

**Summer Training at
Manipal Hospital, Jaipur
(April 3 to June 2, 2017)**

- **Utilization of Radiology Services**
 - **Apache Scoring**
- **Job Description of Employees**

**By
Isha Sharma**

**Under the guidance of
Dr. Arindam Das**

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


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

CERTIFICATE

This is to certify that **Dr. Isha Sharma** has undergone summer training in **Manipal Hospital, Jaipur** from 3rd April to 2nd June 2017.

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

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



Col. (Dr.) Ashok Kaushik

Dean (Academic & Student Affair)

The IIHMR University, Jaipur



Name of the Mentor- **Dr. Arindam Das**

Designation- Associate Professor and

Associate Dean Research

The IIHMR University



SMH/HR/2017/ECR00231

Date: 1st June 2017

TO WHOMSOEVER IT MAY CONCERN

This is to certify that, Dr. Isha Sharma, a student of IIHMR has undergone her internship project with us from 3rd April 2017 to 1st June 2017.

During this period, he/she was involved in projects pertaining to

1. Job Description of Employees
2. Apache Scoring
3. Utilization of Radiology Services.

At "Manipal Hospital (Jaipur) Pvt. Ltd. Her performance on the projects assigned and her conduct was found to be good. We wish her success in her future endeavors.

For Manipal Hospital (Jaipur) Pvt. Ltd.


Deputy Manager HR


Operations Head

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ACKNOWLEDGEMENT

A summer project is a golden opportunity for learning and self-development. I am thankful to have some wonderful people to lead me through in completion of this Project.

I owe a great debt to all Professionals at Manipal Hospitals for sharing their knowledge and time which inspired me to give my best in this project study.

My heartfelt gratitude to Mr.Naveen Malik (Head HR) and Mr. Prateek Negi (Assistant Manager HR) for sharing their views despite of their very busy schedule. It has been my privilege to work under dynamic supervision at the Hospital.

My institute – Indian Institute of Health Management Research (IIHMR), Jaipur deserves the foremost appreciation for providing me the opportunity to understand my individual capabilities.

My sincere gratitude to Dr. Ashok Kaushik (Professor Dean, IIHMR, Jaipur) for his relentless support and guidance.

A genuine thanks to my guide my Mentor Dr. Arindam Das for his helpful attitude and valuable suggestions.

TABLE OF CONTENTS

<u>Abbreviations</u>	5
<u>Introduction</u>	6
<u>Manipal Values</u>	7
<u>Vision Of Hospital</u>	7
<u>Mission Of Hospital</u>	7
<u>Quality Policy</u>	7
<u>Focus of Hospital</u>	8
<u>Accreditation & Affiliations</u>	8
<u>Infrastructure</u>	9
<u>Location</u>	9
<u>Floor Wise Facility Distribution:-</u>	Error! Bookmark not defined.
<u>Services At Manipal Hospital:-</u>	Error! Bookmark not defined.
<u>Department Profiling</u>	Error! Bookmark not defined.
<u>Project</u>	30
<u>Introduction</u>	31
<u>Objective</u>	36
<u>Research Question</u>	36
<u>Research Design</u>	36
<u>Data Collection</u>	Error! Bookmark not defined.
<u>Findings & Analysis</u>	36
<u>Results</u>	38
<u>Recommendations</u>	41
<u>References</u>	42

ABBREVIATIONS

- F & B – Food and Beverage
- USG-Ultrasound
- GE-Gastroenterology
- FD-Facility Director
- MS-Medical Superintendent
- FOS-Fortis Operating System
- QA-Quality Assurance
- CTVS-Cardio Thoracic Vascular Surgery
- HOD- Head of Department
- ENT-Ear Nose Throat
- CSSD-Central Sterile Supply Department
- SICU-Surgical Intensive Care Unit
- NICU-Neonatal Intensive Care Unit
- LDR- Labor and Deliver
- OT-Operation Theater
- HDU-High Dependency Unit
- MICU-Medical Intensive Care Unit
- CCU-Cardiac Care Unit
- HR-Human Resource
- MRD-Medical Records Department
- IT-Information Technology
- PWD-Patient Welfare Department
- NGW- Neuro General Ward
- OPD-Out Patient Department
- IPD-In Patient Department
- PICU- Pediatric ICU

INTRODUCTION

Manipal Hospitals Jaipur



“A world class network of healthcare establishments in India”

Manipal Hospitals is part of the Manipal Education and Medical Group (MEMG), which pioneers in the field of education and healthcare delivery.

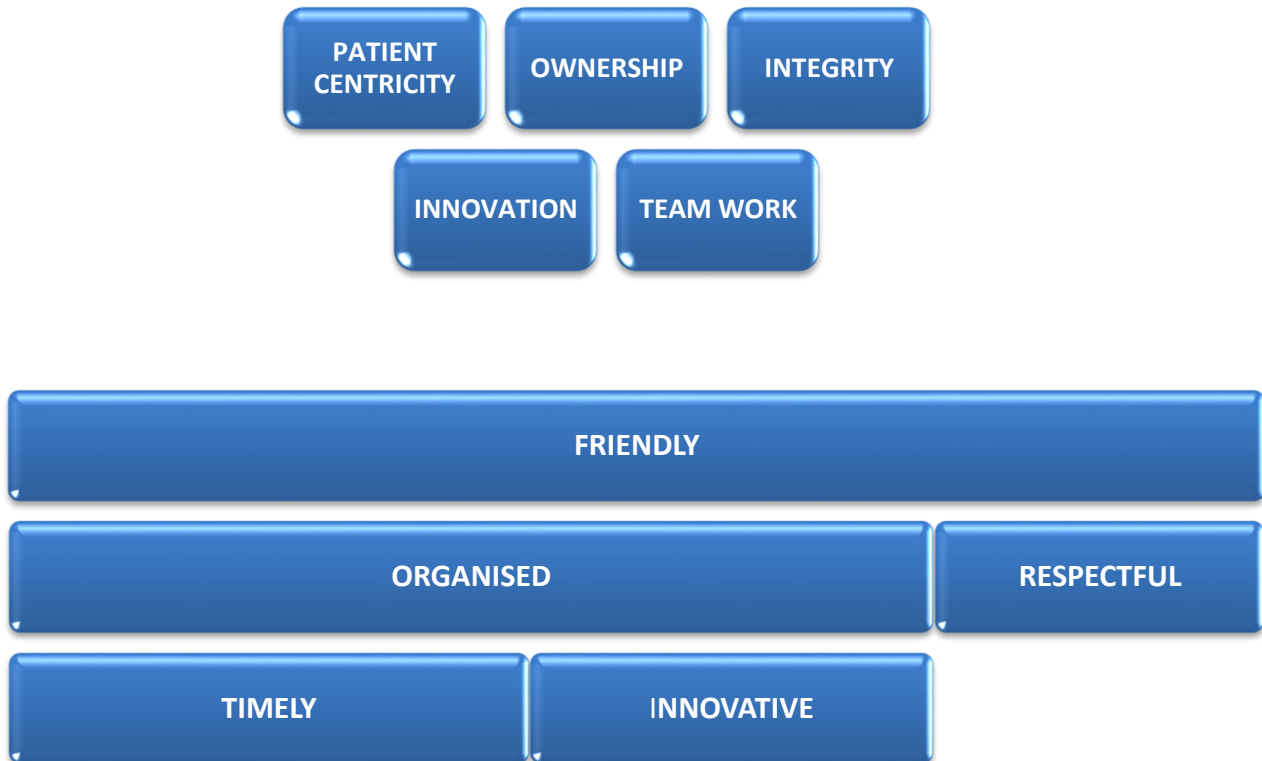
A social seed sown more than five decades ago is today the country's third largest healthcare group with a network of 15 hospitals and three primary clinics providing comprehensive care that is both curative and preventive in nature for a wide variety of patients.

The focus at Manipal Hospitals is to develop an affordable tertiary care multispecialty healthcare framework through its entire delivery spectrum and further extend it to homecare.

The ethos of Manipal Hospitals is its belief in the credo of its triad of core values namely “Clinical Excellence, Patient Centricity and Ethical Practices” which have led to it becoming one of the best and most trusted healthcare providers in the country today. Our Clinical Excellence is rooted in our excellent team of doctor's medical specialists who are well versed with the latest advancements in their respective field of medical expertise. This is further complemented by our teams of highly trained nurses and paramedical people. Besides this, our unwavering and unflinching belief in Ethical Practices along with our social initiatives through the Manipal Foundation and other associates NGOs has enables us to extend quality and affordable healthcare to the lesser privileged sections of our society.

With its flagship quaternary care facility located in the heart of Bangalore city, five tertiary care, nine secondary care and three primary care clinics across five states, today Manipal Hospitals successfully operates and manages 4,900 beds and caters 2 million customers from India and overseas every year.

MANIPAL VALUES



Vision of Hospital: -

“Globally respected Healthcare organization recognized for clinical excellence & distinctive patient care.”

Mission of Hospital: -

“To be the preferred super specialty healthcare provider of international standards known for patient centric care & Clinical excellence through continual improvement of process & outcomes.

Quality Policy: -

To create a world class integrated health care delivery system in India, entailing the finest medical skills combined with compassionate patient care.

Focus of Hospital: -

To develop an affordable tertiary care multispecialty healthcare framework through its entire delivery spectrum and further extend it to homecare.

Accreditation & Affiliations: -

One of the most preferred and recognized healthcare facilities by pharmaceutical companies for drug trials, the group's flagship hospital in Bangalore is NABH accredited and ranked amongst the Top 10 multispecialty hospitals in India.

Manipal Hospital is the first to get credited by A.A.H.R.P.P in India.

Infrastructure: -

The hospital, spread extensively over an area of 2,55,000 sq. Ft. is the first of its kind in any private sector to be approved by the state government for medico legal Services.

The Hospital, equipped with all high tech ultra-modern facilities is aptly befitted to provide State-of-the Art health care under one roof at affordable charges.

Endorsing the international Standards with its thoughtful provisions, Manipal Hospital boasts of lush patient friendly interiors comprising of a capsule lift, artificial Flora and a hanging staircase complemented by utility general services in an air-conditioned environment.

Functionally and technically- the Hospital is equipped with facilities inherent to world class health care.

Location: -

The Access to the hospital is very easy. The hospital is located on Sikar Road, Jaipur.

The address of the hospital is:

Sector 5, Main Sikar Road, Vidhyadhar Nagar, Jaipur, Rajasthan 302013

Tel: 0141-516-4000

Floor wise Facility Distribution: -

BASEMENT

- Blood Bank
- Canteen
- Radiology
- Radiation Oncology
- Physiotherapy
- Manipal Ankur IVF Center
- MRD
- Laboratory
- MRI
- IP Pharmacy
- C.S.S.D.
- Laundry
- Maintenance
- Bio Medical Engineering
- Central Store

GROUND FLOOR

- General Ward 1
- General Ward 2
- AC General Ward
- Dialysis
- Reception
- Emergency
- OPD
- Cafeteria
- Health Checkup
- Sample Collection Room
- OP Pharmacy
- Mortuary
- Labor Room
- Emergency Day Care

FIRST FLOOR

- Cath Lab
- CCU
- NICU
- OT
- Surgical ICU

SECOND FLOOR

- MICU
- HDU
- Neuro ICU

SERVICES AT MANIPAL HOSPITAL

CONSULTATION (OPD)

- Allergy and Asthma
- Anesthesiology
- Banatric Surgery
- Blood Bank
- Cardiac Anesthesia
- Cardiology
- Cardiothoracic and Vascular Surgery
- Critical Care
- Dental
- Dermatology
- Diabetology and Endocrinology
- Emergency Medicine
- ENT
- General Medicine
- Hepato Pancreato Biliary Surgery
- Infectious Diseases
- Medical Gastroenterology
- Medical Jurist

- Neonatology
- Nephrology and Dialysis
- Neuro Surgery
- Neurology
- Nutrition and Dietetics
- Obstetrics and Gynecology
- Oncology
- Ophthalmology
- Orthopedic and Joint replacement
- Pediatric
- Pediatric Surgery
- Physiotherapy
- Plastic and Reconstructive Surgery
- Psychiatry
- Radiology
- Respiratory Medicine
- Sleep medicine
- Spine Surgery
- Surgical Gastroenterology
- Urology

LAB SERVICES

- Biochemistry, Serology, Immunology
- Microbiology
- Histopathology and Cytopathology
- Clinical Hematology and Clinical Pathology
- Hormones study

ENDOSCOPIC SERVICES

- Video Gastrosocopy
- Video Colonoscopy
- Sigmoidoscopy
- Brochoscopy

RADIOLOGY SERVICES

- MRI
- CT Scan
- Digital X-Ray
- Ultra-Sonography
- Color Doppler

CARDIOLOGY

- ECG
- 2D Echo
- TMT
- Holter Monitoring
- TEE
- Cath Lab

OTHERS

- EEG
- EMG
- NCV
- Skin Allergy Test
- Spirometry
- Sleep Lab
- 24 hours Pharmacy
- Ambulance Services

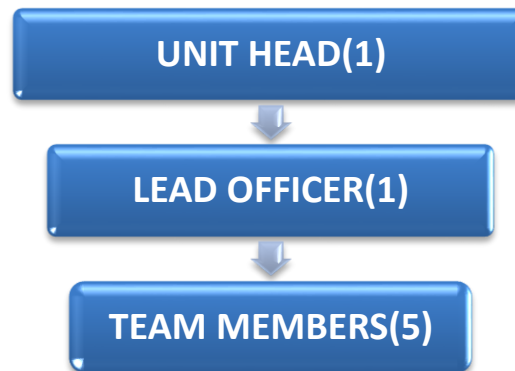
DEPARTMENT PROFILING

1. Billing

Objectives: -

- Interim bill preparations
- Final bill preparations for the discharge patients
- Completion of credit files
- Submissions of IP files to credit cell
- Maintaining the record of submitted and pending files

Organogram: -



Functional Divisions: -

S.no.	Functional Areas
1. IP Billing	• Cash, • Credit, • TPA • Corporate billing
2. IP File completion and submission to credit cell	• Credit- ECHS, CGHS, ESIC, Railway, CRPF and bhamashah • All TPA

3. Code creation and prices updating

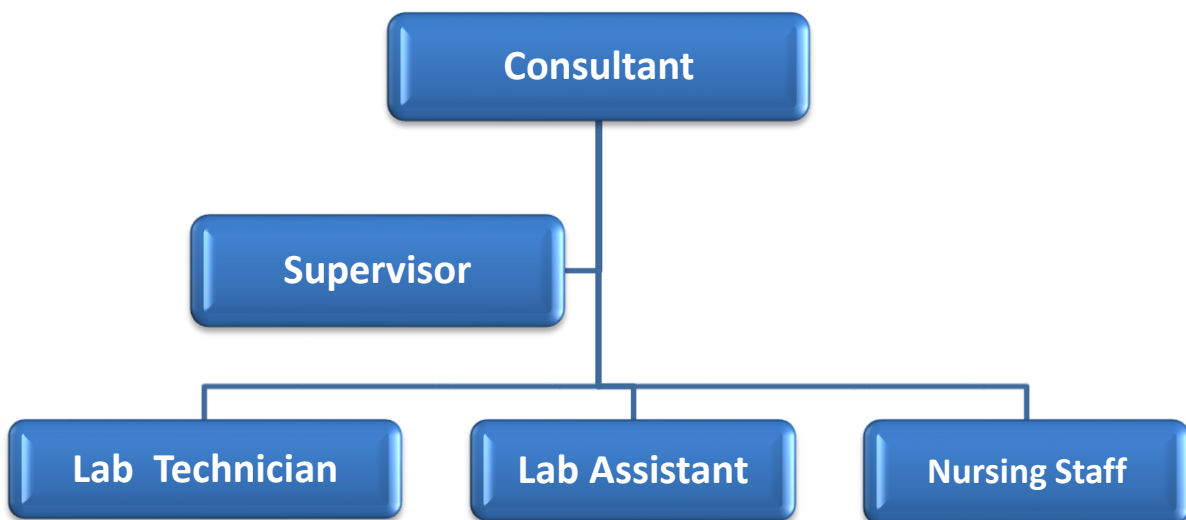
- New billing item code creation,
- OP/IP package creation,
- Price revision
- Tariff creation and corrections
- Mapping of CGHS code with cash codes

2. **Blood Bank**

Objectives: -

- Conducting the test by keeping the patient safety at High importance.
- Maintain the good quality practice in the departments.
- Providing the tested blood within the defined time frame.

Organogram:-



Functional Divisions: -

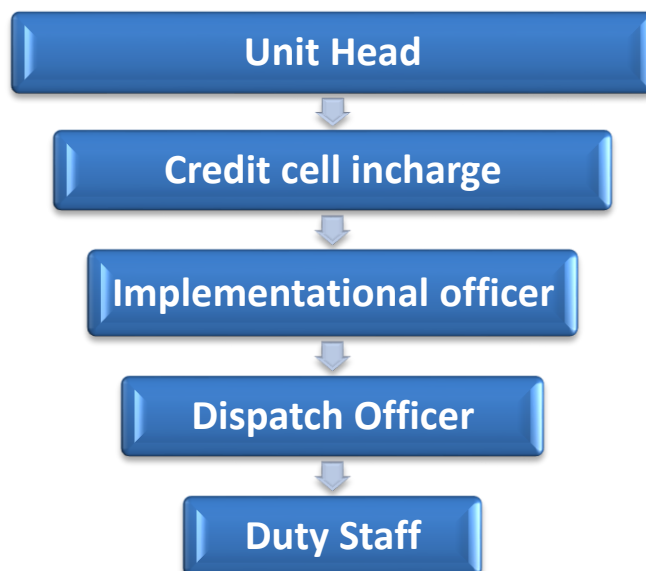
S.No.		Functional Areas
1.	Consultants	Prepare & Check all the report
2.	Incharge (Senior Technician)	Maintenance of all Record, Indenting of required material for department, roaster planning, work related to quality and NABH.
3.	Technicians	To conduct all blood bank related test (e.g. Blood grouping, cross matching etc.)
4.	Lab Assistant	Follow up instructions given by technician and consultant.
5.	Nursing	Maintain Register at reception, receiving of sample & Request slip, Issue of blood.

3. Credit Cell

Objectives: -

- To review and Submit the files of all credit patients (ECHS, ESIC, CGHS, Railways, CRPF, TPA and corporate) to the firms and companies.
- To answer and solve the queries coming in submission of department.
- To prevent the deductions happening in the process of credit file submission

Organogram: -



Functional Divisions: -

S. No.		Functional Areas
1.	Dr. Kusum Yadav	Post-dispatch query answering
2.	Divya Ola	Med verve query answering
3.	Implementational Officer	Implementation specialist
4.	Dispatch Officer	Uploads and dispatch (Railways, ESIC, CGHS)
6.	Duty Staff	Pooling and collation

4. **Finance**

Objectives: -

- To record all financial transactions of the Hospital.
- To maintain all statutory financial records of the Hospital.
- To prepare monthly Income & Expenditure statement.
- To get the accounts audited and certified by the statutory auditor.

Organogram:



Functional Divisions: -

S.No.	Functional Areas	
1.	Accounts Payable	Statuary Liability/ Bill booking, Doctor accounting, Monthly schedule, Audits, quarterly templates, All test of auditors requirements, Tax certificate, Project bills tracking, CWIP ledger

5. **HOUSE KEEPING**

Objectives: -

- To ensure prompt cleanly hygienic and infection free hospital environment.
- To manage assets to ensure for aesthetically beautiful hygienically cleaned functional environment.

Organogram: -



Functional Divisions: -

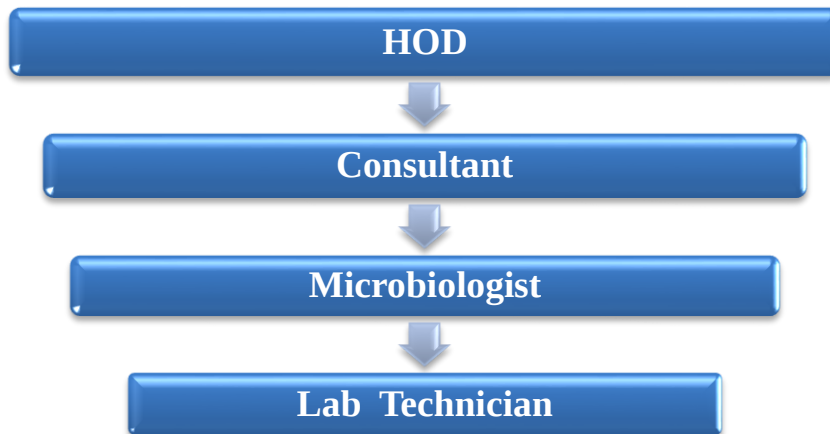
S.NO.		Functional Areas
1.	Operations Head	Responsible for ensuring the smooth functioning.
2.	Housekeeping Executives	Scheduling housekeeping services rounds.
3.	Area Incharge	Conducting Facility rounds
4.	Duty Staff	Doing daily allotted departmental cleaning activity

6. LABORATORY

Objectives: -

- Conducting the test by keeping the patient safety at High importance and maintain the good quality practice in the departments
- Providing all the quality laboratory reports within the defined timeframe.
- To Count and classify blood cells to identify infection or disease
- To Operate complex diagnostic equipment
- To Perform immunological tests to check for antibodies
- To Type and cross-match blood samples for transfusions

Organogram: -



Functional Divisions: -

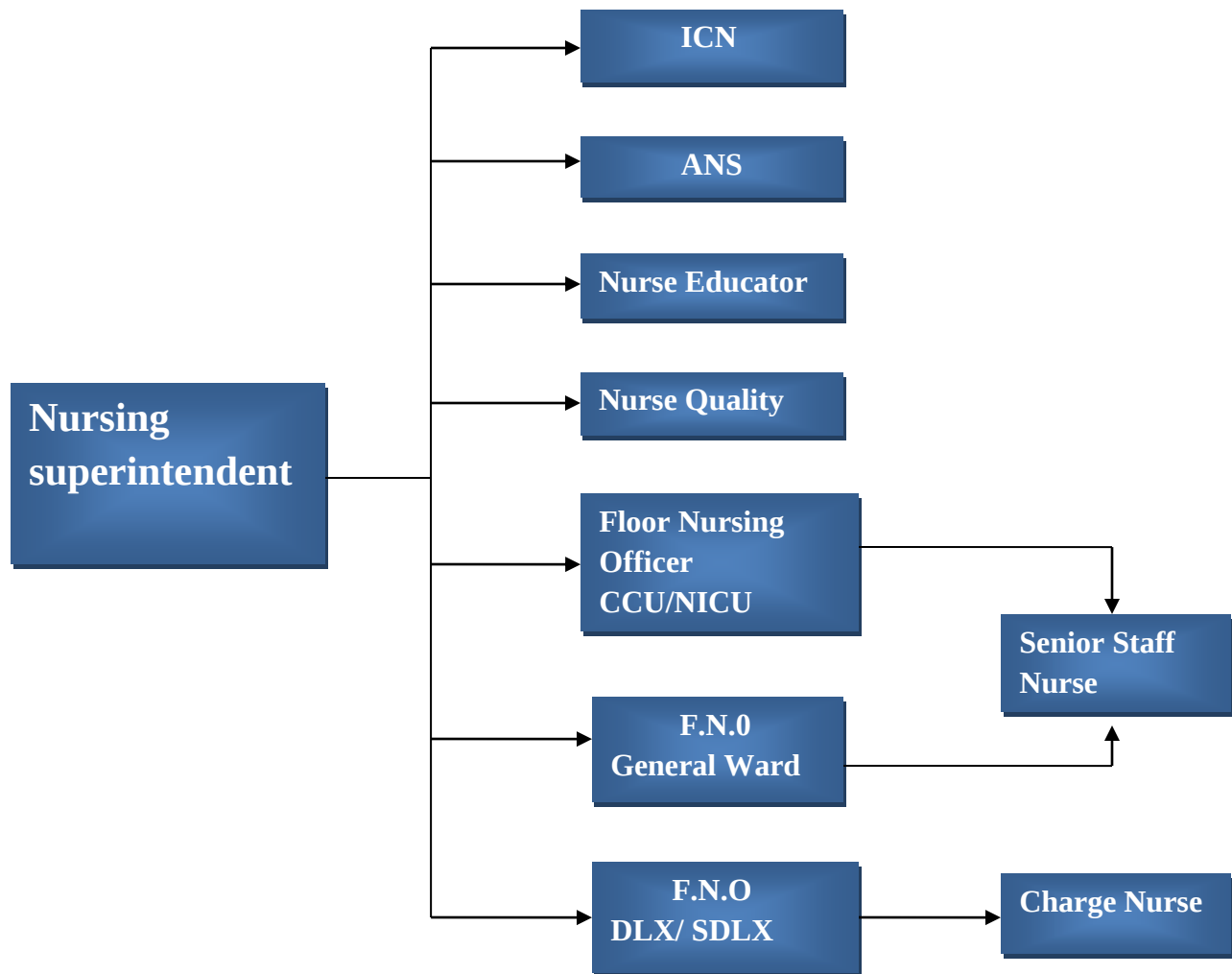
S. No.		Functional Areas
1.	HOD	- Smooth functioning of department.
2.	Consultant	- Gross and microscopic examination of tissue with preparation of written report.
3.	Microbiologist	- To include general microbiology, serology, and fungal studies.
4.	Lab Technician	- Identify required samples as per prescription and collect sample for all diagnosis.

7. Nursing

Objectives: -

- To deliver highest quality of patient centric nursing care
- Nursing Excellence and Team Work
- Clinical collaboration
- Self / Employee development Programmes
- Cost effective care and effective services
- Nurse physician partnership
- Advocate evidence-based practice
- Effective Communication
- Training & Development of creative approaches to practice
- Ensure patient safety – prevention of falls, medication errors
- Ensure current Infection Control Practices

Organogram: -



Functional Divisions: -

S.No. Functional Divisions

- | | | |
|-----------|---|---|
| 1. | Nursing
Administration | <ul style="list-style-type: none">• Reduction in nursing attrition• Ensure compliance to NABH standards• Improve service excellence and patient care experience• Effective people management• Optimal budget management• Effective nursing recruitment |
| 2. | Training &
Development | <ul style="list-style-type: none">• Identifies clinical training needs for Nursing staff• Training need analysis• Meeting the training need of all specialties of nursing• Meeting the mandate training hours of employees• On job training as per the need |
| 3. | Infection Control
Department | <ul style="list-style-type: none">• Infection control practices as per the highest standards NABH• Collation, RCA, trend analysis and solution generation for HAI• Educates and trains all Nurses• training on Bio-medical waste management as per PCCB• Documentation Infection control activities |

4.

Quality & Safety

- Prepares and reviews policies on NABH Standards
- Incident reporting s RCA
- Audit Compilation
- Patient safety
- SOP implementation

5.

Operation Theatre

- Safe Surgical Interventions
- Aseptic Technique
- Patient safety

8. **Nutrition**

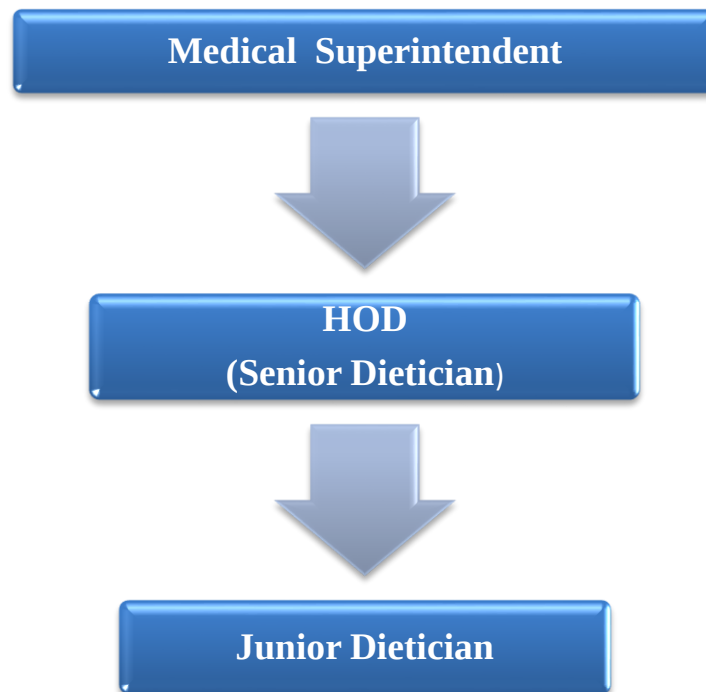
Objectives: -

- To ensure that all patients admitted to the hospital are served safe and nutritious food appropriate to their clinical condition. The nutrition team addresses all the dietary needs of the patients. Outside food is not permitted for the admitted patient.
- Nutritional screening, Nutritional Assessment and Reassessment will be done for all patients who are admitted.
- To ensure implementation of NABH standards in nutritional care.

Functional Divisions: -

S.No		Functional Areas
1.	Dieticians	- Receipt, issue and disposal. - Supervisory record keeping, - Menu planning, - Diet Counseling, Training - Housekeeping and sanitation
2.	Food Service	- Uniforms, Work schedule, timing for service food - Personal hygiene of staff, cleanliness of cooking and serving area.
3.	Clinical Functions	- Menu planning, preparation of therapeutic diets. - Diet Counseling, Diet Charts.
4.	Steward	- Over all supervision and control of kitchen. - Preparation of diet demands. - Collection of ration from store for cooking - Supervision of food distribution in wards
5.	Cook	- Over all supervision of cooks - Kitchen hygiene and food quality - Receipt of fresh supplies, vegetables, eggs, milk, bread
6.	GDA	- Maintenance of cleaning in kitchen area - Proper disposal of waste

Organogram: -

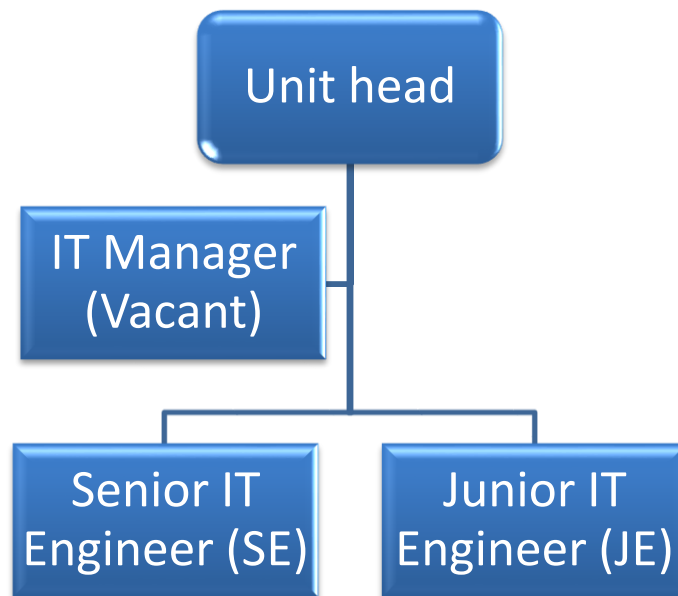


9. INFORMATION TECHNOLOGY

Objectives: -

- To support internal end user in achieving their business goals.
- Implement IT Policies and Procedures.
- To enable smooth functioning to HIS and other software applications.
- To Maintain and hardware and all IT Assets.

Organogram: -



Functional Divisions: -

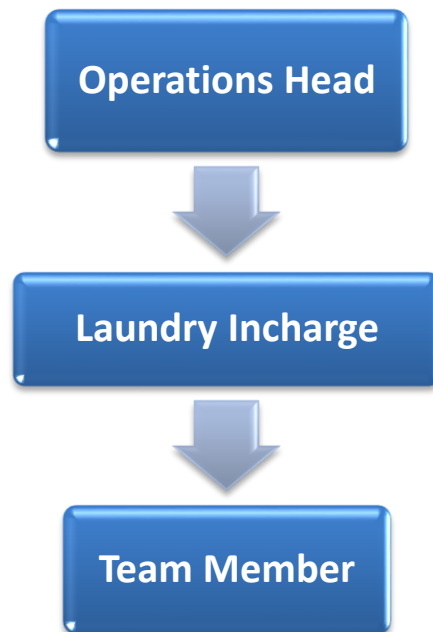
S.No		Functional Areas
1.	Sr. IT Officer	- Infrastructure support - Application support - Support bio-medical equipment's
2.	Sr. Team Member	- Windows installation - Managing hardware and software issues

10. Laundry

Objective: -

- To ensure Availability of linen in hospital at all time
- To provide Prompt clean and infection free linen to patient activities
- To maintain adequate stock of linens according to hospital requirement

Organogram: -



Functional Divisions: -

S.No	Functional Areas	
1.	Unit Head	
2.	Laundry Incharge	Collecting of soiled linen from dept. Daily washing and rinsing of clothes
3.	Duty Staff	Scheduling laundry services for the entire hospital and ensuring that the schedule is followed.

11. **Marketing**

Objectives: -

- Main objective is to get patients to the hospital by all possible means
- Develop business strategies to make profits for the organization
- Relation building with corporate and firms
- Arranging camps and formulating health packages

Organogram: -



Functional Divisions: -

S.No.

Functional Areas

- | | | |
|----|--------------------|---|
| 1. | HOD | Leads all the department members. |
| 2. | Sr. Officer | Handles all credits patients from ECHS, CGHS, Railways, ESI, Bhamasha. |
| 3. | Officer | Handles collection of payments from the pending organizations. |

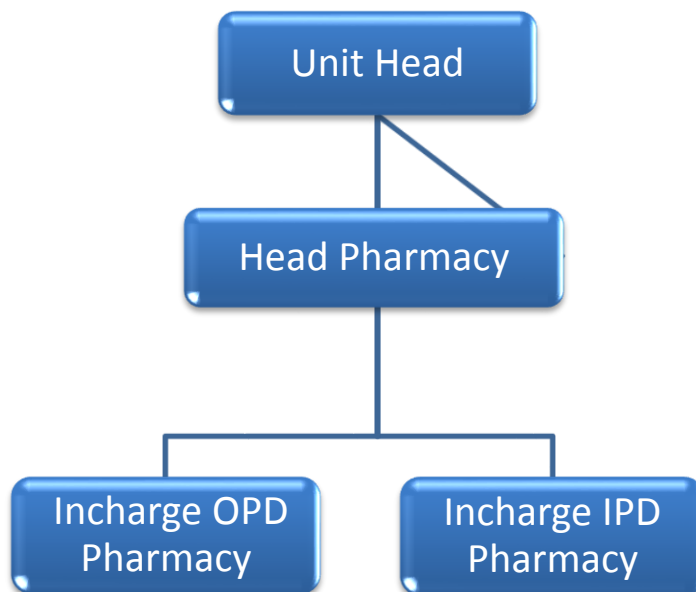
4. **Team Member** Co-ordinates with housing societies and communities.

12. **OP PHARMACY**

Objectives: -

- Indenting and receiving the material.
- Storage (Stock) of material.
- Issuing and dispensing.
- To follow sound inventory practices.
- Code approval for new medicines.
- Following statutory compliances according to NABH standards.
- Providing Hassle-free, on time services to OPD patients.

Organogram: -



Functional Division:-

S.NO		FUNCTIONAL AREAS
1	Receiving Area	3 counters are present in OP pharmacy
2	Dispensing area	2 Counters
3	Storage Area	

13. QUALITY

Objectives: -

- To provide Quality care to the organization
- NABH Compliances and requirements
- Audits – Internal Audits and quality indicator audits.
- Standard operating Procedures review.
- Mapping of clinical and management quality indicators
- Clinical audits.
- Internal audits.
- Safety and facility rounds.
- Review of outsourced processes and quality assurance programmes.

Organogram: -



Functional Division: -

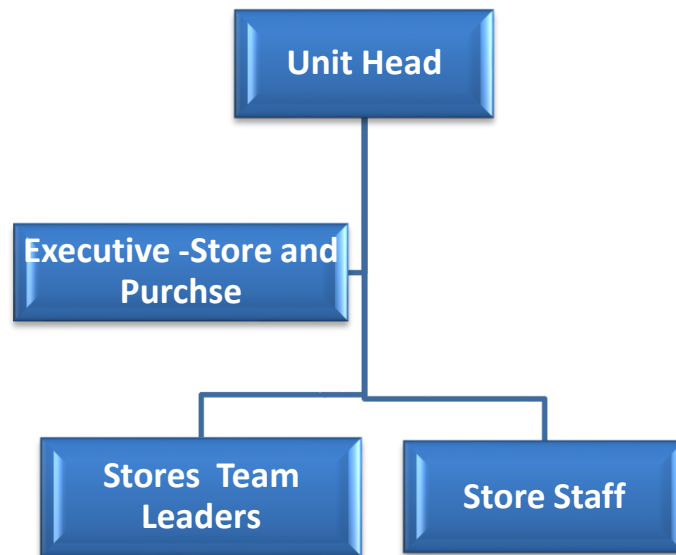
S.NO.	Functional Areas
1.	Incident Reporting
2.	Internal Audits
3.	NABH
4.	Monthly Meetings
5.	Quality Indicators
6.	Mock drill
7.	Maintaining old policy and implementing new

14. STORE AND PURCHASE DEPARTMENT

Objectives: -

- Purchase of Materials and goods, consumables, housekeeping material, CAPEX items, OPEX items.
- Issue of material to department after indenting.
- Management of Printing of material required in department.
- Asset transfer to departments.
- Regular audits of department.

Organogram: -



Functional Division: -

S.No.	Functional Areas	
1.	Executive Stores and Purchase	Propose and ensure implementation of policies, systems and procedures in the department to increase efficiency and improve service levels. To decide the quality standard of a product in consultation with user department
2.	Stores team leader	Responsible for Inventory management of Store dept.

Project 1- Study on Utilization of Radiology Services.

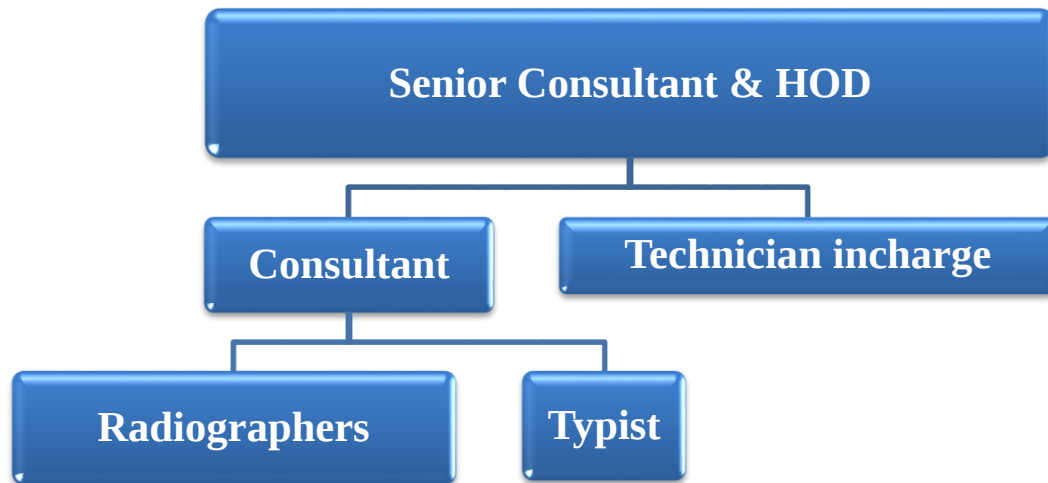
Started on 3rd April- 3rd May.

Radiology Department

Objectives: -

- **Reliability**
- **Responsiveness**
- **Assurance**
- **Empathy**

Organogram:-



Functional Divisions: -

S.No.	Functional Areas	
1.	Head of the Department	To prepare all the report, RSO work
2.	IN charge	Maintenance of all queries regarding functioning & maintain quality standard of department, Indenting of materials, roaster planning
3.	Radiographers	To conduct all types X rays, CT, Mammography, USG
4.	Typist	Type all the reports

ABSTRACT- The aim of the study was to find out the utilization of

- CT-SCAN
- X-RAY
- USG Machine

INTRODUCTION-

The imaging department within a hospital provides routine and specialized diagnostic services with imaging techniques for indoor, out-patients and walk in patients.

In the present healthcare scenario increasing operational efficiency reducing costs while improving services provided to the patient is a constant challenge. Advances in Engineering and information technology particularly during the last few decades have revolutionalized medical care.

The radio diagnosis is that branch of medicine that makes diagnostic images of anatomic structures through the use of electromagnetic radiations or sound waves and that treats disease through the use of radioactive compounds. Radiological imaging techniques include x-rays, CT Scans, PET Scans, MRI, and Ultra sonograms. No field has seen such rapid change as radiology in the past few decades because of use of ultrasonic in magnetic waves for imaging the services are called imaging services instead of radiological services.

This study was done in radiology department of MANIPAL HOSPITALS, JAIPUR to analyze the utilization of CT scan, USG and X-Ray machines.

It was conducted over a period of 2 months through observation and collection of secondary data.

MAJOR COMPLIMENTS OF RADIOLOGY / IMAGING SERVICES

- X-Ray Machine
- Ultrasound machine
- Doppler Machine
- Computer Assisted Tomography
- Magnetic Resonance Imaging
- Positron Emission Tomography
- Mammography
- Nuclear Imaging System

LITERATURE REVIEW

- Radiology central to the clinical practice of medicine across a wide range of disciplines. It is the best practical way to diagnose monitor treatment and detect progression or relapse of many important or common diseases in a minimally invasive and anatomically precise manner.
- A variety of services are used in ICU for long duration each of them is a double-edged sword intended to save life but life threatening if in the wrong place hence it is important to periodically check that these devices are used properly to prevent complications

OBJECTIVES OF STUDY

As optimum utilization of equipment will result in:

- Optimum patient handling and rapid turnover
- Increase in revenue of hospital
- Increase utilization of resources
- To suggest the ways to increase the efficiency.

RESEARCH QUESTION

- What is the level of utilization of radiology services and to suggest ways to increase its efficiency?

RESEARCH DESIGN

Retrospective Cohort Study

RESEARCH METHODOLOGY

A retrospective 2-month record review study was conducted. Radiographic investigations from radiology department were taken from 4th April to 1st June and secondary data of last 3 months is taken. X-ray Request forms and registration books between 4th April to 1st June 2017 were reviewed.

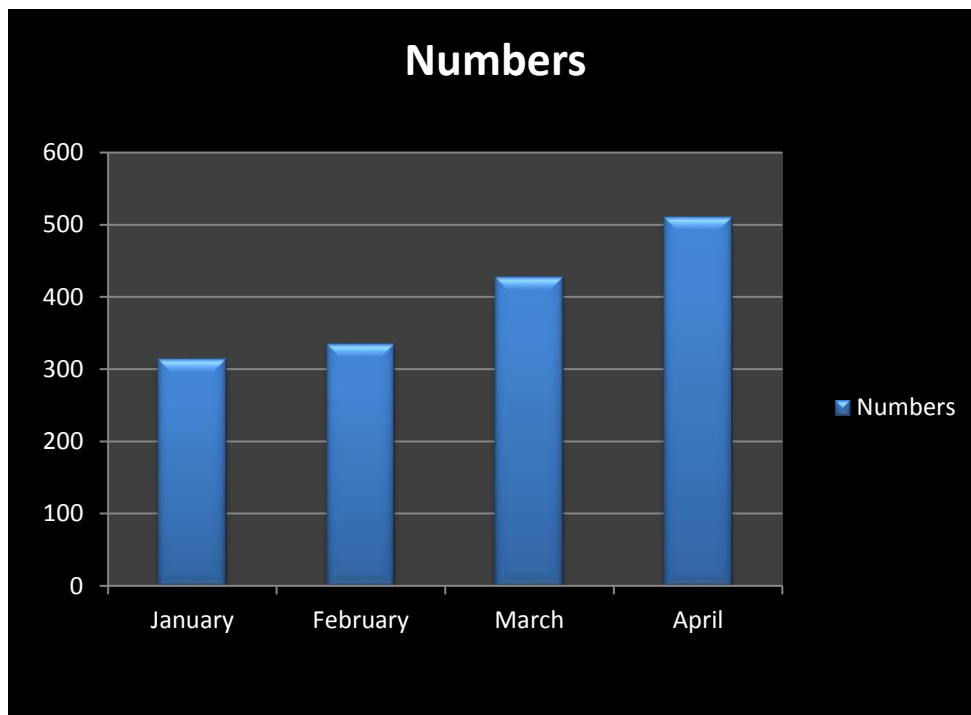
SAMPLING TECHNIQUE

The sampling technique used was convenient sampling the investigations that were ordered during the study hours were included The X Rays, USG, CT Scans are also included. The sample size for the various investigations portable X Rays USGs and CT Scans ordered between 10AM – 5 PM are collected.

FINDINGS AND CONCLUSIONS: -

CT SCAN

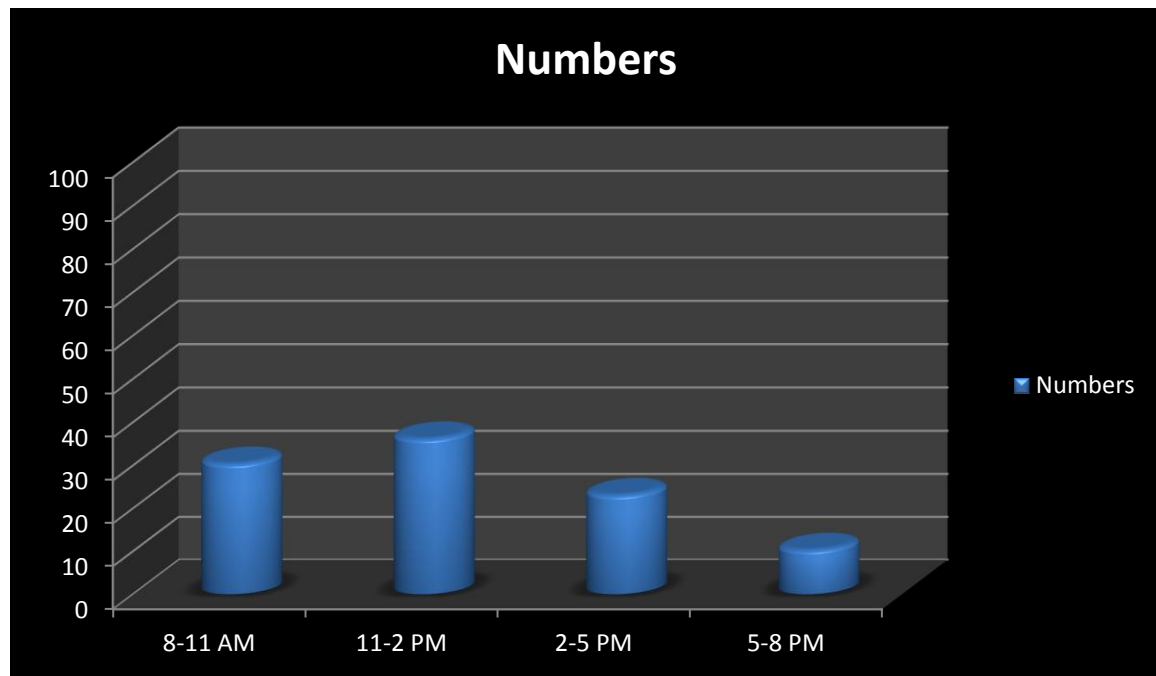
1. Utilization of CT SCAN Machine



Interpretations: -

As from the above graphical representation of No of Patients we can see there is a gradual increase in no of patients from January 2017 to February 2017 which kept on increasing in March and April.

2. Lead Time for CT SCAN Machine



Interpretations: -

As from the above graphical representation it is clearly seen that the best lead time for utilization of CT SCAN Machine is between 11- 2 Pm i.e. 36.20% followed by 30.4% between 8-11 AM counted least Percentage of 10.20% between Timing 5-8 Pm.

3. **Utilization of CT Scan Technician**

The utilization of CT SCAN technicians can be founded by dividing the total productive hours by total no of hours the staff is paid.

- Technicians work for a shift of 12 hours i.e. 8:00 AM- 2:00 PM and 2:00PM- 8:00 PM.

- On an average 20 CT Scans are done in a SHIFT OF 8:00 AM TO 2:00 PM and 2:00 PM-8:00 AM a CT SCAN takes 15 min so,

Total Productive Hours = $20 \times 15 = 300$ min i.e. 5 hours.

- Utilization rate of CT Technician = $\frac{\text{Total productive hours in a month}}{\text{Total paid hours in a month}} \times 100$

$$\begin{aligned} \text{Working days excluding Sundays} &= 26 \\ &= (130/312) * 100 = 41.6\% \end{aligned}$$

4. **Utilization of CT Scan Machine**

The Utilization of CT SCAN machine can be founded by total no of scans in a month by total no of scans that can be done.

- On an average no of scans in a day= 20
That are actually done as per our observation and data for a month = 500
- That can be done in a day = 7 hour working shift i.e. 420 min and each scan taking 15 min. so 28 scans can be done in a day.
For a month= $28 \times 26 = 728$

- Utilization of CT Scan Machine = $\frac{\text{Total No of scans in a month}}{\text{Total no of scans that can be done}} \times 100$

$$\begin{aligned} &= \text{Working days excluding Sundays} = 26 \\ &= (500/728) * 100 = 68.6\% \end{aligned}$$

Process Flow of CT Scans, Gaps, Recommendations

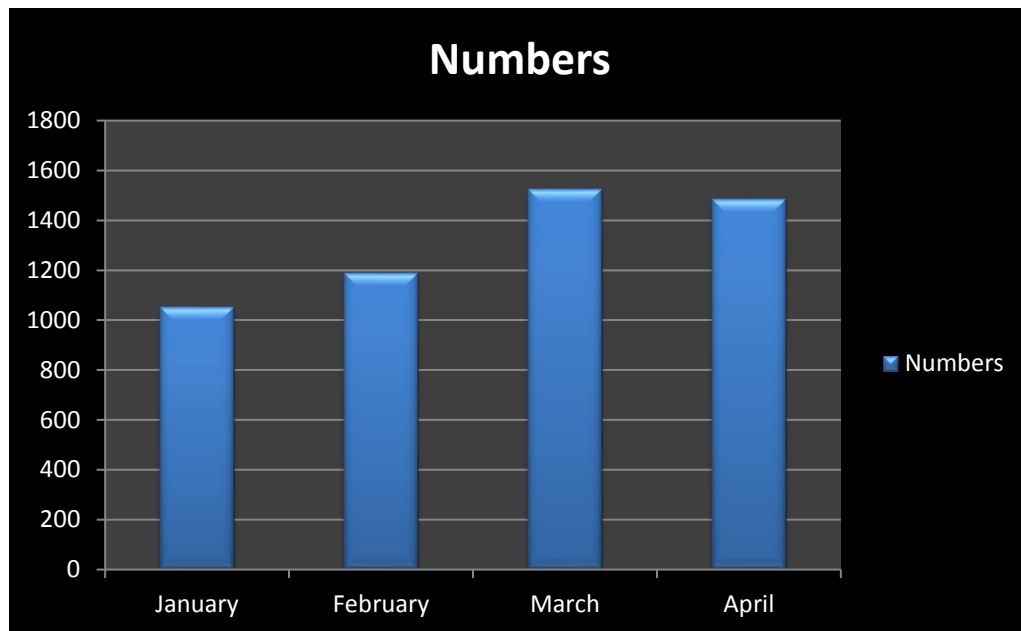
Step No.	Activity / Tasks	Time Taken	Activity done by	Issue/ Problem Identified	Remarks
1.	Patient Came to Radiology Department	at 11:44:00 AM	Patient	Receptionist not present at desk	Receptionist went for photocopy of documents
2.	Procedure required and billing checked	1 minute	Radiographer	Sometimes in case of IPD Patient procedure required to be done not mentioned clearly few times due to lack of knowledge regarding procedure wrong billing done by staff	To clarify the confusion radiographer required to communicate to the respective ward Incharge
3.	Patient entries done in X Ray register	2 minutes	Radiographer	It was a hand written document which was not clearly readable	
4.	Patient went to Changing room	3-4 minutes	Patient	Only One changing room for both Male & Female	
5.	Patient enters in X-Ray room	30 seconds	Patient	Sometimes no one available in X-Ray room and patient had to wait for technician	Technician start finishing their pending work or remaining documentation
6.	Instructions given regarding positioning	40 seconds	Radiographer	screening of patient is to be done by Radiologist Procedure is done by which staff member is not mentioned X-Ray start time not mentioned in register	X-Ray start time is already a column in X-Ray register

7.	In between the procedure some instructions given	2-3 minutes	Radiographer	X Ray end time not mentioned in X-Ray Register	X-Ray end time is also a column in X-Ray register
8.	Radiographer took the Film to processing room	5-6 minutes	Radiographer	Same person had been doing all the work	Patient wait outside during that time period
9.	Patient was handed over his receipts and bills again	1 minute	GDA	for any remaining query they had to wait outside because radiographer was busy with film processing	
10.	Instructions given regarding TAT of report	1 minute	Receptionist	Sometimes receptionist doesn't know TAT of every report.	
11.	Patient leaves the department	30 seconds	Patient		
12.	Reporting of Film done	4-5 minutes	Radiologist		
13.	Typing of Report done	6 minutes	Typist	Sometimes comment written by radiologist is not legible.	
14.	Report verified	2 minutes	Radiologist		In some cases reports are not verified by radiologist after the typing of report.
15.	Report uploaded in the system	45 seconds	Typist	Report generation time not mentioned in register	Report time is also a column in X-Ray register
16.	Report Handover to patient	at 1:20 PM	Front office staff	No entry has been made regarding what time report	

has been handed
over to patient

X-Rays

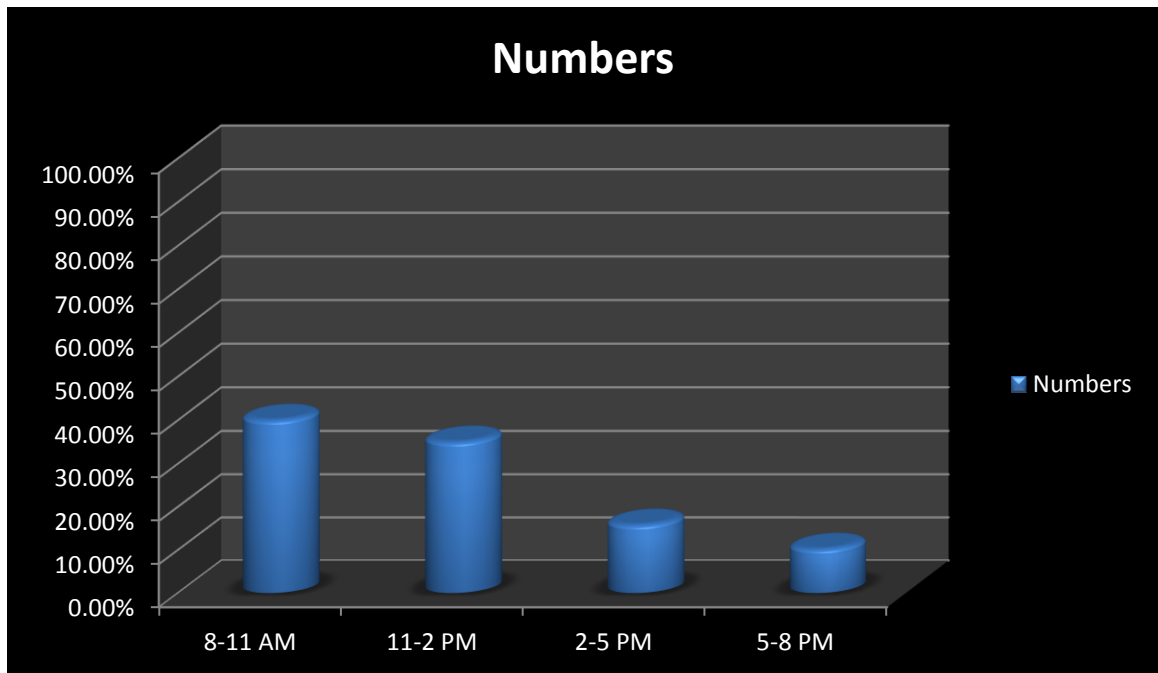
1. Utilization of X-RAY Machine



Interpretations: -

As from the above graphical representation of No of Patients we can see there is a gradual increase in no of patients from January 2017 to February 2017 which kept on increasing in March and April.

3. Lead Time for X-RAY Machine



Interpretations: -

As from the above graphical representation it is clearly seen that the best lead time for utilization of X-RAY Machine is between 8-11 Am i.e. 40% followed by 35% between 11-2 PM than 15.80% between 2-5 PM counted least Percentage of 10.20% between Timing 5-8 Pm.

3. Utilization of X-RAY Technician

The utilization of X-RAY technicians can be founded by dividing the total productive hours by total no of hours the staff is paid.

- Technicians work for a shift of 6 hours i.e. 8:00 AM- 2:00 PM
- On an average 29 X-Rays are done in a shift of 8:00 AM TO 2:00 PM. An X-RAY takes 10 min so,
Total Productive Hours = $29 \times 10 = 290$ min i.e. 4.9 hours.

- Utilization rate of X-Rays = $\frac{\text{Total productive hours in a month}}{\text{Total paid hours in a month}} \times 100$

$$\begin{aligned} \text{Working days excluding Sundays} &= 26 \\ &= (127.4/156) * 100 = 81.6\% \end{aligned}$$

4. Utilization of X-Ray Machine

The Utilization of X-Ray machine can be founded by total no of X-rays in a month by total no of X-Rays that can be done.

- On an average no of X-Rays in two shifts = 57
That are actually done as per our observation and data for a month = 1485
- That can be done in a day = 12 hour working shift i.e. 720 min and each scan taking 10 min. so 72 X-rays can be done in a day.
For a month = $72 \times 26 = 1872$

- Utilization of X RAY Machine = $\frac{\text{Total No of X-Rays in a month}}{\text{Total no of X-Rays that can be done}} \times 100$

$$= (1485/1872) * 100 = 79.3\%$$

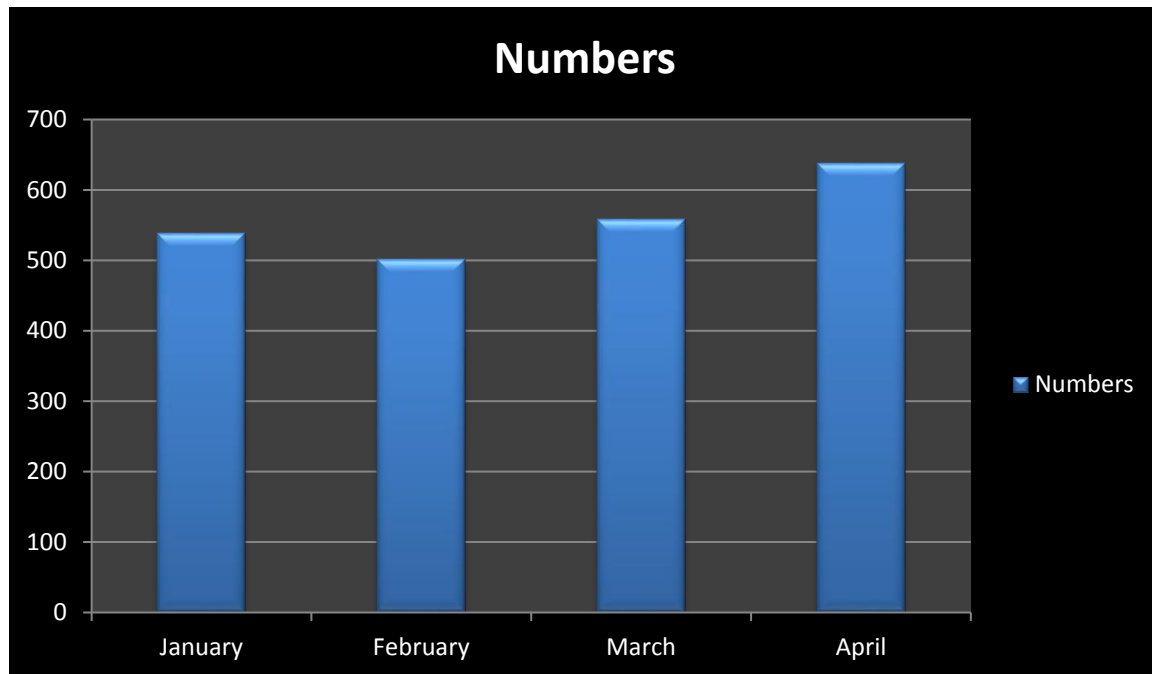
Process Flow of USG, Gaps and Recommendations

Step No.	Activity / Tasks	Time Taken	Activity done by	Issue/ Problem Identified	Remarks
1.	IPD Patient arrives at Radiology Department	12:20pm	Patient	Patient arrival time at department not mentioned	IPD Patient came to the department with IPD file
2.	Procedure required acknowledged in system & billing checked	2:20 minute	Radiographer	Few times patient send to the department without any prior information	if patient came without prior information then they need to wait for the procedure that lead to dissatisfaction
3.	Patient asks to wait in lobby area	11 minutes	Patient	GDA not present at that particular time with patient	
4.	Patient entries done in CT register	2 minutes	Receptionist	Not in clear writing	
5.	Procedure noted down in IPD File	1:35 minutes	Radiographer	Not legible No record taken of past history, though column is provided	no screening is done
6.	Patient taken in CT scan room	2 minutes	GDA	Few times GDA left patients unattended	
7.	Patient shifted to CT table	1:25 minutes	Radiographer & GDA	Few times due to unavailability of GDA attendant need to do shifting of patient	
8.	Instructions given for procedure	1:45 minutes	Radiographer	CT start time not mentioned in register	CT start time is already a column in CT register

9.	In between the procedure few instructions given to the patient regarding procedure	6 minutes	Radiographer		in case of contrast CT cases: amount and type of contrast not mentioned in every cases
10.	Patient taken out of department	2 minutes	GDA	CT end time not mentioned in register	CT end time is already a column in CT register
11.	Film generated	15 minutes	Radiographer		
12.	Reporting of Film done	7-8 minutes	Radiologist		
13.	Typing of Report done	5 minutes	Typist	Sometimes comment written by radiologist is not legible.	
14.	Report verified	2 minutes	Radiologist		In some cases reports are not verified by radiologist after the typing of report.
15.	Report uploaded in the system	45 seconds	Typist	Report generation time not mentioned in register	Report time is also a column in CT register

USG

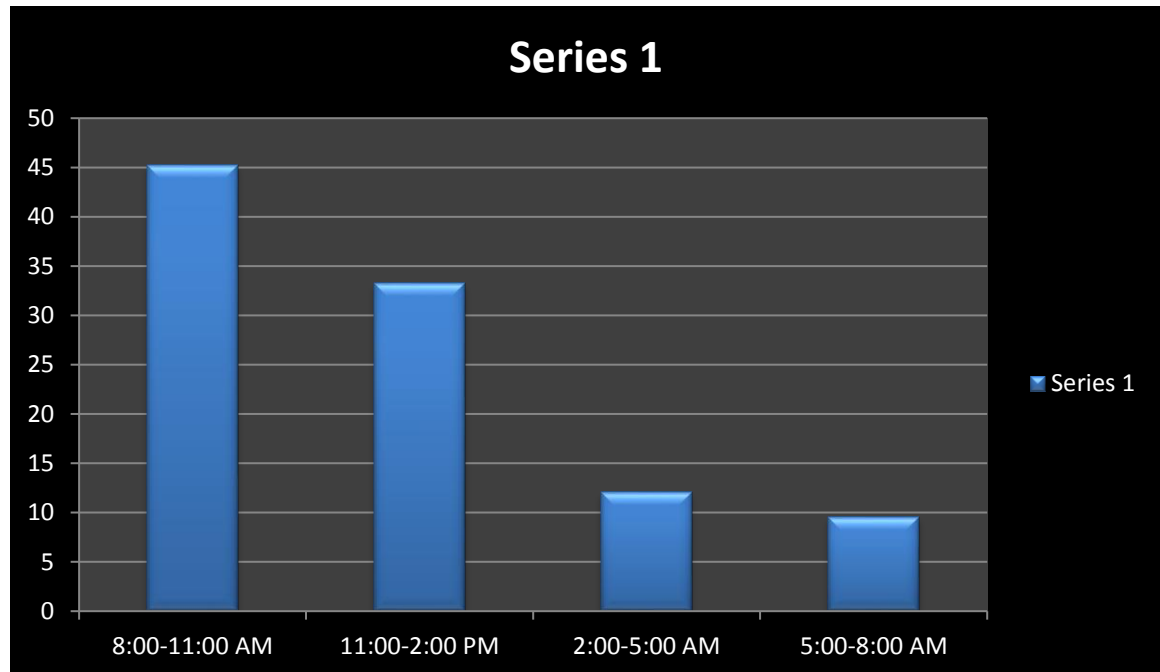
1. Utilization of USG Machine



Interpretations: -

As from the above graphical representation of No of Patients we can see there is a gradual increase in no of patients from January 2017 to February 2017 which kept on increasing in March and April.

2. Lead Time for USG Machine



Interpretations: -

As from the above graphical representation it is clearly seen that the best lead time for utilization of USG is between 8-11 AM i.e. 45.23% followed by 33.25% between 8-11 AM counted least Percentage of 9.52% between Timing 5-8 Pm.

3. **Utilization of USG Technician**

The utilization of USG technicians can be founded by dividing the total productive hours by total no of hours the staff is paid.

- Technicians work for a shift of 6 hours i.e. 8:00 AM- 2:00 PM
- On an average 26 USG are done in a SHIFT OF 8:00 AM TO 2:00 PM. A USG takes 20 min so,
Total Productive Hours = $26 \times 20 = 520$ min i.e. 8.6 hours.
- Utilization rate of USG Technician = $\frac{\text{Total productive hours in a month}}{\text{Total paid hours in a month}} \times 100$

Working days excluding Sundays = 26

$$= (223.6/312) * 100 = 73.6\%$$

4. **Utilization of USG Machine**

The Utilization of USG machine can be founded by total no of USGs in a month by total no of USGs that can be done.

- On an average no of USGs in two shifts = 26
That are actually done as per our observation and data for a month = 638
- That can be done in a day = 12 hour working shift i.e. 720 min and each scan taking 20 min. so 36 USGs can be done in a day.
For a month = $36 \times 26 = 936$
- Utilization of CT Scan Machine = $\frac{\text{Total No of USGs in a month}}{\text{Total no of USGs that can be done}} \times 100$
$$= (660/932) * 100 = 70.5\%$$

Process Flow of USG, Gaps and Recommendations

Step No.	Activity / Tasks	Time Taken	Activity done by	Issue/ Problem Identified	Remarks
1.	Patient arrives at Radiology Department	11:20 AM	Patient	Patient arrival time at department not mentioned	Should be there.
2.	Procedure required, and billing checked	1 minute	Receptionist	Sometimes in case of IPD Patient procedure required to be done not mentioned clearly	To clarify the confusion radiographer required to communicate to the respective ward Incharge
3.	Patient entries done in USG register	2 minutes	Receptionist	Not in legible writing	
4.	Xerox of documents (Patient Id's) done	1:30 minutes	GDA	Few times unavailability of GDA staff	
5.	Patient told to wait	15 seconds	Receptionist	due to unavailability of Radiologist	
6.	Patient enter in USG room	30 Seconds	Patient		
7.	Prepared for procedure	1 minute	Radiographer		few times also done by GDA
8.	Radiologist called	30 Seconds	Radiographer	USG start time not mentioned in register	USG start time is already a column in X-Ray register
9.	Radiologist goes to USG Room	20 Seconds	Radiologist		
10	Details of patient entered in system and Sonography started	2 minutes	Radiologist		
11	Procedure Ends & information given	12 minutes	Radiologist	USG end time not mentioned in register	USG end time is also a

	regarding sonography				column in X- Ray register
12	Reporting done	4-5 minutes	Radiologist		
13	Typing of Report done	4 minutes	Typist	Sometimes comment written by radiologist is not legible.	
14	Report verified	2 minutes	Radiologist		
15	Report uploaded in the system	45 seconds	Typist	Report generation time not mentioned in register	Report time is also a column in USG register
16	Report Handover to patient	at 1:20 PM	Front office staff	No entry has been made regarding what time report has been handed over to patient	

PROJECT REPORT 2

TITLE

Use of Apache scoring in predicting the Mortality rate of hospital.

ABSTRACT

The aim of the study is to predict the mortality rate of hospital and to find out the root cause of these increased mortality rate.

HISTORY OF APACHE SCORING

In 1978, the developers of APACHE recognized the need to collect quality information on patients in the ICU and to use that information to improve outcomes. This led to the development of the Acute Physiology, Age and Chronic Health Evaluation system, known by its acronym, APACHE. Further work by APACHE's developers led to the introduction of APACHE II in 1985. Hospital mortality predictions in APACHE II were based on the prognostic impact of the deviation from normality for 12 physiologic values (consolidated into a measure of physiologic derangement known as the Acute Physiology Score or APS), age, chronic health status and one of 56 disease groups. APACHE II continues to be used as a valid severity-of-illness measurement but mortality predictions are no longer valid because the case mix adjustment is inadequate, and mortality is severely over-estimated because outcome prediction is based on 1979-1981 data.

INTRODUCTION

The high-complexity features of intensive care unit services and the clinical situation of patients themselves render correct prognosis fundamentally important not only for patients, their families and physicians, but also for hospital administrators, fund-providers and controllers. Prognostic indices have been developed for estimating hospital mortality rates for patients hospitalized in intensive care units, based on demographic, physiological and clinical data. The most frequently used indices are APACHE II (Acute Physiology and Chronic Health Evaluation II), APACHE III (Acute Physiology and Chronic Health Evaluation III), SAPS II (Simplified Acute Physiology Score II) and MPM II (Mortality Probability Model II).

The APACHE II index consists of a score that takes account of the patient's age, chronic health condition and physiological variables (internal temperature, heart rate, respiratory rate, oxygenation, arterial pH, sodium, potassium, creatinine, Hematocrit, white blood cells and Glasgow coma score). Although APACHE II was one of the first systems described, it is still the most widely used of them, insofar as the data required for its calculation are simple, well defined, reproducible, and collected on a routine basis during intensive care service provision.

APACHE II

"Acute Physiology and Chronic Health Evaluation II" is a severity-of-disease classification system (Knaus et al., 1985), one of several ICU scoring systems. It is applied within 24 hours of admission of a patient to an intensive care unit (ICU): an integer score from 0 to 71 is computed based on several measurements; higher scores correspond to more severe disease and a higher risk of death. The first APACHE model was presented by Knaus et al. in 1981.

DATA REQUIRED

The point score is calculated from a patient's age and 12 routine physiological measurements:

1. AaDO₂ or PaO₂ (depending on FiO₂)
2. Temperature (rectal)
3. Mean arterial pressure
4. pH arterial
5. Heart rate
6. Respiratory rate
7. Sodium (serum)
8. Potassium (serum)
9. Creatinine
10. Hematocrit
11. White blood cell count
12. Glasgow Coma Scale

These were measured during the first 24 hours after admission, and utilized in addition to information about previous health status (recent surgery, history of severe organ insufficiency, immunocompromised state) and baseline demographics such as age. The calculation method is optimized for paper schemas, by using integer values and reducing the number of options so that data fits on a single-sheet paper form.

The score is not recalculated during the stay; it is by definition an admission score. If a patient is discharged from the ICU and readmitted, a new APACHE II score is calculated.

SCORING CRITERIA

The APACHE II Score									
Physiologic Variable	High Abnormal Range					Low Abnormal Range			
	+4	+3	+2	+1	0	+1	+2	+3	+4
Rectal Temp (°C)	≥41	39-40.9		38.5-38.9	36-38.4	34-35.9	32-33.9	30-31.9	≤29.9
Mean Arterial Pressure (mmHg)	≥160	130-159	110-129		70-109		50-69		≤49
Heart Rate	≥100	140-179	110-139		70-109		50-69	40-54	≤39
Respiratory Rate	≥50	35-49		25-34	12-24	10-11	6-9		≤5
Oxygenation a) $\text{FIO}_2 \geq 0.5$ record A-aDO_2 b) $\text{FIO}_2 < 0.5$ record PaO_2	≥500	350-499	200-349		<200 $\text{PO}_2 \geq 70$	PO_2 61-70		PO_2 55-60	$\text{PO}_2 < 55$
Arterial pH	≥7.7	7.6-7.69		7.5-7.59	7.33-7.49		7.25-7.32	7.15-7.24	<7.15
HCO_3^- (mEq/l)	≥52	41-51.9		32-40.9	22-31.9		18-21.9	15-17.9	<15
K (mEq/l)	≥7	6-6.9		5.5-5.9	3.5-5.4	3-3.4	2.5-2.9		<2.5
Na (mEq/l)	≥100	160-179	155-159	150-154	130-149		120-129	111-119	≤110
S. Creat (mg/dl)	≥3.5	2-3.4	1.5-1.9		0.6-1.4		<0.6		
Hematocrit (%)	≥60		50-59.9	46-49.9	30-45.9		20-29.9		<20
TLC ($10^3/\text{cc}$)	≥40		20-39.9	15-19.9	3-14.9		1-2.9		<1
GCS									

Age -score
<44 → 0
45-54 → 2
55-64 → 3
65-74 → 5
≥75 → 6

GCS:
15 → 0 14 → 1 13 → 2
12 → 3 11 → 4 10 → 5
9 → 6 8 → 7 7 → 8
6 → 9 5 → 10 4 → 11
3 → 12

JAMA 1993;270(24):2957-2963
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VARIABLES

- Total Acute physiology score (sum of all these 12 points)
- Age points (years) $\leq 44=0$; 45 to 54=2; 55 to 64=3; 65 to 74=5; $\geq 75=6$
- Chronic Health Points: If the patient has a history of severe organ system insufficiency or is immunocompromised as defined below, assign points as follows:

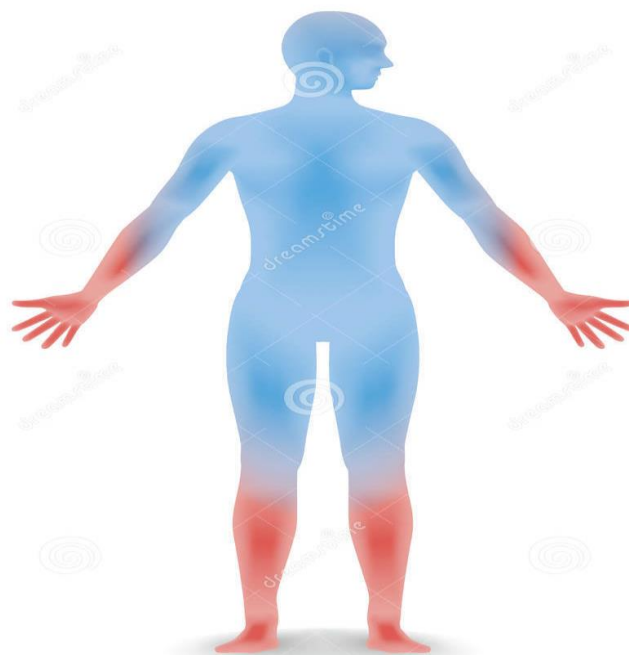
5 points for nonoperative or emergency postoperative patients

2 points for elective postoperative patients

Who can be included?

Organ insufficiency or immunocompromised state must have been evident **prior** to this hospital admission and conform to the following criteria:

- **Liver** – biopsy proven cirrhosis and documented portal hypertension; episodes of past upper GI bleeding attributed to portal hypertension; or prior episodes of hepatic failure/encephalopathy/coma.
- **Cardiovascular** – New York Heart Association Class IV.
- **Respiratory** – Chronic restrictive, obstructive, or vascular disease resulting in severe exercise restriction (i.e., unable to climb stairs or perform household duties; or documented chronic hypoxia, hypercapnia, secondary polycythemia, severe pulmonary hypertension (>40 mmHg), or respiratory dependency.
- **Renal** – receiving chronic dialysis.
- **Immunocompromised** – the patient has received therapy that suppresses resistance to infection (e.g., immunosuppression, chemotherapy, radiation, long term or recent high dose steroids, or has a disease that is sufficiently advanced to suppress resistance to infection, e.g., leukemia, lymphoma, AIDS).



INTERPRETATION TABLE

Score	Death Rate%
0-4	4
5-9	8
10-14	15
15-19	25
20-24	40
25-29	55
30-34	75
>34	85

OBJECTIVES

This study aimed to assess the APACHE II prognostic index of critical patients in Manipal hospital Jaipur. The analysis of the capacity of the system for predicting hospital mortality rate was also an objective of this study, as well as to compare the hospital's recorded mortality rate with the expected mortality rate.

RESEARCH QUESTION

What is the expected mortality rate of hospital and how we can reduce it?

RESEARCH DESIGN

Retrospective Cohort Study with Purposive sampling.

DATA COLLECTION

Data was collected by taking a sample size of 75 critical patients from MICU, CCU, HDU and their Apache Scores are calculated. Points are given on basis of

- Acute physiology
- Chronic Health
- Age

ANALYSIS

Acute physiology and chronic health evaluation score of critical patients of ICU in Manipal Hospitals Jaipur. All the scores are compiled, and mean value is calculated by using statistics making the class interval and width by using Sturge Method. The mean Apache score is interpreted from Apache scoring criteria and mortality rate is predicted.

This finding is generalized on population by using confidence interval for a sample size of 75 patients stating out of 100 future samples how many patients having apache score of this mean value have chances of Death.

Apache Scores	X_i	X_i^2	F_i	$F_i X_i$	$F_i X_i^2$
9-11	10	100	8	80	800
12-14	13	169	12	156	2028
15-17	16	256	22	352	5632
18-20	19	361	15	285	5415
21-23	22	484	6	132	2904
24-26	25	625	6	150	3750
27-29	28	784	2	56	1568
30-32	31	961	3	93	2883
33-35	34	1156	1	34	1156
				1338	26136

- **Class Interval By Sturge Method** = $1 + 3.222 \log_{10}^{75}$

$$= 1 + 3.222 * 1.875 = 7.041$$

Upper Limit = 34

Lower Limit = 9

- **Width of Class Interval** = $34 - 9 / 7.041 = 3.4$

- **Mean** = $1338 / 75$

$$= 17.84$$

- **Standard Deviation** = $\frac{\sum F_i X_i^2 - (\sum F_i(X_i)^2)^n}{n-1}$
 $= 26136 - 23869.92 / 75$
 $= 30.024$

$$= \sqrt{30.24} = 5.53$$

Therefore Mean, 17.84 ± 5.53 interpretes that Patients of apache scoring between 12.31 – 23.37 have 20 – 40% chances of Death.

- **Predicted Mortality** = 20-40%
-
- **Observed Mortality of these patients** =
Dead Patients out of these 75 = 18
Mortality Rate = $18 / 75 = 24\%$
- **Predicted probability of death** = 0.20-0.40.
- **Observed Probability of Death** = 0.24.

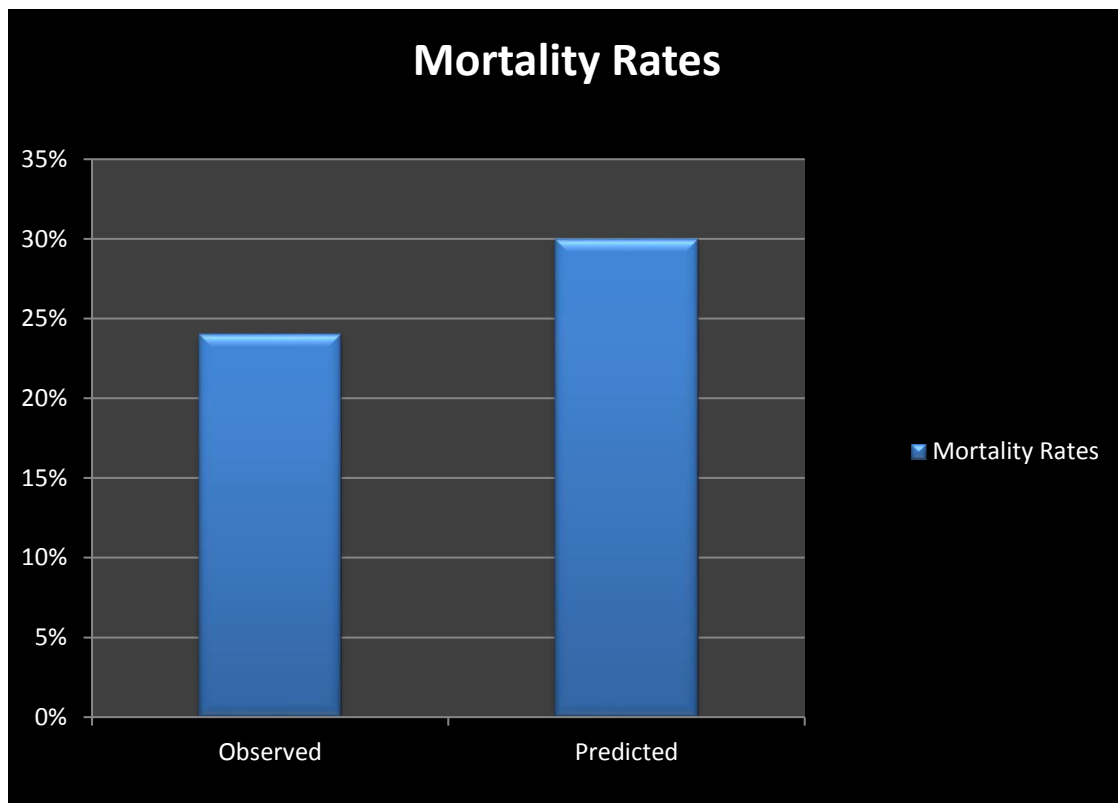
We can generalize this finding for population from our sample mean stating a hypothesis that patients having apache scoring in this range have chances of their death.

For this we will use Z- value as sample size is greater than 30.

RESULTS: -

➤ Graph 1

Predicted Mortality Rate in comparison to observed Mortality Rate for these 75 patients.

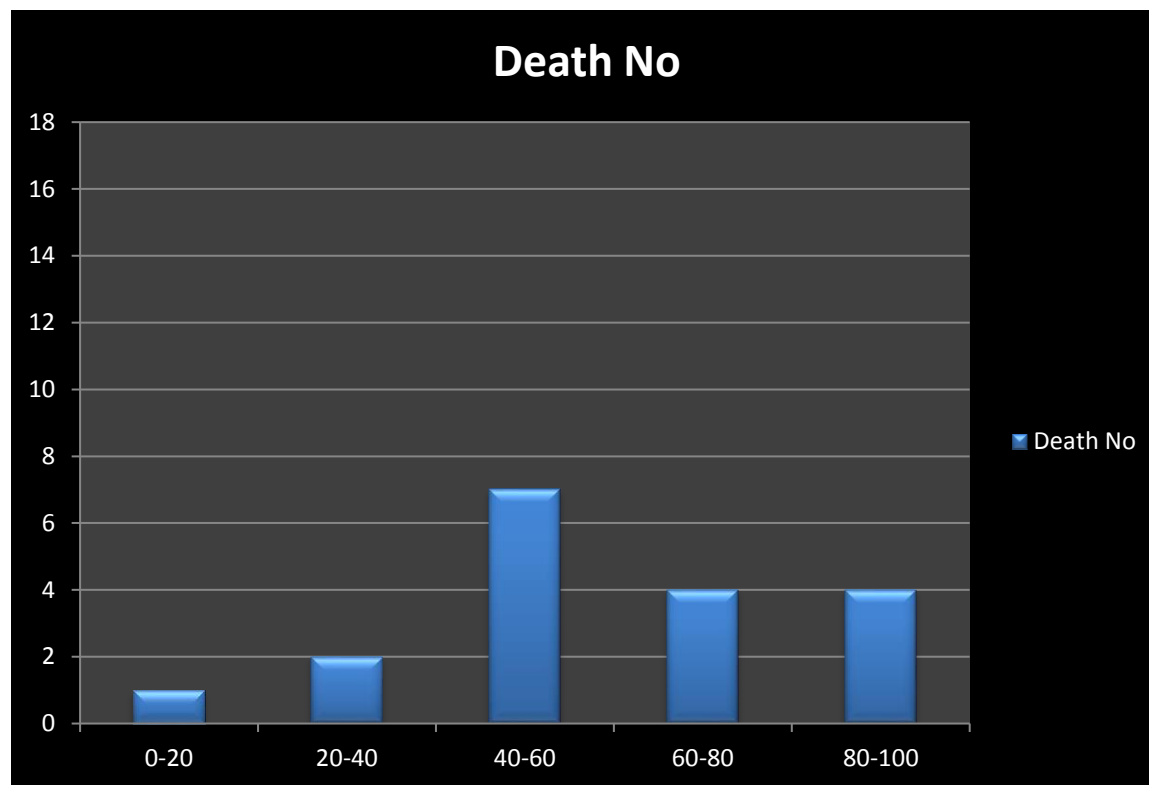


Interpretation

This graph shows that predicted mortality rate of hospitals comes out to be 30% and observed mortality rate of hospital is 24% for these 75 Patients.

➤ Graph 2

No. of Deaths of patients with respect to ages.



Interpretations

This graph shows that Death rates are highest in the age group 40-60 i.e. 38% followed by age group 60-80 and 80-100 i.e. 22.22% followed by age group 20-40 i.e. 11% and least in age group 0-20 only 5%.

GENERALIZATION OF FINDINGS USING CONFIDENCE INTERVAL

- Applying Z- value =

$$= \text{mean} \pm \boxed{} \text{ Standard Deviation} / \sqrt{n} = 95\%$$

By using Z- Table,

$$= 17.84 \pm 1.67 * 5.59 / 8.66 = 95\%$$

$$= 17.84 \pm 1.06 = 95\%$$

CONCLUSION

Out of 100 future samples we are sure that 95 sample having an apache scoring lying in between the mean value of range 16.78- 18.84% have 25% chances of death.

RECOMMENDATIONS

We can say that if we take apache scoring of these critical patients in first 24 hours (worst value) we can define a treatment procedure according to their scores and can reduce the risk of their mortality as analysis shows a direct association between Apache scoring and mortality rates.

PROJECT REPORT 3- HR

ABSTRACT- The aim of the study was to find out the Job Description of Employees.

INTRODUCTION: -

A job is a collection of tasks and responsibilities that an employee is responsible to conduct. A task is typically defined as a unit of work, that is, a set of activities needed to produce some result. Complex positions in the organization may include a large number of tasks, which are sometimes referred to as functions.

Job descriptions are written statements that describe the duties, responsibilities require qualifications and reporting relationship of a particular job. Job descriptions are based on objective information obtained through job analysis, an understanding of the competencies and skills required to accomplish needed tasks, and the needs of the organization to produce work. Job descriptions clearly identify and spell out the responsibilities of a specific job. Job descriptions also include information about working conditions, tools, equipment used, knowledge and skills needed, and relationships with other positions. Whether you're a small business or a large, multi-site organization, well-written job descriptions will help you align employee direction. Alignment of the people you employ with your goals, vision, and mission spells success for your organization. Job descriptions set clear expectations for what you expect from people.

OBJECTIVES OF THE STUDY: -

To prepare job descriptions of the departments assigned.

STUDY DESIGN: -As little was known about the job descriptions of employees working in hospital we need to explore it so Descriptive and Exploratory study design is taken.

SAMPLING METHOD: -

Purposive Sampling since the respondents required for the study should be knowledgeable therefore respondents are chosen directly as per convenience.

SOURCES OF DATA COLLECTION:-

Primary Sources

The methods can be broadly classified as given below: -

➤ **Observation:**

In this method the individual performing the job are observed and relevant points are noted.

This method is helpful in making detailed profile of the department and the job profile.

➤ **Interview method: -**

The interview of employees is a source of information and helped to obtain effective information in structured form

Certain steps involved in doing personal interview

- Select the people who would be able to answer question.
- Perform personal interview.
- List the answer down.

Secondary Sources: - Existing records

➤ **Technical conference method: -**

In this method, the entire job-related information is gathered from the experts- usually supervisors, HOD's and also collected from existing records.

Nursing

Nursing Superintendent

Education- GNM / BSC nursing and registered under TN Nursing Council

Experience- Graduate+ 15 years, Post Graduate: 8+ years

Job Description-

- Managing the nursing department's day to day functioning pertaining their assigned zone and also be a key support provider in planning and executing various nursing activities in the prescribed zone.
- To supervise all nursing activities and ensure that requisite nursing records are correctly maintained, and that equipment and other supplies are in stock.
- Ensure team follows the protocols, procedures, allotment of duties, shift, leave and handling customer grievance in OPD.
- Carrying out administrative issues, needs and problems of the nursing departments as per the zones assigned to them
- Ensuring compliance with established standards and procedures, environmental and infection control, quality assurance and other regulatory requirements.
- Direct and supervise the activities and responsibilities of Nursing Supervisors.

- Evaluation of the performance of Nursing Supervisors and make recommendations for personnel actions, such as promotions, transfers and disciplinary action.
- Induct and guide new nursing administrators like nursing supervisors, ward sisters into the organization.
- Ensure activities of the Infection Control department are done in respective zone.
- Actively involved in the recruitment process of nurses from time to time.
- Carry out nursing audits from time to time.
- Ensure Customer satisfaction levels as per the standards decided.

Nursing Supervisor

Education-GNM / BSC nursing and registered under TN Nursing Council
Experience-15 +Years of Experience could vary depending on qualification.

Job Description-

- To ensure nursing management of unit/ward and administration of day to day functioning to provide key support in planning and execution of various nursing activities thus enhancing patient's satisfaction.
- Direct patient care
- Plans nursing care and allocates patients assignment to nurses as per nursing needs in larger wards or a group of wards.
- Coordinate patient care with various health team members (Intradepartmental, Dietary etc.)
- Supervision and Administration:
- Take regular Ward rounds, help juniors in direct patient care whenever necessary. Ensure timely nursing documentation is done.
- Impart necessary hands on training as and when needed to the nurses
- Supervise the implementation of protocols laid down towards maintaining nursing standards and help in auditing its effectiveness.
- Collect DATAs on clinical quality indicators.
- Interpret the policies and procedures of the hospital to the team and others.
- Acts as a liaison between the CNO and the Nursing Staff. Responsible for nursing activities in the absence of ANS.
- Conduct regular physical verification of medical records of the patients / patient files and reports of consumables and non-consumables maintained by Nurses.
- Manage the ward by ensuring availability of supplies and inventory management and recording
- Ensure cleanliness of the floor, linen, bathrooms and safety of patients in the ward and essential facilities
- Establish and reinforce wards standards as per laid down protocols and policies

- Act as liaison between the ward staff and hospital administration - for linen, equipment, beds
- Maintain good work relation in the unit
- Deal appropriately with any adverse situation that has occurred in the wards and reports to the concerned authorities.
- Participate in assessing and providing desired learning experience for the nursing staff
- Responsible for performance management of their respective team
- Assist in arranging Orientation programme for New Nursing staff. Ward level teaching clinical/incidental
- Ensure clinical experience facilities for new nurses in various clinical areas of the hospital. Mentors preparatory program
- Maintains positive employee relations and discipline among nursing personnel.
- Assists in implementing the Continuing Nursing Education programme planned out by the Department of Nursing.
- Guide & Counsel nursing staff.
- Provide clarity to the team on all employee related communication such as information from HR, Operations, Marketing teams etc.

Staff Nurse

Education- GNM / BSC nursing and registered under TN Nursing Council

Experience- BSC + 1 year of experience or GNM + 2 years of experience

Job Description-

- To provide nursing care and restore patient's health by adhering to and implementing the set nursing protocol
- Provide direct patient care - implement patient care plan as per doctor's recommendation; monitor & record vital parameters
- Monitor, record & report any symptoms / changes in the patient condition to the doctors
- Ensure patient safety by adhering to infection control protocol, medication administration and storage procedure; and during emergencies
- Accompany the doctor on rounds: - provides update on patient condition and helps in clinical procedures.
- Document patient care services by charting in-patient & department records

- Maintain continuity of patient care through documentation & communication during shift change
- Responsible for consumables: - for the patients under her / his nursing care, accounting and indenting of consumables/ medicines & nursing supplies and ensuring the availability of the same
- Educate patients / patient relatives on medication and self-care during stay and discharge as necessary for recovery
- Collect patients' feedback during the discharge
- Updating on essential knowledge and skill by participating in on-going CNE (continuing nursing education)

HUMAN RESOURCES

Sr. Officer

Education- MBA/PGD in Human Resources

Experience- 3 yrs. of experience.

Job Descriptions-

- To ensure smooth on boarding of new entrants, confirmation and related documentation, maintain and update leave records, track unauthorized absence, create new employees personnel files, on boarding formalities of new entrants, co-ordination of training & development.
- Create and maintain personnel records in a systematic and orderly manner as per checklist and ensure easy access of personnel records, Assist in data updation as per personnel records for accurate employee database and systematic pay releases, Training Coordination, Recruitment Coordination
- Verify and submit PF forms (Form 2, 19, 10C) to the concerned team member responsible for PF process management for new joiners & resigned employees. Also Assign PF, Medicare numbers to employees, Documentation, coordination and follow up for Performance Appraisal Forms and collating the ratings for Mid Term and final reviews, one-year completion. Recruitment support and maintenance of database for all requirements, HRIS updation of joiners and exits is done, New Joiners formalities of Consultants and junior doctors
- ESIC updation on portal for new joiners, Welfare Initiative Co-ordination and assistance to senior in the process, Exit process implementation as per organization policy for ensure seamless closure of employment, Communication of Training Calendar, Pre & Post training assessment, & Maintenance of Training documentation and records, as per specified standards, Leave , attendance system updation for accurate payroll processing.
- Unauthorized absenteeism/leave tracking for payroll and contract employees, issue letter as per the statutory requirement. Exit Interview Formalities, Analysis & presentation of exit reports, On boarding of employees and collection of documents & verification of employee records. Carry out HRIS management activities such as password generation for new employees,

- Carry out annual Medicare/ mediclaim renewals, Conduct Exit formalities, Maintenance of recruitment database
- Pre-employment health check co-ordination for all selected candidates, assist in issuing uniform to new joiners along with maintaining categories. Oversee filing of resignation, notice, full and final settlement, and other documents into the respective employee files.
- Filing of resignation, notice, full and final settlement, and other documents into the respective employee files
- New joiner's orientation support for joining document collection, certificates, photographs & preparation of ID cards.
- Update & maintain leave records for all employees on a monthly basis
- Medicare Updation for employees including additions once employees joins & deletions once employees resign.

Executive

Education- MBA/PGD in Human Resources

Experience- 4 + years of experience as HR generalist, preferable hospital industry.

Job Description-

- To ensure timely processing of all statutory requirements, to handle payroll process, HRIS updation of salary, process FFS, performance appraisal process, Training & Development, all HR operational work, Employee Engagement & Development activities to facilitate a performance driven culture
- Preparation and issue of Appointments Letters for all new joiners, conduct payroll processing activities, Clinical & Non-clinical vacancy positions fulfillment, Clinical Consultant Contracts Preparation & Renewals, Conduct Training needs analysis and training needs identification. Carry out budgeting activities for the planned training initiatives
- Monitor the processes of documentation, coordination and follow up for Performance Appraisals Forms and collating the ratings for midterm and final reviews, one-year completion, HR Policy Implementation to enhance customer service levels, Weekly Induction for New Joiners and Monthly Induction Programs, Source candidates through Job Portals, Advertisement, Head hunting and using varied innovative approaches to recruit talent. Execute and monitor the delivery of the training programs based on the identified training needs of the unit provided to Corporate to enhance individual capabilities, Carry out MIS report analysis and preparation of presentation
- Payroll processing of employees & Junior Doctors on retainer-ship. Initiation and issue of confirmation letters on time, Recruitment of Junior Doctors. Conduct appraisal for doctors, build network among Institutions, colleges & stakeholders for recruitment and procuring candidate database. Implementation of employee engagement and training programs, ensuring employee engagement and participation.
- Implement rewards and recognition policy based on pre-determined criteria to increase workforce engagement, MIS reports using approved metrics for the functions on regular basis in order to provide assessment results. Unauthorized absence and disciplinary issues closure,

Candidate screening through interviews, tests and background checks, Ensure smooth functioning of day to day activities of the department

- Payroll query clarification related to LOP and leave for employees and Consultants, Creation of new employee codes, Obtain the necessary approvals, preparation of letters and performing the documentation work for Interns, Observers & project trainees. HR Policy Implementation to enhance customer service levels, providing manpower dashboard to finance, Ensure Internal Communication and notice board updates as per requirements, Prepare MIS reports and carry out attrition Analysis, OT analysis, exit analysis, absenteeism analysis, Ensuring Recruitment is as per approved Manpower Budget
- Completion of reference checks of all new joiners, maintain audit related documentation and non-conformance issues closure. Offer letter issue to candidate (clinical) and clarifying salary and benefits relating to the role.
- Full and Final Settlement processing of resigned employees, carry out Benefit Management activities such as Maintaining employee salary advance requests tracker, processing wedding gifts, Young Scholarship etc, Recruitment and selection of the candidate as per defined policies. Conduct orientation of employees on employee engagement initiatives as and when required

MEDICAL RECORDS DEPARTMENT

Assistant Support Services

Education- 12th

Experience- 2 Years

Job Description-

- To ensure all the MLC and Birth and death registry is properly filled in time, to coordinate for Pre-employment checkup.
- Birth and death certificate entry
- Registry maintenance
- Pre Employment checkup follow up.
- OPD files retrieving and sent to the OPD
- Generation of monthly reports

Senior Team Member

Education-Any graduate

Experience- 2 years of experience

Job Description-

- To ensure all the report submitted to the respective governments departments. OPD files are retrieved and sent to the OPD in proper time.
- Issue of birth certificate to VAO office
- Preparation of duty Roster
- Appointments OPD files retrieving and sent to the front office

Officer

Education-Any graduate with diploma in MRD

Experience-5 years of experience

Job Description-

- To ensure smooth functioning of department by extending administrative support to HOD for day-to-day activities
- Digitization process of scanning, indexing and quality check and uploading and generation of reports
- Indexing of records
- Inventory management – In house register for patient files
- Digitization of records

BILLING

Team Member

Education- Graduate, preferably B Com

Experience-2 - 3 years of exp in the same field

Job Description-

- Process financial transactions related to customer payments from admission to discharge, including patient queries, cash remittance, co-ordination with the consultants
- Inpatient Billing
- Initial Patient handling to explain charges
- System data entry
- Document collection and verification (including for insurance) before admission
- Cash/ card/ other instrument payment collection
- Maintain registers for credit card, discharge etc. for reference
- Maintain internal billing records - collection and remittance reports
- Prepare provisional bills with break up for patients (estimates) both for interim and final discharge

Senior Team Member Incharge

Education- Graduate, preferably B Com/MBA finance

Experience- 14+ years, MBA with 2 - 4 years of experience

Job Description-

- Process financial transactions related to customer payments from admission to discharge, including patient queries, cash remittance, co-ordinate with the consultants, and review to rectify discrepancies as required and train new joiners
- Multiple procedure patient handling for admission
- System data entry/correction/ edit authorization
- IT department co-ordination for system issues resolution/ up gradation
- Escalation and unresolved query resolution from patient parties / internal departments
- Review for final bill preparation and generation
- Verification and rectification of bills
- Review of Balance receipts and payments as per SOP and managing accounts receivable reports
- Handling collections on unpaid accounts
- Participation and clarification for audit processes
- Process and System up gradation
- Verification of cash before / after deposit with Finance department
- Orientation program for new joiners & nursing personnel related to billing

CSSD

Executive

Education- BSc Microbiology + DMLT

Experience- 10 - 20 Years

Job Description-

- To ensure smooth functioning of the department by ensuring proper departmental protocol. To implement processes as per standards and to impart training to all the staff to the present standards. To manage costs and effective utilization of consumables.
- Independently oversee the operation of the department. Ensure smooth functioning and provides support to junior staff in all situations.
- Ensure maintenance checks and daily inspection of steam sterilizer, EO sterilizer, ultrasonic cleaner in accordance with the manufacturer recommendations
- Establish and implement comprehensive quality assurance system. Ensure that the protocol for quality and other departmental processes is properly maintained.
- Conduct daily monitoring of departmental processes.
- Coordinate with the engineering department to ensure proper utilities in accordance with the manufacturer recommendations
- Coordinate with the purchase department for procurement of quality products
- Adherence to SOP, quality and safety measures as per department protocol
- Orientation of new members, train junior staff in departmental procedures
- Coordinate with the ward in charge for their sterile consumable products
- Keep track of latest trends in technological inventions in CSSD.
- Lead and mentor team. Impart training for the new joiners and junior staff.
- Manage costs and fiscal responsibility for adherence to budget spend
- Support sister concerns and new facilities with respect to CSSD function

Senior Technical Supervisor

Education- CSSD technician certified + Graduate

Experience- 12-15 Years

Job Description-

- To supervise the wards for instrument care, sterilization activities, monitor decontamination, packing processes of medical and surgical equipment/instruments, and take overall responsibility for smooth functioning of sub area assigned
- Supervise all wards / ICUs/ Cardiac OT / other OT for proper instrument care and sterilization. Monitors the sterilization process.
- Indent for store requirements. Maintain sterilizing material inventory as per requirement.
- Monitor the decontamination and controls packaging process. Ensures protocol is followed by junior staff.
- Ensure packing all the cleaned items, sealing Ethylene Oxide items as per protocol. Monitors junior staff.
- Ensure auto cleaning process is carried out as per SOP. Monitors OT processes.
- Review and validate documentation.
- Adherence to SOP, quality and safety measures as per department protocol
- Maintain stock register, linen register, validates and forwards the report for authorization.
- Assign sterilization activities and responsibilities as per duty roster.

Technician

Education- Std. 10 / Std. 12 or CSSD technician certified

Experience- 5-8 Years

Job Description-

- To perform sterilization activities, such as reprocessing, segregation, decontamination and packing of medical and surgical equipment/instruments, monitor daily usage of consumables and generate reports
- Perform sterilization activities, ensures all surgical items and instruments are sterilized as per the rules and with the required procedure.
- Receive all contaminated surgical sets from the end user, and carries out decontamination process. Ensure protocol is followed by junior staff.
- Segregate instruments and other items. Ensure instruments are properly functioning.
- Pack all the cleaned items, seal Ethylene Oxide items as per protocol.
- Operate steam apparatus in all OTs (auto cleaning) and prepares drapes for Cardiac OT

- Carry out documentation of the quantity of consumables used on a daily basis and generates reports.
- Adherence to SOP, quality and safety measures as per department protocol

PHARMACY

Pharmacist

Education- B Pharma / D Pharma with registration in state pharmacy council

Experience- 0-3 years

Job Description-

- To ensure accurate dispensing of medications, stock maintenance, liaison with nursing and medical staff concerning prescriptions orders, drugs and pharmaceutical details, resident reactions, errors and complaints.
- Receive and interpret prescriptions from Customers
- Check medicine availability in the pharmacy.
- Select medicines as per the prescriptions, if unavailable arrange for medicine substitutes after getting doctors approval
- Check medicine quantity, batch and expiry
- Maintain inventory records
- Crosscheck with the prescriptions provided
- Advise patients regarding drug dosage as required
- Stock take and check for expiry every month, maintain adequate stock levels
- Order and receive medicines from vendor
- Ensure proper handling and storage of drugs in pharmacy
- Ensure all the activities in the pharmacy bulk store are carried out as per protocol
- Manage pharmacy counter

Supervisor

Education- B Pharma / D Pharma with registration in state pharmacy council/ B.com or any graduate for pharmacy

Experience- 8-12 years

Job Description-

- To ensure customer satisfaction (both internal and external), while maintaining a healthy operating margin in line with the hospital objectives. To operate the pharmacy in accordance with Good Dispensing practice.
- Plan, organize and supervise activities in the hospital pharmacy areas according to hospital policies and directives.
- Maintain departmental quality assurance program, safety & environment
- Ensure continuous supply of drugs and medicines and avoid out of stock situations in order to obtain maximum customer satisfaction
- Ensure medicine quantity, batch and expiry are properly checked
- Ensure proper maintenance of inventory records
- Be responsible for ordering pharmaceutical drugs & control of inventory in accordance with the annual budget and organizational objectives and policy
- Be responsible for cost control of drug purchases by negotiations and contracts.
- Be responsible for accurate dispensing of medications and also liaising with nursing and medical staff concerning prescriptions orders, drugs and pharmaceutical details, resident reactions, errors and complaints.
- Establish a Hospital Drug formulary in consultation with the PTC. Evaluate and review medications for addition to or deletion from the Formulary based on drug control reviews, Value analysis.
- Ensure physical verification and reports. maintain process to avoid pilferage and obsolescence.
- Maintain and updates the Item Master with accurate specifications, (VAT, PUOM and IUOM). Purchase unit of measurement, Issue unit of measurement.
- Ensure secure storage of narcotics and other controlled substances in accordance with statutory regulations.
- Develop SOPs and other departmental protocols. Ensure those are properly followed
- Be responsible for accreditations and formulate and implement organizational policies
- Be responsible for drugs under clinical trial and its storage
- oversee coordination and participation during NABH audits including documentation
- Review and Ensure Meeting of Quality standards at all pharmacy outlets
- Train and orient new/junior team members. Ensure proper training processes are carried out
- Assist the admin head in all administrative activities related to pharmacy department

INFORMATION TECHNOLOGY

Senior Officer

Education-BE/MCA/BSc/MSc (Computer Science)

Experience- More than 6-8 Years, with 3-4 years Exp in health care domain, Techno functional experience

Job Description-

- To issue and receive goods from vendor, collect bills/invoices and delivery challan, handle over to concerned department and make entry of the same on SAP/System.
- Monitor the required stock for availability
- Gets the item arranged in the racks in a systematic order
- Raise purchase requisition as per the indent received
- Follow up with purchase department for release orders.
- Receive goods, invoices/delivery challan from the vendors and arranges the received goods in the respective racks
- Reorder level planning - Forecasts the consumption and plan the operational requirement
- Check the reorder level from different departments & highlights the concerns to immediate manager
- Attends and resolves escalated queries
- Highlights the concerns of the day-to-day issues to the concerned supervisor
- Records the number and the kinds of supplies. Disseminates the supply in its designated areas.
- Supervise and train the team members
- To check the items available in the stock and maintain as per agreed levels, issue the goods and manage the inventory
- Gets the item arranged in the racks in a systematic order
- Tally the materials/stocks periodically
- Contributes to the financial savings by identifying purchase cost and MRP cost comparative analysis
- Maintain all documentation/records for statutory quality compliances and Audit

MARKETING

Assistant Manager Marketing

Education- Post- Graduate, MBA Preferable

Experience-5 + Years of Experience in Business Development in any industry

Job Description-

- Develop and manage effective marketing strategies for department clusters (focus areas) including competition mapping, brand building, creation of internal sales process, and successful implementation of corporate initiatives
- Oversee Maintenance and development of customer and prospect database.
- Develop Tie Ups with hospitals and clinics for referrals. Provide support to junior staff in this process
- Conduct CME's, wellness activities for consultants. Monitor activities of junior staff in this process
- Ensure health check camps across target market are conducted.
- Support Research activity related to marketing plans and business agenda.
- Prepare, plan, develop, and implement complete action plans for marketing and sales objectives.
- Develop publishing material of the hospital namely: information booklets, leaflets, handbills, brochure, and other related materials, including content, design, creativity and proof – reading etc
- Implement brand plan and various Marketing strategies in accordance to corporate policy for hospital brand
- Run Cost benefit analysis for packages, suggest improvements in the respective focus areas.
- Evaluate market conditions, competitor data and implements marketing plan, and suggest for changes as needed in respective department with approval

Lead Officer - Corporates & TPA

Education- Post Graduate

Experience- 0-4 Years relevant work experience

Job Description-

- To generate targeted business from TPA and corporate clients in the respective area. To build long term relation-ships with them and ensure good quality of service

- To interact with TPAs and corporates and get insurance business development, as per business plans
- Build and maintain good rapport with TPAs, corporates & Insurance companies
- Maintain TPA and Corporate empanelment's
- Conduct promotional activities like health camps, health talks etc at corporates
- Ensure insurance related enquiries resolution within 24 hours
- Ensure insurance liaisoning for Guarantee of Payments
- Liaising for collection of receivables

Lead Officer - Products

Education- Post Graduate

Experience- 0-4 Years of relevant experience

Job Description-

- Develop effective marketing strategies for products, advertising and promotional activities of the organization, to increase patient footfall & revenue generation and develop sales in accordance with agreed business plans in respective departments. (For products responsibility would vary with respect to revenue size and complexity based on seniority of role)
- Maintain and develop a customer and prospect database.
- Develop Tie Ups with hospitals and clinics for referrals
- Conduct CME's, wellness activities for consultants
- Conduct health check camps across target market.
- Contribute marketing and sales information and recommendations to strategic plans and reviews
- Prepare and complete action plans for marketing activities
- Develop publishing material of the hospital namely: information booklets, leaflets, handbills, brochure, and other related materials, including content, design, creativity and proof – reading etc

Senior Team Member – Referrals

Education- Graduate with Good Communication and Customer care skills

Experience- Fresher / 1-2 Yrs. Of experience

Job Description-

- To streamline all the referral & product related process and act as one point of contact for any referral patient to ensure smooth and satisfactory customer experience
- Responsible for Meeting sales and business targets

- Responsible for facilitators and other vendor contract renewals (corporate tie ups)
- Assist HOD in the smooth functioning of department
- Assist in coordination for conducting health check camps across target market.
- Be the single point of contact for any customer referral
- Ensure departmental protocol is followed and customer satisfaction is maximized.

FINANCE

Team Member

Education- Post Graduate

Experience- Fresher

Job Descriptions-

- To ensure the payment of all the expenditures occurred, by verifying and completing payable transactions, such as receiving the invoices, accounting and making the payment.
- Depositing cheques in the banks
- Perform vendor reconciliation ageing and advance settlement activities
- Arrange and file all the documents related to payables

Senior Team Member

Education- Graduate, preferably B Com

Experience- 3 - 6 years of exp in the same field

Job Description-

- To provide administrative and processing support for all Banking activities, Project expenditures and Fixed Asset maintenance. To ensure the payment of all the expenditures occurred, by verifying and completing payable transactions, such as receiving the invoices, accounting and making the payment.
- Receive vendor bills, verify the same and issue the payment to vendors on a timely basis
- Maintain accounts of collections. Allocate the amount received to the pending bills.
- Carry out billing, collection and reporting activities according to specific deadlines
- Releases retainer fees/ stipend to doctors/trainees
- Transfer funds to head office on behalf of payments
- Interact with Bank for clarification & Fund status
- Compiles the data in format to support audit requirements
- Processes reimbursements and claims
- Arrange and file all the documents related to treasury
- Prepares schedule as per audit format and timelines
- Participate in Audits

Executive

Education- MBA in Finance

Experience- 4-5 years of relevant experience

Job Descriptions-

- To ensure accuracy of Financial Accounting System by checking, analyzing and verifying the data, ensuring contributions and sundry debtors are invoiced, and collected when due, for all aspects of staff payroll, and statutory and policy compliance
- Analyze financial data/ reports on a daily basis and submit the same to the management on a regular basis
- Analyze Budget Vs. Actual on monthly basis and share findings with seniors
- Ensure input of data including invoices & credit notes is timely.
- Ensure back charging required is performed on a regular monthly basis
- Ensure invoices are raised on time
- Provide the required information to purchase department for correction of Purchase order, work order and other quotations
- Verify all statutory payments including TDS and Service tax, ensure compliance to all legal/statutory and company requirements
- Perform Hospital Information System to SAP reconciliation regarding Treasury
- Check and prepare reports required for audits, participate in audits, provide clarifications on data and process
- Provide financial reports in accordance with published timetables
- Prepare status reports related to activities (e.g. bank reconciliation)
- Participate in new work initiatives in the department and organization (in analyzing and reporting)
- Participate in the budget preparation activity
- Prepare flash reports
- Prepare report for the internal/external audit purpose

Assistant Manager

Education- M. Com / MBA in Finance

Experience- 10 - 15 years of experience

Job Description-

- To establish and maintain financial and management procedures, ensure compliance with all regulatory requirements as relating, to Company Law, and ensure adequate financial resources for the organization
- Prepare cash flow and fund flow statement & allocate funds for the various requirements. Monitor actual expenditure spent department wise and having a control on the budget
- Monitor the receivable position and payable position and raise flag/ resolve issues
- Interact to close issues with Internal Auditors and Statutory Auditors
- Monitor regular filing of statutory reports and attends the queries
- Review and circulate MIS on a monthly basis
- Review to ensure integrity of general ledger
- Interact with the internal departments and resolves issues, if any
- Act as bank voucher signatory for and authorize expenditure up to limits as per department protocol
- Identify development opportunities consistent with the aims of the organization and the operating environment
- Maintain day-to-day financial control within budget heads
- Ensure that appropriate financial regulations and controls are in place and in use at all times
- Monitor regularly work done by the team
- Ensure, delegating as appropriate, that finance team in each service location is adequately managed, staffed and resourced