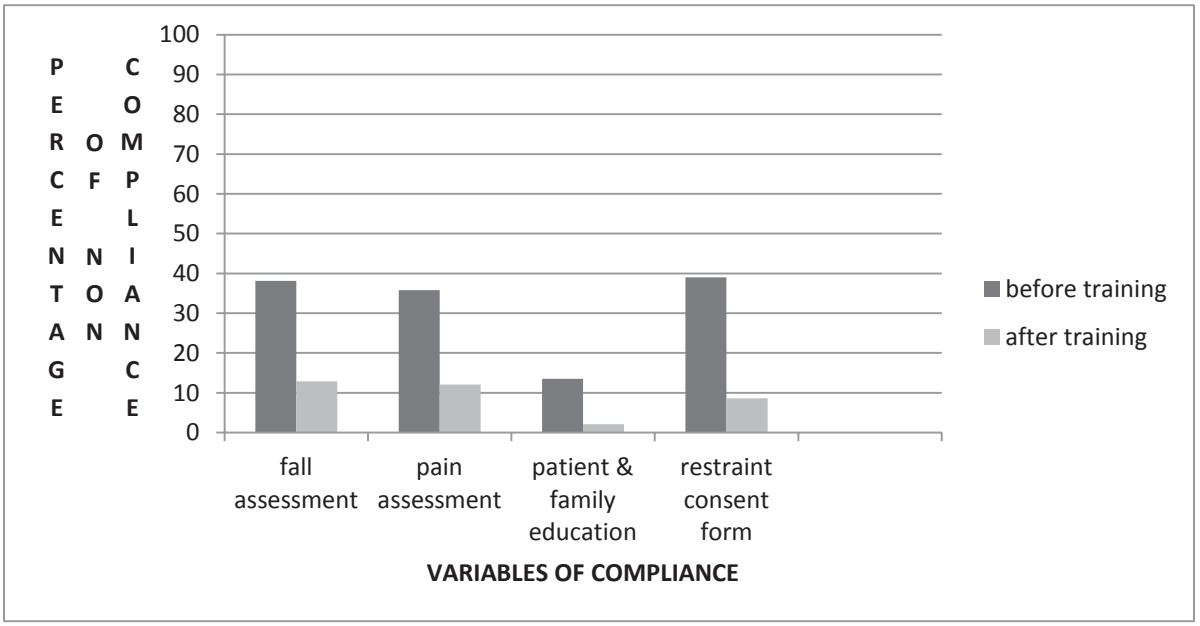
Table 2.H1 z-score and p-values of the non-compliance variables

S no.	Non-Compliance variable	z-score
1	Fall assessment	8.349
2	Pain assessment	8.02
3	Patient and family education	6.441
4	Restraint consent	5.649

Since calculated value of z-score is greater than tabulated value of z-score (1.96), so null hypothesis is rejected at 5% level of significance.

So the study concludes that, there is a significant decrease in the non-compliance after the training of the nurses.

Graph H1 Percentage of non-compliance before and after the training of nurses



The graph H1 shows that there is a significant decrease in the level of non-compliance after the training of nurses.

a) **Findings of fall assessment compliance**

Graph H2 Percentage of non-compliance of fall assessment before and after the training of nurses ward wise

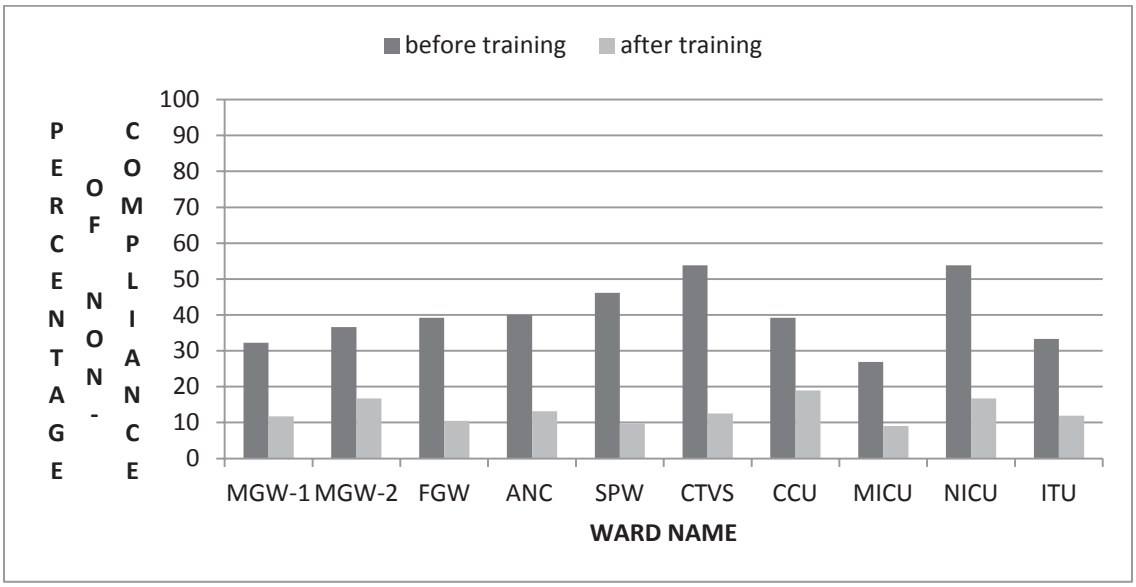
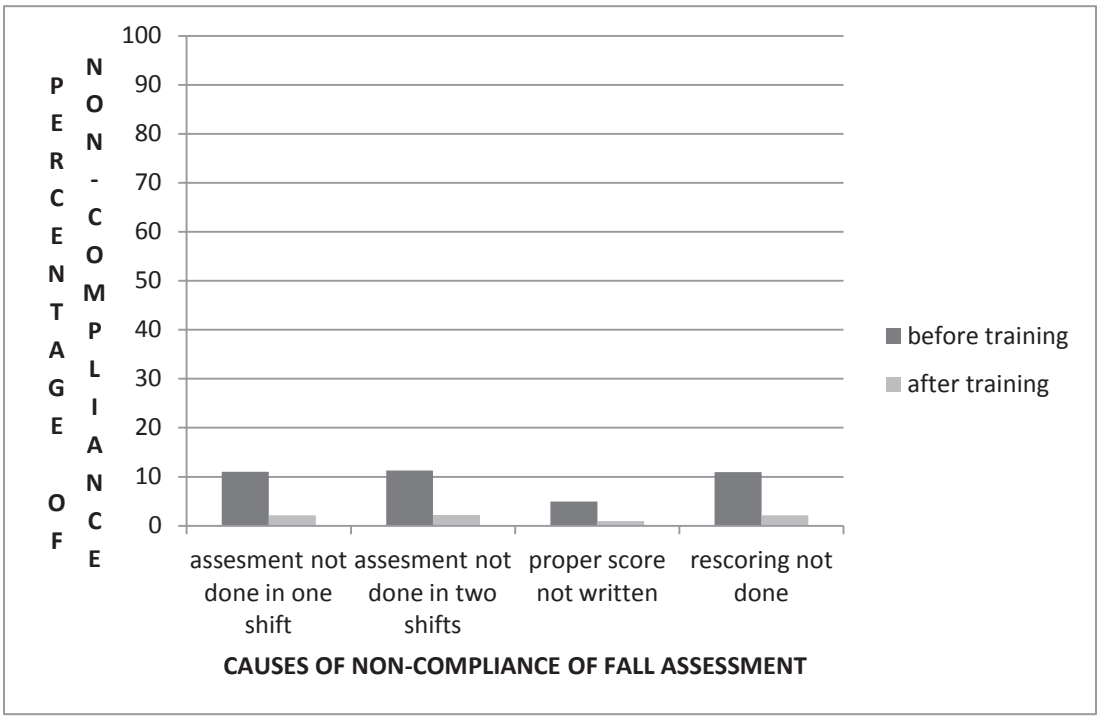


Table 2. H2 z-score of fall assessment ward wise

S no.	Name of ward	z-score
1	Male general ward-1	2.452
2	Male general ward-2	2.387
3	Female general ward	4.541
4	Anti natal clinic	1.98
5	Semi private ward	2.944
6	CTVS	2.704
7	CCU	2.338
8	MICU	1.97
9	NICU	1.99
10	ITU	2.505

According to table 2.H2, there is a significant decrease in non-compliance of fall assessment after the training of nurses in all the wards and ICUs.

Graph H3 Percentage of causes of non-compliance of fall assessment before and after the training of nurses.



Graph H3 shows that there is a significant decrease in the level of causes of non-compliance of fall assessment after the training was imparted.

b) Findings of pain assessment compliance

Graph H4 Percentage of pain assessment non-compliance before and after the training ward wise

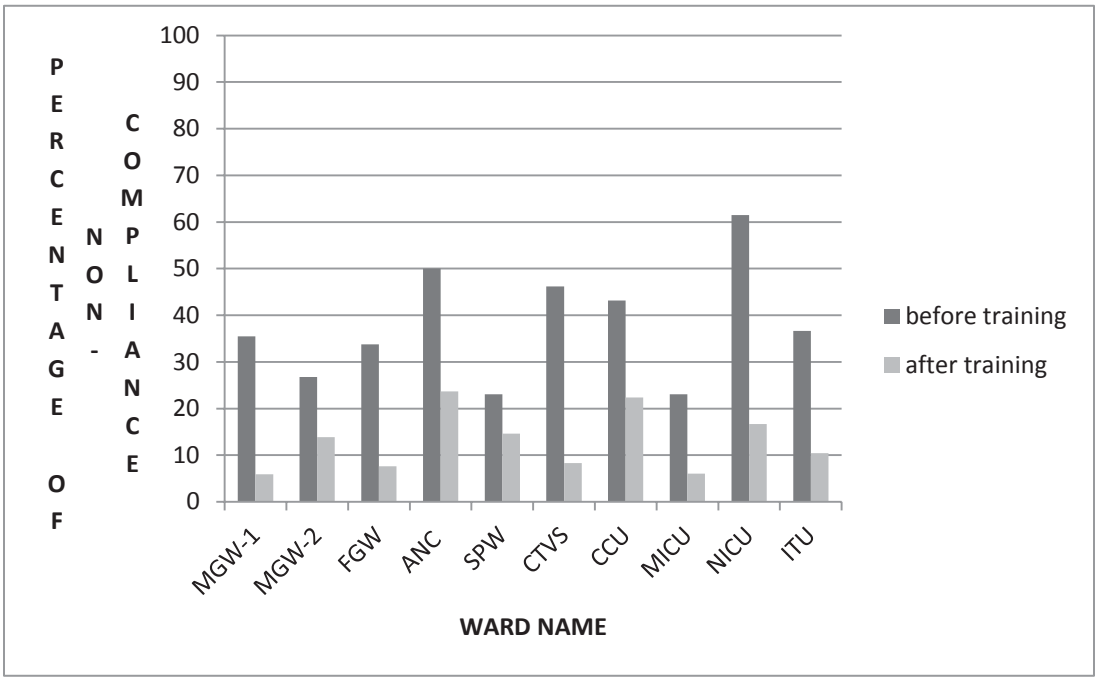
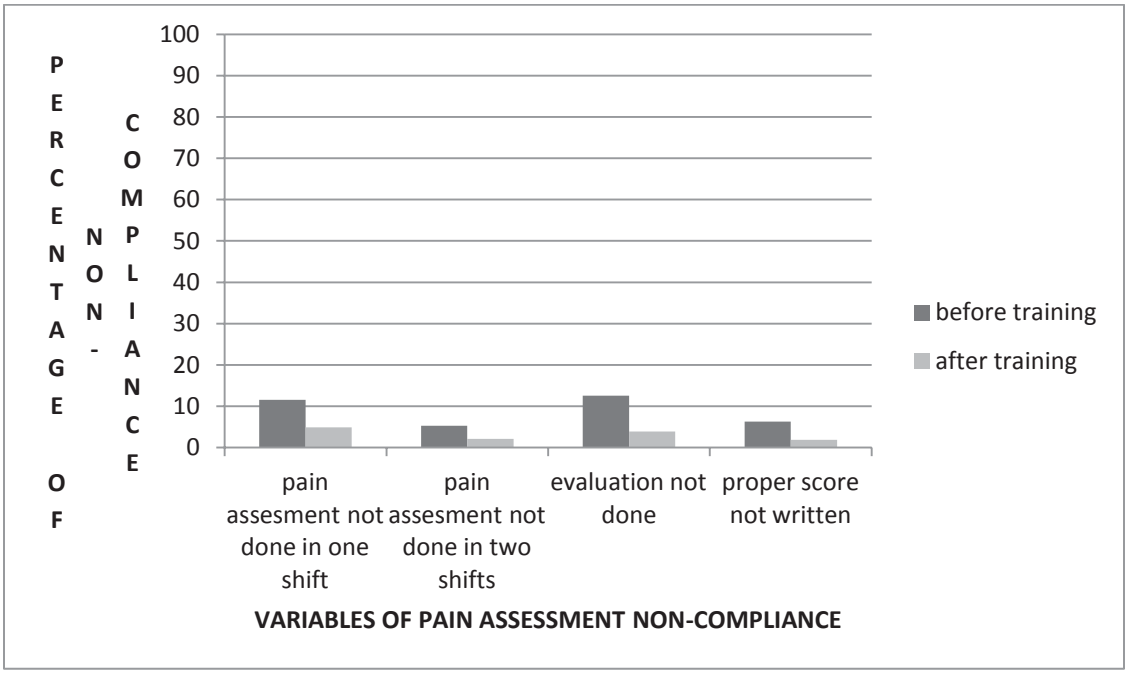


Table2. H3 z-score of pain assessment ward wise

S no.	Name of the wards	z-score
1	Male general ward-1	3.81
2	Male general ward-2	3.81
3	Female general ward	4.445
4	Antenatal clinic	1.629
5	Semi private ward	0.712
6	CTVS	2.668
7	CCU	2.312
8	MICU	1.96
9	NICU	1.98
10	ITU	3.07

According to table 2H3, there is a significant decrease in non-compliance of pain assessment after the training of nurses in all the wards and ICUs except antenatal clinic and semi-private ward because some of the nurses appointed at night shift in these wards were not been able to complete the whole training due to patient load.

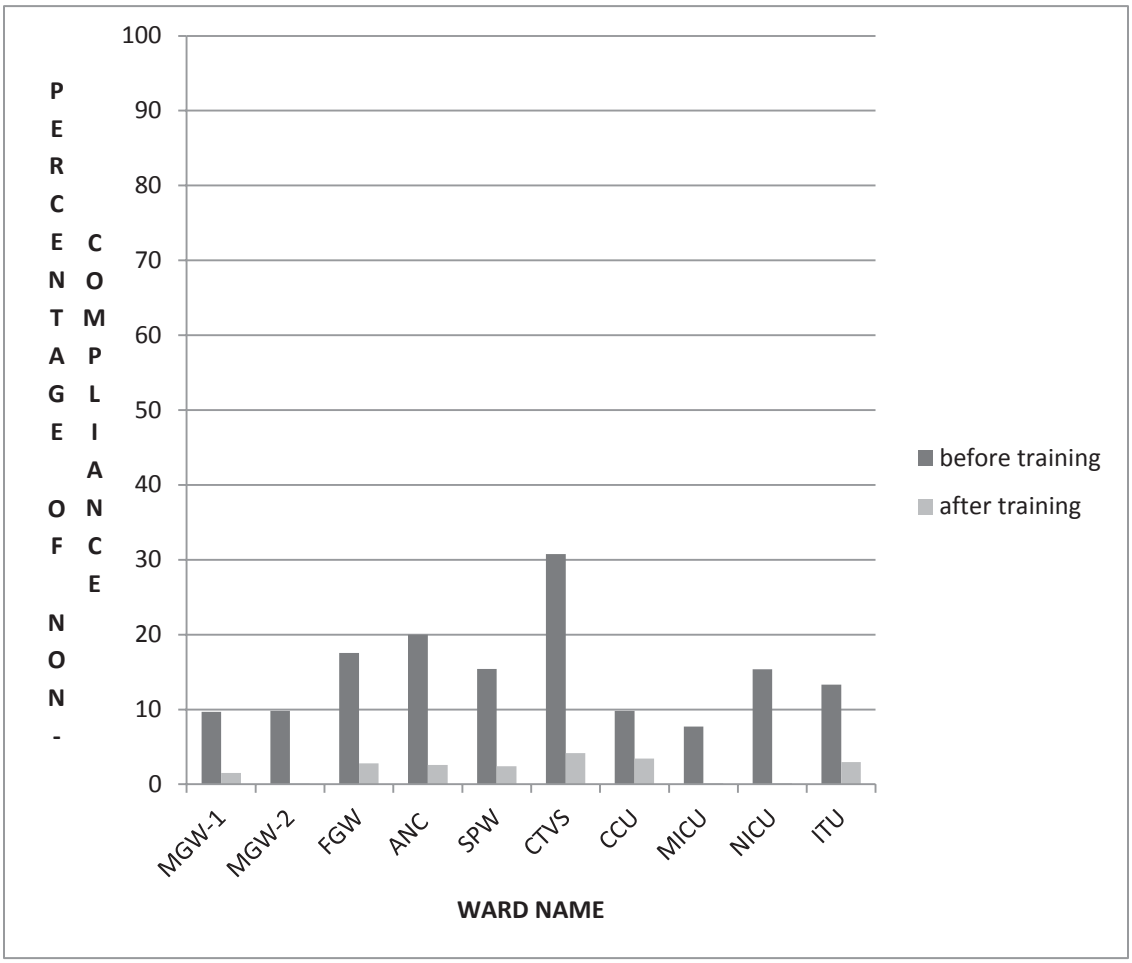
Graph H5 Percentage of causes of non-compliance of pain assessment before and after the training of nurses.



Graph H5 shows that there is decrease in the level of causes of non-compliance of pain assessment after the training given.

c) **Findings of patient and family education compliance**

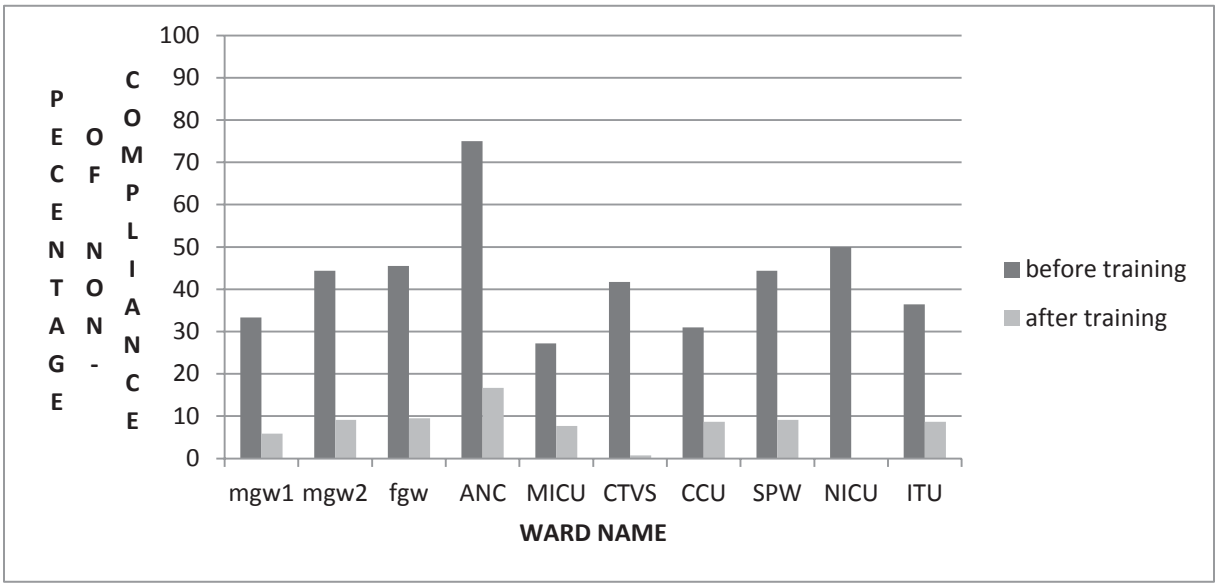
Graph H6 Percentage of patient and family education non-compliance before and after training.



Graph H6 shows that there is a decrease in the level of non-compliance of patient and family education form in all wards and ICUs.

d) Findings of Restraint consent form compliance

Graph H7 Percentage of Restraint consent form non- compliance ward wise before and after training



Graph H7 shows that there is a decrease in the level of non-compliance of restraint consent form in all wards and ICUs.

I. RECOMMENDATIONS

1. For the further improvement of compliance status, regular internal audits should be carried out by nursing supervisor and clinical instructor, so that they can find out which nurse is not following the guidelines and what amount of further training s/he requires.
2. A poster should be pasted in Hindi and English language near the bed side of vulnerable patients having all the instructions regarding fall prevention and pain management, so that the attendant of the patient can himself/herself read out the guidelines.

3. For all ICU patients pamphlet regarding guidelines of fall and pain management should be given to the attendants and time to time prevention guidelines should be repeated on the LCDs of the hospital, so that uneducated attendants can also understand the guidelines.
4. The shift in charge of wards should fix a time for pain and fall assessment of patients at the starting and end of every nursing shift.
5. An internal audit team for the audit of files of vulnerable patients should be created by the management team.

J. CONCLUSION

By regular auditing and training of staff the compliance of the policies and guidelines of vulnerable patients can be improved.

K. LIMITATION OF THE STUDY

The training of pain assessment was not imparted to night duty nurses of ANC and semi private/private wards, due to their busy schedule.

L. REFERENCES

1. Joshi S.K., Quality Management in Hospitals, Jaypee Brothers Medical Publishers (P) Ltd. First edition:2009
2. Joint Commission International Accreditation Standards, by Apollo Hospitals, Dhaka, 2010
3. Joint Commission International Accreditation Standards, 4th edition, 2011.
4. Practitioner Medical Record Standards and Performance Measures, by the Corporate Quality Improvement Council on April 28, 2009.

Study on

Medical Audit

A. INTRODUCTION

It is an important quality indicator for the hospital. Medical audit also called peer review or clinical audit is defined as evaluation of medical care in retrospect through review and analysis of medical records. It is an excellent tool for evaluation of the quality of services (including quality of records) being provided and the corrective actions required to be taken [1].

Audit is a management tool designed to check that resources are not being wasted; medical audit is its application to the management of the care of the individual patient and the use of medical and paramedical resources [2]. Prerequisite for medical audit are- good record keeping system, it should be carried out by impartial professionals, anonymity of clinician, nursing, other staff and patient to be maintained, purpose should be simple and clearly stated and intention should be effective to change for better [3].

The program of medical audit is an ongoing activity involving study of medical records of the patients aimed at assessing the quality of care given to the patients as well as the quality of records generated.

B. REVIEW OF LITERATURE

According to Quality management in hospitals (by Joshi S.K edition 2009), the outcome of successful medical audit is high quality medical records, complete and correct, increased accountability of staff, reduction in incidence of avoidable complications, morbidity, mortality and improved quality of patient care [1].
The article Mersey Care NHS Trust, Policy and Procedure For Records: Retention & Disposal (by Mersey Care NHS Trust. December 2003. Retrieved 2008-07-05) states that, a patient's individual medical record identifies the patient and contains information regarding the patient's case history at a particular provider. The health record as well as any electronically stored variant of the traditional paper files, contains proper identification of the patient. Further information varies with the individual medical history of the patient [4].

The contents are written by medical providers and patients until relatively recently had no say in what was contained in it. Recent advances in health care records privacy and access rules have generally provided for a patient's right to review and have recorded in the medical record objections to the accuracy of certain entries.

C. RESEARCH QUESTIONS

1. What all policies and guidelines are followed by the hospital for the maintenance of medical records of the patients?
2. What is the level of compliance of the medical record policies in the hospital?

D. OBJECTIVES

1. To understand the policies and guidelines followed by the hospital for the maintenance of medical records of the patients.
2. To measure the level of compliance of the medical record policies in the hospital.
3. To find out the possible solutions for the non- compliance of the medical record policies.

E. METHODOLOGY

a. STUDY DESIGN

It is a small scale descriptive case study.

b. SAMPLING TECHNIQUE

Simple random sampling technique was used in the study. The MRN numbers of the patients were selected by lottery method.

c. STUDY AREA

The study area for the study were female general ward, male general ward, semi private and private wards, ante natal clinic, post Cardiac thoracic

vascular surgery ward, MICU, ITU and CCU of Narayana Hrudayalaya Hospital, Jaipur.

d. SAMPLE SIZE

165 active medical records of the admitted patients were taken as the samples for the study.

e. STUDY PERIOD

The study was carried out for 12 days from 2nd of May 2012 to 12th of May 2012.

f. SOURCE OF DATA

Secondary data was taken from the medical records of the admitted patients.

g. TOOLS AND TECHNIQUE

Checklist was used as tool in the study and crosschecking the medical records on the basis of checklist was used as technique.

F. ANALYSIS AND FINDINGS

Following forms were audited for their completeness and reason behind incompleteness: -

a) Admission order form
b) Emergency assessment form
c) History form (doctors)
d) Nursing admission assessment form
e) Nursing daily assessment form
f) Nutrition-admission form
g) Nutrition form daily reassessment
h) Operation consent form
i) Anesthesia consent form
j) High risk procedure consent form

k) Blood transfusion consent form

l) Physiotherapy assessment form

m) Discharge summary

n) Medicines card

a. <u>Compliance of Admission order form</u>

Figure 3.fa compliance status of admission order form

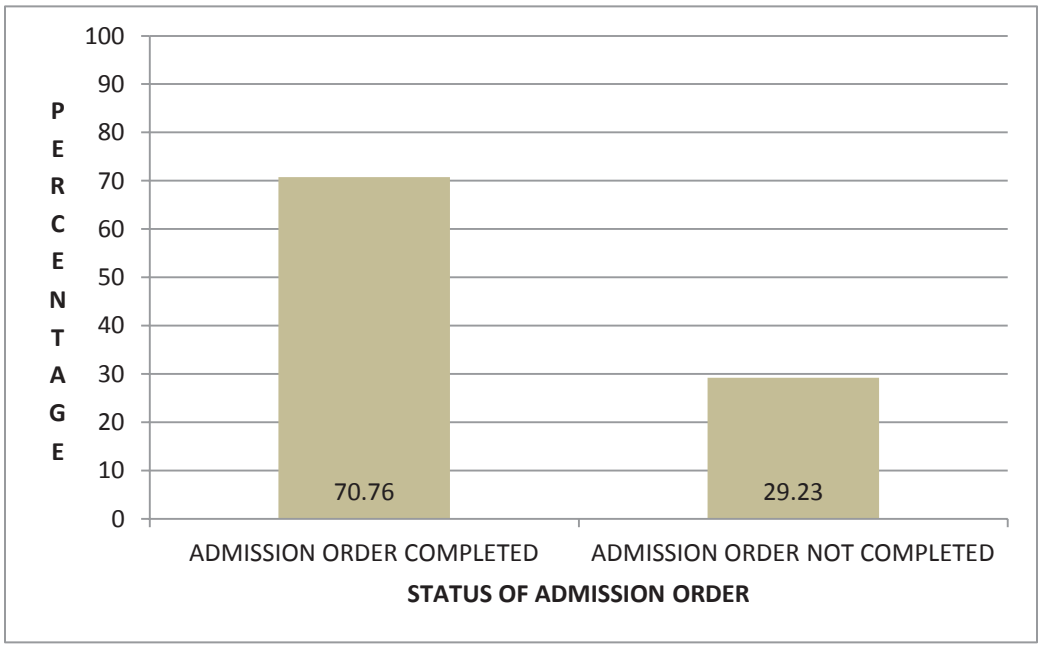
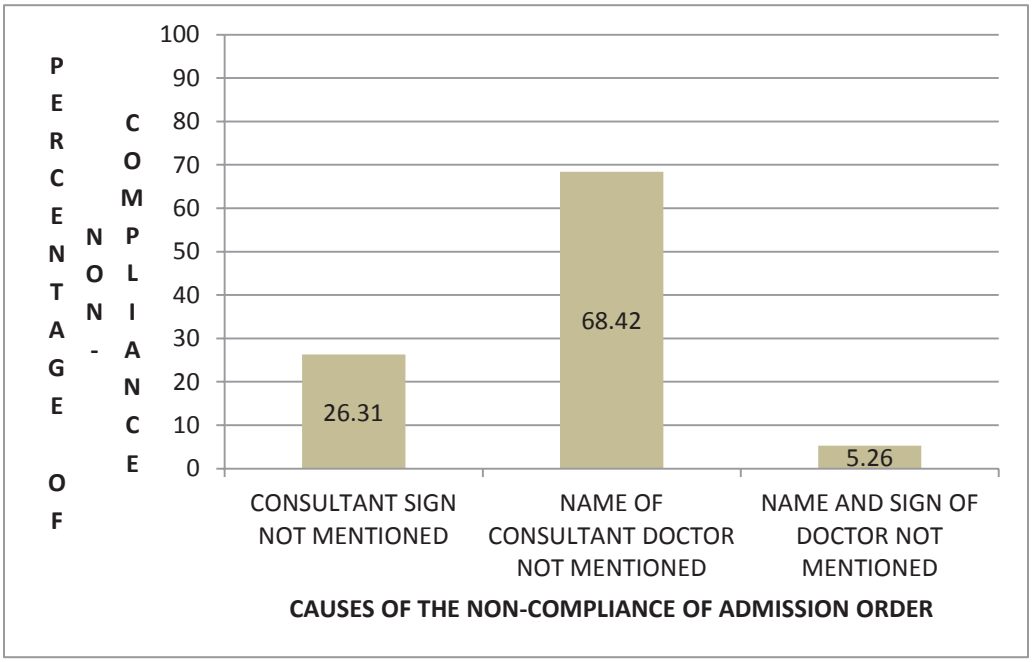
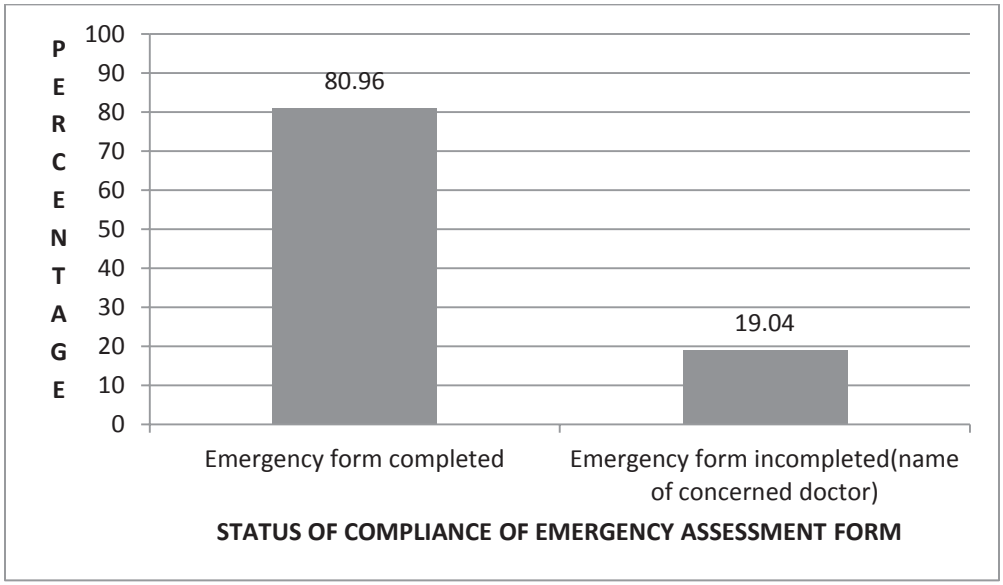


Figure 3.fb reasons for non-compliance of admission order form.



b. <u>Compliance of Emergency assessment form</u>

Figure 3.fc compliance status of emergency assessment form



Out of 165 samples, 55 medical records were having emergency assessment forms. Out of which 19.04% of them were incomplete because the name of the concerned doctor was not mentioned in the forms.

c. History form (doctors)

Figure 3.fd compliance status of history form (doctors)

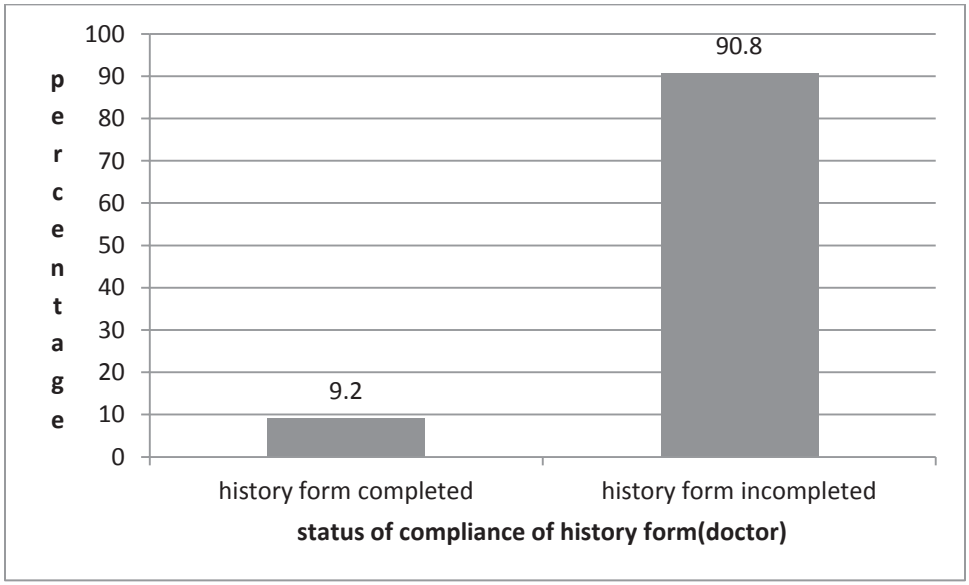
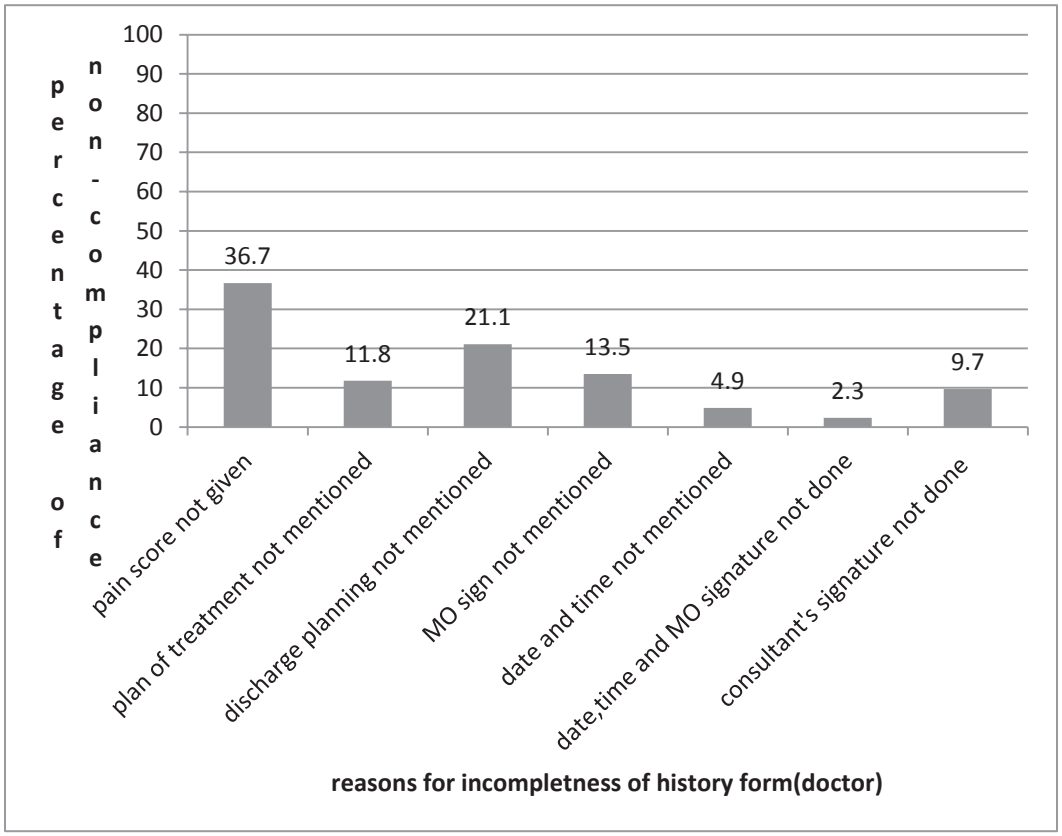


Figure 3.fe reasons of non-compliance of history form (doctors)



d. Compliance of Nursing admission assessment form

Figure 3.ff compliance status of nursing admission assessment form

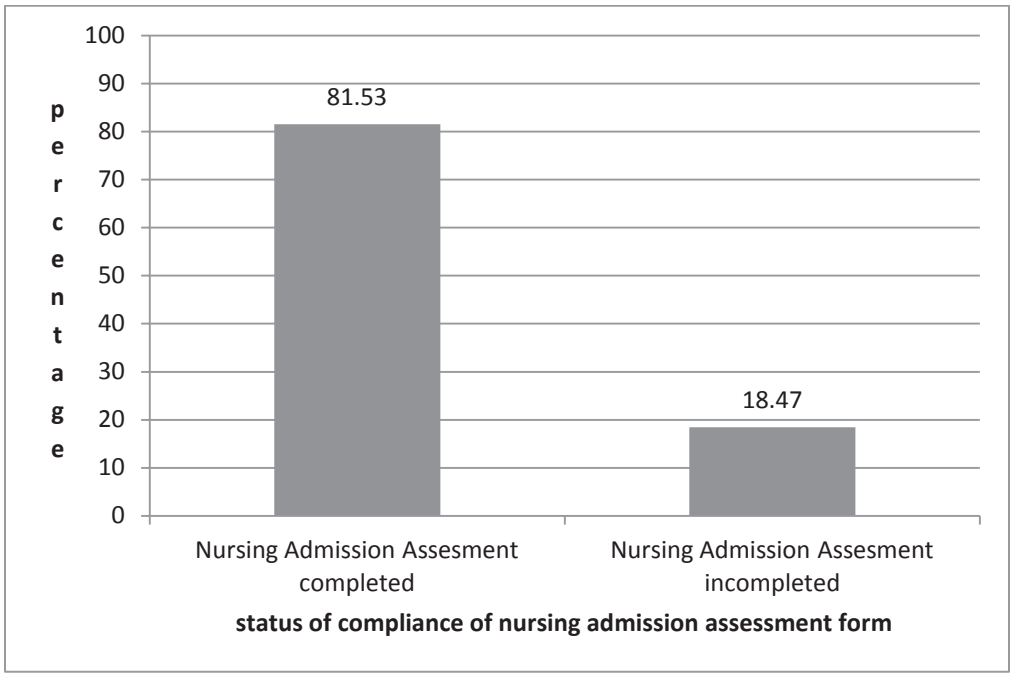
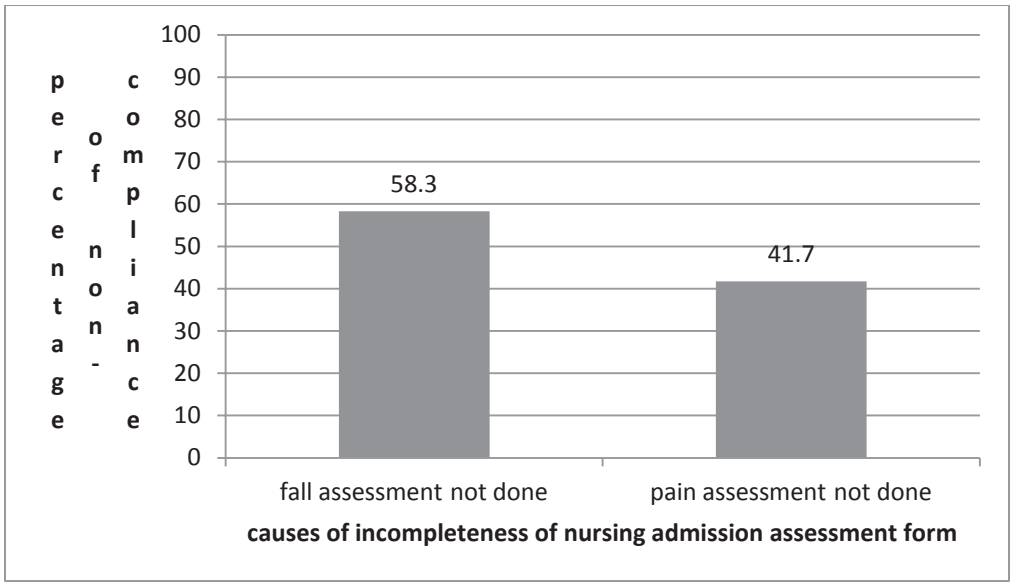


Figure 3.fg reasons for non-compliance of nursing admission assessment form



e. **Compliance of Nursing daily assessment form**

Figure 3.fh compliance status of nursing daily assessment form

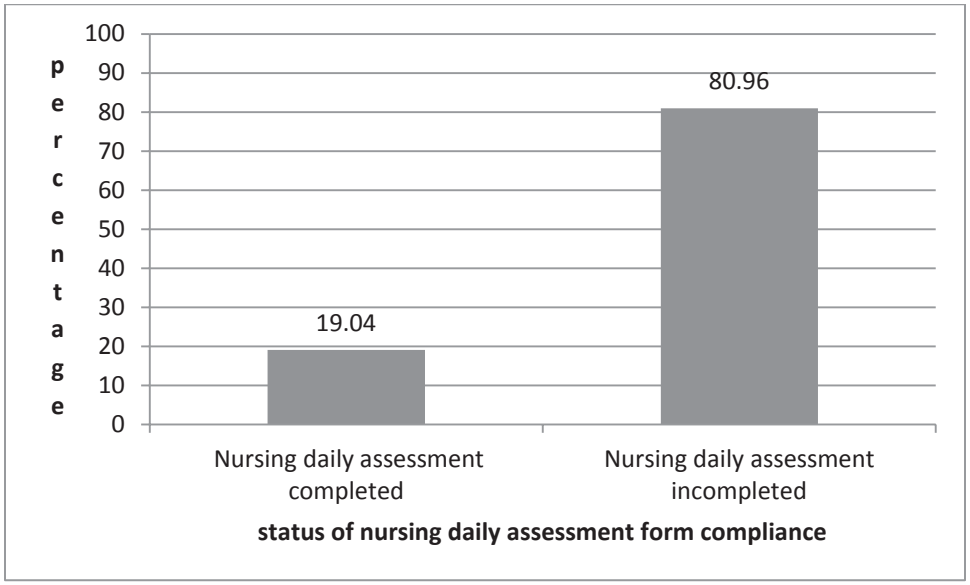
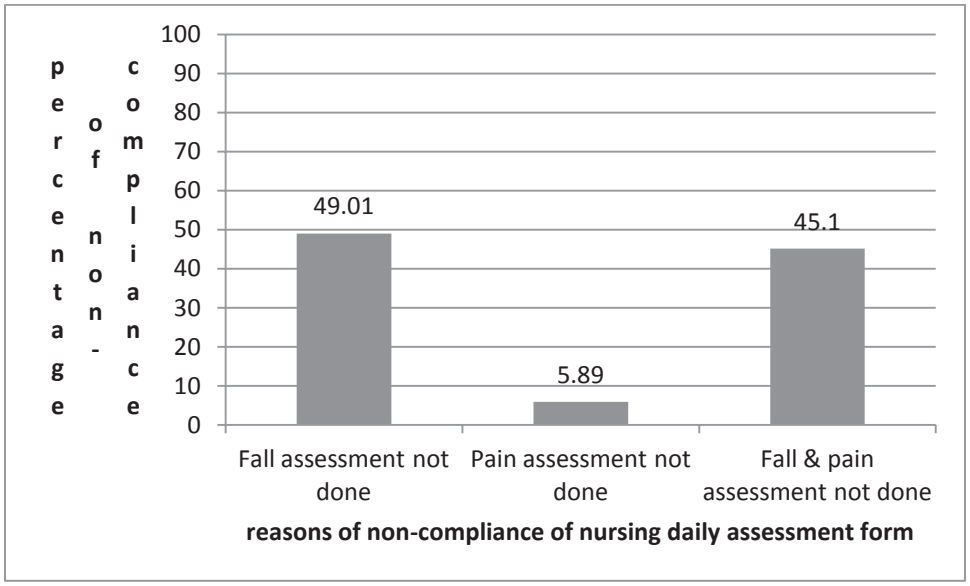


Figure 3.fi reasons for non-compliance of nursing daily assessment form



f. Compliance of Nutrition-admission form

Figure 3.fj compliance status of nutrition admission form

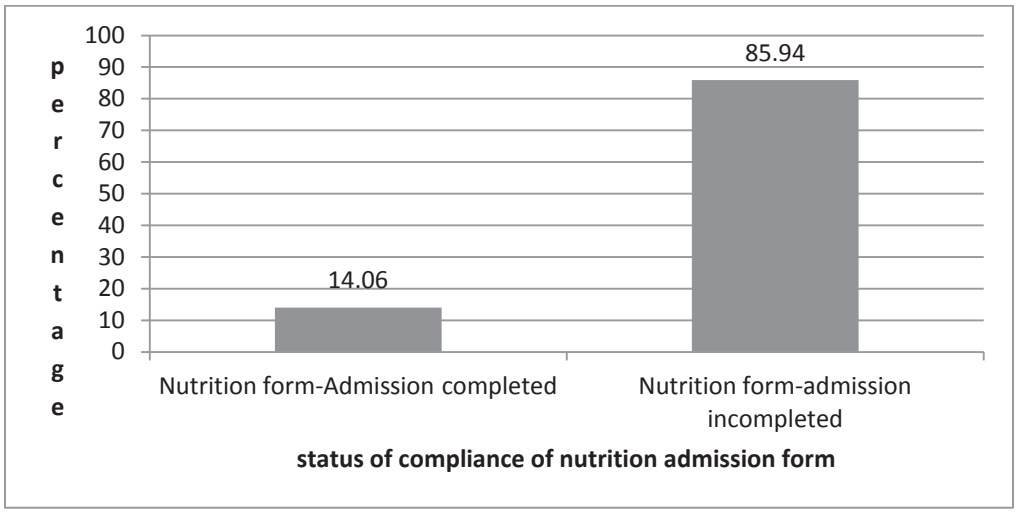
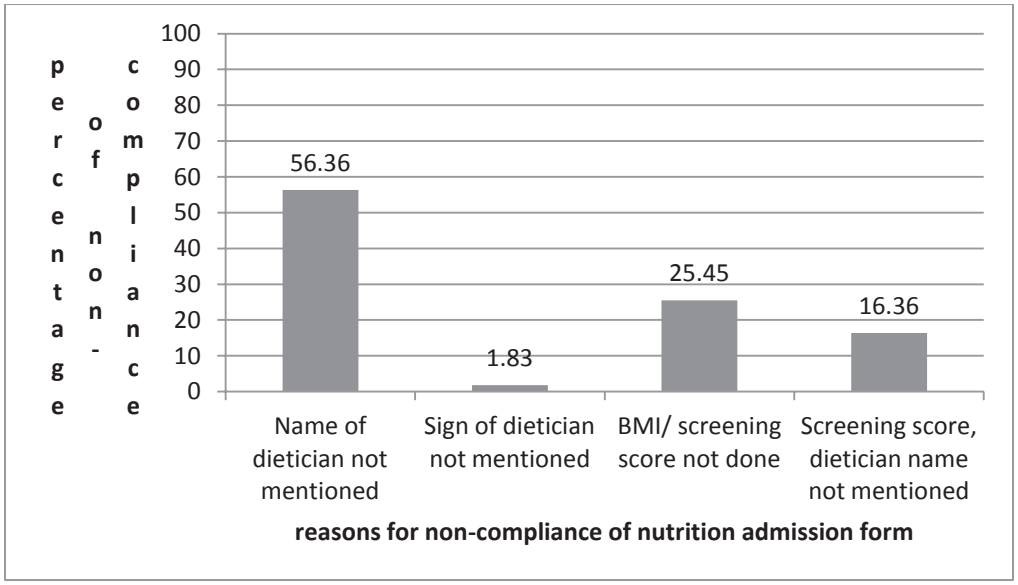


Figure 3.fk reasons for non-compliance of nutrition admission form



g. Compliance of Nutrition form daily reassessment

Figure 3.fl compliance status of nutrition form daily reassessment

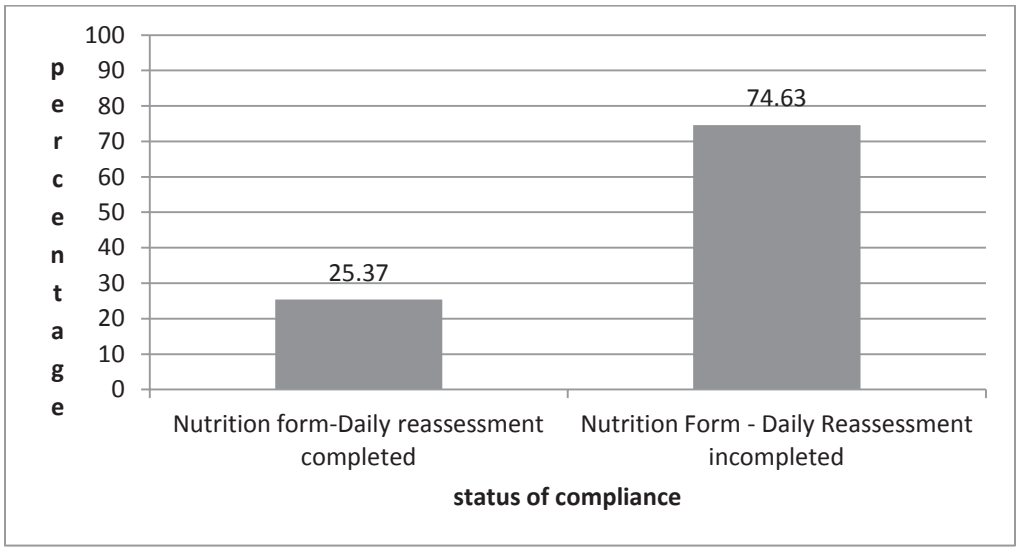
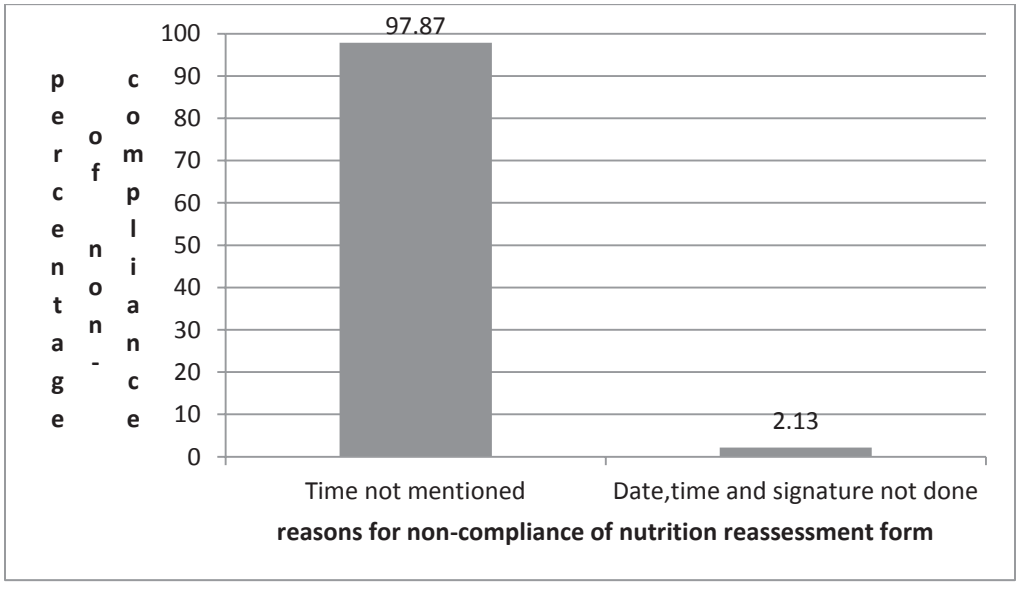


Figure 3.fm reasons for non-compliance of nutrition form daily reassessment



h. **Compliance of consent forms (operation, Anesthesia, High risk procedure, Blood transfusion**

Figure 3.fn compliance status of consent forms

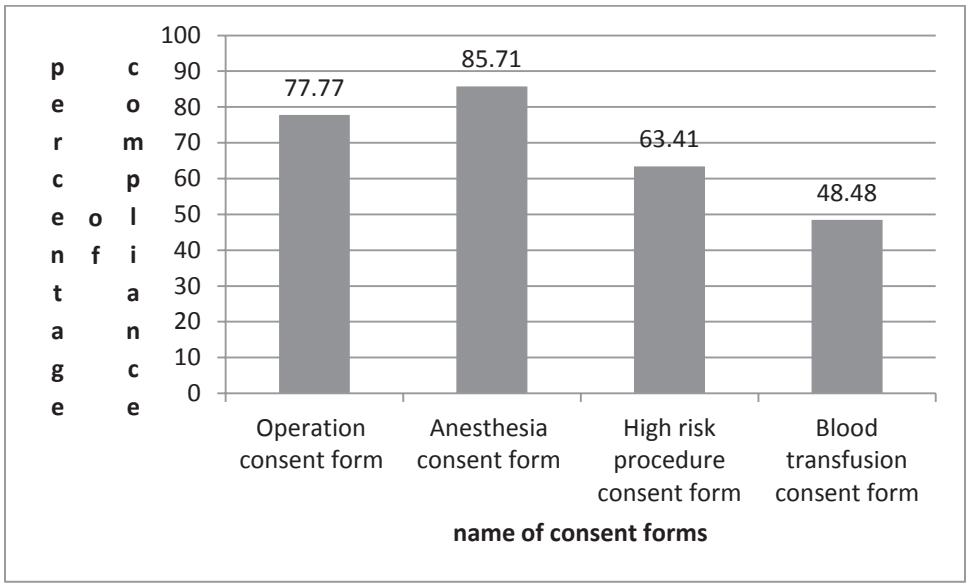
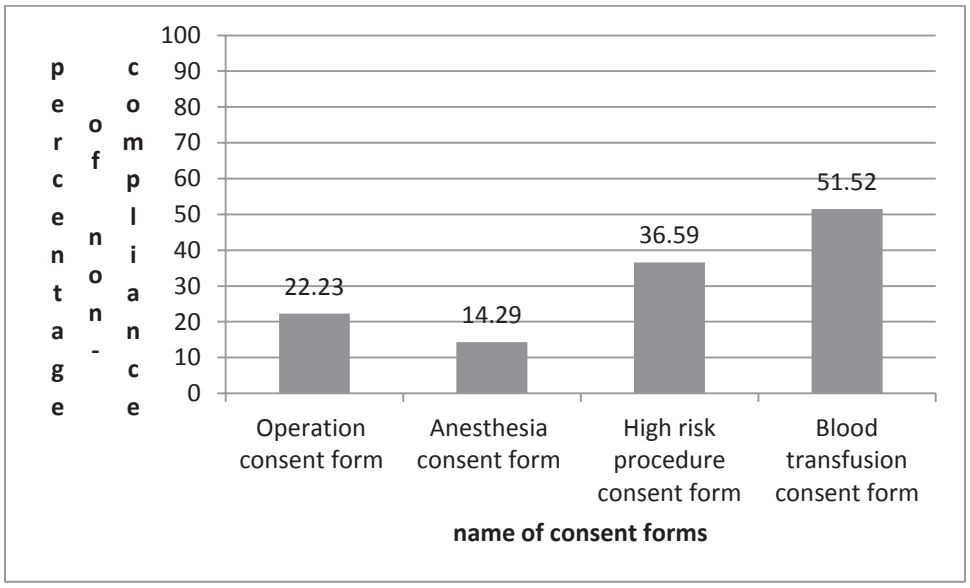


Figure 3.fo non-compliance status of consent forms



In the entire non-compliant consent forms doctor's signature were not done.

i. Compliance of Physiotherapy assessment form

Figure 3.fp compliance status of physiotherapy assessment form

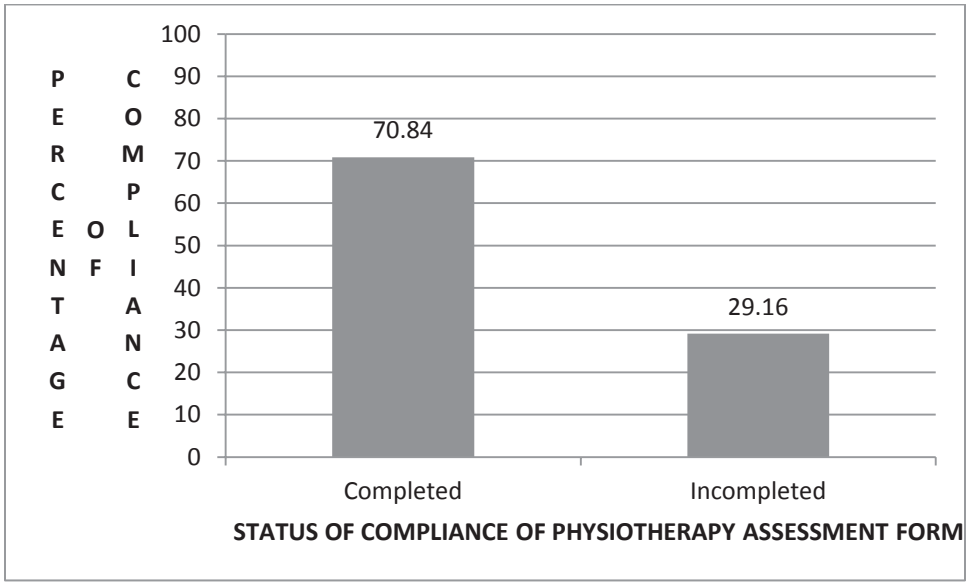
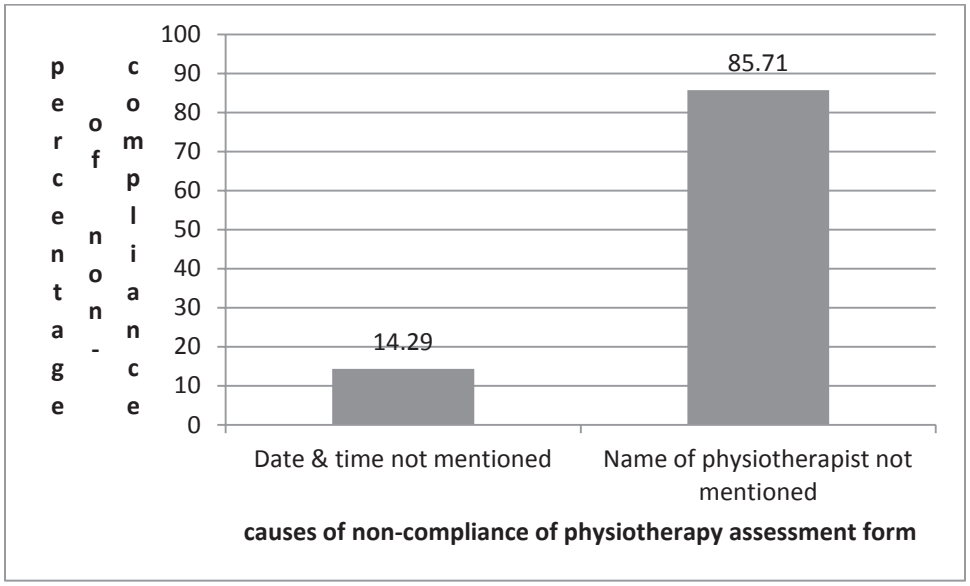


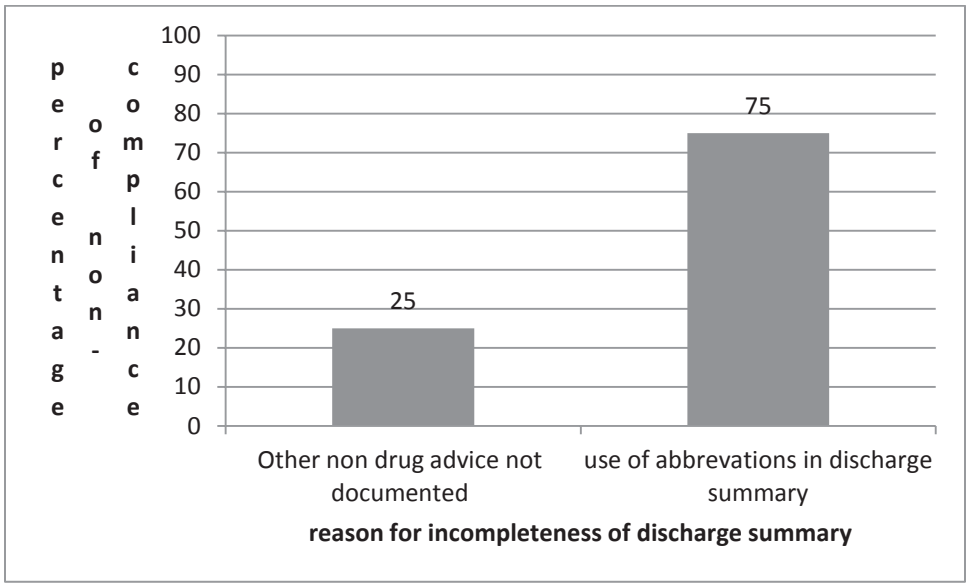
Figure 3.fq reasons of non-compliance of physiotherapy assessment form



j. Compliance of Discharge summary

Out of the total discharge summary audited, all of them were non-compliant.

Figure 3.fr reasons for non-compliance of discharge summary



k. Compliance of medicine card

Figure 3.fs compliance status of medicine card

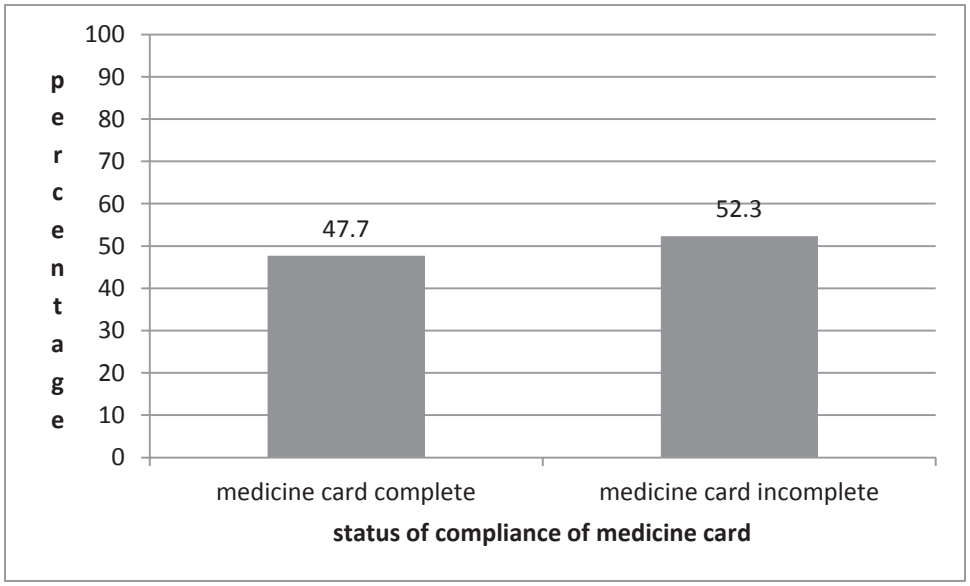
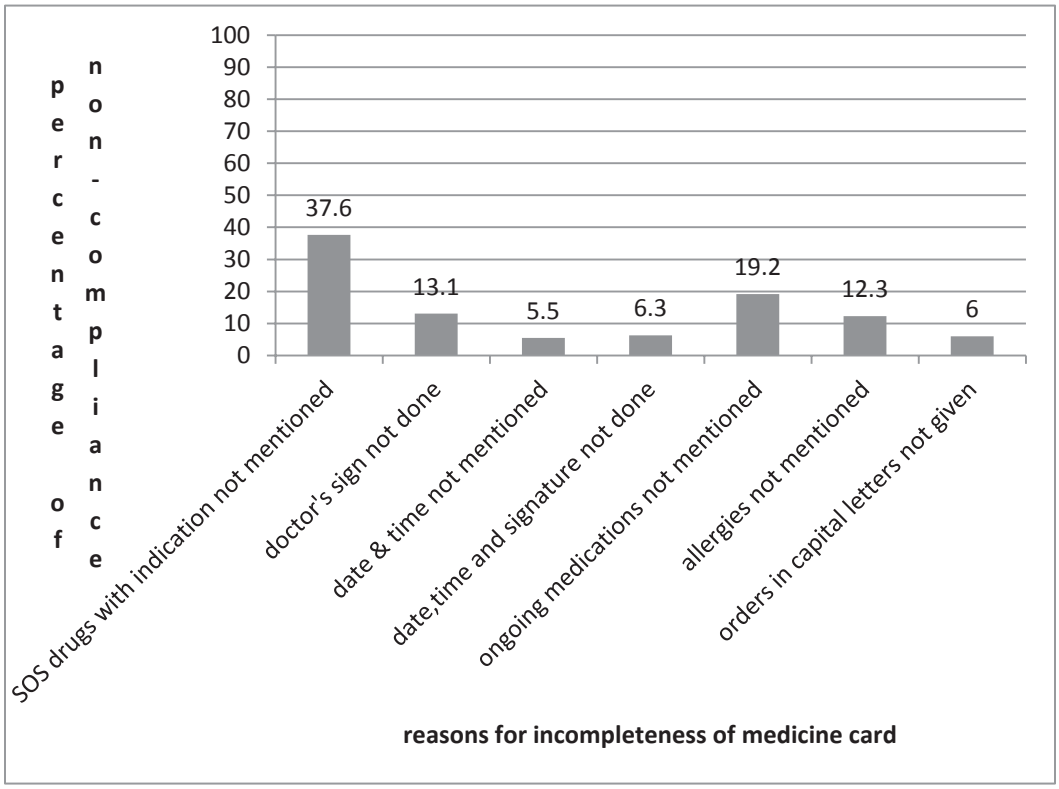


Figure 3.ft reasons for non-compliance of medicine card



G. RECOMMENDATIONS

1. Weekly internal medical audit should be done by audit team and report should be send to respective ward incharge and medical superintendent and nursing superintendent. So that the medical superintendent can instruct respective consultant and medical officer to improve their compliance level. In the same way nursing superintendent and ward incharge can instruct respective nurse.
2. Once in a month training of both doctors and nurses should be given on the proper maintenance of medical records and its importance.
3. Rewards and appreciation should be given to those nurses and wards that maintains and updates the records properly. This will be a motivational factor for them as well as for others.

H. CONCLUSION

By weekly audit of medical records and regular training of staff, the compliance of medical records can be improved.

I. REFERENCES

1. Joshi S.K., Quality Management in Hospitals, Jaypee Brothers Medical Publishers (P) Ltd. First edition:2009
2. Joint Commission International Accreditation Standards, by Apollo Hospitals, Dhaka, 2010
3. Joint Commission International Accreditation Standards, 4th edition, 2011.
4. Mersey Care NHS Trust ,Policy and Procedure For Records: Retention & Disposal Mersey Care NHS Trust. December 2003. Retrieved 2008-07-05.

SUMMER TRAINING LEARNINGS

1. Got an overview of the various departments of the hospital and their day to day functioning.
2. Learned about organizational culture and its importance.
3. Identified some issues/ problems associated with some specific operational area and learned about the simple solutions for them.

ANNEXURE

Distribution of nurses ward wise and bed nurse ratio

WARD	Total Bed	Status		Nurse	Incharge	shift in	Available	M	E	N	R	Ratio	Patient
SP/P/DLX	25	Operational		14	1	3	10	3	2	2	3	4	12
Isolation (SP)	2	Operational									0	0	0
CTVS	12	Operational		8	1	3	4	1	1	1	1	5	5
FGW	33	Operational		18	1	3	14	4	3	3	4	5	20
ANC	8	Operational		9	1	3	5	2	2	1	2	5	10
CCU	12	Operational	18	15	1	3	11	4	4	3	3	1.5	6
Pre cath bed	5	Operational										0	0
MICU	12	Operational		25	1	3	21	7	7	7	6	1.5	10.5
NICU	6	Operational		8	1	3	4	2	1	1	1	1.5	3
ITU	11	Operational		29	1	3	25	9	8	8	8	1.5	13.5
Post op beds	2	Operational				3						0	0
MGW1	16	Operational		14	1	3	10	4	3	3	3	5	20
MGw2	19	Operational		16	1	3	12	4	4	4	4	5	20
Dialysis	16	Operational		3	1	3					0		0
Blood bank				1							0		0
Porocedure room				1							0		0
Emergency	7	Operational		10	1	3	6	2	2	2	2		0
Cath lab Recovery	3	Operational		5	1	3	1				0		0
Total bed	189	**Operational**											
OT				26									
NEW				9									

DETAILS OF WORKING OF PURCHASE DEPARTMENT

Material purchase planning :-

Purchasing :- Hospital requires supplies of materials and services from outside sources , therefore purchasing and processing are common functions in almost all organizations

Purchasing generally refers to the actual buying of materials and those activities associated with the buying procedures.

Purchasing activity starts with the reorganization of needs . When material requisition emerges either from the user department, stores department or material planning, purchase department has to ensure its timely supply.

The next step is the selection of the right source of supply. Often the purchase department has to develop alternative sources of supply and arrange for potential substitutes. The responsibility of purchase manager is from ascertaining the price of items which is a prime factor in source selection , timely delivery , quality assurance , reliability , credit availability etc according to the hospital policy.

Function of material department can be summarized as :-

- **Selection of supplies**
- **Analyzing of bids**
- **Price negotiations**
- **Issuance of purchase orders**
- **Follow up actions**
- **Cost analysis and market study**
- **Maintenance of price catalogues**
- **Issuance of indent orders**

Purchase requisition:-

Purchase requisition is raised in following cases:-

- For a new items
- For a capital item which may be a replacement or for a new activity
- For a standard item normally kept in stock
- Purchase of items which are normally not a part of the inventory but are ordered as and when required for a specific purpose.

The information that has to be provided on purchase requisition:-

- ✓ Name of department :- purchase requisition can come from stores and it is normally based on the stock levels decided for respective items based on ABC analysis.
- ✓ Name of material/items
- ✓ Code no. or batch and expiry date
- ✓ Description / specification ie required features , its functions , model
- ✓ Quantity required
- ✓ Quantity in hand
- ✓ Quantity issued
- ✓ Signature of authorized person

- ✓ Purchase requisition form

PURCHASE REQUISITION	No.
	Date

PT's Name…… Pt's ID……

Name of the ward/department…… Dr's Name…….

SI No	DESCRIPTION	BATCH EXPIRY DATE	QUANTITY REQUIRED	QUANTITY IN HAND	QUANTITY ISSUED	REMARKS

Issued by

Name & signature of indentor checked by Received by Manager-purchaser

Need assessment by purchase department:-

- ✓ Product to be evaluated
- ✓ Reason for request

- ✓ Whether the requested item will be addition to current product line or replacement or reduces use of another item.
- ✓ Whether used for doctors

Note :- suppose the requisition form is made for 500 ml of a product then purchase manager will check the issued data(last 15 days) of that product , if that product has been issued in 400 ml then the purchase manager will issue only that product in 400 ml quantity (average quantity)

Vendor selection :-

Following data has to be collected while selecting a vendor :-

- ✓ Whether the vendor is the authorized distributor / dealer of the manufacturer or manufacturer themselves
- ✓ What is the location of the vendor with respect to the hospital
- ✓ Is the vendor supplying or as ever supplied some material to other hospitals
- ✓ If yes , then enquire about its quality , price , time taken to supply and other parameters.
- ✓ Verification of the vendors financial standing , reputation.
- ✓ Inquiry to find out if the vendor has ever been blacklisted by any other organization in the country.
- ✓ Whether the vendor has sales tax registration.

Vendor rating:-

It can be done on the following grounds :-

- ✓ Price
- ✓ Quality
- ✓ Service
- ✓ Commercial terms
- ✓ Warranty

Rating can be done according to the criticality of the materials. If very critical items are involved then maximum weight age can be given to the quality of the product (in case of drugs , research molecules ar preferable) then service and then price.

While ordering for routine items, maximum weight age can be given to price, then quality, and then services.

Purchase enquiries :-

Enquiries before placing orders should be made on following lines:-

- ✓ Lowest quotation of selected vendors
- ✓ Delivery period

Request for proposal for capital assets:-

All the valuable assets are negotiated at the headquarter of NH ie NH Bangalore. The purchase national head of the hospital will negotiate with company head on the cost of the consignment items and the finalized value of the assets is sent to the respective branches of NH.

NOTE:-

Two types of items are found in the hospital

I. CONSIGNMENT ITEMS: - Those items which are expensive like implants or which belong to operation theatre/ cath lab. For these items there is no invoice generated by the company, hospital can store these items free of cost. Once the item is utilized then the invoice of that item would be generated by the company , hospital will pay the amount

II. NON CONSIGNMENT ITEMS:- surgical and drugs items will come under nonconsignment items.

INSPECTION (Stock inward book) :-

While accepting the ordered materials, the stores person takes note of the following information:-

- ✓ Quantity of each item supplied tally with the ordered quantity as per purchase order.
- ✓ Brand names of the products supplied are as specified in the purchase order.

- ✓ Expiry date of the materials is well beyond the period of anticipated coverage of consumption.
- ✓ Whether there is any breakage, spillage, damage etc.
- ✓ The specifications of the items are as per the purchase order.
- ✓ Source of supply is as per the purchase order.

SUPPLIER RETURNS :- Items to be returned to supplier should be placed in a location "RETURN TO SUPPLIER" in the system. when P.O no. and GRN no. is entered in the system. Automatically it will show the no. of items which have been received. The number of Quantity is to be returned would be marked and generate in a copy, signed by the purchase head and sent it to the source of supply.

ARRANGEMENT OF MATERIAL AT CENTRAL STORE AND CODIFICATION:-

In the store, the drugs and surgical items are kept in rack no.(R-1 to R-) followed by code (B1, B2, B3, B4, B5) followed by series no.(X1, X2, X3, X4, X5). The racks, codes and series no of the drugs and surgical items are kept mentioned in the HIS system of the purchase department.

REQUISITION OF MATERIAL REQUIRED FOR THE DEPARTMENT ON TIME (Indent order) :-

Indent is placed by the department in the HIS system as per requirements and after checking with their safety stock through system and physical verification.

Approval (verification) of indent in HIS by respective HOD and sent to the stores for execution.

ISSUANCE OF INDENT ORDERS :-

- ✓ Issue will be based on indents received from the stores.
- ✓ Issue will be made on cost price.
- ✓ Issue from central store will be on MRP

- ✓ Issue will be made batch wise. Early expiry method is used for issuing.
- ✓ Indent status will be updated.
- ✓ stocks will be updated.
- ✓ Issue will have provision to check expiry material from being issued.
- ✓ Issue will have provision to returns in case of expiry.
- ✓ <u>PROCESS OF INDENTING AND DISPATCHING:-</u>

Nursing counter

⇩

Indents by nursing staff

⇩

Collection of medicines within the central store/ IP pharmacy

⇩

Bills generated in duplicates

⇩

Central store check the expiry and strength of medicines or surgical items

⇩

Packed, labeled, and ready for delivery

⇩

Designated delivery boy per floor

⇩

Collect packed indents and delivered it to nursing staff

⇩

Signature and time of delivery mentioned in bill copy

⇩

One copy of bill is brought back by the boy and the other copy is retained by sister in charge.

CONSIGNMENT ITEMS FORM

CONSIGNMENT ITEM UTILISATION REPORT					
UNIT : CARHLAB/OT			DATE :		
Item Name	Company	Size	Lot No.	Patient Name / ID	
Sub store in charge (cath lab or OT) ……					

ISSUE PURCHASE ORDER :-

Once the negotiation is done with supplier . the purchase manager will issue a purchase order. It is done via mail

PURCHASE ORDER FORM

P.O No.

(automatically generated by system) Purchase order

To,	From,
The selected vendor	The hospital Drug Lic. No.

S.No	Item Name	Unit	Quantity	Rate	Amount	VAT	Tax amount

TERMS AND CONDITIONS :-

Payment : Within 45 days from date of delivery

Delivery : Immediately at out NH Hospital in Sanganer, Jaipur

Note : Please attach PO copy with the invoice, material will not be received without PO copy

RECEIVING:-

Suppliers bring along with the ordered materials , delivery challan , duly signed by the authorized representative.

Delivery challan

Name of the supplier

Invoice to…… Date of P.O……..

P.O no…….. Date of supply…….

Sr.no.	Product code	Name/brand/description Of the product	Unit	quantity ordered	quantity supplied

Signature of supplier…….. stamp of supplier……..

Signature of hospital security…… stamp of hospital……..

Received by……

Received at……..

GOOD RECEIPT NOTE :-

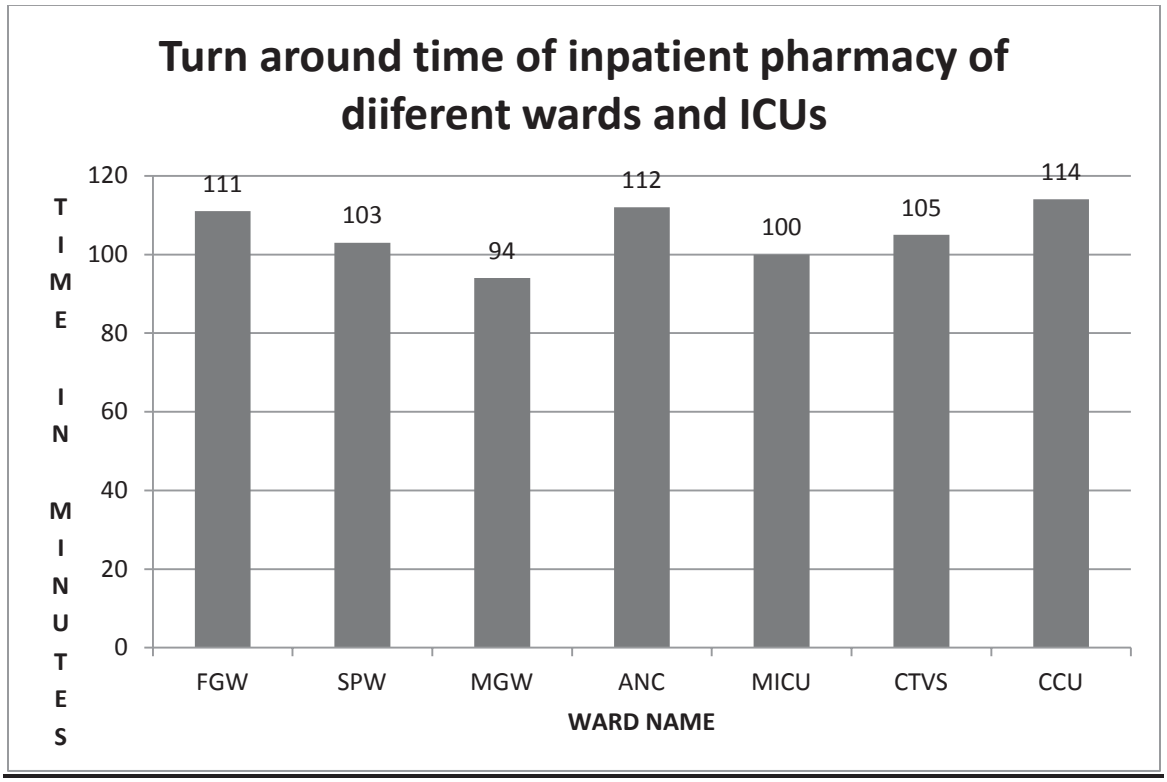
Receipt no……..	Receipt date……..
PO No…….	PO Date…….
Release No. ……..	Invoice Date……
Invoice No. ……	Supplier
Receiving location	

S. No	Item	Basis of sale	Basis of Sales value	Vom received	Quantity date	Batch no. qty	Expiry rate	Good value	Cost amt	Cost	VAT%	VAT	MRP	TOTAL

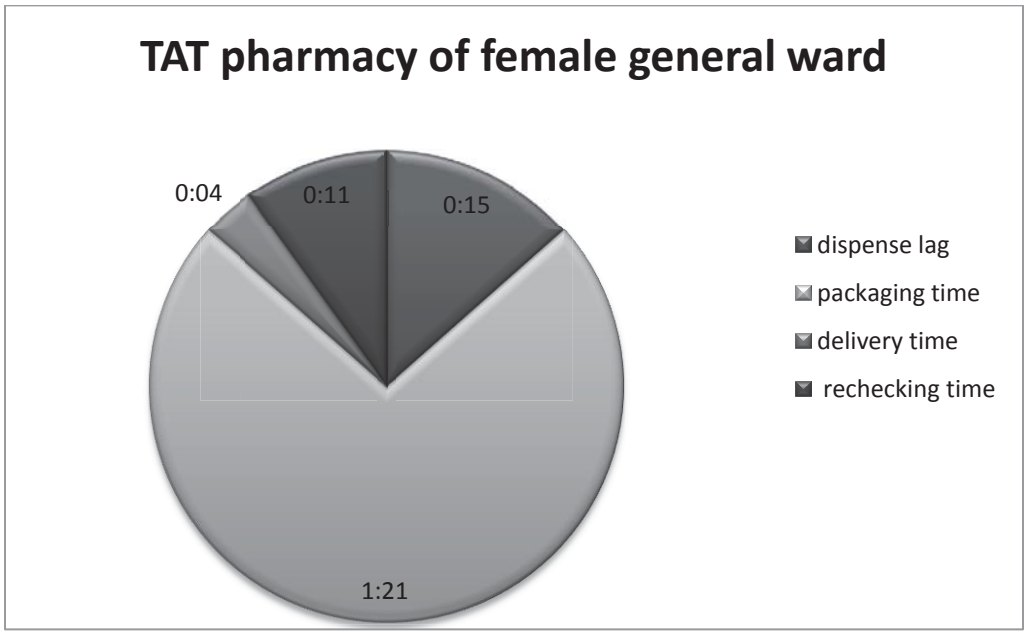
Receiver sign	Sanctioning Authority

Turn Around Time of In-Patient Pharmacy Ward Wise

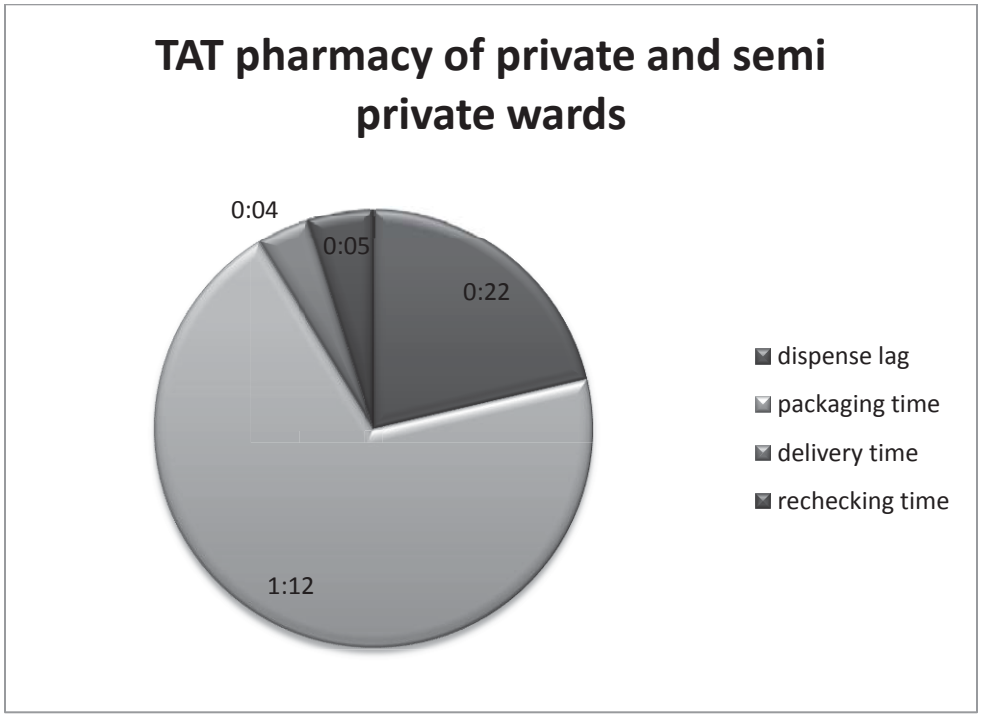
(In minutes)



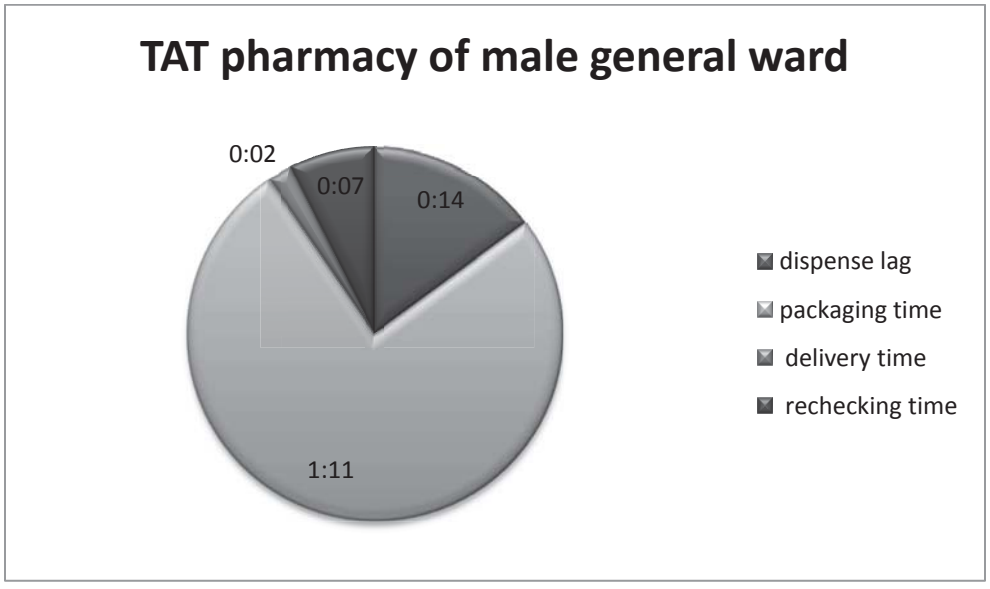
1. Female General Ward



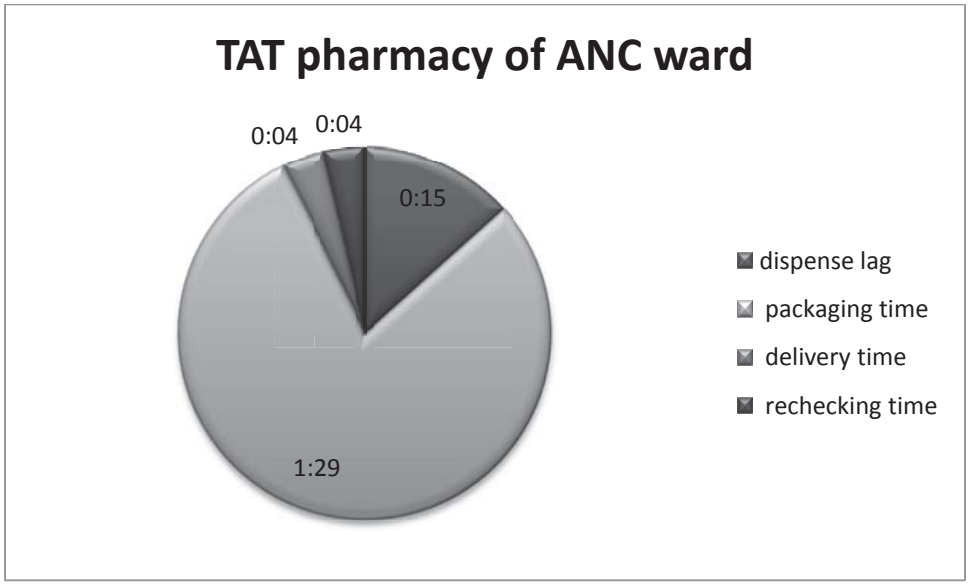
2. Semi Private/Private Ward



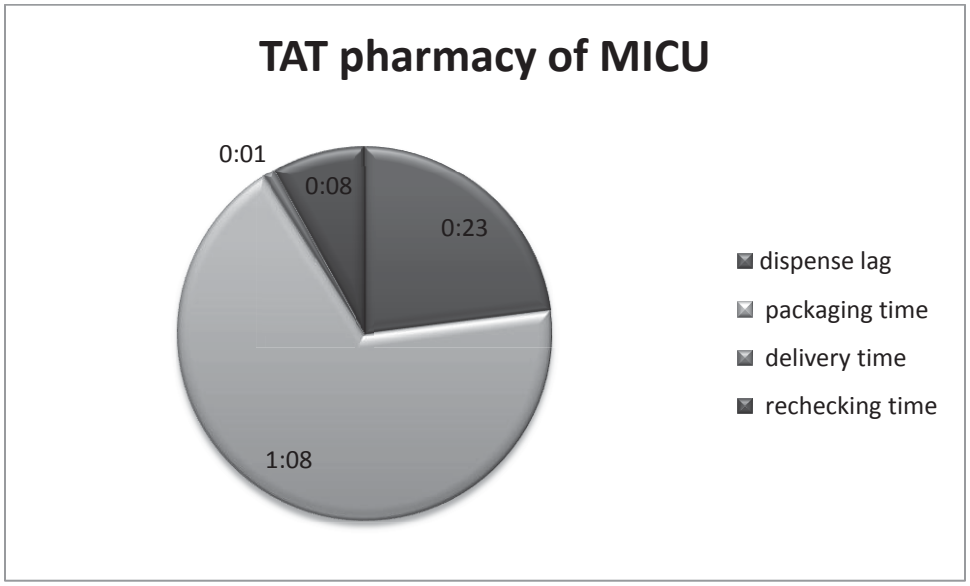
3. Male General Wards



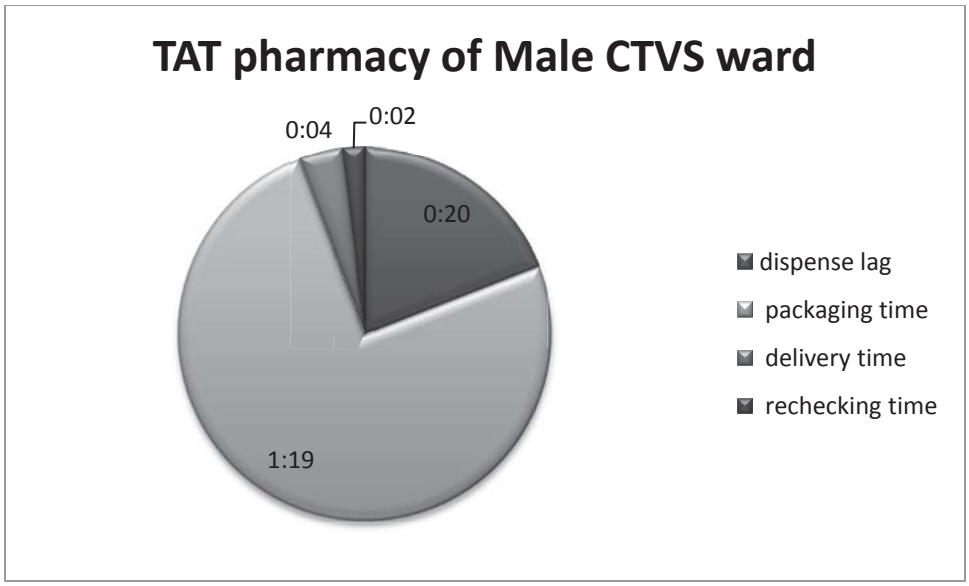
4. Ante Natal Clinic



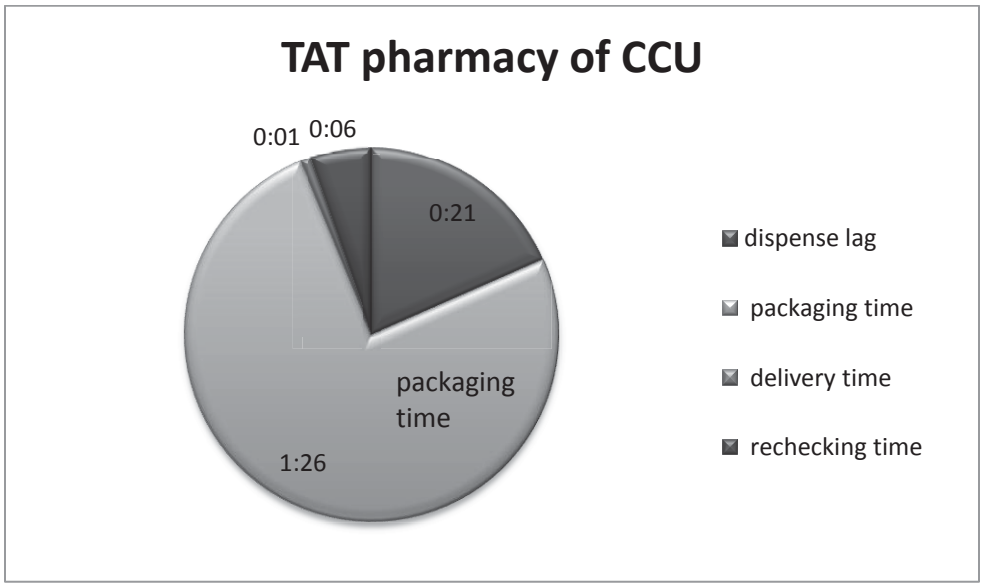
5. Medical Intensive Care Unit



6. Post Cardiac Thoracic Vascular Surgery



7. Cardiac Care Unit



FEMALE GENERAL WARD

DISPENSE LAG	TAT MEDICINE PACKAGING AT STORES	TAT RUNNERS REACHING WARDS	TAT RECEIVAL BY NURSES AFTER MEDICINES REACHING WARDS	TAT MEDICATIONS
0:02	1:14	0:05	0:15	1:36
0:48	0:26	0:05	0:15	1:34
0:03	0:52	0:05	0:15	1:15
0:47	0:32	0:05	0:10	1:34
0:01	0:52	0:05	0:15	1:13
0:42	0:18	0:15	0:10	1:25
0:39	0:54	0:04	0:10	1:47
0:29	0:46	0:04	0:10	1:29
0:02	0:59	0:04	0:10	1:15
0:00	1:14	0:04	0:10	1:28
0:00	2:38	0:04	0:10	2:52
0:00	2:31	0:04	0:09	2:44
0:04	0:27	0:04	0:09	0:44
0:32	3:35	0:04	0:10	4:21
0:00	1:03	0:04	0:10	1:17
0:10	1:41	0:04	0:10	2:05
0:00	1:29	0:04	0:10	1:43
0:05	1:07	0:04	0:10	1:26
0:01	1:02	0:04	0:10	1:17
0:03	1:02	0:04	0:18	1:27
0:05	1:26	0:04	0:18	1:53
0:31	1:36	0:04	0:18	2:29
0:22	1:55	0:04	0:18	2:39
0:35	2:53	0:05	0:05	3:38
0:15	1:21	0:04	0:11	1:52

SEMI PRIVATE/ PRIVATE WARD

DISPENSE LAG	packaging time	DELIVERY TIME	RECHECKING TIME	TOTAL TIME CONSUMED
0:21	2:43	0:07	0:07	3:18
0:31	2:21	0:07	0:07	3:06
0:23	2:12	0:07	0:07	2:49
0:03	2:12	0:03	0:02	2:20
1:39	0:58	0:04	0:05	2:46
1:37	0:59	0:04	0:05	2:45
0:40	1:05	0:04	0:05	1:54
0:40	1:04	0:04	0:05	1:53
0:07	0:52	0:06	0:03	1:08
0:52	1:37	0:03	0:09	2:41
0:00	0:57	0:04	0:05	1:06
0:00	1:05	0:03	0:09	1:17
0:00	1:02	0:03	0:09	1:14
0:00	0:59	0:03	0:09	1:11
0:00	0:49	0:03	0:09	1:01
0:22	0:51	0:02	0:07	1:22
0:25	1:23	0:05	0:02	1:55
0:28	1:18	0:05	0:02	1:53
0:28	1:17	0:05	0:02	1:52
0:01	1:15	0:05	0:02	1:23
0:06	0:31	0:05	0:02	0:44
0:03	0:27	0:05	0:02	0:37
0:00	0:20	0:05	0:02	0:27
0:03	0:38	0:05	0:12	0:58
0:22	1:12	0:04	0:05	1:44

MALE GENERAL WARD

DISPENSE LAG	PACKAGING TIME	DELIVERY TIME	RECHECKING TIME	TOTAL TIME CONSUMED
0:00	2:14	0:03	0:02	2:19
0:04	2:34	0:03	0:02	2:43
0:15	1:50	0:03	0:02	2:10
0:26	0:52	0:03	0:02	1:23
0:43	0:54	0:03	0:02	1:42
0:15	0:59	0:03	0:02	1:19
0:34	1:04	0:03	0:02	1:43
0:04	1:53	0:02	0:07	2:06
0:00	0:58	0:02	0:07	1:07
0:01	1:32	0:02	0:05	1:40
0:02	1:20	0:02	0:15	1:39
0:17	1:26	0:02	0:15	2:00
0:00	1:15	0:00	0:17	1:32
0:00	1:05	0:02	0:07	1:14
0:23	1:26	0:02	0:07	1:58
0:02	1:11	0:02	0:07	1:22
0:30	0:29	0:02	0:07	1:08
0:34	0:30	0:02	0:07	1:13
0:03	1:08	0:02	0:07	1:20
0:07	1:12	0:02	0:15	1:36
0:00	0:27	0:02	0:15	0:44
0:04	0:53	0:02	0:15	1:14
1:30	0:35	0:02	0:03	2:10
0:00	0:54	0:02	0:03	0:59
0:14	1:11	0:02	0:07	1:35

ANTENATAL CLINIC

DISPENSE LAG	PACKAGING TIME	DELIVERY TIME	RECHECKING TIME	TOTAL TIME CONSUMED
0:03	0:48	0:03	0:11	1:05
0:35	1:55	0:03	0:11	2:44
0:35	2:17	0:03	0:11	3:06
0:22	0:49	0:05	0:05	1:21
0:09	0:46	0:05	0:05	1:05
0:01	2:48	0:04	0:02	2:55
0:18	1:43	0:04	0:02	2:07
0:23	1:44	0:04	0:07	2:18
0:18	1:48	0:04	0:07	2:17
0:17	1:48	0:04	0:07	2:16
0:12	1:51	0:04	0:07	2:14
0:11	1:06	0:06	0:04	1:27
0:06	0:34	0:06	0:04	0:50
0:03	0:28	0:05	0:00:53	0:37
0:05	0:36	0:03	0:03	0:47
0:40	0:32	0:05	0:03	1:20
0:34	2:25	0:03	0:03	3:05
0:00	2:04	0:03	0:03	2:10
0:13	1:47	0:04	0:02	2:06
0:10	1:48	0:04	0:02	2:04
0:17	1:52	0:04	0:05	2:18
0:05	2:00	0:04	0:05	2:14
0:31	1:07	0:04	0:05	1:47
0:06	1:49	0:06	0:04	2:05
0:14	0:59	0:06	0:04	1:23
0:15	1:29	0:04	0:04	1:54

MEDICAL INTENSIVE CARE UNIT

DISPENSE LAG	PACKAGING TIME	DELIVERY TIME	RECHECKING TIME	TOTAL TIME CONSUMED
0:37	0:47	0:01	0:13	1:38
0:15	0:46	0:01	0:13	1:15
0:01	0:33	0:01	0:13	0:48
0:03	0:21	0:01	0:13	0:38
0:29	0:27	0:01	0:08	1:05
0:00	0:57	0:01	0:05	1:06
0:00	0:59	0:01	0:05	1:08
0:00	1:03	0:01	0:05	1:12
0:24	0:35	0:00	0:06	1:05
0:50	0:41	0:02	0:07	1:40
0:49	0:42	0:02	0:07	1:40
1:00	0:44	0:02	0:07	1:53
1:05	0:51	0:02	0:07	2:05
0:00	0:52	0:02	0:07	1:01
1:09	0:53	0:02	0:07	2:11
0:43	1:34	0:02	0:07	2:26
1:08	0:56	0:02	0:07	2:13
0:00	1:52	0:01	0:08	2:05
0:00	1:54	0:01	0:08	2:07
0:41	1:54	0:01	0:08	2:48
0:00	2:00	0:01	0:08	2:13
0:00	2:03	0:01	0:08	2:16
0:00	2:16	0:01	0:08	2:25
0:13	1:43	0:01	0:08	2:05
0:23	1:08	0:01	0:08	1:42

POST CTVS MALE WARD

DISPENSE LAG	PACKAGING TIME	DELIVERY TIME	RECHECKING TIME	TOTAL TIME CONSUMED
0:24	0:31	0:05	0:03	1:03
0:00	0:25	0:04	0:04	0:33
0:00	1:33	0:06	0:01	1:40
0:03	3:20	0:04	0:04	3:31
0:56	2:35	0:04	0:04	3:39
0:00	1:16	0:04	0:04	1:24

0:00	1:22	0:04	0:04	1:30
0:00	1:24	0:04	0:04	1:32
0:48	1:05	0:02	0:03	1:58
0:11	1:03	0:06	0:01	1:21
0:11	0:46	0:04	0:04	1:05
1:53	0:34	0:03	0:01	2:31
0:10	0:54	0:04	0:02	1:10
0:10	1:44	0:03	0:02	1:59
0:20	1:19	0:04	0:02	1:46

CARDIAC CARE UNIT

DISPENSE LAG	PACKAGING TIME	DELIVERY TIME	RECHECKING TIME	TOTAL TIME CONSUMED
0:13	1:03	0:01	0:08	1:25
0:41	1:09	0:01	0:08	1:59
0:39	1:07	0:01	0:08	1:55
0:06	0:57	0:01	0:05	1:09
0:04	0:29	0:01	0:05	0:39
0:16	0:13	0:01	0:03	0:33
0:00	1:01	0:02	0:08	1:11
0:00	1:05	0:02	0:08	1:15
1:03	2:29	0:01	0:09	3:42
1:20	2:39	0:01	0:09	4:09
0:00	2:15	0:01	0:09	2:25
0:36	1:51	0:02	0:09	2:38
0:41	1:52	0:02	0:09	2:44
0:41	1:54	0:02	0:09	2:46
0:00	2:04	0:02	0:09	2:15
0:01	1:15	0:02	0:09	1:27
0:20	0:49	0:00	0:01	1:10
0:04	0:52	0:01	0:09	1:06
0:21	0:55	0:01	0:01	1:18
0:16	1:47	0:01	0:07	2:11
0:05	1:52	0:01	0:08	2:06
0:00	1:36	0:02	0:03	1:41
0:31	1:48	0:02	0:03	2:24
0:26	1:45	0:02	0:03	2:16
0:21	1:26	0:01	0:06	1:56

Wide Range of Preventive Health Check Ups

Narayana Hrudayalaya Hospitals
Caring with Compassion

Basic Health Check Up ₹600/-

Recommended for all individuals without any Risk Factor*
Age Group – 15-25 Years

- CBC (Complete Blood Check Up)
- ESR (Infection in Blood)
- ABoRH (Blood Group)
- Blood Glucose Random (Diabetes Check)
- Total Cholesterol (Heart Health Check)
- S. Cretinine (Kidney Function)
- Urine Routine (Urine Infection)
- E.C.G. (Heart Condition Check)
- X-Ray Chest PA View (Infection in Chest)
- Consultation by Internal Medicine

Basic Cardiac Check Up ₹1600/-

Recommended for all individuals without any Risk Factor
Age Group - 25-35 Years

- CBC (Complete Blood Check Up)
- Blood Glucose Fasting (Diabetes Check)
- Post Prandial Glucose (Diabetes Check)
- Lipid Profile (All Cholesterol Levels)
- Kidney Function Test
- S. Calcium (Bone Strength)
- Urine Routine (Urine Infection)
- X-Ray Chest PA View (Infection in Chest)
- E.C.G. (Heart Condition Check)
- S. G. P. T.
- Tread Mil Test or 2D Echo (Heart Functioning Test)
- Consultation by Cardiologist
- Consultation by Dietician

Advance Cardiac Check Up ₹ 2000/-

Recommended for all individuals without any Risk Factor
Age Group - >30 Years

- CBC (Complete Blood Check Up)
- Blood Glucose Fasting (Diabetes Check)
- Post Prandial Glucose (Diabetes Check)
- Lipid Profile (All Cholesterol Levels)
- Kidney Function Test
- 2D Echo (Heart Condition Check)
- Tread Mil Test (Heart Functioning Test)
- S. Calcium (Bone Strength)
- Urine Routine (Urine Infection)
- X-Ray Chest PA View (Infection in Chest)
- E.C.G. (Heart Condition Check)
- S. G. P. T.
- Consultation by Cardiologist
- Consultation by Dietician

360° Cardiac Check Up ₹ 9500/-

Recommended for those with identified Cardiac Problems & other Risk Factors
Age Group - >35 Years

- CBC (Complete Blood Check Up)
- Blood Glucose Fasting (Diabetes Check)
- Post Prandial Glucose (Diabetes Check)
- Lipid Profile (All Cholesterol Levels)
- Kidney Function Test
- 2D Echo (Heart Condition Check)
- Tread Mil Test (Heart Functioning Test)
- S. Calcium (Bone Strength)
- Urine Routine (Urine Infection)
- X-Ray Chest PA View (Infection in Chest)
- E.C.G. (Heart Condition Check)
- 64 Slice CT coronary Angiography (Screening of blockage in heart)
- Consultation by Cardiologist
- Consultation by Dietician

Advance Health Check Up (Male) ₹ 2200/-

Recommended for all Males with /without any Risk Factor to check the key body parts like Liver, Kidney & Heart functions.
Age group - >30 Years

- CBC (Complete Blood Check Up)
- Blood Glucose Fasting (Diabetes Check)
- Post Prandial Glucose (Diabetes Check)
- Lipid Profile (All Cholesterol Levels)
- Liver Function Test (Liver Function)
- S. Cretinine (Kidney Function)
- X-Ray Chest PA View (Infection in Chest)
- Blood Urea Nitrogen (Kidney Function Test)
- Urine Routine (Urine Infection)
- E.C.G. (Heart Condition Check)
- Pulmonary Function Test (Allergy & Function of Lungs)
- Ultrasound Whole Abdomen (Sonography of Entire Stomach)
- PSA (Diagnosis of Prostate Cancer)
- Consultation by Internal Medicine
- Consultation by Dietician

Advance Health Check Up (Female) ₹ 2500/-

Recommended for all Females With /without any Risk Factor to check the key body parts like Liver, Kidney & Heart functions.
Age group - >30 Years

- CBC (Complete Blood Check Up)
- Blood Glucose Fasting (Diabetes Check)
- Post Prandial Glucose (Diabetes Check)
- Lipid Profile (All Cholesterol Levels)
- Liver Function Test (Liver Function)
- S. TSH (Thyroid Disorder)
- Pap smear (Screening of Cervical cancer)
- E.C.G. (Heart Condition Check)
- S. Cretinine (Kidney Function)
- Blood Urea Nitrogen (Kidney Function Test)
- Urine Routine (Urine Infection)
- S. Calcium (Bone Strength)
- X-Ray Chest PA View (Infection in Chest)
- Ultrasound Whole Abdomen (Sonography of Entire Stomach)
- Mammography (Screening of Breast Cancer)
- Consultation by Internal Medicine
- Consultation by Gynecologist
- Consultation by Dietician

Master Health Check Up (Male) ₹ 2900/-

Recommended for all Males with /without any Risk Factor to check the entire body functions.
Age group - >35 Years

- CBC (Complete Blood Check Up)
- Blood Glucose Fasting (Diabetes Check)
- Post Prandial Glucose (Diabetes Check)
- Lipid Profile (All Cholesterol Levels)
- Liver Function Test (Liver Function)
- S. Cretinine (Kidney Function)
- PSA (Diagnosis of Prostate Cancer)
- S. Uric Acid (Diagnosis of Arthritis)
- B. Urea (Kidney Function)
- Blood Urea Nitrogen (Kidney Function Test)
- Urine Routine (Urine Infection)
- Tread Mil Test or 2D Echo (Heart Functioning Test)
- Pulmonary Function Test (Allergy & Function of Lungs)
- E.C.G. (Heart Condition Check)
- Ultrasound Whole Abdomen (Sonography of Entire Stomach)
- X-Ray Chest PA View (Infection in Chest)
- Consultation by Cardiologist
- Consultation by Internal Medicine
- Consultation by Dietician

Master Health Check Up (Female) ₹ 3300/-

Recommended for all Females with /without any Risk Factor to check the entire body functions.
Age group - >35 Years

- CBC (Complete Blood Check Up)
- Blood Glucose Fasting (Diabetes Check)
- Post Prandial Glucose (Diabetes Check)
- Lipid Profile (All Cholesterol Levels)
- Liver Function Test (Liver Function)
- B. Urea (Kidney Function)
- Blood Urea Nitrogen (Kidney Function Test)
- S. Cretinine (Kidney Function)
- Urine Routine (Urine Infection)
- Pap smear (Screening of Cervical cancer)
- S. Uric Acid (Diagnosis of Arthritis)
- S. TSH (Thyroid Disorder)
- Tread Mil Test or 2D Echo (Heart Functioning Test)
- Mammography (Screening for Breast Cancer)
- Ultrasound Whole Abdomen (Sonography of Entire Stomach)
- X-Ray Chest PA View (Infection in Chest)
- E.C.G. (Heart Condition Check)
- Consultation by Cardiologist
- Consultation by Internal Medicine
- Consultation by Gynaecologist
- Consultation by Dietician

Various customized & corporate health packages are also available
*Various Risk Factors are mentioned on the flip side of this leaflet.

For Further Assistance Call : 9686096746

S.No.	Name of package	Duration (Including)	General Ward	Sp (Four)	Semi Pvt (Twin sharing)	Pvt	Deluxe
1	NORMAL DELIVERY PKG	2	6,000	7,500	9,000	12,000	15,000
2	NORMAL DELIVERY - WITHOUT BOOKING PKG	3	8,000	10,000	12,000	16,000	20,000
3	NORMAL DELIVERY - PAINLESS PKG	3	12,500	15,600	18,800	25,000	31,200
4	NORMAL DELIVERY - PAINLESS - WITHOUT BOOKING PKG	3	14,500	18,100	21,800	29,000	36,200
5	NORMAL DELIVERY - HIGH RISK PKG	3	9,000	11,300	13,500	18,000	22,500
6	NORMAL DELIVERY - HIGH RISK + PAINLESS PKG	3	15,000	18,800	22,500	30,000	37,500
7	NORMAL DELIVERY - HIGH RISK + PAINLESS - WITHOUT BOOKING PKG	3	17,000	21,300	25,500	34,000	42,500
8	NORMAL DELIVERY - HIGH RISK - WITHOUT BOOKING PKG	3	11,000	13,800	16,500	22,000	27,500
9	CAESAREAN SECTION LSCS PKG	5	20,000	25,000	30,000	40,000	50,000
10	CAESAREAN SECTION LSCS - WITHOUT BOOKING PKG	5	22,000	27,500	33,000	44,000	55,000
11	CAESAREAN SECTION LSCS - HIGH RISK PKG	5	25,000	31,300	37,500	50,000	62,500
12	CAESAREAN SECTION LSCS - HIGH RISK - WITHOUT BOOKING PKG	5	27,000	33,800	40,500	54,000	67,500
13	ASSISTED DELIVERY (INSTRUMENTAL) PKG	3	9,000	11,300	13,500	18,000	22,500
14	ASSISTED DELIVERY (INSTRUMENTAL) - WITHOUT BOOKING PKG	3	11,000	13,800	16,500	22,000	27,500

Note:-

1. Charges are inclusive of Bed charges, Operation charges, Labour room charges, Drugs & Consumables.
2. Any stay beyond the package period would be chargeable on actuals
3. All Invetsigations Charged Extra
4. Unbooked Delivéries to be charged Rs. 2000/- in general ward to be increased

	Gynecology - oncology						
S.No.	Name of package	Duration	General Ward	Sp (Four)	Semi Pvt(Twin sharing)	Pvt	Deluxe
1	Fibroadenoma removal	Open Billing	3,000	3,300	3,750	4,500	6,000
2	Anterior & Posterior Colpperineorrhaphy	Open Billing	10,000	11,000	12,500	15,000	20,000
3	PAP Smear & Colposcopy	Open Billing	1,500	1,650	1,875	2,250	3,000
4	PAP Smear + VIA with Cryotherapy	Open Billing	2,000	2,200	2,500	3,000	4,000
5	PAP Smear with Electric Coutry VILI	Open Billing	2,000	2,200	2,500	3,000	4,000
6	LLETZ (Large Loop Excision of T Zone)	Open Billing	2,500	2,750	3,125	3,750	5,000
7	Endo Aspiration with Endo Sample	Open Billing	1,000	1,100	1,250	1,500	2,000
8	PAP Smear with Ecto, Endi Cx	Open Billing	1,500	1,650	1,875	2,250	3,000
9	For All Genital Malignents Pap's Smear Ecto Cx, Endo Cx & Endometrium	Open Billing	2,500	2,750	3,125	3,750	5,000
10	Werthiems hysterectomy	Open Billing	15,000	16,500	18,750	22,500	30,000
11	Staging Laprotomy	Open Billing	18,000	19,800	22,500	27,000	36,000
12	Vulvectomy (Major Surgery)	Open Billing	10,000	11,000	12,500	15,000	20,000
13	Radical Vulvectomy	Open Billing	9,000	9,900	11,250	13,500	18,000
14	Conization of Cx	Open Billing	4,500	4,950	5,625	6,750	9,000
15	Chemotherapy Infusion	Open Billing	1,000	1,100	1,250	1,500	2,000

Note:-

1 The charges are inclusive of OT charges, Surgeon charges, Anesthetist charges and Drugs & consumables used in OT. All other charges like bed, consultation, investigations, drugs & consumables other than in OT would be charged extra.

S.No.	Name of package	Duration	General Ward	Sp (Four)	Semi Pvt (Twin sharing)	Pvt	Deluxe
1	D & E 6 - 10 week	Open Billing	2,000	2,200	2,500	3,000	4,000
2	D & E 10 - 12 week	Open Billing	3,000	3,300	3,750	4,500	6,000
3	D & C	Open Billing	2,000	2,200	2,500	3,000	4,000
4	MTP surgical 6- 8 week	Open Billing	3,000	3,300	3,750	4,500	6,000
5	MTP surgical 8-10 week	Open Billing	4,000	4,400	5,000	6,000	8,000
6	MTP surgical 10-12 week	Open Billing	5,000	5,500	6,250	7,500	10,000
7	MTP surgical Second Trimester	Open Billing	7,500	8,250	9,375	11,250	15,000
8	Vesicular Mole 6 - 10 Week	Open Billing	4,000	4,400	5,000	6,000	8,000
9	Vesicular Mole 10 - 12 Week	Open Billing	5,000	5,500	6,250	7,500	10,000
10	Vesicular Mole Second Trimester	Open Billing	7,500	8,250	9,375	11,250	15,000
11	Vesicular Mole Third Trimester	Open Billing	10,000	11,000	12,500	15,000	20,000

Note:

1 For Item no 1 to 12:- the charges are inclusive of OT charges, Surgeon charges, Anesthetist charges and Drugs & consumables used in OT. All other charges like bed, consultation, investigations, drugs & consumables other than in OT would be charged extra.

	Gynecology						
S.No.	Name of package	Duration	General Ward	Sp (Four)	Semi Pvt(Twin sharing)	Pvt	Deluxe
1	Bartholin cyst excision	Open billing	2,500	2,750	3,125	3,750	5,000
2	Diagnostic hysteroscopy	Open billing	2,500	2,750	3,125	3,750	5,000
3	Diagnostic Colposcopy	Open billing	2,500	2,750	3,125	3,750	5,000
4	Operative Hysteroscopy	Open billing	3,500	3,850	4,375	5,250	7,000
5	Diagnostic laproscopy	Open billing	5,000	5,500	6,250	7,500	10,000
6	Fractional curettage	Open billing	3,500	3,850	4,375	5,250	7,000
7	Operative Laproscopy (minor)	Open billing	7,000	7,700	8,750	10,500	14,000
8	Operative Laproscopy (major)	Open billing	18,000	19,800	22,500	27,000	36,000
9	LAP sterization LS	Open billing	3,500	3,850	4,375	5,250	7,000
10	Laprotomy Simple	Open billing	12,000	13,200	15,000	18,000	24,000
11	Laprotomy Complex .	Open billing	15,000	16,500	18,750	22,500	30,000
12	Laprotomy - Stageing	Open billing	18,000	19,800	22,500	27,000	36,000
13	LAVH	Open billing	15,000	16,500	18,750	22,500	30,000
14	NDVH	Open billing	15,000	16,500	18,750	22,500	30,000
15	Myomectomy	Open billing	15,000	16,500	18,750	22,500	30,000
16	OS tightning	Open billing	3,000	3,300	3,750	4,500	6,000
17	Introitus Tightning	Open billing	5,000	5,500	6,250	7,500	10,000
18	Tubal Microsurgery	Open billing	20,000	22,000	25,000	30,000	40,000
19	Vaginal Hysterectomy	Open billing	18,000	19,800	22,500	27,000	36,000
20	Radical Hysterectomy	Open billing	18,000	19,800	22,500	27,000	36,000
21	Breast Abscess Drainage GA	Open billing	3,000	3,300	3,750	4,500	6,000
22	Breast Abscess Drainage LA	Open billing	1,500	1,650	1,875	2,250	3,000

Note:-

1 The charges are inclusive of OT charges, Surgeon charges, Anesthetist charges and Drugs & consumables used in OT. All other charges like bed, consultation, investigations, drugs & consumables other than in OT would be charged extra.