

**Summer Training at  
CARE Hospitals, Nampally, Hyderabad  
(April 3 to June 2, 2017)**

- **Study to Assess the Effectiveness of Communication in the Inpatient Department of Care Hospitals, Nampally**
- **Study on the Patient/Attendants' Satisfaction of the Out Patient Department of Care Hospitals, Nampally .**
- **Study on The Wastage of Blood and Its Components in the Blood Bank of Care Hospitals, Nampally**
- **Study on Turnaround Time at the Radiology Department of Care Hospitals, Nampally**
- **Study on Assessing the Reasons Behind Insurance Denials at Care Hospitals, Nampally**

**By  
Aditi Chopra**

**Under the guidance of  
Brig. (Dr.) S.K. Puri**

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

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

**CERTIFICATE**

This is to certify that Dr. Aditi Chopra has undergone summer training in CARE Hospitals, Nampally from 3<sup>rd</sup> April to 2<sup>nd</sup> June 2017.

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

I wish her success in all her future endeavors.

  
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**CERTIFICATE OF PROJECT COMPLETION**

This is to certify that **Dr. Aditi Chopra** has successfully completed her project on the topic  
“A study to assess the effectiveness of communication in the Inpatient Department of  
**CARE Hospitals, Nampally**” during her summer training starting from 3<sup>rd</sup> April to till 2<sup>nd</sup>  
June, 2017.

I wish her best of luck for her future endeavors.

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(FCOO, CARE Hospitals, Nampally)

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This is to certify that **Dr. Aditi Chopra** has successfully completed her project on the topic  
“A study on turnaround time at the Radiology Department of CARE Hospitals,  
Nampally” during her summer training starting from 3<sup>rd</sup> April to till 2<sup>nd</sup> June, 2017.

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**CERTIFICATE OF PROJECT COMPLETION**

This is to certify that **Dr. Aditi Chopra** has successfully completed her project on the topic  
“**A study on the wastage of blood and its components in the Blood Bank of CARE Hospitals, Nampally**” during her summer training starting from 3<sup>rd</sup> April to till 2<sup>nd</sup> June, 2017.

I wish her best of luck for her future endeavors.

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“**A Study on the Patient/Attendants’ Satisfaction of the Outpatient Department of  
CARE Hospitals, Nampally**” during her summer training starting from 3<sup>rd</sup> April to till 2<sup>nd</sup>  
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**CERTIFICATE OF INTERNSHIP COMPLETION**

This is to certify that **Dr. Aditi Chopra** has successfully completed her 2 months mandatory summer training from CARE Hospitals, Nampally starting from 3<sup>rd</sup> April, 2017 to till 2<sup>nd</sup> June, 2017 under my guidance.

I wish her best of luck for her future endeavors.

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## **ABBREVIATIONS:**

- ACLS: Advanced Cardiac Life Support
- ATM: Automatic Teller Machine
- BLS: Basic Life support
- CGHS: Central Government Health Scheme
- CICU: Cardiac Intensive Care Unit
- CMA: Chief Medical Associate
- CPR: Cardio Pulmonary Resuscitation
- CSSD: Central Sterile Supply Department
- CT: Computerized Tomography
- CTICU: Cardio Thoracic Intensive Care Unit
- CTOT: Cardio Thoracic Operation Theatre
- DNB: Diplomate of National Board
- EHS: Employee Health Scheme
- ENT: Ear,Nose,Throat
- FCOO: Facility Chief Operating Officer
- FFP: Fresh Frozen Plasma
- GOT: General Operation Theatre
- HCV: Human Cytomegalo Virus
- HID: Health Insurance Department
- HIS: Hospital Information System
- HIV: Human Immuno-deficiency Virus
- HOD: Head of the Department
- HR: Human Resource
- ICD: International Code for Diseases
- IPD: In Patient Department
- MICU: Medical Intensive Care Unit
- MRD: Medical Records Department
- MRI: Magnetic Resonance Imaging
- NICU: Neuro Intensive Care Unit
- OPD: Out Patient Department
- OT: Operation Theatre
- PRE: Patient Relation Executive
- PRP: Platelet Rich Plasma
- PWO: Patient Welfare Officer
- QNS: Quantity Not Sufficient
- RIS: Radiography Information System
- SDP: Single Donor Platelet
- TAT: Turn Around Time
- TPA: Third Party Association
- USG: UltraSonoGraphy
- WHO: World Health Organization

## CARE HOSPITALS

*“To provide care that people trust”*

Managed by Quality Care Limited, CARE Hospitals Group is the regional leader in tertiary healthcare in South/ Central region and among the top four pan Indian hospital chains. It is a multispecialty healthcare provider with 14 hospitals serving 6 cities spread across 5 states of India.

The various specialities include:

|                                                        |                                                                                                          |                                                               |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Anaesthesiology<br>Haematology<br>Pediatric Cardiology | Cardiac sciences<br>Hepatobiliary surgery & Liver<br>Transplantation<br>Pediatric Cardiothoracic Surgery | Clinical Psychology<br>Infectious Disease<br>Pediatrics       |
| Critical Care<br>Lab Medicine<br>Psychiatry            | Dentistry<br>Laposcopic & Bariatric surgeries<br>Plastic Surgery                                         | Dermatology<br>Nephrology<br>Physiotherapy and Rehabilitation |
| Dietetics & Nutrition<br>Neurosciences<br>Pulmonary    | Emergency Medicine<br>Nuclear Medicine<br>Radiology                                                      | Endocrinology<br>Obstetrics and Gynaecology<br>Rheumatology   |
| ENT<br>Oncology<br>Robotic Surgery                     | Gastroenterology<br>Orthopaedics Wellness<br>Surgical Oncology                                           | General Medicine<br>Ophthalmology<br>Urology                  |
| General Surgery                                        | Yoga Therapy                                                                                             | Vascular Surgery                                              |

It was founded in 1997, by Dr B Soma Raju, Chairman and Managing Director, CARE Hospitals Group with its core purpose as “To provide care that people trust”. The CARE Hospitals’ founders developed Asia’s first indigenous coronary stent — the ‘Kalam-Raju stent,’ named after Dr APJ Abdul Kalam, former President of India and Dr. B. Soma Raju. Besides this, the CARE group has to its credits many achievements, namely:

- 1<sup>st</sup> Prospective randomised trial of balloon valvotomy v/s mitral valve replacement in the world
- 1<sup>st</sup> Coronary Angioplasty in India
- 2<sup>nd</sup> Balloon Valvuloplasty in India
- 1<sup>st</sup> Cardiac MRI in India
- 1<sup>st</sup> Atrial Fibrillation Clinic in India
- 1<sup>st</sup> Beating Heart Surgery in Andhra Pradesh
- 1<sup>st</sup> Heart Transplant Performed in a tier-2 town (Visakhapatnam)

The various branches of CARE Hospitals are:

- Hyderabad (Banjara Hills)
- Hyderabad (Nampally)
- Hyderabad ( Out Patient- Banjara Hills)
- Hyderabad ( Hi-tech City)
- Hyderabad (Musheerabad)
- Secunderabd (Market Street)
- Visakhapatnam (Ramnagar)
- Visakhapatnam (Maharanipeta)
- Visakhapatnam (Railway New Colony)
- Raipur
- Bhubaneshwar
- Bhubaneshwar New (Prachi Enclave)
- Nagpur
- Pune

### **CARE HOSPITALS, NAMPALLY**

CARE Hospitals, Nampally, Hyderabad, is the first hospital established by the CARE Hospitals Group in 1997. The hospital began as a 100-bed Heart Institute, focusing on cardiac care with a core team of 20 cardiologists, one operating theatre and one catheterization laboratory. The hospital was expanded and upgraded in the year 1998 and again in 2000 and is now a 266 bed facility.

It is an NABH and NABL accredited hospital.

The Medical director of CARE Hospitals, Nampally is Dr. D.N. Kumar and the Facility Director is Dr. Sandeep Patel.

## OBSERVATIONAL LEARNINGS AT CARE HOSPITALS, NAMPALLY

**Purpose:** To provide care that people trust.

**Vision:** To be a trusted, people- centric, integrated healthcare system as a model for global health.

**Mission:** 20:20:90, CARE Process Re-Engineering, Employee First, CARE Continuum, learning Organization.

**Values:**

- Honesty & Integrity
- Teamwork
- Empathy & Compassion
- Education
- Citizenship
- Equity
- Dignity & Respect

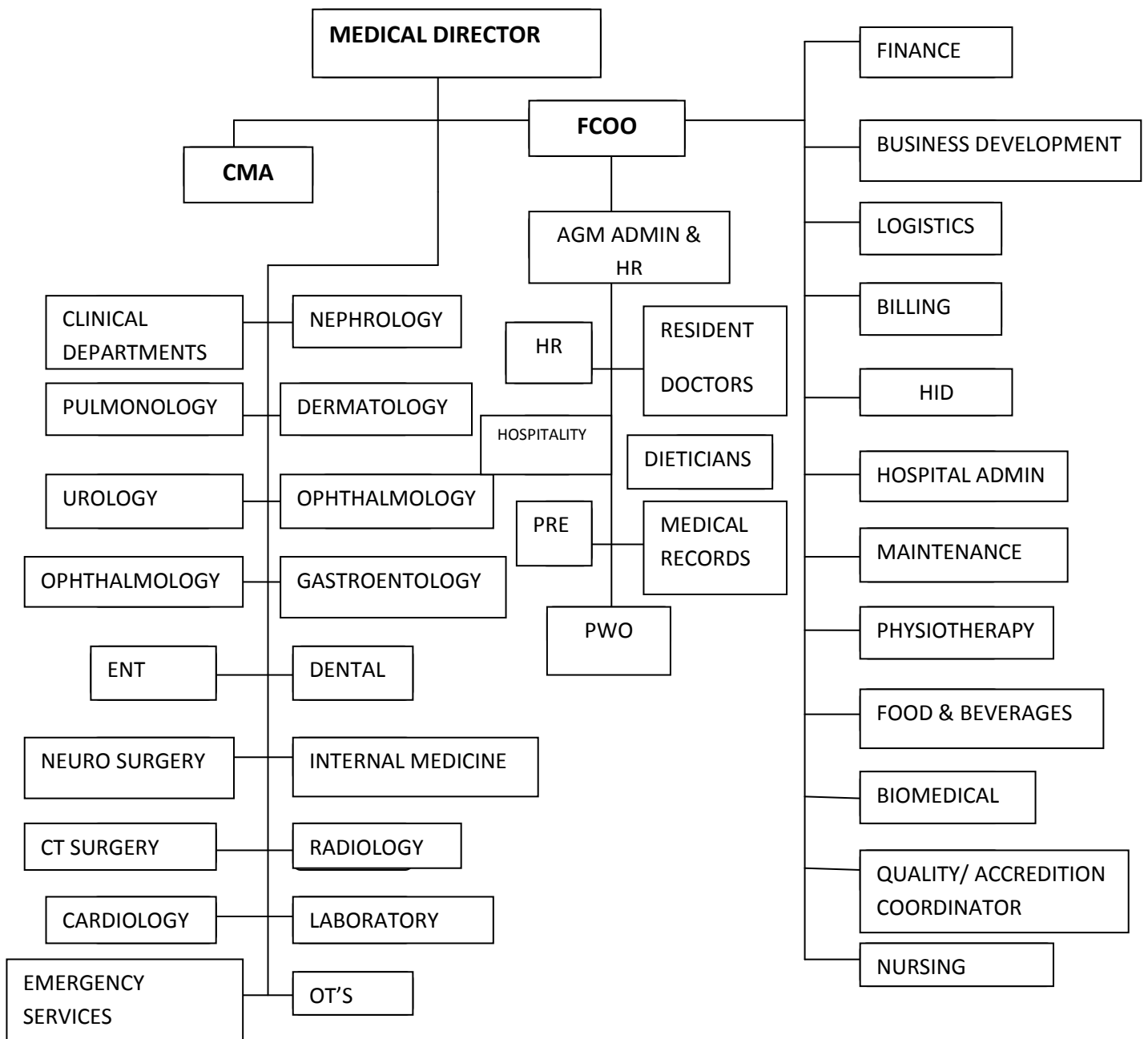
**Quality Statement:** We are committed to enhance patient and associate's satisfaction by providing them with most appropriate, safe & reliable service through continuous improvement by integrating best practice, personnel, technology & material.

### INFRASTRUCTURE OF CARE HOSPITALS, NAMPALLY

- CARE Hospitals, Nampally has two buildings. The main building belongs to the CARE Group while the other building is on rent, The Arogya Block.
- The main hospital building has five floors.
- The ground floor consists of the IPD Reception, Emergency Department and the Radiology Department.
- The first floor consists of the OPD, Abdul Kalam general ward, cafeteria and CICU.
- The second floor consists of semi private rooms, hospital administration, nursing stations, Mahatma Gandhi general ward and MICU and a cafeteria.
- The third floor consists of the private wards, blood bank, library and laboratories.
- The fourth floor consists of the Operation theatre and conference hall.
- The fifth floor consists of CSSD, Housekeeping and various other administrative departments.
- The Arogya block consists of the cardiac OPD, MRD, Biomedical Departments and the stores.



# ORGANOGRAM OF CARE HOSPITALS, NAMPALLY



## DEPARTMENT WISE OBSERVATIONS AT CARE HOSPITALS, NAMPALLY

### 1. MEDICAL RECORDS DEPARTMENT:

**HEAD OF THE DEPARTMENT:** Mr. Saccyanarayan

- Located on the third floor of the Arogya Block.
- Human Resource : 3 for record keeping and 2 for scanning
- Mainly concerned with documentation.
- **Colour coding of files:**
  - PINK:** Medico legal cases
  - YELLOW:** death cases
  - GREEN:** discharge cases
- Every death has to be communicated to the municipality for registration.
- A unique ICD code number for various diseases is present which is mentioned in the records.
- **Form numbers:**
  - Death – 2,4**
  - Still Births -1**
  - Birth – 3**
- **Time period for preserving the records:**
  - Discharge:** 5 years
  - Death :** 10 years
  - Medico legal cases:** 30 years
- Obtaining an informed consent for accident and injury cases is a must.
- **Consent is obtained in the following situations:**
  - ✓ Surgery
  - ✓ Anaesthesia
  - ✓ High risk cases
  - ✓ Blood transfusion
  - ✓ Intensive procedures
  - ✓ Haemodialysis
- Separate register is maintained for communicable diseases and the information of the following cases is sent to the municipality:
  - ✓ Malaria
  - ✓ Dengue
  - ✓ Chikungunya
  - ✓ Cholera
  - ✓ Food poisoning
  - ✓ H1N1
- A newspaper advertisement has to be given before the destruction of medical records and a certificate is obtained after the same.

## 2. HUMAN RESOURCE:

- **HEAD OF THE DEPARTMENT:** Mr. Radha Manohar
- The human resource department is located on the fifth floor of the main hospital building.
- The main functions of the HR Department are as follows:
  - ✓ Attendance management
  - ✓ Salary management
  - ✓ Development and implementation of training schedules
  - ✓ Management of leaves
  - ✓ Management of outlay
  - ✓ Performance appraisal
  - ✓ Recruitment and selection
  - ✓ Career planning
- Total human resource of the hospital:  
Permanent= 722  
Contractual= 420 (security, housekeeping, food and beverages)  
Consultants= 75
- The employees with a salary of less than Rs.21000 derive the benefit of Employee State Insurance.
- The employees are graded on a scale of G1, G2 and so on based on the seniority basis
- Maximum recruitment in CARE, Nampally is internal selection or by reference and if no suitable candidate is found, then an advertisement in the National Newspapers is issued and the selection process takes place based on the applications received.
- CARE Nampally follows a 3 shift system with shifts being:
  - ✓ 8 am to 2 pm
  - ✓ 2 pm to 8 pm
  - ✓ 8 pm to 8 pm
- The various leaves offered are:
  - Casual leaves – 12
  - Sick leaves – 12
  - Earned leaves – 15
  - Maternity leave – 26 weeks

## 3. CENTRAL STERILE SUPPLY DEPARTMENT:

- **HEAD OF THE DEPARTMENT:** Dr. Mustaffa
- Located on the fifth floor of the main hospital building.
- Human resource in the department: 4
- Mainly concerned with the sterilization of instruments and packing of linen, Neuro, GTOT and CTOT instruments.
- Consists of the following areas:
  - Receiving area
  - Cleaning area
  - Drying area

- Packaging area
  - Sterilization area
  - Storage area
  - Delivery counter
- Two types of sterilizations take place at CARE, Nampally:
  - Steam Sterilization
  - Ethylene oxide sterilization
- Various indicators used are:
  - Biological
  - Chemical
- Average daily workload is 160 – 170.
- ETO sterilization for CARE Banjara hills and CARE Mursheedabad also takes place at CARE, Nampally.

#### **4. PATIENT WELFARE DEPARTMENT:**

- **HEAD OF THE DEPARTMENT:** Miss. Sangeeta
- Located on the fifth floor of the main hospital building.
- Human Resource : 2
- Main functions of the Welfare Department are:
  - Interact with the patients
  - Listen to the complaints of the patients and convey them to the respective departments
  - Look after patient welfare
  - Collection of feedback forms at the time of discharge
  - Presentation of the feedbacks of the entire week to the HOD's every Monday

#### **5. FOOD AND BEVERAGES DEPARTMENT:**

- **HEAD OF THE DEPARTMENT:** Mr. Kendell B. Mcleod
- Human resource = 87 including the following:
  - ✓ Manager
  - ✓ Executive chef
  - ✓ Cooks
  - ✓ Assistant cooks
  - ✓ Stewards
  - ✓ Housekeeping
  - ✓ Wash boys
- There is one canteen and visitor's dining hall named "Atidhi" on the first floor.
- Staff dining hall is located on the fifth floor.
- There are three floor pantries, on second floor, third floor and one outside the IP Reception.

- The food and beverages department is on a contractual basis with the contract renewed every year.
- Operating hours = 24\*7
- All the food for the patients is prepared on the dietician's recommendations and is tasted by the dietician before it is sent to the patients.
- The menu is a cyclic menu revised by the head dietician every year or as and when required.
- Food for the Nursing Hostels of CARE, Nampally is also prepared by the food and beverages department.
- On an average 2000 meals per day are cooked.
- Random feedbacks from the patients and attendants are taken about the quality of food.
- A spoilage register is maintained to keep a record of the spoilt eatables.

## **6. HOSPITALITY/HOUSEKEEPING DEPARTMENT:**

- **HEAD OF DEPARTMENT:** Mrs. Mantri Ramani
- Human resource: 250 contractual manpower with contract renewed every year.
- The office is located on the second floor.
- Functions performed:
  - ✓ Room services
  - ✓ Cleaning of washrooms
  - ✓ Fumigation
  - ✓ Scrubbing
  - ✓ Dressing
  - ✓ Shifting of patients
- The housekeeping staff is trained in CPR.
- The entire housekeeping staff is immunized for hepatitis B.

## **7. SUPPLY CHAIN MANAGEMENT:**

- **HEAD OF DEPARTMENT:** Mr. Peddi Raje
- Located on the fifth floor of the main hospital building.
- Human resource: 47 regular employees.
- Purchase of medicines is centralized for all CAREs.
- A total of 10 stores are present.
- The store for nephrology department and radiology is virtual.
- CARE, Nampally logistics team has been declared as the "Best logistics team" amongst all CAREs since the last three years.
- Requirements from the OP and IP pharmacy are received and purchase order is placed.
- Drugs are removed from the stores 3 months prior to the expiry and sent to the supplier.

## **8. MAINTENANCE/ ENGINEERING DEPARTMENT:**

- **HEAD OF THE DEPARTMENT:** Mr. Dhasarathan
- Location is in the cellar.
- Human Resource: 1 manager, 2 supervisors, 6 electricians, 4 plumbers(contractual) and 2 carpenters(contractual).



- Function: To look after the maintenance of electricity, building, plumbing, oxygen, water, generators and miscellaneous.
- There are 2 generators for the power back up in case of power cut off.
- Average daily work load is 20-25 complaints per day.
- Mock drills related to fire emergency are conducted by the maintenance department.
- It works 24\*7 with three shifts and a general shift.

## **9. BLOOD BANK:**

- **HEAD OF THE DEPARTMENT:** Dr. Sucharita
- Located on the third floor of the main hospital building.
- HUMAN RESOURCE: 12 including 1 HOD, 1 staff nurse and 10 blood bank technicians.
- Function is to collect, process and store blood and its components in specialized refrigerators within the department and to supply the same when needed.
- The donors are selected based on three criteria: physical examination, laboratory examination and medical tests.
- Apart from supplying blood within the CARE family, this blood bank caters to the needs of various other private and government hospitals.
- Regular blood donation camps are conducted out of which 21 units of blood are supplied to the government hospitals free of cost.
- It works 24\*7 with three shifts and a general shift.
- Various record books including the donor records, discard records, deferral donor book and issue book is maintained.
- On an average, a daily collection of 15-20 units of blood is noted.

## **10. BIOMEDICAL DEPARTMENT:**

- **HEAD OF DEPARTMENT:** Mr. Saishgiri
- Located on the first floor of Arogya block.
- Human Resource: 4 including the HOD and 3 biomedical engineers.
- It is a supporting department for all the equipments running in the hospital.
- It looks after the servicing and maintenance of the instruments as well as the equipments.
- On an average, this department takes care of 20 complaints per day.
- Maintenance records are kept in hard as well as soft copies and the records are maintained for a period of one year.

## **11. BUSINESS AND DEVELOPMENT:**

- **HEAD OF DEPARTMENT:** Mr. D. Venugopal
- Located on the fifth floor of the main hospital building.
- Human Resource: 10 including the HOD.
- The main function of this department is to conduct health awareness camps once or twice a month which includes both mega and specialty camps.
- The department also looks into the insurance sector with the main focus on cash insurance.
- CARE group believes in the marketing through word of mouth by satisfied patients.

## 12. LABORATORY:

- **HEAD OF THE DEPARTMENT:** Dr. Anjana Tiwari
- Located on the third floor of the main building
- Human resource: 43 technicians, 1 lab assistants and 5 housekeeping staff.
- The laboratory is divided into three units: pathology, biochemistry and Microbiology.
- The main function is to perform the diagnostic tests required by the patients as well as all the screening tests in the blood bank.

## 13. FRONT DESK:

- The front desk is divided into two parts; Inpatient and outpatient.
- **INPATIENT DEPARTMENT:**
- **HEAD OF THE DEPARTMENT:** Mr. Sagar
- Located on the ground floor of the main building close to the Emergency Department.
- Human Resource: 8 including the HOD.
- The functions of this department includes:
  - ✓ Prompt admission of the patient
  - ✓ Allotment of wards
  - ✓ Segregating the patients into cash, credit, insurance and Arogyashree
  - ✓ Dealing with the patient grievances
  - ✓ Issue of death certificate
  - ✓ Conducting the Census of the inpatients daily at 12 am
  - ✓ Maintenance of records of daily surgeries
  - ✓ Maintaining the record of room vacancies.
- The department works 24\*7 with three shifts and one general shift.
- Average daily work load is around 40- 45 admissions per day.
- The records of past ten years in hard copy and soft copy are maintained.
- The software used for registration is 'KARISHMA" which is linked to the Hospital Information System. ( HIS)
- **OUT PATIENT DEPARTMENT:**
- **HEAD OF THE DEPARTMENT:** Mr. Suba Rao
- There are three OPDs:
  - Cardiac OPD on the ground floor of Arogya block
  - General OPD on the first floor of the main building
  - Nephrology OPD on the second floor of the main building
- Human resource: 4 including the HOD.
- The functions of this department include:
  - ✓ Registration of the outpatients
  - ✓ Providing the telephonic appointments
  - ✓ Guiding the patients
  - ✓ Billing of the outpatients
  - ✓ Billing of diagnostic tests required for out patients.
- Average daily patient load in the OPD is 400-500 with the maximum patients of Cardiology.
- The OPD timings are; 7 AM to 8 PM while the appointment closes at 7 PM.
- The OPD remains closed on Sundays.

#### 14. DEPARTMENT OF RADIOLOGY:

- **HEAD OF THE DEPARTMENT:** Dr. T. R. Nagendra
- Located on the ground floor next to the IPD and Emergency Department and in proximity to the OPD.
- Human resources: 27 including 1 HOD, 2 Senior Residents, 9 technicians in the X Ray, 7 technicians in CT & MRI, 2 receptionists, 3 typists and 3 nurses.
- The various radiological tests conducted are:
  - X Ray
  - USG
  - CT Scan
  - MRI
  - Fluoroscopy
  - Colour Doppler
- Both the OPD and IPD radiologic investigations are conducted in this department.
- The emergency patients are given preference.
- The daily work load of the radiology department is as follows:

| INVESTIGATION  | OPD | IPD |
|----------------|-----|-----|
| X Ray          | 100 | 50  |
| USG            | 50  | 22  |
| CT             | 10  | 10  |
| MRI            | 9   | 4   |
| Fluoroscopy    | 20  | 5   |
| Colour Doppler | 6   | 3   |

#### 15. PUBLIC RELATIONS EXECUTIVES:

- **HEAD OF THE DEPARTMENT:** Mr. Radha Manohar
- The public Relations Executives are divided into three categories:
  - Floor PREs - 7
  - IP Reception PREs -2
  - OP Reception PREs - 2
- The IP and OP Reception PREs are mainly concerned with the registration and billing of the patients.
- The Floor PREs come under the administrative block.
- The floor PREs report to the floor managers who are four in number.
- The function of the PREs is as follows:
- **CASH PATIENTS:**
  - Daily updates of bills
  - Each PRE is responsible for 20 – 25 beds.
  - Communication of pending amounts to the patients' attendants
  - Transfer the discharge summary to the nursing station
  - Look after the pharmacy clearance\
  - Transfer of the bill to the cash counter

- **CORPORATE PATIENTS:**

- Visit on the first day to find out about the Credit Scheme
- Preparation of Enhancement letter if required

## **16. OPERATION THEATRES AND INTENSIVE CARE UNITS:**

- CARE Nampally is equipped with 4 operation theatres.
- The general OT is on the ground floor.
- The cardio-thoracic, neurosurgery and nephrology OT is on the fourth floor.
- All the operation theatres are well installed with required equipments to cater the needs of any surgery.
- All these equipments are regularly maintained by the bio-medical department.
- A proper coordination is maintained between the OT's and the CSSD department regarding the requirement of sterilized instruments by the OTs.
- The operation theatres adhere to the surgical safety check list which is in turn under the supervision of the infection control department
- There are 7 ICUs in CARE Hospitals, Nampally, namely:
  - Medical ICU: First floor
  - Intensive Cardiac Care unit: First floor
  - Critical Care Unit: Third floor
  - Nephrology ICU: Fourth floor
  - Cardio-Thoracic ICU: Fourth floor
  - Neuro-Surgery ICU: Fourth floor
  - Surgical ICU: Ground floor

## **17. QUALITY AND INFECTION CONTROL:**

- **HEAD OF THE QUALITY DEPARTMENT:** Mr. Nasir
- This department deals with the consistent delivery of the services to the expected standards.
- Functions:
  - To ensure the effectiveness of treatment
  - Increase patient satisfaction
  - Patient focused care
  - Ensure the provision of sterilized instruments
  - Ensure adherence to surgical safety check list

## **18. NURSING DEPARTMENT:**

- **HEAD OF THE DEPARTMENT:** Sister Lissy Molphilip
- Human Resource: (307 sisters+brothers) + 15 Interns
- There are 23 nursing stations each being supervised by a nursing in charge.
- The nurses follow the 3 shifts system.
- Recruitment is on the basis of written as well as the practical exam followed by an interview.
- Every Tuesday nurses are given rotatory ACLS/BLS training.

- **Functions:**
  - Providing medications
  - Adhering to the doctors' instructions
  - Looking towards patients' comfort
  - To respond to any of the patients' need

# **A STUDY TO ASSESS THE EFFECTIVENESS OF COMMUNICATION IN THE INPATIENT DEPARTMENT OF CARE HOSPITALS, NAMPALLY**

## **INTRODUCTION:**

The inpatient department of a tertiary care hospital is its backbone. Right from revenue generation to image creation, it contributes to the sustainability of the hospital in this commercialized industry of healthcare. Progress in modern medicine and the advent of comprehensive outpatient clinics have ensured that a patient is admitted in the inpatient department only if he is suffering from severe physical trauma or is extremely ill. Hence it is quite clear that the patients and their attendants in the inpatient department are already under stress. This is the area where the importance of effective communication steps in. The soft skills of not only the care providers but also the personnel who interact with the patient or their attendant play a vital role in the reduction of the anxiety and thereby creating a positive impact on the patients' and their attendants' stay.

This study aims at assessing the effectiveness of communication taking place between the patient, attendant and the hospital personnel right from their entry to the exit from the hospital.

According to the study, effective communication is defined based on the following parameters:

- Greetings
- Self introduction
- Recognition by name
- Guidance
- Understanding of the message delivered
- Understanding of the language
- Listening skills
- Polite gestures
- Courtesy

**RESEARCH QUESTION:** What is the percentage of effective communication in the inpatient department of CARE Hospitals, Nampally?

## **RESEARCH OBJECTIVES:**

- To determine the percentage of effective communication at CARE Hospitals, Nampally
- To identify the gaps in communication at CARE Hospitals, Nampally
- To provide solutions to improve the effectiveness of communication

## REVIEW OF LITERATURE:

- Gooch , 2016, in his study on “*The chronic problem of communication: Why it is a patient safety issue and how hospitals can address it*” state that communication at hospitals is much more complex than people realize since communication is basically about behaviour which is notoriously difficult to change which include the individual and the organizational behaviour both. And various other factors like ethnicity, language, personality and past experiences also play a role in determining effective communication.
- White, 2106, in a study “*How communication problems put patients, hospitals in jeopardy*” state that most common patient provider communication issues involve inadequate informed consent, unsympathetic response to the patients complaints, inadequate education, incomplete follow up instructions and miscommunication due to language barrier. It has been found out that 37% of the failures in the hospital occur due to communication issues.
- A study by the Institute of Healthcare Communication state that patient’s perceptions of the quality of healthcare that they receive are highly dependent on their interaction with the healthcare providers. The healthcare communication relies heavily on core communication skills such as open ended enquiry, reflective listening and empathy.
- Daniel et al, 2014, in the study “*Professional communication and team collaboration*” sate that lack of communication creates situation where medical errors can occur. Communication acts as a building block in creating trust and confidence between the patients and the providers.

## METHODOLOGY:

The study was carried out in the inpatient department of CARE Hospitals, Nampally by conducting interviews of the patients availing the IPD facilities for the period of 2 weeks.

**Research design:** A descriptive cross-sectional exploratory study was conducted at CARE Hospitals, Nampally to assess the effectiveness of communication in the inpatient department

**Period of study:** 2 weeks

**Sample size:** A total sample of 100 was taken including the patients and the attendants from all the 3 IPDs at CARE Hospitals, Nampally (pre-defined by the hospital management).

**Sampling design:** A stratified random sampling method was chosen to conduct this study. The stratum was population with the knowledge of English/ Hindi language and then the sample was selected randomly.

### Inclusion criteria:

- Patients/ attendants above the age of 16 years

### Exclusion criteria:

- Patients/ attendants who are the part of the Hospital
- Mentally challenged patients



- Patients/ attendants with hearing or speaking disability
- Emergency patients and their attendants
- Critical care patients

### Tool for the data collection:

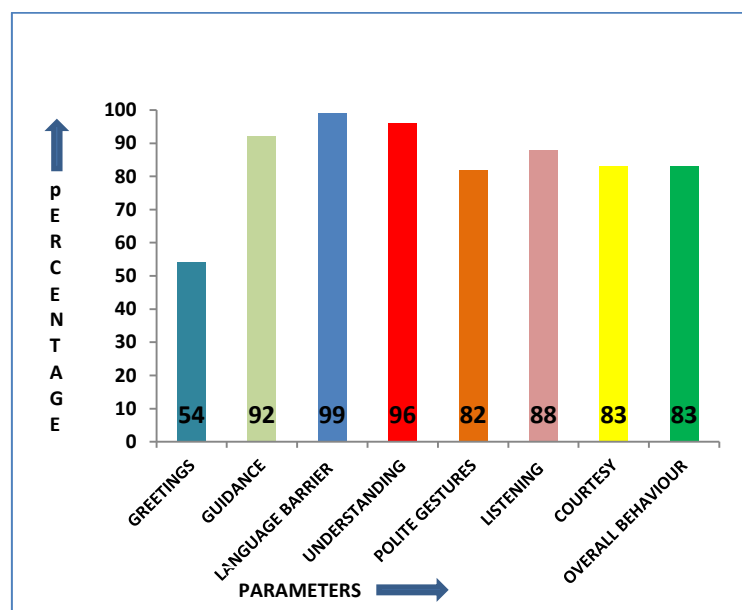
A pre-designed questionnaire was prepared to assess the effectiveness of communication in the IPD of CARE Hospitals, Nampally which was quantitatively analyzed by assigning the values to the variables which were: Yes= +1 and No= 0.

One of the parameter which assesses the overall behaviour of the personnel was quantitatively analyzed by assigning the values to the variable as: Yes= +1 and No= -1.

### DATA ANALYSIS:

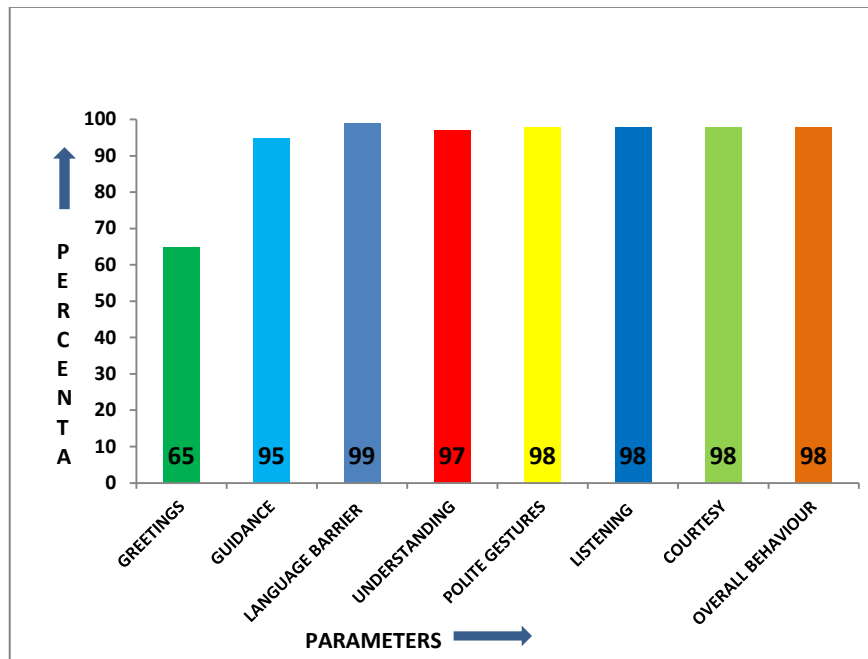
Total number of Respondents: 100

1. The following graph shows the effectiveness of communication of the security staff. It is seen that on an average 85.84% of the patients/attendants consider communication of the security staff based on the mentioned parameters at CARE Hospitals, Nampally to be effective and 83% of them consider the behaviour of the security to be satisfactory.



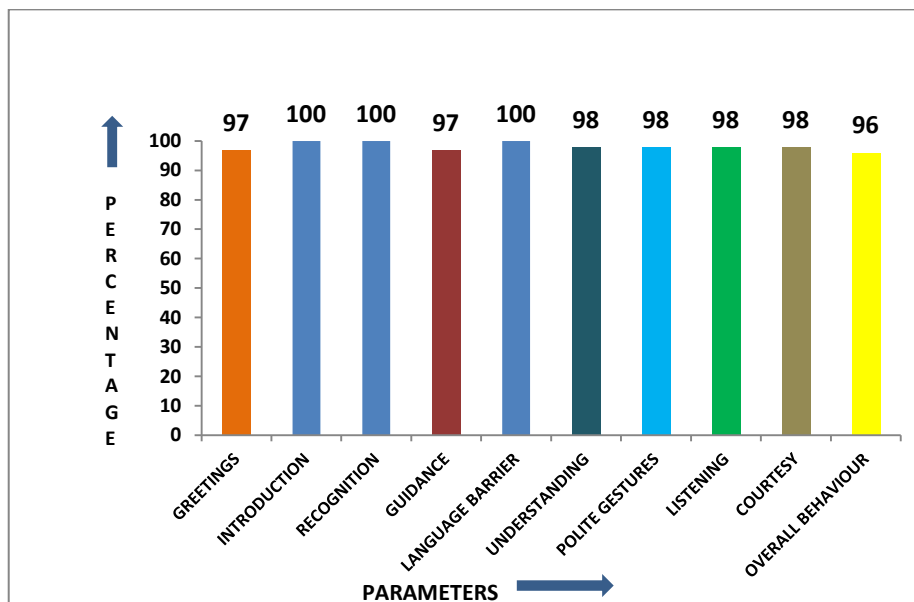
Graph 1 A GRAPH SHOWING THE PERCENTAGE OF EFFECTIVENESS IN COMMUNICATION OF THE SECURITY STAFF

2. The following graph shows the effectiveness of communication of the front desk staff. It is seen that on an average 92.87% of the patients/attendants consider communication of the front desk based on the mentioned parameters at CARE Hospitals, Nampally to be effective and 98% of them consider the behaviour of the front desk to be satisfactory.



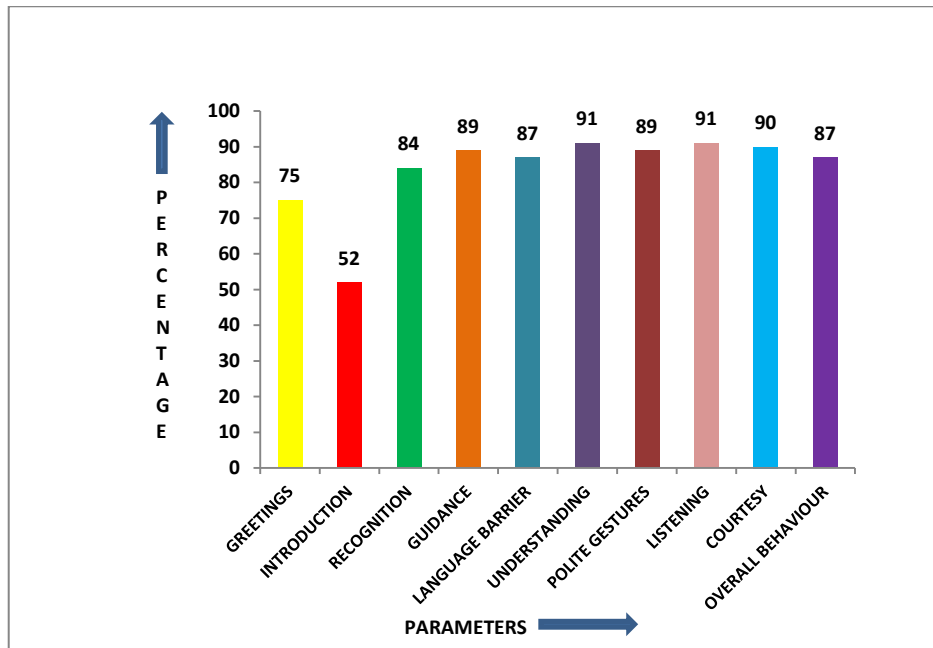
**Graph 2 A GRAPH SHOWING THE PERCENTAGE OF EFFECTIVENESS OF COMMUNICATION OF THE FRONT DESK**

- The following graph shows the effectiveness of communication of the consultants/Resident doctors. It is seen that on an average 98.44% of the patients/attendants consider communication of the consultants/ Resident doctors based on the mentioned parameters at CARE Hospitals, Nampally to be effective and 96% of them consider the behaviour of the Consultants/ Resident Doctors to be satisfactory.



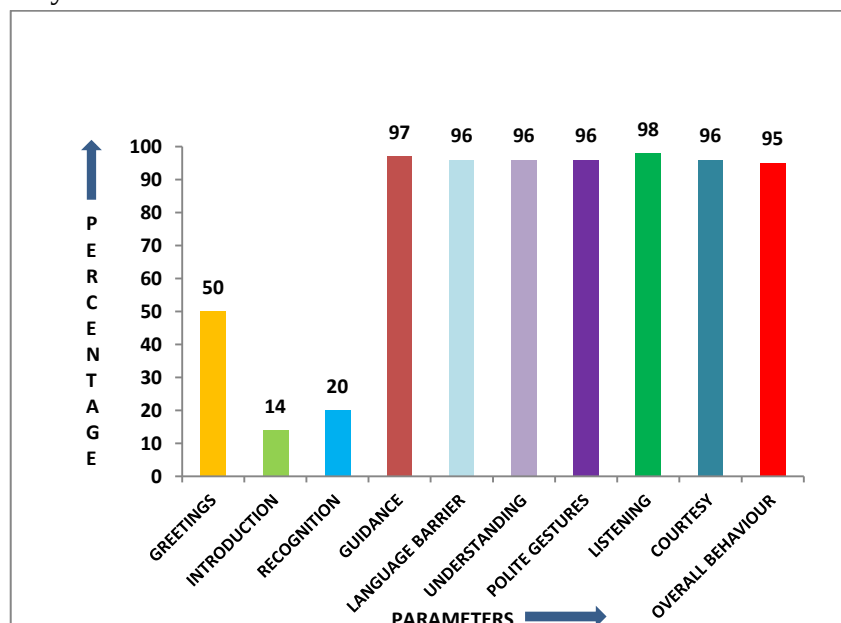
**Graph 3 A GRAPH SHOWING THE PERCENTAGE OF EFFECTIVENESS OF COMMUNICATION OF THE CONSULTANTS/RESIDENT DOCTORS**

4. The following graph shows the efficiency of communication of the nursing staff. It is seen that on an average 83.11% of the patients/attendants consider communication of the nursing staff based on the mentioned parameters at CARE Hospitals, Nampally to be effective and 87% of them consider the behaviour of the nursing staff to be satisfactory.



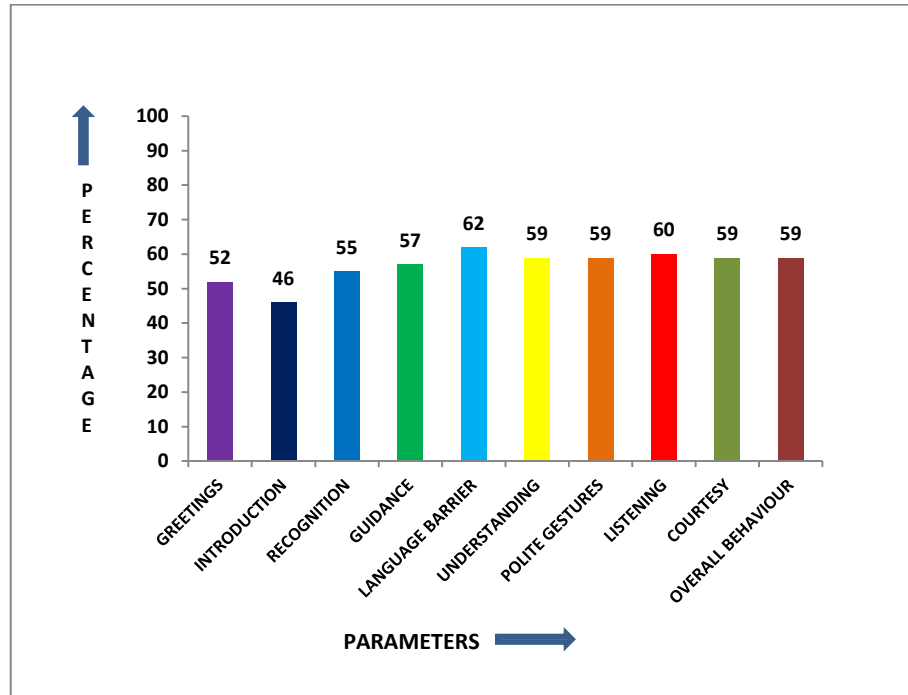
**Graph 4 A GRAPH SHOWING THE PERCENTAGE OF EFFECTIVENESS OF COMMUNICATION OF THE NURSES**

5. The following graph shows the efficiency of communication of the house keeping staff. It is seen that on an average 73.66% of the patients/attendants consider communication of the house keeping staff based on the mentioned parameters at CARE Hospitals, Nampally to be effective and 95% of them consider the behaviour of the house keeping staff to be satisfactory.



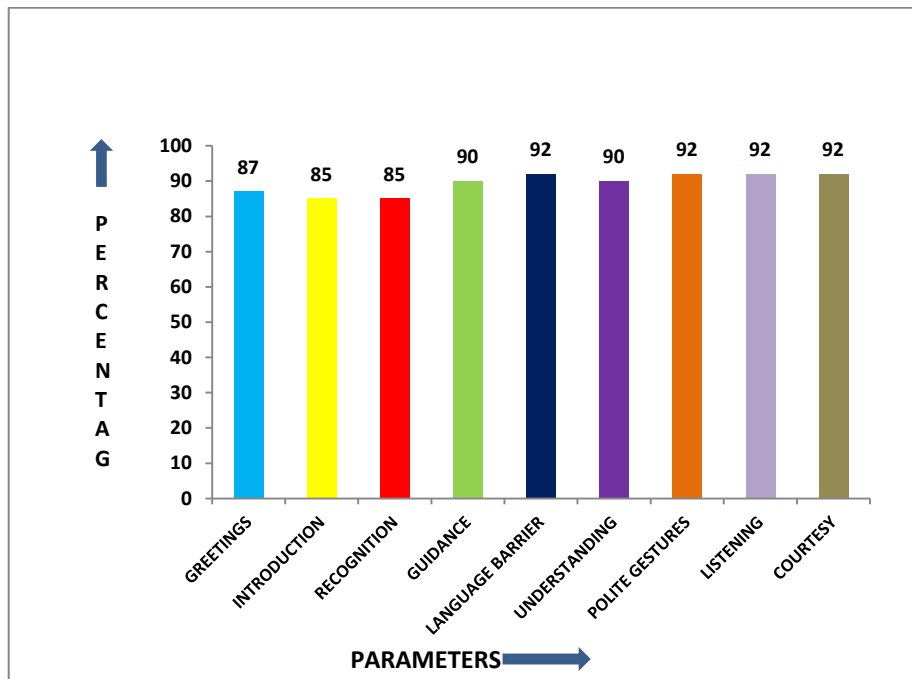
**Graph 5 A GRAPH SHOWING THE PERCENTAGE OF EFFECTIVENESS OF COMMUNICATION OF THE HOUSE KEEPING STAFF**

6. The following graph shows the efficiency of communication of the PRE staff. It is seen that on an average 56.55 % of the patients/attendants consider communication of the PRE staff based on the mentioned parameters at CARE Hospitals, Nampally to be effective and 59 % of them consider the behaviour of the PRE staff to be satisfactory.



Graph 6 A GRAPH SHOWING THE PERCENTAGE OF EFFECTIVENESS IN COMMUNICATION OF THE PRE STAFF

7. The following graph shows the efficiency of communication of the PWO staff. It is seen that on an average 89.44% of the patients/attendants consider communication of the PWO staff based on the mentioned parameters at CARE Hospitals, Nampally to be effective and 92 % of them consider the behaviour of the PWO staff to be satisfactory.



Graph 7 A GRAPH SHOWING THE PERCENTAGE OF EFFECTIVENESS IN COMMUNICATION OF THE PWO STAFF

## **GAPS APART FROM THE DATA:**

### **A. SECURITY PERSONNEL:**

- a. Patients have complained about the rude behaviour of the security staff especially in the circumstances when there are more than one attendant and also during the non-visiting hours of the critical care units.
- b. Some complaints have also surfaced regarding the non-availability/sleeping security staff during the night hours.

### **B. FRONT DESK:**

- a. A few cases have come to light where the attendants complained that the patient was not shifted to the ward until the complete payment was made at the front desk.

### **C. CONSULTANTS/ RESIDENT DOCTORS:**

- a. Few attendants have complained about the irregular visits of the resident doctors.
- b. A single complaint was regarding the re-scheduling of the surgical process due to the unavailability of the surgeon.
- c. A few complaints regarding the visits of the dietician were also noted.

### **D. NURSES:**

- a. Patients have complained about the difficulty in communicating with the nursing staff since they are the natives of Kerela and East India.
- b. A few complaints were about the delayed response of the nurses even after repeated requests. While some attendants complained that they had to visit the nursing station to call their respective nurses.

### **E. HOUSE KEEPING:**

- a. Patients have complained that the washrooms are not being cleaned regularly. This is mainly in respect to the cubicles and the Abdul Kalam ward.

### **F. PRE STAFF:**

- a. There have been complaints about irregular or no visits of the PRE staff. This is especially in respect to the patients who come under corporate and Aarogya shree.
- b. There have been complaints by the cash patients about the constant rude reminders regarding the bill payment even after getting an affirmation from the attendants.
- c. Complaints regarding delayed discharge have also come into light.

### **G. PWO STAFF:**

- a. A few isolated cases have come up where the attendants did not know the PWO staff.
- b. It was noted that few patients were apprehensive about voicing out their concerns to the PWO or any other management staff as they feared that something unforeseen might happen to them in lieu of their complaints.
- c. No explanations regarding the feedback form.

## **SUGGESTIONS:**

1. **AWARE** and **GATHER** approaches on effective communication and regular follow ups of the same is highly recommended.  
  
**A-** Announce your presence  
  
**W-** Welcome the patient  
  
**A-** Ask if there is anything that the patient needs  
  
**R-** Review what was done and explain when the next service will be  
  
**E-** Exit with a kind word  
  
  
**G-** Greet the person  
  
**A-** Ask how can I help you  
  
**T-** Tell them any relevant information  
  
**H-** Help them to make decisions  
  
**E-** Explain any misunderstanding  
  
**R-** Return for follow up or referral
2. Regular/surprise visits by the top managers during the night hours can help in checking the problem of sleeping/unavailable staff during the night.
3. Installation of an ATM inside the hospital premises is suggested to reduce the complaints about the billing procedure.
4. One day prior information regarding the unavailability of the consultants and the re-scheduling of the surgical procedures can be done to minimize patients' apprehension.
5. A proper check on the regular visits of the resident doctors should be kept. The suggestion is to keep a record book in the general ward and each room of the private and the semi-private wards where the resident doctor has to sign and mention the time of the visit.
6. A comprehensive language training programme followed by a verbal test should be implemented for the nurses who have joined recently and face native language problem.
7. It is suggested that the frequency of the cleaning of the washrooms especially of the general wards be increased to improve hygiene and prevent infections.
8. The regular visit of the PRE and PWO to all the patients is suggested.
9. It is suggested that the PWO staff should not have official uniforms to decrease the apprehension and anxiety of the patients.
10. An English speaking training programme is highly recommended for the entire staff.

11. Some workshop on empathy and team building of all the staff that comes in direct contact with the patient and their attendants is suggested in Annexure 3

### **CONCLUSION:**

Communication in a healthcare setting is one of the most important tools for providing excellent care and increasing patient satisfaction. With the changing face of the healthcare industry the caliber of all the front line team members has changed. Patients expect courtesy and communication from whom they interact with including the support services. Hence it is imperative that there is no question mark raised on the communication within the hospital setting. Various small measures can be taken to reduce the dissatisfaction of the patients arising out lack of communication thereby improving the overall reputation of the hospital.

# **A STUDY ON THE PATIENT/ATTENDANTS' SATISFACTION OF THE OUT PATIENT DEPARTMENT OF CARE HOSPITALS, NAMPALLY**

## **INTRODUCTION:**

Hospitals have evolved from being an isolated platform of disease cure to an industry with five star facilities. The patients and their relatives, who visit the hospital, not only expect a world class treatment but also expect non clinical facilities which make their visit comfortable. This change in the image of hospitals has come from media exposure as well as commercialization of the industry. It, therefore, becomes essential for a hospital to reach out to its customers if it wants to survive the competition. The customer of a hospital is very different from a regular customer, because, in the first place, he does not want to become a “customer” since visiting a hospital is rarely a happy incidence for anyone.. Secondly, unlike any other industry, the “customer” in the healthcare industry gets a chance to closely notice the various facilities and interact with almost everyone, right from the admission staff to the housekeeping staff to the core providers. In the modern times, when the expectations from the healthcare industry are increasing and level of satisfaction is decreasing, leading to increased number of legal and physical manhandling of healthcare professionals, it is very important to know the variables affecting patients’ satisfaction level. Hence, it becomes imperative that due importance be given to the satisfaction level of the patients and their relatives since they are the driving power in this industry which has dramatically changed from “a seller’s industry” to “a buyer’s industry”.

This study aims to quantitatively analyze the satisfaction level of the patients and attendants with the various hospital facilities concerning the Out Patient Department of CARE Hospitals, Nampally and dig deeper into the patients’ perspectives regarding the service qualities.

According to the study, satisfaction is defined in respect to the patients/attendants perception about the following facilities:

- Greetings
- Guidance
- Parking
- Cleanliness
- Cafeteria services
- Waiting area
- Laboratory services
- Pharmacy services
- Sign boards
- Waiting time



**RESEARCH QUESTION:** What is the percentage satisfaction of the patients and attendants in respect to the various non clinical facilities at CARE Hospitals, Nampally?

**RESEARCH OBJECTIVES:**

- To determine the percentage of patient satisfaction with the Out Patient Department at CARE Hospitals, Nampally
- To study the patients' perspective regarding the suggestions for the improvement of the facilities at the Out Patient Department
- To provide suggestions for improvement of the level of patient satisfaction in the Out Patient Department

**REVIEW OF LITERATURE:**

- Mohd. Athar et al, 2014; conducted their study "*Patient satisfaction with services of the outpatient department*" in an Army hospital and found that the officers of the lower rank showed a lower degree of satisfaction than the others. The communication process, the respect of dignity of the patients and the pharmacy facility constituted a major role in increasing the satisfaction of the patients. Easy accessibility and a good signage system for the OPD services rendered a good image to the hospital. Staff behaviour, particularly polite and courteous behaviour was accepted as a necessity for the hospital OPD services. Waiting time which includes the registration time is an important area to address for enhancing overall satisfaction level.
- Sodani et al, 2010; in their study "*Measuring patient satisfaction: A case study to improve quality of care at public health facilities*" state that the major reason for choosing the public health facility was inexpensiveness, infrastructure and proximity to health facility. It was observed that the patients were more satisfied with the behaviour of the doctors and staff at lower health facilities. Patients were not satisfied with the registration time, waiting time and the pharmacy facilities at the higher health facilities while the patients are not satisfied with the cleanliness of the lower health facilities.
- Jain et al, 2016; in their study "*A study to assess patient satisfaction in out patient department of a tertiary care hospital in North India*" found that socio economic factors like caste, occupation and education were the contributing factors in deciding the level of satisfaction by the patients. The highest satisfaction was seen with respect to the behaviour of the doctors and the lowest satisfaction was seen with the canteen and pharmacy services.
- Vadhana ,2012; in a study "*Assessment of patient satisfaction in an outpatient department of an autonomous hospital*" in Thnom Penh, Cambodia state that the least satisfaction level is seen with the registration services. Inadequate amount of prescribed drugs and unfriendly attitude of the registration staff contributed to the dissatisfaction among the patients. Regarding socio demographic factors, education was found to have a statistically significant relationship with the satisfaction.
- Mankar et al, 2103; in their study "*A study of patient satisfaction towards outpatient department services of a hospital and research centre using exit interviews*" state that the perceived problems by the patients were dirty toilets, uncleanliness of the unit,

expensive medicines and excessive time taken in the radiology department and unavailability of the senior doctors.

- Lyngkhoi et al, 2015; in their study “*A study on patient satisfaction in outpatient department*”, state that the waiting time, incorrect information about the appointment time and the high cost of the hospital were the major causes of the dissatisfaction.
- Jawahar, 2007; in a study “*A study on outpatient satisfaction at a super specialty hospital in India*” state that the guidance provided by the staff and the security staff, cleanliness, waiting hours are the causes of dissatisfaction among the patients. However according to the patients perspective, the rude behaviour of the doctors and the nurses is a major area which needs to be worked upon.

**METHODOLOGY:** The study was carried out in the outpatient department of CARE Hospitals, Nampally by conducting interviews of the patients availing the OPD facilities for the period of 2 weeks.

**Research Design:** Descriptive cross-sectional study

**Period of study:** 2 weeks

**Sample size:** A total sample of 100 was taken including the patients and the attendants from all the 3 OPDs at CARE Hospitals, Nampally (pre-defined by the hospital management).

**Sampling design:** According to the past records a proportion of 14:3:3 was observed and the same proportion was applied for the sample collection from the 3 OPDs. The sampling design for the same was stratified random sampling wherein the stratum was population with the knowledge of English/ Hindi language and then the sample was selected randomly.

**Inclusion criteria:**

- Patients/ attendants above the age of 16 years

**Exclusion criteria:**

- Patients/ attendants who are the part of the Hospital
- Mentally challenged patients
- Patients/ attendants with hearing or speaking disability
- Emergency patients and their attendants

**Mode of data collection:** Primary data through questionnaires

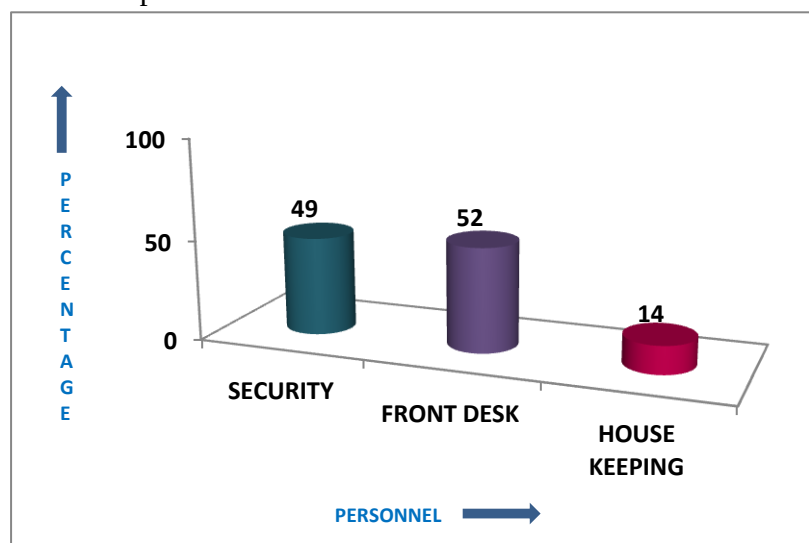
## TOOL FOR THE DATA COLLECTION:

A pre designed questionnaire was prepared to assess the patient/attendants' satisfaction which was quantitatively analyzed by assigning the values to the variables which were: Yes= +1, No= -1 and Not applicable=0

## DATA ANALYSIS:

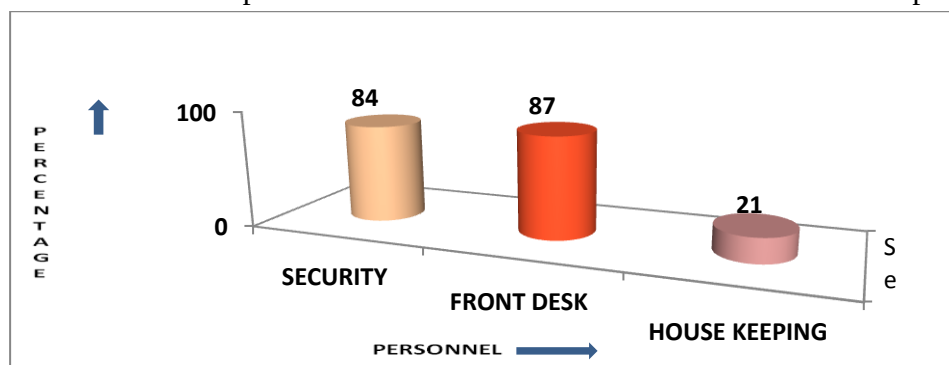
Total number of Respondents: 100

1. The following graph shows the percentage of patients/attendants who were greeted well by the various hospital personnel. It is seen that 49% of the patients/attendants were greeted by the security, 52% were greeted at the registration desk and 14% were greeted by the housekeeping staff. Lower percentage of the housekeeping staff can be attributed to the fact that maximum patients/attendants do not interact with the housekeeping staff.



Graph 8 A GRAPH SHOWING THE PERCENTAGE OF PERSONNEL WHO GREETED THE PATIENTS/ATTENDANTS

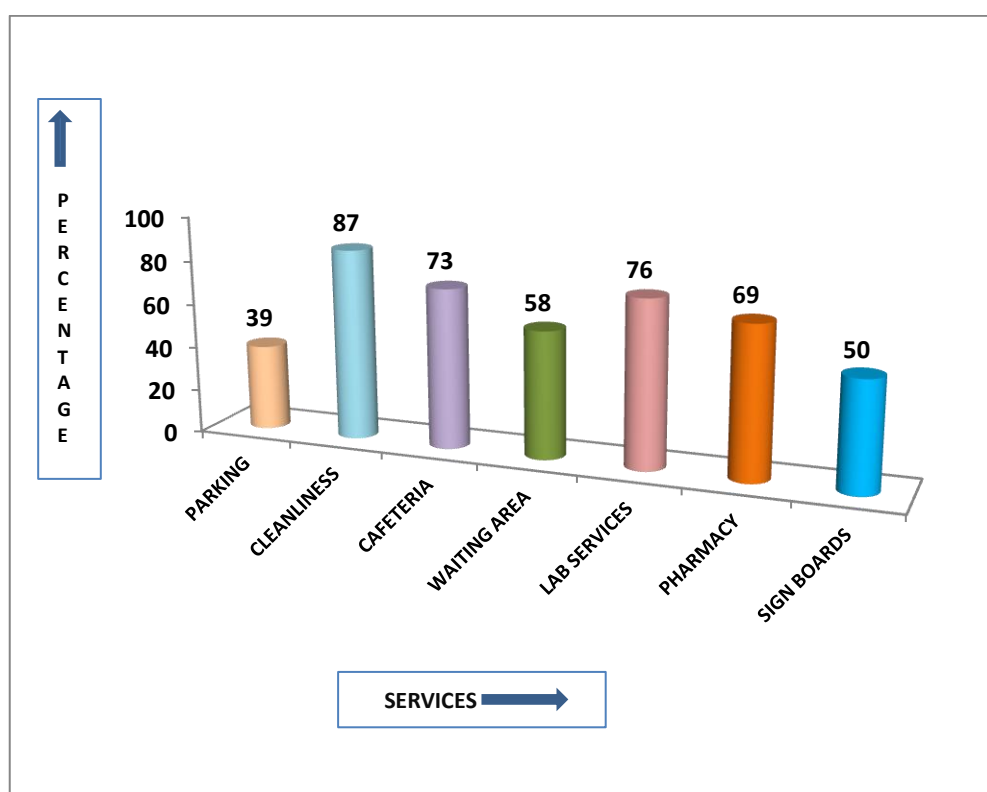
2. The following graph shows the percentage of patients/attendants who were guided well by the various hospital personnel. It is seen that 84% of the patients/attendants were guided by the security, 87% by the registration desk and 21% by the housekeeping staff. Lower percentage of the housekeeping staff can be attributed to the fact that maximum patients/attendants do not interact with the housekeeping staff.



Graph 9 A GRAPH SHOWING THE PERCENTAGE OF PERSONNEL WHO GUIDED THE PATIENTS/ATTENDANTS

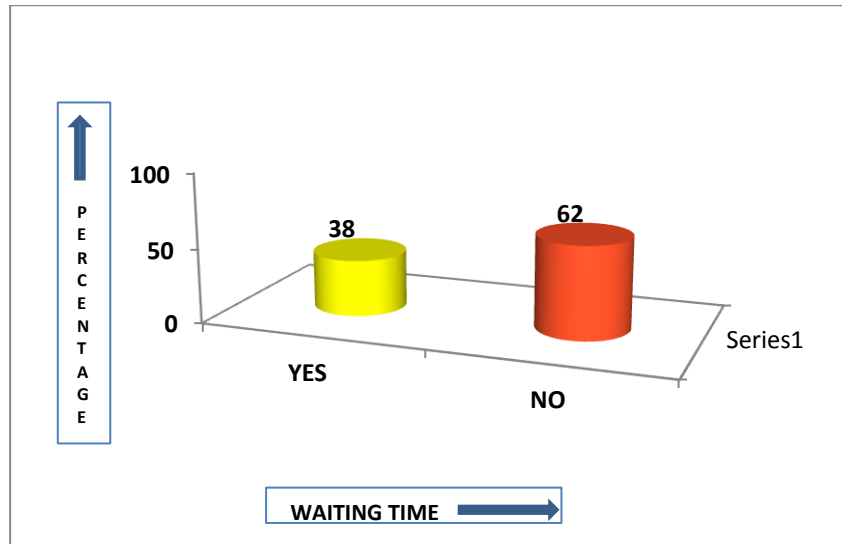
3. The following graph depicts the level of satisfaction of the patients/attendants with respect to the different facilities provided by the hospital. However it is to be noted that the total number of respondents for parking, cafeteria, pharmacy and laboratory services was variable due to the non applicability of these facilities to certain patients/attendants. The percentage was calculated by considering the total number of respondents for whom the services were applicable. They are as follows:
- 4.

| SERVICES                  | NUMBER OF RESPONDENTS |
|---------------------------|-----------------------|
| PARKING                   | 76                    |
| PHARMACY                  | 71                    |
| LABORATORY                | 74                    |
| CAFETERIA                 | 59                    |
| WAITING AREA, SIGN BOARDS | 100                   |



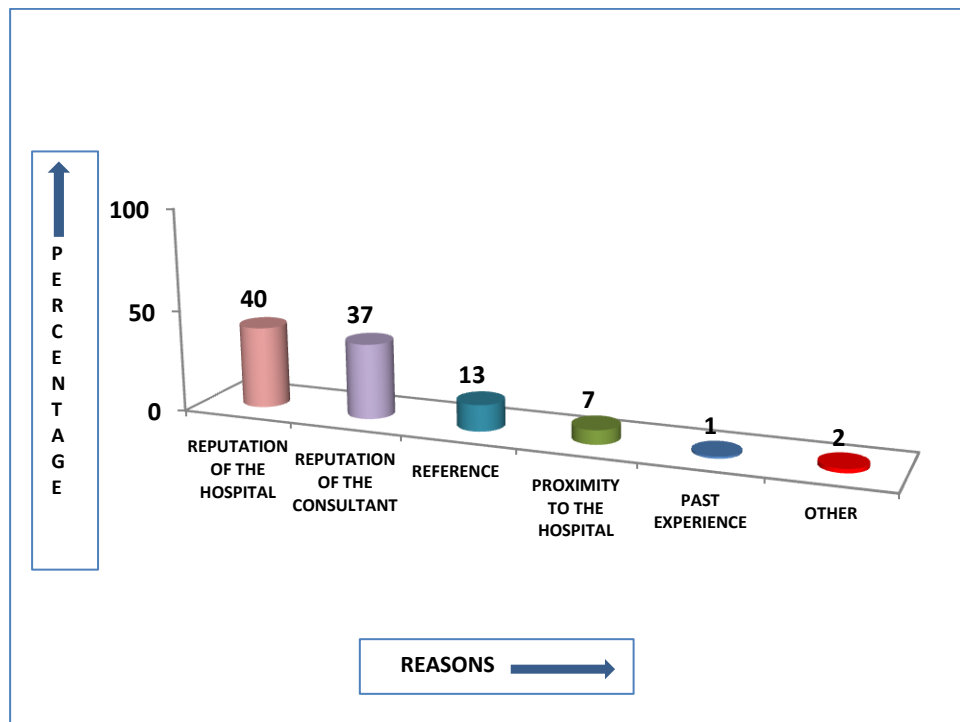
Graph 10 A GRAPH SHOWING THE PERCENTAGE OF SATISFIED PATIENTS BY THE HOSPITAL SERVICES

5. The following graph shows the percentage of satisfaction of the patients/attendants in regard to the waiting time at the OPD. It is seen that 38% of the patients/attendants are satisfied by the waiting time while remaining were dissatisfied.



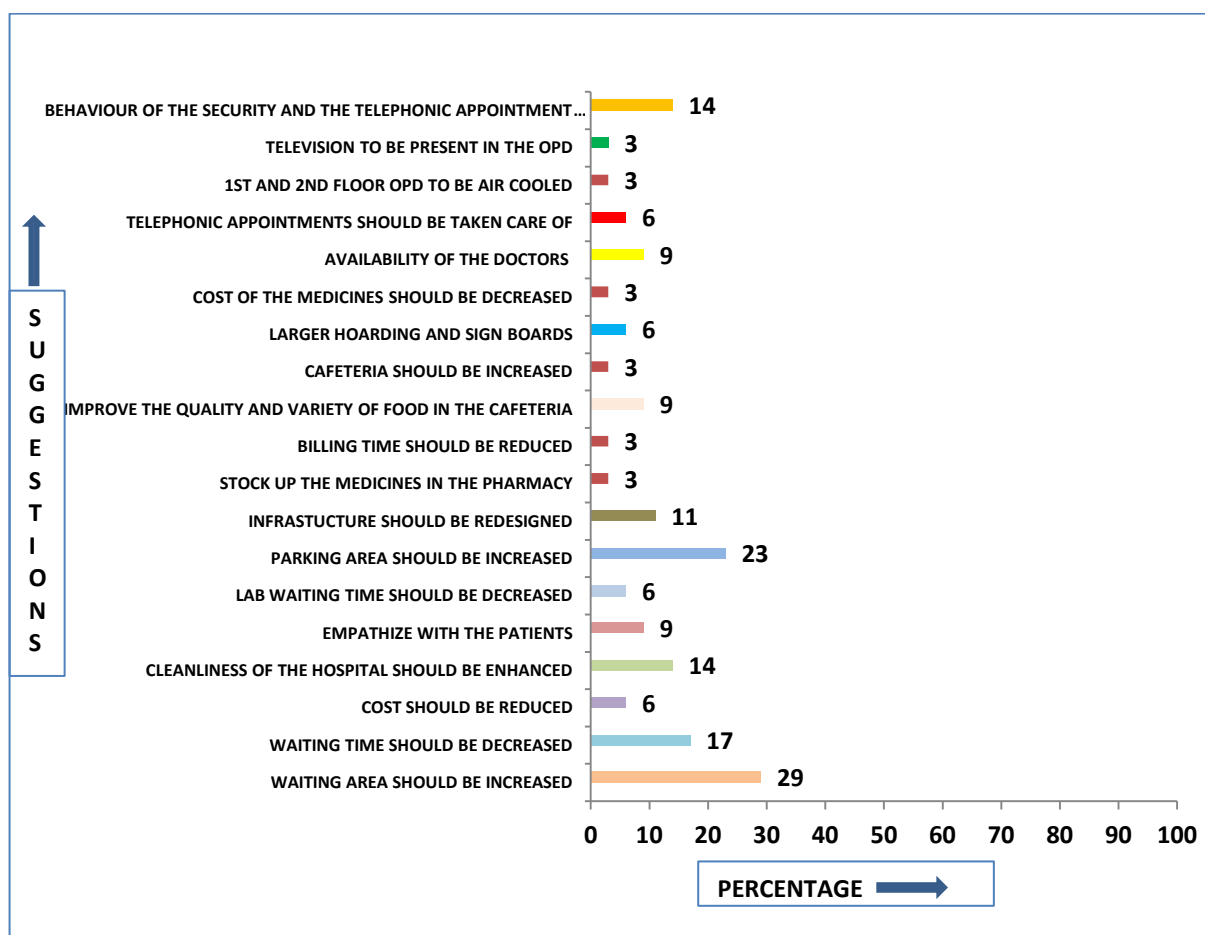
Graph 11 A GRAPH SHOWING THE SATISFACTION OF THE PATIENTS WITH RESPECT TO WAITING TIME

6. The following graph shows the reasons for which the patients/attendants chose CARE Hospitals. It can be noted that the maximum patients choose CARE Hospitals due to the reputation of the consultants followed by the reputation of the hospital. Other reasons like proximity and reference have also been recorded.



Graph 12 A GRAPH SHOWING THE REASONS WHY PATIENTS CHOOSE CARE HOSPITAL, NAMPALLY

7. The following graph shows the various suggestions offered by the patients/attendants for the improvement of the OPD facilities. It is seen that the maximum suggestion were offered in regard to improvement of the parking facilities, extending the waiting area and improving the behaviour of the security staff.



Graph 13 A GRAPH SHOWING THE PERCENTAGE OF SUGGESTIONS GIVEN BY THE PATIENTS

#### OBSERVATIONS APART FROM THE FINDINGS FROM THE TOOL:

- There is a dearth of sources of distraction for the patients as well the attendants in the waiting area to kill the long waiting hours.
- The Ist floor and the IInd floor OPDs lack an efficient cooling mechanism which makes it difficult for the patients to wait during summers.
- Adequate marketing of the hospital and the services it is providing is not up to the mark in the OPD.
- Due to the heavy patient load enough importance is not being given to the patients availing the telephonic appointments.

### **SUGGESTIONS:**

- In order to meet the challenges offered by inadequate parking area, the staff can be recommended to vehicle-pooling or the hospital may offer a shuttle for the employees.
- It is highly recommended that some sort of distraction like a muted television be installed in the OPD's waiting area to relieve the anxiety of the patients.
- Proper cooling mechanism of the OPDs should be done to make their visit comfortable
- The place chosen for the marketing of the hospital should be reconsidered. It is suggested that the pamphlets and the brochures are stacked in a stand which should be placed where the visibility and accessibility is the maximum.

### **CONCLUSION:**

The outpatient department is the face of any hospital. The services that are provided here set a standard and also create a long lasting impression on the minds of all the visitors. Since hospitals are no longer excluded from the commercialized industries and the competition faced by them, the value of the hospitality services is almost at par with the clinical services. Patient satisfaction therefore becomes an important measure while carrying out the futuristic planning of the hospital. If proper steps are taken, keeping in mind the suggestions of the patients, CARE Hospitals, Nampally can not only add more stars to its already existing brand name but also can generate better revenues.

# **A STUDY ON THE WASTAGE OF BLOOD AND ITS COMPONENTS IN THE BLOOD BANK OF CARE HOSPITALS, NAMPALLY**

## **INTRODUCTION:**

Blood is a specialized fluid which provides nutrients and oxygen to various body parts and hence it is very significant for human life and its transfusion is a life saving intervention. The most common reasons of usage of blood are surgery, anaemia, accidents, clotting disorders, burns, viral infections, skin disorders and dialysis. However, according to the WHO data, the demand for blood surpasses its supply in many countries and what is noticeable is that, in developing countries the supply is less than half of the demand. Since blood is a precious commodity, which countries like India with a population of about 120 million cannot afford to waste; this study at blood bank of CARE Hospitals, Nampally, focuses on identifying the reasons for the wastage of blood and its components and providing suggestions to minimize the preventable errors.

**RESEARCH QUESTION:** What are the reasons for the wastage of blood and its components in the blood bank of CARE Hospitals, Nampally

## **RESEARCH OBJECTIVES:**

- To find out the reasons for the wastage of blood and its components in the blood bank of CARE Hospitals, Nampally
- To give suggestions to reduce the preventable errors in the blood bank of CARE Hospitals, Nampally

## **REVIEW OF LITERATURE:**

- Kurup et al, 2016, in their research paper “*A study on blood product usage and wastage at the public hospital, Guyana*” stated that various factors leading to the wastage of blood products are broken bags, broken seal, expired units, return after 30 minutes, clotted blood or miscellaneous reasons due to lack of knowledge and awareness.
- Alcantara et al, 2014, in their study “*A comparative study on blood components utilization in selected hospitals-blood banks in Hail K.S.A*”, stated that the maximum utilization among the blood components is of packed cells, followed by fresh frozen plasma, followed by platelet concentrates. However, blood component therapy should be given only when the expected benefits to the patients out way the potential risks. Good inventory management is necessary to ensure appropriate utilization of a precious resource. Not holding enough products can potentially put patients at risk, however having too much inventory can increase the age of blood at transfusion and increase wastage. Inventory management encompasses all of the activities associated with ordering, storing, handling and issuing of blood products.
- Singhal et al, 2013, in their study “*A research analysis on blood components usage and wastage in blood bank and blood component centre*” stated that transfusion transmitted infections like HIV, HCV, Hepatitis B are major reasons for the discard of blood and the screening of blood is of utmost importance to prevent the spread of infections to others and preventing the donors from donating again. The major reason for the discard of RBC's was expiry followed by the detection of HBsAg and high bilirubin content. The most common



reason for the discard of FFP is breakage followed by high lipid, RBC contamination, HBsAg positive and high bilirubin. The maximum number of platelet concentrates units discarded are due to expiry ( around 82%) followed by HBsAg positive, high bilirubin and high lipid content. The main reason for discard of whole blood was quantity not sufficient (QNS), expiry, detection of HBsAg positive and HCV positive.

- Sharma et al,2014, in their study “*Causes of wastage of blood and blood components- A retrospective analysis*” stated that seropositivity, leakage, damage and expiry were the most common reasons for the discard of blood. The most common component discarded was platelets due to non utilization. Seropositivity of transfusion transmitted infections can be reduced by proper interview of donor while proper blood collection technique along with the continuous training of the phlebotomy staff can go a long way in reducing rejection due to inadequate quantity.

## **PROCESS OF PREPARATION OF VARIOUS COMPONENTS OF BLOOD:**

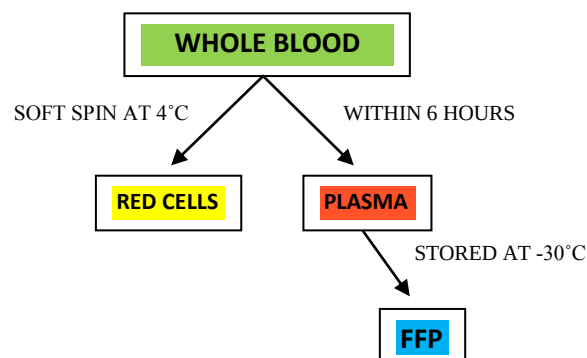
Blood components are derived from whole blood which is collected from the donors by the technique called phlebotomy. Blood components are separated by differential centrifugation. Various components derived from blood are RBCs, WBCs, plasma, platelets and cryoprecipitate.

**BLOOD COLLECTION:** At the donation site whole blood is collected from the ante cubital vein after the site has been cleansed and sanitized with iodine, alcohol, chlorhexidine based solution. Most blood is collected into different types of bags containing preservatives and anti coagulant solutions. The bags are:

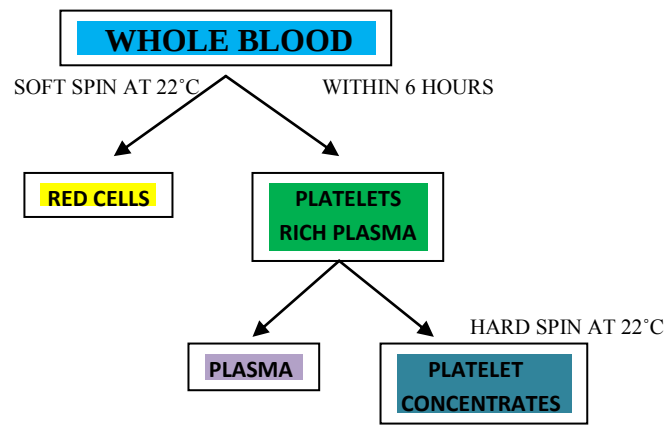
- Single bags(Whole blood)
- Double bags(Red cells +Plasma)
- Triple bags(Red cells+Plasma+Platelets)
- Quadruple bags(Red cells+Plasma+Platelets+Plasma factors)

## **PROCESSING OF BLOOD:**

### **PREPARATION OF RED CELLS AND FRESH FROZEN PLASMA (FFP)**

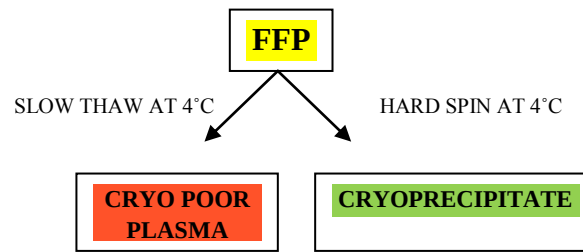


### **PREPARATION OF PLATELETS FROM WHOLE BLOOD**



Most platelet concentrates contain around 7000 per microlitres platelets in volume of 50 ml platelet rich plasma. However there is a method to obtain a minimum of 30000 per microlitres platelets in a volume of about 300 ml of blood which is equivalent to 4-6 whole blood derived concentrates. It is called **Single Donor Apheresis Platelets (Cytopheresis)**. The equipment and methodology for this is different from the whole blood derived platelets.

### PREPARATION OF CRYOPRECIPITATE



### SHELF LIFE AND STORAGE TEMPERATURES OF BLOOD AND ITS COMPONENTS:

| COMPONENTS      | SHELF LIFE | STORAGE TEMPERATURE |
|-----------------|------------|---------------------|
| WHOLE BLOOD     | 35 DAYS    | 2-6°C               |
| PACKED CELLS    | 35 DAYS    | 2-6°C               |
| PRP             | 5 DAYS     | 22-24°C             |
| FFP             | 1 YEAR     | -30°C               |
| CRYOPRECIPITATE | 1 YEAR     | -30°C               |

## METHODOLOGY:

It is a retrospective study in which data relating to collection and usage of blood and its components from January 2017 to March 2017 was collected and analyzed.

### DATA COLLECTION:

Data regarding the donation and discard of blood and its components for was collected from the database for 3 months starting from January 2017 to March 2017. Collected data was processed and categorized into the following categories:

1. Comparative utilization of components, and
2. Reasons for the discard of blood components

After the analysis and review, suggestions were provided to improve utilization of blood and its components.

### DATA ANALYSIS:

The following table shows the data for the comparative utilization of blood and its various components for the months of January, February and March 2017.

| COMPONENTS                | JANUARY | FEBRUARY | MARCH |
|---------------------------|---------|----------|-------|
| WHOLE BLOOD               | 4       | 12       | 1     |
| PACKED CELLS              | 331     | 313      | 333   |
| FFP                       | 164     | 144      | 133   |
| PRP                       | 82      | 76       | 56    |
| CRYOPRECIPITATE           | 18      | 32       | 0     |
| SINGLE DONOR<br>PLATELETS | 26      | 4        | 4     |
| TOTAL                     | 625     | 581      | 527   |

### ANALYSIS:

It is seen that the maximum utilization is of Packed cells followed by Fresh Frozen Plasma followed by Platelet Rich Plasma. However it is also seen that there is a dramatic fall in the utilization of Whole Blood, FFP, PRP and Cryoprecipitate in the month of March, 2017. It is also seen that the utilization of SDP is the highest in the month of January, the reason of which can be attributed to the high demand at CARE Hospitals, Nampally and CARE Hospitals, Banjara Hills.

The following table represents the units of blood and blood components prepared in the months of January, February and March, 2017.

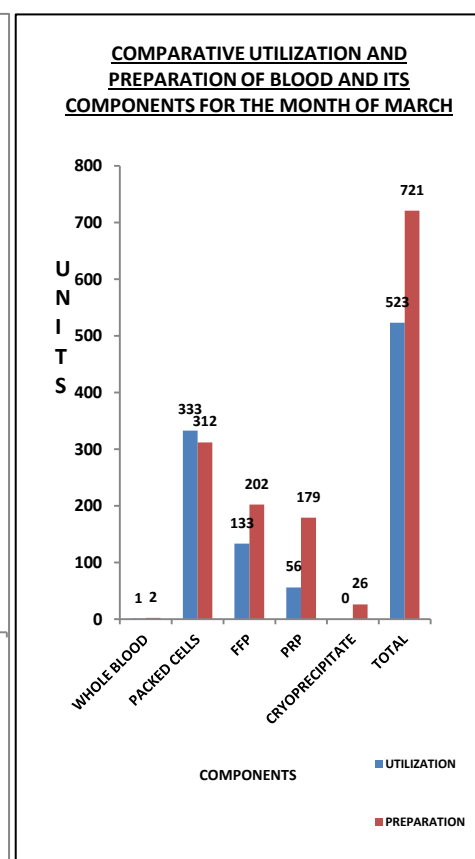
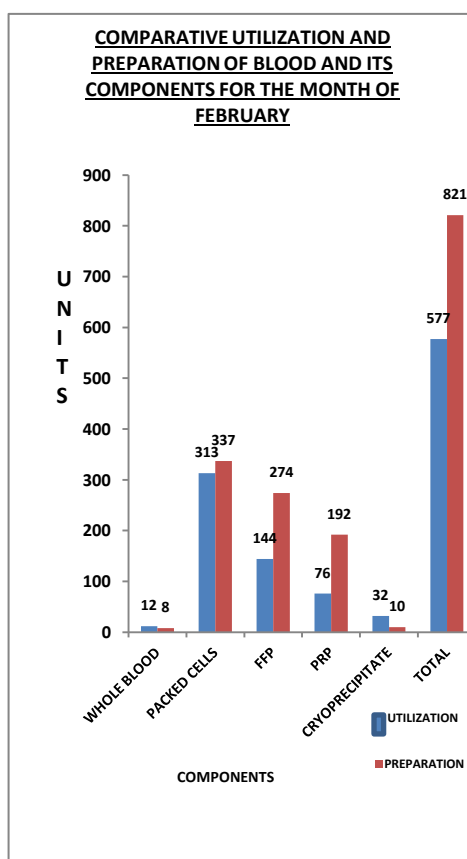
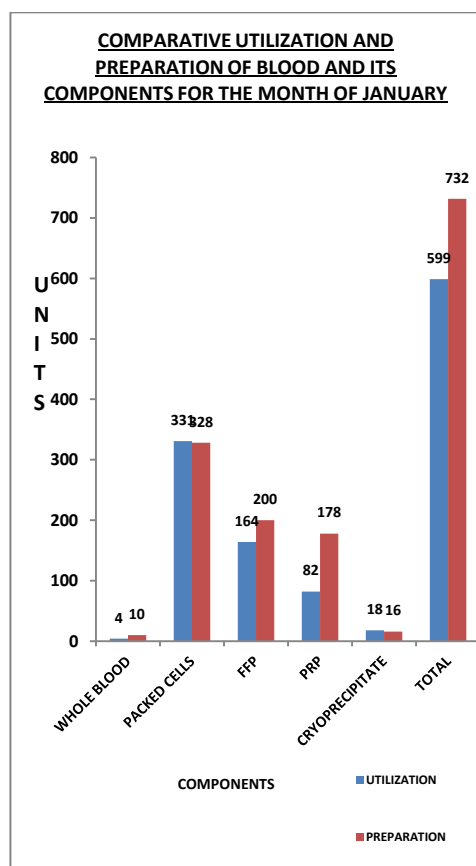
| COMPONENTS      | JANUARY | FEBRUARY | MARCH |
|-----------------|---------|----------|-------|
| WHOLE BLOOD     | 10      | 8        | 2     |
| PACKED CELLS    | 328     | 337      | 312   |
| FFP             | 200     | 274      | 202   |
| PRP             | 178     | 192      | 179   |
| CRYOPRECIPITATE | 16      | 10       | 26    |
| PHLEBOTOMY      | 1       | 1        | 0     |
| TOTAL           | 733     | 822      | 721   |

## ANALYSIS:

According to the data, it is seen that there is a dramatic increase in the preparation of various components of blood in the month of February, 2017 which can be attributed to the increased number of donations for the month. However it is seen that the preparation of PRP greatly exceeds its utilization and hence it becomes an area to be worked upon.

## A COMPARISON BETWEEN THE PREPARATION AND UTILIZATION OF BLOOD AND ITS COMPONENTS:

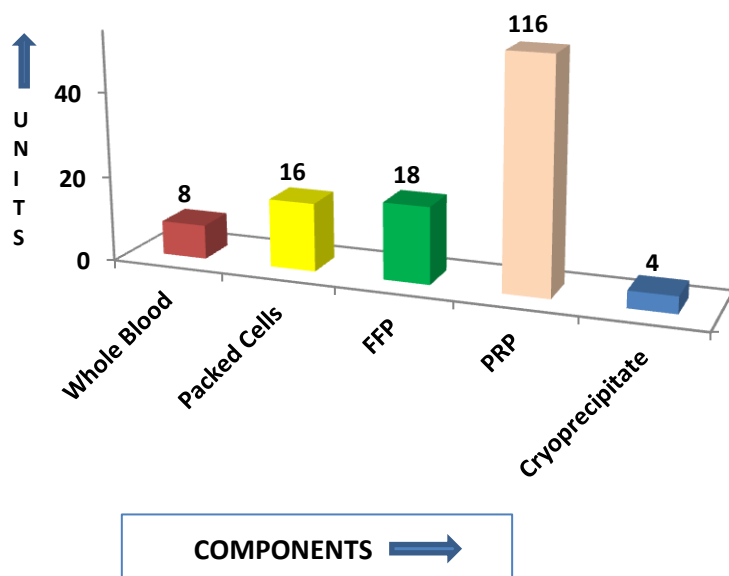
The following graphs show the comparison between the preparation and the utilization of the various components of blood. It can be seen that for the months of January and February the utilization of cryoprecipitate exceeds its preparation. Perhaps this is the reason for the increased preparation of cryoprecipitate in the month of March. Utilization of Packed cells is almost equal to its preparation in all the 3 months. However, it is noticeable that the utilization of platelet rich plasma (PRP) is dramatically lower than its preparation. Similar is the case with Fresh Frozen Plasma.



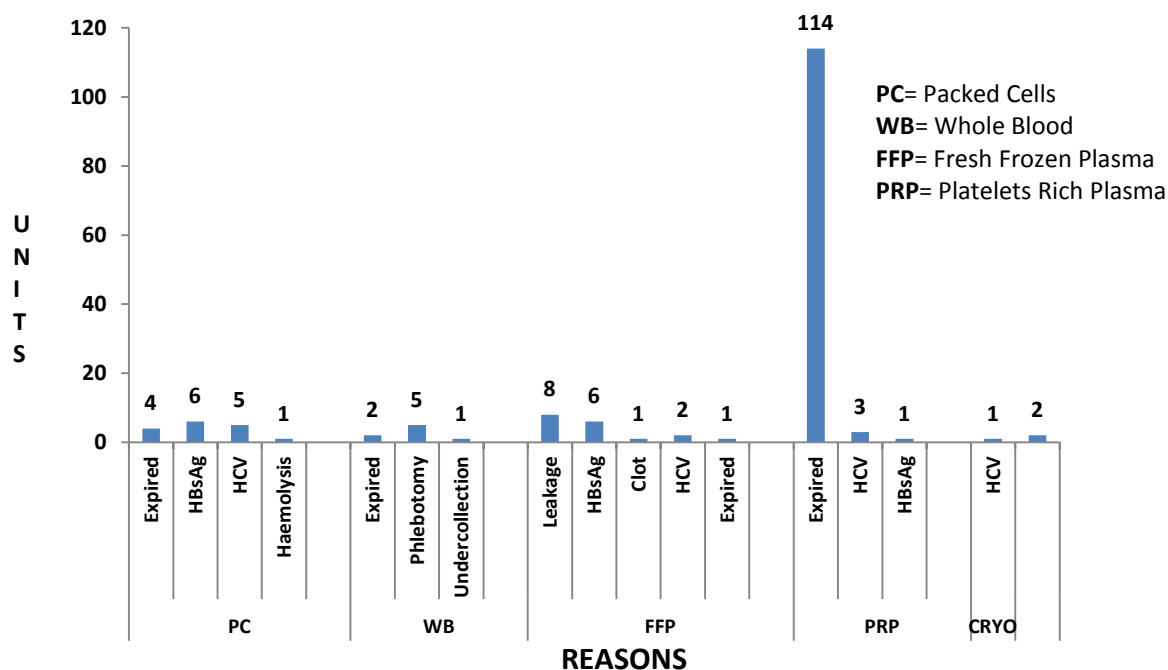
## ANALYSIS OF THE WASTAGE OF BLOOD COMPONENTS:

The following graphs shows the total units of blood and its components discarded and the reasons behind it for the period of study. It is inferred from the data that the maximum component being discarded at the blood bank was PRP and the major reason for it being the expiry of the component which can be attributed to the small shelf life of platelets.

**A GRAPH SHOWING THE TOTAL UNITS OF BLOOD AND ITS COMPONENTS BEEN DISCARDED**



**A GRAPH SHOWING THE REASONS FOR DISCARD OF BLOOD AND ITS COMPONENTS**



## GAPS:

In our retrospective study of 3 months at CARE Hospitals, Nampally; we have analyzed that the percentage of wastage of various components is as follows:

| COMPONENTS   | JANUARY  |           |           | FEBRUARY |           |           | MARCH    |           |           | AVERAGE % DISCARD |
|--------------|----------|-----------|-----------|----------|-----------|-----------|----------|-----------|-----------|-------------------|
|              | PREPARED | DISCARDED | % DISCARD | PREPARED | DISCARDED | % DISCARD | PREPARED | DISCARDED | % DISCARD |                   |
| WHOLE BLOOD  | 10       | 2         | 20.0      | 8        | 4         | 50.0      | 2        | 2         | 100.0     | 56.7              |
| PACKED CELLS | 328      | 2         | 0.6       | 337      | 6         | 1.8       | 312      | 8         | 2.6       | 1.7               |
| FFP          | 200      | 3         | 1.5       | 274      | 3         | 1.1       | 202      | 12        | 5.9       | 2.8               |
| PRP          | 178      | 47        | 26.4      | 192      | 20        | 10.4      | 179      | 49        | 27.4      | 21.4              |
| CRYO         | 16       | 0         | 0.0       | 10       | 2         | 20.0      | 26       | 2         | 7.7       | 9.2               |

According to the study this wastage can be attributed to the following reasons:

- Over preparation seems to be the major reason for the excessive discard of the blood and its components at the blood bank of CARE Hospitals, Nampally.
- Preventable human errors such as leakage and under collection have also been noted in some cases.
- A large number of units are discarded due to seropositivity.
- Higher demand for SDPs rather than PRPs due to lower number of platelets prepared by the centrifugal machine.
- Lack of following of universal precautions.
- Up to date maintenance of the records.

## SUGGESTIONS:

- A check on the over production and storage of components is advised and it is suggested that an average estimate of each component be made at the beginning of each month on the basis of the past records and a margin of error be kept.
- A tie up with various blood banks and certain specialty hospitals is advised so that the extra components can be supplied to them.
- It is advised that when the platelets reach 3.5 days of its shelf life various institutions other than the CARE family should be contacted to check the need for the same.
- It is advised that when the FFP and Cryoprecipitate reach 10 months of its shelf life various companies preparing Plasma derived medicines be contacted.
- Either a tie up with the companies producing albumin and globulin or an initiative to start the preparation of albumin and globulin within the hospital is advised to reduce the discard of FFP and Cryoprecipitate.
- A record should be kept of emergency donors who can be contacted at the time of unavailability.

- Up gradation of the inventory at the blood bank to improve the storage facilities.
- A regular training programme for all the blood bank technicians to upgrade their knowledge.
- Pre screening of the blood before collection is highly recommended to nullify the discard due to seropositivity.
- All the staff should be educated about the importance of following universal precautions to maintain the safety of the patients and self.
- Updating of the record books should be carried on a daily basis.

### **CONCLUSION:**

Blood is a precious resource and in an ideal setting the wastage of blood components should be zero. However attainment of this target is not possible due to various environmental and human factors. An effort has to be made to reach as close as possible to the target. Working upon some preventable errors and certain steps by the administration can help in reducing the discard of the blood and its components to a minimum level.

# A STUDY ON TURNAROUND TIME AT THE RADIOLOGY DEPARTMENT OF CARE HOSPITALS, NAMPALLY

## INTRODUCTION:

In today's healthcare environment radiology is being asked to be the medical six million dollar man- this specialty is expected to be better, stronger and faster than before. And integral to that achievement is the quickest radiology report turnaround time possible. The quest for the most rapid turnaround time isn't new. In many ways it is Holy Grail in radiology for nearly a decade. The question however that plaguing the providers is how fast is too fast. Turnaround times are variable. Some tests require 15 minutes while some might require more than an hour. This study aims to focus on the various steps that contribute in increasing the turnaround time and provide implementable solutions that can reduce it without affecting the diagnostic accuracy and the provider efficiency.

In this study we have considered 4 diagnostic procedures, namely:

- X-Ray
- Ultrasound
- MRI
- CT Scan

The standard turnaround time provided by the hospital has been compared to the average time being taken in these procedures and doing the root cause analysis of the factors causing delay.

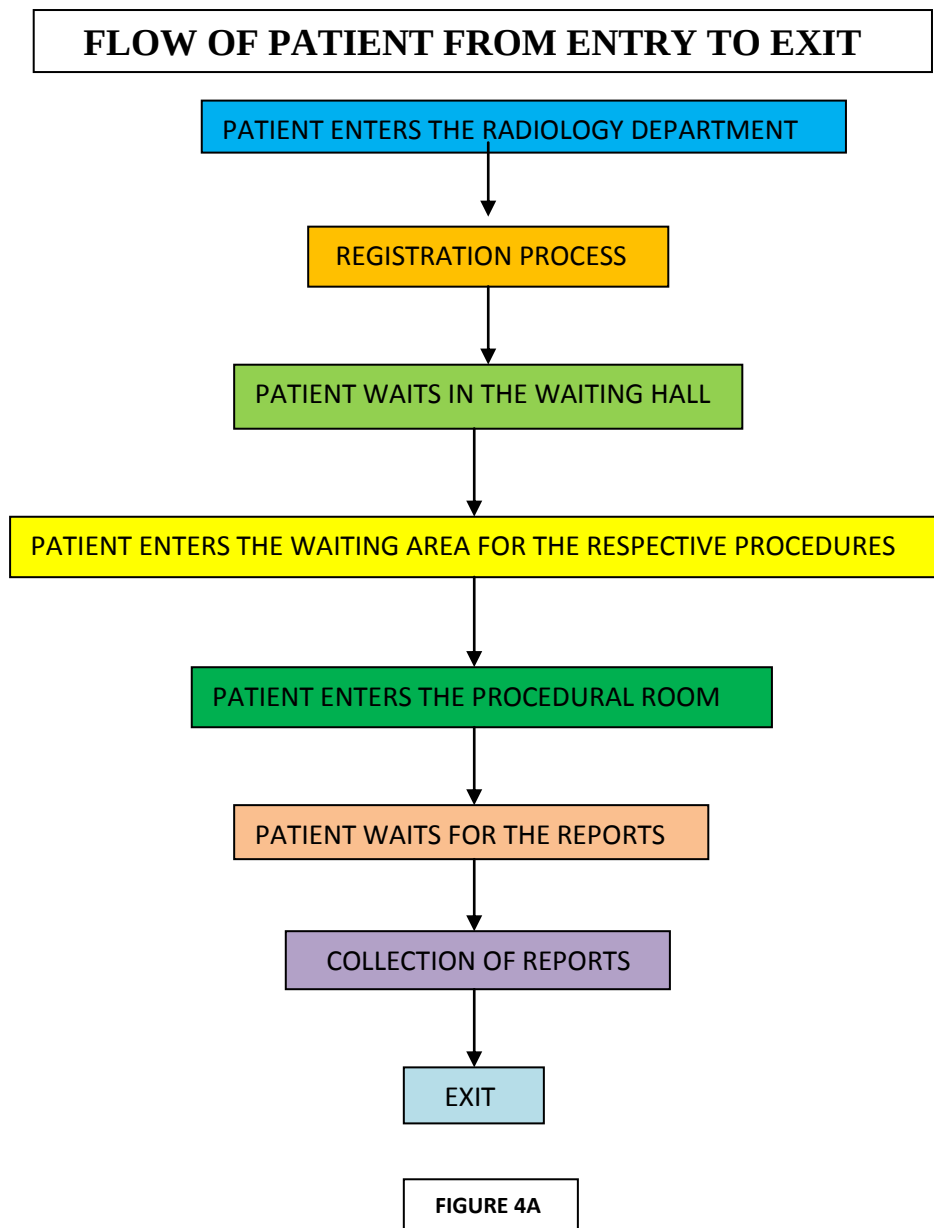
## PROCESS:

**Turnaround time:** It is defined as the total time taken from the registration to the report generation of any diagnostic procedure.

The standard turnaround time at CARE Hospitals, Nampally for various procedures is:

| PROCEDURE  | TURNAROUND TIME |
|------------|-----------------|
| X RAY      | 8 HOURS         |
| ULTRASOUND | 3 HOURS         |
| CT SCAN    | 8 HOURS         |
| MRI        | 8 HOURS         |





**RESEARCH QUESTION:**

- What is the average turnaround time of the diagnostic procedures at CARE Hospitals, Nampally?
- What are the factors leading to an increased turnaround time in the radiology department of CARE Hospitals, Nampally?

**PROBLEM STATEMENT:**

The increased turnaround time in the Department of Radiology at CARE Hospitals, Nampally.

**RESEARCH OBJECTIVE:**

- To perform root cause analysis of the factors causing an increased turnaround time in the radiology department of CARE Hospitals, Nampally.
- To provide implementable solutions to decrease the turnaround time in the radiology department of CARE Hospitals, Nampally.

## REVIEW OF LITERATURE:

- Brele et al, 2011; in their study “*Mapping turnaround time to a generic timeline: A systematic review of TAT definitions in clinical domains*”, concluded that the following 15 terms are the factors contributing to turnaround time: admission, order, biopsy/examination, receipt of specimen, procedure completion, interpretation, dictation, transcription, verification, report available, delivery, physician views report, treatment, discharge and discharge letter sent.
- Odhiambo et al, 2015; in their study “*The turnaround time for the patients undergoing ultrasound examination at the radiology department, Kentyatta National Hospital*”, stated that various factors leading to an increased turnaround time were power blackouts, improper registration system with no strict cues and burn out of the staff by working alone.
- Humphries et al, in their study “*Utilizing lean management technique to improve the turnaround time of CT Scan*”, stated that the various methods for improving the turnaround time were shifting the CT technologists hours to more appropriately covering the busier part of the day, use of wireless communication devices by the staff, allotment of daily scorecards by the supervisors to their technicians based on their performance and protocol change to reduce the indirect contrast used for CT.

**METHODOLOGY:** The study was carried out in the Radiology department of CARE Hospitals, Nampally.

**Research Design:** Descriptive cross-sectional study

**Period of study:** 2 weeks

**Sample design:** Non random purposive sampling technique

Sample size:

X-ray: 350

USG: 281

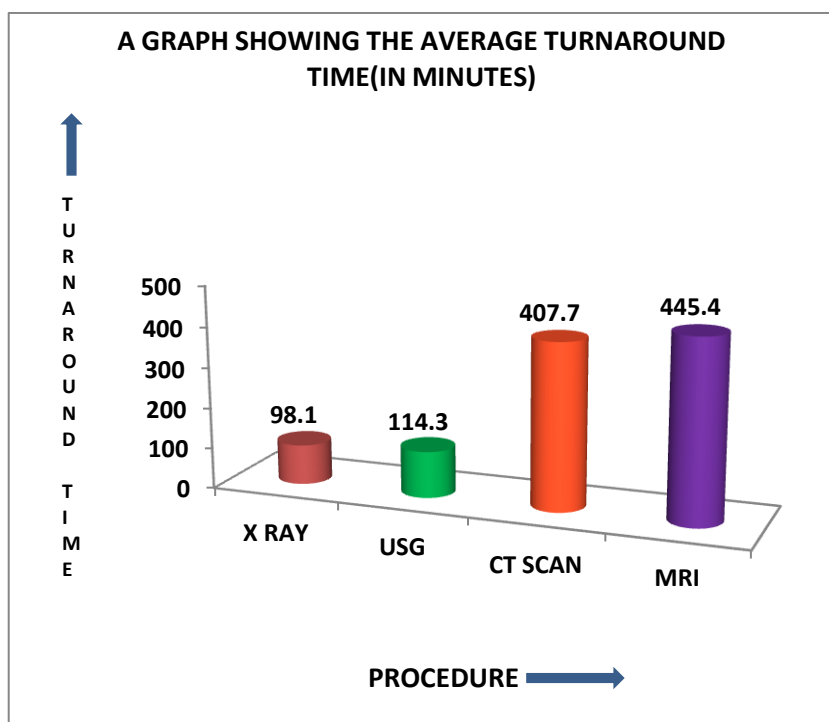
CT scan: 76

MRI: 141

**Mode of data collection:** Primary data through observation

## DATA ANALYSIS:

1. The following graph shows the average turnaround time taken for each of the 4 diagnostic procedures at CARE Hospitals, Nampally.



Graph 14 A GRAPH SHOWING THE AVERAGE TURNAROUND TIME(IN MINUTES)

2. The following table shows the average turnaround time taken by the various procedures along with the standard deviation for the each and the standard turnaround time decided by the hospital.

| PROCEDURES | STANDARD DEVIATION | AVERAGE | IN HOURS  | HOSPITAL'S TURN AROUND TIME |
|------------|--------------------|---------|-----------|-----------------------------|
| X-RAY      | 61.2               | 98.1    | 1.6 ± 1   | 8                           |
| USG        | 60.5               | 114.3   | 1.9 ± 1   | 3                           |
| CT SCAN    | 217.7              | 407.7   | 6.8 ± 3.6 | 8                           |
| MRI        | 174                | 445.4   | 7.4 ± 2.9 | 8                           |

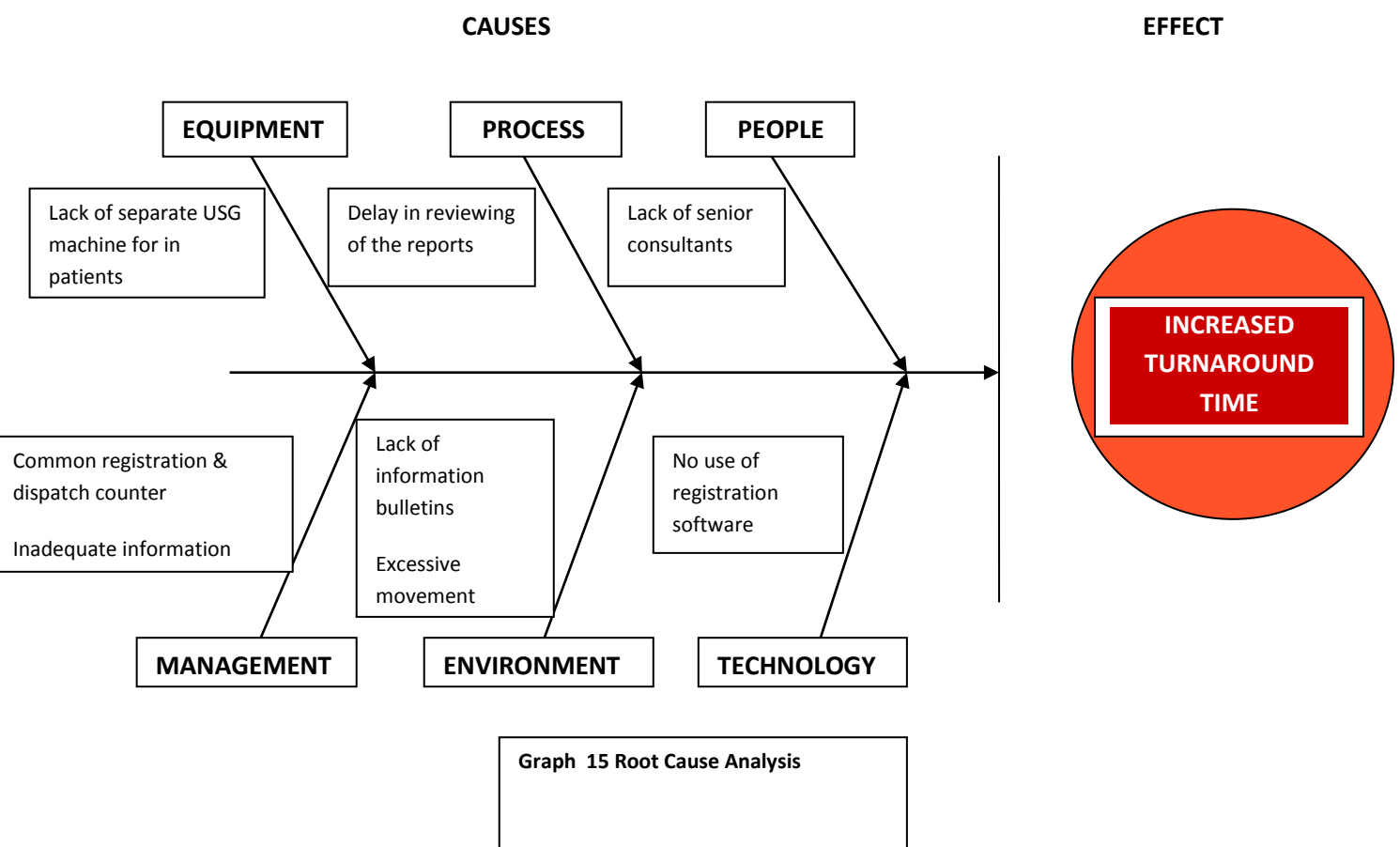
It can be seen that the turnaround time for X-ray and USG procedures falls in the range of the pre-decided hospital's turnaround time but it can also be seen that if the standard deviation for USG is added then the turnaround time is almost the same as the pre-decided hospital's turnaround time. Hence this procedure becomes an area to work upon.

Apart from these, the CT scan and MRI already exceed the hospital's turnaround time if the standard deviations are added which is a grave concern for the department.

## ROOT CAUSE ANALYSIS:

According to the observations, the following are the reasons leading to the increased turnaround time for the mentioned procedures:

1. Delay at the registration desk when only one registration staff is present.
2. Manual registration entry leading to increased time.
3. Excessive movement of the registration staff to the various departmental billing counters in turn making the new patients wait for the registration.
4. A common registration and report dispatch counter.
5. Inadequate information provided to the patients regarding bladder filling, in case of USG procedure leading decreased water intake by the patients and thus wastage of time inside the procedural room.
6. Lack of separate ultrasound machine for IPD patients.
7. Lack of senior medical consultant to review the reports hence causing excessive delay.
8. No prior information given regarding the removal of metallic items for procedures like x-ray, MRI and CT scan thus causing the delay inside the procedural room.
9. Lack of information bulletins in the waiting hall regarding the pre-procedural protocols to be followed by the patients.



## **SUGGESTIONS:**

### **1. Suggestions for the registration desk:**

- Registration desk should use software for registration which in turn should be connected to HIS and RIS.
- Common registration counter including the record of the vital information and the billing is suggested in place of the dual registration system currently present.
- Computerized check monitors should be installed at the registration desk wherein the patient can cross check his/her vital information to avoid insurance claim denials and exchange of reports.
- The registration and dispatch counter should be separate.
- A strong recommendation for the online dispatch of reports to the respective patients in order to avoid chaos and overcrowding in the waiting area.
- Tokens should be provided so that the patients have a fair idea of the time taken for their respective procedure thereby reducing the anxiety of the patients.
- Every married woman should be asked about their pregnancy status to avoid hospital induced radioactive hazard to the foetus.

### **2. Suggestions for the waiting area:**

- Every USG patient should be informed in advance about the importance of bladder filling and the approximate time taken for the same.
- Pictorial information bulletins should be put up in the waiting area having complete information about bladder filling, radioactive hazards, and items prohibited in the procedural room.
- A security guard should be appointed at the entry of the procedural room to limit the unwanted movement.

### **3. Suggestions for the Department:**

- A separate USG machine for the IPD patients is strongly recommended.
- An additional senior staff should be appointed in order to speed up the process of reports review by the DNB students.

### **4. Training programmes:**

- **For the registration staff:** An effective English speaking and personality development training programme should be held twice a month with regular follow ups.  
A knowledge enhancement programme regarding the various procedures should be organized so that the staff can impart information to the patients.
- **Common to all the staff:** An effective communication skill enhancement programme should be organized twice a month with regular follow ups.

A training programme based on lean sigma methodology is suggested in order to reduce the turnaround time by cutting the non value added stages and activities in the process, speeding up an reducing work through automation and improving work flow.

## **CONCLUSION:**

Radiology department is the centre which brings out the major chunk of revenue hence patient satisfaction in this area becomes more important than superficially evident. In today's world where time is more important than money, not respecting the patients' time implies playing with the hospital revenue. Hence it is strongly suggested that the standard turnaround time of the hospital should be brought down by at least 30% thereby increasing the patient satisfaction and aiding in the improvement of hospitals' revenue.

# **A STUDY ON ASSESSING THE REASONS BEHIND INSURANCE DENIALS AT CARE HOSPITALS, NAMPALLY**

## **INTRODUCTION:**

Health insurance is the insurance against the risk of incurring medical expenses among individuals. By estimating the overall risk of healthcare and health system expenses among a targeted group insurer can develop a routine financial structure such as a monthly premium or pay roll tax to ensure that money is available to pay for the healthcare benefits specified in the agreement. India has 29 non life insurance companies out of which 5 private sector insurers are registered exclusively in health, they are: Star Health and Allied Insurance Company limited, Apollo Munich Health Insurance Company Limited, Religare Health Insurance Company Limited and Cigna TTK Health Insurance Company. The government policies of insuring the uninsured has gradually pushed the insurance penetration in the country and proliferation of insurance schemes are expected to catapult this key ratio beyond 4% by the end of this year.

In CARE Hospitals, Nampally, patients can be divided into 4 categories:

- Arogyashree
- Credit patients(CGHS, EHS)
- Cash patients
- Insurance patients

Since the Arogyashree and credit patients contribute to the minimum in profit making and revenue generation, the payment made by the cash and the insurance patients become the only source of revenue making. The hospital therefore should aim at increasing the number of insurance patients and reduce the denials of insurance to the minimum.

## **PROBLEM STATEMENT:**

Increased number of insurance denials at CARE Hospitals, Nampally.

## **RESEARCH QUESTION:**

What are the reasons behind the insurance denials at CARE Hospitals, Nampally?

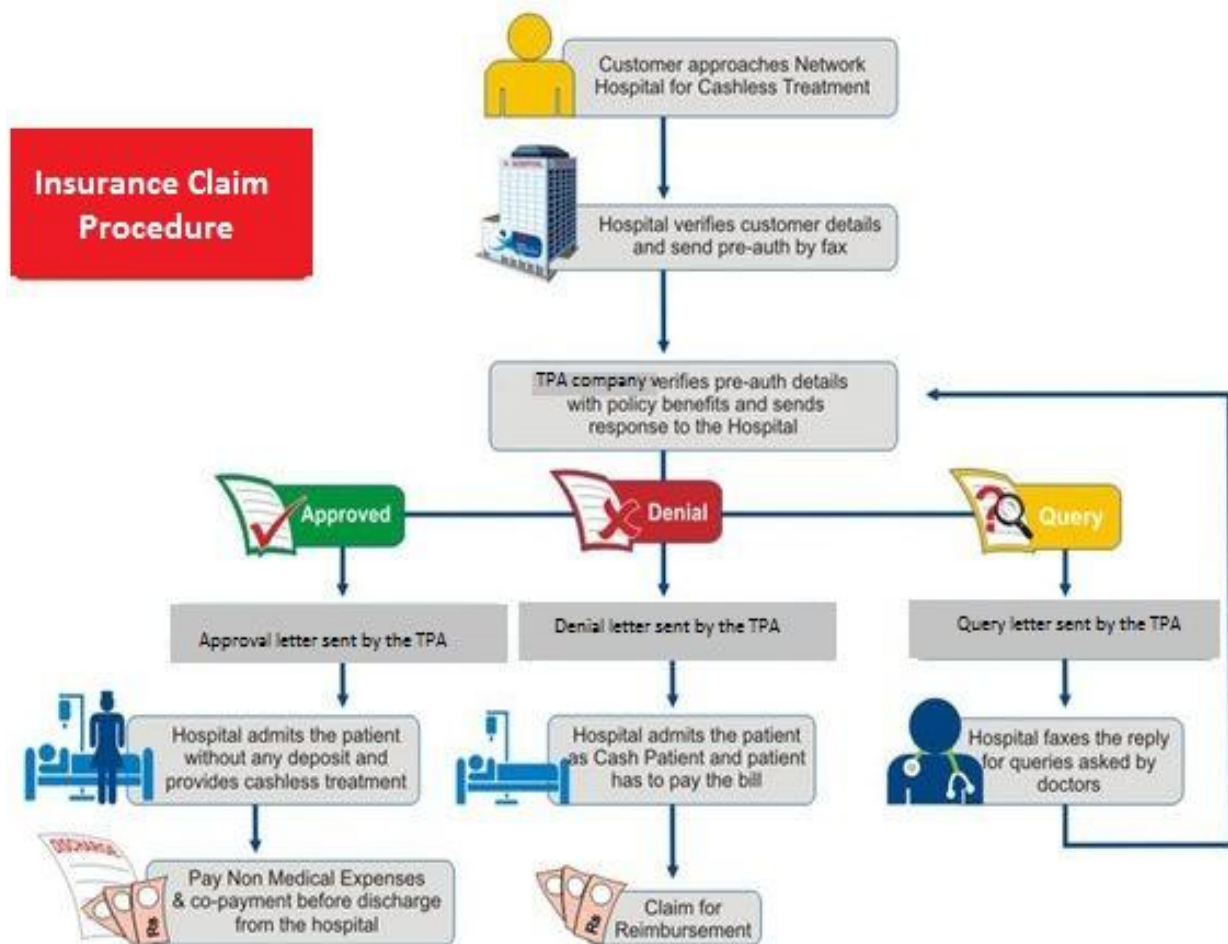
## **RESEARCH OBJECTIVE:**

- To find the reasons behind the insurance denials at CARE Hospitals, Nampally
- To suggest ways by which the insurance denials can be reduced at CARE Hospitals, Nampally

## REVIEW OF LITERATURE:

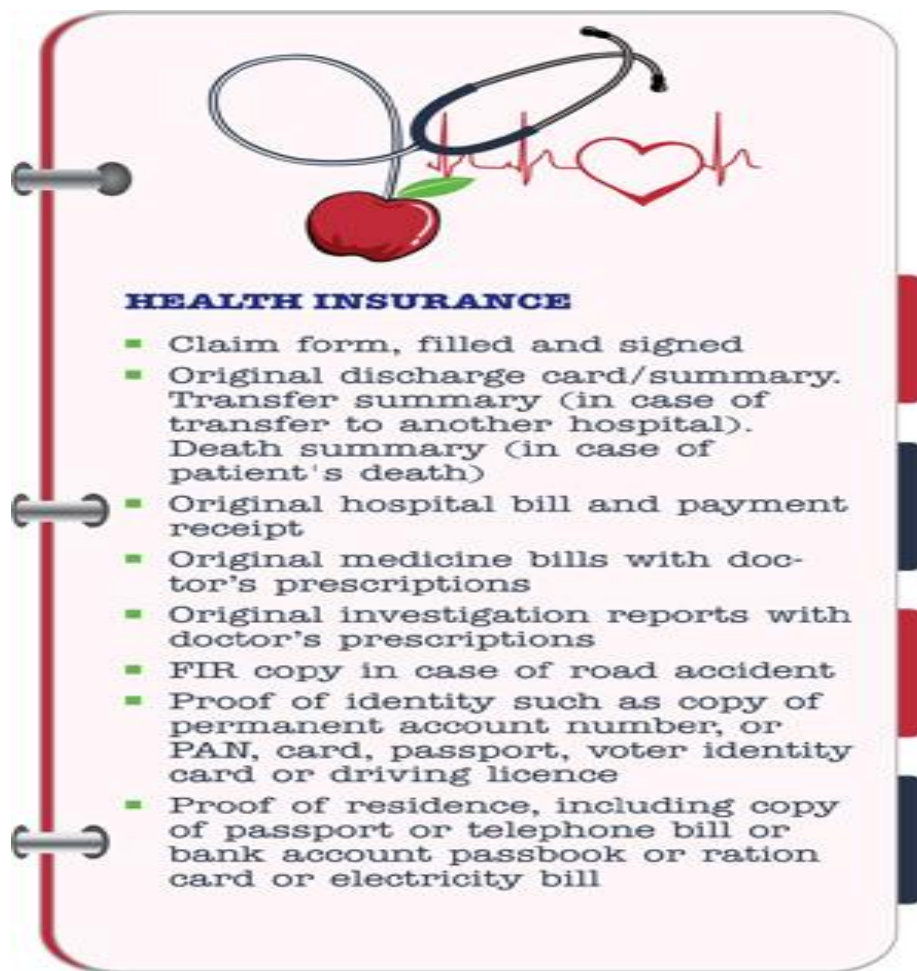
- A study by Harold Gipson, 2103; claims that the common reasons for the medical claims being rejected are :
  - a. Excessive time taken to file a claim
  - b. Vital information missing
  - c. Improperly filled pre authorization form
- A study by GAO in the year 2011, found that the various reasons for coverage denials are billing errors, duplicate claims, missing information and eligibility issues.
- A study by Woodcock, “ Denial Management: Field tested techniques that get claims paid”, states that various reasons for denials are procedure code is not consistent, care may be covered by another payer, services not authorized by the designated providers and the procedure/treatment is deemed investigational by the payer.

## INSURANCE CLAIM PROCEDURE:



Graph 16 Insurance Claim Procedure





Graph 17 DOCUMENTS REQUIRED AT THE TIME OF ADMISSION OF INSURANCE PATIENT:

## METHODOLOGY:

The study was carried out in the insurance and billing department of CARE Hospitals, Nampally for the period of 2 weeks.

**Research Design:** Exploratory retrospective study

**Period of study:** 2 weeks

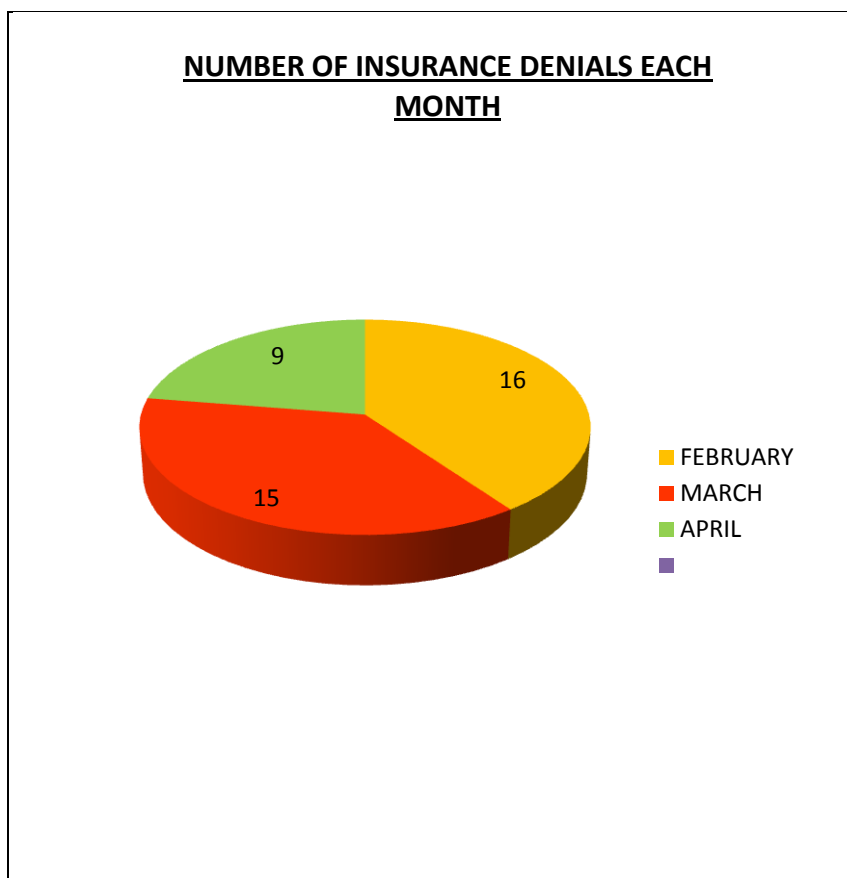
**Mode of Data Collection:** Secondary Data

**Tool for Data Collection:** The preauthorized forms of the denied Insurance Claims in the last 3 months were collected from the Insurance Department and reasons for the denials were noted.

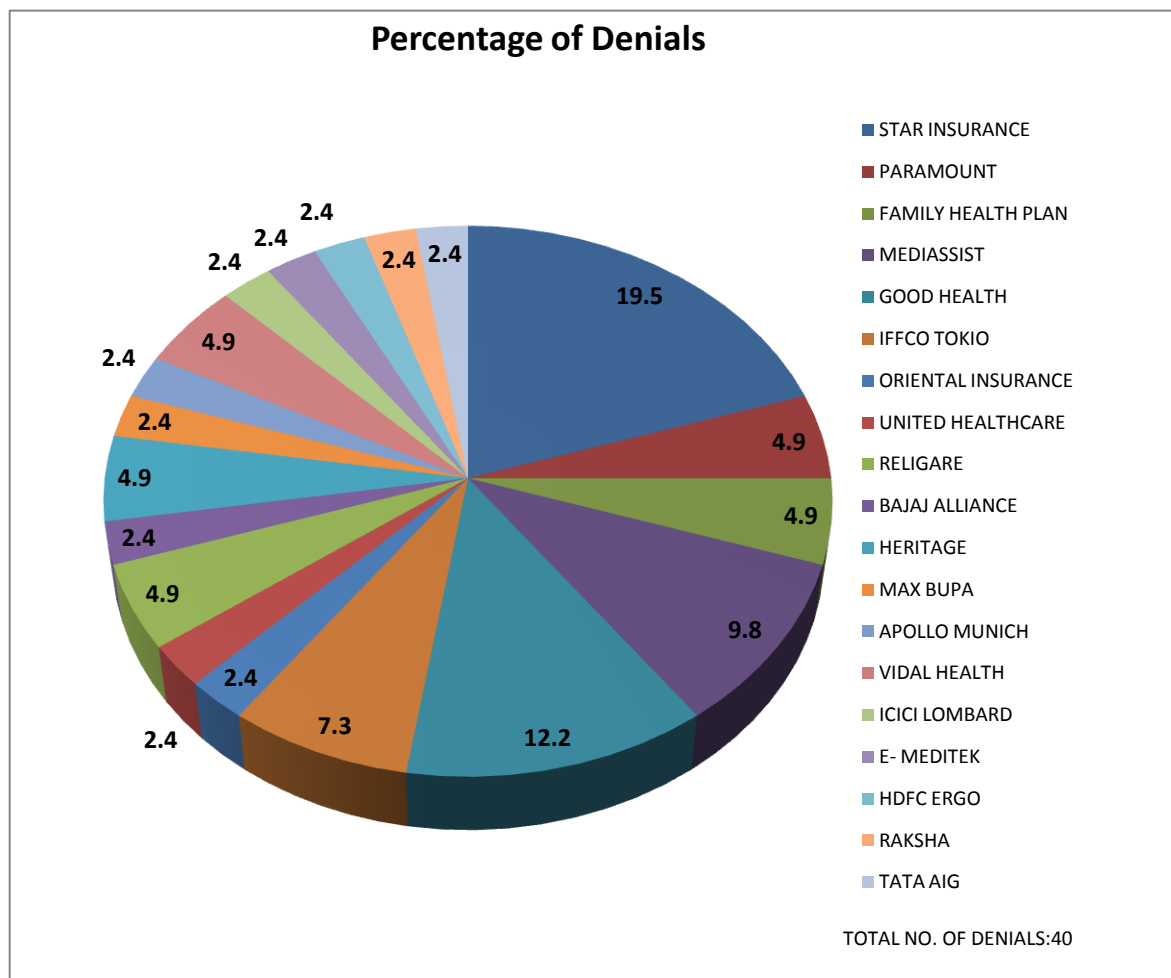
**Limitation of the Study:** There is no record maintained in hard copy or in soft copy of the denied Insurance Claims. Hence, there is no substantial evidence to conclude that the data collected was a comprehensive one. The possibility of understatement of the denied Insurance Claims cannot be ruled out.

## DATA ANALYSIS:

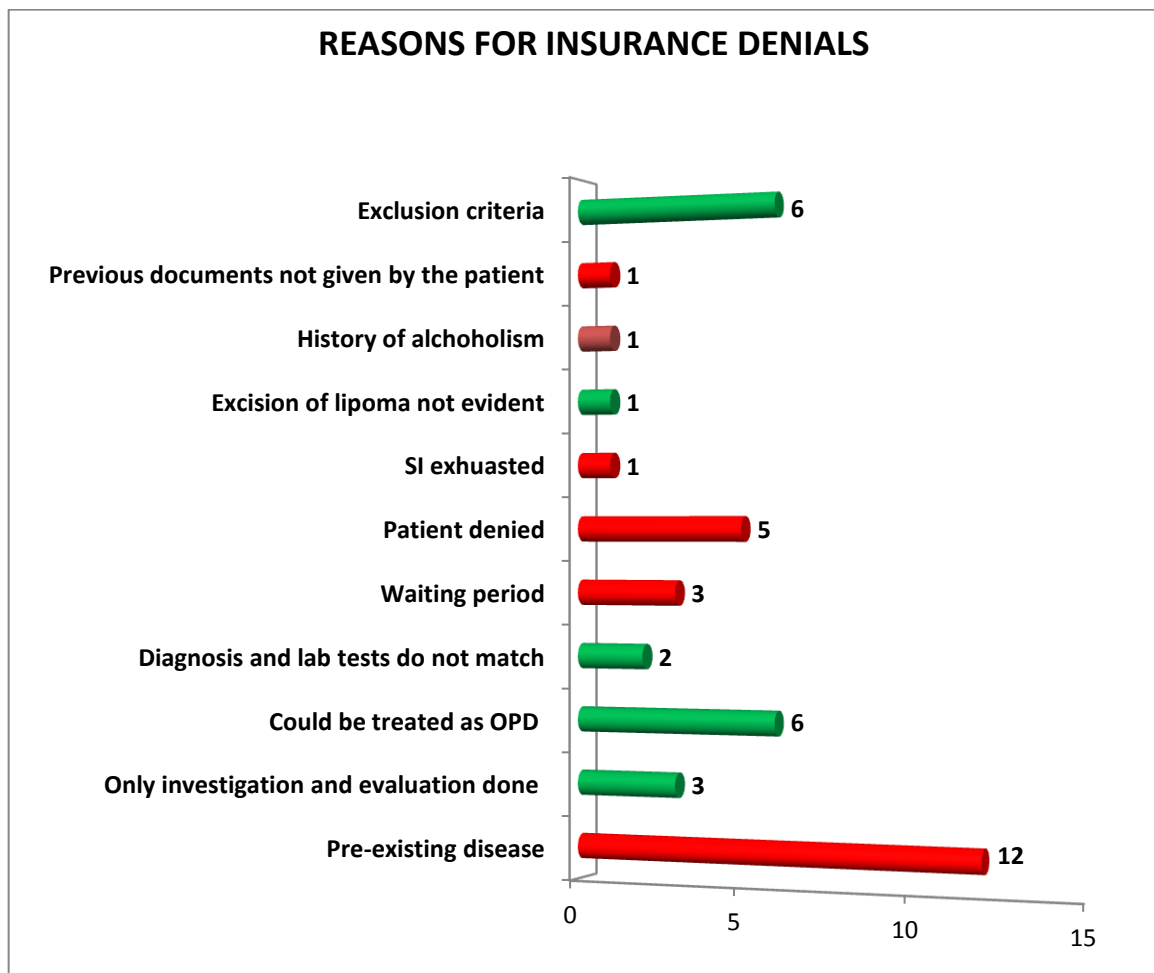
1. The following pie diagram shows the number of denials from the month of February to April, 2017 from the available data. The maximum number of insurance denial was seen in the month of February followed by the month of March, 2017.



2. The following graph shows the percentage denials by each TPA for the month of February, March and April, 2017. It can be seen that the maximum percentage of denial is from Star Insurance Company followed by Good Health Pvt Limited and so on.



3. The following graph shows the reasons for the denials of insurance claims. It is seen that non disclosure of the pre existing diseases forms the major reason followed by the insurance company's exclusion criteria. However about 30% of the denials are preventable by the hospital authority.



**GAPS:**

1. Improper maintenance of denial records.
2. No proper checklist provided to the patient/attendant at the time of admission.
3. The claims of excluded diseases such as sleep apnoea and suicidal tendency are being sent for insurance claim.
4. Claims of insurance where no active line of treatment is followed are being sent for claim approval.
5. Mismatch between investigation and diagnosis is being recorded by the TPA Company.
6. No record of insurance patients turning into cash patients being maintained.

### **SUGGESTIONS:**

1. Maintaining a hard as well as soft copy record of the insurance denials with daily updation of the same.
2. Proper checklist of all the required documents for the insurance claim to be provided to the patient/attendant at the time of admission.
3. Insurance claims of excluded diseases and investigatory procedure not to be sent for insurance approval.
4. Proper documentation justifying the need of hospitalization and the diagnostic tests conducted to be sent to the TPA Company.
5. Maintaining a record of insurance patients turning into cash with the reason for the same.
6. PRE staff can verify the waiting period of the policy before sending the claim.
7. A proper interaction between the patient/attendant and the insurance claim dealing staff regarding the time of purchase of the insurance policy can be carried out to reduce the denials during the activation time of the respective policy.

### **CONCLUSION:**

Insurance is the buzz word in today's healthcare industry. The government is putting in efforts to ensure that each citizen has a health insurance policy. Since the future of healthcare market is highly dependent on the insurance sector, denials are the most unwelcomed thing for the industry which has recently turned into revenue making one. It is imperative that maximum efforts are made to reduce the managerial problems at the hospital level so that the number of denials is reduced to the minimum.

## ANNEXURE 1:

### QUESTIONNAIRE TO ASSESS EFFECTIVENESS OF COMMUNICATION IN THE IPD OF CARE HOSPITALS, NAMPALLY

AGE:

GENDER:

| Did the following personnel:                                  | SECURITY | FRONT<br>DESK | CONSULTANT/<br>RESIDENT<br>DOCTOR | NURSES | HOUSEKEEPING | PRE | PWO |
|---------------------------------------------------------------|----------|---------------|-----------------------------------|--------|--------------|-----|-----|
| 1. Greet you                                                  |          |               |                                   |        |              |     |     |
| 2. Introduce themselves to you                                |          |               |                                   |        |              |     |     |
| 3. Recognize you by your name                                 |          |               |                                   |        |              |     |     |
| 4. Guide you whenever and<br>wherever required                |          |               |                                   |        |              |     |     |
| 5. Face problem understanding<br>your language or vice versa  |          |               |                                   |        |              |     |     |
| 6. Understand whatever you<br>wanted to convey and vice versa |          |               |                                   |        |              |     |     |
| 7. Show polite gestures                                       |          |               |                                   |        |              |     |     |
| 8. Listen to you carefully and<br>completely                  |          |               |                                   |        |              |     |     |
| 9. Show courtesy towards you                                  |          |               |                                   |        |              |     |     |
| 10. Were you happy with the<br>behaviour of                   |          |               |                                   |        |              |     |     |

## **ANNEXURE 2:**

### **QUESTIONNAIRE TO ASSESS PATIENT SATISFACTION IN OPD OF CARE HOSPITALS, NAMPALLY**

#### **I. SOCIO-DEMOGRAPHIC FACTORS:**

1. Age: \_\_\_\_\_ 2. Gender: \_\_\_\_\_ 3. Education: \_\_\_\_\_  
4. Occupation: \_\_\_\_\_ 5. Marital status: \_\_\_\_\_

**1. Were you greeted by the following personnel?**

YES NO

- a. Security
- b. Front Desk
- c. Housekeeping

**2. Were you guided by the following personnel?**

YES NO

- a. Security
- b. Front Desk
- c. Housekeeping

**3. Are you satisfied with the following:**

YES NO

- a. Parking
- b. Cleanliness
- c. Accessibility of the cafeteria
- d. Waiting area
- e. Lab services
- f. Pharmacy services

**g. Sign boards**

**4. Was the waiting time the same as communicated to you?**

**a. Yes**

**b. No**

**5. Why did you choose CARE?**

- **Reputation of the hospital**
- **Reputation of the consultant**
- **Reference from friends/ relatives**
- **Proximity to the hospital**
- **Previous experience**
- **Any other, please mention: \_\_\_\_\_**

**SUGGESTIONS:**



### ANNEXURE 3

| S. No. | Name of the Department                                 | Date(s)<br>of Visit       | Interacted with (Name and Designation) |
|--------|--------------------------------------------------------|---------------------------|----------------------------------------|
| 1.     | Non Clinical<br>Departments(Observational<br>Learning) | 3/04/2017-<br>10/04/2017  | Head of the Departments                |
| 2.     | In Patient Department                                  | 11/04/2017-<br>26/04/2017 | Dr. Sandeep Patel, FCOO                |
| 3.     | Out Patient Department                                 | 11/04/2017-<br>26/04/2017 | Mr. Suba Rao, HOD                      |
| 4.     | Blood Bank                                             | 27/04/2017-<br>11/05/2017 | Dr. Sucharita, HOD                     |
| 5.     | Radiology Department                                   | 12/05/2017-<br>26/05/2017 | Dr. T.R. Nagendra, HOD                 |
| 6.     | Business and Development<br>Department                 | 19/05/2017-<br>2/06/2017  | Mr. Venu Gopal, HOD                    |

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