Summer Placement

In

Fortis Memorial Research Institute

Gurgaon

(april 1st – 31st may 2015)

A Report

By

Dr. Anudeep Agarwal

MBA-Hospital and Health Management

2014-2016

IIHMR,University, Jaipur

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

IIHMR UNIVERSITY

CERTIFICATE

This is to certify that the project work titled ' An analysis of level of patient compliance to advised Radiological investigations and admission in FMRI, Gurgaon, has been done entirely and submitted by Dr. Anudeep Agarwal, a student of Masters of Business Administration in Hospital and Health Management-19th Batch from IIHMR University, Jaipur.

The study project was prepared during the internship period from April 1st 2015 – May 31st , 2015 at "Fortis Memorial Research Institute, Gurgaon". This is his original work.

I wish him all success for his future endeavors.

Col. (Dr) Ashok Kaushik
Dean (Academics & Student Affairs)
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Fortis MEMORIAL
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GURGAON

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May 30, 2015

TO WHOMSOEVER IT MAY CONCERN

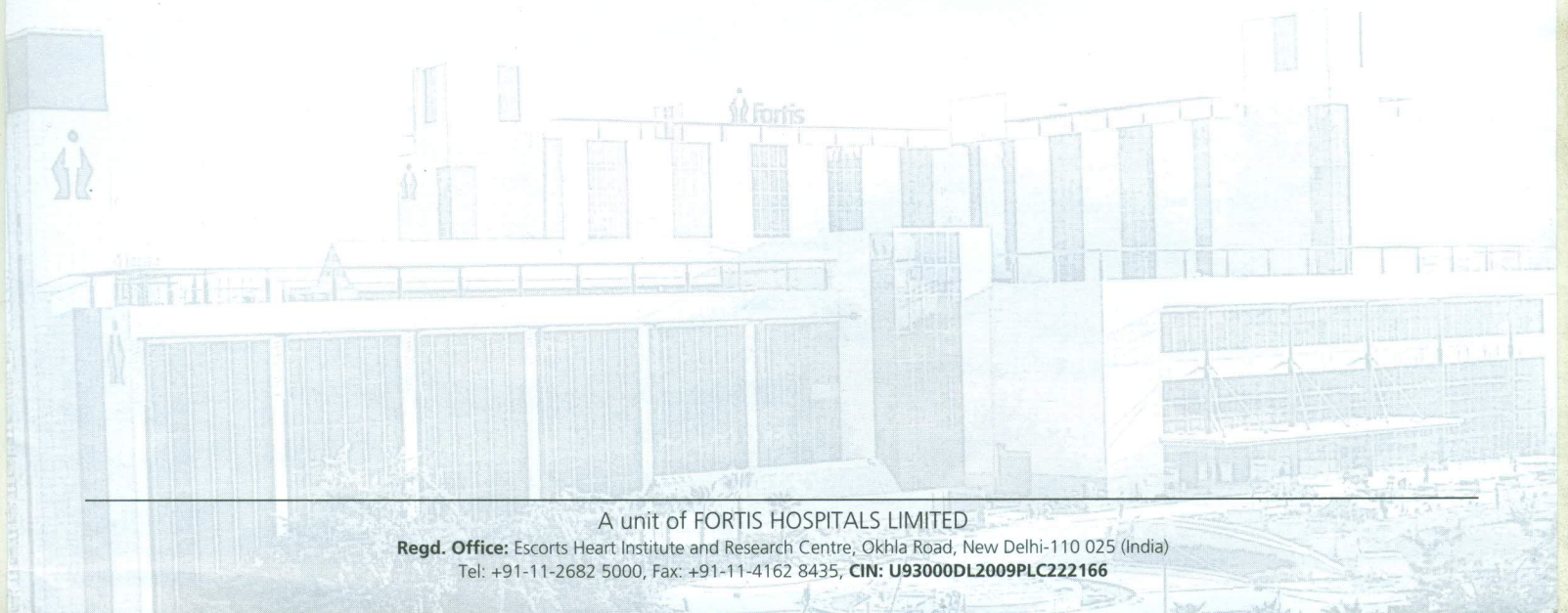
This is to certify that **Dr. Anudeep Agarwal** has undergone an internship in **"Quality and Operations" from April 1 to May 30, 2015**

During his training **Dr. Anudeep** exhibited a high level of professionalism and a tremendous zest for learning.

We wish **Dr. Anudeep** all the best in his future endeavors.

With Best Wishes,

Ritu Verma
Senior Manager- Human Resources



CERTIFICATE

This is to certify that Dr. Anudeep Agarwal, a student of IIHMR University, Jaipur has carried out a project on 'An analysis of patient compliance to advised Radiological Investigations and Admission in FMRI, Gurgaon'. This project work has been prepared by the student himself with utmost sincerity and this work has not been presented earlier for any academic activity.

I wish him all the very best & success in his further future endeavours.

Dr. Aparna Bogadi — Operations head

Mr.Umesh Gupta — Human Resource Head

ACKNOWLEGEMENT

"A Great achievement solution dawns with an idea, grows with our effort and attains fulfilment with our will power". In our effort towards the realization of my project work, I have drawn on the guidance of many people for which I'm glad to acknowledge.

I acknowledge the contribution of my mentor **Dr. P. R. Sodani** (Dean, Training-IIHMR) whose detailed suggestions have vastly enhanced the quality of my work.

I got the opportunity to pursue my summer internship from Fortis Medical Research Institute, Gurgaon. It was an opportunity to work with one of the best health care service providers.

I would like to thank my mentor & guide **Dr. Aparna Bogadi** , Fortis Medical Research Institute, Gurgaon for providing an opportunity to carry out the project work and utilizing the facilities available. Without her valuable guidance and consistent support, this project would not have got underway.

I'm thankful to **Ms. Priya Verma**, Operations, **Ms. Divya Gautam**, Deputy manager and **Ms. Lekshmi Gireesh**, Clinical Pharmacist, Quality Department, Fortis Medical Research Institute, Gurgaon for being my mentor and project guide for the entire period of my summer internship, for helping me improve the quality of my work and for helping me identify areas where I lack and work upon them.

I'm also thankful to all those who have directly or indirectly encouraged me to complete this project.

THANK YOU ALL

Table of Contents :

ACRONYMS

FMRI: Fortis Memorial Research Institute

Pts : Patients

SUD's ; Single use devices

ETO's : Ethylene dioxide Sterilised instruments

Cath.Lab : Catherisation lab

CCU – Critical/Coronary care Unit

PTCA :Percutaneous T Coronary Angioplasty

I. OBSERVATIONAL LEARNING

Section -1

***FORTIS HEALTHCARE LIMITED**: A brief History and present*

Fortis Healthcare Limited ,is one of the fastest growing and India's second largest healthcare provider in the country.The company was founded by the visionary business leader, Late Dr.Parvinder Singh, the Managing Director of Ranbaxy Laboratories.

Fortis Hospital- Mohali was the first step towards realising his Dream,his vision regarding the Indian Healthcare industry.

- **Mission Statement:**

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

- Late Dr. Parvinder Singh

Founder, Chairman Fortis Ltd

- **Vision Statement :**

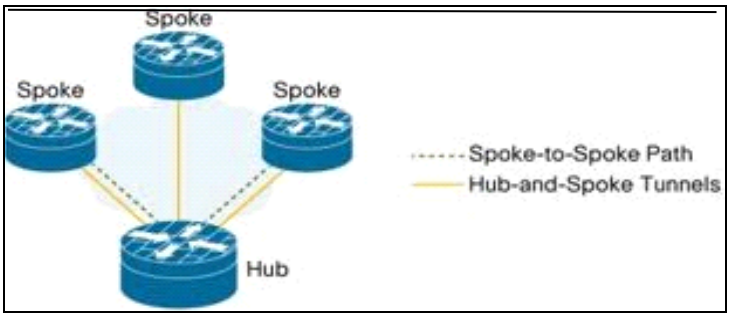
  "Globally Respected Healthcare organization known for Clinical Excellence and Distinctive Patient Care."

- FORTIS HEALTHCARE LTD. Was incorporated in 1996 to develop a world-class system of integrated healthcare delivery in India , comprising super-speciality areas along with multi-speciality care at the tertiary level.
- Late Dr.Parvinder Singh's Dream was carried forward by his Sons, Malvinder.M.Singh and Shivender.M.Singh.
- Fortis is the manifestation of Dr.Parvinder Singhs ideology and has been vrapidly growing through a combination of acquisitions, Greenfield, Brown field and management contracts.
- Fortis is in collaboration with the renowned hospital Escorts and has created history by acquiring 10 Hospitals from Wockhardt, giving it a strong Pan India presence, this was one of the largest deal ever in the Healthcare industry.
- In 2005, Fortis announced its first International foray jointly with Mauritis based partner, and thus came into existence "**Fortis Clinique Darne** "

JOURNEY OF FORTIS:

- 1996 : Foundation of the vision
- 2001 : JUNE, : Cardiac centre Launched
- 2002 : AUGUST : Multi speciality wing
- 2005 : Acquiisition of 5 ESCORTS HOSPITALS
- 2009 : JANUARY, First International Hospital in partnership- MAURITIUS
- Latest acquisition ; 10 Wockhardt Hospitals Pan India

- OPERATING MODEL :



Fortis operates on a Hub and Spoke model to Provide ,Multi-speciality and Tertiary level medical care.

HUB's – are the super-speciality Hospitals

SPOKE's – are the Multi speciality centres.

Patients who have the need are referred to these Hubs from the Multi speciality facilities in the Region, by embracing this system the patient benefits from the many available network facilities.

- SOME HIGHLIGHTS :

- Fortis Hospital Mohali, is the Most advanced Hospital in the Tricity (Chandigarh, Mohali Panchkula)and the nearby regions, and has State-of Art Infrastructure and Technology and services.There are now 64 Fortis Hospitals across the globe.
- Fortis Hospital Mohali is the first Hospital that was started and the biggest in the tricity, ie a 350 Bedded Hospital with 250 Operational Beds and 7 Operation Theatres, 4 ICU's and a Round the clock Emergency Dept. and 24hrs Pharmacy along with Ambulance services.
- Recent Development is the FORTIS CANCER INSTITUTE at Mohali.
- Fortis Hospital Mohali has been awarded " BEST DESIGN AWARD" By American Institute of Architecture 1999.
- Built-up Area of Fortis Hospital Mohali 400,000 sq.ft, with a investment of 155 Crores.

QUALITY FOCUS & ACCREDITION :

Organization Accredited
by Joint Commission International

Fortis Healthcare has been at the Forefront od providing quality healthcare services and has raised the bar of Quality Standards in the country.The hospital employ renowned medical talent from the healthcare industry.

- Due to their excellent Quality care standards & safety for patients 3 of Fortis's Hospitals have received the Prestigious JCI Accredation 9 Joint Comission International)
- JCI- is the largest accreditor of Healthcare organisation in U.S
- In Addition to this, 6 Fortis hospitals in India have been given the highly Respected NABH Accreditation ,which is the Highest national recognition for Quality , Patient care and Safety.
- On the other hand even the Labs have been given NABL accredation
-

PATIENT CENTERED STANDARDS	ORGANISATIONAL MANAGEMENT STANDARDS
1. Access to Care and Continuity of care	1. Quality improvement and patient safety
2. Patient and family Rights	2. Prevention and control of infections
3. Assesment of Patients	3. Governance, leadership and direction
4. Care of Patients	4. Facility management and safety staff
5. Anesthesia and surgical care	5.Staff qualifications and education
6.Medication Management and use	6. Management of communication and information
7. Patient and family education	

- NABH-

National Accreditation Board for Hospitals & Healthcafre providers

- NABH is a constituent board of Quality council of India, structured to cater to much desired needs of the consumers and to set Benchmarks for Progress of health industry.
- The standards provide framework for quality assurance and performance improvement of hospitals.
- The Standard focus is on Patient safety and quality of care.
- There 10 Chapters in the NABH book, which comprise of two Major aspects of Healthcare delivery.

Patient Centered	**Organisation centred**
1.Access , Assesment and Continuity of care.	6. Continous Quality Improvement
2. Care of Patients	7. Responsibility of Management
3. Management of Medication	8. Facility Management and Safety
4. Patient Rights and Education	9. Human Resource management
5. Hospital infection control	10. Information Management system

Certificate of Accreditations, Fortis Memorial Research Institute, Gurgaon:

- Awarded JCI Accreditation on 15TH June, 2007
- Re-Accreditation July, 2008, 2013
- Awarded NABH Accreditation on 16th June,2008
- Re-Accreditation June, 2011
- NABH audit 9th-11th May,20

Fortis MEMORIAL RESEARCH INSTITUTE

Hospital Overview :

- **FMRI** – is divided into 2 Blocks, A - block & B – block, and now recent development is the Fortis Cancer Institute, which maybe named C – block.
- Further, again the Departments are divided Floor wise, which is as follows,
- **Basement :** Materials, Stores, H.R, House-keeping , MRD, Biomedical engineering dept, CSSD, Laundry, Food & Breverage dept.
- **Ground Floor :** Reception, Registration, OPD's Blood Bank, X-ray, NICU, General ICU, Patient wating areas, IDBI Bank+ATM ,cafeteria, CCD, Prayer Room, Childrens play area, Dietetics,PWD-Patient welfare dept.Emergency. Lab, Nuclear Medicine, Clinic Rejuve. Pharmacy
- **1st Floor :** Opds, Wards, CMO office, MICU
- **2nd Floor :** MSOT,CCU, Cath LaB, PCR, ORTH.OT
- **3rd Floor :** Executive offices, Café Jamjaajee,Paalna Library. Auditorium, Finance, Marketing, Media & Communication, IT,CSR, FOS, QA Dept.
- In all there are 27 Depts in the Hospital.
- Some Depts. At FHM are Outsourced, like :
    - IVF- Dr. Pai & his Team (Mumbai)
    - Lab : SRL
    - Ultrasound,CT,MRI : Dr.Chawla
    - Dental : Axiss Dental

And latest addition is Physiotherapy Dept. outsourced to Dr.Balaji

Overview of FMRI,Gurgaon Department wise ;

- **OPD – Out Patient Department** ;

  The OPD at FHM is a Muliti –speciality centre bringing to the patients all the required specialities under one roof.It consists of the following specialities like Cardiology, Dentistry,ENT, Gastroenterology, Endocrinology, internal Medicine, child specialist, Gynaecology.Neurology,Opthalmology,Orthopaedics, Psychiatry, Pulmonology, Rheumatology,Urology,Radiology,Lab, Nuclear medicine,Pathology .
  It also has Home Based Rehabilitation Programmes and also has a Rhabilation centre-cum inn providing a world class ambience along with Patient care.

- **Preventive Health Care** : ***CLINIC REJUVE***

  Fortis firmly believes in Prevention is better than cure,,and this is done here at Clinic Rejuve ,where preventive Healthcare packages are given to pts and their family members at discounted rates to help them identify High-Risk pts and guide them towards better and healthy living, and providing them with required Medical help or Medication, and try to decrease lifestyle diseases by guiding towards healthy living.

- **Radiology** : Fortis can boost about having one of the most Advanced Radiology dept with skilled technicians and with the latest and most advanced machines. The Dept. has facilities like 64 Slice CT Scan, MRI,Mammography, X-Ray Ultrasound.

- **Nuclear Medicine :** This Dept. uses Safe,Painless, cost-effective method to image body with specialised diagnostic Gamma Cameras,in order to identify organ function and find out if presence of any disease.

- **Pathology :** SRL Ranbaxy manages the Path Lab at FHM . One of Asia's leading clinical testing facilities, SRL follows the protocol of College of American Pathologists Staffed with highly skilled technicians and equipped with digital analysers and complete

automationin Biochemistry, Hematology Serology, Microbiology and Patholgy and these services are rendered round the clock 24x7,and has also been Awarded NABL

- **Physiotherapy :** FHM has a dedicated Physiotherapy dept.which facilitates quick rehabilitation and pain management plus manage pts with musculoskeletal, cardiothoracic and neurological conditions. They also aid in Geriatric care from Degenerative diseases and provide Rehabilitation post trauma /surgery.

- **Dietitics :** The goal of the Diet clinic is toprovide diet consultation to patients and their attendents and satisfy their diet related queries. This dept organises specific individual conselling and diet education to the pts based on the clinical parameters and Doctors prescription.

- **IPD :** FHM has a total capacity of 350 beds out of which 315 are functional.The functions of IPD are to Admit/Dischare/Transfer pts.Collect patient information and coordinate the addmission with the other functions of the hospital.Arrange for the billing accept reservations, Disseminate information. It has a Reception desk all the above procedures are done.

- **OT'S** – there are 3 Main OT's Cardiac-OT, MS-OT, Ortho-OT ,

Cardiac OT : Bringing breakthrough technologies to the operating room,and setting international standards in its cardiac facilities, FHM has one of the most state of art OT with the most advanced lung and heart machines and many such deveices. Cardiac OT has been constructed around a central sterile core which has the provision of storing all the sterile items to be used in the OT. It also has a Stas lab for immediate ABG &Electrolyte and steam sterilizer . The OT is directly connected with CSSD thorough a Dumb waiter lifter to transfer items.

Cardiac CATH Lab : FHM has 3 Cath labs that function Round the clock 24hrs and 7 days supported by a sophisticated CCU . It has some world class equipments like, COROSCOPE - by Siemens used for electrophysiological monitoring and INNOVA 2000 –by GE a digital imaging system , one of its kind in the world.

MSOT : Multispeciality Operation theatre

FHM is equipped with high-yech OT's where high risk surgical procedures are performed by a dedicated team of experts.There are 4 Major and one Minor OT .

There is a Exclusive OT for Joint Replacements

A State-of-Art Neuro OT has been commissioned and is only of its king in the region.

On an average 15-20 cases are done in MSOT from 8am to 8pm , however Emergency services are available round the clock

CCU : Critical Care Unit :

CCU is managed by experts in critical care, with patient to nurse ratio 1:1. Trained intensivists are adept in all emergency techniques such as airway management, IV, Anaesthesia etc

➢ EMERGENCY DEPT.

The Dept. of Emergency Medicine at FHMis adept with the most modern life support systems and manned by highly qualified paramedics with knowledge and skills to evaluate and stabilize pts who seek emergency medical care, especially those with potentially lethal and serious conditions.

The Dept is equipped to Handle all emergency cases like,

Cardiac emergencies : Chest pain, heart aatacks,angina

Neuro. Emergency : Stroke, shock

Medical emergencies : Poisoning, abdominal pain, lung problem ,liver, kidney

Surgical emergencies : appendicitis, lancerations,cuts , wounds, fractures, trauma, RTA's

➢ Wards :

The Wards at FHM are, A1, A2, A3 , A4 Latest additions A6 (Cancer institue block)

A1 A2 are located on the first floor ,

A1 Multi-speciality unit which have a capacity of 33 which includes 2 deluxe rooms, and one presedential suite

A2 Cardiac unit, bed capacity of 38 with one presedential room.and 5 Double rooms and 10 single rooms.

A3 is Multispeciality again, with 47 beds

A4 A5A6 have also been made now.

➢ Fortis PAALNA:

FMRI has launched a complete Obstetrics and Maternity division .It aims at offering young expectant mothers an excellent experience of childbirth and care. FHM aims to make the delivery safe comfortable , stress free and Memrable.

➢ Pharmacy :

Pharmacy is one of the most important unit in the hospital. FHM has In Patient Pharmacy on 2nd floor, and the Out Patient Pharmacy on the Ground floor. The Chemist shop is right at the enterance that operates 24x7 and the aim of this Dept is to provide standard medicines to pts .The entire medicine and medical disposable requirements of OPD pts and discharged IPD Patients are met by the Pharmacy Dept.

➢ CSSD : CENTRAL STERILE SUPPLY DEPARTMENT

Ensuring high standard of sterilisation and disinfection to minimize the incidence of hospital acquired infection rate, is one of the most essential feature at FHM.

The objective of the Central Sterile supply Dept. is to provide all the hospital departments served adequate supply of sterilised goods conforming to highest standards of sterilastion from a central place thus reducing the overall cost and contributing towards reduction in the incidence of hospital acquired infection. Destruction of all micro-organisims including their spores by chemical or physical means.

Sterilization methods used :

1) Steam Sterilization 2) Ethylene Oxide Gas Sterilization

To minimize the time as well as distance , CSSD is connected with Cardiac units and OT,s through two dumb waiter lifts. One is used to transfer the sterile goods, and one for transportation of contaminated goods.

The Dept is divided into 3 zones,

1.Decontamination Area 2.Semi-sterile Area 3.Sterile Area

There are timings for supplying and taking of the goods at CSSD, for Wards and others

Mornings 8.15am to 11am

Evenings 2-30pm to 5pm

While foe Emergency /OT's there is no time restriction (Iventory stock is kept in the Ratio 3:1 to Avoid any kind of shortage)

➢ PWD : Patient welfare Dept :

Since its inception Fortis Healthcare has been aspiring to track patient satisfaction and feedback through our Patient Welfare Program.Fortis healthcare has an established PWD and the welfare officers, termed as the pink ladies – due to their uniforms act as liasions between the patients/customers and the hospital. They are patients advocates or representatives striving to provide solutions to any problem they may encounter here at Fortis.

➢ Human Resource Dept.

The Human Resource Dept. deals with the effective management and development of the most valuable Resource ie the Human component of the organisation. In FHM it is located in the Basement with the Zonal Head, 4 managers, 3 executives and a GDA.

Some of the important functions of HR are,

Manpower planning, Recruitment and Selection, Training and Career Development, Periodic Employee Performance Appraisal, Employee Rights/Welfare/Grievance, Wage and salary admininstration, rewards, incentives, Trainings, Job description and Job Analysis,employee engagements programmes- Fortis idol, FHM Nach baliye, Doctor/Nurse/Saff of the month etc.Thus this Dept is one of the key depts for functioning of the hospital.

➢ IT- Information Technology

The mission of the dept. to implement and support the IT related infrastructure required to achieve the target of being a near paperless and film less institute. The Major tasks include Systems support,looking after the installation and routine maintenance of the Computer systems and networking at FHM Mohali.

Theres, IT Help desk, nos.6050,6055, there are 13 servers450 work stations,call centre,etc. Backups and internet are also maintained by this dept.

The Softwares used here at FHM are, MEDTRAK and PYROGEN.

Pyrogen : operational only in the accounts and Pharmacy Dept.

Medtrak: is operational in all the depts at FHM

Fortis was one of the first few hospitals to HIS Hospital information system.

➢ **FINANCE** :

One of the Most integral dept. of the the hospital, which is responsible for Revenue collection,calculation and all money related matters, Purchases, allowances or salary of Employees, Situated on the 3rd floor of Block B.

➢ Marketing :

FHM is the first of its kind of Hospital in this region, and FHL has been formed with the sole objective of providing total integrated healthcare by establishing State-of-Art Health delivery system.This dept balong with Media and communication, creates awareness through Ad, Banners, Hoardings Press releases and interviews on Radio and Seminars.

➢ CSR : Corporate Social Responsibility

For the upliftment and betterment of Society, this has now become a Mandatory issue, 2% of the profits are supposed to be used for CSR activities for the welfare of the people. FHM also is doing its bit, and has 21 programmes running like ,

CHETNA : To provide help to the underprivileged girl child

ACTFAST : To spread awareness about HIV/AIDS

SAARTHAK : To extend support to cancer patients

SAHAYAK : A programme for Dialysis Patients

NANHI CHAH : To celebrate birth of a girl child and plant tree saplings

Friends of Fortis, Rural Outreach camp, Blood Donation Camps, Free Health check ups etc to name a few.

➢ F&B –Food and Breverage Dept :

This is again a vital part of the Hospital as it provides the resticted and special diet to the patients as per requirements. It is responsible for pre-peparation, Preparation, service, clearance of Food and Breverages.

➢ MATERIALS/ STORES/PURCHASE :

This dept is responsible for purchase storage of Medical Consumables, Stationary, Medical equipments, Pharmacy stores, its aim is to provide right item at the right time at the right price and quantity. Here at Fortis we have a CBU-Central Buying Unit that procures all the orders. Functions of this dept. are Procrement, Storage, Distribution,

➢ **HOUSE-KEEPING** :

Another important dept. takes care of the facilities present in the Hospital . Atem of 11 Supervisors help in maintainig the cleanliness of the Hospital right from the premises , public areas and Patient areas.

➢ **ENGENEERING** :

FHM functions the way it does ie Flwlessly, thanks to this dept. the Mjoe work of this dept . is Building maintenance, Water supply , Powerbackup, Gas supply, Sewage treatment plant.

➢ **BIOMEDICAL** :

This dept. is again a v.important part of the hospital as it helps FHM to maintain its world class services by using world class equipments, Flawlessly. It looks after all the medical devices and Equipments .

➢ **MRD – Medical Records Dept.**

Situated at the Basement, the MRD keeps a record of all the patient files along withv their details and H istroy.

- **LIBRARY :**

  A library is present on the Third Floor that houses various reference books, Journals, articles etc and every employee is an member.

- **CAFÉ JAMJAAJEE** :

  Situated on the 3rd Floor, the canteen of the Hospital, the unique name lies in the history and Values of Fortis and Fortis culture. A well arranged cafeteria where the staff have their meals daily.

- **SECURITY** :

  The security although is outsourced gives a 24X& cover to the entire Hospital and especially regulates the traffic in the Parking areas

- Some of the other Fcilities available are :

  - Fortis inn : a paid resthouse for the attendents of Out-station patients,or the Attendents of Patients for some rest within the hospital
  - Café 24 : a in house Restaurant that offers a wide variety of food for the attendants and family members of the patients.
  - Bank/ATM : IDBI Bank and ATM is also present within the premises that can be very helpful to the customers in cases of need for money, and don't have to run around to get instant financial aid
  - Café Coffee Day : CCD as is it well known is also present in the premises near the waiting area, again which is there to cater the needs of the people.
  - Prayer Room : keeping in mind the religious and spiritual needs of the people, such a room is created where people can pray for their loved ones
  - Play area : Specially for Children, this area has been designed.
  - Many other Miscellaenous things like Nescafe Shop, Gift shop, etc is also present in the Hospital premises.

PROJECT REPORT:

An analysis of patient compliance to advised Radiological Investigations and Admission in FMRI, Gurgaon:

Introduction:

Physicians work in partnership with patients to achieve optimal care.

But what happens when a patient does not follow a doctor's advice? Addressing non-compliance or non-adherence — when a patient does not comply with **doctor's advice**, which a physician has set out in the patient's best interests — can be challenging.

Besides impacting patients and the health care system, non-compliance has grim financial implications for other stakeholders, such as hospitals, insurance companies and employers. Patients have a reduced quality of life, shorter life spans and higher long-term health costs. Hospitals forego potential revenues worth millions of dollars, if not billions. The entire health care system is burdened by increased health care costs, including increased hospitalization rates and physician consultation. Yet most patients don't particularly care how their individual non-compliance affects the cost of care at their hospital or in the healthcare system overall.

Patient noncompliance is one of the major unsolved therapeutic problems confronting the medical profession today. Physicians have great difficulty in identifying and dealing with non compliers. *(1)*

Despite this evolved understanding, in general **the issue of poor compliance to investigations and admissions advised by consultants in a Hospital setting has not been given the priority it deserves**. Consequently, in the past it has received insufficient direct, systematic or sustained intervention.

Literature Review:

- It has been estimated by numerous studies that one-third to one-half of all patients are non-compliant with medical direction [(2)].

- Research conducted by the New England Healthcare Institute (NEHI) in 2009 estimated that, in the US, the overall cost of poor adherence, measured in otherwise avoidable medical spending, is close to $310 billion annually, representing approximately 14% of total healthcare expenditures[(3)]

However, little is known about patient non-compliance in relation to investigations and admission advised by a consultant. This leads to prolonged illness and further complications which is an important patient safety concern.

Need For Study:

Patient "non-compliance" is actually not a patient failure but rather another data point to be assessed and another opportunity to re-engage creatively with the patient, perhaps with the help of others.

If patients aren't compliant, there's a reason, and it's a healthcare provider's obligation to find out what it is; understanding a patient's personal and social circumstances is crucial to caring for the patient and will ultimately drive down costs.

In this research project, I attempt to address this small but an important corner of this patient safety endeavour.

- Why are patients not getting their laboratory monitoring test and not getting admitted in the hospitals, when advised by their consultants?
- Which prescribers and which patients are least likely to do what is needed to happen and what interventions would be most promising?

"Identifying non-compliance is not an easy task, but understanding the reasons patients do not comply is a good beginning".

Research Question:

- What is the effect of ***cost*** in influencing patient's compliance to advised radiological investigations and admission in FMRI, Gurgaon?
- What is the effect of ***waiting time*** in influencing patient's compliance to advised radiological investigations and admission in FMRI, Gurgaon?
- What is the effect of ***patient trust*** in influencing compliance to consultant's advice in FMRI, Gurgaon?

Objective:

- To determine the **effect of cost** in influencing patient's compliance to advised radiological investigations and admission in FMRI, Gurgaon
- To determine the **effect of waiting time** in influencing patient's compliance to advised radiological investigations and admission in FMRI, Gurgaon
- To determine the **effect of patient trust** in influencing compliance to advised radiological investigations and admission advised in FMRI, Gurgaon

Hypothesis:

- Cost of care influences patient's compliance to advised radiological investigations and admission in FMRI, Gurgaon
- Waiting time influences patient's compliance to advised radiological investigations and admission in FMRI, Gurgaon
- Patient trust influences patient's compliance to advised radiological investigations and admission in FMRI, Gurgaon

Research Methodology:

Study Design:

Descriptive Cross Sectional study

Study Area:

Fortis Memorial Research Institute, Gurgaon

Sample Size:

Departments: Neurology
Sample size: 200

Sample Method:

Simple Random Sampling

Sample Criteria:

A total of 200 prescriptions were collected over a period of 30 days during the working hours of OPD from Monday to Saturday (to account for daily variation). **Prescriptions were collected only for those patients who were advised radiological investigations and were advised admission by consultants in neurology department.**

Tools:

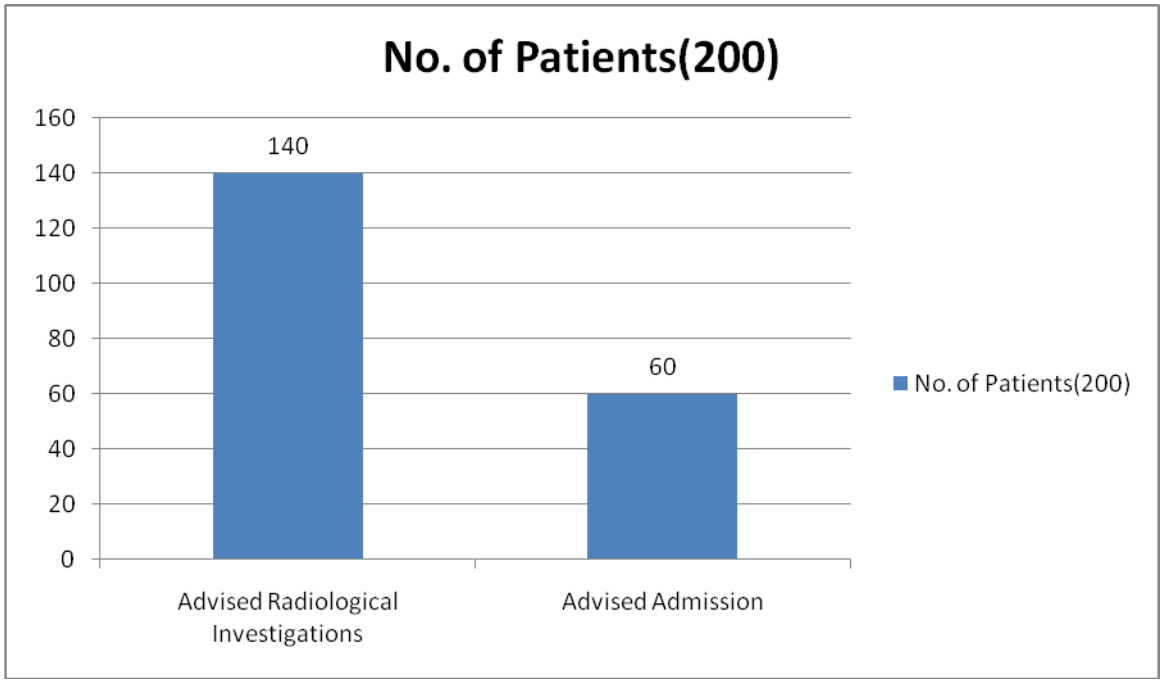
Patients: Semi-structured Questionnaire

Technique:

Patients: Telephonic interview

Analysis:

(1) Of the total 200 prescriptions analysed for patients, how many of them were advised radiological investigations and how many were advised admission.

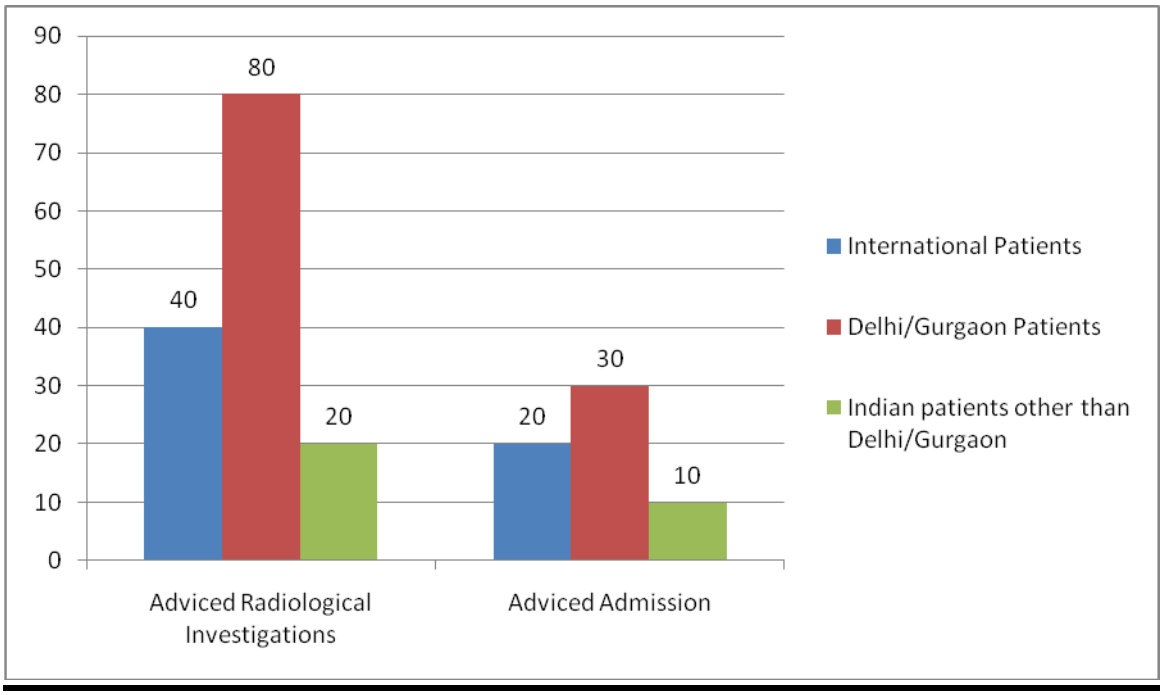


Interpretation:

Of the total 200 prescription advised for patients

- 140 patients were advised radiological investigations
- 60 patients were advised

(2) Of the total 140 patients who were advised radiological investigations and 60 patients who were advised admission, what was the geographical distribution of patients?



Interpretation:

Of the total 140 patients who were advised radiological investigations:

- 40 were international patients
- 80 were residents of Gurgaon/Delhi/NCR
- 20 were Indians other than from Gurgaon/Delhi/NCR

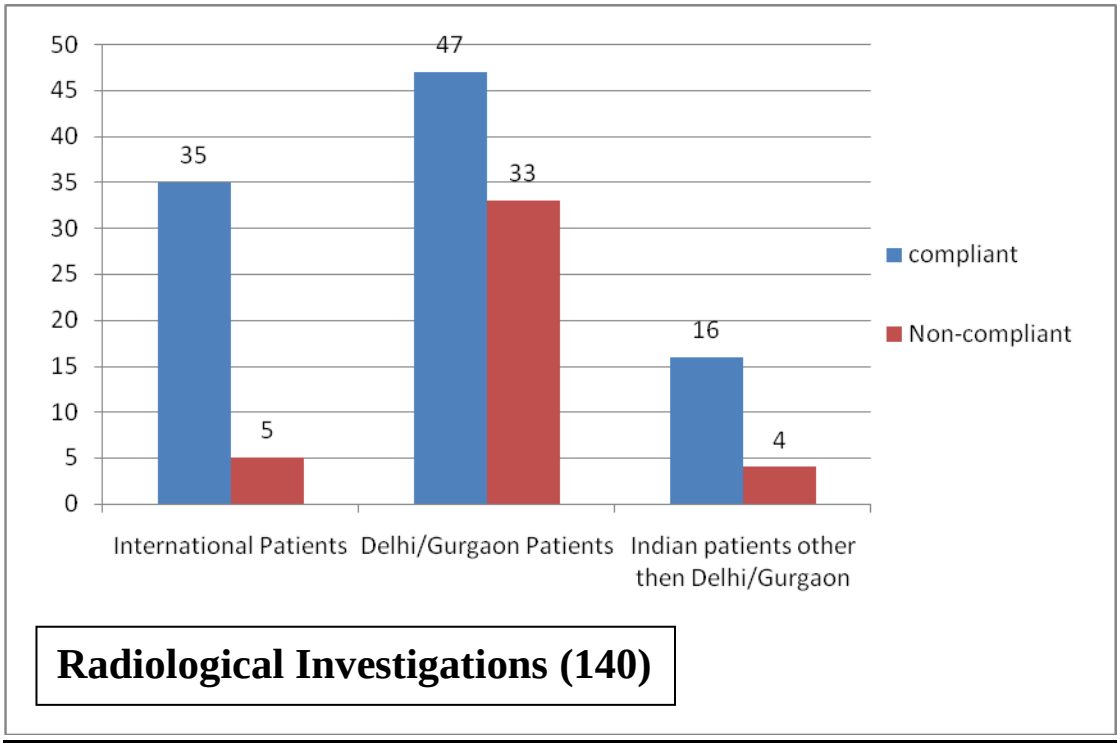
International patients	Gurgaon/Delhi/NCR residents	Indian patients other then Gurgaon/Delhi/NCR	Total
40	80	20	140

Of the total 60 patients who were advised admission:

- 20 were international patients
- 30 were residents of Gurgaon/Delhi/NCR
- 10 were Indians other than from Gurgaon/Delhi/NCR

International patients	Gurgaon/Delhi/NCR residents	Indian patients other then Gurgaon/Delhi/NCR	Total
20	30	10	60

(3) What was the compliance for international patients, Gurgaon/Delhi/NCR residents and for Indian patients other then Gurgaon/Delhi/NCR



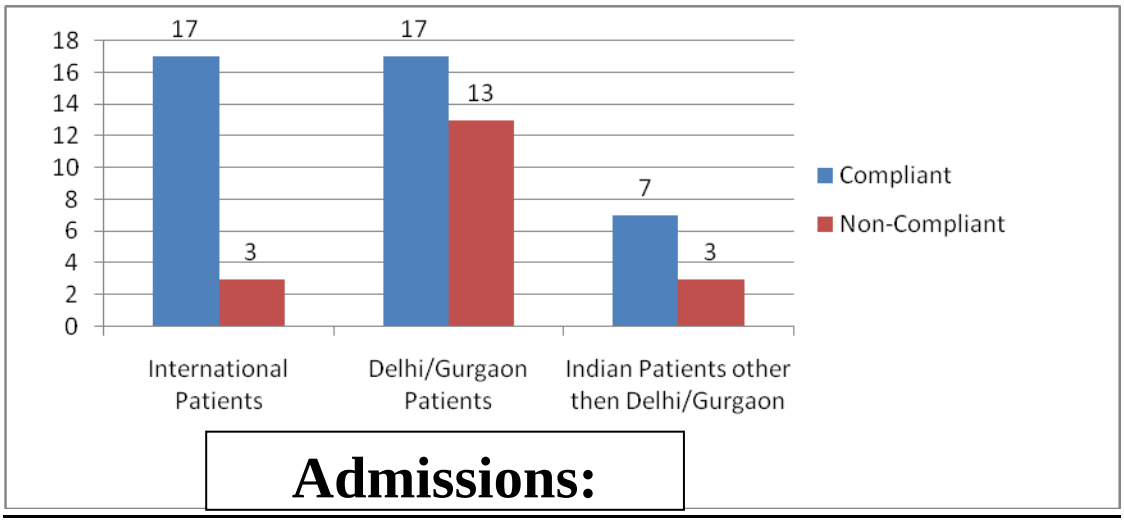
Radiological Investigations (140)

Interpretation:

Radiological Investigations (140)

Compliance	Compliant	Non-Compliant	Total	Non-compliance %age
International Patients	35	5	40	**12.5%**
Gurgaon/Delhi/NCR residents	47	33	80	**41.25%**

- Of the total 40 international patients who were advised radiological investigations, 5 were non-compliant
- **Of the total 80 patients from Gurgaon/Delhi/NCR region, 33 were non-compliant**
- Of the total 20 Indian patients other than from Gurgaon/Delhi/NCR, 4 were non-compliant.



Admissions:

Interpretation:

Admissions (60)

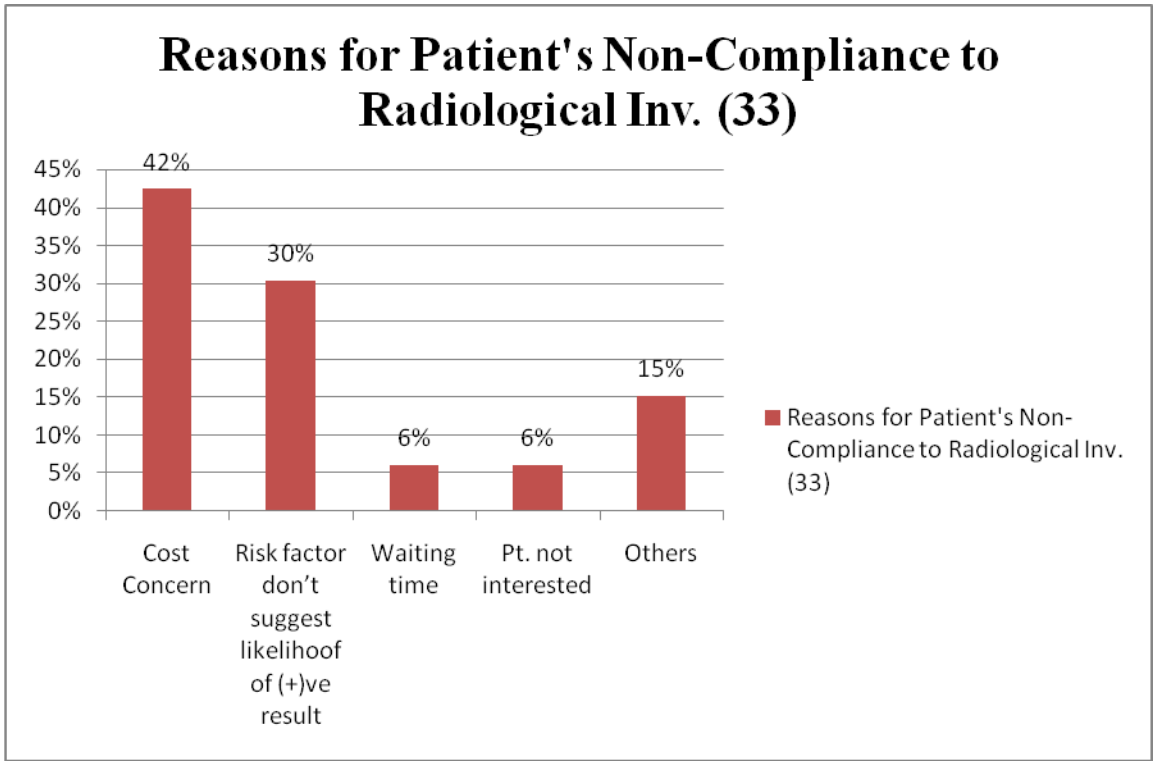
Compliance	Compliant	Non-Compliant	Total	Non-compliance %age
International Patients	17	3	20	**15%**
Gurgaon/Delhi/NCR residents	17	13	30	**43%**
Indian patients other than from Gurgaon/Delhi/NCR	7	3	10	**30%**

- Of the total 20 international patients who were advised admission, 3 were non-compliant
- **Of the total 30 patients from Gurgaon/Delhi/NCR region, 13 were non-compliant**
- Of the total 10 Indian patients other than from Gurgaon/Delhi/NCR, 3 were non-compliant.

Non-compliance was found to be high for Gurgaon/Delhi/NCR resident's i.e. 41.25% and 43% for radiological investigations and admissions respectively. So, detailed analysis was done only for patients from Gurgaon/Delhi/NCR region.

(4) To know, the reasons of patient's non-compliance to Radiological investigations and Admissions advised by consultant in neurology department :

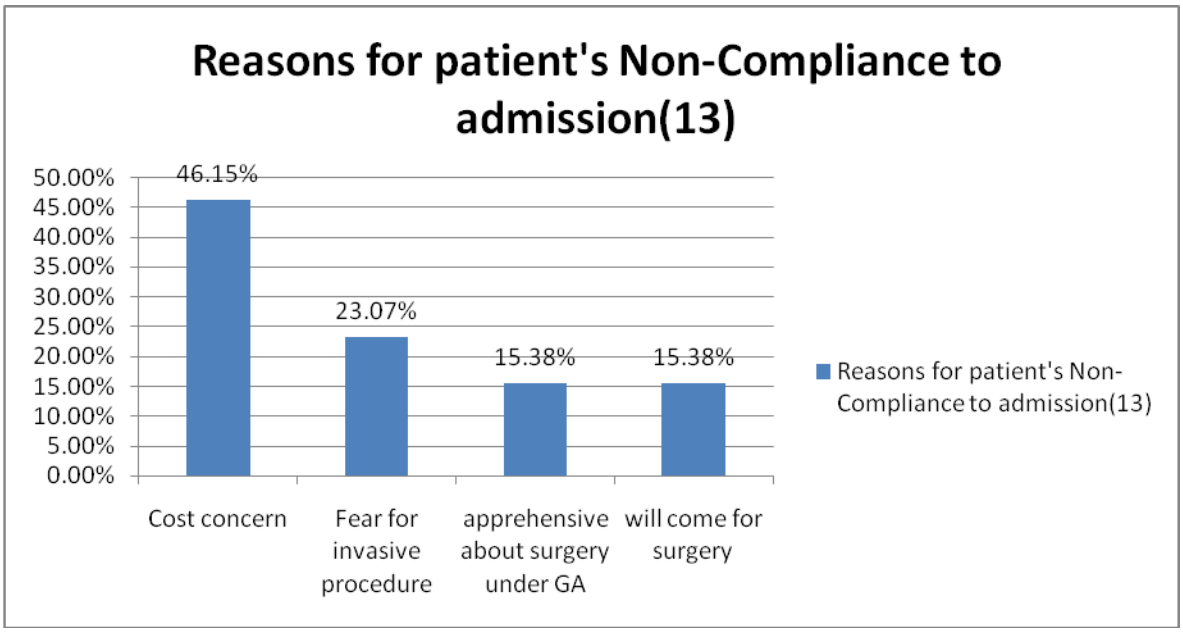
(For *patients from Gurgaon/Delhi/NCR region)*



Interpretation:

Cost Concern	Risk factor don't suggest likelihood of (+)ve result	Waiting Time	Patient not interested	others	Total
14	10	2	2	5	33

- Of the 33 patients who did not comply with consultant advice for radiological investigations:
- 14 patients did not comply because of high cost
- **10 patients didn't go for the test because they believe that risk factor don't suggest the likelihood of positive result**
- 2 patients were not interested in getting their test done whereas 5 have some other reasons.



Interpretation:

Cost concern	Fear for invasive procedure	Apprehensive about surgery under GA	Will come for surgery	Total
6	3	2	2	13

- Of the 13 patients who did not comply with consultant advice for admission:
- 6 patients did not comply because of high cost
- 3 patients feared invasive procedure whereas 2 were apprehensive about surgery under GA.
- 2 patients said that they have not decided yet but will come for surgery soon.

Findings:

- From the above data, we can say that, International patients are most likely to comply with consultant advice for investigations and advice
- Non-compliance is found to be highest for patients from Gurgaon/Delhi/NCR region i.e. close to 50%
- Cost is still the major concern for most of the patients but a majority of patients don't comply to advised investigations as they feel that risk factor don't suggest likelihood of positive results and ;
- For patients who are advised admission, emotional barrier is a factor next to cost which influences patients to not to comply to advised admission.

Discussion:

Patients may have many reasons for refusing treatment. The patient may not understand the importance of the treatment or the consequences of noncompliance. Our research study has disclosed that the factors most consistently related to patient's non-compliance are:

- High Cost
- **Patient not convinced with consultant's advice or disease/illness not properly explained**
- Psychological factor
- Characteristics of the therapeutic regimen
- Properties of the physician-patient interaction

The patient is the ultimate decision-maker regarding his or her own medical care and has the final word in whether or not to undergo a recommended procedure or course of treatment.

These patients are not "non-compliant," they simply have more steps to complete at the beginning of the process before engaging and arriving at a place where they are ready to either accept the advice and input of the physician or ideally co-create a patient-specific healing journey.

It is an obligation of healthcare provider to find out the reasons for the refusal. Once the underlying cause is identified, the physician may be able to address it specifically and find an effective alternative that is mutually agreeable to both the patient and physician

The solution to this problem lies in the development of an open, co-operative doctor-patient relationship.

- ✓ The potential risks of declining the recommended course of treatment should routinely be discussed with patients, along with the risks and potential complications of the procedure/treatment itself.
- ✓ The patient should be given ample opportunity to raise any questions or concerns about proceeding or not proceeding with the recommended course of treatment.
- ✓ If the patient decides to refuse the treatment, the physician should not assume that the patient understands the consequences of that refusal and needs no further explanation. The physician should always verbally confirm that the patient understands and has no questions about the proposed procedure or treatment and/or the potential risks of refusing it.

Conclusion:

Patient noncompliance with medical regimens is one of the major unsolved therapeutic problems confronting the medical profession today. Besides impacting patients and the health care system, non-compliance has grim financial implications for other stakeholders, such as hospitals, insurance companies and employers. Patients has reduced quality of life and increased long term cost whereas hospitals forego potential revenues worth millions of dollars, if not billions.

Physicians have great difficulty in identifying and dealing with non compliers. **Patient "non-compliance" is actually not a patient failure but rather another data point to be assessed and another opportunity to re-engage creatively with the patient, perhaps with the help of others**. Sometimes a patient is not ready to hear, to believe, or to follow a physician-defined and dictated care plan. Sometimes a patient needs to first overcome a mental health barrier, a financial barrier, an environmental barrier, or a spiritual barrier before being ready to address a physical challenge and follow a prescribed care plan.

If we truly want to create a healthy health care system than we must create an environment where the practitioner has the time, relationship and patient's trust to assess and identify the real barriers to healing (those early steps in the process that must be addressed). Then together they must take the opportunity to co-create a healing journey that will best position the patient to achieve specific health goals. To meet the patient where he is at and begins the co-created plan at that point.

'A truly patient-centered and patient-specific approach to healing is a key'.

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