**Summer Training at**
**Narayana Health,**
**Bangalore**

# Prospective Study on the Level of Satisfaction among International Patients

**By**
**Ipshita Deb**

**Under the guidance of**
**Mr. Abhishek Dadhich**

**MBA Hospital and Health Management**
**2015-2017**


**The IIHMR University, Jaipur**
**2016**

INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that **Ms. Ipshita Deb,** student of MBA Hospital and Health Management from the IIHMR University, Jaipur has undergone summer training at NARAYANA HEALTH, Bangalore from 1st April to 31st May, 2016.

The Candidate has successfully carried out the study designated to her during summer training and her approach to the study has been sincere, scientific & analytical.

The Internship is in fulfilment of the course requirements.

I wish her all success in all her future endeavours.

**Col. (Dr.) Ashok Kaushik**
Dean (Academics & Student Affairs)
The IIHMR University, Jaipur

9/6/2016

**Mr. Abhishek Dadhich**
Assistant Professor
The IIHMR University, Jaipur

Narayana Health™

**Date: 31st May 2016**

## INTERNSHIP COMPLETION LETTER

This is to certify that **Ms. Ipsitha Deb**, 2nd year MBA Student, IHMR, Jaipur has successfully completed her internship project at **Narayana Health City**, Bangalore from 1st April 2016 to 31st May 2016.

During the course of internship, the intern has done 2 projects titled "and **"A Prospective Study On The Level of satisfaction among international patients in Narayana Health City"** and **"A Study On The Occupational Hazard Faced By Various Employees In A Hospital" at Narayana Institute of Cardiac Sciences, at NH Healthcity, Bangalore"** under the guidance of **Mr. Joseph Pasangha – Facility Director, Narayana Institute of Cardiac Sciences, NH Health city**, Bangalore.

We found her sincere, hardworking and technically sound and result oriented. She worked well as part of a team during her tenure.

We take this opportunity to thank her and wish her all the best for her future.

For Narayana Hrudayalaya Ltd

Dr. Rakesh Verma
Group Head – Learning & Development Department

## Acknowledgement:

Apart from the efforts of myself, the success of this study depends largely on the encouragement and guidelines of many others. I take this opportunity to express my gratitude to the people who have been instrumental in the successful completion of this study. The guidance and support received from all the members who contributed was vital for the success of this study. I am grateful for their constant support and help.

- I wish to express my sincere respects, regards and deep sense of gratitude to my mentor Mr. Joseph Pasangha, Facility Director, Narayana Hrudayalaya, a well versed teacher, experienced in a plethora of fields, with an inherent rare human quality to listen and to render physical and mental courage on the onlooker. I sincerely express my boundless reverence for his excellent guidance, constant courage, encouragement, timely advice, thoughtful criticism and constructive suggestions to which this thesis owes its very existence. His administrative intuition has made him as a constant oasis of ideas and his passion in administration, which exceptionally inspire and enrich my growth as a student, researcher and administrator I want to be.

- I am also very grateful to Dr. Somya, Query Manager, International Patient Division, Narayana Health, at Mazumdar Shaw Medical Center , Bangalore , for her immense support and inputs towards the study to be a success.

- My heartfelt thanks to complete staff and the patients of International Patient Division, Mazumdar Shaw Medical Center, Bangalore, who were the subjects of this study, who have willingly shared their precious, time during the data collection, without whose consent and cooperation this work would not be complete.

## Table of Contents:

## Accronyms:

- NH- Narayana Hrudayalaya.
- MSMC- Mazumdar Shaw Medical Center.
- GW- General Ward.
- SPW- Semi Private Ward.
- PW- Private Ward.
- OPD- Out Patient Department.
- IPD- In-patient Department.

# ORGANIZATION PROFILE

# (Observational Learning)

## INTRODUCTION:

Narayana Health, headquartered in Bangalore is one of India's largest and world's most economical healthcare service provider. Since its inception in 2000 by leading cardiac surgeon Dr. Devi Prasad Shetty, as a 225- beds cardiac hospital 'Narayana Hrudayalaya' in Bangalore, the NH Group of Hospitals has grown to a healthcare conglomerate with a network of 32 multispecialty and superspeciality hospitals with 6498 beds spread across 20 locations. The Group was rebranded as 'Narayana Health' in 2013 to convey organizational vision, values, and objectives beyond just cardiac care.

The NH group offers services in all areas of medicine with special thrust in the areas of Cardiology & Cardiac Surgery, Cancer Care, Neurology and Neurosurgery, Orthopedics, Nephrology & Urology, Gastroenterology, General Surgery, Solid Organ Transplant & Critical Care and is focused on awareness, disease prevention, screening and early intervention.

Over the decade and a half, NH has set up clusters in South, East and West of the country and plans to create similar clusters in Northern & Central India and globally. They have set their global footprint with the establishment of Health City, Cayman Islands, North America that replicates the NH model of healthcare delivery. NH plans to reach out to people in Tier II and Tier III cities of India systematically, ensuring and providing them with quality care. Recognized world over for its social enterprise model, NH is committed to the principles of Compassion, Quality and Affordability in healthcare and leverages technology to achieve this.

NH has also been striving to build a self-sustaining healthcare ecosystem through various initiatives like building Health Cities to bring down the overall cost, leveraging economies of scale, CSR initiatives/donations from corporates/charitable trusts, offering academic programs, vendor management, thus addressing healthcare dynamics in a systematic manner. For its ability to reconcile quality, affordability, scale, transparency, credibility and profitability NH has emerged as a global industry model.

Going forward, NH intends to stay predominantly asset-light, reinvest accruals and engage with the state governments and like- minded private organizations for affordable healthcare, while leveraging the economies of scale and technology to its advantage.

## Vision

To provide high quality health care with care and compassion at an affordable cost on large scale

## CORE VALUES (ICARE)

I – innovation and efficiency

C- compassionate Care

A – Accountability

R- Respect for all

E – Excellence

## What makes Narayana Health different?

- **Clinical Excellence** with **2 JCI** (**Joint Commission International** ) accredited Hospitals
- **4 NABH** Accredited Hospitals
- Service Excellence
- Affordability
- More than 90000 Cardiac Surgeries
- Amongst the **largest Telemedicine networks** in the world
- Patients from 76 countries
- One of the largest Dialysis units in India with 217 dedicated beds and 1,30,000 Procedures per year
- 80 bed dedicated post-operative pediatric cardiac ICU, largest in the world
- Digital Radiology

- Academic Excellence
- Financial Stability

FLOOR WISE FACILITY DISTRIBUTION:

BASEMENT

BLOCK -A

- RADIOLOGY DEPARTMENT-CT SCAN , X –RAY , ULTRASOUND, MRI
- NUCLEAR MEDICINE
- DEPARTMENT OF SOCIAL WORK
- TELERADIOLOGY

BLOCK -B

- IT DEPARTMENT
- OUT PATIENT SERVICES – ONCOLOGY
- MEDICAL RECORD ROOM

FIRST FLOOR

BLOCK -A

- OUT PATIENT SERVICES(OPD)
- EXECUTIVE HEALTH CHECK
- EXECUTIVE OPD
- PAIN MANAGEMENT
- VOICE AND SWALLOW REHABILITATION

BLOCK -B

- OUT PATIENT SERVICES(OPD)
- RHEMATOLOGY
- VASCULAR SURGERY
- PAC
- DAY CARE UNIT
- BOARD ROOM

SECOND FLOOR

BLOCK –A

- GENERAL WARD

  1ST WING TO 11TH WING

- NEURO PHYSIO UNIT

BLOCK -B

- SEMI PRIVATE WARD
- PRIVATE RROMS
- DELUXE ROOMS
- SLEEP LAB
- INPATIENT PHARMACY STORE

THIRD FLOOR

BLOCK -A

- GENERAL WARD

  HDU 1

  HDI 2

  4TH WING

  5TH WING

  6TH WING

- ISOLATION WARD
- MEDICAL INTENSIVE CARE UNIT (MICU)

BLOCK -B

- SEMI PRIVATE WARD
- PRIVATE RROMS

- DELUXE ROOMS

FOURTH FLOOR

BLOCK -A

- OT COMPLEX
- POST ANAESTHETIC CARE UNIT(PACU)
- SURGICAL ICU(SICU)
- TISSUE REPOSITORY

BLOCK -B

- SEMI PRIVATE WARD
- PRIVATE RROMS
- DELUXE ROOMS
- INPATIENT PHARMACY STORE

FIFTH FLOOR

BLOCK -A

- OT COMPLEX
- LABOUR ROOM
- NEONATAL INTENSIVE CARE UNIT
- PAEDIATRIC INTENSIVE CARE UNIT
- STEP DOWN PAEDIATRIC ICU
- TRANSPLANT INTENSIVE CARE UNIT

BLOCK -B

- PRIVATE RROMS
- SEMI PRIVATE WARDS
- DELUXE ROOMS
- LABOUR SUITE
- COLONOSCOPY / PROCEDURE ROOMS

- GENERAL WARD
- OUT PATIENT SERVICES
  PAEDIATRIC
  OBSTETRICS AND GYNAECOLOGY

SIXTH FLOOR

BLOCK -A

- DIALYSIS

BLOCK -B

- OUT PATIENT SRVICES OF HEAD AND NECK
- OUT PATIENT SRVICES OF ENT
- OUT PATIENT SRVICES OF BREAST ONCOLOGY
-

SEVENTH FLOOR

BLOCK -A

- HEMATOLOGY DEPARTMENT

EIGHTH FLOOR

BLOCK -A

- CORPORATE OFFICE

BLOCK –B

- MAZUMDAR SHAW RESEARCH CENTER

**Front Office**

Location**:** Ground floor

## 1) Introduction

Front Office is the First Interactive Point for a patient coming to a Hospital. Front Office executives do multiple tasks right from taking multiple incoming telephone calls from patients who want to schedule appointments, registration, billing, admission, replying to queries of the patients, dispatching of reports, preparing individual patient file to entering records in HIS **Manpower & Hierarchy :**

There are 36 people working under Front Office Department.

Hierarchy:

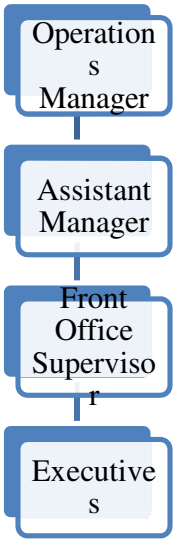



Figure 2.9.1: Organogram of Front Office Department

## 2) Different Departments in Front office:

- OPD Bill Counter
- Corporate Bill counter
- Report collection counter
- Counselling room
- OPD Counter A to F

- Call centre

OPD Bill counter

It accounts for registration & billing,and patient's queries; even corporate billing, Lab Billing, Radiology Billing which have their separate counters. But it is not meant for billing for PHC.

Alongwith paying patients, cashless services are provided for ESI, ECHS and CGHS patients. For CGHS patients, if cash, Rs.58/- is being charged and Xerox of ID proof is kept by the Hospital. If credit, referral letter from CGHS Clinic is required, which is valid for 7days. Colored photocopy of card & bill has to be kept.

For ECHS patients, referral letter is required which is valid for 30days. Referral letter can be used for single time only. Cash patients need to pay Rs.58/- along with copy of ID proof.

Report collection counter

This is a report collection counter for Lab. Investigations, Radiology, cardiac procedures, Neuro procedures. Reports of endoscopy and PHC are given by the respective departments.

(Normal timings for reporting- if tests are done before 12pm, reports can be collected after 5pm on the same day. If after 12 pm then next day morning.)

Counselling Room

If patient gets admitted in the hospital, patients are explained the estimate of hospital stay, expenses, etc. in this room. And they are allotted room according to their choice and availability.

Bed Management

It is responsible for allotment of bed and shifting of beds on patient's request. If the desired bed category is not available then the patient is upgraded into the immediate above bed category.

OPD Counters A to F

- **Counter A- Cardiology**

  Manpower on Nursing Counter: 3 nurses.

Counter A also includes Cardiac Procedure room. The procedures performed in Cardiac Procedure Room and their Turn Around Time is as follows:

1. ECG-Electrocardiography: 5 min
2. Echocardiography/Color Doppler: 15-20 min
3. Treadmill Test(TMT): 25 min
4. Stress echocardiography: 35 min
5. Transoesophagal cardiography (TEE): 15 min

Procedures done per day (on an average):

1. ECG-7
2. ECHO-15
3. Stress ECHO-2
4. TMT-3

Manpower in Cardiac Procedure Room:

1 or 2 Doctors

1 Technician

1 Female Nurse

1 Medical Transcriptionist (M.T.)

- **Counter B** involves following specialties:
  Obs. and Gynae.
  Paediatrics
  ENT
  Ophthalmology
- **Counter C**- Neurology
  This counter caters to patients coming for Neurology Consultation. Neuro Procedure Room also come under this counter where following Neuro procedures are being done.
  1. EMG-Electromyography
  2. EEG-Electroencephalography

3. NCV-Nerve conduction velocity test.
(Time taken by each procedure-45 min

- **Counter D**
  Counter D caters to patients coming for General and Lap. Surgeon consultation and this is also a Billing Counter for Lab. and Neuro procedures bill

- **Counter E** includes:
  Internal Medicine
  Orthopaedics & Joint Replacement
  Gastroenterologist
  Psychiatry
  Rheumatology

- **Counter F** includes:
  Neurosurgery
  Urology
  Haematology
  Spine clinic
  Psychiatry/Clinical Psychology
  Nephrology

  <u>Dialysis unit</u>

  Dialysis unit has 5 dialysis machines and 1 dialyzer reprocessor. Dialysis takes 3-4 hrs. to complete the process. So the appointments given to the patients are in 4 shifts as mentioned under:

  Morning 8-12

  Afternoon 12-4

  Evening 4-8

  Night- 8-12

  Manpower:

  3 staff nurse

3 technicians-

1 GDA

1 housekeeping personnel

Endoscopy suite

Consists of procedure room, pre- & post-procedure room and cleaning area.

Procedures done:

1. Colonoscopy

2. Endoscopy

3. Sigmoidoscopy

4. ERCP (done in OT)

TAT for the procedures:

Each procedure takes 10-15 min. If pre-care, post-care and reporting is added it takes 30 min. Only colonoscopy requires 30 min. (only for the procedure)

Manpower:

1Doctor

1 female nurse

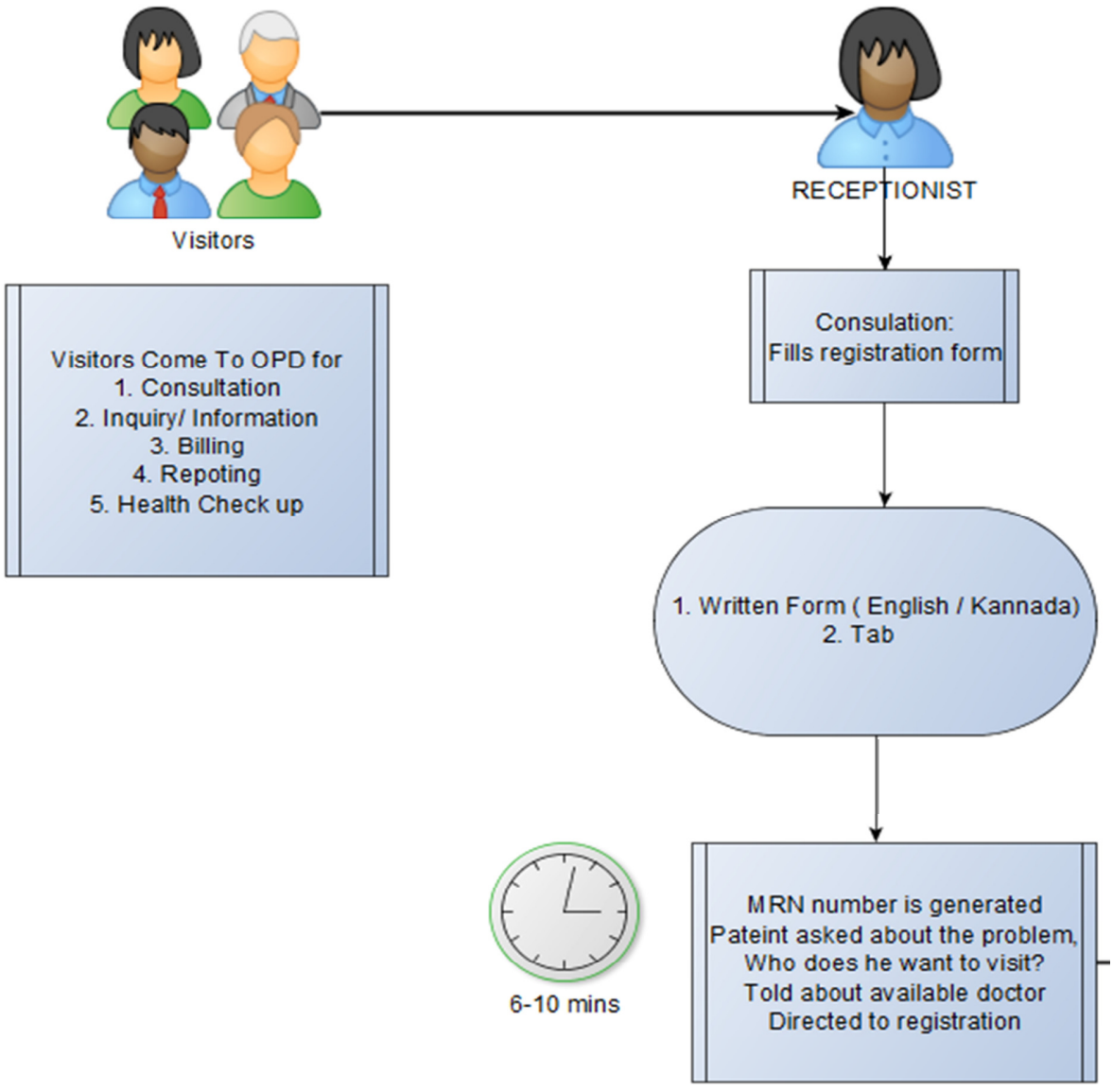
1 technician

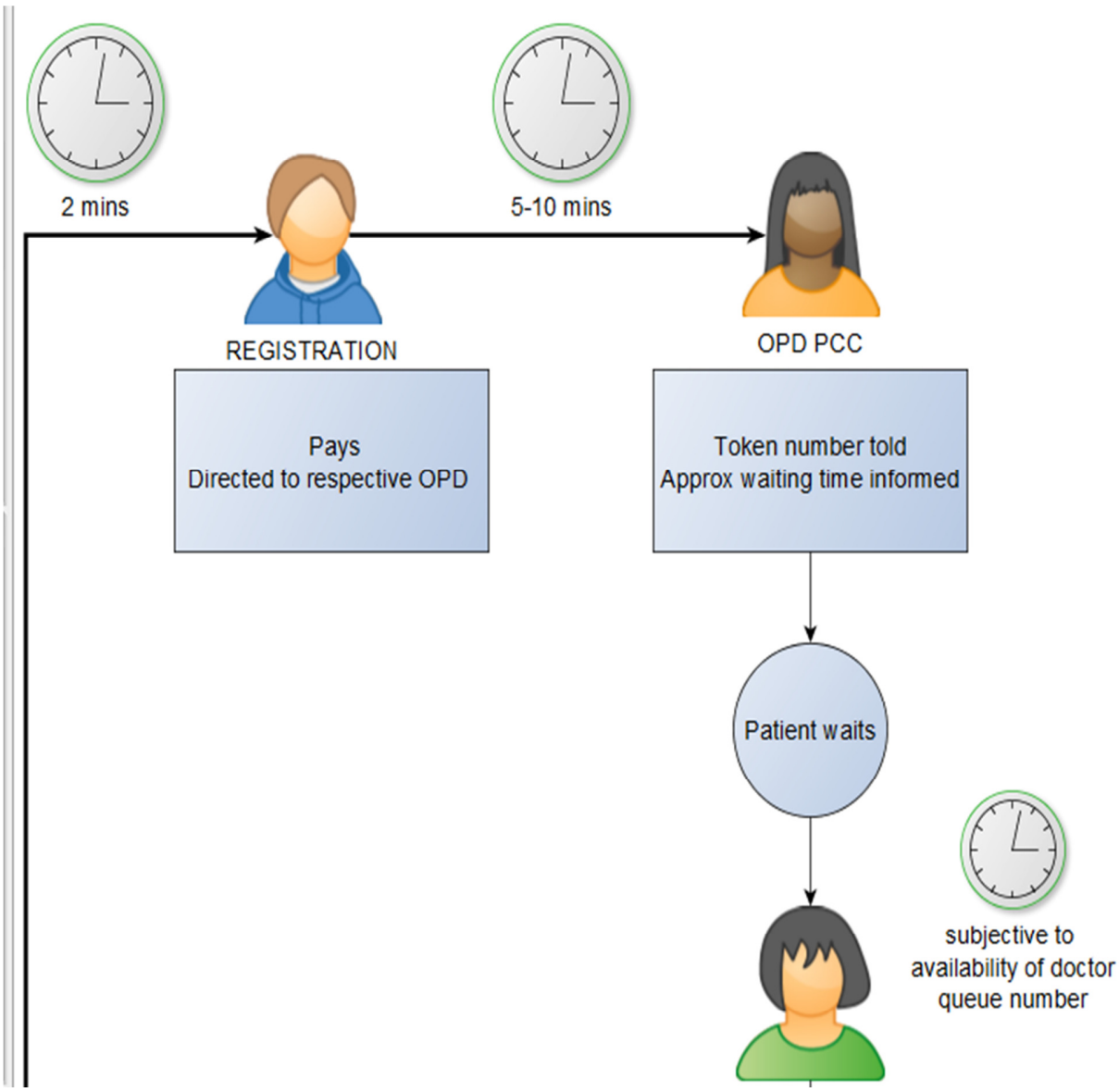
1 GDA

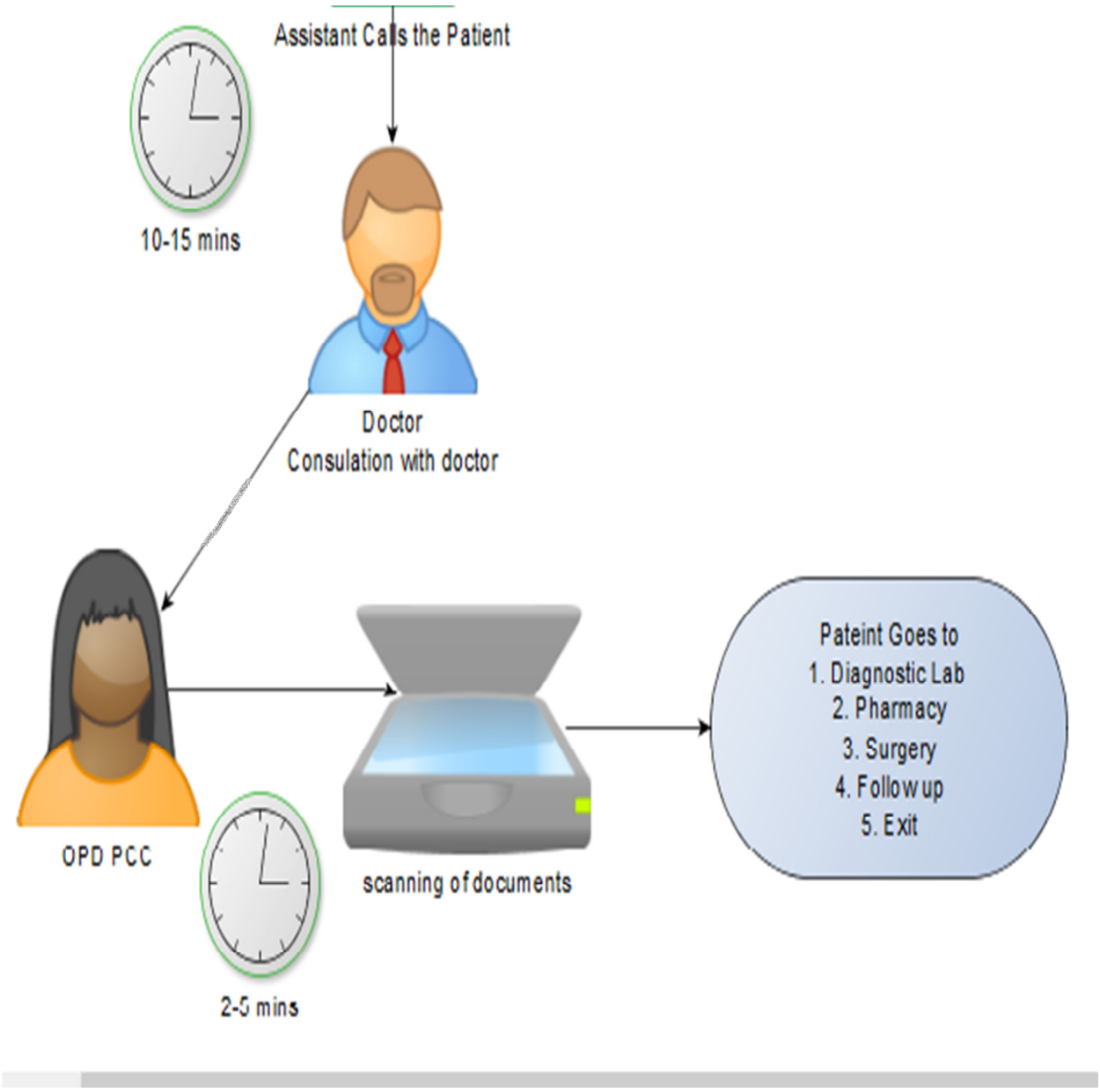
- There are 34 OPD's in MSCC
- 30,000 to 35,000 Out patients in a month .HINAI is used to manage patient queue.
- QIKWELL is the chosen software of choice now.

- Launched in three busy OPD's on ground floor of MSCC in April. These OPD's are Neurology, Urology and Nephrology.
- By the end of May this software has been scaled up to 9 other departments.
- Gather's information from the doctors, about their OPD timings and consultation time devoted to new and follow up patients.
- With this information a dashboard is created with the slot timings and OPD dates.
- The front desk secretaries were trained about booking the appointment for patients and the working of the system.
- Apart from this, patients receive a message as soon as they are checked into the system by the secretary or if the appointments are booked online, for the live slots of appointment of doctors can be seen on the site. This also provides MSCC to out lay all its doctors on the net platform.

## OPD PROCESS FLOW HINAI

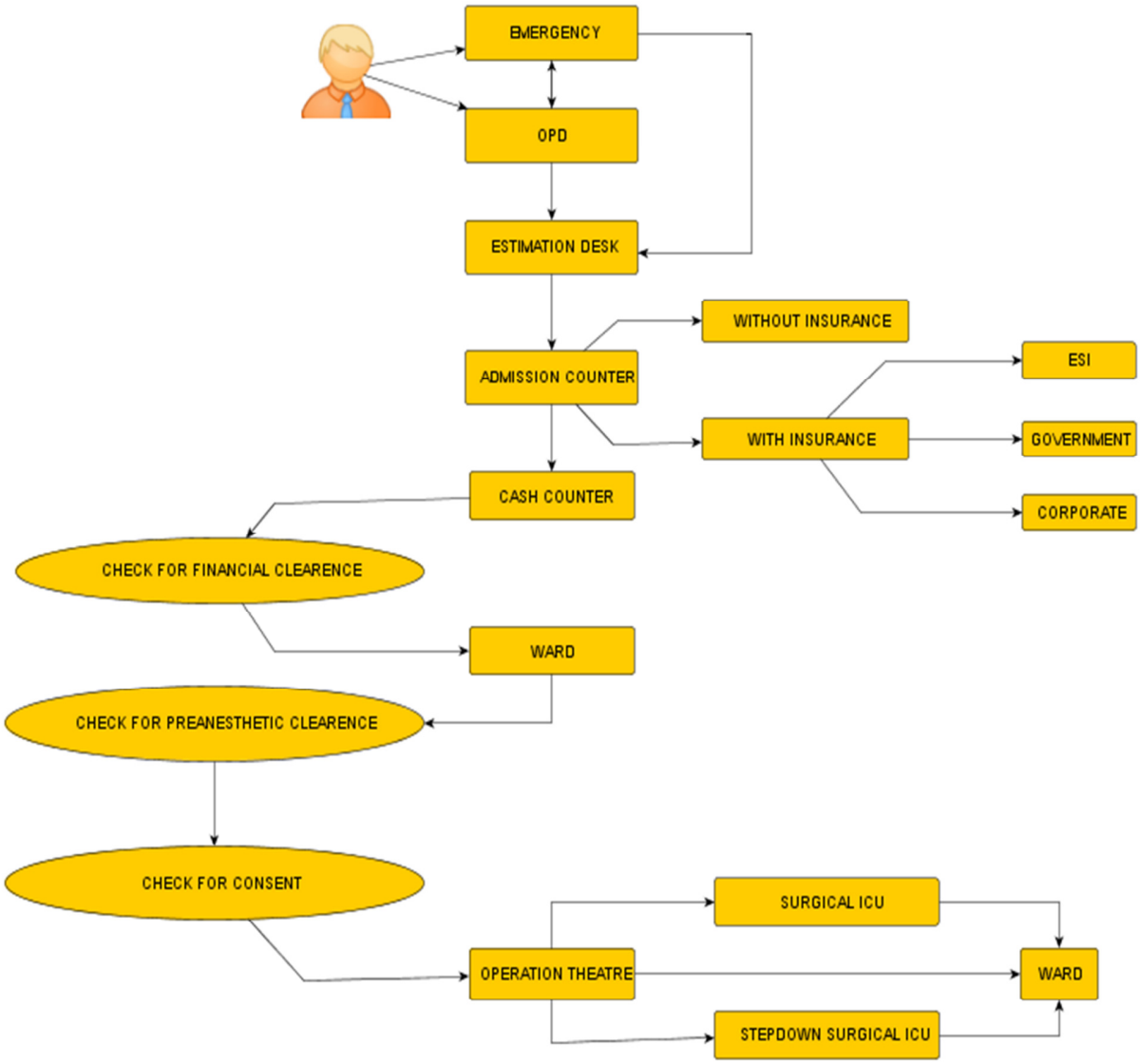



2 mins
5-10 mins
REGISTRATION
OPD PCC
Pays
Directed to respective OPD
Token number told
Approx waiting time informed
Patient waits
subjective to
availability of doctor
queue number


Assistant Calls the Patient
10-15 mins
Doctor
Consulation with doctor
OPD PCC
scanning of documents
2-5 mins
Pateint Goes to
1. Diagnostic Lab
2. Pharmacy
3. Surgery
4. Follow up
5. Exit

## DEPARTMENT OF OPERATION THEATRE

## WORK PROCESS FLOW



## AREA

The size of each operating room is 6 * 9.2sq meters. Therefore the size of 13 operation theatres is 717.6 sq meters.

## LOCATION

It is located in 4th and 5 floors in 'B' Block adjacent to Surgical ICU and Step-down surgical ICU in Narayana health (Mazumdar Shaw Medical Centre), Bangalore. There are total 13 Operation theatres, Out of that 11 Operation theatres are assigned to the particular departments and Operation Theatres 12 and 13 are assigned for Day care surgical procedures and Emergency cases respectively.

## STAFFING

The surgical department is organized around five main groups of staff – the surgeons, anesthesiologists, nurses, technicians and aides/orderlies, Surgeons and anesthesiologists are salaried staff. The surgeons group consists of surgeons from all specialties – general, orthopedic, neuro, cardiac, vascular, plastic and reconstructive surgery, ophthalmology, otolaryngology, gynecology, urogenital surgery, oral surgery, etc. Anesthesiologists are medical doctors who administer anesthesia and provide medical direction in the recovery room.

The third group in the operating room consists of the operating room supervisor who is generally a senior nurse, and staff nurses. The nursing team usually consists of a circulating nurse and a scrub nurse. Circulating nurse coordinates activities, gets and hands supplies and specimens into and out of the sterile area and marks all the checklist. The scrub nurse assists the surgeon and organizes and passes instruments. Bedsides the nurse, the surgeon may have another assistant, a medical doctor, during certain procedures

Technicians are commonly used in specialty and teaching hospitals where complex procedures like cardiac surgery, neurosurgery is performed. Orderlies and attendants are generally used for patient transportation, patient 10 positioning, cleaning work, mopping of floors and disposal of trash. Aides clean, check and wrap instrument kits. The Cleaning and preparation time for operation room is 20 minutes and the waiting time of the patient for surgery in pre-operative room is 15 minutes

## UTILIZATION

The operating theatre is one of the most expensive departments of any hospital. Its capacity often limits the amount of routine surgical work that can be carried out. Surgeons, therefore, have a responsibility to ensure that theatre facilities are used as fully as possible, and also that good use is made of the operating time in the theatre. So Routine operation lists are prepared / planned in advance, so that each surgical team should be able to ensure that its share of theatre time is used as fully as possible, without being exceeded more often than necessary.

## SCHEDULING:

Proper and judicious scheduling of cases and adhering strictly to schedule is important, as poor scheduling is often said to be the cause of lost OT time. The list of people to be operated is scheduled in such a way that surgical and anesthetic time is synchronized, e.g. patients with infection is operated in the end, so that they do not contaminate the theatre .Experts allocates the right amount of OT time to each service on each day of the week So that rarely do services fill their allocated OT time and leave another case to schedule

### Emergency Department

The purpose of Emergency department is to ensure patients undergo an immediate care in an urgency that their treatment is initiated in a timely manner & to do triage assessment.

**1) Scope of emergency**

To cater all emergencies coming to hospital, their stabilization, admission, transfer or referral from emergency department within or outside the hospital.

i. ER provides a comprehensive & uniform emergency service/ care to patient (functional 24*7).
ii. All patients are assessed & triaged by a qualified & experienced medical & paramedical staff & provided appropriate level of care in ER department.
iii. The ER department provides medical evaluation & treatment (including rapid resuscitation & stabilization) .Patients receive medical referral / transfer (including critically ill patients & or those are not in scope of services of hospital )
iv. Emergency care services provided include-
    1. Stabilization of life threatening conditions.
    2. Life saving procedures.
    3. Immediate treatment of medical & surgical emergencies.
    4. Emergency treatment for minor injury or illness.

**2) Admission process flow**

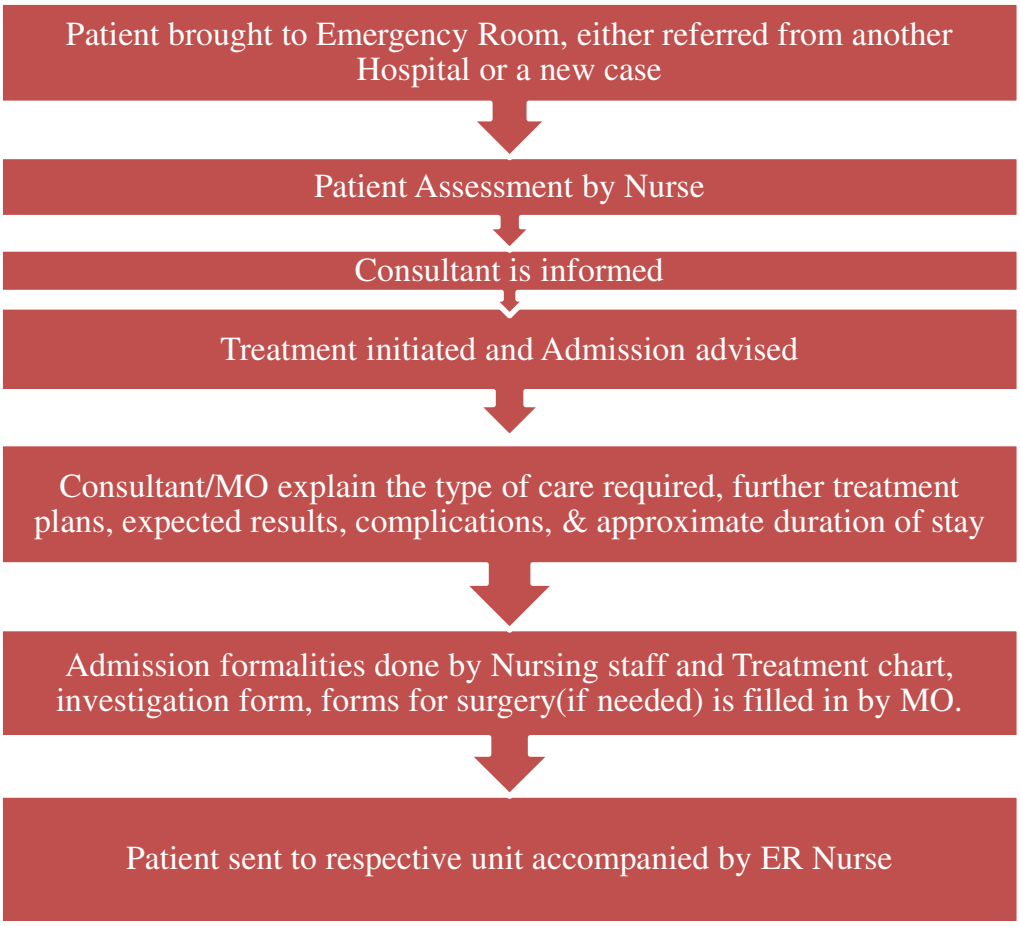



Figure 2.10.1: Process Flow showing admission process in Emergency Department

### 3) Process Flow in Triage

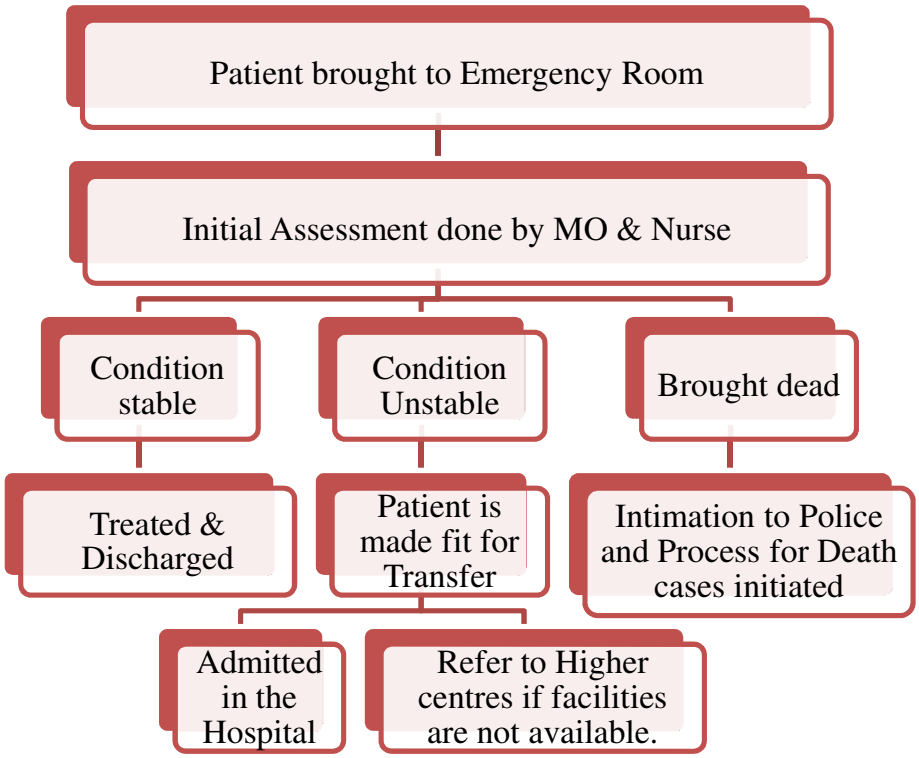



Figure 2.10.2: Process Flow in Triage

**4) Overview of the department**

ER department is situated at the Ground floor of Paras hospital. It is 24 hour functional & is eight bedded. Hierarchy is as shown:

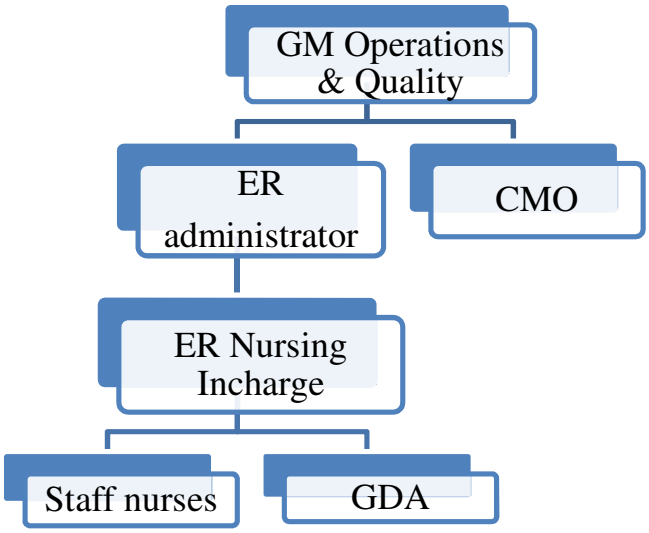



Figure 2.10.3: Organogram of Emergency Department

**5) Important medications used in Emergency Department**

High alert medications

These are defined as those which could cause an immediate life threatening condition for the patient if an error in administration occurs.

Narcotic drugs & psychotropic substances (NDPS)

These are drugs which required special storage & issue to prevent misuse, pilferage etc e.g. fentanyl, morphine, pethidine, sufentanyl (also known as Schedule 2 drugs).

Each person independently compares the label & product contents in hand versus the written order & EMAR (if it is the first dose) or label. Double check of medications prior to administration by 2 registered nurses after reading the label is mandatory.

Hospital has made some policies regarding the use of Narcotic Drugs

General guidelines for the Medicines:

- High alert medications dispensed, & administered only on prescription by credentialed personnel / OT/ ICU/ ER in charge doctors to critical care & special care areas
- Double check of Medications prior to Administration by 2 Registered Nurses by reading aloud:

i. Right medication, Right dose rate, including double check of any calculation & verification of pump settings.
ii. Right route , including line reconciliation., Right frequency, Right patient.

- High alert medications details will be recorded in Medication Administration Record.
- Storage as per manufacturer packaging instruction.
- Narcotics must be stored under double lock & key.
- In case of expiry/ breakage, excise inspector will be informed accordingly.
- Warning labels for all cytotoxic drug containers, as well as shelves.

**6) MLC cases**

It is a case of injury or ailment etc where attending doctor after taking history & doing clinical examination of patient thinks that some investigations by law enforcing agencies are essential so as to fix responsibility regarding the said injury or ailment etc according to law.CMO attending the case, label the case as MLC.

Cases labeled as MLC-

Trauma, burns, electrocution, poisoning, industrial accidents, sexual offences, cases requiring age estimation, criminal abortion, animal or snake bite, cases of coma where cause could not be ascertained, cases of starvation including hunger strike, unclaimed newly born, hanging, strangulation, drowning, suffocation etc, cases brought by police or sent by court for medical examination, BID, where death certification due to disease or natural cause is not possible being not apparent, result of medical malpractices.

**Central Sterile Supply Department**

It is responsible for providing seamless supply of sterilized instruments and other devices to the required departments for the smooth working of the Hospital alongwith maintaining the sterility. The aim of CSSD is to reduce hospital acquired infection level to zero.

**1) Structure of CSSD**

CSSD is divided into 2 areas: **Sterile and Unsterile Area**. Unsterile area is for receiving the unsterile supplies, washing and packing them to proceed for sterilization whereas sterile area is to store the sterile items to avoid any kind of contamination. In the unsterile area, gauze pieces and gamzee roll (of half metre size) are also made for wards and OT which then is packed and sterilized in the Autoclave. For OT, set of 10 gauze pieces are packed together with a single piece of 8 layers and of size 10 by 10 whereas in the ward, a set of 4 pieces are packed with a single gauze piece of 12 layers and of size 7.5 by 7.5

**3) Areas where CSSD supplies are required**

- OT& ICU
- Nursing counters & OPD

Issuing of sterilized materials are done 2 times a day from the Issue Counter in the sterile area.

<u>Receiving & Issue Time-</u>

Morning- 9am-10am

Evening-3apm-4pm

Night-9pm-10pm

For sterilization of metal instruments, firstly Ultrasonic machine is used for disinfecting the instruments with Rapid-multi enzyme cleaner(10 ml/litre) and a chemical-Neadishter Iar (10ml/litre) to prevent the instruments from rusting. This takes 15-20 min. to complete the procedure. After completion of the procedure, instruments are washed in running water and then dried. Then these are packed in sets in a double sheet. Finally the packed sets are autoclaved at a temperature of 132-134 degree Celsius and 15 lb pressure. The process takes 40 to 50 minutes. Autoclave in CSSD has double door with one door opening in the non-sterilized area from where non-sterilized items are moved to the autoclave and another door in the sterile area.

For sterilization of plastic and rubber items, ETO sterilizer is used. It has an inbuilt tray for the items. It uses Ethylene oxide gas for sterilization which comes in the form of 100ml cartridge. A single cycle takes 10 hrs 20 minutes

**5) Process flow**

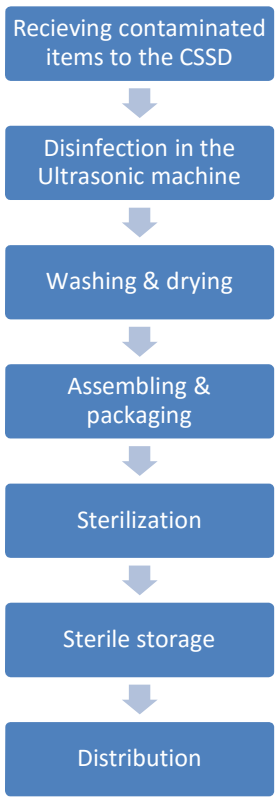



Figure 2.6.1: Flowchart of CSSD sterilization

**7) Indicators of sterilization**

Two types of Indicators are there: Chemical Indicator and Biological Indicator.

**Chemical Indicator** is an adhesive tape which is adhered to the packet which after the procedure turns its color indicating the process of sterilization has completed. For Autoclave, Green color turns to Black and for ETO, brown color turns to Green.

**Biological Indicator**-.Biological indicators are used to confirm autoclave's killing efficiency. A kit containing *Bacillus stearothermophilus (*for steam sterilizer) and *Bacillus Subtillus* (for ETO machine) is kept inside the machines; the machines are run for their actual processing time. Then the kit is sent to the lab to identify if the bacteria died or not. After this, the machine is declared fit to run. This test is performed on weekly basis, every Tuesday. Investigation of this test takes 48 hrs.

**Other tests** to ensure functioning of CSSD Equipments:

For every load**, Steam sterilization Integrator** is also used in both Autoclave and ETO which resembles a strip and changes its color indicating the successful procedure. In case of Autoclave, color changes from White to Blue and in ETO, color changes from Yellow to Green.

**Bowie-Dick test** or DART (*Dynamic air removal test)* is performed every morning before starting any procedure. A strip is placed in the Autoclave for 15-20 minutes, after which its color turns from Blue to Pink. This test is for checking prevaccum autoclave's air removing ability and steam penetration.

**Fumigation** every week on Monday Night.

**8) Manpower and shifts**

CSSD In charge (8:00am-4:30pm)

4 Technicians

**9) CSSD Layout**

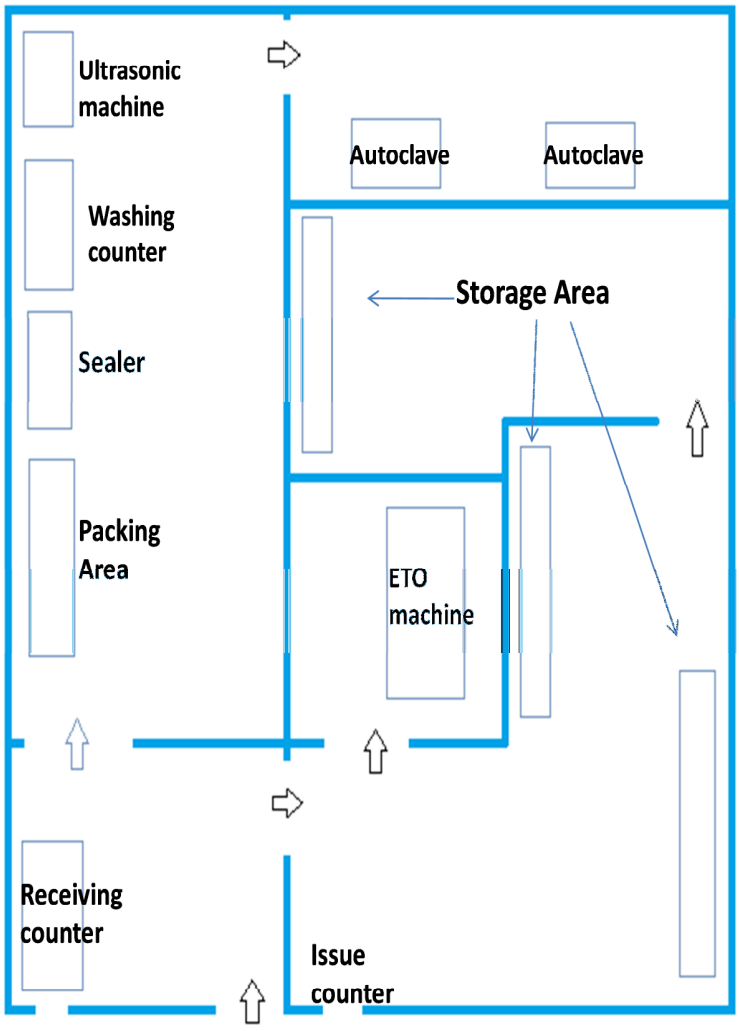



Figure 2.6.2: CSSD layout

**IP Pharmacy**

IP Pharmacy majorly caters to IPD, OT pharmacy and Emergency department.

**1) Manpower**

Head of Department: 1

Deputy Manager: 1

Assistant Manager: 1

Executive: 2 (store)

Senior Pharmacist: 4

Pharmacist: 9

Pharmacy asst.: 5

**2) Emergency Drugs:**

A total of 35 critical life saving drugs and 48 high alert drugs are kept. High alert drug such as chemo drugs are those which need to be handled with care and prevent breakage etc.

Look alike and Sound alike drugs are kept in a different shelf and are marked as look alike and sound alike so that a person dispending any of these drugs is more alert.

**4) Drug Ordering:**

Bulk orders are given on Tuesday and Friday but still depending on the stock at hand the department can put an indent every day. The ROL (Re order level) has a minimum stock marked for 7 days and a maximum for 15 days.

**5) Medicine Expiry:**

Every month in the last week, the IP Pharmacy staff checks the medicines which are three months before the date of expiry. Medicines found in that category are collected and returned to the respective vendor. Surgical device and vaccines can be kept before 6 months of expiry after which they are returned.

**6) Legal Norms:**

Forms 20 and Form 21 certify the pharmacy by the government to dispense medicines. As of now the pharmacy has three licenses issued in name of four people. Anyone of the four is expected to be at the hospital at all times.

For a person to qualify as a pharmacist, he or she is at least expected to have a Diploma in pharmacy. Also each pharmacist is expected to have a valid registration with the pharmacy council which has to be renewed every year.To stock narcotics, a separate permit is also required.

**8) Storing the drugs:**

Drugs are stored based on alphabetical order and are segregated based upon the types.

**9) Processes Taking Place in the Pharmacy:**

Medicine Dispatch:

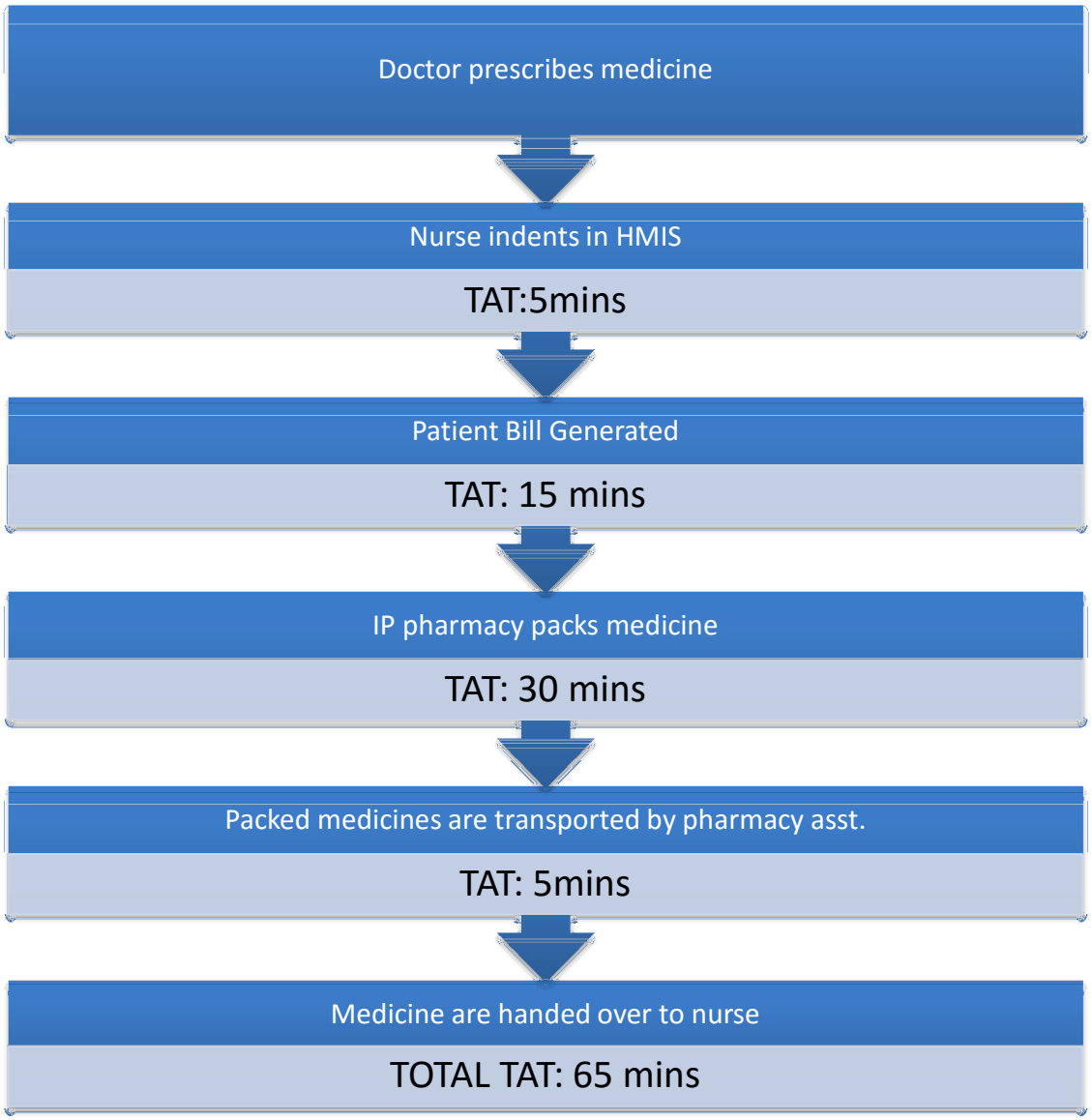



Figure 2.5.1: Process flowchart of medicine delivery

Medicine Return:

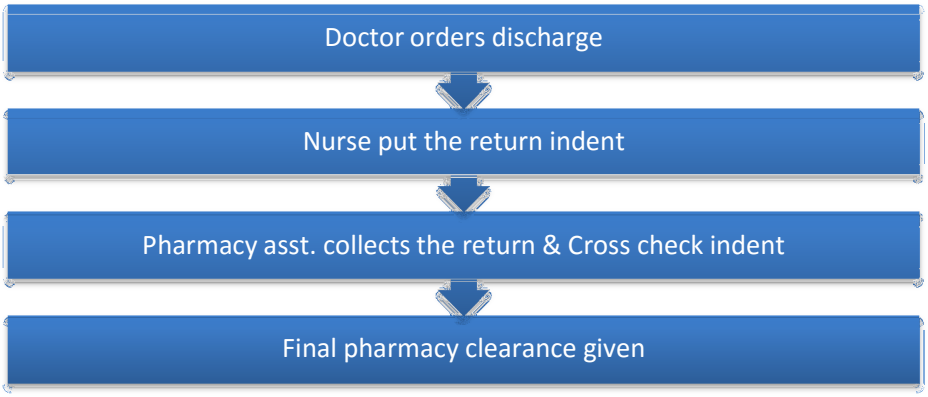



Figure 2.5.2: Medicine return process

The standardized hospital TAT for the above procedure is 40 minutes.

Also medicine is returned against a credit note or cash in the form of cheque from vendor.

Procurement of Medicine:

Everyday an indent can be put in if some new medicine is being prescribed by the doctors or if the store does not have a set of medicines. Bulk order days for pharmacy are Tuesday and Thursday.

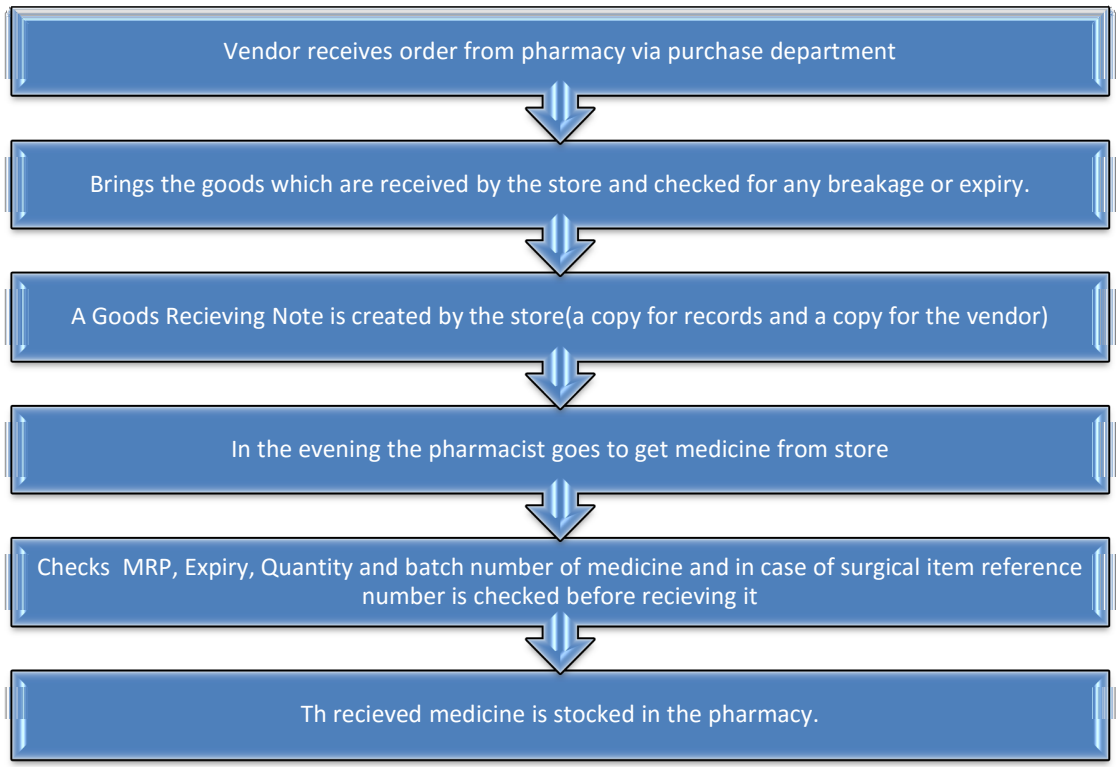



Figure 2.5.3: Process flowchart of procuring medicines

**10) Manual Prescriptions are used for the following cases:**

1. Medicine for emergency department
2. New admission in the IPD
3. Chemo Drugs
4. Urgent drugs
5. Non available drugs.

**13) Adverse reaction:**

In case of an adverse reaction of any medicine, an adverse reaction form is filled by the doctor and the batch no. of the medicine is noted. All the drugs of the batch are discarded from use and returned back to the vendor with the documents mentioning the reason.

## Intensive Care Unit

**Intensive care units (ICUs) provide intensive care (treatment and monitoring) for people in a critically ill or unstable condition.**

Paras Hospital has **7 ICUs**:

1. CTVS ICU: For patients admitted for Cardio Thoracic Vascular Surgeries or critical Cardiac patients.
2. Surgical ICU: For patients who have undergone surgeries or trauma patients.
3. CCU: For patients who are admitted for invasive procedures in Cath Lab.
4. MICU: For patients with Medical conditions
5. NSICU: For Neuro patients
6. PICU: For Pediatric patients
7. NICU: For care of Neonates after delivery.

### 1) Admission Process in ICU

In ICUs patients get admitted via OPD, IPD or Emergency.

### 2) Discharge process from ICU

Generally, patient is stepped down to the ward if the condition gets stable and then discharged. In some cases, if patients' relatives wants to take the patient against the Doctor's advice, then they are given LAMA (Leave against Medical Advice).

### 4) Equipments used & care in ICU

Major Equipments used in ICUs:

1. Ventilator `
2. Monitor
3. Crash Cart
4. Air beds to prevent Bed Sores
5. BIPAP

In each ICU, Bed Panels are there for each bed through which medical air, oxygen, vacuum for suctioning is supplied.2 Portable machines are also dedicated for ICUs, mainly for the Chest X-Rays of the bed-ridden patients.

In case of infectious patients, nurse-to-bed ratio is one with separate gown for the Nurse and Doctor who sees that patient. For infected patients with Respiratory diseases, double

mask are given to the patients to wear to control the spread of infection to other patients and ICU staff. Identification to Infectious patient is by 'Barrier Nursing' or 'High Risk patient' Tag.

**7) Nurse-to-bed ratio**

For ventilated patients, nurse to bed ratio is 1:1

For non-ventilated patients, nurse to bed ratio is 1:2 or 1:3

**6) Temperature in ICU**

In each ICU, temperature is maintained between 22-24 degree Celsius; reason being bacteria and viruses cannot thrive at lower temperatures.

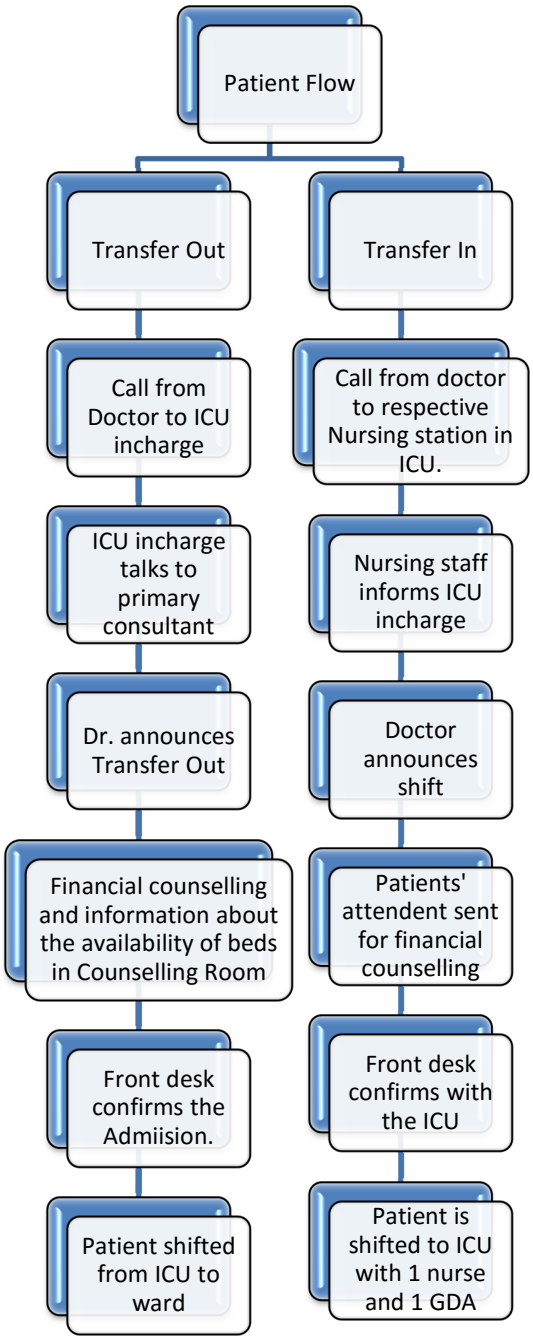



Figure 2.4.1: Transfer In Transfer out process chart

## 5) Infection Control in ICU

- ✓ Hand washing.
- ✓ Floor cleaning with Sodium Hypochlorite.
- ✓ Proper Biomedical waste segregation.

- ✓ Not more than 3 antibiotics
- ✓ Fumigation once in a month.
- ✓ Used items such as Ambu Bag, etc. are sent to CSSD for sterilization.
- ✓ Use of Gowns, shoe covers and masks inside the ICUs.
- ✓ After each Transfer Out or Discharge, bed is carbolized with sodium hypochlorite.

**8) Food & beverages**

Patients' diet is decided by the doctor by consulting the dietician.

**8) Store rooms**

Each ICU has store room where medicines, injectables, etc. are kept for the need of the hour. Generally medicines for the patients are called from IP Pharmacy through Drug Requisition in HMIS. On Daily Basis, each Nurse is assigned to check the items of the store for its expiry date.

**9) Manpower & shifts-**

1 Senior Area Incharge (8:00am-4:30pm)

1 Area Incharge (12:00pm-8:00pm)

7 staff Nurses

- Morning shift-8:00am-2:00pm (3 staff nurses)
- Evening shift-2:00pm-8:00pm (2 staff nurses)
- Night shift-8:00am-8:00pm (2 staff nurse)

**10) Different Areas in ICU-**

- ➢ Patient Area
- ➢ Nursing Counter
- ➢ Store Room
- ➢ Utility Room

**Specific to NSICU**:

Neuro Surgical ICU has an isolation room which is mainly for highly infectious patients negative air pressure is maintained in this so that infection does not spread.

**Specific to CCU**:

Patients in CCU are admitted mainly for the Angioplasty or other Cath Lab Procedures. Before patient is sent to Cath Lab, below mentioned things are looked after:

- Part Preparation of Radial and Femoral site.
- Surgery Billing & Completion of Consent Forms
- Investigations, mainly kidney Investigations are done because the dye given during the Cath Lab Procedure can affect kidney.
- It also records the vitals for upto 72 hours.

Different Areas in ICU-

- Patient area
- Doctor's Room
- Store Room
- Utility Room

**Specific to PICU:**

Pediatric ICU mainly caters children of age 1 month to 15 years. It is 8-bedded ICU.

**Specific to NICU:**

NICU mainly caters to the neonates of less than a month. Only low-birth weight babies are treated in NICU for upto 3 months. NICU is divided into 2 areas: One is for outside patients and another is for inside patients. There are total 9 beds in NICU, 3 for the outside patients and 6 for the inside patients.

In NICU, admissions are mainly due to Pre-term, meconium aspiration or Low Birth Weight.

Patients in NICU are treated according to the Level of care needed:

For Level 1- only patient warmer is used.

For Level 2- patient warmer, monitor, syringe pump & phototherapy is used.

For Level 3- patient warmer, syringe pump, monitor & ventilator is used.

Equipments used in NICU-

- Neonatal warmers-9, which maintains the temperature between 36-37 degree Celsius.
- Phototherapy unit -4
- 3 ventilators- 2 Pediatric and 1 adult

# A PROSPECTIVE STUDY ON THE LEVEL OF SATISFACTION AMONG INTERNATIONAL PATIENTS

(Project Report- 1)

## INTRODUCTION:

Medical Tourism (also known as Health Tourism, Medical Travel) is about travelling to a foreign country for medical treatment. It involves the benefit of cost effective treatment, private medical care in collaboration with the tourism industry. The concept of Medical Tourism is fast catching-up in India where people from any part of the world travel to the country for the purpose of medical treatment and get the dual benefit of travelling and sightseeing to various parts of India. Medical Tourism is a growing concept in India because of various reasons. Much of it depend upon factors those are:

• Low cost surgeries and medical treatments such as complex Bone Marrow transplant, liver transplant, kidney transplant, specialized cardiac/heart surgery, surgeries for hip joint replacement, knee joint replacement, dental surgery, and cosmetic surgeries, to mention a few. All these surgical procedures are carried out by expert doctors.

• India has various state-of-the-art medical institutes and hospitals of international standards.

• People all around the world are eager to see the diversity and unity of India. So, when they get the advantage of medical treatment along with a dual advantage of getting to travel India, they choose India over others.

• Comparatively the cost of surgery in India is estimated to be one-tenth of that in the United States or Western Europe, and sometimes even less. A heart-valve replacement that would cost $200,000 or more in the US, for example, goes for $10,000 in India—and that includes round-trip airfare and a brief vacation package. Similarly there are other such surgical procedures that cost less in India.

## BOOMING MEDICAL TOURISM IN INDIA

Medical tourism in India has emerged as the fastest growing segment of tourism industry despite the global economic downturn. High cost of treatments in the developed countries, particularly the USA and UK, has been forcing patients from such regions to look for alternative and cost-effective destinations to get their treatments done. The Indian medical

tourism industry is presently at a nascent stage, but has an enormous potential for future growth and development. We have also found that India represents the most potential medical tourism market in the world. Factors such as low cost, scale and range of treatments provided by India differentiate it from other medical tourism destinations. Moreover, the growth in India's medical tourism market will be a boon for several associated industries, including hospital industry, medical equipment's industry and pharmaceutical industry. In addition to the existence of modern medicine, indigenous or traditional medical practitioners are providing their services across the country. There are over 3,000 hospitals and around 726,000 registered practitioners catering to the needs of traditional Indian healthcare. Indian hotels are also entering the wellness services market by trying up with professional organizations in a range o wellness fields and offering spas and Ayurveda massages.

Our comprehensive report also provides a deep insight into the Indian medical tourism market and evaluates the past, present and future scenario of the medical tourism market. It discusses the key factors which are making India an attractive medical tourism destination. Both statistics and trends about market size, tourist arrivals, infrastructure, accreditations, drivers and restraints have been thoroughly discussed in the report.

## PROCESS FLOW FOR INTERNATIONAL PATIENTS IN NARAYANA HEALTH:

The department is subdivided into three sections mainly viz. Business Development Team, Query Team and Operations Team.

For a patient to plan a visit to India for Medical tourism purpose the following steps are identified:

1. Medical reports- patient coordinator requests patient's medical report as soon as he or she shows interest in seeking of medical opinion from a relevant medical practioner.

2. Medical opinion- The coordinator consults referral/treating doctor and takes medical opinion on:

- Diagnosis
- Treatment recommended
- Stay required in hospital and for review
- Estimated costs of treatment and inclusives

- Post discharge care and visit for review in 6/12 months

If required ,the hospital will arrange a video conference or tele conference with the treating doctor prior to arrival

3. Patient consent- Patient confirms that he / she will avail treatment at NH

4. Visa facilitation- The dedicated team that facilitates international patient's visit sends Visa Facilitation Letter to the concerned Indian High Commission in the patient's native country. Followed by letter to the patient, his/her attendants close visa formalities.

5. Arrival confirmation- Patient confirms arrival date and time to the International patient's coordinator. He then sends a letter confirming doctor's appointment, accommodation booking etc.

6. Patient welcome- Patient coordinator meets the patient at the airport and escorts the patient either to the hospital or the guest house.

7. Patient admission- Patient arrives at the hospital and admission formalities are completed.

8. FRRO Assistance- The hospital arranges for registration of the patient with the local authority.

9. Treatment plan- The patient undergoes initial evaluation, consults doctor and is given a detailed plan of treatment.

10. The patient undergoes treatment or surgery.

11. Discharge procedure- Patient settles the bill before being discharged and is either shifted to the guest house or escorted to the airport.

12. After care- If required a follow-up call/video conferencing is arranged with the doctor who treated the patient.

**Aim :** To study the satisfaction level and quality of care received by international patients for treatment at NARAYANA Health, Bengaluru.

**Rationale:** This project is designed in a way to identify various issues or gaps prevailing in the International Division of the Health City and subsequently improve the services offered right from the beginning of patient hospitality to maximum cure through suitable recommendations thus also improving the overall International Revenue for the Hospital.

## Objectives:

- To study the patients awareness about the hospital.
- To study the patients needs and wants.
- To monitor quality of care provided by the hospital.
- To study satisfaction level of the patient in the hospital.
- To study the facilities and quality of services provided by the hospital.
- Finally to make recommendations for improving medical and service quality in the hospital.

**Mode of Data Collection and Compilation:** The study was conducted among the International patients at Narayana Health City for a period of 1 month approximately. There are mainly two wings serving for the purpose which are Narayana Hrudayalaya (Cardiac Center) and Mazumdar Shaw Medical Center (A multispecialty unit)

The main method of collecting the material and data for this study is primary in nature.

- It has been done through patient's satisfaction questionnaire, which were printed in a definite order in a form and filled through interaction with the patients and their relatives/attendants. There has been constant interaction with the patients from admission till discharge.

- With continuous interaction and working with the staff of International Patient Service.

Later the total data which includes answers by patients/attendants from departments like OPD and IPD was compiled for further interpretation.

## Data Analysis:

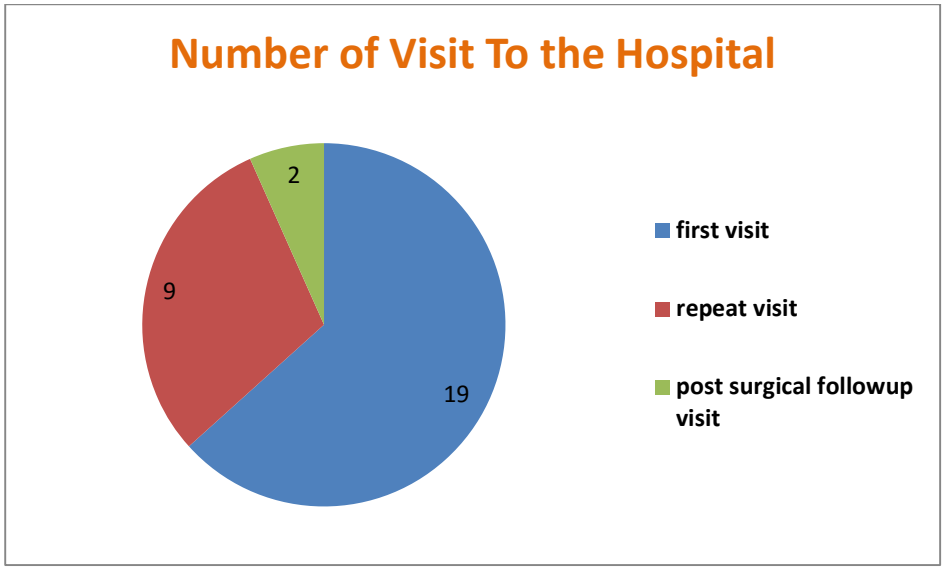
The primary data was collected from 30 patients, in both the wings (Cardiac center & MSMC), Bengaluru.

This data is processed and analyzed by use of simple statistical tools such as percentage and arithmetic mean.

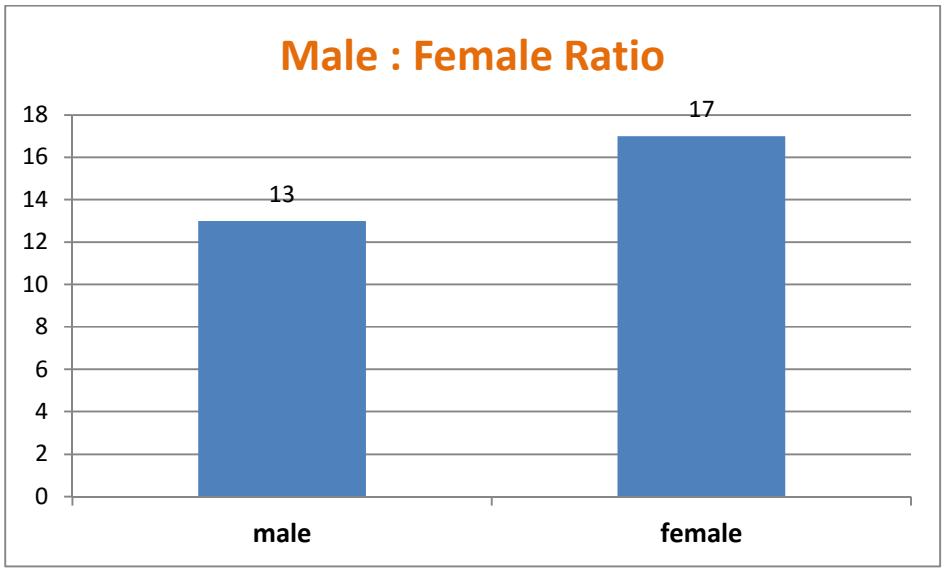
**Interpretation:** The total number of sample size was 30.

1.) PATIENT PROFILE

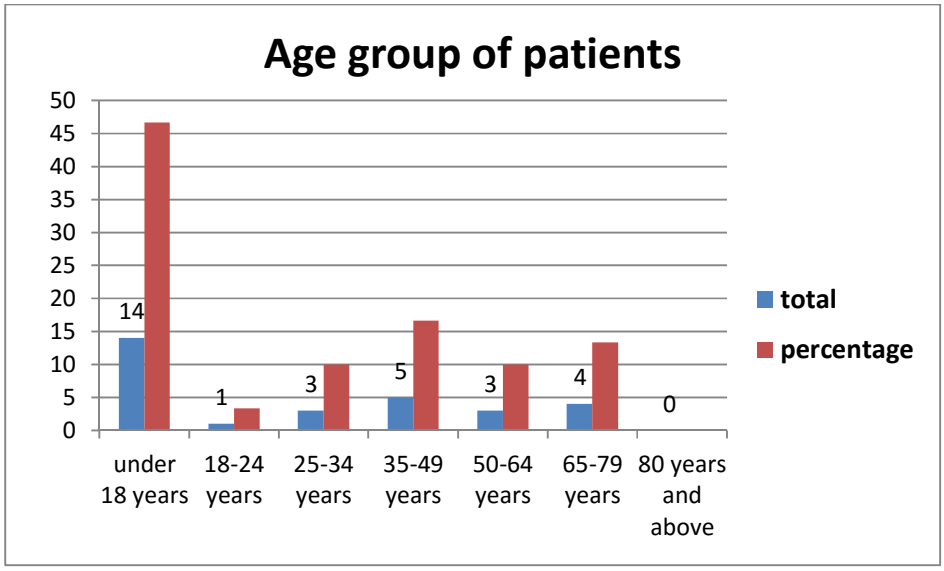
**a.) Visit to the hospital:** The number of visits of the patients showed that 63% of the patients visited the hospital for the first time. About 30% came for repeat visit and very few i.e. 7% came for post-surgical follow up visit.



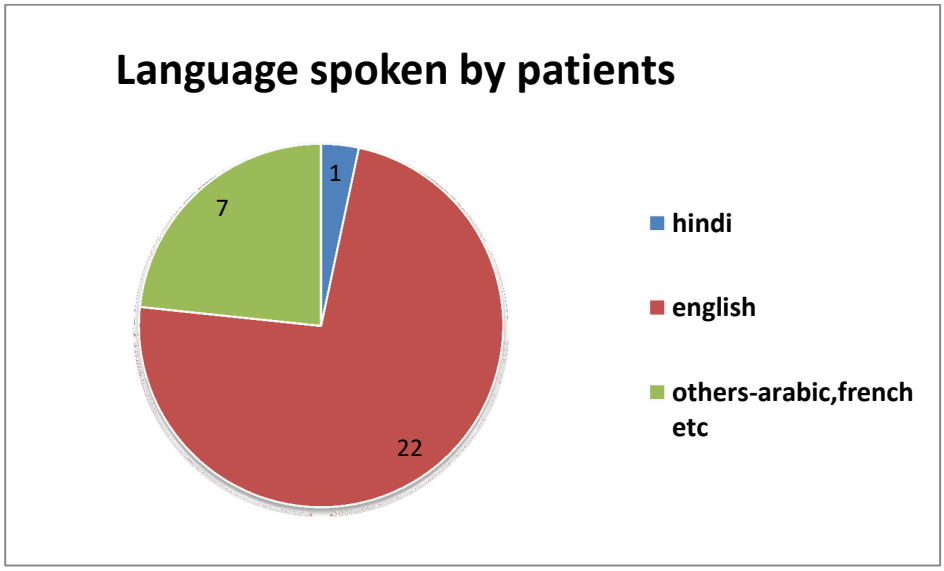

**b.) Male : Female** Ratio was found to be 17:13



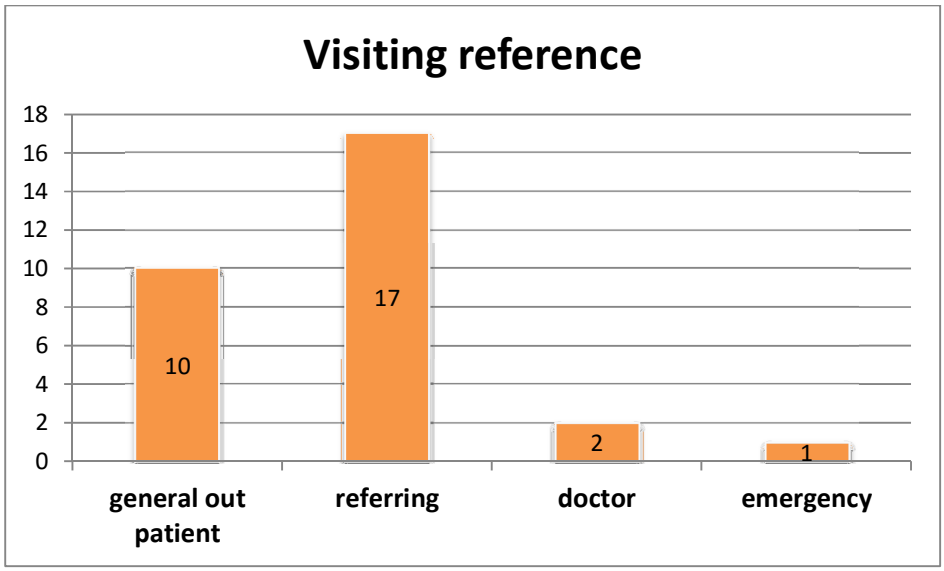
**c.) <u>Age group:</u>** The age group of the patients was mostly between 0 to 18 years(47%) . The second most common age group of patient was 35-49 years(17%). The third age group of patient was 65 to 79 years (13%) followed by two age groups of 25 to 34 years and 50 to 64 years (both 10%). The lowest was that of 18 to 24 years(3%).




**d) <u>Language details:</u>** The language spoken by the patients: It was found that 73% of the patient speaks English ,23% speaks other languages like Arabic, French etc. followed by 3% of the patients who speaks Hindi.

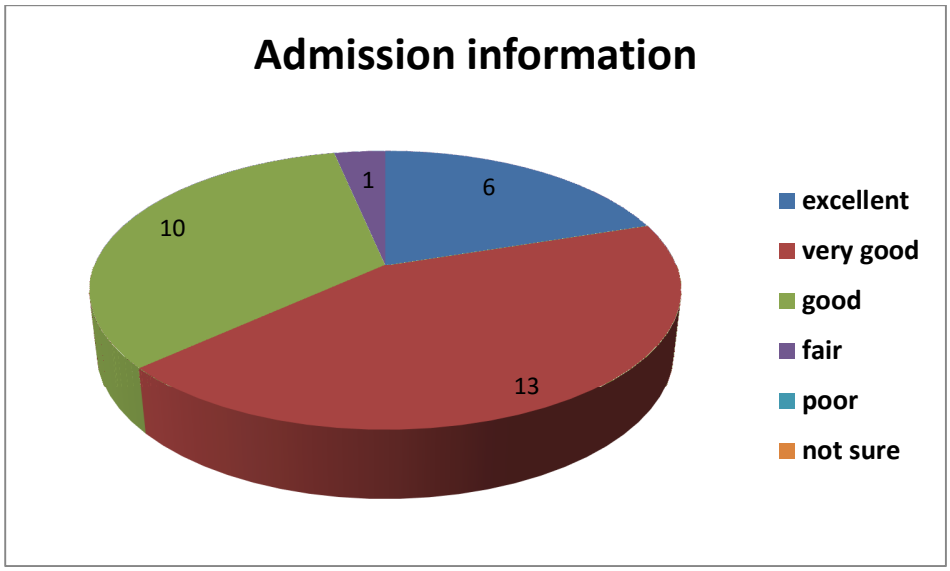


**e) <u>Visiting reference:</u>** The visit to the hospital was mostly through referring by the friends or Doctors. Some patients came through general walk in(s) and very few through emergency.

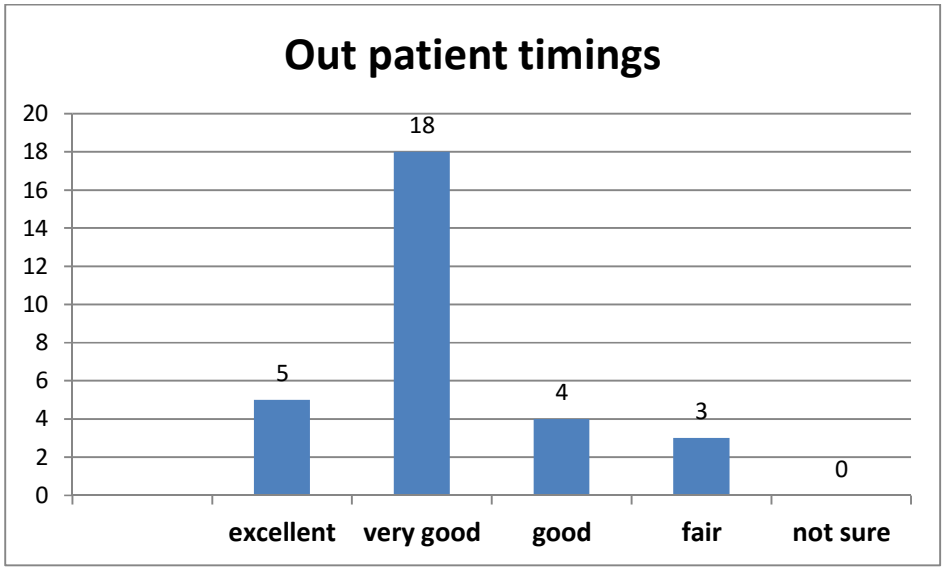


## 2. ADMISSION INFORMATION

**a)** The amount of information the patients received about the hospital before their first visit was rated very good by 43%, good by 33%, Excellent by 20% and fair by 3% by the patients.

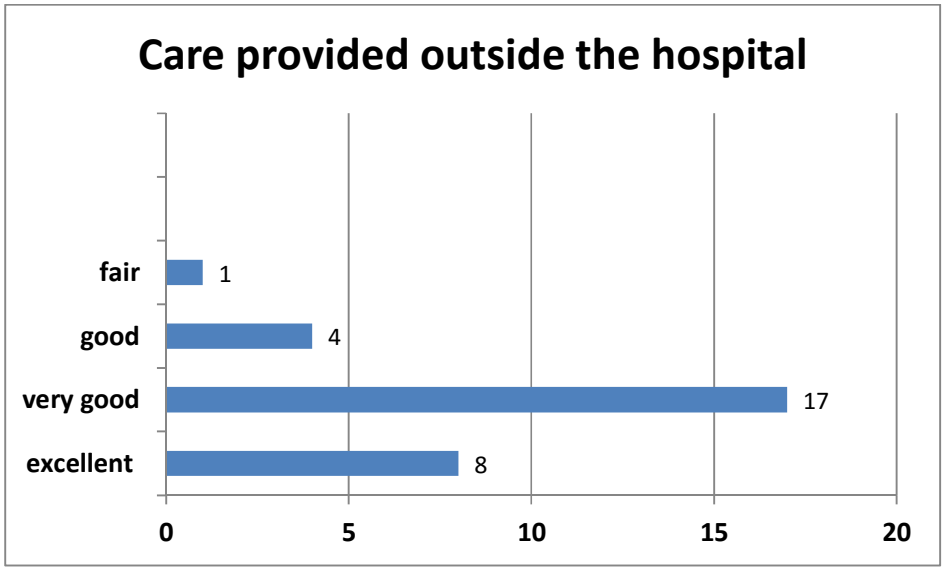



**b) <u>OPD Timing:</u>** The Out Patient Timings were graded as very good by 44% of the patients, good by 32%, excellent by 8% and fair by 10% of the patients

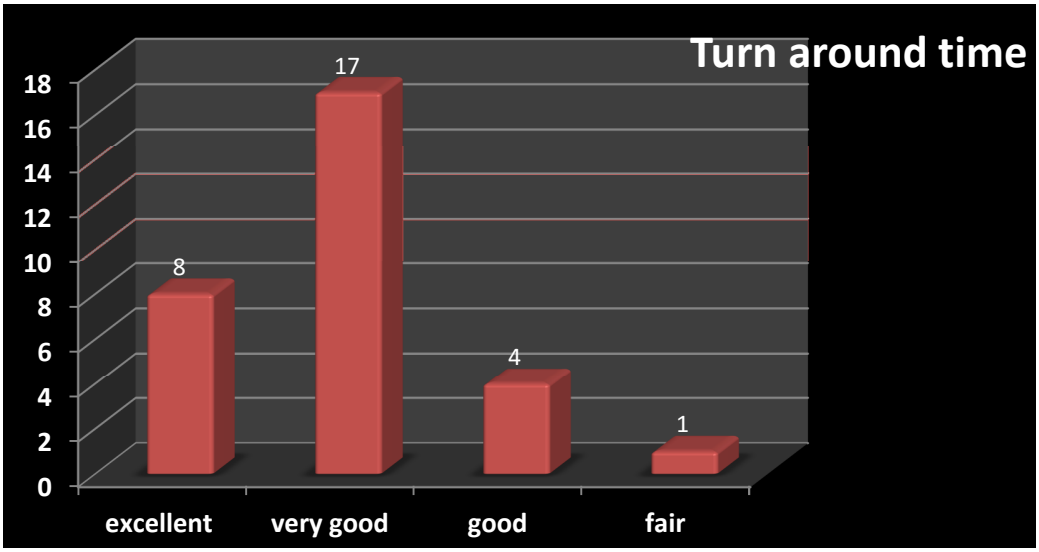


**c) Hospitality index:** The Helpfulness, Courtesy of the staff, Language Translator at the enquiry and registration desk and various other areas in the hospital was found to be very good by 65% of the patients, good by 29% of the patients and only 3% of the patients found it fair.

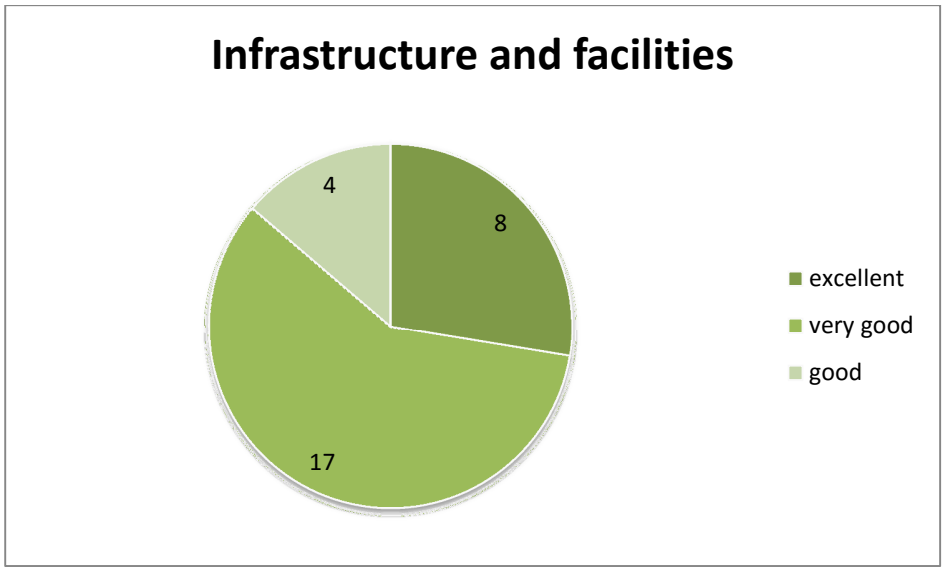

**d)** Courtesy of the staff at the airport, transportation facility provided by the hospital to the patients graded it as very good by most patients (76%), few as good (13%) followed by excellent (10%).



**e) <u>Turnaround time:</u>** Time taken at the point of enquiry, registration, preparing of admission card till being attended by the doctor was rated as very good by 67% of the patients, good by 16% followed by excellent (10%) and fair (7%).

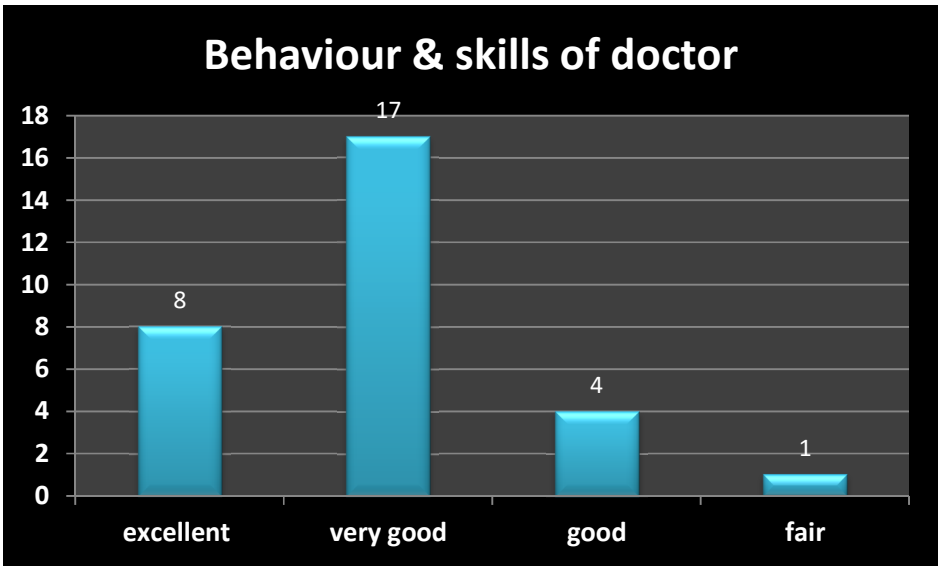



3**. THE INFRASTRUCTURE AND FACILITIES OF THE HOSPITAL** – like accessibility, parking facility, ambience, overall cleanliness of hospital, cafeteria, waiting area, language translator, availability of drinking water, quality of pharmacy, internet and other facilities. 61% rated the facilities as very good, 24% good and 15% rated it as excellent.

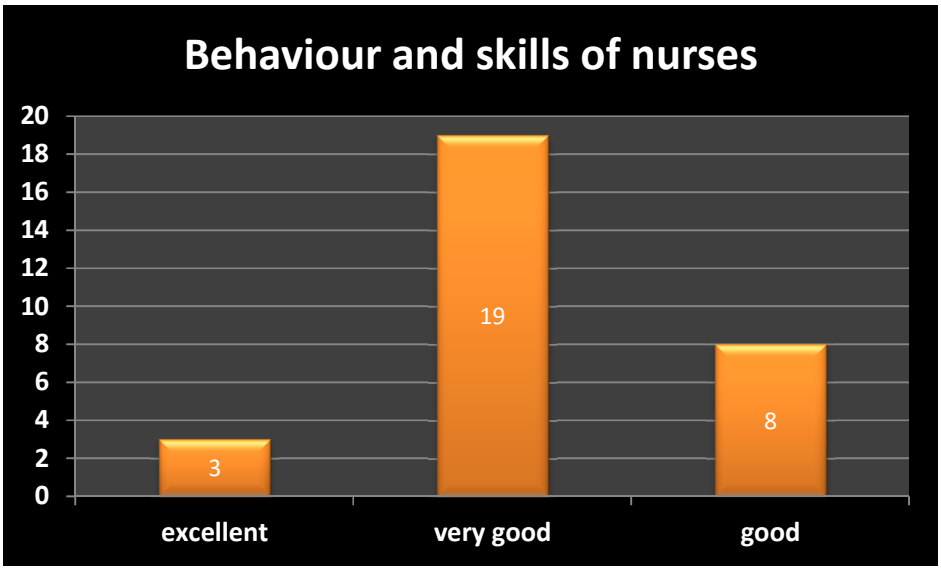


## 4. DURING THE COURSE OF TREATMENT:

**a) Doctor –** The courtesy, patience while hearing, privacy maintained during examination and diagnosis, clinical skills, explanation of the treatment, medicines etc. was graded as very good by 60% of the patients, excellent by 24%, good by 13% while 3% rated it as fair.

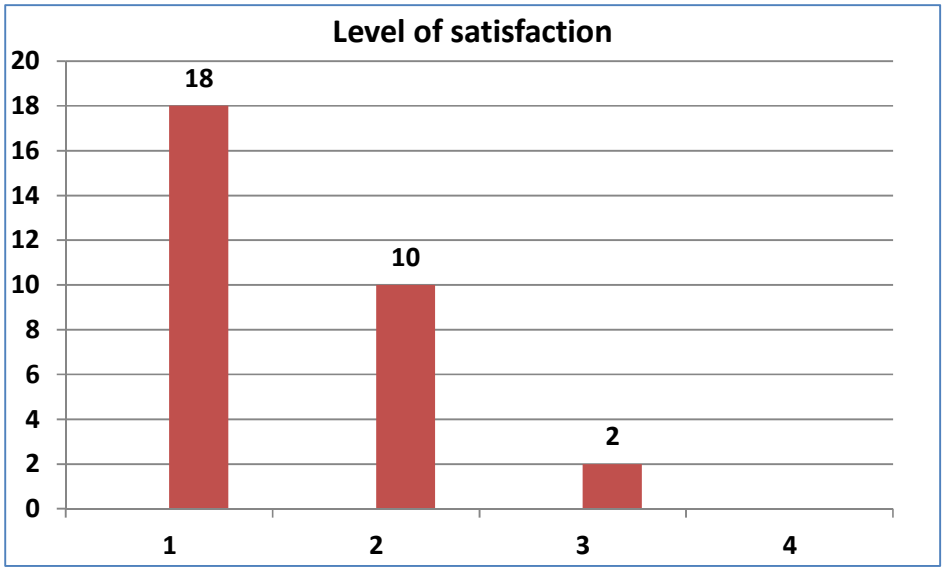



**b) Nurse –** Courtesy, responsiveness, helpfulness, compassion. 62% of the patients found the care given by nurse as very good, 27% as good and 11% as excellent.

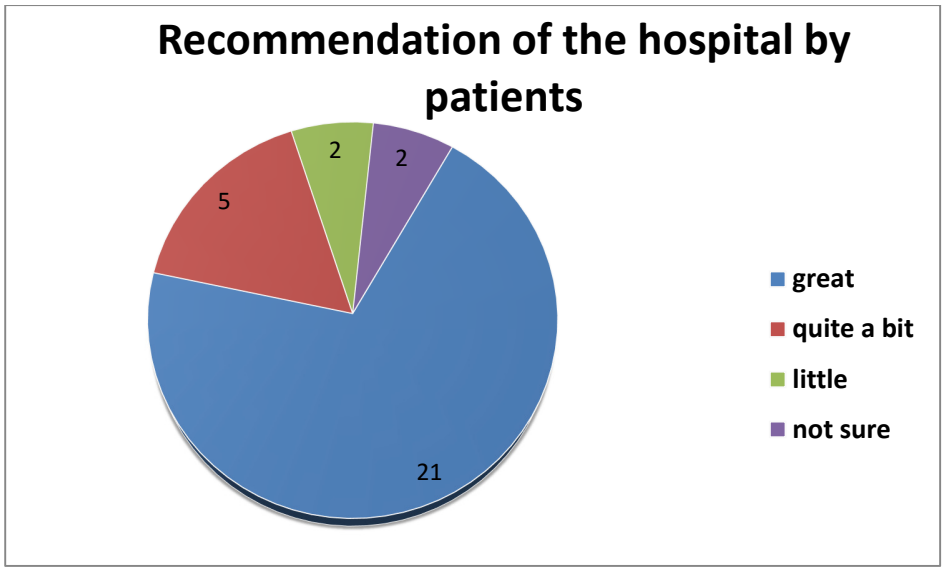


## 5. OVERALL HOSPITAL EXPERIENCE:

**a.) <u>Satisfaction level-</u>** Larger group of the patients (60%) was very satisfied with all the facilities followed by fairly satisfied (33%).




**b.) <u>Patient opinion regarding recommendations:</u>** Opinion of the patients regarding recommending the hospital to family and friends in their native country says that 71% as great,19% as quite a bit followed by 5% as little and not sure.



**FINDINGS:**

- The majority of the patient were visiting the hospital for the first time and the age group varied from 1-70 years.
- The patients came as referrals by their organization like from the Doctors in their country, or through their relatives or friends while many of the patients were walk in patients who got to know about the hospital through their family, or Internet.
- Patients where from all over the world, with more from middle east like Iraq, Nigeria, Kenya etc.
- Most of the patients were self employed and few were in private and government jobs
- The mode of payment was mainly self with few under any medical policy
- The infrastructure, condition of rooms, cleanliness of the hospital, waiting area, consultation room, ambience and other facilities provided to the patient, their relatives, visitor is very good.
- Parking facilities, signs and directions were very good, other facilities like internet, cafeteria etc where good.
- Behavior of the staff including doctors, nurses, paramedical and other staff was found to good. The staff was very polite, courteous, hospitable and all always their to listen and extend a helping hand for all there needs.
- Patients were very happy with the language translators provided to them, as they are an important link between them and hospital. They got lot of support and comfort from them. The staff of department of international patient service helps patients with everything from reservations, to local sightseeing etc.
- Service of the pharmacy, laboratory were good.
- For billing procedure there is separate counters with staff available all the time bills are attached to the case sheet and final bill is available at discharge.
- The hospital has separate security wing to enforce the security guidelines to achieve security of building, equipment, wards, OPD, access points and patients. All the staff has been issued photo ID cards. In order to monitor and keep watch CCTV and cameras have been installed. Security personnel belonging to professional private agency have been deployed at various access points, lifts and entry to the wards etc. All visitors and attendants are given ID cards.
- Very few patients were apprehensive in sharing their experience.
- Most of the patients were satisfied with the hospital and wished to recommend to others back in there country. They felt at home though away from home.

**RECOMMENDATIONS:**

- Customer feedback should be recognized as a legitimate method of evaluating health services.
- Healthcare service providers must continually capture, measure and evaluate patient satisfaction through a range of agreed mechanisms.
- Organizations should integrate the learning opportunities from customer feedback into their quality improvement plans.
- Patient centered models of care should be integral to the core education curricula of health professionals.
- An Increase in the travel facility for foreign patients like setting up a medical tourism centre/help desk at airports and providing international patients a complete docket with details on hotel bookings, bus/cab bookings, restaurants/places to visit around the hospital, etc. can go a long way in easing the stay of the patients and visitors.
- The hospital should inquire about the patient's food preferences and any other specifications before their arrival, so as to make necessary arrangements and avoid any inconvenience to the travellers.
- The cleanliness of toilets can be improved. It can be done more frequently

- The results of these evaluations should be analyzed and inform the service planning process.
- In this study we found the satisfaction level relating to all patients service was very good and above average level. But as they say there is always a scope of improvement.
- To counter increasing competition in medical tourism sector, we should tie-up with foreign institutions for assured supply of medical tourists.

Few suggestions were made by patients include:

- The quality and taste of food need to be improved and should be at least nearer to match to their taste.
- Some patients demanded more privacy.
- Inconvenience was caused due to the extra noise level in some wards.
- Night staffs should be a little more vigilant.

## CONCLUSION:

The major reasons cited by the respondents for visiting India were treatment and tourism. The findings suggest that the patients are coming majorly for the cardiac diseases, cancer treatment, gastro intestinal diseases etc. The major attractions of the patients are Doctor's specialization and low treatment charges.

Evaluation of patient satisfaction should form part of continuous improvement.

Patient satisfaction, as a method of evaluating health services is essential. Whilst satisfaction with delivered services is important, focusing on it alone fails to address customer needs.

Understanding the difference between customer needs and customer satisfaction is crucial to the organization's success in quality management.

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# Annexure:

# Patient satisfaction survey with questionnaire

**Questions regarding the patient**

| | | | |
|---|---|---|---|
| Q.1 | Your visit to the hospital is | | |
| | ☐ First time visit | ☐ Repeat visit | ☐ Post surgical follow-up visit. |
| Q.2 | Are you male or female? | | |
| | ☐ Male | ☐ Female | |
| Q.3 | To which age group you belong? | | |
| | ☐ 35-49 years | ☐ 50-64 years | ☐ 65-79 years |
| | ☐ 80 years and over | | |
| Q.4 | Which languages do you speak? | | |
| | ☐ Hindi | ☐ English | ☐ Others (Please specific) |
| Q.5 | Are you covered for health or hospitalization expenses? Yes/No | | |
| | ☐ Public or Medicare policy | ☐ Work Cover | ☐ Other: Please specify |
| Q.6 | How would you pay for the hospital expenses ? | | |
| | ☐ Self or family | ☐ Medical policy | ☐ Under Work cover / ☐ If Others (Please specific) |
| Q.7 | Your visit to the hospital is | | |
| | ☐ General out patient | ☐ Through referring | ☐ Attachment like health ministry |
| | ☐ Doctor | ☐ Emergency / ☐ TPA | ☐ Medical Tourism agent |
| Q.8 | Which OPD did you visit: | | |
| | ☐ Fast track | ☐ General | |

| | | | |
|---|---|---|---|
| Q.9 | The clinic you visited for the treatment: | | |
| | Oncology | OBS &Gynaecology | Paediatric |
| | Neurology | Ophthalmology | Cardiology |
| Q.10 | How did you get the information about the hospital: | | |
| | Attending physician | Family or friends | |
| | Advertisement | Others | |
| Q.11 | Where you transferred or referred from another hospital: | | |
| | Yes | No | |

## Admission information

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Q.12 | Was your appointment with the doctor planned? | | | | | | |
| | Yes | | | No | | | |
| Q.13 | Did you have discussion or interaction with your doctor prior to your visit via phone/ telemedicine? | | | | | | |
| | Yes | | | No | | | |
| | | **Excellent** | **Very Good** | **Good** | **Fair** | **Poor** | **Not Sure** |
| Q.14 | The amount of information you received about the hospital before your visit | .. | .. | .. | .. | .. | .. |
| Q.15 | OPD Timings | .. | .. | .. | .. | .. | .. |
| Q.16 | Helpfulness of people at the enquiry and registration Department | .. | .. | .. | .. | .. | .. |
| Q.17 | Time taken for registration and preparing the admission card | .. | .. | .. | .. | .. | .. |
| | | | | | | | |
| Q.18 | Waiting time: not having to wait too long when you have arrived before being attended | .. | .. | .. | .. | .. | .. |
| Q.19 | Courtesy of the receiving staff at the airport | .. | .. | .. | .. | .. | .. |
| Q.20 | Transportation facility provided by the hospital | .. | .. | .. | .. | .. | .. |

## Information regarding infrastructure and facilities

| | | Excellent | Very Good | Good | Fair | Poor | Not Sure |
|---|---|---|---|---|---|---|---|
| Q.21 | Accessibility to the hospital | .. | .. | .. | .. | .. | .. |
| Q.22 | Quality of parking facility | .. | .. | .. | .. | .. | .. |
| | | | | | | | |
| Q.23 | Availability of proper signpost to guide you through the hospital | .. | .. | .. | .. | .. | .. |
| | | **Excellent** | **Very Good** | **Good** | **Fair** | **Poor** | **Not Sure** |
| Q.24 | Waiting room comforts: Comfortable Chairs and pleasant surroundings | .. | .. | .. | .. | .. | .. |
| Q.25 | Availability of drinking water and fan facility | .. | .. | .. | .. | .. | .. |
| Q.26 | Noise level around the waiting area | .. | .. | .. | .. | .. | .. |
| Q.27 | Cleanliness of waiting area | .. | .. | .. | .. | .. | .. |
| Q.28 | Cleanliness toilets. Availability of adequate toilets for Males and females | .. | .. | .. | .. | .. | |
| | | | | | | | .. |
| Q.29 | Overall cleanliness of hospital | .. | .. | .. | .. | .. | |
| | | | | | | | .. |
| Q.30 | Quality of the pharmacy, explanation of Medicines | .. | .. | .. | .. | .. | |
| | | | | | | | .. |
| Q.31 | Location, cleanliness, quality and Variety of food available at Cafeteria | .. | .. | .. | .. | .. | .. |
| Q.32 | Internet, STD, ISD, Bookshop facility available | .. | .. | .. | .. | .. | .. |
| | | | | | | | |

| | | Excellent | Very Good | Good | Fair | Poor | Not Sure |
|---|---|---|---|---|---|---|---|
| Q.33 | Guesthouse facility for patient's relatives or attend | .. | .. | .. | .. | .. | .. |
| Q.34 | Language Translator available | .. | .. | .. | .. | .. | |
| | | | | | | | |

## Information regarding treatment process

During your treatment how will you rate the following?

| | | Excellent | Very Good | Good | Fair | Poor | Not Sure |
|---|---|---|---|---|---|---|---|
| Q.35 | Courtesy of the doctor | .. | .. | .. | .. | .. | .. |
| | | | | | | | |
| Q.36 | Was the doctor patient while hearing about your complain | | | | | | |
| Q.37 | The way the doctor explained your treatment to you. | .. | .. | .. | .. | .. | .. |
| Q.38 | Privacy maintained about your diagnosis | .. | .. | .. | .. | .. | .. |
| | | | | | | | |
| Q.39 | Your confidence in the doctor | .. | .. | .. | .. | .. | .. |
| Q.40 | Overall interpersonal skills of the doctor | .. | .. | .. | .. | .. | .. |
| | | | | | | | |

| | | Excellent | Very Good | Good | Fair | Poor | Not Sure |
|---|---|---|---|---|---|---|---|
| Q.41 | Overall clinical skills of the doctor | .. | | .. | .. | .. | .. |
| Q.42 | Courtesy of the nurse | - | - | - | - | - | - |
| | | | | | | | |
| Q.43 | Responsiveness of the nurses to your needs | .. | .. | .. | .. | .. | .. |
| | | | | | | | |
| | | | | | | | |
| Q.44 | Length of time nursing staff took to respond to your needs | .. | .. | .. | .. | .. | .. |
| | | | | | | | |
| | | | | | | | |
| Q.45 | Helpfulness of the hospital staff in General | .. | .. | .. | .. | .. | .. |
| Q.46 | The way hospital staff helped you with your pain | .. | .. | .. | .. | .. | .. |
| Q.47 | Availability of hospitality staff when you needed them | .. | .. | .. | .. | .. | .. |
| | | | | | | | |
| Q.48 | The way information about your condition was explained to you | .. | .. | .. | .. | .. | .. |
| Q.49 | Were you being treated with respect | .. | .. | .. | .. | .. | .. |
| Q.50 | Opportunity to ask questions about your treatment | .. | .. | .. | .. | .. | .. |

## Questions about the way hospital responded to your needs:

Q.51 Did the hospital staff encourage your feedback? Yes ___ No ___

Q.52 Did you have a reason to make a complaint during your treatment period? Yes ___ No ___

Q.53 If yes, were you satisfied with the way your complaint was handled? Yes ___ No ___

## Questions about overall hospital experience:

Q.54 Thinking about all aspects how satisfied were you?

☐ Very Satisfied ☐ Fairly Satisfied ☐ Not too satisfied

☐ Not Satisfied ☐ Not Sure

Q.55 How much do you were actually helped by treatment in the hospital?

☐ Helped a great deal ☐ Helped quite a bit ☐ Helped a little

☐ Did not help at all ☐ Not Sure

Q.56 If need arises what are the chances you would go back to the hospital

☐ Great ☐ Quite Bit ☐ Little

☐ Not at all ☐ Not Sure

Q.57 What are the chances you will recommended the hospital to family and friends.

☐ Great ☐ Quite Bit ☐ Little

☐ Not at all ☐ Not Sure

******Thank You******

# A RETROSPECTIVE STUDY ON THE OCCUPATIONAL HAZARDS FACED BY VARIOUS EMPLOYEES IN A HOSPITAL

(Project Report- 2)

# INTRODUCTION:

**Definition of occupational health and safety:**

In 1950, the Joint ILO/WHO Committee on Occupational Health stated that "Occupational health should aim at the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations; the prevention amongst workers of departures from health caused by their working conditions; the protection of workers in their employment from risks resulting from factors adverse to health; the placing and maintenance of the worker in an occupational environment adapted to his physiological and psychological capabilities".

In summary: "the adaptation of work to man, and of each man to his job."

Workplace-related health impairments, injuries and illnesses cause great human suffering and incur high costs, both for those affected and for society as a whole. Occupational health and safety measures and health promotion in workplaces are aimed at preventing this. But, in addition to protecting workers from harm, this guide wants to show managers in the healthcare system how to achieve a health-promoting hospital or facility according to the World Health Organisation (WHO) definition of health. This defines health as a state of complete physical, mental and social well-being, as well as the empowerment of individuals to use their own health potential and to deal successfully with the demands of their environment.

Such pronounced health competence among workers can only be achieved if a prevention culture prevails in the company which systematically allows for health-related aspects in all company matters. Management is not only responsible for the implementation of health-promoting measures in the company in the sense of circumstantial prevention. Above all, it also has to set an example in terms of its own conduct. As a result, it has a crucial impact on the corporate culture and initiates changes at the behaviour level among the workers.

Therefore, occupational health and safety must be seen as an important corporate goal of the organisation, like quality, customer satisfaction, productivity, growth and profitability. Safe and healthy working conditions for workers can be achieved more efficiently if the implementation of occupational health and safety is integrated into a quality management system. Risk assessment is an ongoing process and has to be repeated frequently, and the results have to be documented and integrated into the strategic planning by the management.

In NH, Occupational health and safety (OHS) issues are an important part of quality management, risk management and corporate social responsibility (CSR). In this sense, OHS aspects must be an integrated element of all managerial development processes, i.e. corporate strategy, human resources and organisational development.

The basis of the vision regarding better, healthier and more competitive workplaces is to create a corporate culture where managers and workers (as experts on their workplaces) discuss work processes together in a continuous improvement process including all related risks and possible measures for improvements. Such a positive corporate culture is the core for the sustainable development and success of health institutions.

**Preventive and protective measures should be implemented in the following order of priority:**

• Elimination of the hazard/risk;

• Control of the hazard/risk at source, through the use of engineering controls or organisational measures;

• Minimisation of the hazard/risk by the design of safe work systems, which include administrative control measures;

• Where residual hazards/risks cannot be controlled by collective measures, provision by the employer of appropriate personal protective equipment, including clothing, at no cost, and implementation of measures to ensure its use and maintenance.

## PROBLEM STATEMENT:

The occupational hazards faced by any employee in a hospital work environment can always demotivate one from working satisfactorily and safely.

## AIM:

To find out the prevalence of health hazards among various employees in the hospital and awareness level for the same among health care professionals.

## RATIONALE:

**"If you wish to control the future, study the past."-** Confucius (551 B.C. to 479 B.C.)

- In today's volatile work environment inside a Multispecialty Hospital, it has become an important factor to ensure occupational safety for each employee.

- Working in such environment can end up with many occupational hazards which have many direct effects like minor or major physical injuries, temporary or permanent physical disability, psychological trauma death as well as indirect effects like Low worker morale, Increase in job stress, Increase in worker turnover, reduced trust of management/co-workers and a hostile work environment.

- So it's necessary for the management to provide utmost safety and care for each employee for the efficient function of the Hospital.

## SPECIFIC OBJECTIVES:

- The main objectives behind the research are the promotion and maintenance of highest degree of physical, mental and social wellbeing, to evaluate and subsequently prevent any occupational hazard for different employees while working in a hospital.

- Examine Hazard Risks for hospitals which could result in need for prescribed actions, and special considerations needed for them.

- Recognize the difference between Structural and Non-structural damage in a facility and protection of workers from risks resulting from factors adverse to health.
- Taking various measures of safety to minimise the risk factors for each employee along with placing and maintenance of an employee in a work environment adapted to his/her physiological and psychological capabilities.

- To specify suggestions for the prevention and control of these problems and to make a safer work environment for every employee.

- To review and strengthen the needs of the comprehensive prevention program and safety committee to oversee these aspects of the hospital's daily function ensuring that these incidents don't happen anymore.

## DATA COLLECTION, COMPILATION AND ANALYSIS:

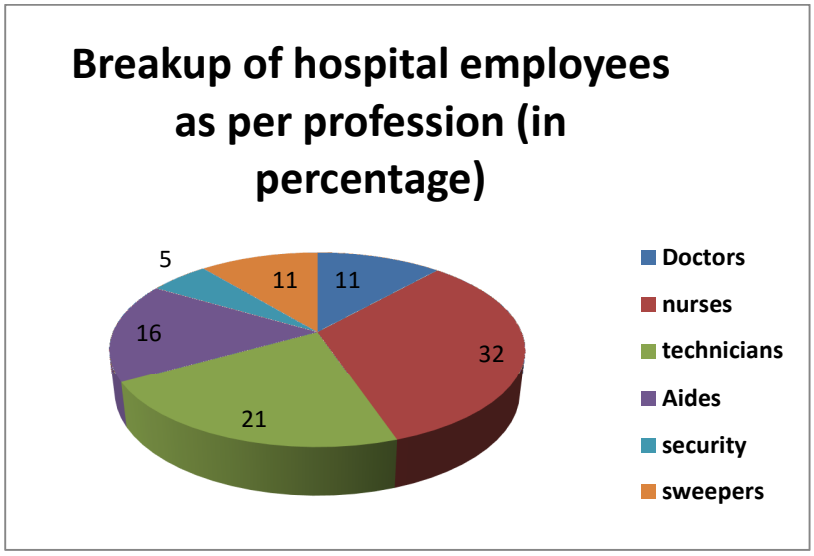
- The study population consisted of 10 doctors, 30 nurses, 20 technicians, 15 aides, 5 security personnel and 10 sweepers that is in total a sample strength of 90 people related to this hospital.

- Data was obtained through the use of self-administrated questionnaires that included questions on personal data, awareness to occupational hazards, possession of health insurance policy, safety measures practiced, and experience of occupational hazard while in practice.

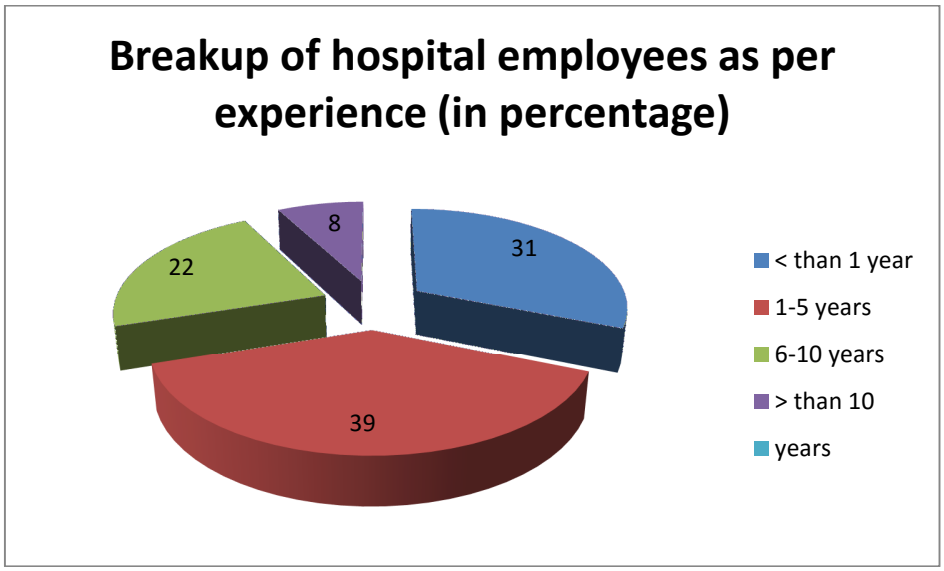
- Data was analysed using frequency tables to display the responses of the dental staff. Where necessary, cross tabulations were carried out to determine the significant difference between variables. Also at some places pie charts and bar graphs have also been used for easy review.

## INTERPRETATION-I:

- **Employee division:** Total breakup of employees in the sample as per profession shows 10% are doctors, 31% are nurses, 20% are technicians, 15% are aides and 5% of security and 10% are sweepers approximately.



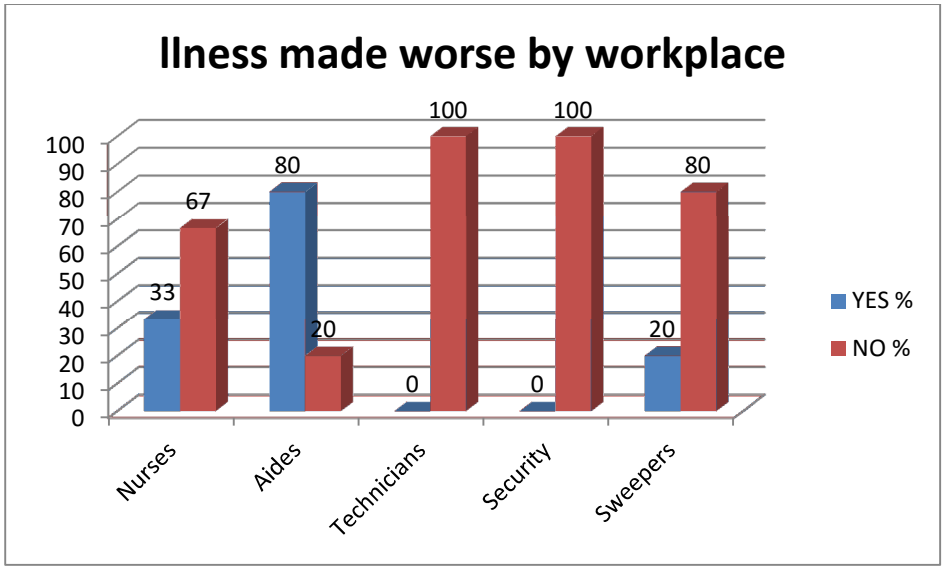

- **Experience:** The experience for each staff shows around 31% are having less than one year, 39% are having 1 to 5 years of experience, 22% are having 6 to 10 years of experience and only 8 % are having more than 10 years of experience.



## INTERPRETATION-II:

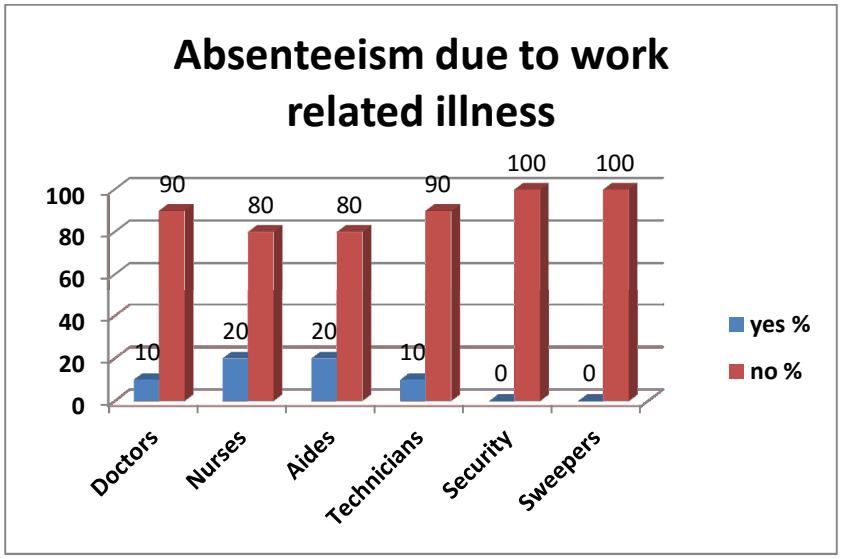
- **Safety inside workplace:** It shows that 90 % of the doctors and nurses, 75% of the technicians and 80 % of the sweepers feel safe within the workplace and rest are not comfortable with the environment.


- **Workplace condition:** According to the responses from the staffs around 33% of the nurses, 80% of aides and 20% of the sweepers have got their illness worsen by the workplace.

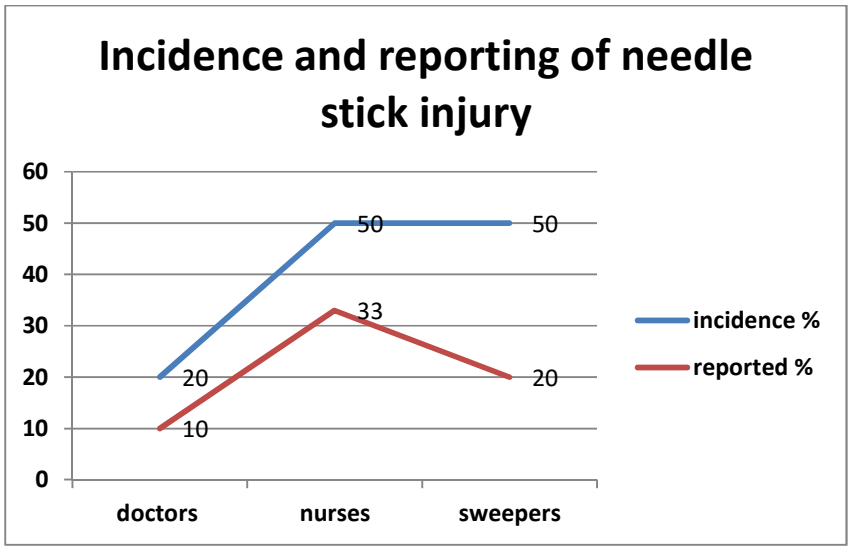


## INTERPRETATION-III:

- **Absenteeism for illness:** Absenteeism due to work related illness shows nurses and aides remain more absent than doctors and technicians.

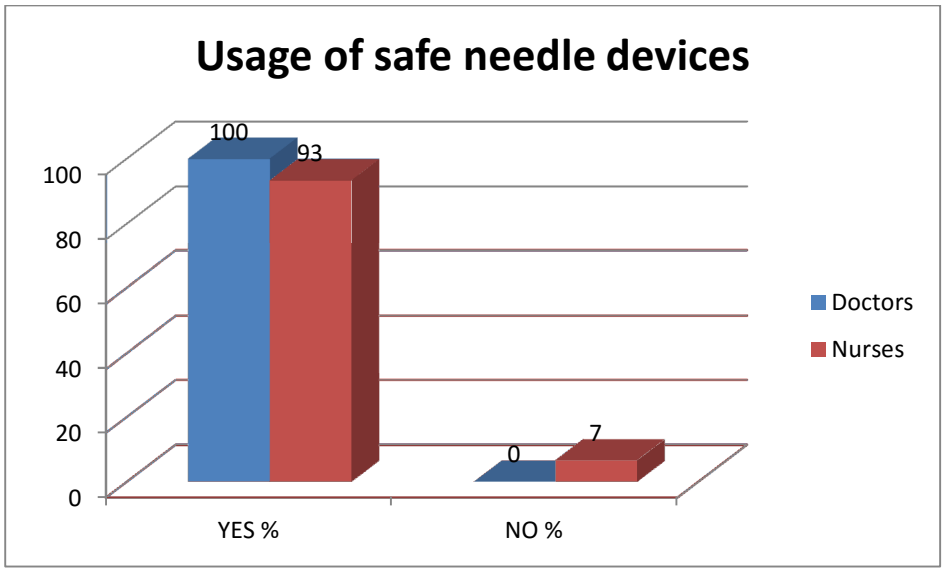



- **Incidence and reporting status:** Records obtained of incidence and reporting of needle stick injury shows 20% of the doctors and 50% of each of nurses and sweepers got the incidence out of which only 10, 33 and 20 % of each reported the same.

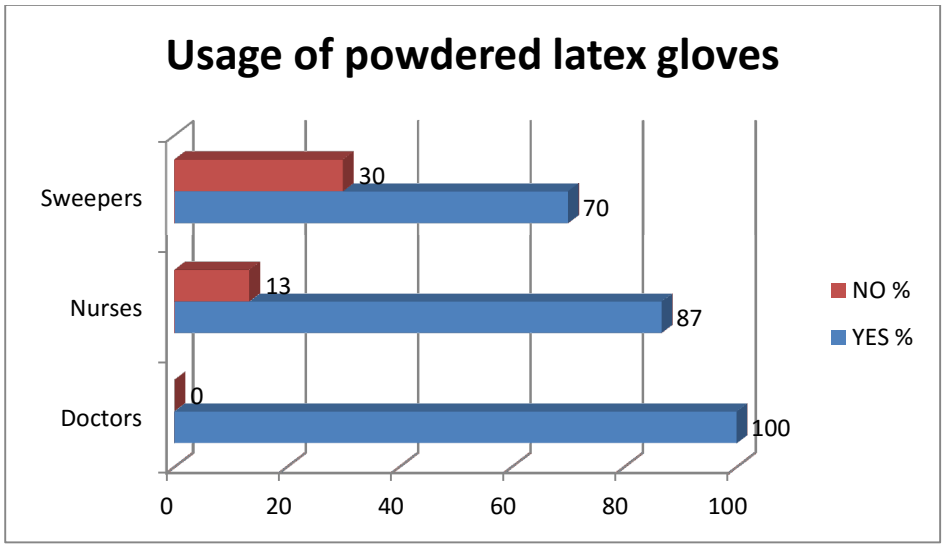


## INTERPRETATION-IV:

- **Safe needle device usage:** Usage details of safe needle devices shows 100% of the doctors and 93% of nurses use safe needle devices but around 7% of the nurses does not practice safe methods in this case.

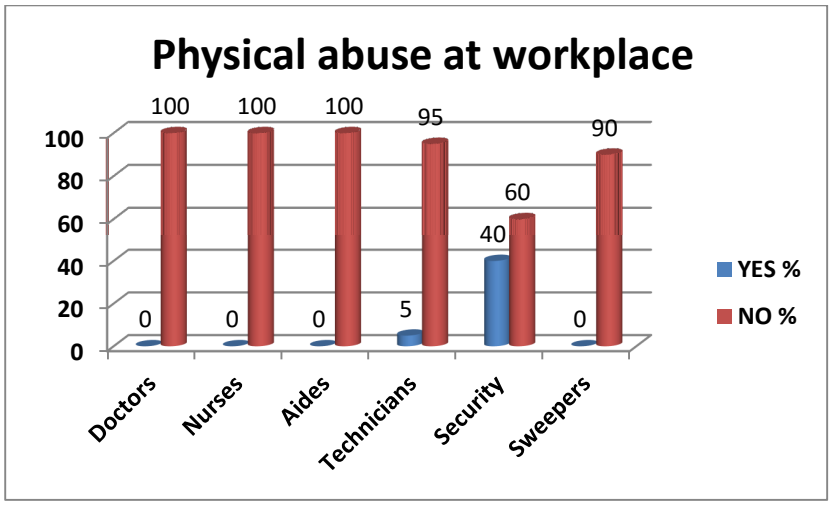



- **Powdered latex glove usage:** Usage details about powdered latex gloves shows that 100% of the doctors and 86% of the nurses use the same while 30% of the sweepers does not use it.

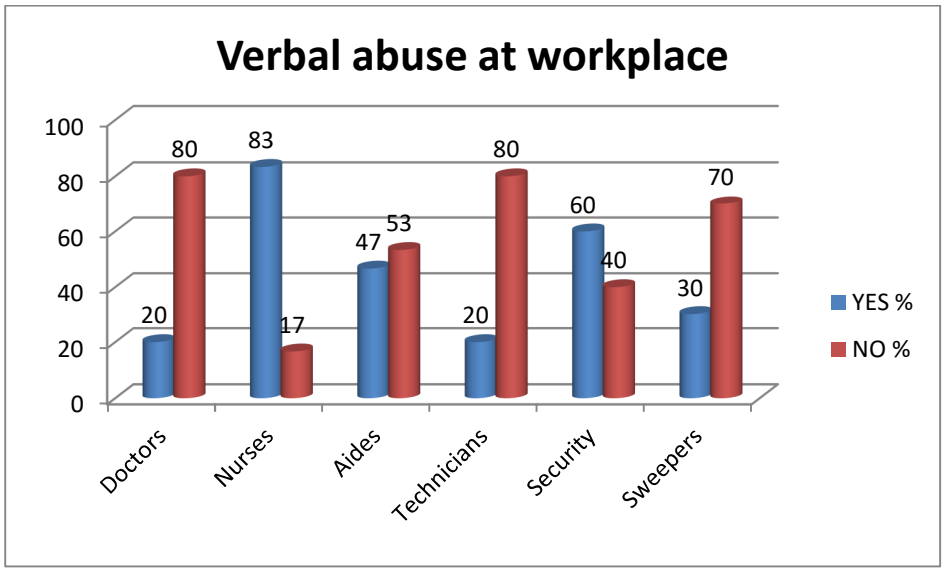


## INTERPRETATION-V:

- **Records for physical abuse at workplace:** It shows that Doctors, Nurses and other aides has not faced any physical abuse but there was incidence of this in case of few technicians and security staffs.




- **Records for verbal abuse at workplace:** It shows that verbal abuse faced by the nurses(83%) aides (47%) security(60%) and sweepers(30%) are quite high compared to doctors(20%) and technicians(20%)



## FINDINGS:

- It shows that most of the experienced staffs in this hospital feel safe within their respective work environment. The rating goes down with lower grade staffs.

- Also the responses from various staffs shows around most of them, specially the aides have got their illness worsen affected by the workplace environment which can be a probable reason of their prolonged or/and frequent absenteeism.

- The reporting status of injuries shows very few nurses and sweepers reported these cases to the hospital, the use of preventive measures while handling hazardous substances among lower grade staffs is much less.

- There were fewer incidences of physical abuse but a comparative high verbal abuse among different staffs especially a high among nursing staffs.

## RECOMMENDATIONS-I:

The hospital environment presents particular and, in some cases, unique safety problems when compared with other industrial settings. These problems affect the patient, staff, and visitor. Few recommendations for the smooth running of this setup include:

- Firstly it is necessary to have a safety program and a safety committee to oversee the aspects of the hospital's daily function. It may include three major components:

1) The identification of hazards and risk.
2) The prevention of hazards and risk.
3) Documentation.

- The comprehensive prevention program may include: Zero tolerance policy, Management commitment/enforcement, Employee participation, Hazard identification, Training, Hazard prevention, Accurate and timely reporting.

## RECOMMENDATIONS-II:

- For protection of all personnel's efficient work balance, specific measures can be taken like:

1) Elimination or direct control of the hazard.

2) Supervision, education and training of the worker like Creating “buddy system”, Provide security escorts to parking lots, Prevent personnel from working alone, Restrict movement of public using controlled-access cards, Training in hazard awareness, resolving conflicts, recognizing potential signs, Make counseling available to reduce workers’ fear, Have open communication with workers.

3) Inspection and preventive maintenance, the replacement or change in types of equipment, changes in procedures, the addition of safety and protective devices, and improved worker qualifications.

- Few engineering development can be made like improved security devices, Better lighting, Enclosed nurses’ stations, Bullet-proof/shatter-proof glass enclosures at reception areas.

- Few Administrative Controls can be included like Comprehensive and compulsory written procedures for reporting of workplace injuries and for responding to such occurrences, updating program when necessary (continuous improvement), intolerance against verbally-expressed anger or frustration, body language or threatening gestures, signs of alcohol or drug use, more vigilant staffs, Remove one from the situation and immediate reporting any violent situations to management.

- Periodic review of the prevention efforts, health and safety education programs should be developed to include job orientation, safe working habits, relevant health information and the use of the hospital occupational health unit for reporting injury or illness along with their causes. These also serve as a permanent record of what was done and why.

## CONCLUSION:

- Occupational hazards can be easily minimised up to a great extent by maintaining certain guidelines, also if one can be heedful enough and it should always be the joint effort of the employer, employee and the Government.

✓ Let's be always Careful within the workplace.

✓ Let's make others Aware of various perils.

✓ Let's give the ultimate Report of incidents.

✓ Let's everyone have constant Endeavour for this.

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# Annexure:

**Survey on Occupational Hazards In Health Care Profession**

This survey asks for the opinions about health care professionals' safety issues. The survey will take about 10-15mins to complete. Please read the questions carefully before answering them.

1. What is your staff position in this hospital?

Nurse ( ) Resident Doctor ( ) Senior Doctor ( ) Hospital Aide ( )

Technician ( )

2. How long have you worked in this hospital?

Less than 1 year ( ) 1-5 years ( ) 6-10 years ( ) More than 10 years ( )

3. Do you feel safe from work-related illness in your current working environment?

Moderately safe ( ) Very safe( ) Somewhat safe ( ) Not safe at all ( )

4. Within the past year, have you had any illnesses that you think were caused or made worse by job you had?

NO ( ) YES ( )

5. Have you missed more than 2 days of work this year due to a work-related injury or illness?

NO ( ) YES ( )

6. From the following list, please check your top 3 health and safety concerns.

o Acute /chronic effects of stress and overwork ( )
o A disabling back injury ( )
o Getting HIV or Hepatitis from a needle stick ( )
o Infection with infectious diseases ( )
o An on-the-job assault ( )
o Developing a latex allergy ( )
o Fatigue-related accident after a shift ( )
o Toxic effects from exposure to chemicals including adverse reproductive effects( )
o Exposure to hazardous drugs ( )
o Exposure to smoke from lasers or electro cautery device ( )

7. Over the past 12 months, how many times have you been injured on-the-job, including needle stick injuries?

0 ( ) 1-2 ( ) 3-4( ) 5-6 ( ) 6+( )

8. Of these injuries, how many did you report?

0 ( ) 1-2 ( ) 3-4( ) 5-6 ( ) 6+( )

9. If you answered zero to the last question, please check ONE response which best describes why you didn't report injuries?

- Didn't have any injuries ( )
- Didn't think the injury was significant ( )
- Too busy, didn't have time ( )
- Fear of retribution ( )
- Reported to supervisor but not encouraged to fill out report and seek treatment( )
- No one to cover for me ( )
- No mechanism for reporting injuries or getting care ( )

10. Does your facility provide safe needle devices for injections, IV insertions and phlebotomy?

NO ( ) YES ( )

11. If so, do you use the devices whenever possible?

NO ( ) YES ( )

12. Are powdered latex gloves used in your facility?

NO ( ) YES ( )

13. In the past year, have you been physically assaulted at work?

NO ( ) YES ( )

14. In the past year, have you been threatened or experienced verbal abuse at work?

NO ( ) YES ( )

###Thank you###