Summer Training at

Kokilaben Dhirubhai Ambani Hospital and Medical Research Institute
(April 1–May 31, 2014)

International Patient Services: KDAH

By
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Under the guidance of
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MBA- Hospital & Health Management (MBA-HM)
2013-2015

The IIHMR University, Jaipur
2014

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CERTIFICATE

This is to certify that **Dr. Tayib Mohammad Syed** has undergone his summer training at Kokilaben Dhirubhai Ambani Hospital and Medical Research Institute, Mumbai from 1st April, 2014 to 31st May, 2014.

The candidate himself carried out the study **"International Patient Services: KDAH"** during his summer training. His approach to the study has been scientific and analytical.

This summer training is partial fulfilment of the course requirement recommended for the awarding of the post graduate diploma in health and hospital management.

I wish him success in all his future endeavours.

Dr. Ashok Kaushik

Dean(Academic & Student Affairs)

IIHMR Jaipur

Dr. Vijay Pratap Raghuvanshi

Professor

IIHMR Jaipur

ACKNOWLEDGEMENTS

I would like to take this opportunity to express my deepest gratitude toward all the people who have been instrumental in guiding and helping me in making this project a success.

I would like to thank my mentor, **Dr. Vijay Pratap Raghuvanshi**, Assistant Professor, Institute of Health Management research, Jaipur, for being a constant source of support and inspiration throughout my tenure at KDAH.

I would like to thank the CEO, **Dr. Ram Narain** at Kokilaben Dhirubhai Ambani Hospital and Medical Research Institute, for investing his time and patience in guiding and supporting me in my quest for knowledge. His close attention and feedback on my abilities as a healthcare management student have been pivotal in recognizing and utilizing my strengths.

Last but not the least; I would like to thank **Dr. Mohammad Faisal Pervez**, Senior Manger – Clinical Administration, Kokilaben Dhirubhai Ambani Hospital and Medical Research Institute, for being a driving force behind the successful completion of my project. His constant guidance and support was central in making my tenure at the hospital a fruitful one.

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ACRONYMS

- **A&E - Accident and Emergency**
- **DAMA -Discharge Against Medical Advice**
- **HCA -Health Care Assistant**
- **ALOS -Average Length Of Stay**
- **CMD – Chief Medical Director**
- **COO – Chief Operating Officer**
- **CGHS – central Government Health Scheme**
- **CSSD – Central Sterile and Supply Department**
- **CT – Computerized Tomography**
- **ECG – Electro Cardiogram**
- **TMT – Treadmill Test**
- **EEG – Electro Encephalography**
- **EMG – Electro Myo Graphy**
- **FMO – Front Office Manager**
- **FOE – Front Office Executive**
- **HOD – Head Of Department**
- **HRD – Human Resources Department**
- **ICU – Intensive Care Unit**
- **IPD – In-patient Department**
- **KDAH – Kokilaben Dhirubhai Ambani Hospital**
- **MRD – Medical Records Department**
- **MLC – Medico Legal Case**
- **NICU – Neonatal Intensive Care Unit**
- **OPD – Out Patient Department**
- **CME – Continued Medical Education**

OBSERVATIONAL LEARNING

About Summer Training:

The Post Graduate Diploma in Health and Hospital Management (PGDHM) program of Institute of Health management Research (IIHMR) aims at preparing professionally trained managers of health care organizations and hospitals to meet the increasing need for managerial skill. It involves an eight week summer placement for the first year students to provide them with a firsthand experience of the hospital system or environment. As a part of the program I had the privilege to undergo my practical training at Kokilaben Dhirubhai Ambani Hospital, Mumbai to get a firsthand knowledge and experience about the functioning of the hospital. I worked all through under the operations team there from 1st April 2014 to 31st May 2014. The main aim of the summer training was to get exposed to operation of all the hospital in general, and an in-depth insight of the Third Party Administrator, Pharmacy, medical Record Department and Laboratory in the hospital in particular.

Objective:

The summer training program had the following objectives:

- To have a basic orientation of the hospital set up.
- To study the functioning of the hospital as a system and its departments as subsystems of the hospital.
- To observe all the departments in terms of their location, work plan and staffing pattern.
- To study about the staffing pattern and job responsibility of staff.
- Doing a project which is helpful to me in understanding hospital working in a better way and to the organization.

METHOD OF DATA COLLECTION:

The data collected was primary and secondary data.

Primary data was collected by:

- Personal observation during the summer training and department visits.
- Further information was gathered by discussion with the department heads and staff on the basis of unstructured interview.

Secondary data was collected from:

- The past records and hospital management information system (HMIS).

Profile of KDAH

Kokilaben Dhirubhai Ambani Hospital & medical Research is India‟s newest, most advanced tertiary care facility. As the flagship social initiative of Anil Dhirubhai Ambani group, it is designed to raise India‟s global standing as a healthcare hub, with emphasis on excellence in clinical services, diagnostic facilities and research.

A vision to strength en healthcare in the communities we serve and empower patients to make informed choices was at the genesis of Kokilaben Dhirubhai Ambani Hospital &Medical Research Institute.

Inaugurated in January 2009, The Hospital is a significant CSR initiative from Reliance Anil Dhirubhai Ambani Group. It is designed to raise India‟s global standing as a healthcare hub, with emphasis on excellence in clinical services, diagnostic facilities and research activities.

It is the only hospital in Mumbai to function with a FULL TIME SPECIALIST SYSTEM that ensures the availability and access to the best medical talent around-the-clock. The 750-bed hospital has over 103 full-time doctors, 520 nurses and about 200 paramedical and growing.

It represents a confluence of top-notch talent, cutting edge technology, state of art infrastructure and most important, commitment .KDAH offers doctors and patient‟s cutting edge diagnostic and surgical solutions as well as the latest in IT systems. In many cases, they represent the first of their kind in the region.

KDAH is fully geared in terms of talent ,technology, structure and spirit-to reshape perceptions regarding hospitals and redefine the concept of caring, Indeed, this globally benchmarked institution marks the beginning of a new era in Indian healthcare.

History

The hospital project was initiated in 1999 by Dr. Nitu Mandke as a large scale heart hospital. Dr. Nitu Mandke was born in 1948 in a middle class family. He was first in the family to choose medicine as a profession with a determination to become a heart surgeon.

He joined B.J. Medical College; Pune from where he passed his M.B.B.S in 1970 came to Mumbai for further studies and completed his super specialty course in Cardiovascular Surgery. He spent close to 8 years working with world renowned figures in cardiac surgery like Dr. Magdi Yacoub in England and Dr. Kirklin and Dr. Pacifico at the University of Alabama in the United states. He was an all-rounder with exemplary proficiency in sports, arts, languages, mathematics and so on

In his lifetime he won the heart of many and repaired many more through unerring surgery. He won various social awards like : " The Rajiv Gandhi Gold Medal of merit " 1992 , " Indira Gandhi sadhbhawna Award " 1999, " Outstanding Man of the 20th Century " 2000 , " Pride of India"2001, " Sarvashri " Gold Medal 2000 and " Maharashtra Gaurav Award to name a few.

With great passion Dr. Mundke built a substantial portion of the hospital building. Sadly his dream was cut short by fate when he succumbed to a massive heart attack in May 2003 ; leaving a dream unfulfilled and unfinished.

The Management of Mandke Foundation approached Reliance ADA Group, who graciously took over this project and developed it into one of the most modern and state –of-the-art multispecialty tertiary care hospital; naming the institution as – Kokilaben Dhirubhai Ambani Hospital & Medical Research institute.

In honor of initiator, the hospital"s Medical Convention Centre has been aptly dedicated to the memory of Dr. Nitu Mandke.

VISION

We aim to be a global healthcare institution that combines the best in medical treatment with strong ethical principles and a culture of care and compassion.

VALUES

Integrity: To deal with all stakeholders – patients, partners, employees, vendors and the community – in a spirit of fairness and integrity

Transparency: To respect the patient‟s right to know at every touch point by providing information that is clear, concise relevant and easy to understand.

Maximum Care: To re- evaluate every hospital system, Process and procedure to ensure that patients and their loved ones receive maximum care and comfort.

Self – Improvement: To instill a process of learning and self – improvement at every level through continuous training, focused research and peer review.

Patient Dignity: To safeguard the dignity of patients by protecting their individuality and privacy at all times.

KEY STATISTICS

Encompassing 10 lakh Sq.Ft.of space spread over 17 floors and two basements. Its intelligent framework allows for hospital staff to optimize utilization of space and resources.

Accommodates over 750 in – patient beds, allows optimal utilization of resources and ensures privacy, dignity, comfort, comfort, convenience and the best healthcare to every patient. However the smooth and seamless movement of people & staff guaranteed.

Critical care unit is the largest number of critical care beds in Mumbai, with 130 ICU beds. Special technical features in ICU including ceiling mounted, dual arm pendants which ensure that the space around the patient is not cluttered. Another unique feature is dedicated air supply that keeps the critical care free of any kind of contamination and infection.

It has a total of over 140 Full time consulting clinics, with the capacity to handle over 6000 outpatient consulting every day.

Movements in the hospital is managed by 30 elevators – the largest elevator bank for any hospital in India capable of transporting 7500 persons per hour, with different elevators for inpatients , outpatients, staff and catering.

Two dedicated elevators ensure quick transfer of patients to operation Rooms and ICUs.

The hospital‟s laboratory is housed on a single floor spread over an area of over 40,000 sq ft offers over 3000 routine and highly advanced diagnostics, genetic and molecular biology test and will serve as a referral Centre for second opinions.

UNIQUE IN MUMBAI

Mumbai‟s first slice PET CT Scanner that combines computed tomography and positron emission tomography technologies into a single machine.

140 ICU beds, Largest number of critical care beds in Mumbai.

Hospital‟s laboratory housed on single floors spread over an area of over 40,000 sq ft. It offers over 3,000 routine and highly advanced diagnostics, genetic and molecular biology tests.

Hospital is having Mumbai‟s Largest OT complex with 22 operating theatres.

Largest dialysis Centre in Mumbai.

Full – time Specialist System: All doctors are attached and available only at Kokilaben Hospital.

Level I Accident and Emergency Center.

UNIQUE IN INDIA

Encompassing 10 lakh sq ft of space spread over 17 floors and two basements. Its “intelligent framework” allows for hospital staff to optimize utilization of space and resources.

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HOSPITAL INFRASTRUCTURE

1. Lower basement
    - Biomedical Engineering
    - CSSD
    - MRD
    - Nuclear medicine
    - PET CT
    - Radiation Oncology
    - SRS
2. Upper basement
    - Car Parking
    - Central security office
    - Mortuary
3. Ground floor
    - Main Reception
    - Admission counter
    - Discharge and billing
    - Pharmacy & Medical mall
    - Gift shop
    - Prayer hall
    - Business centre
    - Fine dining
    - Food court
    - ATM
    - Central report collection centre
    - Beauty Salon
    - Accident and emergency
4. Mezzanine Floor
    - Administration
    - Library

- Staff dining

5. First Floor
    - Clinical administration
    - Radiology & Imaging (X-Ray, MRI , Ultrasound, CT scan)
    - Health check up program
    - Sample collection
    - Centre for cardiac sciences
    - Centre for bone and joint
    - Centre for pulmonary and lung medicine
    - Multi-specialty OPD
6. Second floor
    - Centre for children
    - Centre for brain and nervous centre
    - Dental clinic
    - Centre for cancer
    - Ophthalmology clinic
    - E.N.T clinic
    - Gastroenterology clinic
    - Dialysis centre
    - Blood bank
    - Urology clinic
    - Nephrology clinic
7. Third floor
    - OT complex 1 (8 theatres)
    - Catheterization lab
    - ICU (Neuro and surgical)
    - Interventional radiology
8. Fourth floor
9. Fifth floor
    - Ambulatory surgery

- Day surgery
- ICU (cardiac)
- OT complex 2 (7 theatre)
- Refuge Area

10. Sixth floor
    - Rehabilitation centre
    - Convention and exhibition centre
11. Seventh floor
    - IVF centre
    - Cosmetology and aesthetic surgery
    - Laboratory medicine and pathology
    - Nursing College
    - Tissue and bone bank
12. Eighth floor
    - Birthing complex (labour and delivery)
    - ICU (pediatric and neonatal)
    - Birthing Suites
    - OT (obstetric)
    - Wards
13. Ninth floor
    - Inpatients (pediatric)
14. Tenth floor
    - High dependency unit
    - ICU (Medical)
    - Refuge area
15. Eleventh floor
    - General ward
    - Nursing College
16. Twelfth to sixteenth floor
    - Inpatient

DEPARTMENT IN THE HOSPITAL

The following departments function in the hospital

Clinical Services	**Clinical support services**	**Clinical Administrative Services**	**Administrative services**
Accident & Emergency	LABORATORY MEDICINE	Ambulance services	Human resources
OPD	Imaging	Nursing department	Materials
Anesthesia	CSSD	Food & beverages	Marketing
Critical Care	Biomedical waste	Security	Finance
OT	Housekeeping	Mortuary	Engineering
IPD	Pharmacy	Laundry	IT

CLINICAL SERVICES

ACCIDENT AND EMERGENCY

An Emergency Department (ED) is also known as Accident & Emergency (A & E), Emergency Room (ER), Emergency Ward (EW), or Casualty Department is a medical treatment facility, specializing in acute care of patients who present without prior appointment, either by their own means or by ambulance. Due to the unplanned nature of patient attendance, the department must provide initial treatment for a broad spectrum of illnesses and injuries, some of which may be life threatening and require immediate attention.

Layout

- 11 bedded (6+3 triage + 2 isolation)
- Each bed is separated with curtains to maintain patient privacy and is equipped with the following:

✓ Oxygen supply
✓ Suction Pump
✓ Syringe pump
✓ Cardiac monitor

Minor Operation theatre

- Machines in minor OT are as follows:

✓ Anaesthesia machine
✓ ETCO2 machine
✓ Cautery machine
✓ OT table

- Procedures done in minor OT

✓ Lumbar puncture
✓ Biopsy
✓ Bone marrow aspiration
✓ Suturing

This department has got its own billing and discharge counter.

Staff

HOD

9Junior Medical Doctor (2/shift)

1 Head Nurse

24 Staff nurse (6/shift)

6 HCA (2/shift)

Equipment:

- Defibrillator-2
- Portable ECG – 2
- Nebulisation machine -2
- Portable sonography machine-1
- Trolleys :
    - ✓ Procedure trolley
    - ✓ Induction trolley
    - ✓ Adult crash cart
    - ✓ Dressing trolley

Ambulance:

There are 2 types of ambulance:

a) Non-cardiac ambulance

b) Cardiac Ambulance

Equipment in the ambulance are as follows:

- Ambulance cot
- Portable Ventilator (cardiac ambulance)
- Portable oxygen unit
- Portable suction unit
- First aid kits
- Traction splint
- Auxiliary Stretcher
- Transfer sheet
- Airways (nasal, oropharyngeal)
- Obstetrical Kit
- Sphygmomanometer
- Stethoscope
- Fire Extinguishers
- Burn Kit
- Others
    - ✓ Sterile and non-sterile gloves
    - ✓ Face mask
    - ✓ Blankets
    - ✓ Towels
    - ✓ Bed pan
    - ✓ Tongue depressors
    - ✓ Cold packs instant chemical type

- 1 HCA in non-cardiac ambulance
- 1 HCA + 1 nurse + 1 cardiac consultant in cardiac ambulance

OUTPATIENT DEPARTMENT

Kokilaben Dhirubhai Ambani Hospital has 140 independent consultant clinics with a capacity to handle over 6000 outpatient consultations every day. These clinics are organised as "functional clusters" representing a specialty, with each cluster containing its own examination room, phlebotomy room, and in instances, rooms for specialized medical equipment unique to the cluster. A day care dialysis unit, an endoscopy theatre complex, radiology suites and a blood bank support outpatient service are co-located on the same floors as the self-contained outpatient area. The hospital outpatient services offer specialist consultation services across 42 different specialities including six centres of excellence.

The six centre of excellence are as follows:

- Centre for neurosciences
- Centre for cancer
- Centre for physical medicine and rehabilitation
- Centre for cardiac sciences
- Centre for bone and joint
- Centre for children

The specialists included are Anaesthesiology, Critical Care Medicine, accident and emergency, gynaecology and obstetrics, imaging, laboratory medicine and pathology including biochemistry, molecular biology, haematology, histopathology, microbiology, clinical pathology, transfusion medicine and blood bank, genetics, tissue and bone bank, dermatology, endocrinology, gastroenterology, clinical nutrition, internal medicine, nephrology, psychiatry, pulmonary medicine, rheumatology, geriatric medicine, surgery including dentistry, ENT, general surgery, ophthalmology, plastic and reconstructive surgery, urology, surgical oncology, cosmetology.

a) Access to OPD services:
   All patients who visit KDAH or free OPD for the first time for consultation/ other services are issued a card which gives each patient a UHID number. This UHID card is attached to the registration form. With the help of this number, medical records of

patients can be assessed. Allotment and control of UHID number is the responsibility of the admission staff desk.

b) OPD Appointment:

Appointments can be fixed over telephone to all from the call centre or personally across the reception counter. Fax and e-mail facilities are also available.

Following services are offered in the OPD

- Medical / Surgical consultations
- Preventive Health check-up packages
- Laboratory investigations
- Imaging services
- Cardiology investigations
- Neurology investigations
- Pulmonary investigations
- Pain management
- AKD
- Gamma knife
- Endoscopy
- Bronchoscopy
- Urodynamic study
- Physiotherapy
- CDC
- ENT
- Ophthalmology
- Dental procedures
- Oncology
- Radiation oncology

HEALTH CHECK UP

- The executive check-up department, a part of OPD services, is a wing of this multispecialty hospital dedicates to the diagnostic and preventive side of patient care.

It is a place where healthy patient come for prognosis of disease or to know about the preventive and curative aspect of conditions they may already have.

- This system facilitates the patient to get all the required investigations/consultations done without having to pay for either consultation and/or for each individual item of pathological or imaging investigation. It is the centre point where the potential customers come directly in contact with hospital services. This department can therefore be a point to draw in patients to become in-patients or for them to come even for follow up OPD consultation.
- The packages in the program have been developed by a team of highly qualified and experienced medical personnel and are designed to offer a complete medical checkup and within their limitations detect any latent health problems. In additions, these packages are offered at special discounted rates that make them truly worthwhile. At the end of the day, candidates leave the hospital with all their reports.
- This department is dependent on various other hospital departments and consultants to ensure a smooth process flow. Therefore co-ordination is a key factor in smoothly running the department. The departments in co-ordination are: pathology, radiology, cardiology, ENT, ophthalmology, dental etc. the visiting consultants are from following department; medicine, surgery and gynecology.

OPERATION THEATRE:

The aim of department of anaesthesiology and OT facility is to provide the highest quality of care to patients undergoing various types of surgeries. The OT facility is positioned as a tertiary care centre of excellence providing complete services for various surgical specialties. The department is staffed with highly experienced and trained anaesthesiologist, surgeons, technicians, nurses and other support staff. Their services have state-of- the-art technology and equipment with highest level environment and quality controls. For each OT there are two scrub nurses and one circulating nurse. Protocols based on approach for quality pre-operative, intra-operative and post-operative and follow up care of the patients. The complex is divided into three zones: sterile, semi sterile and non-sterile zones. Complete services to the following surgical specialties are provided.

- Cardiac surgery

- Neuro surgery
- Onco surgery
- Orthopaedic surgery
- General surgery
- Gynaecology and obstetrics surgery
- Paediatric surgery
- GI surgery
- Uro surgery
- Plastic surgery
- ophthalmic and ENT surgery
- Transplantation surgeries

The OT complex has a pre and post-operative monitoring room for continuous monitoring of patients (recovery rooms). The facility includes 22OTs, 600 square feet area, pendants in all OTs and surgical control panels.

IN PATIENT DEPARTMENT

The IPD provides the detailed pre-procedure needs their completion and coordination with the diagnostic to arrive at the diagnosis and completion of treatment regimens, comprehensive care in the pre-operative and follow up care, rehabilitative, and nutritional regimen and their scientific amalgamation as per the progressive patient care need. IPD wards are located on floor numbers 9,10,11,12,13,14,15 & 16 The IPD rooms are of the following types: single room, twin sharing, deluxe room and suits. Each floor has three zones, east, west and central and each wing has a separate nursing station. The various types of rooms with their features as follows:

- **GENERAL WARDS**
  - 5beds/room
  - Air conditioned
  - Bed head panels with medical gasses
  - Nurse call systems with 2 way communication

- **SINGLE ROOMS**
  - Area of 320 sq ft
  - Separate patient zone and attendant zone
  - Nurse call system with two way communication

- **Twin Sharing**
  - Bed head panels with medical gasses
  - Television sets
  - Couch for each patient relative
  - Nurse call system with two way communication

- **Suits**
  - Area of 750 sq. ft.
  - Terrace garden
  - Exclusive visitor area and guest rooms
  - Nurse call system with two way communication

The nurse: bed ratio is 1:5 for general ward, 1:2 for single rooms, 1:3 for twin sharing, 1:1 for suits. The various other rooms are clean utility, dirty utility, janitor room, AHU (air handling unit), sluice room, I.T. room, and service elevator.

INTENSIVE CARE UNIT

The ICU cater to patients with most severe and life-threatening illnesses and injuries requiring constant close monitoring and support from specialist equipment and medication to ensure normal bodily functions. There is Adult ICU consisting of SICU & MICU, Paediatric ICU, Neonatal ICU, Transplant ICU and Paediatric Cardiac ICU. The nurse patient ratio for critical patients is 1:1 and for stable patients is 1:2. The ICU co-ordinates with the CSSD, Laboratory and the Radiology department. Strict aseptic techniques are used. Pressure zones are created to control infection rate.

The ICU has highly dedicated and trained medical, nursing and allied staff. There is a system of closed ICU in KDAH .The space per bed is 320 sq feet in the patient care area

Bed Capacity in each ICU

ICU	***BED CAPACITY***
SICU 1	11
SICU 2	10
PCICU	11
PCICU-HDU	2
PICU	7
TRANSPLANT ICU	7
NICU	8
NICU-HDU	5
MICU	28
MICU	25

Human resource of the ICU

- Intensive care doctors

✓ 1 Chief Intensivist for all ICU

✓ Junior consultants (12 hour shift)

✓ Clinical registrars (8 hours shift)

- Intensive care nursing staff

✓ 1 Director General Manager for ICU

✓ Nurse in charge (8 hours shift)

✓ Team leader (8 hours shift)

✓ Senior nurse officers

✓ Junior nurse officers

- Allied staff
- ✓ Physiotherapists
- ✓ Dieticians
- ✓ Biomedical Engineers
- ✓ Health Care Assistants

Shift timings:

For doctors

- ✓ Morning : 8 am - 4 pm
- ✓ Afternoon : 2 pm - 10 pm
- ✓ Evening : 10 pm - 8 am
- ✓ Overlapping hours : 2 pm - 4 pm

For nurses, HCA and housekeeping staff

- ✓ Morning : 7 am - 3 pm
- ✓ Evening : 3 pm - 11 pm
- ✓ Afternoon : 11 pm - 7 am

Visiting hours : 11 am – 1 pm

5 pm – 7 pm

- ✓ Only 1 relative at a time is allowed

Records and Registers

- Admission and discharge register
- Handing and Taking over/Team leader sheet
- Assignment book
- Leave book

- O.T booking register
- Critical care flow sheet
- Narcotic drug register.

Equipment's:

MONITORING EQUIPMENT	**CARDIOVASCULAR THERAPHY**	**RESPIRATORY THERAPY**	**LABORATORY EQUIPMENT**
Bed side and Central Monitors ECG Recorder Pulse Oximeter Spirometer ECG Monitor Temperature Monitors Blood Glucose Meter	CPR Trolley Defibrillators Infusion Pumps and Syringes	Ventilators Intubation/ Tracheostomy Trolley Nebulisers	Blood gas Analyser Electrolyte Analyser

Miscellaneous Equipment

- Crash Cart
- Dressing trolley
- Procedure trolley

Management Information System

ICU	***LOS (days)***

Adult ICU	4
PCICU	6.5
PICU	5.6
NICU	6.4

PAEDIATRIC INTENSIVE CARE UNIT

The PICU looks after all critical pediatric patients. It is located on 8th floor. The ICU is split into 2 zones for outpatients and inpatients. The various other rooms include Ante room, equipment room, clean utility and dirty utility room. The average length of stay of each patient is approximately 1 week.

NEONATAL INTENSIVE CARE UNIT

The NICU is 18 bedded and located on the 8th floor. The department is divided into 2 zones – outpatients and inpatients. There are 2 isolation rooms. The nurse ratio is 1:1

DEPARTMENT OF RADIATION ONCOLOGY

The department of radiation oncology at KDH is a state of the art unit having the latest technology and equipped personnel, delivering services of international quality. The department has the first installed TRIOLOGY and NOVALIS Tx in the country. It is capable of performing all the high end treatment like IMRT, IGRT intracranial stereotactic radio surgery and radiotherapy, extra cranial sterotaxy, total body radiation, total skin electron treatment. There is a facility of brachytherapy for all sites in the form of remote afterloading HDR brachytherapy system with 3D planning facility. The department works in close coordination with surgical oncology and neurosurgical subspecialties (e.g. head and neck, thoracic, breast, urology and gynaeoncology, neuro-oncology) maintaining a high quality evidence based practice for the particular sub suite.

CENTRE FOR REHABILITATION

- The centre is located on a dedicated floor with 30,000 square feet area and exclusive inpatient service, first of its kind.

- The department is located on 7th and 8th floor of hospital.\
- It has got its own billing desk.
- It also consists of a daycare centre for those patients who need 4-5 sessions in a day.
- **Staff of the department consist of**

HOD

↓

40 physiotherapists

↓

1 Asst. nurse

↓

3 Nurses

↓

5 HCA

- **Following therapy services are available :**

1. Neurological Rehabilitation
2. Musculoskeletal rehabilitation
3. Cardiac Rehabilitation services
4. Pulmonary Rehabilitation
5. Paediatric Rehabilitation
6. Cancer Rehabilitation
7. Pain management
8. Women‟s health
9. Geriatric Rehabilitation

The therapy services offered in the department:

1) Physical therapy

2) Occupational therapy
3) Electrotherapy
4) Speech and language pathology
5) Exercise physiology
6) Psychology
7) Rehabilitation nursing
8) Orthosis and prosthesis

IVF CENTRE

- Centre for reproductive endocrinology and fertility (CREF) is located on the 7th floor of the hospital and has dedicated space for out-patient care and day care of patients with infertility and reproductive endocrine problems, and for medical acupuncture and mind body program.
- CREF is staffed by a full time consultant reproductive endocrinologist and infertility specialist, embryologist and infertility issues and a health care assistant.
- A full-fledged laboratory and radiology department offering a comprehensive range of tests including some newer cutting edge tests under one roof only compliments our services at CREF, but is also extremely convenient for patients.
- Medical conditions addressed at CREF:
  - ✓ **Reproductive endocrinology**
  - ✓ **Midlife health care**
  - ✓ **Bone health**
  - ✓ **Adolescent gynaecology**
  - ✓ **Infertility treatment**
    - ❖ Fertility drugs to induce / enhance ovulation (pills or injections)
    - ❖ Intrauterine insemination
    - ❖ Assisted reproductive therapy (ART) procedures:
      - o In vitro fertilization (IVF)
      - o Intracytoplasmic sperm injection (ICSI)
      - o Assisted hatching(AH)
      - o Blastocyst transfer

- Pre-implantation genetic diagnosis (PGD)
- Embryo cryopreservation
- Sperm cryopreservation
- Testicular tissue cryopreservation
- Third party reproduction
  - Donor oocytes
  - Donor sperm
  - Gestational surrogacy
  - Donated embryos

- Other facility:

✓ Diagnostic tests
✓ Billing and registration
✓ Phlebotomy services
✓ Ultrasound facilities
✓ Andrology and embryology laboratories
✓ Operating room, pre-op and recovery room facilities
✓ Counseling and support services

CLINICAL SUPPORT SERVICES

MEDICAL RECORD DEPARTMENT

- The main functions of the department are :

1) Storing file for future reference.
2) Research.

- Staff:

HOD

↓

1 Sr. MRD Officer

↓

1 DATA Operator

↓

1 Trainee

↓

1 HCA

- Open and close audit is done of all files before keeping them storage.
- The arrangement of files is done in following ways-
  - ✓ Year wise and UHID wise.
  - ✓ Also on the basis of their type :
    a) Regular files
    b) DAMA files
    c) MLC files
    d) OT recovery files
    e) Chemotherapy files
    f) Dialysis files
- Apart from files few forms and records are also store in this department:
  - ✓ Consent form
  - ✓ OT papers

- ✓ A&E papers

- Certificates issued from the department :
  - ✓ Patient fitness certificate
  - ✓ Fit to fly certificate
  - ✓ Leave certificate
- All files are stored in the department for the following time period:
  - ✓ Reports -1.5years
  - ✓ Death, DAMA & MLC files 20 years
  - ✓ Regular files-5years
- ICD-10 coding is done for storing files:
  - ✓ Red-Death, DAMA & MLC
  - ✓ Black-Oncology
  - ✓ Yellow-Gynecology& obstetrics, IVF files
  - ✓ Dark blue-General medicine, critical care, Nephrology, Endocrinology, Gastroenterology, Pulmonary medicine, Dermatology, Dental, Psychiatry, rehabilitation, Rheumatology.
  - ✓ Light blue- Pediatrics
  - ✓ Orange- Neurology, CVTS, Cardiology, orthopedics
  - ✓ Green-ENT, general surgery, ophthalmology, Urology, Cosmetology, Interventional radiology.
- This department has to notify Bombay Municipal Corporation(BMC) about following things on regular basis:
  - ✓ Birth and death report (once in a week).
  - ✓ Notifiable disease which includes cholera, dengue, plague, yellow fever, TB, polio, meningococcal meningitis, leptospirosis, viral encephalitis (once in a week).
  - ✓ Maternal mortality (once in a month)
  - ✓ MTP &PNDT (once in a month)
- Retrieval- for easy retrieval of files tracer cards are used when files are given to patients or sent outside the department.

LABORATORY

The salient features of the department are as follows-

- CAP (College of American Pathology) accreditation
- Central processing laboratory is spread over 40,000sq. Ft. which follows strict internal quality compliance for all analyzer.
- Exhaustive menu of tests from routine to esoteric.
- Excellent laboratory management system which handles both pre-analytical and post-analytical aspects.
- Dedicated courier and logistic services
- 24 hrs. sample collection facility
- Stringent quality control monitoring which satisfy the quality assurance elements elaborated by GLP and GCP and readily available documented evidence of quality assurance and quality proficiency schemes.
- Constant improvisation and technology innovation using over 150 state of the art equipment.
- Quality control and quality assurance executive that monitors pre-analytical and post-analytical processing of the samples.
- Customized management report (MIS-management information system)
- An active IRB and ethics committee which oversees clinical trials proposed when required.

BLOOD BANK

Transfusion medicine is a multi-disciplinary area concerned with the appropriate use of blood and blood components in the treatment of human disease. The mission of KDAH is to make available appropriate adequate quantity and high quality of safe blood and blood component to “anyone, anytime, anywhere” in medical community. KDAH adheres to quality norms and focus on the donor satisfaction standards and technique and quality control are precisely and meticulously maintained as per norms given in the drugs and cosmetics acts, by the regulatory authority, director drug controller (India), ministry of health and family welfare, Govt. of India, and also internationally

recommended methods. The department runs round the clock and blood and its products are supplied as and when requested. Blood donation is accepted from voluntary blood donors and relatives and friends of the patient. Autologous blood donation (blood donation for one‟s own use) is also accepted. The blood donors are informed and educated about the infections transmitted by transfusion of blood components 100% of collected blood is processed into component like red cells concentrate, platelet concentrate, fresh frozen plasma (FFP) and cryoprecipitate. The use of the components is better and cost effective. The blood bank at KDAH is equipped with state of art equipment, which enables use of advanced techniques for processing/screening of blood and its components. All the mandatory screening for the transfusion transmissible disease like HIV, HBV, and HCV is done with the more sensitive and specific CMLIA and ELISA methods. All units are screened for VDRL and malaria parasite. Red cells in an additive solution (RCA) like, SAGM or ADSOL is a product which is used in variety of indication like surgeries, anemia, trauma, child birth etc. as a thumb rule one unit would increase the hemoglobin by 1 gm.%.

IMAGING

The imaging department consists of radiology services. The investigations performed in these departments include:

- CT Scan
- MRI
- X-Ray
- Ultrasonography
- Mammography

The HIS has a system for appointment scheduling for each of these investigations. The appointments are given by Call Centre. There are 4 X-ray machines, 5 ultrasonography machines, 1 mammography machine, 1 CT Scan machine, and 2 MRI machine of which one is 3 Tesla located in the radiology department and the other is 1.5 Tesla IMRIS (intraoperative magnetic resonance imaging suit) is a movable machine attached to the

ceiling that is located in the OT. It is basically used for MRI scanning during a surgery. They are working on its complete utilization.

CENTRAL STERILE SUPPLY DEPARTMENT

The central sterile supply department (CSSD) plays a key role in providing the items required to deliver quality patient care. Centralizing the reprocessing of reusable devices helps ensure uniform standards of practice, while also providing for improved workflow (soiled, to clean, to sterile). This also facilitates the training and education of skilled technicians who must be aware about the standards, complexities, challenges, risks and technicians associated with the CSSD function. Every CSSD task must be performed for the welfare and safety of patients, co-workers and the community.

CSSD is the heart of hospital infection control and the most important unit of clinical support services. CSSD‟s main functions are cleaning and drying, assembly, packing, sterilizing, storing and distributing instruments (both multi use and single use devices), as per well delineated protocols and standardized procedures.

INFRASTRUCTURE

It is divided into 3 zones

1. Decontamination area
2. Assembly area
3. Sterile storage area

STAFF

1 manager / department head

1 executive

1 senior technical officer

4 technical officers

6 junior technical officers

10 trainees

16 health care attendants

MAJOR TECHNOLOGIES

Ultrasonic cleaner

Washer disinfectant

Dryer

Steam sterilizers

Plasma sterilizer

ETO (ethylene oxide gas sterilizer)

Dry heat sterilizer.

RECORD MAINTAINED:

- Manual issue and receiving OT
- Manual issue and receiving all departments
- Sterilization records

PHARMACY

Central pharmacy indents to IP, OP and LB. it is of 2 categories: capital and consumables.

SCOPE OF INVENTORY MANAGEMENT:

- INDENTATION
- RECEIVING
- STORING
- DISTRIBUTION

The staff consists of:

- 5 manager

- 1 executive
- 8 senior officers
- 24 officers
- 7 junior officers
- 6 trainee assistants
- 1 trainee HCA
- 16 attendants
- 21 HCA

HOUSE KEEPING:

The objective of housekeeping is exceptional standards of cleanliness, sanitation and hygiene of the entire hospital. Housekeeping services are outsourced to ARA MARK services.

The staffs include:

- Housekeeping manager
- Assistant manager
- Housekeeping executives
- Supervisors
- Houseboys &house girls

Functions of housekeeping department are:

- General facility cleaning
  - ✓ Routine cleaning of patient"s rooms
  - ✓ Patient"s common areas
  - ✓ Washrooms
  - ✓ OT
  - ✓ Laboratory
  - ✓ Consultant"s office
  - ✓ Glass windows and doors
  - ✓ Ceiling etc.
- Handling of biomedical waste.

- Pest control-It includes spraying every 24 hours for mosquitoes, cockroaches, flies, rats, lizards and termites.
- Garbage disposal- The housekeeping staff collects garbage collected in specified color coded bags from all garbage bins existing inside the hospital premises and disposes the garbage at the designated area within the hospital, which is the biomedical waste room. The general waste is sold to the junk dealer and healthcare waste is handed over to government approved vendor “synergy waste management”.
- Horticulture- It is responsible for maintenance of in house plants & terrace gardens, flower arrangement during hospital functions.

The performance indicators are B.M.W. color code compliance, B.M.W. collection, pest control efficiency and sanitization of the hospital premises.

CLINICAL ADMINISTRATIVE SERVICES

STORES

Material stores functions in order to supply the right material in right quintiles at the right time at the right price. The IP departments put up requests for the required materials by uploading indents in the HIS. The store manager raises a purchase order to be sent at the central procurement stores. The supplies received are inspected on the basis of quantity and expiry in the incoming material inspection area. The items are stored as per the storage norms. Departmental issues are made for non – medical consumables as per requirement. Stock is reviewed periodically for non-moving items and short expiry items. Stock audits are carried out twice/year. Any variance is reported to the higher management. For inventory control, ABC and VED analysis is carried out. FEFO (first expiry first out) is followed. The staff includes:

- Assistant Manager
- Executive store
- Assistants
- 2 Health care assistants

The key performance indicators are no stock outs, zero errors in maintenance of accounts, zero error in billing processing, maintain minimum inventory maximum efficiency, maintaining stores as per the NABH = ISO standards, submission of bills accounts within 4 working days, expired items on the shelves should be zero, minimize emergency purchase, TAT suture and lab kits (19 days), instruments (8 weeks) and other items (2 days)

LINEN AND LAUNDRY

The objective linen and laundry is the availability of clean uniforms for patients and staff. Soiled linen when collected is kept in the dirt utility room in a hamper trolley. Infected linen are collected and put in a red bag at the source4 of generation. The red bag is sealed and labeled for infection. At the end of each shift, the dirty utility linen is carried in the hamper trolley to the collection room. At the collection point, it is segregated, counted,

and sent to the laundry for washing. The performance indicators are laundry pending, turnaround time for laundry cleaning, percentage discarded linen.

BIOMEDICAL ENGINEERING DEPARTMENT

The main objective of the department is to facilitate the usage of latest technologies in the diagnosis, treatment and care of patients. It is also responsible for proper usage and quality performance of these costly equipment and tools inside the hospital

The department maintains an updated asset register of the hospital equipment, conduct daily rounds to ensure that the equipment is functioning smoothly, responsible for facilitation and identification of equipment requirements, planning technical comparison, ordering installation and deployment units and new projects, conduct regular preventive maintenance servicing for all the equipment at regular intervals, facilitating equipment replacements and condemnation, whenever required, conducting regular training programs for hospital staff, on usage of hospital equipments. The staff consists of HOD, 5 biomedical engineers and 2 biomedical technicians and 4 medical gas technicians.

FOOD AND BEVERAGES

The objectives of food and beverages department are to deliver healthy and nutritious meals coupled with a wonderful experience of hospitality services to all IP, OP and staff. The cafeteria is outsourced to Java Green. The main functions of the department are as follows:

- Inpatient meal management
- Purchase of fruits, vegetables, milk, pulses, whole grain and other dietary consumables
- FIFO is followed

The purchased items are unloaded in the receiving area, where they are inspected and then washed with water and anti-bacterial liquid before bringing it in the kitchen premises. It is followed by storage of perishable and non-perishable items in refrigerator and dry storage area respectively. Diet planning and counseling is done by the dietician according to the patient‟s condition, food allergy and taste and general preference. The diet summary is

handed over to the supervisor in the form of meal sheet cum ticket. According to this, the food is prepared and laid out on trays. The meals are served in the patients‟ rooms and clearance is carried out after 2 hours. Food/meal/diet for a patient admitted in the hospital is decided by the doctor admitting the patient depending on his/her medical condition. On doctor‟s recommendations, the dieticians plan the meal that is best for the patient‟s speedy recovery. The staff includes:

- Regional head of support function
- F&B manager cum chef
- Assistant manager F&B
- Executives
- Senior Dietician
- Other F&B staff

SECURITY

Services rendered by security department are surveillance and patrolling of the infrastructure and material, access control (in restricted areas like IT, MRD, LSS, Mortuary, Pharmacy, Electric control panels), control of movement of traffic in premises, reception and conduct of visitors and attendants, assistance in fire control and emergency plan, vigilance and intelligence, liaison with sensitive areas, carry out verification, hold records, issue passes, and generate reports on security matters. It is equipped with modern equipment like CCTV‟s metal and explosive detectors, alarms, security, lighting and walkie-talkies, etc. The staff members are:

- HOD
- Senior officer
- Security supervisor
- Sr. security assistant
- Security guards

The performance indicators are TAT, theft percent, code related incidents.

EDUCATION AND TRAINING FACILITIES FOR NURSES

In line with the vision of continued commitment toward education and training in the field of healthcare, particularly the preparation of highly competent nursing professionals dedicated to patient care, the board of management has upgraded its School of Nursing to a full KDA College of Nursing.

ADMINISTRATIVE SERVICES

ADMISSION AND BILLING:

The admission and billing staff includes 1 H.O.D. and 12 employees. The services offered by the department are registration of a new patient, booking/reservation-bed and O.T, admission, billing, discharge work.

Front office:

The front office is the first point of contact at KDAH. It is manned by duty manager, deputy duty manager, and patient care executive and patient care coordination. There are total 7 front offices in KDAH and there are 2 help desks.

Functions:

- Respond and answer telephone calls from patients and clients (call center).
- Registration of outpatients, in patients and executive health checkup patients for various investigations (registration counter).
- Admission, billing and discharge of in patients.
- Direct the patients and their relatives to the outpatient services and the inpatient wards (helpdesk and welcome desk).
- Report receiving and handling over to the patient (dispatch counter).

Third Party Administrator Desk:

T.P.A. staff includes one executive clinical administrator and 4 Customer care officer.

Functions:

- Counseling.
- Pre-Authorization.

- Cashless admission.
- Query handling.
- Final approval.
- Maintain privacy and confidentiality.

INFORMATION TECHNOLOGY DEPARTMENT:

It is implied that there is central database for entire hospital. Services rendered by the IT department are as follows:

- IT support to location users for hardware and software as per SLA (service level agreement).
- Installation of new IT equipment.
- Helping biomedical department in configuring the medical equipment with HIS.
- Installation of appointment scheduling programs.

The IT staffs include:

- Chief information officer
- Manager IT
- Executive IT engineers.

The performance indicators are calls resolutions within a time limit, strict data security, zero percent variance, in hardware and software variance, minimal occupational hazard and proper e-waste disposal.

ENGINEERING DAPARTMENT:

Engineering and maintenance department is manned for 24 hours for keeping round the clock vigil on proper functioning of plant engineering equipment coming under the purview of department. This covers maintenance of major supplies to the hospital such as power, water, which form the life line to the hospital‟s activities. The responsibilities of the department include operation and maintenance of plant equipment installed in the basement of main building and various other areas to support the normal functioning of the hospital and repair

work of equipment related to the department‟s responsibility. The policy of the department is to serve well with safety and it time, continuous improvement, cost saving, optimum utilization of manpower and equipment, optimum utilization of inventory and teamwork.

The major engineering services are:

- Electrical power supply- normal and emergency
- Air conditioning, ventilation and refrigeration.
- Steam and hot water supply.
- Water stations and cold water supplies- filtration system.
- Medical gases supplies
- Fire detection alarms and fighting system.
- Internal and external plumbing system.
- Civil works-Masonry, carpentry, glasswork, upholstery, painting, etc.
- PNG and LPG supply.
- Safety assessment of facilities.

MARKETING AND SALES

Marketing and sales department is concerned with business development, branding, promotions and advertisement of KDAH healthcare services. Marketing deals with organizing health check-up camps and awareness talks for corporate or PSU‟s and RWA, designing all the brochures and signage, conducting CME‟s/seminars. The sales department deals with PSU‟s and corporate tie-ups, pitching referral sales from nearby general practitioners and nursing homes, liaison with TPAs and managing the international patients (medical tourism).

FINANCE

The scope of services includes the entire hospital cash handling and cash disbursement in the form of salaries and vendor payment for stores, pharmacy and biomedical department. All

the cash collected is deposited on daily basis n the bank. The TPA payment is collected through lump sum amount in the form of checque at the end of the month. The staffs include:

- HOD
- Asst. Manager
- Senior executives
- Junior executives
- 2 cashiers

PURCHASING DEPARTMENT

Purchasing department is responsible for the procurement of function of the hospital the primary functions of the purchasing department are to:

- Procure the rights and services from the right suppliers at the right time for the right place.
- Receive, warehouse, issue $ distribute stocks to hospital departments in accordance with KDH procedure.
- Hospital users and clinicians actively participate in product evaluation processes. The purchasing department is actively involved in cost analysis and supplier performance management. It is through all of these activities that the department manages the chain process.

HUMAN RESOURCE DEPARTMENT

The functions of HR department at KDA hospital are:

- Hiring
- Physician and nurse recruitment
- Employee orientation
- Personal management
- Benefits and compensation management
- Counseling

- Claims handling
- Training and performance monitoring
- Professional development programs
- State and federal regulations education
- Work place safety and sanitation
- Administration – employee meetings
- Staff morale and retention

Recruitment /selection:

- Identifying the key requirements areas(KRA)
- Drafting job description
- Recruitment through job portals and internal references
- Selection
- Medical examination of the candidate
- Offering letter to the selected ones

QUALITY CONTROL DEPARTMENT

The Functions of the department are:

- To analyze patient feedback forms.
- To analyze different parameters from different departments and compare them.
- Infection control of the hospital.
- Induction and training of hospital staff.
- Accreditations (NABH, JCI).

This department also maintains few quality indicators for hospital:

- Medication Errors
- Return of patient within 72hours.
- Return of patient to OT within 48hours.

- Return of patient to ICU within 48hours.
- Number of Needle sticks Injuries.
- Number of blood transfusion reaction.
- Number of Adverse Drug reaction.

Staff:

This department consists of one quality manager who reports directly to the director of hospital.

PROJECT REPORT

INTRODUCTION

The term medical tourism is a paradox. Medical care generally brings to mind the thought of hospitals and doctors, which to most is not a pleasant thought. While on the other hand, tourism would remind you of white sandy beaches, palm trees and clear blue waters. However, when you bring together these two completely opposite poles, it brings about a market which for a few people seeking healthcare becomes a blessing.

By definition **Medical tourism or health tourism** is the travel of people to another country for the purpose of obtaining medical treatment in that country.

When we talk about International patient services at a global level, a different level of priority is allocated to it in different hospitals in different regions. A few hospitals have business models and marketing strategies which are largely focused on the international market as opposed to the local market. However, a few hospitals which may cater to international patients, do not derive greater portion of their revenue and patient inflow from patients beyond borders. Thereby, they focus their marketing strategies mainly towards the local market.

For hospitals to pursue either of the two business models, the reasons are multifarious. If we look at it from a macro-environmental perspective, we find that it may or may not be suitable for a hospital to pursue international patient services as their main source of revenue. For example, 61.1% of the total revenue of the Bumrungrad International Hospital, Bangkok is acquired through international patient services. When we look at the political and legal system in Thailand, we find the government and the judicial system quite supportive of medical tourism. Thailand being one of the most preferred tourist destinations scores points for the “tourism” part of “Medical tourism”. Economic support from the government in the form of investment incentives is a motivation. Technological prowess in the form of state of the art equipment is another advantage .While on the other hand, in order to acquire healthcare in India, People have to go through the hassle of acquiring medical visas, which is

a tedious job and most of the international patients are reluctant to go through the pains of acquiring it. Due to the recent shift in policy from general visas to e-visas we might see a change in the inflow of patients. Compared to Thailand, India is not on the top of the lists for travelers as a tourism destination. However when we compare the prices of treatment with Thailand, India provides a better overall package. Technologically advanced institutions are now cropping up in India that provide state of the art treatment options to patients. However when we compare the accreditations of hospitals in India as opposed to those in Thailand or Brazil, we lag behind. International accreditations are key to attracting international patients. Other hurt points are the cost of accommodation, travel and the unavailability of preferred food.

When we look at the micro-environment factors associated to the healthcare institutions providing international patient services, the gaps are pretty clear. A more customer-centric approach is necessary. International accreditations, better hospital management, better co-ordination with the travel, hotel and tourism industry, consideration of the cultural and religious backgrounds of international patients before designing services, post op care and efficient discharge procedures are a few of the main hurdles that we need to overcome.

India has the potential to host a huge capacity of international patients. It is all dependent on the government support and the focus of the healthcare institutions to provide quality healthcare to international patients.

MODE OF DATA COLLECTION

Research Design: Qualitative research design

Study time line: one month

Data collection: primary and secondary data.

Primary data: Personal interviews with the international marketing team and other employees at KDAH in contact with international patient services.

Secondary data: online research.

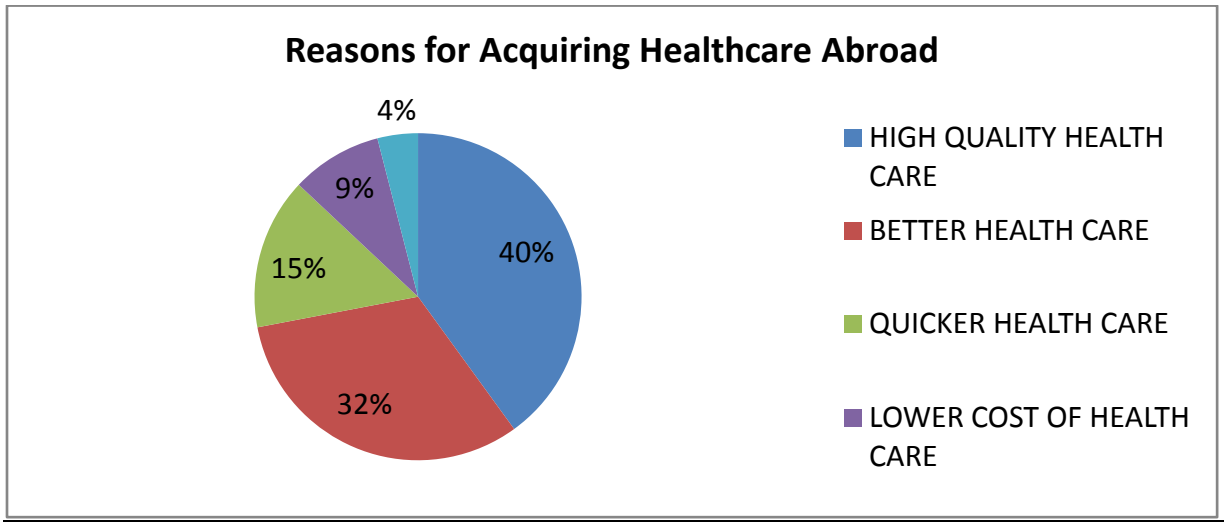
DATA COMPILATION, ANALYSIS AND INTERPRETATION

GLOBAL PERSPECTIVE:

The medical tourism industry, is valued at 38.5 to 55 billion USD (patients beyond borders) with the market expected to grow at about 15-25%.

However, what could be the reasons that motivate people to opt for healthcare abroad rather than going through grueling procedures in the vicinity of their homes, families and friends?

Well, according to a McKinsey (Ehrbeck, Guevara, & Mango, 2008) article, 40% of the patients travel to acquire high quality healthcare available anywhere in the world, giving little attention to the proximity of potential destination or the cost of care. Example includes people travelling to developed countries for treatment. 32% of all medical travelers, the second-largest segment comprises of patients who seek better care than they could find in their home countries, which are often in the developing world. When selecting a destination, such patients generally trade off perceived quality against burdens such as costs, distance, and unfamiliar cultures. The third segment, about15% of the market, comprises of the medical patients who want quicker access to medically necessary procedure delayed by long wait times at home for orthopedic and cardiac complications. 9 percent of the travelers represent the fourth segments that seek lower costs for medically necessary procedures. They seek to save significant part of the cost of treatment. The choice of destination for treatment is in accordance with the costs of treatment offered by the service providers. The last category representing a meager 4 percent of market comprises of the patients seeking lower costs for discretionary procedures such as breast augmentation and reduction, liposuction etc. This segment seeks smaller but specialized service providers rather than larger multi-specialty hospital



Patients before opting for treatment abroad harbor certain concerns. These concerns are expressed below, divided under three stages of procedures.

Pre Procedure:

- Quality
- Connectivity
- Cost of treatment
- Ease of access and purchase

During Procedure:

- competence of doctors
- competence of staff
- professionalism in management of hospital
- facilitation and care

Post procedure:

- hassle free disengagement from the procedure
- Clear follow up instructions and settlement of bills.
- post procedure monitoring

ACCREDITATIONS

Accreditations are not always important to attract international patients. We find patients from the Middle East and Africa not paying much weight age to accreditations. However, we have patients from Europe and North America who keep accreditation as one of the main criteria to consider whether a hospital is up to the mark in terms of quality.

Apart from general International accreditations like JCI, TRENT etc. there are other accreditation organizations which focus specifically on medical tourism.

MEDICAL TRAVEL QUALITY ALLIANCE

- Medical tourism certification is an independent third party recognition that assess whether the non-medical services of hospitals, clinics or businesses meet the international standard of excellence for care and services to international patients and medical tourists**.**
- Medical travelers require many services to support and ensure successful outcomes for medical treatment and procedures.
- MTQUA offers these service listings to those who provide support for medical travelers and health tourists.
- Certification is offered for providers of treatment and care

ISQua

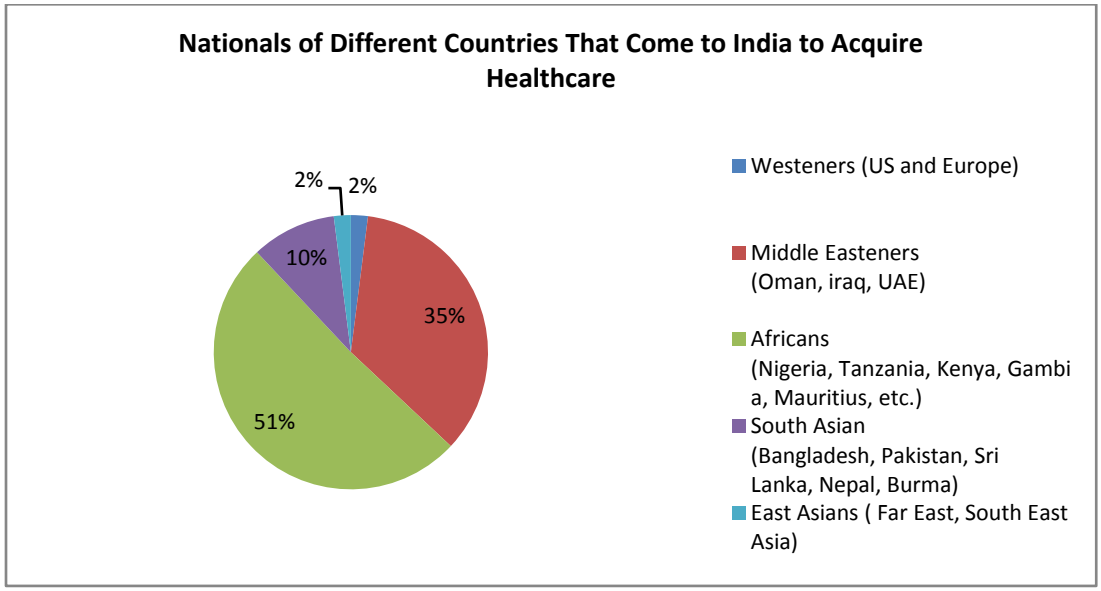
- The International Society for Quality in Health Care (ISQua) is an umbrella organization for such organizations providing international healthcare accreditation. Its offices are based in the Republic of Ireland. ISQua is a small non-profit limited company with members in over 70 countries. ISQua works to provide services to guide health professionals, providers, researchers, agencies, policy makers and consumers, to achieve excellence in healthcare delivery to all people, and to continuously improve the quality and safety of care. ISQua does not actually survey or accredit hospitals or clinics itself.
- Responsible for assessing the standards of organisations who set the benchmarks in healthcare safety and quality and is the only organisation to 'accredit the accreditors'. (NABH is a member)

ISQua‟s International Accreditation Programme (IAP) is the leading International Health Care external evaluation programme of its kind. It „Accredits the Accreditors‟ through three unique programmes:

- Accreditation of health care standards
- Accreditation of external evaluation organisations and
- Accreditation of surveyor training programmes

INDIAN PERSPECTIVE

- India‟s medical tourism sector is expected to experience an annual growth rate of 25% per annum [CII]
- The medical tourism market is estimated to generate revenues of about 12,000 Crores by 2015 [CII]
- People of motley of nationalities prefer to acquire healthcare in India. Of the total people coming in, maximum number of people acquiring healthcare are Africans (51%). They consist of people from Nigeria, Tanzania, Kenya, Gambia etc. Next in line are people from Middle East (35%). People from Oman, Iraq, U.A.E etc. fall into this group. Next in line are the people from South Asia or the neighboring countries (10%). These include nationals from Pakistan, Nepal, Sri Lanka, Burma, Bangladesh etc. the rest of the population are from the West and South-East Asia.

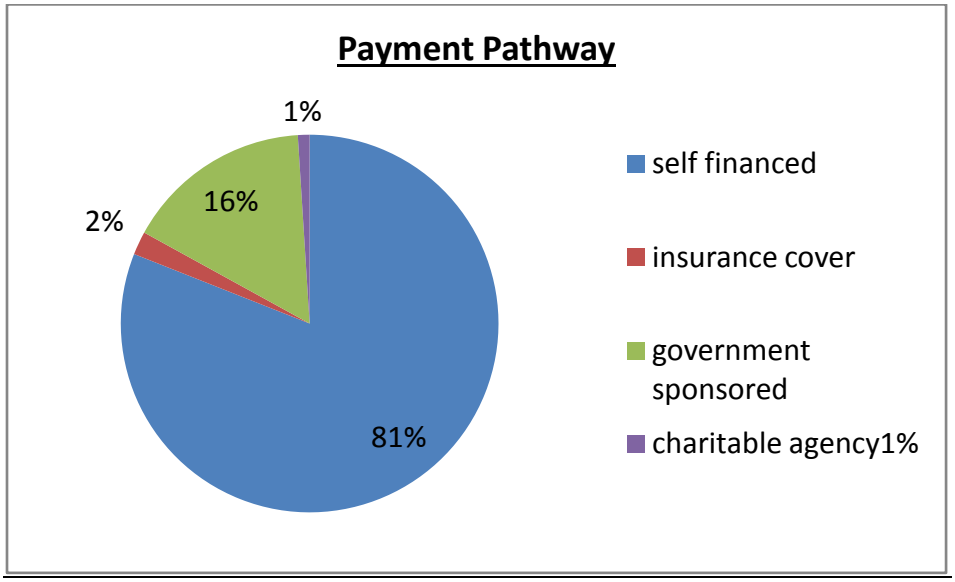


- PATIENT INFLOW

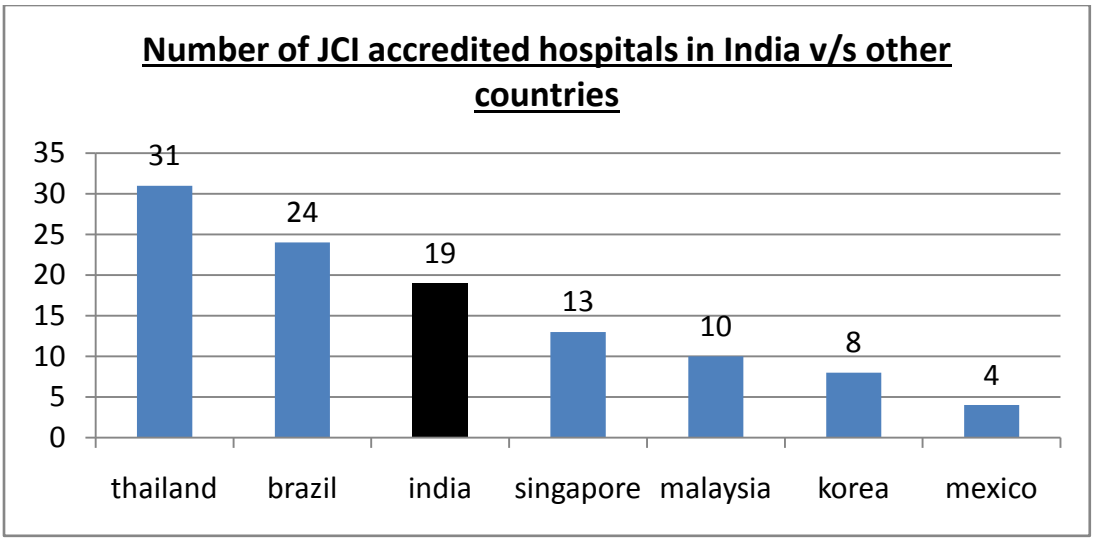
  Confederation of Indian Industry reported that 150,000 medical tourists came to India in 2005, based on feedback from the organization's member hospitals. The number grew to 200,000 by 2008. A separate study by Associated Chambers of Commerce and Industry of India (ASSOCHAM) reported that the year 2011 saw 850,000 medical tourists in India and projected that by 2015 this number would rise to 3,200,000.

year	Number of patients
2005	150,000
2008	200,000
2011	850,000
2015	3,200,000 (expected)

- The payment pathway adopted for financing healthcare costs are varied for most of the nationals coming in. Self financing is most preferred mode of payment (81%). These are mostly the African nationals. Government sponsorship (16%) falls next in line in mode of payment. Rest of the population (3%) is cover by insurance or is financed by charitable organizations.

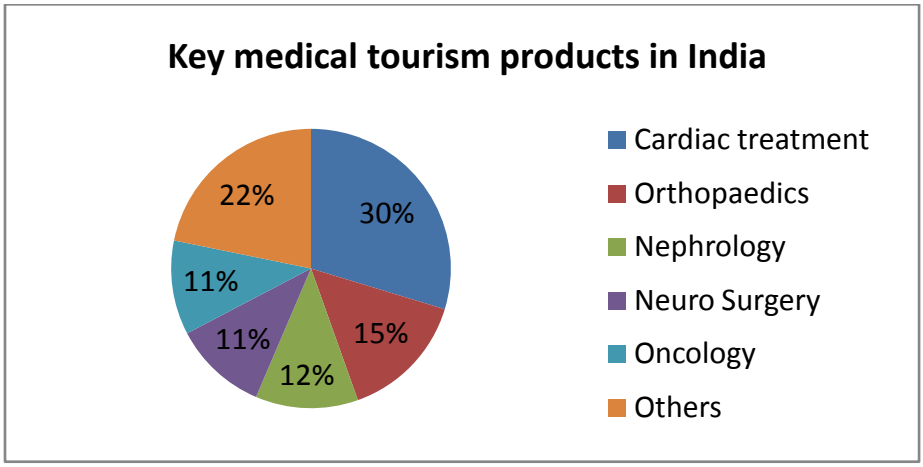


- As we‟ve discussed the relevance of accreditations in hospitals, let‟s look at the number of JCI accredited hospitals in India as opposed to the rest of the medical tourist destinations:



We find India at third position in terms of the total number of JCI accredited hospitals present in the world falling short by 10 hospitals against Thailand, which has the highest JCI accredited hospitals (31) and by 5 hospitals against Brazil, which has the second highest JCI accredited hospitals (24).

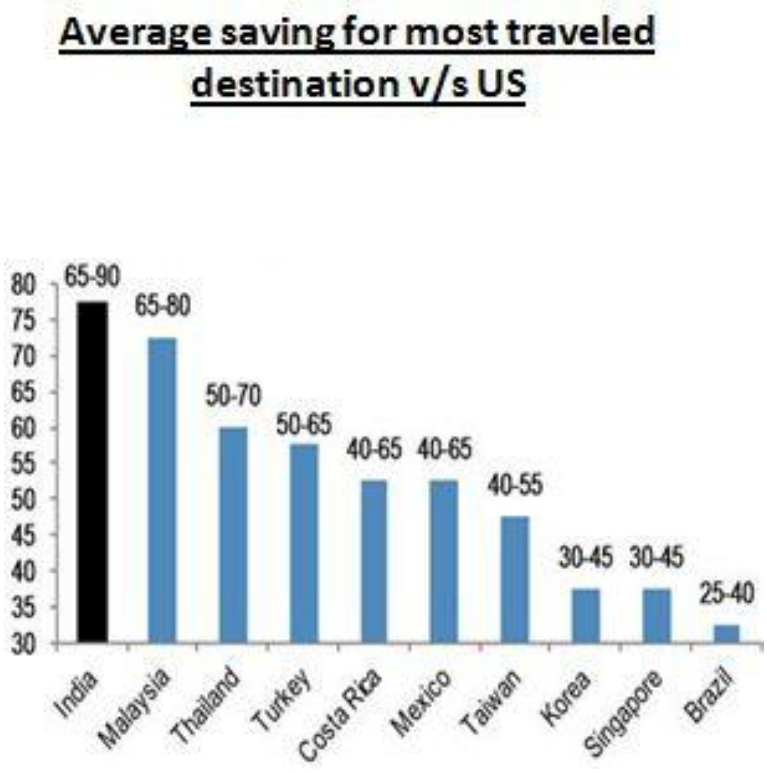
- India is mainly famous for its cheap and quality cardiac and orthopedic treatment. Other treatment options like Neurology, Nephrology, Oncology etc. are also gaining attention at a global level. Below is a chart which shows the different treatments acquired divided according to popularity



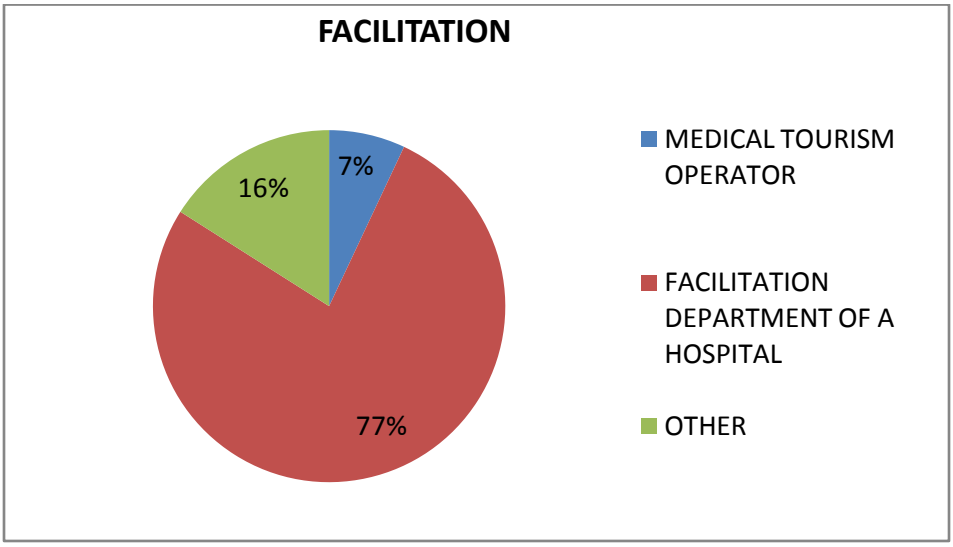
- One of the main reasons why people prefer India as their destination of choice for acquiring healthcare is because of the availability of quality healthcare at cheap rates.

Below is a table showing the differences in healthcare costs in India and US followed by the difference in healthcare costs among famous medical tourism destinations.

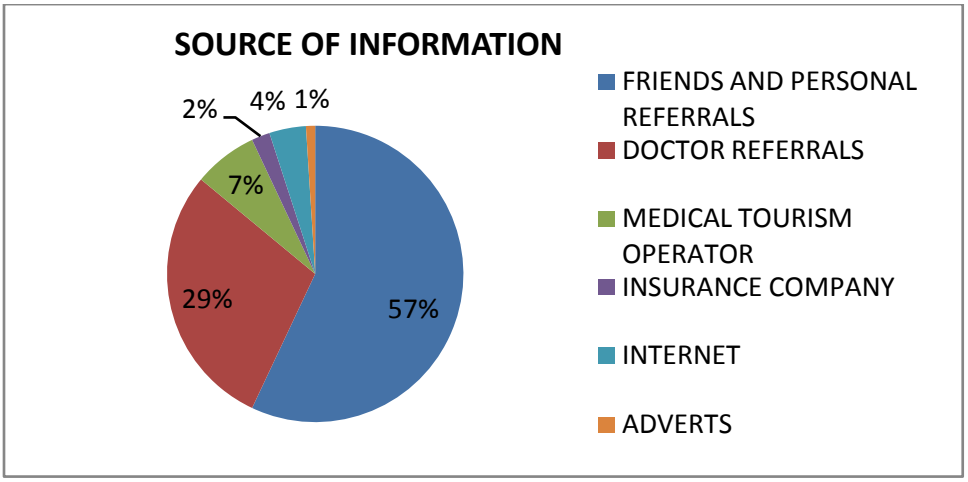
Cost comparison of medical procedures (US$)		
Procedure	**USD(inUSA)**	**USD(inIndia)**
Bone Marrow Transplant	250000	69200
Liver Transplant	300000	69350
Heart Surgery	30000	8700
Orthopedic Surgery	20000	6300
Cataract Surgery	2000	1350
Dental Procedures		
Metal Free Bridge	5500	600
Dental Implants	3500	900
Porcelain Metal Bridge	3000	600
Porcelain Metal Crown	1000	100



- Facilitation in terms of helping patients acquire information about the hospital and its services is mainly handled by the medical tourism operator the international marketing team of the hospital. Acquisition of visa, lodging etc is also handled by them

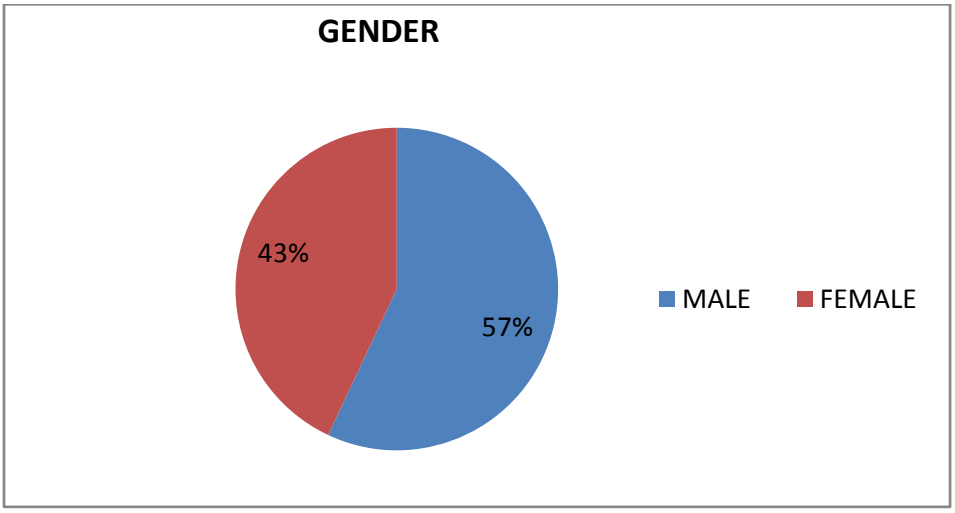


- Information about the quality of services in hospitals is acquired through different sources. Below is a chart depicting the different sources through which a person finds about a hospital divided on the bases of popularity.

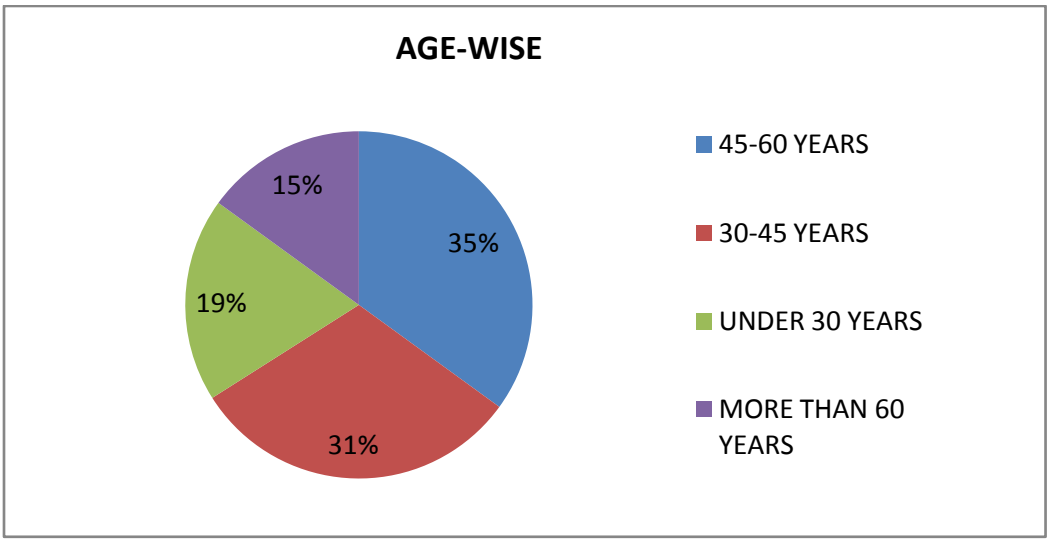


- Age-wise and gender-wise distribution of the patients coming into India for treatment is represented in the tables below.

  We find that Males constitute to 57% of the total international patients while 43% are women



35% of the international patients coming in fall into the age group of 45-60 years, which is the largest category. It is closely followed by 31% of which fall into the age group of 30-45 years. Next, 15% are people in the age group of more than 60years. The rest of the 19% fall into the age group of under 30 years.



- Bureau of Immigration: Bureau of immigration undertakes Immigration functions in the country. BoI is headed by Commissioner of Immigration and assisted by FRROs for immigration facilitation service at airports and work relating to registration of foreigners under various Acts and Rules. Altogether, there are 82 Immigration Check Posts all over India, catering to international traffic. Out of these, 27 ICPs are functioning under the BoI, while the remaining are being managed by the concerned State Governments.

  At present, there are 13 FRROs in major cities i.e. Delhi, Mumbai Kolkata, Chennai, Amritsar, Bengaluru, Hyderabad, Calicut, Cochin, Goa and Trivandrum and Chief Immigration officer in Ahmedabad. At remaining places District Superintendent of Police (SP) functions as FRO to facilitate foreigners.

  To strengthen the Immigration system, a modernization program viz. Mission Mode Project on Immigration, Visa Foreigners" Registration and Tracking has been

undertaken by MHA/BoI, with the assistance of National Informatics Center(NIC). Under the project, all the Indian Missions, Immigration Check posts (ICPs); FRRO/FRO offices are being computerized and networked to develop a secure and integrated delivery framework to facilitate legitimate travelers.

- FRRO: The Immigration services at the major International Airports in India and the Foreigners' registration work in seven major cities, are handled by the Bureau of Immigration (BOI).

  The field officers in charge of immigration and registration activities at Delhi, Mumbai, Kolkata, Chennai, Amritsar, Bengaluru and Hyderabad are called Foreigners Regional Registration Officers (FRROs). Apart from the FRROs who look after the immigration/registration functions in the above mentioned seven cities, the concerned District Superintendents of Police function as Foreigners Registration Officers (FROs) in all the states in the country.

  Registration at FRRO Mumbai: Police Verification of Address
  The foreign nationals required to register at FRRO Mumbai should get their addresses verified from local Police station before going for the registration at FRRO Mumbai. Since the verification of address from local Police station can take some time, the foreign nationals should start the process of registration early so that they can file the registration papers with FRRO Mumbai within the 14 days time limit

- MEDICAL VISA: open to residents of all countries including Pakistan, Bangladesh, China and Sri Lanka, those availing of the medical visa - with a validity of one year that can be extended for another year by the FRRO (Foreign Regional Registration Office) and thereafter by the Union home ministry - would, however, be required to register themselves with the local FRRO within 14 days of their arrival at the place of treatment here.

As per the rules pertaining to medical visa, the applicant would have to produce exhaustive local medical documents about the nature of his ailment and satisfy the mission of the need for superior treatment in India. Though the list of ailments put down on paper is not exhaustive, those qualifying for a medical visa include neurosurgery, ophthalmic treatment, heart ailments, organ transplant, congenital defects, gene therapy, plastic surgery and joint replacement

The medical visa would also require the applicant to produce documents pertaining to his communication with the hospital where he seeks to be treated during his stay in the country. The authorities have left it to the Indian missions abroad to sensitize the applicant on whether or not the hospital is reputed enough or has the requisite facilities, before granting him the medical visa

The medical visa would grant three entries to the patient during its one-year validity period (it can be 4 in emergency cases). Not only this, it would also allow two attendants to accompany the patient at any given time on an ex-visa co-terminus with the medical visa. These attendants, however, would have to be the spouse, blood relation or child of the patient and would have to register themselves with the FRRO.

Criteria for Selecting a Hospital: International patients before deciding on acquiring healthcare from a particular hospital have a certain criteria in mind which determines whether a hospital is to be considered or not. Given below are a few of the major points:

- Total bed Capacity of hospital
- Qualifications of Doctors
- Nursing care (number of Nurses/patient)
- Specialities available
- Round the clock availability of doctors
- Accreditation (Joint commission International etc)
- Global insurance acceptance.
- Translator facility
- Special Food and other facilities like guest rooms etc

Preferred Destinations in India

South India: is the most famous destination for healthcare tourism in India

- Chennai: is the health capital of India. It attracts about 45 percent of health tourists from abroad arriving in the country and 30 to 40 percent of domestic health tourists
- Calicut: MIMS (Malabar Institute Of Medical Sciences) and AIMS (Amrita Institute Of Medical Science In Kochi) (mainly the south Indians/keralites),
- Narayana Hrudayalaya, Apollo Hospitals etc.
- MIMS & IQRA „A HOSPITALS: representatives in Dubai.
- Kottakkal (Kerala) for Ayurvedic and Rejuvenation therapies is a highly preferred destination. Presence of various medical travel facilitators.

In Mumbai

- Saifee Hospital
- Kokilaben Dhirubhai Ambani Hospital
- Prince Aly Khan Hospital
- Breach Candy

These all Hospitals are getting ensured business through direct tie ups with the consulates, travel agents, hotels, the doctors attached with them, etc.

EXPECTATIONS V/S EXPERIENCE :

The Indian Institute of Travel and Tourism, sanctioned by the government of India conducted a study to determine the medical tourism market in India. Variables based on the expectations of the patient"s experience in acquiring medical care in India were devised.

536 International patients were interviewed in 35 hospitals (13 JCI, 17 NABH, 4 non-accredited). These variables were divided into three categories:

- Pre procedural
- Procedural
- Post procedural

On a scale of 1-5, these variables were rated by the patients based on the expectations and experiences the patients had in acquiring medical care in India.

The variables were then grouped into clusters and according to the differences, the clusters of high differences were determined. This gives us an insight into what the gaps are in expectations and experiences of a patient.

PRE-PROCEDURE STAGE (MEAN VALUE)

S.N.	VARIABLES	EXPECTATION	EXPERIENCE	DIFFERENCE
1	Low cost of medical procedure	4.01	3.75	0.26
2	Overall cost of travel and treatment	4.03	3.75	0.28
3	Less wait time for treatment	4.19	4.23	-0.04
4	Destination well connected to home country	4.06	3.88	0.18
5	Quality of medical procedure	4.68	4.42	0.26
6	Competence of doctors and paramedical staff	4.73	4.49	0.24
7	Quality clinical infrastructure	4.54	4.4	0.14
8	Quality non clinical infrastructure	4.05	3.91	0.14
9	Availability of medical insurance	3.4	2.97	0.43
10	Affordable cost of insurance	3.31	3.05	0.26
11	Availability of visa	4.26	3.84	0.42
12	Help to finalize my travel itinerary	3.51	3.52	-0.01
13	Pre-procedure documentation	3.99	3.88	0.11
14	Terms of payment	3.65	3.3	0.35
	Average	4.03	3.81	0.22

Five clusters were formed based on the variables during the pre procedural stage. They are:

- Quality of treatment
- Ease of access

- Connectivity
- Cost of treatment
- Ease of purchase

It was found that the cost of treatment, including the lodging, food and transport cost included was a major hurt point for the patient.

PROCEDURE STAGE (MEAN VALUE)

S.N.	VARIABLES	EXPECTATION	EXPERIENCE	DIFFERENCE
1	Swift admission process	4.23	4.15	0.08
2	Attention to customers' needs	4.3	4.26	0.04
3	Coordination between different wards and departments	4.29	4.2	0.09
4	Enthusiastic and proactive staff	4.23	4.11	0.12
5	Pickup facility on arrival	4.25	4.14	0.11
6	Counseling at hospital on arrival	4.19	4.05	0.14
7	Assurance of confidentiality	4.17	4.05	0.12
8	Helpful and cheerful daily care staff	4.25	4.11	0.14
9	Daily care staff sensitive to customers' needs	4.28	4.08	0.20
10	Knowledgeable and skillful nursing staff	4.42	4.15	0.27
11	Quick and responsive nursing care staff	4.33	4.14	0.19
12	Nursing staff demonstrates concern	4.3	4.13	0.17
13	Doctors available when required	4.44	4.35	0.09
14	Doctors willing to share information	4.41	4.39	0.02
15	Qualified and skillful doctors	4.54	4.56	-0.02
16	Linguistic abilities of doctors and nurses	4.38	4.23	0.15
17	Linguistic abilities of non medical staff	4.31	3.91	0.40
18	Empathetic doctors and nurses	4.31	4.12	0.19
19	Comfortable (and affordable) accommodation	4.33	3.99	0.34
20	Good and palatable food	4.32	3.54	0.78
21	Privacy	4.22	3.83	0.39
22	Proper arrangement for accomplice	4.31	3.96	0.35
	Average	4.31	4.11	0.20

Four clusters were formed based on the variables during the pre procedural stage. They are:

- Professionalism in management of hospitals
- Competence of staff

- Competence of doctors
- Facilitation and care

International patients found the professional in management to be below their standards. Also facilitation and care during the procedural stage was not up to the mark for the patients.

FACTORS OF CONCERN (EXPECTATIONS) AT POST PROCEDURE STAGE

The experience of the patients after the procedure could not be tracked by the authors of the study. However the Expectations from their experience were still rated.

S.NO.	VARIABLES	MEAN	S.D
1	Simple and swift discharge procedure	3.78	0.61
2	Discharge instructions clear and understandable	3.87	0.36
3	Self explanatory billing free from any surprise hidden charges	3.82	0.4
4	Swift and error free billing	3.8	0.43
5	Quality of recuperative stay	3.7	0.48
6	Post procedure monitoring (for any complications) by hospital/doctor	3.77	0.47
7	Recovery monitoring and facilities for physical and alternate therapy	3.6	0.61
8	Follow up care and instructions for medicine regime	3.73	0.5
9	Post treatment vacationing	3.23	0.85
10	Availability of prescribed medicines in home country/city	3.77	0.45
11	Opportunity for consultations after getting back home	3.76	0.48
12	Hospital to be in touch with doctors/hospitals in home country	3.74	0.50

INTERNATIONAL PATIENT SERVICES AT KDAH

FUNCTIONS:

- SALES: branding, communication with patients, CME programs, tie- ups with medical tourism agencies, consulates etc.
- OPERATIONS: handled by the patient co-coordinator

NUMBER OF IPD PATIENTS

- 55 of 2000 patients per month (2.5%)

DIFFERENT NATIONALITIES AVAILING THE SERVICE:

- Nigeria, Kenya, Iraq, U.A.E., Oman, Saudi Arabia, Bangladesh, Pakistan, Nepal

RELIGION OF PATIENTS:

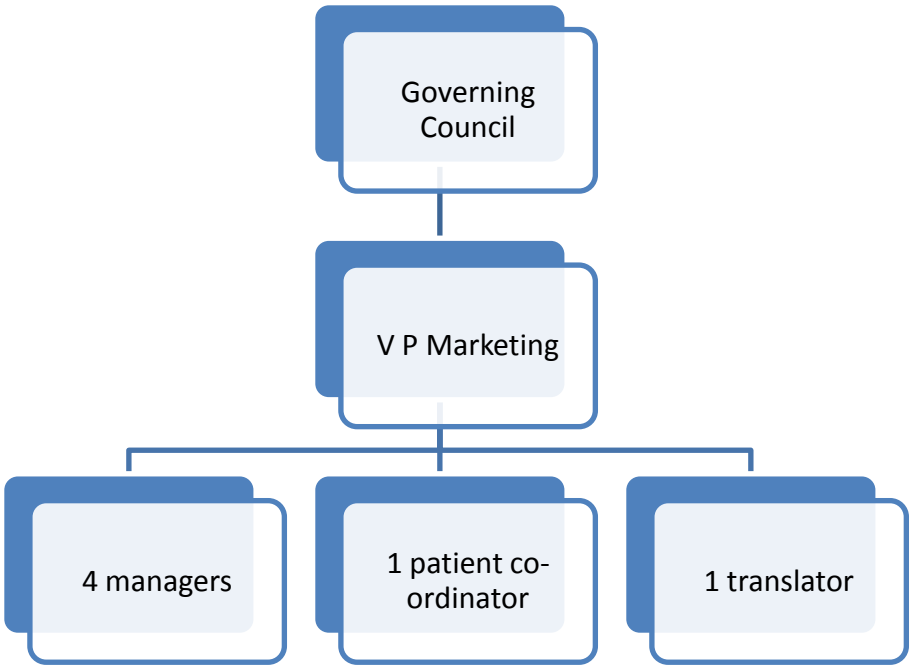
- Muslims, Christians, Hindus

TREATMENTS OPTED FOR:

- ONCOLOGY: surgical, radiotherapy , Chemotherapy
- NEUROSURGERY: Neuro-interventions, Arteriovenous malformations, Cath lab procedures, Brain tumors
- ORTHOPEDIC: Spinal treatments, joint replacements, Hip replacements, dislocations, slip discs
- CARDIAC TREATMENTS: angioplasty, CABG
- TRANSPLANTS: bone marrow, liver and kidney
- ROBOTIC SURGERIES
- GYNECOLOGY: hysterectomy, Fibroids, Deliveries, laproscopic surgeries,
- GASTRO - INTESTINAL SURGERIES: Bariatric surgeries, Cholecystectomy, esophageal varices
- ORTHO - ONCO CARE

- PAEDIATRIC: surgeries and neurology

ORGANOGRAM



INTERNATIONAL PATIENT FLOW

SPECIAL ATTRACTIONS AT KDAH

- Full time consultant model
- Ambience
- Infrastructure
- State of the art technology (eg. Intra operative MRI, robotic surgeries, Aqua treadmill)
- Guest rooms for patient relatives
- Multiple options for food and beverages
- Translators
- Patient co coordinators
- Complex procedures : liver transplants, pediatric cardiac procedures

INTERDEPARTMENTAL RELATIONSHIPS

- Billing/Finance
- Clinical Administration
- Food and Beverage
- Security
- General admin
- Ambulance service/transport services

FORMS AND LETTERHEADS OF NOTE CREATED FROM THE DEPARTMENT

- A letter head is sent to the patient during the time of visa application by the patient
- A letter head to be submitted to the FRRO is drafted and issued to the patient

MARKETING STRATEGY FOR INTERNATIONAL PATIENTS: KDAH

- A separate section for international patients on the website of the hospital giving information on the services provided
- Advertisements in in-flight magazines
- CME programs and free health check up camps abroad
- Tie ups with various non government and government bodies abroad
- Referrals from doctors abroad and advertisements in hospitals.
- Strong social media presence online
- Infotainment program on the hospital covered by National Geographic gives a broad perspective on the high quality treatment and technological prowess of the hospital portraying it as a leading, state of the art healthcare facility.

A PEEK INTO THE BUMRUMGRAD INTERNATIONAL BUSINESS MODEL

- Total revenue: 14,251 million baht
- International patient services constitute 61.1% of total revenue : 8707.361 million baht = 15,950.36 million rupees

= 267 million US dollars

Unique marketing strategies

- Collaboration with Thai airways
- Promoting healthcare packages pre-designed for UK, US and Asian countries
- Promotion of customer customized services:

Presence of translators and patient co-ordinators catering to the needs for patients of different countries

Providing an environment in consideration with the religious and cultural beliefs and needs of patients from different countries

- Representative offices abroad helping patients with visa procurement, travel arrangements and providing cost estimates
- Partnerships with tour operators
- Tie ups with spas providing complementary services after treatment
- Thai traditional treatments also provided
- to attract international clients the hospital emphasize personalized nursing care for patients, massage therapies, five-star hotel quality room accommodation, prompt access to expert medical care, door-to-door transportation services from airport to hospital and delectable meals prepared by chefs from popular local restaurants

UNIQUE MARKETING STRATEGIES ADOPTED BY OTHER HOSPITALS IN INDIA TO ATTRACT INTERNATIONAL PATIENTS:

Fortis:

- Social media presence: They rank second in social media presence.
- International and national patient testimonials on their youtube channel.
- Doctor videos on procedures along with their profiles
- Tie ups with MNC‟s
- In collaboration with Partners Healthcare System, USA

Apollo:

- The social media presence of Apollo hospitals is the most profound compared to other hospitals
- The youtube channel consists of videos prepared by the hospital which are in relation to first aid and emergency medicine that give a sense of "altruism" towards the community.
- In a joint venture with Singapore based Parkway Group Healthcare PTE Ltd.
- Tie up with Johns Hopkins medicine international and Yemen‟s Hayel Saeed Anam group.
- A healthcare center established at the Rajiv Gandhi International airport, Hyderabad attracts patients coming in to acquire medical care

Wockhardt:

- Strategic tie ups with Harvard med and international insurance companies facilitate the easy inflow of patients. These tie ups help provide patients a sense of security and comfort in relation to healthcare that is provided by the hospital

Medanta:

Telemedicine is utilized to consult international patients

The hospital has set up a healthcare center at the IGI airport. This attracts patients coming in to the capital for medical treatments.

Max healthcare:

Has strategic tie ups with embassies and MNC‟s of different countries. They collaborate with Singapore general hospitals in the areas of medical practices, nursing, paramedical research and training. Max Healthcare also conducted free health camps in Kabul and Mazar-e-Sharif.

Narayana Hrudayalaya

NH Is coming up with a center of excellence in the Cayman Islands in collaboration with Ascension, the largest not for profit healthcare network in US.

Artemis hospital

Gurgaon has a strategic tie up with the memorial Sloan-Kettering cancer center

Sri Devi Hospitals

Entered into a tie-up with the Pyramids International Business Group to bring more patients to India

Madras Medical Mission

Has a tie-up with the Government of Tanzania for treating patients for a period of three years. Has tie-ups with Health Ministries, hospitals and doctors in Seychelles, Kenya and Uganda as well. MMM also has a strategic tie up with Navaloka hospital in Colombo.

Madras Institute of Orthopaedics and Traumatology (MIOT)

Hospital has a tie-up with Ministries in Oman, Kuwait, Tanzania and Kenya. Prayer rooms and facilities are available in accordance with international patient needs. Presence of a post treatment retreat, a separate facility for patients to convalesce

Manipal Hospital

Has a tie-up with the governments of Tanzania and Mauritius

Arvind Eye Care

AEC Has worked in collaboration with University of California, San Francisco.

MARKETING STRATEGIES ADOPTED BY HOSPITALS ABROAD TO ATTRACT INTERNATIONAL PATIENTS:

- Duke University received over US $350 million from the Singapore government to create a graduate medical school in conjunction with National University of Singapore
- Cornell University‟s Weill Cornell Medical College runs a medical school in Qatar.
- Harvard Medical International and the Mayo Clinic are partners in Dubai Healthcare City.
- Johns Hopkins Singapore International Medical Centre provides care to patients seeking cancer treatment in Singapore.
- The Royal College of Surgeons in Ireland runs the Medical University of Bahrain and RCSI Dubai.
- Cleveland Clinic in partnership with Mubadala Healthcare has spawned its second center of excellence in Al Maryah Island, Abu Dhabi‟s new financial district. It will be functional by 2015

CHALLENGES FACING INDIAN MEDICAL TOURISM INDUSTRY

- No strong Government support/initiative to promote medical tourism
- Medical visa issues
- Lack of coordination among various players in the industry - airlines, hotels and hospitals.
- The negative perceptions about India with regard to public sanitation/ hygiene standards or prevalence of contagious diseases.
- Strong competitions from many other players like Thailand, Singapore etc.
- Low investments in healthcare infrastructure.
- Availability of hotel rooms in India is considered to be more difficult as compared to other countries. In addition, the cost of accommodation is another hindrance to middle level international travelers visiting India.
- Language differences and unavailability of preferred food is also an issue.

THE KEY DRIVERS THAT MOTIVATE A MEDICAL TOURIST FOR CHOOSING INDIA:

- Availability of hospitals with International accreditations
- Treatment provided is comparable to any other destination in developed countries
- English speaking doctors.
- Connectivity is good
- Possibility of on line diagnosis especially for post care and future consultations.
- Large pool of doctors

- Nurses & paramedics – Highly skilled experts with good communication skills.
- Yoga & Kerala Ayurveda as alternative treatments. (In case of minor ailments)
- The easy availability of major tourist destinations like Goa, Agra, Jaipur, Kerala etc. (This serves as an additional incentive to the medical tourist).

RECCOMMENDATIONS

- Tie ups with influential online entities like "Medical tourism Association" and "patients beyond borders" will help promote our services online to a market segment that is willing to travel abroad to acquire medical care.
- Centre for alternative medicine providing traditional forms of treatment (like Ayurveda and Yoga) for patients travelling to acquire this particular option of treatment. Specific packages for international patients can be designed.
- Going the extra mile with international patients. Providing them with souvenirs and city visits. Tie ups with local tourism operators.
- Helping them with the registration with the FRRO. A patient with a medical condition would be comfortable if a member of the hospital accompanied him/her to the FRRO and helped handle the registration procedures.
- Providing cultural/nationality specific amenities to patients. Eg. Separate prayer rooms for Muslim patients, TV channels and newspapers of the country the patient is from.
- Increasing the Social media reach. (Reddit AMA). The population we will be exposing our services here would be from the lower middle class and middle class (uninsured + insured patients from US, Europe etc.)
- Tie ups with various departments of tourism in different states (eg. U.P., Goa, Kerala etc.) Facilitate the easy travel of patients to different areas of their preference.

- Tie ups with MNC‟s who would send their patients abroad for treatment. It would help cut costs for employee healthcare for the companies and bring in patients from abroad to our hospital.
- Placing appropriate medical tourism news stories in the foreign press. This would help expose our services to potential patients abroad.
- Tie ups with airlines and hotels to help give patients a complete package. The hurt points in the patient experience in acquiring medical treatment in India is the cost of accommodation.
- Using markers or indicators against the physician profiles to determine the country/institution the physician has acquired training from
- Tie ups with healthcare centers abroad to handle follow up for patients acquiring treatment here. Clear and strong communication between GP‟s from the two countries to ensure patient‟s speedy recovery

GAMIFICATION SYSTEM BASED ON REFERRALS BY INTERNATIONAL PATIENTS

- Objectives:
- The main objective is to attract as many international patients as possible to acquire medical services in our hospital.
- To promote our services in the process.
- To create a loyal customer base which would help flock more patients towards acquiring our services
- To earn a profit by treating more patients

Target behaviors:

- We want more patients coming in for treatment from abroad

- We want more patients recommending the services provided by the hospital to their relatives and friends
- Success metrics: increased patient inflow compared to earlier

Analytics: comparing stats from earlier

Player description:

- Our players are international patients
- Age: 35% - 45-60 years

  31% - 30-45 years

  19% - under 30 years

  15% - more than 60 years
- Gender: males - 57%

  Females - 43%
- Nationality: Nigeria, Kenya, Oman, Saudi Arabia, Iraq, Nepal, Bangladesh etc.
- Player types: Explorers, Achievers, Socializers
- Game elements and structures: - a co-operative system

  - Rewards based on referrals

  - Social and altruistic attraction

Activity loop:

- Feedback loop
- Rewards represent feedback showing appreciation of a patient for acquiring and referring the services to other patients
- Feedback will be given to players regarding how far they are from achieving a win

- Appreciating players on achieving a quest (referring patients to acquire your services)

- Progression loop

How do I keep my players engaged?

- Loyalty levels: The more the patients you recommend, the higher level of loyalty achieved (eg. After every 5 patients)

- The quests keep on getting harder (the number of referrals will increase in order to achieve a mega win). In return, the reward will be greater.

- A trophy case is maintained displaying trophies representing the number of wins a player has achieved). Empty trophy spots will be displayed along with information on quests that have to be accomplished to achieve trophy and a win.

- The account is to be linked with emails in order to keep the player constantly informed on how far away the player is from a win.

- Mods: Portal for patient testimonials and notes they can write about the experience they had at the hospital

The fun

- Social graph: User‟s friends and relatives using the service are visible in the social graph along with their number of shares and achievements.

- Presence of a leader board provides the user his/her ranking compared to his/her friends and relatives on the basis of shares and achievements. A sense of competition is created with the help of the leader board

- There is fun in helping others (Altruistic fun). It can be deemed as a form of socialization. Also, rewards attached to the activity will be appealing.

Tools

- Trophies: They will express the achievements accomplished by users within the gamified system. A trophy case will be maintained on the user‟s profile. The empty

spots on the trophy case would also give feedback on what the user has to accomplish to earn more trophies.

- Leader board: This brings out a sense of competition between the users and his/her friends and relatives.
- Loyalty levels: The users, as they progress earn their loyalty on the basis of the number of referrals. Constant appreciation is most important as the player progresses.

REFERENCES

- http://en.wikipedia.org/wiki/Medical_tourism_in_India
- http://en.wikipedia.org/wiki/Medical_tourism
- http://www.mail.medvarsity.com/Articles_PDF/MT_1MT%20in%20India.pdf
- Medical Tourism: Consumers in Search of Value (Deloitte). Available at: http://www.deloitte.com/view/en_HR/hr/industries/lifesciencesheathcare/964710a8b410e110VgnVCM100000ba42f00aRCRD.htm. Accessed April 2014-04-02
- http://www.medvarsity.com/content/CMT/Module1/1_3_India.aspx
- http://www.indiamedicaltimes.com/2011/08/05/indian-medical-tourism-industry-to-be-worth-rs-10800-crore-by-2015-assocham/
- http://www.mtqua.org/
- boi.gov.in
- http://www.indiavisa.com.my/contact/registration_office.php
- http://tourism.gov.in/writereaddata/CMSPagePicture/file/marketresearch/studyreports/Med.pdf
- http://www.indiahealthtour.com/medical_visa.html
- http://www.business-standard.com/article/companies/medical-tourism-hamstrung-by-obsolete-visa-rules-113120201713_1.html
- https://markets.jpmorgan.com/research/email/to0t3a0k/GPS-1343686-0

- http://www.cnbc.com/id/101487998
- http://www.imtj.com/resources/research-and-statistics/medical-tourism-report-facts-and-figures-2014/
- http://www.patientsbeyondborders.com/reviews
- http://www.ahc.umn.edu/bioethics/prod/groups/ahc/@pub/@ahc/@bioethics/documents/asset/ahc_asset_177834.pdf
- http://www.eoi.gov.in/kabul/?0293?000
- http://www.hindu.com/2004/08/01/stories/2004080108760300.htm
- http://www.apollohospitals.com/apollo_pdf/Apollo_Investor_Presentation_June_2013.pdf