

Summer Training

At



Fortis Hospital Shalimar Bagh

(April 1 to May 31st, 2015)

- A Composite study on waiting time in various Out-Patient Departments and gap analysis.

By

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MBA Hospital and Health Management

2014-2016



Institute of Health Management Research, Jaipur

CERTIFICATE

This is to certify that Parul V Garg has undergone the summer training in Fortis Hospital Shalimar Bagh, Delhi from 1st April, 2015 to 31st May, 2015. The candidate herself carried out the study titled 'A Composite study on waiting time in various Out-Patient Departments and gap analysis.' Her approach of the study has been scientific and analytical.

The summer training is partial fulfillment of the course requirement recommended for the award of Masters of Business Administration in Hospital and Health Management.

I wish her success in all her future endeavors.



Col. (Dr.) Ashok Kaushik

Dean (Academic and Student Affair)

IIHMR University



Dr. Barun Kanjilal

Professor

IIHMR University

1st June 2015

TO WHOMSOEVER IT MAY CONCERN

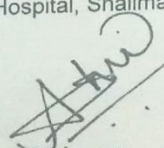
This is to certify that **Ms. Parul V Garg** from **IIHMR University, Jaipur** has successfully completed her training from **1st April 2015 to 31st May 15** in Operations Department of this hospital. She has duly completed her project on "**Analysis of waiting time in OPD**".

Any information used to complete the project is the intellectual property of Fortis Hospital Shalimar Bagh and hence should not be used for any other purpose.

During the training her performance was good.

We wish her all the best for all her future endeavors.

For **Fortis Healthcare Ltd**
Fortis Hospital, Shalimar Bagh


Ashwin Divakaran
Zonal Head – Human Resources



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 **Fortis SPECIALITY** Hospital

ACKNOWLEDGEMENT

The study has been a novel learning experience as being a first exposure to hospital industry. This study helped in understanding and learning the hospital setup, its various departments, their functioning and their interrelations. However, none of this would have been ever possible without the priceless support of several people. I wish to take this opportunity to express my deepest gratitude to all of them who have made this endeavour a success.

I am highly obliged to Dr S.D. Gupta (Director, IIHMR Jaipur) Col. (Dr) Ashok Kaushik (Dean Academics and Student Affair, IIHMR Jaipur) for providing such a great opportunity. I am also thankful to my mentor Dr Barun Kanjilal for being a constant source of guidance and support.

I own my profound gratitude to Dr Rajeev Nayyar (Medical Superintendent) for his keen interest, constant guidance, encouraging appreciation and solemn advice throughout the project.

I would also like to thank Ms Charu Batra (Coordinator Medical Services), Ms. Sherly Joseph (Senior PCS Supervisor), Ms. Reema and Ms. Shelja (PCS) for giving me all the information and support required to complete my summer training. I would like to extend my thanks to the management, medical and paramedical staff of Fortis Hospital, Shalimar Bagh. Being beehive of activities, it was great experience as hospital management trainee at Fortis Healthcare Limited.

I would like to thank all the others who left their mark in the project and helped me in spite of their busy schedule and hectic work hours. Last and not least, I acknowledge the moral support of my parents, family members and friends during summer training.

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ACRONYMS/ABBREVIATIONS

- ✓ ANM- Auxiliary Nurse Midwife
- ✓ CN – Clinical Nutritionist
- ✓ CN&D – Clinical Nutritionist and Dietician
- ✓ EUS- Endoscopic Ultrasound
- ✓ ECBC- Energy Conservation Building Code
- ✓ ERCP's- Endoscopic Retrograde Cholangio Pancreatography
- ✓ EUS- Endoscopic Ultrasound
- ✓ FHL-Fortis Healthcare Limited
- ✓ FHSB-Fortis Hospital Shalimar Bagh
- ✓ FICCI- Federation of Indian Chambers of Commerce and Industry
- ✓ GNM- General Nurse Midwife
- ✓ GRIHA- Green Rating Integrated Habitat Assessment
- ✓ IPD- In-Patient Department
- ✓ MLC- Medico-Legal Cases
- ✓ MRD- Medical Record Department
- ✓ OPD- Out-Patient Department
- ✓ PCS- Patient Care Services
- ✓ REL-Religare Enterprise Limited

INTRODUCTION TO FHL



Fortis Healthcare Limited is a leading integrated healthcare delivery service provider in India. The healthcare verticals of the company primarily comprise hospitals, diagnostics and day care specialty facilities. The company operates its healthcare delivery services in India, Dubai, Mauritius and Sri Lanka with 54 healthcare facilities (including projects under development), approximately 10,000 potential beds and 260 diagnostic centers.

Vision

“Saving and Enriching Lives”

Mission

"To be globally respected healthcare organization known for Clinical Excellence and Distinctive Patient Care”

Values

- Patient Centricity
- Integrity

- Teamwork
- Ownership
- Innovation

Board of Directors

- Mr. Malvinder Mohan Singh (Executive Chairman, FHL)
- Mr. Shivinder Mohan Singh (Executive Vice Chairman, FHL)
- Mr. Sunil Godhwani (Chairman and M.D. REL)
- Mr. Harpal Singh (Mentor and Chairman Emeritus, Fortis Healthcare)
- Dr. Brian W Tempest (Chairman, Religare Capital Market)
- Dr. P S Joshi
- Joji Sekhon Gill
- Ms. Lynette Joy Hepburn Brown
- Pradeep Ratilal Raniga
- Udai Dhawan
- Ravi Mehrotra
- Shradha Suri Marwah

Management Team

- Mr. Malvinder Mohan Singh (Executive Chairman, FHL)
- Mr. Shivinder Mohan Singh (Executive Vice Chairman, FHL)
- Mr. Daljit Singh (President, FHL)
- Mr. Balinder Singh Dhillon (President, FHL)
- Mr. Gagandeep Singh Bedi (Group Chief Financial Officer, FHL)
- Mr. K Srivatsan (Chief Financial Officer, Fortis Healthcare International)
- Ms. Tan Poh Lan (CEO, Fortis Healthcare, Singapore)

Journey of FHL

Brand Fortis was established in 1996, by Founder Chairman Late Dr. Parvinder Singh, who instituted it with the vision 'to create a world class integrated healthcare delivery system in

India, entailing the finest medical skills combined with compassionate patient care.' Fortis Healthcare is the country's 'fastest' growing healthcare group. They have grown from first hospital at Mohali (Chandigarh) which opened in 2001 to over 55 facilities today. These include the world famous Escorts Heart Institute and the erstwhile Wockhardt facilities. From North to South, East to West, Fortis truly has India covered - the frontier city of Amritsar, to Ludhiana, Mohali, the National Capital region, Mumbai, Bangalore, Mysore, Chennai, Kolkata and many more destinations are all home to Fortis facilities.

INTRODUCTION TO FHSB



Fortis Hospital, Shalimar Bagh, New Delhi, is a multi-super specialty Hospital offering super specializations within departments, with the mission of providing quality medical care. It commenced its operations in 2010 and serves the residents of North, West and North-West Delhi, and the neighboring states.

The hospital is equipped with 262 beds and is spread over an area of 7.34 acre with built up area of 3.87 lakh sq. ft.

Fortis Hospital, Shalimar Bagh, strives to be the champion for quality and patient centricity and is an NABH accredited hospital. It is the first hospital building in India to have registered for the green building rating system. It has been designed as an energy efficient building that compiles with the ECBC and is undergoing TERI GRIHA green rating certification. The hospital has received 3 Star rating for its building by the Bureau of Energy Efficiency, Government of India, under the Ministry of Power, making it only hospital from Delhi to

receive such recognition. Federation of Indian Chambers of Commerce and Industry (FICCI) has recognized the hospital's excellence in branding, marketing and building with the FICCI Heal 2015.

Top Specialities

- Cardiology
- Obstetrics and Gynecology
- Nephrology
- Ophthalmology
- Dermatology

Clinical Specialities

- | | |
|---|---|
| 1. Anesthesiology | 18. IVF |
| 2. Bariatrics | 19. Internal Medicine |
| 3. Cardio Thoracic and Vascular Surgery | 20. Mental Health and Behavioral Sciences |
| 4. Cardiology | 21. Minimal Access Surgery |
| 5. Clinical Nutrition and dietetics | 22. Neonatology |
| 6. Critical Care | 23. Neurosurgery |
| 7. Dentistry and Maxillo-Facial Surgery | 24. Nephrology |
| 8. Dermatology | 25. Obstetrics and Gynecology |
| 9. Diabetes and Metabolic Disorders | 26. Oncology |
| 10. Emergency Medicine | 27. Ophthalmology |
| 11. ENT | 28. Organ Transplantation |
| 12. Endocrinology | 29. Orthopedics and Joint Replacement |
| 13. Foetal Medicine | 30. Pediatric Surgery |
| 14. Gastroenterology and Hepatology | 31. Pediatrics and Neonatology |
| 15. General and Laparoscopic Surgery | 32. Physiotherapy an Rehabilitation |
| 16. GI and Hepatobiliary Surgery | 33. Plastic/ Cosmetic Surgery |
| 17. Hematology | 34. Pulmonology/Respiratory Medicine |

35. Radiology

37. Urology

36. Rheumatology

Connectivity of Floors

- Lifts: There are total of eight lifts in the hospital which has different capacity.
- Stairs: There are total of nine staircases. Two staircases go on basement rest are to go up from ground floor.
- There are no ramps

Fire Safety System

There are various are safety equipment in OPD and IPD which includes

- Fire Extinguisher and Hose reel
- Hydrant System
- Fire Detection System (Smoke Detector, Heat Detector, MCP, Hooter cum Flasher, Fault isolator)
- Fire alarms (Code Red)
- Emergency fire exits – there are nine fire exits in the hospital

Different Codes

- Code Blue – Individual Disaster. Dial 77
- Code Red – Fire. Dial 88
- Code Grey – Internal Disaster. Dial 88
- Code Pink – Baby Missing. Dial 88
- Code Purple – Fight/Physical Altercation. Dial 88

DEPARTMENTAL DETAILS



In-Patient Department

IPD is distributed over four floors (2nd-5th) in B wing of Fortis Hospital including a total no of 242 beds. Every bed side has: details of consultant and nurse written on top of every bed, room equipment checklist and important instructions. Every Floor has central nursing station with information board covering designation and contact no. of Duty Doctor, Administration Staff and Support Staff. Nurses' names with shift timing and designation are also mentioned.

Nurses to bed ratio is 3:1 in IPD. Turnaround Time for cash patient is 3hrs and for a cashless patient is 5hrs. Average Length of Stay for simple Laparoscopic surgery is 2 days. There are four GDAs (Ground Duty Assistants) 4\ on every floor in every shift.

Break-Up of Rooms

TYPE OF ROOM	NO OF ROOMS
Presidential Suite	1
Suite	3
Deluxe Room	9
Single	43
Twin Sharing	60
4 Bedded Ward	40
Economy Ward	36

Admission Process

- Patient admitted from OPD or after Doctor's consulting at other place.
- Patient comes to admission department.
- UHID for new patient is created. Old patients already have an UHID no.
- An estimate is drawn out and the patient is guided for selecting the relevant category of room according to the need and availability
- An SOP is given to the patient and signatures are obtained for the same

- Patient will be required to make an advance payment. The advance shall be adjusted against the final bill at the time of discharge. Those seeking the cashless route would have to visit the insurance desk / TPA desk for the hospitalization of the patient.
- The staff will escort the patient to the allotted room/bed.

Staff

Admission Personnel – 5

Qualification Required – Graduation

On Admission Desk they also provide attendants pass to patients.

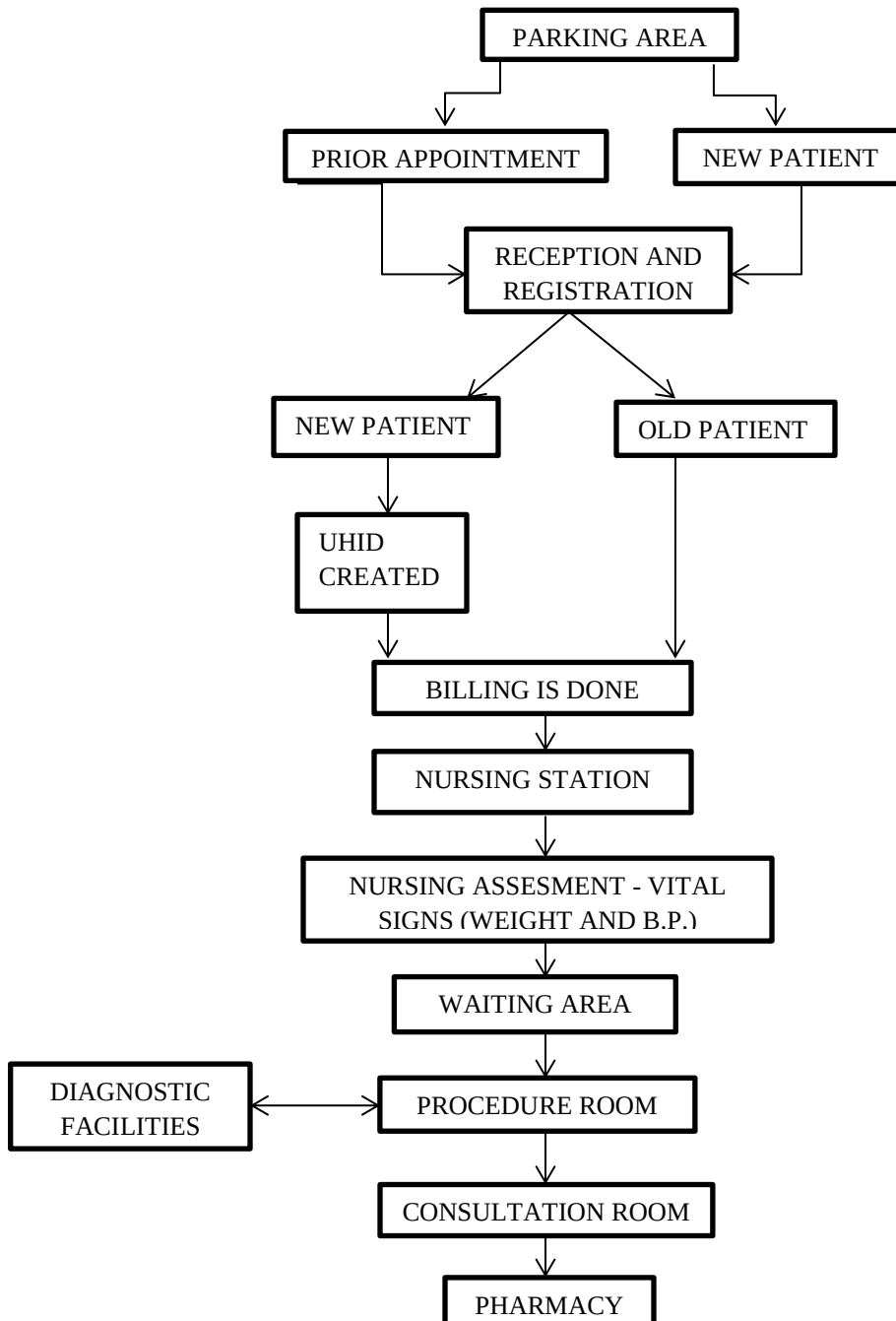
Discharge Process

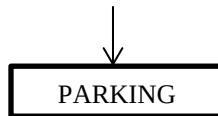
- The nurse will assist patient in the discharge process which may take few hours to complete the process.
- Once the final bill is generated, patient is expected to clear your dues by paying cash or by a credit/debit card.
- The nurse will hand over patient's discharge summary and other belongings (like thermometer, urinal bedpan, etc.--used during the course of stay).
- The nurse will then explain the medication that patient needs to continue after discharge and any other follow-up instructions.
- In case patient needs a medical ambulance to drop them at their home, then they need to inform the nurse and he/she will make the necessary arrangement.

Out-Patient Department

OPD is distributed over four floors (ground-3rd floor) in A wing of Fortis Hospital. Every floor has a procedure room and a front desk. Appointments are centralized and are recorded on the Hospital Information Management System. As soon as appointments are fixed, a text message is sent to the patient confirming the appointment. No walk-in patient is turned away, and staffs try to accommodate these patients between the appointments already scheduled for the day. Each OPD has a waiting area of a capacity to handle 50-100 patients waiting.

OPD PROCESS FLOW





Emergency Department

Due to the unplanned nature of patient attendance, this department provides initial treatment for a broad spectrum of illness and injuries, some of which may be life threatening and that require immediate attention, except for major burns. It is located at the ground floor with its own dedicated entrance and operates 24 hours a day.

Patients are either transferred to other departments or are discharged within 4 hours.

Infrastructure

- 16 bedded triage
- Doctor's working station
- Hospital information system
- Urgent care area
- Observation area
- Doctor's Work Station
- Resuscitation suite
- Store room
- Waiting area for patient's attendants is outside the department

Staffing

- Senior Consultant
- Team Leader
- Emergency Physicians
- Nurses
- Emergency Reception

- GDAs
- Paramedical staff for ambulance
- Security personnel

Central Sterile Supply Department

It is a Supportive, non-medical service department. It provides sterile devices, equipment, to the departments like operation theatre, cath lab and others

Service utilization

- 80% to the OT
- 10% to the Cath Lab
- 10% to Ophthalmology and E.N.T. department

Divisions of the area

- Receiving Area
- Washing Area
- Decontamination Area
- Sterilizing Area
- Sterilized Area

Process Flow

- Receiving
- Checking the list and the number of equipment
- Signed received
- Cleaning
 - Through tap water
 - Dismantled
 - Soaked in enzymatic solution for 10mins in two different containers
- Machine cleaning

- Dismantled equipment put into the ultrasound machine
 - Dried after ultrasound machine for 10mins
- Washer disinfectant
 - For heavy machinery and trays
 - Washed and dried in machine
 - Sterilization
 - Reassembled, checked by the list
 - Packed in a tray
 - Doubled packed in inner sterile cloth outer normal cloth
 - Put on a name coded sticker with a temperature color bar
 - Put in to sterilizer

Manpower

- 15 staff
- 6 housekeeping staff
- Minimum of 5 people for every procedure
- One stand by person
- Requirement – 20-25 staff

Staff Training

- A month training before the person joins the department
- Once on floor, supervised for another month
- Continuous classes are organized

Cath Lab

Procedures done are Angiogram, PTCA, Ballooning, Stents, Pacemaker, EPS (diagnostics and therapeutic) and Time taken :

- Diagnostic – 30-45mins

- Therapeutic – 1-2hrs

Number of Procedures – 10-15 procedure done in a day including emergencies. Consent form filled at the time of admission in case of day care procedure, on the table in case of emergency, and in wards in case of IPD patient.

There are 22 beds and 2 isolation room. Human resource involved

- 15 staff
- 3 full time cardiologist

Dialysis Unit

It includes day care procedure and Bed turnaround time for a procedure is 4 hours. There are 11 dialysis machines. 900 dialysis procedures per day are carried out. Total manpower in dialysis unit is 14 personnel.

Inflow of Patient is mostly OPD but there are IPD patients also.

Endoscopy

It is located on 2nd floor. Procedures carried out per day - 20-25 Endoscopy, 5-8 colonoscopy, 2-3 EUS and 2-5 ERCP's.

Process Flow

- Doctor's prescription is seen and reports are checked
- Vitals are measured
- Ultrasound is done
- Medicines according to the procedure are given
- Procedure is performed
- Patient is kept in observation
- Patients is discharged and reports are given

Blood Bank

FHSB has its own blood bank. All blood groups are available. But it is preferred that patient arranges blood through his relatives or any friend and should give replacement.

Blood bank consists of

- Sample collection area / reception area : In reception area a form is given to the attendant of the patient regarding their details before he/she donates blood.
- Apheresis area: blood has several components including red blood cells, platelets and plasma. Donor apheresis is a special type of blood donation in which a specific component platelet, plasma is withdrawn from donor
- Component room: in component room the whole blood is separated into packed cells FFP and platelets.
- TTI room: it is to diagnose transfusion transmitted infections. If donor is detected positive of TTI status it means donor have potential to transmit the infection to their partner and children.
- Issue room: This room is to issue the screened blood bags.

Quality Assurance Department

The goal of this department is to maintain and perk up the standards. Quality Assurance is the activity of providing evidence needed to establish quality in work, and the activities that require good quality are being performed effectively. All those planned or systematic actions that is necessary to provide enough confidence that a product or service will satisfy the given requirements of quality.

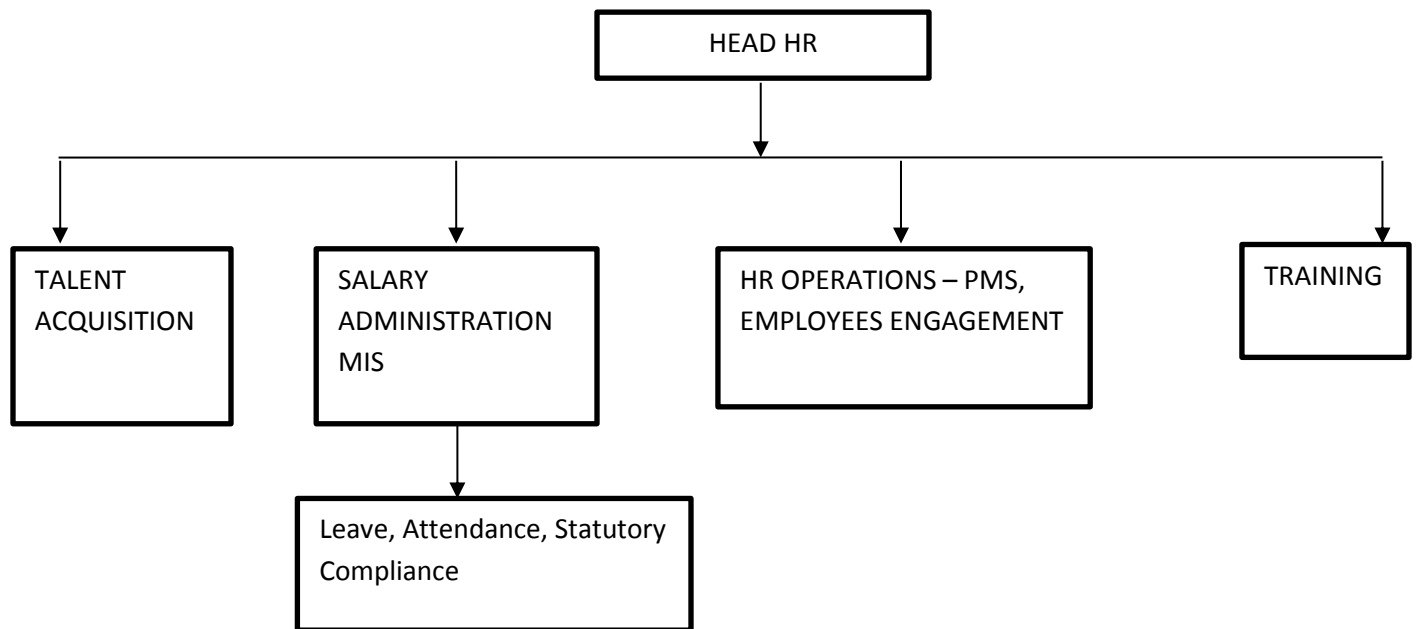
Documents maintained by this department include

- SOPs
- Plans and Policies
- Manuals

- Quality Indicators
- Internal Audit and Medical Audit
- Training Record
- QA Programs
- Clinical Guidelines

Human Resource Department

Functional Organization Structure

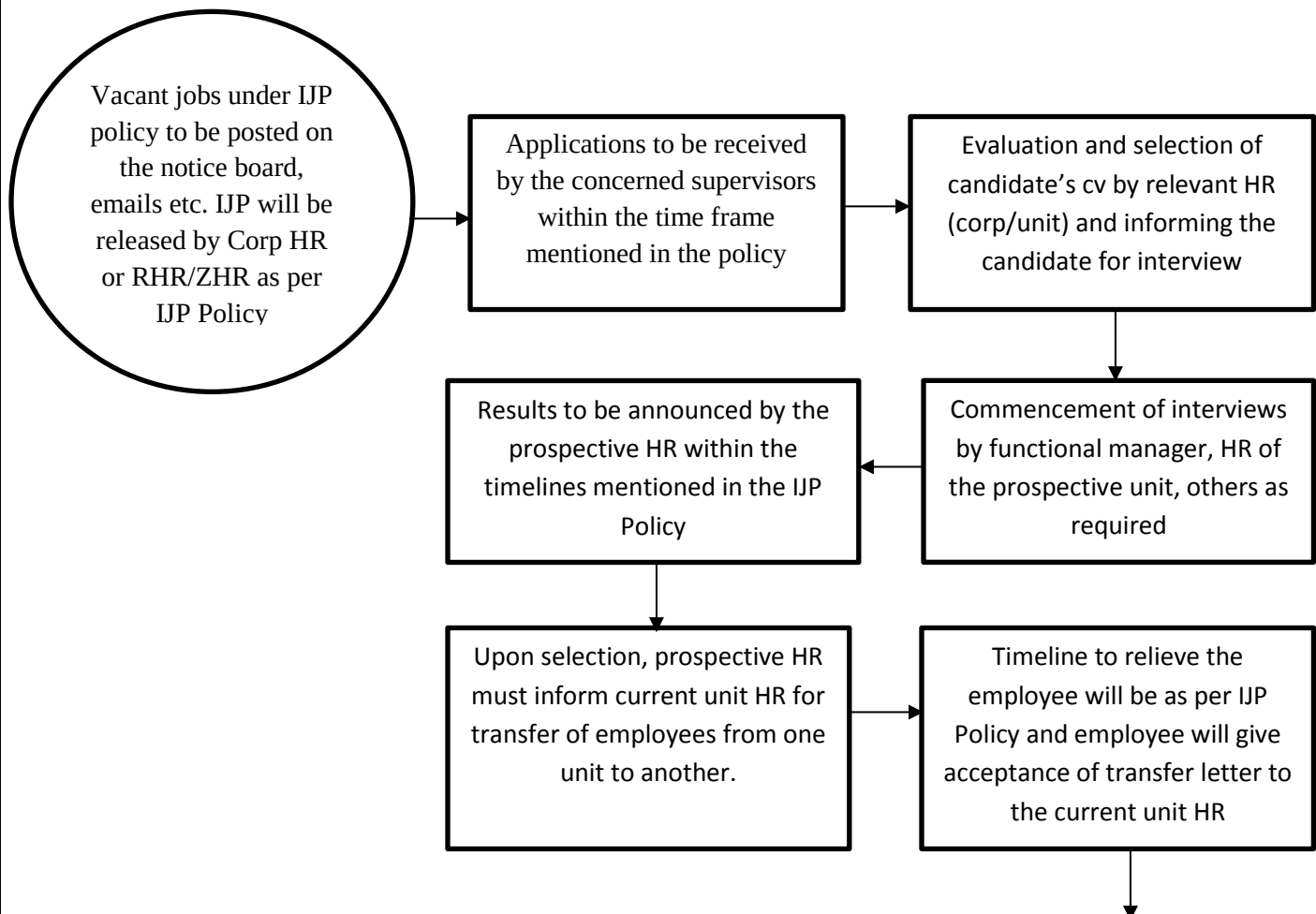


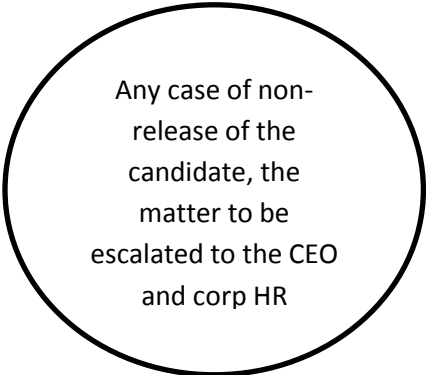
The goal of the department is to ensure availability and retention of quality talent to meet the organization goals and objectives and overall growth and development of employee's orientation and functional training.

Scope of Services

- Manpower planning
- Recruitment process

- Internal job posting process
- Pre-employment health check up
- Training
- Attendance and leave management
- Appraisal and promotion process
- Statutory compliance
- Employee welfare programs
- Disciplinary actions
- Grievance control
- Payroll management
- Budgeting





Any case of non-release of the candidate, the matter to be escalated to the CEO and corp HR

Medical Records Department

The goal of this department is the collection of all the discharged/expired health record charts. The Medical Record Department staff ensures the confidentiality, preservation, storage and retention of the patients. Medical records are given only to authorized person with their due signature on the medical record requisition slip. It is mandatory to inform (register) birth and death cases within 21 days of occurrence to Government Bodies. All records are destructed by shredding the documents.

Medical record of discharge patient should reach the Medical Record Department in time frame of 48 hours.

Retention period of Medico-Legal Case File is 10 years. MLC, legal and death cases files are kept under lock and key in MRD.

Retention period of normal file is 5 years.

Documents maintained by the department

- IPD/OPD files receive register
- IPD file dispatch register
- OPD file dispatch register
- Death Register
- Birth Register
- Discharge Summaries

Scope of Services

- Record Collection
- Analytical Evaluation
- Storage
- Data generation
- Retrieval

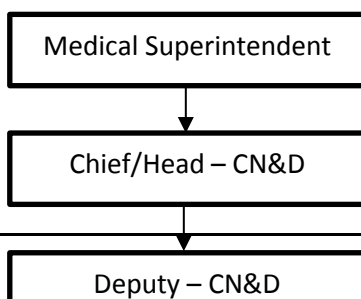
Dietetics, Food and Beverages

These offices are situated on upper basement of FHSB. These departments are tasked with managing the dietary needs of the patients and the staff. The Food and Beverage department of this hospital has to be able to serve close to 2000 meals per day.

In order to be able to cater to delicate yet crucial needs of all the patients coming to the hospital, most of the functions of are outsourced. With respect to ensuring quality of services hospital maintains a service level agreement with the partnering company, and both strive jointly towards maintaining the quality of standards. There are representatives that keep a check on any issue that may crop up.

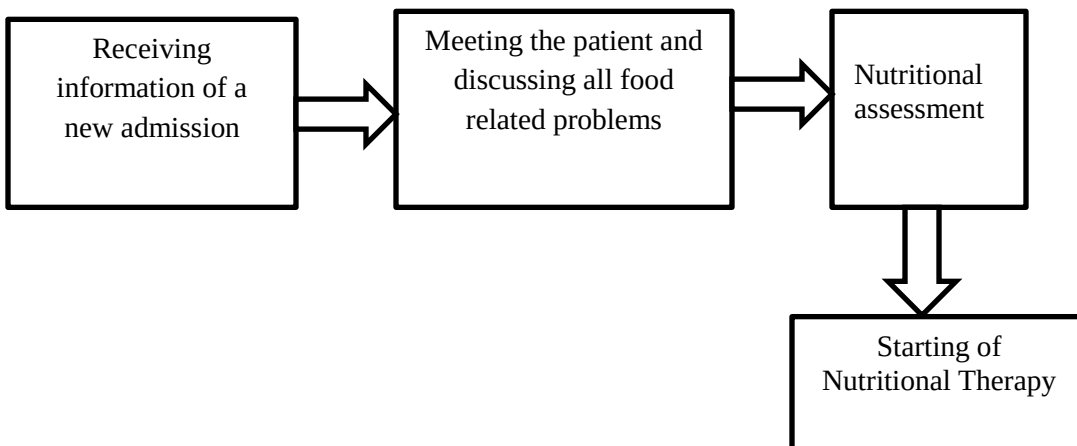
The dietetics department is tasked with the specialized function of ensuring that a patient is not presented with a meal that may not be in compliance with the treatment that the patient has come to FHSB for. To be able to deliver on this front, dietician's role includes checking the diet of all the patients periodically, going on rounds of the patients and coordinating with the kitchen in order to ensure the provision of the right quality food to the patients.

Functional Organizational Structure



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Flowchart



Medical Gases

This department is situated on the upper basement of FHSB. This department's chief responsibility is to ensure the timely provision of all the medical gases where ever they may be required. This department is responsible for all the inventory control of the following gases:

- Oxygen
- Carbon Dioxide
- Nitrous Oxide
- Compressed Air
- Nitrogen

This department is also responsible for maintaining inventories of the cylinder that may be used during patient transport. The color coding of these cylinders are

- Oxygen – Black with white neck band
- Nitrous Oxide – French Blue
- Compressed Air – Grey
- Nitrogen – Grey with black neck band
- Carbon Dioxide – Black with silver neck band

Marketing Department

This department is situated on the upper ground floor of FHSB. The chief function of this department is to market the services of FHSB. Fortis Hospital is now at such a stage that it need not indulge in extensive marketing activities. Fortis Healthcare Limited is a brand name recognized internationally, which is evident from its large international patient base. In fact, this brand is so well known that it has not invested in large billboards and does not spend too much on Out-of-Home advertising. This hospital does have a strong presence on Facebook, and is followed by many.

The uniqueness of the hospital lies in the services that it offers, and the quality of services offered. This is why most of the marketing that this hospital enjoys is through ‘word of mouth’. The clinical team employed at FHSB is among the finest in India. All these factors have come together to make FHSB the strong brand it is.

A majority of activities of the marketing department comprises of CSR initiatives. Over the years, Fortis Healthcare Ltd. through Fortis Charitable Foundation (FCF) and its hospitals across India is committed towards providing healthcare for the socially marginalized and deprived sections of the society. They not only make sure that programs are efficient, but also ensure that they are sustainable and relevant to those meant to benefit from them.

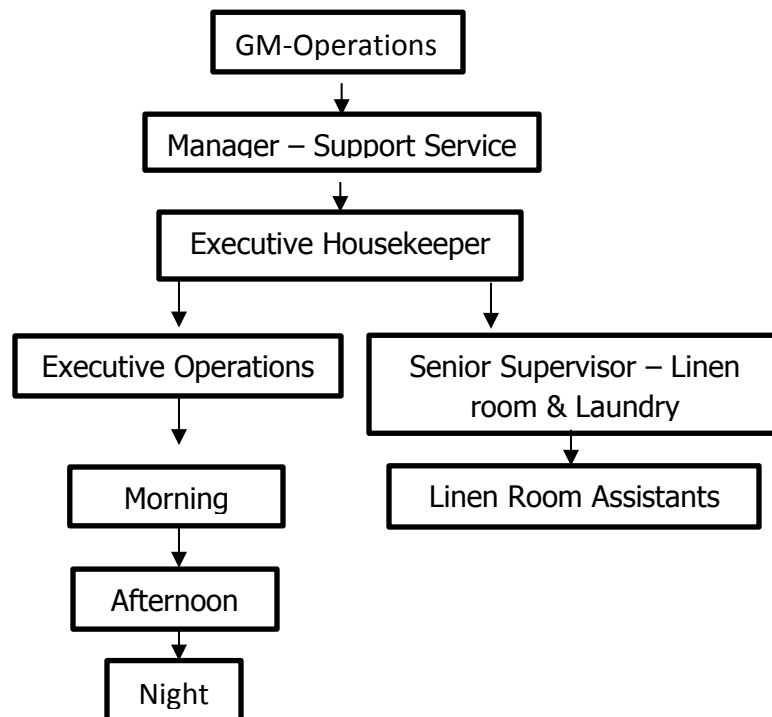
Major initiatives 2011-2015

- Making A Difference – Touching Lives

- The Little Hearts Programs
- AAS- Acid Attack Support Program
- Global Dignity – India Program
- Save Shriya Campaign
- SEWA – A Disaster Relief Initiative

Housekeeping

Functional Organization Structure



Flowchart

28

Dry dust or vacuum clean the area.

Place “wet floor” caution right and mop the area, half at one time.

Change solution frequently for both or results.

Scrub the floor daily in the night.



Supervisor
checks.

Waste Management System

Color	Waste Description	Disposal Method
Red	Infected plastics	Autoclaving
Yellow	Human Tissue ,all gauze soaked in body fluid	Incineration
Blue	Unbroken glass bottles	Direct disposal
Black	General office waste	Direct Disposal
Green	Kitchen waste	Direct Disposal
Pink	Infected linen	Laundry

Operation Theatre Complex

Operation Theatre Complex in Paras Hospital is located on 1st floor with the restricted area for outside visitors to minimize the traffic and to maintain the sterility. Nobody is allowed inside the Complex without the Management's or Doctor's permission. It is also necessary to

wear shoe-covers before entering the OT Complex. OT Complex is divided into different areas:

1. PAC Room
2. PACU
3. CTVS ICU
4. Catheterisation Lab
5. Female Doctor changing room
6. Changing room for OT Technicians
7. Common Room for Doctors
8. OT pharmacy
9. 6 OTs
10. 2 scrub stations
11. 1 room for flash sterilization
12. Dirty utility room
13. OT Store Rooms

1) PAC Room

PAC Room in OT Complex is meant for Pre-Operative Evaluation of patients on OPD basis by Anaesthetists to check if the patient is fit for surgery. This room is also used by surgeons to examine the OPD patients in case the surgeon is in OT.

2) PACU (Post Anaesthetic Care Unit)

This unit accommodates the patients before and after surgery. There are 6 beds in PACU. Patients to be operated are shifted from wards to PACU around 15-30 minutes before. Nursing staff in this unit check the vitals of the patients and check that the medicines have

been given to the patients or not. After the surgery is over, the patient is brought to PACU with the objective to monitor the patients post-surgery. The patients' vitals are monitored every half an hour and if the patient is found stable based on Aldrete scoring mechanism (score should be more than 12 out of 14), the patient is shifted to the ward after the evaluation by anaesthetist. Critical patients are directly shifted from OT to ICU for monitoring. Cardiac and Neuro surgery patients are shifted from OT to CTVS ICU and NSICU respectively.

Manpower in PACU:

- 1 Area Incharge
- staff nurse and
- 1 trainee.

Intensive Care Unit

Intensive care units (ICUs) provide intensive care (treatment and monitoring) for people in a critically ill or unstable condition. In each ICU, temperature is maintained between 22-24 degree Celsius, reason being bacteria and viruses cannot thrive at lower temperatures.

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

In common, ICUs have:

- Specialized monitoring equipment
- High degree of medical expertise
- Highly trained nurses

Fortis 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.

Admission Process in ICU

In ICUs patients get admitted via OPD, IPD or Emergency. Patients can come directly to the Hospital in critical condition or can deteriorate during the Hospital stay in wards, in which condition patient is shifted to ICU.

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).

Transfer In and Transfer Out

If patient is shifted to a particular ICU from another ICU or ward, then it is called Transfer In. The opposite of it is called Transfer Out.

Pharmacy

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

A total of 35 critical lifesaving 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.

There are five types of drugs based upon the government norm made:

1. Schedule X drugs: These are narcotics drugs. The narcotics allowed inside the hospital are morphine and fentanyl. The norm says it should be kept in double lock and key. The keys are with the senior pharmacist and head pharmacist. A separate register is maintained for this kind of drug. Secondly, the inventory is decided by the HODs of all departments and then it has to be approved by the excise department of the government after which the pharmacy receives a fixed inventory for every month which is sanctioned by the government. Finally a narcotic drug comes with a XRx written in red on the top left corner. Even empty vials need to be accounted for with the name of the doctor prescribing.

2. Schedule H and Schedule L drugs: These drugs are prescriptive drugs, which can only be given if a person is prescribed by the doctor. These drugs might have NRx written in red on the top left corner, if they come under Dangerous Drug Act. These drugs include injectables, antibiotics and antibacterial.

3. Schedule C and C1 drugs: These drugs include biological products eg. Serum and Vaccines

Schedule M in the government norms includes the norms to be followed when a medicine is being manufactured.

Schedule N lay down the norms to be followed for equipment, staff and hospital pharmacy.

There are different types of drugs based on situation or physical shape:

1. Chemo drugs
2. Cardio Vascular drugs
3. Critical Life Saving drugs
4. Emergency drugs
5. Look alike drug
6. Sound alike drugs
7. FMCG

8. Diabetic powder

9. OTC drugs (Over the counter drugs)

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 dispensing any of these drugs is more alert.

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. The money refunded or the credit bill generated after refund is the same.

Manpower

Head of Department: 1

Deputy Manager: 1

Assistant Manager: 1

Executive: 2 (store)

Senior Pharmacist: 4

Pharmacist: 9

Pharmacy asst.: 5

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 three people. Anyone of the three 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 perform any kind of drug mixing the hospital should have a license to do so. No mixing takes place in the pharmacy. To stock narcotics, a separate permit is also required.

PROJECT

- A Composite study on waiting time in various Out-Patient Departments and Gap analysis

Introduction

A hospital is an integral part of a social and medical organization, the function of which is to provide for the population complete healthcare, both curative and preventive and whose outpatient services reach out to the family and its home environment the hospital is also a center for the training of health workers and bio-social research.

Out Patient Department (OPD) is considered as the window of hospital services and a patients impression of the hospital begins at the OPD. OPD is the point of contact between patients and community. The impression often influences the patient's sensitivity to the hospital and therefore it is essential to ensure OPD services provide an excellent experience for customers.

The main objectives of the Out-patient department of a hospital should include the reduction of patients' waiting time in the system, improvement on the services given, and better resource utilization.

Since the numbers of patients are large and the treatment should be given within a day the bottlenecks occurred with respect to these constraints can be solved by an effective management design. Common problems to be encountered in OPD system are as follows:

- Patients waiting time occur long at the front desk of the hospital.
- Patients might be conveyed to wrong services.

- Number of patients admitted within a working day will cause overtime for doctors.
- Patient appointments will overlap.
- Doctors' and patients' dissatisfaction will create a tense environment at the OPD.
- Patients could prefer another health clinic due to improper management.¹

The study throws light into finding out the various problems hindering the functions of the OPD, factors responsible for increase in waiting time for the patients and ways to meet the expectations and needs of patients who walk into the OPD and helps the hospital management to gain insight into how the services should be designed and delivered to satisfy and retain them.

Background

Scores of patients, a maze of windows, chaos and confusion used to be the typical scenario of a hospital OPD. However, automation, trained staff and new time management tools and techniques are changing the picture.

Queuing and waiting line problems can be managed by the following methods:

- Appointment system
- Satellite clinics
- Filter clinics
- Starting OPD in time and prolonging OPD timings.¹

Managing the out-patient department

Management of out-patient department (OPD) has always been a problem difficult to solve. Let us find out why. Can we do something to reduce the waiting period in a hospital or clinic? At many nursing homes there may not be a system of appointment instead the system 'first come first serve' may be in vogue.²

Reasons for delay

- Doctors coming late.

- Delay on the part of the reception in taking out the case papers.
- Delay on the part of the ward boy in taking the case papers to the doctor.
- Favouritism on the part of the reception / ward boy to send the case papers of their Friend / relative first. More time taken in clinical examinations.³

Keeping these problems in mind, the management has now started employing full time doctors rather than hiring them as consultants. Delay on part of reception and ward boy can effectively be tackled by the Administrator through close and regular monitoring.⁴

Queuing and Waiting Time Problems

The maximum number of problems in OPDs of most hospitals belongs to this category. The service of an OPD is affected by the following.

1. Arrival pattern, or input rate, of patients at the central waiting room.
2. Input and output rates at various clinics and other s upportive services units
3. Service time at various clinics
4. Queue lengths at waiting rooms of clinics.⁵

Meterko, Mark (2000) conducted a study to assess the length of wait to get into the hospital. The sample includes older people with chronic illness (APSF 1991), the finding shows that patient could not afford private care due to waiting times in the OPD.⁶

Reduced Wait Times for Outpatient Consultation

The availability of tele-counts can reduce wait time for an outpatient consultation in underserved areas and underrepresented Specialities. This has been noted as well in correctional facilities, where one study reported the average wait time for a consultation decreased from 99 days to 23 days with the introduction of telehealth. As a result, telehealth has been shown to reduce the speciality backlog of physicians.⁷

Managerial Aspects

1. OPD should start exactly on time. The patients should not be made to wait for the doctors. Punctuality of the staff is of more importance.
2. The gap between the time of arrival of patients and the time of departure should be minimal and if there is delay it should be made enjoyable experience for the patient. Music, TV, Reading materials will help.⁸

Analyzing outpatient tasks for different-sized hospitals

The progressive steps of outpatient's services, including multiple activities identified by the patient's experience, are important in improving processes. In their text on advising healthcare organisations on ways to achieve continual improvement, Marszalek-Gaucher and Coffey (1990) advocate improvements to systems or processes for enhancing quality and cost-effectiveness. Elkhuizen et al. (2006) expressed that business process redesign is used to implement organizational transformation towards more customer-focused and cost-effective care. Hall (1989 in Hall 2006) claims that solutions to delay problems concern processes relating to service, arrival or queuing—these processes are in order of priority. That is, consider the needs of patients first. If solutions are not forthcoming, then explore changes to patterns in patient arrival. Finally, if all else fails, resort to managing queues. From the perspective of a delivery model, hospitals transform inputs to outputs through clinical, management and ancillary processes (Vissers, 1998). Vissers contends that this process oriented model does not account for externalities (e.g., national health policies) and decision making at different levels (i.e., operational tactical and strategic).⁹

Make it an Experience

Patient friendly environment and other tangible facilities also play a major role in improvement of OPD services. Providing magazines, newspapers and installing a television in the waiting room and supplying coffee, tea or water would delight the patients. These may not cost much, but the patients will put up with the waiting time. "Keep the patient occupied i.e., make the wait a part of the customer experience. The patient should be engaged in something constructive like an interesting health talk or Audio Visual Aids."¹⁰

Rationale

OPD services are most important services provided by all the hospitals as it provides service to a large number of patients at a low cost. Apart from the quality of staff, equipment the main feelings and image carried by patients about hospital mainly depends on human aspect and the concern, sympathy and understanding shown by hospital staff. This study is mainly based on the reducing of waiting time of patients in the OPD at Fortis Hospital. This study will help to understand the process flow and identify the reasons for delay in OPD to reduce the resulting long waiting time in OPD.

Research Question

1. What are the factors affecting the waiting timings in the OPD of Fortis Hospital?
2. What could be done to improve this situation?

Objectives

1. To identify the average time spent by the patient in the OPD.
2. To analyze the factors those are responsible for waiting time in the OPD.
3. To recommend appropriate suggestions to reduce the waiting time in OPD.

Research Methodology

Research Design

A research design will be **Descriptive (cross sectional) research – Phase I**

A research design will be **Analytical - Phase II**

Study Setting

The study setting was the OPD of the Fortis Hospital, situated in the Shalimar Bagh, North Delhi.

Study Period

Study period was 5 weeks (20th April - 31st May)

Type of Sampling

Non Probability Sampling

Study Sample

The study sample included all the outpatients coming to the Obstetrics and Gynecology Department, Cardiology Department and Internal Medicine Department in month of April and May as well as the staff of the hospital.

Total Patients: 1250 patients from three departments. 1000 patients were selected for the study excluding the patients coming just for reports.

Staff: 8 OPD staffs from different depts.

Data Management

Data Collection

A MS Excel based data-collection was designed for this study. The method of data collection is by observing the patient from entry to exit of the hospital and observing the staff at registration, laboratory and radiology department. These reports were submitted to the researcher on daily basis at the end of each shift.

Data was collected by giving the questionnaire to the OPD staffs of the hospital after obtaining the free consent from them.

Data Management and Analysis

Data collected was checked for any incomplete filling.

The data was edited, tabulated, organized according to study.

Total no. of Patients observed for the Study

Patients that were considered for the study from different departments over the period of 5 weeks are shown in a department wise segregation in Table 1.

Table 1: Total no. of Patients observed for the Study

	Total	Week 1	Week 2	Week 3	Week 4	Week 5
Obstetrics and Gynecology	300	140	160			
Cardiology	450			200	250	
Internal Medicine	250					250
Total	1000					

Findings

- **Distribution of patient according to waiting time spent in OPD for consultation**

Table 2 shows the maximum waiting time spent by the patients in the OPD for consultation with doctors. It shows that out of 1000 (100%) patients, highest is 660 (66%) patient had to wait for less than 30mins and lowest is 40 (4%) patients waited for more than 2 hour. While 180(18%) patients waited for 30mins to 1 hour and 120 (12%) patients waited for 1-2hour in the OPD for consultation.

In Fortis Hospital Shalimar Bagh, if the patients have to wait more than 30 minutes from the time of the appointment then they are returned 50% of they paid for OPD consultation. So it was important to maintain the standard waiting time i.e. 30 minutes.

Table 2: Distribution of patient according to waiting time spent in opd for consultation

Waiting time	Total	Percentage	cumulative percentage
less than 30mins	660	66	66
30mins-1hr	180	18	84
1-2hr	120	12	96
more than 2hr	40	4	100

• Problems Encountered

Table 3 enlists the problem faced by 340 patients i.e. the patients who waited for more than 30 minutes in the OPD for consultation. These problems were observed by the author during the collection of the data.

Fig 1 Shows the various problems encountered that lead to increased waiting time 42% patient delays were caused due to walk-in patients who come for consultation without any appointment and still demand to be seen by the doctor. Only 7% patients delays were caused due to time taken at the registration counter.

22% patients had to wait due to insufficient staff and doctors. The reason for the absence of staff and doctors were -

- doctors scheduled their meetings during OPD hours

- Doctors went for breakfast or lunch to doctor's lounge
- Staff had to go to some other department
- Confusion caused due to miscommunication between the staff

The author observed that there was no coordination amongst the staff. Staff was very reluctant during the shift of roasters specially during lunch hours. Which lead to insufficient staff during lunch hours.

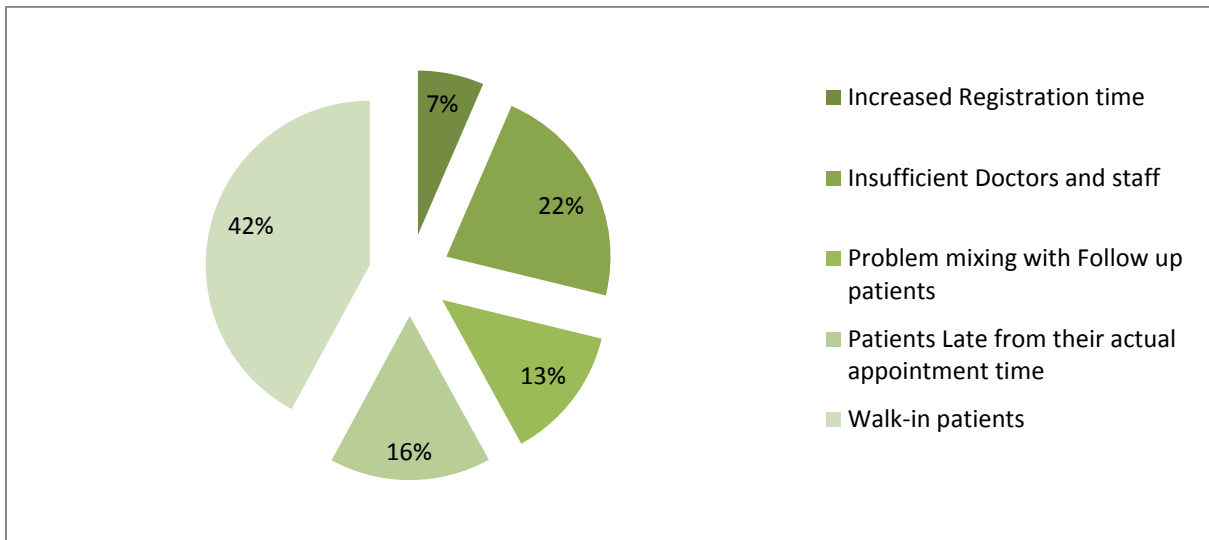
16% delays were caused by the appointment patients who were late from their actual appointment but demanded to be seen as soon as possible creating a fuss.

13% delays were caused due to waiting of follow up patients. Follow up patients usually don't take much time during consultations. But as all the patients are seen according to the appointments the delays are caused

Table 3: Various problems encountered that lead to increased waiting time

S.No	Problems
1	Increased Registration time
2	Insufficient Doctors and staff
3	Problem mixing with Follow up patients
4	Patients Late from their actual appointment time
5	Walk-in patients

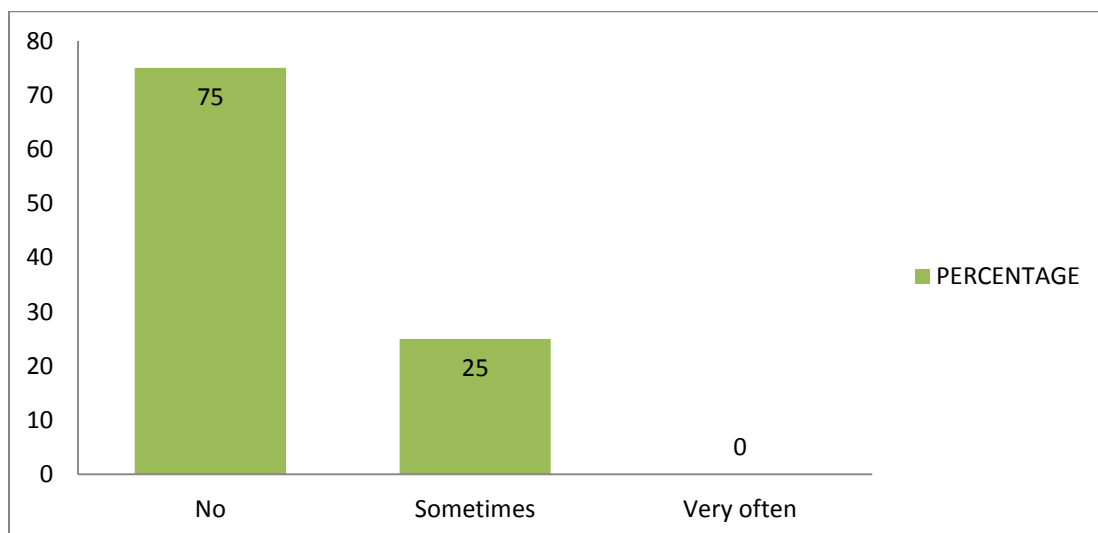
Fig 1: Various problems encountered that lead to increased waiting time



- **Staff's feedback on doctor's delay for OPD**

Fig. 2 shows the distribution of the staffs view on doctors coming late to OPD. Out of 8(100%) staffs, 6(75%) of them says that doctors do not come late to OPD. While 2(25%) staffs responded that sometimes the doctors do come late.

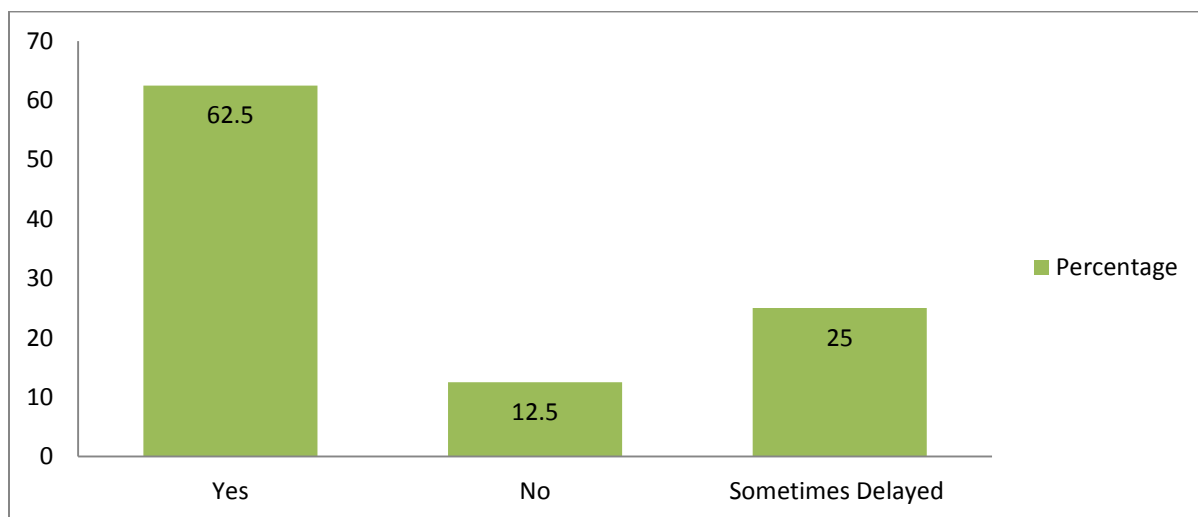
Fig.2: Staff's feedback on doctor's delay for OPD



- **Distribution of Staffs View on Patients Coming On Scheduled Appointment Time To OPD**

Fig.3 shows the distribution of the staffs view on patients coming on scheduled appointment time to OPD. Out of 8(100%) staffs, (62.5%) of them agreed that patients do come on scheduled time. 2(25%) responded that sometimes the patients get delayed and the rest 1(12.5%) says that patient do not come on scheduled appointment time.

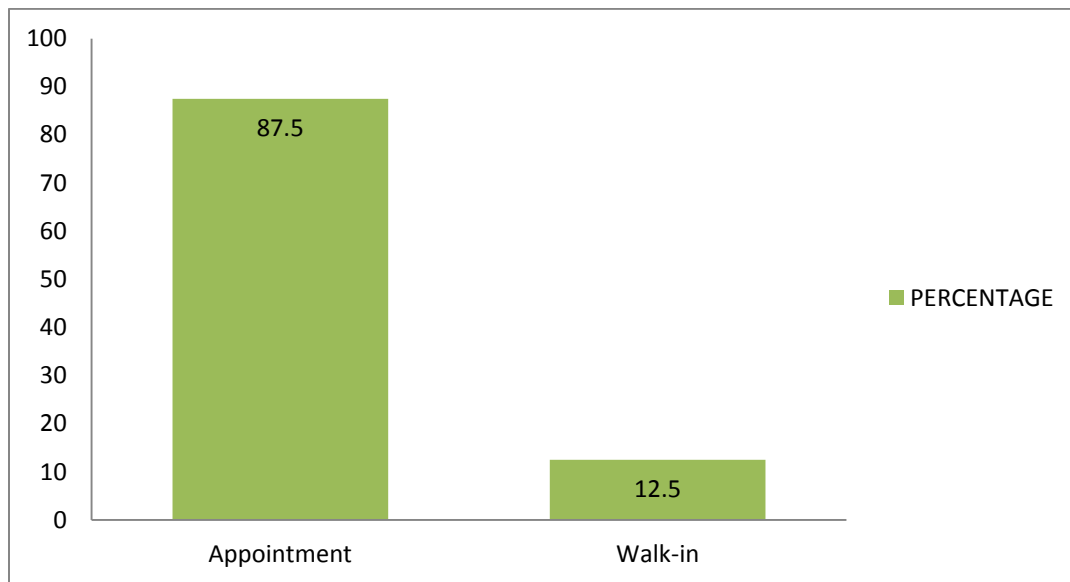
Fig.3: Patients coming on scheduled appointment time



- **Distribution of staffs view on preference given to patient for consultation**

Fig. 4 shows the distribution of the staffs view on preference given to patients for consultation. Out of 8(100%) staffs, 7(87.5%) of them says that appointment patients are given preference compared to the walk-ins. (12.5%) says that walk-in patient are given the preference for consultation.

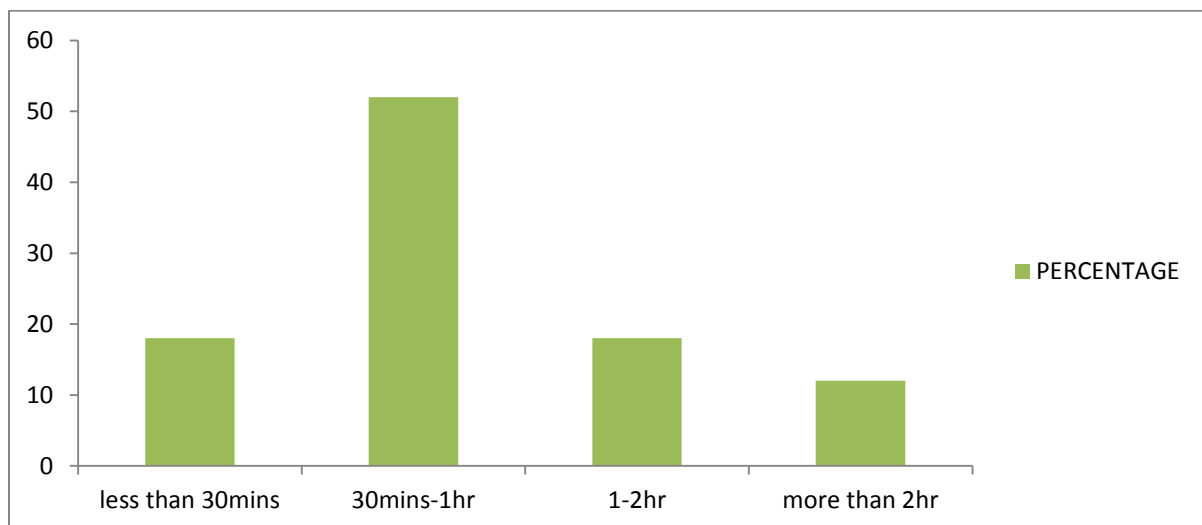
Fig 4: Preference given to patient for consultation



- **Average waiting time for walk-in patients**

Fig. 5 shows that out of 340 walk-in patients 18% were called for consultation within the standard time i.e.30 minutes. 52% patients i.e. maximum patients had to wait for 30mins to 1 hour.18% had to wait for 1 to 2 hour and rest 12% had to wait for more than 2 hours.

Fig 5: Average waiting time for walk-in patients



RECOMMENDATIONS

1. Optimize Physician's appointment scheduling.

There were variable workload amongst doctors and a mismatched demand and supply of appointment slots. Forced in walk-in were common. Moreover, there were inconsistencies in service time i.e. duration each doctor spent in consult with a patient. Also, breakfast and lunch timings of doctors were not fixed which resulted in patients waiting during that time. Appointment scheduling should be re-examined to optimize slots and match supply with demand.

2. Improving workflow and communication with staff.

Doctors and Staff should be give alternate lunch breaks to ensure sufficient manpower during all times. A floater should be appointed who'll assist with miscellaneous duties like second cashier or as counter staff during peak patient hours.

3. Out-patient Appointment Reminder System

Dedicated staff should contact patients before the scheduled appointment dates to remind them of their appointments and the need to arrive earlier for any recommended investigations. If there's a preplanned surgery of the respected doctor patient of that time slot should be informed and a new appointment should be give so as to reduce the waiting time.

4. Follow-up patients should be attended by team doctors and if there's something major or critical only then it should be discussed with senior doctors. If there's a proper division of work within the team it'll ensure adequate examination time. And doctors can then entertain more number of patients.

5. Walk-in patients should be encouraged to take appointments by giving preference and special benefits to appointment patients.

6. Nurses should conduct an initial examination to determine if patients who claim to be emergency patients are truly emergent. Use an ordered number system assigned to patients who come without appointment (emergency and non-emergency).
7. Do not schedule patients during staff meetings.
8. Punctual start of the OPD requires multiple conditions. First, all patients, physicians and nurses should be on time. Second, the required instrument and information has to be available at the beginning of OPD.

CONCLUSION

Patients attending each clinic are responsible for spreading the good image of the clinic and therefore satisfaction of patients attending the hospital is equally important for management. Various studies about outpatient services have elicited problems like- overcrowding, delay in consultation, proper behavior of the staff etc. The study reveals the average time spent by the patients and also expresses their view towards the hospital and hospital's services in undergoing various procedures. The study throws light on the various services provided by the hospital and the total time consumed on each activity.

The waiting time spent by the patients in reception for registration is much less in case of maximum no. of patients compared to lesser no. of patients whose waiting time exceeded more than 30min. This represents the efficiency of the registration process in the OPD.

Study depicts that the average waiting time spent in OPD for consultation and time taken during consultation satisfactory which states that OPD of the hospital functions satisfactorily. Study depicts that OPD always starts on time and the doctors mostly comes on time. Patients also come on scheduled appointment time sometimes getting delayed. Preference for consultation is always given to the appointment patients.

From the present study, it is concluded that the OPD services form an important component of Hospital services and feedback of patients are vital in quality improvement maximum patients are satisfied with the waiting time in OPD.

ETHICAL CONSIDERATIONS

The privacy of participants will be protected by numerical coding to keep the responses and their identity confidential.

All study data will be kept confidential.

Participants will be told summary data will be disseminated to the professional community, but it will not disclose identity of respondents.

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APPENDIX

Questionnaire for the staff

1) Does the OPD start on time?

Yes () no ()

If delayed, please specify _____

2) Do the doctors come late?

No ☐ Sometimes ☐ Very often ☐

3) Do the patients come on scheduled appointment time?

Yes ☐ No ☐ sometimes delayed ☐

4) Who is given the preference for consultation/investigation?

Appointments ☐ walk-in ☐